



Quarterly Investment Performance Analysis

City of Jacksonville Employees' Retirement System

Period Ended: June 30, 2022



Table of Contents

1	Capital Markets Review	Page 3
2	Total Fund	Page 12
3	Composite Profiles	Page 32
4	Investment Manager Profiles	Page 48
5	Addendum & Glossary	Page 72

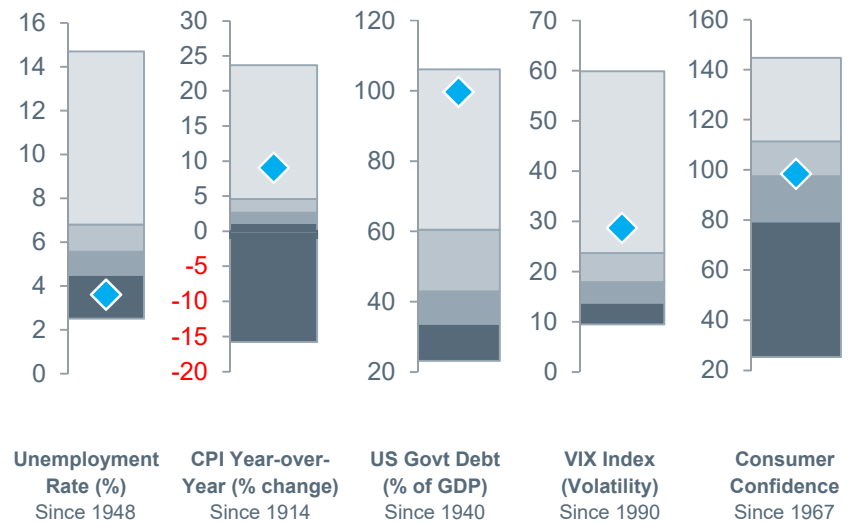
Capital Markets Review



Second Quarter Economic Environment

Continued rising inflation, accelerated tightening of global monetary policy and falling economic growth estimates led to most major indices ending negative in Q2. Inflation continued to rise in the US as the Consumer Price Index (CPI) rose to 9.1% at the end of June, spurred on by supply chain disruptions tied with the war in Ukraine and China's zero-COVID policy. The OECD's June Economic Outlook report now forecasts global inflation to end the year near 9%. Central banks continued to tighten monetary policy with the Federal Open Market Committee raising the federal funds rate by 0.75% in June which followed a 0.50% increase in May. Following the June CPI release, a 1.0% increase at the FOMC meeting in July is now the most likely scenario based on probabilities implied by traders. Forecasters are increasingly citing a rising risk of a recession in the US however the data is less clear. The Atlanta Fed's GDP Nowcast indicates a modest contraction of growth in Q2, with declining residential investment and private inventory overhang as key negative effects. However, manufacturing and services Purchasing Managers' indexes (PMIs) indicate expansion. The unemployment rate ended June at 3.6% as non-farm payroll growth averaged just under 375k per month. According to the latest JOLTS survey, the US currently has roughly two job openings for every unemployed individual. The Atlanta Fed's wage tracker also lists average annual wage growth at 6.7% based on a 3-month moving average.

Key Economic Indicators



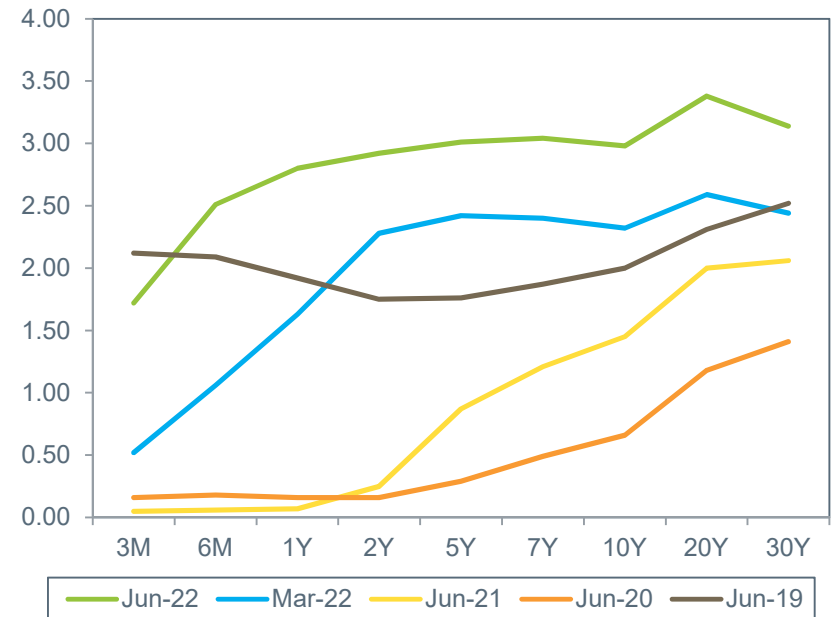
Economic Indicators

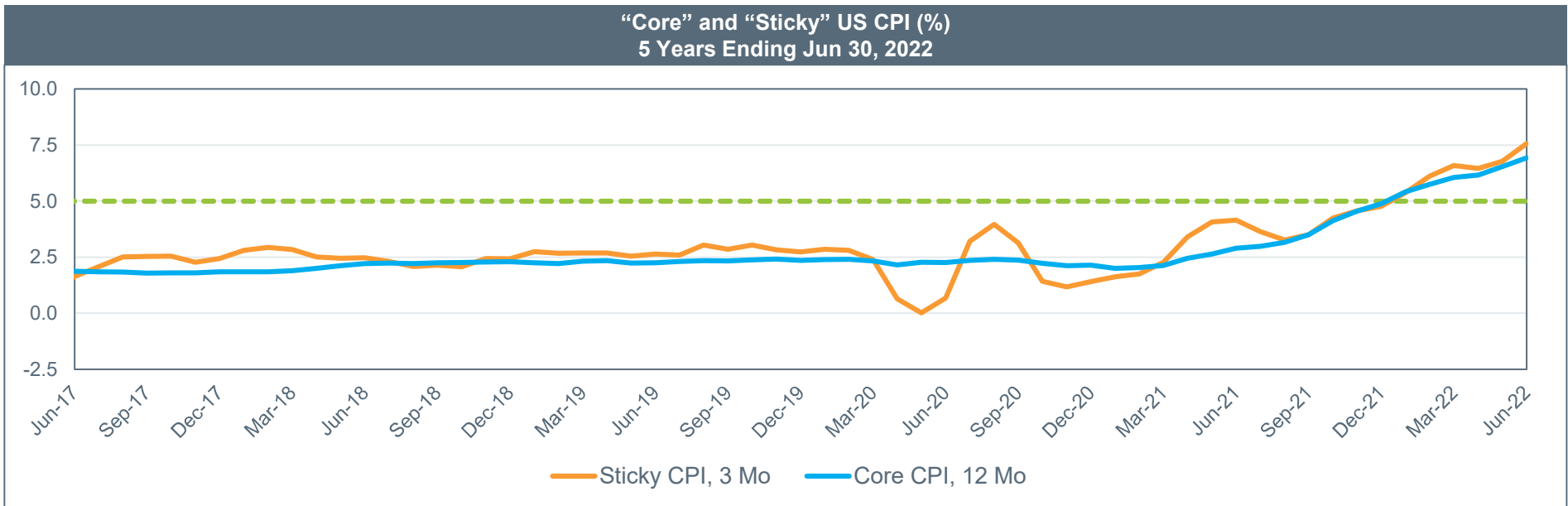
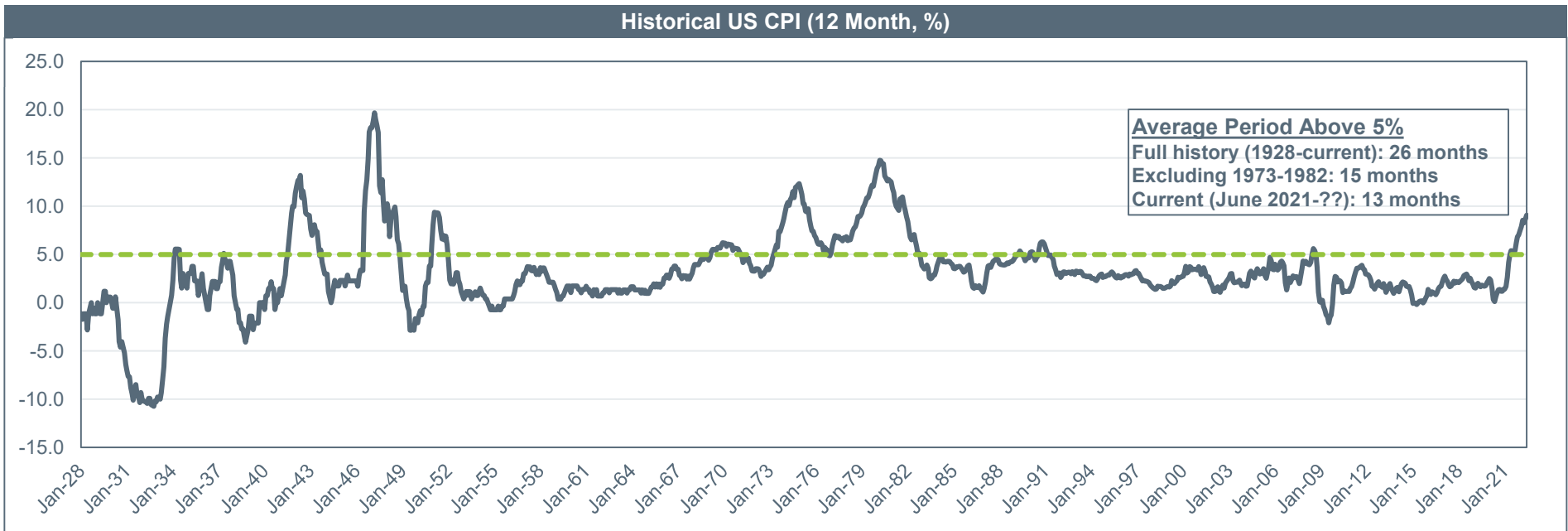
	Jun-22	Mar-22	Jun-21	Jun-19	20 Yr
Federal Funds Rate (%)	1.58 ▲	0.33	0.08	2.40	1.30
Breakeven Infl. - 5 Yr (%)	2.62 ▼	3.43	2.50	1.54	1.86
Breakeven Infl. - 10 Yr (%)	2.34 ▼	2.83	2.34	1.70	2.04
CPI YoY (Headline) (%)	9.1 ▲	8.5	5.4	1.6	2.2
Unemployment Rate (%)	3.6 —	3.6	5.9	3.6	6.1
Real GDP YoY (%)	1.6 ▼	3.5	12.2	2.1	1.9
PMI - Manufacturing	53.0 ▼	57.1	60.9	51.5	53.5
USD Total Wtd Idx	121.05 ▲	115.22	112.61	114.58	103.10
WTI Crude Oil per Barrel (\$)	105.8 ▲	100.3	73.5	58.5	64.4
Gold Spot per Oz (\$)	1,807 ▼	1,937	1,770	1,410	1,086

Market Performance (%)

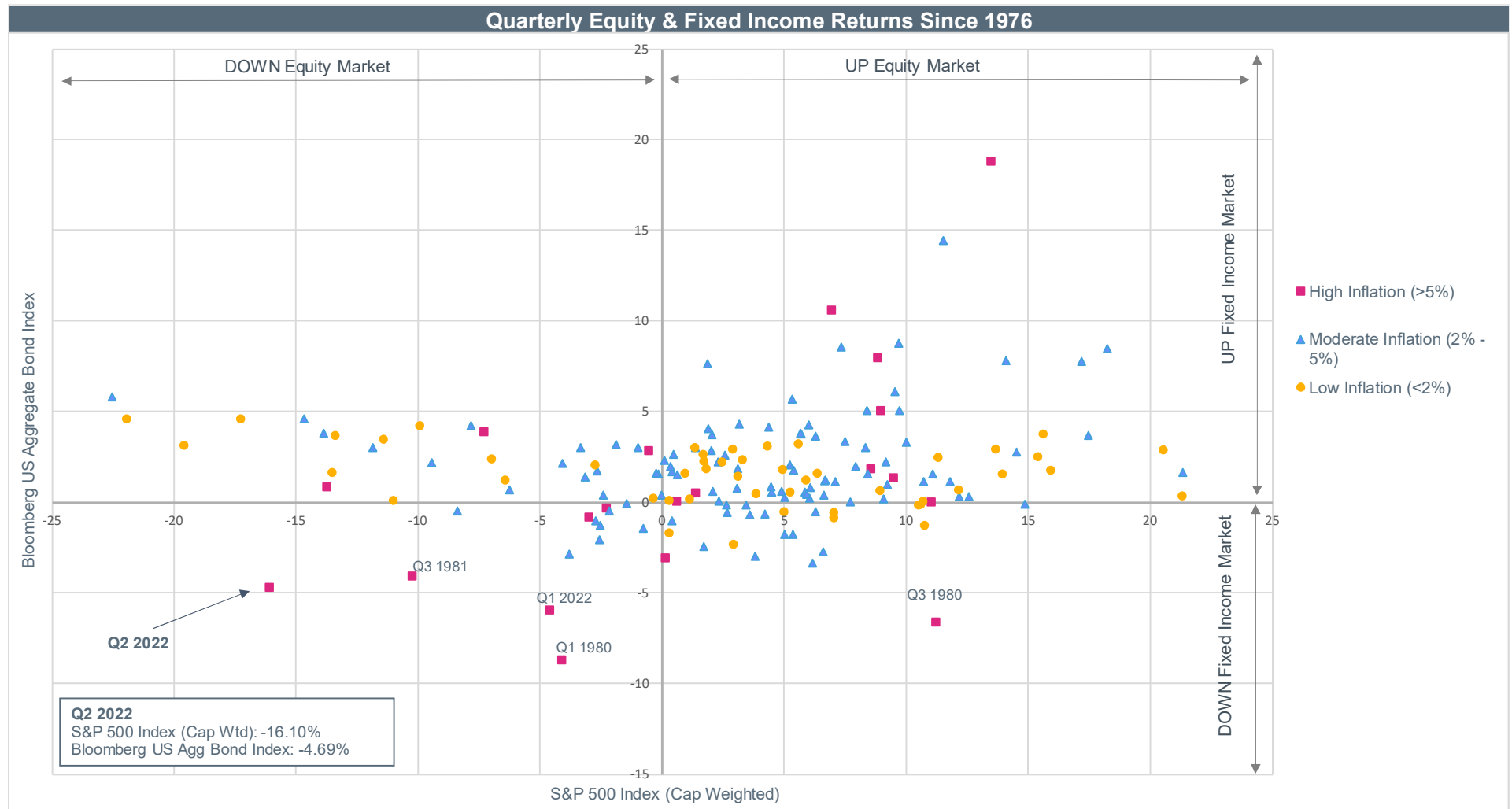
	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	-16.10	-19.96	-10.62	11.31	12.96
Russell 2000	-17.20	-23.43	-25.20	5.17	9.35
MSCI EAFE (Net)	-14.51	-19.57	-17.77	2.20	5.40
MSCI EAFE SC (Net)	-17.69	-24.71	-23.98	1.72	7.18
MSCI Emg Mkts (Net)	-11.45	-17.63	-25.28	2.18	3.06
Bloomberg US Agg Bond	-4.69	-10.35	-10.29	0.88	1.54
ICE BofAML 3 Mo US T-Bill	0.11	0.15	0.17	1.11	0.64
NCREIF ODCE (Gross)	4.77	12.49	29.51	10.54	11.16
FTSE NAREIT Eq REIT (TR)	-16.97	-20.20	-6.27	5.30	7.39
HFRI FOF Comp	-3.88	-6.53	-5.45	3.63	3.75
Bloomberg Cmdty (TR)	-5.66	18.44	24.27	8.39	-0.82

Treasury Yield Curve (%)





As of June 30, 2022. Sources: US Bureau of Labor Statistics, Federal Reserve Bank of Cleveland, and Federal Reserve Bank of Atlanta. Core CPI is represented by the Revised FRB Cleveland Trimmed Mean, 12-month. Sticky CPI is represented by the FRB Atlanta Sticky-Price Index, 3-month.



Bloomberg US Aggregate Bond Index: Worst Quarters and Subsequent Performance

Quarter Ended	Quarter Return	YTW at Quarter End	Subsequent Quarter Return	Subsequent Year Return	Subsequent 3 Year Return Annualized
Mar-1980	-8.71%	14.10	18.79%	13.05%	17.88%
Sep-1980	-6.60%	12.43	1.36%	-2.58%	15.05%
Mar-2022	-5.93%	2.92	-4.69%	?	?
Jun-2022	-4.69%	3.72	?	?	?
Sep-1981	-4.07%	16.50	10.58%	35.22%	19.35%
Mar-2021	-3.38%	1.61	1.83%	-4.15%	?
Dec-1979	-3.08%	11.19	-8.71%	2.67%	13.12%

Inflation data provided by the Federal Reserve Economic Database.
 Yield to Worst data provided by Barclays Live.



Second Quarter Review

Broad Market

US equity markets were down sharply in Q2 in the midst of increasing concerns of a looming recession as the Fed acted to respond to sustained, elevated levels of inflation. With declines affecting all sectors, investors fled to defensive stocks as these were comparatively resilient. Likewise, investors in energy stocks benefited as the sector was buoyed by commodity prices.

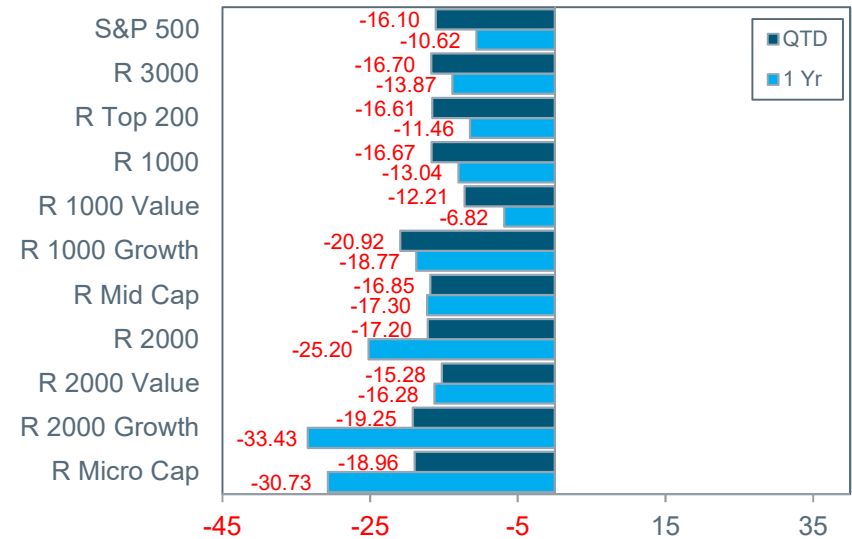
Market Cap

There was significant outperformance of value stocks over growth stocks, with the Russell 1000 Value and Russell 2000 Value indexes outperforming their growth counterparts by 8.7% and 4.0%, respectively.

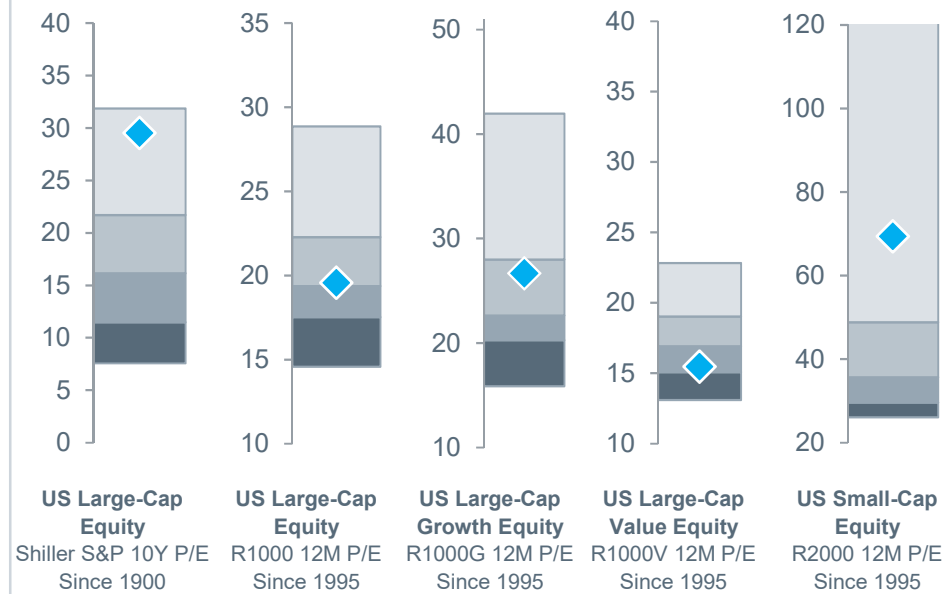
Style and Sector

Active management performed well in Q2, with the exception of large-cap growth managers. Small- and mid-cap core and value managers had an exceptionally strong Q2 with a majority outpacing their respective benchmarks by significant margins.

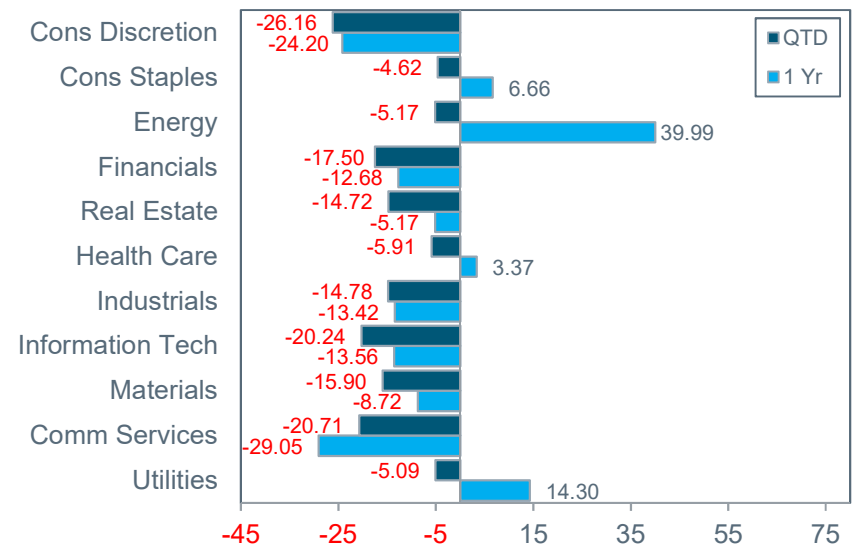
Style and Capitalization Market Performance (%)



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.

Second Quarter Review

Developed Markets

Developed International markets fared better than the domestic market, albeit still finishing Q2 in negative territory with the MSCI EAFE Index notching a -14.5% return for the period. Value stocks remained in favor with continued outperformance over growth stocks, while large-cap stocks outperformed small-cap stocks. All developed market countries and sectors were negative for the quarter, with the Asia-Pacific region and information technology sector leading markets lower.

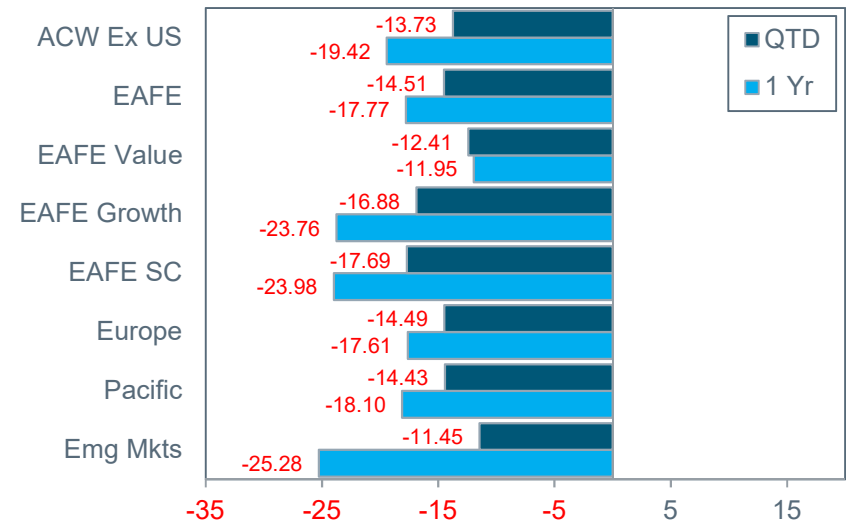
Emerging Markets

Emerging markets outperformed developed in Q2 with the MSCI EM Index returning -11.4%. Nearly all emerging market countries experienced negative returns.

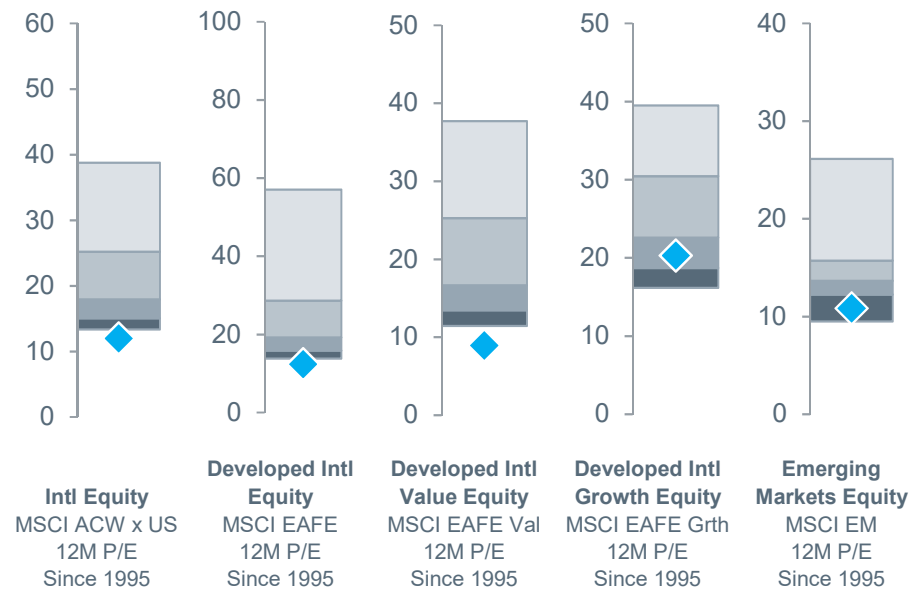
Market Cap & Style

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

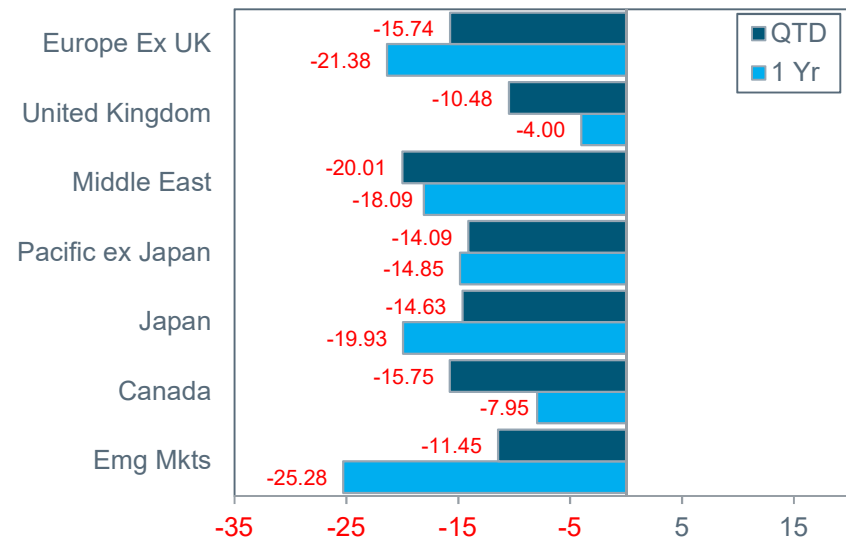
MSCI Style and Capitalization Market Performance (%)



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.



Second Quarter Review

Broad Market

In Q2, Treasury yields rose 66 basis points from 2.32% to 2.98% with an intra-quarter high of 3.49%, as measured by the 10-year US Treasury yield. The Federal Reserve hiked the Federal Funds rate by 75 basis points over the quarter, the largest single increase since 1994. The Bloomberg US Aggregate ended the quarter down with an overall return of -4.7%.

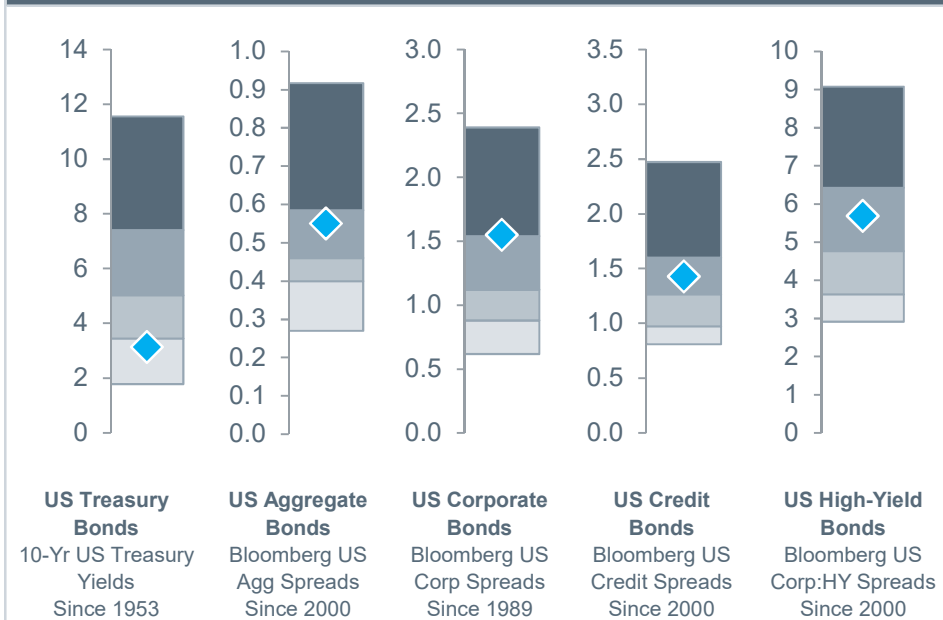
Credit Market

While fixed income broadly experienced negative absolute performance over the quarter, widening credit spreads presented additional headwinds to corporate credit. US Investment Grade credit detracted -6.9%, while US High Yield returned -9.8%, as measured by the Bloomberg US Credit Index and Bloomberg US High Yield index, respectively.

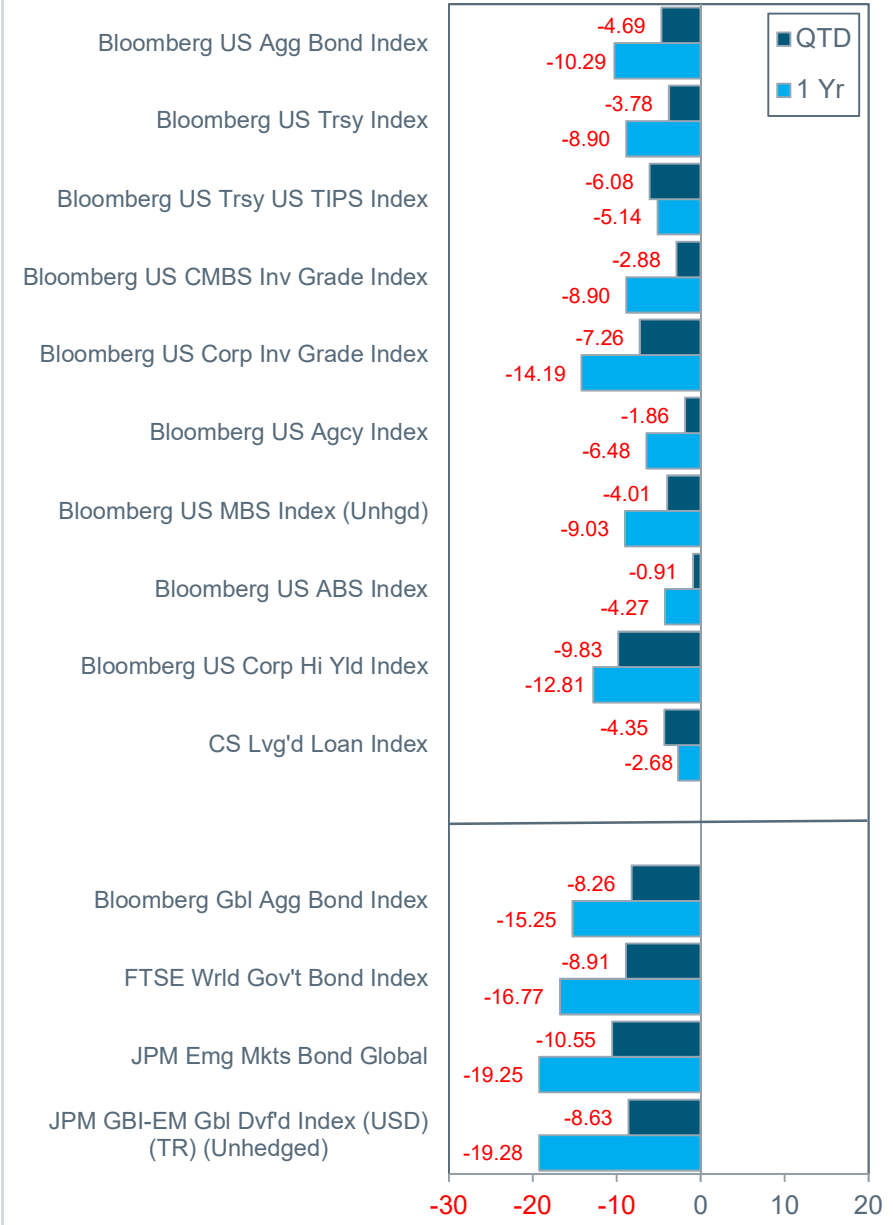
Emerging Market Debt

Foreign fixed income experienced headwinds from the Russia-Ukraine war, inflationary concerns, and mixed central bank policy. These factors led to a -11.4% return in Q2 for the JPM EMBI Global Diversified Index.

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.

Second Quarter Review - Absolute Return

General Market - Hedge Funds

Dispersion continues to be the theme across the hedge fund landscape. Although the HFRI Asset Weighted Composite returned 0.3% during the quarter, its year-to-date return remained positive at 2.1%. By contrast, the Equal Weighted Index, which is dominated by long/short equity strategies (“ELS”), returned -4.9% in Q2, led lower by ELS managers returning -8.3%. Prime brokerage data indicates that the 1st half of 2022 was one of the strongest on record for short alpha, as higher interest rates tend to structurally benefit short sellers.

General Market - Global Tactical Asset Allocation (GTAA)

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely generated disparate performance in Q2. Although overall performance was negative, nearly all managers outperformed a US centric blend of 60% equity and 40% fixed income. The top performing long-biased GTAA strategies tended to emphasize relative undervaluation in their asset allocation processes, while underperformers tended to hold larger allocations to US equity and non-USD fixed income.

Second Quarter Review - Real Assets

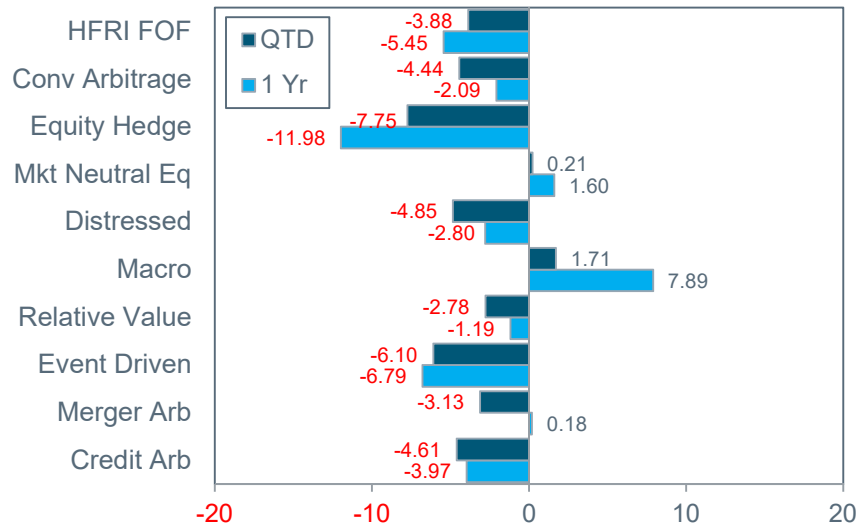
General Market - Diversified Inflation Strategies (DIS)

After responding positively to record inflationary pressures in Q1, DIS posted losses ranging from negative mid-single digit to negative low double-digit. Manager allocations to inflation sensitive assets were affected by cross currents of Fed rate hikes combined with changing market estimates of future economic growth. During the Q2, nearly all inflation sensitive asset classes were negative except for energy commodities. Managers with larger TIPS allocations tended to outperform peers, especially in cases where shorter duration TIPS were targeted.

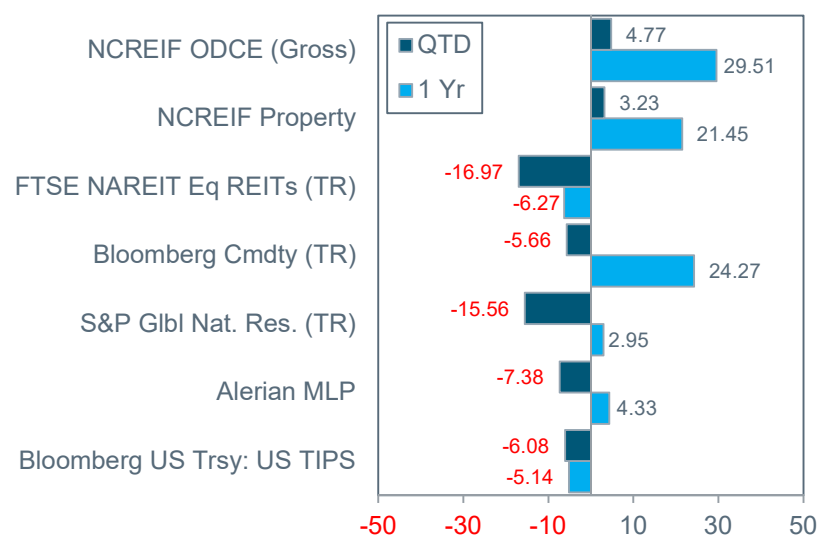
General Market - Real Estate

Core private real estate generated 4.8% return in Q2, as reported by the NFI-ODCE Index, with the total return comprising of 0.9% income and 3.9% price appreciation. As income return trends at the lower end of historical levels, the price appreciation return remains elevated. Investors in publicly traded real estate significantly underperformed their private market counterparts by a meaningful margin.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)



Annual Asset Class Performance

As of June 30, 2022

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD
Best	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	43.24	18.44
	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	28.71	12.49
	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	27.11	0.15
	-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	22.17	-6.53
	-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	14.82	-8.92
	-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	11.26	-10.35
	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.44	10.88	10.10	-14.19
	-33.79	18.91	15.06	0.10	10.94	2.47	3.37	-0.31	6.67	7.62	-4.62	14.32	7.82	6.17	-17.63
	-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	5.96	-19.57
	-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	5.28	-19.96
	-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	0.05	-20.20
	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.73	7.69	0.67	-1.55	-21.88
	-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	-2.52	-23.43
Worst	-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	-2.54	-24.71
	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



Watch List Managers	Date Added to Watch List	Benchmark	Peer Group	Inception Date	Quantitative Factors						Qualitative Factors	Last Meeting w/Staff or RVK	Rationale for Addition to Watch List
					Rolling 5-Year Return (GoF) for three consecutive quarters vs. Benchmark			Rolling 5-Year Return (GoF) for three consecutive quarters vs. Peer Group universe			Meaningful Updates		
US Equity					5-Years Ending Jun-2022	5-Years Ending Mar-2021	5-Years Ending Dec-2021	5-Years Ending Jun-2022	5-Years Ending Mar-2021	5-Years Ending Dec-2021			
Pinnacle US SMID Cap Growth	Oct-20	R2500 Growth	IM US SMID Cap Growth Equity (SA+CF) Median	Mar-10	✓	✓	✓	✗	✓	✓	N/A	Jul-22	Rolling five-year return (gross of fees) has fallen below the rolling five-year benchmark return for three consecutive quarters, and; Rolling five-year return (gross of fees) has ranked in the bottom third of the peer group for three consecutive quarters.

✓ = strategy exceeds the benchmark / peer group over the stated trailing period.
✗ = strategy does not exceed the benchmark / peer group over the stated trailing period.

Organization, Team, Process, and AUM Developments

Pinnacle US SMID Cap Growth (please refer to page 19 for gross performance)

Firm and product assets have declined incrementally, driven by market depreciation, but remain in line with historical levels. There are no recent personnel changes to report nor indications of a change to the investment process. While the portfolio remains ahead of its benchmark in 2022, it did underperform in the second quarter caused primarily by poor performance among consumer discretionary and technology stocks amid concerns over slowing economic growth. RVK rates Pinnacle SMID Cap Growth as neutral and views it as an institutional quality option.

Recommendation: RVK recommends Pinnacle US SMID Cap Growth be removed from the Watch List due to improvement in performance relative to its benchmark and rankings amongst peers.

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

As of June 30, 2022

	Allocation		Performance (%)		Allocation		Performance (%)
	Market Value (\$)	%	QTD		Market Value (\$)	%	QTD
US Equity	829,962,401	36.43	-18.27	Real Estate	455,696,906	20.00	4.77
Eagle Capital Large Cap Value (SA)	206,182,156	9.05	-19.93	Harrison Street Core Property (CF)	124,054,558	5.44	2.50
Mellon Large Cap Core Index (CF)	252,604,777	11.09	-16.67	PGIM Real Estate PRISA II (CF)	75,436,721	3.31	7.38
Loomis Sayles Large Cap Growth (CF)	150,563,516	6.61	-22.72	Principal US Property (CF)	169,115,741	7.42	3.05
Pinnacle Associates US SMID Cap Growth (SA)	70,236,612	3.08	-21.06	UBS Trumbull Property (CF)	81,435,866	3.57	7.54
Kayne Anderson US SMID Value (SA)	73,838,413	3.24	-10.87	Vanguard RE Idx;ETF (VNQ)	1,223,622	0.05	-15.40
Systematic Financial US SMID Value (SA)	76,536,926	3.36	-13.27	H.I.G. Realty Fund IV	4,430,398	0.19	60.74
International Equity	491,111,192	21.55	-14.09	Diversifying Assets	81,798,433	3.59	12.35
Silchester International Value (CF)	234,878,127	10.31	-11.07	Hancock Timberland (SA)	16,022,129	0.70	37.19
Baillie Gifford International Growth (BGEFX)	139,962,359	6.14	-17.07	Adams Street Private Equity (SA)	44,718,790	1.96	8.48
Acadian Emerging Markets (CF)	116,270,705	5.10	-16.23	Hamilton Lane Private Credit (SA)	21,057,514	0.92	3.58
Fixed Income	416,788,040	18.29	-6.77	Dreyfus Gvt Csh Mgt;Inst (DGCXX)	3,111,581	0.14	0.17
Baird Core Fixed Income (SA)	207,723,829	9.12	-4.92	Transition Account	47,367	0.00	N/A
Franklin Templeton Global Multisector Plus (CF)	83,171,415	3.65	-11.38				
Loomis Sayles Multisector Full Discretion (CF)	125,892,796	5.53	-6.55				

Schedule of Investable Assets (Total Assets)

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
CYTD	2,664,636,142	1,275,194	-387,395,417	2,278,515,919	-14.53

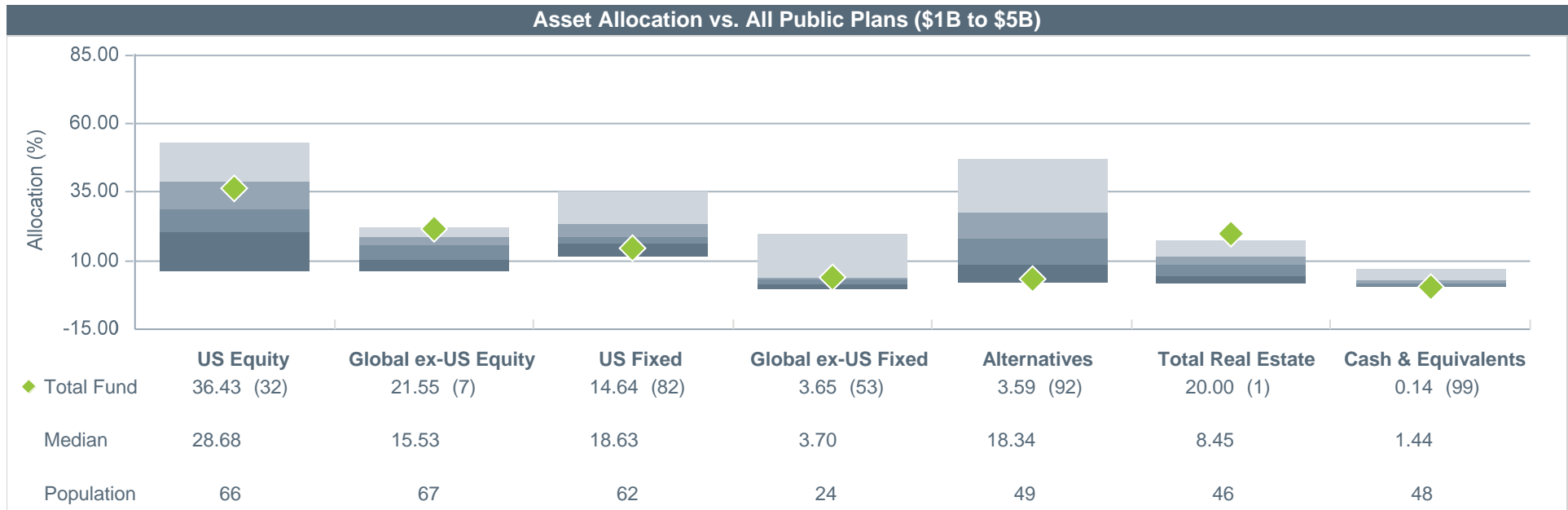
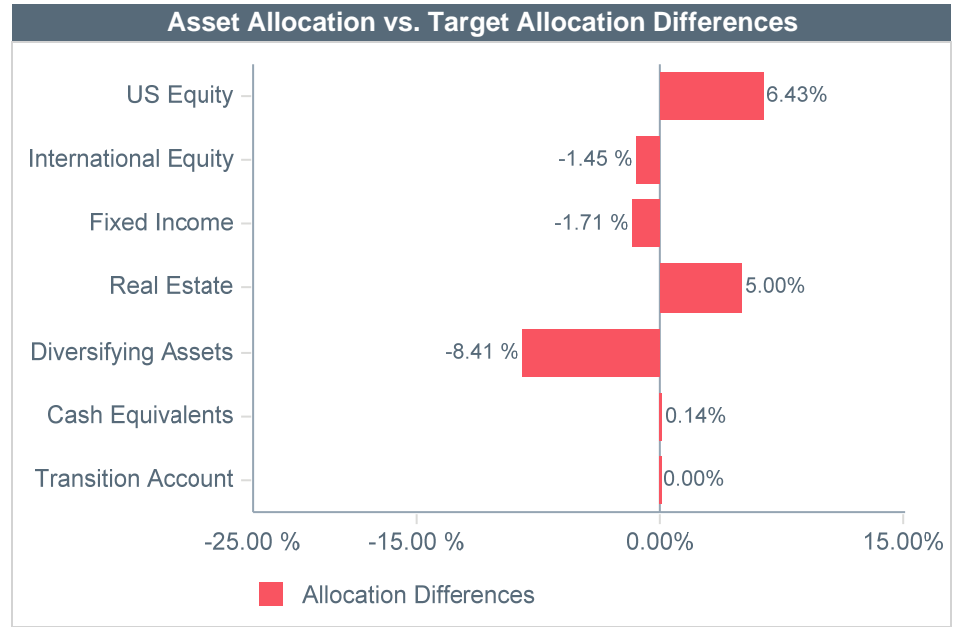
Performance shown is net of fees. Allocations shown may not sum up to 100% exactly due to rounding.



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

As of June 30, 2022

Asset Allocation vs. Target Allocation					
	Market Value (\$)	Allocation (%)	Min (%)	Target (%)	Max (%)
Total Fund	2,278,515,919	100.00	-	100.00	-
US Equity	829,962,401	36.43	20.00	30.00	40.00
International Equity	491,111,192	21.55	13.00	23.00	25.00
Fixed Income	416,788,040	18.29	10.00	20.00	30.00
Real Estate	455,696,906	20.00	0.00	15.00	20.00
Diversifying Assets	81,798,433	3.59	0.00	12.00	20.00
Cash Equivalents	3,111,581	0.14	0.00	0.00	10.00
Transition Account	47,367	0.00	0.00	0.00	0.00

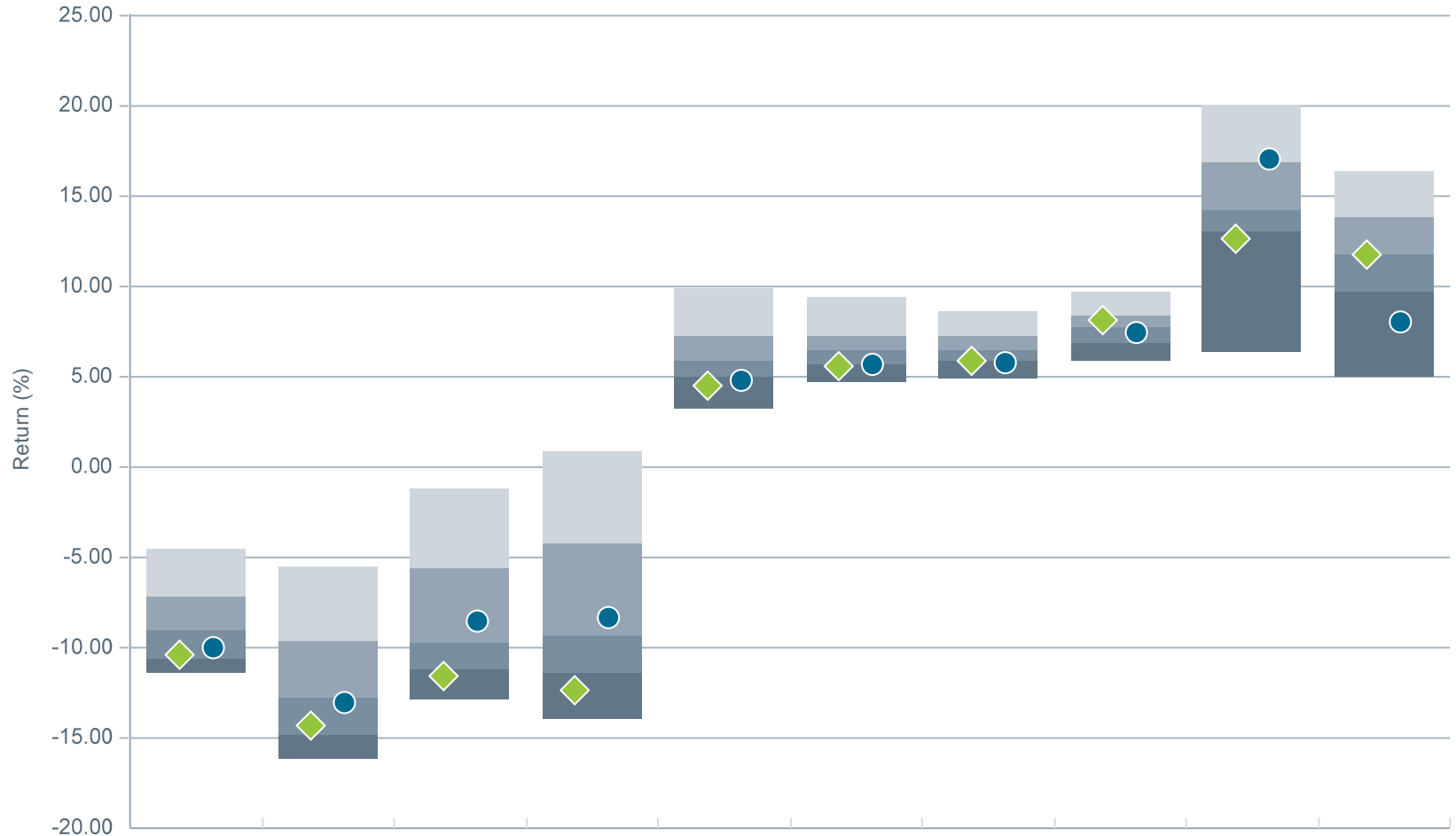


Allocations shown may not sum up to 100% exactly due to rounding. Parentheses contain percentile ranks.



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

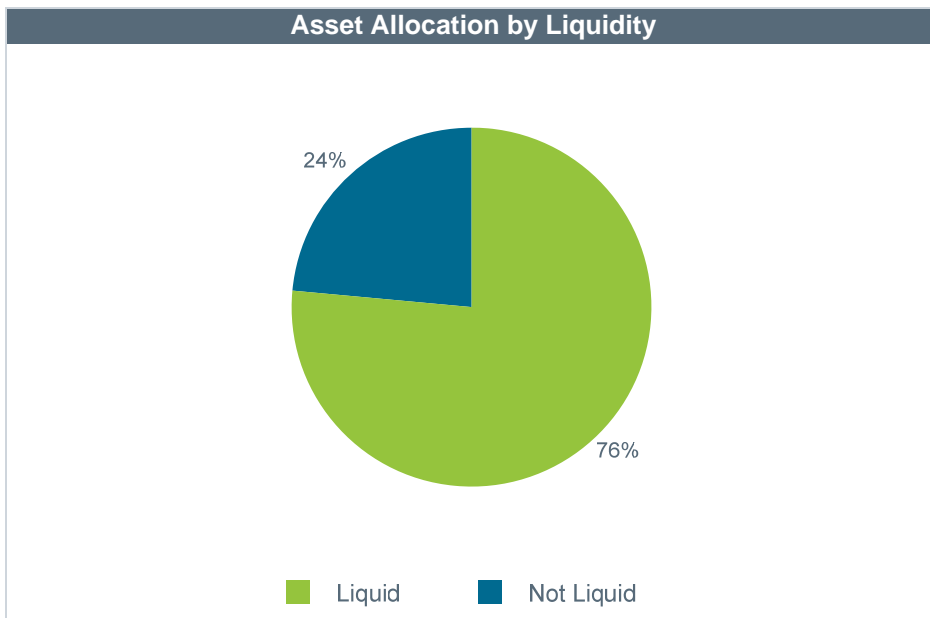
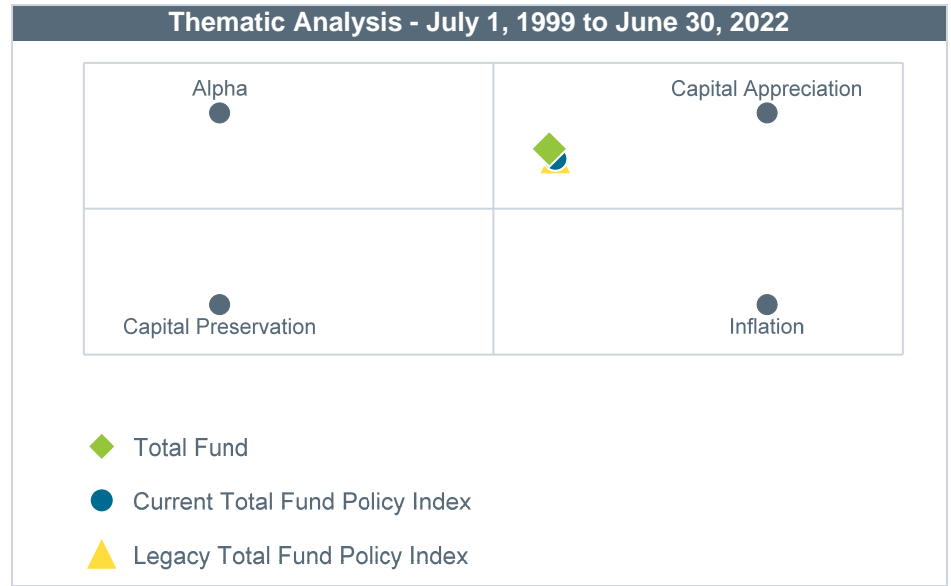
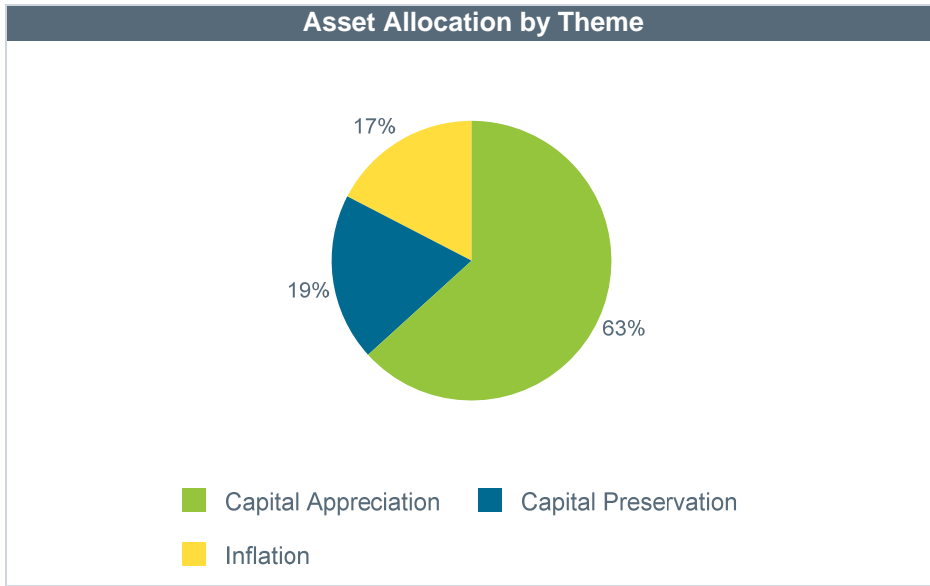
As of June 30, 2022



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020
◆ Total Fund	-10.40 (69)	-14.32 (67)	-11.53 (86)	-12.32 (91)	4.49 (83)	5.58 (77)	5.89 (76)	8.13 (34)	12.64 (81)	11.73 (51)
● Current Total Fund Policy Index	-9.99 (62)	-13.01 (52)	-8.52 (41)	-8.35 (44)	4.82 (79)	5.68 (76)	5.80 (77)	7.43 (64)	17.09 (21)	8.02 (92)
5th Percentile	-4.54	-5.49	-1.18	0.83	9.95	9.40	8.60	9.72	20.02	16.38
1st Quartile	-7.17	-9.57	-5.57	-4.25	7.27	7.27	7.27	8.39	16.87	13.86
Median	-9.00	-12.76	-9.67	-9.29	5.87	6.43	6.44	7.72	14.18	11.80
3rd Quartile	-10.61	-14.78	-11.16	-11.41	4.98	5.68	5.89	6.89	13.05	9.73
95th Percentile	-11.39	-16.13	-12.87	-13.91	3.22	4.74	4.85	5.89	6.39	4.97

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



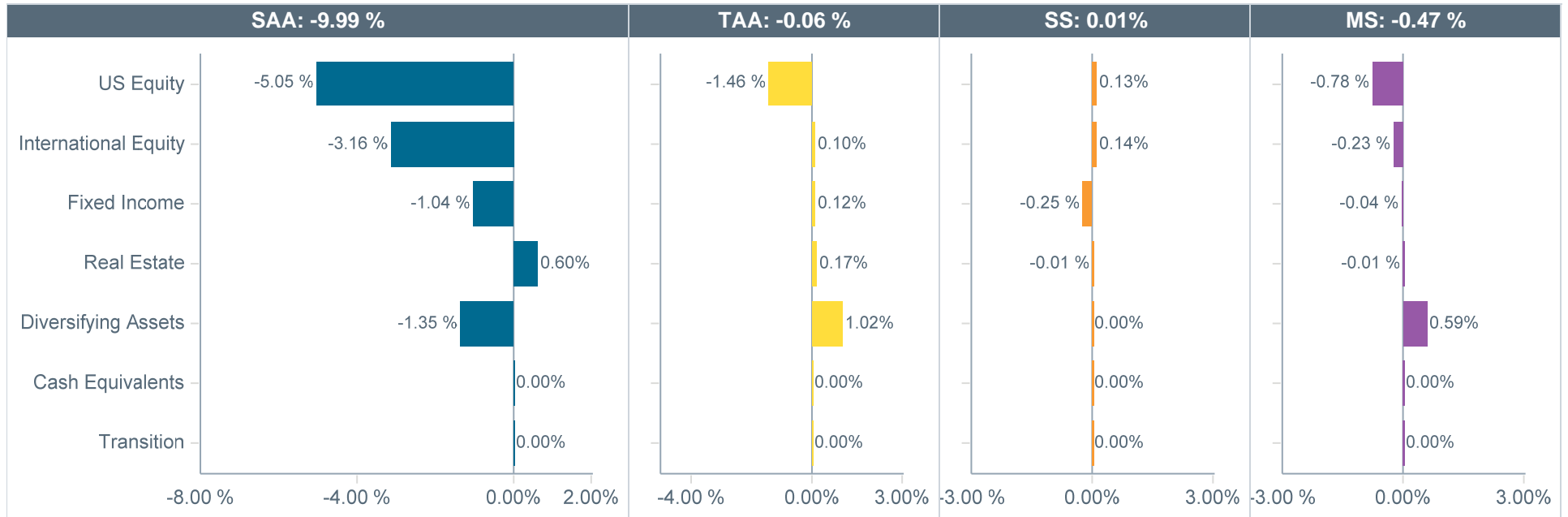
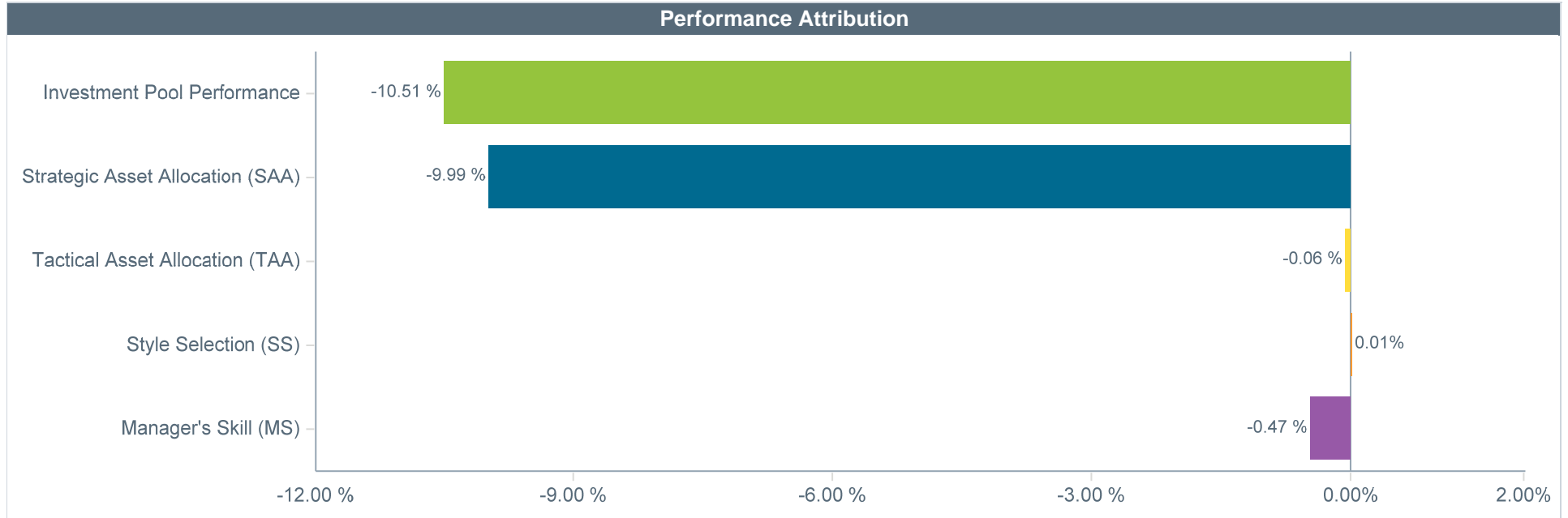


Correlation Matrix - 10 Years

	A	B	C	D
A	1.00			
B	0.60	1.00		
C	-0.14	-0.15	1.00	
D	0.54	0.74	-0.03	1.00

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.

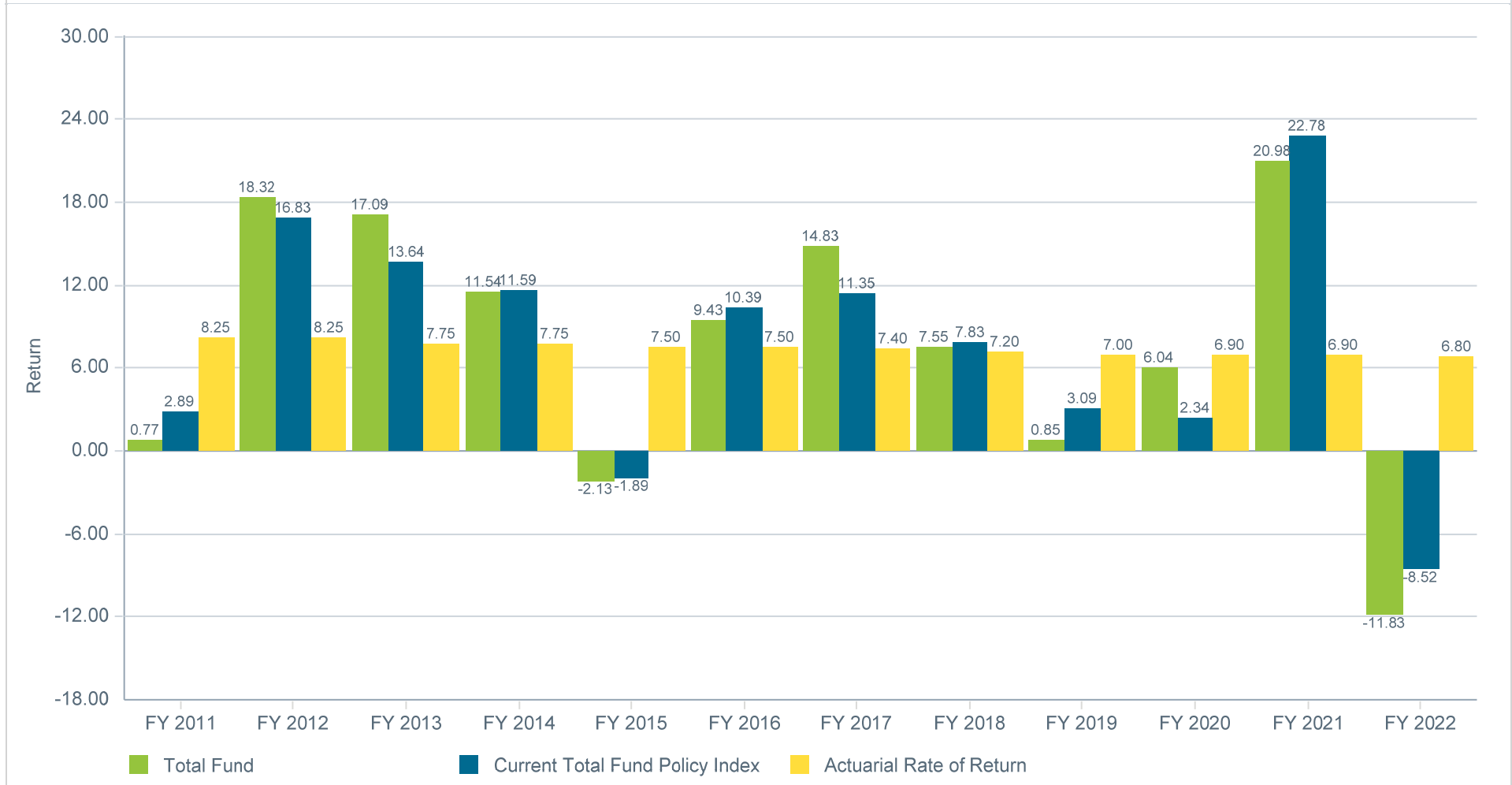


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

City of Jacksonville Employees' Retirement System
Historical Fiscal Year Returns

As of June 30, 2022

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016	FY 2017	FY 2018	FY 2019	FY 2020	FY 2021	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	20.98	-11.83
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	22.78	-8.52
Difference	2.99	-2.12	1.49	3.45	-0.05	-0.24	-0.96	3.48	-0.28	-2.24	3.70	-1.80	-3.31
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	6.80
Difference	2.91	-7.48	10.07	9.34	3.79	-9.63	1.93	7.43	0.35	-6.15	-0.86	14.08	-18.63



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, changed to 6.90% effective 10/01/2019, and then changed to 6.80% effective 10/01/2021. Please see the Addendum for custom index definitions.



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

As of June 30, 2022

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Total Fund	2,278,515,919	100.00	-10.40	-14.32	-11.53	-12.32	4.49	5.58	5.89	8.13	6.27	07/01/1999
Current Total Fund Policy Index			-9.99	-13.01	-8.52	-8.35	4.82	5.68	5.80	7.43	5.69	
Difference			-0.41	-1.31	-3.01	-3.97	-0.33	-0.10	0.09	0.70	0.58	
All Public Plans (\$1B to \$5B) (Custom PG) Median			-9.00	-12.76	-9.67	-9.29	5.87	6.43	6.44	7.72	6.04	
Rank			69	67	86	91	83	77	76	34	41	
Total Equity	1,321,073,592	57.98	-16.66	-22.69	-20.23	-22.04	5.49	6.87	7.33	10.15	6.21	07/01/1999
US Equity	829,962,401	36.43	-18.18	-23.84	-19.31	-19.90	7.54	9.25	9.15	11.99	6.84	07/01/1999
US Equity Index			-16.70	-21.10	-13.78	-13.87	9.77	10.60	10.43	12.57	6.81	
Difference			-1.48	-2.74	-5.53	-6.03	-2.23	-1.35	-1.28	-0.58	0.03	
IM U.S. Equity (SA+CF) Median			-15.39	-19.85	-12.90	-13.06	8.42	9.20	9.09	11.96	8.58	
Rank			75	71	72	72	60	50	49	50	83	
International Equity	491,111,192	21.55	-13.97	-20.65	-21.73	-25.41	2.29	3.14	4.31	7.00	5.58	07/01/1999
International Equity Index			-13.73	-18.42	-16.94	-19.42	1.35	2.50	2.92	4.83	3.55	
Difference			-0.24	-2.23	-4.79	-5.99	0.94	0.64	1.39	2.17	2.03	
IM International Equity (SA+CF) Median			-13.68	-19.63	-18.55	-20.54	2.36	3.12	3.88	6.36	6.36	
Rank			53	58	68	73	51	50	40	36	64	
Fixed Income	416,788,040	18.29	-6.70	-10.79	-11.31	-11.52	-1.94	0.21	1.05	1.77	4.51	07/01/1999
Fixed Income Index			-5.13	-10.93	-10.96	-10.89	-0.94	0.89	1.43	1.55	4.15	
Difference			-1.57	0.14	-0.35	-0.63	-1.00	-0.68	-0.38	0.22	0.36	
IM Global Fixed Income (SA+CF) Median			-9.07	-13.72	-13.69	-13.55	-0.47	1.53	2.44	2.33	5.72	
Rank			26	30	33	38	71	71	76	56	64	
Real Estate	455,696,906	20.00	4.91	10.67	18.30	23.06	9.76	8.88	9.04	9.59	7.02	12/01/2005
Real Estate Index			4.54	12.01	20.58	28.32	11.66	9.55	9.35	10.16	7.17	
Difference			0.37	-1.34	-2.28	-5.26	-1.90	-0.67	-0.31	-0.57	-0.15	
Core Real Estate	451,266,508	19.81	4.49	10.28	17.88	22.63	9.63	8.80	8.99	9.55	6.99	12/01/2005
NCREIF ODCE Index (AWA) (Gross)			4.77	12.49	21.46	29.51	12.66	10.54	10.34	11.16	8.17	
Difference			-0.28	-2.21	-3.58	-6.88	-3.03	-1.74	-1.35	-1.61	-1.18	
Non-Core Real Estate	4,430,398	0.19	60.74	60.74	N/A	N/A	N/A	N/A	N/A	N/A	60.74	01/01/2022
NCREIF ODCE Index (AWA)(Gross) +2%			5.29	13.61	23.28	32.10	14.92	12.75	12.54	13.38	13.61	
Difference			55.45	47.13	N/A	N/A	N/A	N/A	N/A	N/A	47.13	
Diversifying Assets	81,798,433	3.59	12.45	22.81	39.61	43.97	14.40	9.52	5.89	8.81	9.08	03/01/2011
Diversifying Assets Index			-11.23	-13.72	-7.94	-9.24	-2.87	-0.73	-1.12	2.24	2.42	
Difference			23.68	36.53	47.55	53.21	17.27	10.25	7.01	6.57	6.66	

Performance shown is gross of fees except if noted otherwise, 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 June 30, 2022

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Equity												
Eagle Capital Large Cap Value (SA)	206,182,156	9.05	-19.76	-26.73	-24.27	-22.62	5.79	8.90	9.54	12.56	10.00	02/01/2007
Russell 1000 Val Index			-12.21	-12.86	-6.09	-6.82	6.87	7.17	7.69	10.50	6.25	
Difference			-7.55	-13.87	-18.18	-15.80	-1.08	1.73	1.85	2.06	3.75	
IM U.S. Large Cap Value Equity (SA+CF) Median			-11.76	-11.82	-4.75	-5.54	9.04	8.88	8.90	11.42	7.75	
Rank			98	98	100	98	96	50	31	18	5	
Mellon Large Cap Core Index (CF)	252,604,777	11.09	-16.67	-20.94	-13.21	-13.00	10.14	N/A	N/A	N/A	9.65	05/01/2019
Russell 1000 Index			-16.67	-20.94	-13.21	-13.04	10.17	11.00	10.78	12.82	9.68	
Difference			0.00	0.00	0.00	0.04	-0.03	N/A	N/A	N/A	-0.03	
IM U.S. Large Cap Core Equity (SA+CF) Median			-15.06	-19.06	-11.06	-10.55	9.83	10.68	10.43	12.83	9.43	
Rank			81	72	76	73	43	N/A	N/A	N/A	45	
Loomis Sayles Large Cap Growth (CF)	150,563,516	6.61	-22.57	-28.49	-23.60	-25.11	7.21	10.46	N/A	N/A	10.64	08/01/2017
Russell 1000 Grth Index			-20.92	-28.07	-19.70	-18.77	12.58	14.29	13.45	14.80	13.94	
Difference			-1.65	-0.42	-3.90	-6.34	-5.37	-3.83	N/A	N/A	-3.30	
IM U.S. Large Cap Growth Equity (SA+CF) Median			-20.20	-28.41	-21.78	-20.97	9.63	12.58	11.83	13.90	12.10	
Rank			76	51	61	74	80	84	N/A	N/A	79	
Kayne Anderson US SMID Value (SA)	73,838,413	3.24	-10.83	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-11.15	03/01/2022
Russell 2500 Val Index			-15.39	-16.66	-11.36	-13.19	6.19	5.54	6.49	9.54	-13.61	
Difference			4.56	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.46	
IM U.S. SMID Cap Value Equity (SA+CF) Median			-13.45	-15.30	-9.07	-10.47	7.92	7.09	7.52	11.06	-12.73	
Rank			23	N/A	N/A	N/A	N/A	N/A	N/A	N/A	30	
Systematic Financial US SMID Value (SA)	76,536,926	3.36	-13.18	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-13.51	03/01/2022
Russell 2500 Val Index			-15.39	-16.66	-11.36	-13.19	6.19	5.54	6.49	9.54	-13.61	
Difference			2.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.10	
IM U.S. SMID Cap Value Equity (SA+CF) Median			-13.45	-15.30	-9.07	-10.47	7.92	7.09	7.52	11.06	-12.73	
Rank			47	N/A	N/A	N/A	N/A	N/A	N/A	N/A	59	
Pinnacle Associates US SMID Cap Growth (SA)	70,236,612	3.08	-20.92	-25.03	-22.51	-25.65	9.59	9.17	8.75	12.65	12.87	03/01/2010
Russell 2500 Grth Index			-19.55	-29.45	-29.31	-31.81	3.68	7.53	7.05	10.88	11.51	
Difference			-1.37	4.42	6.80	6.16	5.91	1.64	1.70	1.77	1.36	
IM U.S. SMID Cap Growth Equity (SA+CF) Median			-19.66	-28.28	-25.93	-24.78	6.64	10.23	9.38	12.11	13.20	
Rank			63	28	35	56	25	75	61	33	59	

Performance shown is gross of fees except if noted otherwise, 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 June 30, 2022

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
International Equity												
Silchester International Value (CF)	234,878,127	10.31	-10.94	-10.66	-10.57	-11.34	2.81	2.80	4.19	8.10	8.56	06/01/2009
MSCI EAFE Val Index (USD) (Net)			-12.41	-12.12	-11.09	-11.95	0.18	0.52	1.17	4.25	4.14	
Difference			1.47	1.46	0.52	0.61	2.63	2.28	3.02	3.85	4.42	
IM EAFE Value (SA+CF) Median			-11.73	-14.56	-13.61	-14.17	2.44	2.32	2.94	5.97	6.39	
Rank			40	17	25	25	43	36	17	9	9	
Baillie Gifford International Growth (BGEFX)	139,962,359	6.14	-16.97	-34.92	-37.81	-42.78	2.69	5.50	6.14	8.51	8.94	06/01/2009
Baillie Gifford Index			-15.71	-24.79	-23.01	-25.80	1.62	3.13	3.65	6.12	6.41	
Difference			-1.26	-10.13	-14.80	-16.98	1.07	2.37	2.49	2.39	2.53	
Baillie Gifford Spliced Index			-13.73	-18.42	-16.94	-19.42	1.72	2.59	2.98	5.60	5.60	
Difference			-3.24	-16.50	-20.87	-23.36	0.97	2.91	3.16	2.91	3.34	
IM ACWI Ex US Growth (SA+CF) Median			-15.98	-26.22	-24.32	-24.88	2.60	4.46	4.68	6.96	7.53	
Rank			58	96	98	98	48	28	26	15	15	
Acadian Emerging Markets (CF)	116,270,705	5.10	-16.11	-17.51	-16.81	-21.91	2.65	2.21	3.27	3.95	2.72	02/01/2011
MSCI Emg Mkts Index (USD) (Net)			-11.45	-17.63	-18.71	-25.28	0.57	2.18	2.79	3.06	1.45	
Difference			-4.66	0.12	1.90	3.37	2.08	0.03	0.48	0.89	1.27	
IM Emerging Markets Equity (SA+CF) Median			-12.05	-18.20	-19.00	-25.03	1.46	2.93	3.80	4.41	2.75	
Rank			88	45	38	36	37	66	64	61	52	
Fixed Income												
Baird Core Fixed Income (SA)	207,723,829	9.12	-4.86	-10.68	-10.85	-10.66	N/A	N/A	N/A	N/A	-7.41	03/01/2021
Bloomberg US Agg Bond Index			-4.69	-10.35	-10.34	-10.29	-0.94	0.88	1.42	1.54	-7.44	
Difference			-0.17	-0.33	-0.51	-0.37	N/A	N/A	N/A	N/A	0.03	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			-4.85	-10.35	-10.34	-10.29	-0.44	1.29	1.89	2.03	-7.33	
Rank			54	67	71	70	N/A	N/A	N/A	N/A	56	
Franklin Templeton Global Multisector Plus (CF)	83,171,415	3.65	-11.30	-9.94	-12.07	-13.97	-7.83	-3.90	-2.00	0.39	4.26	09/01/2007
Frank. Temp. Global Multisector Index			-8.43	-13.97	-14.57	-15.35	-3.20	-0.51	0.62	0.27	2.25	
Difference			-2.87	4.03	2.50	1.38	-4.63	-3.39	-2.62	0.12	2.01	
IM Global Fixed Income (SA+CF) Median			-9.07	-13.72	-13.69	-13.55	-0.47	1.53	2.44	2.33	3.29	
Rank			83	25	38	53	100	100	100	79	34	
Loomis Sayles Multisector Full Discretion (CF)	125,892,796	5.53	-6.46	-11.51	-11.57	-11.25	1.56	3.00	3.54	4.90	5.88	10/01/2007
Bloomberg Gbl Agg Bond Index			-8.26	-13.91	-14.49	-15.25	-3.22	-0.55	0.51	0.11	1.92	
Difference			1.80	2.40	2.92	4.00	4.78	3.55	3.03	4.79	3.96	
IM Global Fixed Income (SA+CF) Median			-9.07	-13.72	-13.69	-13.55	-0.47	1.53	2.44	2.33	3.03	
Rank			24	33	33	38	16	15	25	13	3	

Performance shown is gross of fees except if noted otherwise, 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 June 30, 2022

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Real Estate												
Harrison Street Core Property (CF)	124,054,558	5.44	2.50	5.11	8.04	11.10	7.35	8.09	N/A	N/A	7.93	11/01/2015
NCREIF ODCE Index (AWA) (Gross)			4.77	12.49	21.46	29.51	12.66	10.54	10.34	11.16	10.28	
Difference			-2.27	-7.38	-13.42	-18.41	-5.31	-2.45	N/A	N/A	-2.35	
PGIM Real Estate PRISA II (CF)	75,436,721	3.31	7.55	14.68	23.17	29.35	11.33	10.74	11.01	N/A	10.72	01/01/2015
NCREIF ODCE Index (AWA) (Gross)			4.77	12.49	21.46	29.51	12.66	10.54	10.34	11.16	10.65	
Difference			2.78	2.19	1.71	-0.16	-1.33	0.20	0.67	N/A	0.07	
Principal US Property (CF)	169,115,741	7.42	3.26	11.05	22.45	28.85	13.01	11.23	11.19	N/A	11.67	01/01/2014
NCREIF ODCE Index (AWA) (Gross)			4.77	12.49	21.46	29.51	12.66	10.54	10.34	11.16	10.87	
Difference			-1.51	-1.44	0.99	-0.66	0.35	0.69	0.85	N/A	0.80	
UBS Trumbull Property (CF)	81,435,866	3.57	7.75	13.52	20.61	24.26	6.83	5.60	6.30	7.67	6.37	12/01/2005
NCREIF ODCE Index (AWA) (Gross)			4.77	12.49	21.46	29.51	12.66	10.54	10.34	11.16	8.17	
Difference			2.98	1.03	-0.85	-5.25	-5.83	-4.94	-4.04	-3.49	-1.80	
Vanguard RE Idx;ETF (VNQ)	1,223,622	0.05	-15.40	-20.54	-8.62	-8.05	4.79	5.57	6.91	7.33	12.00	12/01/2008
Custom REITs Index			-15.43	-20.47	-8.59	-7.94	4.88	6.11	7.31	7.73	12.75	
Difference			0.03	-0.07	-0.03	-0.11	-0.09	-0.54	-0.40	-0.40	-0.75	
H.I.G. Realty Fund IV	4,430,398	0.19	60.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60.74	04/01/2022
NCREIF ODCE Index (AWA)(Gross) +2%			5.29	13.61	23.28	32.10	14.92	12.75	12.54	13.38	5.29	
Difference			55.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	55.45	
Diversifying Assets												
Hancock Timberland (SA)	16,022,129	0.70	37.19	37.19	42.52	55.69	22.77	15.88	12.34	11.49	6.82	10/01/2006
NCREIF Timberland Index			1.87	5.13	9.93	12.01	5.03	4.32	4.05	5.73	5.58	
Difference			35.32	32.06	32.59	43.68	17.74	11.56	8.29	5.76	1.24	
Adams Street Private Equity (SA)	44,718,790	1.96	8.48	25.84	55.56	80.84	N/A	N/A	N/A	N/A	42.68	11/01/2020
S&P 500 Index+3%			-15.48	-18.77	-9.14	-7.93	13.92	14.65	14.48	16.35	14.15	
Difference			23.96	44.61	64.70	88.77	N/A	N/A	N/A	N/A	28.53	
Hamilton Lane Private Credit (SA)	21,057,514	0.92	4.02	4.70	7.13	8.47	N/A	N/A	N/A	N/A	6.72	04/01/2021
ICE BofAML Gbl Hi Yld Index +2%			-10.97	-15.91	-16.13	-16.00	0.14	2.78	4.61	5.85	-10.89	
Difference			14.99	20.61	23.26	24.47	N/A	N/A	N/A	N/A	17.61	
Dreyfus Gvt Csh Mgt;Inst (DGCXX)	3,111,581	0.14	0.21	0.33	0.47	0.70	0.83	1.26	1.02	0.74	1.35	04/01/2001
FTSE 3 Mo T-Bill Index			0.14	0.17	0.18	0.19	0.61	1.09	0.86	0.62	1.29	
Difference			0.07	0.16	0.29	0.51	0.22	0.17	0.16	0.12	0.06	

Performance shown is gross of fees except if noted otherwise, 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 June 30, 2022

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Total Fund	2,278,515,919	100.00	-10.51	-14.53	-11.83	-12.72	4.00	5.06	5.36	7.60	5.95	07/01/1999
Current Total Fund Policy Index			-9.99	-13.01	-8.52	-8.35	4.82	5.68	5.80	7.43	5.69	
Difference			-0.52	-1.52	-3.31	-4.37	-0.82	-0.62	-0.44	0.17	0.26	
Total Equity	1,321,073,592	57.98	-16.77	-22.89	-20.51	-22.41	4.98	6.33	6.77	9.58	5.90	07/01/1999
US Equity	829,962,401	36.43	-18.27	-24.04	-19.57	-20.24	7.06	8.73	8.61	11.42	6.54	07/01/1999
US Equity Index			-16.70	-21.10	-13.78	-13.87	9.77	10.60	10.43	12.57	6.81	
Difference			-1.57	-2.94	-5.79	-6.37	-2.71	-1.87	-1.82	-1.15	-0.27	
International Equity	491,111,192	21.55	-14.09	-20.87	-22.05	-25.81	1.73	2.57	3.73	6.40	5.25	07/01/1999
International Equity Index			-13.73	-18.42	-16.94	-19.42	1.35	2.50	2.92	4.83	3.55	
Difference			-0.36	-2.45	-5.11	-6.39	0.38	0.07	0.81	1.57	1.70	
Fixed Income	416,788,040	18.29	-6.77	-10.92	-11.51	-11.78	-2.19	-0.05	0.80	1.55	4.35	07/01/1999
Fixed Income Index			-5.13	-10.93	-10.96	-10.89	-0.94	0.89	1.43	1.55	4.15	
Difference			-1.64	0.01	-0.55	-0.89	-1.25	-0.94	-0.63	0.00	0.20	
Real Estate	455,696,906	20.00	4.77	10.37	17.82	22.40	9.04	8.12	8.28	8.78	6.34	12/01/2005
Real Estate Index			4.54	12.01	20.58	28.32	11.66	9.55	9.35	10.16	7.17	
Difference			0.23	-1.64	-2.76	-5.92	-2.62	-1.43	-1.07	-1.38	-0.83	
Core Real Estate	451,266,508	19.81	4.49	10.28	17.88	22.63	9.63	8.80	8.99	9.55	6.99	12/01/2005
NCREIF ODCE Index (AWA) (Net)			4.54	12.00	20.58	28.31	11.66	9.55	9.35	10.15	7.17	
Difference			-0.05	-1.72	-2.70	-5.68	-2.03	-0.75	-0.36	-0.60	-0.18	
Non-Core Real Estate	4,430,398	0.19	60.74	60.74	N/A	N/A	N/A	N/A	N/A	N/A	60.74	01/01/2022
NCREIF ODCE Index (AWA) (Net) (Monthly)+2%			5.06	13.12	22.38	30.87	13.90	11.74	11.53	12.36	13.12	
Difference			55.68	47.62	N/A	N/A	N/A	N/A	N/A	N/A	47.62	
Diversifying Assets	81,798,433	3.59	12.35	22.55	39.11	42.98	13.77	8.94	5.34	8.26	8.54	03/01/2011
Diversifying Assets Index			-11.23	-13.72	-7.94	-9.24	-2.87	-0.73	-1.12	2.24	2.42	
Difference			23.58	36.27	47.05	52.22	16.64	9.67	6.46	6.02	6.12	

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 June 30, 2022

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Equity												
Eagle Capital Large Cap Value (SA)	206,182,156	9.05	-19.93	-27.03	-24.71	-23.21	5.00	8.09	8.73	11.72	9.29	02/01/2007
Russell 1000 Val Index			-12.21	-12.86	-6.09	-6.82	6.87	7.17	7.69	10.50	6.25	
Difference			-7.72	-14.17	-18.62	-16.39	-1.87	0.92	1.04	1.22	3.04	
Mellon Large Cap Core Index (CF)	252,604,777	11.09	-16.67	-20.95	-13.22	-13.02	10.11	N/A	N/A	N/A	9.63	05/01/2019
Russell 1000 Index			-16.67	-20.94	-13.21	-13.04	10.17	11.00	10.78	12.82	9.68	
Difference			0.00	-0.01	-0.01	0.02	-0.06	N/A	N/A	N/A	-0.05	
Loomis Sayles Large Cap Growth (CF)	150,563,516	6.61	-22.72	-28.76	-23.96	-25.59	6.64	9.89	N/A	N/A	10.08	08/01/2017
Russell 1000 Grth Index			-20.92	-28.07	-19.70	-18.77	12.58	14.29	13.45	14.80	13.94	
Difference			-1.80	-0.69	-4.26	-6.82	-5.94	-4.40	N/A	N/A	-3.86	
Kayne Anderson US SMID Value (SA)	73,838,413	3.24	-10.87	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-11.24	03/01/2022
Russell 2500 Val Index			-15.39	-16.66	-11.36	-13.19	6.19	5.54	6.49	9.54	-13.61	
Difference			4.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.37	
Systematic Financial US SMID Value (SA)	76,536,926	3.36	-13.27	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-13.59	03/01/2022
Russell 2500 Val Index			-15.39	-16.66	-11.36	-13.19	6.19	5.54	6.49	9.54	-13.61	
Difference			2.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.02	
Pinnacle Associates US SMID Cap Growth (SA)	70,236,612	3.08	-21.06	-25.55	-23.05	-26.28	8.87	8.52	7.99	11.87	12.10	03/01/2010
Russell 2500 Grth Index			-19.55	-29.45	-29.31	-31.81	3.68	7.53	7.05	10.88	11.51	
Difference			-1.51	3.90	6.26	5.53	5.19	0.99	0.94	0.99	0.59	
International Equity												
Silchester International Value (CF)	234,878,127	10.31	-11.07	-10.91	-10.95	-11.84	2.23	2.21	3.59	7.47	7.92	06/01/2009
MSCI EAFE Val Index (USD) (Net)			-12.41	-12.12	-11.09	-11.95	0.18	0.52	1.17	4.25	4.14	
Difference			1.34	1.21	0.14	0.11	2.05	1.69	2.42	3.22	3.78	
Baillie Gifford International Growth (BGEFX)	139,962,359	6.14	-17.07	-35.09	-38.04	-43.06	2.19	4.97	5.60	7.97	8.53	06/01/2009
Baillie Gifford Index			-15.71	-24.79	-23.01	-25.80	1.62	3.13	3.65	6.12	6.41	
Difference			-1.36	-10.30	-15.03	-17.26	0.57	1.84	1.95	1.85	2.12	
Baillie Gifford Spliced Index			-13.73	-18.42	-16.94	-19.42	1.72	2.59	2.98	5.60	5.60	
Difference			-3.34	-16.67	-21.10	-23.64	0.47	2.38	2.62	2.37	2.93	
Acadian Emerging Markets (CF)	116,270,705	5.10	-16.23	-17.75	-17.17	-22.36	2.06	1.62	2.67	3.33	2.13	02/01/2011
MSCI Emg Mkts Index (USD) (Net)			-11.45	-17.63	-18.71	-25.28	0.57	2.18	2.79	3.06	1.45	
Difference			-4.78	-0.12	1.54	2.92	1.49	-0.56	-0.12	0.27	0.68	

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 June 30, 2022

	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income												
Baird Core Fixed Income (SA)	207,723,829	9.12	-4.92	-10.78	-11.00	-10.86	N/A	N/A	N/A	N/A	-7.58	03/01/2021
Bloomberg US Agg Bond Index			-4.69	-10.35	-10.34	-10.29	-0.94	0.88	1.42	1.54	-7.44	
Difference			-0.23	-0.43	-0.66	-0.57	N/A	N/A	N/A	N/A	-0.14	
Franklin Templeton Global Multisector Plus (CF)	83,171,415	3.65	-11.38	-10.11	-12.33	-14.32	-8.21	-4.35	-2.49	-0.23	3.55	09/01/2007
Frank. Temp. Global Multisector Index			-8.43	-13.97	-14.57	-15.35	-3.20	-0.51	0.62	0.27	2.25	
Difference			-2.95	3.86	2.24	1.03	-5.01	-3.84	-3.11	-0.50	1.30	
Loomis Sayles Multisector Full Discretion (CF)	125,892,796	5.53	-6.55	-11.67	-11.81	-11.56	1.19	2.62	3.13	4.48	5.52	10/01/2007
Bloomberg Gbl Agg Bond Index			-8.26	-13.91	-14.49	-15.25	-3.22	-0.55	0.51	0.11	1.92	
Difference			1.71	2.24	2.68	3.69	4.41	3.17	2.62	4.37	3.60	
Real Estate												
Harrison Street Core Property (CF)	124,054,558	5.44	2.50	5.11	8.04	11.10	6.90	7.60	N/A	N/A	7.56	11/01/2015
NCREIF ODCE Index (AWA) (Net)			4.54	12.00	20.58	28.31	11.66	9.55	9.35	10.15	9.28	
Difference			-2.04	-6.89	-12.54	-17.21	-4.76	-1.95	N/A	N/A	-1.72	
PGIM Real Estate PRISA II (CF)	75,436,721	3.31	7.38	14.32	22.60	28.54	10.50	9.71	10.08	N/A	9.85	01/01/2015
NCREIF ODCE Index (AWA) (Net)			4.54	12.00	20.58	28.31	11.66	9.55	9.35	10.15	9.66	
Difference			2.84	2.32	2.02	0.23	-1.16	0.16	0.73	N/A	0.19	
Principal US Property (CF)	169,115,741	7.42	3.05	10.61	21.74	27.84	12.12	10.33	10.30	N/A	10.78	01/01/2014
NCREIF ODCE Index (AWA) (Net)			4.54	12.00	20.58	28.31	11.66	9.55	9.35	10.15	9.87	
Difference			-1.49	-1.39	1.16	-0.47	0.46	0.78	0.95	N/A	0.91	
UBS Trumbull Property (CF)	81,435,866	3.57	7.54	13.08	19.91	23.30	6.07	4.80	5.41	6.72	5.45	12/01/2005
NCREIF ODCE Index (AWA) (Net)			4.54	12.00	20.58	28.31	11.66	9.55	9.35	10.15	7.17	
Difference			3.00	1.08	-0.67	-5.01	-5.59	-4.75	-3.94	-3.43	-1.72	
Vanguard RE Idx;ETF (VNQ)	1,223,622	0.05	-15.40	-20.54	-8.62	-8.05	4.79	5.57	6.91	7.33	12.00	12/01/2008
Custom REITs Index			-15.43	-20.47	-8.59	-7.94	4.88	6.11	7.31	7.73	12.75	
Difference			0.03	-0.07	-0.03	-0.11	-0.09	-0.54	-0.40	-0.40	-0.75	
H.I.G. Realty Fund IV	4,430,398	0.19	60.74	N/A	N/A	N/A	N/A	N/A	N/A	N/A	60.74	04/01/2022
NCREIF ODCE Index (AWA) (Net) (Monthly)+2%			5.06	13.12	22.38	30.87	13.90	11.74	11.53	12.36	5.06	
Difference			55.68	N/A	N/A	N/A	N/A	N/A	N/A	N/A	55.68	

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.



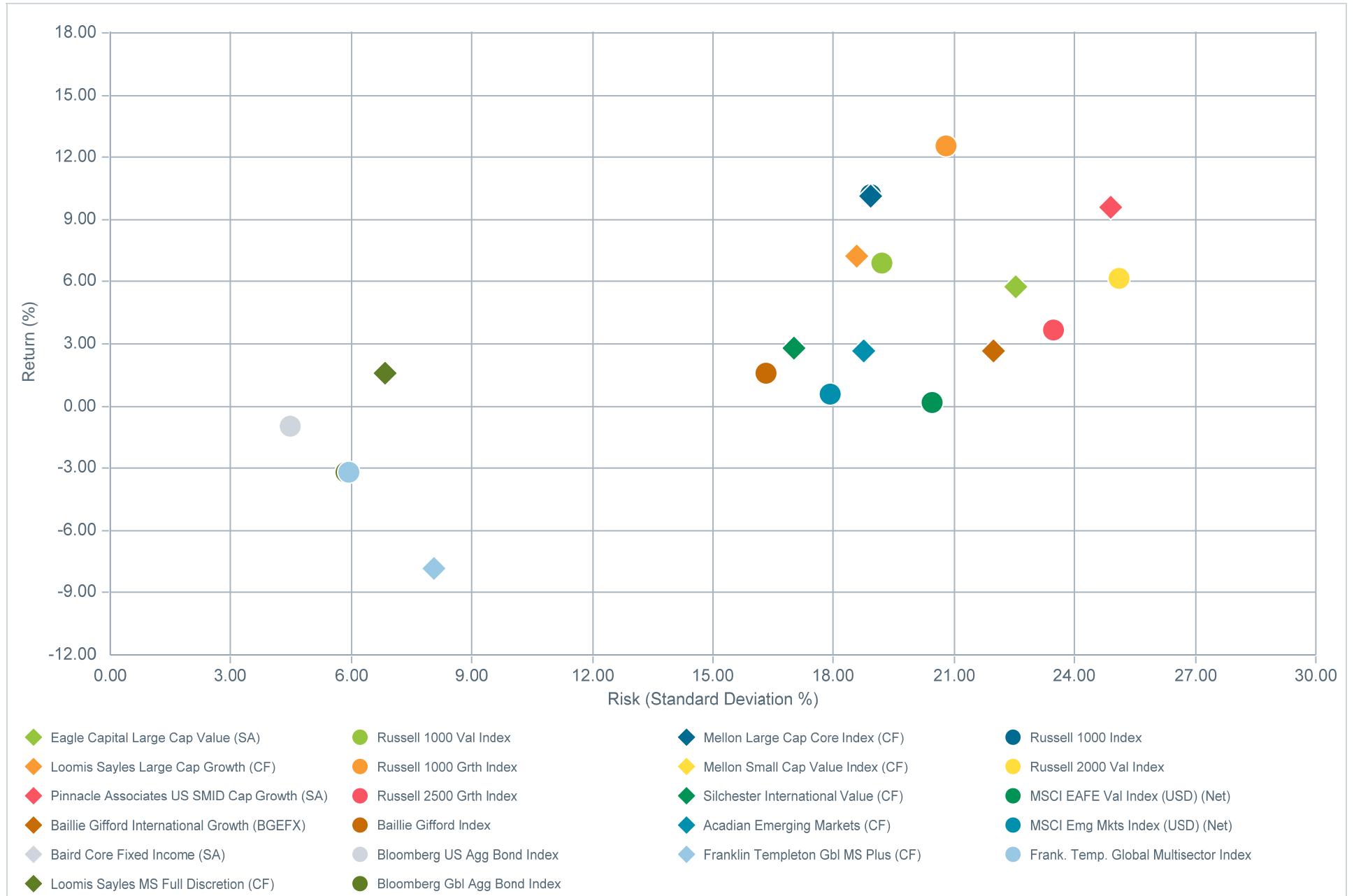
City of Jacksonville Employees' Retirement System
 Asset Allocation & Performance (Net of Fees)

As of June 30, 2022

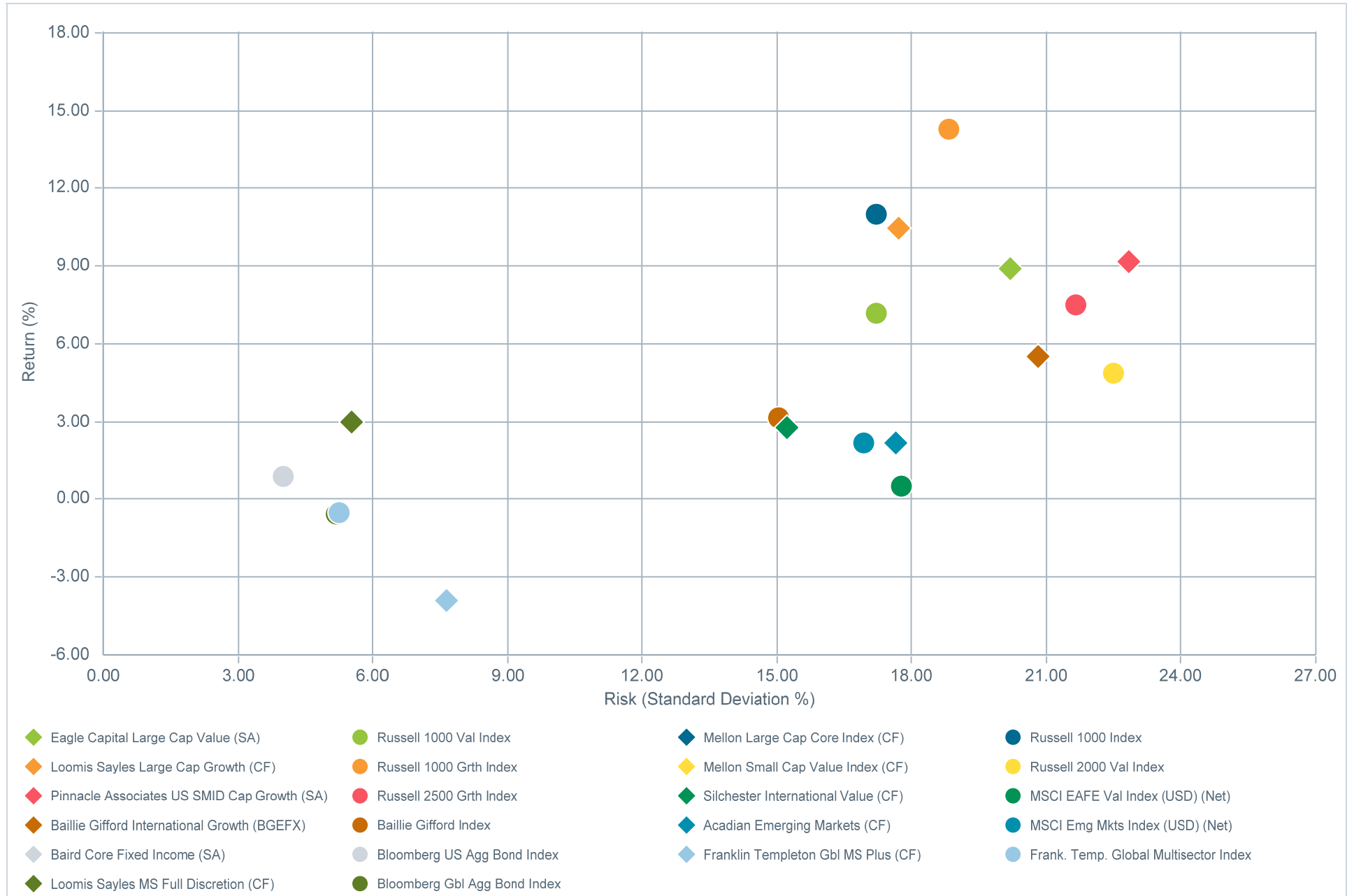
	Allocation		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Diversifying Assets												
Hancock Timberland (SA)	16,022,129	0.70	37.19	37.19	42.52	55.69	22.77	15.88	12.34	11.49	6.82	10/01/2006
NCREIF Timberland Index			1.87	5.13	9.93	12.01	5.03	4.32	4.05	5.73	5.58	
Difference			35.32	32.06	32.59	43.68	17.74	11.56	8.29	5.76	1.24	
Adams Street Private Equity (SA)	44,718,790	1.96	8.48	25.84	55.56	80.84	N/A	N/A	N/A	N/A	42.68	11/01/2020
S&P 500 Index+3%			-15.48	-18.77	-9.14	-7.93	13.92	14.65	14.48	16.35	14.15	
Difference			23.96	44.61	64.70	88.77	N/A	N/A	N/A	N/A	28.53	
Hamilton Lane Private Credit (SA)	21,057,514	0.92	3.58	3.66	5.33	5.34	N/A	N/A	N/A	N/A	-4.17	04/01/2021
ICE BofAML Gbl Hi Yld Index +2%			-10.97	-15.91	-16.13	-16.00	0.14	2.78	4.61	5.85	-10.89	
Difference			14.55	19.57	21.46	21.34	N/A	N/A	N/A	N/A	6.72	
Dreyfus Gvt Csh Mgt;Inst (DGCXX)	3,111,581	0.14	0.17	0.25	0.35	0.54	0.68	1.15	0.93	0.68	1.31	04/01/2001
FTSE 3 Mo T-Bill Index			0.14	0.17	0.18	0.19	0.61	1.09	0.86	0.62	1.29	
Difference			0.03	0.08	0.17	0.35	0.07	0.06	0.07	0.06	0.02	

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

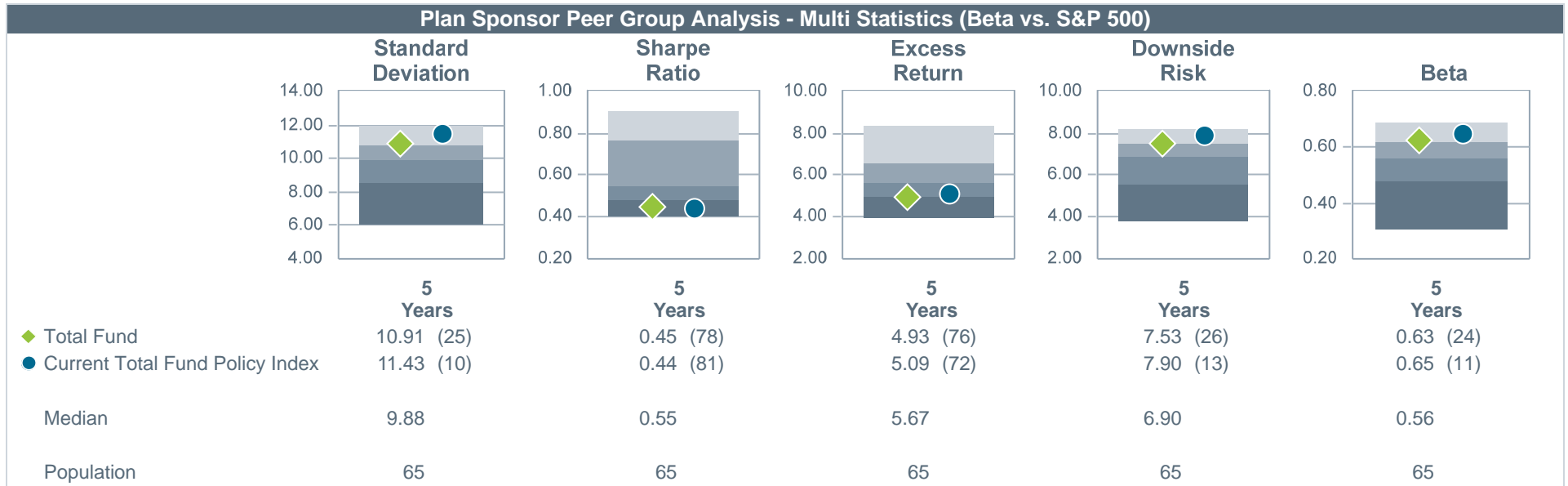
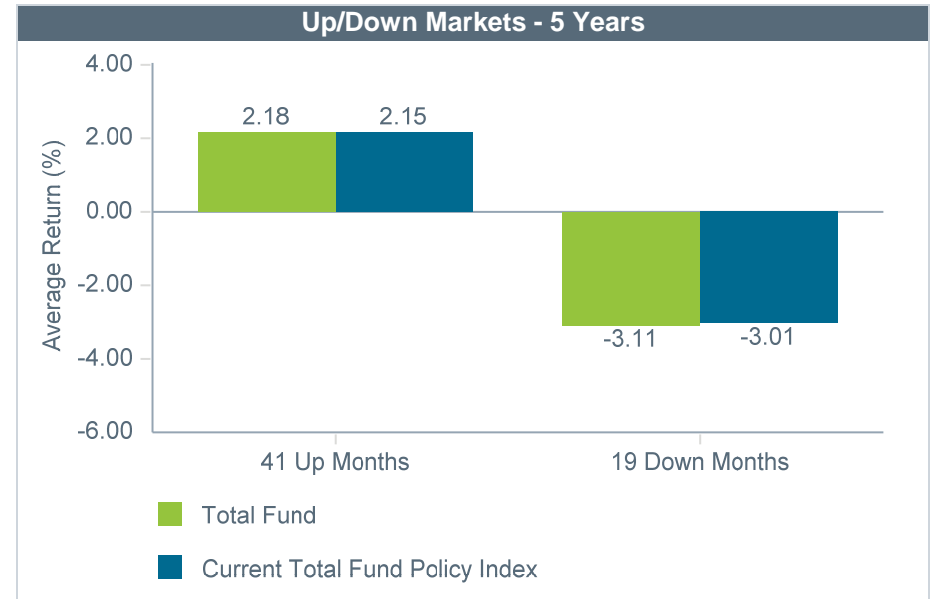
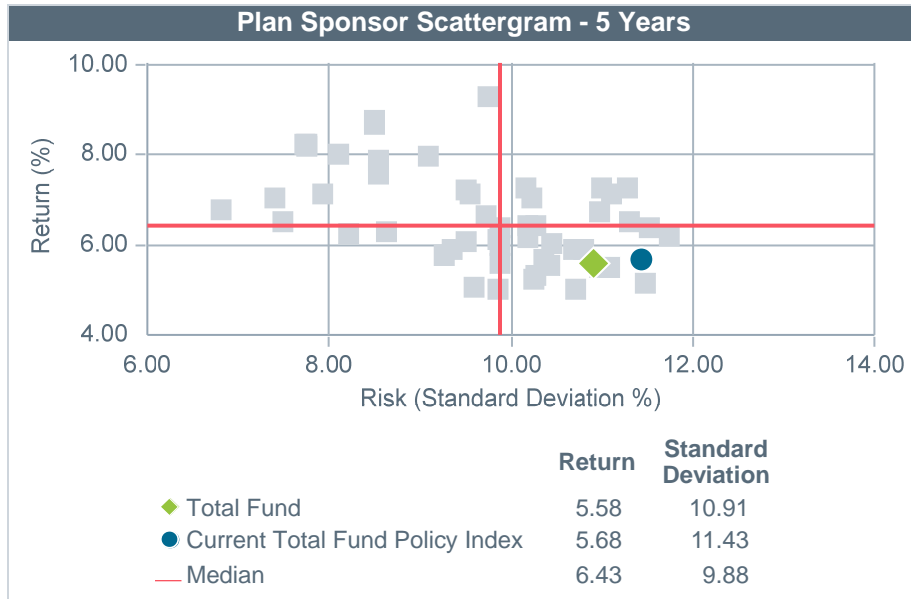




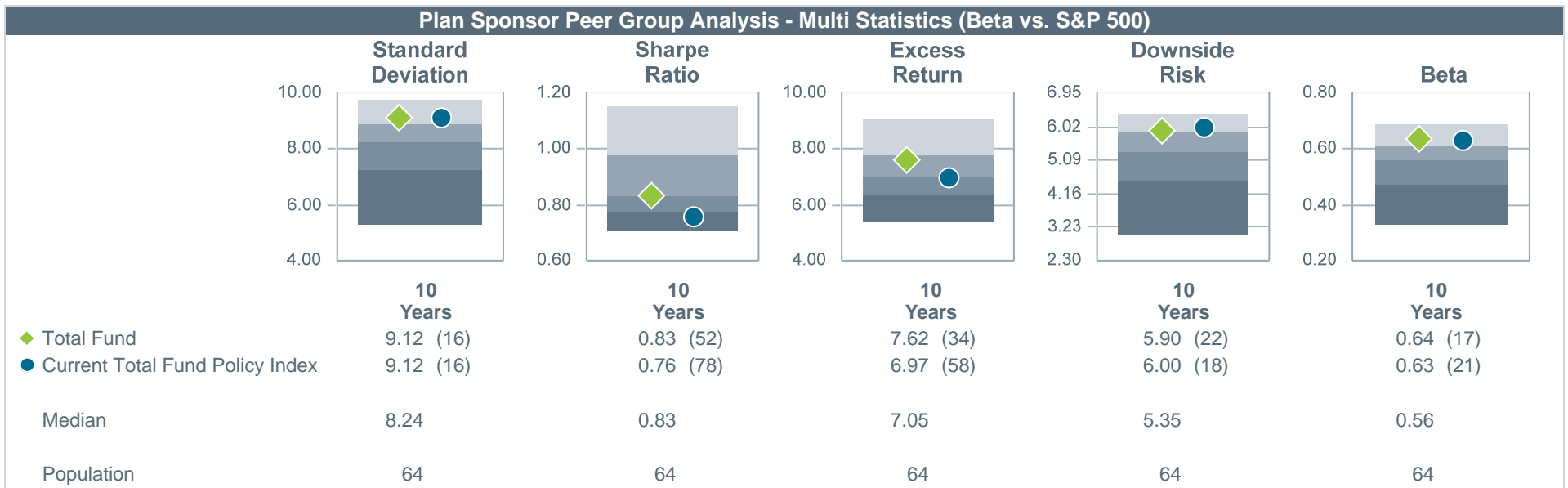
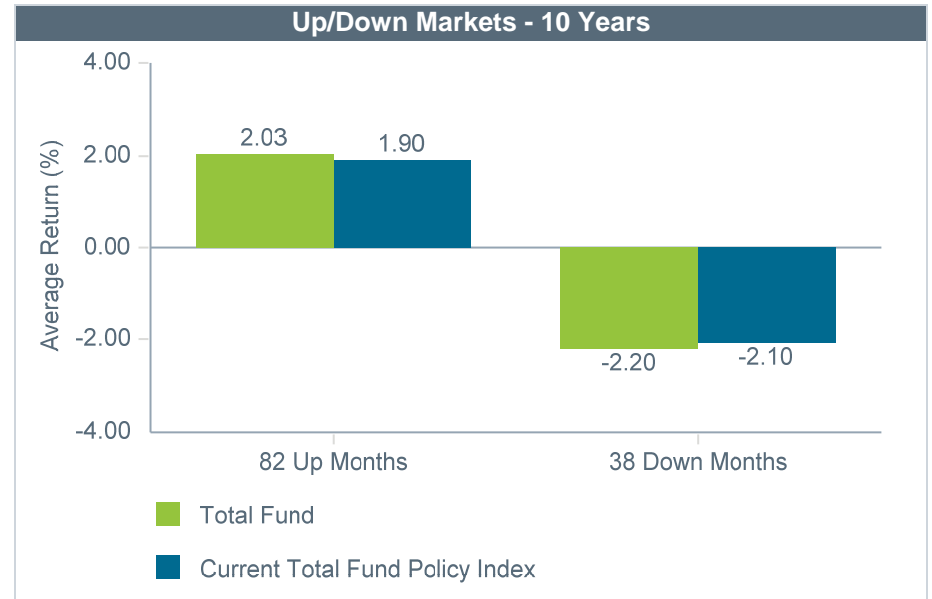
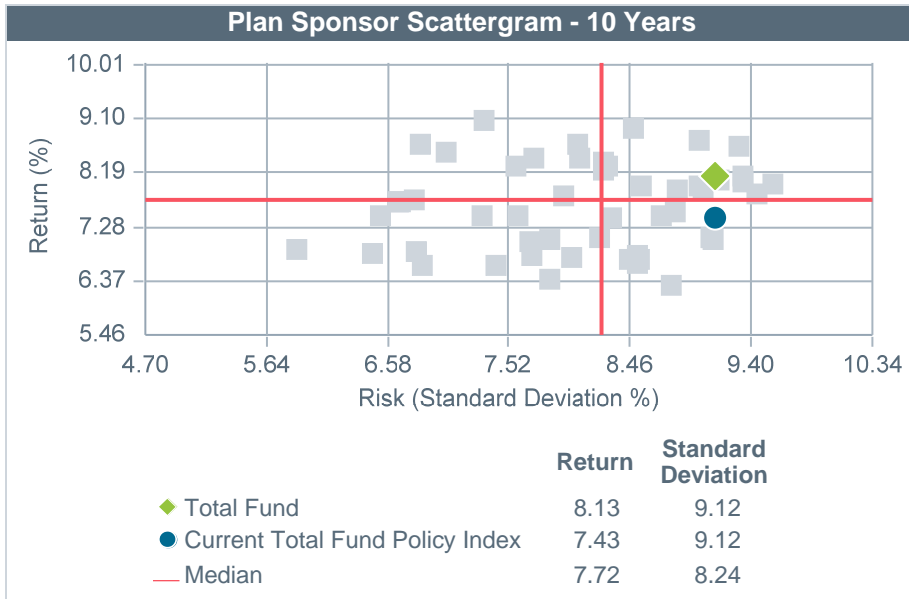
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Managers with less history than the specified time period will not appear. Please see the Addendum for custom index definitions.



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.



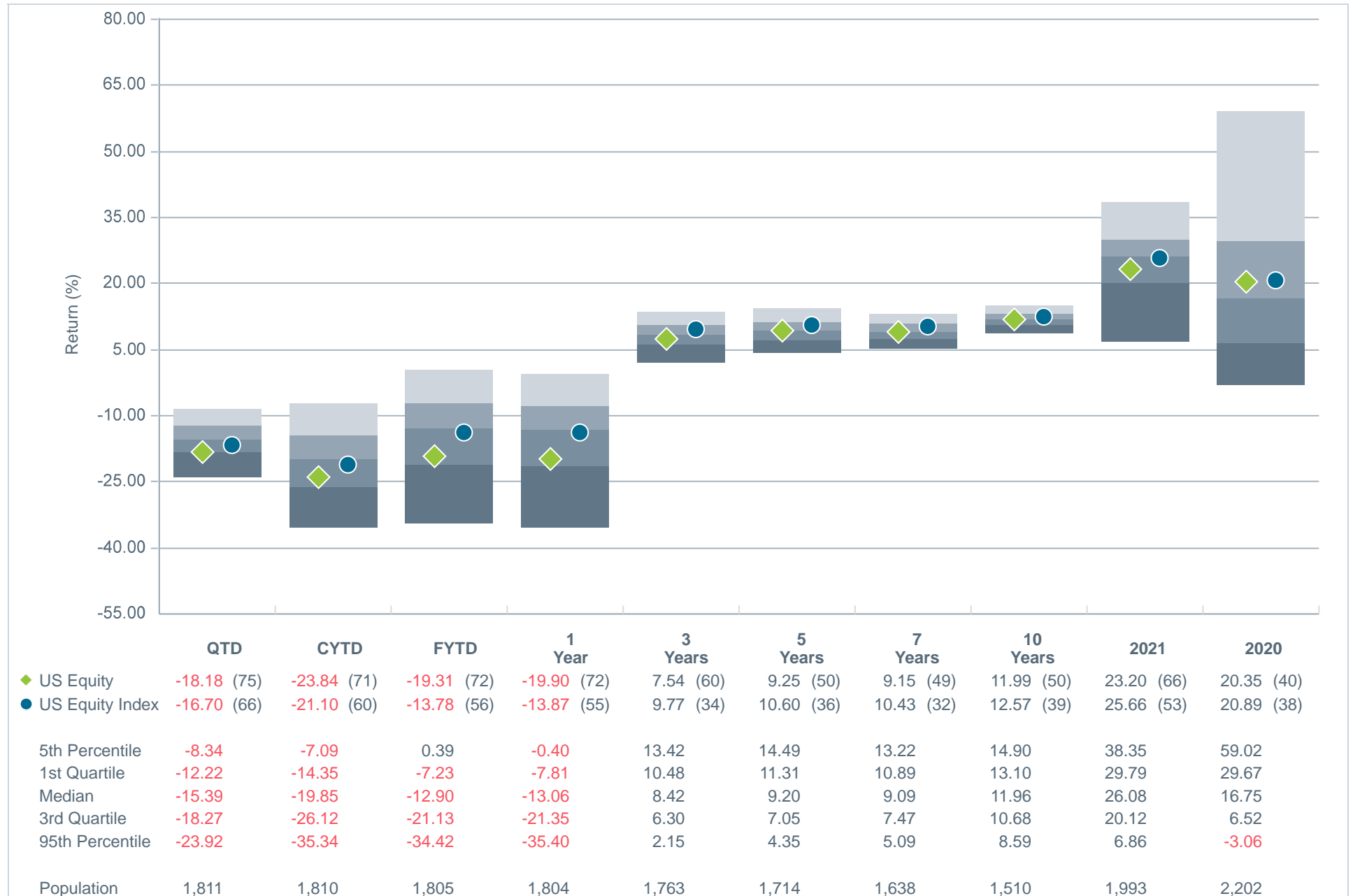
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Composite Profiles



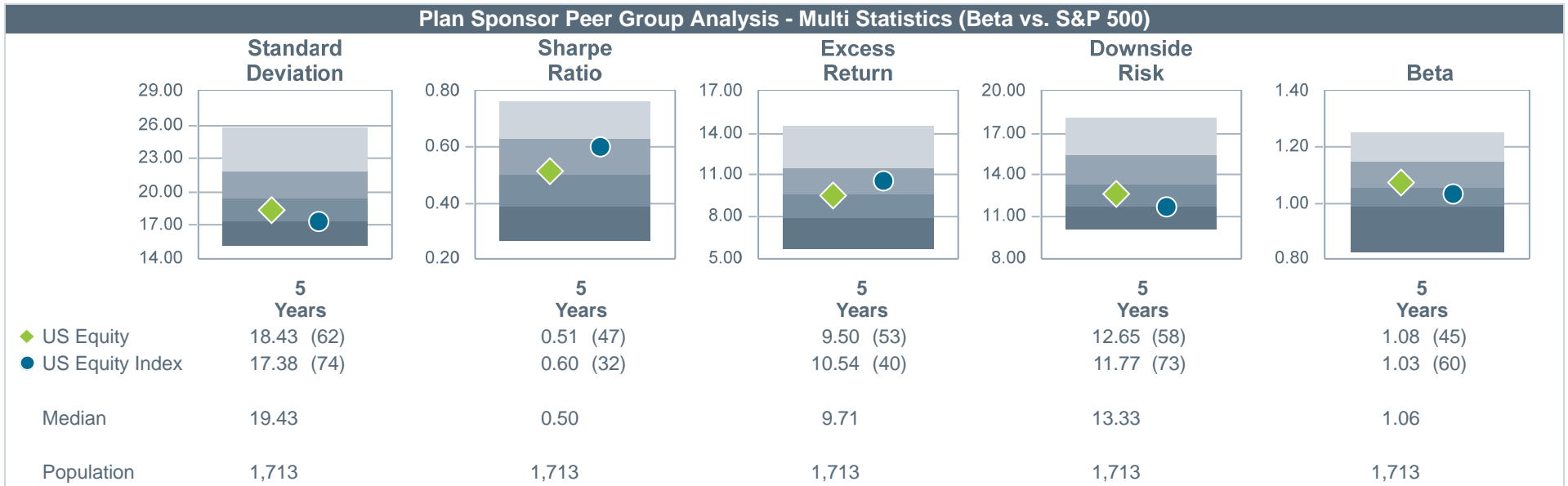
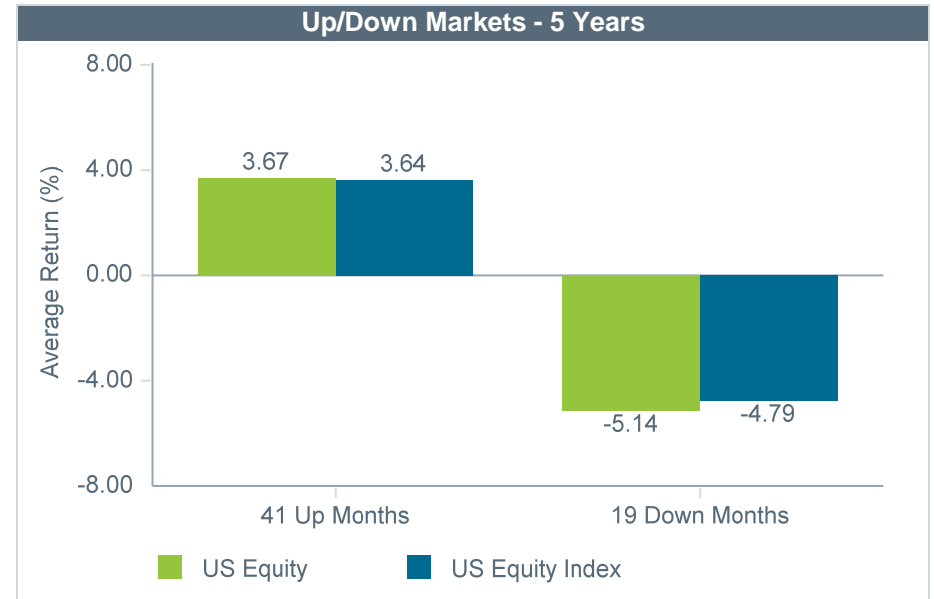
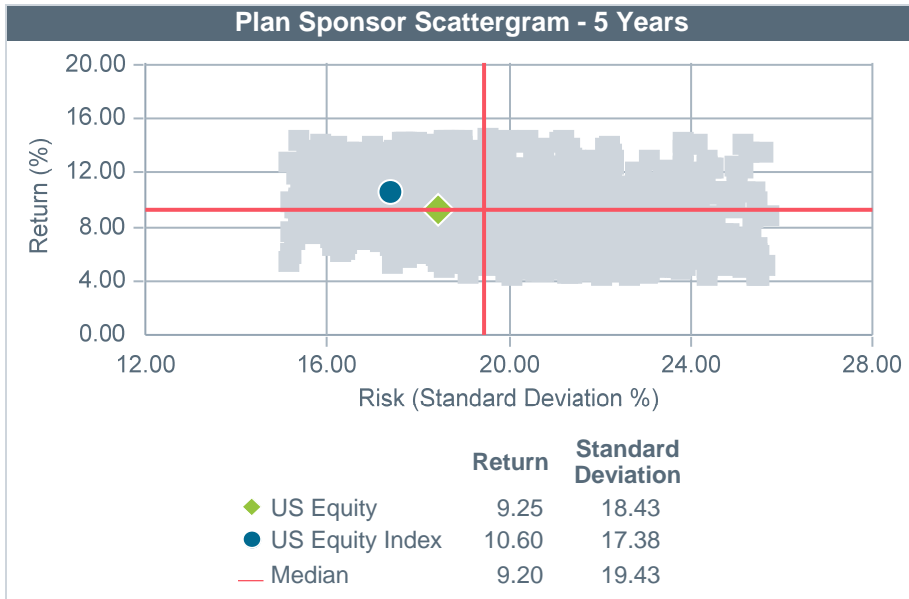
City of Jacksonville Employees' Retirement System
 US Equity vs. IM U.S. Equity (SA+CF)
 Peer Group Analysis

As of June 30, 2022



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





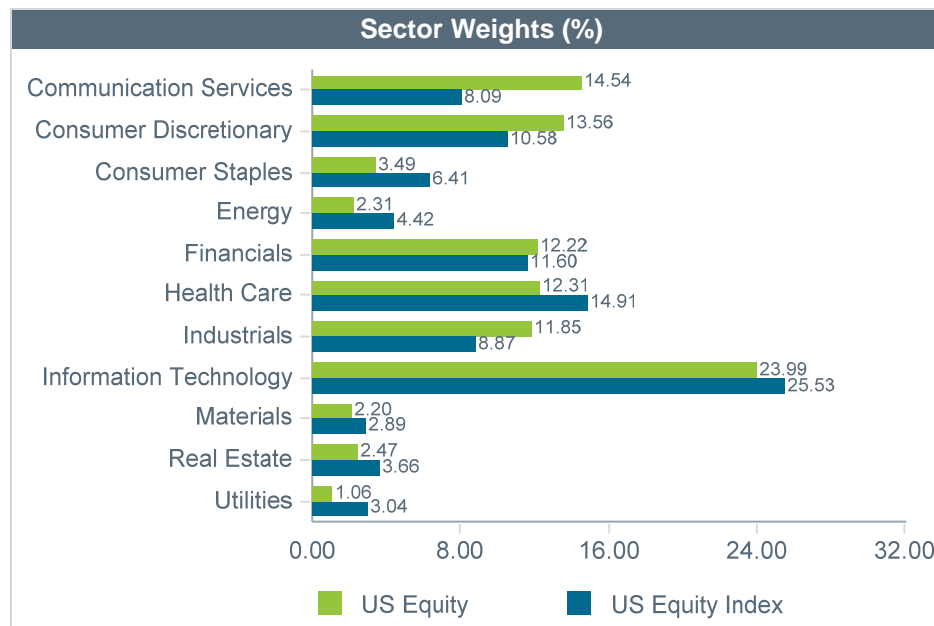
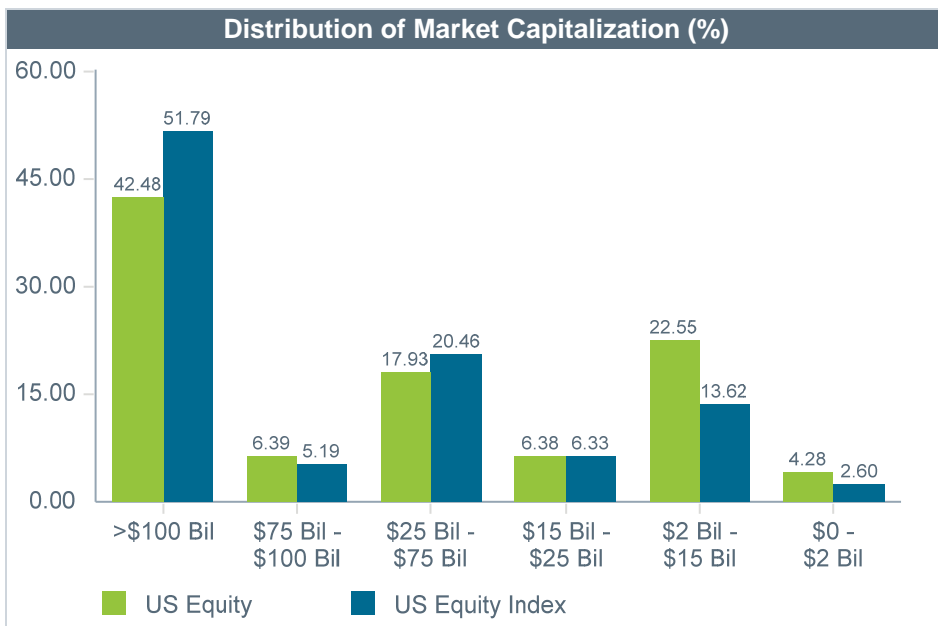
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

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

As of June 30, 2022

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	5.00	5.11	-0.11	-16.49
Alphabet Inc	3.29	1.60	1.69	-21.68
Amazon.com Inc	3.28	2.51	0.77	-34.84
Meta Platforms Inc	2.39	0.98	1.41	-27.48
Unitedhealth Group Inc	1.94	1.28	0.66	1.08
Visa Inc	1.85	0.86	0.99	-11.05
Apple Inc	1.82	5.56	-3.74	-21.59
Netflix Inc	1.52	0.20	1.32	-53.32
Alphabet Inc	1.35	1.74	-0.39	-21.65
Marriott International Inc	1.26	0.10	1.16	-22.47
% of Portfolio	23.70	19.94	3.76	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	325,477	406,574
Median Mkt. Cap (\$M)	10,050	1,913
Price/Earnings Ratio	16.52	17.73
Price/Book Ratio	3.43	3.68
5 Yr. EPS Growth Rate (%)	21.02	19.09
Current Yield (%)	1.24	1.66
Beta (5 Years, Monthly)	1.05	1.00
Number of Securities	1,197	3,011
Active Share	51.70	N/A



The Top ten Domestic Equity Holdings included NVIDIA Corporation (1.79%) in Q1 2022 which was replaced by Marriott International Inc in Q2 2022. Alphabet Inc. is shown twice in the Top Ten Equity Holdings but represents two different share classes: GOOGL (Class A) and GOOG (Class C).



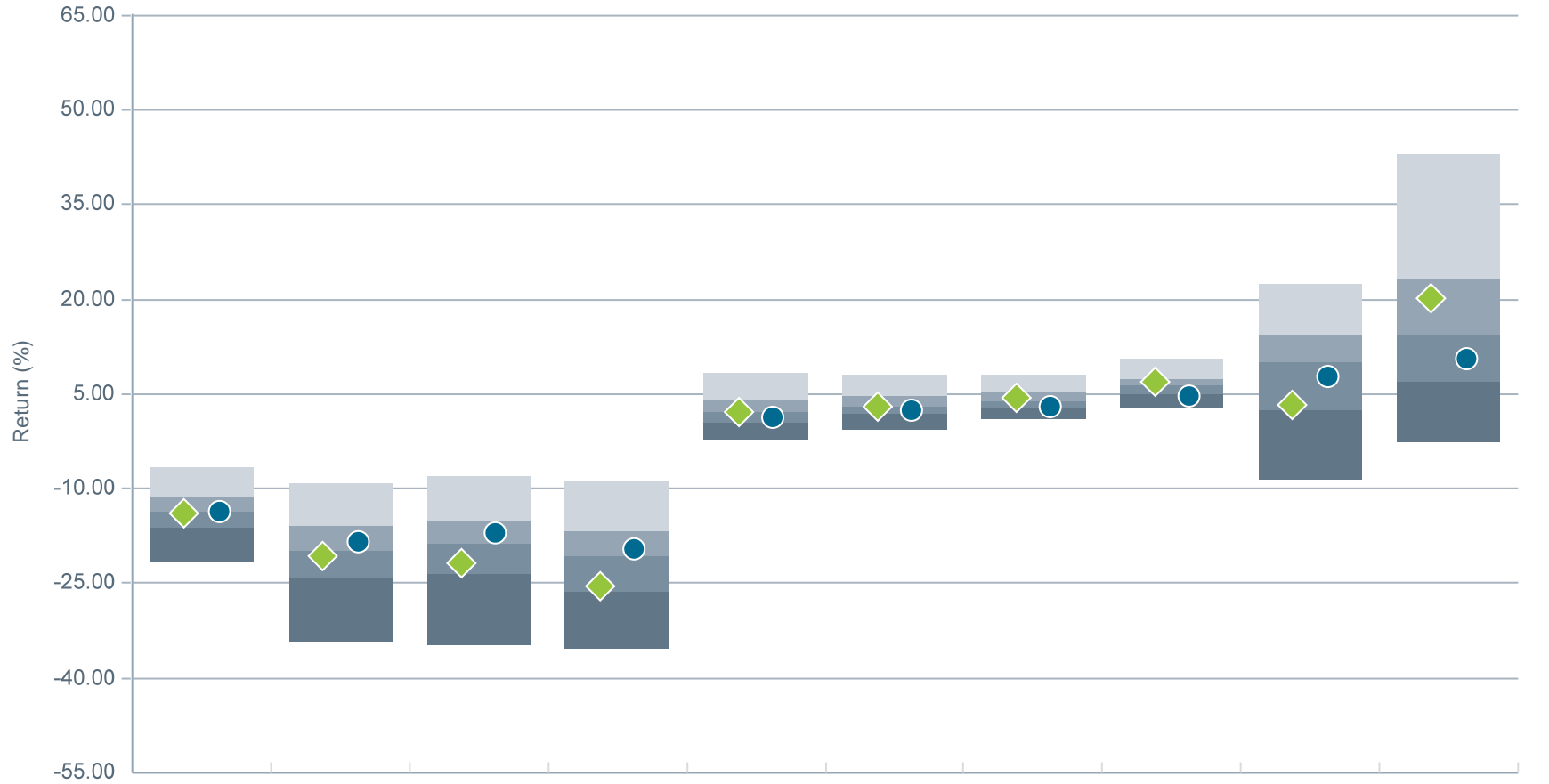
Style Map with History (12 Months)



Calculation is based on monthly periodicity. This is a return based calculation. Performance prior to manager inception date is backfilled with product specific returns.

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

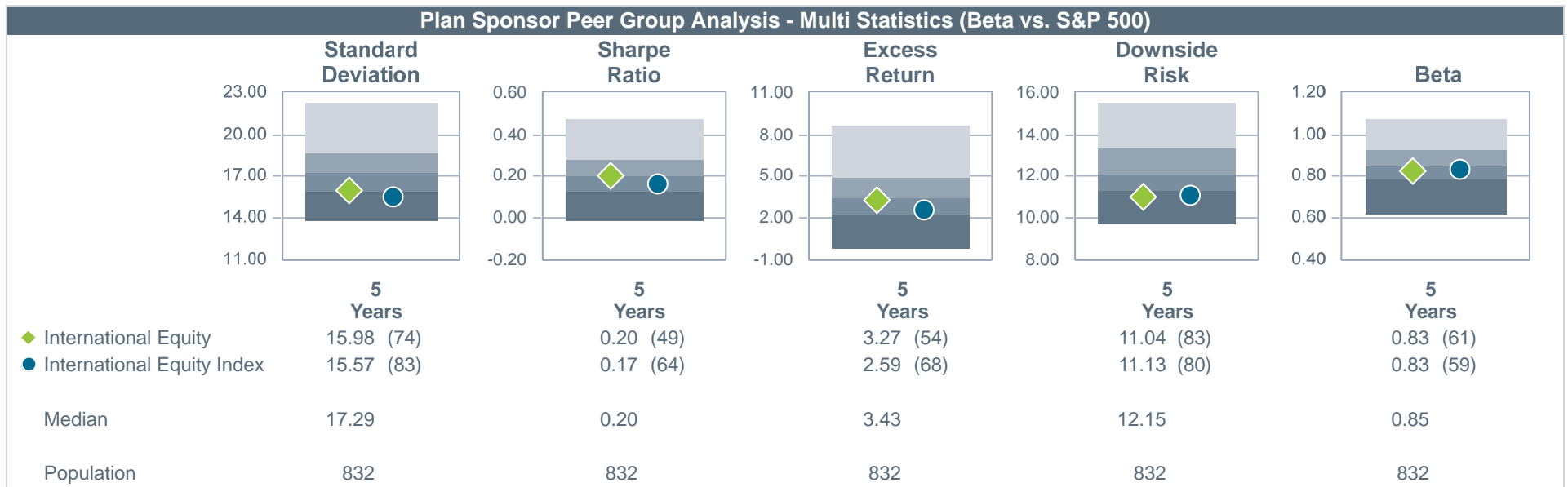
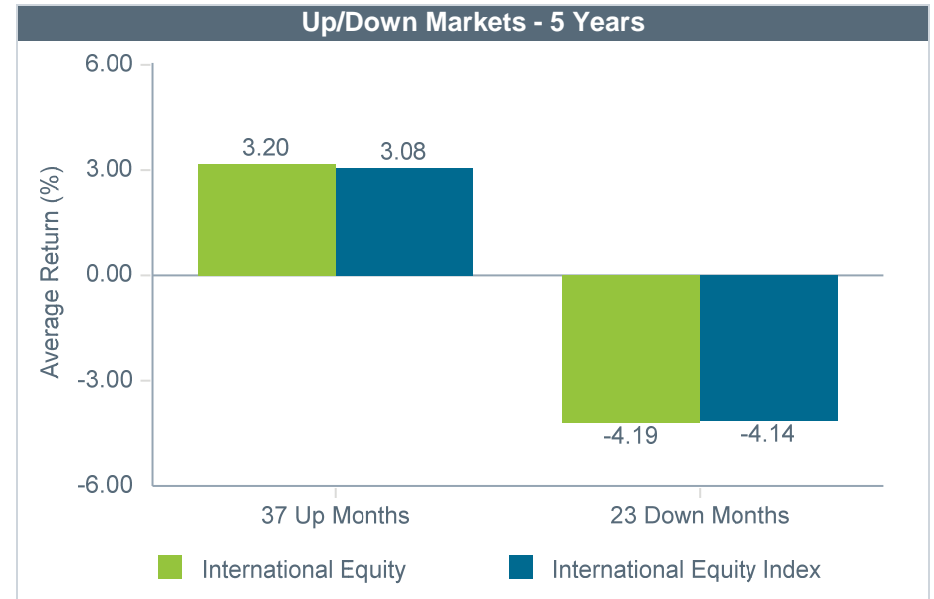
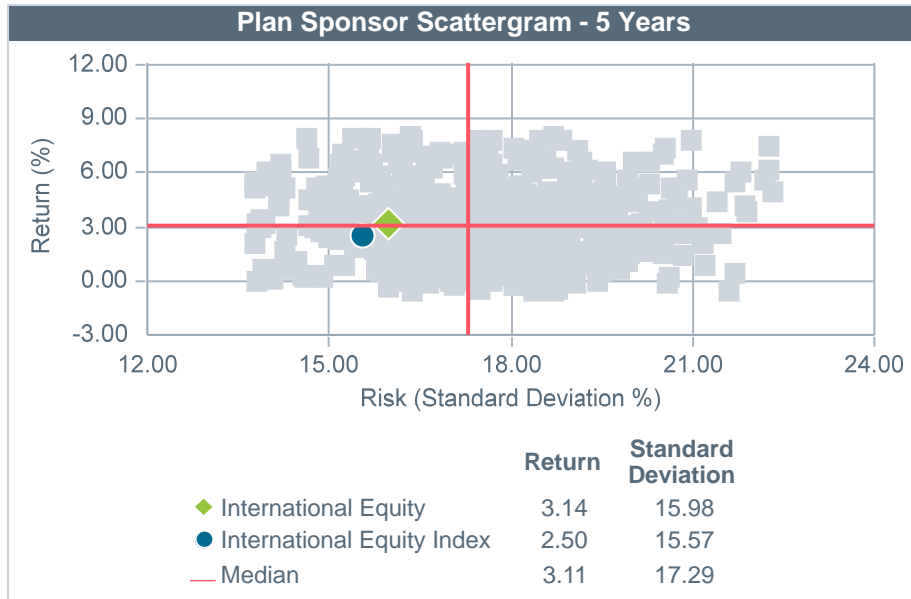
As of June 30, 2022



	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020
◆ International Equity	-13.97 (53)	-20.65 (57)	-21.73 (68)	-25.41 (72)	2.29 (50)	3.14 (50)	4.31 (40)	7.00 (35)	3.25 (74)	20.20 (32)
● International Equity Index	-13.73 (51)	-18.42 (42)	-16.94 (40)	-19.42 (43)	1.35 (64)	2.50 (63)	2.92 (75)	4.83 (78)	7.82 (60)	10.65 (62)
5th Percentile	-6.64	-9.08	-7.92	-8.88	8.51	8.04	7.96	10.54	22.57	43.08
1st Quartile	-11.32	-15.73	-14.96	-16.60	4.07	4.59	5.22	7.54	14.22	23.29
Median	-13.68	-19.71	-18.55	-20.76	2.23	3.11	3.86	6.31	10.00	14.32
3rd Quartile	-16.07	-24.12	-23.45	-26.37	0.61	1.82	2.88	5.02	2.56	6.85
95th Percentile	-21.55	-34.26	-34.65	-35.29	-2.33	-0.60	0.99	2.83	-8.64	-2.54
Population	936	934	928	928	888	832	780	663	1,004	1,098

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





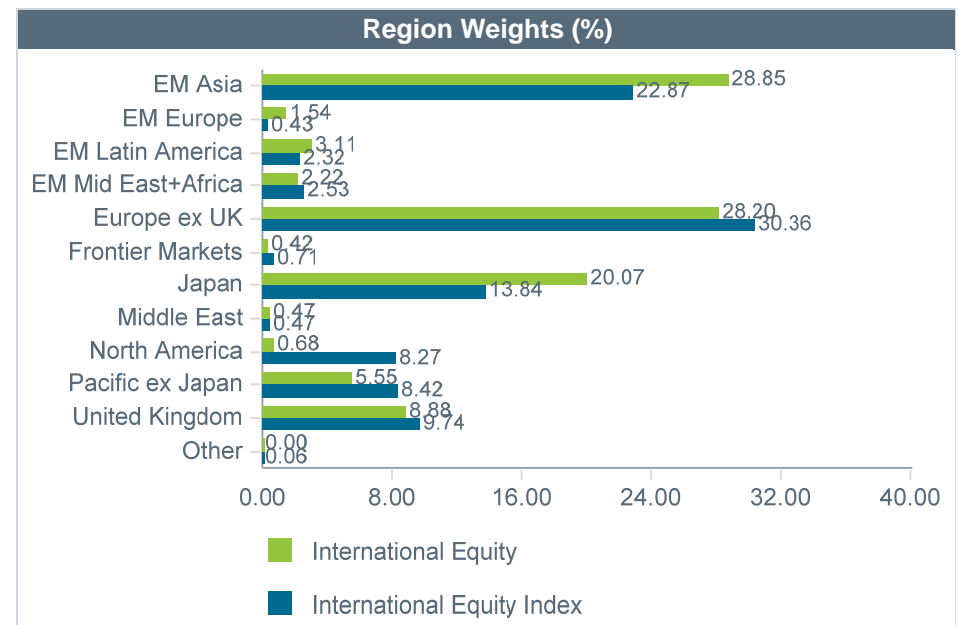
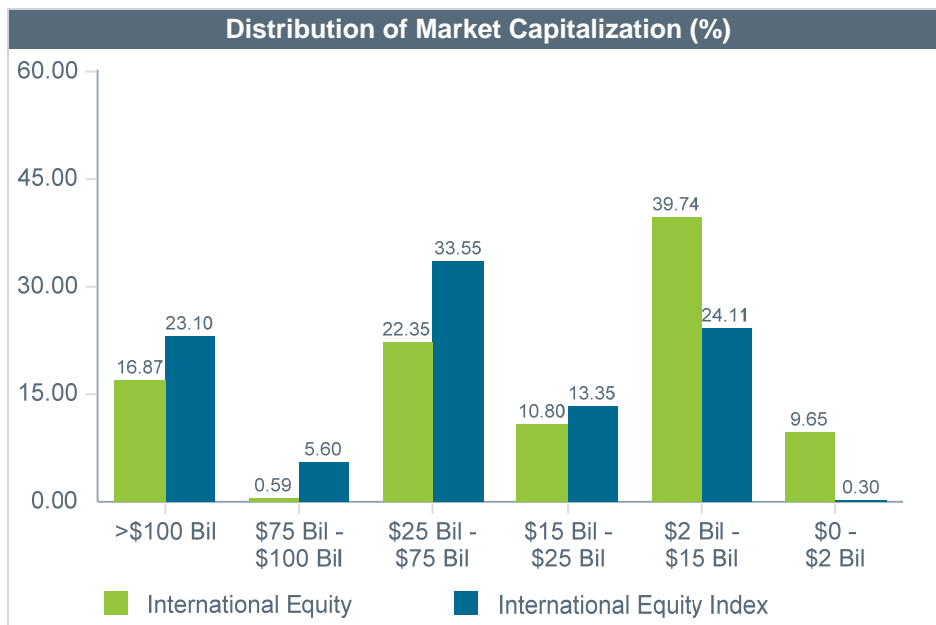
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

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

As of June 30, 2022

Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Tencent Holdings LTD	2.05	1.29	0.76	-5.05
Taiwan Semiconductor Mfg	1.99	1.80	0.19	-22.83
ASML Holding NV	1.84	0.88	0.96	-29.20
Honda Motor Co Ltd	1.60	0.18	1.42	-15.61
Meituan	1.53	0.46	1.07	24.56
Alibaba Group Holding Ltd	1.53	0.99	0.54	-0.38
Ferrari NV	1.46	0.11	1.35	-16.48
Sanofi	1.39	0.52	0.87	1.91
GSK plc	1.37	0.50	0.87	-0.12
Kering	1.36	0.17	1.19	-18.50
% of Portfolio	16.12	6.90	9.22	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	55,557	76,934
Median Mkt. Cap (\$M)	1,267	8,474
Price/Earnings Ratio	8.84	11.90
Price/Book Ratio	2.72	2.39
5 Yr. EPS Growth Rate (%)	13.93	14.76
Current Yield (%)	4.12	3.45
Beta (5 Years, Monthly)	1.00	1.00
Number of Securities	868	2,269
Active Share	80.72	N/A



The Top Ten International Equity Holdings included Glaxosmithkline PLC (1.37%), Adyen N.V. (1.43%), and Honda Motor Co Ltd (1.61%) in Q1 2022 which was replaced by Alibaba Group Holding Ltd, Meituan, and GSK plc in Q2 2022.



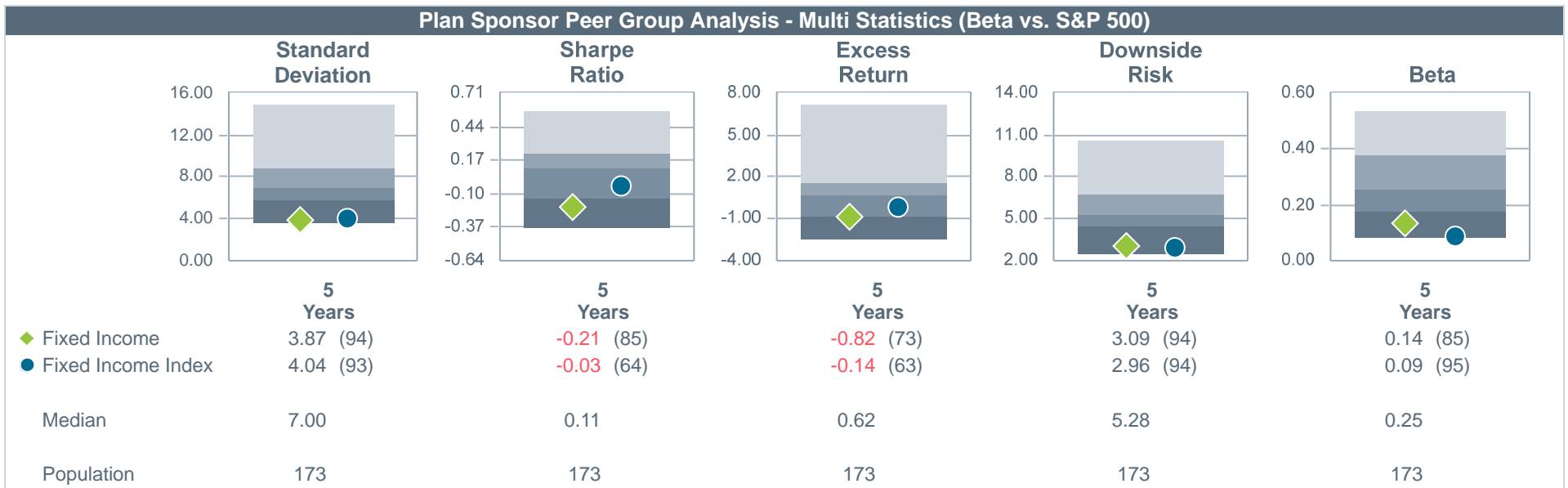
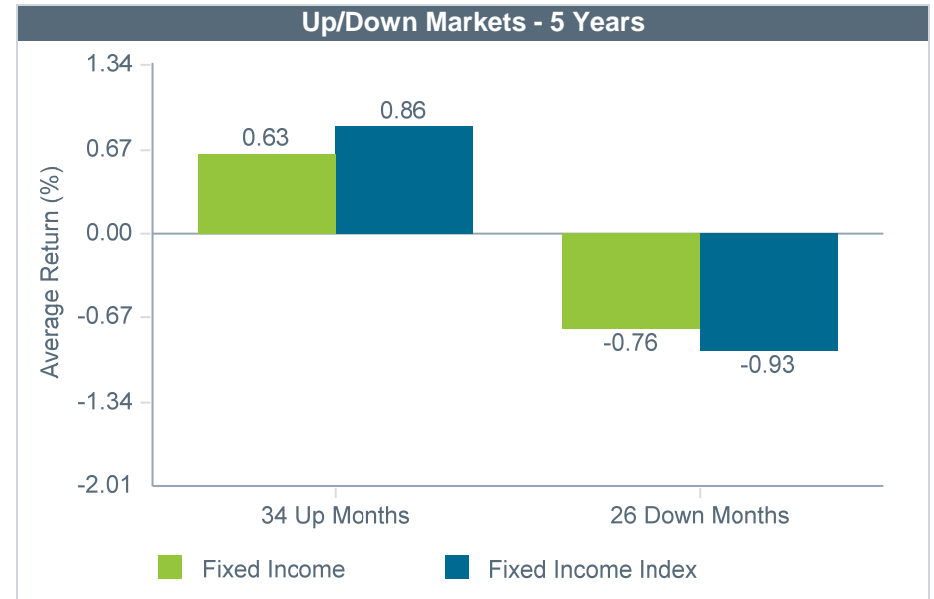
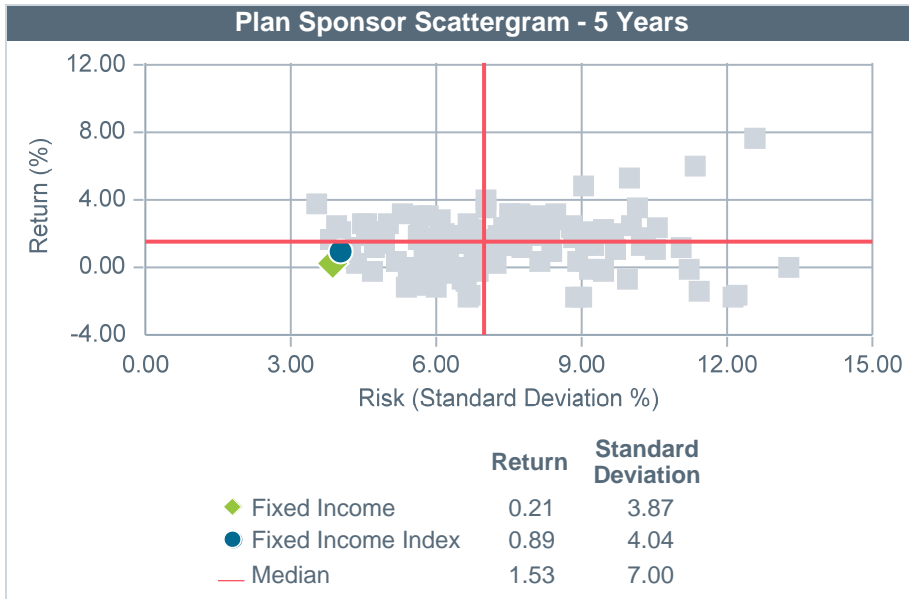
City of Jacksonville Employees' Retirement System
 Fixed Income vs. IM Global Fixed Income (SA+CF)
 Peer Group Analysis

As of June 30, 2022



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



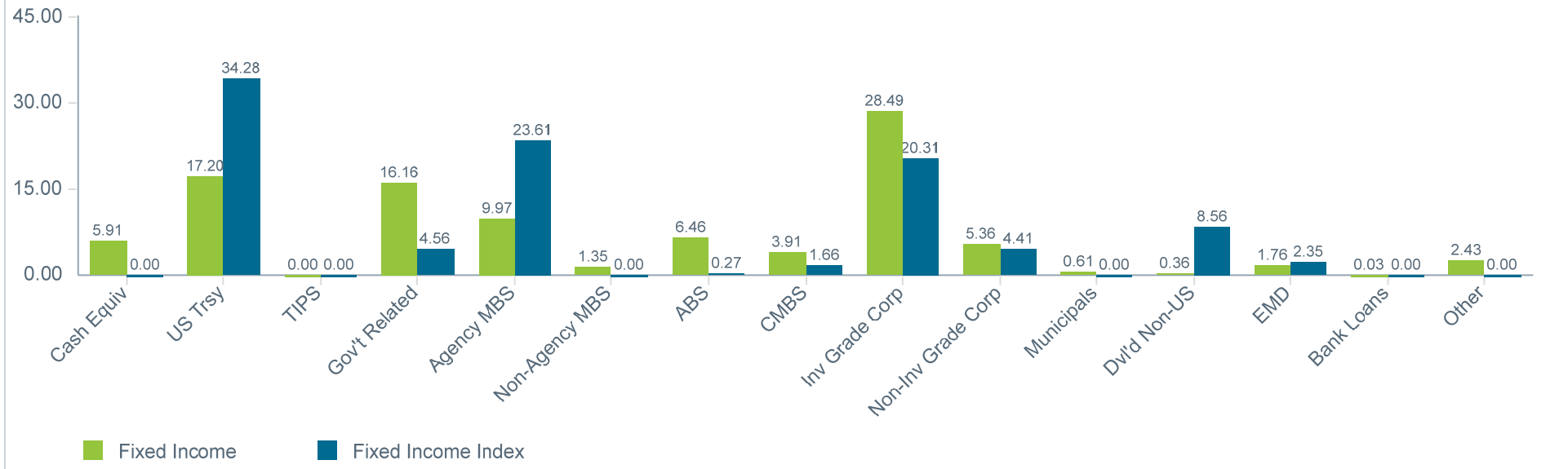


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	4.91	6.22
Avg. Maturity	6.49	8.45
Avg. Quality	Ba1	N/A
Yield To Maturity (%)	N/A	4.21
Coupon Rate (%)	3.25	2.79
Current Yield (%)	1.90	N/A

Sector Distribution (%)

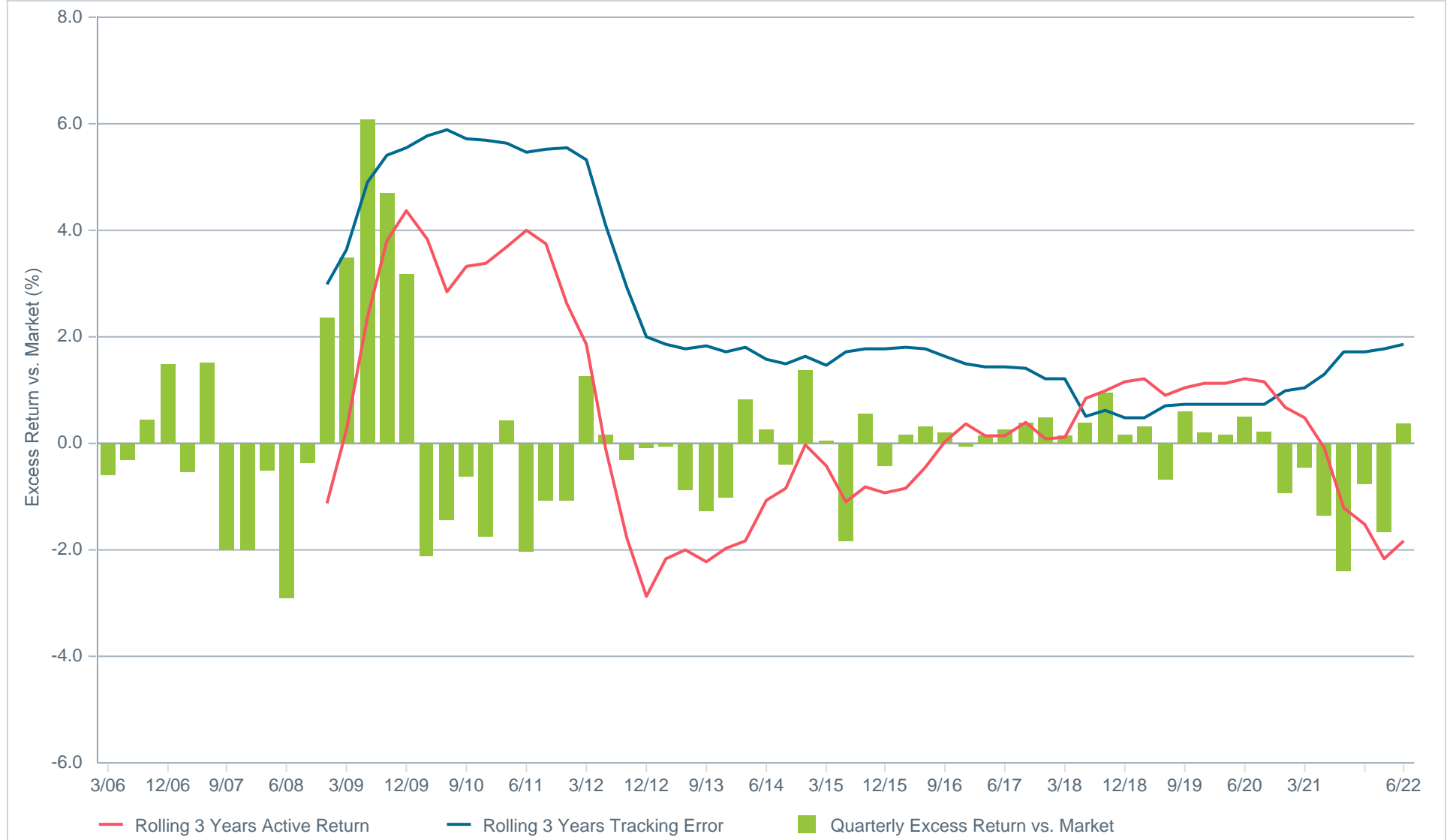


Cash equivalents are defined as any security with duration under one year.

City of Jacksonville Employees' Retirement System
 Real Estate vs. Real Estate Index
 Comparative Performance & Rolling Return

As of June 30, 2022

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Real Estate	4.91	10.67	18.30	23.06	9.76	8.88	9.04	9.59	15.43	0.31	4.85	7.02	12/01/2005
Real Estate Index	4.54	12.01	20.58	28.32	11.66	9.55	9.35	10.16	21.02	0.34	4.39	7.17	
Difference	0.37	-1.34	-2.28	-5.26	-1.90	-0.67	-0.31	-0.57	-5.59	-0.03	0.46	-0.15	



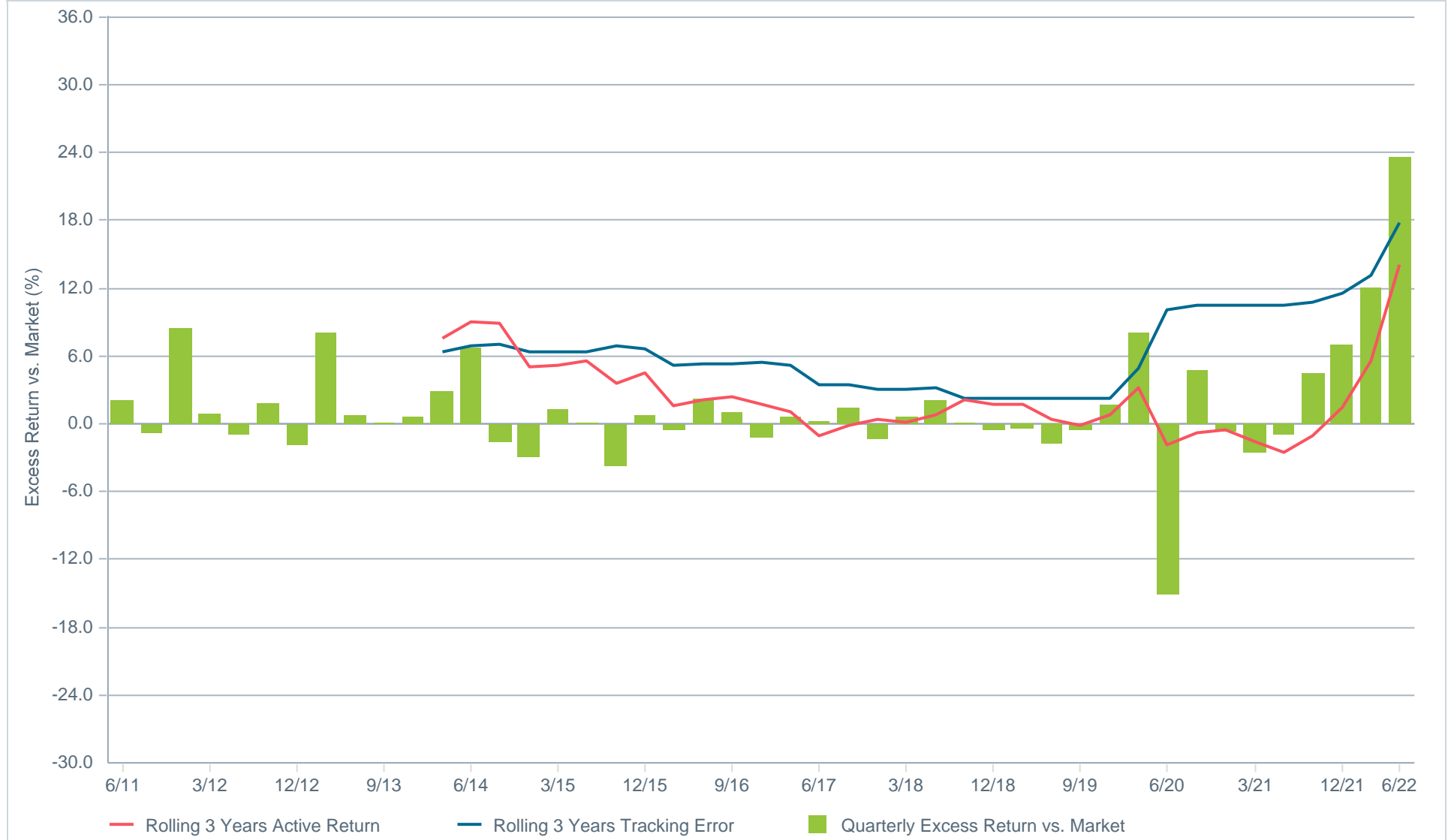
Performance shown is gross of fees. Calculation is based on quarterly periodicity.



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

As of June 30, 2022

	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Diversifying Assets	12.45	22.81	39.61	43.97	14.40	9.52	5.89	8.81	47.46	-14.35	6.21	9.08	03/01/2011
Diversifying Assets Index	-11.23	-13.72	-7.94	-9.24	-2.87	-0.73	-1.12	2.24	36.38	-18.40	7.29	2.42	
Difference	23.68	36.53	47.55	53.21	17.27	10.25	7.01	6.57	11.08	4.05	-1.08	6.66	



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



City of Jacksonville Employees' Retirement System
 Alternative Investment Real Estate Fund Performance Listing

As of March 31, 2022

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
H.I.G. Realty Partners IV, LP	2021	Real Estate - Opportunistic	25,000,000	4,184,814	1,728,711	4,430,137	N/M	N/A	N/M	1.47
Hammes Partners IV LP	2021	Real Estate - Value Added	15,000,000	0	0	0 *	N/M	N/A	N/M	
			40,000,000	4,184,814	1,728,711	4,430,137				1.47

Certain valuations (marked with a **) are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the NCREIF ODCE Index (AWA) (Net) (Monthly)+2% assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Preqin.



City of Jacksonville Employees' Retirement System
 Alternative Investment Private Equity Fund Performance Listing

As of March 31, 2022

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
ASP COJ PE Fund LP	2020	Private Equity - Fund of Funds	105,000,000	24,342,892	2,939,720	35,253,975	67.81	N/A	22.60	1.57
			105,000,000	24,342,892	2,939,720	35,253,975	67.81		22.60	1.57

Certain valuations (marked with a **) are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the S&P 500 Index (CW)+3% assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Prequin.



City of Jacksonville Employees' Retirement System
 Alternative Investment Private Credit Fund Performance Listing

As of March 31, 2022

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Hamilton Lane Private Credit (SA)	2021	Private Credit - Direct Investment	250,000,000	15,582,056	817,968	16,204,565	19.59	N/A	N/M	1.09
			250,000,000	15,582,056	817,968	16,204,565	19.59			1.09

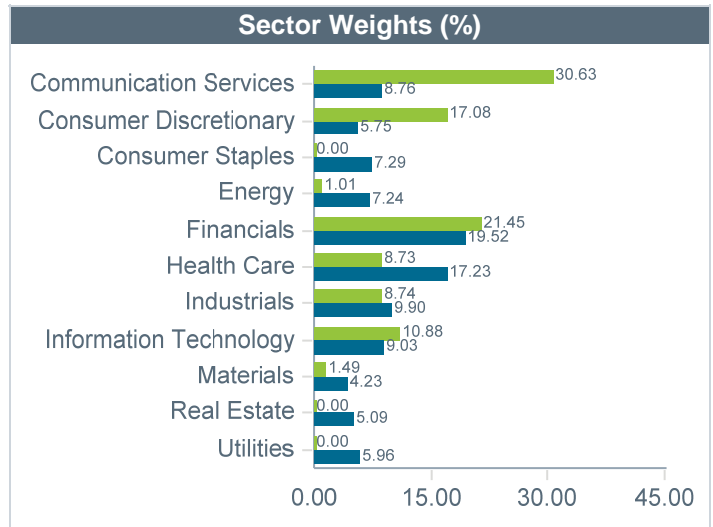
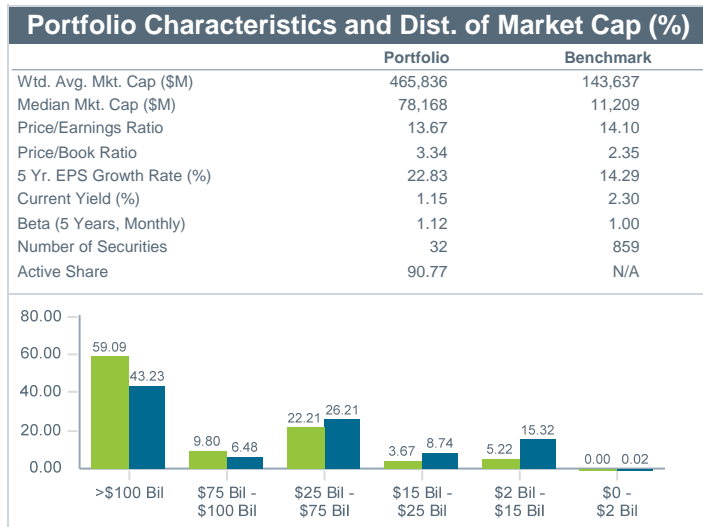
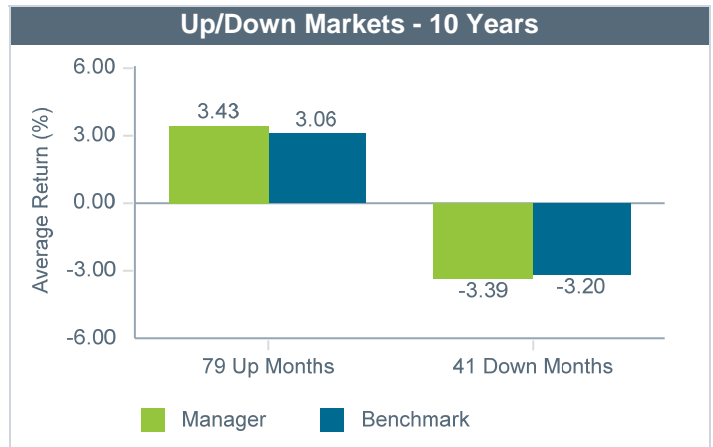
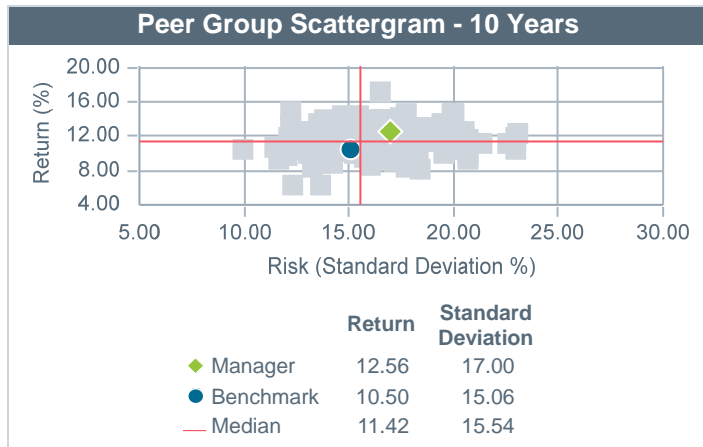
Certain valuations (marked with a **) are preliminary estimates of valuation as of the date of reporting and reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Index IRR represents the dollar-weighted returns calculated using the ICE BofAML Global High Yield Index +2% assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Fund Multiple is the since inception sum of distributions and valuation divided by paid in capital. Quartile data is based on information provided by Preqin. Total commitment amount reflects target account size over a 5-year horizon, approximately \$50M/year, not to exceed \$65M/year.



Investment Manager Profiles



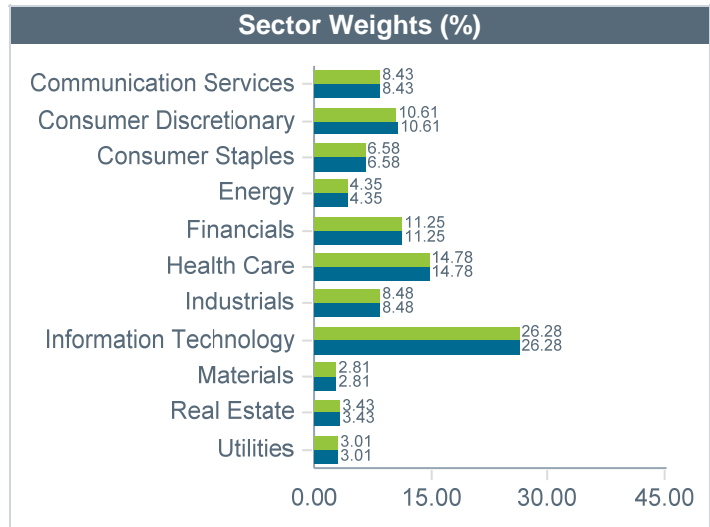
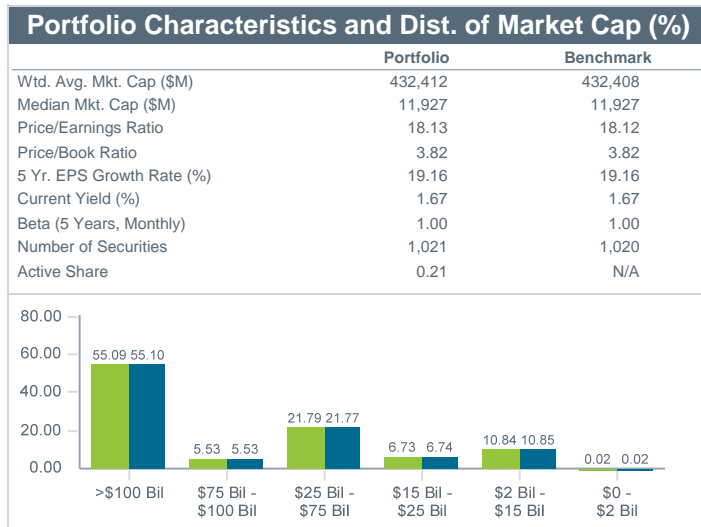
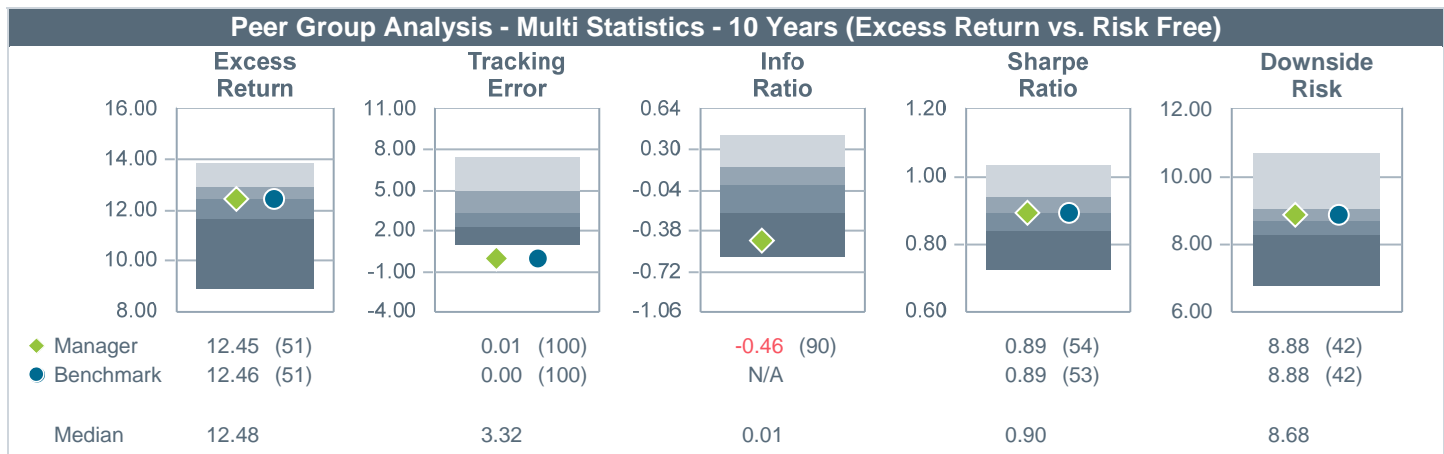
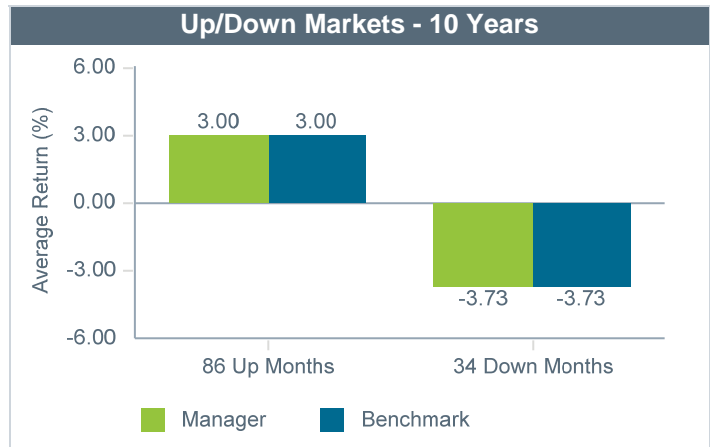
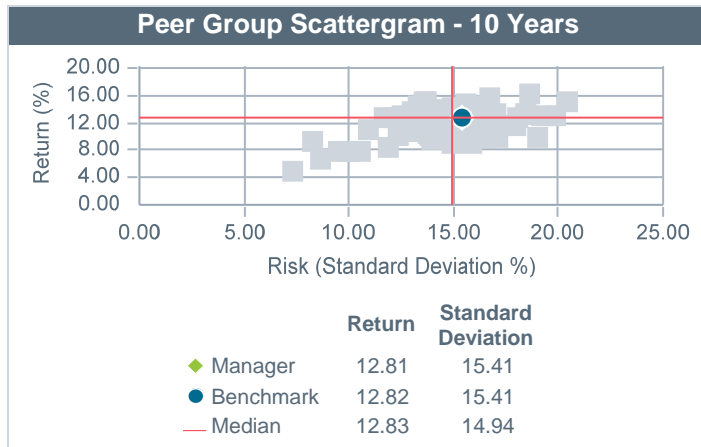
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-19.76	-22.62	5.79	8.90	9.54	12.56	28.01	15.54	31.94	-3.90	24.19
Benchmark	-12.21	-6.82	6.87	7.17	7.69	10.50	25.16	2.80	26.54	-8.27	13.66
Difference	-7.55	-15.80	-1.08	1.73	1.85	2.06	2.85	12.74	5.40	4.37	10.53
Peer Group Median	-11.76	-5.54	9.04	8.88	8.90	11.42	27.67	5.75	27.45	-8.31	17.30
Rank	98	98	96	50	31	18	47	14	14	16	8
Population	236	235	231	227	223	212	260	290	319	336	353



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



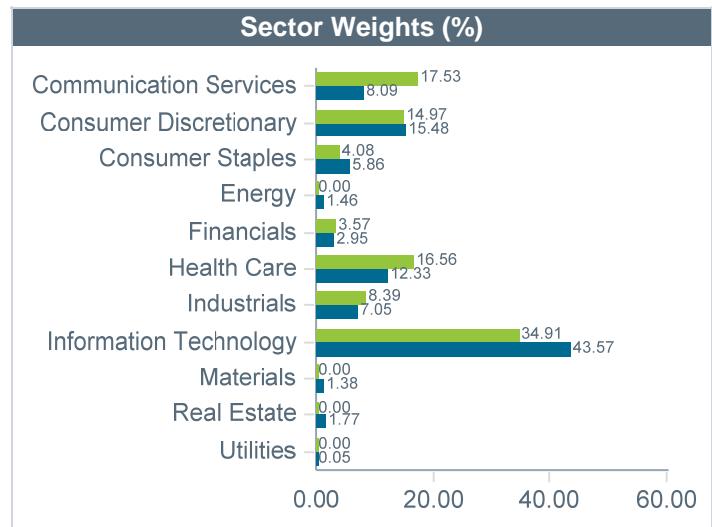
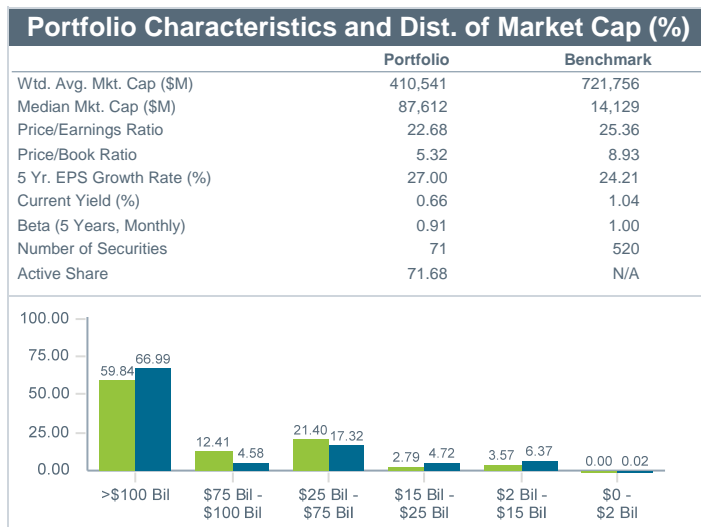
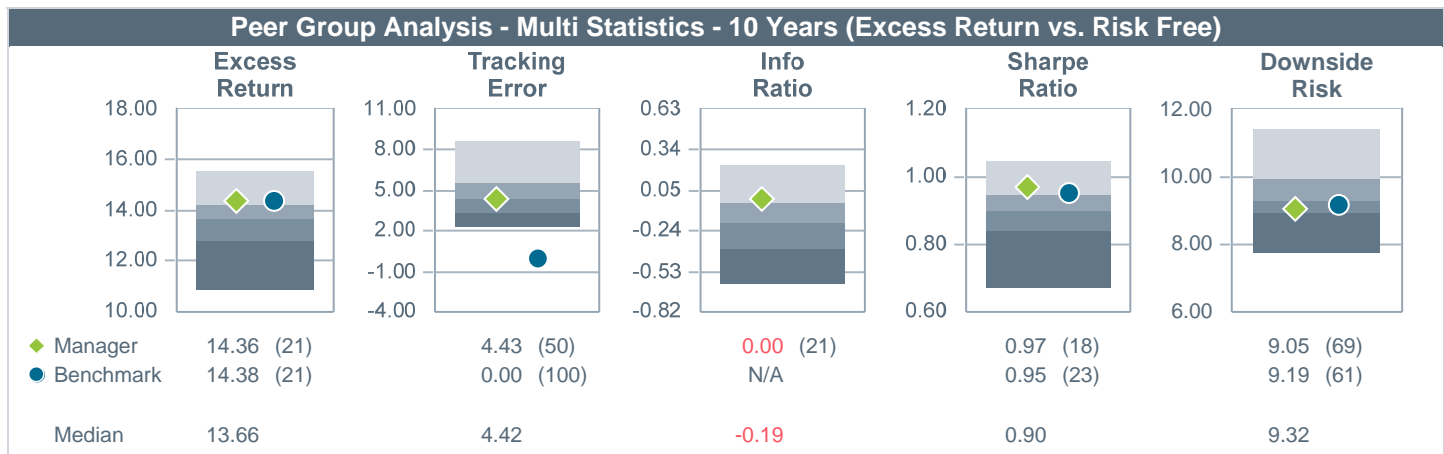
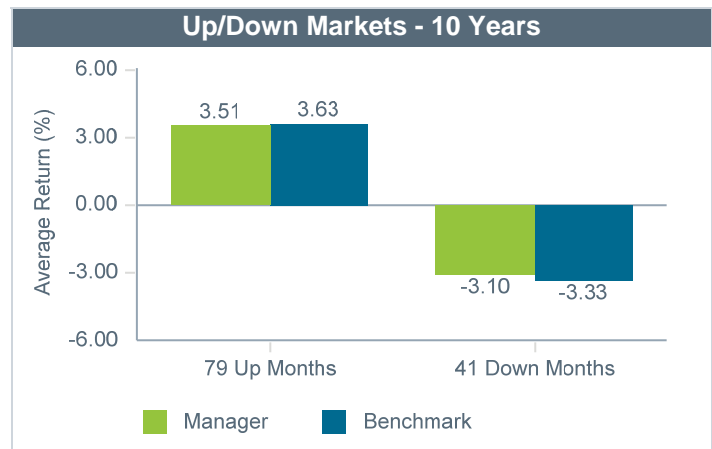
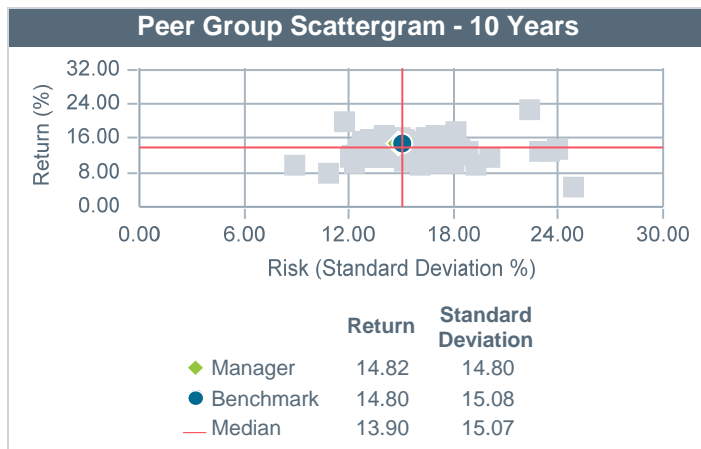
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-16.67	-13.03	10.15	10.99	10.77	12.81	26.46	20.91	31.42	-4.77	21.68
Benchmark	-16.67	-13.04	10.17	11.00	10.78	12.82	26.45	20.96	31.43	-4.78	21.69
Difference	0.00	0.01	-0.02	-0.01	-0.01	-0.01	0.01	-0.05	-0.01	0.01	-0.01
Peer Group Median	-15.06	-10.55	9.83	10.68	10.43	12.83	27.83	17.26	29.99	-5.15	21.86
Rank	81	73	42	42	40	51	60	28	36	44	54
Population	180	180	175	169	162	148	205	226	253	276	299



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



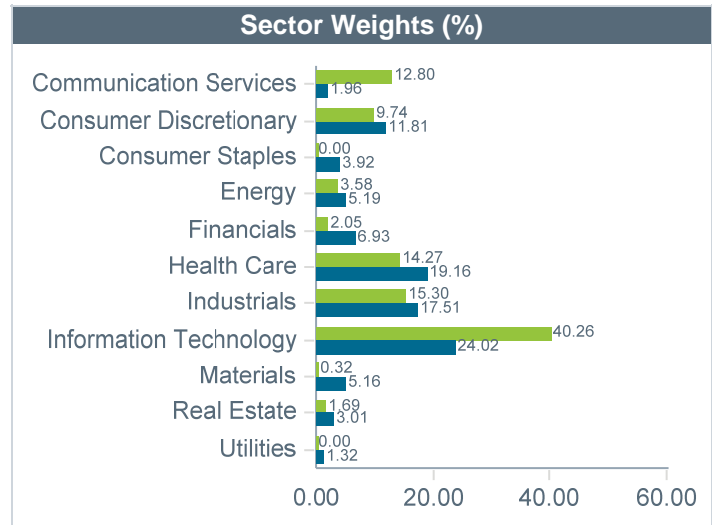
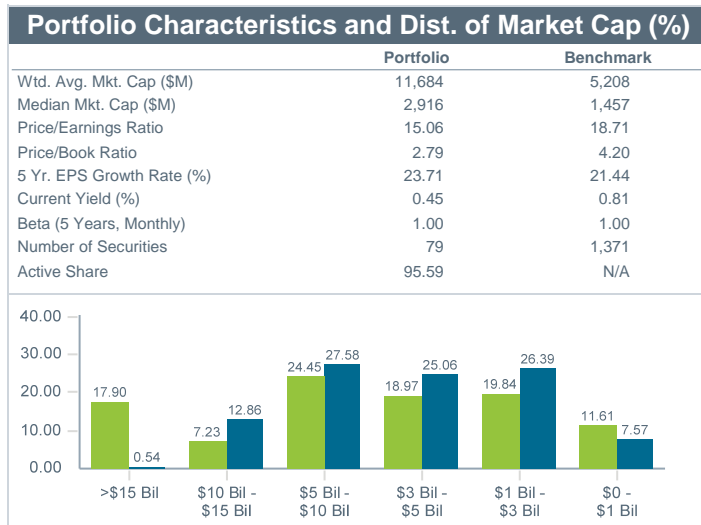
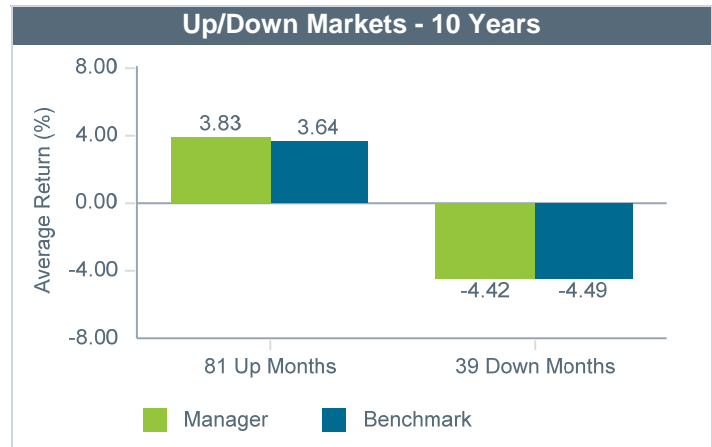
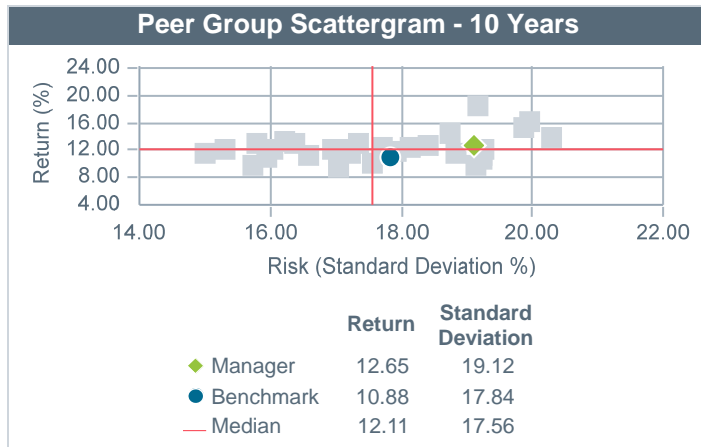
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-22.67	-25.18	7.16	10.89	12.47	14.82	19.45	32.95	32.71	-1.72	34.03
Benchmark	-20.92	-18.77	12.58	14.29	13.45	14.80	27.60	38.49	36.39	-1.51	30.21
Difference	-1.75	-6.41	-5.42	-3.40	-0.98	0.02	-8.15	-5.54	-3.68	-0.21	3.82
Peer Group Median	-20.20	-20.97	9.63	12.58	11.83	13.90	25.15	34.79	33.81	-0.94	28.21
Rank	77	74	82	81	32	19	81	60	61	57	17
Population	214	214	211	209	200	188	229	247	260	284	293



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



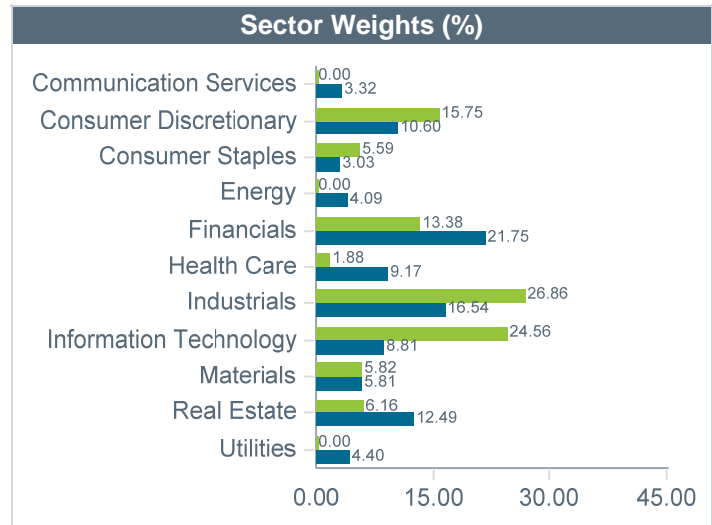
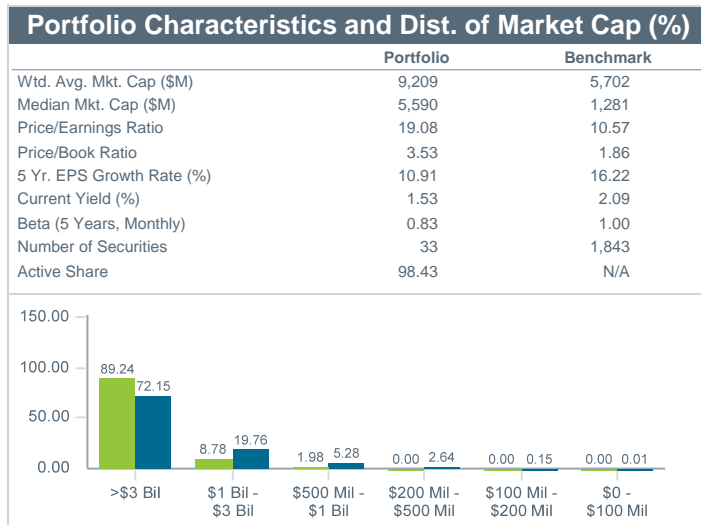
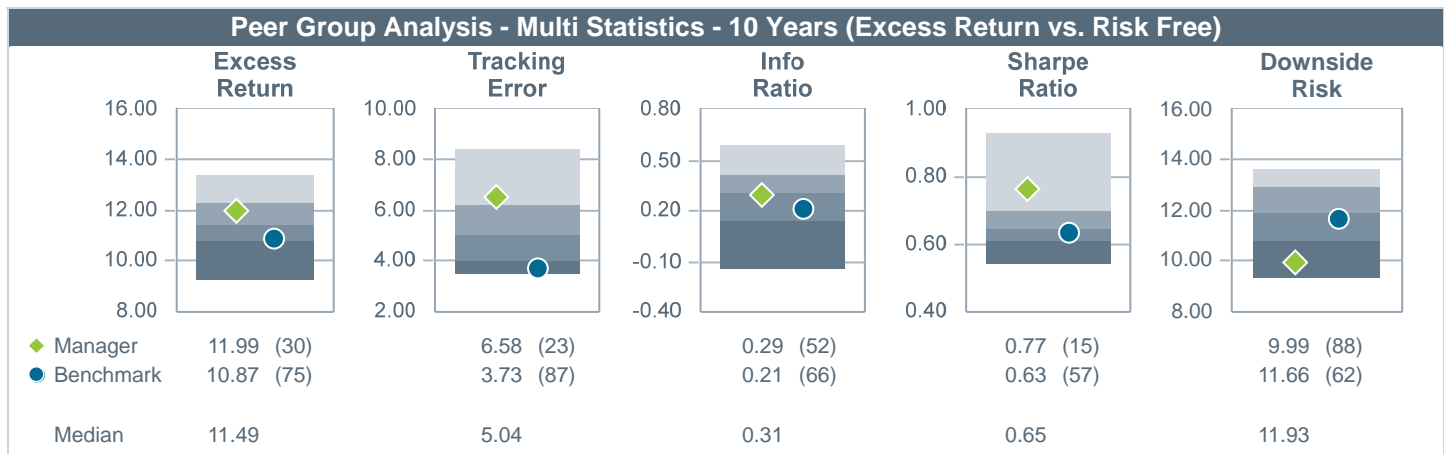
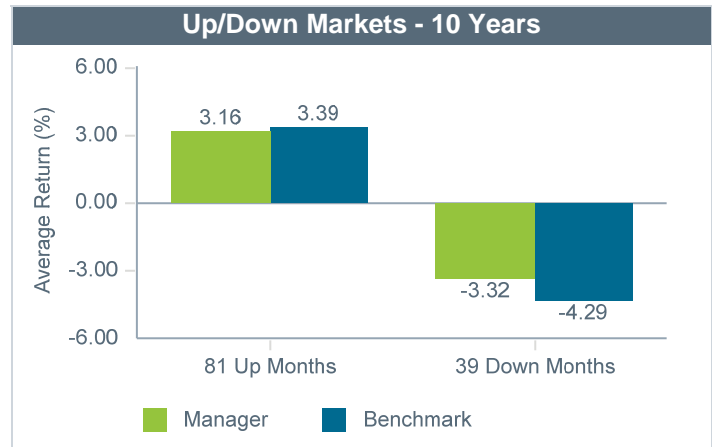
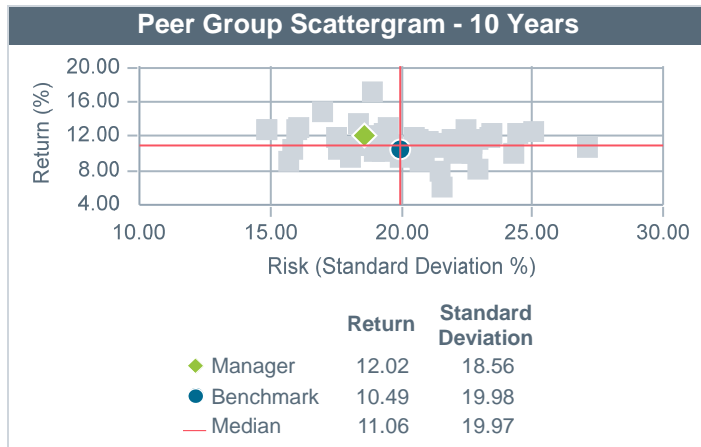
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-20.92	-25.65	9.59	9.17	8.75	12.65	12.71	33.32	41.57	-10.36	25.99
Benchmark	-19.55	-31.81	3.68	7.53	7.05	10.88	5.04	40.47	32.65	-7.47	24.46
Difference	-1.37	6.16	5.91	1.64	1.70	1.77	7.67	-7.15	8.92	-2.89	1.53
Peer Group Median	-19.66	-24.78	6.64	10.23	9.38	12.11	16.62	44.80	31.74	-4.67	24.93
Rank	63	56	25	75	61	33	55	74	3	86	43
Population	58	55	52	45	38	29	59	60	59	63	62



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



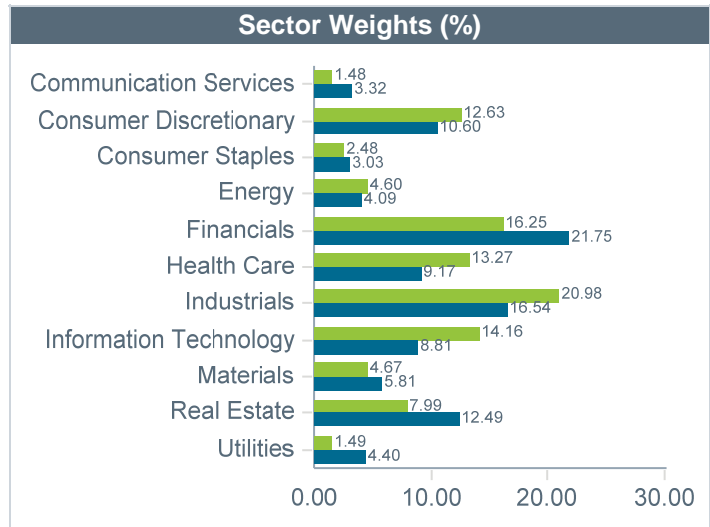
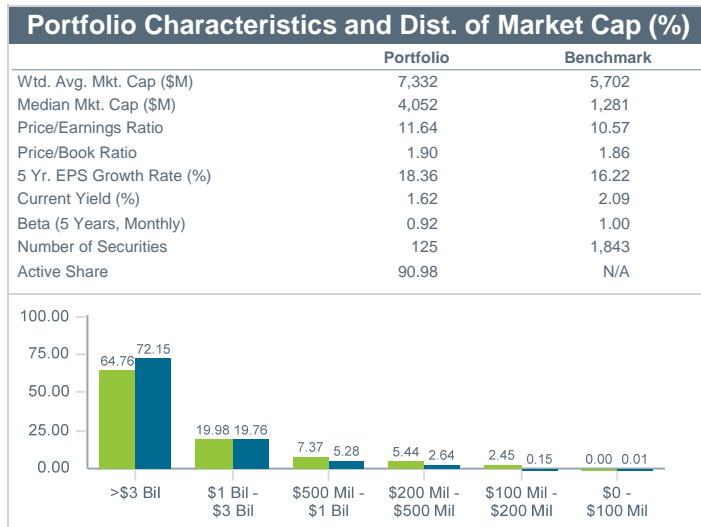
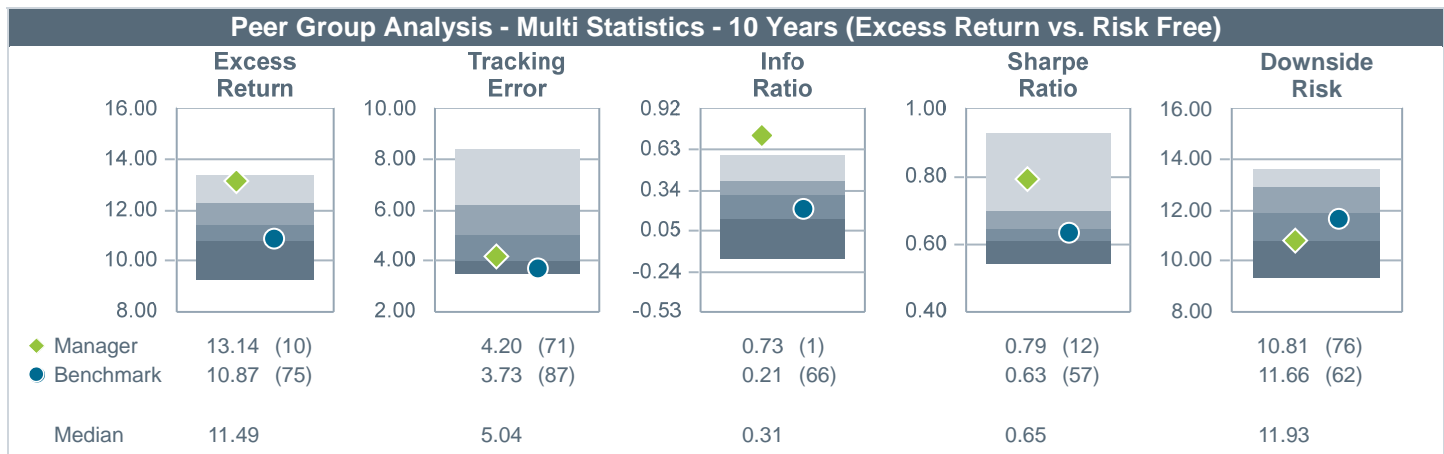
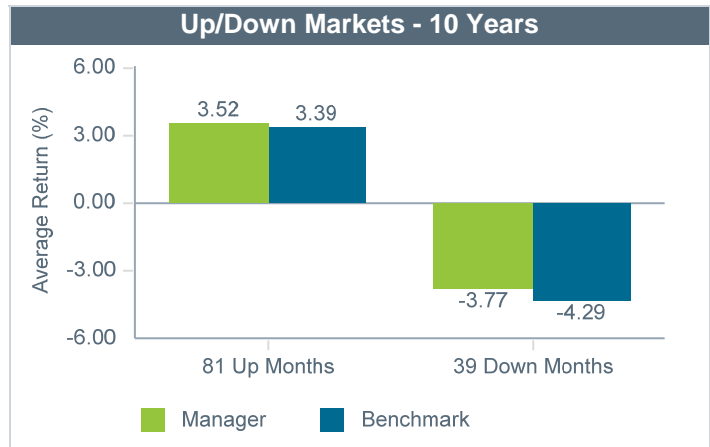
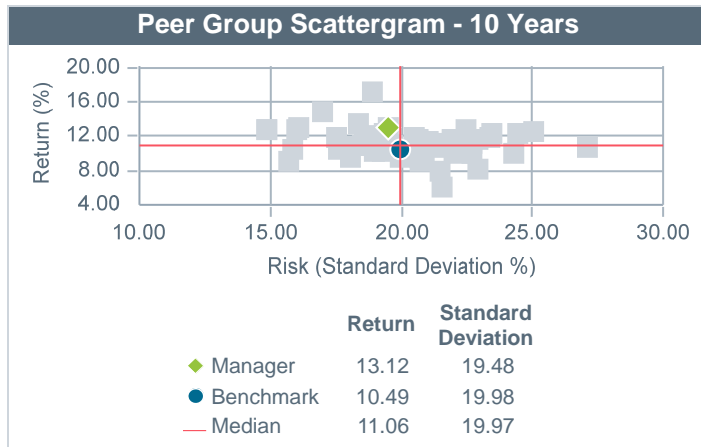
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-10.83	-16.88	9.38	9.12	9.68	12.02	22.19	24.69	33.21	-11.99	18.47
Benchmark	-15.39	-13.19	6.19	5.54	6.49	9.54	27.78	4.88	23.56	-12.36	10.36
Difference	4.56	-3.69	3.19	3.58	3.19	2.48	-5.59	19.81	9.65	0.37	8.11
Peer Group Median	-13.45	-10.47	7.92	7.09	7.52	11.06	28.45	7.77	27.61	-12.97	14.63
Rank	23	90	35	16	13	22	89	7	9	39	20
Population	77	77	76	72	67	63	86	99	99	106	111



Performance shown is and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



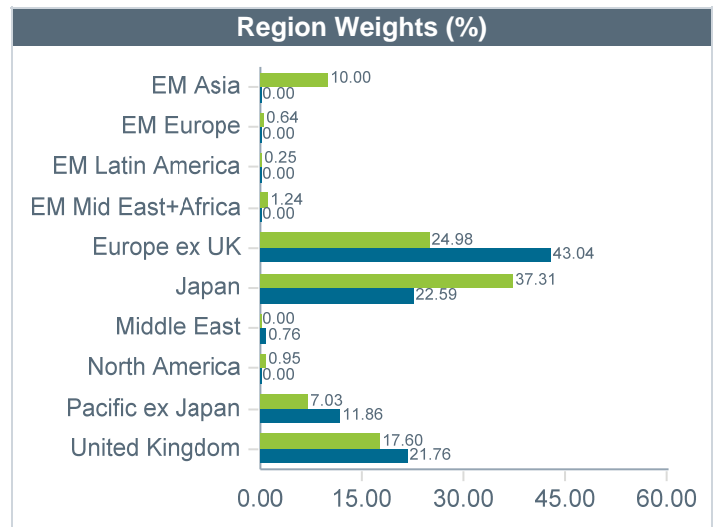
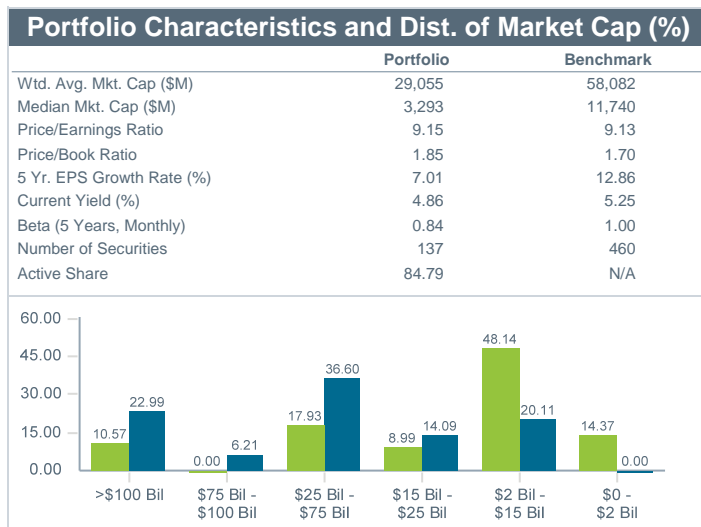
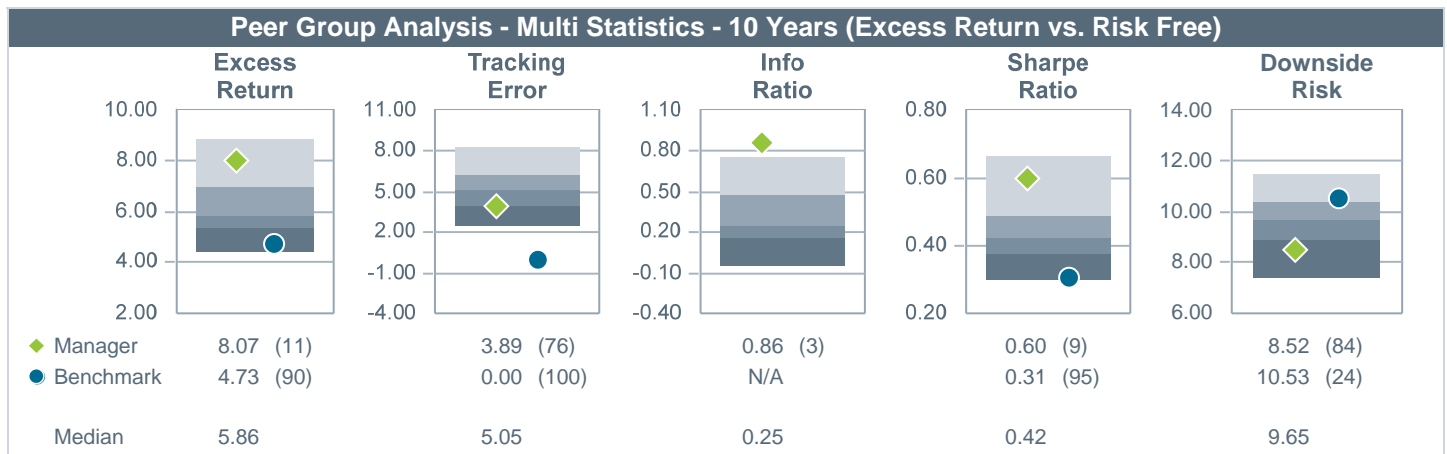
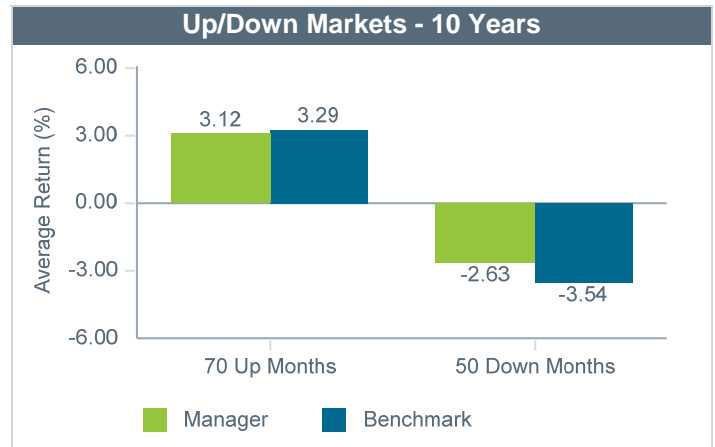
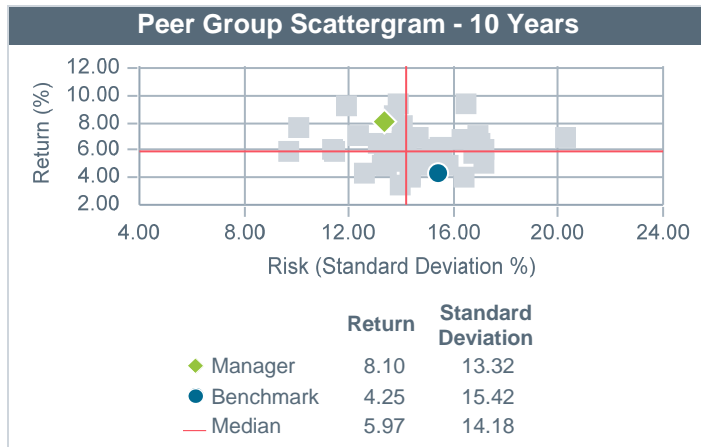
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-13.18	-9.48	9.66	8.94	10.05	13.12	31.53	7.55	27.80	-14.17	25.80
Benchmark	-15.39	-13.19	6.19	5.54	6.49	9.54	27.78	4.88	23.56	-12.36	10.36
Difference	2.21	3.71	3.47	3.40	3.56	3.58	3.75	2.67	4.24	-1.81	15.44
Peer Group Median	-13.45	-10.47	7.92	7.09	7.52	11.06	28.45	7.77	27.61	-12.97	14.63
Rank	47	42	34	18	11	5	28	52	47	60	3
Population	77	77	76	72	67	63	86	99	99	106	111



Performance shown is and product specific prior to client inception. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



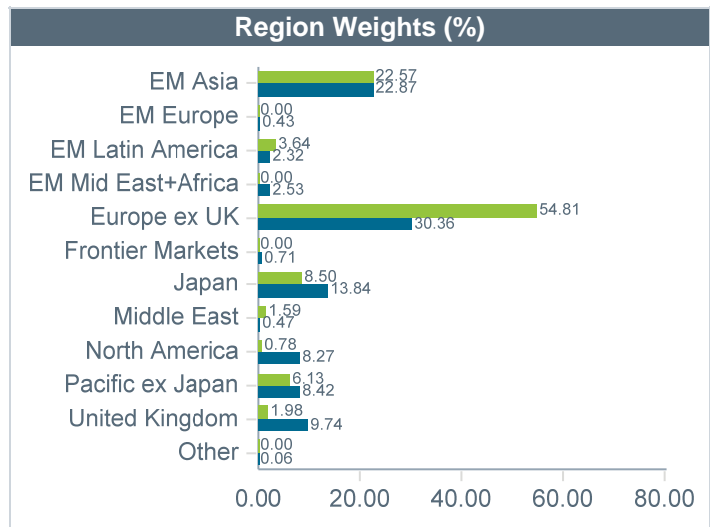
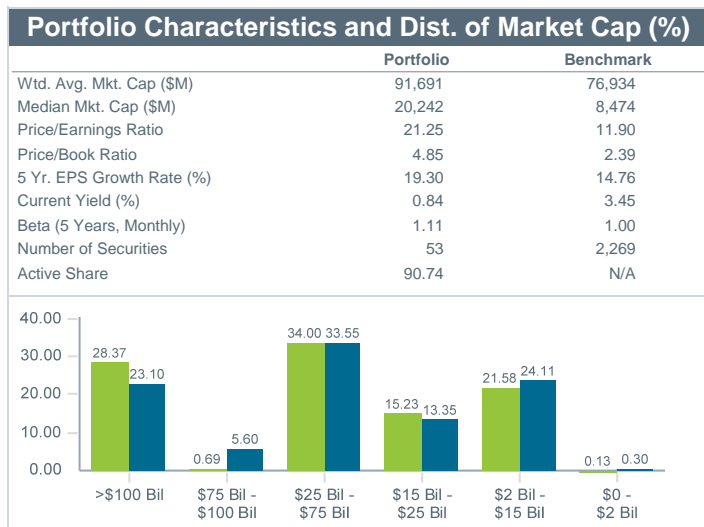
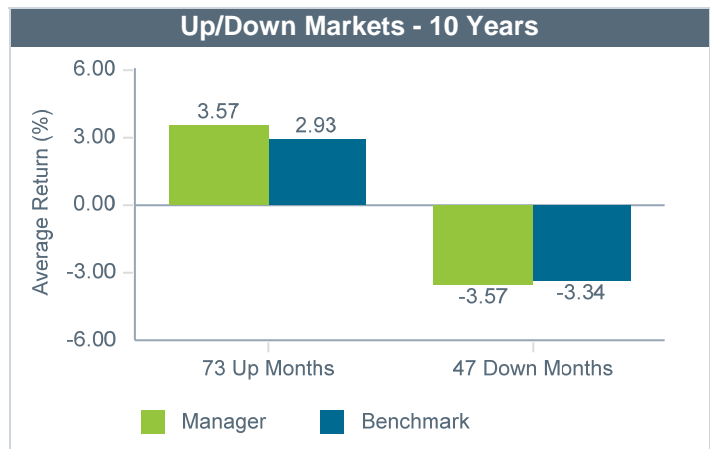
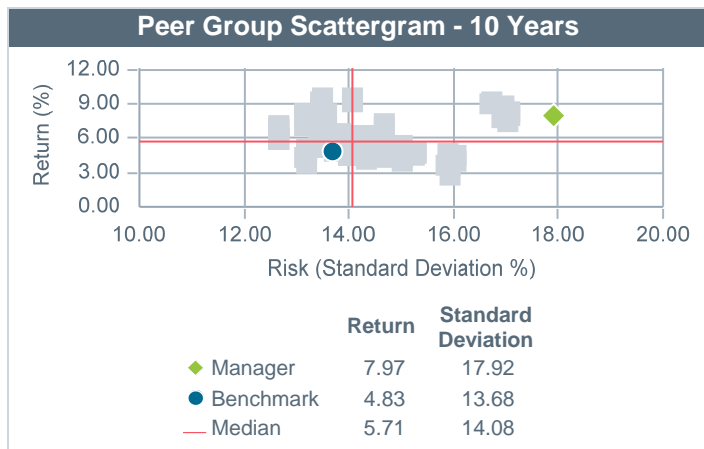
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-10.94	-11.29	2.83	2.81	4.19	8.10	12.58	0.17	18.05	-13.74	28.10
Benchmark	-12.41	-11.95	0.18	0.52	1.17	4.25	10.89	-2.63	16.09	-14.78	21.44
Difference	1.47	0.66	2.65	2.29	3.02	3.85	1.69	2.80	1.96	1.04	6.66
Peer Group Median	-11.73	-14.17	2.44	2.32	2.94	5.97	11.65	4.45	21.10	-15.76	24.17
Rank	40	25	43	36	17	9	41	81	88	41	26
Population	43	43	43	43	43	43	44	50	56	59	61



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



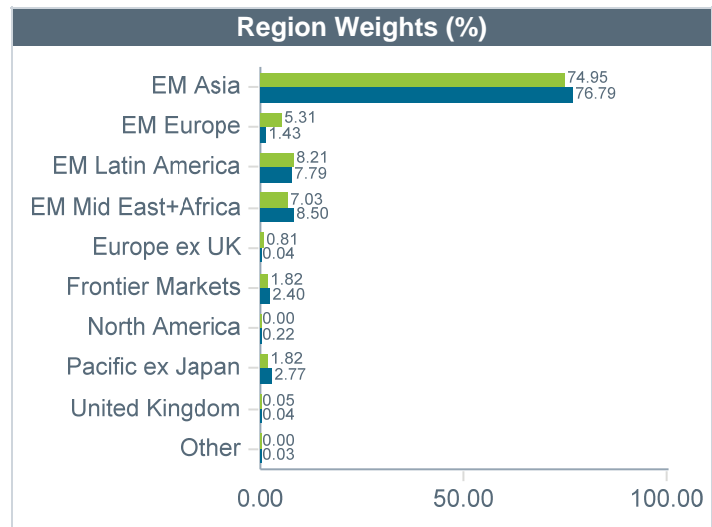
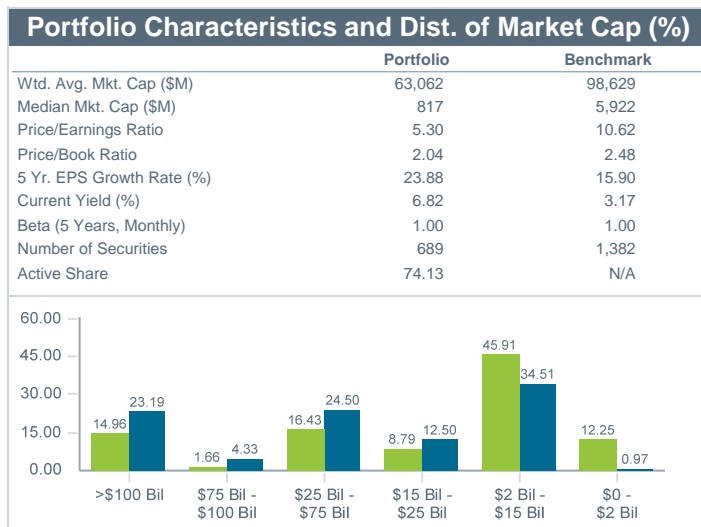
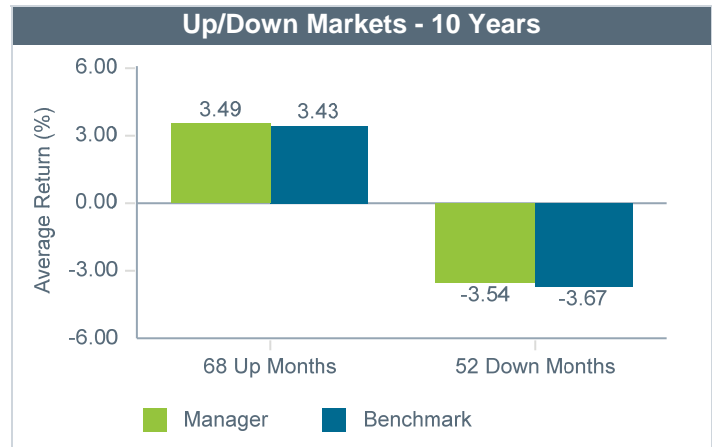
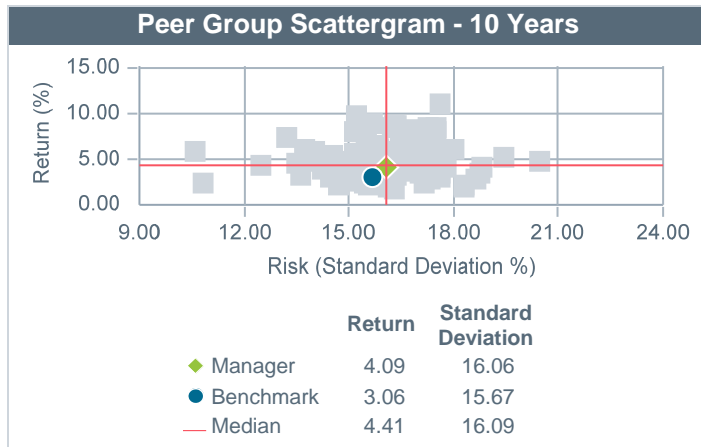
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-17.07	-43.06	2.19	4.97	5.60	7.97	-9.32	63.13	37.48	-17.23	46.37
Benchmark	-13.73	-19.42	1.35	2.50	2.92	4.83	7.82	10.65	21.51	-14.20	27.19
Difference	-3.34	-23.64	0.84	2.47	2.68	3.14	-17.14	52.48	15.97	-3.03	19.18
Peer Group Median	-16.27	-28.08	1.70	3.24	3.60	5.71	7.93	22.75	27.84	-14.32	32.37
Rank	59	97	46	22	13	15	98	1	2	79	5
Population	170	170	170	170	146	113	170	170	172	176	188



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

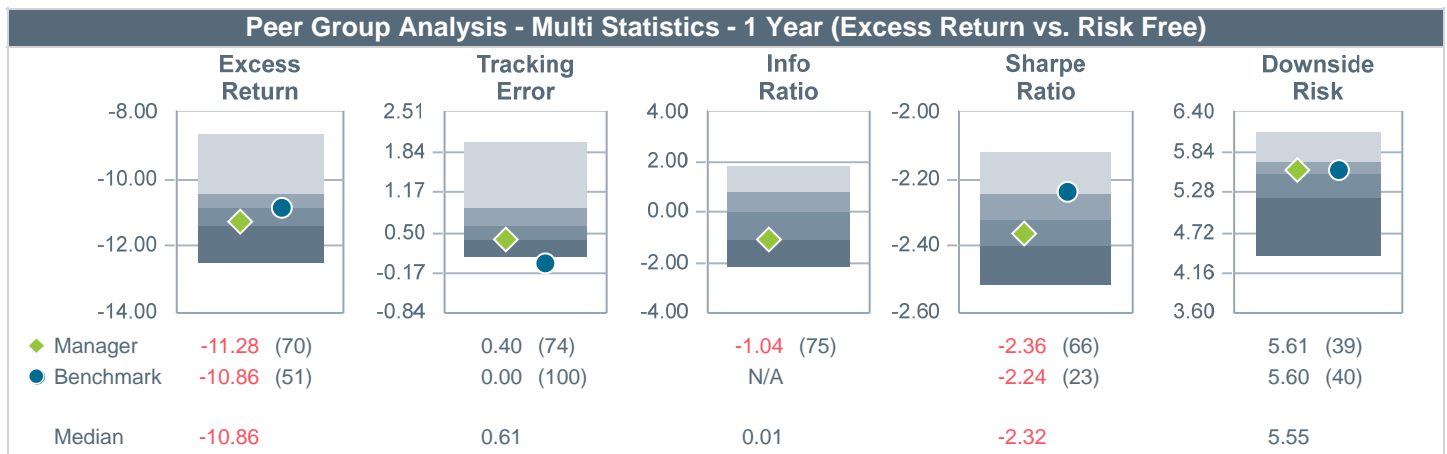
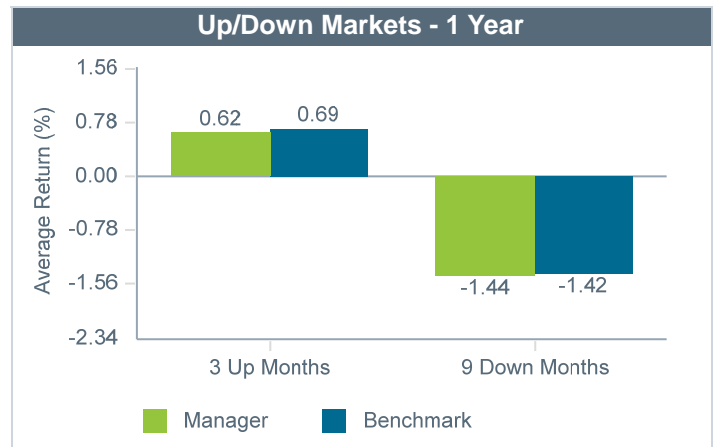
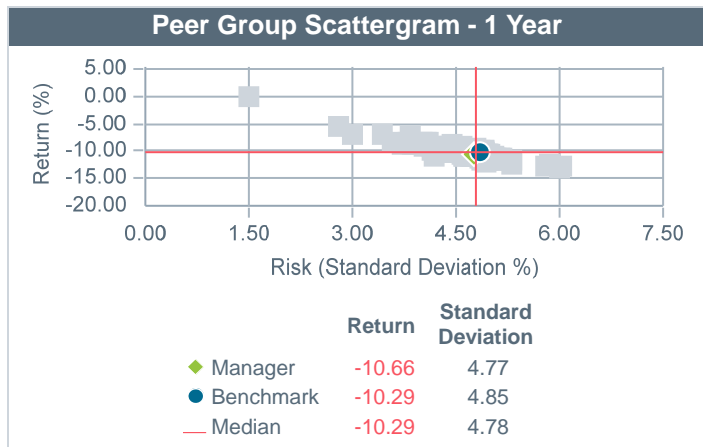


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-16.07	-21.78	2.76	2.32	3.40	4.09	8.75	12.55	18.00	-18.30	38.94
Benchmark	-11.45	-25.28	0.57	2.18	2.79	3.06	-2.54	18.31	18.44	-14.58	37.28
Difference	-4.62	3.50	2.19	0.14	0.61	1.03	11.29	-5.76	-0.44	-3.72	1.66
Peer Group Median	-12.05	-25.03	1.46	2.93	3.80	4.41	1.08	18.14	19.62	-15.20	36.81
Rank	88	35	36	63	61	56	26	74	65	81	36
Population	257	254	242	222	207	165	275	303	332	335	345



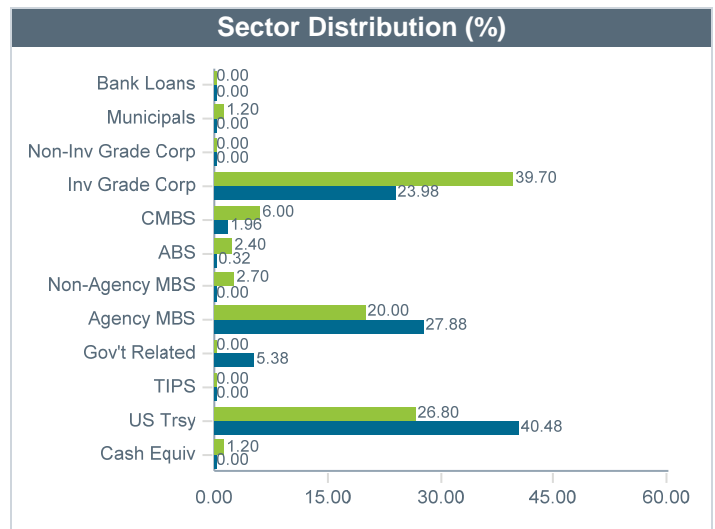
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-4.86	-10.66	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benchmark	-4.69	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	0.01	3.54
Difference	-0.17	-0.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Peer Group Median	-4.85	-10.29	-0.44	1.29	1.89	2.03	-1.21	8.52	9.20	0.06	4.02
Rank	54	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Population	125	125	125	121	118	114	142	151	153	159	164



Portfolio Characteristics

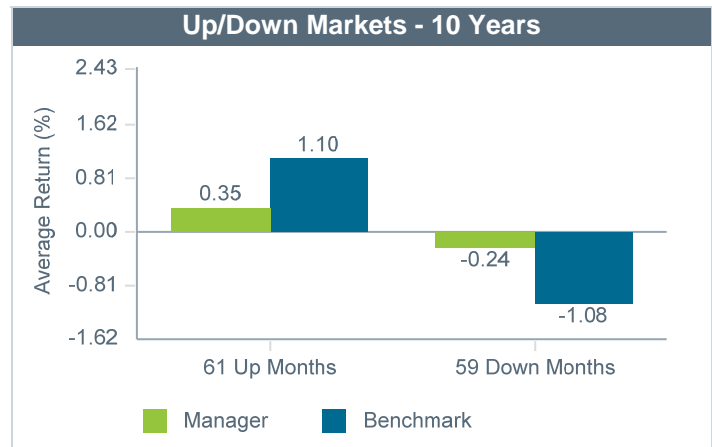
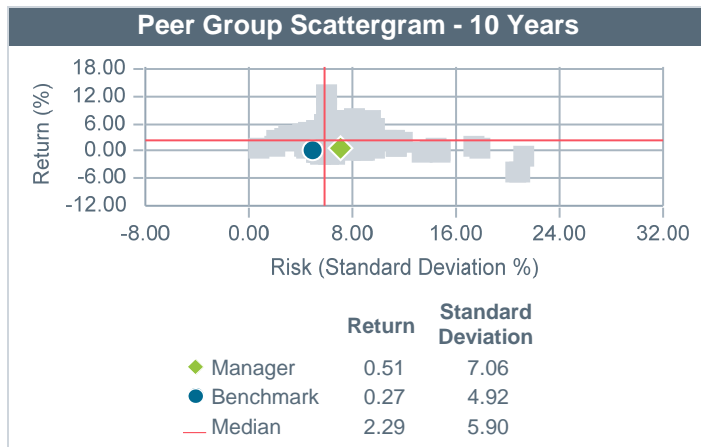
	Portfolio	Benchmark
Effective Duration	6.43	6.44
Spread Duration	3.65	N/A
Avg. Maturity	8.28	8.63
Avg. Quality	AA-	Aa1/Aa2
Yield To Maturity (%)	N/A	3.72
Coupon Rate (%)	2.87	2.49
Current Yield (%)	N/A	N/A
Holdings Count	250	12,563



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

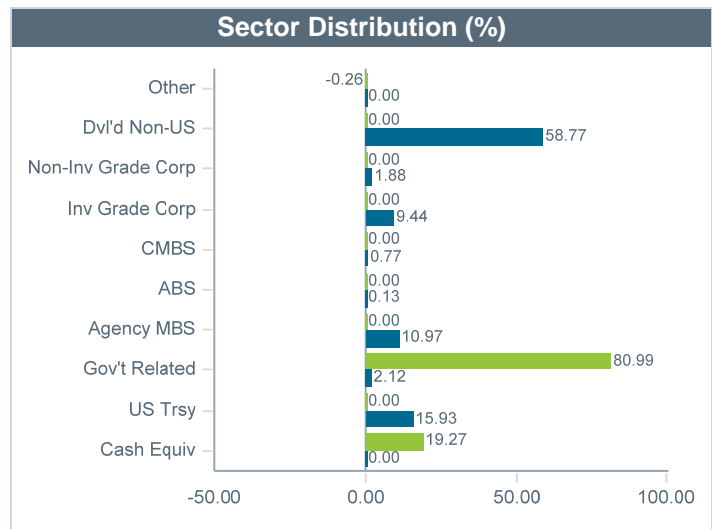


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-11.28	-13.90	-7.76	-3.84	-1.62	0.51	-4.72	-3.81	-0.33	0.52	5.06
Benchmark	-8.43	-15.35	-3.20	-0.51	0.62	0.27	-4.51	9.02	7.13	-1.36	7.69
Difference	-2.85	1.45	-4.56	-3.33	-2.24	0.24	-0.21	-12.83	-7.46	1.88	-2.63
Peer Group Median	-9.07	-13.55	-0.47	1.53	2.44	2.33	0.35	8.54	9.49	-1.81	7.67
Rank	83	53	100	100	100	76	82	99	100	19	79
Population	182	182	179	173	169	145	203	225	238	254	263



Portfolio Characteristics

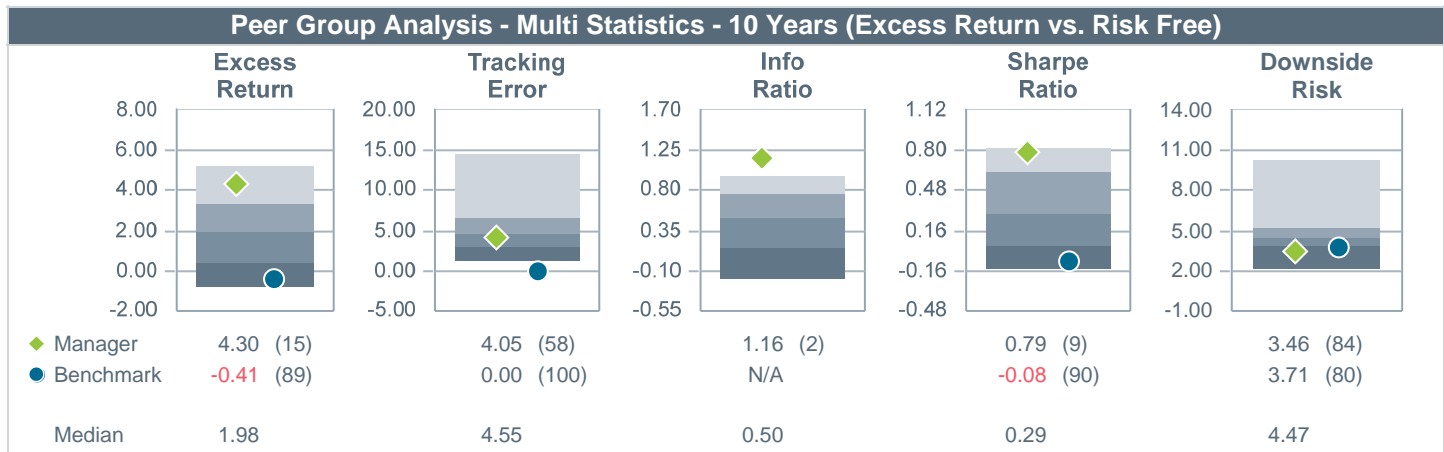
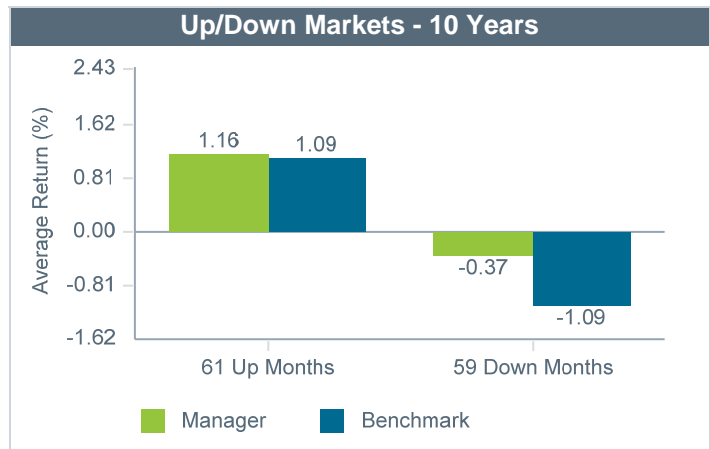
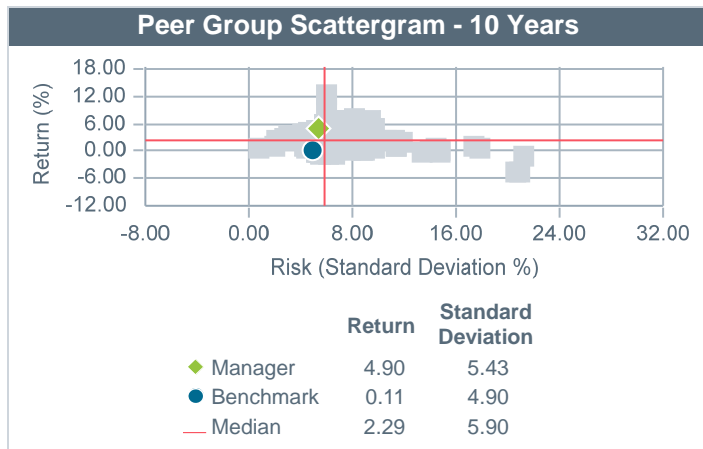
	Portfolio	Benchmark
Effective Duration	1.53	6.87
Spread Duration	1.58	N/A
Avg. Maturity	3.09	8.67
Avg. Quality	N/A	N/A
Yield To Maturity (%)	8.45	3.22
Coupon Rate (%)	4.19	2.39
Current Yield (%)	3.77	N/A
Holdings Count	107	32,120



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.

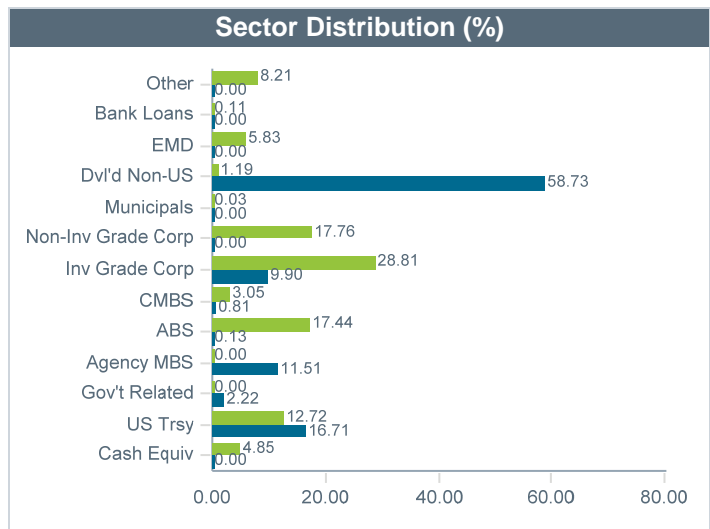


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-6.47	-11.25	1.59	3.02	3.56	4.90	0.55	15.08	9.80	0.09	8.74
Benchmark	-8.26	-15.25	-3.22	-0.55	0.51	0.11	-4.71	9.20	6.84	-1.19	7.39
Difference	1.79	4.00	4.81	3.57	3.05	4.79	5.26	5.88	2.96	1.28	1.35
Peer Group Median	-9.07	-13.55	-0.47	1.53	2.44	2.33	0.35	8.54	9.49	-1.81	7.67
Rank	24	38	15	15	24	13	46	7	48	23	31
Population	182	182	179	173	169	145	203	225	238	254	263



Portfolio Characteristics

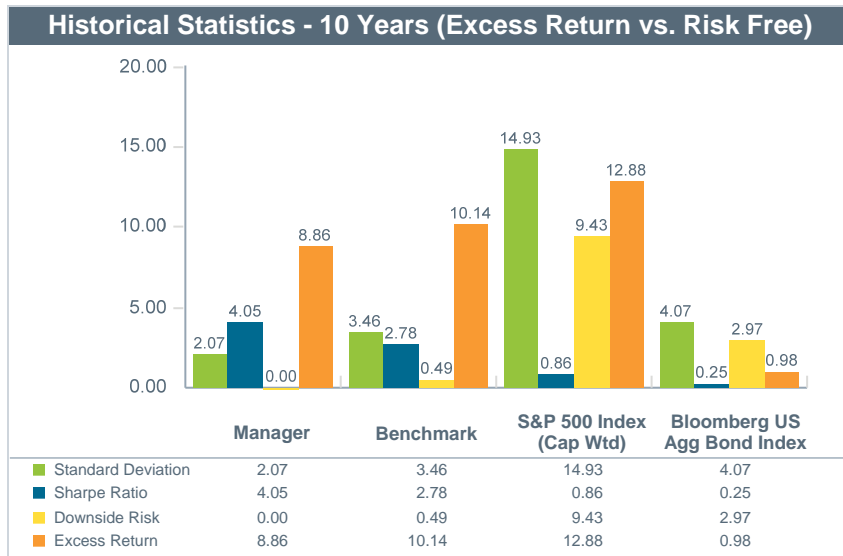
	Portfolio	Benchmark
Effective Duration	4.62	6.99
Spread Duration	3.86	N/A
Avg. Maturity	5.77	8.77
Avg. Quality	Baa2	N/A
Yield To Maturity (%)	5.95	2.91
Coupon Rate (%)	3.26	2.23
Current Yield (%)	3.81	N/A
Holdings Count	926	28,186



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, derivatives, and convertibles.

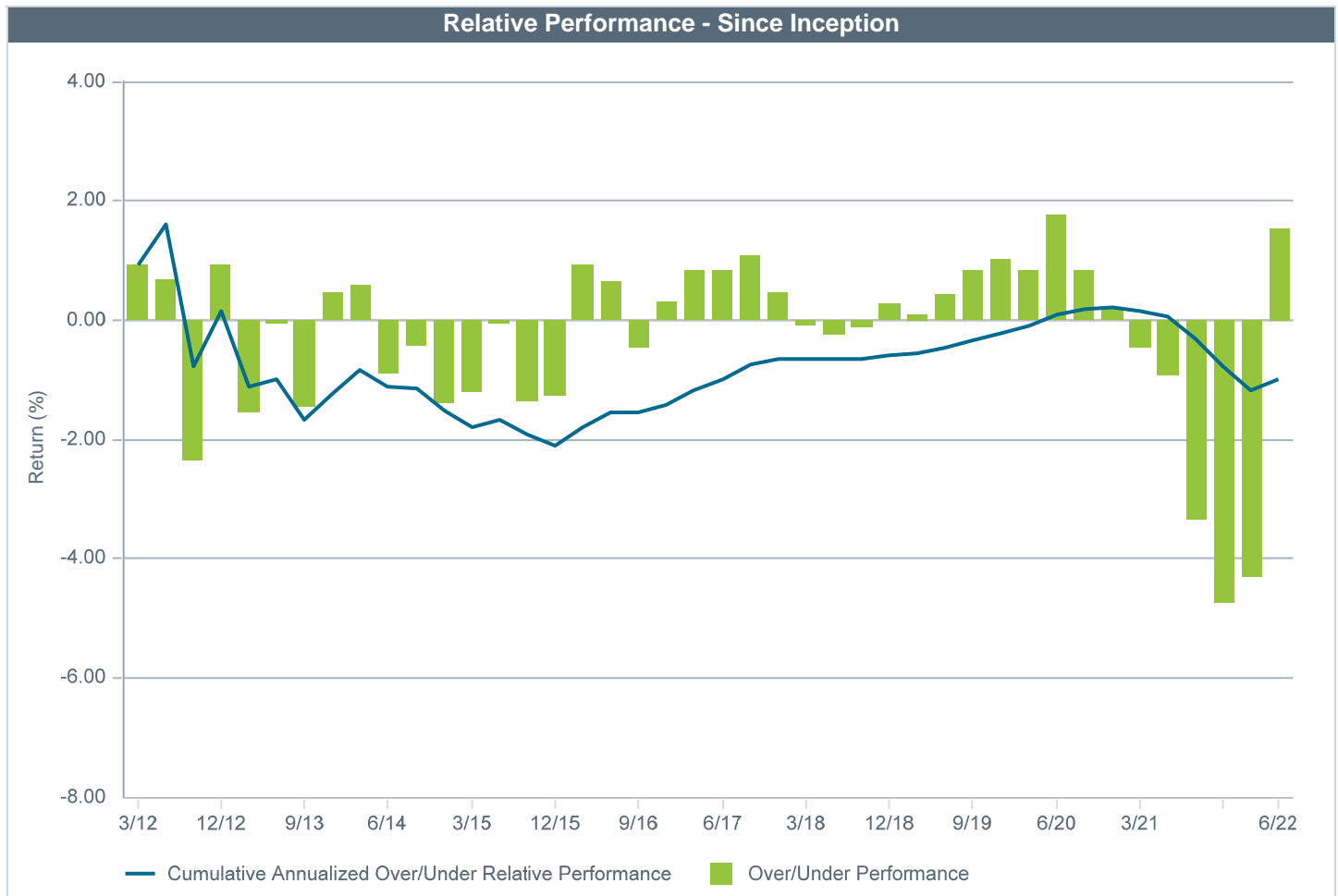


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	6.39	15.92	10.06	9.41	9.60	9.82	10.94	4.91	7.87	8.18	11.11
Benchmark	4.77	29.51	12.66	10.54	10.34	11.16	22.17	1.19	5.34	8.35	7.62
Difference	1.62	-13.59	-2.60	-1.13	-0.74	-1.34	-11.23	3.72	2.53	-0.17	3.49



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.50
S&P 500 Index (Cap Wtd)	-0.45
Russell 2000 Index	-0.42
MSCI EAFE Index (USD) (Net)	-0.38
MSCI Emg Mkts Index (USD) (Net)	-0.33
Bloomberg US Agg Bond Index	-0.46
Bloomberg US Trsy US TIPS Index	-0.54
Wilshire US REIT Index	-0.36
HFRI FOF Comp Index	-0.39
Bloomberg Cmdb Index (TR)	-0.09
ICE BofAML 3 Mo US T-Bill Index	-0.19
Cons Price Index (Unadjusted)	0.31
NCREIF ODCE Index (AWA) (Gross)	0.50



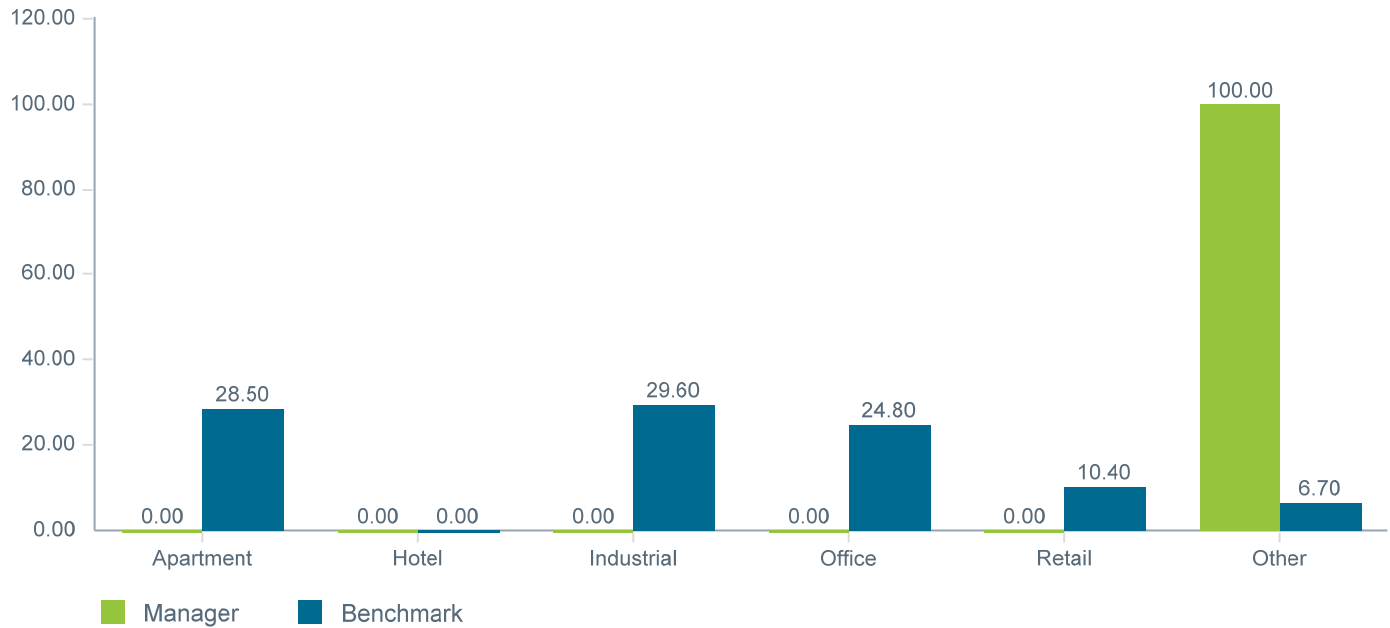
Investment Strategy

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.

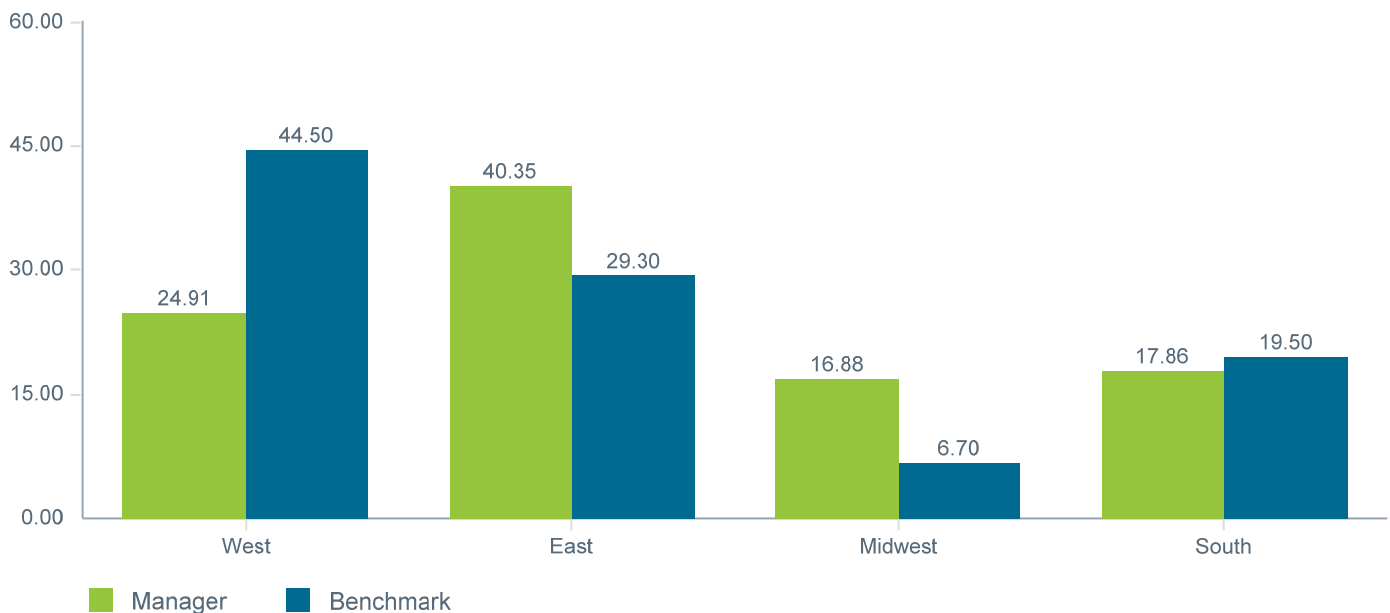
Investment Profile

Fund Inception	2011
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	13,464
Fund Leverage %	23.78
Portfolio Occupancy %	89.30
Cash Reserve %	1.08
Number of Investments	387
Number of Limited Partners	231

Property Type Allocation (%)



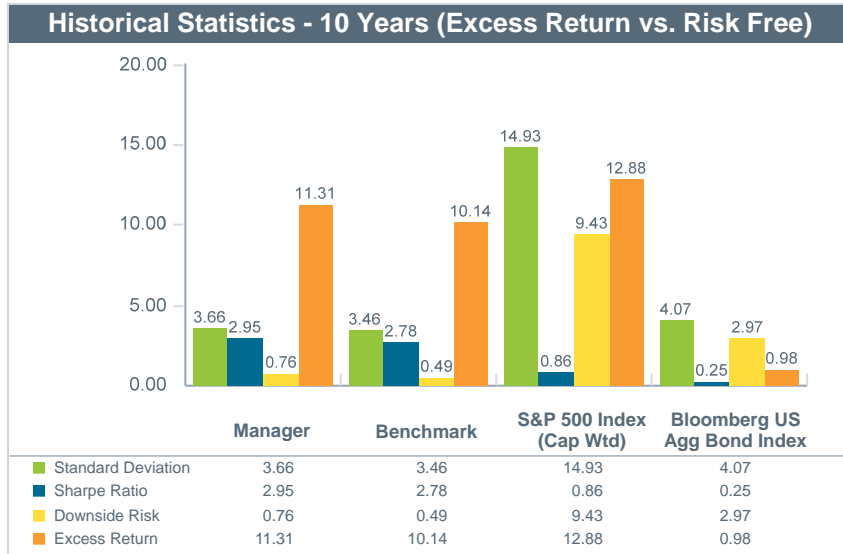
Geographic Allocation (%)



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, senior housing, 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.

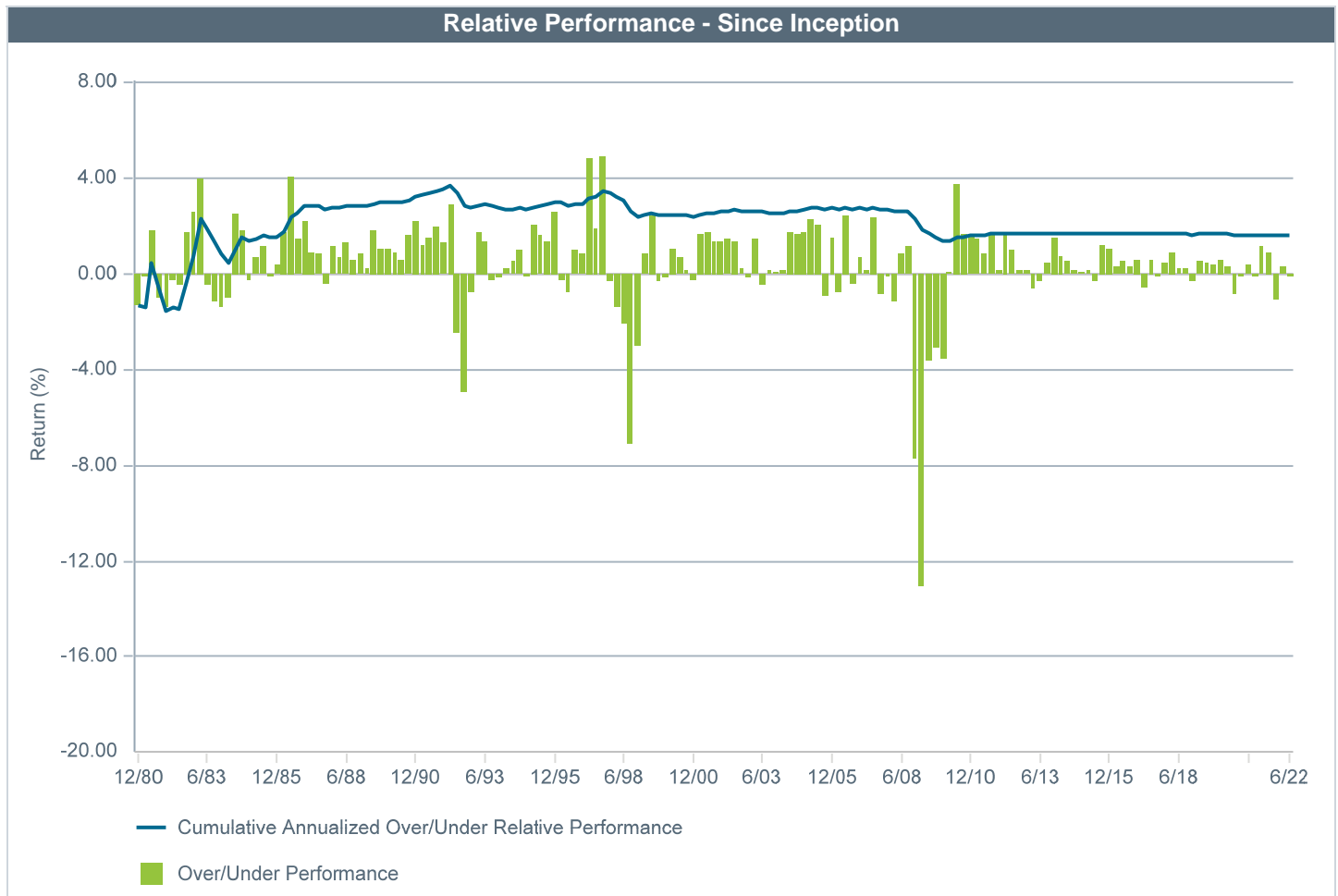


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	4.65	29.51	13.42	11.52	11.69	12.43	23.30	1.03	7.52	9.48	8.06
Benchmark	4.77	29.51	12.66	10.54	10.34	11.16	22.17	1.19	5.34	8.35	7.62
Difference	-0.12	0.00	0.76	0.98	1.35	1.27	1.13	-0.16	2.18	1.13	0.44



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.95
S&P 500 Index (Cap Wtd)	-0.24
Russell 2000 Index	-0.30
MSCI EAFE Index (USD) (Net)	-0.25
MSCI Emg Mkts Index (USD) (Net)	-0.42
Bloomberg US Agg Bond Index	-0.45
Bloomberg US Trsy US TIPS Index	-0.33
Wilshire US REIT Index	-0.01
HFRI FOF Comp Index	-0.30
Bloomberg Cmnty Index (TR)	0.14
ICE BofAML 3 Mo US T-Bill Index	-0.37
Cons Price Index (Unadjusted)	0.35



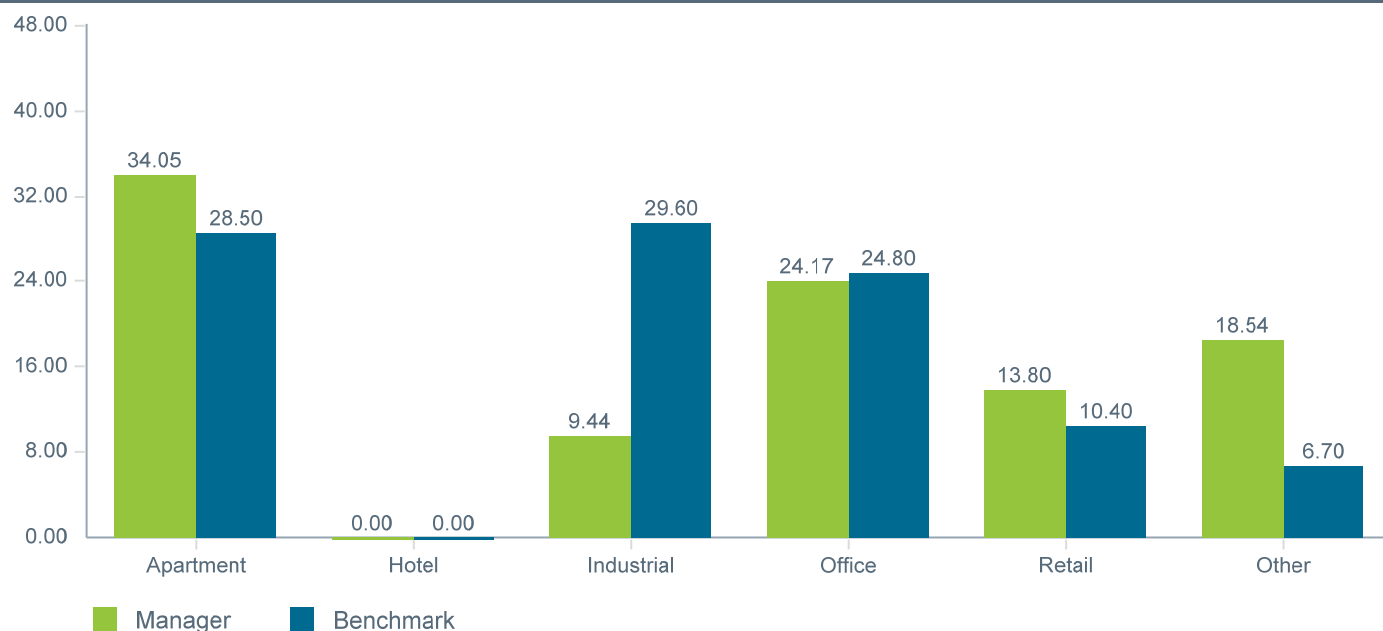
Investment Strategy

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.

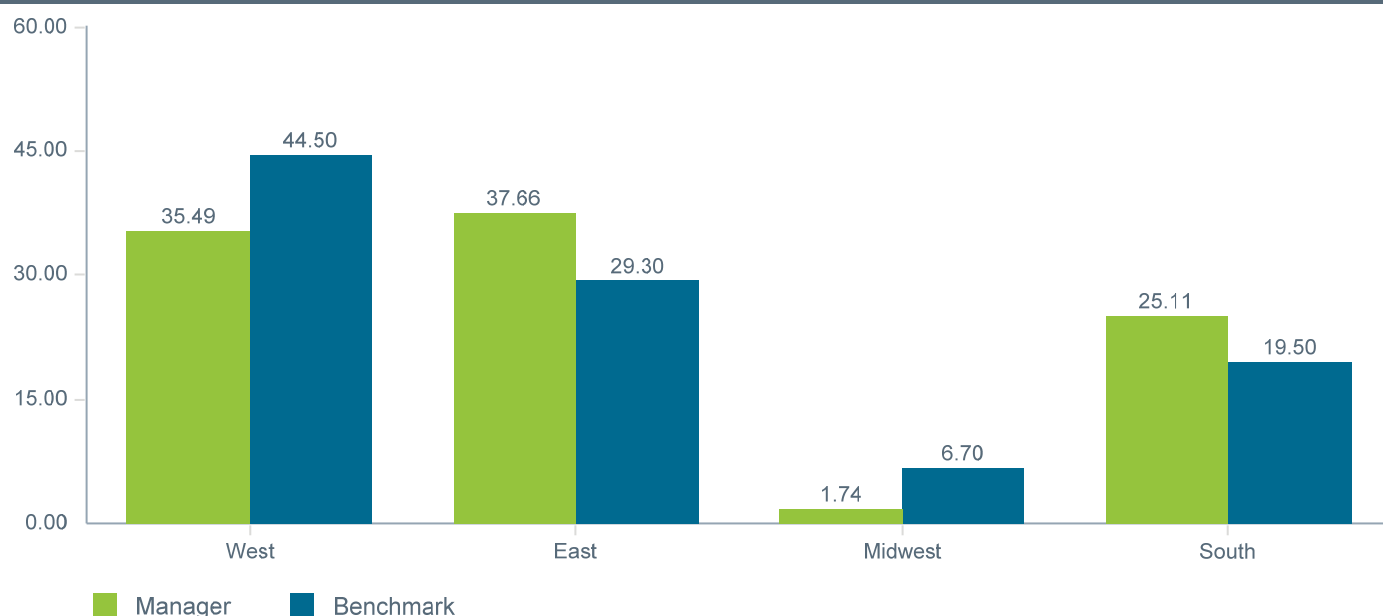
Investment Profile

Fund Inception	1980
Legal Structure	REIT
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	17,403
Fund Leverage %	32.40
Portfolio Occupancy %	90.15
Cash Reserve %	2.36
Number of Investments	160
Number of Limited Partners	110

Property Type Allocation (%)



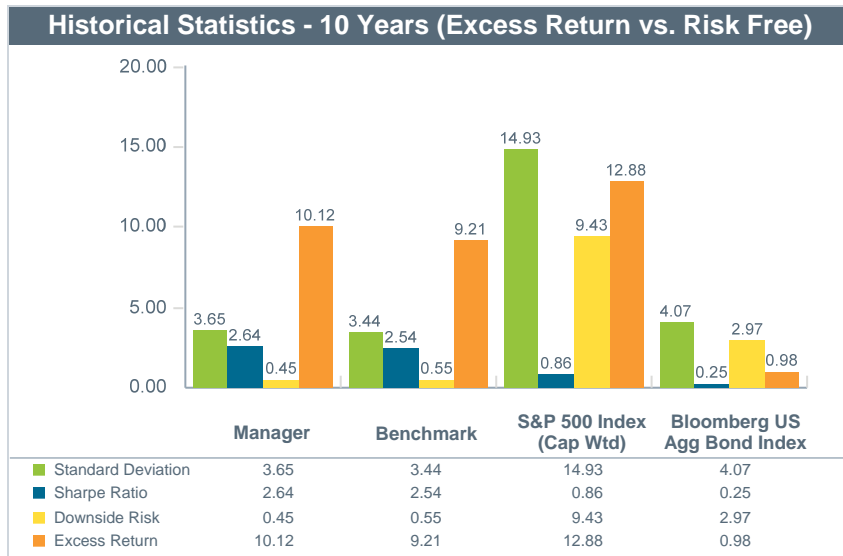
Geographic Allocation (%)



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 land, student housing, self-storage, and life science/lab space. 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.

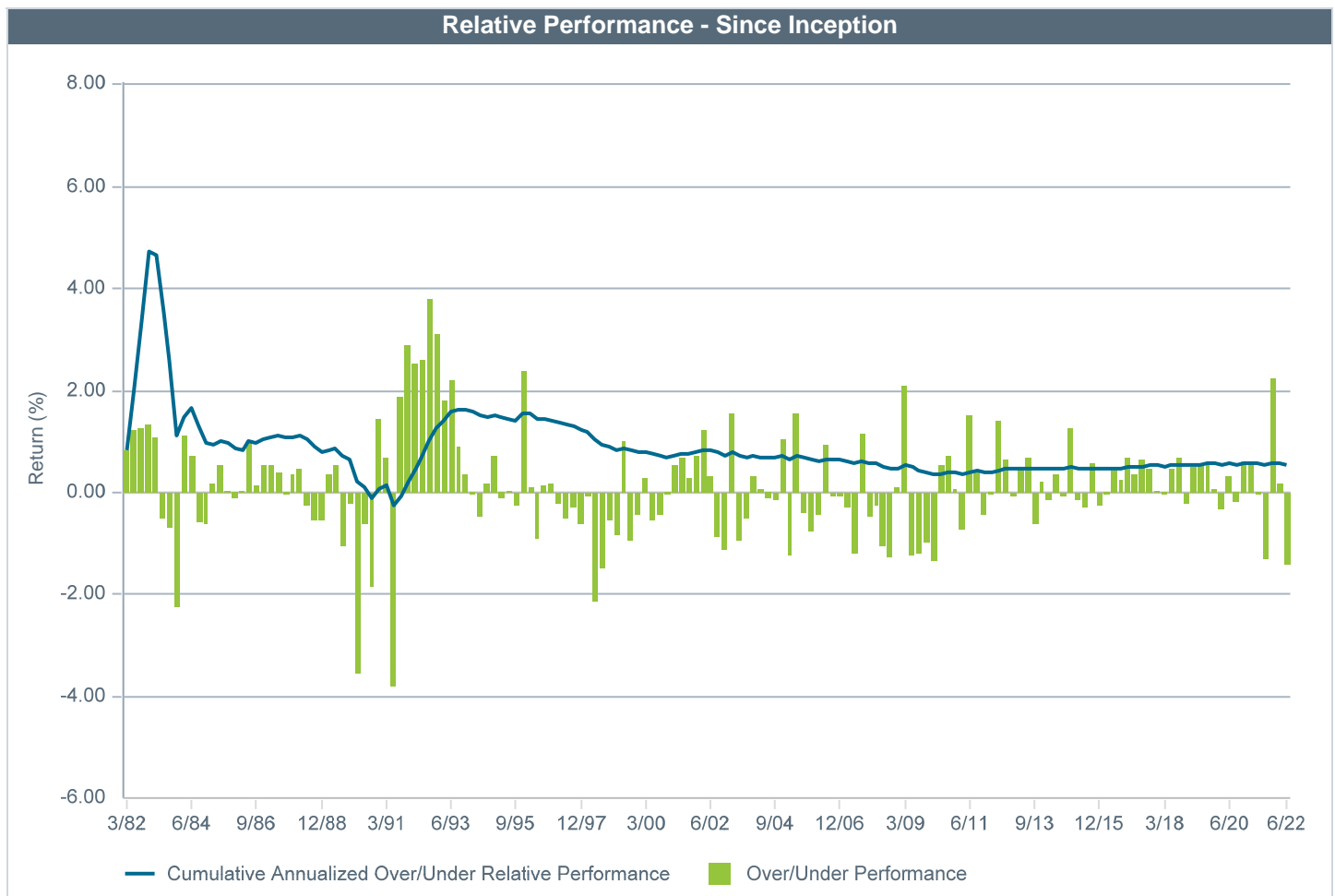


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	3.07	27.91	12.18	10.40	10.36	11.13	22.83	0.81	6.22	8.32	8.29
Benchmark	4.54	28.31	11.66	9.55	9.35	10.15	21.02	0.34	4.39	7.36	6.66
Difference	-1.47	-0.40	0.52	0.85	1.01	0.98	1.81	0.47	1.83	0.96	1.63



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Net)	0.94
S&P 500 Index (Cap Wtd)	-0.05
Russell 2000 Index	-0.15
MSCI EAFE Index (USD) (Net)	-0.15
MSCI Emg Mkts Index (USD) (Net)	-0.33
Bloomberg US Agg Bond Index	-0.43
Bloomberg US Trsy US TIPS Index	-0.29
Wilshire US REIT Index	0.19
HFRI FOF Comp Index	-0.20
Bloomberg Cmdty Index (TR)	0.12
ICE BofAML 3 Mo US T-Bill Index	-0.38
Cons Price Index (Unadjusted)	0.33
NCREIF ODCE Index (AWA) (Gross)	0.94



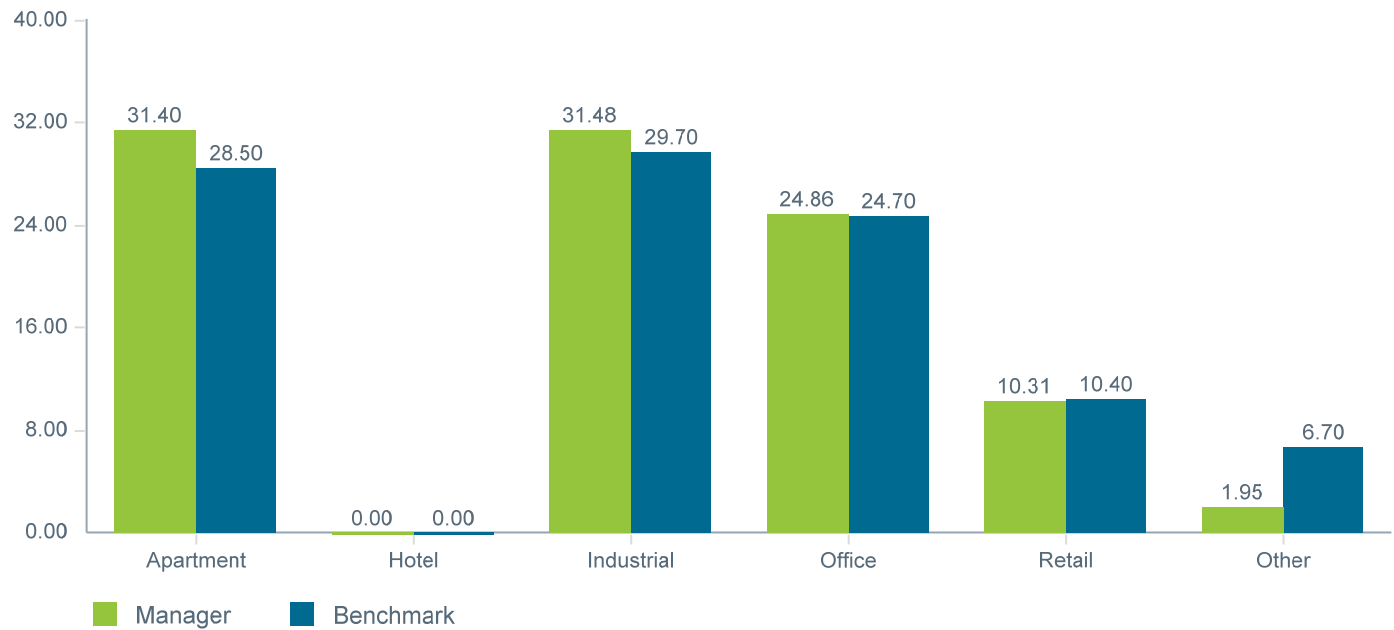
Investment Strategy

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.

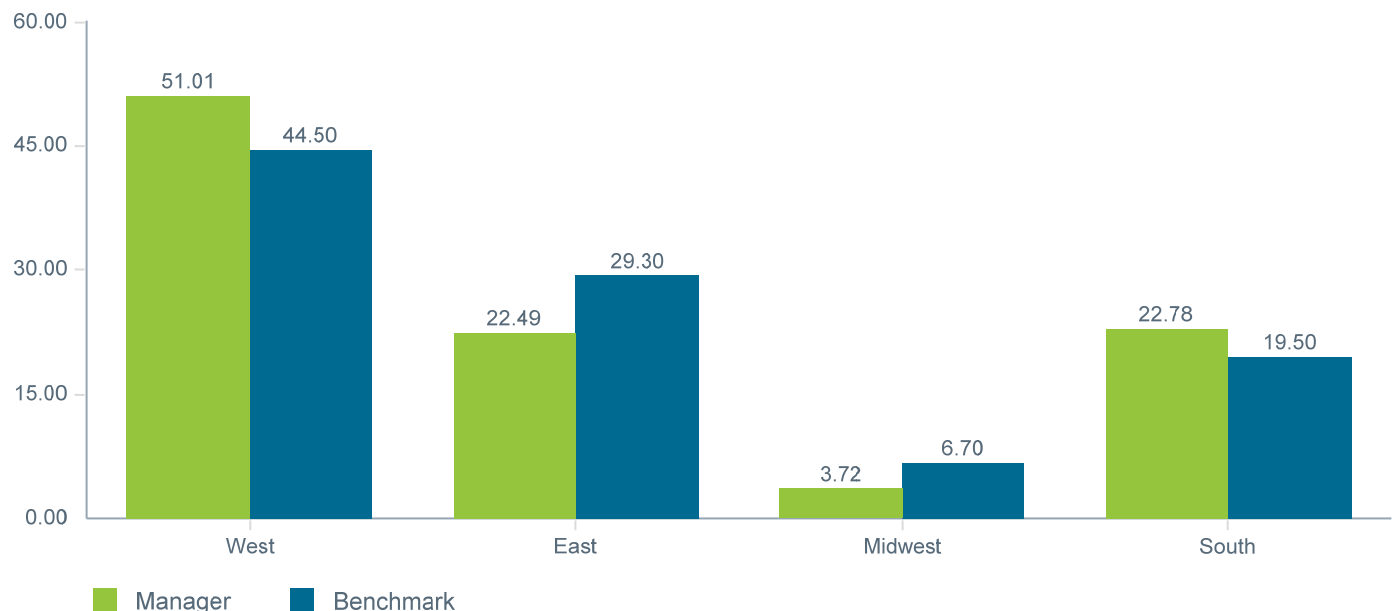
Investment Profile

Fund Inception	1982
Legal Structure	Insurance SA
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	13,307
Fund Leverage %	20.74
Portfolio Occupancy %	92.52
Cash Reserve %	2.21
Number of Investments	146
Number of Limited Partners	4,752

Property Type Allocation (%)



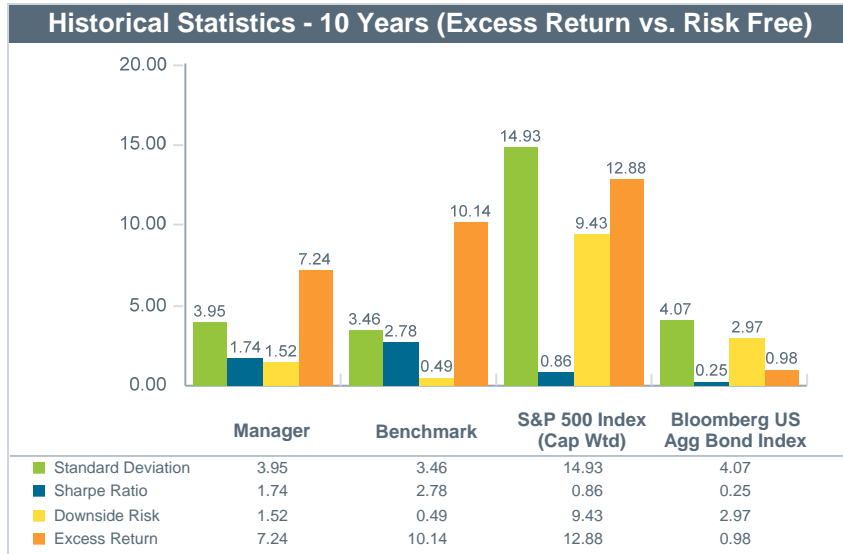
Geographic Allocation (%)



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, self storage, and manufactured housing. 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.

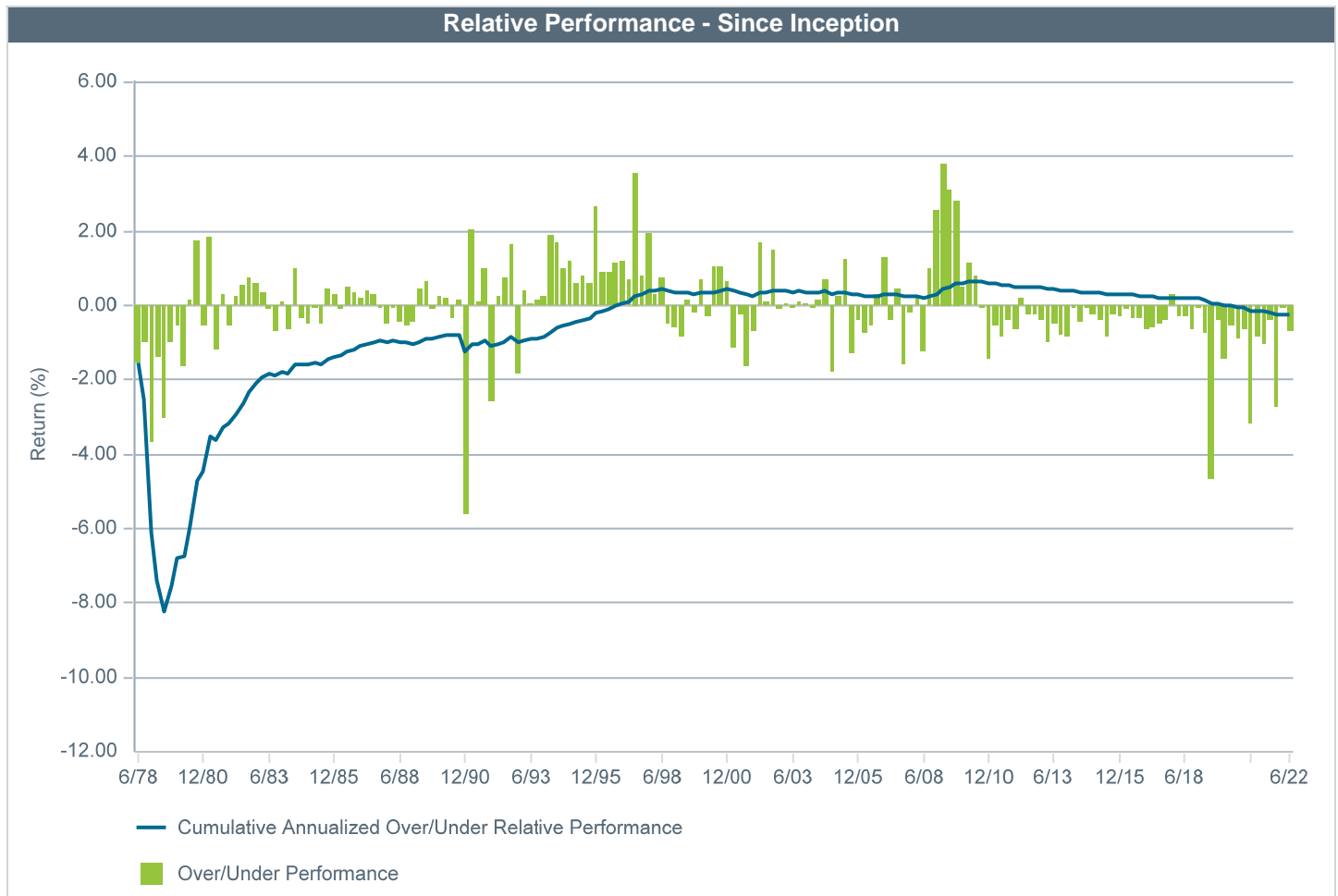


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	4.02	24.65	7.95	6.27	6.80	8.03	16.24	-4.04	-2.10	6.99	6.30
Benchmark	4.77	29.51	12.66	10.54	10.34	11.16	22.17	1.19	5.34	8.35	7.62
Difference	-0.75	-4.86	-4.71	-4.27	-3.54	-3.13	-5.93	-5.23	-7.44	-1.36	-1.32



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.89
S&P 500 Index (Cap Wtd)	-0.33
Russell 2000 Index	-0.40
MSCI EAFE Index (USD) (Net)	-0.37
MSCI Emg Mkts Index (USD) (Net)	-0.46
Bloomberg US Agg Bond Index	-0.50
Bloomberg US Trsy US TIPS Index	-0.40
Wilshire US REIT Index	-0.09
HFRI FOF Comp Index	-0.41
Bloomberg Cmdty Index (TR)	0.07
ICE BofAML 3 Mo US T-Bill Index	-0.44
Cons Price Index (Unadjusted)	0.31



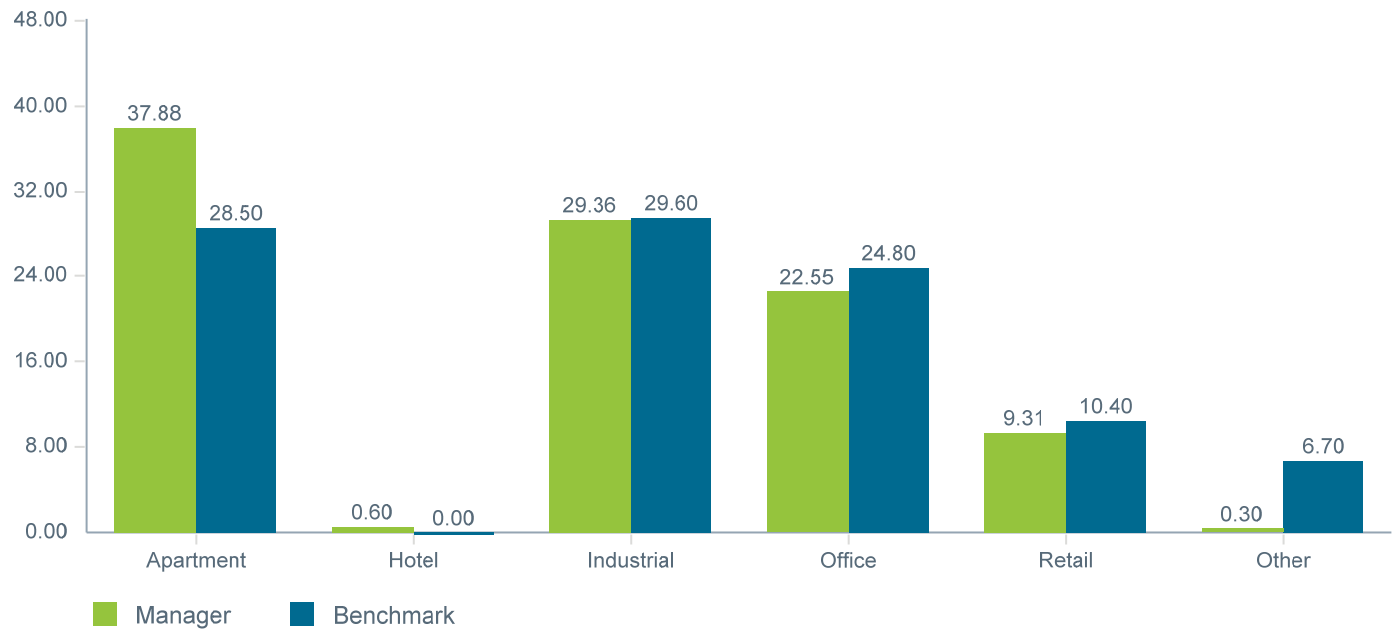
Investment Strategy

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.

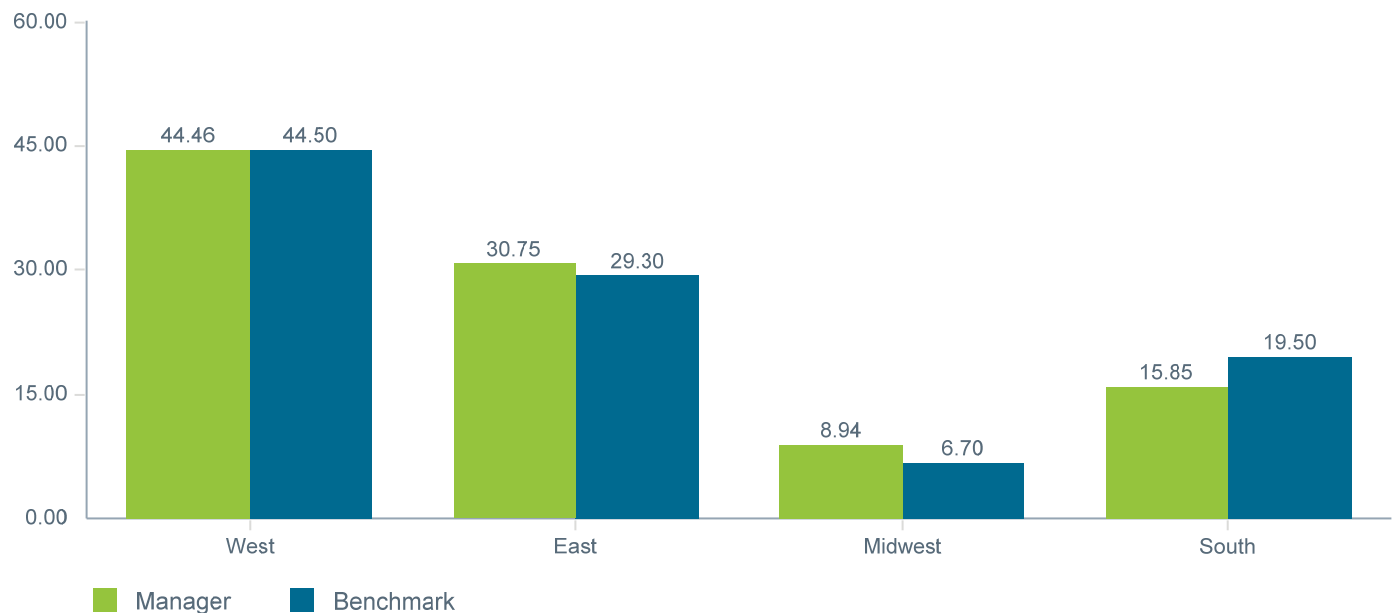
Investment Profile

Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (\$M)	18,225
Fund Leverage %	16.70
Portfolio Occupancy %	92.80
Cash Reserve %	2.30
Number of Investments	157
Number of Limited Partners	443

Property Type Allocation (%)



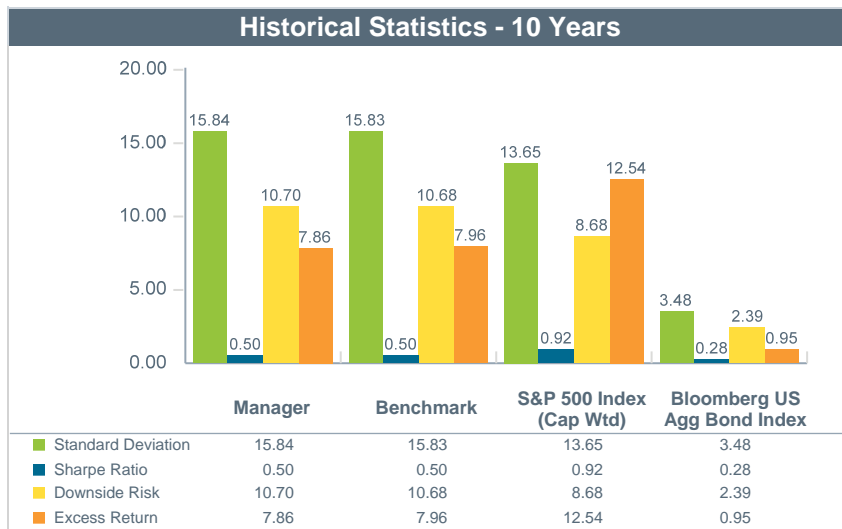
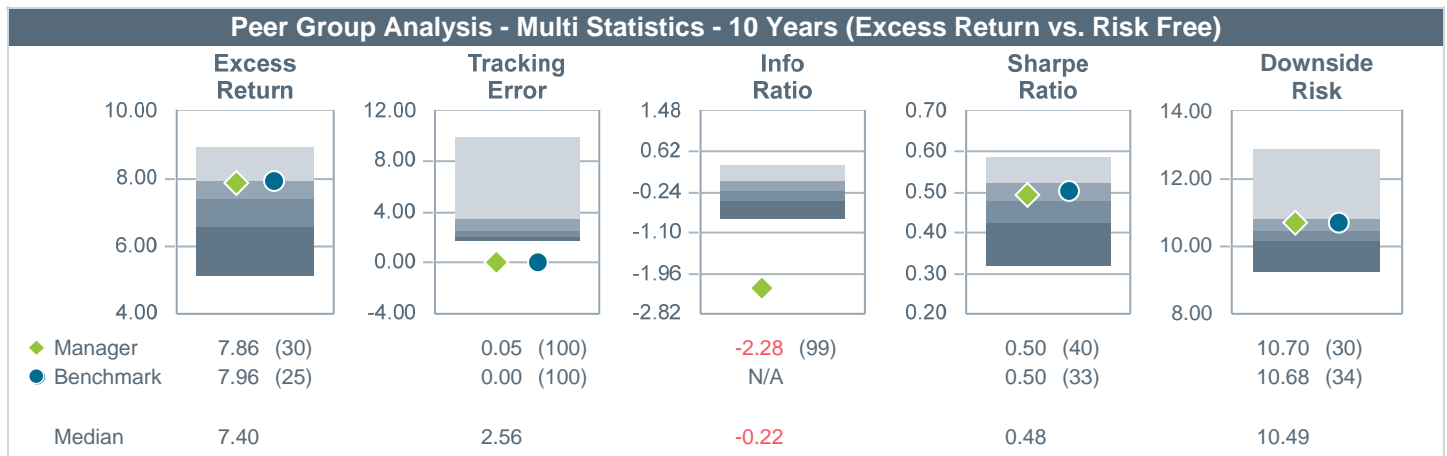
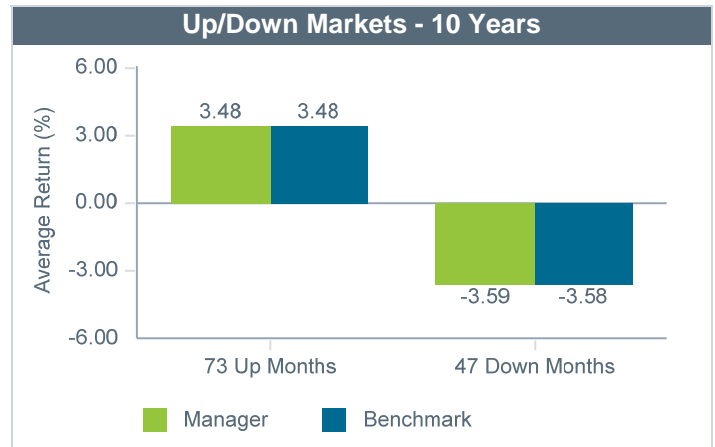
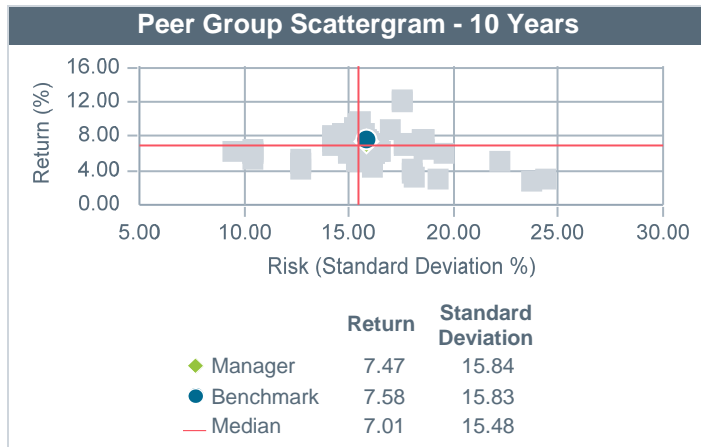
Geographic Allocation (%)



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. 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	2021	2020	2019	2018	2017
Manager	-15.47	-8.07	4.73	5.69	6.97	7.47	40.38	-4.72	28.91	-5.95	4.95
Benchmark	-15.43	-7.94	4.88	5.81	7.10	7.58	40.56	-4.55	29.03	-5.86	5.07
Difference	-0.04	-0.13	-0.15	-0.12	-0.13	-0.11	-0.18	-0.17	-0.12	-0.09	-0.12
Peer Group Median	-15.81	-7.15	4.80	5.73	6.81	7.01	41.32	-4.31	27.32	-5.71	5.32
Rank	40	74	53	52	43	31	63	55	35	54	58
Population	255	247	229	206	179	143	251	248	256	244	243



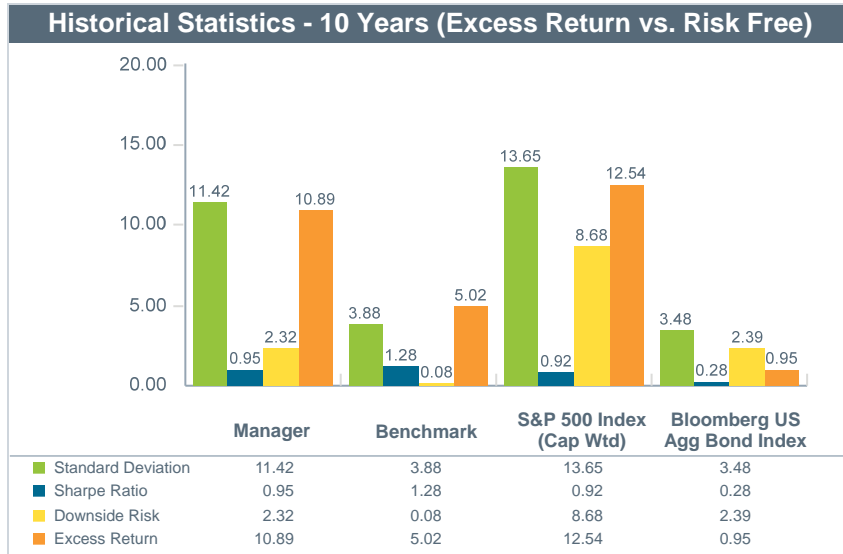
Actual Correlation - 10 Years

Index	Actual Correlation
Vanguard Spl Real Estate Index	1.00
S&P 500 Index (Cap Wtd)	0.67
Russell 2000 Index	0.61
MSCI EAFE Index (USD) (Net)	0.59
MSCI Emg Mkts Index (USD) (Net)	0.47
Bloomberg US Agg Bond Index	0.41
Bloomberg US Trsy US TIPS Index	0.52
Wilshire US REIT Index	0.99
HFRI FOF Comp Index	0.58
Bloomberg Cmnty Index (TR)	0.24
ICE BofAML 3 Mo US T-Bill Index	-0.12
Cons Price Index (Unadjusted)	-0.07

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.

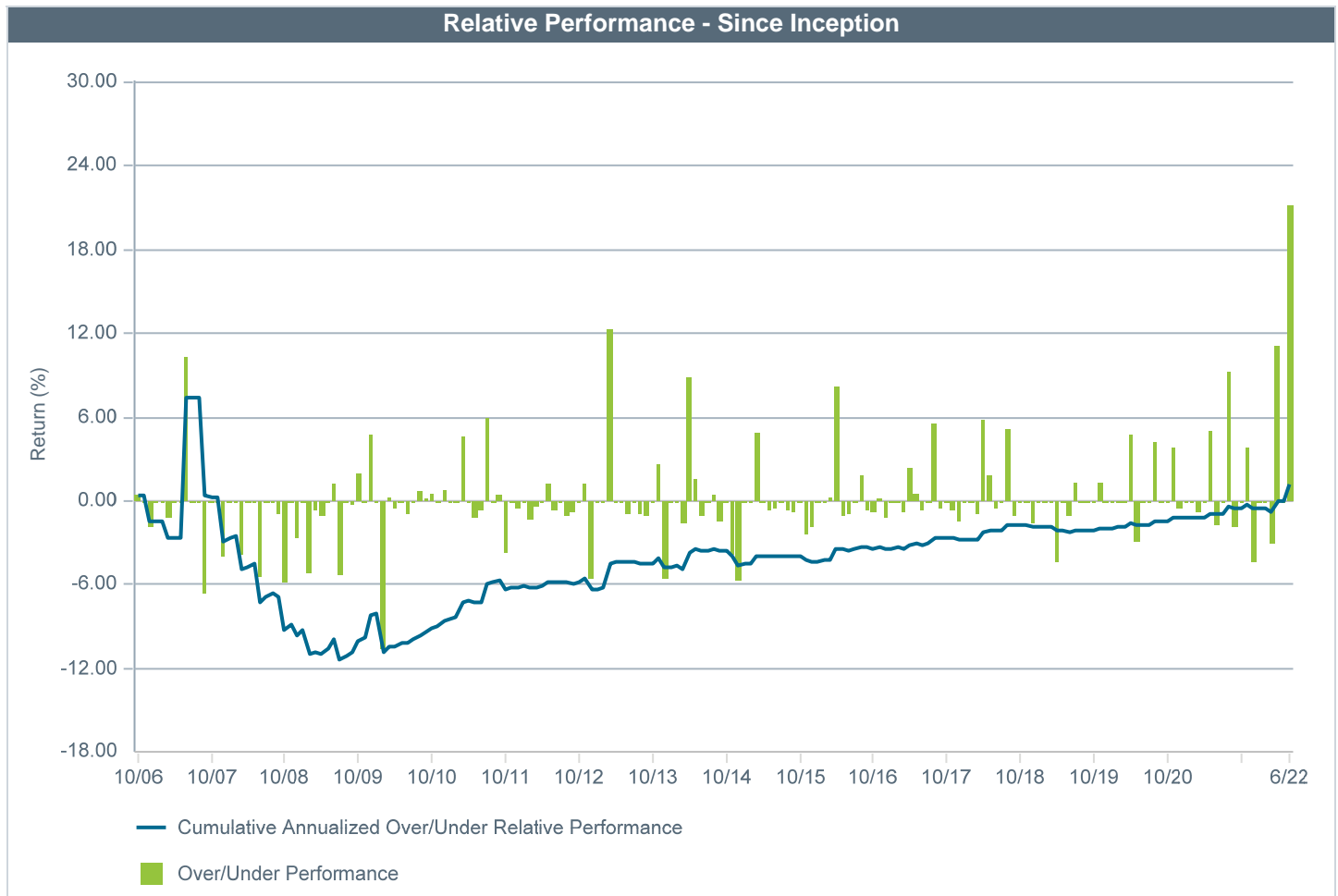


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	37.19	55.69	22.77	15.88	12.34	11.49	19.14	10.18	-1.69	12.47	8.08
Benchmark	1.87	12.01	5.03	4.32	4.05	5.73	9.17	0.81	1.30	3.21	3.63
Difference	35.32	43.68	17.74	11.56	8.29	5.76	9.97	9.37	-2.99	9.26	4.45



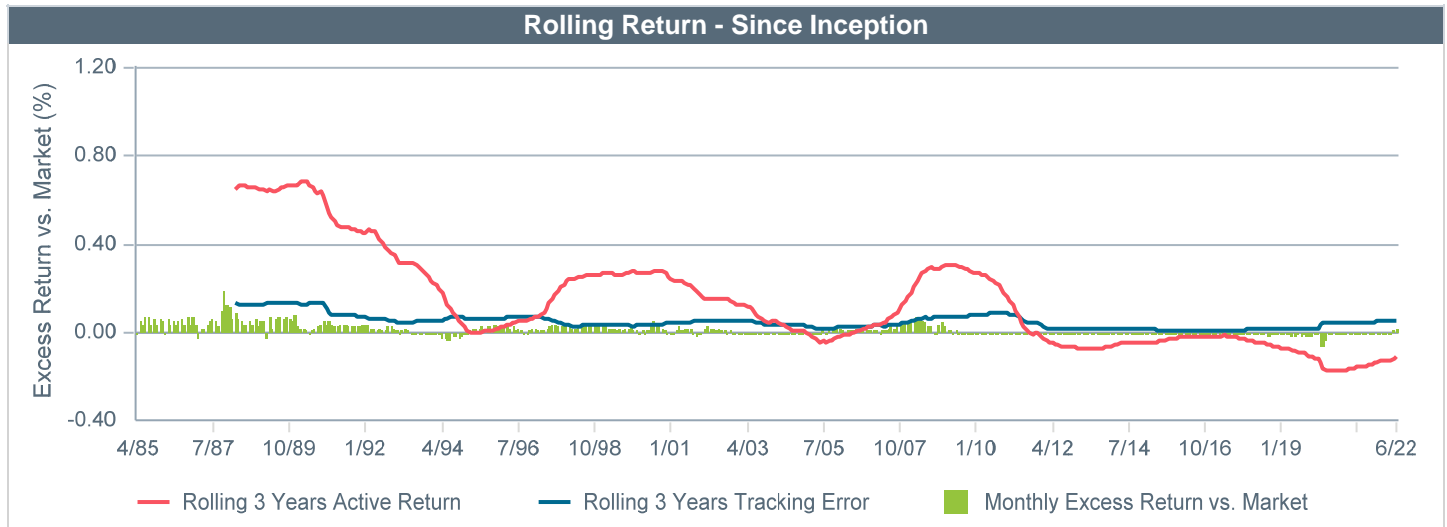
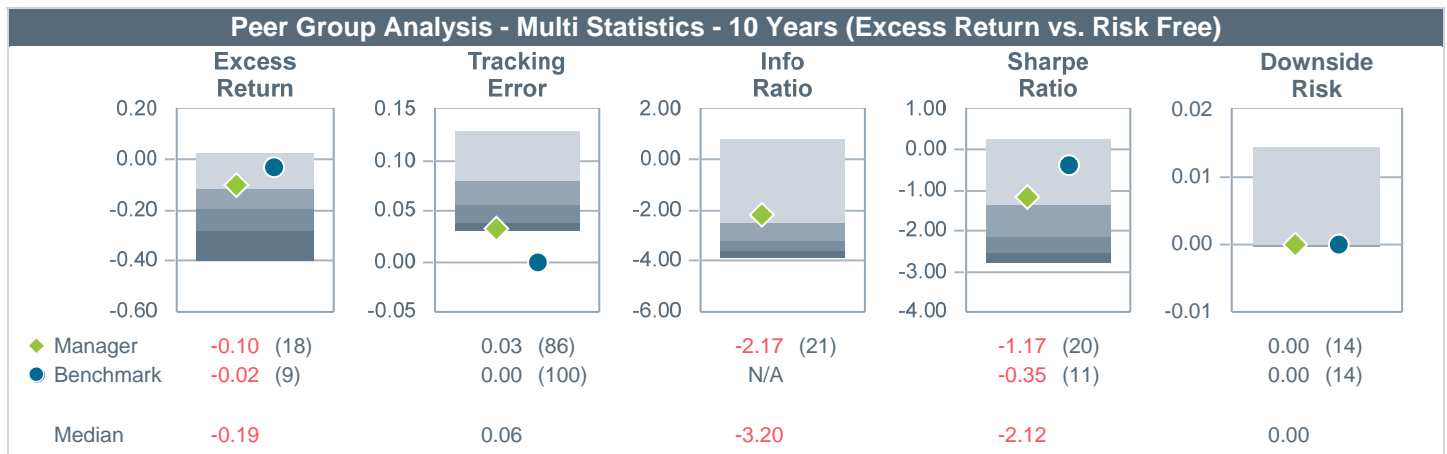
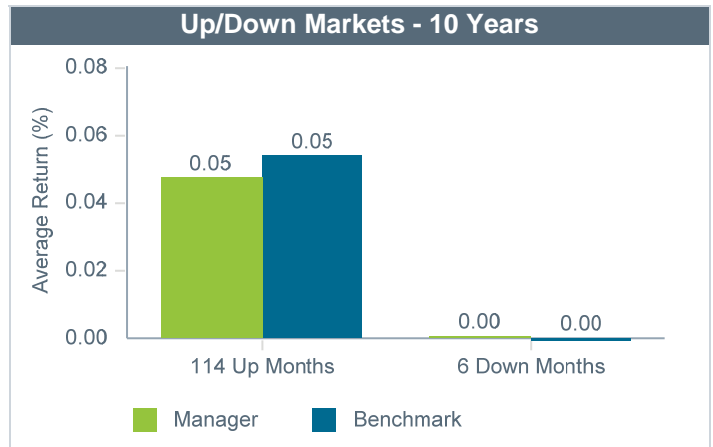
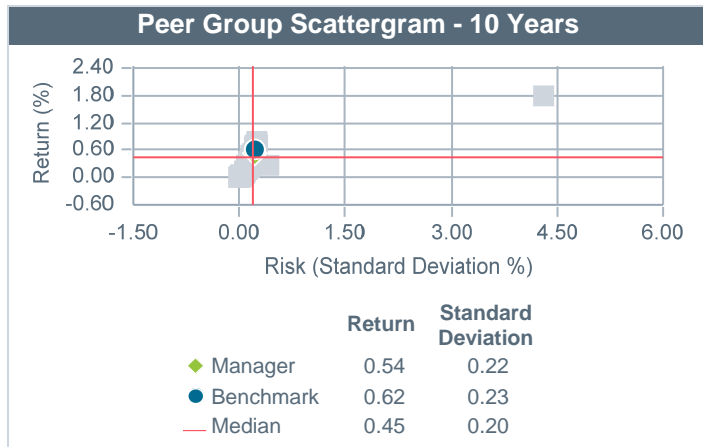
Actual Correlation - 10 Years

	Actual Correlation
NCREIF Timberland Index	0.05
S&P 500 Index (Cap Wtd)	-0.12
Russell 2000 Index	-0.07
MSCI EAFE Index (USD) (Net)	-0.12
MSCI Emg Mkts Index (USD) (Net)	-0.09
Bloomberg US Agg Bond Index	-0.16
Bloomberg US Trsy US TIPS Index	-0.11
Wilshire US REIT Index	-0.07
HFRI FOF Comp Index	-0.02
Bloomberg Comdty Index (TR)	-0.07
ICE BofAML 3 Mo US T-Bill Index	-0.10
Cons Price Index (Unadjusted)	0.27



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	2021	2020	2019	2018	2017
Manager	0.16	0.19	0.50	0.97	0.77	0.54	0.03	0.37	2.09	1.73	0.79
Benchmark	0.14	0.19	0.61	1.09	0.86	0.62	0.05	0.58	2.25	1.86	0.84
Difference	0.02	0.00	-0.11	-0.12	-0.09	-0.08	-0.02	-0.21	-0.16	-0.13	-0.05
Peer Group Median	0.10	0.11	0.42	0.85	0.63	0.45	0.01	0.30	1.90	1.53	0.55
Rank	18	11	19	19	17	18	12	31	20	21	17
Population	800	765	708	661	565	531	768	789	793	817	831



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).

Custom Composite Benchmark Comments:

- **Current Total Fund Policy Index:** The passive Total Fund Policy Index is calculated monthly and currently consists of 30% Russell 3000 Index, 23% MSCI ACW Ex US Index (USD) (Net), 20% Fixed Income Index, 15% Real Estate Index, and 12% Diversifying Assets 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.
- **Real Estate Index:** The active Real Estate Index is calculated monthly using beginning of month investment weights applied to each corresponding primary benchmark return.
- **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.
- **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.

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. Attribution to "other" is the result of securities based in industries that do not fit into any GICS classification.

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. Attribution to "other" is the result of securities based in countries/regions that do not fit into any MSCI classification.

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.

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.

