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# Capital Markets Review



Capital Markets Review As of June 30, 2022

### **Second Quarter Economic Environment**

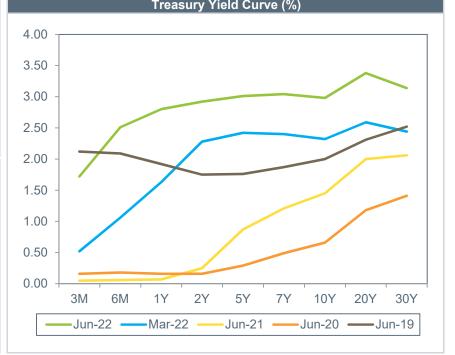
Continued rising inflation, accelerated tightening of global monetary policy, and falling economic growth estimates led to most major indices ending negative in Q2. Inflation continued to rise in the US as the Consumer Price Index (CPI) rose to 9.1% at the end of June, spurred on by supply chain disruptions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

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	16 7	30 ]	120 ]	70 ]	160 ]
	14 -	25 - 20 -	100 -	60	140
	12 -	15 -	100	50 -	120 -
	10 -	10 -	80 -	40 -	100 -
	8 -	5 -	60	30 -	80 -
	6 -	-5 -		20 -	60 -
	2 -	-10 - -15 -	40 -	10 -	40 -
	0	-15	20	0	20
	Unemployme			VIX Index	Consumer
	Rate (%) Year (% change) Since 1948 Since 1914		e) (% of GDP) Since 1940	(Volatility) Since 1990	Confidence Since 1967
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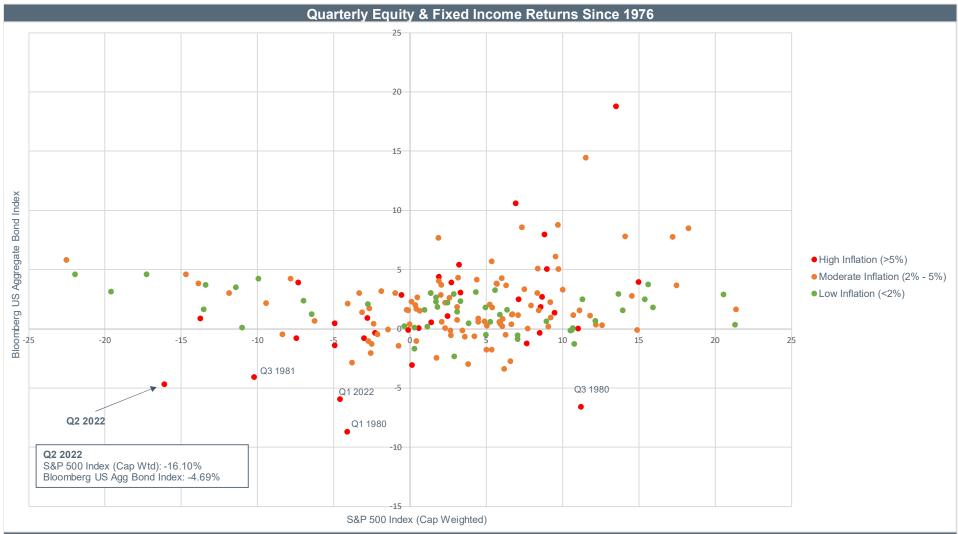
**Key Economic Indicators** 

Economic Indicators	Jun-22	Mar-22	Jun-21	Jun-19	20 Yr
Federal Funds Rate (%)	1.58 🔺	0.33	0.08	2.40	1.30
Breakeven Infl 5 Yr (%)	2.62	3.43	2.50	1.54	1.86
Breakeven Infl 10 Yr (%)	2.34	2.83	2.34	1.70	2.04
CPI YoY (Headline) (%)	9.1	8.5	5.4	1.6	2.2
Unemployment Rate (%)	3.6 <b>—</b>	3.6	5.9	3.6	6.1
Real GDP YoY (%)	N/A	3.5	12.2	2.1	1.9
PMI - Manufacturing	53.0 ▼	57.1	60.9	51.5	53.5
USD Total Wtd Idx	121.05	115.22	112.61	114.58	103.10
WTI Crude Oil per Barrel (\$)	105.8	100.3	73.5	58.5	64.4
Gold Spot per Oz (\$)	1,807 ▼	1,937	1,770	1,410	1,086
Market Darferres and (0/)	OTD	CVTD	4 V.	E V.	40 V.

σσια σροι ρσι σΣ (ψ)	1,007	1,007	1,770	1,110	1,000
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	-16.10	-19.96	-10.62	11.31	12.96
Russell 2000	-17.20	-23.43	-25.20	5.17	9.35
MSCI EAFE (Net)	-14.51	-19.57	-17.77	2.20	5.40
MSCI EAFE SC (Net)	-17.69	-24.71	-23.98	1.72	7.18
MSCI Emg Mkts (Net)	-11.45	-17.63	-25.28	2.18	3.06
Bloomberg US Agg Bond	-4.69	-10.35	-10.29	0.88	1.54
ICE BofAML 3 Mo US T-Bill	0.11	0.15	0.17	1.11	0.64
NCREIF ODCE (Gross)	4.77	12.49	29.51	10.54	11.16
FTSE NAREIT Eq REIT (TR)	-16.97	-20.20	-6.27	5.30	7.39
HFRI FOF Comp	-4.08	-6.73	-5.65	3.59	3.73
Bloomberg Cmdty (TR)	-5.66	18.44	24.27	8.39	-0.82







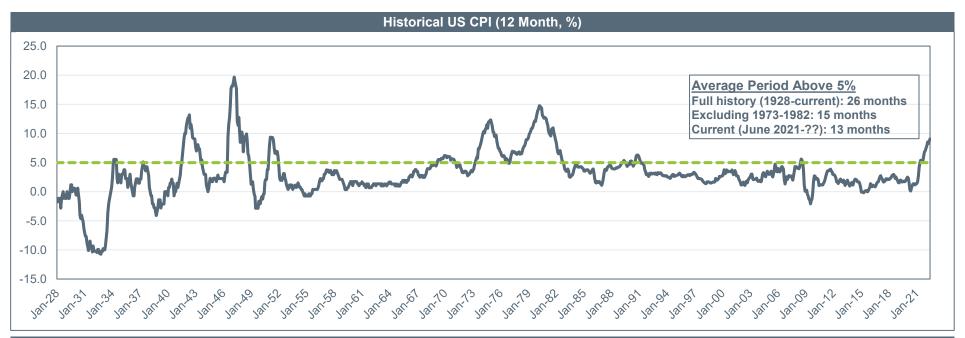
	Bloomberg US A	ggregate Bond Index: W	orst Quarters and Subseq	uent Performance	
Quarter Ended	Quarter Return	YTW at Quarter End	Subsequent Quarter Return	Subsequent Year Return	Subsequent 3 Year Return Annualized
Mar-1980	-8.71%	14.10	18.79%	13.05%	17.88%
Sep-1980	-6.60%	12.43	1.36%	-2.58%	15.05%
Mar-2022	-5.93%	2.92	-4.69%	?	?
Jun-2022	-4.69%	3.72	?	?	?
Sep-1981	-4.07%	16.50	10.58%	35.22%	19.35%
Mar-2021	-3.38%	1.61	1.83%	-4.15%	?
Dec-1979	-3.08%	11.19	-8.71%	2.67%	13.12%

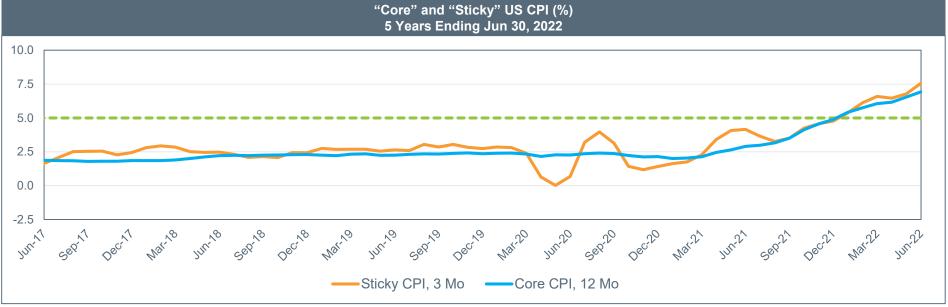
Inflation data provided by the Federal Reserve Economic Database. Yield to Worst data provided by Barclays Live.



Current Inflation in Context

As of June 30, 2022





As of June 30, 2022. Sources: US Bureau of Labor Statistics, Federal Reserve Bank of Cleveland, and Federal Reserve Bank of Atlanta.

Core CPI is represented by the Revised FRB Cleveland Trimmed Mean, 12-month. Sticky CPI is represented by the FRB Atlanta Sticky-Price Index, 3-month.



US Equity Review
As of June 30, 2022

### **Second Quarter Review**

### **Broad Market**

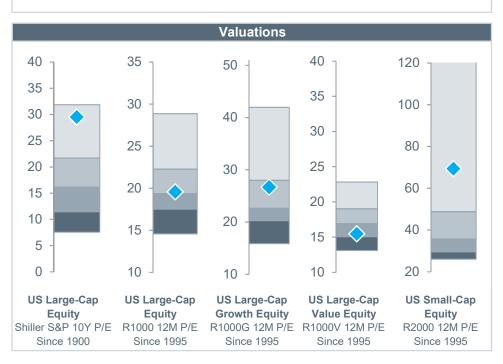
US equity markets were down sharply in Q2 in the midst of increasing concerns of a looming recession as the Fed acted to respond to sustained, elevated levels of inflation. With declines affecting all sectors, investors fled to defensive stocks as these were comparatively resilient. Likewise, investors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

### **Market Cap**

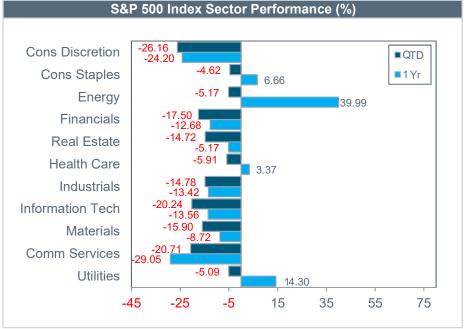
There was significant outperformance of value stocks over growth stocks, with the Russell 1000 Value and Russell 2000 Value indexes outperforming their growth counterparts by 8.7% and 4.0%, respectively.

### **Style and Sector**

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







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



Non-US Equity Review
As of June 30, 2022

### **Second Quarter Review**

### **Developed Markets**

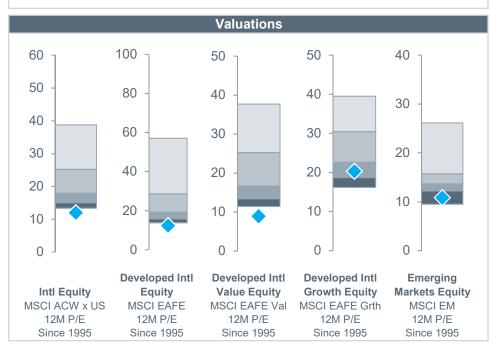
Developed International markets fared better than the domestic market, albeit still finishing Q2 in negative territory with the MSCI EAFE Index notching a -14.5% return for the period. Value stocks remained in favor with continued outperformance over growth stocks, while large-cap stocks outperformed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

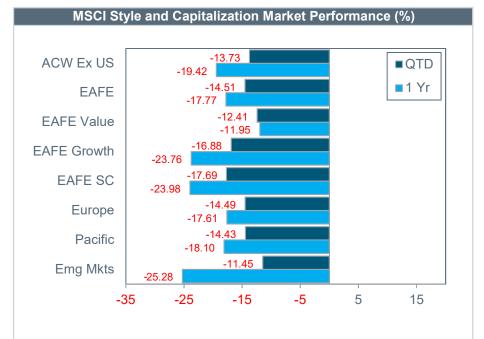
### **Emerging Markets**

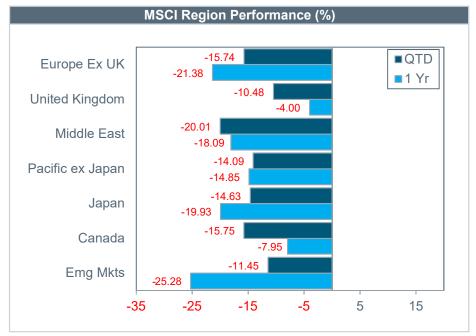
Emerging markets outperformed developed in Q2 with the MSCI EM Index returning -11.4%. Nearly all emerging market countries experienced negative returns.

### **Market Cap & Style**

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









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.



Alternatives Review As of June 30, 2022

### **Second Quarter Review - Absolute Return**

### **General Market - Hedge Funds**

Dispersion continues to be the theme across the hedge fund landscape. Although the HFRI Asset Weighted Composite returned -0.3% during the quarter, its year-to-date return remained positive at 1.6%. By contrast, the Equal Weighted Index, which is dominated by long/short equity strategies ("ELS"), returned -4.9% in Q2, led lower by ELS managers returning -8.3%. Prime brokerage data indicates that the 1st half of 2022 was one of the strongest on record for short alpha, as higher interest rates tend to structurally benefit short sellers.

### **General Market - Global Tactical Asset Allocation (GTAA)**

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

#### **HFRI Hedge Fund Performance (%)** HFRI FOF ■ QTD -5.65 -4.42 Conv Arbitrage ■1 Yr **Equity Hedge** -12.20 0.66 Mkt Neutral Eq 2.05 -3.69 Distressed -1.61 1.80 Macro 7.98 -2.58 Relative Value -0.98 -6.39 **Event Driven** -7.08 -2.86 Merger Arb 0.47 -5.22 Credit Arb -4.59 -10 10 20 -20 0

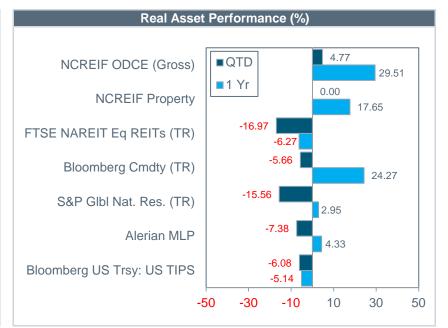
### **Second Quarter Review - Real Assets**

### **General Market - Diversified Inflation Strategies (DIS)**

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

### **General Market - Real Estate**

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





Fixed Income Review

As of June 30, 2022

### Second Quarter Review

### **Broad Market**

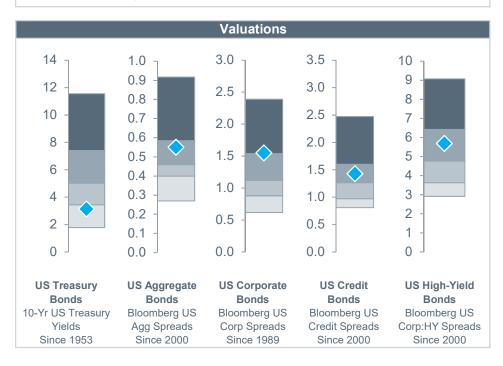
In Q2, Treasury yields rose 66 basis points from 2.32% to 2.98% with an intra-quarter high of 3.49%, as measured by the 10-year US Treasury yield. The Federal Reserve hiked the Federal Funds rate by 75 basis points over the quarter, the largest single increase since 1994. The Bloomberg US Aggregate ended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

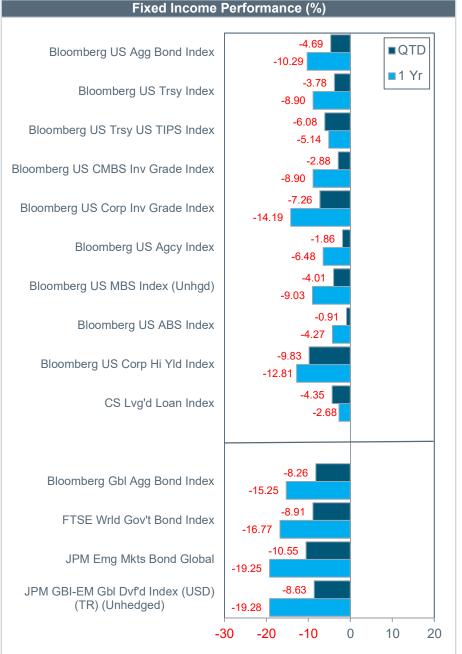
### **Credit Market**

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

### **Emerging Market Debt**

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







Valuations shown represent the 5th through 95th percentiles to minimize the effect of outliers.



Annual Asset Class Performance As of June 30, 2022

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	YTD
Best	8.44	78.51	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	18.44
1	5.24	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	12.49
	2.06	46.78	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	0.15
	-2.35	31.78	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	16.12	22.17	-6.73
	-10.01	28.01	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	12.34	14.82	-8.92
	-21.37	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	19.59	10.99	11.26	-10.35
	-26.16	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.44	10.88	10.10	-14.19
	-33.79	18.91	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	7.82	6.17	-17.63
	-35.65	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	8.72	7.51	5.96	-19.57
	-37.00	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	8.43	7.11	5.28	-19.96
	-37.74	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	8.39	1.19	0.05	-20.20
	-43.38	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.79	7.69	0.67	-1.55	-21.88
	-47.01	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.58	5.34	-3.12	-2.52	-23.43
Worst	-53.33	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	2.28	-8.00	-2.54	-24.71
S&P 500 US Larg Cap	ge US Sr	mall (Net)		(Net) - (N	MSCI EM Net) - Int'I Img Mkts	Bloombrg US Agg Bond - Fl		Bloombro i US Trsy U TIPS - FI	S Credit I	ov OD	CE NARI	EIT Eq C	odov C	Bloombrg Cmdty (TR) Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv







## Kansas City Police Employees' Retirement Systems (KCPERS) Investment Objective Review As of June 30, 2022

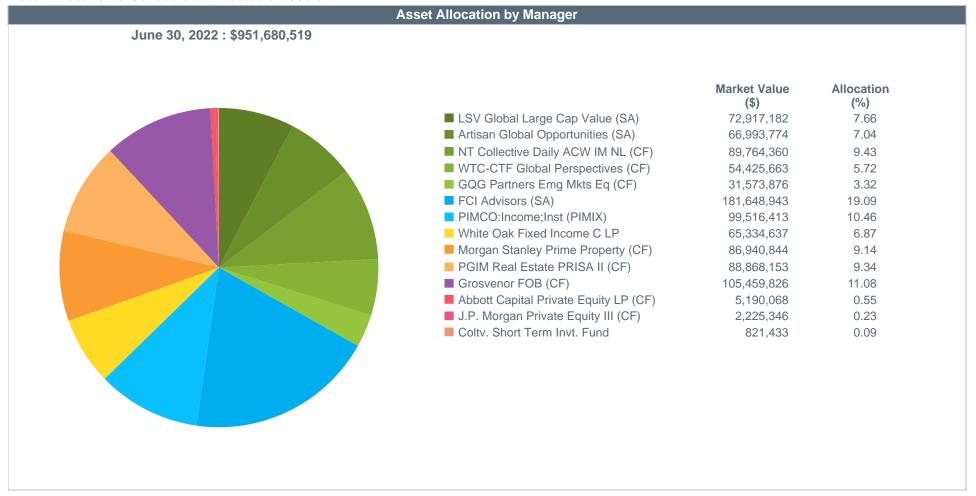
Asset Allocation											
	Yes	No	Current	Min.	Target	Max.					
Global Equity	✓		33.2%	33%	38%	43%					
Fixed Income	✓		29.5%	26%	31%	36%					
Direct Lending	✓		6.9%	4%	7%	10%					
Real Estate			18.5%	9%	13%	17%					
Absolute Return	✓		11.1%	7%	11%	15%					
Private Equity		✓	0.8%	0%	0%	0%					
Cash 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)	Rain			
Total Fund				
Total fund composite rate of return exceeds the current Target Allocation Index (gross of fees) over 5 years.	6.08%	✓		
The total fund return is equal to or exceeds 7.25% annualized return (gross of fees) over 5 years.	6.08%		1	
Global Equity				
The global equity composite rate of return exceeds the benchmark (net of fees).	6.49%		1	
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).	5.53%		✓	
The manager performed at the fortieth (40th) percentile or better.	39	1		
Artisan Global Opportunities (SA)				
The manager return exceeds the benchmark (net of fees).	8.76%	1		
The manager performed at the fortieth (40th) percentile or better.	39	1		
NT Collective Daily ACW IM NL (CF)				
The manager return exceeds the benchmark (net of fees).	7.09%	1		
The manager performed at the fortieth (40th) percentile or better.	4	1		
WTC-CTF Global Perspectives (CF)				
The manager return exceeds the benchmark (net of fees).	6.02%	1		
The manager performed at the fortieth (40th) percentile or better.	15	1		
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).	1.79%	1		
The fixed income composite performed at the fortieth (40th) percentile or better.	6	1		
FCI Advisors (SA)				
The manager return exceeds the benchmark (net of fees).	1.27%	1		
The manager performed at the fortieth (40th) percentile or better.	13	1		
PIMCO:Income;Inst (PIMIX)				
The manager return exceeds the benchmark (net of fees).	2.04%	1		
The manager performed at the fortieth (40th) percentile or better.	20	4		
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).	10.20%	1		
Morgan Stanley Prime Property (CF)				
The manager return exceeds the benchmark (net of fees).	10.17%	1		
PGIM Real Estate PRISA II (CF)				
The manager return exceeds the benchmark (net of fees).  Absolute Return	10.23%	√		
The absolute return composite rate of return exceeds the benchmark (net of fees).	3.32%		1	
Grosvenor FOB (CF)				
The manager return exceeds the benchmark (net of fees).	3.61%		✓	
Private Equity				
The private equity composite rate of return exceeds the benchmark (net of fees).	14.30%		1	

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 GGG 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 & Schedule of Investable Assets



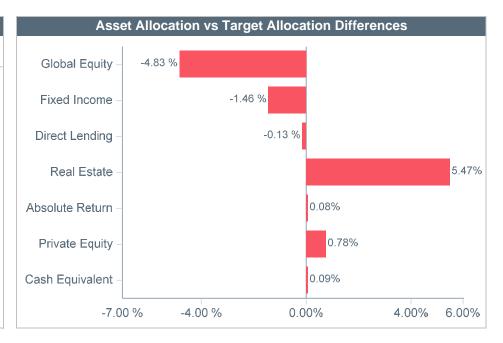
Schedule of Investable Assets											
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return						
QTD	1,029,699,662	-5,993,676	-72,025,467	951,680,519	-6.99						
CYTD	1,079,612,315	-17,856,218	-110,075,579	951,680,519	-10.26						
FYTD	986,540,335	-5,972,362	-28,887,454	951,680,519	-2.93						

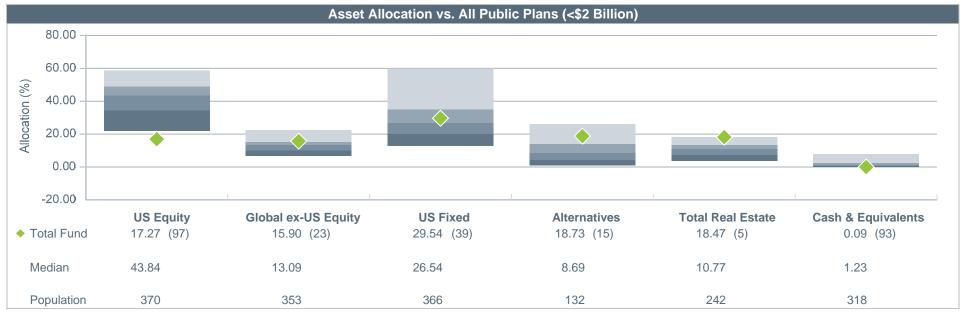
Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is net of fees.



**Total Fund vs. All Public Plans (<\$2 Billion)** 

	Asset Alloca	ition vs. Tar	get Alloca	ation	
	Market Value (\$)	Allocation (%)	Target (%)	Minimum (%)	Maximum (%)
Total Fund	951,680,519	100.00	100.00	-	-
Global Equity	315,674,854	33.17	38.00	33.00	43.00
Fixed Income	281,165,356	29.54	31.00	26.00	36.00
Direct Lending	65,334,637	6.87	7.00	4.00	10.00
Real Estate	175,808,997	18.47	13.00	9.00	17.00
Absolute Return	105,459,826	11.08	11.00	7.00	15.00
Private Equity	7,415,414	0.78	0.00	0.00	0.00
Cash Equivalent	821,433	0.09	0.00	0.00	5.00





Parentheses contain percentile ranks. Allocations may not sume up to 100% exactly due to rounding. As the Board has elected not to make additional commitments to Private Equity, the Private Equity Allocation will become below target. Increased allocations to U.S. and International Equity will result.



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

	Market Value (\$M)	FYTD	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
Total Fund (Gross)	\$951.68	-2.85	-6.87	-10.04	-6.03	5.63	6.08	6.20	7.08	10.90	12.06	15.24
All Public Plans (<\$2 Billion)		-4.99	-10.37	-14.32	-10.43	5.51	6.30	6.26	7.56	13.54	12.78	18.88
Rank		5	6	9	10	46	61	54	68	84	60	91
Total Fund	\$951.68	-2.93	-6.99	-10.26	-6.52	5.09	5.54	5.67	N/A	10.29	11.54	14.64
Target Allocation Index		-2.86	-6.89	-9.57	-5.70	4.80	5.50	5.56	6.44	9.89	10.25	14.39
Difference		-0.07	-0.10	-0.69	-0.82	0.29	0.04	0.11	N/A	0.40	1.29	0.25
7.25% Annualized Return		1.17	1.77	3.56	7.25	7.25	7.25	7.25	7.25	7.25	7.25	7.25
Difference		-4.10	-8.76	-13.82	-13.77	-2.16	-1.71	-1.58	N/A	3.04	4.29	7.39
Global Equity	\$315.67	-8.10	-15.61	-21.03	-17.99	5.77	6.49	6.94	N/A	16.64	17.54	27.58
MSCI ACW IM Index (USD) (Net)		-8.57	-15.83	-20.44	-16.52	5.98	6.70	6.78	8.71	18.22	16.25	26.35
Difference		0.47	0.22	-0.59	-1.47	-0.21	-0.21	0.16	N/A	-1.58	1.29	1.23
IM Global Large Cap Equity (MF) Median		-8.35	-15.82	-23.02	-19.60	5.48	7.30	6.97	9.20	16.85	20.30	29.63
Rank		44	49	29	39	47	60	51	N/A	54	62	74
Fixed Income	\$281.17	-1.80	-5.47	-10.65	-10.37	-0.13	1.79	2.35	N/A	-0.45	9.18	9.31
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72
Difference		-0.87	-0.78	-0.30	-0.08	0.81	0.91	0.93	N/A	1.10	1.67	0.59
IM Global Fixed Income (MF) Median		-3.10	-7.00	-12.55	-14.42	-2.33	-0.15	0.88	0.63	-2.73	8.15	8.08
Rank		13	30	39	31	10	6	8	N/A	10	36	25





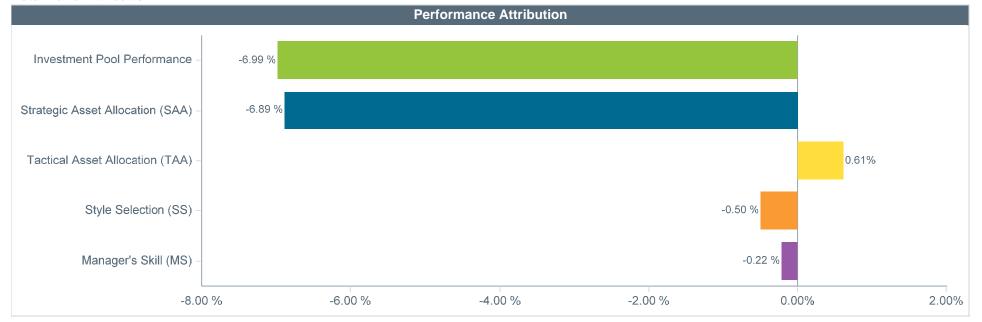
**Asset Allocation & Performance** 

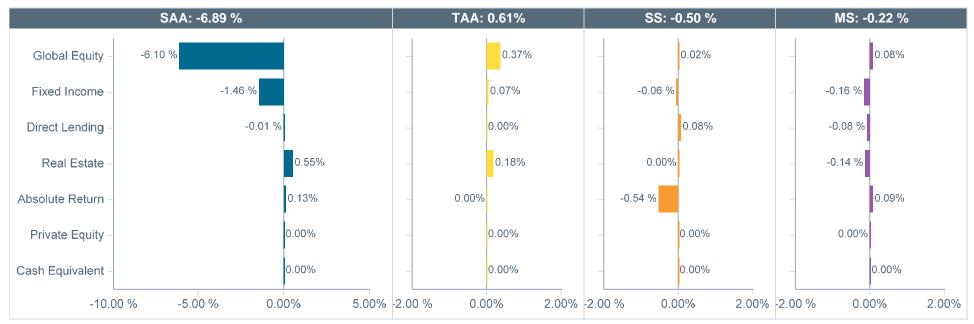
	Market Value (\$M)	FYTD	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
Direct Lending	\$65.33	0.00	0.00	0.76	1.80	3.65	N/A	N/A	N/A	4.60	2.66	7.41
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	0.00	0.00	2.50	4.75	5.62	5.54	5.40	5.05	5.70	7.39
Difference		0.00	0.00	0.76	-0.70	-1.10	N/A	N/A	N/A	-0.45	-3.04	0.02
Real Estate	\$175.81	3.70	3.70	11.16	27.94	11.95	10.20	10.33	N/A	21.73	0.54	6.24
NCREIF ODCE Index (AWA) (Net)		4.54	4.54	12.00	28.31	11.66	9.55	9.35	10.15	21.02	0.34	4.39
Difference		-0.84	-0.84	-0.84	-0.37	0.29	0.65	0.98	N/A	0.71	0.20	1.85
Absolute Return	\$105.46	-1.99	-3.09	-7.93	-3.73	3.98	3.32	2.91	N/A	6.32	11.60	7.71
Long Term Absolute Return Custom Benchmark		0.91	1.33	2.62	5.18	5.56	6.16	6.02	N/A	5.05	5.62	7.40
Difference		-2.90	-4.42	-10.55	-8.91	-1.58	-2.84	-3.11	N/A	1.27	5.98	0.31
Absolute Return Custom Benchmark		-3.19	-3.89	-4.58	-2.69	4.59	4.21	3.38	N/A	6.77	9.32	9.82
Difference		1.20	0.80	-3.35	-1.04	-0.61	-0.89	-0.47	N/A	-0.45	2.28	-2.11
Private Equity	\$7.42	0.00	-0.11	-3.15	0.32	15.46	14.30	12.63	N/A	28.38	20.44	10.04
Cambridge US Prvt Eq Index (1 Qtr Lag)		0.58	0.58	6.62	27.60	23.05	19.71	16.93	16.15	48.25	12.66	7.73
Difference		-0.58	-0.69	-9.77	-27.28	-7.59	-5.41	-4.30	N/A	-19.87	7.78	2.31

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.



**Total Fund Attribution - IDP** 

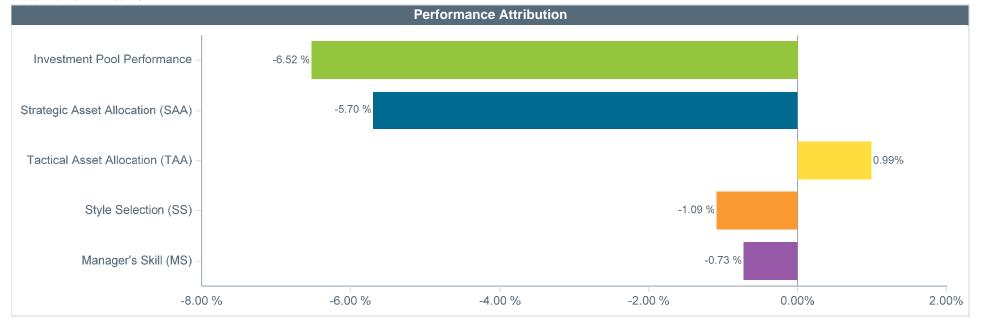


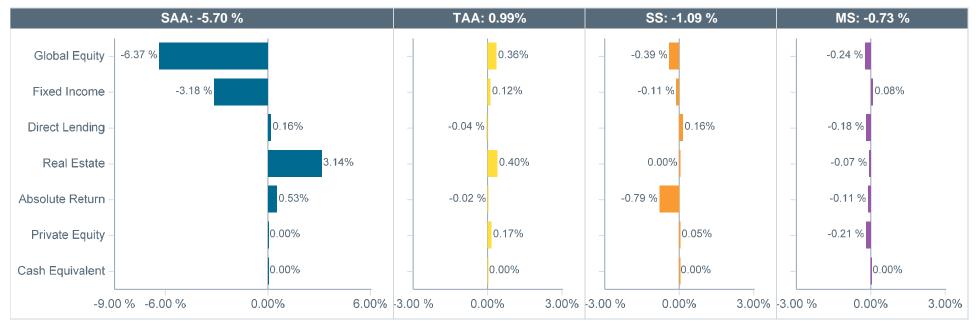


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



**Total Fund Attribution - IDP** 

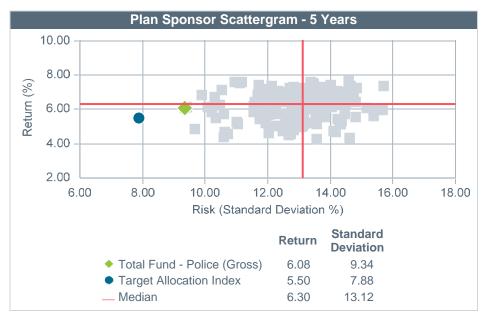


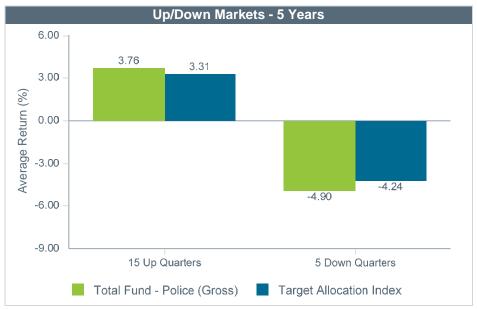


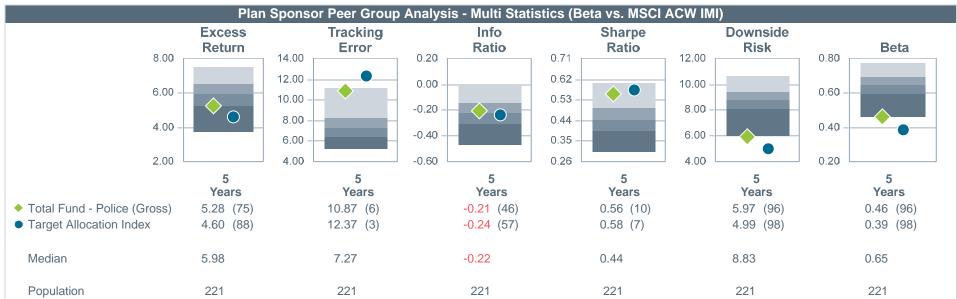
Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



Total Fund - Police (Gross) vs. All Public Plans (<\$2 Billion)



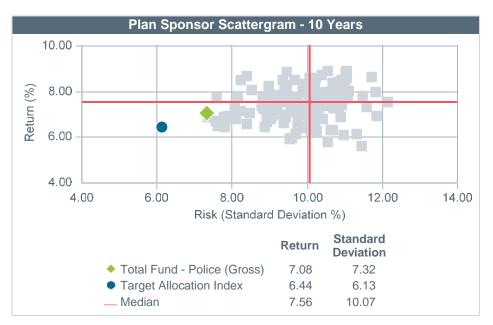


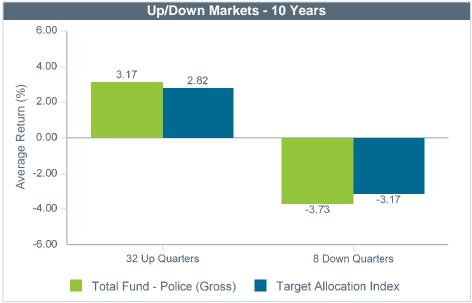


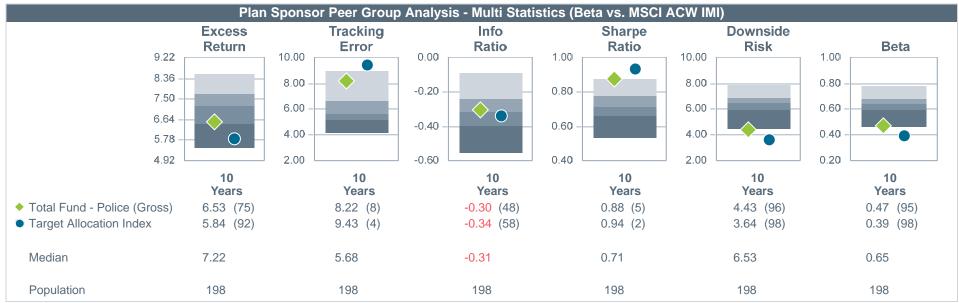
Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



Total Fund - Police (Gross) vs. All Public Plans (<\$2 Billion)



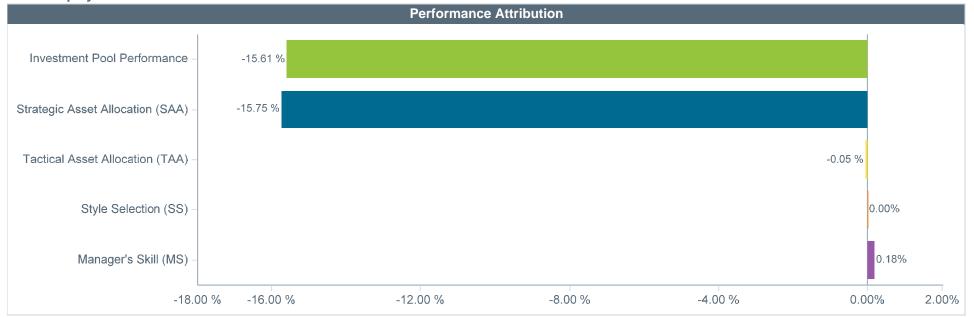


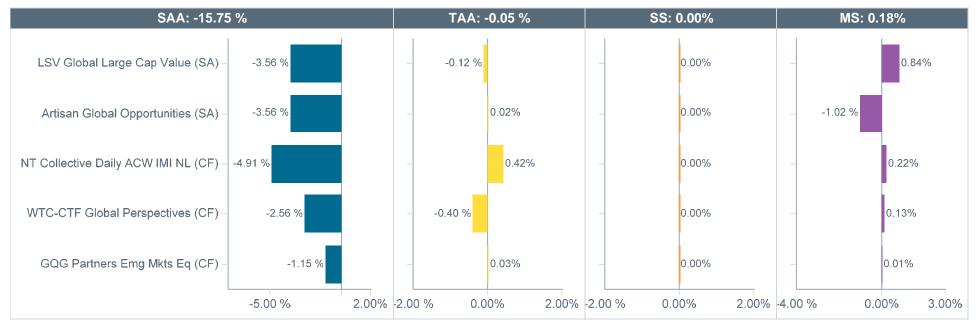


Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



**Global Equity Attribution - IDP** 

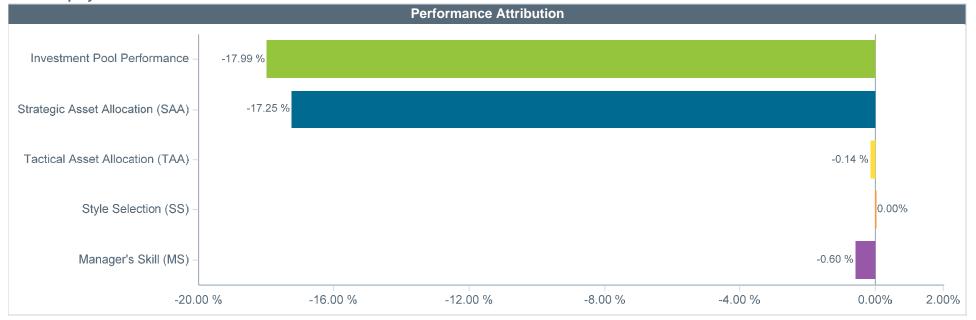


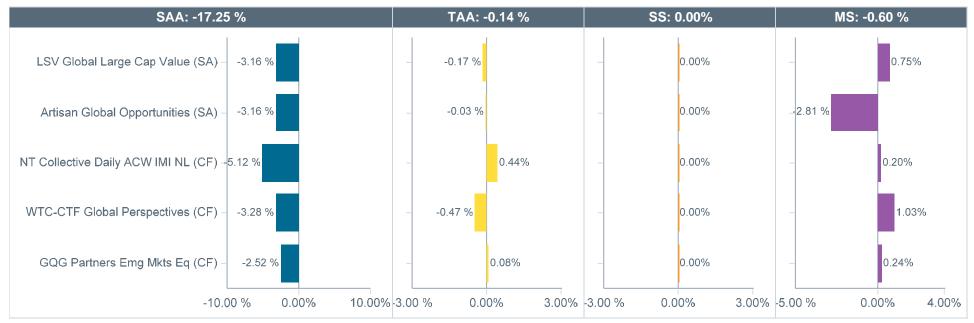


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



**Global Equity Attribution - IDP** 

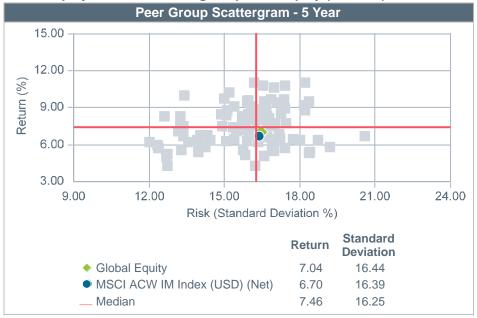


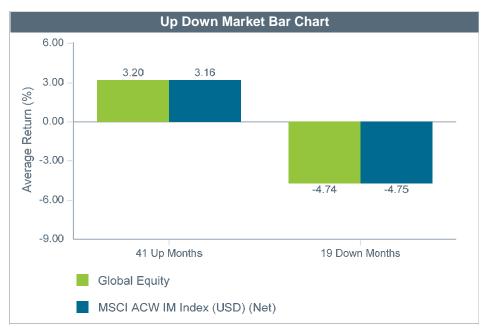


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



Global Equity vs. IM Global Large Cap Core Equity (SA + CF)







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

To	p Ten Equi	ty Holdings		
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	1.26	2.90	-1.64	-16.49
NextEra Energy Inc	1.24	0.24	1.00	-8.06
Advanced Micro Devices Inc	1.23	0.20	1.03	-30.06
Veeva Systems Inc	1.19	0.04	1.15	-6.79
Apple Inc	1.10	3.53	-2.43	-21.59
UBS Group AG	1.06	0.09	0.97	-15.94
Techtronic Industries Co Ltd	1.00	0.02	0.98	-35.02
Boston Scientific Corp	0.85	0.08	0.77	-15.85
Alphabet Inc	0.85	1.04	-0.19	-21.65
LONZA GROUP AG	0.75	0.06	0.69	-26.55
% of Portfolio	10.53	8.20	2.33	

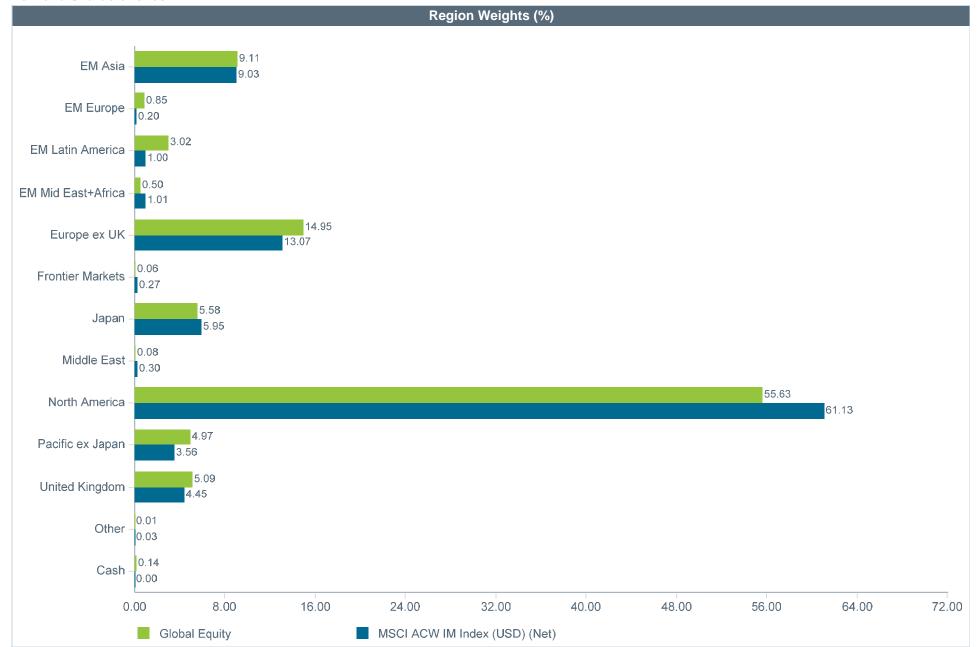
Portfol	lio Characteristics	
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	131,294	271,233
Median Mkt. Cap (\$M)	1,763	1,712
Price/Earnings Ratio	12.05	14.83
Price/Book Ratio	2.72	3.09
5 Yr. EPS Growth Rate (%)	16.93	17.29
Current Yield (%)	2.86	2.38
Beta (5 Years, Monthly)	1.00	1.00
Number of Securities	8,725	9,297





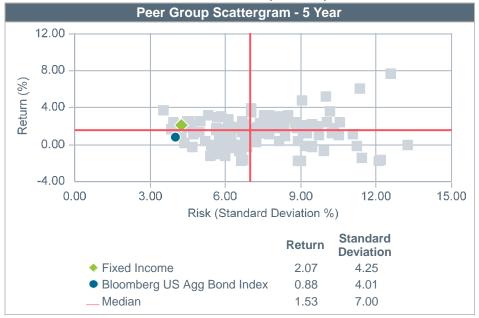


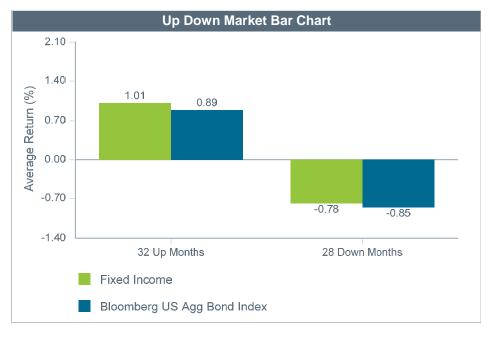


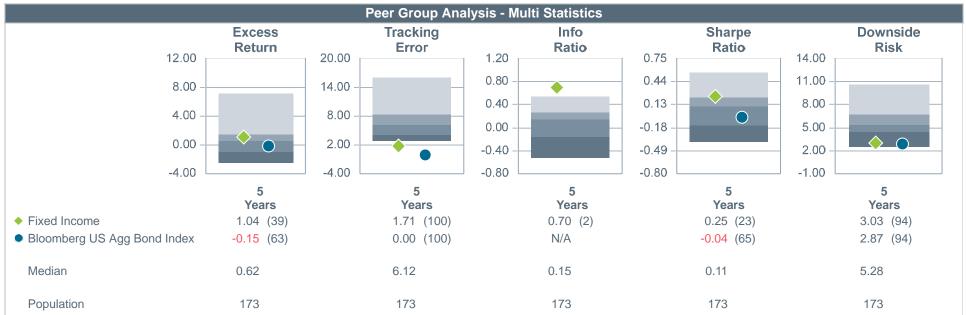




Fixed Income vs. IM Global Fixed Income (SA + CF)





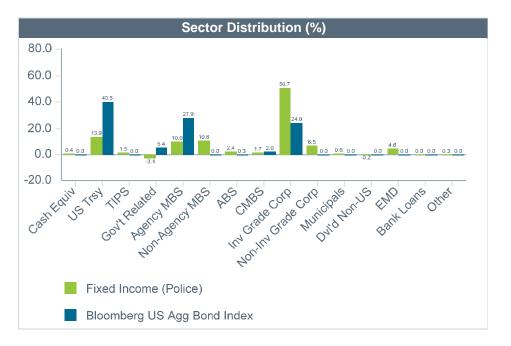


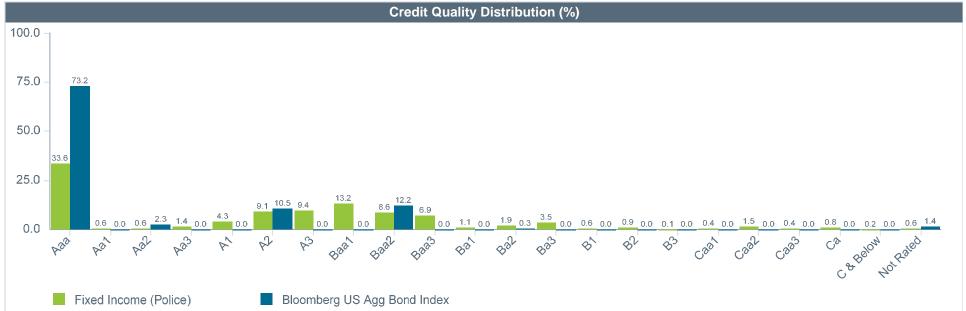
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



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

Portfolio Characteristics									
	Portfolio	Benchmark							
Effective Duration	5.44	6.44							
Avg. Maturity	7.40	8.63							
Avg. Quality	A3	Aa1/Aa2							
Coupon Rate (%)	3.00	2.49							
Yield To Maturity (%)	4.07	3.72							
Holdings Count	7,893	12,563							









### **Asset Allocation & Performance - Gross of Fees**

	Market Value (\$M)	FYTD	QTD	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)	\$72.92	-7.47	-12.26	-13.36	-10.58	6.92	6.20	6.49	N/A	22.90	2.87	26.36	6.24	05/01/2014
MSCI Wrld Index (USD) (Net)		-8.59	-16.19	-20.51	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	7.10	
Difference		1.12	3.93	7.15	3.76	-0.08	-1.47	-1.04	N/A	1.08	-13.03	-1.31	-0.86	
MSCI Wrld Val Index (USD) (Net)		-6.95	-11.59	-12.16	-6.63	4.52	4.67	5.31	7.62	21.94	-1.16	21.75	4.56	
Difference		-0.52	-0.67	-1.20	-3.95	2.40	1.53	1.18	N/A	0.96	4.03	4.61	1.68	
IM Global Large Cap Value Equity (SA+CF) Median		-7.17	-13.15	-15.54	-12.96	5.70	5.58	6.24	8.75	18.72	6.95	24.17	6.02	
Rank		57	42	39	38	30	40	43	N/A	15	70	34	44	
Artisan Global Opportunities (SA)	\$66.99	-9.71	-20.57	-30.87	-25.85	7.62	9.55	10.26	N/A	15.26	41.63	37.23	10.67	05/01/2014
MSCI Wrld Index (USD) (Net)		-8.59	-16.19	-20.51	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	7.10	
Difference		-1.12	-4.38	-10.36	-11.51	0.62	1.88	2.73	N/A	-6.56	25.73	9.56	3.57	
MSCI Wrld Grth Index (USD) (Net)		-10.54	-21.21	-28.80	-22.37	8.42	10.01	9.28	11.05	21.18	33.83	33.68	9.22	
Difference		0.83	0.64	-2.07	-3.48	-0.80	-0.46	0.98	N/A	-5.92	7.80	3.55	1.45	
IM Global Large Cap Growth Equity (SA+CF) Median		-8.64	-17.07	-25.11	-21.05	6.93	9.22	8.84	10.75	17.88	28.37	31.52	8.77	
Rank		66	78	78	65	44	43	26	N/A	61	22	15	19	
NT Collective Daily ACW IM NL (CF)	\$89.76	-7.84	-15.03	-19.73	-15.76	6.47	7.19	7.28	N/A	18.12	16.73	26.89	6.92	03/01/2014
MSCI ACW IM Index (USD) (Net)		-8.57	-15.83	-20.44	-16.52	5.98	6.70	6.78	8.71	18.22	16.25	26.35	6.41	
Difference		0.73	0.80	0.71	0.76	0.49	0.49	0.50	N/A	-0.10	0.48	0.54	0.51	
IM Global Large Cap Core Equity (SA+CF) Median		-7.97	-15.17	-19.68	-15.04	6.47	7.51	7.44	9.97	20.13	15.42	26.64	7.25	
Rank		45	47	51	55	51	57	57	N/A	64	45	47	60	
WTC-CTF Global Perspectives (CF)	\$54.43	-8.61	-16.18	-19.76	-15.58	N/A	N/A	N/A	N/A	22.80	N/A	N/A	13.77	11/01/2020
MSCI ACW Sm Cap Index (USD) (Net)		-10.40	-17.09	-22.27	-21.82	4.40	4.68	5.37	8.33	16.10	16.33	24.65	6.86	
Difference		1.79	0.91	2.51	6.24	N/A	N/A	N/A	N/A	6.70	N/A	N/A	6.91	
IM Global Small Cap Equity (SA+CF) Median		-9.09	-15.33	-23.30	-19.97	6.07	5.35	5.81	9.55	21.14	15.15	26.01	6.74	
Rank		39	62	29	24	N/A	N/A	N/A	N/A	40	N/A	N/A	33	
GQG Partners Emg Mkts Eq (CF)	\$31.57	-5.45	-11.07	-17.96	-22.15	N/A	N/A	N/A	N/A	-0.82	N/A	N/A	-5.16	11/01/2020
MSCI Emg Mkts Index (USD) (Net)		-6.23	-11.45	-17.63	-25.28	0.57	2.18	2.79	3.06	-2.54	18.31	18.44	-3.55	
Difference		0.78	0.38	-0.33	3.13	N/A	N/A	N/A	N/A	1.72	N/A	N/A	-1.61	
IM Emerging Markets Equity (SA+CF) Median		-6.55	-12.05	-18.20	-25.03	1.46	2.93	3.80	4.41	1.08	18.14	19.62	-2.69	
Rank		30	31	50	38	N/A	N/A	N/A	N/A	62	N/A	N/A	66	

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.



**Asset Allocation & Performance - Gross of Fees** 

	Market Value (\$M)	FYTD	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Fixed Income														
FCI Advisors (SA)	\$181.65	-1.31	-5.61	-11.43	-11.31	-0.47	1.42	1.93	1.91	-1.92	10.49	10.01	7.10	01/01/1975
Bloomberg US Gov't Crdt Bond Index		-1.11	-5.03	-11.05	-10.85	-0.77	1.05	1.63	1.67	-1.75	8.93	9.71	6.90	
Difference		-0.20	-0.58	-0.38	-0.46	0.30	0.37	0.30	0.24	-0.17	1.56	0.30	0.20	
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	N/A	
Difference		-0.38	-0.92	-1.08	-1.02	0.47	0.54	0.51	0.37	-0.37	2.98	1.29	N/A	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median		-1.19	-4.85	-10.35	-10.29	-0.44	1.29	1.89	2.03	-1.21	8.52	9.20	N/A	
Rank		63	89	89	87	54	38	45	66	94	6	10	N/A	
PIMCO:Income;Inst (PIMIX)	\$99.52	-2.51	-5.06	-8.93	-8.02	0.83	N/A	N/A	N/A	3.11	6.31	8.59	2.30	09/01/2017
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	0.63	
Difference		-1.58	-0.37	1.42	2.27	1.77	N/A	N/A	N/A	4.66	-1.20	-0.13	1.67	
IM Multi-Sector General Bond (MF) Median		-3.16	-6.05	-10.47	-10.26	0.57	2.37	3.16	3.78	2.55	7.52	11.11	2.08	
Rank		35	31	26	28	44	N/A	N/A	N/A	45	66	82	41	
Direct Lending														
White Oak Fixed Income C LP	\$65.33	0.00	0.00	0.76	3.10	5.12	N/A	N/A	N/A	6.85	3.68	9.58	7.26	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	0.00	0.00	2.50	4.75	5.62	5.54	5.40	5.05	5.70	7.39	5.50	
Difference		0.00	0.00	0.76	0.60	0.37	N/A	N/A	N/A	1.80	-2.02	2.19	1.76	
Real Estate														
Morgan Stanley Prime Property (CF)	\$86.94	3.43	3.43	11.03	29.28	13.06	11.38	11.41	N/A	22.89	2.31	7.38	11.97	10/01/2014
NCREIF ODCE Index (AWA) (Gross)		4.77	4.77	12.49	29.51	12.66	10.54	10.34	11.16	22.17	1.19	5.34	10.75	
Difference		-1.34	-1.34	-1.46	-0.23	0.40	0.84	1.07	N/A	0.72	1.12	2.04	1.22	
PGIM Real Estate PRISA II (CF)	\$88.87	4.62	4.62	12.64	29.33	13.34	11.45	11.64	12.40	23.18	0.98	7.52	8.92	10/01/2004
NCREIF ODCE Index (AWA) (Gross)		4.77	4.77	12.49	29.51	12.66	10.54	10.34	11.16	22.17	1.19	5.34	8.70	
Difference		-0.15	-0.15	0.15	-0.18	0.68	0.91	1.30	1.24	1.01	-0.21	2.18	0.22	
Absolute Return														
Grosvenor FOB (CF) (Net)	\$105.46	-1.99	-3.09	-7.93	-3.73	4.69	3.61	3.04	N/A	6.32	14.40	6.30	3.24	08/01/2014
HFN FOF Multi-Strat Index (Net)		-3.19	-3.89	-4.58	-2.69	4.36	3.64	2.52	3.58	6.77	9.79	6.75	2.72	
Difference		1.20	0.80	-3.35	-1.04	0.33	-0.03	0.52	N/A	-0.45	4.61	-0.45	0.52	
ICE BofAML 3 Mo US T-Bill Index+5%		0.91	1.33	2.62	5.18	5.66	6.17	5.93	5.67	5.05	5.70	7.39	5.83	
Difference		-2.90	-4.42	-10.55	-8.91	-0.97	-2.56	-2.89	N/A	1.27	8.70	-1.09	-2.59	
Private Equity														
Abbott Capital Private Equity Fund LP (CF) (Net)	\$5.19	0.00	0.00	-4.08	-4.31	13.46	13.69	12.28	12.51	20.61	22.76	10.87	6.90	10/01/2005
J.P. Morgan Private Equity III (CF) (Net)	\$2.23	0.00	-0.36	-0.82	14.61	21.06	15.82	13.53	14.59	56.05	11.80	7.53	8.47	04/01/2006

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.



**Asset Allocation & Performance - Net of Fees** 

	Market Value (\$M)	FYTD	QTD	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)	\$72.92	-7.47	-12.41	-13.63	-11.14	6.25	5.53	5.82	N/A	22.15	2.22	25.58	5.58	05/01/2014
MSCI Wrld Index (USD) (Net)		-8.59	-16.19	-20.51	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	7.10	
Difference		1.12	3.78	6.88	3.20	-0.75	-2.14	-1.71	N/A	0.33	-13.68	-2.09	-1.52	
MSCI Wrld Val Index (USD) (Net)		-6.95	-11.59	-12.16	-6.63	4.52	4.67	5.31	7.62	21.94	-1.16	21.75	4.56	
Difference		-0.52	-0.82	-1.47	-4.51	1.73	0.86	0.51	N/A	0.21	3.38	3.83	1.02	
Artisan Global Opportunities (SA)	\$66.99	-9.71	-20.71	-31.12	-26.38	6.86	8.76	9.46	N/A	14.46	40.64	36.25	9.88	05/01/2014
MSCI Wrld Index (USD) (Net)		-8.59	-16.19	-20.51	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	7.10	
Difference		-1.12	-4.52	-10.61	-12.04	-0.14	1.09	1.93	N/A	-7.36	24.74	8.58	2.78	
MSCI Wrld Grth Index (USD) (Net)		-10.54	-21.21	-28.80	-22.37	8.42	10.01	9.28	11.05	21.18	33.83	33.68	9.22	
Difference		0.83	0.50	-2.32	-4.01	-1.56	-1.25	0.18	N/A	-6.72	6.81	2.57	0.66	
NT Collective Daily ACW IM NL (CF)	\$89.76	-7.86	-15.05	-19.77	-15.84	6.38	7.09	7.18	N/A	18.01	16.62	26.78	6.83	03/01/2014
MSCI ACW IM Index (USD) (Net)		-8.57	-15.83	-20.44	-16.52	5.98	6.70	6.78	8.71	18.22	16.25	26.35	6.41	
Difference		0.71	0.78	0.67	0.68	0.40	0.39	0.40	N/A	-0.21	0.37	0.43	0.42	
WTC-CTF Global Perspectives (CF)	\$54.43	-8.74	-16.36	-20.10	-16.28	N/A	N/A	N/A	N/A	21.82	N/A	N/A	12.85	11/01/2020
MSCI ACW Sm Cap Index (USD) (Net)		-10.40	-17.09	-22.27	-21.82	4.40	4.68	5.37	8.33	16.10	16.33	24.65	6.86	
Difference		1.66	0.73	2.17	5.54	N/A	N/A	N/A	N/A	5.72	N/A	N/A	5.99	
GQG Partners Emg Mkts Eq (CF)	\$31.57	-5.58	-11.26	-18.30	-22.79	N/A	N/A	N/A	N/A	-1.61	N/A	N/A	-5.92	11/01/2020
MSCI Emg Mkts Index (USD) (Net)		-6.23	-11.45	-17.63	-25.28	0.57	2.18	2.79	3.06	-2.54	18.31	18.44	-3.55	
Difference		0.65	0.19	-0.67	2.49	N/A	N/A	N/A	N/A	0.93	N/A	N/A	-2.37	
Fixed Income														
FCI Advisors (SA)	\$181.65	-1.33	-5.65	-11.50	-11.44	-0.62	1.27	1.78	N/A	-2.06	10.33	9.85	2.07	07/01/2013
Bloomberg US Gov't Crdt Bond Index		-1.11	-5.03	-11.05	-10.85	-0.77	1.05	1.63	1.67	-1.75	8.93	9.71	1.92	
Difference		-0.22	-0.62	-0.45	-0.59	0.15	0.22	0.15	N/A	-0.31	1.40	0.14	0.15	
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	1.79	
Difference		-0.40	-0.96	-1.15	-1.15	0.32	0.39	0.36	N/A	-0.51	2.82	1.13	0.28	
PIMCO:Income;Inst (PIMIX)	\$99.52	-2.60	-5.18	-9.16	-8.48	0.33	N/A	N/A	N/A	2.61	5.79	8.04	1.78	09/01/2017
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	0.63	
Difference		-1.67	-0.49	1.19	1.81	1.27	N/A	N/A	N/A	4.16	-1.72	-0.68	1.15	

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.



**Asset Allocation & Performance - Net of Fees** 

	Market Value (\$M)	FYTD	QTD	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	\$65.33	0.00	0.00	0.76	1.80	3.65	N/A	N/A	N/A	4.60	2.66	7.41	5.58	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	0.00	0.00	2.50	4.75	5.62	5.54	5.40	5.05	5.70	7.39	5.50	
Difference		0.00	0.00	0.76	-0.70	-1.10	N/A	N/A	N/A	-0.45	-3.04	0.02	0.08	
Real Estate														
Morgan Stanley Prime Property (CF)	\$86.94	3.04	3.04	10.27	27.89	11.78	10.17	10.19	N/A	21.48	1.26	6.17	10.75	10/01/2014
NCREIF ODCE Index (AWA) (Net)		4.54	4.54	12.00	28.31	11.66	9.55	9.35	10.15	21.02	0.34	4.39	9.76	
Difference		-1.50	-1.50	-1.73	-0.42	0.12	0.62	0.84	N/A	0.46	0.92	1.78	0.99	
PGIM Real Estate PRISA II (CF)	\$88.87	4.34	4.34	12.05	27.98	12.10	10.23	10.45	N/A	21.86	-0.16	6.32	11.33	07/01/2013
NCREIF ODCE Index (AWA) (Net)		4.54	4.54	12.00	28.31	11.66	9.55	9.35	10.15	21.02	0.34	4.39	10.05	
Difference		-0.20	-0.20	0.05	-0.33	0.44	0.68	1.10	N/A	0.84	-0.50	1.93	1.28	
Absolute Return														
Grosvenor FOB (CF)	\$105.46	-1.99	-3.09	-7.93	-3.73	4.69	3.61	3.04	N/A	6.32	14.40	6.30	3.24	08/01/2014
HFN FOF Multi-Strat Index (Net)		-3.19	-3.89	-4.58	-2.69	4.36	3.64	2.52	3.58	6.77	9.79	6.75	2.72	
Difference		1.20	0.80	-3.35	-1.04	0.33	-0.03	0.52	N/A	-0.45	4.61	-0.45	0.52	
ICE BofAML 3 Mo US T-Bill Index+5%		0.91	1.33	2.62	5.18	5.66	6.17	5.93	5.67	5.05	5.70	7.39	5.83	
Difference		-2.90	-4.42	-10.55	-8.91	-0.97	-2.56	-2.89	N/A	1.27	8.70	-1.09	-2.59	
Private Equity														
Abbott Capital Private Equity LP (CF)	\$5.19	0.00	0.00	-4.08	-4.31	13.46	13.69	12.28	N/A	20.61	22.76	10.87	12.81	07/01/2013
J.P. Morgan Private Equity III (CF)	\$2.23	0.00	-0.36	-0.82	14.61	21.06	15.82	13.53	N/A	56.05	11.80	7.53	15.19	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.



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

	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	\$7.51	-3.04	11.81	-3.04	11.72	17.41	15.22	13.16	N/A	28.38	20.44	10.04	13.94	07/01/2013
Abbott Capital Private Equity LP (CF) (Net)	\$5.19	-4.08	5.25	-4.08	5.25	15.13	14.42	12.82	N/A	20.61	22.76	10.87	13.19	07/01/2013
Cambridge US Prvt Eq Index		0.58	27.60	0.58	27.60	23.05	19.71	16.93	16.15	40.41	21.67	13.82	16.66	
Difference		-4.66	-22.35	-4.66	-22.35	-7.92	-5.29	-4.11	N/A	-19.80	1.09	-2.95	-3.47	
J.P. Morgan Private Equity III (CF) (Net)	\$2.32	-0.46	33.29	-0.46	32.78	23.87	17.26	14.00	N/A	56.05	11.80	7.53	15.70	07/01/2013
Cambridge US Prvt Eq Index		0.58	27.60	0.58	27.60	23.05	19.71	16.93	16.15	40.41	21.67	13.82	16.66	
Difference		-1.04	5.69	-1.04	5.18	0.82	-2.45	-2.93	N/A	15.64	-9.87	-6.29	-0.96	
Police - Direct Lending	\$65.33	0.76	2.56	0.76	2.56	4.20	N/A	N/A	N/A	4.60	2.66	7.41	5.94	04/01/2018
White Oak Fixed Income C LP	\$65.33	0.76	2.56	0.76	2.56	4.20	N/A	N/A	N/A	4.60	2.66	7.41	5.94	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		1.27	4.64	1.27	5.07	5.85	6.19	5.92	5.66	5.05	5.70	7.39	6.19	
Difference		-0.51	-2.08	-0.51	-2.51	-1.65	N/A	N/A	N/A	-0.45	-3.04	0.02	-0.25	

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

Fund Name	Vintage	e Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	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	652,366	6.66	10.42	1.46
J.P. Morgan European Corporate Finance Investors III	2006	Private Equity - Non-US Private Equity	1,500,000	1,443,444	2,158,650	104,451	7.73	10.86	1.57
J.P. Morgan U.S. Corporate Finance Investors III	2006	Private Equity - Buyout	6,000,000	6,033,615	11,713,108	767,081	13.49	8.83	2.07
J.P. Morgan Venture Capital Investors III	2006	Private Equity - Venture	2,500,000	2,540,695	3,691,654	1,443,701	10.29	12.29	2.02
Abbott Capital Private Equity VI LP	2008	Private Equity - Fund of Funds	10,000,000	9,950,088	15,170,011	4,537,702	13.64	14.09	1.98
			35,400,000	34,844,243	53,726,753	7,505,301	9.94	11.02	1.76

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.



Alternative Investment	3/31/2022	3/31/2021	3/31/2020	3/31/2019	3/31/2018	3/31/2017	3/31/2016	3/31/2015	3/31/2014
Abbott Capital Private Equity V LP	6.66	6.94	6.49	6.80	6.78	6.91	6.99	7.48	7.05
Index	10.42	10.25	9.03	9.57	9.58	9.34	8.88	9.56	9.11
Difference	-3.76	-3.31	-2.54	-2.77	-2.80	-2.43	-1.89	-2.08	-2.06
Abbott Capital Private Equity VI LP	13.63	13.43	11.35	12.35	11.92	10.69	9.21	8.32	6.03
Index	14.09	13.97	11.74	13.14	13.58	13.43	12.54	16.34	17.91
Difference	-0.46	-0.54	-0.39	-0.79	-1.66	-2.74	-3.33	-8.02	-11.88
JP Morgan European Corporate Finance Investors III	7.73	7.50	7.57	7.51	7.60	7.02	7.12	7.20	7.53
Index	10.83	10.69	9.42	10.04	10.03	9.75	9.18	10.11	9.70
Difference	-3.10	-3.19	-1.85	-2.53	-2.43	-2.73	-2.06	-2.91	-2.17
JP Morgan US Corporate Finance Investors III	13.50	13.25	13.29	13.10	13.43	13.27	13.19	13.60	11.93
Index	8.83	8.83	8.83	8.83	8.83	8.83	8.78	9.08	8.75
Difference	4.67	4.42	4.46	4.27	4.60	4.44	4.41	4.52	3.18
JP Morgan Venture Capital Investors III	10.29	10.05	9.21	9.60	9.62	9.86	11.22	11.84	9.44
Index	12.28	12.13	10.44	11.35	11.46	11.23	10.63	11.92	11.78
Difference	-1.99	-2.08	-1.23	-1.75	-1.84	-1.37	0.59	-0.08	-2.34
Total PE Composite Performance	10.00	9.86	9.15	9.43	9.39	9.15	9.05	9.37	8.36
Total Index Performance	11.02	10.88	9.74	10.28	10.32	10.05	9.50	10.42	10.04
Difference	-1.02	-1.02	-0.59	-0.85	-0.93	-0.90	-0.45	-1.05	-1.68

<sup>\*</sup>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)											
Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return							
83,107,610	135,910	-10,326,339	72,917,182	-12.41							
	Market Value (\$)	Beginning Net Market Value (\$) Cash Flow (\$)	Beginning Net Gain/Loss (\$) Market Value (\$) Cash Flow (\$)	Beginning Net Gain/Loss (\$) Ending Market Value (\$) Cash Flow (\$) Market Value (\$)							

	Artisan Global Opportunities (SA)											
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return							
Quarter	84,327,539	148,969	-17,482,734	66,993,774	-20.71							

NT Collective Daily ACW IM NL (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	105,643,395	21,731	-15,900,766	89,764,360	-15.05

WTC-CTF Global Perspectives (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	65,072,207	-	-10,646,544	54,425,663	-16.36

GQG Partners Emg Mkts Eq (CF)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	35,579,273	-	-4,005,397	31,573,876	-11.26

FCI Advisors (SA)					
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return
Quarter	192,449,989	68,927	-10,869,973	181,648,943	-5.65

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

PIMCO:Income;Inst (PIMIX)										
Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return						
111,462,465	-6,250,000	-5,696,052	99,516,413	-5.18						
	Market Value (\$)	Beginning Net Market Value (\$) Cash Flow (\$)	Beginning Net Market Value (\$) Cash Flow (\$) Gain/Loss (\$)	Beginning Net Gain/Loss (\$) Ending Market Value (\$) Cash Flow (\$) Market Value (\$)						

Morgan Stanley Prime Property (CF)										
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return					
Quarter	84,373,413	-	2,567,431	86,940,844	3.04					

PGIM Real Estate PRISA II (CF)									
% Return	Ending Market Value (\$)	Gain/Loss (\$)	Net Cash Flow (\$)	Beginning Market Value (\$)	Periods Ending				
4.34	88,868,153	3,697,736	-	85,170,417	Quarter				
	00,000,133	3,097,730	-	65,170,417	Quarter				

Grosvenor FOB (CF)										
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return					
Quarter	108,821,389	-	-3,361,563	105,459,826	-3.09					

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

Manager	Fee Schedule	Aggregate Assets (\$)	Estimated Annual Fee (%)	Market Value as of 6/30/2022	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	86,009,538	0.64	72,917,182	464,628
Artisan Global Opportunities (SA)	0.80 % of First \$50 M 0.60 % of Next \$50 M 0.50 % Thereafter	66,993,774	0.75	66,993,774	501,963
NT Collective Daily ACW IM NL (CF)	0.10 % of First \$50 M 0.08 % Thereafter	104,427,038	0.09	89,764,360	80,407
WTC-CTF Global Perspectives (CF)	1.00 % of Assets	63,386,367	1.00	54,425,663	544,257
GQG Partners Emg Mkts Eq (CF)	0.85 % of First \$25 M 0.80 % Thereafter	36,995,771	0.83	31,573,876	263,259
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	213,493,887	0.15	181,648,943	268,178
PIMCO:Income;Inst (PIMIX)	0.50 % of Assets	119,150,143	0.50	99,516,413	497,582
White Oak Fixed Income C LP	1.00% of Assets	76,341,239	1.00	65,334,637	653,346
Morgan Stanley Prime Property (CF)	0.84 % of Assets	101,621,831	0.84	86,940,844	730,303



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

Manager	Fee Schedule	Aggregate Assets (\$)	Estimated Annual Fee (%)	Market Value as of 6/30/2022	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	103,800,448	1.11	88,868,153	986,625
Grosvenor FOB (CF)	1.15 % of First \$25 M 1.00 % of Next \$25 M 0.80 % of Next \$50 M 0.60 % Thereafter	121,664,629	0.88	105,459,826	925,307
Coltv. Short Term Invt. Fund	0.15 % of Assets	1,718,471	0.15	821,433	1,232

#### 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

Venture Capital Investors III

Management fee for initial 8 years: 0.90%

Management fee for initial 8 years: 1.10%

Average fee over 15 years: 0.76%

Average fee over 15 years: 0.93%

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







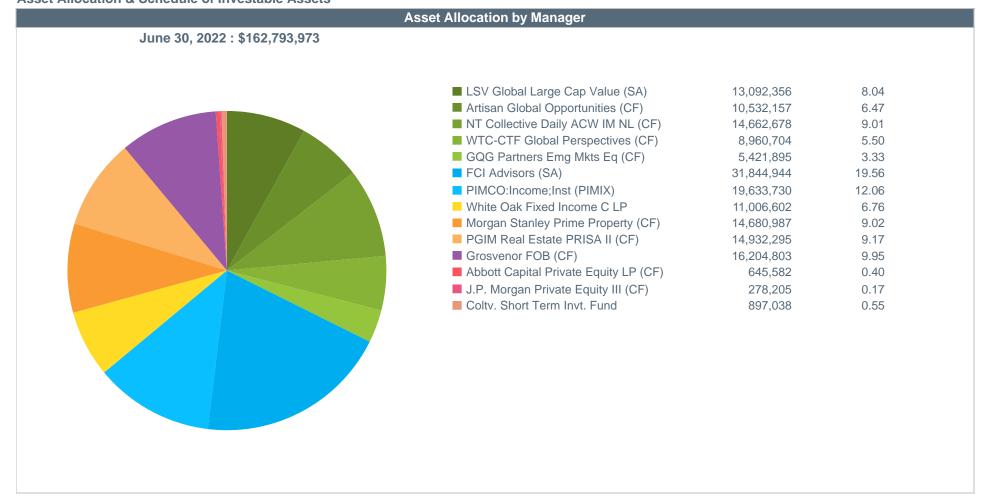
# Kansas City Civilian Employees' Retirement Systems (KCPERS) Investment Objective Review As of June 30, 2022

Asset Allocation											
	Yes	No	Current	Min.	Target	Max.					
Global Equity		✓	32.4%	33%	38%	43%					
Fixed Income	✓		31.6%	26%	31%	36%					
Direct Lending	✓		6.8%	4%	7%	10%					
Real Estate			18.2%	9%	13%	17%					
Absolute Return	✓		10.0%	7%	11%	15%					
Private Equity		✓	0.6%	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)	Kaiik			
Total Fund				
Total fund composite rate of return exceeds the current Target Allocation Index (gross of fees) over 5 years.	6.12%	1		
The total fund return is equal to or exceeds 7.1% annualized return (gross of fees) over 5				
years.	6.12%		1	
Global Equity				
The global equity composite rate of return exceeds the benchmark (net of fees).	6.65%		1	
The global equity composite performed at the fortieth (40th) percentile or better.	57		1	
LSV Global Large Cap Value (SA)				
The manager return exceeds the benchmark (net of fees).	5.84%		1	
The manager performed at the fortieth (40th) percentile or better.	33	✓		
Artisan Global Opportunities (SA)				
The manager return exceeds the benchmark (net of fees).	8.50%	✓		
The manager performed at the fortieth (40th) percentile or better.	43		1	
NT Collective Daily ACW IM NL (CF)		,		
The manager return exceeds the benchmark (net of fees).	7.05%	1		
The manager performed at the fortieth (40th) percentile or better.	4	✓		
WTC-CTF Global Perspectives (CF)	6.02%	1		
The manager return exceeds the benchmark (net of fees).  The manager performed at the fortieth (40th) percentile or better.	15	-/		
GQG Partners Emg Mkts Eq (CF)	15	· ·		
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	INA			mountaient matery.
The fixed income composite rate of return exceeds the benchmark (net of fees).	1.76%	4		
The fixed income composite performed at the fortieth (40th) percentile or better.	6	1		
FCI Advisors (SA)				
The manager return exceeds the benchmark (net of fees).	1.24%	✓		
The manager performed at the fortieth (40th) percentile or better.	14	1		
PIMCO:Income;Inst (PIMIX)				
The manager return exceeds the benchmark (net of fees).	2.04%	√		
The manager performed at the fortieth (40th) percentile or better.	20	✓		
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).	10.22%	1		
Morgan Stanley Prime Property (CF)				
The manager return exceeds the benchmark (net of fees).	10.17%	1		
PGIM Real Estate PRISA II (CF)				
The manager return exceeds the benchmark (net of fees).  Absolute Return	10.23%	1		
The absolute return composite rate of return exceeds the benchmark (net of fees).	3.30%		1	
Grosvenor FOB (CF)				
The manager return exceeds the benchmark (net of fees).	3.61%		1	
Private Equity				
The private equity composite rate of return exceeds the benchmark (net of fees).	14.41%		1	

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.





	Schedule of Investable Assets										
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return						
QTD	175,383,709	-448,269	-12,141,467	162,793,973	-6.94						
CYTD	182,874,897	-1,499,185	-18,581,738	162,793,973	-10.23						
FYTD	168,095,609	-401,840	-4,899,796	162,793,973	-2.93						

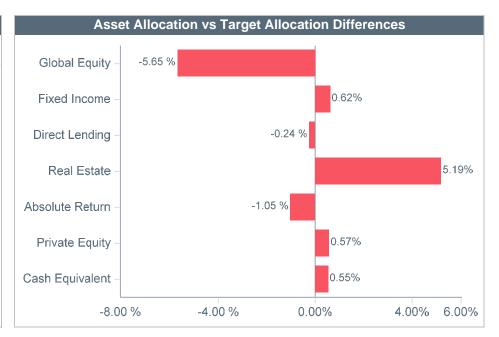
Allocations shown may not sum up to 100% exactly due to rounding. Performance shown is net of fees.

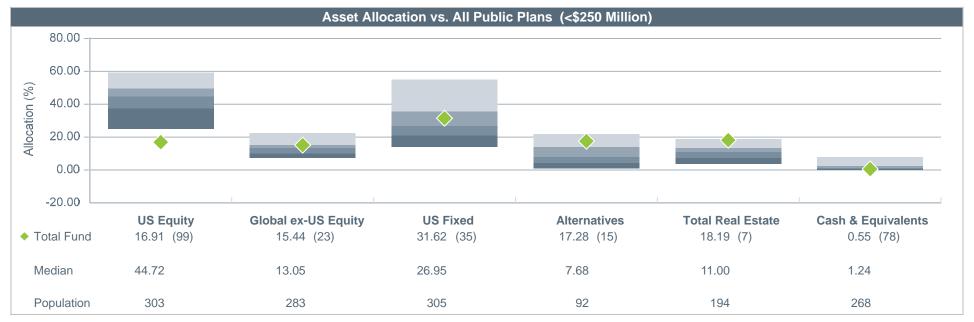


### Kansas City Police Employees' Retirement Systems KCPERS Civilian Employees

**Total Fund vs. All Public Plans (<\$250 Million)** 

	Asset Alloca	ition vs. Tar	get Alloca	ation	
	Market Value (\$)	Allocation (%)	Target (%)	Minimum (%)	Maximum (%)
Total Fund	162,793,973	100.00	100.00	-	-
Global Equity	52,669,789	32.35	38.00	33.00	43.00
Fixed Income	51,478,673	31.62	31.00	26.00	36.00
Direct Lending	11,006,602	6.76	7.00	4.00	10.00
Real Estate	29,613,281	18.19	13.00	9.00	17.00
Absolute Return	16,204,803	9.95	11.00	7.00	15.00
Private Equity	923,787	0.57	0.00	0.00	0.00
Cash Equivalent	897,038	0.55	0.00	0.00	5.00





Parentheses contain percentile ranks. Allocations may not sume up to 100% exactly due to rounding. As the Board has elected not to make additional commitments to Private Equity, the Private Equity Allocation will become below target. Increased allocations to U.S. and International Equity will result.



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

	Market Value (\$M)	FYTD	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
Total Fund (Gross)	\$162.79	-2.83	-6.82	-10.00	-6.03	5.71	6.12	6.17	6.89	10.75	12.37	15.42
All Public Plans (<\$250 Million)		-4.97	-10.37	-14.32	-10.33	5.40	6.26	6.19	7.43	13.11	12.76	19.41
Rank		4	5	7	8	40	56	53	72	84	56	91
Total Fund	\$162.79	-2.93	-6.94	-10.23	-6.53	5.16	5.57	5.64	N/A	10.13	11.83	14.80
Target Allocation Index		-2.86	-6.89	-9.57	-5.70	4.80	5.50	5.56	6.44	9.89	10.25	14.39
Difference		-0.07	-0.05	-0.66	-0.83	0.36	0.07	0.08	N/A	0.24	1.58	0.41
7.1% Annualized Return		1.15	1.73	3.49	7.10	7.10	7.10	7.10	7.10	7.10	7.10	7.10
Difference		-4.08	-8.67	-13.72	-13.63	-1.94	-1.53	-1.46	N/A	3.03	4.73	7.70
Global Equity	\$52.67	-8.12	-15.51	-20.99	-17.90	6.02	6.65	7.01	N/A	16.82	18.10	27.74
MSCI ACW IM Index (USD) (Net)		-8.57	-15.83	-20.44	-16.52	5.98	6.70	6.78	8.71	18.22	16.25	26.35
Difference		0.45	0.32	-0.55	-1.38	0.04	-0.05	0.23	N/A	-1.40	1.85	1.39
IM Global Large Cap Equity (MF) Median		-8.35	-15.82	-23.02	-19.60	5.48	7.30	6.97	9.20	16.85	20.30	29.63
Rank		44	48	28	39	43	57	50	N/A	52	61	72
Fixed Income	\$51.48	-1.85	-5.49	-10.63	-10.33	-0.16	1.76	2.30	N/A	-0.37	8.97	9.31
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72
Difference		-0.92	-0.80	-0.28	-0.04	0.78	0.88	0.88	N/A	1.18	1.46	0.59
IM Global Fixed Income (MF) Median		-3.10	-7.00	-12.55	-14.42	-2.33	-0.15	0.88	0.63	-2.73	8.15	8.08
Rank		14	31	39	30	10	6	8	N/A	10	40	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.



# Kansas City Police Employees' Retirement Systems KCPERS Civilian Employees

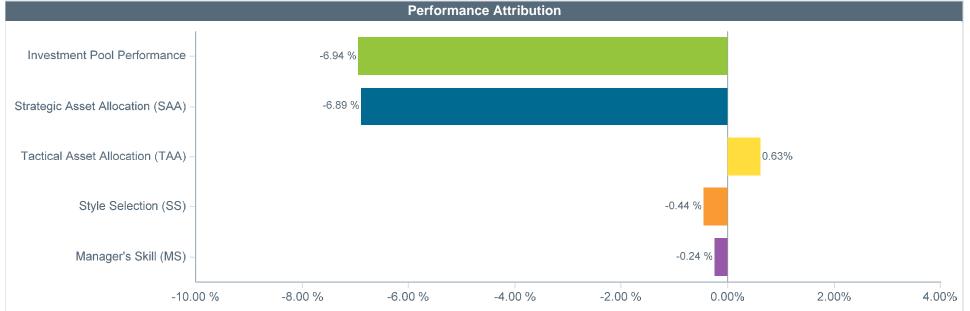
**Asset Allocation & Performance** 

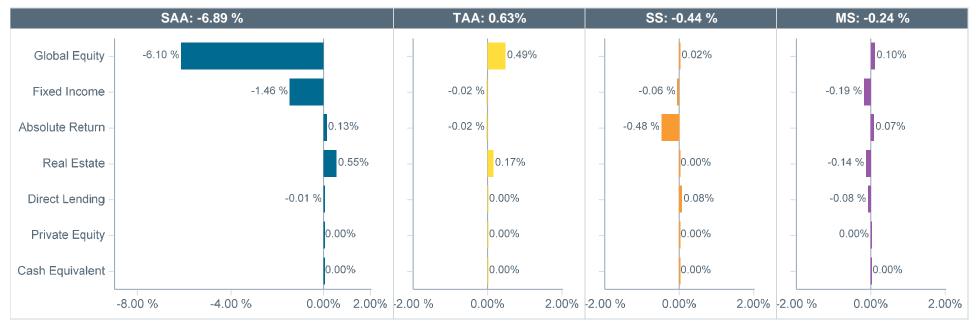
	Market Value (\$M)	FYTD	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019
Direct Lending	\$11.01	0.00	0.00	0.76	1.80	3.66	N/A	N/A	N/A	4.60	2.66	7.41
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	0.00	0.00	2.50	4.75	5.62	5.54	5.40	5.05	5.70	7.39
Difference		0.00	0.00	0.76	-0.70	-1.09	N/A	N/A	N/A	-0.45	-3.04	0.02
Real Estate	\$29.61	3.69	3.69	11.16	27.94	11.97	10.22	10.34	N/A	21.77	0.56	6.24
NCREIF ODCE Index (AWA) (Net)		4.54	4.54	12.00	28.31	11.66	9.55	9.35	10.15	21.02	0.34	4.39
Difference		-0.85	-0.85	-0.84	-0.37	0.31	0.67	0.99	N/A	0.75	0.22	1.85
Absolute Return	\$16.20	-1.99	-3.09	-7.93	-3.73	3.93	3.30	2.90	N/A	6.32	11.40	7.81
Long Term Absolute Return Custom Benchmark		0.91	1.33	2.62	5.18	5.56	6.16	6.02	N/A	5.05	5.62	7.40
Difference		-2.90	-4.42	-10.55	-8.91	-1.63	-2.86	-3.12	N/A	1.27	5.78	0.41
Absolute Return Custom Benchmark		-3.19	-3.89	-4.58	-2.69	4.61	4.26	3.43	N/A	6.77	9.28	10.04
Difference		1.20	0.80	-3.35	-1.04	-0.68	-0.96	-0.53	N/A	-0.45	2.12	-2.23
Private Equity	\$0.92	0.00	-0.11	-3.15	0.50	15.60	14.41	12.74	N/A	28.80	20.47	10.10
Cambridge US Prvt Eq Index (1 Qtr Lag)		0.58	0.58	6.62	27.60	23.05	19.71	16.93	16.15	48.25	12.66	7.73
Difference		-0.58	-0.69	-9.77	-27.10	-7.45	-5.30	-4.19	N/A	-19.45	7.81	2.37

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.





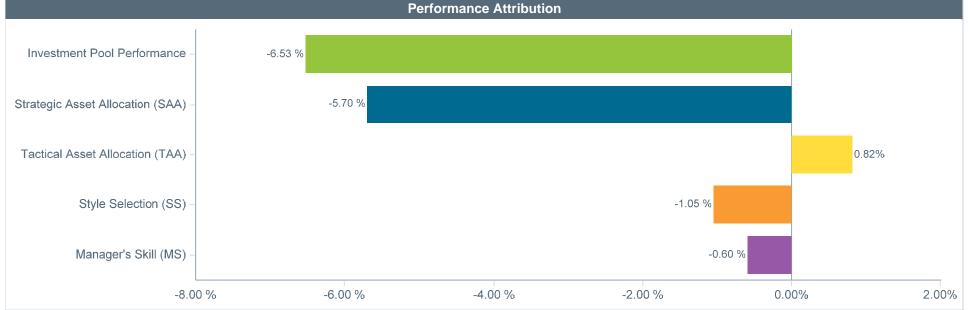


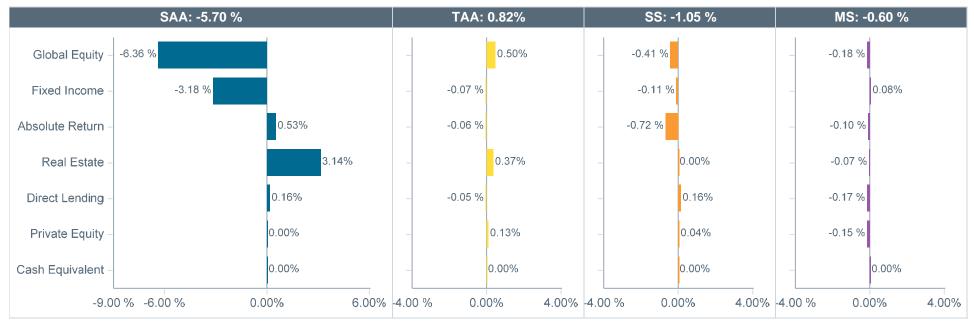


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.





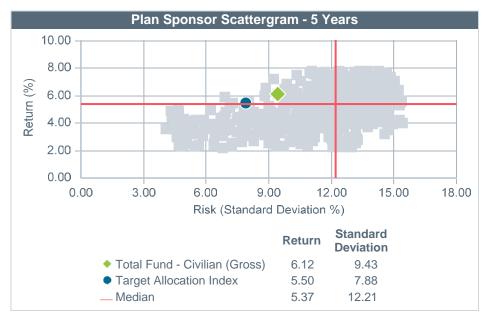


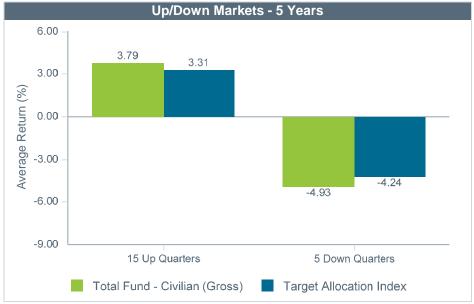


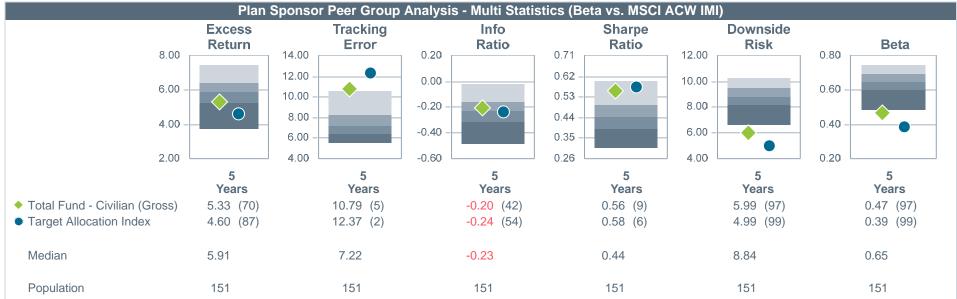
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Total Fund - Civilian (Gross) vs. All Public Plans (<\$250 Million)

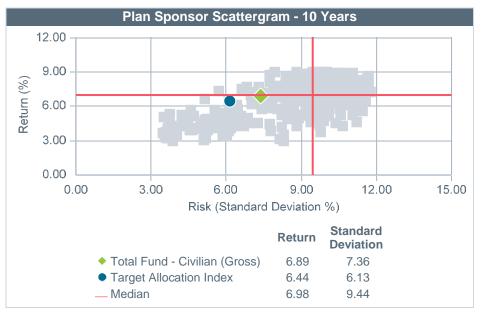


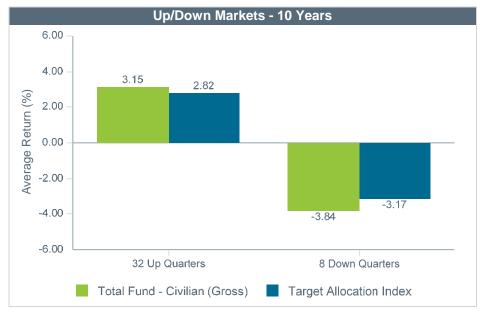


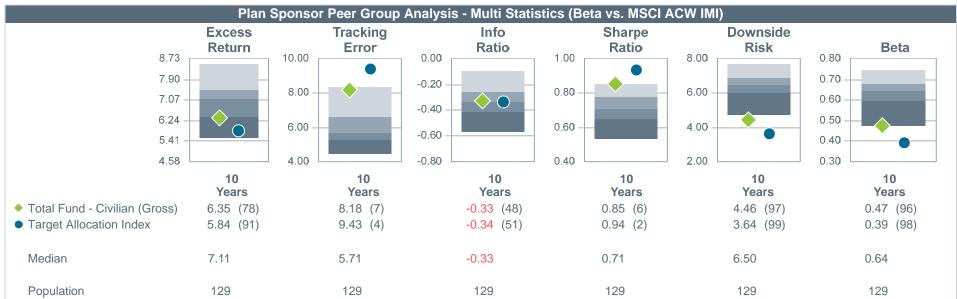


Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.





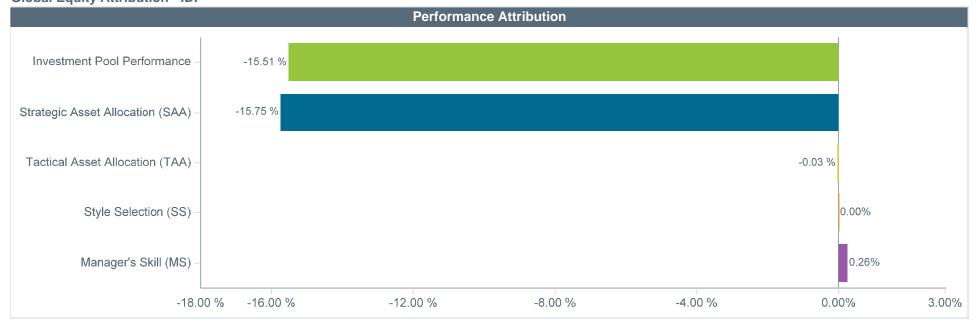


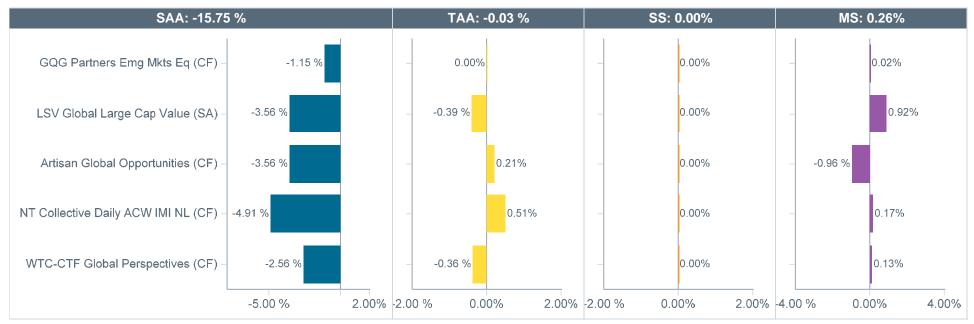


Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks.



#### Kansas City Police Employees' Retirement Systems KCPERS Civilian Employees Global Equity Attribution - IDP

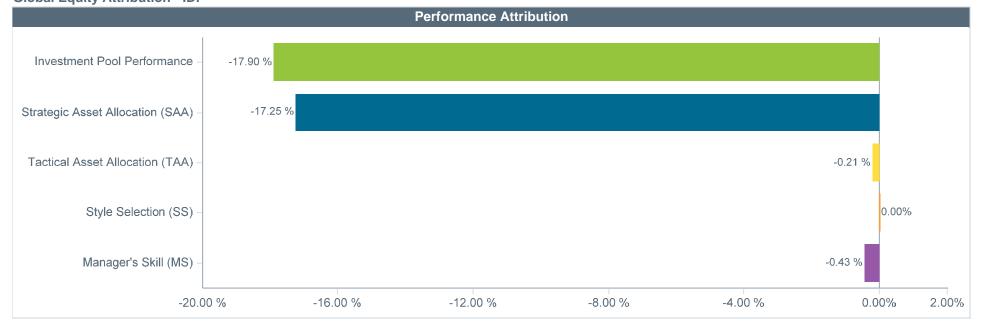


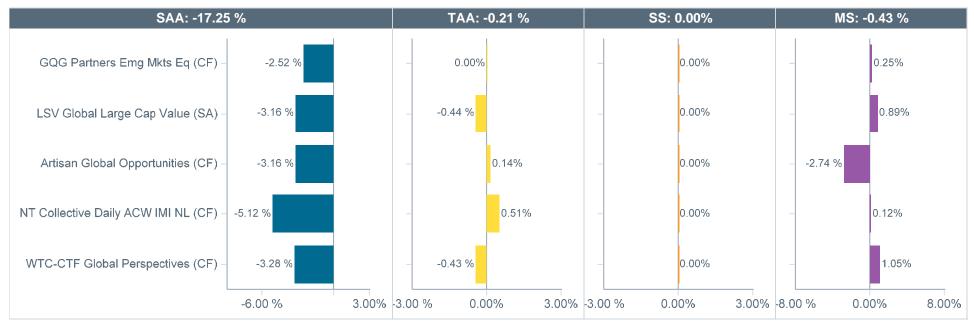


Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



#### Kansas City Police Employees' Retirement Systems KCPERS Civilian Employees Global Equity Attribution - IDP





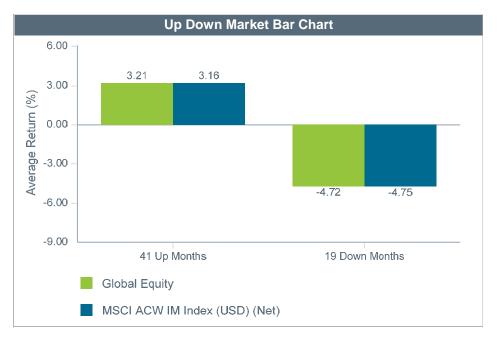
Performance shown is net of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



## Kansas City Police Employees' Retirement Systems KCPERS Civilian Employees

Global Equity vs. IM Global Large Cap Equity (SA + CF)







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

T	op Ten Equi	ty Holdings		
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)
Microsoft Corp	1.21	2.90	-1.69	-16.49
NextEra Energy Inc	1.17	0.24	0.93	-8.06
Advanced Micro Devices Inc	1.16	0.20	0.96	-30.06
Veeva Systems Inc	1.12	0.04	1.08	-6.79
UBS Group AG	1.08	0.09	0.99	-15.94
Apple Inc	1.06	3.53	-2.47	-21.59
Techtronic Industries Co Ltd	0.95	0.02	0.93	-35.02
Boston Scientific Corp	0.80	0.08	0.72	-15.85
Alphabet Inc	0.80	1.04	-0.24	-21.65
LONZA GROUP AG	0.70	0.06	0.64	-26.55
% of Portfolio	10.05	8.20	1.85	

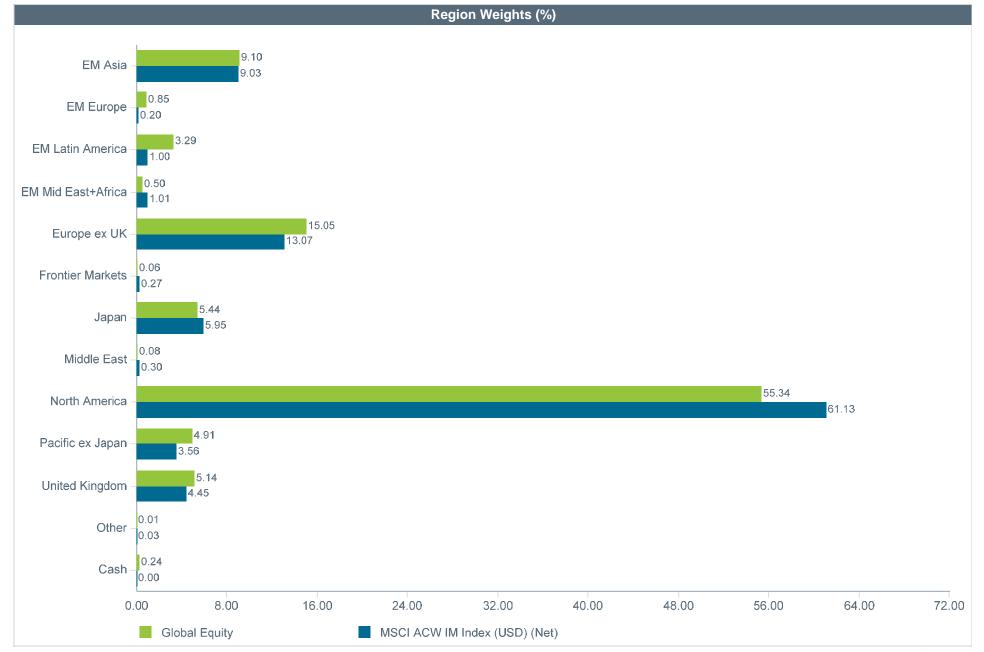
Portfol	lio Characteristics	
	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	128,690	271,220
Median Mkt. Cap (\$M)	1,763	1,712
Price/Earnings Ratio	11.89	14.83
Price/Book Ratio	2.69	3.09
5 Yr. EPS Growth Rate (%)	17.12	17.29
Current Yield (%)	2.91	2.38
Beta (5 Years, Monthly)	1.00	1.00
Number of Securities	8,716	9,297







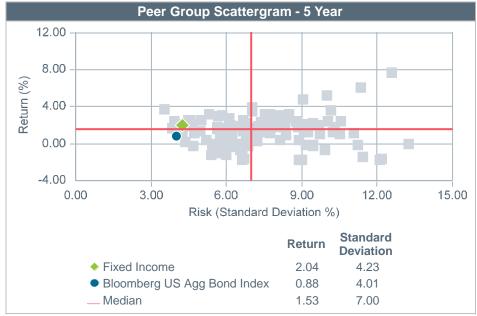


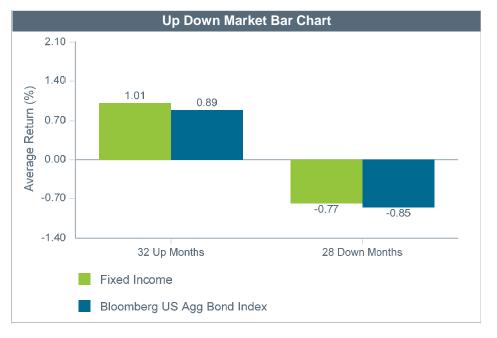




### Kansas City Police Employees' Retirement Systems KCPERS Civilian Employees

Fixed Income vs. IM Global Fixed Income (SA + CF)





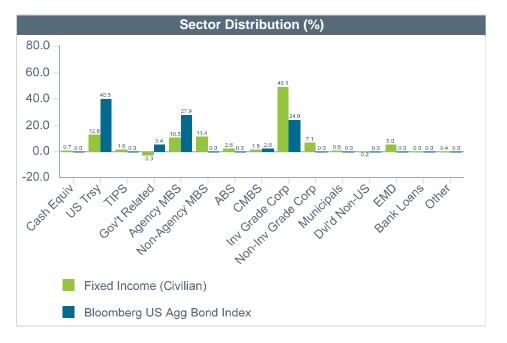


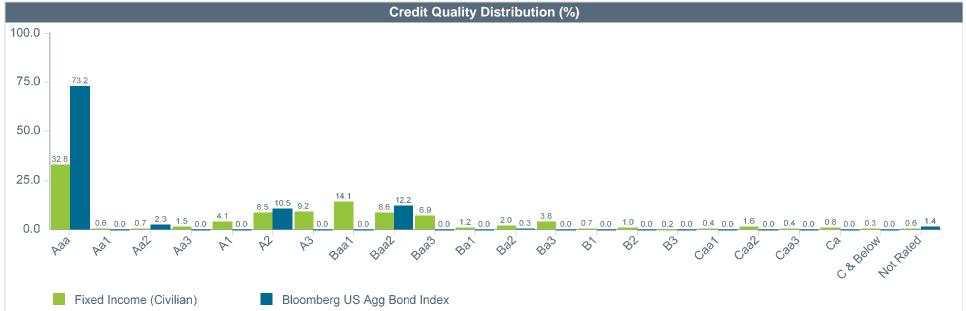
Performance shown is gross of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



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

PortfolioEffective Duration5.45Avg. Maturity7.41	Benchmark 6.44
	6.44
Avg. Maturity 7.41	
	8.63
Avg. Quality A3	Aa1/Aa2
Coupon Rate (%) 2.93	2.49
Yield To Maturity (%) 3.72	3.72
Holdings Count 7,895	12,563









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

	Market Value (\$M)	FYTD	QTD	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)	\$13.09	-7.48	-12.23	-13.67	-10.17	7.39	6.51	6.63	N/A	24.55	3.07	26.99	6.31	05/01/2014
MSCI Wrld Index (USD) (Net)		-8.59	-16.19	-20.51	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	7.10	
Difference		1.11	3.96	6.84	4.17	0.39	-1.16	-0.90	N/A	2.73	-12.83	-0.68	-0.79	
MSCI Wrld Val Index (USD) (Net)		-6.95	-11.59	-12.16	-6.63	4.52	4.67	5.31	7.62	21.94	-1.16	21.75	4.56	
Difference		-0.53	-0.64	-1.51	-3.54	2.87	1.84	1.32	N/A	2.61	4.23	5.24	1.75	
IM Global Large Cap Value Equity (SA+CF) Median		-7.17	-13.15	-15.54	-12.96	5.70	5.58	6.24	8.75	18.72	6.95	24.17	6.02	
Rank		58	42	41	30	23	35	41	N/A	8	69	30	44	
Artisan Global Opportunities (CF)	\$10.53	-9.71	-20.52	-30.94	-26.01	7.49	9.42	10.16	N/A	15.09	41.51	37.02	10.73	05/01/2014
MSCI Wrld Index (USD) (Net)		-8.59	-16.19	-20.51	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	7.10	
Difference		-1.12	-4.33	-10.43	-11.67	0.49	1.75	2.63	N/A	-6.73	25.61	9.35	3.63	
MSCI Wrld Grth Index (USD) (Net)		-10.54	-21.21	-28.80	-22.37	8.42	10.01	9.28	11.05	21.18	33.83	33.68	9.22	
Difference		0.83	0.69	-2.14	-3.64	-0.93	-0.59	0.88	N/A	-6.09	7.68	3.34	1.51	
IM Global Large Cap Growth Equity (SA+CF) Median		-8.64	-17.07	-25.11	-21.05	6.93	9.22	8.84	10.75	17.88	28.37	31.52	8.77	
Rank		66	76	78	65	46	46	26	N/A	62	22	16	18	
NT Collective Daily ACW IM NL (CF)	\$14.66	-7.94	-15.20	-19.94	-16.05	6.39	7.14	7.24	N/A	18.14	16.75	26.88	6.89	03/01/2014
MSCI ACW IM Index (USD) (Net)		-8.57	-15.83	-20.44	-16.52	5.98	6.70	6.78	8.71	18.22	16.25	26.35	6.41	
Difference		0.63	0.63	0.50	0.47	0.41	0.44	0.46	N/A	-0.08	0.50	0.53	0.48	
IM Global Large Cap Core Equity (SA+CF) Median		-7.97	-15.17	-19.68	-15.04	6.47	7.51	7.44	9.97	20.13	15.42	26.64	7.25	
Rank		47	52	54	58	52	58	58	N/A	64	44	47	63	
WTC-CTF Global Perspectives (CF)	\$8.96	-8.60	-16.17	-19.75	-15.55	N/A	N/A	N/A	N/A	22.86	N/A	N/A	13.81	11/01/2020
MSCI ACW Sm Cap Index (USD) (Net)		-10.40	-17.09	-22.27	-21.82	4.40	4.68	5.37	8.33	16.10	16.33	24.65	6.86	
Difference		1.80	0.92	2.52	6.27	N/A	N/A	N/A	N/A	6.76	N/A	N/A	6.95	
IM Global Small Cap Equity (SA+CF) Median		-9.09	-15.33	-23.30	-19.97	6.07	5.35	5.81	9.55	21.14	15.15	26.01	6.74	
Rank		39	62	29	24	N/A	N/A	N/A	N/A	40	N/A	N/A	33	
GQG Partners Emg Mkts Eq (CF)	\$5.42	-5.45	-11.07	-17.96	-22.15	N/A	N/A	N/A	N/A	-0.82	N/A	N/A	-5.16	11/01/2020
MSCI Emg Mkts Index (USD) (Net)		-6.23	-11.45	-17.63	-25.28	0.57	2.18	2.79	3.06	-2.54	18.31	18.44	-3.55	
Difference		0.78	0.38	-0.33	3.13	N/A	N/A	N/A	N/A	1.72	N/A	N/A	-1.61	
IM Emerging Markets Equity (SA+CF) Median		-6.55	-12.05	-18.20	-25.03	1.46	2.93	3.80	4.41	1.08	18.14	19.62	-2.69	
Rank		30	31	50	37	N/A	N/A	N/A	N/A	62	N/A	N/A	66	





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

	Market Value (\$M)	FYTD	QTD	CYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	Since Incep.	Inception Date
Fixed Income														
FCI Advisors (SA)	\$31.84	-1.34	-5.65	-11.46	-11.33	-0.53	1.39	1.90	1.88	-1.91	10.32	10.05	4.13	03/01/2001
Bloomberg US Gov't Crdt Bond Index		-1.11	-5.03	-11.05	-10.85	-0.77	1.05	1.63	1.67	-1.75	8.93	9.71	3.89	
Difference		-0.23	-0.62	-0.41	-0.48	0.24	0.34	0.27	0.21	-0.16	1.39	0.34	0.24	
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	3.79	
Difference		-0.41	-0.96	-1.11	-1.04	0.41	0.51	0.48	0.34	-0.36	2.81	1.33	0.34	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median		-1.19	-4.85	-10.35	-10.29	-0.44	1.29	1.89	2.03	-1.21	8.52	9.20	4.20	
Rank		67	90	90	88	60	39	50	70	94	9	10	58	
PIMCO:Income;Inst (PIMIX)	\$19.63	-2.52	-5.06	-8.93	-8.02	0.83	N/A	N/A	N/A	3.11	6.31	8.59	2.30	09/01/2017
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	0.63	
Difference		-1.59	-0.37	1.42	2.27	1.77	N/A	N/A	N/A	4.66	-1.20	-0.13	1.67	
IM Multi-Sector General Bond (MF) Median		-3.16	-6.05	-10.47	-10.26	0.57	2.37	3.16	3.78	2.55	7.52	11.11	2.08	
Rank		35	31	26	28	44	N/A	N/A	N/A	45	66	82	41	
Direct Lending														
White Oak Fixed Income C LP	\$11.01	0.00	0.00	0.76	3.10	5.15	N/A	N/A	N/A	6.86	3.68	9.69	7.29	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	0.00	0.00	2.50	4.75	5.62	5.54	5.40	5.05	5.70	7.39	5.50	
Difference		0.00	0.00	0.76	0.60	0.40	N/A	N/A	N/A	1.81	-2.02	2.30	1.79	
Real Estate														
Morgan Stanley Prime Property (CF)	\$14.68	3.43	3.43	11.03	29.28	13.07	11.38	11.41	N/A	22.89	2.32	7.38	11.97	10/01/2014
NCREIF ODCE Index (AWA) (Gross)		4.77	4.77	12.49	29.51	12.66	10.54	10.34	11.16	22.17	1.19	5.34	10.75	
Difference		-1.34	-1.34	-1.46	-0.23	0.41	0.84	1.07	N/A	0.72	1.13	2.04	1.22	
PGIM Real Estate PRISA II (CF)	\$14.93	4.62	4.62	12.64	29.33	13.34	11.45	11.64	12.40	23.18	0.98	7.52	8.92	10/01/2004
NCREIF ODCE Index (AWA) (Gross)		4.77	4.77	12.49	29.51	12.66	10.54	10.34	11.16	22.17	1.19	5.34	8.70	
Difference		-0.15	-0.15	0.15	-0.18	0.68	0.91	1.30	1.24	1.01	-0.21	2.18	0.22	
Absolute Return														
Grosvenor FOB (CF) (Net)	\$16.20	-1.99	-3.09	-7.93	-3.73	4.69	3.61	3.04	N/A	6.32	14.40	6.30	3.24	08/01/2014
HFN FOF Multi-Strat Index (Net)		-3.19	-3.89	-4.58	-2.69	4.36	3.64	2.52	3.58	6.77	9.79	6.75	2.72	
Difference		1.20	0.80	-3.35	-1.04	0.33	-0.03	0.52	N/A	-0.45	4.61	-0.45	0.52	
ICE BofAML 3 Mo US T-Bill Index+5%		0.91	1.33	2.62	5.18	5.66	6.17	5.93	5.67	5.05	5.70	7.39	5.83	
Difference		-2.90	-4.42	-10.55	-8.91	-0.97	-2.56	-2.89	N/A	1.27	8.70	-1.09	-2.59	
Private Equity														
Abbott Capital Private Equity LP (CF) (Net)	\$0.65	0.00	0.00	-4.09	-4.10	13.63	13.84	12.42	12.61	21.08	22.82	10.96	7.03	12/01/2005
J.P. Morgan Private Equity III (CF) (Net)	\$0.28	0.02	-0.35	-0.80	14.63	21.07	15.82	13.54	14.59	56.05	11.80	7.53	8.57	06/01/2006

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 nonmarketable investments such as private equity is imperfect at best and can potentially be misleading.



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

	Market Value (\$M)	FYTD	QTD	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)	\$13.09	-7.48	-12.37	-13.94	-10.72	6.72	5.84	5.95	N/A	23.80	2.41	26.20	5.65	05/01/2014
MSCI Wrld Index (USD) (Net)		-8.59	-16.19	-20.51	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	7.10	
Difference		1.11	3.82	6.57	3.62	-0.28	-1.83	-1.58	N/A	1.98	-13.49	-1.47	-1.45	
MSCI Wrld Val Index (USD) (Net)		-6.95	-11.59	-12.16	-6.63	4.52	4.67	5.31	7.62	21.94	-1.16	21.75	4.56	
Difference		-0.53	-0.78	-1.78	-4.09	2.20	1.17	0.64	N/A	1.86	3.57	4.45	1.09	
Artisan Global Opportunities (CF)	\$10.53	-9.85	-20.70	-31.25	-26.65	6.57	8.50	9.23	N/A	14.10	40.34	35.89	9.80	05/01/2014
MSCI Wrld Index (USD) (Net)		-8.59	-16.19	-20.51	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	7.10	
Difference		-1.26	-4.51	-10.74	-12.31	-0.43	0.83	1.70	N/A	-7.72	24.44	8.22	2.70	
MSCI Wrld Grth Index (USD) (Net)		-10.54	-21.21	-28.80	-22.37	8.42	10.01	9.28	11.05	21.18	33.83	33.68	9.22	
Difference		0.69	0.51	-2.45	-4.28	-1.85	-1.51	-0.05	N/A	-7.08	6.51	2.21	0.58	
NT Collective Daily ACW IM NL (CF)	\$14.66	-7.95	-15.22	-19.97	-16.12	6.30	7.05	7.15	N/A	18.05	16.65	26.78	6.80	03/01/2014
MSCI ACW IM Index (USD) (Net)		-8.57	-15.83	-20.44	-16.52	5.98	6.70	6.78	8.71	18.22	16.25	26.35	6.41	
Difference		0.62	0.61	0.47	0.40	0.32	0.35	0.37	N/A	-0.17	0.40	0.43	0.39	
WTC-CTF Global Perspectives (CF)	\$8.96	-8.74	-16.36	-20.10	-16.27	N/A	N/A	N/A	N/A	21.83	N/A	N/A	12.85	11/01/2020
MSCI ACW Sm Cap Index (USD) (Net)		-10.40	-17.09	-22.27	-21.82	4.40	4.68	5.37	8.33	16.10	16.33	24.65	6.86	
Difference		1.66	0.73	2.17	5.55	N/A	N/A	N/A	N/A	5.73	N/A	N/A	5.99	
GQG Partners Emg Mkts Eq (CF)	\$5.42	-5.58	-11.26	-18.30	-22.79	N/A	N/A	N/A	N/A	-1.61	N/A	N/A	-5.92	11/01/2020
MSCI Emg Mkts Index (USD) (Net)		-6.23	-11.45	-17.63	-25.28	0.57	2.18	2.79	3.06	-2.54	18.31	18.44	-3.55	
Difference		0.65	0.19	-0.67	2.49	N/A	N/A	N/A	N/A	0.93	N/A	N/A	-2.37	
Fixed Income														
FCI Advisors (SA)	\$31.84	-1.37	-5.69	-11.53	-11.46	-0.68	1.24	1.74	N/A	-2.05	10.16	9.89	2.04	07/01/2013
Bloomberg US Gov't Crdt Bond Index		-1.11	-5.03	-11.05	-10.85	-0.77	1.05	1.63	1.67	-1.75	8.93	9.71	1.92	
Difference		-0.26	-0.66	-0.48	-0.61	0.09	0.19	0.11	N/A	-0.30	1.23	0.18	0.12	
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	1.79	
Difference		-0.44	-1.00	-1.18	-1.17	0.26	0.36	0.32	N/A	-0.50	2.65	1.17	0.25	
PIMCO:Income;Inst (PIMIX)	\$19.63	-2.60	-5.18	-9.16	-8.48	0.33	N/A	N/A	N/A	2.61	5.79	8.05	1.78	09/01/2017
Bloomberg US Agg Bond Index		-0.93	-4.69	-10.35	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	0.63	
Difference		-1.67	-0.49	1.19	1.81	1.27	N/A	N/A	N/A	4.16	-1.72	-0.67	1.15	

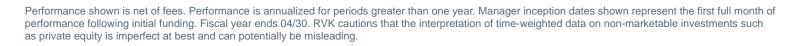
Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month of performance following initial funding. Fiscal year ends 04/30. RVK cautions that the interpretation of time-weighted data on non-marketable investments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



#### Kansas City Police Employees' Retirement Systems KCPERS Civilian Employees

**Asset Allocation & Performance - Net of Fees** 

	Market Value (\$M)	FYTD	QTD	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	\$11.01	0.00	0.00	0.76	1.80	3.66	N/A	N/A	N/A	4.60	2.66	7.41	5.58	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		0.00	0.00	0.00	2.50	4.75	5.62	5.54	5.40	5.05	5.70	7.39	5.50	
Difference		0.00	0.00	0.76	-0.70	-1.09	N/A	N/A	N/A	-0.45	-3.04	0.02	0.08	
Real Estate														
Morgan Stanley Prime Property (CF)	\$14.68	3.04	3.04	10.27	27.89	11.78	10.17	10.19	N/A	21.48	1.26	6.17	10.75	10/01/2014
NCREIF ODCE Index (AWA) (Net)		4.54	4.54	12.00	28.31	11.66	9.55	9.35	10.15	21.02	0.34	4.39	9.76	
Difference		-1.50	-1.50	-1.73	-0.42	0.12	0.62	0.84	N/A	0.46	0.92	1.78	0.99	
PGIM Real Estate PRISA II (CF)	\$14.93	4.34	4.34	12.05	27.98	12.10	10.23	10.45	N/A	21.86	-0.16	6.32	11.33	07/01/2013
NCREIF ODCE Index (AWA) (Net)		4.54	4.54	12.00	28.31	11.66	9.55	9.35	10.15	21.02	0.34	4.39	10.05	
Difference		-0.20	-0.20	0.05	-0.33	0.44	0.68	1.10	N/A	0.84	-0.50	1.93	1.28	
Absolute Return														
Grosvenor FOB (CF)	\$16.20	-1.99	-3.09	-7.93	-3.73	4.69	3.61	3.04	N/A	6.32	14.40	6.30	3.24	08/01/2014
HFN FOF Multi-Strat Index (Net)		-3.19	-3.89	-4.58	-2.69	4.36	3.64	2.52	3.58	6.77	9.79	6.75	2.72	
Difference		1.20	0.80	-3.35	-1.04	0.33	-0.03	0.52	N/A	-0.45	4.61	-0.45	0.52	
ICE BofAML 3 Mo US T-Bill Index+5%		0.91	1.33	2.62	5.18	5.66	6.17	5.93	5.67	5.05	5.70	7.39	5.83	
Difference		-2.90	-4.42	-10.55	-8.91	-0.97	-2.56	-2.89	N/A	1.27	8.70	-1.09	-2.59	
Private Equity														
Abbott Capital Private Equity LP (CF)	\$0.65	0.00	0.00	-4.09	-4.10	13.63	13.84	12.42	N/A	21.08	22.82	10.96	12.92	07/01/2013
J.P. Morgan Private Equity III (CF)	\$0.28	0.02	-0.35	-0.80	14.63	21.07	15.82	13.54	N/A	56.05	11.80	7.53	15.19	07/01/2013





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

	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	\$0.93	-3.05	12.11	-3.05	12.02	17.57	15.34	13.26	N/A	28.80	20.47	10.10	14.04	07/01/2013
Abbott Capital Private Equity LP (CF) (Net)	\$0.65	-4.09	5.58	-4.09	5.58	15.32	14.58	12.97	N/A	21.08	22.82	10.96	13.32	07/01/2013
Cambridge US Prvt Eq Index		0.58	27.60	0.58	27.60	23.05	19.71	16.93	16.15	40.41	21.67	13.82	16.66	
Difference		-4.67	-22.02	-4.67	-22.02	-7.73	-5.13	-3.96	N/A	-19.33	1.15	-2.86	-3.34	
J.P. Morgan Private Equity III (CF) (Net)	\$0.29	-0.46	33.29	-0.46	32.79	23.87	17.26	14.01	N/A	56.05	11.80	7.53	15.71	07/01/2013
Cambridge US Prvt Eq Index		0.58	27.60	0.58	27.60	23.05	19.71	16.93	16.15	40.41	21.67	13.82	16.66	
Difference		-1.04	5.69	-1.04	5.19	0.82	-2.45	-2.92	N/A	15.64	-9.87	-6.29	-0.95	
Civilian - Direct Lending	\$11.01	0.76	2.56	0.76	2.56	4.20	N/A	N/A	N/A	4.60	2.66	7.41	5.94	04/01/2018
White Oak Fixed Income C LP	\$11.01	0.76	2.56	0.76	2.56	4.20	N/A	N/A	N/A	4.60	2.66	7.41	5.94	04/01/2018
ICE BofAML 3 Mo US T-Bill Index+5%		1.27	4.64	1.27	5.07	5.85	6.19	5.92	5.66	5.05	5.70	7.39	6.19	
Difference		-0.51	-2.08	-0.51	-2.51	-1.65	N/A	N/A	N/A	-0.45	-3.04	0.02	-0.25	

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

Fund Name	Vintage	e Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	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	78,369	6.66	10.42	1.46
J.P. Morgan European Corporate Finance Investors III	2006	Private Equity - Non-US Private Equity	187,500	180,430	269,831	13,055	7.73	10.86	1.57
J.P. Morgan U.S. Corporate Finance Investors III	2006	Private Equity - Buyout	750,000	754,199	1,464,142	95,879	13.50	8.83	2.07
J.P. Morgan Venture Capital Investors III	2006	Private Equity - Venture	312,500	317,584	461,457	180,464	10.29	12.28	2.02
Abbott Capital Private Equity VI LP	2008	Private Equity - Fund of Funds	1,250,000	1,243,761	1,896,251	567,213	13.64	14.09	1.98
			4,350,000	4,283,074	6,613,607	934,980	10.00	11.02	1.76

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.



LSV Global Large Cap Value (SA)										
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return					
Quarter	14,917,245	23,164	-1,848,054	13,092,356	-12.37					

Artisan Global Opportunities (CF)											
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return						
Quarter	13,282,057	-	-2,749,901	10,532,157	-20.70						

	NT Collective Daily ACW IM NL (CF)											
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return							
Quarter	17,291,066	3,217	-2,631,605	14,662,678	-15.22							

WTC-CTF Global Perspectives (CF)									
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return				
Quarter	10,713,563	-	-1,752,859	8,960,704	-16.36				

GQG Partners Emg Mkts Eq (CF)									
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return				
Quarter	6,109,657	-	-687,762	5,421,895					

FCI Advisors (SA)									
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return				
Quarter	33,753,066	12,120	-1,920,242	31,844,944	-5.69				

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



PIMCO:Income;Inst (PIMIX)								
Periods Ending  Beginning Market Value (\$)  Cash Flow (\$)  Gain/Loss (\$)  Market Value (\$)								
21,148,266	-425,000	-1,089,537	19,633,730	-5.18				
	Market Value (\$)	Beginning Net Market Value (\$) Cash Flow (\$)	Beginning Net Market Value (\$) Cash Flow (\$) Gain/Loss (\$)	Beginning Net Gain/Loss (\$) Ending Market Value (\$) Cash Flow (\$) Market Value (\$)				

Morgan Stanley Prime Property (CF)									
Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return					
14,247,437	-	433,549	14,680,987	3.04					
	Market Value (\$)	Beginning Net Market Value (\$) Cash Flow (\$)	Beginning Net Gain/Loss (\$) Market Value (\$) Cash Flow (\$)	Beginning Net Gain/Loss (\$) Ending Market Value (\$) Cash Flow (\$) Market Value (\$)					

PGIM Real Estate PRISA II (CF)									
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return				
Quarter	14,310,973	-	621,321	14,932,295	4.34				

Grosvenor FOB (CF)									
Periods Ending	Beginning Market Value (\$)	Net Cash Flow (\$)	Gain/Loss (\$)	Ending Market Value (\$)	% Return				
Quarter	16,721,335	(1)		16,204,803	-3.09				

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

Manager	Fee Schedule	Aggregate Assets (\$)	Estimated Annual Fee (%)	Market Value as of 6/30/2022	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	86,009,538	0.64	13,092,356	83,424
Artisan Global Opportunities (CF)	0.85% of Assets	10,532,157	0.85	10,532,157	89,523
NT Collective Daily ACW IM NL (CF)	0.10 % of First \$50 M 0.08 % Thereafter	104,427,038	0.09	14,662,678	13,134
WTC-CTF Global Perspectives (CF)	1.00 % of Assets	63,386,367	1.00	8,960,704	89,607
GQG Partners Emg Mkts Eq (CF)	0.85 % of First \$25 M 0.80 % Thereafter	36,995,771	0.83	5,421,895	45,207
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	213,493,887	0.15	31,844,944	47,014
PIMCO:Income;Inst (PIMIX)	0.50 % of Assets	119,150,143	0.50	19,633,730	98,169
White Oak Fixed Income C LP	1.00% of Assets	76,341,239	1.00	11,006,602	110,066
Morgan Stanley Prime Property (CF)	0.84 % of Assets	101,621,831	0.84	14,680,987	123,320



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

Manager	Fee Schedule	Aggregate Assets (\$)	Estimated Annual Fee (%)	Market Value as of 6/30/2022	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	103,800,448	1.11	14,932,295	165,780
Grosvenor FOB (CF)	1.15 % of First \$25 M 1.00 % of Next \$25 M 0.80 % of Next \$50 M 0.60 % Thereafter	121,664,629	0.88	16,204,803	142,181
Coltv. Short Term Invt. Fund	0.15 % of Assets	1,718,471	0.15	897,038	1,346

#### 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

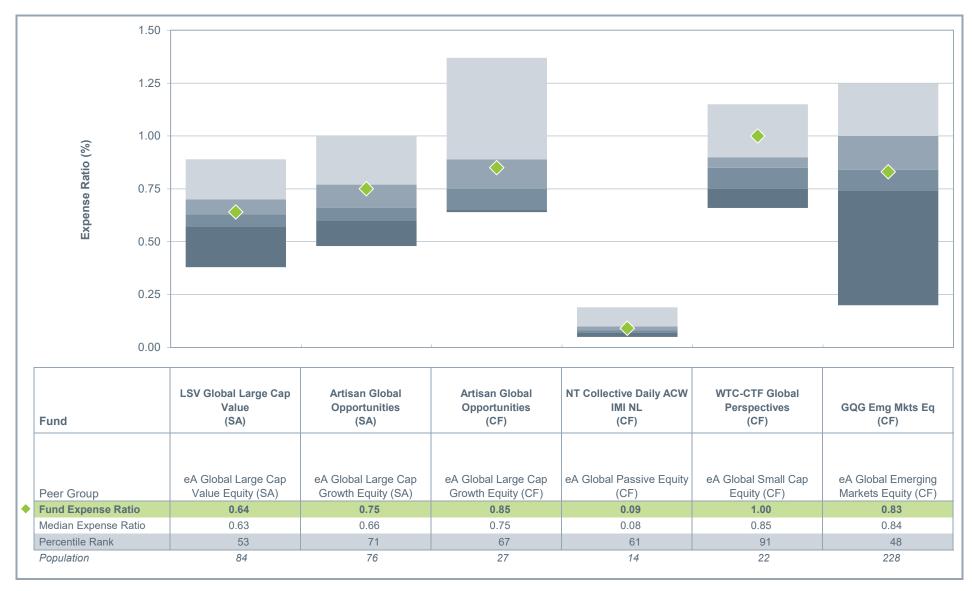
Venture Capital Investors III

Management fee for initial 8 years: 0.90% Average fee over 15 years: 0.76% Management fee for initial 8 years: 1.10%

Average fee over 15 years: 0.93%

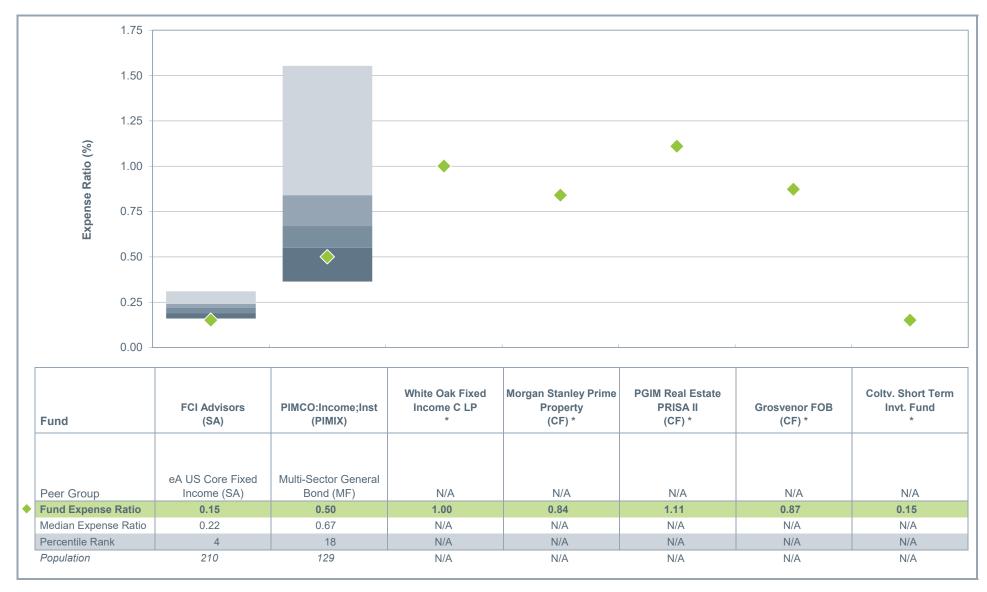
Mutual fund fees are sourced from Morningstar and/or the investment manager.





Fund 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**



Manager: LSV Global Large Cap Value (SA) Benchmark: MSCI Wrld Index (USD) (Net)

Peer Group: IM Global Large Cap Value Equity (SA+CF)

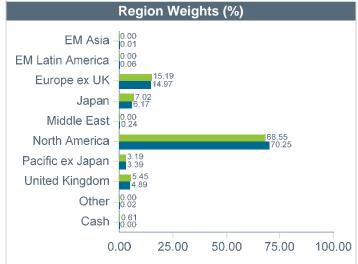
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-12.26	-10.58	6.92	6.20	6.49	N/A	22.90	2.87	26.36	-12.66	21.35
Benchmark	-16.19	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	-8.71	22.40
Difference	3.93	3.76	-0.08	-1.47	-1.04	N/A	1.08	-13.03	-1.31	-3.95	-1.05
Peer Group Median	-13.15	-12.96	5.70	5.58	6.24	8.75	18.72	6.95	24.17	-10.14	21.46
Rank	42	38	30	40	43	N/A	15	70	34	66	51
Population	111	108	101	95	85	71	116	124	132	135	136







		Port	folio	Benchmark		
Wtd. Avg. Mkt. Cap (\$M)		56	533	335,263		
Median Mkt. Cap (\$M)	12	230		16,342		
Price/Earnings Ratio		9.01		16.26		
Price/Book Ratio		2.14		3.34		
5 Yr. EPS Growth Rate (%)	1	6.33		17.67		
Current Yield (%)	;	3.61	2.26			
Beta (5 Years, Monthly)			1.05		1.00	
Number of Securities		233		1,513		
Active Share		8	6.10	N/A		
60.00 - 45.00 - 30.00 - 21.88 15.00 - 0.00	25.35 <sup>27.71</sup>	10.029.14	32.66 10.16	6.80	0.61 0.00	
>\$100 Bil   \$75 Bil - \$100 Bil	\$25 Bil - \$75 Bil	\$15 Bil - \$25 Bil	\$2 Bil - \$15 Bil	\$0 - \$2 Bil	Cash	



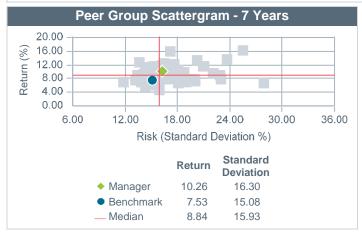
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Manager: Artisan Global Opportunities (SA)
Benchmark: MSCI Wrld Index (USD) (Net)

Peer Group: IM Global Large Cap Growth Equity (SA+CF)

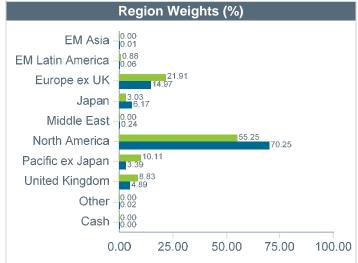
Performance Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-20.57	-25.85	7.62	9.55	10.26	N/A	15.26	41.63	37.23	-7.87	32.72
Benchmark	-16.19	-14.34	7.00	7.67	7.53	9.51	21.82	15.90	27.67	-8.71	22.40
Difference	-4.38	-11.51	0.62	1.88	2.73	N/A	-6.56	25.73	9.56	0.84	10.32
Peer Group Median	-17.07	-21.05	6.93	9.22	8.84	10.75	17.88	28.37	31.52	-7.21	30.39
Rank	78	65	44	43	26	N/A	61	22	15	56	38
Population	110	110	106	99	88	76	112	118	125	119	122







	Po	rtfolio	Be	enchmark		
Wtd. Avg. Mkt. Cap (\$M)	1	54,661	335,263			
Median Mkt. Cap (\$M)		36,554		16,342		
Price/Earnings Ratio		21.97	16.26			
Price/Book Ratio		3.71		3.34		
5 Yr. EPS Growth Rate (%)		18.69		17.67		
Current Yield (%)		1.19		2.26		
Beta (5 Years, Monthly)		0.97		1.00		
Number of Securities		52		1,513		
Active Share		91.70	N/A			
45.00 - 47.07 30.00 - 32.36 15.00 - 2.93 <sup>5.92</sup>	27.71 16.90 9.14	. 10.16 3.81	0.00 0.00	0.00 0.00		
>\$100 Bil \$75 Bil - \$100 Bil	\$25 Bil - \$15 Bil \$75 Bil \$25 Bil	\$2 Bil - \$15 Bil	\$0 - \$2 Bil	Cash		



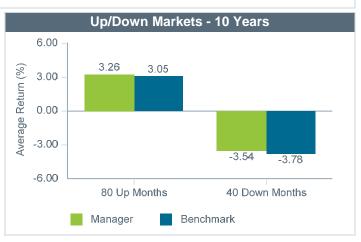
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Manager: WTC-CTF Global Perspectives (CF)
Benchmark: MSCI ACW Sm Cap Index (USD) (Net)
Peer Group: IM Global Small Cap Equity (SA+CF)

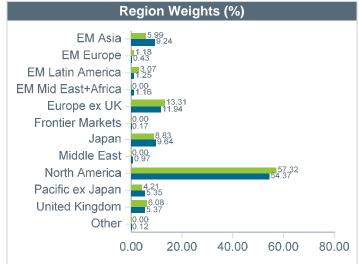
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-16.36	-16.31	6.16	6.01	7.13	10.97	21.78	14.66	22.35	-13.82	29.98
Benchmark	-17.09	-21.82	4.40	4.68	5.37	8.33	16.10	16.33	24.65	-14.39	23.81
Difference	0.73	5.51	1.76	1.33	1.76	2.64	5.68	-1.67	-2.30	0.57	6.17
Peer Group Median	-15.33	-19.97	6.07	5.35	5.81	9.55	21.14	15.15	26.01	-14.30	23.16
Rank	63	26	48	25	33	18	44	52	67	42	23
Population	26	25	23	20	17	15	26	28	30	34	33







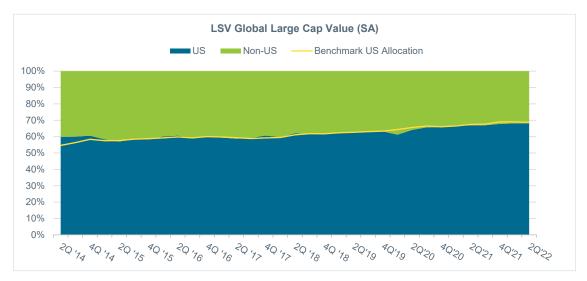
		Portfolio		Benchmark
Wtd. Avg. Mkt. Cap (\$M)		5,542		3,322
Median Mkt. Cap (\$M)		3,741		1,100
Price/Earnings Ratio		11.19		11.24
Price/Book Ratio		2.18		2.28
5 Yr. EPS Growth Rate (%)		16.72		15.38
Current Yield (%)		2.66		2.42
Beta (5 Years, Monthly)		1.03		1.00
Number of Securities		109		6,402
Active Share		96.42		N/A
60.00 — 45.00 — 30.00 —	25.40 19.16	37.50 24.51	38.92 28.25	15.39
0.00				1.59
>\$15 Bil \$10 Bil - \$15 Bil	\$5 Bil - \$10 Bil	\$3 Bil - \$5 Bil	\$1 Bil - \$3 Bil	\$0 - \$1 Bil

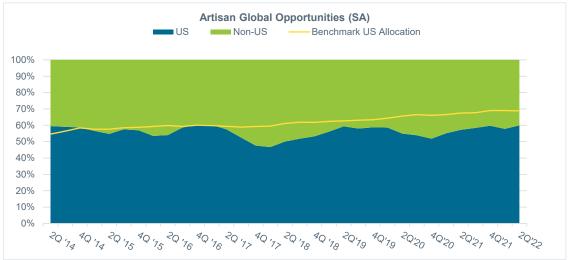


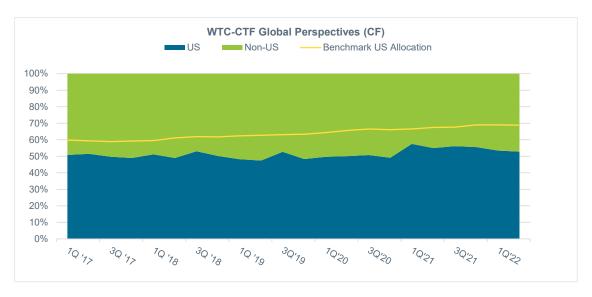
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Global Equity - KCPERS
Benchmark: MSCI Wrld Index (USD) (Net)
Historical US vs. Non-US Allocations





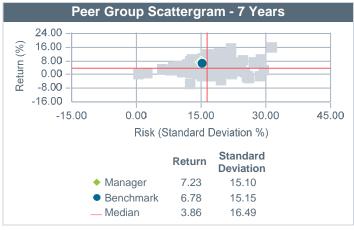


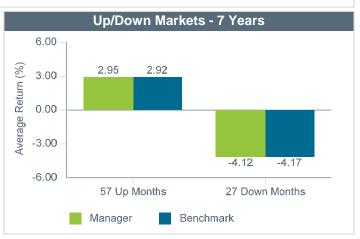
Global allocations shown for WTC-CTF Global Perspectives (CF) prior to KCPERS inception are provided by the manager.



Manager: NT Collective Daily ACW IM NL (CF)
Benchmark: MSCI ACW IM Index (USD) (Net)
Peer Group: IM International Equity (SA+CF)

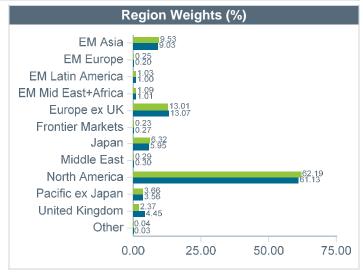
	Performance Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017	
Manager	-15.36	-16.12	6.41	7.14	7.23	N/A	18.50	16.78	26.83	-9.61	24.32	
Benchmark	-15.83	-16.52	5.98	6.70	6.78	8.71	18.22	16.25	26.35	-10.08	23.95	
Difference	0.47	0.40	0.43	0.44	0.45	N/A	0.28	0.53	0.48	0.47	0.37	
Peer Group Median	-13.68	-20.54	2.36	3.12	3.88	6.36	10.08	14.14	22.68	-14.78	30.53	
Rank	68	24	13	9	10	N/A	12	41	28	13	83	
Population	936	928	888	832	780	663	1,004	1,099	1,166	1,204	1,231	







	Portfolio	Benchmark
Wtd. Avg. Mkt. Cap (\$M)	264,084	271,220
Median Mkt. Cap (\$M)	1,740	1,712
Price/Earnings Ratio	14.78	14.83
Price/Book Ratio	3.08	3.09
5 Yr. EPS Growth Rate (%)	17.00	17.29
Current Yield (%)	2.40	2.38
Beta (5 Years, Monthly)	1.00	1.00
Number of Securities	8,637	9,297
Active Share	9.54	N/A
60.00 — 45.00 — 38.97 38.99 30.00 — 4.72 5.0	24.39.24.07 5 8.39 8.39	19.07 18.96
>\$100 Bil \$75 Bil \$100 B	7-7	\$2 Bil - \$0 - \$15 Bil \$2 Bil

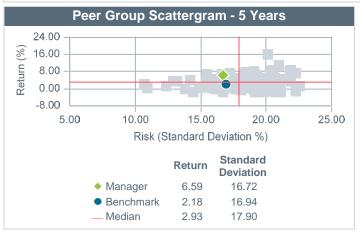


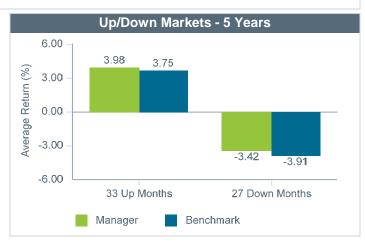
Performance shown is gross of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.



Manager: GQG Partners Emg Mkts Eq (CF)
Benchmark: MSCI Emg Mkts Index (USD) (Net)
Peer Group: IM Emerging Markets Equity (SA+CF)

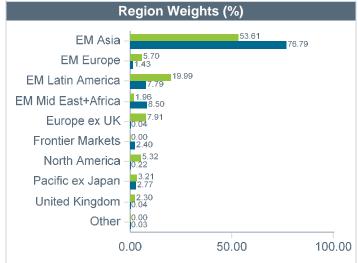
	Performance Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017	
Manager	-11.35	-22.30	3.99	6.59	N/A	N/A	-0.61	34.80	23.62	-13.41	32.90	
Benchmark	-11.45	-25.28	0.57	2.18	2.79	3.06	-2.54	18.31	18.44	-14.58	37.28	
Difference	0.10	2.98	3.42	4.41	N/A	N/A	1.93	16.49	5.18	1.17	-4.38	
Peer Group Median	-12.05	-25.03	1.46	2.93	3.80	4.41	1.08	18.14	19.62	-15.20	36.81	
Rank	38	38	23	9	N/A	N/A	60	12	32	27	68	
Population	257	254	242	222	207	165	275	303	332	335	345	







97,575 51,115 7.75 2.59 14.81 6.28	98,629 5,922 10.62 2.48 15.90 3.17
51,115 7.75 2.59 14.81 6.28	5,922 10.62 2.48 15.90
7.75 2.59 14.81 6.28	10.62 2.48 15.90
2.59 14.81 6.28	2.48 15.90
14.81 6.28	15.90
6.28	
	3.17
0.00	
0.90	1.00
59	1,382
78.86	N/A
	34.51
8.36	6.31
	0.08 0.37
\$15 Bil - \$25 Bil	\$2 Bil - \$0 - \$15 Bil \$2 Bil
	78.86 8.36 12.50 \$15 Bil -



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



As of June 30, 2022

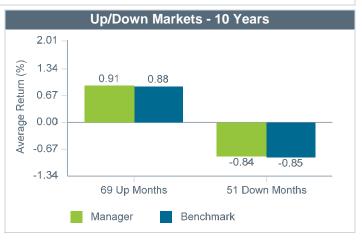
Manager: FCI Advisors (SA)

Benchmark: Bloomberg US Gov't Crdt Bond Index

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

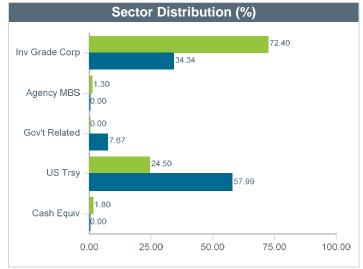
	Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017	
Manager	-5.61	-11.31	-0.47	1.42	1.93	1.91	-1.92	10.49	10.01	0.22	4.07	
Benchmark	-5.03	-10.85	-0.77	1.05	1.63	1.67	-1.75	8.93	9.71	-0.42	4.00	
Difference	-0.58	-0.46	0.30	0.37	0.30	0.24	-0.17	1.56	0.30	0.64	0.07	
Peer Group Median	-4.85	-10.29	-0.44	1.29	1.89	2.03	-1.21	8.52	9.20	0.06	4.02	
Rank	89	87	54	38	45	66	94	6	10	34	47	
Population	125	125	125	121	118	114	142	151	153	159	164	







Spread Duration         N/A         6.72           avg. Maturity         8.80         9.10           avg. Quality         A2         Aa2/Aa3           Yield To Maturity (%)         4.03         3.69           Coupon Rate (%)         3.01         2.43           Current Yield (%)         3.23         N/A		Portfolio	Benchmark
avg. Maturity       8.80       9.10         avg. Quality       A2       Aa2/Aa3         Yield To Maturity (%)       4.03       3.69         Coupon Rate (%)       3.01       2.43         Current Yield (%)       3.23       N/A	Effective Duration	6.81	6.73
Aug. Quality     A2     Aa2/Aa3       Yield To Maturity (%)     4.03     3.69       Coupon Rate (%)     3.01     2.43       Current Yield (%)     3.23     N/A	Spread Duration	N/A	6.72
Yield To Maturity (%)       4.03       3.69         Coupon Rate (%)       3.01       2.43         Current Yield (%)       3.23       N/A	Avg. Maturity	8.80	9.10
Coupon Rate (%)       3.01       2.43         Current Yield (%)       3.23       N/A	Avg. Quality	A2	Aa2/Aa3
Current Yield (%) 3.23 N/A	Yield To Maturity (%)	4.03	3.69
	Coupon Rate (%)	3.01	2.43
Ioldings Count 91 8 737	Current Yield (%)	3.23	N/A
0,737	Holdings Count	91	8,737



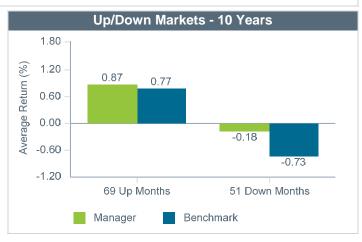
Performance shown is gross of fees and client specific. Calculation is based on monthly periodicity.



Manager: PIMCO:Income;Inst (PIMIX)
Benchmark: Bloomberg US Agg Bond Index
Peer Group: IM Multi-Sector General Bond (MF)

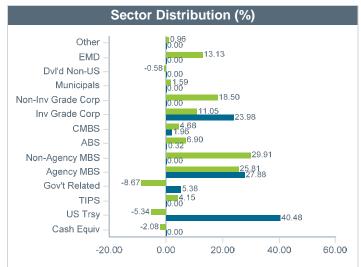
	Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017	
Manager	-5.18	-8.48	0.33	2.04	3.37	5.07	2.61	5.80	8.07	0.58	8.61	
Benchmark	-4.69	-10.29	-0.94	0.88	1.42	1.54	-1.55	7.51	8.72	0.01	3.54	
Difference	-0.49	1.81	1.27	1.16	1.95	3.53	4.16	-1.71	-0.65	0.57	5.07	
Peer Group Median	-6.26	-10.95	-0.28	1.34	2.25	2.72	1.51	6.47	9.98	-1.59	5.84	
Rank	29	24	27	20	3	1	33	59	77	18	13	
Population	478	457	361	312	254	166	446	402	387	384	358	







Portfol	io Characteristic	S
	Portfolio	Benchmark
Effective Duration	2.94	6.44
Spread Duration	3.83	N/A
Avg. Maturity	4.83	8.63
Avg. Quality	A3	Aa1/Aa2
Yield To Maturity (%)	4.13	3.72
Coupon Rate (%)	2.98	2.49
Current Yield (%)	N/A	N/A
Holdings Count	7,802	12,563

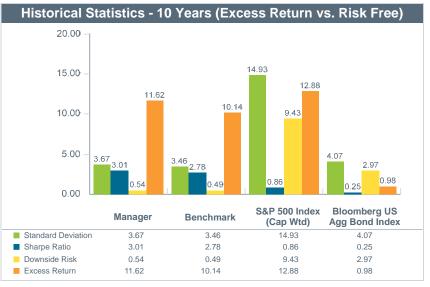


Performance shown is net of fees and product specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "Other" consists of convertible bonds and preferred stock. Negative sector allocation reflects manager's use of derivatives, short selling, or interest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

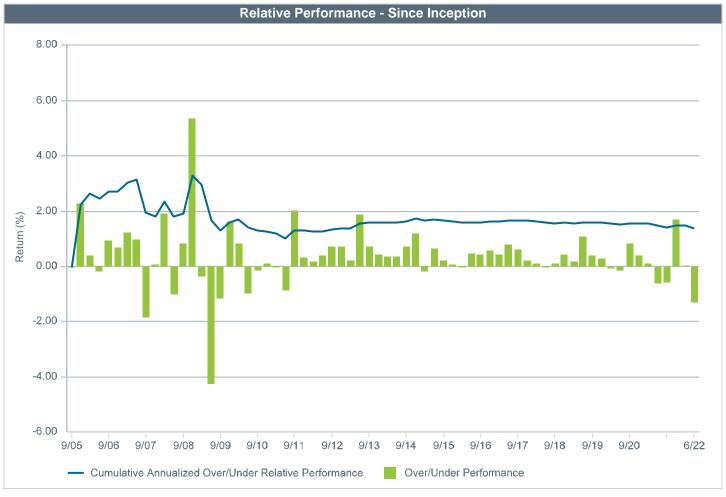


Manager: Morgan Stanley Prime Property (CF)
Benchmark: NCREIF ODCE Index (AWA) (Gross)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	3.40	29.25	13.02	11.34	11.38	12.76	22.87	2.18	7.40	8.99	9.84
Benchmark	4.77	29.51	12.66	10.54	10.34	11.16	22.17	1.19	5.34	8.35	7.62
Difference	-1.37	-0.26	0.36	0.80	1.04	1.60	0.70	0.99	2.06	0.64	2.22



	Actual Correlation
NCREIF ODCE Index (AWA) (Gross)	0.95
S&P 500 Index (Cap Wtd)	-0.13
Russell 2000 Index	-0.22
MSCI EAFE Index (USD) (Net)	-0.18
MSCI Emg Mkts Index (USD) (Net)	-0.35
Bloomberg US Agg Bond Index	-0.44
Bloomberg US Trsy US TIPS Index	-0.35
Wilshire US REIT Index	0.06
HFRI FOF Comp Index	-0.24
Bloomberg Cmdty Index (TR)	0.07
ICE BofAML 3 Mo US T-Bill Index	-0.41
Cons Price Index (Unadjusted)	0.26



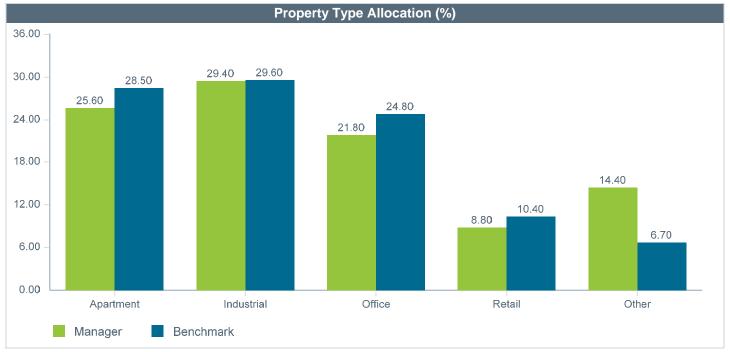


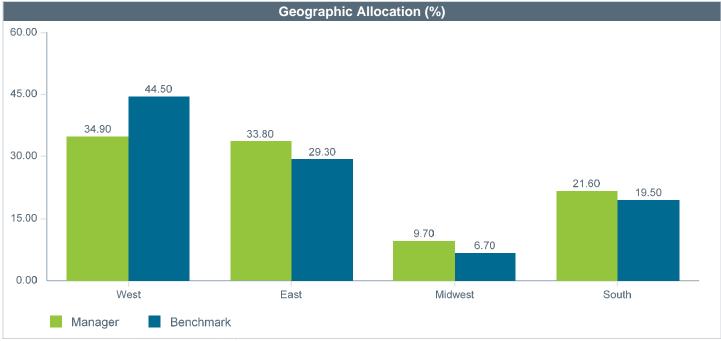
Manager: Morgan Stanley Prime Property (CF)
Benchmark: NCREIF ODCE Index (AWA) (Gross)

# **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 (\$M)	44,405
Fund Leverage %	16.70
Portfolio Occupancy %	94.30
Cash Reserve %	1.10
Number of Investments	526
Number of Limited Partners	423



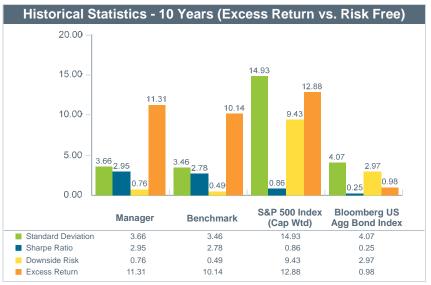


Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists of self-storage, health care, 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.

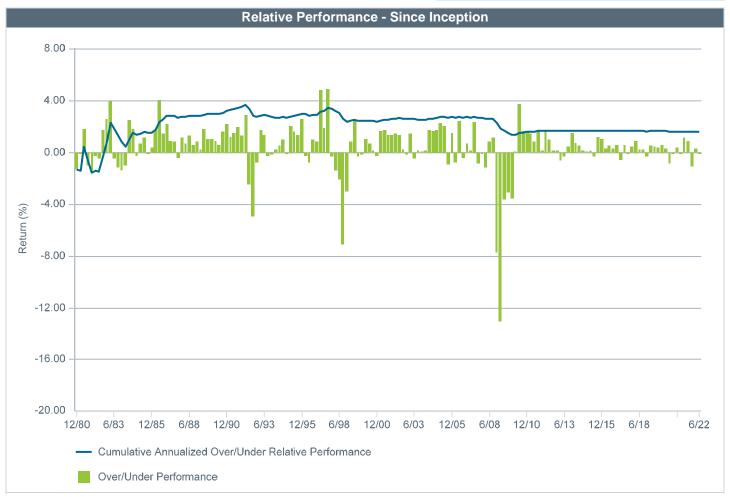


Manager: PGIM Real Estate PRISA II (CF)
Benchmark: NCREIF ODCE Index (AWA) (Gross)

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



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



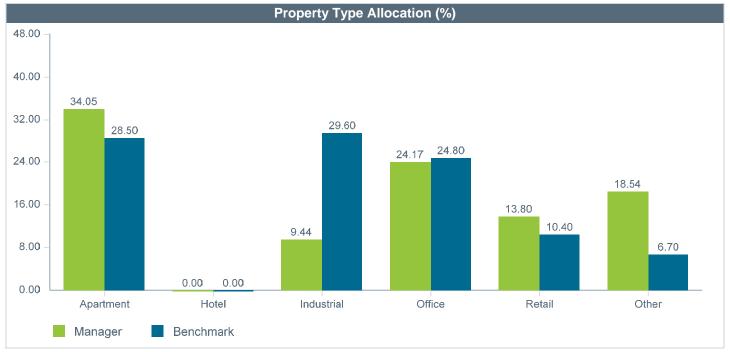


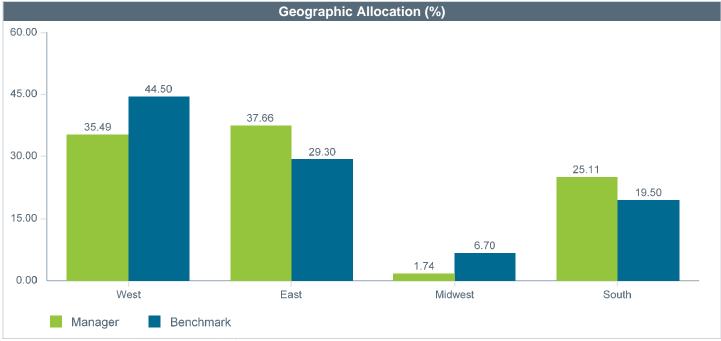
Manager: PGIM Real Estate PRISA II (CF)
Benchmark: NCREIF ODCE Index (AWA) (Gross)

# **Investment Strategy**

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

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





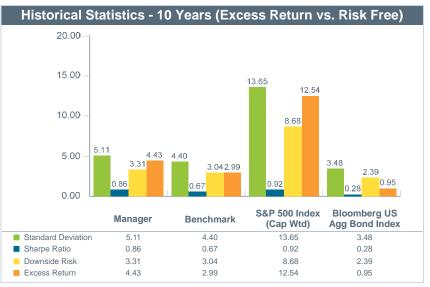
Performance shown is gross of fees and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Manager allocation to "Other" consists 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.



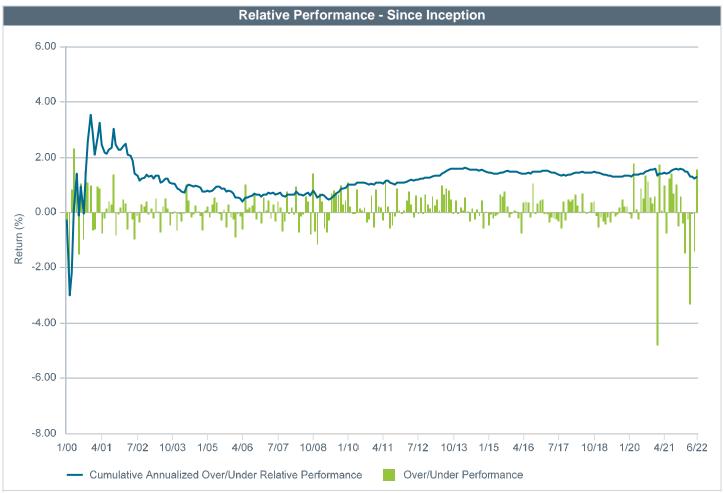
**Manager: Grosvenor Institutional Partners (CF)** 

Benchmark: HFN FOF Multi-Strat Index (Net)

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2021	2020	2019	2018	2017
Manager	-3.74	-4.86	5.57	4.56	3.55	5.05	7.87	17.24	6.14	-1.38	6.25
Benchmark	-3.89	-2.69	4.36	3.64	2.52	3.58	6.77	9.79	6.75	-3.58	7.27
Difference	0.15	-2.17	1.21	0.92	1.03	1.47	1.10	7.45	-0.61	2.20	-1.02



	Actual Correlation
HFN FOF Multi-Strat Index (Net)	0.85
S&P 500 Index (Cap Wtd)	0.67
Russell 2000 Index	0.67
MSCI EAFE Index (USD) (Net)	0.65
MSCI Emg Mkts Index (USD) (Net)	0.50
Bloomberg US Agg Bond Index	0.08
Bloomberg US Trsy US TIPS Index	0.16
Wilshire US REIT Index	0.40
HFRI FOF Comp Index	0.85
Bloomberg Cmdty Index (TR)	0.32
ICE BofAML 3 Mo US T-Bill Index	-0.24
Cons Price Index (Unadjusted)	-0.07







# Kansas City Police Employees' Retirement Systems Grosvenor FOB

Commodities Uninvested

Other **TOTAL** 

#### 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 6/30/2022

Fund Assets (USD millions): 122 Inception Date: August 1, 2014

Currency: USD

Number of Investment Managers: 20 Number of Portfolio Funds: 20

Style Mandate: Broad Mandate Multi-Strategy Portfolios

Portfolio Type: Offshore Non-Plan Asset Top 10 Investment Managers % of NAV: 58.77 Top 20 Investment Managers % of NAV: 89.79

Macro					
Macro         5.7%           Credit         14.7%           Relative Value         27.9%           Multi-Strategy         8.7%           Quantitative         0.0%           Uninvested         9.2%           Other         1.0%           Strategy Performance Attribution           QTD Rate Of Return         QTD Contrib to Rate Of Return         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Strategy		А		
Credit         14.7%           Relative Value         14.7%           Multi-Strategy         8.7%           Quantitative         0.0%           Uninvested         9.2%           Other         1.0%           Strategy Performance Attribution           Allocation as of 6/30/2022           Return         Rate Of Return         Rate Of Return         Return         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Equities			32.8%	
Relative Value         27.9%           Multi-Strategy         8.7%           Quantitative         0.0%           Uninvested         9.2%           Strategy Performance Attribution           Allocation as of Return Return           Return Return Return         7TD Contrib to Rate Of Return Return         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Macro			5.7%	
Multi-Strategy         8.7%           Quantitative         0.0%           Uninvested         9.2%           Other         Strategy Performance Attribution           Equities         QTD Rate Of Return Return Return Return Return         VTD Contrib to Rate Of Return Return         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Credit			14.7%	
Quantitative         0.0%           Uninvested         9.2%           Other         Strategy Performance Attribution           Allocation as of Return Return           Return         QTD Rate Of Return Return         VTD Contrib to Rate Of Return Return         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Relative Value			27.9%	
Uninvested   9.2%   Other   Strategy Performance Attribution	Multi-Strategy			8.7%	
Other         3.0%           Strategy Performance Attribution           QTD Rate Of Return         QTD Contrib to Rate Of Return         YTD Contrib to Rate Of Return         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Quantitative			0.0%	
Strategy Performance Attribution           QTD Rate Of Return         QTD Contrib to Rate Of Return         YTD Contrib to Rate Of Return         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Uninvested			9.2%	
Part of Return         QTD Rate of Return         QTD Contributo Rate Of Return         VTD Contributo Rate Of Return         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Other			1.0%	
Return         to Rate Of Return         to Rate Of Return         to Rate Of 6/30/2022         Allocation as of 6/30/2022           Equities         -9.23%         -3.47%         -8.04%         32.8%           Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%		Strategy P	erformance At	tribution	
Macro         -1.59%         -0.09%         -0.32%         5.7%           Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%			to Rate Of	to Rate Of	Allocation as of 6/30/2022
Credit         -2.64%         -0.44%         -0.39%         14.7%           Relative Value         5.88%         1.55%         2.18%         27.9%           Multi-Strategy         -5.11%         -0.45%         -0.98%         8.7%	Equities	-9.23%	-3.47%	-8.04%	32.8%
Relative Value 5.88% 1.55% 2.18% 27.9% Multi-Strategy -5.11% -0.45% -0.98% 8.7%	Macro	-1.59%	-0.09%	-0.32%	5.7%
Multi-Strategy -5.11% -0.45% -0.98% 8.7%	Credit	-2.64%	-0.44%	-0.39%	14.7%
37	Relative Value	5.88%	1.55%	2.18%	27.9%
	Multi-Strategy	-5.11%	-0.45%	-0.98%	8.7%
Quantitative 4.31% 0.09% 0.11% 0.0%	Quantitative	4.31%	0.09%	0.11%	0.0%

	Derivatives I	Report - Expo	sure Table	
Exposure Category			Notional	
Exposure Category	Long	Short	Gross	Net
U.S. / Canada	96.1	69.1	165.2	27.0
Latin America	0.4	0.2	0.6	0.2
Europe - Developed	45.2	30.7	75.9	14.5
Europe - Emerging	0.2	0.3	0.5	-0.1
Asia - Japan	4.2	23.4	27.6	-19.2
Asia - Developed ex Japan	10.8	4.3	15.1	6.5
Asia - Emerging	2.6	1.6	4.2	1.0
Middle East/Africa	0.4	0.1	0.5	0.3
Global	29.8	28.7	58.5	1.1
Portfolio Fund Cash	-	-	-	-
Grosvenor Fund Cash	-	-	-	-
Tail Risk Protection	-	-	-	-
Total Grosvenor Fund	189.7	158.4	348.1	-

0.00%

-2.81%

0.00%

-7.44%

-0.28%

-5.01%

Asset Allocation	
1.0%	■Equities
0.0% 8.7%	■Macro
32.8%	■ Credit
	■ Relative Value
	■Multi-Strategy
27.9%	<ul><li>Quantatative</li><li>Uninvested</li></ul>
	Other
14.7%	_ 0.00

Fund Liquidity Schedule as of 6/30/2022 - (with lockup)					
	Amount	%	Cumulative %		
Daily	11,218	9.22	9.22		
Monthly	4,934	4.05	13.27		
Quarterly	37,117	30.49	43.76		
Semi-annually	13,907	11.42	55.18		
Annually	29,265	24.04	79.22		
Every 18 Months	3,614	2.97	82.19		
Biannually	3,823	3.14	85.33		
Triannually	2,431	2.00	87.33		
Other	8,229	6.76	94.09		
Designated/Illiquid	7,197	5.91	100.00		

Data is as of 6/30/2022 unless otherwise noted. Notional exposures will differ slightly from Grosvenor due to rounding.



0.0%

9.2% 1.0%

100%

# Addendum & Glossary



# Kansas City Police Employees' Retirement Systems Addendum

#### 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.

#### **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 Eg 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 Abbott Capital Private Equity LP (CF) are as of 12/31/2021.
- Market values shown for White Oak Fixed Income C LP and J.P. Morgan Private Equity III (CF) are as of 03/31/2022, 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 incepted 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.



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&amp;P</u>	Moody's	<u>Explanation</u>	S&P	Moody's	<u>Explanation</u>
Higher Cr	edit Quality – I	nvestment Grade	Lower Cr	edit Quality – E	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	В	B2	
Α	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
			С	Ca	
			D	С	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., 1<sup>st</sup> quartile, 2<sup>nd</sup> quartile, 3<sup>rd</sup> quartile, and 4<sup>th</sup> quartile). The median observation is where the 2<sup>nd</sup> quartile and 3<sup>rd</sup> 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 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.



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



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 4<sup>th</sup> 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 ≥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.



**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.

Asset Class	<b>RVK Liquidity Rating</b>	Asset Class	<b>RVK Liquidity Rating</b>
<u>Liquid Investments</u>		Less Liquid Investments	
T-Bills and Treasurys	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	Not Liquid Investments	
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:

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

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.

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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