



RVK

Quarterly Investment Performance Analysis

Kansas City Police Employees' Retirement Systems

Period Ended: December 31, 2022



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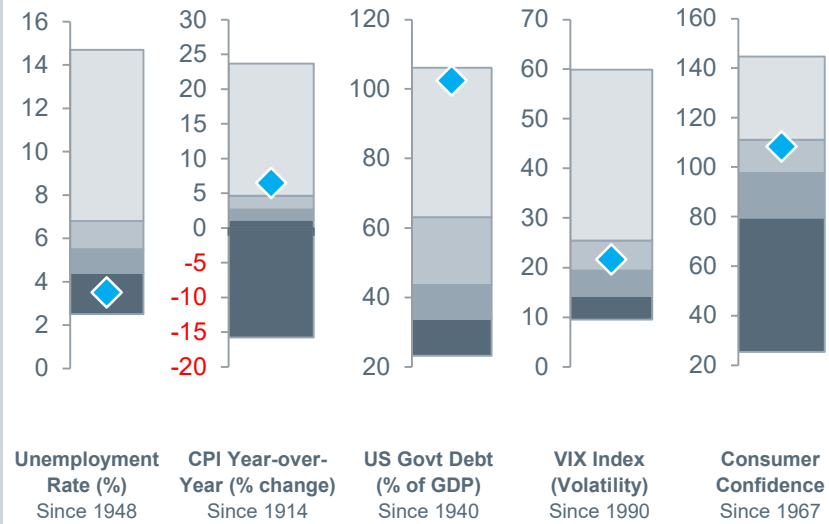
Capital Markets Review



Fourth Quarter Economic Environment

In Q4, equity and fixed income markets delivered improved results while continuing to experience elevated volatility. However, positive quarterly returns came on the tail of a significantly negative year for many investors. Regarding economic conditions, the impact of tightening monetary policy and persistent inflation, combined with supply shocks and an energy crisis in Europe, are leading to increasing odds of a global recession in 2023. On a relatively positive note, recent data indicates that the inflationary environment is showing signs of abating. Notably, the US Consumer Price Index declined for a sixth straight month in December with a reading of 6.5%, the lowest level since October 2021. In December, the FOMC did slow the pace of policy rate hikes with a 50 basis point increase, following a series of four straight 75 basis point increases. Internationally, the war in Ukraine caused an energy price shock and trade tensions continue to test economic and political relationships across multiple regions. Within emerging markets, investor attention is focused on China with some pointing to signs of a softening stance toward pandemic restrictions as reason to be optimistic regarding the country's outlook. However, these views are countered with concerns over indications of social unrest and the consolidation of power around President Xi Jinping. With all this considered, global GDP growth forecasts continue to moderate with the OECD forecasting growth of 3.1% in 2022 with an expected decline to 2.2% global GDP growth in 2023.

Key Economic Indicators



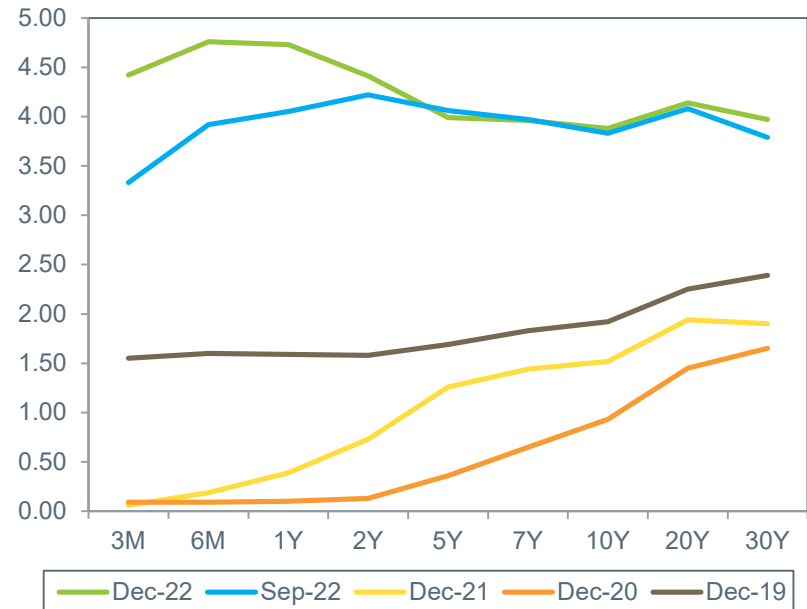
Economic Indicators

	Dec-22	Sep-22	Dec-21	Dec-19	20 Yr
Federal Funds Rate (%)	4.33 ▲	3.08	0.07	1.55	1.30
Breakeven Infl. - 5 Yr (%)	2.38 ▲	2.16	2.91	1.70	1.92
Breakeven Infl. - 10 Yr (%)	2.30 ▲	2.15	2.59	1.79	2.08
CPI YoY (Headline) (%)	6.5 ▼	8.2	7.0	2.3	2.5
Unemployment Rate (%)	3.5 —	3.5	3.9	3.6	6.0
Real GDP YoY (%)	1.0 ▼	1.8	5.7	2.6	2.0
PMI - Manufacturing	48.4 ▼	50.9	58.8	47.9	53.7
USD Total Wtd Idx	121.51 ▼	127.64	115.37	114.67	103.33
WTI Crude Oil per Barrel (\$)	80.3 ▲	79.5	75.2	61.1	67.9
Gold Spot per Oz (\$)	1,824 ▲	1,661	1,829	1,517	1,160

Market Performance (%)

	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	7.56	-18.11	-18.11	9.42	12.56
Russell 2000	6.23	-20.44	-20.44	4.13	9.01
MSCI EAFE (Net)	17.34	-14.45	-14.45	1.54	4.67
MSCI EAFE SC (Net)	15.79	-21.39	-21.39	-0.05	6.21
MSCI Emg Mkts (Net)	9.70	-20.09	-20.09	-1.40	1.44
Bloomberg US Agg Bond	1.87	-13.01	-13.01	0.02	1.06
ICE BofAML 3 Mo US T-Bill	0.84	1.46	1.46	1.26	0.76
NCREIF ODCE (Gross)	-4.96	7.47	7.47	8.68	10.10
FTSE NAREIT Eq REIT (TR)	5.24	-24.37	-24.37	3.68	6.53
HFRI FOF Comp	1.79	-5.25	-5.25	3.02	3.51
Bloomberg Cmdty (TR)	2.22	16.09	16.09	6.44	-1.29

Treasury Yield Curve (%)



Fourth Quarter Review

Broad Market

US equity markets experienced a decrease in volatility in Q4 with short term spikes around CPI release dates and Fed meetings. Returns were positive across market cap and style groups in Q4. The reversal to growth seen in Q3 was short-lived, as value stocks led growth by a wide margin in Q4. Energy had its best year on record with the S&P 500 Energy Index gaining 65.72%.

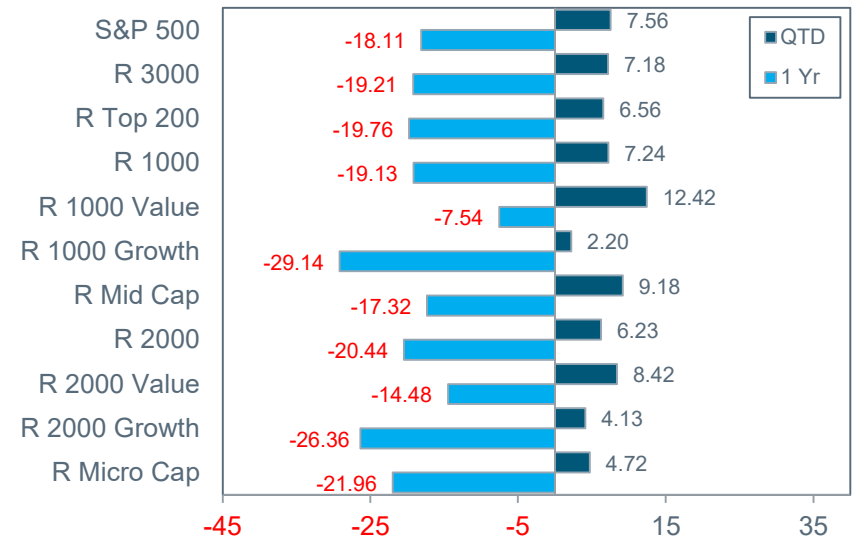
Market Cap

This year marks the worst performance of US equities across market cap groups since the GFC, and only the third time in the last 15 years that the Russell 3000 Index has generated negative returns.

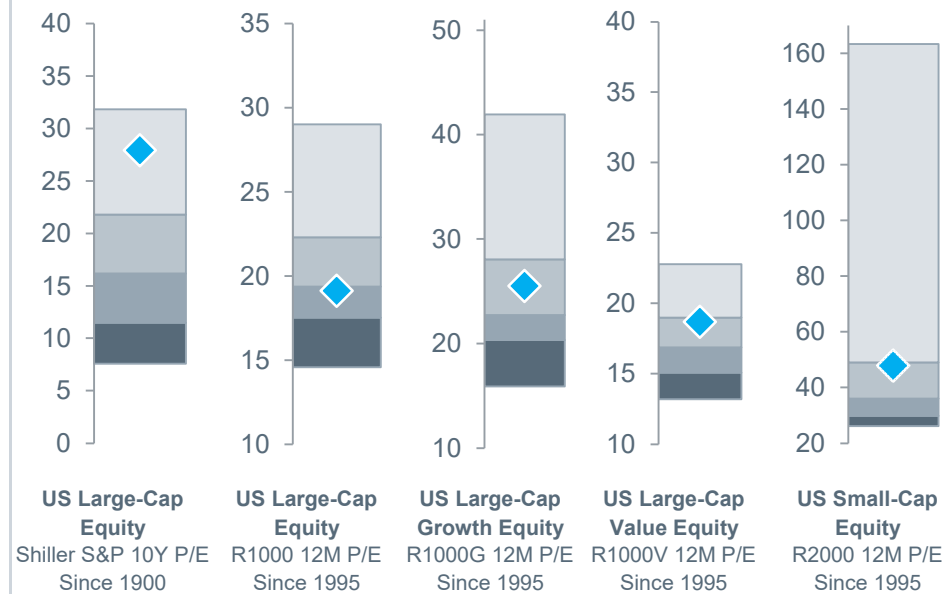
Style and Sector

Value-oriented managers had a higher success rate than core or growth managers in the small- and mid-cap spaces, while large-cap core and growth managers fared better than value managers. Growth managers across the market cap spectrum struggled to provide downside protection in 2022, while value and core managers were broadly successful.

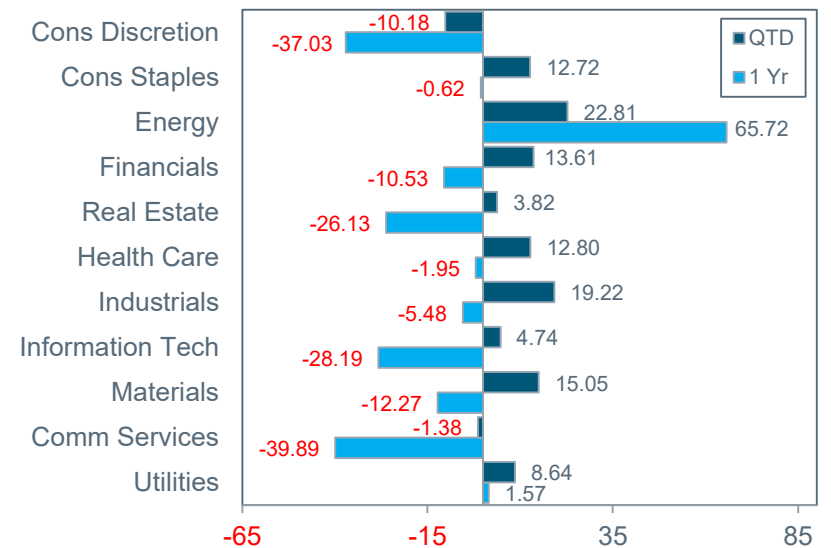
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



Valuation data courtesy of Bloomberg Professional Service and Robert J. Shiller, Irrational Exuberance, Second Edition (2000). P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.



Fourth Quarter Review

Developed Markets

International developed markets meaningfully outperformed their domestic counterparts in Q4 with the MSCI EAFE Index realizing a 17.3% return for the period. Value stocks rebounded back into favor, outperforming growth in a reversal from the prior quarter, while large-cap continued its outperformance over small-cap stocks. Overall, market trends pointed to investors anticipating moderating inflation and easing of rate hikes despite the ongoing uncertainty led by the conflict in Ukraine and near-term recession fears.

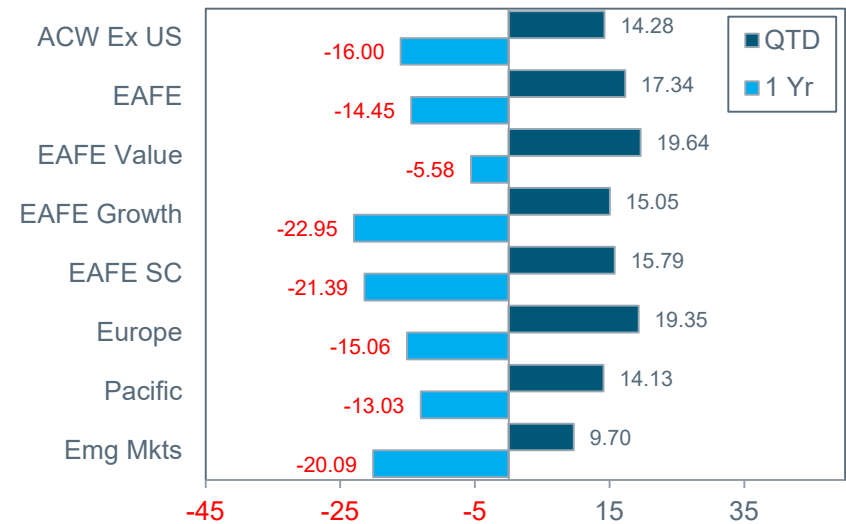
Emerging Markets

Emerging markets lagged behind developed during the quarter with the MSCI Emerging Markets Index finishing with a 9.7% return. Value stocks narrowly outperformed growth and large-cap beat small-cap.

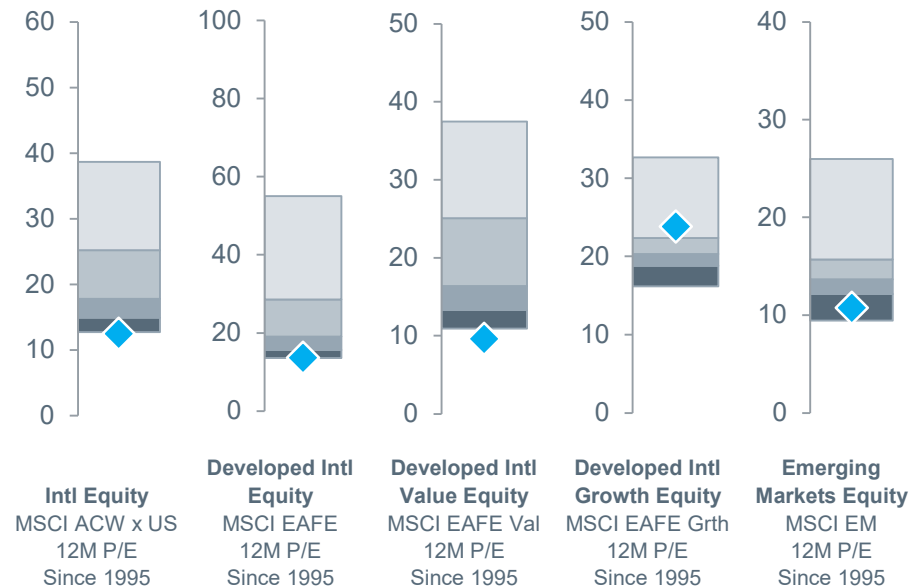
Market Cap & Style

The majority of active managers in emerging markets outperformed the index in Q4; however, active managers in international developed mostly underperformed.

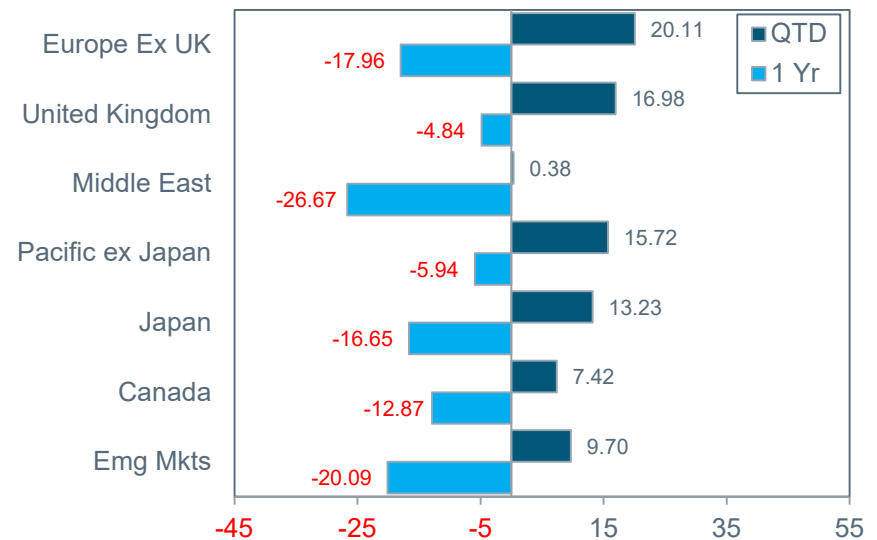
MSCI Style and Capitalization Market Performance (%)



Valuations



MSCI Region Performance (%)



Valuation data courtesy of Bloomberg Professional Service.

P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.

All returns are shown net of foreign taxes on dividends.



Fourth Quarter Review - Absolute Return

General Market - Hedge Funds

Despite a highly challenging market backdrop, hedge funds broadly delivered much-needed capital preservation to institutional investors. The year also ended on a strong note given most managers were reducing leverage and overall market exposure going into Q4. The HFRI Fund-Asset-Weighted Composite Index delivered an annual return of 1.0% while its Asset-Weighted counterpart ended the year at -4.0%.

General Market - Global Tactical Asset Allocation (GTAA)

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely posted significant gains with moderate dispersion to close an otherwise challenging year. Given a strong quarter for non-US equity, as well as value-oriented equity within the US, nearly all active managers with significant diversification outperformed a US centric blend of 60% equity and 40% fixed income. The top performing long-biased GTAA strategies were those who have included meaningful market neutral idiosyncratic relative valuation exposures. While those who moderately underperformed peers benefitted from a value bias despite maintaining US equity and fixed income exposures.

Fourth Quarter Review - Real Assets

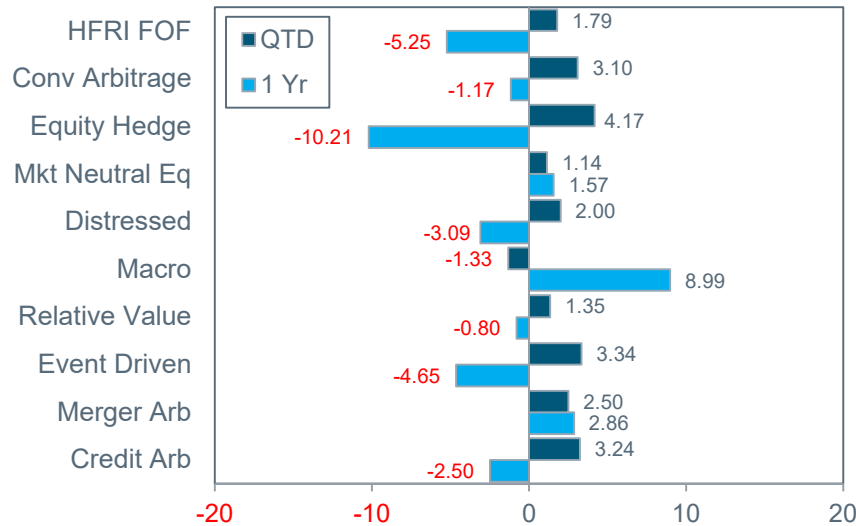
General Market - Diversified Inflation Strategies (DIS)

DIS managers tracked closely by RVK have outperformed a US-centric blend of 60% equity and 40% fixed income both year to date, and over the quarter. After responding positively to record inflationary pressures in Q1 of 2022, DIS posted losses in the second and third quarters that followed. Strong Q4 performance has materialized across the peer group, with those who rely on income-oriented investment processes and those who hold larger TIPS allocation lagging the group to a moderate degree.

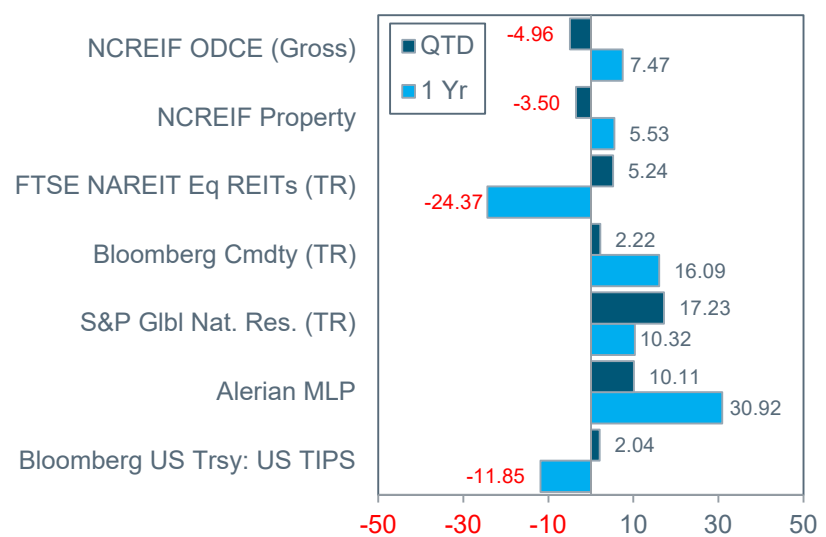
General Market - Real Estate

Core private real estate generated a negative return of -5.0% in Q4 (on a preliminary and gross of fee basis), as reported by the NFI-ODCE Index, with the total return comprising of 0.8% income and -5.8% price appreciation. Investors of publicly traded real estate significantly outperformed their private market counterparts by a meaningful margin. Publicly traded real estate delivered a fourth quarter total return of 4.5%, as measured by FTSE/NAREIT All REITs Index.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)



Fourth Quarter Review

Broad Market

The Bloomberg US Aggregate Index finished Q4 with a return of 1.9%, capping off a decline of -13.0% in 2022, the most negative calendar year on record for the index. The year was defined by rising interest rates, as treasury yields rose 236 basis points from 1.5% to 3.9% as measured by the 10-year US Treasury yield. The Federal Reserve aggressively hiked the Federal Funds rate in response to persistent inflation over the course of the year.

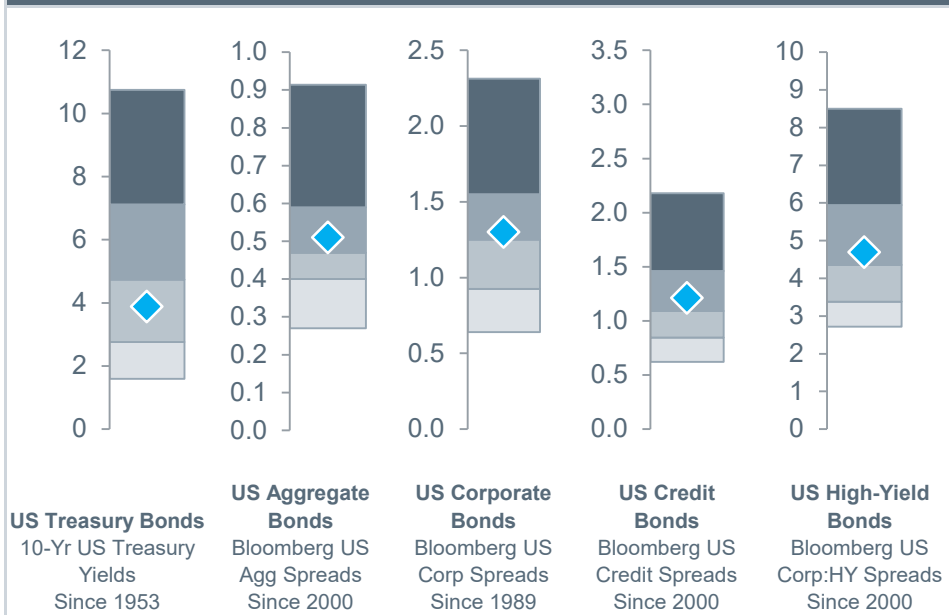
Credit Market

US investment grade corporate bonds rebounded in Q4 as low supply and softer Federal Reserve rhetoric bolstered credit markets. Non-investment grade corporate credit relatively outperformed investment grade over the year.

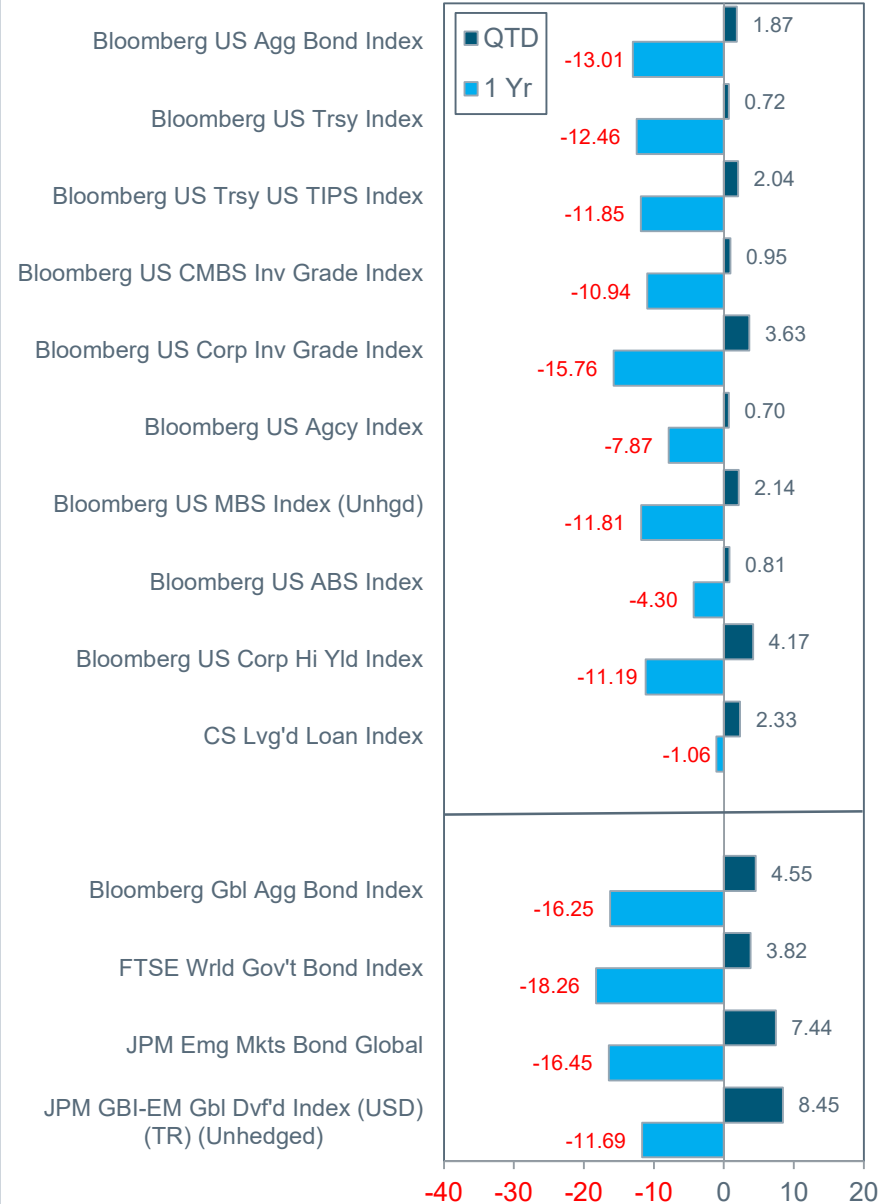
Emerging Market Debt

Conditions in global fixed income markets were defined by concerns over low growth, persistent inflation, rising interest rates, a strong US Dollar, and geopolitical conflict. The Bloomberg Global Aggregate Index returned 1.0% in Q4 and -11.2% in 2022, while the JPM EMBI Global Diversified returned 8.1% and -17.8% over these respective periods.

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.



Annual Asset Class Performance

As of December 31, 2022

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	CYTD
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	16.09
	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	7.47
	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	1.46
	-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	-5.25
	-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	-11.19
	-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	-11.85
	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.42	10.88	10.10	-13.01
	-33.79	18.91	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	7.82	6.17	-14.45
	-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	-18.11
	-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	-20.09
	-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	-20.44
	-43.33	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	-21.39
	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.37
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	-27.09
	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 Comdty (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.



Police Plan



Kansas City Police Employees' Retirement Systems (KCPERS)
Investment Objective Review
As of December 31, 2022

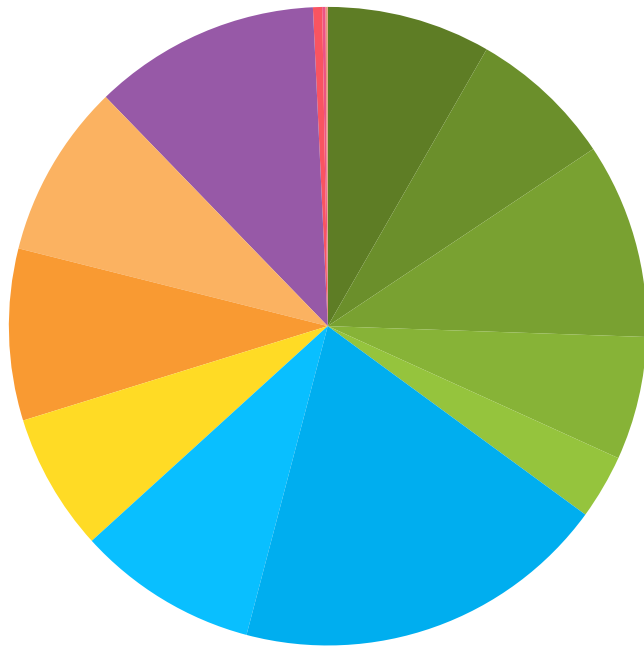
Asset Allocation						
	Yes	No	Current	Min.	Target	Max.
Global Equity	✓		35.0%	33%	38%	43%
Fixed Income	✓		28.2%	26%	31%	36%
Direct Lending	✓		7.0%	4%	7%	10%
Real Estate		✓	17.5%	9%	13%	17%
Absolute Return	✓		11.5%	7%	11%	15%
Private Equity		✓	0.6%	0%	0%	0%
Cash Equivalent	✓		0.1%	0%	0%	5%
Total Fund	✓		100%	95%	100%	100%

Investment Policy Guidelines	Performance (Net)/ Rank	Yes	No	Comments
Performance (over full market cycle of 5 years)				
Total Fund				
Total fund composite rate of return exceeds the current Target Allocation Index (gross of fees) over 5 years.	4.76%	✓		
The total fund return is equal to or exceeds 7.25% annualized return (gross of fees) over 5 years.	4.76%		✓	
Global Equity				
The global equity composite rate of return exceeds the benchmark (net of fees).	4.93%		✓	
The global equity composite performed at the fortieth (40th) percentile or better.	62		✓	
LSV Global Large Cap Value (SA)				
The manager return exceeds the benchmark (net of fees).	4.43%		✓	
The manager performed at the fortieth (40th) percentile or better.	44		✓	
Artisan Global Opportunities (SA)				
The manager return exceeds the benchmark (net of fees).	7.04%	✓		
The manager performed at the fortieth (40th) percentile or better.	33	✓		
NT Collective Daily ACW IM NL (CF)				
The manager return exceeds the benchmark (net of fees).	5.36%	✓		
The manager performed at the fortieth (40th) percentile or better.	3	✓		
WTC-CTF Global Perspectives (CF)				
The manager return exceeds the benchmark (net of fees).	4.69%	✓		
The manager performed at the fortieth (40th) percentile or better.	22	✓		
GQG Partners Emg Mkts Eq (CF)				
The manager return exceeds the benchmark (net of fees).	N/A			Insufficient history.
The manager performed at the fortieth (40th) percentile or better.	N/A			Insufficient history.
Fixed Income				
The fixed income composite rate of return exceeds the benchmark (net of fees).	1.06%	✓		
The fixed income composite performed at the fortieth (40th) percentile or better.	9	✓		
FCI Advisors (SA)				
The manager return exceeds the benchmark (net of fees).	0.53%	✓		
The manager performed at the fortieth (40th) percentile or better.	12	✓		
PIMCO:Income;Inst (PIMIX)				
The manager return exceeds the benchmark (net of fees).	1.69%	✓		
The manager performed at the fortieth (40th) percentile or better.	15	✓		
Direct Lending				
The direct lending composite rate of return exceeds the benchmark (net of fees).	N/A			Insufficient history.
White Oak Fixed Income C LP				
The manager return exceeds the benchmark (net of fees).	N/A			Insufficient history.
Real Estate				
The real estate composite rate of return exceeds the benchmark (net of fees).	8.30%	✓		
Morgan Stanley Prime Property (CF)				
The manager return exceeds the benchmark (net of fees).	8.40%	✓		
PGIM Real Estate PRISA II (CF)				
The manager return exceeds the benchmark (net of fees).	8.19%	✓		
Absolute Return				
The absolute return composite rate of return exceeds the benchmark (net of fees).	2.90%		✓	
Grosvenor FOB (CF)				
The manager return exceeds the benchmark (net of fees).	3.28%		✓	
Private Equity				
The private equity composite rate of return exceeds the benchmark (net of fees).	8.97%		✓	

The Investment Policy Review for the Police Retirement System of Kansas City, Missouri examines client specific net returns, except for the Total Fund which examines client specific gross return. Managers that do not have 5 years of client specific net performance populate are backfilled with composite/manager gross performance until sufficient historical client-specific net performance is available. White Oak Fixed Income C LP and GQG Partners Emg Mkts Eq (CF) do not have 5 years of composite level returns. The two private equity managers are in their final stages of distributing capital; performance for these managers is not relevant.

Asset Allocation by Manager

December 31, 2022 : \$931,621,415



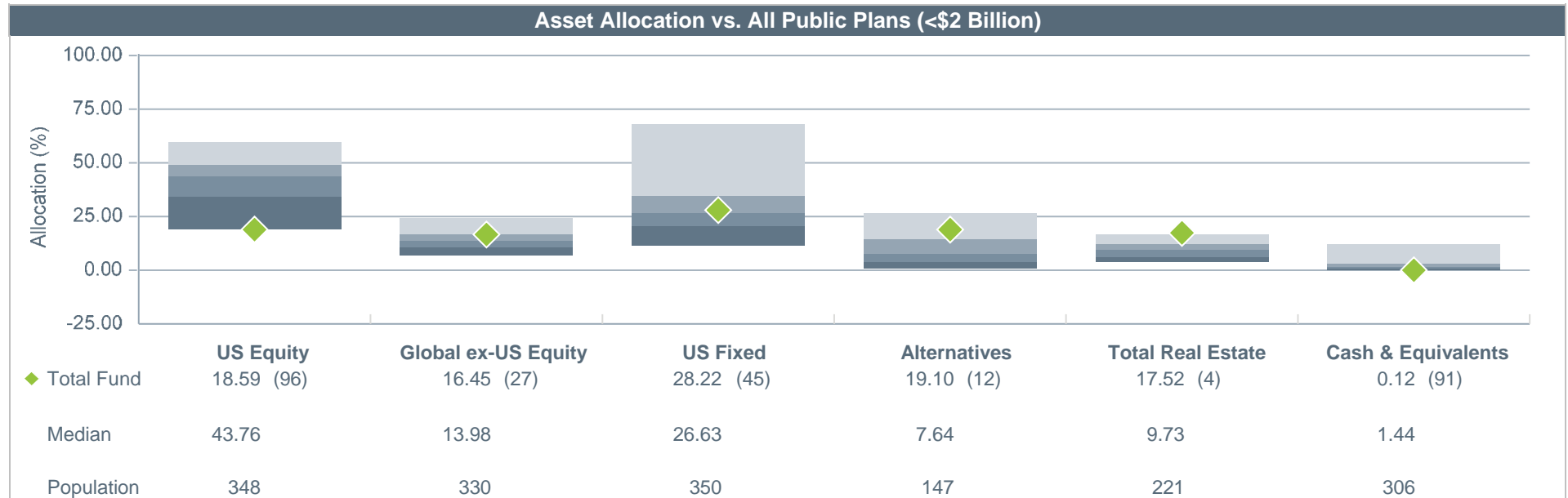
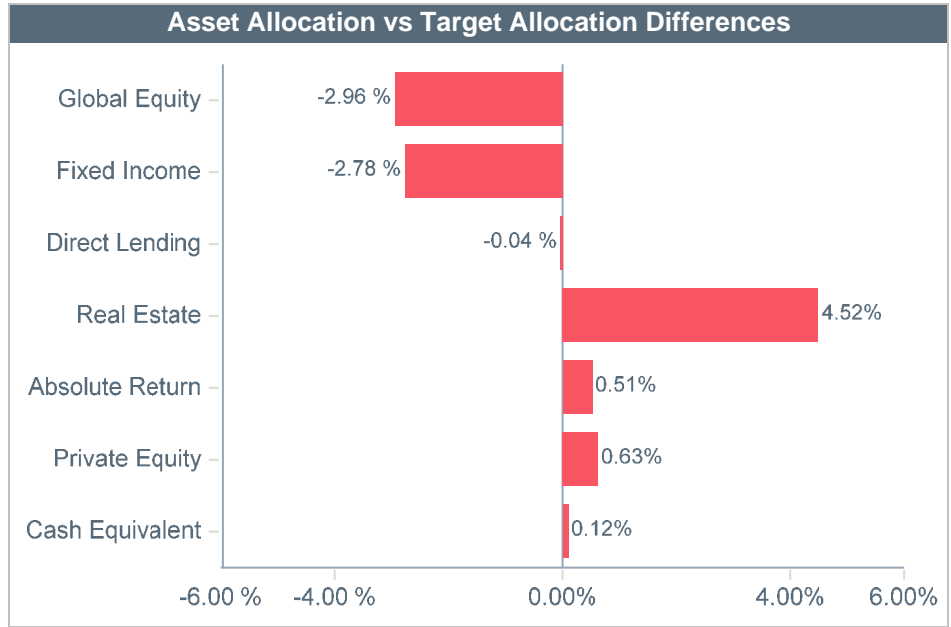
	Market Value (\$)	Allocation (%)
LSV Global Large Cap Value (SA)	77,314,181	8.30
Artisan Global Opportunities (SA)	68,401,354	7.34
NT Collective Daily ACW IM NL (CF)	92,193,215	9.90
WTC-CTF Global Perspectives (CF)	58,153,448	6.24
GQG Partners Emg Mkts Eq (CF)	30,420,118	3.27
FCI Advisors (SA)	177,586,052	19.06
PIMCO:Income;Inst (PIMIX)	85,331,417	9.16
White Oak Fixed Income C LP	64,819,070	6.96
Morgan Stanley Prime Property (CF)	80,997,324	8.69
PGIM Real Estate PRISA II (CF)	82,183,060	8.82
Grosvenor FOB (CF)	107,245,687	11.51
Abbott Capital Private Equity LP (CF)	4,330,214	0.46
J.P. Morgan Private Equity III (CF)	1,541,584	0.17
Coltv. Short Term Inv. Fund	1,104,691	0.12

Schedule of Investable Assets

Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
QTD	917,113,185	-13,706,292	28,214,521	931,621,415	3.07
CYTD	1,079,612,315	-37,333,072	-110,657,829	931,621,415	-10.32
FYTD	986,540,335	-25,449,216	-29,469,704	931,621,415	-3.00

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

Asset Allocation vs. Target Allocation					
	Market Value (\$)	Allocation (%)	Target (%)	Minimum (%)	Maximum (%)
Total Fund	931,621,415	100.00	100.00	-	-
Global Equity	326,482,315	35.04	38.00	33.00	43.00
Fixed Income	262,917,469	28.22	31.00	26.00	36.00
Direct Lending	64,819,070	6.96	7.00	4.00	10.00
Real Estate	163,180,384	17.52	13.00	9.00	17.00
Absolute Return	107,245,687	11.51	11.00	7.00	15.00
Private Equity	5,871,798	0.63	0.00	0.00	0.00
Cash Equivalent	1,104,691	0.12	0.00	0.00	5.00



Parenteses contain percentile ranks. Allocations may not sum up to 100% exactly due to rounding. The Board has elected not to make additional Private Equity commitments and as a result, the Private Equity allocation is winding down. The Board-approved rebalancing plan is in the process of being implemented.

Kansas City Police Employees' Retirement Systems
KCPERS Police
Asset Allocation & Performance

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
Total Fund (Gross)	\$931.62	3.18	-2.69	-9.89	-9.89	3.84	4.76	6.52	6.54	10.90	12.06	15.24
All Public Plans (<\$2 Billion)		5.98	-3.78	-13.41	-13.41	3.68	5.09	6.81	7.06	13.56	12.79	18.89
Rank		97	17	10	10	46	63	64	71	83	61	91
Total Fund	\$931.62	3.07	-3.00	-10.32	-10.32	3.33	4.22	5.99	N/A	10.29	11.54	14.64
Target Allocation Index		3.88	-2.62	-9.24	-9.24	3.22	4.42	5.72	5.83	9.89	10.25	14.39
Difference		-0.81	-0.38	-1.08	-1.08	0.11	-0.20	0.27	N/A	0.40	1.29	0.25
7.25% Annualized Return		1.77	4.78	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
Difference		1.30	-7.78	-17.57	-17.57	-3.92	-3.03	-1.26	N/A	3.04	4.29	7.39
Global Equity	\$326.48	9.75	-5.11	-18.46	-18.46	3.79	4.93	8.29	N/A	16.64	17.54	27.58
MSCI ACW IM Index (USD) (Net)		9.84	-6.24	-18.40	-18.40	3.89	4.96	7.98	7.94	18.22	16.25	26.35
Difference		-0.09	1.13	-0.06	-0.06	-0.10	-0.03	0.31	N/A	-1.58	1.29	1.23
IM Global Large Cap Equity (MF) Median		9.88	-5.98	-22.10	-22.10	3.45	5.56	7.92	8.31	16.85	20.30	29.62
Rank		53	41	34	34	43	62	42	N/A	54	62	74
Fixed Income	\$262.92	2.79	-2.77	-11.54	-11.54	-1.30	1.06	2.40	N/A	-0.45	9.18	9.31
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72
Difference		0.92	1.10	1.47	1.47	1.41	1.04	1.51	N/A	1.10	1.67	0.59
IM Global Fixed Income (MF) Median		3.81	-4.86	-14.66	-14.66	-3.68	-0.90	0.74	0.01	-2.73	8.29	8.08
Rank		58	24	31	31	16	9	10	N/A	10	37	25

Performance shown is net of fees, unless otherwise noted. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading. Direct Lending performance is currently unavailable.



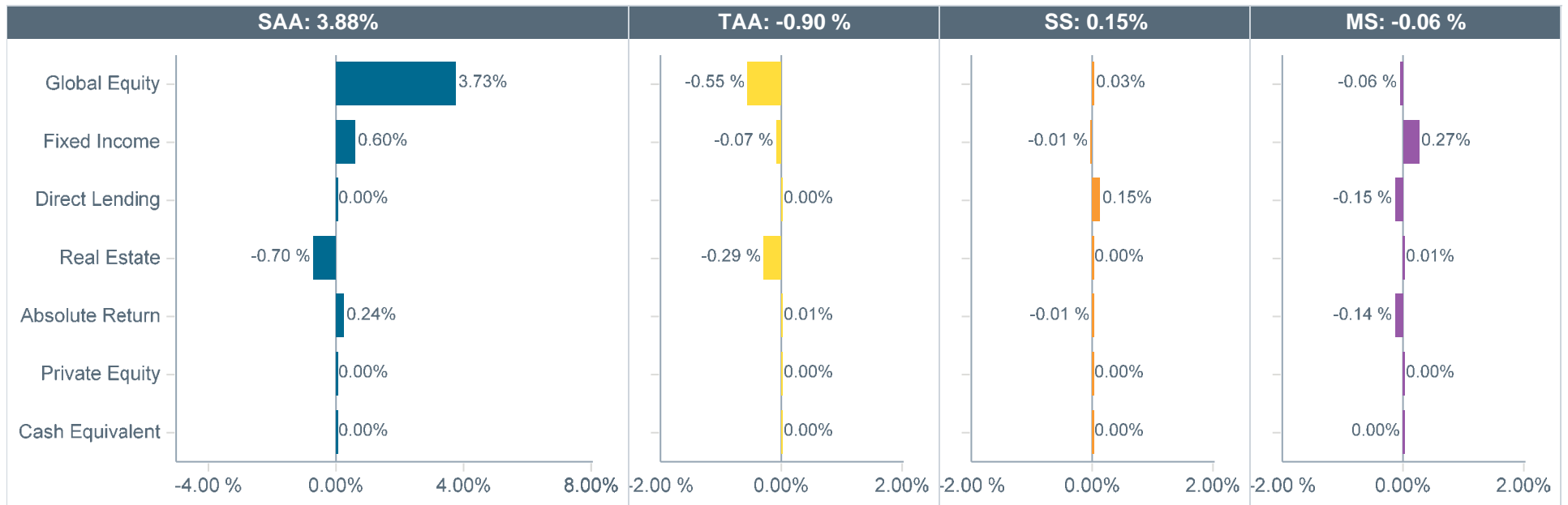
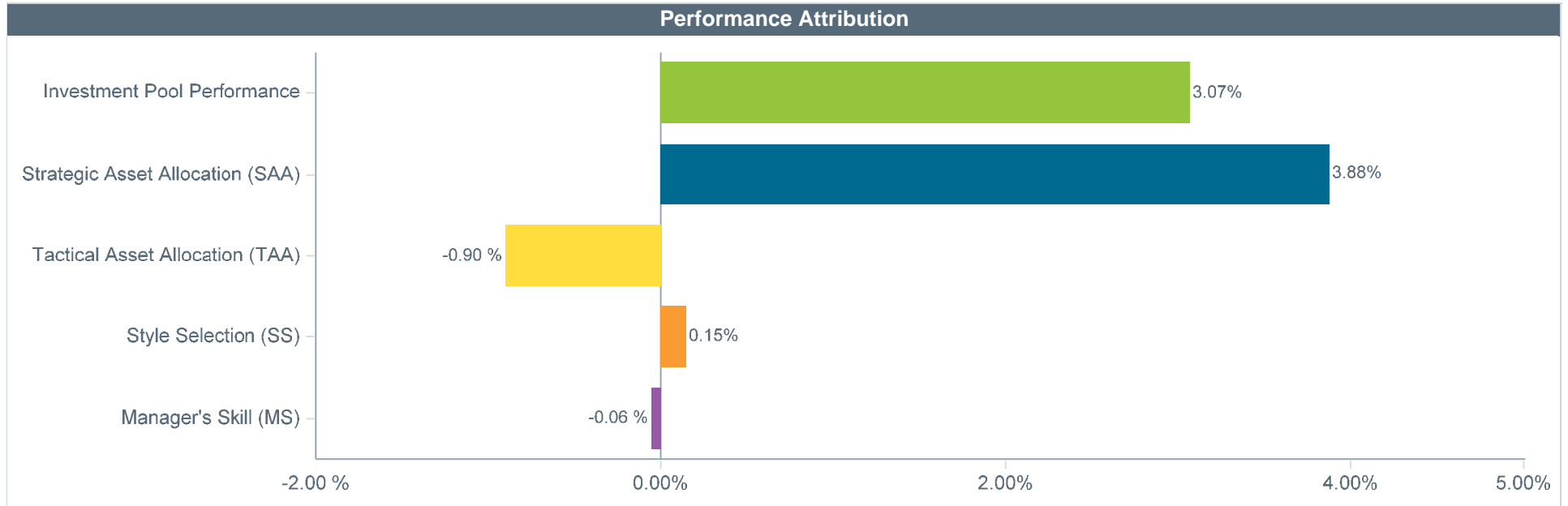
Kansas City Police Employees' Retirement Systems
KCPERS Police
Asset Allocation & Performance

As of December 31, 2022

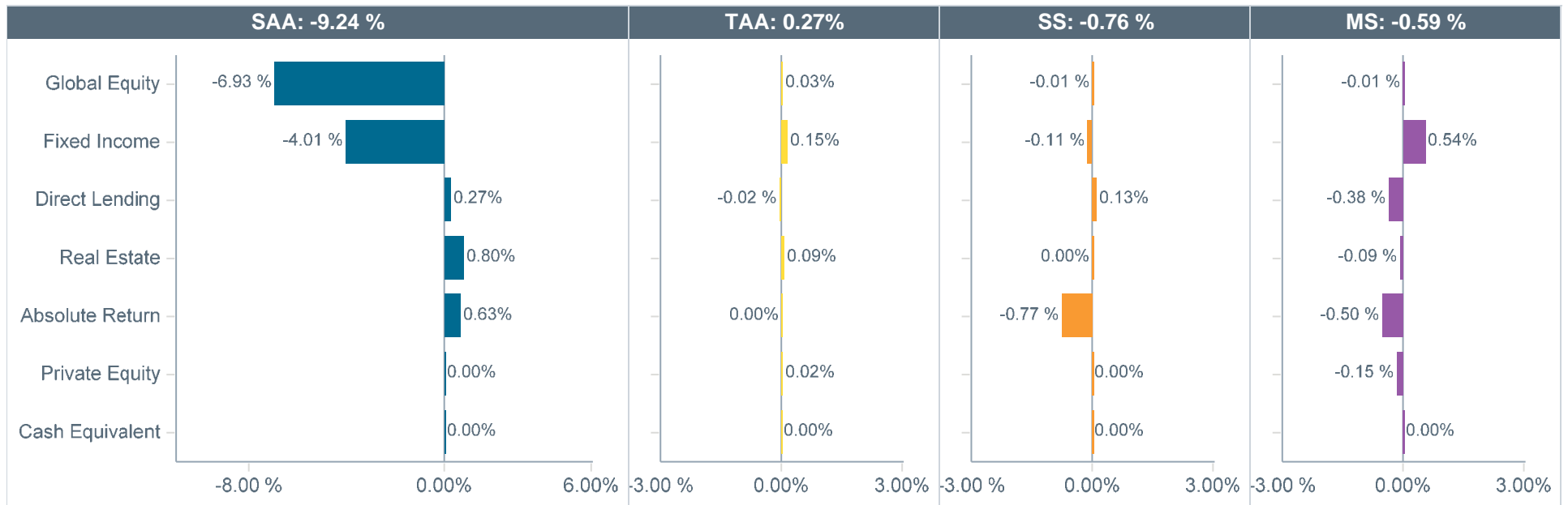
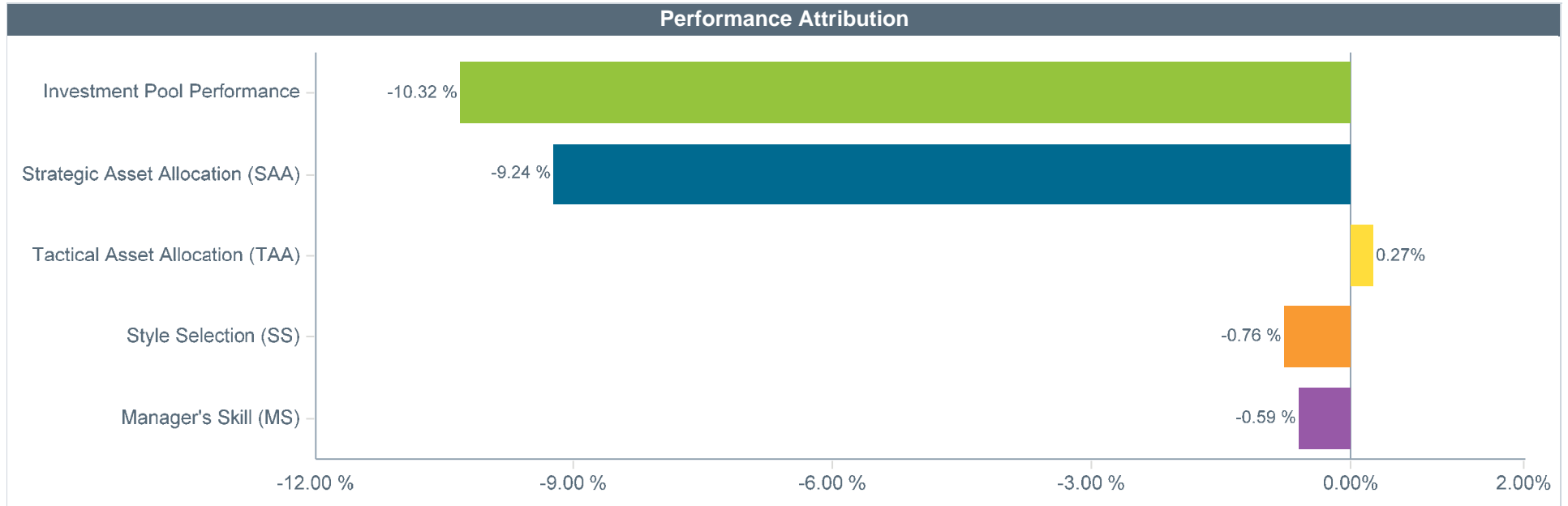
	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
Direct Lending	\$64.82	0.00	-0.79	-0.04	-0.04	2.39	N/A	N/A	N/A	4.60	2.66	7.41
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	2.62	4.36	4.36	5.04	5.89	5.81	5.58	5.05	5.70	7.39
Difference		0.00	-3.41	-4.40	-4.40	-2.65	N/A	N/A	N/A	-0.45	-3.04	0.02
Real Estate	\$163.18	-5.08	-1.12	6.00	6.00	9.06	8.30	8.38	N/A	21.73	0.54	6.24
NCREIF ODCE Index (AWA) (Net)		-5.13	-0.51	6.59	6.59	8.98	7.72	7.58	9.11	21.02	0.34	4.39
Difference		0.05	-0.61	-0.59	-0.59	0.08	0.58	0.80	N/A	0.71	0.20	1.85
Absolute Return	\$107.25	0.79	-0.33	-6.37	-6.37	3.57	2.90	3.72	N/A	6.32	11.60	7.71
Long Term Absolute Return Custom Benchmark		2.08	4.75	6.53	6.53	5.73	6.31	6.25	N/A	5.05	5.62	7.40
Difference		-1.29	-5.08	-12.90	-12.90	-2.16	-3.41	-2.53	N/A	1.27	5.98	0.31
Absolute Return Custom Benchmark		1.99	0.09	-1.35	-1.35	4.81	3.91	4.40	N/A	6.77	9.32	9.82
Difference		-1.20	-0.42	-5.02	-5.02	-1.24	-1.01	-0.68	N/A	-0.45	2.28	-2.11
Private Equity	\$5.87	0.43	-15.27	-17.94	-17.94	8.26	8.97	9.59	N/A	28.38	20.44	10.04
Cambridge US Prvt Eq Index (1 Qtr Lag)		0.05	-3.34	2.60	2.60	19.91	17.17	15.97	15.37	49.06	12.72	7.79
Difference		0.38	-11.93	-20.54	-20.54	-11.65	-8.20	-6.38	N/A	-20.68	7.72	2.25

See addendum for custom index comments. 7.25% annualized return represents the System's long-term return goal based on the System's current actuarial assumed rate of return.

Performance shown is net of fees, unless otherwise noted. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading. Direct Lending performance is currently unavailable.

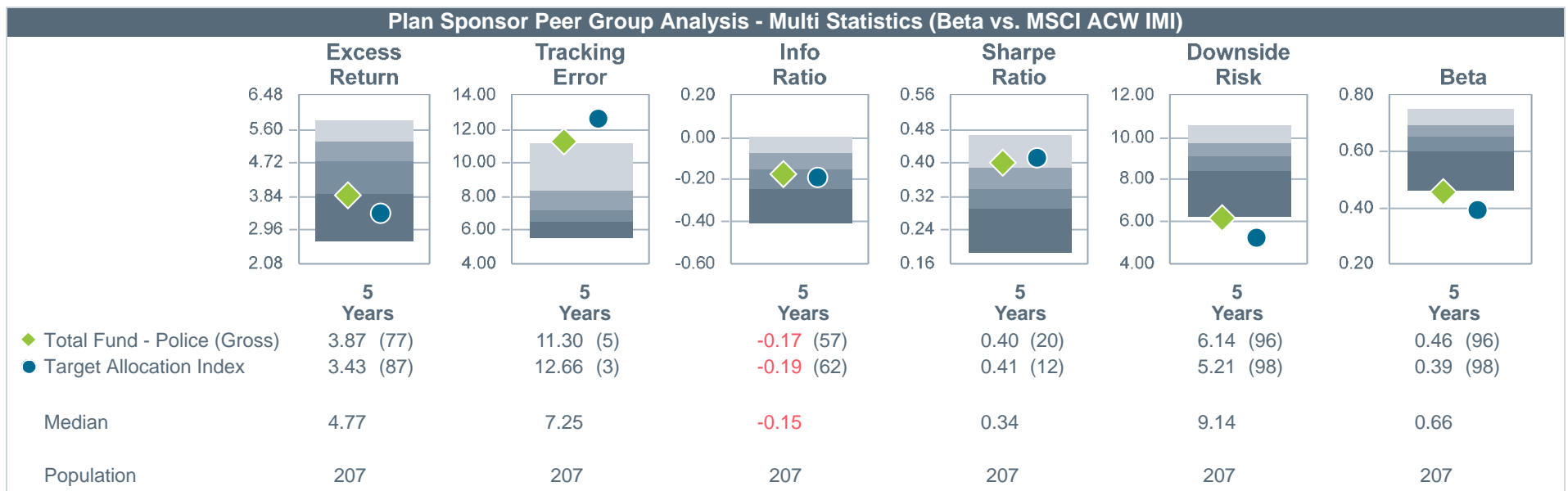
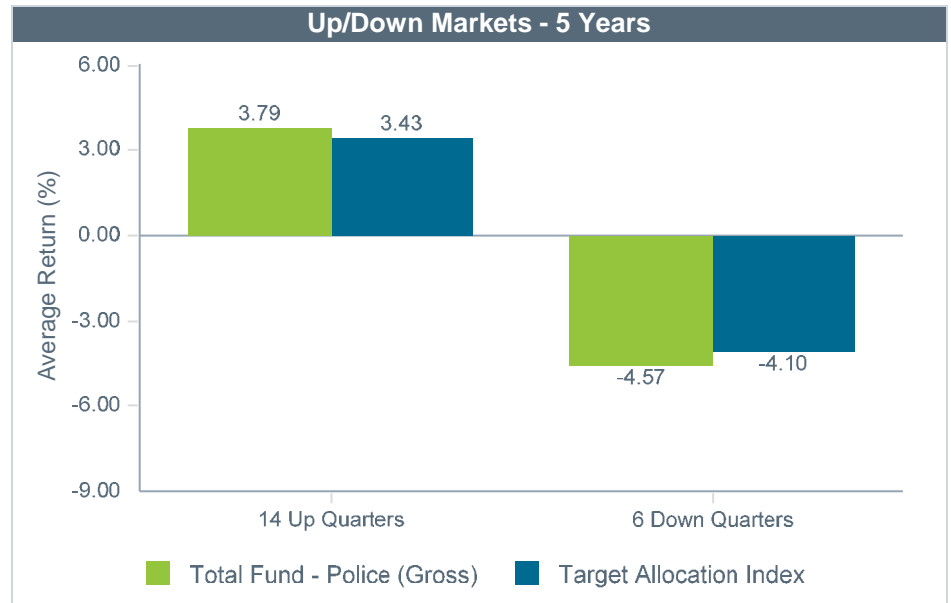
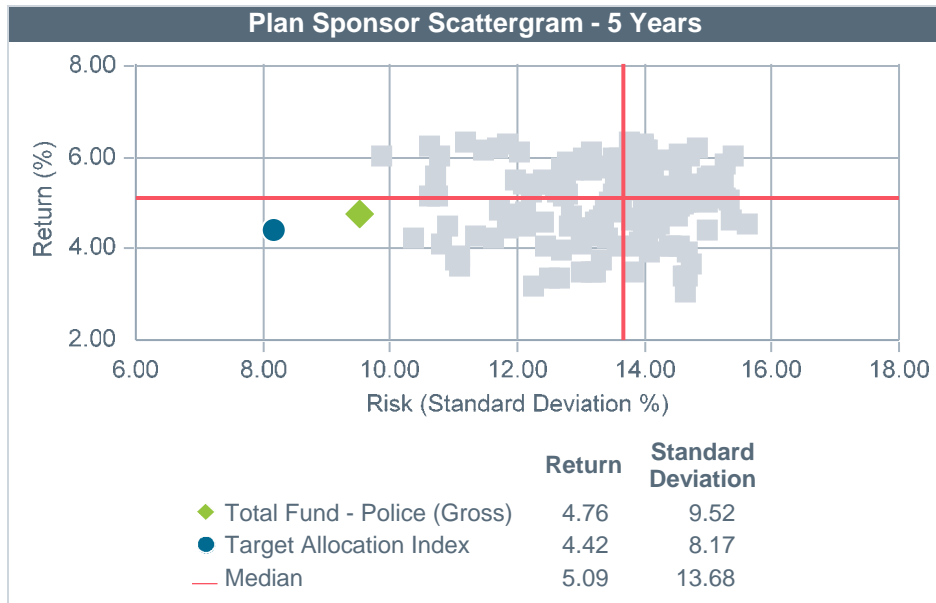


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

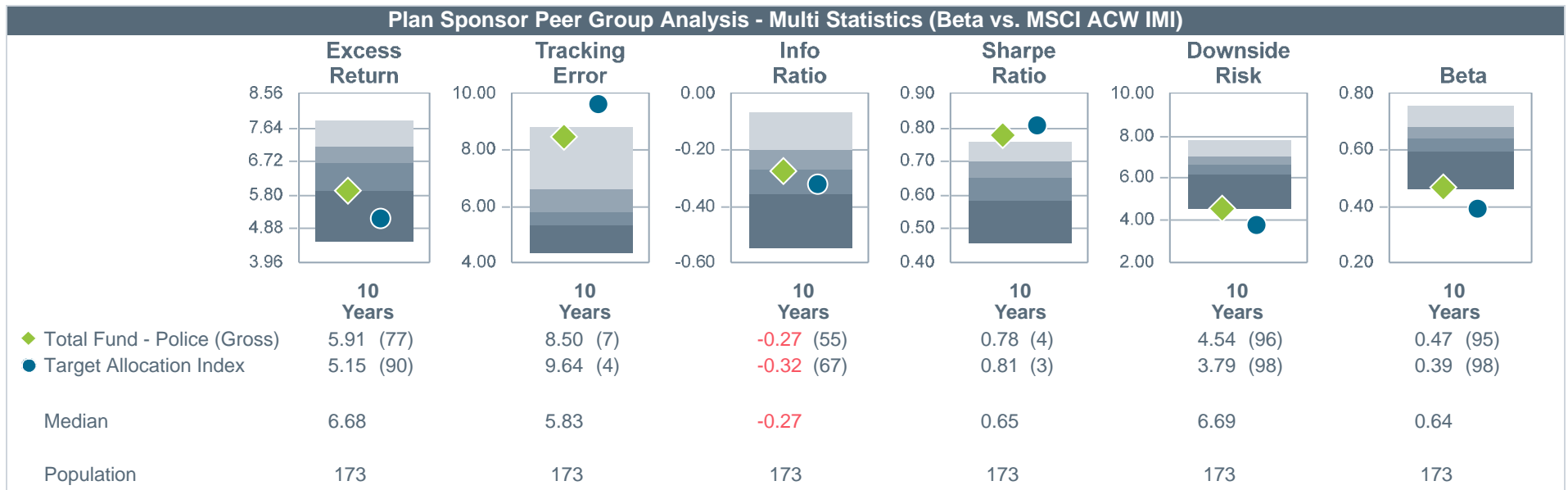
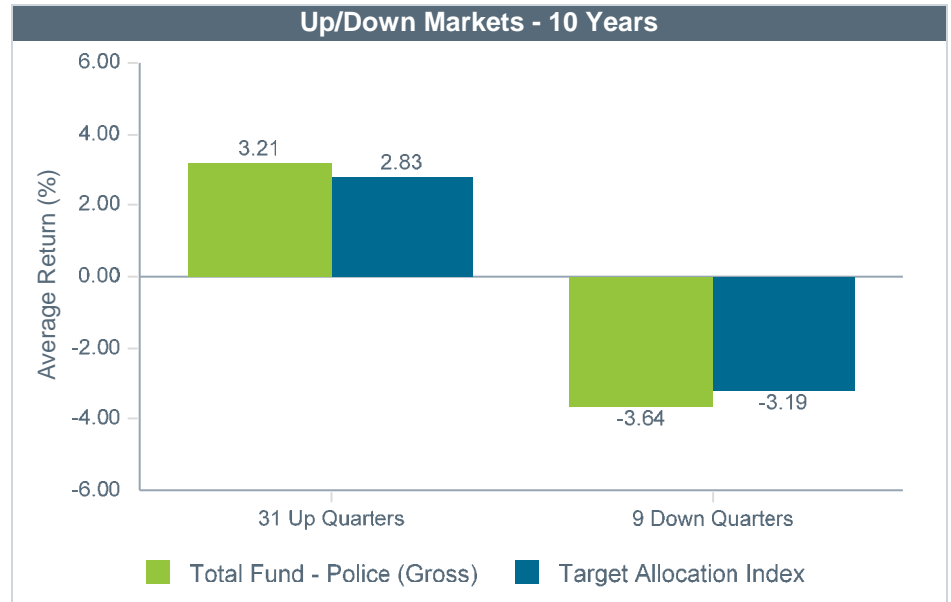
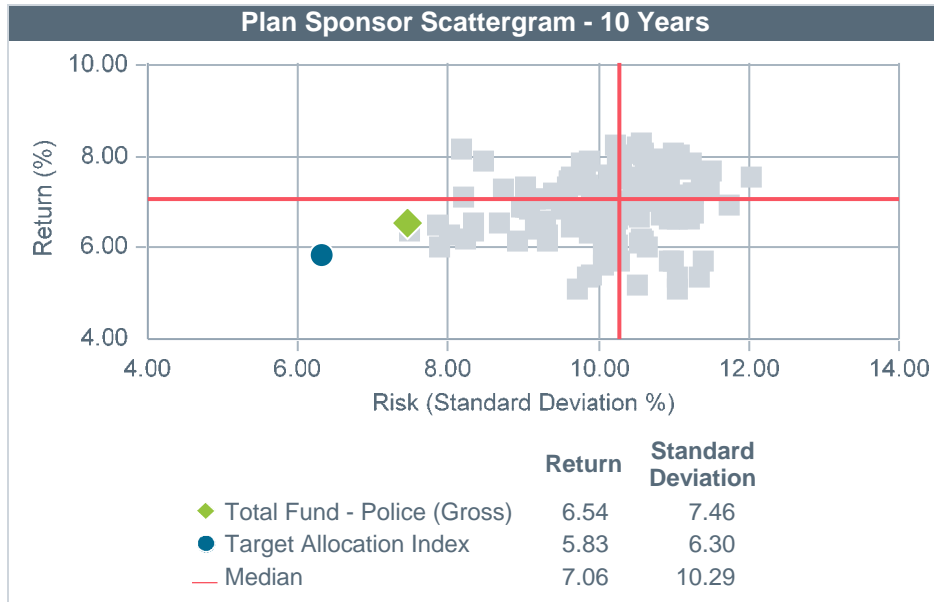


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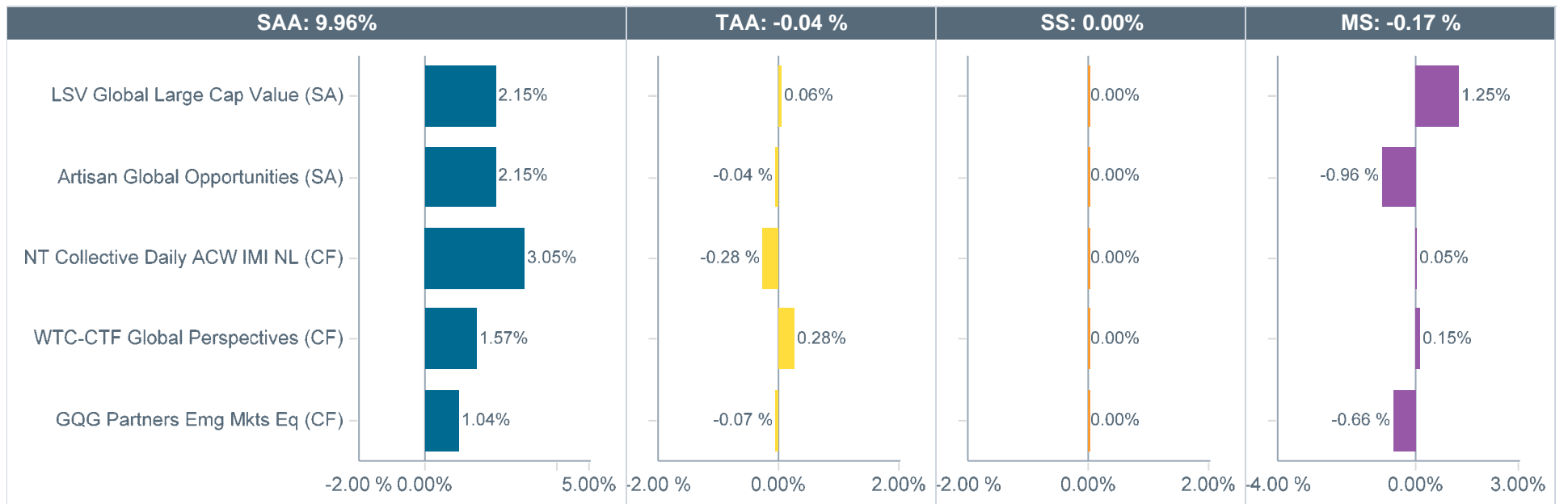
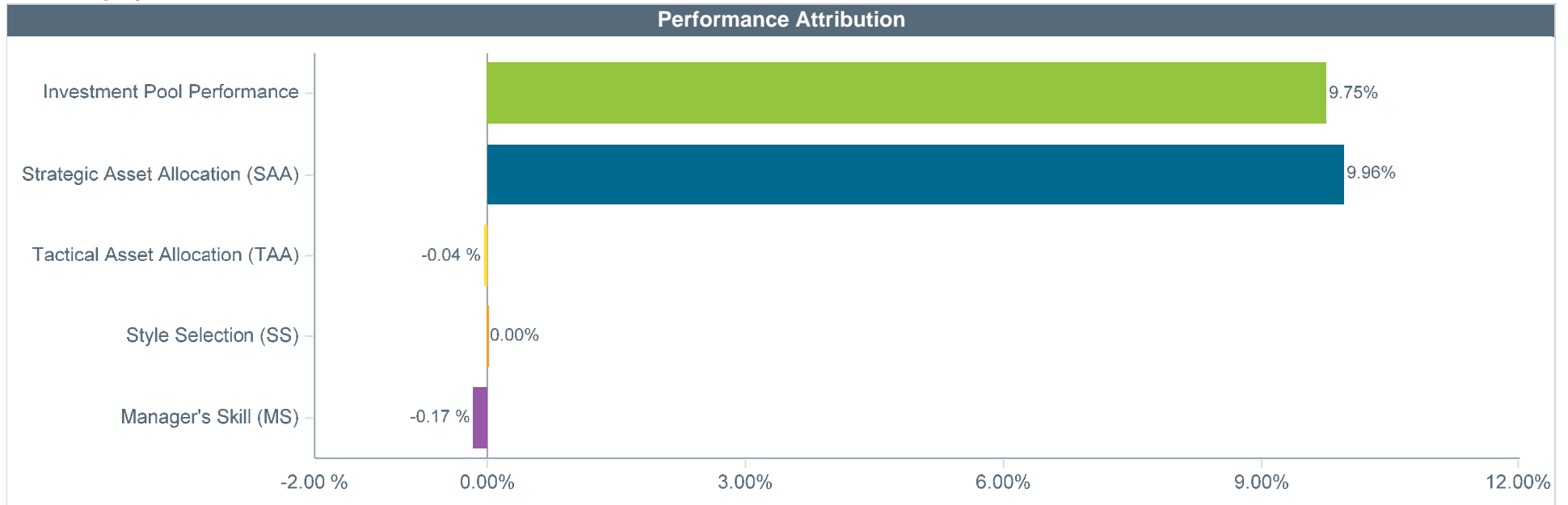




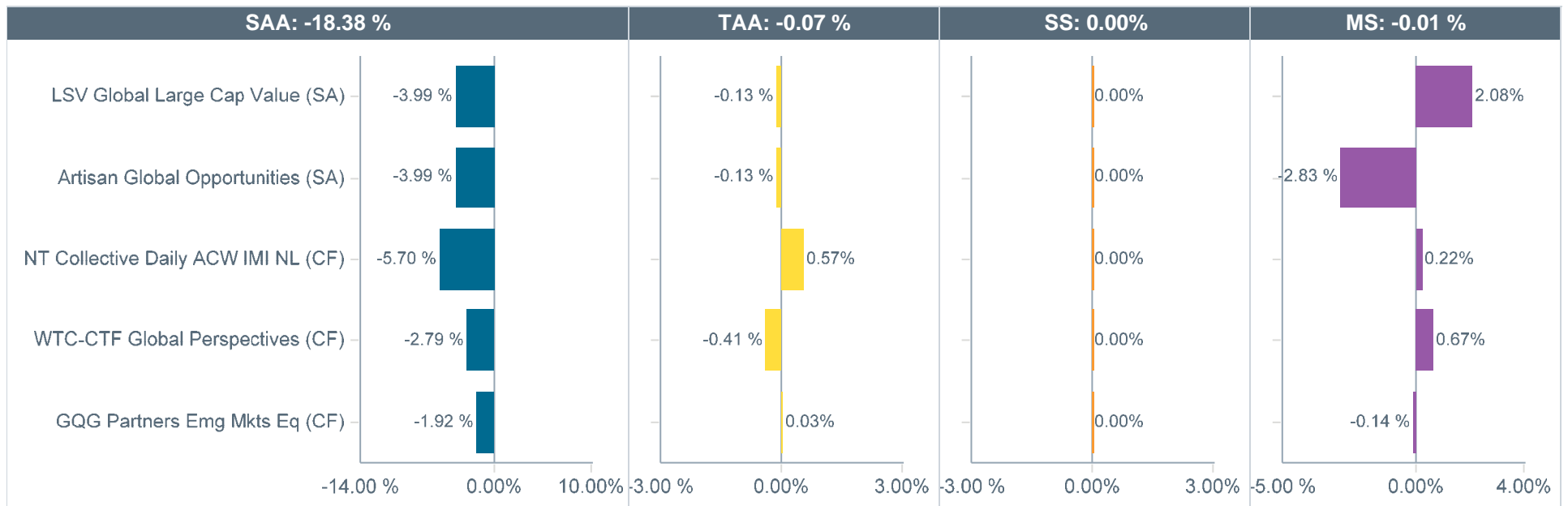
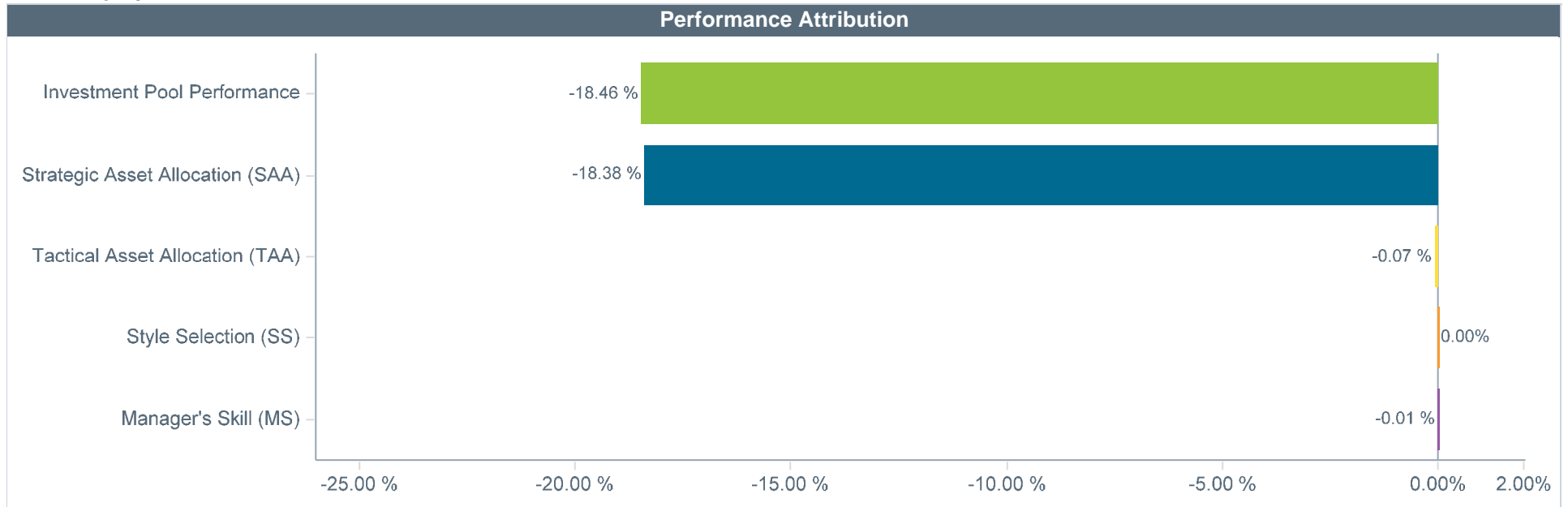
Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



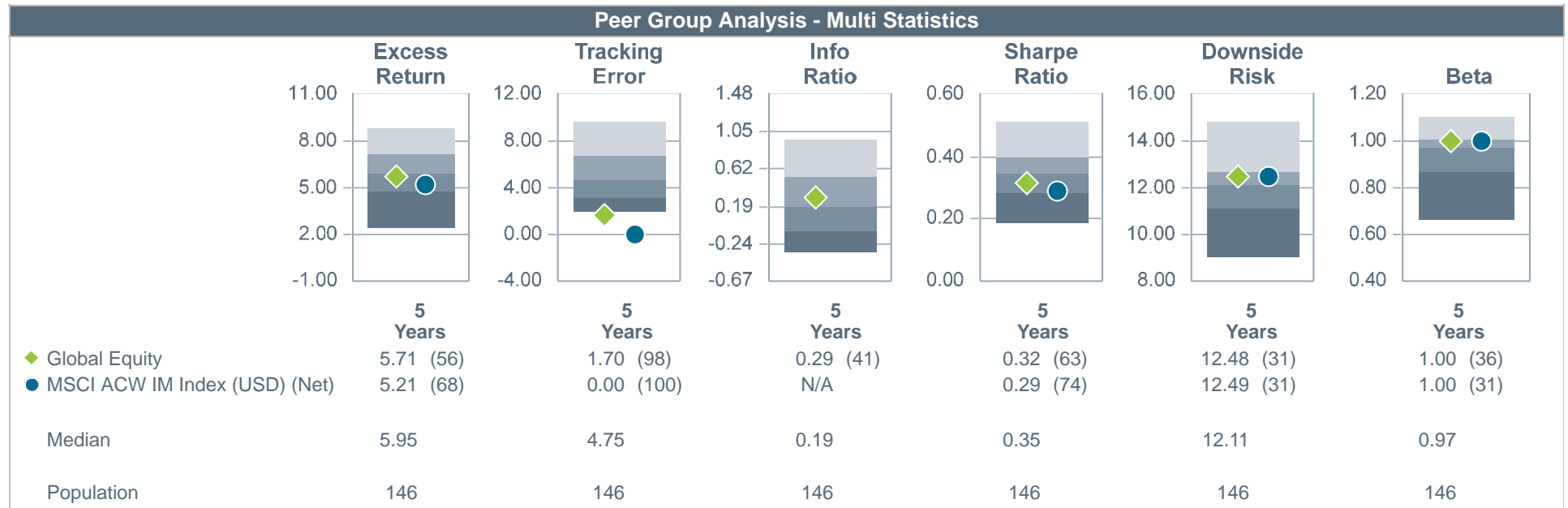
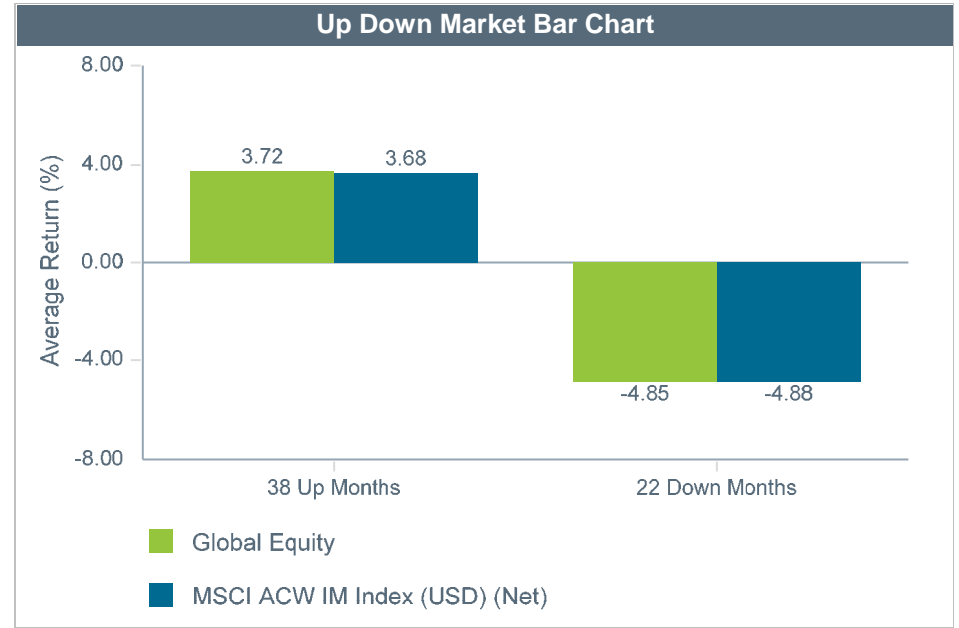
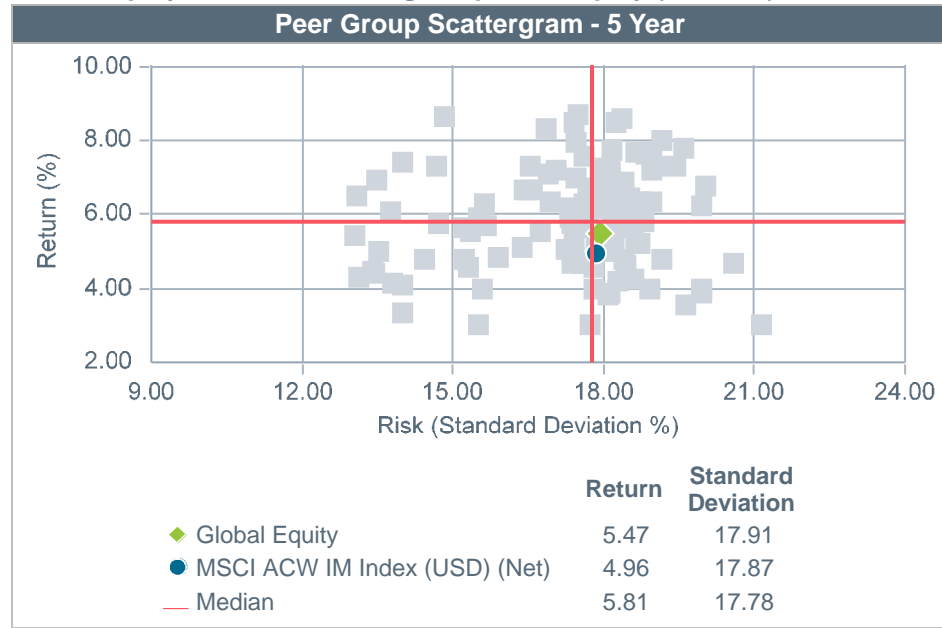
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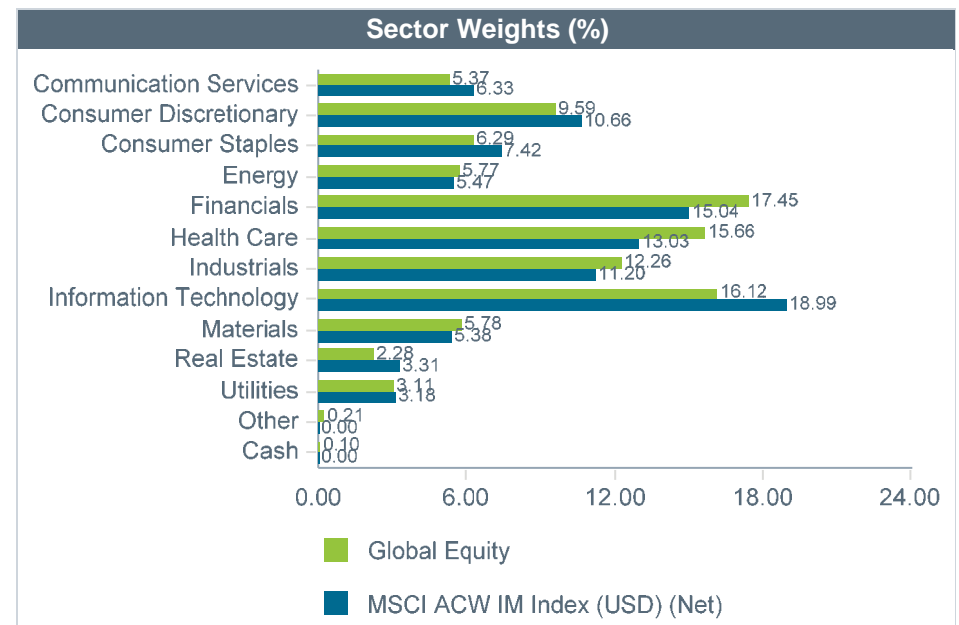
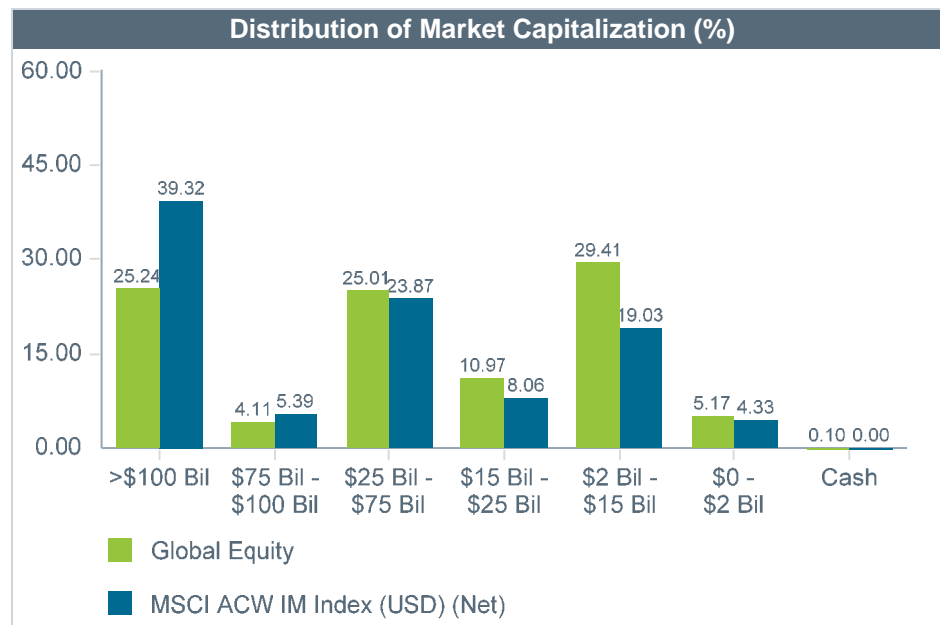
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Kansas City Police Employees' Retirement Systems
Global Equity vs. MSCI ACW IM Index (USD) (Net)
Portfolio Characteristics

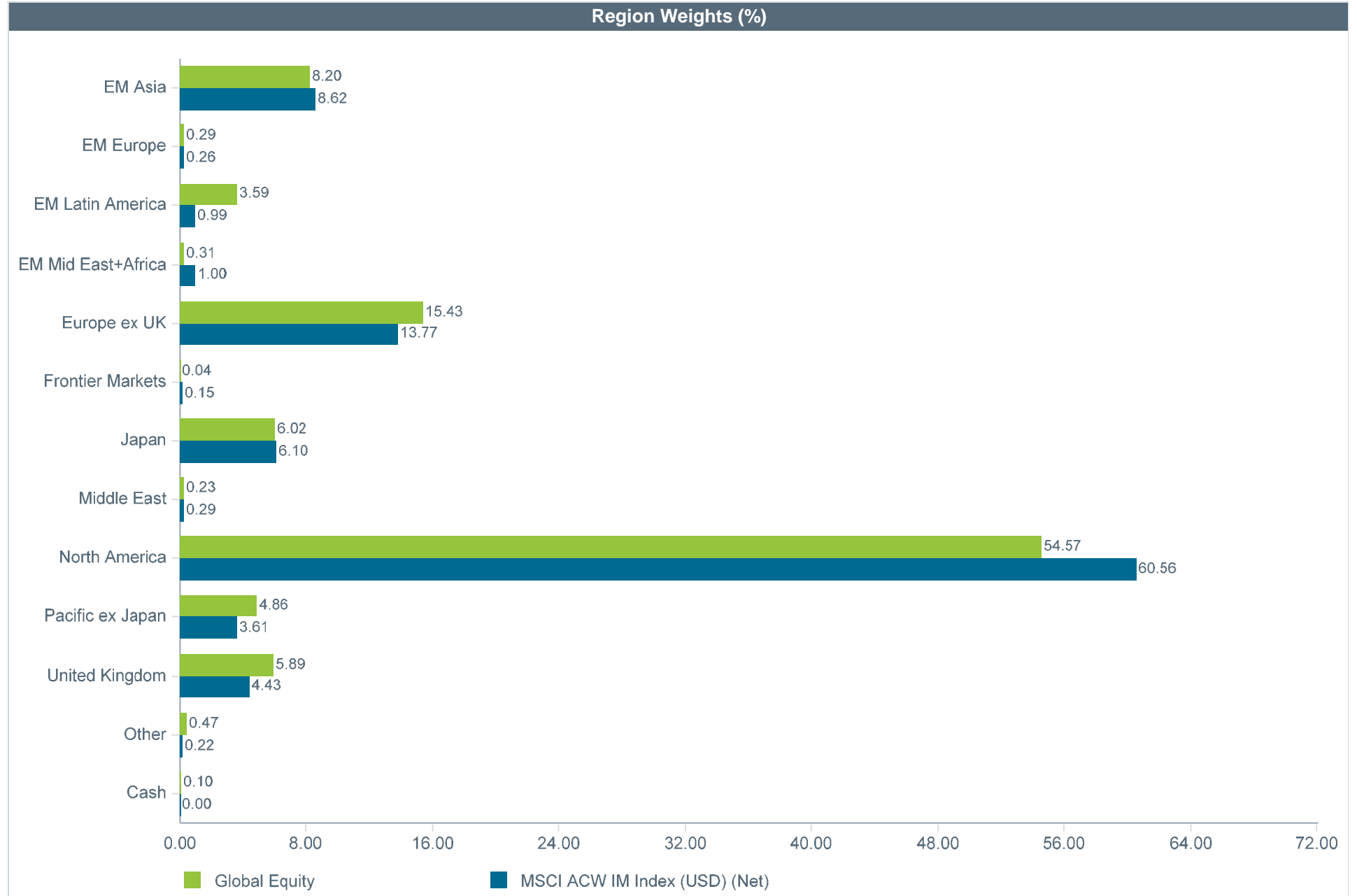
As of December 31, 2022

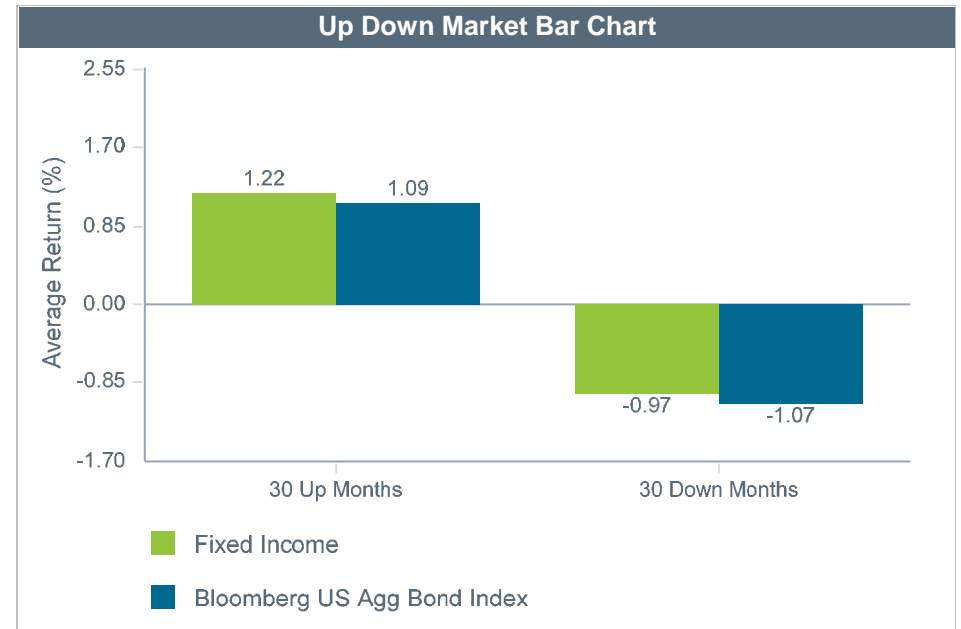
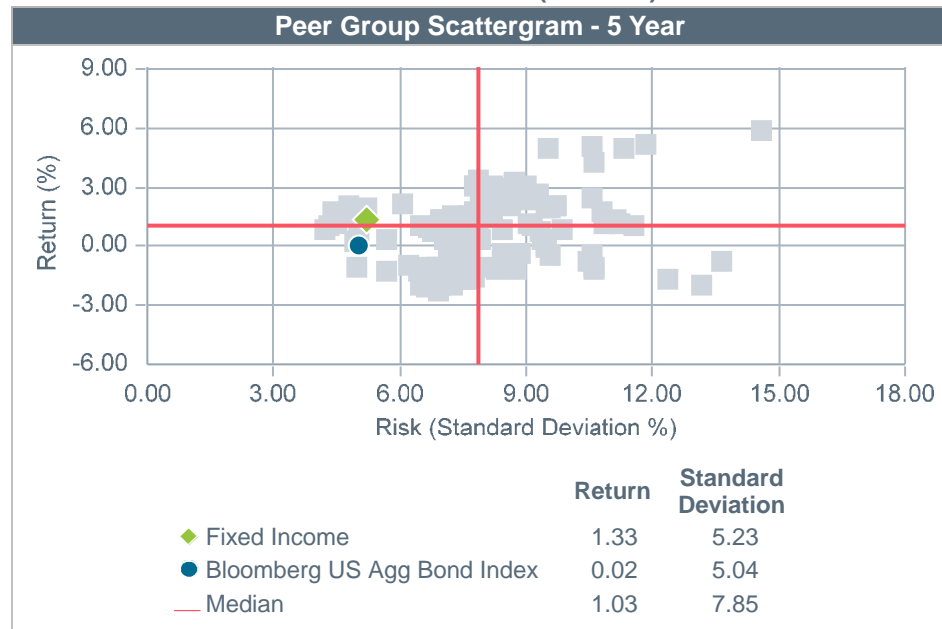
Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
NextEra Energy Inc	1.20	0.26	0.94	7.15
Veeva Systems Inc	1.14	0.04	1.10	-2.12
Techtronic Industries Co Ltd	1.10	0.02	1.08	15.61
Boston Scientific Corp	1.01	0.10	0.91	19.47
Advanced Micro Devices Inc	0.97	0.16	0.81	2.23
Apple Inc	0.94	3.27	-2.33	-5.83
Novo Nordisk A/S	0.92	0.35	0.57	34.34
Alphabet Inc	0.88	0.83	0.05	-7.76
LONZA GROUP AG	0.81	0.06	0.75	-1.10
Charles Schwab	0.79	0.19	0.60	16.17
% of Portfolio	9.76	5.28	4.48	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	114,764	238,324
Median Mkt. Cap (\$M)	1,796	1,765
Price/Earnings Ratio	12.93	15.07
Price/Book Ratio	2.60	3.08
5 Yr. EPS Growth Rate (%)	15.74	15.67
Current Yield (%)	2.88	2.39
Beta (5 Years, Monthly)	1.00	1.00
Number of Securities	9,362	9,154



Region Weights (%)



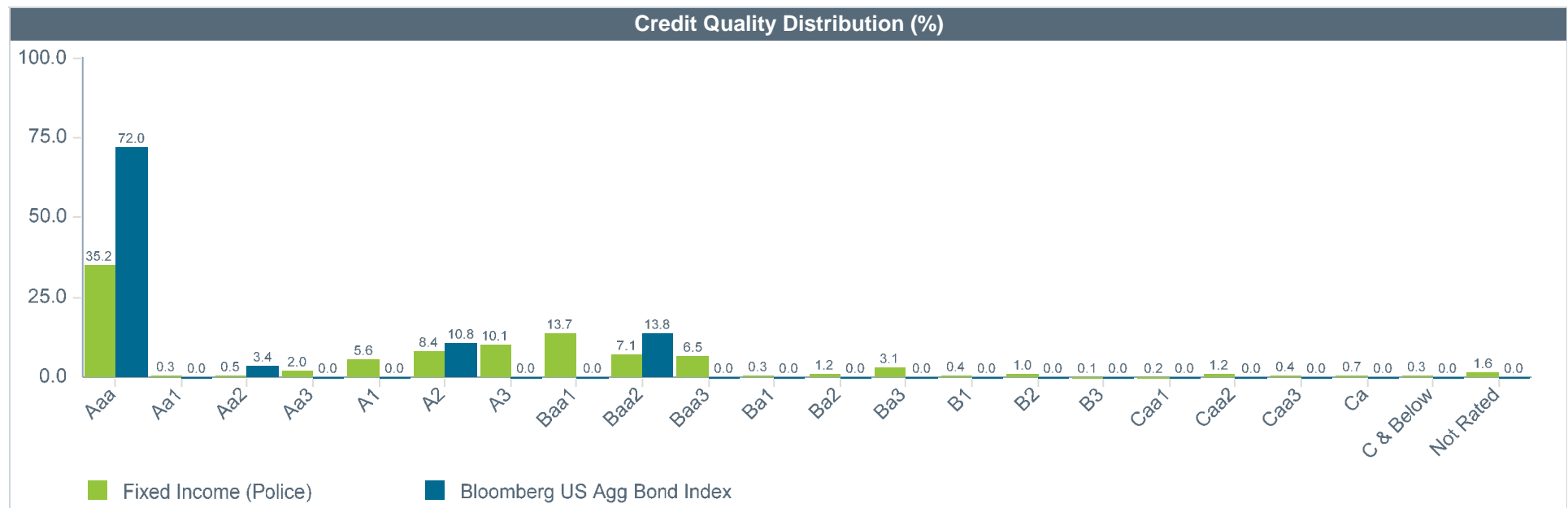
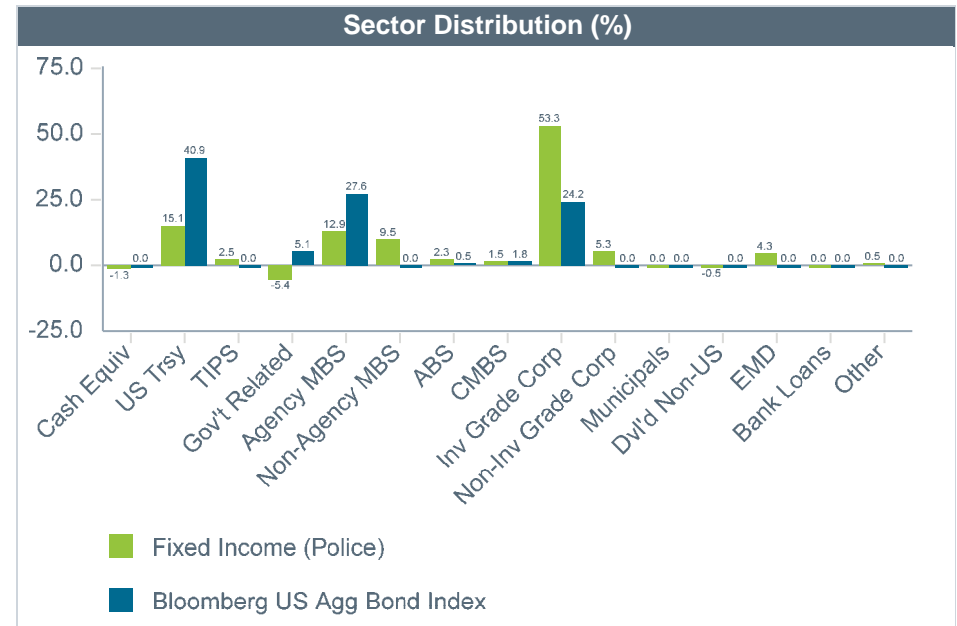


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Kansas City Police Employees' Retirement Systems
Fixed Income (Police) vs. Bloomberg US Agg Bond Index
Portfolio Characteristics

As of December 31, 2022

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.71	6.17
Avg. Maturity	7.75	8.44
Avg. Quality	Aa3	Aa1/Aa2
Coupon Rate (%)	3.17	2.69
Yield To Maturity (%)	5.01	4.68
Holdings Count	7,784	13,133



Allocation to "Other" consists of Convertible Bonds, Preferred Stock, and Euro/Yankee Bonds. PIMCO:Income;Inst (PIMIX) effective duration is used as modified duration.



Kansas City Police Employees' Retirement Systems
KCPERS Police
Asset Allocation & Performance - Gross of Fees

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Global Equity														
LSV Global Large Cap Value (SA)	\$77.31	15.43	-1.89	-8.13	-8.13	5.12	5.09	8.25	N/A	22.90	2.87	26.36	6.59	05/01/2014
MSCI Wrld Index (USD) (Net)		9.77	-5.88	-18.14	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	7.03	
Difference		5.66	3.99	10.01	10.01	0.18	-1.05	-0.27	N/A	1.08	-13.03	-1.31	-0.44	
MSCI Wrld Val Index (USD) (Net)		14.74	-0.98	-6.52	-6.52	4.06	4.12	7.04	7.24	21.94	-1.16	21.75	5.04	
Difference		0.69	-0.91	-1.61	-1.61	1.06	0.97	1.21	N/A	0.96	4.03	4.61	1.55	
IM Global Large Cap Value Equity (SA+CF) Median		14.19	-2.76	-10.17	-10.17	4.23	4.76	7.78	8.07	18.78	6.73	24.22	5.97	
Rank		38	41	37	37	32	41	36	N/A	14	69	33	34	
Artisan Global Opportunities (SA)	\$68.40	5.62	-7.81	-29.41	-29.41	4.84	7.82	10.76	N/A	15.26	41.63	37.23	10.29	05/01/2014
MSCI Wrld Index (USD) (Net)		9.77	-5.88	-18.14	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	7.03	
Difference		-4.15	-1.93	-11.27	-11.27	-0.10	1.68	2.24	N/A	-6.56	25.73	9.56	3.26	
MSCI Wrld Grth Index (USD) (Net)		4.72	-11.05	-29.21	-29.21	4.71	7.43	9.47	10.08	21.18	33.83	33.68	8.59	
Difference		0.90	3.24	-0.20	-0.20	0.13	0.39	1.29	N/A	-5.92	7.80	3.55	1.70	
IM Global Large Cap Growth Equity (SA+CF) Median		9.07	-6.50	-24.06	-24.06	5.08	7.44	9.52	9.85	17.80	30.10	31.58	8.49	
Rank		83	59	73	73	54	40	31	N/A	61	24	15	19	
NT Collective Daily ACW IM NL (CF)	\$92.19	10.04	-5.35	-17.56	-17.56	4.36	5.46	8.47	N/A	18.12	16.73	26.89	6.84	03/01/2014
MSCI ACW IM Index (USD) (Net)		9.84	-6.24	-18.40	-18.40	3.89	4.96	7.98	7.94	18.22	16.25	26.35	6.34	
Difference		0.20	0.89	0.84	0.84	0.47	0.50	0.49	N/A	-0.10	0.48	0.54	0.50	
IM Global Large Cap Core Equity (SA+CF) Median		10.54	-4.81	-16.56	-16.56	4.89	5.81	8.31	9.13	19.93	15.25	26.53	7.21	
Rank		63	62	58	58	59	61	43	N/A	63	44	46	63	
WTC-CTF Global Perspectives (CF)	\$58.15	11.54	-1.95	-13.92	-13.92	N/A	N/A	N/A	N/A	22.80	N/A	N/A	14.07	11/01/2020
MSCI ACW Sm Cap Index (USD) (Net)		10.45	-6.25	-18.67	-18.67	3.18	3.23	7.13	7.69	16.10	16.33	24.65	7.46	
Difference		1.09	4.30	4.75	4.75	N/A	N/A	N/A	N/A	6.70	N/A	N/A	6.61	
IM Global Small Cap Equity (SA+CF) Median		12.02	-4.55	-20.71	-20.71	6.06	3.66	7.27	8.87	21.14	17.53	26.40	6.96	
Rank		53	32	33	33	N/A	N/A	N/A	N/A	40	N/A	N/A	34	
GQG Partners Emg Mkts Eq (CF)	\$30.42	3.41	-8.54	-20.64	-20.64	N/A	N/A	N/A	N/A	-0.82	N/A	N/A	-5.45	11/01/2020
MSCI Emg Mkts Index (USD) (Net)		9.70	-9.04	-20.09	-20.09	-2.69	-1.40	5.17	1.44	-2.54	18.31	18.42	-4.10	
Difference		-6.29	0.50	-0.55	-0.55	N/A	N/A	N/A	N/A	1.72	N/A	N/A	-1.35	
IM Emerging Markets Equity (SA+CF) Median		10.59	-7.48	-19.65	-19.65	-0.92	-0.13	5.87	2.82	0.84	18.69	20.64	-3.08	
Rank		94	64	57	57	N/A	N/A	N/A	N/A	60	N/A	N/A	68	

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Kansas City Police Employees' Retirement Systems
KCPERS Police
Asset Allocation & Performance - Gross of Fees

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Fixed Income														
FCI Advisors (SA)	\$177.59	2.51	-3.51	-13.41	-13.41	-2.10	0.68	1.42	1.46	-1.92	10.49	10.01	6.97	01/01/1975
Bloomberg US Gov't Crdt Bond Index		1.80	-3.93	-13.58	-13.58	-2.57	0.21	1.14	1.16	-1.75	8.93	9.71	6.77	
Difference		0.71	0.42	0.17	0.17	0.47	0.47	0.28	0.30	-0.17	1.56	0.30	0.20	
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	N/A	
Difference		0.64	0.36	-0.40	-0.40	0.61	0.66	0.53	0.40	-0.37	2.98	1.29	N/A	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median		1.79	-4.00	-12.95	-12.95	-2.22	0.43	1.36	1.49	-1.23	8.51	9.19	N/A	
Rank		5	16	78	78	41	26	43	55	93	6	10	N/A	
PIMCO:Income;Inst (PIMIX)														
PIMCO:Income;Inst (PIMIX)	\$85.33	3.54	-0.81	-7.34	-7.34	0.53	2.21	N/A	N/A	3.11	6.31	8.59	2.41	09/01/2017
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.00	
Difference		1.67	3.06	5.67	5.67	3.24	2.19	N/A	N/A	4.66	-1.20	-0.13	2.41	
IM Multi-Sector General Bond (MF) Median		2.70	-3.38	-10.74	-10.74	-0.30	1.78	3.61	3.06	2.55	7.54	11.13	1.99	
Rank		33	7	20	20	26	31	N/A	N/A	45	66	82	26	
Direct Lending														
White Oak Fixed Income C LP	\$64.82	0.00	-0.79	-0.04	-0.04	3.46	N/A	N/A	N/A	6.85	3.68	9.58	6.30	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	2.62	4.36	4.36	5.04	5.89	5.81	5.58	5.05	5.70	7.39	5.86	
Difference		0.00	-3.41	-4.40	-4.40	-1.58	N/A	N/A	N/A	1.80	-2.02	2.19	0.44	
Real Estate														
Morgan Stanley Prime Property (CF)	\$81.00	-3.48	0.04	7.38	7.38	10.53	9.60	9.75	N/A	22.89	2.31	7.38	10.76	10/01/2014
NCREIF ODCE Index (AWA) (Gross)		-4.96	0.09	7.47	7.47	9.93	8.68	8.54	10.10	22.17	1.19	5.34	9.46	
Difference		1.48	-0.05	-0.09	-0.09	0.60	0.92	1.21	N/A	0.72	1.12	2.04	1.30	
PGIM Real Estate PRISA II (CF)	\$82.18	-6.14	-0.60	7.02	7.02	10.01	9.39	9.38	11.22	23.18	0.98	7.52	8.36	10/01/2004
NCREIF ODCE Index (AWA) (Gross)		-4.96	0.09	7.47	7.47	9.93	8.68	8.54	10.10	22.17	1.19	5.34	8.18	
Difference		-1.18	-0.69	-0.45	-0.45	0.08	0.71	0.84	1.12	1.01	-0.21	2.18	0.18	
Absolute Return														
Grosvenor FOB (CF) (Net)	\$107.25	0.79	-0.33	-6.37	-6.37	4.43	3.28	3.75	N/A	6.32	14.40	6.30	3.25	08/01/2014
HFN FOF Multi-Strat Index (Net)		1.99	0.09	-1.35	-1.35	4.96	3.54	3.57	3.56	6.77	9.79	6.75	2.97	
Difference		-1.20	-0.42	-5.02	-5.02	-0.53	-0.26	0.18	N/A	-0.45	4.61	-0.45	0.28	
ICE BofAML 3 Mo US T-Bill Index+5%		2.08	4.75	6.53	6.53	5.76	6.33	6.12	5.80	5.05	5.70	7.39	5.94	
Difference		-1.29	-5.08	-12.90	-12.90	-1.33	-3.05	-2.37	N/A	1.27	8.70	-1.09	-2.69	
Private Equity														
Abbott Capital Private Equity Fund LP (CF) (Net)	\$4.33	0.00	-11.77	-15.37	-15.37	7.81	9.23	9.89	10.43	20.61	22.76	10.87	5.93	10/01/2005
J.P. Morgan Private Equity III (CF) (Net)	\$1.54	1.67	-23.55	-24.17	-24.17	9.78	8.27	8.85	11.07	56.05	11.80	7.53	6.48	04/01/2006

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Kansas City Police Employees' Retirement Systems
KCPERS Police
Asset Allocation & Performance - Net of Fees

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Global Equity														
LSV Global Large Cap Value (SA)	\$77.31	15.26	-2.18	-8.70	-8.70	4.46	4.43	7.56	N/A	22.15	2.22	25.58	5.93	05/01/2014
MSCI Wrld Index (USD) (Net)		9.77	-5.88	-18.14	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	7.03	
Difference		5.49	3.70	9.44	9.44	-0.48	-1.71	-0.96	N/A	0.33	-13.68	-2.09	-1.10	
MSCI Wrld Val Index (USD) (Net)		14.74	-0.98	-6.52	-6.52	4.06	4.12	7.04	7.24	21.94	-1.16	21.75	5.04	
Difference		0.52	-1.20	-2.18	-2.18	0.40	0.31	0.52	N/A	0.21	3.38	3.83	0.89	
Artisan Global Opportunities (SA)	\$68.40	5.41	-8.17	-29.94	-29.94	4.09	7.04	9.96	N/A	14.46	40.64	36.25	9.50	05/01/2014
MSCI Wrld Index (USD) (Net)		9.77	-5.88	-18.14	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	7.03	
Difference		-4.36	-2.29	-11.80	-11.80	-0.85	0.90	1.44	N/A	-7.36	24.74	8.58	2.47	
MSCI Wrld Grth Index (USD) (Net)		4.72	-11.05	-29.21	-29.21	4.71	7.43	9.47	10.08	21.18	33.83	33.68	8.59	
Difference		0.69	2.88	-0.73	-0.73	-0.62	-0.39	0.49	N/A	-6.72	6.81	2.57	0.91	
NT Collective Daily ACW IM NL (CF)	\$92.19	10.02	-5.41	-17.63	-17.63	4.27	5.36	8.37	N/A	18.01	16.62	26.78	6.75	03/01/2014
MSCI ACW IM Index (USD) (Net)		9.84	-6.24	-18.40	-18.40	3.89	4.96	7.98	7.94	18.22	16.25	26.35	6.34	
Difference		0.18	0.83	0.77	0.77	0.38	0.40	0.39	N/A	-0.21	0.37	0.43	0.41	
WTC-CTF Global Perspectives (CF)	\$58.15	11.32	-2.49	-14.63	-14.63	N/A	N/A	N/A	N/A	21.82	N/A	N/A	13.15	11/01/2020
MSCI ACW Sm Cap Index (USD) (Net)		10.45	-6.25	-18.67	-18.67	3.18	3.23	7.13	7.69	16.10	16.33	24.65	7.46	
Difference		0.87	3.76	4.04	4.04	N/A	N/A	N/A	N/A	5.72	N/A	N/A	5.69	
GQG Partners Emg Mkts Eq (CF)	\$30.42	3.20	-9.03	-21.28	-21.28	N/A	N/A	N/A	N/A	-1.61	N/A	N/A	-6.21	11/01/2020
MSCI Emg Mkts Index (USD) (Net)		9.70	-9.04	-20.09	-20.09	-2.69	-1.40	5.17	1.44	-2.54	18.31	18.42	-4.10	
Difference		-6.50	0.01	-1.19	-1.19	N/A	N/A	N/A	N/A	0.93	N/A	N/A	-2.11	
Fixed Income														
FCI Advisors (SA)	\$177.59	2.47	-3.61	-13.54	-13.54	-2.24	0.53	1.27	N/A	-2.06	10.33	9.85	1.71	07/01/2013
Bloomberg US Gov't Crdt Bond Index		1.80	-3.93	-13.58	-13.58	-2.57	0.21	1.14	1.16	-1.75	8.93	9.71	1.51	
Difference		0.67	0.32	0.04	0.04	0.33	0.32	0.13	N/A	-0.31	1.40	0.14	0.20	
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	1.38	
Difference		0.60	0.26	-0.53	-0.53	0.47	0.51	0.38	N/A	-0.51	2.82	1.13	0.33	
PIMCO:Income;Inst (PIMIX)	\$85.33	3.41	-1.15	-7.81	-7.81	0.02	1.69	N/A	N/A	2.61	5.79	8.04	1.89	09/01/2017
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.00	
Difference		1.54	2.72	5.20	5.20	2.73	1.67	N/A	N/A	4.16	-1.72	-0.68	1.89	

Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading. White Oak Fixed Income performance is currently unavailable.

Kansas City Police Employees' Retirement Systems
KCPERS Police

As of December 31, 2022

Asset Allocation & Performance - Net of Fees

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Direct Lending														
White Oak Fixed Income C LP	\$64.82	0.00	-0.79	-0.04	-0.04	2.39	N/A	N/A	N/A	4.60	2.66	7.41	4.80	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	2.62	4.36	4.36	5.04	5.89	5.81	5.58	5.05	5.70	7.39	5.86	
Difference		0.00	-3.41	-4.40	-4.40	-2.65	N/A	N/A	N/A	-0.45	-3.04	0.02	-1.06	
Real Estate														
Morgan Stanley Prime Property (CF)	\$81.00	-3.69	-0.82	6.14	6.14	9.30	8.40	8.57	N/A	21.48	1.26	6.17	9.56	10/01/2014
NCREIF ODCE Index (AWA) (Net)		-5.13	-0.51	6.59	6.59	8.98	7.72	7.58	9.11	21.02	0.34	4.39	8.49	
Difference		1.44	-0.31	-0.45	-0.45	0.32	0.68	0.99	N/A	0.46	0.92	1.78	1.07	
PGIM Real Estate PRISA II (CF)	\$82.18	-6.42	-1.42	5.86	5.86	8.80	8.19	8.20	N/A	21.86	-0.16	6.32	10.04	07/01/2013
NCREIF ODCE Index (AWA) (Net)		-5.13	-0.51	6.59	6.59	8.98	7.72	7.58	9.11	21.02	0.34	4.39	8.93	
Difference		-1.29	-0.91	-0.73	-0.73	-0.18	0.47	0.62	N/A	0.84	-0.50	1.93	1.11	
Absolute Return														
Grosvenor FOB (CF)	\$107.25	0.79	-0.33	-6.37	-6.37	4.43	3.28	3.75	N/A	6.32	14.40	6.30	3.25	08/01/2014
HFN FOF Multi-Strat Index (Net)		1.99	0.09	-1.35	-1.35	4.96	3.54	3.57	3.56	6.77	9.79	6.75	2.97	
Difference		-1.20	-0.42	-5.02	-5.02	-0.53	-0.26	0.18	N/A	-0.45	4.61	-0.45	0.28	
ICE BofAML 3 Mo US T-Bill Index+5%		2.08	4.75	6.53	6.53	5.76	6.33	6.12	5.80	5.05	5.70	7.39	5.94	
Difference		-1.29	-5.08	-12.90	-12.90	-1.33	-3.05	-2.37	N/A	1.27	8.70	-1.09	-2.69	
Private Equity														
Abbott Capital Private Equity LP (CF)	\$4.33	0.00	-11.77	-15.37	-15.37	7.81	9.23	9.89	N/A	20.61	22.76	10.87	10.62	07/01/2013
J.P. Morgan Private Equity III (CF)	\$1.54	1.67	-23.55	-24.17	-24.17	9.78	8.27	8.85	N/A	56.05	11.80	7.53	11.15	07/01/2013

Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading. White Oak Fixed Income performance is currently unavailable.

**Kansas City Police Employees' Retirement Systems
KCPERS Police Private Investment Lagged Performance
Asset Allocation & Performance**

As of September 30, 2022

	Market Value (M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Police - Private Equity	\$6.22	-5.48	-15.64	-18.30	-19.22	8.41	9.64	9.74	N/A	28.38	20.44	10.04	11.06	07/01/2013
Abbott Capital Private Equity LP (CF) (Net)	\$4.58	-1.80	-11.77	-15.37	-17.70	8.64	10.01	10.21	N/A	20.61	22.76	10.87	10.93	07/01/2013
Cambridge US Prvt Eq Index		0.05	-3.98	-3.34	2.60	19.91	17.17	15.97	15.37	40.61	22.37	13.84	15.29	
Difference		-1.85	-7.79	-12.03	-20.30	-11.27	-7.16	-5.76	N/A	-20.00	0.39	-2.97	-4.36	
J.P. Morgan Private Equity III (CF) (Net)	\$1.64	-14.43	-24.80	-25.42	-22.97	7.86	8.64	8.56	N/A	56.05	11.80	7.53	11.27	07/01/2013
Cambridge US Prvt Eq Index		0.05	-3.98	-3.34	2.60	19.91	17.17	15.97	15.37	40.61	22.37	13.84	15.29	
Difference		-14.48	-20.82	-22.08	-25.57	-12.05	-8.53	-7.41	N/A	15.44	-10.57	-6.31	-4.02	
Police - Direct Lending	\$64.82	1.78	-0.79	-0.04	-0.80	2.89	N/A	N/A	N/A	4.60	2.66	7.41	5.08	04/01/2018
White Oak Fixed Income C LP	\$64.82	1.78	-0.79	-0.04	-0.80	2.89	N/A	N/A	N/A	4.60	2.66	7.41	5.08	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		1.69	2.62	4.36	5.65	5.62	6.21	6.00	5.72	5.05	5.70	7.39	6.19	
Difference		0.09	-3.41	-4.40	-6.45	-2.73	N/A	N/A	N/A	-0.45	-3.04	0.02	-1.11	

Performance shown is net of fees, unless otherwise noted. Performance and market values are preliminary and subject to change. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading.

**Kansas City Police Employees' Retirement Systems
Alternative Investment Fund Performance Listing**

As of September 30, 2022

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Abbott Capital Private Equity V LP	2005	Private Equity - Fund of Funds	15,400,000	14,876,400	20,993,330	597,416	6.62	3rd	9.65	1.45
J.P. Morgan European Corporate Finance Investors III	2006	Private Equity - Non-US Private Equity	1,500,000	1,445,896	2,203,211	56,940	7.68	3rd	9.99	1.56
J.P. Morgan U.S. Corporate Finance Investors III	2006	Private Equity - Buyout	6,000,000	6,042,637	11,743,150	563,997	13.34	1st	8.83	2.04
J.P. Morgan Venture Capital Investors III	2006	Private Equity - Venture	2,500,000	2,545,959	3,751,498	1,021,395	9.40	1st	11.24	1.87
Abbott Capital Private Equity VI LP	2008	Private Equity - Fund of Funds	10,000,000	9,950,088	15,170,011	3,981,896	13.04	2nd	13.09	1.92
			35,400,000	34,860,981	53,861,200	6,221,644	9.67		10.43	1.72

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 (Cap Wtd) 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.



Kansas City Police Employees' Retirement Systems
Alternative Investment Fund Performance
Rolling Annualized Internal Rate of Return Since Inception

As of December 31, 2022

Alternative Investment	9/30/2022	9/30/2021	9/30/2020	9/30/2019	9/30/2018	9/30/2017	9/30/2016	9/30/2015	9/30/2014
Abbott Capital Private Equity Fund V LP	6.62	6.88	6.77	6.80	6.92	6.89	6.89	7.27	7.35
Index	9.65	10.39	9.79	9.62	9.87	9.50	9.01	8.54	9.38
Difference	-3.03	-3.51	-3.02	-2.82	-2.95	-2.61	-2.12	-1.27	-2.03
Abbott Capital Private Equity Fund VI LP	13.04	13.94	12.39	12.34	12.36	11.49	10.33	9.29	7.61
Index	13.09	14.10	13.24	13.12	14.16	13.63	12.62	11.81	17.08
Difference	-0.05	-0.16	-0.85	-0.78	-1.80	-2.14	-2.29	-2.52	-9.47
JP Morgan European Corporate Finance Investors III	7.68	7.72	7.39	7.58	7.51	7.42	7.14	6.80	8.56
Index	9.99	10.83	10.21	10.08	10.36	9.94	9.35	8.81	9.95
Difference	-2.31	-3.11	-2.82	-2.50	-2.85	-2.52	-2.21	-2.01	-1.39
JP Morgan U.S. Corporate Finance Investors III	13.34	13.49	13.20	13.32	13.23	13.48	13.19	13.57	12.51
Index	8.83	8.83	8.83	8.83	8.83	8.83	8.81	8.66	8.98
Difference	4.51	4.66	4.37	4.49	4.40	4.65	4.38	4.91	3.53
JP Morgan Venture Capital Investors III	9.40	10.42	9.29	9.61	9.84	9.79	10.15	12.13	10.99
Index	11.24	12.28	11.55	11.38	11.86	11.42	10.77	10.21	11.90
Difference	-1.84	-1.86	-2.26	-1.77	-2.02	-1.63	-0.62	1.92	-0.91
Total PE Composite Performance	9.67	10.09	9.47	9.50	9.51	9.36	9.07	9.37	8.95
Total Index Performance	10.43	10.99	10.47	10.32	10.64	10.24	9.65	9.11	10.28
Difference	-0.76	-0.90	-1.00	-0.82	-1.13	-0.88	-0.58	0.26	-1.33

*Index IRR represents the dollar-weighted returns calculated using the S&P 500 Index (Cap Wtd) 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. Fund IRR is the annualized since-inception net internal rate for the indicated fund or composite. Applicable IRRs are marked with 'N/M' for not material.

LSV Global Large Cap Value (SA)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	66,979,440	108,400	10,226,341	77,314,181	15.26

Artisan Global Opportunities (SA)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	64,759,178	133,787	3,508,389	68,401,354	5.41

NT Collective Daily ACW IM NL (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	83,778,611	19,606	8,394,998	92,193,215	10.02

WTC-CTF Global Perspectives (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	52,239,262	-	5,914,186	58,153,448	11.32

GQG Partners Emg Mkts Eq (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	29,475,672	-	944,446	30,420,118	3.20

FCI Advisors (SA)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	173,247,501	63,264	4,275,287	177,586,052	2.47

Performance shown is net of fees and will not match subsequent comparative performance gross of fees.

Kansas City Police Employees' Retirement Systems
 KCPERS Police
 Schedule of Investable Assets by Manager

As of December 31, 2022

PIMCO:Income;Inst (PIMIX)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	91,802,835	-9,500,000	3,028,582	85,331,417	3.41

Morgan Stanley Prime Property (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	86,892,284	-2,687,259	-3,207,701	80,997,324	-3.69

PGIM Real Estate PRISA II (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	89,717,054	-1,775,637	-5,758,358	82,183,060	-6.42

Grosvenor FOB (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	106,402,520	-	843,167	107,245,687	0.79

Performance shown is net of fees and will not match subsequent comparative performance gross of fees.



Kansas City Police Employees' Retirement Systems
KCPERS Police
Fee Schedule

As of December 31, 2022

Manager	Fee Schedule	Aggregate Assets (\$)	Estimated Annual Fee (%)	Market Value as of 12/31/2022	Estimated Annual Fee (\$)
LSV Global Large Cap Value (SA)	0.75 % of First \$25 M 0.65 % of Next \$25 M 0.55 % of Next \$50 M 0.45 % Thereafter	91,263,274	0.63	77,314,181	488,765
Artisan Global Opportunities (SA)	0.80 % of First \$50 M 0.60 % of Next \$50 M 0.50 % Thereafter	68,401,354	0.75	68,401,354	510,408
NT Collective Daily ACW IM NL (CF)	0.10 % of First \$50 M 0.08 % Thereafter	107,255,039	0.09	92,193,215	82,350
WTC-CTF Global Perspectives (CF)	1.00 % of Assets	67,727,899	1.00	58,153,448	581,534
GQG Partners Emg Mkts Eq (CF)	0.85 % of First \$25 M 0.80 % Thereafter	35,643,847	0.84	30,420,118	254,029
FCI Advisors (SA)	0.50 % of First \$5 M 0.40 % of Next \$5 M 0.30 % of Next \$10 M 0.20 % of Next \$10 M 0.12 % Thereafter	208,725,204	0.15	177,586,052	263,301
PIMCO:Income;Inst (PIMIX)	0.50 % of Assets	103,797,275	0.50	85,331,417	426,657
White Oak Fixed Income C LP	1.00% of Assets	75,738,817	1.00	64,819,070	648,191
Morgan Stanley Prime Property (CF)	0.84 % of Assets	94,674,663	0.84	80,997,324	680,378

**Kansas City Police Employees' Retirement Systems
KCPERS Police
Fee Schedule**

As of December 31, 2022

Manager	Fee Schedule	Aggregate Assets (\$)	Estimated Annual Fee (%)	Market Value as of 12/31/2022	Estimated Annual Fee (\$)
PGIM Real Estate PRISA II (CF)	1.20 % of First \$25 M 1.15 % of Next \$25 M 1.05 % of Next \$50 M 0.95 % of Next \$100 M 0.90 % of Next \$100 M 0.85 % Thereafter	95,992,075	1.12	82,183,060	919,863
Grosvenor FOB (CF)	1.15 % of First \$25 M 1.00 % of Next \$25 M 0.80 % of Next \$50 M 0.60 % Thereafter	123,724,902	0.87	107,245,687	936,022
Coltv. Short Term Invt. Fund	0.15 % of Assets	2,079,733	0.15	1,104,691	1,657

Fee Notes:

White Oak Fixed Income C LP - Fee structure is 1.25% when aggregate assets are below \$10M, and 1.00% when aggregate assets are above \$10M.

The incentive fee for Morgan Stanley Prime Property (CF) for each calendar year is capped at 35 basis points per annum.

The fee schedule shown for PGIM Real Estate PRISA II (CF) represents the maximum annual fee and may be lower depending on the fund's operating cash flow.

Grosvenor FOB (CF) fee has a 75 basis point minimum. The fee schedule shown for Grosvenor FOB (CF) excludes the underlying manager's fees.

Abbott Capital Private Equity LP (CF) consists of two separate funds: Abbott Capital Private Equity V LP and Abbott Capital Private Equity VI LP. The annual management fee for both funds is 1.00% with 0% carried interest for initial 8 years thereafter the fee is reduced by 10% per year.

JP Morgan Private Equity III (CF) consists of three separate funds: European Corporate Finance Investors III, U.S. Corporate Finance Investors III, and Venture Capital Investors III. The annual management fee pertains to the percentage of committed capital, is level for the first eight years, and is then reduced each successive year by 10% of the preceding year's fee. Each fund is also subject to an incentive/carried interest fee, which is 10% for secondary partnership investments and 20% for direct co-investments.

European and U.S. Corporate Finance Investors III

Management fee for initial 8 years: 0.90%

Average fee over 15 years: 0.76%

Venture Capital Investors III

Management fee for initial 8 years: 1.10%

Average fee over 15 years: 0.93%

Mutual fund fees are sourced from Morningstar and/or the investment manager.

Civilian Plan



**Kansas City Civilian Employees' Retirement Systems (KCPERS)
Investment Objective Review
As of December 31, 2022**

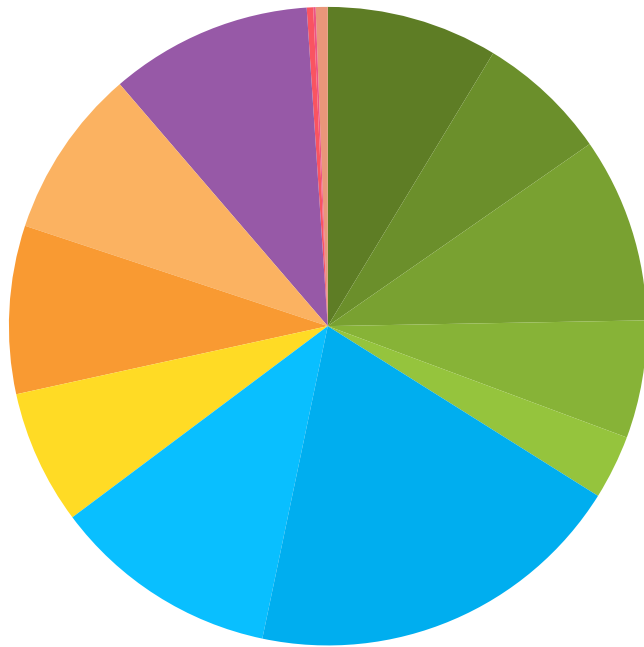
Asset Allocation						
	Yes	No	Current	Min.	Target	Max.
Global Equity	✓		33.9%	33%	38%	43%
Fixed Income	✓		30.9%	26%	31%	36%
Direct Lending	✓		6.8%	4%	7%	10%
Real Estate		✓	17.1%	9%	13%	17%
Absolute Return	✓		10.3%	7%	11%	15%
Private Equity		✓	0.5%	0%	0%	0%
Cash Equivalent	✓		0.6%	0%	0%	5%
Total Fund	✓		100%	95%	100%	100%

Investment Policy Guidelines	Performance (Net)/ Rank	Yes	No	Comments
Performance (over full market cycle of 5 years)				
Total Fund				
Total fund composite rate of return exceeds the current Target Allocation Index (gross of fees) over 5 years.	4.80%	✓		
The total fund return is equal to or exceeds 7.1% annualized return (gross of fees) over 5 years.	4.80%		✓	
Global Equity				
The global equity composite rate of return exceeds the benchmark (net of fees).	5.10%	✓		
The global equity composite performed at the fortieth (40th) percentile or better.	60		✓	
LSV Global Large Cap Value (SA)				
The manager return exceeds the benchmark (net of fees).	4.76%		✓	
The manager performed at the fortieth (40th) percentile or better.	38	✓		
Artisan Global Opportunities (SA)				
The manager return exceeds the benchmark (net of fees).	6.77%	✓		
The manager performed at the fortieth (40th) percentile or better.	37	✓		
NT Collective Daily ACW IM NL (CF)				
The manager return exceeds the benchmark (net of fees).	5.33%	✓		
The manager performed at the fortieth (40th) percentile or better.	3	✓		
WTC-CTF Global Perspectives (CF)				
The manager return exceeds the benchmark (net of fees).	4.69%	✓		
The manager performed at the fortieth (40th) percentile or better.	21	✓		
GQG Partners Emg Mkts Eq (CF)				
The manager return exceeds the benchmark (net of fees).	N/A			Insufficient history.
The manager performed at the fortieth (40th) percentile or better.	N/A			Insufficient history.
Fixed Income				
The fixed income composite rate of return exceeds the benchmark (net of fees).	1.06%	✓		
The fixed income composite performed at the fortieth (40th) percentile or better.	9	✓		
FCI Advisors (SA)				
The manager return exceeds the benchmark (net of fees).	0.51%	✓		
The manager performed at the fortieth (40th) percentile or better.	13	✓		
PIMCO:Income;Inst (PIMIX)				
The manager return exceeds the benchmark (net of fees).	1.69%	✓		
The manager performed at the fortieth (40th) percentile or better.	15	✓		
Direct Lending				
The direct lending composite rate of return exceeds the benchmark (net of fees).	N/A			Insufficient history.
White Oak Fixed Income C LP				
The manager return exceeds the benchmark (net of fees).	N/A			Insufficient history.
Real Estate				
The real estate composite rate of return exceeds the benchmark (net of fees).	8.31%	✓		
Morgan Stanley Prime Property (CF)				
The manager return exceeds the benchmark (net of fees).	8.40%	✓		
PGIM Real Estate PRISA II (CF)				
The manager return exceeds the benchmark (net of fees).	8.19%	✓		
Absolute Return				
The absolute return composite rate of return exceeds the benchmark (net of fees).	2.88%		✓	
Grosvenor FOB (CF)				
The manager return exceeds the benchmark (net of fees).	3.28%		✓	
Private Equity				
The private equity composite rate of return exceeds the benchmark (net of fees).	9.06%		✓	

The Investment Policy Review for the Police Retirement System of Kansas City, Missouri examines client specific net returns, except for the Total Fund which examines client specific gross return. Managers that do not have 5 years of client specific net performance populate are backfilled with composite/manager gross performance until sufficient historical client-specific net performance is available. White Oak Fixed Income C LP and GQG Partners Emg Mkts Eq (CF) do not have 5 years of composite level returns. The two private equity managers are in their final stages of distributing capital; performance for these managers is not relevant.

Asset Allocation by Manager

December 31, 2022 : \$160,698,363



LSV Global Large Cap Value (SA)	13,949,093	8.68
Artisan Global Opportunities (CF)	10,692,841	6.65
NT Collective Daily ACW IM NL (CF)	15,061,824	9.37
WTC-CTF Global Perspectives (CF)	9,574,451	5.96
GQG Partners Emg Mkts Eq (CF)	5,223,729	3.25
FCI Advisors (SA)	31,139,152	19.38
PIMCO:Income;Inst (PIMIX)	18,465,858	11.49
White Oak Fixed Income C LP	10,919,747	6.80
Morgan Stanley Prime Property (CF)	13,677,339	8.51
PGIM Real Estate PRISA II (CF)	13,809,015	8.59
Grosvenor FOB (CF)	16,479,215	10.25
Abbott Capital Private Equity LP (CF)	538,366	0.34
J.P. Morgan Private Equity III (CF)	192,692	0.12
Coltv. Short Term Invt. Fund	975,042	0.61

Schedule of Investable Assets

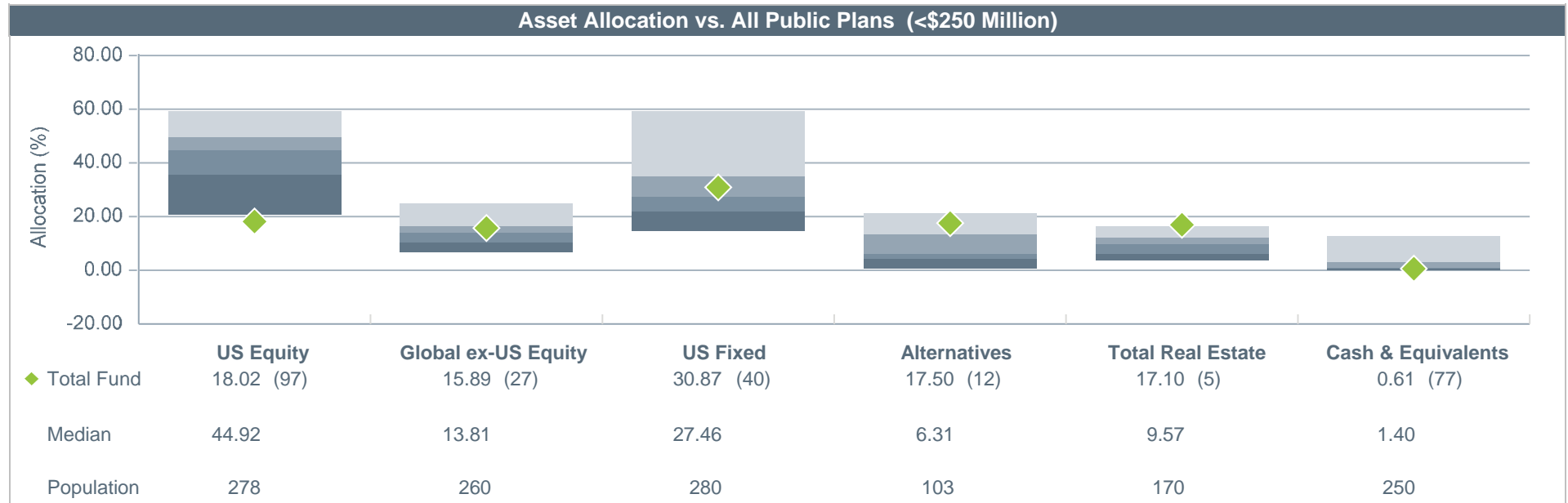
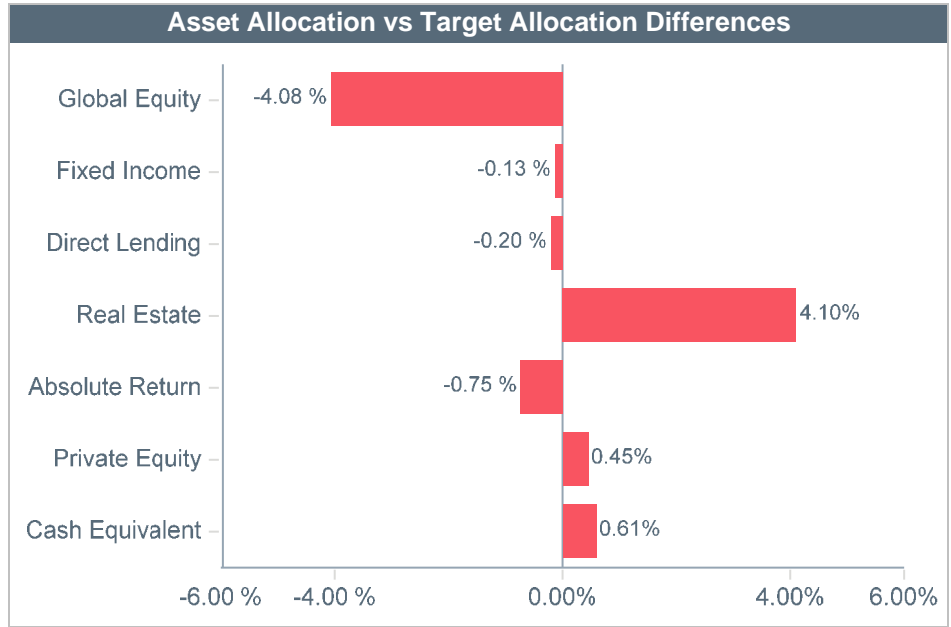
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
QTD	157,362,136	-1,633,233	4,969,460	160,698,363	3.17
CYTD	182,874,897	-3,612,422	-18,564,112	160,698,363	-10.23
FYTD	168,095,609	-2,515,076	-4,882,169	160,698,363	-2.93

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

**Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Total Fund vs. All Public Plans (<\$250 Million)**

As of December 31, 2022

Asset Allocation vs. Target Allocation					
	Market Value (\$)	Allocation (%)	Target (%)	Minimum (%)	Maximum (%)
Total Fund	160,698,363	100.00	100.00	-	-
Global Equity	54,501,938	33.92	38.00	33.00	43.00
Fixed Income	49,605,010	30.87	31.00	26.00	36.00
Direct Lending	10,919,747	6.80	7.00	4.00	10.00
Real Estate	27,486,354	17.10	13.00	9.00	17.00
Absolute Return	16,479,215	10.25	11.00	7.00	15.00
Private Equity	731,058	0.45	0.00	0.00	0.00
Cash Equivalent	975,042	0.61	0.00	0.00	5.00



Parenteses contain percentile ranks. Allocations may not sum up to 100% exactly due to rounding. The Board has elected not to make additional Private Equity commitments and as a result, the Private Equity allocation is winding down. The Board-approved rebalancing plan is in the process of being implemented.



**Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Asset Allocation & Performance**

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
Total Fund (Gross)	\$160.70	3.28	-2.60	-9.79	-9.79	3.93	4.80	6.53	6.36	10.75	12.37	15.42
All Public Plans (<\$250 Million)		6.18	-3.87	-13.56	-13.56	3.48	5.05	6.74	7.00	13.10	12.76	19.39
Rank		96	16	9	9	40	58	60	74	81	56	90
Total Fund	\$160.70	3.17	-2.93	-10.23	-10.23	3.40	4.26	5.99	N/A	10.13	11.83	14.80
Target Allocation Index		3.88	-2.62	-9.24	-9.24	3.22	4.42	5.72	5.84	9.89	10.25	14.39
Difference		-0.71	-0.31	-0.99	-0.99	0.18	-0.16	0.27	N/A	0.24	1.58	0.41
7.1% Annualized Return		1.73	4.68	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Difference		1.44	-7.61	-17.33	-17.33	-3.70	-2.84	-1.11	N/A	3.03	4.73	7.70
Global Equity	\$54.50	10.03	-5.00	-18.31	-18.31	4.07	5.10	8.38	N/A	16.82	18.10	27.74
MSCI ACW IM Index (USD) (Net)		9.84	-6.24	-18.40	-18.40	3.89	4.96	7.98	7.94	18.22	16.25	26.35
Difference		0.19	1.24	0.09	0.09	0.18	0.14	0.40	N/A	-1.40	1.85	1.39
IM Global Large Cap Equity (MF) Median		9.88	-5.98	-22.10	-22.10	3.45	5.56	7.92	8.31	16.85	20.30	29.62
Rank		49	40	33	33	37	60	41	N/A	52	61	72
Fixed Income	\$49.61	2.82	-2.71	-11.41	-11.41	-1.29	1.06	2.36	N/A	-0.37	8.97	9.31
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72
Difference		0.95	1.16	1.60	1.60	1.42	1.04	1.47	N/A	1.18	1.46	0.59
IM Global Fixed Income (MF) Median		3.81	-4.86	-14.66	-14.66	-3.68	-0.90	0.74	0.01	-2.73	8.29	8.08
Rank		58	24	31	31	16	9	10	N/A	10	42	25

Performance shown is net of fees, unless otherwise noted. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading. Direct Lending performance is currently unavailable.

**Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Asset Allocation & Performance**

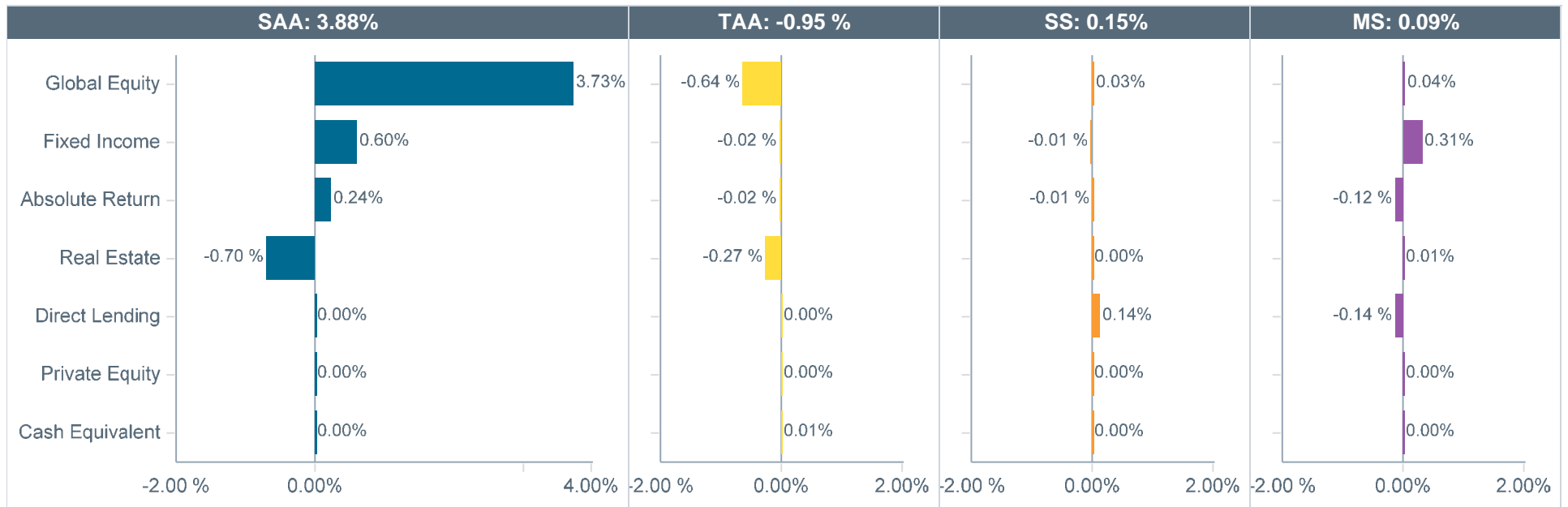
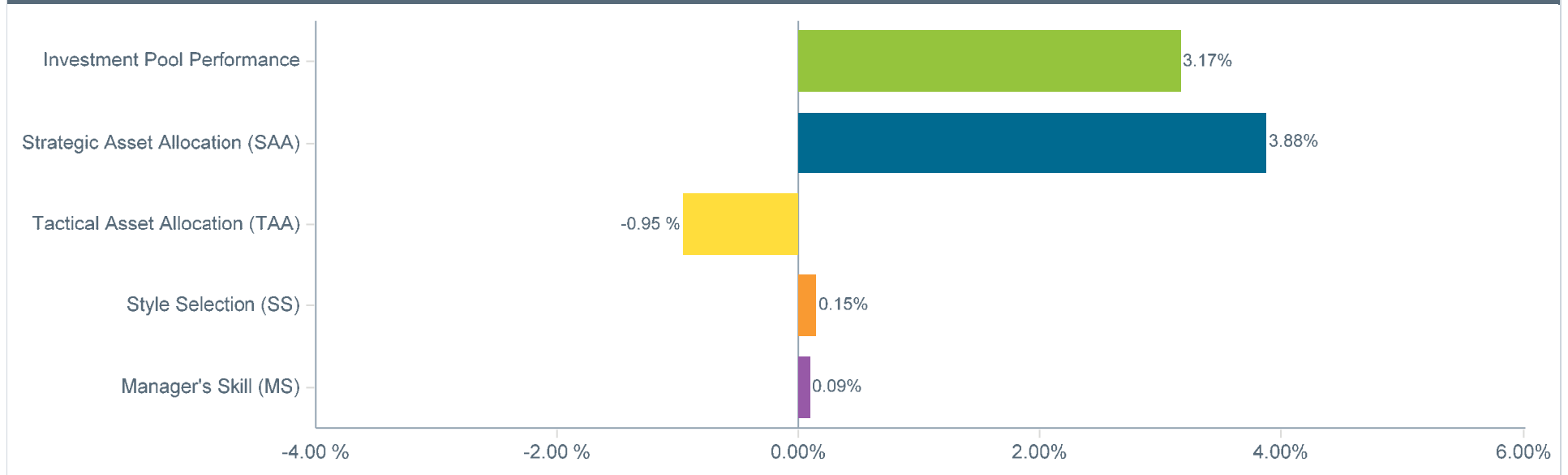
As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
Direct Lending	\$10.92	0.00	-0.79	-0.04	-0.04	2.39	N/A	N/A	N/A	4.60	2.66	7.41
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	2.62	4.36	4.36	5.04	5.89	5.81	5.58	5.05	5.70	7.39
Difference		0.00	-3.41	-4.40	-4.40	-2.65	N/A	N/A	N/A	-0.45	-3.04	0.02
Real Estate	\$27.49	-5.07	-1.12	6.00	6.00	9.08	8.31	8.39	N/A	21.77	0.56	6.24
NCREIF ODCE Index (AWA) (Net)		-5.13	-0.51	6.59	6.59	8.98	7.72	7.58	9.11	21.02	0.34	4.39
Difference		0.06	-0.61	-0.59	-0.59	0.10	0.59	0.81	N/A	0.75	0.22	1.85
Absolute Return	\$16.48	0.79	-0.33	-6.37	-6.37	3.51	2.88	3.71	N/A	6.32	11.40	7.81
Long Term Absolute Return Custom Benchmark		2.08	4.75	6.53	6.53	5.73	6.31	6.25	N/A	5.05	5.62	7.40
Difference		-1.29	-5.08	-12.90	-12.90	-2.22	-3.43	-2.54	N/A	1.27	5.78	0.41
Absolute Return Custom Benchmark		1.99	0.09	-1.35	-1.35	4.80	3.93	4.45	N/A	6.77	9.28	10.04
Difference		-1.20	-0.42	-5.02	-5.02	-1.29	-1.05	-0.74	N/A	-0.45	2.12	-2.23
Private Equity	\$0.73	0.43	-15.30	-17.97	-17.97	8.37	9.06	9.68	N/A	28.80	20.47	10.10
Cambridge US Prvt Eq Index (1 Qtr Lag)		0.05	-3.34	2.60	2.60	19.91	17.17	15.97	15.37	49.06	12.72	7.79
Difference		0.38	-11.96	-20.57	-20.57	-11.54	-8.11	-6.29	N/A	-20.26	7.75	2.31

See addendum for custom index comments. 7.1% annualized return represents the System's long-term return goal based on the System's current actuarial assumed rate of return.

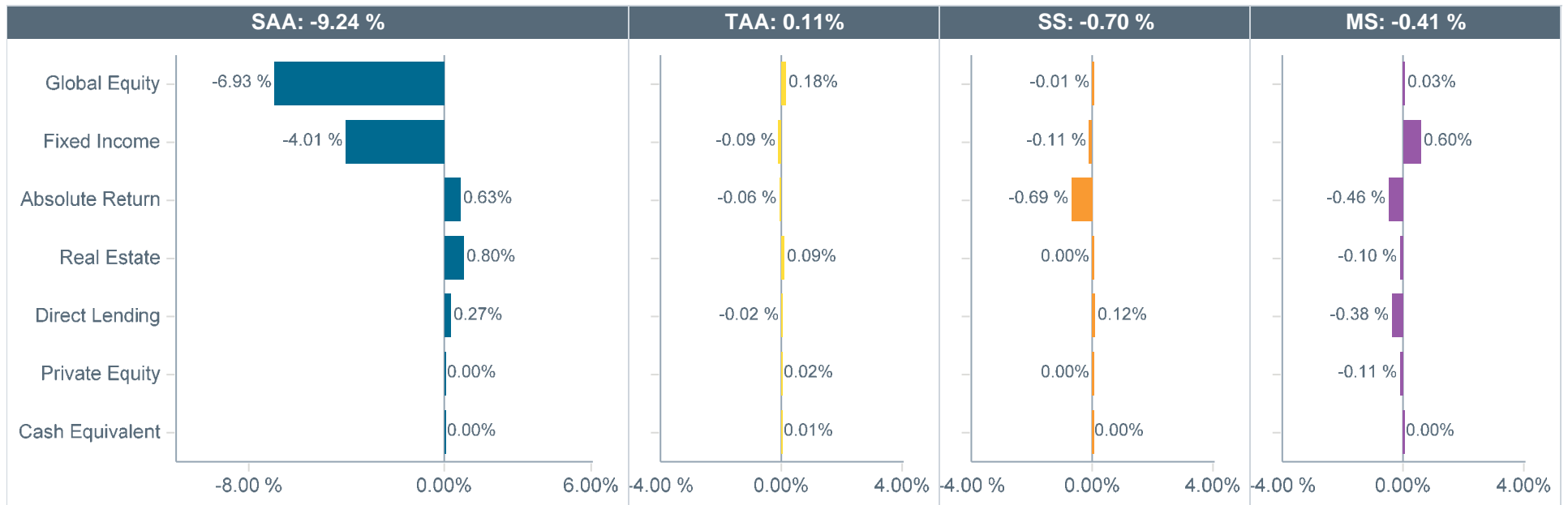
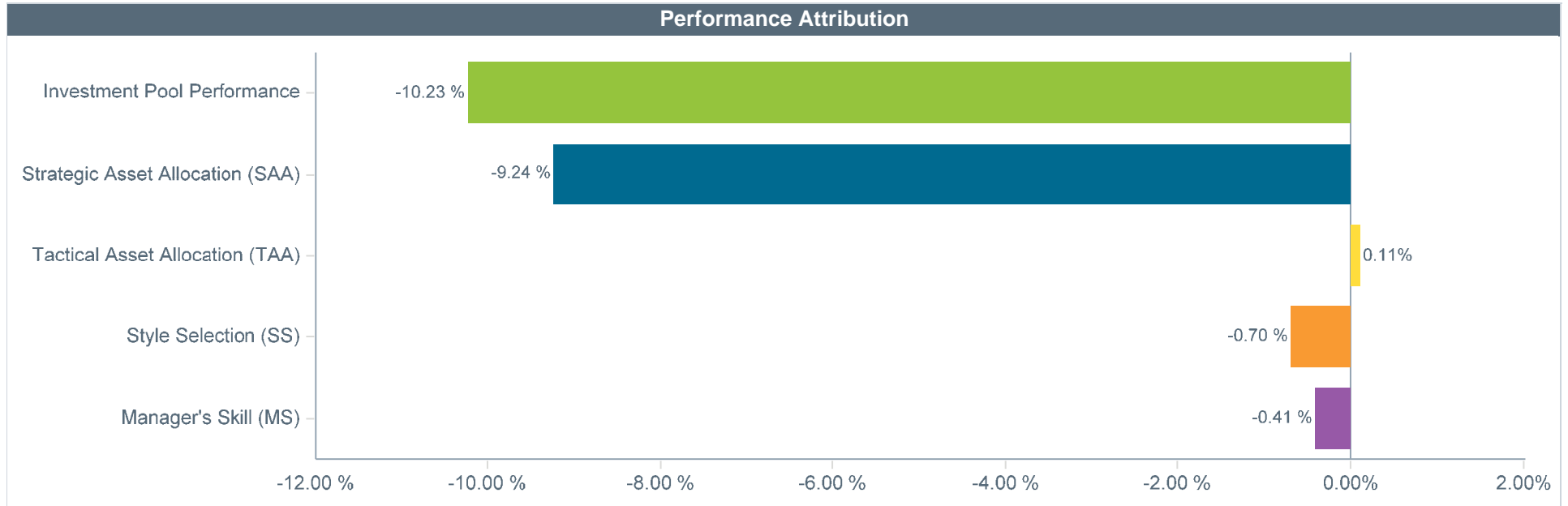
Performance shown is net of fees, unless otherwise noted. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading. Direct Lending performance is currently unavailable.

Performance Attribution

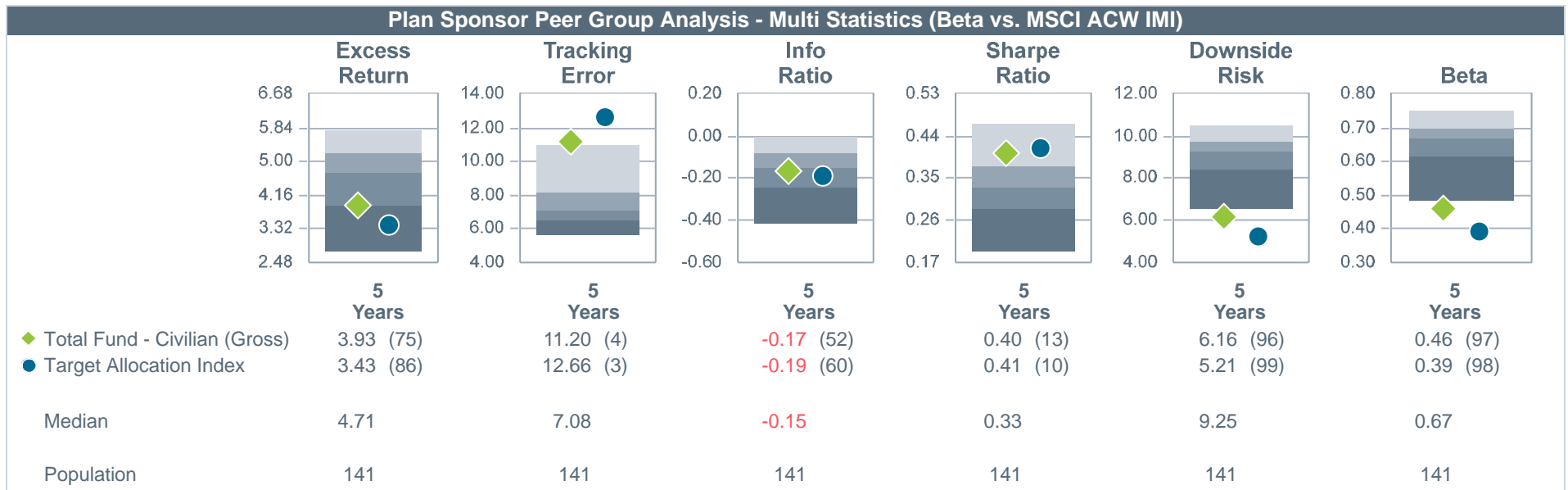
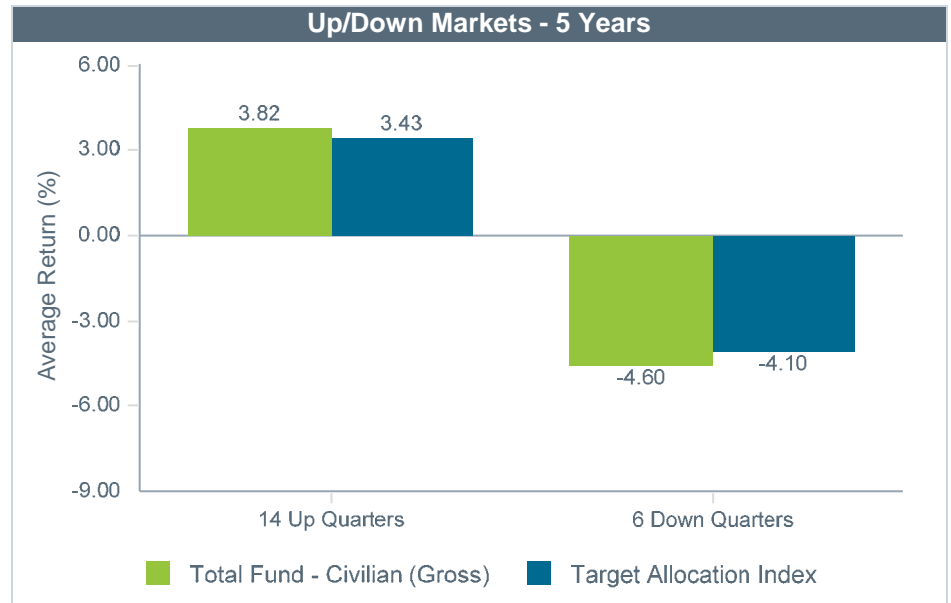
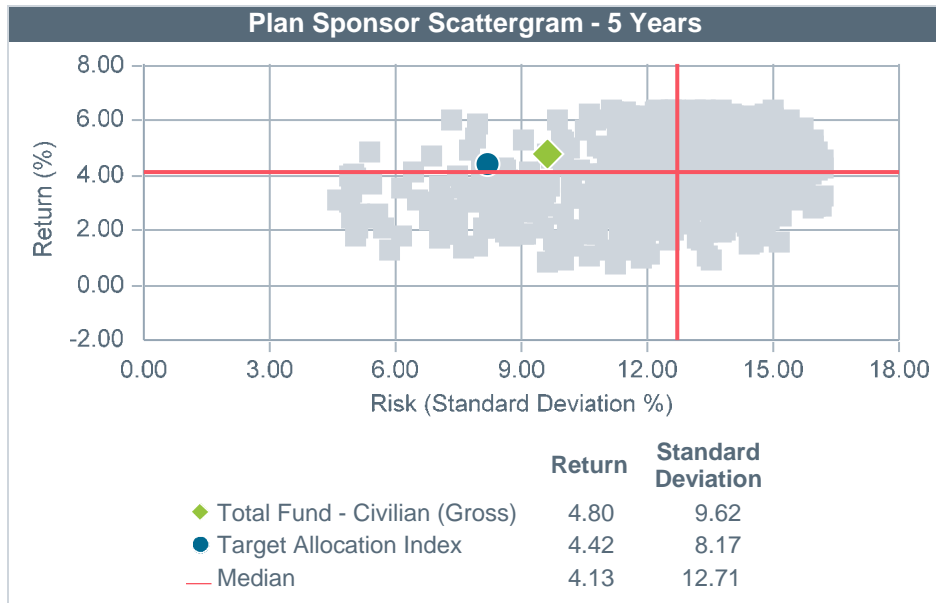


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.

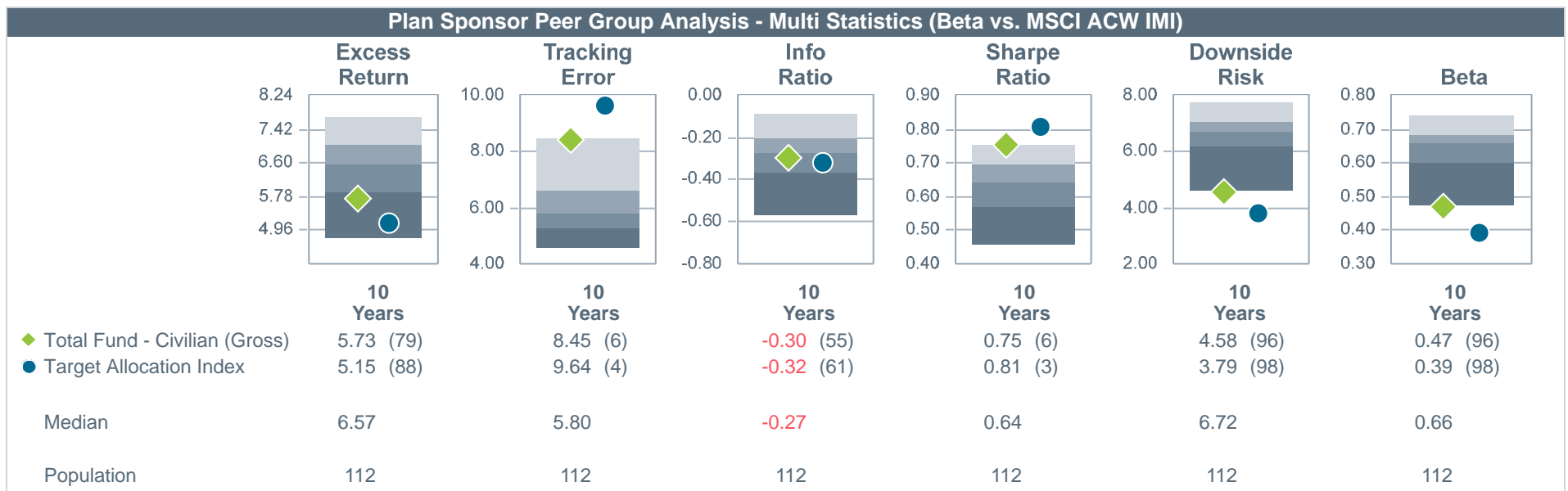
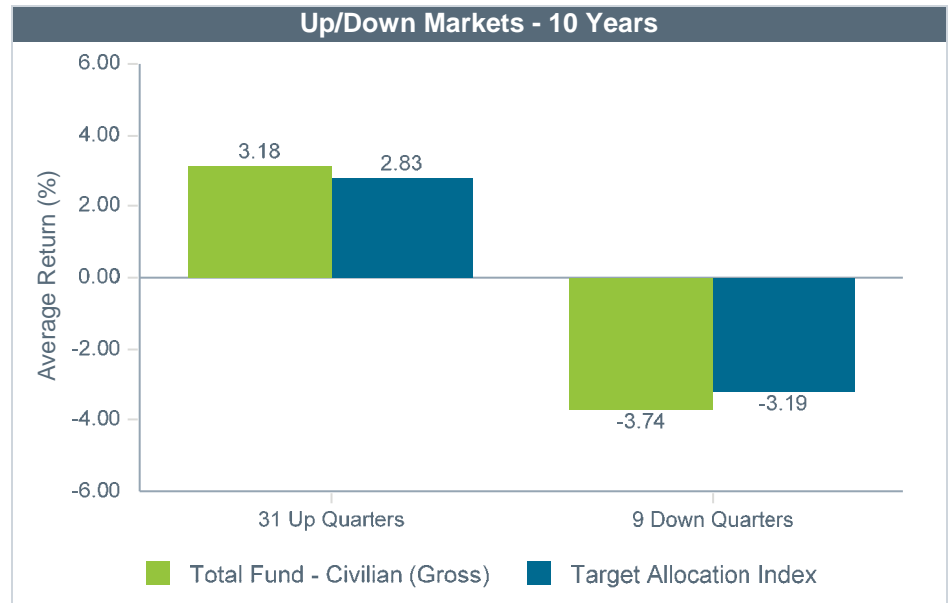
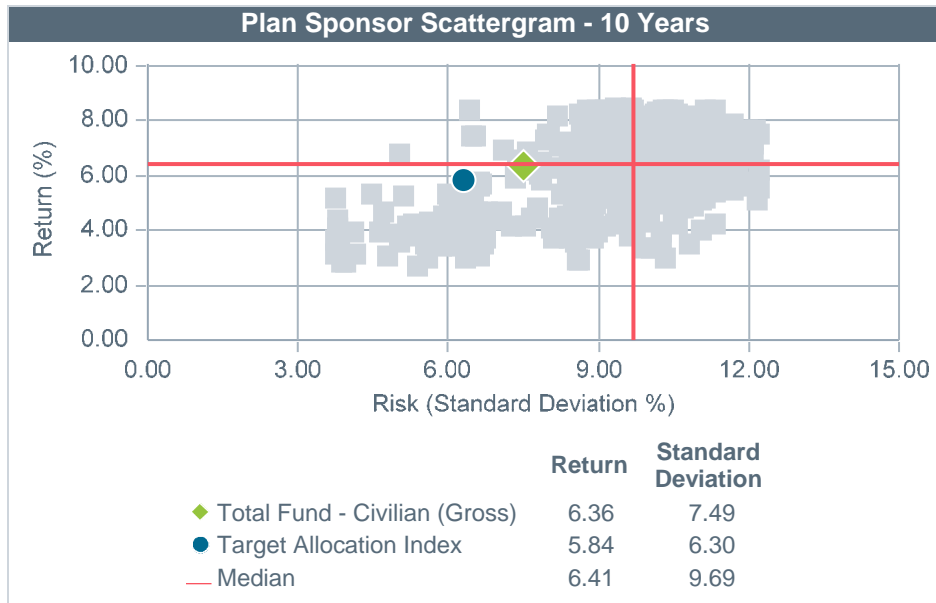




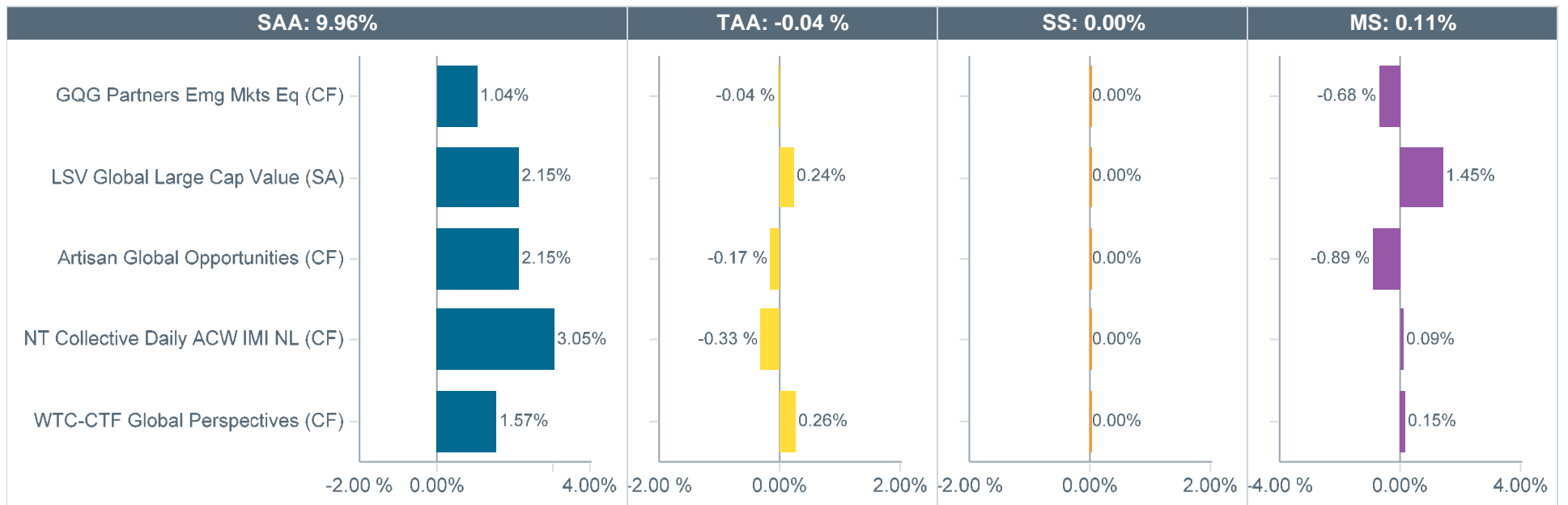
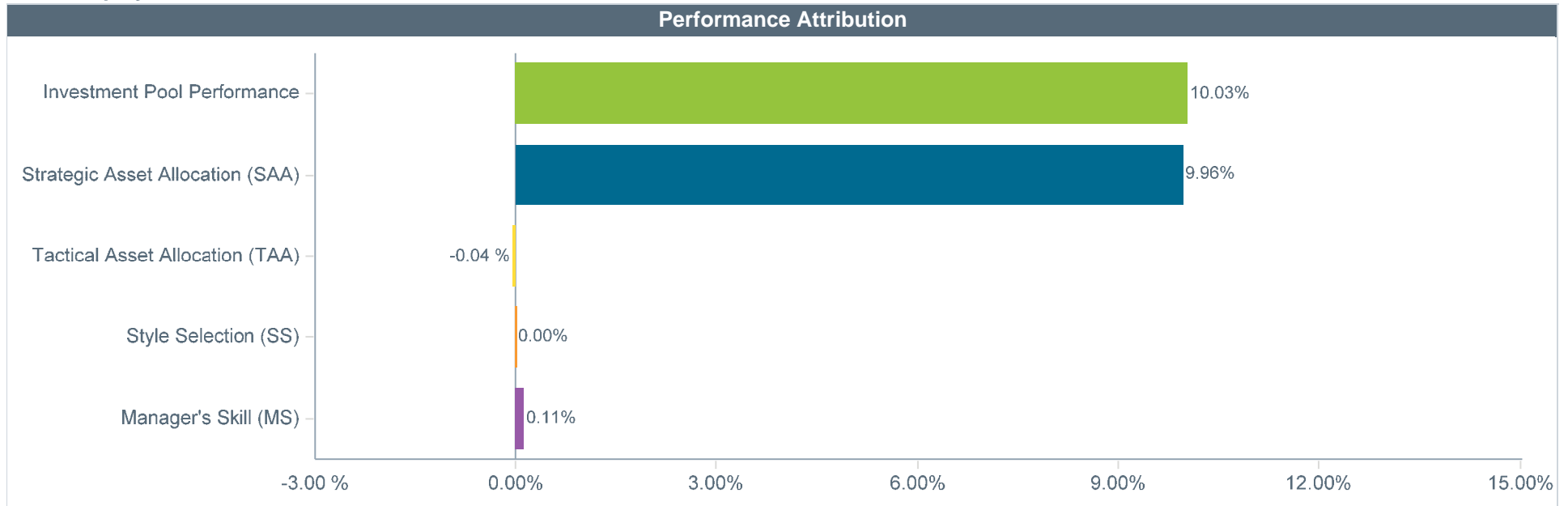
Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



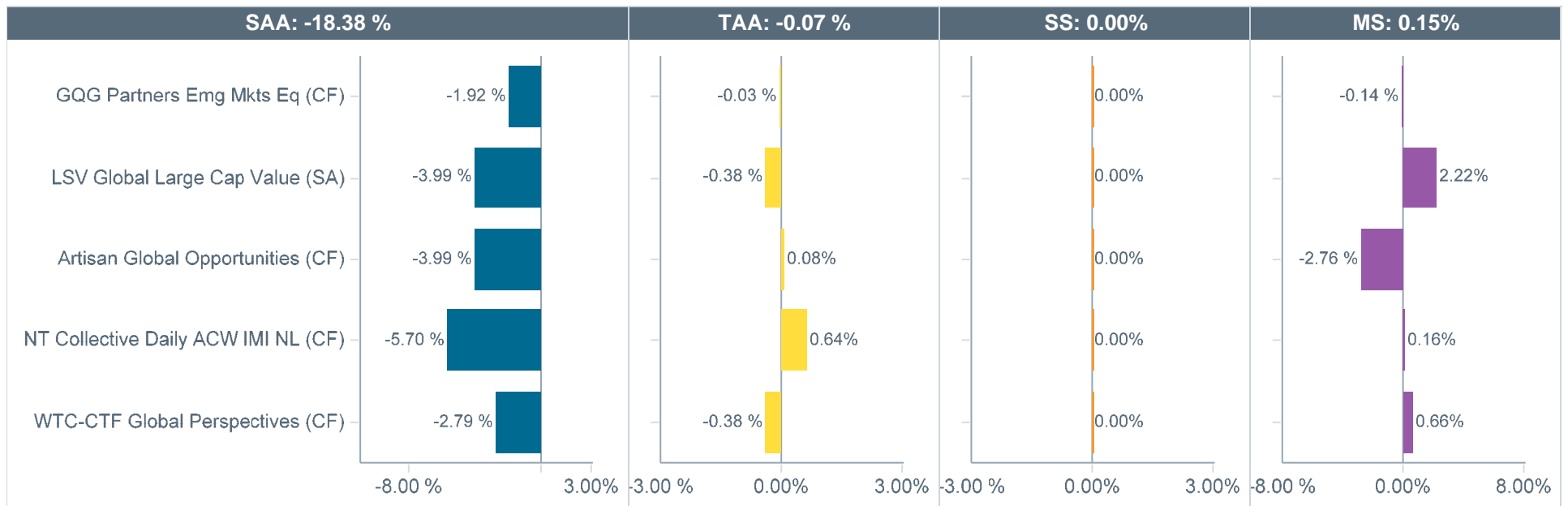
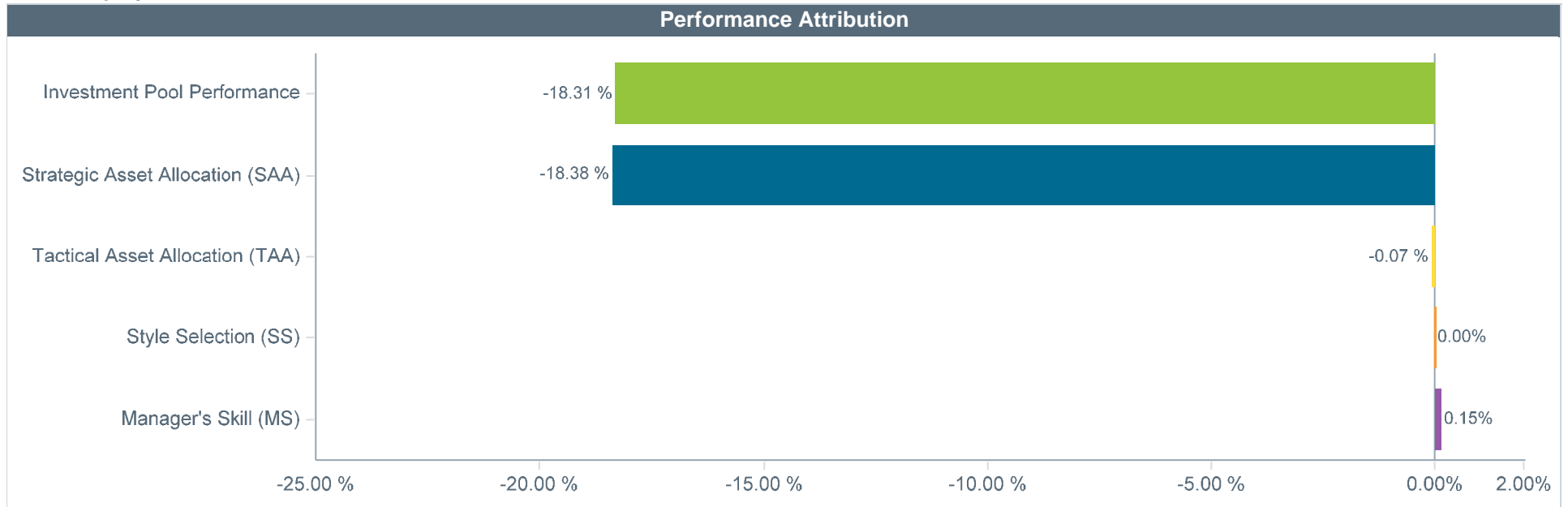
Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



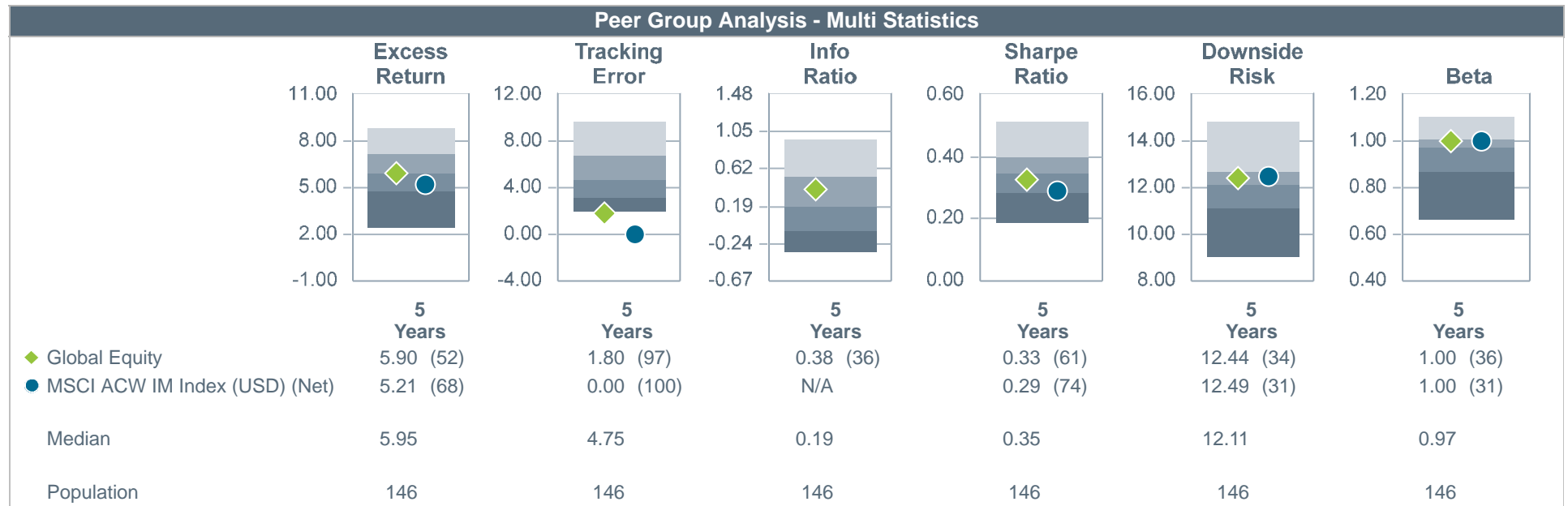
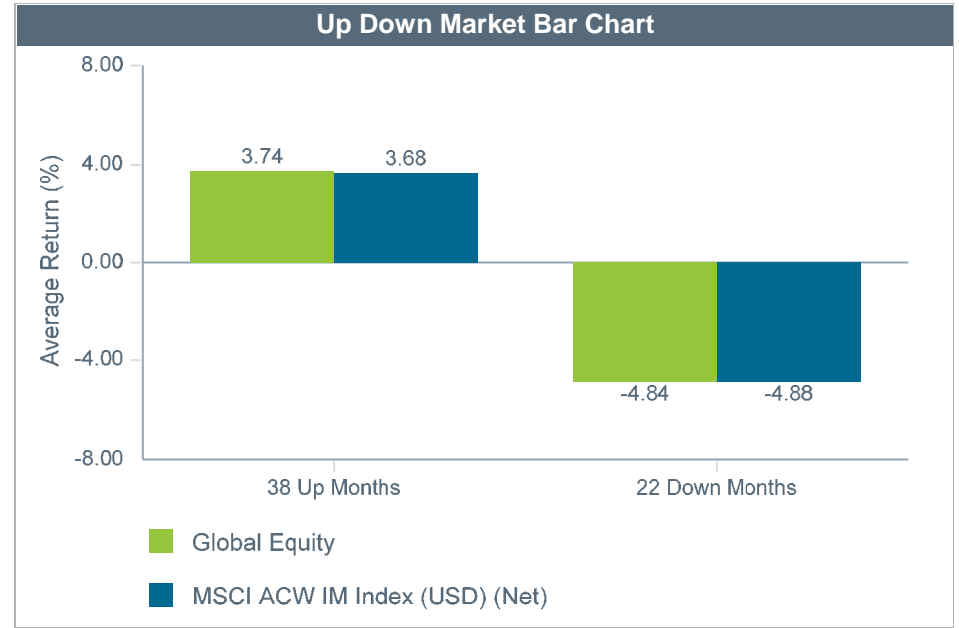
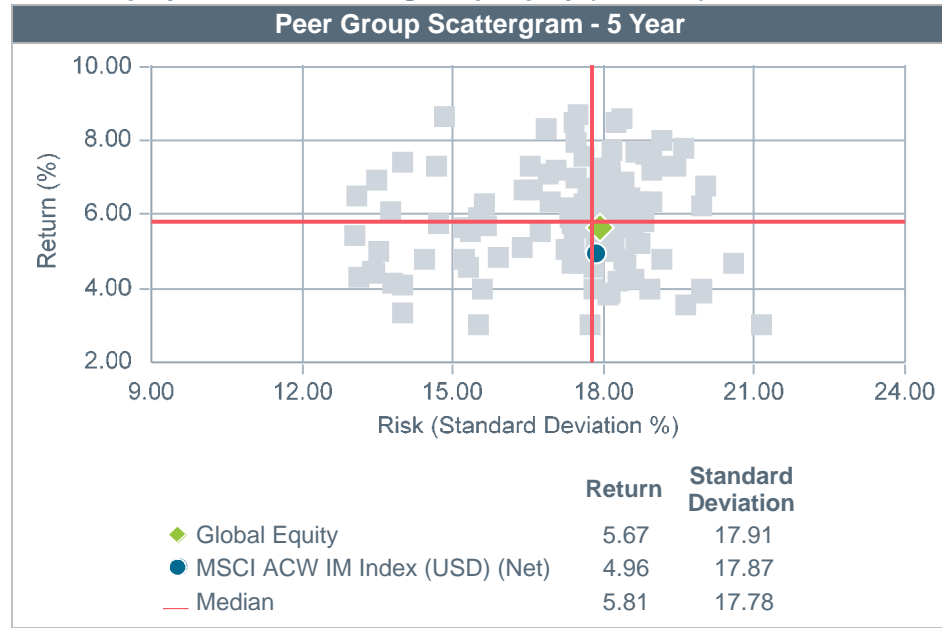
Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



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



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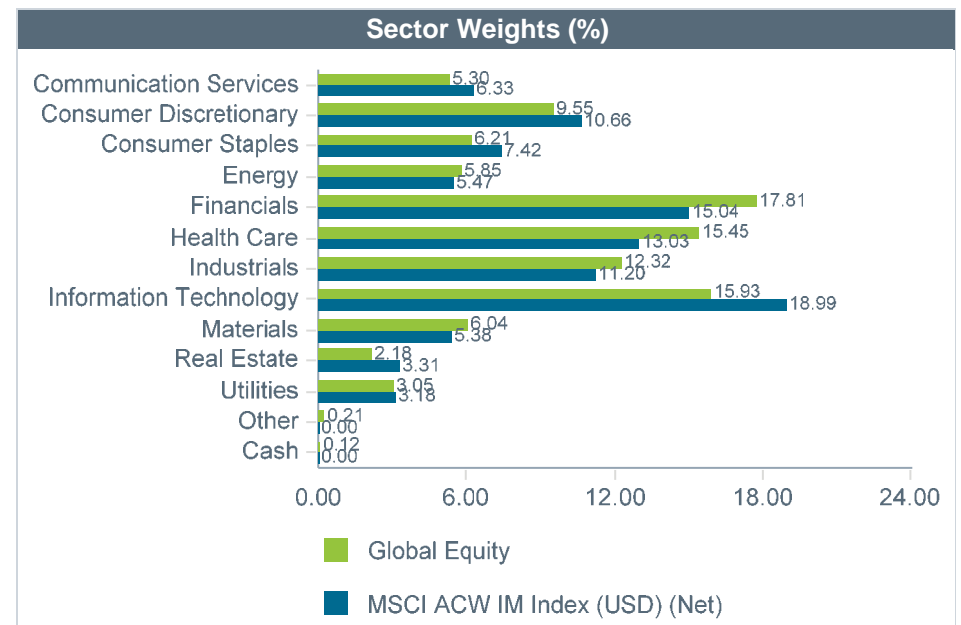
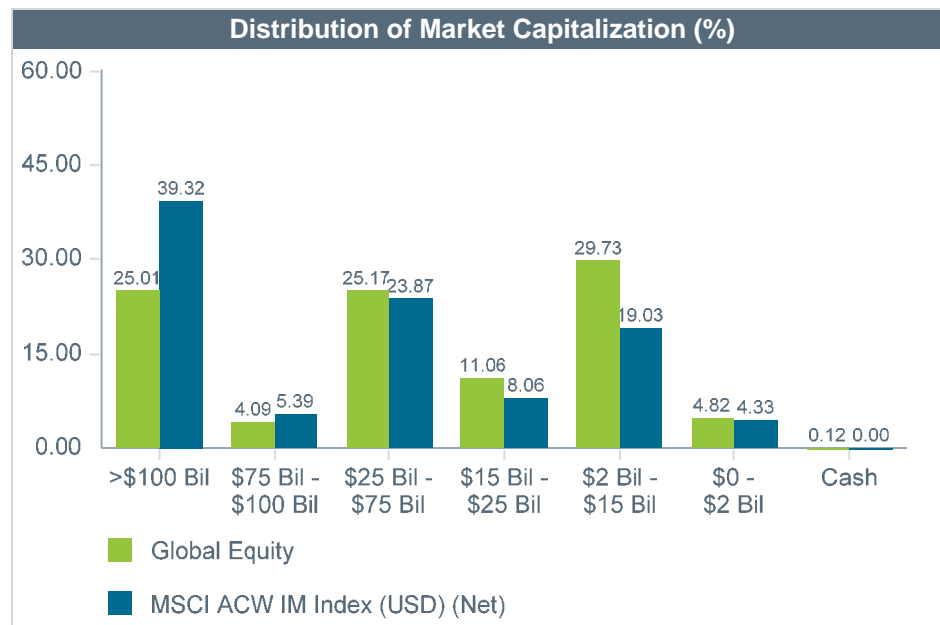
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

**Kansas City Police Employees' Retirement Systems
Global Equity vs. MSCI ACW IM Index (USD) (Net)
Portfolio Characteristics**

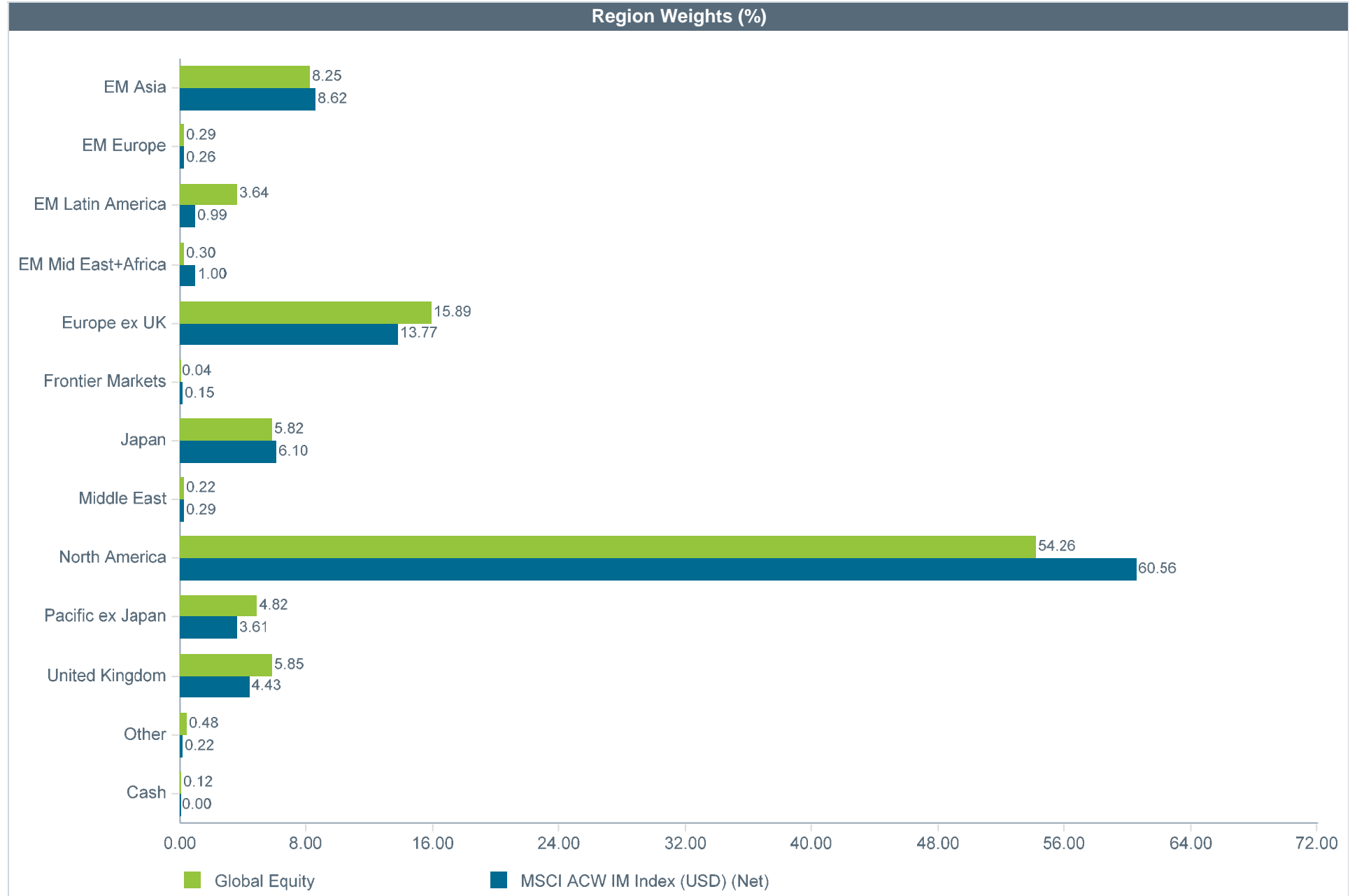
As of December 31, 2022

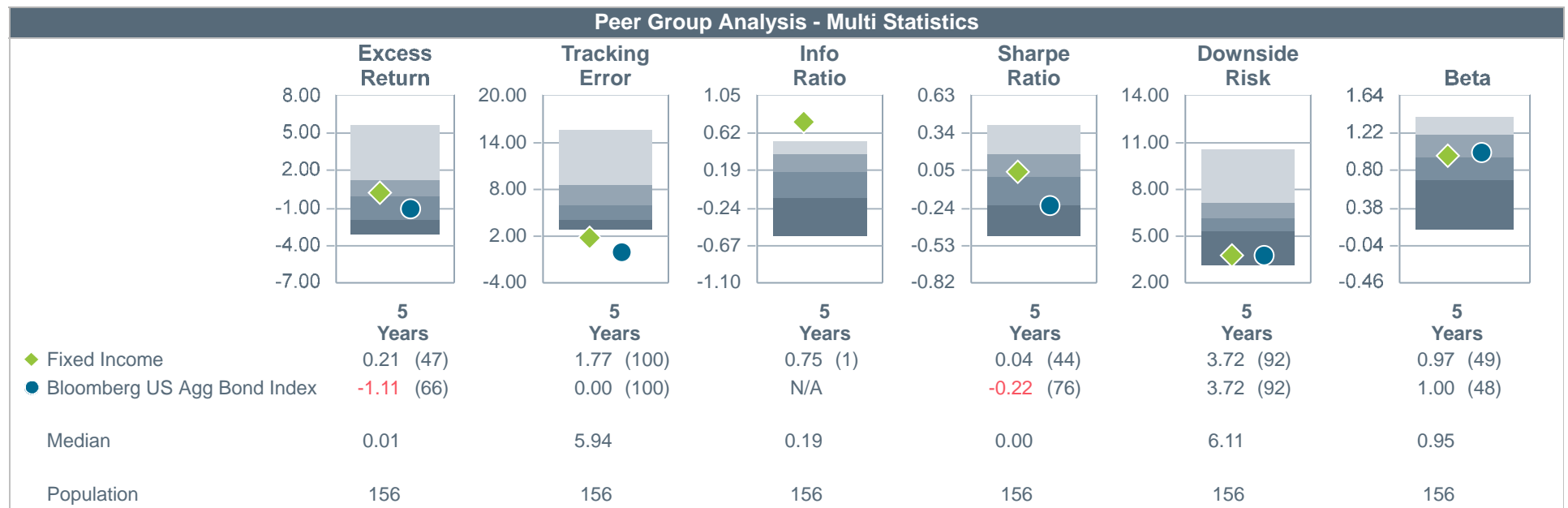
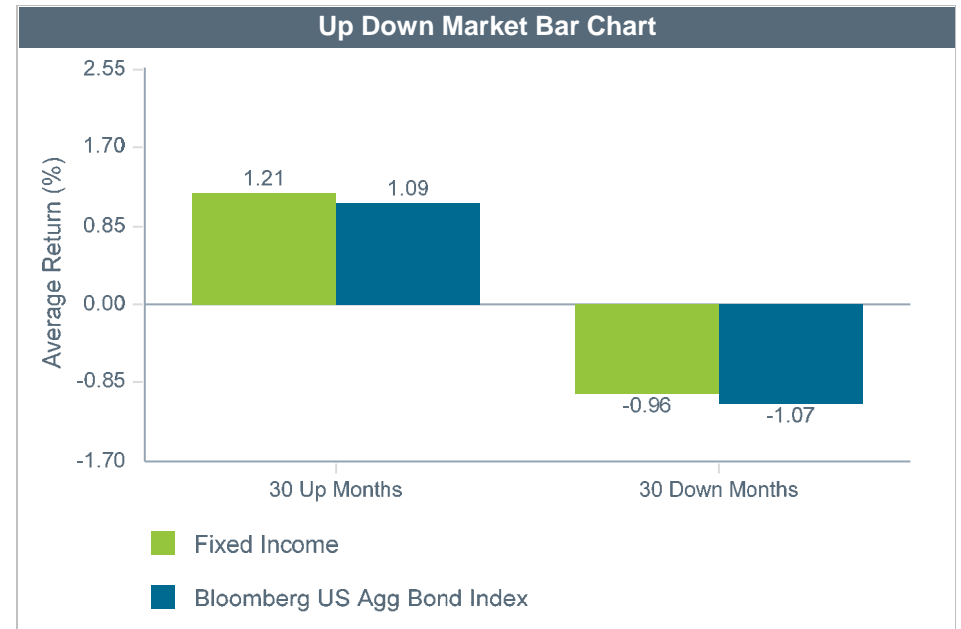
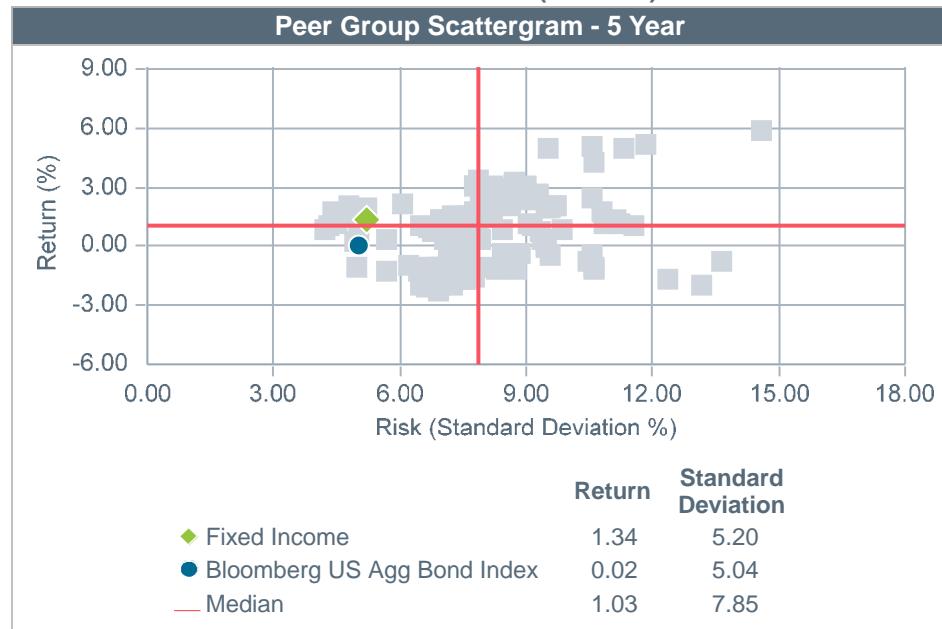
Top Ten Equity Holdings				
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
NextEra Energy Inc	1.13	0.26	0.87	7.15
Veeva Systems Inc	1.07	0.04	1.03	-2.12
Techtronic Industries Co Ltd	1.03	0.02	1.01	15.61
Boston Scientific Corp	0.95	0.10	0.85	19.47
Apple Inc	0.92	3.27	-2.35	-5.83
Advanced Micro Devices Inc	0.91	0.16	0.75	2.23
Novo Nordisk A/S	0.86	0.35	0.51	34.34
Alphabet Inc	0.83	0.83	0.00	-7.76
UBS Group AG	0.81	0.10	0.71	26.16
LONZA GROUP AG	0.76	0.06	0.70	-1.10
% of Portfolio	9.27	5.19	4.08	

Portfolio Characteristics		
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	113,362	238,333
Median Mkt. Cap (\$M)	1,794	1,765
Price/Earnings Ratio	12.72	15.07
Price/Book Ratio	2.55	3.08
5 Yr. EPS Growth Rate (%)	15.86	15.67
Current Yield (%)	2.93	2.39
Beta (5 Years, Monthly)	1.00	1.00
Number of Securities	9,354	9,154



Region Weights (%)



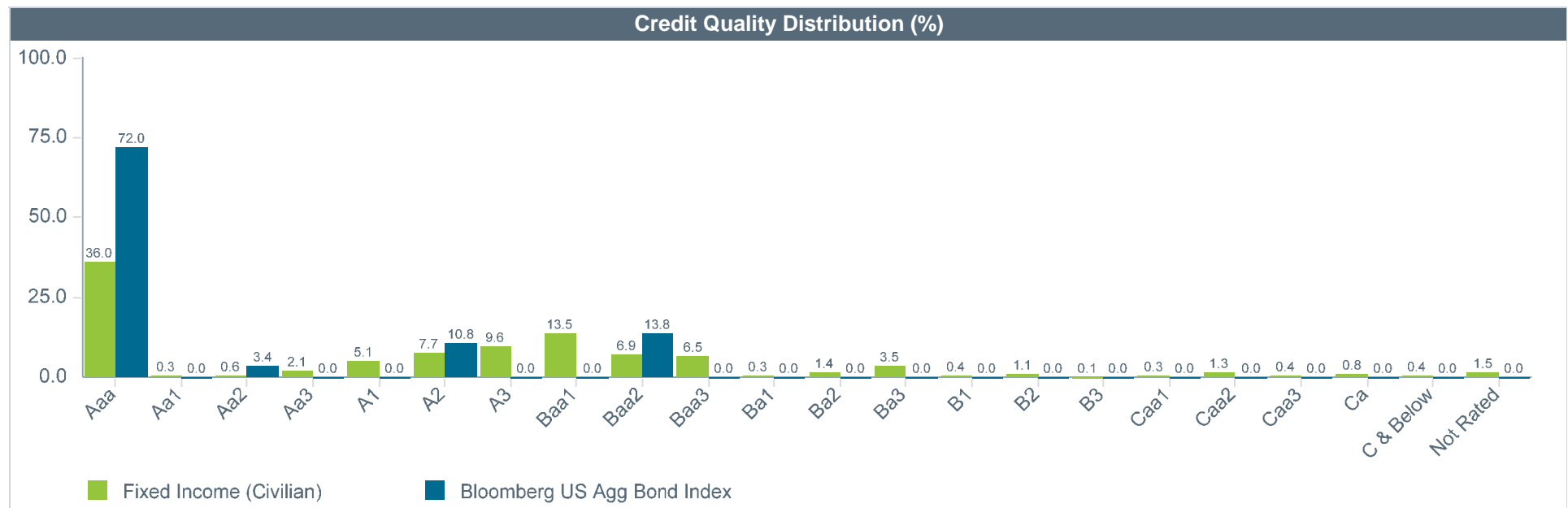
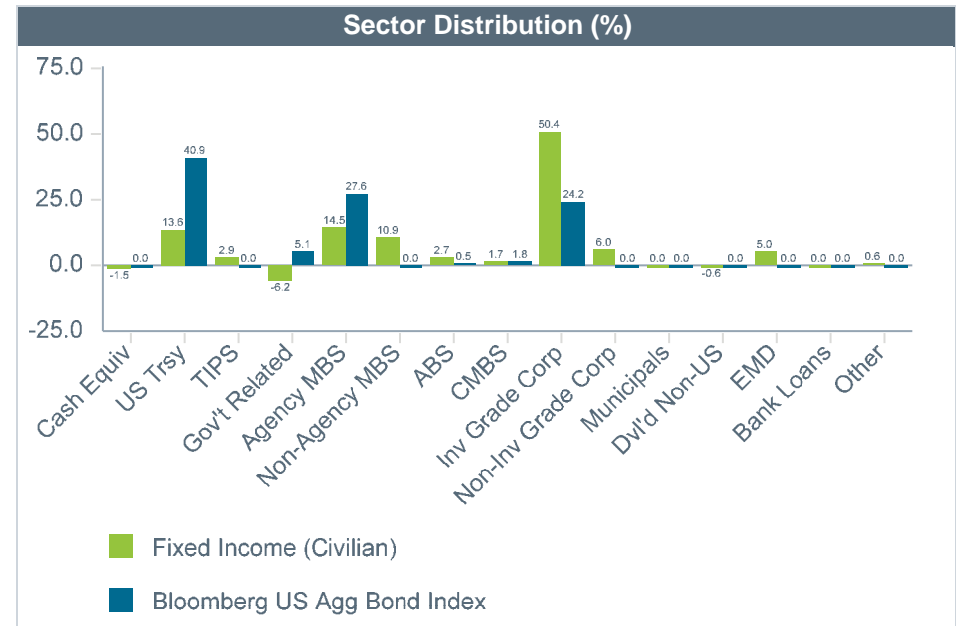


Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Kansas City Police Employees' Retirement Systems
Fixed Income (Civilian) vs. Bloomberg US Agg Bond Index
Portfolio Characteristics

As of December 31, 2022

Portfolio Characteristics		
	Portfolio	Benchmark
Effective Duration	5.58	6.17
Avg. Maturity	7.60	8.44
Avg. Quality	A2	Aa1/Aa2
Coupon Rate (%)	3.18	2.69
Yield To Maturity (%)	N/A	4.68
Holdings Count	7,784	13,133



Allocation to "Other" consists of Convertible Bonds, Preferred Stock, and Euro/Yankee Bonds. PIMCO:Income;Inst (PIMIX) effective duration is used as modified duration.



Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Asset Allocation & Performance - Gross of Fees

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Global Equity														
LSV Global Large Cap Value (SA)	\$13.95	15.85	-1.43	-8.02	-8.02	5.70	5.42	8.43	N/A	24.55	3.07	26.99	6.71	05/01/2014
MSCI Wrld Index (USD) (Net)		9.77	-5.88	-18.14	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	7.03	
Difference		6.08	4.45	10.12	10.12	0.76	-0.72	-0.09	N/A	2.73	-12.83	-0.68	-0.32	
MSCI Wrld Val Index (USD) (Net)		14.74	-0.98	-6.52	-6.52	4.06	4.12	7.04	7.24	21.94	-1.16	21.75	5.04	
Difference		1.11	-0.45	-1.50	-1.50	1.64	1.30	1.39	N/A	2.61	4.23	5.24	1.67	
IM Global Large Cap Value Equity (SA+CF) Median		14.19	-2.76	-10.17	-10.17	4.23	4.76	7.78	8.07	18.78	6.73	24.22	5.97	
Rank		34	37	37	37	22	38	34	N/A	8	69	29	33	
Artisan Global Opportunities (CF)														
Artisan Global Opportunities (CF)	\$10.69	5.70	-7.94	-29.59	-29.59	4.67	7.68	10.66	N/A	15.09	41.51	37.02	10.33	05/01/2014
MSCI Wrld Index (USD) (Net)		9.77	-5.88	-18.14	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	7.03	
Difference		-4.07	-2.06	-11.45	-11.45	-0.27	1.54	2.14	N/A	-6.73	25.61	9.35	3.30	
MSCI Wrld Grth Index (USD) (Net)		4.72	-11.05	-29.21	-29.21	4.71	7.43	9.47	10.08	21.18	33.83	33.68	8.59	
Difference		0.98	3.11	-0.38	-0.38	-0.04	0.25	1.19	N/A	-6.09	7.68	3.34	1.74	
IM Global Large Cap Growth Equity (SA+CF) Median		9.07	-6.50	-24.06	-24.06	5.08	7.44	9.52	9.85	17.80	30.10	31.58	8.49	
Rank		82	60	74	74	56	44	32	N/A	62	24	16	19	
NT Collective Daily ACW IM NL (CF)														
NT Collective Daily ACW IM NL (CF)	\$15.06	10.17	-5.43	-17.76	-17.76	4.29	5.41	8.43	N/A	18.14	16.75	26.88	6.81	03/01/2014
MSCI ACW IM Index (USD) (Net)		9.84	-6.24	-18.40	-18.40	3.89	4.96	7.98	7.94	18.22	16.25	26.35	6.34	
Difference		0.33	0.81	0.64	0.64	0.40	0.45	0.45	N/A	-0.08	0.50	0.53	0.47	
IM Global Large Cap Core Equity (SA+CF) Median		10.54	-4.81	-16.56	-16.56	4.89	5.81	8.31	9.13	19.93	15.25	26.53	7.21	
Rank		58	63	59	59	61	61	44	N/A	63	44	46	63	
WTC-CTF Global Perspectives (CF)														
WTC-CTF Global Perspectives (CF)	\$9.57	11.55	-1.93	-13.89	-13.89	N/A	N/A	N/A	N/A	22.86	N/A	N/A	14.11	11/01/2020
MSCI ACW Sm Cap Index (USD) (Net)		10.45	-6.25	-18.67	-18.67	3.18	3.23	7.13	7.69	16.10	16.33	24.65	7.46	
Difference		1.10	4.32	4.78	4.78	N/A	N/A	N/A	N/A	6.76	N/A	N/A	6.65	
IM Global Small Cap Equity (SA+CF) Median		12.02	-4.55	-20.71	-20.71	6.06	3.66	7.27	8.87	21.14	17.53	26.40	6.96	
Rank		53	32	33	33	N/A	N/A	N/A	N/A	40	N/A	N/A	33	
GQG Partners Emg Mkts Eq (CF)														
GQG Partners Emg Mkts Eq (CF)	\$5.22	3.41	-8.54	-20.64	-20.64	N/A	N/A	N/A	N/A	-0.82	N/A	N/A	-5.45	11/01/2020
MSCI Emg Mkts Index (USD) (Net)		9.70	-9.04	-20.09	-20.09	-2.69	-1.40	5.17	1.44	-2.54	18.31	18.42	-4.10	
Difference		-6.29	0.50	-0.55	-0.55	N/A	N/A	N/A	N/A	1.72	N/A	N/A	-1.35	
IM Emerging Markets Equity (SA+CF) Median		10.59	-7.48	-19.65	-19.65	-0.92	-0.13	5.87	2.82	0.84	18.69	20.64	-3.08	
Rank		94	64	57	57	N/A	N/A	N/A	N/A	60	N/A	N/A	68	

Performance shown is gross of fees, unless otherwise noted. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading. White Oak Fixed Income performance is currently unavailable.



Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Asset Allocation & Performance - Gross of Fees

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Fixed Income														
FCI Advisors (SA)	\$31.14	2.50	-3.53	-13.42	-13.42	-2.15	0.66	1.39	1.45	-1.91	10.32	10.05	3.93	03/01/2001
Bloomberg US Gov't Crdt Bond Index		1.80	-3.93	-13.58	-13.58	-2.57	0.21	1.14	1.16	-1.75	8.93	9.71	3.67	
Difference		0.70	0.40	0.16	0.16	0.42	0.45	0.25	0.29	-0.16	1.39	0.34	0.26	
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	3.56	
Difference		0.63	0.34	-0.41	-0.41	0.56	0.64	0.50	0.39	-0.36	2.81	1.33	0.37	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median		1.79	-4.00	-12.95	-12.95	-2.22	0.43	1.36	1.49	-1.23	8.51	9.19	3.95	
Rank		5	17	78	78	47	27	48	56	93	8	9	53	
PIMCO:Income;Inst (PIMIX)														
PIMCO:Income;Inst (PIMIX)	\$18.47	3.54	-0.81	-7.34	-7.34	0.52	2.21	N/A	N/A	3.11	6.31	8.59	2.41	09/01/2017
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.00	
Difference		1.67	3.06	5.67	5.67	3.23	2.19	N/A	N/A	4.66	-1.20	-0.13	2.41	
IM Multi-Sector General Bond (MF) Median		2.70	-3.38	-10.74	-10.74	-0.30	1.78	3.61	3.06	2.55	7.54	11.13	1.99	
Rank		34	8	20	20	26	31	N/A	N/A	45	66	82	26	
Direct Lending														
White Oak Fixed Income C LP	\$10.92	0.00	-0.79	-0.04	-0.04	3.46	N/A	N/A	N/A	6.86	3.68	9.69	6.32	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	2.62	4.36	4.36	5.04	5.89	5.81	5.58	5.05	5.70	7.39	5.86	
Difference		0.00	-3.41	-4.40	-4.40	-1.58	N/A	N/A	N/A	1.81	-2.02	2.30	0.46	
Real Estate														
Morgan Stanley Prime Property (CF)	\$13.68	-3.48	0.04	7.38	7.38	10.53	9.60	9.75	N/A	22.89	2.32	7.38	10.76	10/01/2014
NCREIF ODCE Index (AWA) (Gross)		-4.96	0.09	7.47	7.47	9.93	8.68	8.54	10.10	22.17	1.19	5.34	9.46	
Difference		1.48	-0.05	-0.09	-0.09	0.60	0.92	1.21	N/A	0.72	1.13	2.04	1.30	
PGIM Real Estate PRISA II (CF)	\$13.81	-6.14	-0.60	7.02	7.02	10.01	9.39	9.38	11.22	23.18	0.98	7.52	8.36	10/01/2004
NCREIF ODCE Index (AWA) (Gross)		-4.96	0.09	7.47	7.47	9.93	8.68	8.54	10.10	22.17	1.19	5.34	8.18	
Difference		-1.18	-0.69	-0.45	-0.45	0.08	0.71	0.84	1.12	1.01	-0.21	2.18	0.18	
Absolute Return														
Grosvenor FOB (CF) (Net)	\$16.48	0.79	-0.33	-6.37	-6.37	4.43	3.28	3.75	N/A	6.32	14.40	6.30	3.25	08/01/2014
HFN FOF Multi-Strat Index (Net)		1.99	0.09	-1.35	-1.35	4.96	3.54	3.57	3.56	6.77	9.79	6.75	2.97	
Difference		-1.20	-0.42	-5.02	-5.02	-0.53	-0.26	0.18	N/A	-0.45	4.61	-0.45	0.28	
ICE BofAML 3 Mo US T-Bill Index+5%		2.08	4.75	6.53	6.53	5.76	6.33	6.12	5.80	5.05	5.70	7.39	5.94	
Difference		-1.29	-5.08	-12.90	-12.90	-1.33	-3.05	-2.37	N/A	1.27	8.70	-1.09	-2.69	
Private Equity														
Abbott Capital Private Equity LP (CF) (Net)	\$0.54	0.00	-11.78	-15.39	-15.39	7.96	9.36	10.01	10.53	21.08	22.82	10.96	6.03	12/01/2005
J.P. Morgan Private Equity III (CF) (Net)	\$0.19	1.67	-23.55	-24.17	-24.17	9.78	8.27	8.85	11.08	56.05	11.80	7.53	6.56	06/01/2006

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Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Asset Allocation & Performance - Net of Fees

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Global Equity														
LSV Global Large Cap Value (SA)	\$13.95	15.68	-1.72	-8.58	-8.58	5.05	4.76	7.75	N/A	23.80	2.41	26.20	6.05	05/01/2014
MSCI Wrld Index (USD) (Net)		9.77	-5.88	-18.14	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	7.03	
Difference		5.91	4.16	9.56	9.56	0.11	-1.38	-0.77	N/A	1.98	-13.49	-1.47	-0.98	
MSCI Wrld Val Index (USD) (Net)		14.74	-0.98	-6.52	-6.52	4.06	4.12	7.04	7.24	21.94	-1.16	21.75	5.04	
Difference		0.94	-0.74	-2.06	-2.06	0.99	0.64	0.71	N/A	1.86	3.57	4.45	1.01	
Artisan Global Opportunities (CF)	\$10.69	5.48	-8.47	-30.20	-30.20	3.78	6.77	9.72	N/A	14.10	40.34	35.89	9.40	05/01/2014
MSCI Wrld Index (USD) (Net)		9.77	-5.88	-18.14	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	7.03	
Difference		-4.29	-2.59	-12.06	-12.06	-1.16	0.63	1.20	N/A	-7.72	24.44	8.22	2.37	
MSCI Wrld Grth Index (USD) (Net)		4.72	-11.05	-29.21	-29.21	4.71	7.43	9.47	10.08	21.18	33.83	33.68	8.59	
Difference		0.76	2.58	-0.99	-0.99	-0.93	-0.66	0.25	N/A	-7.08	6.51	2.21	0.81	
NT Collective Daily ACW IM NL (CF)	\$15.06	10.15	-5.49	-17.83	-17.83	4.21	5.33	8.34	N/A	18.05	16.65	26.78	6.72	03/01/2014
MSCI ACW IM Index (USD) (Net)		9.84	-6.24	-18.40	-18.40	3.89	4.96	7.98	7.94	18.22	16.25	26.35	6.34	
Difference		0.31	0.75	0.57	0.57	0.32	0.37	0.36	N/A	-0.17	0.40	0.43	0.38	
WTC-CTF Global Perspectives (CF)	\$9.57	11.32	-2.49	-14.63	-14.63	N/A	N/A	N/A	N/A	21.83	N/A	N/A	13.15	11/01/2020
MSCI ACW Sm Cap Index (USD) (Net)		10.45	-6.25	-18.67	-18.67	3.18	3.23	7.13	7.69	16.10	16.33	24.65	7.46	
Difference		0.87	3.76	4.04	4.04	N/A	N/A	N/A	N/A	5.73	N/A	N/A	5.69	
GQG Partners Emg Mkts Eq (CF)	\$5.22	3.20	-9.03	-21.28	-21.28	N/A	N/A	N/A	N/A	-1.61	N/A	N/A	-6.21	11/01/2020
MSCI Emg Mkts Index (USD) (Net)		9.70	-9.04	-20.09	-20.09	-2.69	-1.40	5.17	1.44	-2.54	18.31	18.42	-4.10	
Difference		-6.50	0.01	-1.19	-1.19	N/A	N/A	N/A	N/A	0.93	N/A	N/A	-2.11	
Fixed Income														
FCI Advisors (SA)	\$31.14	2.46	-3.63	-13.55	-13.55	-2.29	0.51	1.24	N/A	-2.05	10.16	9.89	1.68	07/01/2013
Bloomberg US Gov't Crdt Bond Index		1.80	-3.93	-13.58	-13.58	-2.57	0.21	1.14	1.16	-1.75	8.93	9.71	1.51	
Difference		0.66	0.30	0.03	0.03	0.28	0.30	0.10	N/A	-0.30	1.23	0.18	0.17	
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	1.38	
Difference		0.59	0.24	-0.54	-0.54	0.42	0.49	0.35	N/A	-0.50	2.65	1.17	0.30	
PIMCO:Income;Inst (PIMIX)	\$18.47	3.41	-1.15	-7.81	-7.81	0.02	1.69	N/A	N/A	2.61	5.79	8.05	1.90	09/01/2017
Bloomberg US Agg Bond Index		1.87	-3.87	-13.01	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.00	
Difference		1.54	2.72	5.20	5.20	2.73	1.67	N/A	N/A	4.16	-1.72	-0.67	1.90	

Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading. White Oak Fixed Income performance is currently unavailable.



Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Asset Allocation & Performance - Net of Fees

As of December 31, 2022

	Market Value (\$M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Direct Lending														
White Oak Fixed Income C LP	\$10.92	0.00	-0.79	-0.04	-0.04	2.39	N/A	N/A	N/A	4.60	2.66	7.41	4.80	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	2.62	4.36	4.36	5.04	5.89	5.81	5.58	5.05	5.70	7.39	5.86	
Difference		0.00	-3.41	-4.40	-4.40	-2.65	N/A	N/A	N/A	-0.45	-3.04	0.02	-1.06	
Real Estate														
Morgan Stanley Prime Property (CF)	\$13.68	-3.69	-0.82	6.14	6.14	9.30	8.40	8.57	N/A	21.48	1.26	6.17	9.56	10/01/2014
NCREIF ODCE Index (AWA) (Net)		-5.13	-0.51	6.59	6.59	8.98	7.72	7.58	9.11	21.02	0.34	4.39	8.49	
Difference		1.44	-0.31	-0.45	-0.45	0.32	0.68	0.99	N/A	0.46	0.92	1.78	1.07	
PGIM Real Estate PRISA II (CF)	\$13.81	-6.42	-1.42	5.86	5.86	8.80	8.19	8.20	N/A	21.86	-0.16	6.32	10.04	07/01/2013
NCREIF ODCE Index (AWA) (Net)		-5.13	-0.51	6.59	6.59	8.98	7.72	7.58	9.11	21.02	0.34	4.39	8.93	
Difference		-1.29	-0.91	-0.73	-0.73	-0.18	0.47	0.62	N/A	0.84	-0.50	1.93	1.11	
Absolute Return														
Grosvenor FOB (CF)	\$16.48	0.79	-0.33	-6.37	-6.37	4.43	3.28	3.75	N/A	6.32	14.40	6.30	3.25	08/01/2014
HFN FOF Multi-Strat Index (Net)		1.99	0.09	-1.35	-1.35	4.96	3.54	3.57	3.56	6.77	9.79	6.75	2.97	
Difference		-1.20	-0.42	-5.02	-5.02	-0.53	-0.26	0.18	N/A	-0.45	4.61	-0.45	0.28	
ICE BofAML 3 Mo US T-Bill Index+5%		2.08	4.75	6.53	6.53	5.76	6.33	6.12	5.80	5.05	5.70	7.39	5.94	
Difference		-1.29	-5.08	-12.90	-12.90	-1.33	-3.05	-2.37	N/A	1.27	8.70	-1.09	-2.69	
Private Equity														
Abbott Capital Private Equity LP (CF)	\$0.54	0.00	-11.78	-15.39	-15.39	7.96	9.36	10.01	N/A	21.08	22.82	10.96	10.73	07/01/2013
J.P. Morgan Private Equity III (CF)	\$0.19	1.67	-23.55	-24.17	-24.17	9.78	8.27	8.85	N/A	56.05	11.80	7.53	11.15	07/01/2013

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**Kansas City Police Employees' Retirement Systems
KCPERS Civilian Private Investment Lagged Performance
Asset Allocation & Performance**

As of September 30, 2022

	Market Value (M)	QTD	FYTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Civilian - Private Equity	\$0.77	-5.50	-15.66	-18.32	-19.13	8.53	9.74	9.83	N/A	28.80	20.47	10.10	11.15	07/01/2013
Abbott Capital Private Equity LP (CF) (Net)	\$0.57	-1.81	-11.78	-15.39	-17.56	8.80	10.15	10.34	N/A	21.08	22.82	10.96	11.04	07/01/2013
Cambridge US Prvt Eq Index		0.05	-3.98	-3.34	2.60	19.91	17.17	15.97	15.37	40.61	22.37	13.84	15.29	
Difference		-1.86	-7.80	-12.05	-20.16	-11.11	-7.02	-5.63	N/A	-19.53	0.45	-2.88	-4.25	
J.P. Morgan Private Equity III (CF) (Net)	\$0.21	-14.43	-24.81	-25.42	-22.97	7.86	8.64	8.56	N/A	56.05	11.80	7.53	11.27	07/01/2013
Cambridge US Prvt Eq Index		0.05	-3.98	-3.34	2.60	19.91	17.17	15.97	15.37	40.61	22.37	13.84	15.29	
Difference		-14.48	-20.83	-22.08	-25.57	-12.05	-8.53	-7.41	N/A	15.44	-10.57	-6.31	-4.02	
Civilian - Direct Lending	\$10.92	1.78	-0.79	-0.04	-0.80	2.89	N/A	N/A	N/A	4.60	2.66	7.41	5.08	04/01/2018
White Oak Fixed Income C LP	\$10.92	1.78	-0.79	-0.04	-0.80	2.89	N/A	N/A	N/A	4.60	2.66	7.41	5.08	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		1.69	2.62	4.36	5.65	5.62	6.21	6.00	5.72	5.05	5.70	7.39	6.19	
Difference		0.09	-3.41	-4.40	-6.45	-2.73	N/A	N/A	N/A	-0.45	-3.04	0.02	-1.11	

Performance shown is net of fees, unless otherwise noted. Performance and market values are preliminary and subject to change. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments such as private equity is imperfect at best and can potentially be misleading.

Civilian Employees' Retirement System of the Police Department of Kansas City
Alternative Investment Fund Performance Listing

As of September 30, 2022

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Abbott Capital Private Equity V LP	2005	Private Equity - Fund of Funds	1,850,000	1,787,100	2,521,926	71,767	6.62	3rd	9.65	1.45
J.P. Morgan European Corporate Finance Investors III	2006	Private Equity - Non-US Private Equity	187,500	180,736	275,401	7,116	7.68	3rd	10.00	1.56
J.P. Morgan U.S. Corporate Finance Investors III	2006	Private Equity - Buyout	750,000	755,327	1,467,898	70,493	13.35	1st	8.83	2.04
J.P. Morgan Venture Capital Investors III	2006	Private Equity - Venture	312,500	318,242	468,938	127,676	9.40	1st	11.24	1.87
Abbott Capital Private Equity VI LP	2008	Private Equity - Fund of Funds	1,250,000	1,243,761	1,896,251	497,736	13.04	2nd	13.09	1.92
			4,350,000	4,285,166	6,630,414	774,788	9.73		10.45	1.73

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 (Cap Wtd) 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.



Kansas City Police Employees' Retirement Systems
 KCPERS Civilian Employees
 Schedule of Investable Assets by Manager

As of December 31, 2022

LSV Global Large Cap Value (SA)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	12,040,937	19,476	1,888,680	13,949,093	15.68

Artisan Global Opportunities (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	10,137,749	-	555,093	10,692,841	5.48

NT Collective Daily ACW IM NL (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	13,670,969	2,865	1,387,990	15,061,824	10.15

WTC-CTF Global Perspectives (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	8,600,732	-	973,719	9,574,451	11.32

GQG Partners Emg Mkts Eq (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	5,061,549	-	162,180	5,223,729	3.20

FCI Advisors (SA)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	30,380,299	11,116	747,737	31,139,152	2.46

Performance shown is net of fees and will not match subsequent comparative performance gross of fees.



Kansas City Police Employees' Retirement Systems
 KCPERS Civilian Employees
 Schedule of Investable Assets by Manager

As of December 31, 2022

PIMCO:Income;Inst (PIMIX)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	18,589,433	-750,000	626,425	18,465,858	3.41

Morgan Stanley Prime Property (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	14,672,793	-453,775	-541,679	13,677,339	-3.69

PGIM Real Estate PRISA II (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	15,074,933	-298,356	-967,563	13,809,015	-6.42

Grosvenor FOB (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	16,349,656	-	129,559	16,479,215	0.79

Performance shown is net of fees and will not match subsequent comparative performance gross of fees.



**Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Fee Schedule**

As of December 31, 2022

Manager	Fee Schedule	Aggregate Assets (\$)	Estimated Annual Fee (%)	Market Value as of 12/31/2022	Estimated Annual Fee (\$)
LSV Global Large Cap Value (SA)	0.75 % of First \$25 M 0.65 % of Next \$25 M 0.55 % of Next \$50 M 0.45 % Thereafter	91,263,274	0.63	13,949,093	88,183
Artisan Global Opportunities (CF)	0.85% of Assets	10,692,841	0.85	10,692,841	90,889
NT Collective Daily ACW IM NL (CF)	0.10 % of First \$50 M 0.08 % Thereafter	107,255,039	0.09	15,061,824	13,454
WTC-CTF Global Perspectives (CF)	1.00 % of Assets	67,727,899	1.00	9,574,451	95,745
GQG Partners Emg Mkts Eq (CF)	0.85 % of First \$25 M 0.80 % Thereafter	35,643,847	0.84	5,223,729	43,622
FCI Advisors (SA)	0.50 % of First \$5 M 0.40 % of Next \$5 M 0.30 % of Next \$10 M 0.20 % of Next \$10 M 0.12 % Thereafter	208,725,204	0.15	31,139,152	46,169
PIMCO:Income;Inst (PIMIX)	0.50 % of Assets	103,797,275	0.50	18,465,858	92,329
White Oak Fixed Income C LP	1.00% of Assets	75,738,817	1.00	10,919,747	109,197
Morgan Stanley Prime Property (CF)	0.84 % of Assets	94,674,663	0.84	13,677,339	114,890

**Kansas City Police Employees' Retirement Systems
KCPERS Civilian Employees
Fee Schedule**

As of December 31, 2022

Manager	Fee Schedule	Aggregate Assets (\$)	Estimated Annual Fee (%)	Market Value as of 12/31/2022	Estimated Annual Fee (\$)
PGIM Real Estate PRISA II (CF)	1.20 % of First \$25 M 1.15 % of Next \$25 M 1.05 % of Next \$50 M 0.95 % of Next \$100 M 0.90 % of Next \$100 M 0.85 % Thereafter	95,992,075	1.12	13,809,015	154,562
Grosvenor FOB (CF)	1.15 % of First \$25 M 1.00 % of Next \$25 M 0.80 % of Next \$50 M 0.60 % Thereafter	123,724,902	0.87	16,479,215	143,828
Coltv. Short Term Invt. Fund	0.15 % of Assets	2,079,733	0.15	975,042	1,463

Fee Notes:

White Oak Fixed Income C LP - Fee structure is 1.25% when aggregate assets are below \$10M, and 1.00% when aggregate assets are above \$10M.

The incentive fee for Morgan Stanley Prime Property (CF) for each calendar year is capped at 35 basis points per annum.

The fee schedule shown for PGIM Real Estate PRISA II (CF) represents the maximum annual fee and may be lower depending on the fund's operating cash flow.

Grosvenor FOB (CF) fee has a 75 basis point minimum. The fee schedule shown for Grosvenor FOB (CF) excludes the underlying manager's fees.

Abbott Capital Private Equity LP (CF) consists of two separate funds: Abbott Capital Private Equity V LP and Abbott Capital Private Equity VI LP. The annual management fee for both funds is 1.00% with 0% carried interest for initial 8 years thereafter the fee is reduced by 10% per year.

JP Morgan Private Equity III (CF) consists of three separate funds: European Corporate Finance Investors III, U.S. Corporate Finance Investors III, and Venture Capital Investors III. The annual management fee pertains to the percentage of committed capital, is level for the first eight years, and is then reduced each successive year by 10% of the preceding year's fee. Each fund is also subject to an incentive/carried interest fee, which is 10% for secondary partnership investments and 20% for direct co-investments.

European and U.S. Corporate Finance Investors III

Management fee for initial 8 years: 0.90%

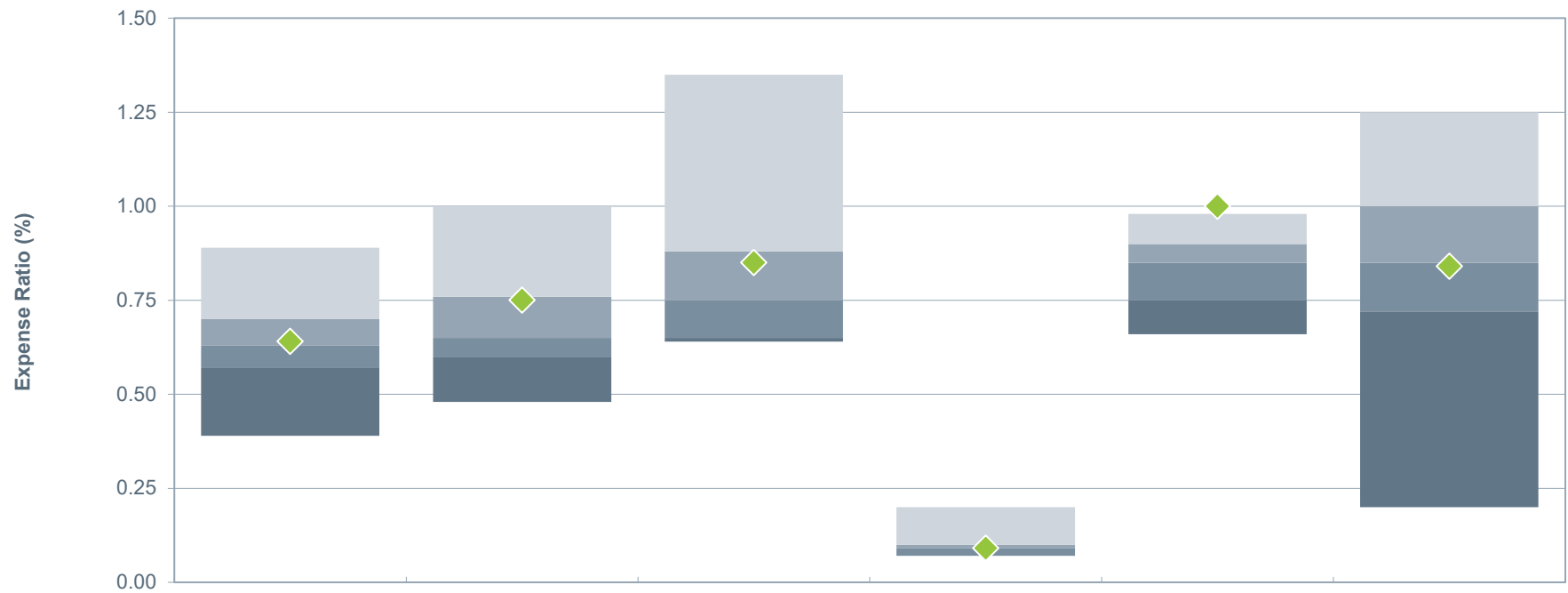
Average fee over 15 years: 0.76%

Venture Capital Investors III

Management fee for initial 8 years: 1.10%

Average fee over 15 years: 0.93%

Mutual fund fees are sourced from Morningstar and/or the investment manager.



Fund	LSV Global Large Cap Value (SA)	Artisan Global Opportunities (SA)	Artisan Global Opportunities (CF)	NT Collective Daily ACW IMI NL (CF)	WTC-CTF Global Perspectives (CF)	GQG Emg Mkts Eq (CF)
Peer Group	eA Global Large Cap Value Equity (SA)	eA Global Large Cap Growth Equity (SA)	eA Global Large Cap Growth Equity (CF)	eA Global Passive Equity (CF)	eA Global Small Cap Equity (CF)	eA Global Emerging Markets Equity (CF)
Fund Expense Ratio	0.64	0.75	0.85	0.09	1.00	0.84
Median Expense Ratio	0.63	0.65	0.75	0.09	0.85	0.85
Percentile Rank	53	73	67	58	96	49
Population	90	80	28	13	23	234

Fund Expense Ratios are intuitively ranked (i.e., a lower expense ratio yields a better percentile rank than a higher expense ratio).
The fee peer groups consist of only institutional share classes.

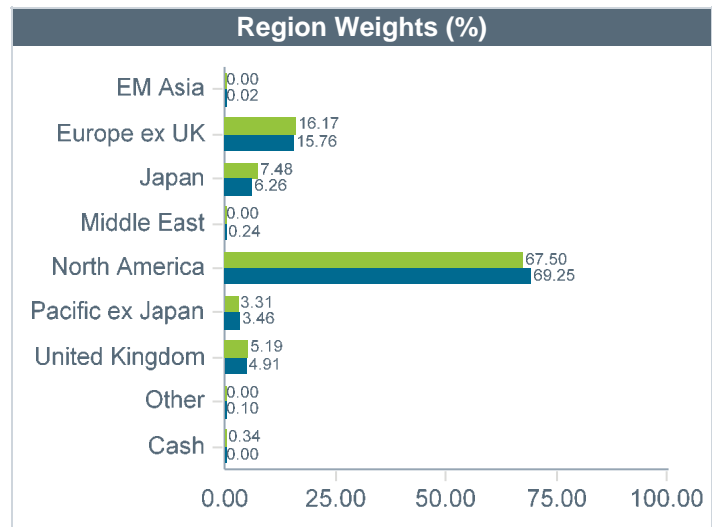
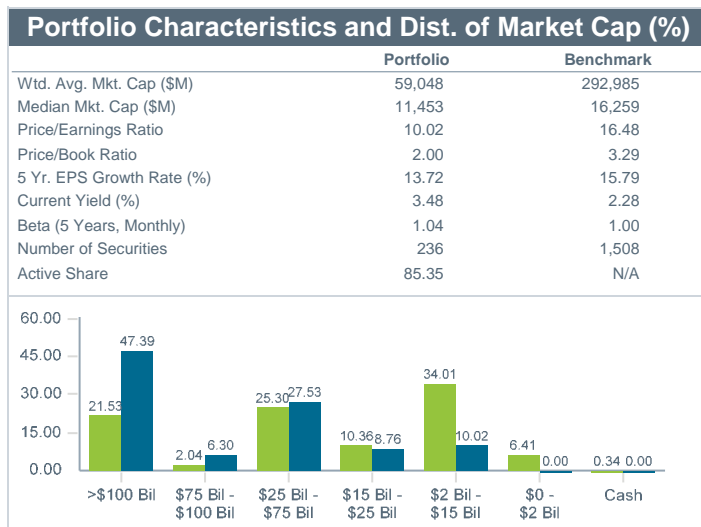
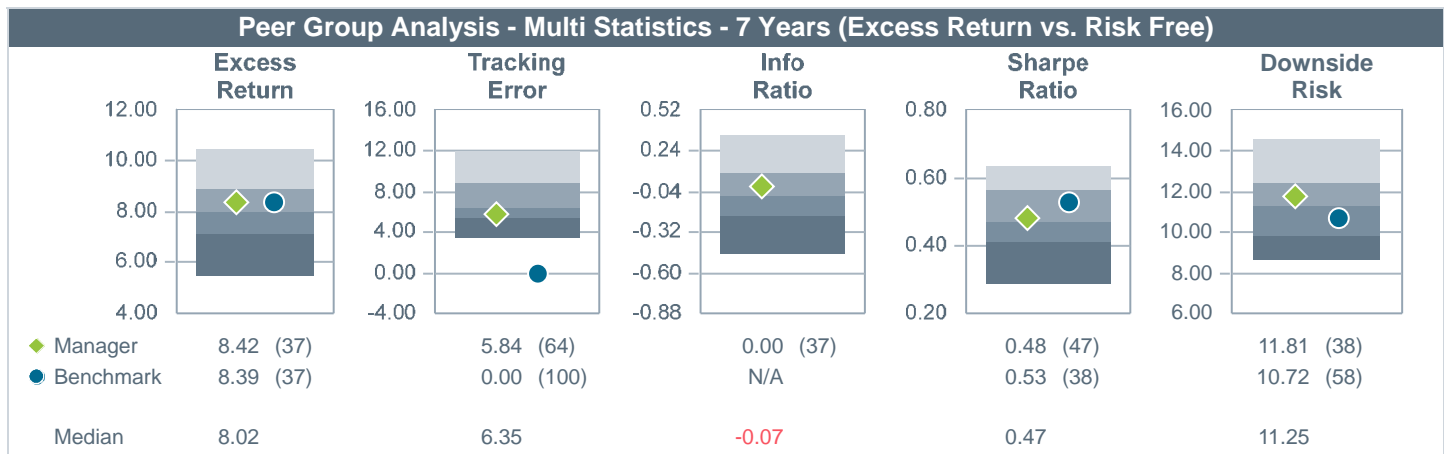
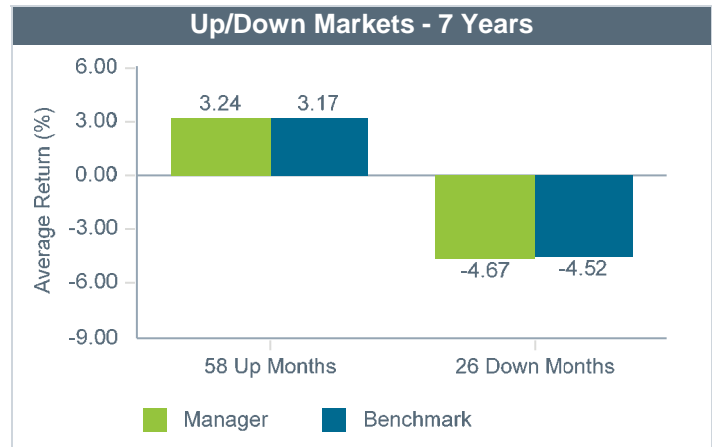
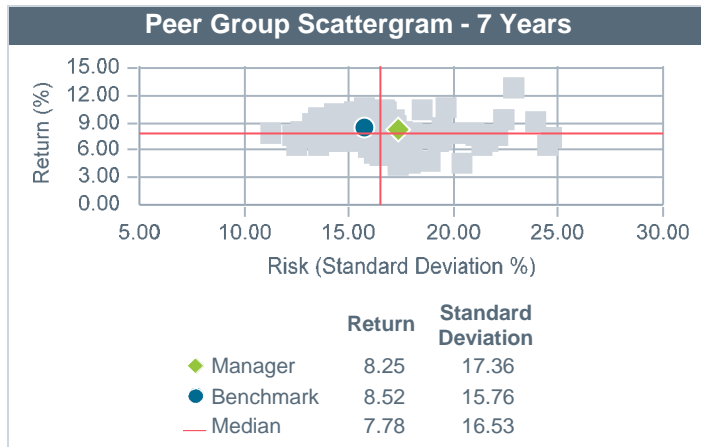


Fund Expense Ratios are intuitively ranked (i.e., a lower expense ratio yields a better percentile rank than a higher expense ratio). The fee peer groups consist of only institutional share classes. Funds with no applicable fee peer groups are denoted with an asterisk (*).

Investment Manager Profiles



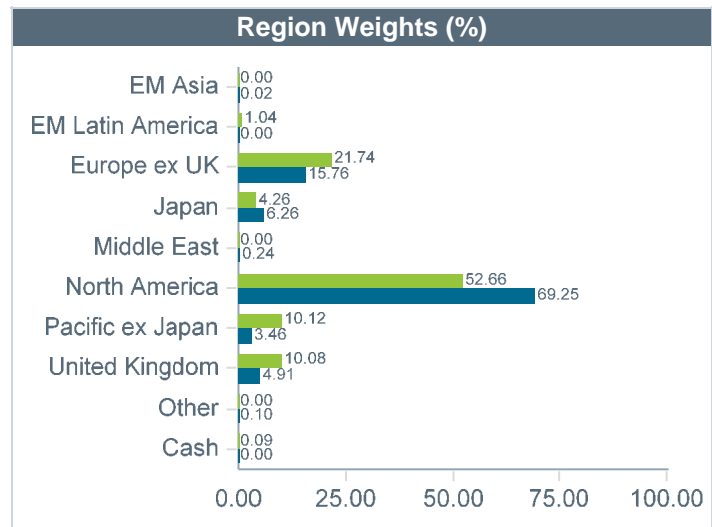
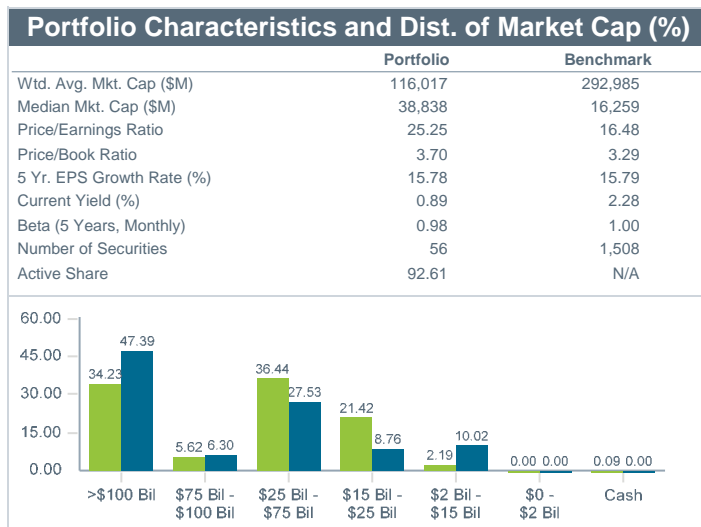
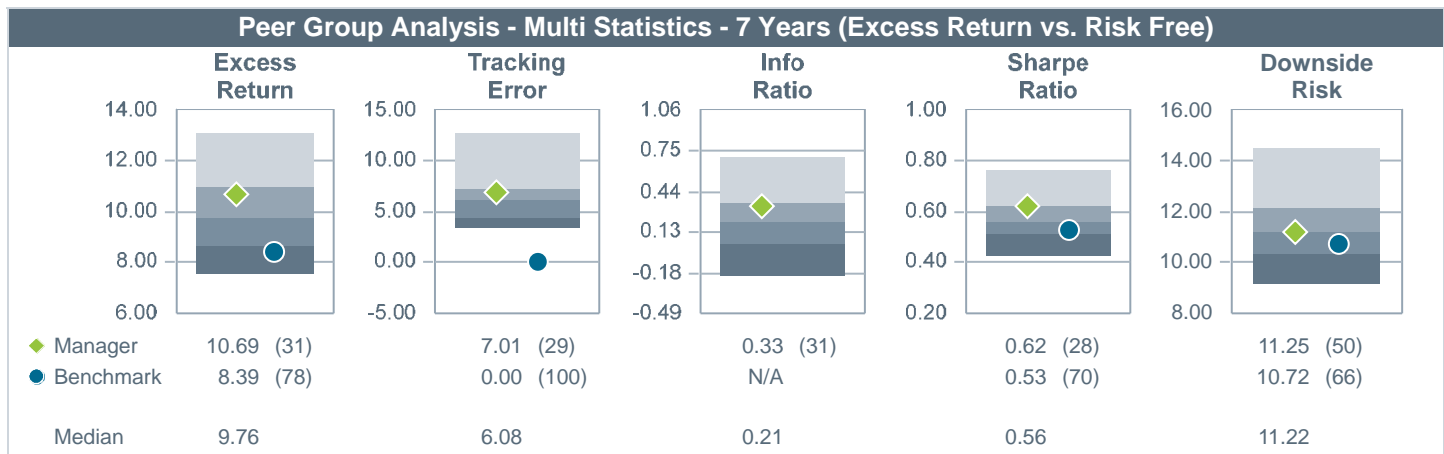
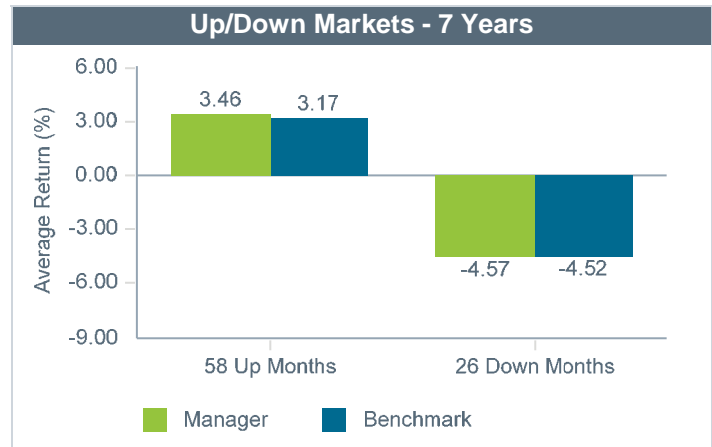
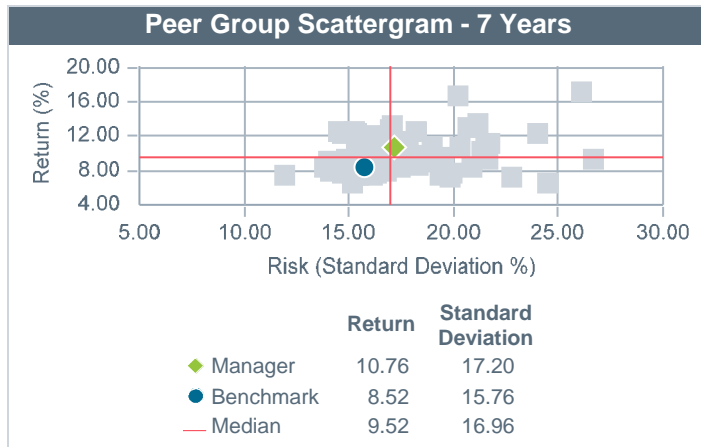
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	15.43	-8.13	5.12	5.09	8.25	N/A	22.90	2.87	26.36	-12.66	21.35
Benchmark	9.77	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	-8.71	22.40
Difference	5.66	10.01	0.18	-1.05	-0.27	N/A	1.08	-13.03	-1.31	-3.95	-1.05
Peer Group Median	14.19	-10.17	4.23	4.76	7.78	8.07	18.78	6.73	24.22	-10.92	21.35
Rank	38	37	32	41	36	N/A	14	69	33	62	50
Population	115	112	106	100	95	79	121	130	136	139	140



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

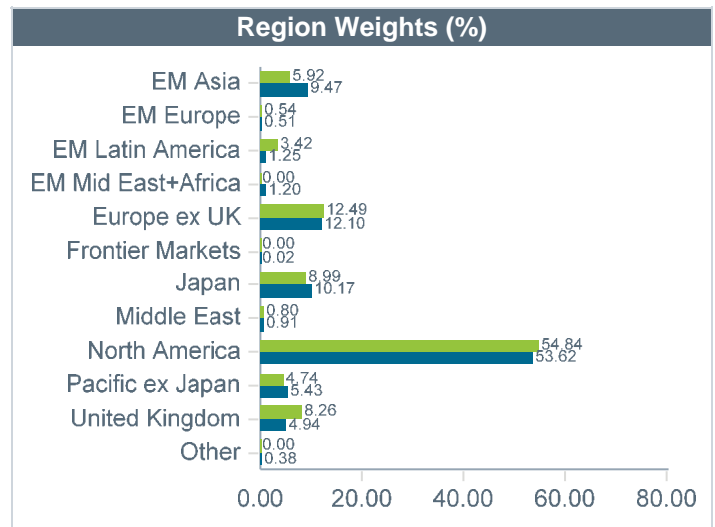
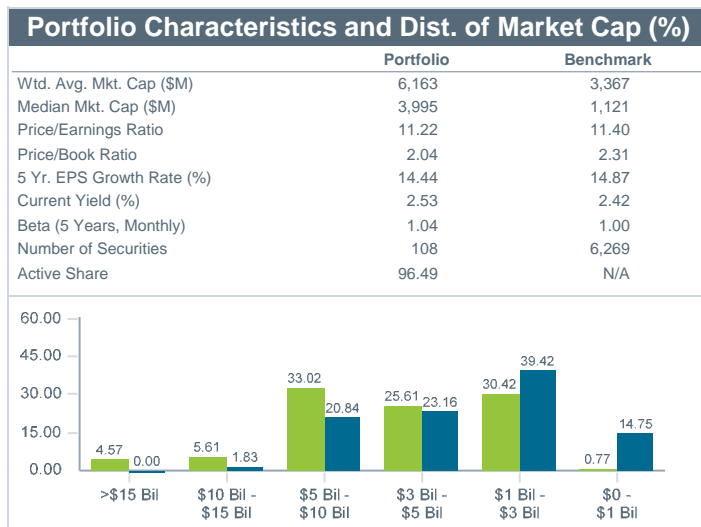
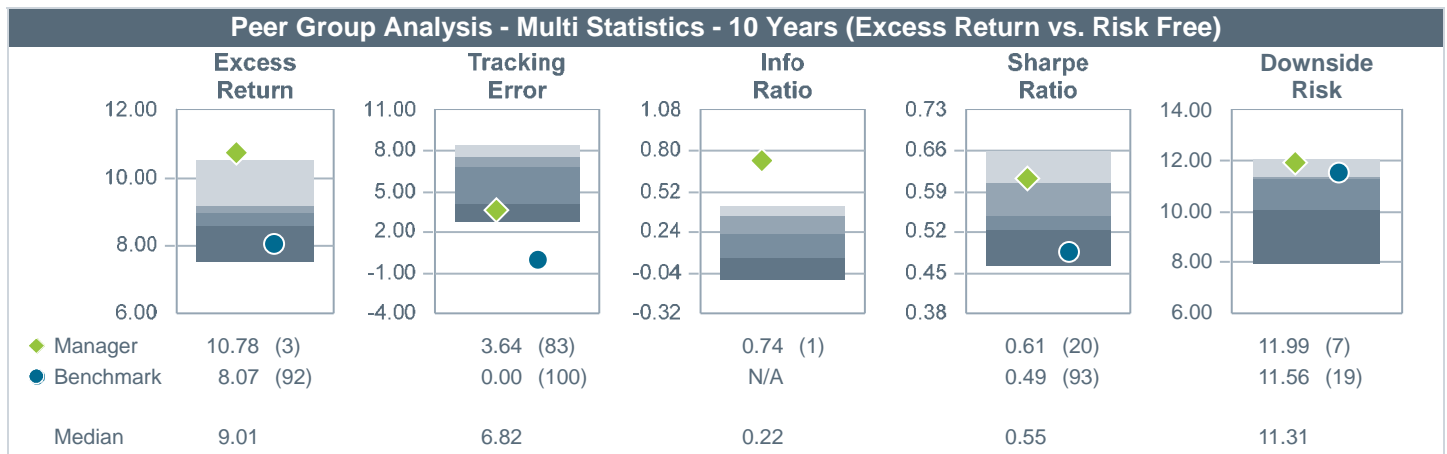
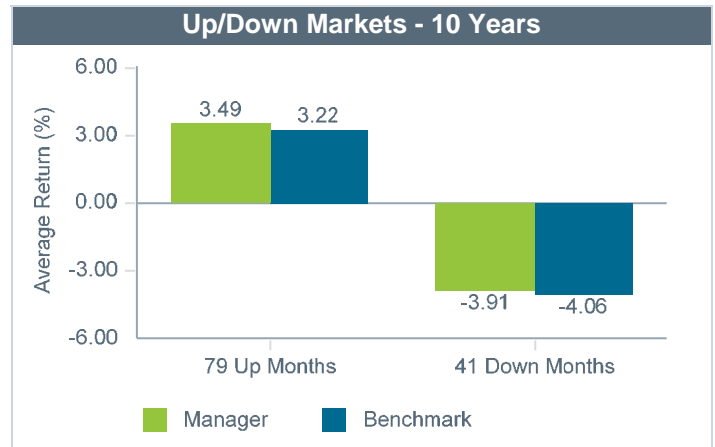
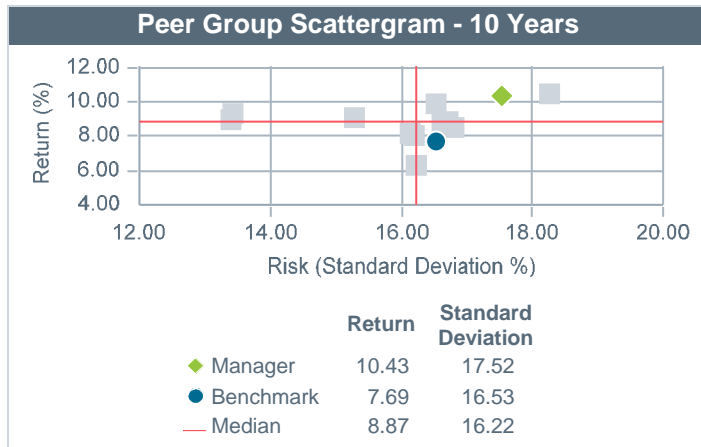


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	5.62	-29.41	4.84	7.82	10.76	N/A	15.26	41.63	37.23	-7.87	32.72
Benchmark	9.77	-18.14	4.94	6.14	8.52	8.85	21.82	15.90	27.67	-8.71	22.40
Difference	-4.15	-11.27	-0.10	1.68	2.24	N/A	-6.56	25.73	9.56	0.84	10.32
Peer Group Median	9.07	-24.06	5.08	7.44	9.52	9.85	17.80	30.10	31.58	-7.23	30.86
Rank	83	73	54	40	31	N/A	61	24	15	55	40
Population	117	117	110	103	92	78	125	129	131	125	127



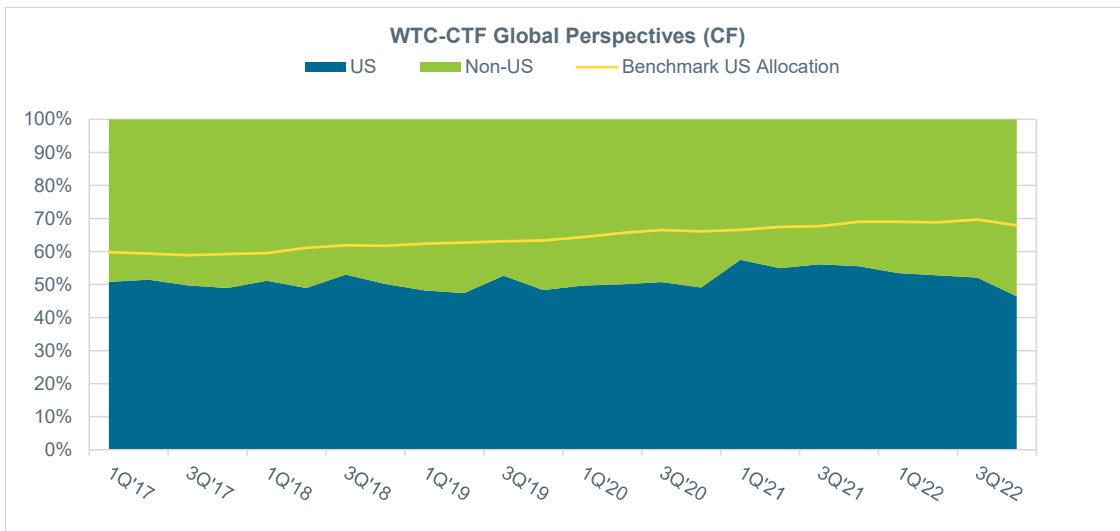
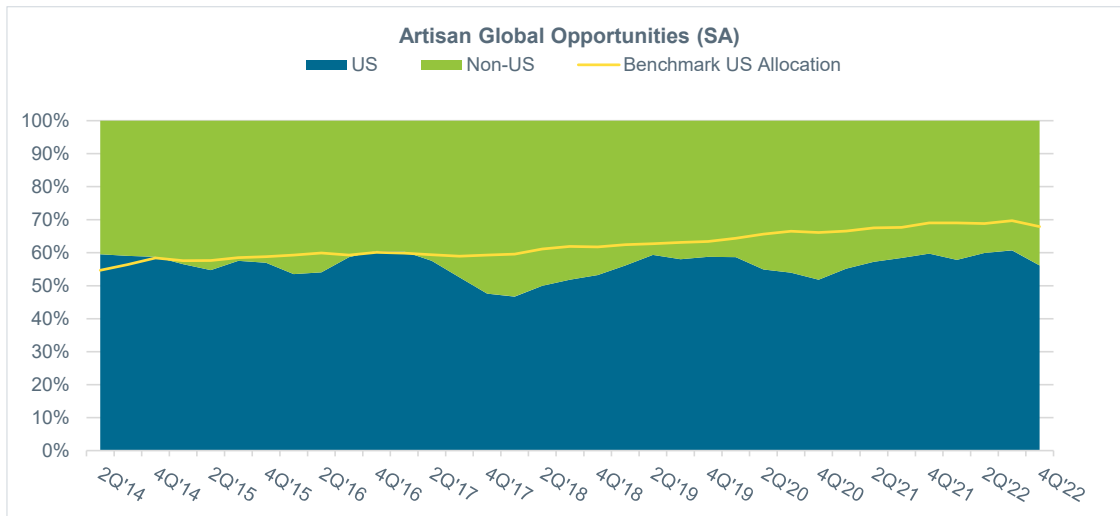
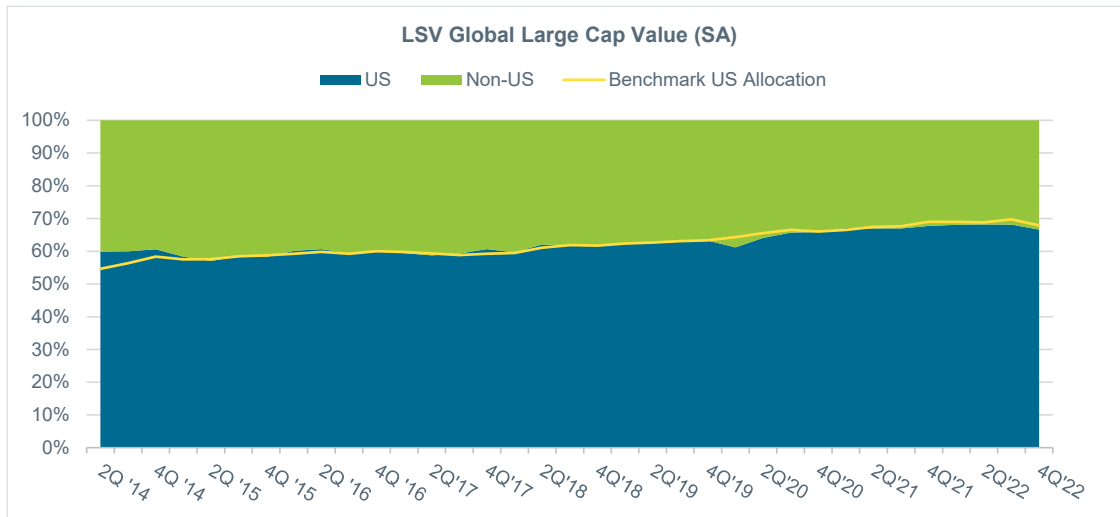
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	11.32	-14.63	6.03	4.68	8.85	10.43	21.78	14.66	22.35	-13.82	29.98
Benchmark	10.45	-18.67	3.18	3.23	7.13	7.69	16.10	16.33	24.65	-14.39	23.81
Difference	0.87	4.04	2.85	1.45	1.72	2.74	5.68	-1.67	-2.30	0.57	6.17
Peer Group Median	12.02	-20.71	6.06	3.66	7.27	8.87	21.14	17.53	26.40	-14.30	22.28
Rank	54	33	51	28	20	2	44	56	70	41	23
Population	23	23	19	15	13	11	26	28	29	32	31



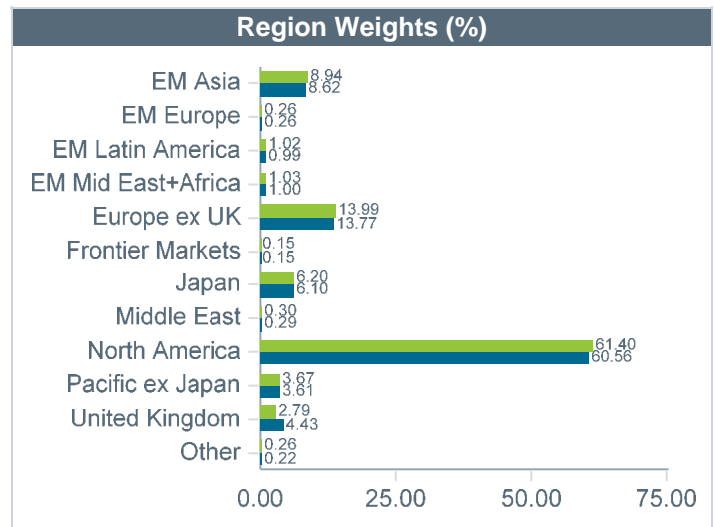
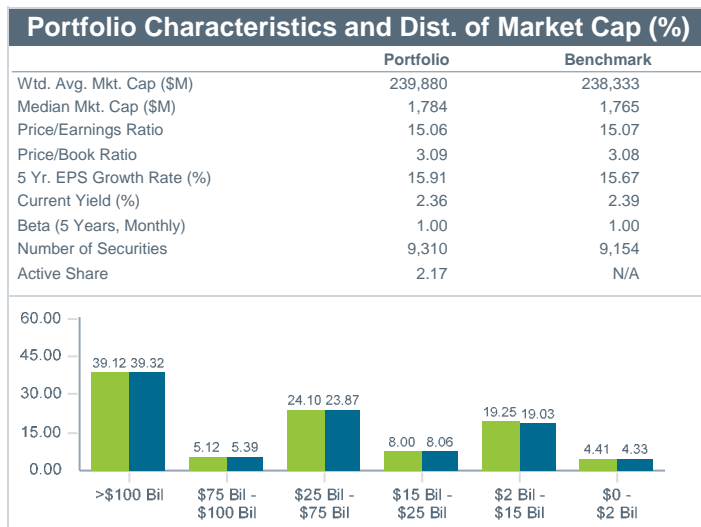
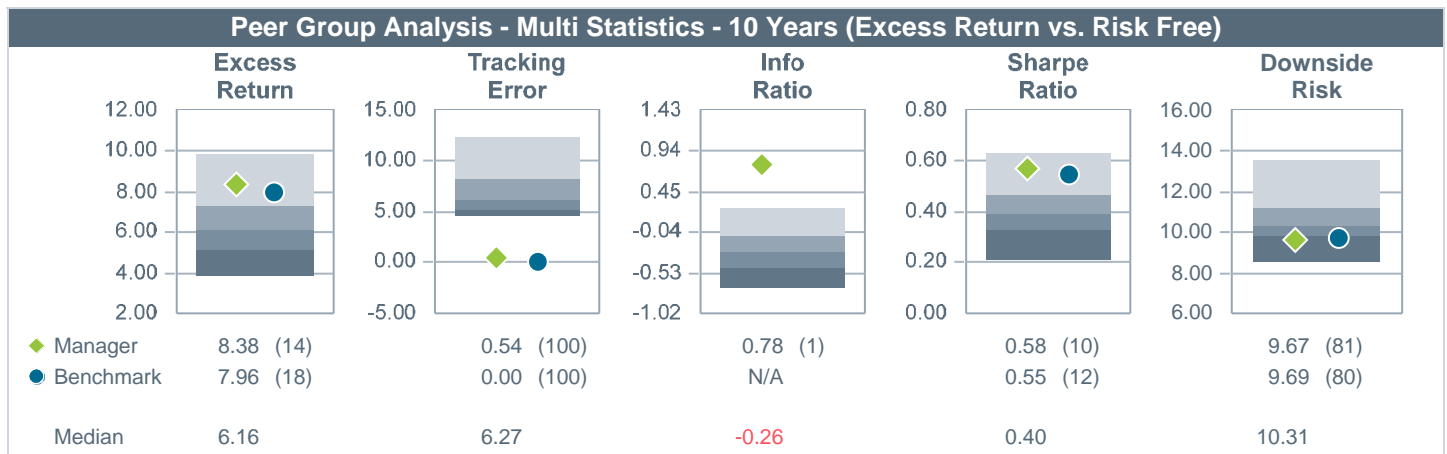
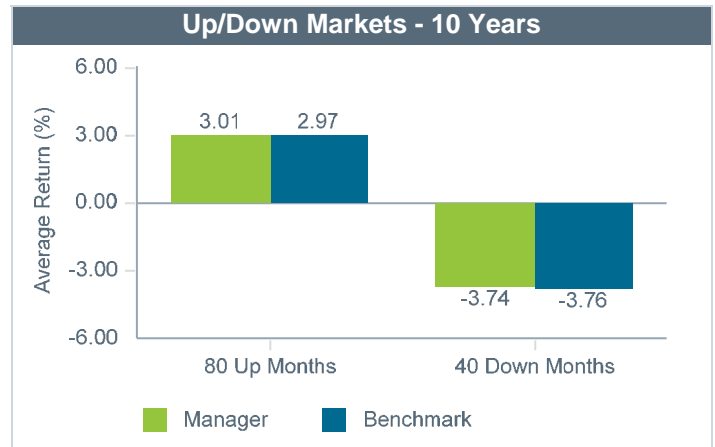
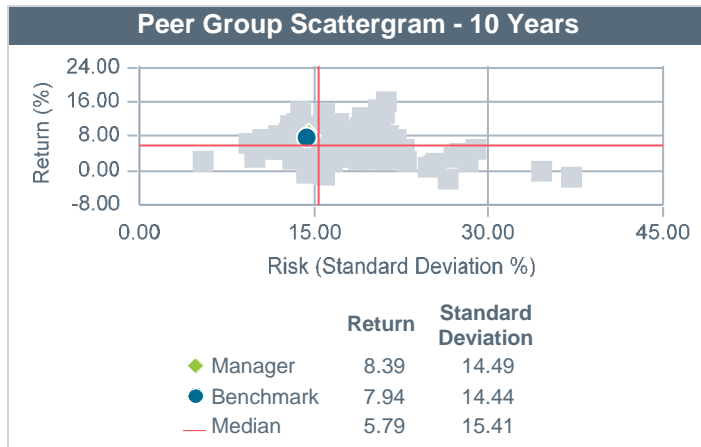
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.





Global allocations shown for WTC-CTF Global Perspectives (CF) prior to KCPERS inception are provided by the manager.

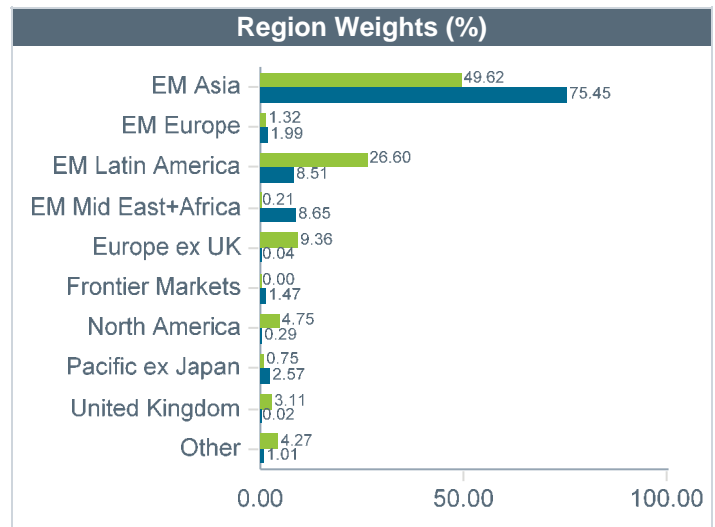
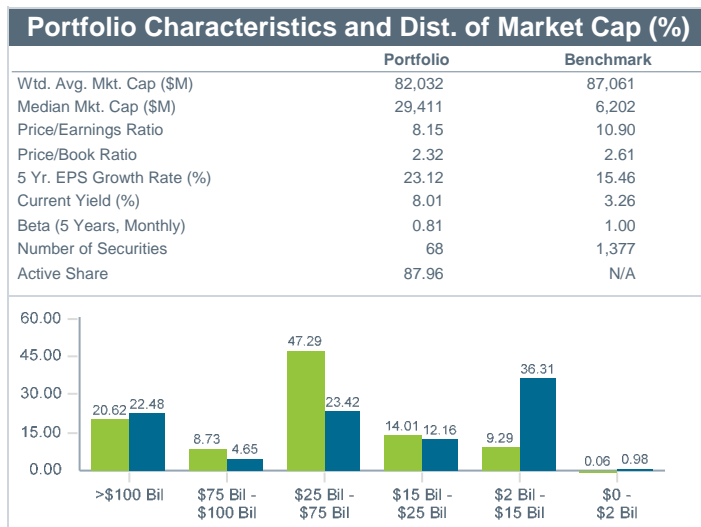
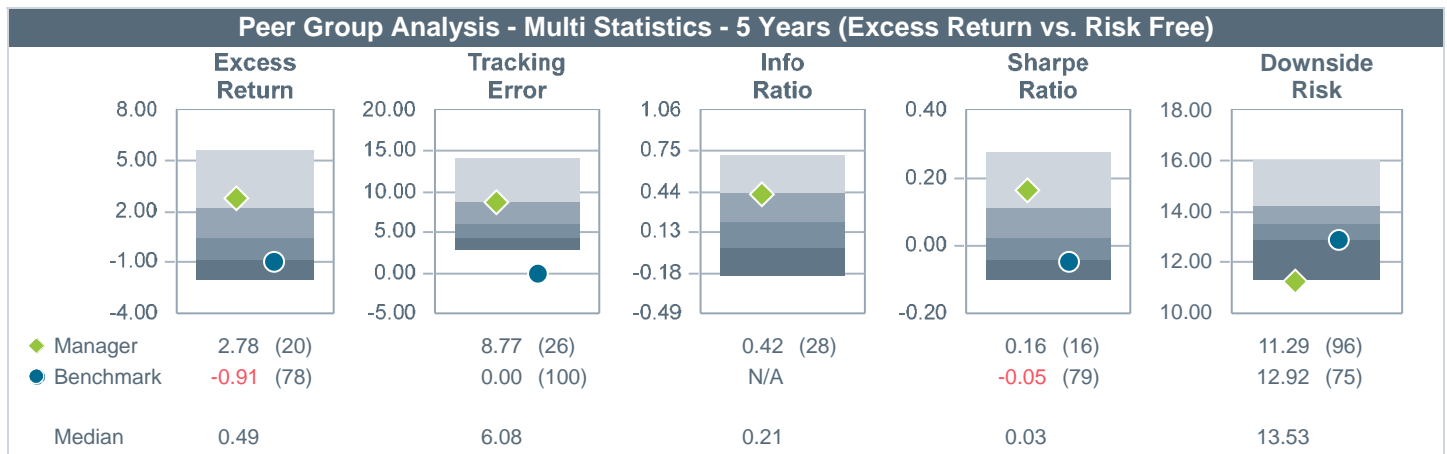
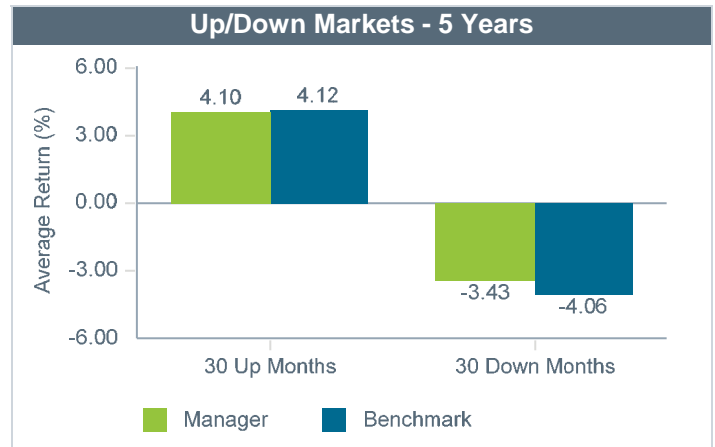
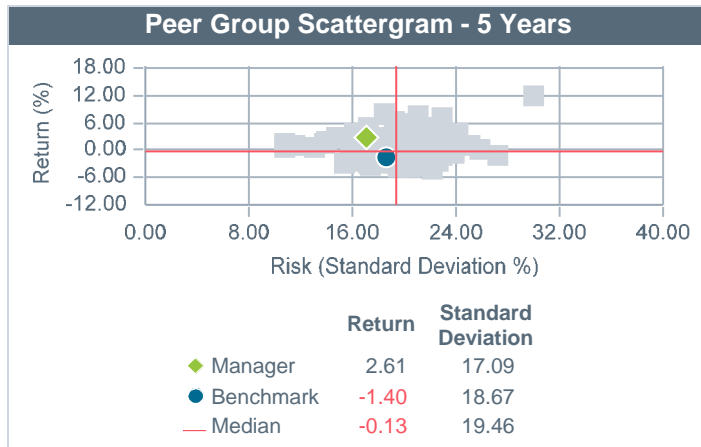
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	10.30	-17.93	4.33	5.42	8.43	8.39	18.50	16.78	26.83	-9.61	24.32
Benchmark	9.84	-18.40	3.89	4.96	7.98	7.94	18.22	16.25	26.35	-10.08	23.95
Difference	0.46	0.47	0.44	0.46	0.45	0.45	0.28	0.53	0.48	0.47	0.37
Peer Group Median	15.72	-16.59	1.37	1.93	5.51	5.79	11.51	11.80	23.37	-14.58	28.81
Rank	90	58	15	9	12	12	12	35	31	15	78
Population	656	652	628	598	565	490	733	805	847	881	900



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



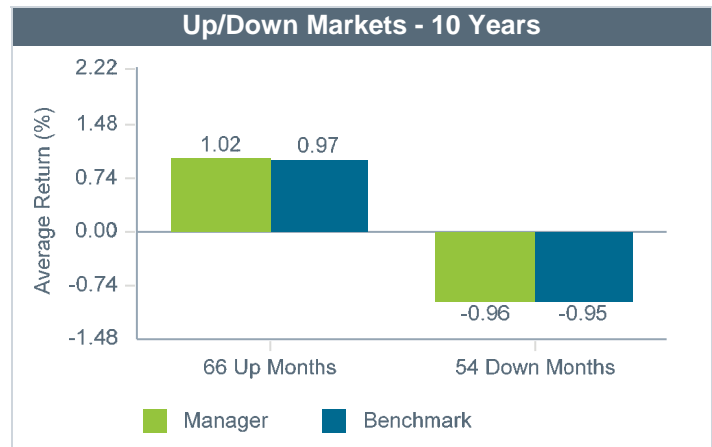
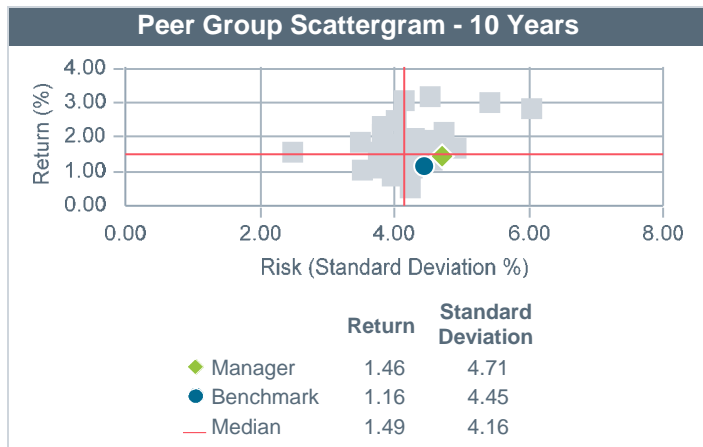
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	3.26	-20.68	2.05	2.61	N/A	N/A	-0.61	34.80	23.62	-13.41	32.90
Benchmark	9.70	-20.09	-2.69	-1.40	5.17	1.44	-2.54	18.31	18.42	-14.57	37.28
Difference	-6.44	-0.59	4.74	4.01	N/A	N/A	1.93	16.49	5.20	1.16	-4.38
Peer Group Median	10.59	-19.65	-0.92	-0.13	5.87	2.82	0.84	18.69	20.64	-15.24	36.81
Rank	95	57	27	15	N/A	N/A	59	15	35	27	69
Population	259	258	243	215	204	163	297	326	353	352	357



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

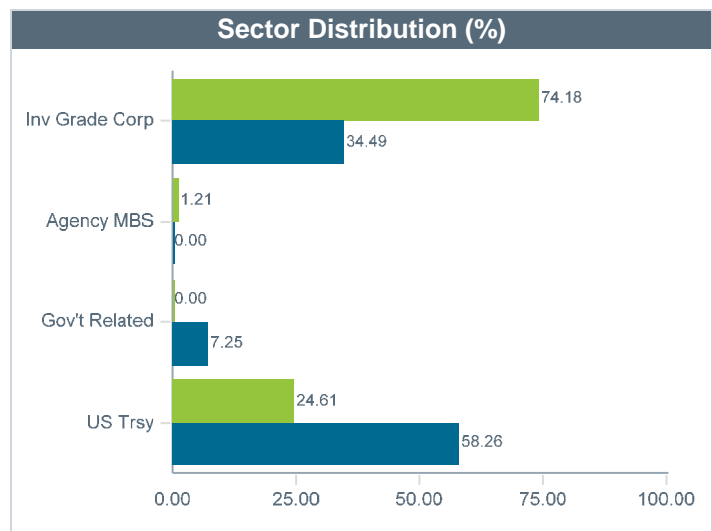


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	2.51	-13.41	-2.10	0.68	1.42	1.46	-1.92	10.49	10.01	0.22	4.07
Benchmark	1.80	-13.58	-2.57	0.21	1.14	1.16	-1.75	8.93	9.71	-0.42	4.00
Difference	0.71	0.17	0.47	0.47	0.28	0.30	-0.17	1.56	0.30	0.64	0.07
Peer Group Median	1.79	-12.95	-2.22	0.43	1.36	1.49	-1.23	8.51	9.19	0.06	4.01
Rank	5	78	41	26	43	55	93	6	10	33	46
Population	121	121	121	118	116	112	146	154	156	163	168



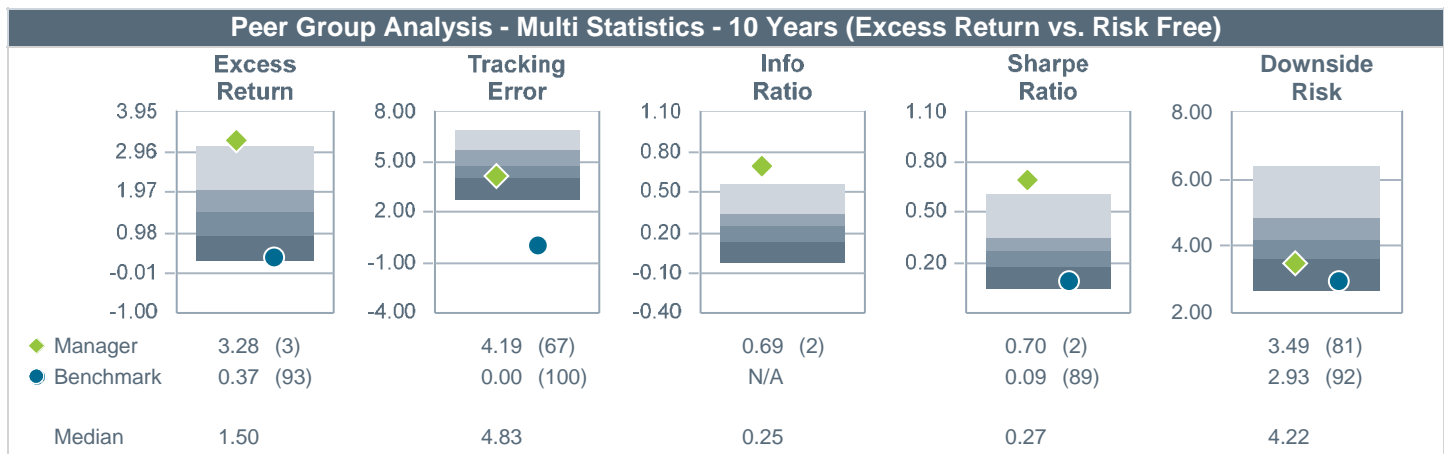
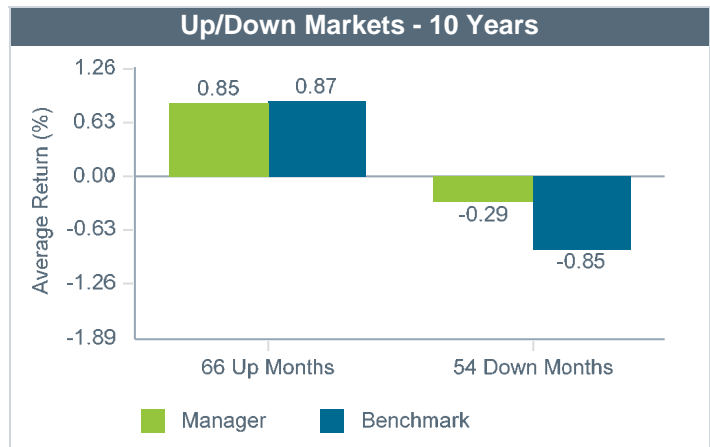
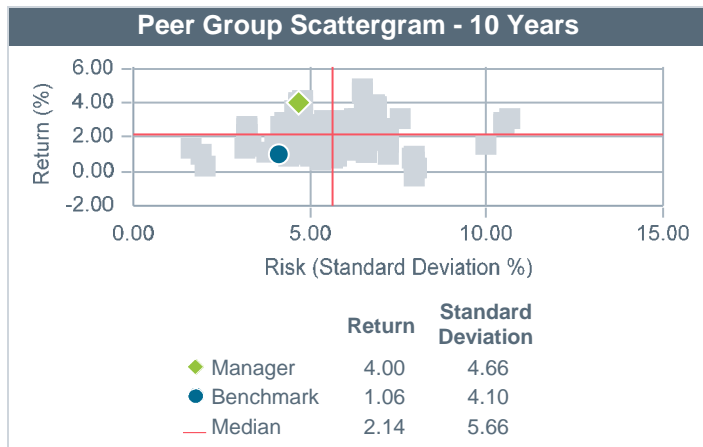
Portfolio Characteristics

	Portfolio	Benchmark
Effective Duration	6.62	6.38
Spread Duration	N/A	6.42
Avg. Maturity	8.64	8.83
Avg. Quality	Aa2	Aa2/Aa3
Yield To Maturity (%)	4.90	4.65
Coupon Rate (%)	3.10	2.65
Current Yield (%)	3.50	N/A
Holdings Count	91	8,893



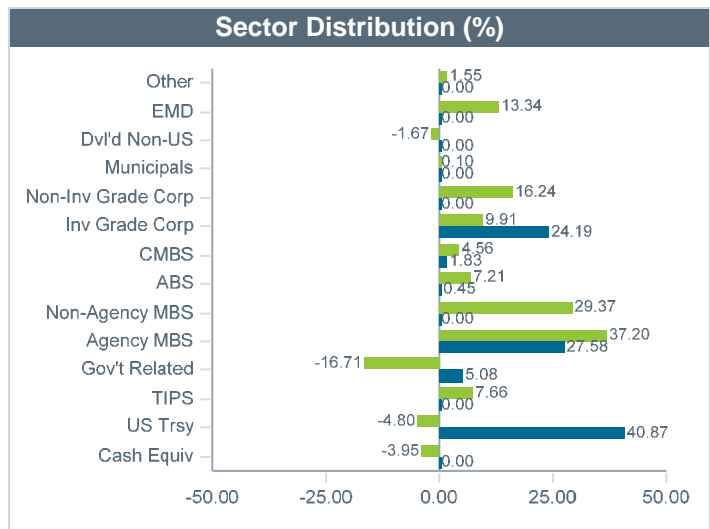
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity.

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	3.41	-7.81	0.03	1.70	3.64	4.00	2.61	5.80	8.07	0.58	8.61
Benchmark	1.87	-13.01	-2.71	0.02	0.89	1.06	-1.55	7.51	8.72	0.01	3.54
Difference	1.54	5.20	2.74	1.68	2.75	2.94	4.16	-1.71	-0.65	0.57	5.07
Peer Group Median	2.53	-11.73	-1.33	0.78	2.47	2.14	1.51	6.54	9.98	-1.59	5.84
Rank	30	18	16	15	11	3	33	59	77	18	13
Population	474	466	376	318	271	180	446	402	387	384	358



Portfolio Characteristics

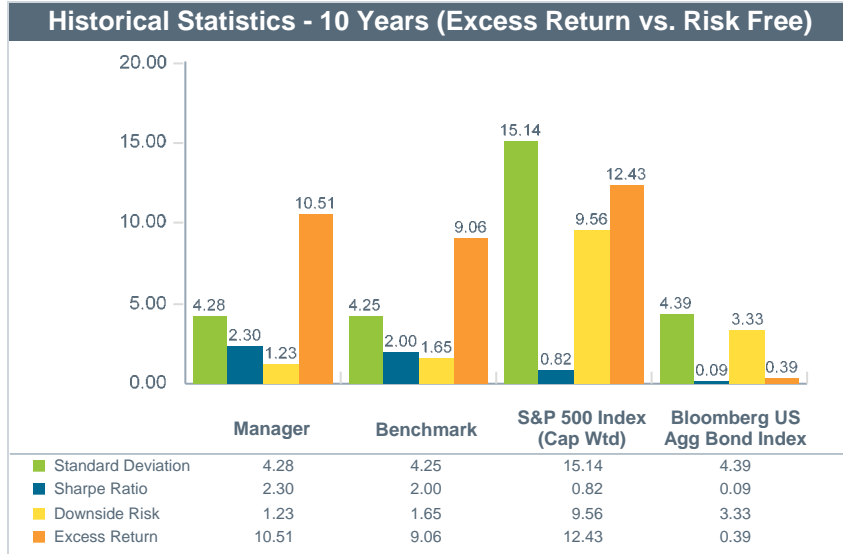
	Portfolio	Benchmark
Effective Duration	3.83	6.17
Spread Duration	4.70	N/A
Avg. Maturity	5.90	8.44
Avg. Quality	A2	Aa1/Aa2
Yield To Maturity (%)	5.25	4.68
Coupon Rate (%)	3.31	2.69
Current Yield (%)	N/A	N/A
Holdings Count	7,693	13,133



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of convertible bonds and preferred stock. Negative sector allocation reflects manager's use of derivatives, short selling, or interest rate swaps.

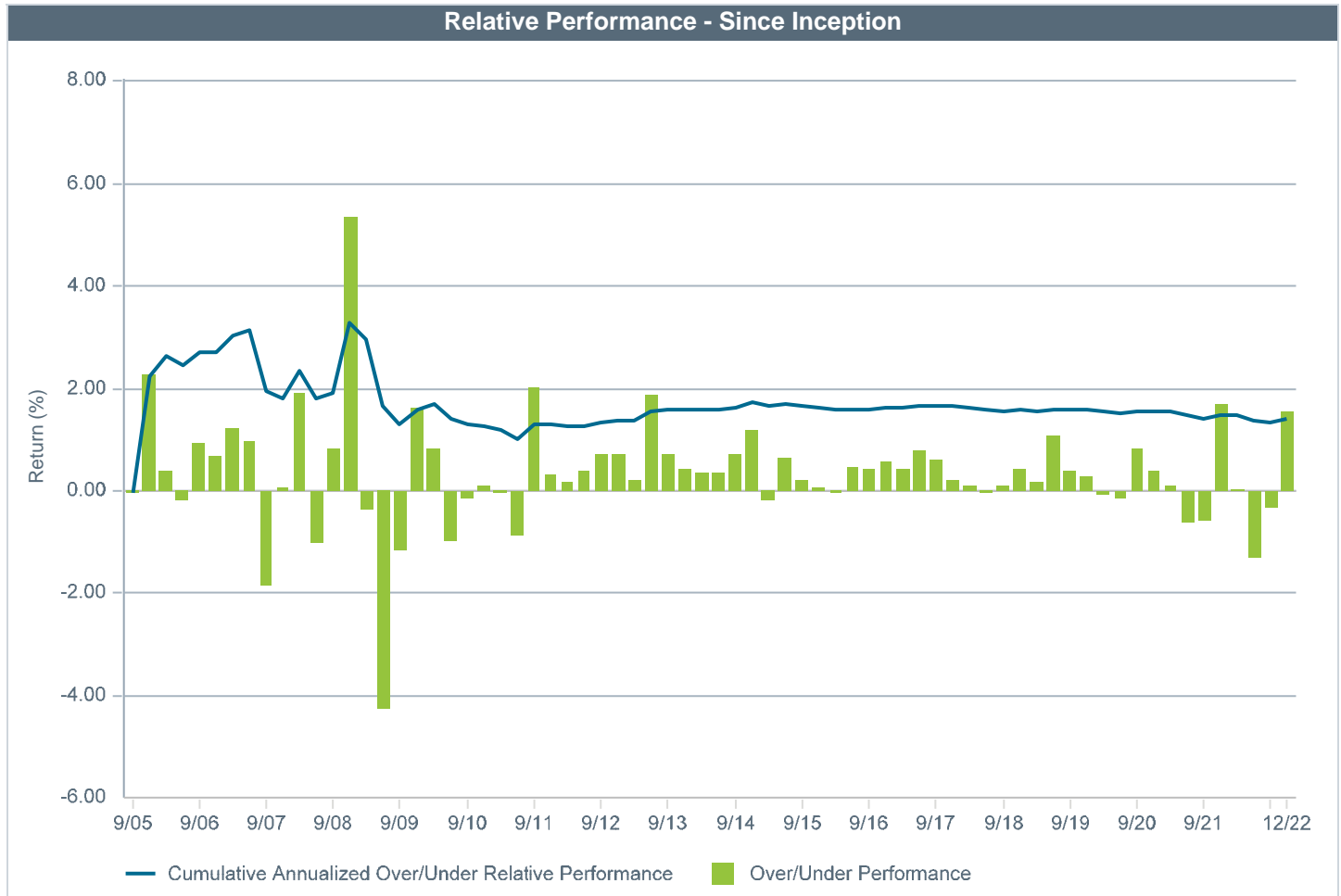


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-3.50	7.38	10.47	9.55	9.71	11.66	22.87	2.18	7.40	8.99	9.84
Benchmark	-4.97	7.47	9.93	8.68	8.54	10.10	22.17	1.19	5.34	8.35	7.62
Difference	1.47	-0.09	0.54	0.87	1.17	1.56	0.70	0.99	2.06	0.64	2.22



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.96
S&P 500 Index (Cap Wtd)	-0.12
Russell 2000 Index	-0.20
MSCI EAFE Index (USD) (Net)	-0.25
MSCI Emg Mkts Index (USD) (Net)	-0.32
Bloomberg US Agg Bond Index	-0.33
Bloomberg US Trsy US TIPS Index	-0.27
Wilshire US REIT Index	0.08
HFRI FOF Comp Index	-0.22
Bloomberg Cmnty Index (TR)	0.05
ICE BofA 3 Mo US T-Bill Index	-0.56
Cons Price Index (Unadjusted)	0.30



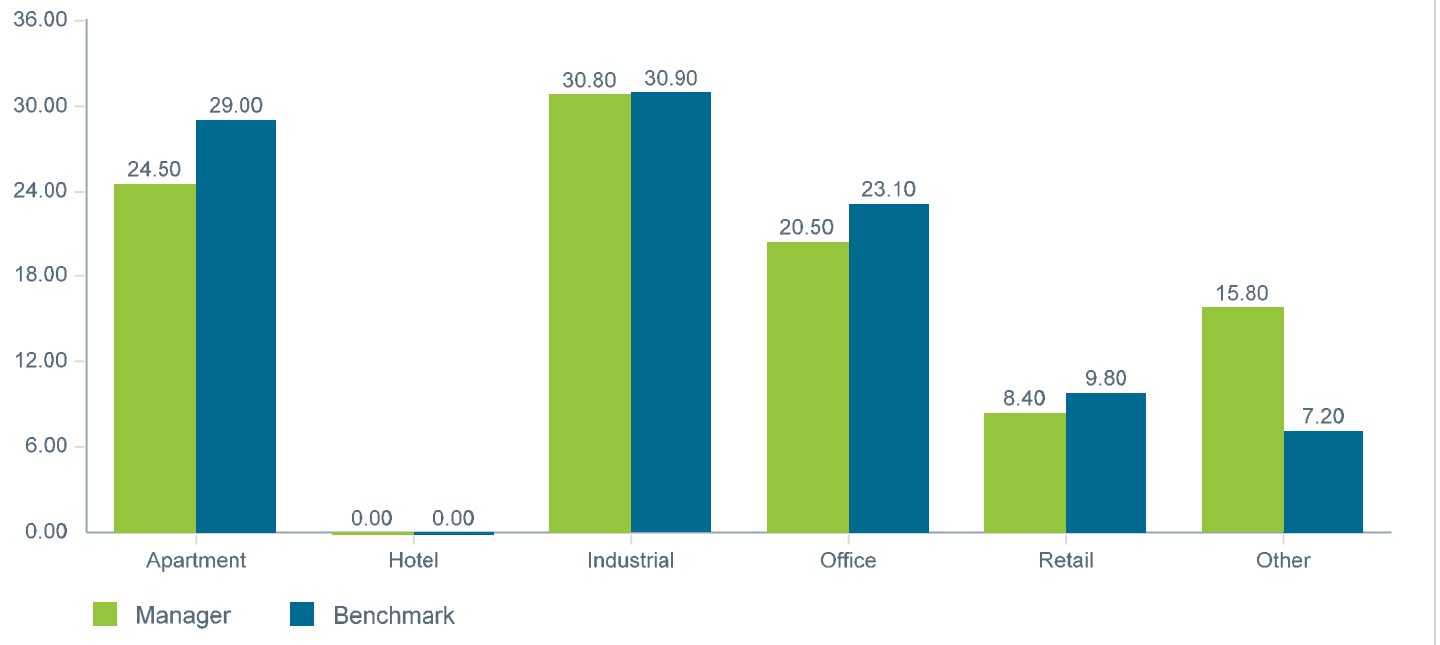
Investment Strategy

The Fund pursues a diversified core real estate strategy that invests in assets with stable, highly predictable cash flow returns. The Fund targets high quality office, Class A multifamily, warehouse distribution, and top-tier super regional malls in addition to storage facilities in targeted primary markets. The Fund favors investing in major metropolitan markets and secondary markets expected to achieve above-average economic performance and believes that those cities offer better liquidity, more diverse tenant bases, and stronger resilience to market cycles. It operates with leverage of 50% or less and may invest up to 15% of its gross assets in higher-risk, value-added real estate investment opportunities.

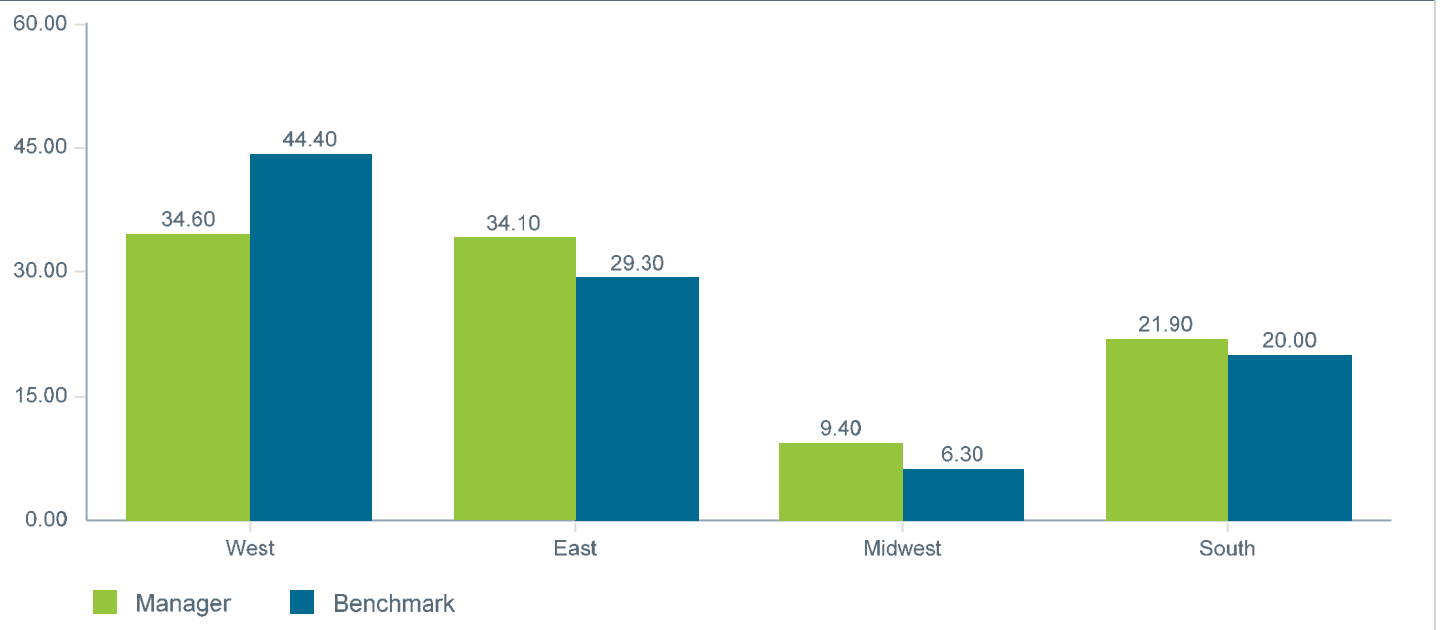
Investment Profile

Fund Inception	1973
Legal Structure	LLC
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	45,948
Fund Leverage %	18.20
Portfolio Occupancy %	94.50
Cash Reserve %	1.20
Number of Investments	547
Number of Limited Partners	449

Property Type Allocation (%)



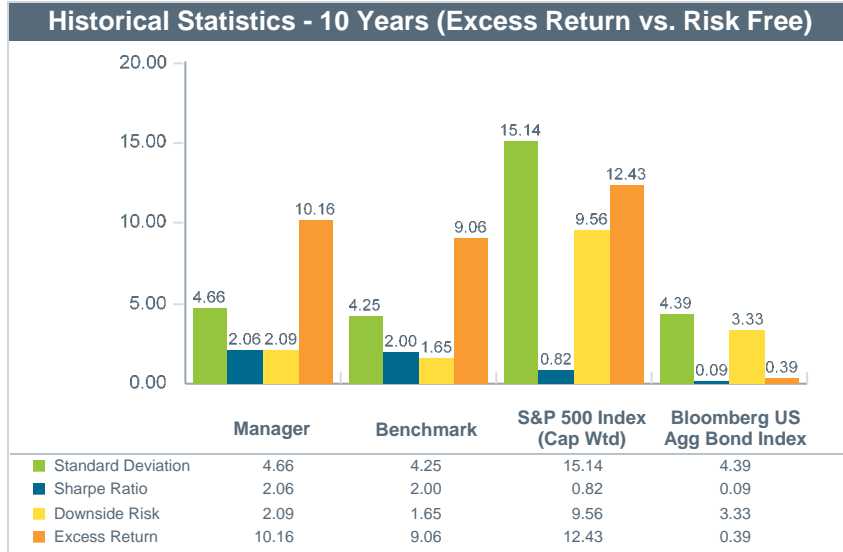
Geographic Allocation (%)



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, health care, student housing, land held for potential development, and hotel. 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.

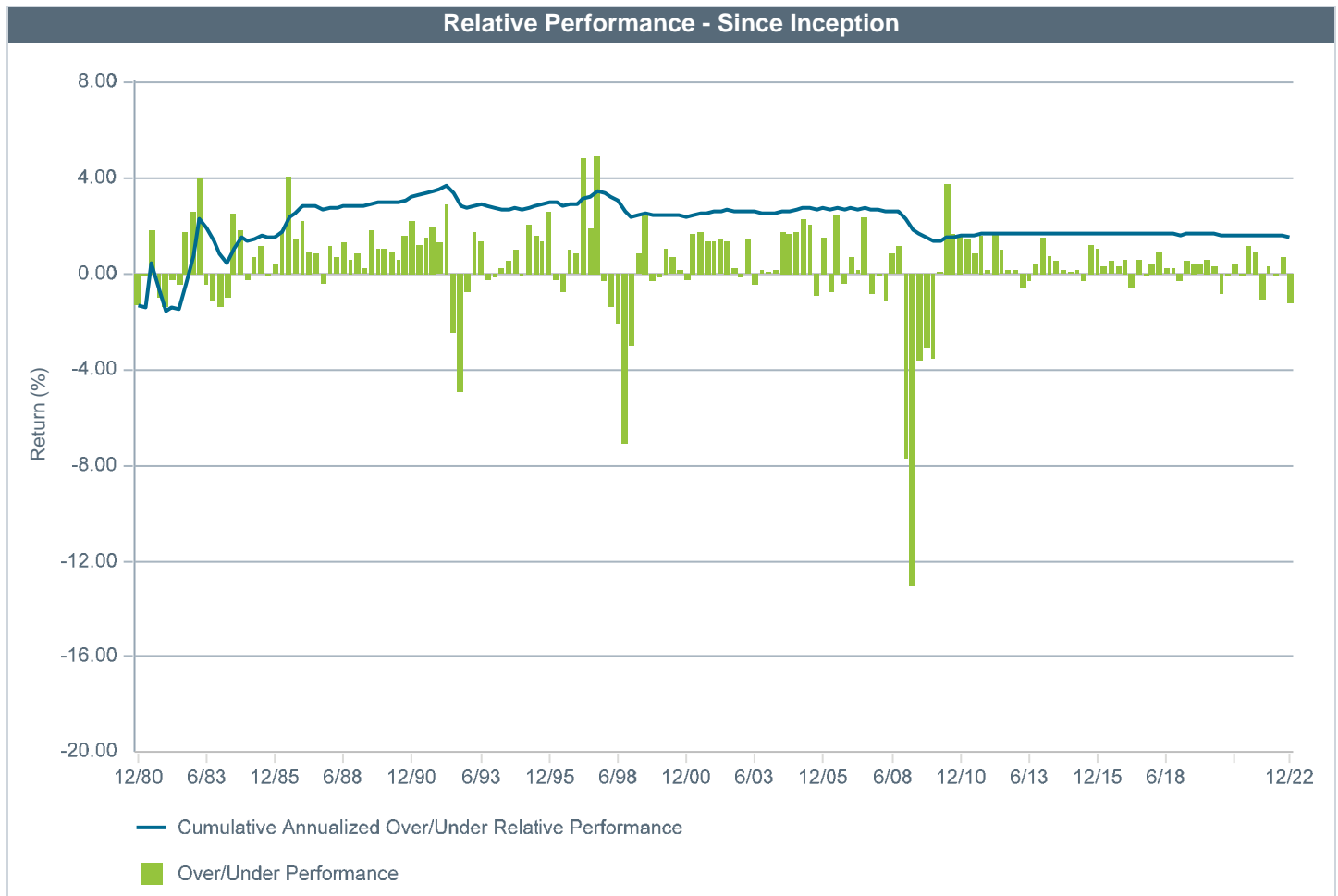


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-6.14	7.13	10.10	9.46	9.43	11.26	23.30	1.03	7.52	9.48	8.06
Benchmark	-4.97	7.47	9.93	8.68	8.54	10.10	22.17	1.19	5.34	8.35	7.62
Difference	-1.17	-0.34	0.17	0.78	0.89	1.16	1.13	-0.16	2.18	1.13	0.44



Actual Correlation - 10 Years

	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.97
S&P 500 Index (Cap Wtd)	-0.22
Russell 2000 Index	-0.26
MSCI EAFE Index (USD) (Net)	-0.35
MSCI Emg Mkts Index (USD) (Net)	-0.39
Bloomberg US Agg Bond Index	-0.36
Bloomberg US Trsy US TIPS Index	-0.27
Wilshire US REIT Index	-0.01
HFRI FOF Comp Index	-0.26
Bloomberg Cmdty Index (TR)	0.09
ICE BofAML 3 Mo US T-Bill Index	-0.55
Cons Price Index (Unadjusted)	0.35



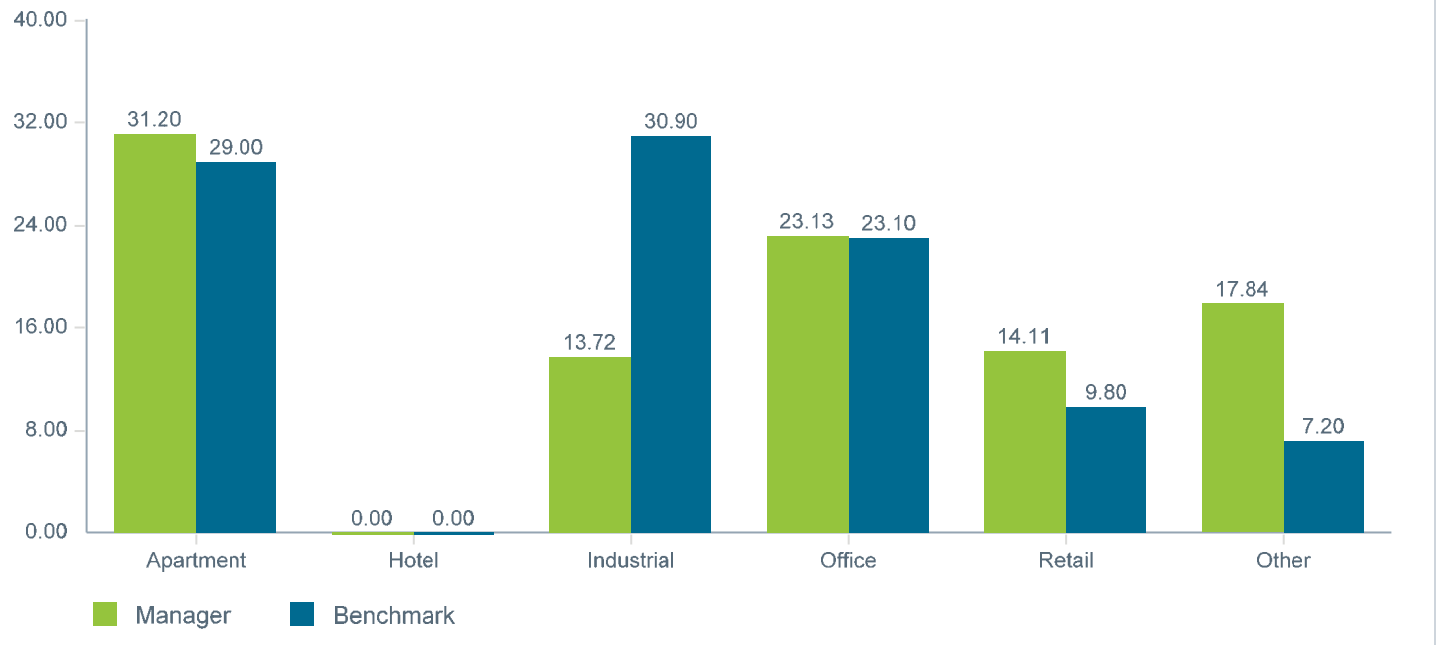
Investment Strategy

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.

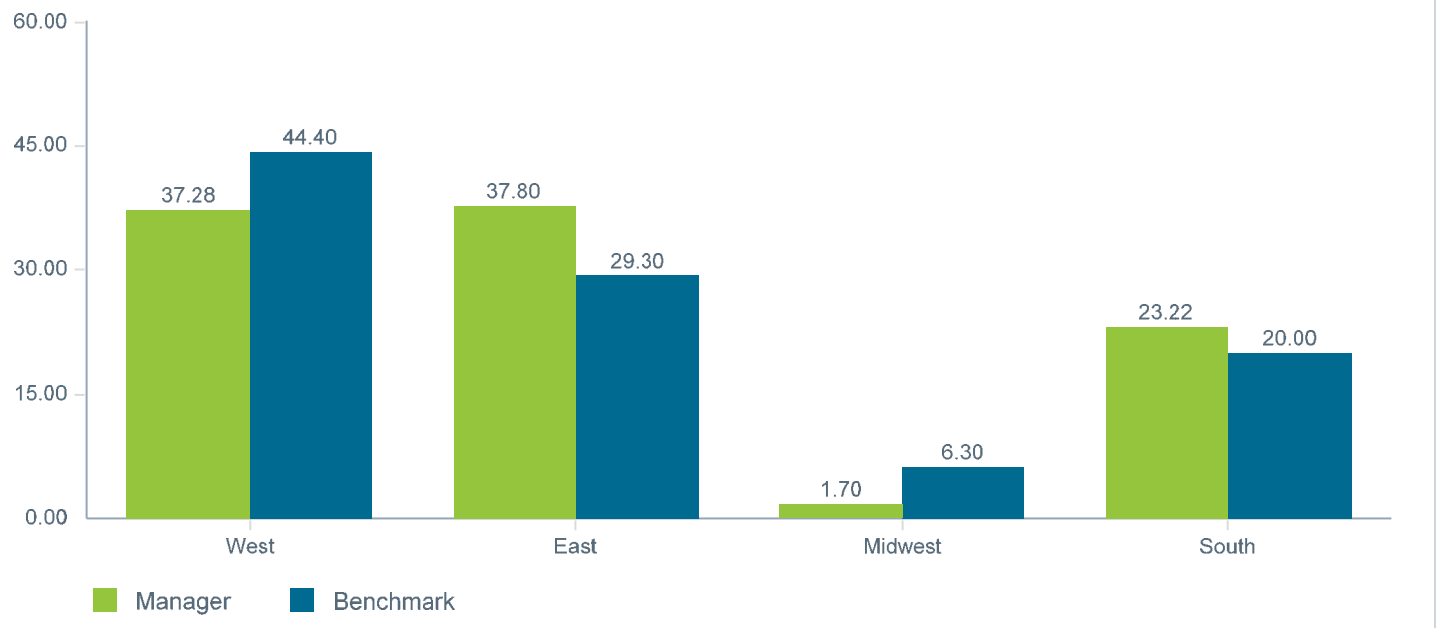
Investment Profile

Fund Inception	1980
Legal Structure	REIT
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	18,008
Fund Leverage %	32.32
Portfolio Occupancy %	90.68
Cash Reserve %	1.44
Number of Investments	162
Number of Limited Partners	112

Property Type Allocation (%)



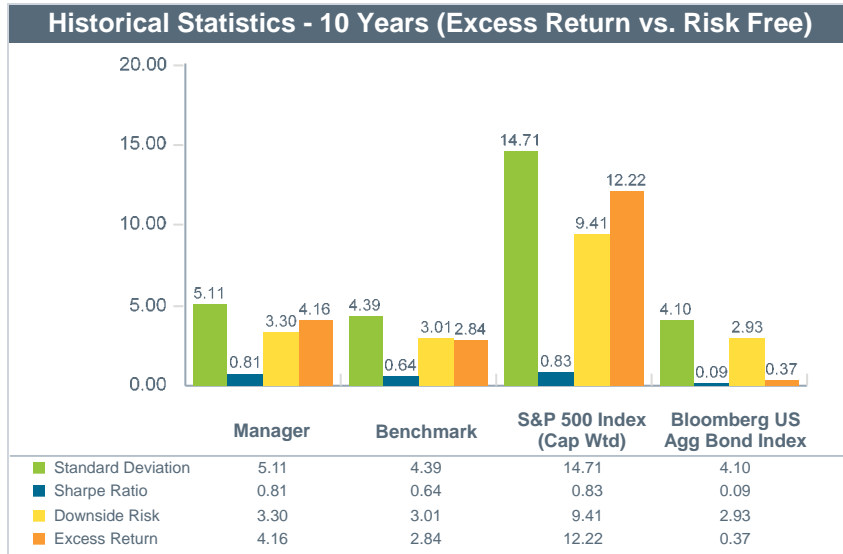
Geographic Allocation (%)



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.

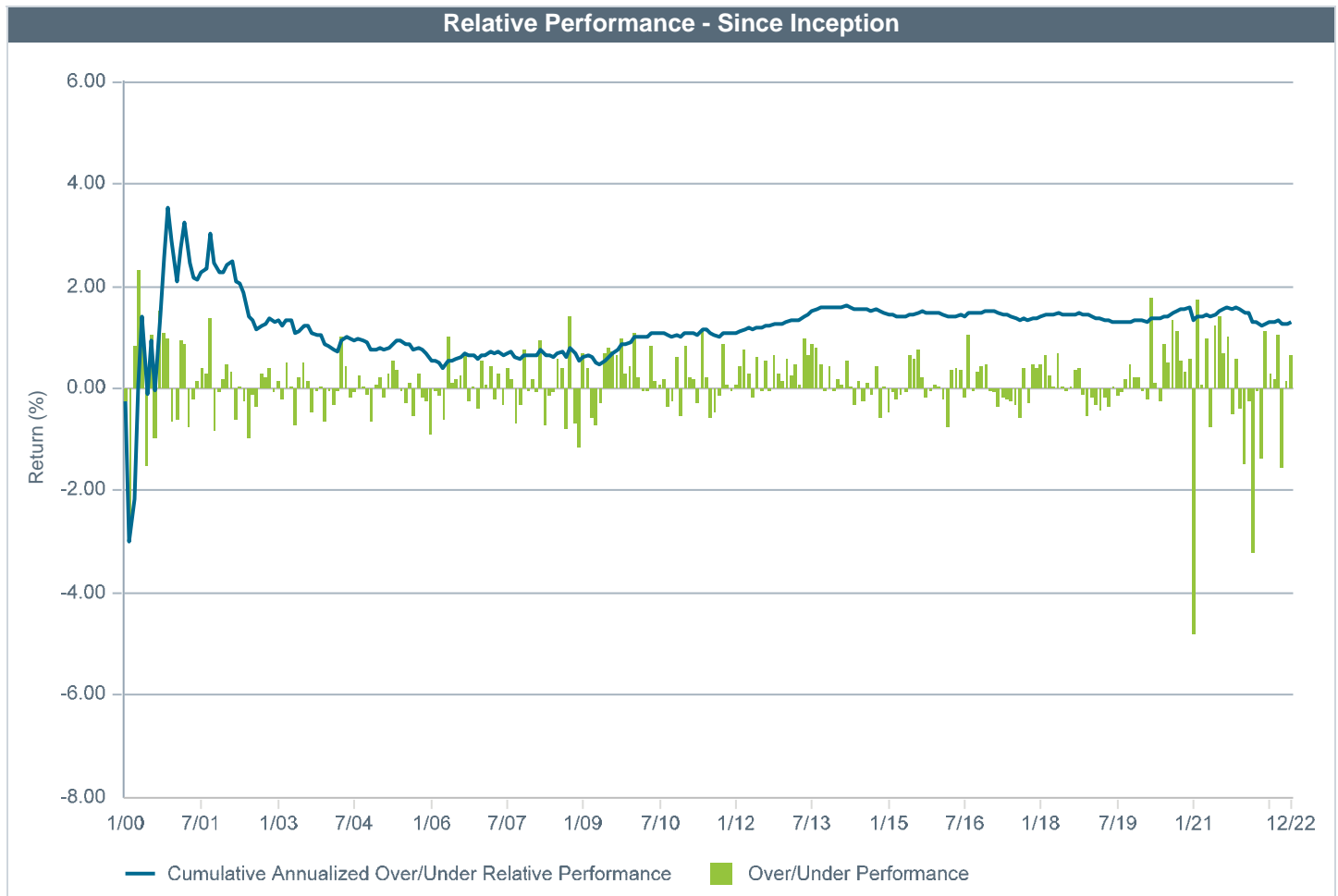


Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	1.21	-5.77	6.02	4.52	4.46	4.90	7.87	17.24	6.14	-1.38	6.25
Benchmark	1.99	-1.35	4.96	3.54	3.57	3.56	6.77	9.79	6.75	-3.58	7.27
Difference	-0.78	-4.42	1.06	0.98	0.89	1.34	1.10	7.45	-0.61	2.20	-1.02



Actual Correlation - 10 Years

	Actual Correlation
HFN FOF Multi-Strat Index (Net)	0.85
S&P 500 Index (Cap Wtd)	0.61
Russell 2000 Index	0.63
MSCI EAFE Index (USD) (Net)	0.61
MSCI Emg Mkts Index (USD) (Net)	0.47
Bloomberg US Agg Bond Index	0.08
Bloomberg US Trsy US TIPS Index	0.14
Wilshire US REIT Index	0.37
HFRI FOF Comp Index	0.85
Bloomberg Cmnty Index (TR)	0.31
ICE BofAML 3 Mo US T-Bill Index	-0.19
Cons Price Index (Unadjusted)	-0.07



Performance shown is net of fees and product specific. Calculation is based on monthly periodicity.



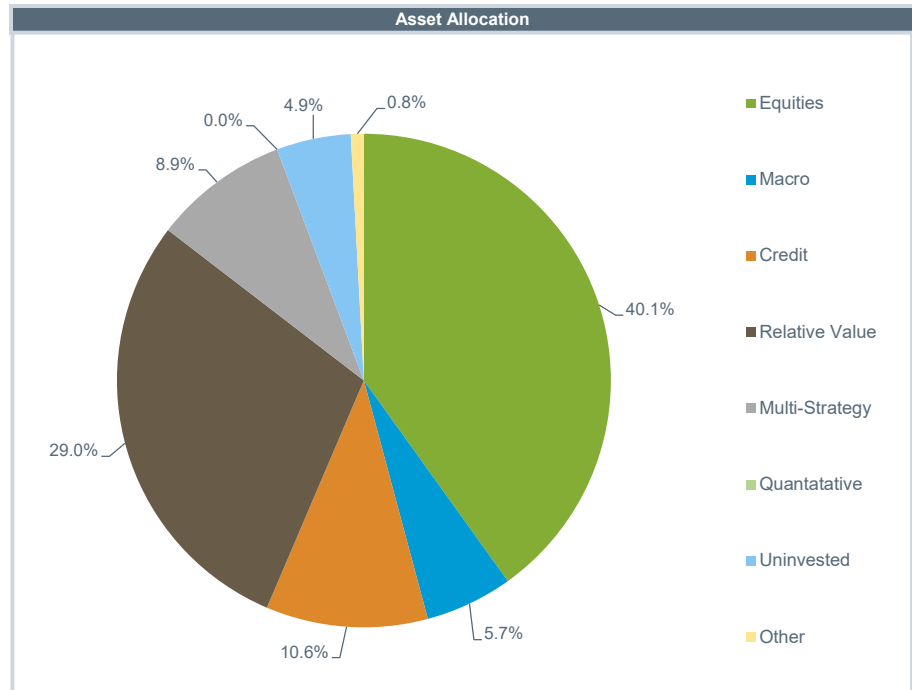
Investment Strategy

Grosvenor manages a customized hedge fund of fund portfolio for KCPERS, Grosvenor FOB Fund. The customized portfolio is structured to meet KCPERS specific needs of seeking a superior absolute and risk-adjusted rate of return, with low performance volatility, low correlations with global equity and fixed-income markets, over a full market cycle, and to preserve capital during challenging market environments. Specifically, the Fund seeks to generate a return of treasury bills + 600 basis points over a full market cycle, an annualized standard deviation of less than 10%, and a beta to equity markets of less than 0.4.

Fund Details as of 12/31/2022

Fund Assets (USD millions): 124
 Inception Date: August 1, 2014
 Currency: USD
 Number of Investment Managers: 22
 Number of Portfolio Funds: 22
 Style Mandate: Broad Mandate Multi-Strategy Portfolios
 Portfolio Type: Offshore Non-Plan Asset
 Top 10 Investment Managers % of NAV: 60.77
 Top 20 Investment Managers % of NAV: 91.53

Strategy	Allocation as of 12/31/2022
Equities	40.1%
Macro	5.7%
Credit	10.6%
Relative Value	29.0%
Multi-Strategy	8.9%
Quantitative	0.0%
Uninvested	4.9%
Other	0.8%



Strategy Performance Attribution

	QTD Rate Of Return	QTD Contrib to Rate Of Return	YTD Contrib to Rate Of Return	Allocation as of 12/31/2022
Equities	-0.65%	-0.26%	-8.80%	40.1%
Macro	-1.72%	-0.10%	-0.19%	5.7%
Credit	0.42%	0.05%	-0.45%	10.6%
Relative Value	4.97%	1.41%	3.47%	29.0%
Multi-Strategy	-1.63%	-0.14%	-0.96%	8.9%
Quantitative	--	--	--	0.0%
Commodities	--	--	--	0.0%
Uninvested	--	--	--	4.9%
Other	-2.66%	-0.02%	-0.08%	0.8%
TOTAL	0.79%	0.94%	-7.01%	100%

Derivatives Report - Exposure Table

Exposure Category	Notional		Gross	Net
	Long	Short		
U.S. / Canada	88.3	70.0	158.3	18.3
Latin America	0.6	2.3	2.9	-1.7
Europe - Developed	64.1	41.8	105.9	22.3
Europe - Emerging	0.3	0.4	0.7	-0.1
Asia - Japan	8.4	25.3	33.7	-16.9
Asia - Developed ex Japan	13.8	3.1	16.9	10.7
Asia - Emerging	3.4	3.3	6.7	0.1
Middle East/Africa	0.2	0.2	0.4	0.0
Global	32.7	27.3	60.0	5.4
Portfolio Fund Cash	-	-	-	-
Grosvenor Fund Cash	-	-	-	-
Tail Risk Protection	-	-	-	-
Total Grosvenor Fund	211.8	173.7	385.5	-

Fund Liquidity Schedule as of 12/31/2022 - (with lockup)

	Amount	%	Cumulative %
Daily	6,041	4.88	4.88
Monthly	12,471	10.07	14.95
Quarterly	39,038	31.53	46.49
Semi-annually	12,520	10.11	56.60
Annually	27,041	21.84	78.45
Every 18 Months	2,716	2.19	80.64
Biannually	3,331	2.69	83.33
Triannually	615	0.50	83.83
Other	13,040	10.53	94.36
Designated/Illiquid	6,982	5.64	100.00

Data is as of 12/31/2022 unless otherwise noted. Notional exposures will differ slightly from Grosvenor due to rounding.

Addendum & Glossary



Performance Related Comments

- Performance shown for composites is net of fees, unless otherwise noted. Performance shown for managers is gross of fees except for Grosvenor Institutional Partners (CF) and Private Equity, which are shown net of fees.
- RVK began monitoring the assets and performance of Kansas City Police Employees' Retirement System in 07/2013.
- Performance shown on manager pages reflect the Police Retirement System for all funds.
- Gross performance shown for White Oak Fixed Income C LP differs from the manager's due to a difference in performance calculation methods.
- Performance shown for Financial Counselors may differ from what is reported by the manager due to differences in bond pricing between the manager and the custodian.
- Performance for White Oak Fixed Income C LP, Morgan Stanley Prime Property (CF), PGIM Real Estate PRISA II (CF), Abbott Capital Private Equity LP (CF), and J.P. Morgan Private Equity III (CF) is reported on a quarterly basis. Performance for Direct Lending and Private Equity is not yet available.

Index Comments

- The Target Allocation Indices are calculated monthly and currently consists of 38% MSCI ACW IM Index (USD) (Net), 31% Bloomberg US Agg Bond Index, 7% ICE BofAML 3 Mo US T-Bill Index+5%, 13% NCREIF ODCE Index (AWA) (Net), and 11% Long Term Absolute Return Custom Benchmark.
 - Prior to 07/2020, the Target Allocation Indices consisted of 37% MSCI ACW IM Index (USD) (Net), 30% Bloomberg US Agg Bond Index, 5% ICE BofAmL 3 Mo US T-Bill Index+5%, 11% NCREIF ODCE Index (AWA) (Net), 15% Long Term Absolute Return Custom Benchmark, and 2% Cambridge US Prvt Eq Index (1 Qtr Lag).
 - Prior to 04/2018, the Target Allocation Indices consisted of 37% MSCI ACW IM Index (USD) (Net), 30% Bloomberg US Agg Bond Index, 5% Real Return Custom Benchmark, 11%NCREIF ODCE Index (AWA) (Net), 15% Long Term Absolute Return Custom Benchmark, and 2% Cambridge US Prvt Eq Index (1 Qtr Lag).
 - Prior to 07/2017, the Target Allocation Indices consisted of 35% MSCI ACW IM Index (USD) (Net), 30% Bloomberg US Agg Bond Index, 5% Real Return Custom Benchmark, 10% NCREIF ODCE Index (AWA) (Net), 15% Long Term Absolute Return Custom Benchmark, and 5% Cambridge US Prvt Eq Index (1 Qtr Lag).
 - Prior to 11/2014, the Target Allocation Indices consisted of 35% MSCI ACW IM Index (USD) (Net), 30% Bloomberg US Agg Bond Index, 5% Real Return Custom Benchmark, 10% NCREIF Property Index, 15% Long Term Absolute Return Custom Benchmark, and 5% Cambridge US Prvt Eq Index (1 Qtr Lag).
 - Prior to 07/2014, the Target Allocation Indices consisted of 35% MSCI ACW IM Index (USD) (Net), 30% Bloomberg US Agg Bond Index, 5% Real Return Custom Benchmark, 10% NCREIF Property Index, 15% HFRI FOF Comp Index, and 5% Cambridge US Prvt Eq Index (1 Qtr Lag).
 - Prior to 03/2014, the Target Allocation Indices consisted of 15% S&P 500 Index (Cap Wtd), 11% Russell 2000 Index, 10% MSCI EAFE Index (USD) (Net), 10% MSCI Emg Mkts Index (USD) (Net), 24% Bloomberg A+ US Gov't/Crdt Index, 5% ICE BofAML US Hi Yld Master II Index, 5% Real Return Custom Benchmark, 5% NCREIF Property Index, 10% HFRI FOF Composite Index, 3% Venture Economics All Private Equity Index (1 Qtr Lag), and 2% FTSE 3 Mo T-Bill Index.
- The Long Term Absolute Return Custom Benchmark consists of 100% ICE BofAML 3 Mo US T-Bill Index+5%.
 - Prior to 07/2020, the Long Term Absolute Return Custom Benchmark consisted of 70% ICE BofAML 3 Mo US T-Bill Index+5% and 30% Consumer Price Index+5%.
- The Absolute Return Custom Benchmark is calculated monthly using beginning of month manager weights applied to each corresponding benchmark return.
- ICE BofAML 3 Mo US T-Bill Index+5% benchmark for Direct Lending and White Oak Fixed Income Fund C L.P. assumes a 0.00% return during interim quarter months and when corresponding fund performance is not yet available.

Market Value Comments

- Market values shown for White Oak Fixed Income C LP is as of 09/30/2022.
- Market values shown for Abbott Capital Private Equity LP (CF) and J.P. Morgan Private Equity III (CF) are as of 09/30/2022, adjusted for subsequent cash flows.

Miscellaneous Comments

- Fidelity Strat RI Rtn (FSRRX) was liquidated on 03/30/2018 and White Oak Fixed Income C LP was funded with the proceeds.
- ICE BofAML 3 Mo US T-Bill Index+5% benchmark for Direct Lending and White Oak Fixed Income C LP assumes a 0.00% return during interim quarter months and when corresponding fund performance is not yet available.
- GMO:Bchmk-Fr All;III (GBMFX) was liquidated on 06/24/2020.
- GQG Partners Emg Mkts Eq (CF) was inception on 10/21/2020.
- On 10/30/2020, assets invested in WTC-CIF II US Sm Cap 2000 Series 1 (CF) and WTC-CTF Intl Sm Cap Research Equity (CF) were liquidated and used to fund WTC-CTF Global Perspectives (CF). LSV Emg Mkts Equity (CF) and LSV Emg Mkts Sm Cap Equity (CF) were liquidated on 11/23/2020 and 11/20/2020, respectively.

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.

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