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# **Capital Markets Review**

## **Market Returns & Economic Data**

MOST RECENT MARKET DATA													
										Average			
	As of		Up/Down	06/30/24	03/31/24	12/31/23	06/30/21	06/30/19	10-Yr	20-Yr	40-Yr	Last 3	Months
Federal Funds Rate	08/01/24	5.33%	_	5.33%	5.33%	5.33%	0.08%	2.40%	1.57%	1.62%	3.54%		
Treasury - 1 Year	08/02/24	4.33%	▼	5.09%	5.03%	4.79%	0.07%	1.92%	1.78%	1.75%	3.61%	<b>——</b>	
Treasury - 2 Year	08/02/24	3.88%	<b>V</b>	4.71%	4.59%	4.23%	0.25%	1.75%	1.85%	1.88%	3.90%		
Treasury - 5 Year	08/02/24	3.62%		4.33%	4.21%	3.84%	0.87%	1.76%	2.11%	2.35%	4.43%		
Treasury - 10 Year	08/02/24	3.80%	<b>V</b>	4.36%	4.20%	3.88%	1.45%	2.00%	2.41%	2.91%	4.90%		
Treasury - 30 Year	08/02/24	4.11%	▼	4.51%	4.34%	4.03%	2.06%	2.52%	2.87%	3.40%	5.40%		
3 Month LIBOR	08/02/24	5.49%	<b>V</b>	5.59%	5.56%	5.59%	0.15%	2.32%	1.78%	1.89%	N/A		
Secured Overnight Financing Rate	08/01/24	5.35%	<b>A</b>	5.33%	5.34%	5.38%	0.05%	2.50%	N/A	N/A	N/A		
Breakeven Inflation - 5 Year	08/05/24	1.91%	<b>V</b>	2.24%	2.44%	2.14%	2.50%	1.54%	1.93%	1.94%	N/A		
Breakeven Inflation - 10 Year	08/05/24	2.03%	▼	2.27%	2.32%	2.17%	2.34%	1.70%	1.98%	2.09%	N/A		
Breakeven Inflation - 30 Year	08/05/24	2.09%	<b>V</b>	2.29%	2.28%	2.16%	2.28%	1.76%	2.03%	2.23%	N/A		
Bloomberg US Agg Bond Index - Yield	08/02/24	4.35%	▼	5.00%	4.85%	4.53%	1.50%	2.49%	2.82%	3.27%	4.77%		
Bloomberg US Agg Bond Index - OAS	08/02/24	0.40%	<b>A</b>	0.39%	0.39%	0.42%	0.32%	0.46%	0.47%	0.59%	N/A	~-	~
Bloomberg US Credit Index - OAS	08/02/24	0.99%	<b>A</b>	0.88%	0.85%	0.93%	0.77%	1.09%	1.16%	1.38%	N/A		
Bloomberg US Corp: Hi Yld Index - OAS	08/02/24	3.59%	<b>A</b>	3.09%	2.99%	3.23%	2.68%	3.77%	4.23%	4.91%	N/A		
Capacity Utilization	06/30/24	78.76%	_	78.76%	78.41%	78.73%	77.66%	78.47%	77.45%	77.19%	79.06%		
Unemployment Rate	07/31/24	4.30%	<b>A</b>	4.10%	3.80%	3.70%	5.90%	3.60%	4.73%	5.83%	5.80%		
ISM PMI - Manufacturing	07/31/24	46.80%	▼	48.50%	50.30%	47.40%	60.90%	51.50%	53.47%	53.05%	52.35%		
ISM PMI - Service	06/30/24	48.80%	_	48.80%	51.40%	50.50%	60.70%	55.20%	56.35%	54.95%	N/A		_
Baltic Dry Index - Shipping	08/02/24	1,675	▼	2,050	1,821	2,094	3,383	1,354	1,411	2,289	N/A	~	
Consumer Confidence (Conf. Board)	07/31/24	100.30	<b>V</b>	100.40	103.10	108.00	128.90	124.30	109.83	92.70	96.95		
CPI YoY (Headline)	06/30/24	3.00%	_	3.00%	3.50%	3.40%	5.40%	1.60%	2.86%	2.62%	2.84%		_
CPI YoY (Core)	06/30/24	3.30%	_	3.30%	3.80%	3.90%	4.50%	2.10%	2.92%	2.43%	2.86%		
PPI YoY - Producer Prices	06/30/24	2.60%	_	2.60%	1.90%	1.10%	7.60%	1.60%	2.70%	N/A	N/A		
PCE YoY - Consumer Prices	06/30/24	2.63%	_	2.63%	2.82%	2.93%	3.80%	1.75%	2.42%	2.11%	2.38%		
US Dollar Total Weighted Index	07/26/24	123.99	▼	124.52	121.41	118.77	112.61	114.58	114.42	104.26	93.75		
WTI Crude Oil per Barrel	08/02/24	\$74	<b>V</b>	\$82	\$83	\$72	\$73	\$58	\$63	\$71	\$47		
Gold Spot per Oz	08/05/24	\$2,405	<b>A</b>	\$2,337	\$2,230	\$2,068	\$1,770	\$1,410	\$1,544	\$1,292	\$826		~
			M	DVETD	ERFORI	AANCE							
	As of	1-Day	MTD	QTD	CYTD	1-Yr	3-Yr	5-Yr	10-Yr*	2023	2022	2021	2020
D II 2000 I- d													
Russell 3000 Index	08/02/24	-2.02	-3.49	-1.70	11.63	18.89	6.89	13.81	12.57	25.96	-19.21	25.66	20.89
MSCI ACW Ex US Index (Net)	08/02/24	-2.26	-3.35	-1.11	4.51	9.10	0.26	6.02	4.18	15.62	-16.00	7.82	10.65
MSCI Emerging Markets Index (Net)	08/02/24	-2.44	-2.16	-1.86	5.48	6.69	-3.83	3.63	2.62	9.83	-20.09	-2.54	18.31
Bloomberg US Agg Bond Index	08/02/24	1.16	1.58	3.95	3.21	7.69	-2.20	0.35	1.60	5.53	-13.01	-1.54	7.51
Bloomberg US Corp High Yield Index	08/02/24	-0.30	-0.31	1.63	4.26	11.46	2.06	4.20	4.65	13.45	-11.19	5.28	7.11
Goldman Sachs Commodities Index (GSCI)	08/02/24	-2.06	-3.30	-6.71	3.63	-1.02	10.05	7.58	-2.94	-4.27	25.99	40.35	-23.72

<sup>\*10-</sup>Yr Index returns are as of most recent month-end. Past performance does not guarantee future results. All data courtesy of Bloomberg LP. N/A appears when there is insufficient history.



Capital Markets Review As of June 30, 2024

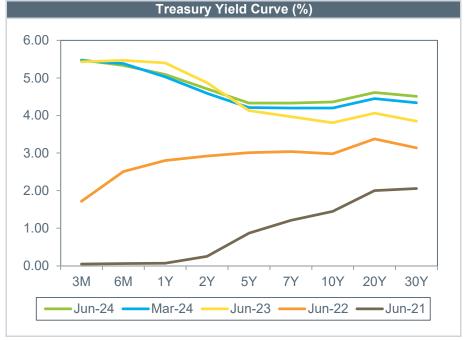
## **Second Quarter Economic Environment**

During Q2, broad global equity markets experienced subdued volatility and continued appreciation, while aggregate fixed income was flat. Within equity markets, results were once again driven by mega cap growth stocks, including NVIDIA and others expected to benefit from further adoption of Al. Within fixed income, the lack of movement in monetary policy and persistently tight spreads among corporate debt led to marginally positive returns for broad fixed income indexes, but longer duration asset prices declined modestly as long-term Treasury yields rose in Q2. Inflationary conditions improved as highlighted by the personal consumption expenditures deflator reading of 2.6% in May (the preferred inflation measure of the US Federal Reserve). The headline Consumer Price Index also came in below expectations at 3.0% in the June reading. The Federal Open Markets Committee (FOMC) indicated that "greater confidence" was necessary with regard to the downward path of inflation prior to considering major policy changes. The "dot plot" released by the FOMC indicated dispersion in rate forecasts among the group with the median member indicating that the Federal Funds Rate would decline by 25 basis points by the end of 2024. The June outlook released by the World Bank forecasted global GDP growth of 2.6% in 2024 and 2.7% in 2025. Global inflation levels were forecasted to be 3.5% this year with expectations that reductions will be more gradual than in prior projections.

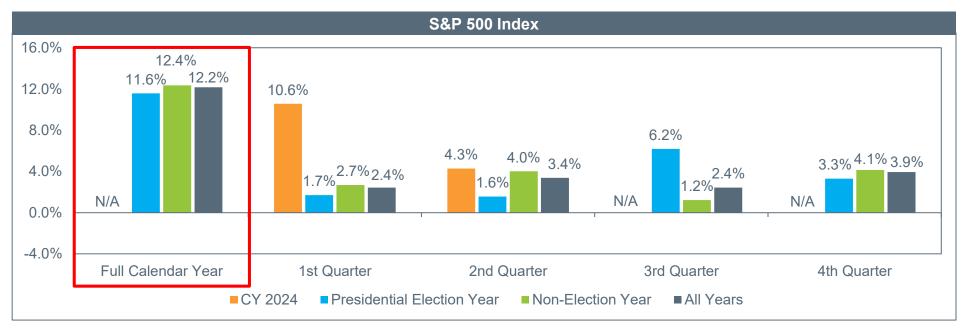
	Key E	Economic Inc	licators	
16 7	30 7	120 ]	70 7	160 7
14 -	25 -	100	60	140 -
12 -	20 - 15 -	100 -	50 -	120 -
10 -	10 -	80 -	40 -	100 -
8 -	5 0	60 -	30 -	80 -
6 -	<b>-5</b> -	00	20 -	60 -
4 - 2 -	-10 -	40 -	10	40 -
0	-15 -20	20	0	20
	20	20	Ü	
Unemployme Rate (%) Since 1948	nt CPI Year-over- Year (% change) Since 1914	US Govt Debt (% of GDP) Since 1940	VIX Index (Volatility) Since 1990	Consumer Confidence Since 1967

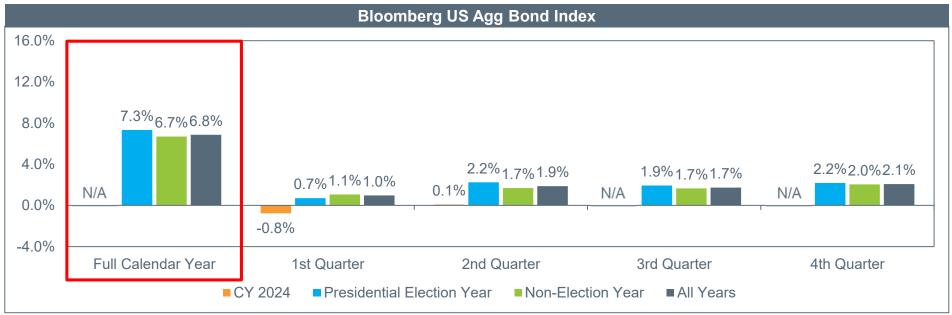
Economic Indicators	Jun-24		Mar-24	Jun-23	Jun-21	20 Yr
Federal Funds Rate (%)	5.33	_	5.33	5.08	0.08	1.60
Breakeven Infl 5 Yr (%)	2.24	$\blacksquare$	2.44	2.17	2.50	1.94
Breakeven Infl 10 Yr (%)	2.27	$\blacksquare$	2.32	2.21	2.34	2.09
CPI YoY (Headline) (%)	3.0	$\blacksquare$	3.5	3.0	5.4	2.6
Unemployment Rate (%)	4.1		3.8	3.6	5.9	5.8
Real GDP YoY (%)	3.1		2.9	2.4	11.9	2.0
PMI - Manufacturing	48.5	$\blacksquare$	50.3	46.0	60.9	53.1
USD Total Wtd Idx	124.52		121.41	119.71	112.61	104.24
WTI Crude Oil per Barrel (\$)	81.5	$\blacksquare$	83.2	70.6	73.5	71.2
Gold Spot per Oz (\$)	2,337	<b>A</b>	2,230	1,906	1,770	1,282
						40.14

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Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	4.28	15.29	24.56	15.05	12.86
Russell 2000	-3.28	1.73	10.06	6.94	7.00
MSCI EAFE (Net)	-0.42	5.34	11.54	6.46	4.33
MSCI EAFE SC (Net)	-1.84	0.51	7.78	4.19	4.29
MSCI Emg Mkts (Net)	5.00	7.49	12.55	3.10	2.79
Bloomberg US Agg Bond	0.07	-0.71	2.63	-0.23	1.35
ICE BofAML 3 Mo US T-Bill	1.32	2.63	5.40	2.16	1.51
NCREIF ODCE (Gross)	-0.45	-2.81	-9.26	3.16	6.41
FTSE NAREIT Eq REIT (TR)	0.06	-0.13	7.79	3.90	5.90
HFRI FOF Comp	0.44	4.63	8.50	4.78	3.48
Bloomberg Cmdty (TR)	2.89	5.14	5.00	7.25	-1.29
HFRI FOF Comp	0.44	4.63	8.50	4.78	3.48









Average quarterly and calendar year returns are measured from: January 1926 to June 2024 for the S&P 500 Index (Cap Wtd); and January 1976 to June 2024 for the Bloomberg US Aggregate Bond Index.



US Equity Review
As of June 30, 2024

## **Second Quarter Review**

#### **Broad Market**

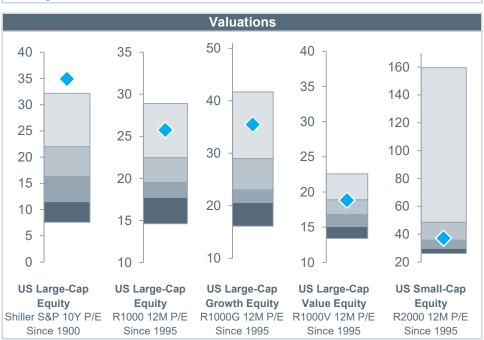
During Q2, US equities posted mixed results across the style spectrum, with broader market cap-weighted indexes delivering modest gains, as demonstrated by the Russell 3000 return of 3.2%. In contrast, returns from equal-weighted broad market indexes were negative highlighting the lack of market breadth in Q2. There was continued dispersion between the "Magnificent Seven" and the broader US market.

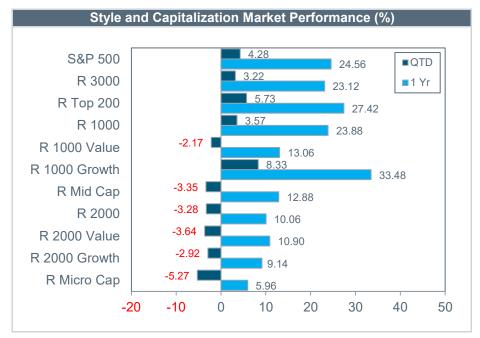
#### **Market Cap**

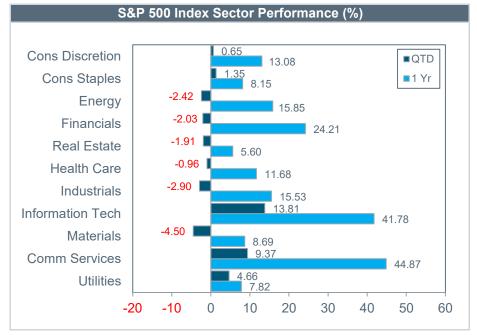
During Q2, large-cap equities significantly outperformed small-cap equities, and value underperformed growth, particularly in the large-cap space, with the Russell 1000 Value and Russell 1000 Growth delivering -2.2% and 8.3%, respectively.

## **Style and Sector**

Median manager excess returns were mostly negative in Q2, except for the small-cap space. The largest dispersion in manager median excess returns occurred in large-cap, with growth managers, in particular, struggling to keep pace with strong benchmark returns compared to value managers, who delivered modest excess returns, on average. This trend of underperformance by median growth managers was consistent in the mid-cap space, but not in the small-cap space, where managers fared better relative to the benchmark.











Non-US Equity Review
As of June 30, 2024

## **Second Quarter Review**

## **Developed Markets**

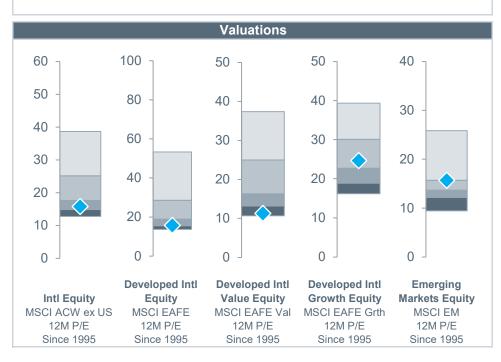
Developed international markets continued to trail their US counterparts in Q2 with the MSCI EAFE Index returning -0.4%. Developed markets were particularly influenced by election results in the European Parliament and the European Central Bank's first interest rate cut since 2019 following the easing of year-over-year inflation.

#### **Emerging Markets**

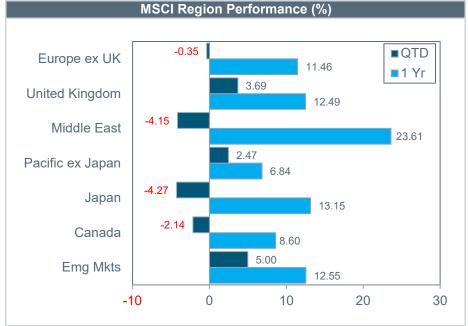
Emerging market equities significantly outperformed developed markets in Q2 reversing a recent trend with the MSCI Emerging Markets Index finishing the quarter up 5.0%. Emerging market value stocks narrowly outperformed growth while small-cap outperformed large-cap.

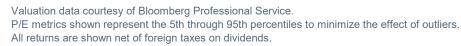
## Market Cap & Style

As with the US Market, large-cap stocks again outpaced small-cap stocks however, in a reversal from the prior quarter, value stocks outperformed their growth counterparts with the MSCI EAFE Value Index outperforming the MSCI EAFE Growth Index. Most developed active managers struggled to beat their index in Q2 with the exception being the small-cap value space.











Fixed Income Review

As of June 30, 2024

## Second Quarter Review

#### **Broad Market**

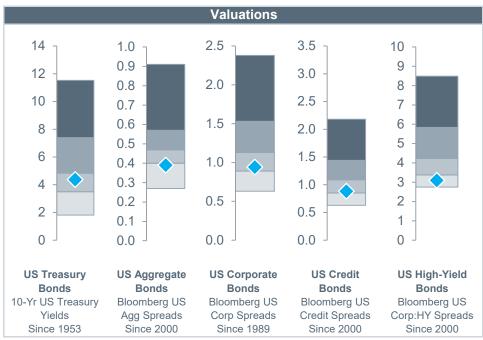
In Q2, the fixed income market experienced volatility due to uncertainty around rate cuts and inflation data. The latest Summary of Economic Projections released by the FOMC indicated only one expected rate cut in 2024 compared to a median forecast of three in the March release. FOMC members continued to stress the need for more confidence in economic data before adjusting policy. US Treasury yields experienced a steady increase across the curve, with the 10-year yield rising by 16 basis points to end at 4.4%. The yield spread between 2- and 10-year Treasury remained negative, marking a record duration of 24 months since the start of the inversion. Against this backdrop, the Bloomberg US Aggregate Bond Index posted a return of 0.1% in Q2.

#### **Credit Market**

Risk assets weathered rising rates, with lower-rated bonds outperforming the broad market. The Bloomberg US Corporate Investment Grade Index returned -0.1%, while the Bloomberg US Corporate High Yield Index returned 1.1%.

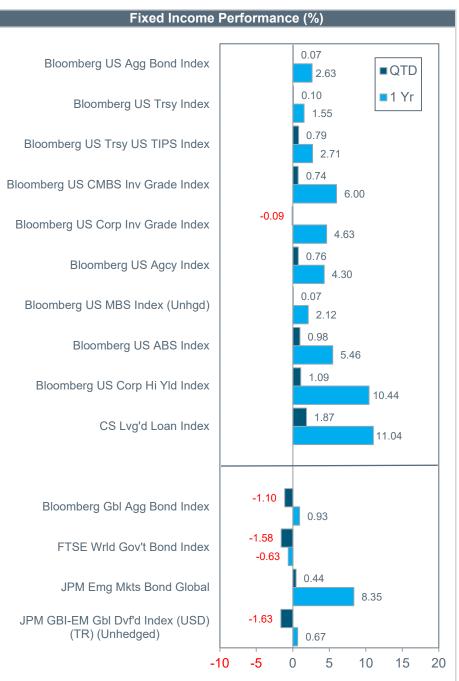
#### **Emerging Market Debt**

Emerging market debt delivered mixed results. The JPMorgan EMBI Global Diversified Index, tracking hard currency bond markets, posted a 0.3% return in Q2. However, the strength of the US dollar led to the underperformance of the JPMorgan GBI-EM Global Diversified Index, tracking local currency bond markets, which declined -1.6% in Q2.





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





Alternatives Review As of June 30, 2024

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

## **General Market - Hedge Funds**

In Q2, the HFRI Asset Weighted Composite Index finished the quarter up 0.1% resulting in a year-to-date return of 5.1%. Risk market volatility remained subdued amid uncertainty surrounding the anticipated interest rate policy pivot and the upcoming US presidential election. The long technology trade continues to perform well as NVIDIA and other "Magnificent Seven" stocks continue to push higher even as concentration among hedge fund managers reaches record levels. Long biased tech-oriented hedge funds were top performers during the quarter, with the HFRI EH: Technology Sector Index up 3.2%, and the HFRI EH: Fundamental Growth Index up 2.2%.

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

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely posted modest positive returns with limited dispersion. Generally, active managers providing significant diversification underperformed a US-centric blend of 60% equity and 40% fixed income (60/40 blend) as US stocks continued to trend higher. Relatedly, long-biased GTAA strategies featuring higher allocation to US stocks tied to information technology and communication services sectors outpaced peers.

#### **HFRI Hedge Fund Performance (%)** 0.44 HFRI FOF ■ QTD 8.50 1.17 Conv Arbitrage ■1 Yr 0.95 **Equity Hedge** 11.84 1.97 Mkt Neutral Eq 11.15 2.10 Distressed 10.46 -0.84 Macro 5.91 1.36 Relative Value 8.42 0.18 **Event Driven** 10.49 -0.01 Merger Arb 8.30 1.42 Credit Arb 12.61 -5 5 20 0 10 15

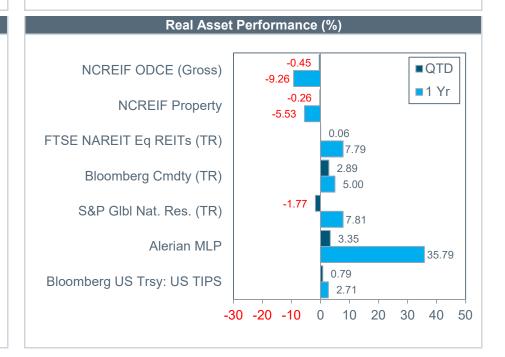
#### **Second Quarter Review - Real Assets**

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

Diversified Inflation Strategy managers tracked closely by RVK underperformed a US-centric 60/40 blend over the quarter. While results were relatively muted, managers with higher allocations to treasury inflation protected securities (TIPS) and exposures to commodities outperformed peers. Notably, managers with higher allocations to real estate investment trusts (REITs) tended to lag peers.

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

Core private real estate generated a negative total return of -0.5% in Q2 as reported by the NFI-ODCE Index, with the total return comprising 1.0% from income and -1.5% from price appreciation. Investors of publicly traded real estate underperformed their private market counterparts, though both were negative. Publicly traded real estate delivered a second quarter total return of -0.9%, as measured by FTSE/NAREIT All REITs Index. Negative price appreciation in institutional real estate, driven by rate expansion, continues to show a slowing pace. Coupled with stabilizing transaction markets and expectations of an interest rate cut in the near-term there is some anticipation from real estate investors that an eventual market inflection point could be realized.





Annual Asset Class Performance As of June 30, 2024

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD
Best	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	16.09	26.29	15.29
<b>1</b>	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	7.47	18.24	7.49
	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	1.46	16.93	5.34
	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	16.12	22.17	-5.31	13.73	5.14
	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	12.34	14.82	-11.19	13.45	4.63
	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	19.59	10.99	11.26	-11.85	13.16	2.63
	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.42	10.88	10.10	-13.01	9.83	2.58
	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	7.82	6.17	-14.45	7.13	1.73
	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	8.72	7.51	5.96	-18.11	6.07	0.70
	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	8.43	7.11	5.28	-20.09	5.53	0.51
	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	8.39	1.19	0.05	-20.44	5.02	-0.13
	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.79	7.69	0.67	-1.55	-21.39	3.90	-0.71
	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.37	-7.91	-2.81
Worst	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	2.28	-8.00	-2.54	-27.09	-12.02	-4.10
S&P 500 US Larg Cap		mall (Net)		(Net) - (I	MSCI EM Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - Fl	Bloombrg US Corp H Yield - Fl	Bloombr i US Trsy U TIPS - Fl	IS Credit I	v ODO	CE NARI	EIT Eq (	comp	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv



## **Educational Review**

## **Topics on Large Pension Plans**

## 1) Asset Allocation and Capital Market Assumptions

- Public Plan funded ratios have increased to 79.4% in May 2024 up from 73.7% in May 2023 according to Milliman's Public Plan Index which measures the largest 100 public plans with strong market returns.
- Pension plans are reassessing their equity allocation following stocks run-up during the first half of the year. The NYC Common moved allocations from cash into alternatives. A few other plans reduced their equities in favor of bonds. However, Texas Teachers reduced their private equity allocation in favor of US and non-US equities
- US public pension plans have generally increased their allocations to private credit over the past few years as they can offer yields in the 8% 15% range. Defaults within this space are still moderate, but interest rate coverage ratios are decreasing. Plans are increasing or implementing an asset-based lending segment of their private credit.
- US public pension plans have generally been reassessing their exposure to office real estate as the corporate business environment has shifted post pandemic. Defaults have picked up in NYC, Chicago, and St. Louis and transaction prices have fallen.
- Plans are limiting or trying to reduce their COLAs as inflation data has soften year over year.

## 2) Total Fund Performance Increased over the Past Year

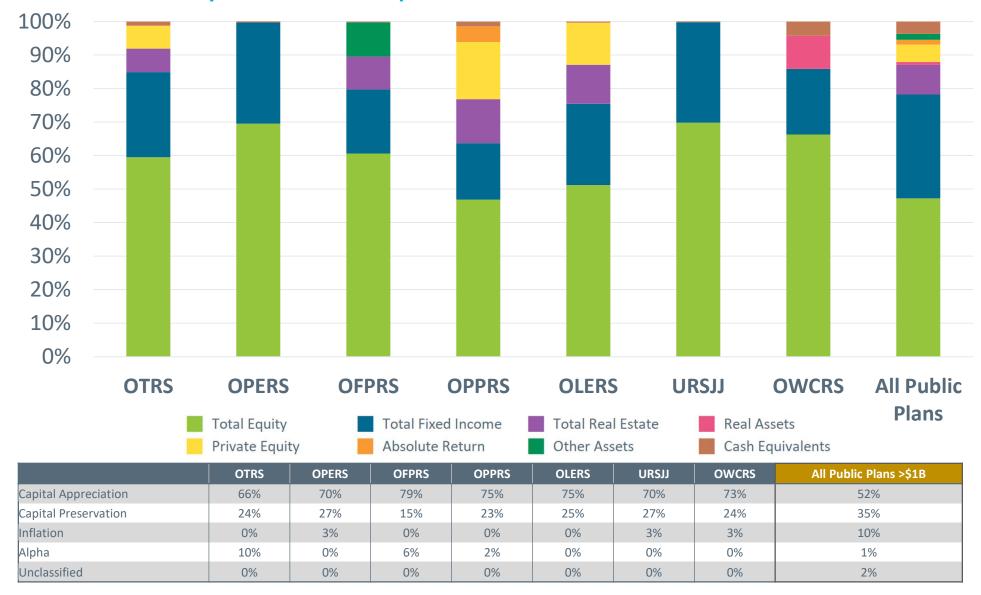
- The pension fund universe showed a median return of 10.9% over the past year and most pension funds outperformed versus their actuarial rate (~6-8%).
- US equities were up over 20% over the past year and private markets valuations are increasing. Private equity fundraising is slowing as plan sponsors are decreasing their future commitments.

# Oklahoma Pension Asset Allocation & Performance Detail



## **Asset Allocation Comparison**

## **Asset Allocation by Plan vs Peer Group**

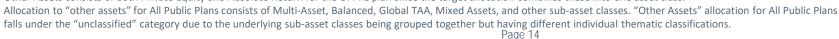


Data shown is as of 06/30/2024. Allocations may not add up to 100% due to rounding. Please refer to the appendix for thematic classification definitions.

All Public Plan >\$1B is the Investment Metrics peer group of plans reporting in their system, with a current population of 122.

Total Equity excludes Private Equity. Total Fixed Income includes Private Debt. Private Equity includes Venture Capital.

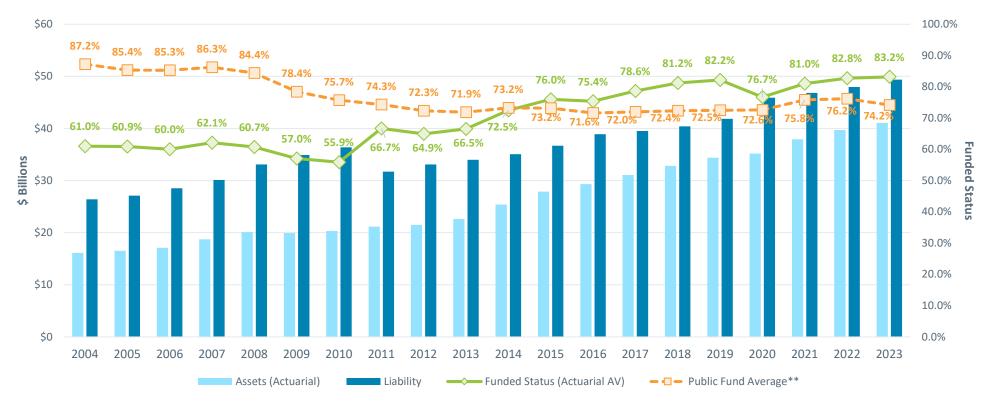
Other Assets consists of both Private Equity and Absolute Return for the OFPRS plan since the target allocation combines these into one asset class.





# **Projected Returns and Peer Data**

Plan	Market Value (\$B)	Projected Returns (%)	Actuarial Rate (%)	% Paid to Investment Fees	*Median % Paid to Investment Fees	Funded Status (%)	Unfunded Accrued Liability (\$M)
OTRS	\$22.8	6.7%	7.0%	0.22%		75.1%	\$7,706
OPERS	\$12.2	6.5%	6.5%	0.10%		100.7%	\$458
OFPRS	\$3.7	7.1%	7.5%	0.62%		72.8%	\$1,290
OPPRS	\$3.2	7.1%	7.5%	0.62%	0.370/	106.1%	(\$31)
OLERS	\$1.1	7.0%	7.5%	0.53%	0.37%	81.8%	\$330
OURSJJ	\$0.4	6.5%	6.5%	0.03%		104.1%	\$1
OWCRS	\$0.1	6.5%	7.0%	0.24%		92.3%	\$14
Total	\$43.6	-	-	-		-	\$9,768



Market value data shown is as of 06/30/2024. Projected returns were calculated using RVK's 2024 capital market assumptions and each plan's actual allocations as of Q2 2024. Investment fee data is sourced from each plan's Annual Comprehensive Financial Report (ACFR) as of 06/30/2023 and percentage is calculated by dividing the total dollar fee amount by the plan's market value as of 06/30/2023.





# **Risk & Yield Figures**

Plan	Percent of Assets	Percent Yield	5-Year Standard Deviation (%)	10-Year Sharpe Ratio & Rank vs. All Public Plans	Projected Returns (%)	Projected Risk (%)
OTRS	52.3%	2.6%	11.2%	0.54 (56 <sup>th</sup> )	6.7%	12.1%
OPERS	28.0%	1.6%	13.3%	0.50 (75 <sup>th</sup> )	6.5%	11.9%
OFPRS	8.5%	0.6%	10.7%	0.66 (14 <sup>th</sup> )	7.1%	13.3%
OPPRS	7.3%	0.8%	8.7%	0.61 (28 <sup>th</sup> )	7.1%	12.4%
OLERS	2.6%	1.5%	10.1%	0.49 (76 <sup>th</sup> )	7.0%	11.9%
OURSJJ	1.0%	1.1%	13.3%	0.49 (76 <sup>th</sup> )	6.5%	12.0%
OWCRS	0.3%	1.8%	13.5%	0.60 (34 <sup>th</sup> )	6.3%	11.7%



Data shown is as of 06/30/2024.

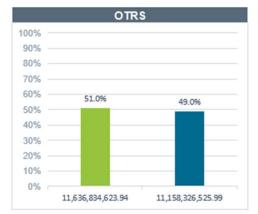
Calendar Year yield percentages were calculated as total income for the calendar year ending in Q1 2024 by plan divided by the average market value for the calendar year ending in Q1 2024 by plan. Yields are annualized. Income and market values come directly from each plan's consultant and are reported on a quarter lag.

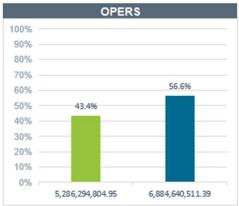
Ranking for 10-Year Sharpe Ratio is based on gross of fees performance and is scaled from 1-100, with 1 being the highest rank and 100 being the lowest rank compared to peers. Projected returns and risk were calculated using RVK's 2024 capital market assumptions and each plan's actual allocation as of Q2 2024.

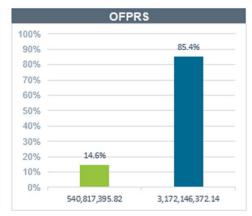


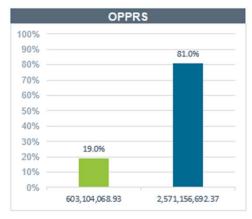
# **Management Style**

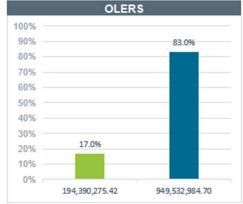
## **Active vs Passive Manager Allocations by Plan**

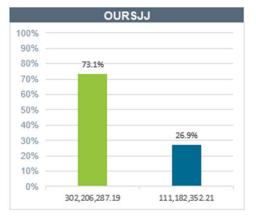




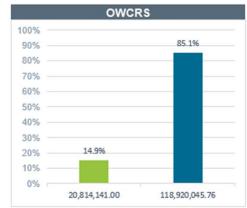














## **Total Fund**

	Allocation												
	Market Value (\$)	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
OTRS (Teachers) Total Fund	22,795,161,150	1.24	5.37	11.51	11.51	3.03	8.04	7.96	7.17	13.02	-13.08	18.42	13.45
OTRS Policy Index		2.31	8.14	13.71	13.71	3.90	8.81	8.53	7.55	14.96	-14.07	15.60	15.24
Difference		-1.07	-2.77	-2.20	-2.20	-0.87	-0.77	-0.57	-0.38	-1.94	0.99	2.82	-1.79
All Public Plans-Total Fund Median		1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47
Rank		42	58	41	41	53	31	31	34	46	58	9	36
OPERS (Public Employees) Total Fund	12,170,935,316	1.22	6.60	12.74	12.74	2.24	7.46	7.40	6.76	16.27	-16.64	12.46	15.34
OPERS Policy Index		1.33	6.18	12.46	12.46	2.01	7.15	7.22	6.65	16.11	-16.62	11.54	15.19
Difference		-0.11	0.42	0.28	0.28	0.23	0.31	0.18	0.11	0.16	-0.02	0.92	0.15
All Public Plans-Total Fund Median		1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47
Rank		44	25	23	23	73	51	53	54	9	94	74	18
OFPRS (Firefighters) Total Fund	3,712,963,768	1.29	6.12	10.78	10.78	2.73	8.25	8.67	8.16	13.08	-13.03	13.87	18.44
OFPRS Policy Index		1.56	6.47	11.94	11.94	3.75	8.57	8.54	8.07	14.34	-13.50	16.12	15.02
Difference		-0.27	-0.35	-1.16	-1.16	-1.02	-0.32	0.13	0.09	-1.26	0.47	-2.25	3.42
All Public Plans-Total Fund Median		1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47
Rank		40	39	52	52	60	24	9	6	45	57	57	5
OPPRS (Police) Total Fund	3,174,260,761	1.11	3.79	7.95	7.95	2.45	7.15	7.03	6.40	8.20	-9.99	17.71	12.54
OPPRS Policy Index		1.78	6.66	11.40	11.40	3.40	7.36	7.18	6.13	13.27	-13.55	14.45	12.33
Difference		-0.67	-2.87	-3.45	-3.45	-0.95	-0.21	-0.15	0.27	-5.07	3.56	3.26	0.21
All Public Plans-Total Fund Median		1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47
Rank		50	88	87	87	69	62	65	68	94	23	13	49
OLERS (Law Enforcement) Total Fund	1,143,923,260	0.92	4.04	8.71	8.71	1.29	6.42	6.55	6.13	11.38	-14.08	15.04	12.80
OLERS Policy Index		1.22	5.87	10.59	10.59	3.18	7.52	7.50	6.90	12.81	-13.05	15.07	12.82
Difference		-0.30	-1.83	-1.88	-1.88	-1.89	-1.10	-0.95	-0.77	-1.43	-1.03	-0.03	-0.02
All Public Plans-Total Fund Median		1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47
Rank		61	84	82	82	87	79	80	75	69	70	37	45
URSJJ (Judges) Total Fund	413,388,639	1.43	6.55	12.89	12.89	2.06	7.27	7.27	6.65	16.28	-16.93	12.12	15.10
URSJJ Policy Index		1.33	6.18	12.46	12.46	2.01	7.16	7.22	6.65	16.11	-16.62	11.54	15.19
Difference		0.10	0.37	0.43	0.43	0.05	0.11	0.05	0.00	0.17	-0.31	0.58	-0.09
All Public Plans-Total Fund Median		1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47
Rank		30	26	21	21	76	58	58	58	8	96	78	20
OWCRS (Wildlife) Total Fund	139,734,187	1.93	8.04	14.32	14.32	4.74	8.25	8.07	7.24	19.22	-14.14	11.95	13.34
OWCRS Policy Index		1.79	7.68	14.44	14.44	3.11	6.84	6.61	5.91	16.94	-15.39	10.17	12.67
Difference		0.14	0.36	-0.12	-0.12	1.63	1.41	1.46	1.33	2.28	1.25	1.78	0.67
All Public Plans-Total Fund Median		1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47
Rank		6	4	5	5	10	24	26	32	1	70	80	38



## **US Equity**

	Market	Performance (%)											
	Value (\$)	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
OTRS US Equity	9,496,277,999	1.69	11.21	20.25	20.25	6.21	11.58	11.32	10.27	20.86	-16.60	24.61	15.62
Russell 3000 Index		3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89
Difference		-1.53	-2.35	-2.87	-2.87	-1.84	-2.56	-2.16	-1.88	-5.10	2.61	-1.05	-5.27
IM U.S. Equity (SA+CF) Median		-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	19.37	-16.40	26.09	16.71
Rank		31	33	34	34	48	48	47	47	45	51	60	53
OPERS US Equity	5,003,180,734	2.21	12.93	22.36	22.36	8.15	14.07	13.26	11.91	24.78	-17.63	26.13	20.53
OPERS US Equity Custom Index		2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	25.18	-19.29	24.73	20.97
Difference		-0.32	0.62	0.55	0.55	1.11	0.56	0.34	0.16	-0.40	1.66	1.40	-0.44
IM U.S. Equity (SA+CF) Median		-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	19.37	-16.40	26.09	16.71
Rank		29	28	29	29	31	28	32	33	32	55	50	40
OFPRS US Equity	1,605,618,255	2.52	14.41	23.88	23.88	5.70	13.00	13.11	11.84	24.14	-20,49	19.85	25.89
Russell 3000 Index		3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89
Difference		-0.70	0.85	0.76	0.76	-2.35	-1.14	-0.37	-0.31	-1.82	-1.28	-5.81	5.00
IM U.S. Equity (SA+CF) Median		-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	19.37	-16.40	26.09	16.71
Rank		28	24	25	25	51	36	33	33	34	70	77	29
OLERS US Equity	357,913,064	0.34	9.20	19.55	19.55	5.08	12.53	12.08	10.98	24.81	-20.32	26.08	20.00
S&P 500 Index (Cap Wtd)		4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	26.29	-18.11	28.71	18.40
Difference		-3.94	-6.09	-5.01	-5.01	-4.93	-2.52	-2.20	-1.88	-1.48	-2.21	-2.63	1.60
IM U.S. Equity (SA+CF) Median		-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	19.37	-16.40	26.09	16.71
Rank		37	41	36	36	56	40	40	41	31	69	51	42
URSJJ US Equity	170,122,353	2.58	12.36	21.89	21.89	7.06	13.52	12.90	11.74	25.17	-19.30	24.70	21.03
URSJJ US Equity Custom Index		2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	25.18	-19.29	24.73	20.97
Difference		0.05	0.05	0.08	0.08	0.02	0.01	-0.02	-0.01	-0.01	-0.01	-0.03	0.06
IM U.S. Equity (SA+CF) Median		-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	19.37	-16.40	26.09	16.71
Rank		27	29	30	30	41	32	34	34	30	65	59	37
OWCRS US Equity	68,674,849	3.46	13.78	21.98	21.98	9.98	14.72	13.98	12.43	28.52	-17.14	26.59	19.18
Russell 3000 Index		3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89
Difference		0.24	0.22	-1.14	-1.14	1.93	0.58	0.50	0.28	2.56	2.07	0.93	-1.71
IM U.S. Equity (SA+CF) Median		-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	19.37	-16.40	26.09	16.71
Rank		22	25	30	30	17	23	26	28	17	54	47	44



## **Non-US Equity**

	Market	Performance (%)											
	Value (\$)	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
OTRS International Equity	4,064,133,763	0.78	5.60	12.55	12.55	-0.22	6.01	5.41	4.58	16.97	-19.91	11.72	12.61
MSCI ACW Ex US IM Index (USD) (Gross)		1.12	5.63	12.12	12.12	0.70	6.12	5.63	4.40	16.21	-16.15	8.99	11.59
Difference		-0.34	-0.03	0.43	0.43	-0.92	-0.11	-0.22	0.18	0.76	-3.76	2.73	1.02
IM International Equity (SA+CF) Median		0.35	5.34	11.44	11.44	1.83	6.99	6.27	5.27	17.71	-16.30	11.76	11.61
Rank		41	46	41	41	71	66	69	71	56	70	51	47
OPERS International Equity	3,458,036,894	1.05	5.22	10.39	10.39	-0.26	5.63	5.34	4.23	16.15	-17.30	7.22	12.53
MSCI ACW Ex US Index (USD) (Gross)		1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference		-0.12	-0.82	-1.78	-1.78	-1.23	-0.42	-0.34	-0.11	-0.06	-1.73	-1.07	1.40
IM All ACWI Ex US (SA+CF) Median		0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	17.12	-17.00	9.43	14.71
Rank		40	59	55	55	70	80	76	80	63	53	70	56
OFPRS International Equity	555,426,492	1.70	8.29	10.74	10.74	-1.10	8.03	8.24	7.01	12.79	-20.65	7.66	32.50
MSCI ACW Ex US Index (USD) (Net)		0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	15.62	-16.00	7.82	10.65
Difference		0.74	2.60	-0.88	-0.88	-1.56	2.48	3.07	3.17	-2.83	-4.65	-0.16	21.85
IM International Equity (SA+CF) Median		0.35	5.34	11.44	11.44	1.83	6.99	6.27	5.27	17.71	-16.30	11.76	11.61
Rank		23	22	56	56	74	33	17	21	85	73	76	9
OLERS International Equity	227,012,880	1.34	3.05	9.10	9.10	-0.94	5.66	5.53	4.71	17.27	-18.64	8.17	13.34
MSCI ACW Ex US Index (USD) (Gross)		1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference		0.17	-2.99	-3.07	-3.07	-1.91	-0.39	-0.15	0.37	1.06	-3.07	-0.12	2.21
IM International Equity (SA+CF) Median		0.35	5.34	11.44	11.44	1.83	6.99	6.27	5.27	17.71	-16.30	11.76	11.61
Rank		29	77	67	67	73	74	65	68	54	64	73	46
URSJJ International Equity	118,426,357	1.15	5.88	11.72	11.72	0.72	5.80	5.44	4.12	15.83	-15.72	8.09	10.87
MSCI ACW Ex US Index (USD) (Gross)		1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference		-0.02	-0.16	-0.45	-0.45	-0.25	-0.25	-0.24	-0.22	-0.38	-0.15	-0.20	-0.26
IM All ACWI Ex US (SA+CF) Median		0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	17.12	-17.00	9.43	14.71
Rank		37	48	46	46	56	77	72	81	65	44	64	60
OWCRS International Equity	23,912,007	-0.18	3.19	8.43	8.43	-0.45	5.21	5.11	4.23	15.76	-15.34	6.16	10.82
MSCI ACW Ex US Index (USD) (Net)		0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	15.62	-16.00	7.82	10.65
Difference		-1.14	-2.50	-3.19	-3.19	-0.91	-0.34	-0.06	0.39	0.14	0.66	-1.66	0.17
IM All ACWI Ex US (SA+CF) Median		0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	17.12	-17.00	9.43	14.71
Rank		64	81	74	74	71	88	79	80	68	40	82	60
OPPRS Total Equity	2,027,712,157	1.46	6.71	12.31	12.31	3.30	10.33	9.76	8.80	13.35	-15.04	23.90	18.81
MSCI ACW Index (USD) (Gross)		3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	22.81	-17.96	19.04	16.82
Difference		-1.55	-4.87	-7.61	-7.61	-2.64	-0.95	-0.81	-0.19	-9.46	2.92	4.86	1.99
IM Global Equity (SA+CF) Median		1.10	8.32	15.94	15.94	4.80	10.71	10.04	8.70	20.18	-16.57	19.10	15.78
Rank		46	63	67	67	67	54	55	50	76	42	17	37



## **Fixed Income**

	Market						Perform	ance (%)	)				
	Value (\$)	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
OTRS Fixed Income	5,161,900,552	0.38	0.57	5.29	5.29	-2.59	1.16	2.22	2.63	8.26	-16.10	0.23	12.11
OTRS Fixed Income Custom Index		0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	7.87	-12.41	0.49	7.30
Difference		0.01	0.29	0.36	0.36	-0.98	0.16	0.34	0.38	0.39	-3.69	-0.26	4.81
IM U.S. Fixed Income (SA+CF) Median		0.67	0.92	4.71	4.71	-0.63	1.36	2.01	2.15	6.33	-9.19	0.01	6.94
Rank		65	59	41	41	78	58	42	34	29	90	43	12
OPERS Fixed Income	3,666,468,582	-0.04	-0.90	2.06	2.06	-3.47	0.12	1.29	1.79	5.69	-14.97	-0.72	10.65
OPERS Fixed Income Custom Index		-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	5.19	-15.08	-1.01	9.08
Difference		0.03	0.23	0.47	0.47	0.29	0.56	0.51	0.44	0.50	0.11	0.29	1.57
IM U.S. Broad Market Fixed Income (SA+CF) Median		0.32	0.00	3.69	3.69	-2.50	0.58	1.58	2.01	6.37	-12.92	-0.74	8.74
Rank		99	98	97	97	99	82	77	72	81	97	49	10
OFPRS Fixed Income	474,197,434	-1.06	-3.68	-0.20	-0.20	-4.41	-1.00	-0.04	0.78	6.82	-13.89	-2.70	8.41
Bloomberg US Agg Bond Index		0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51
Difference		-1.13	-2.97	-2.83	-2.83	-1.39	-0.77	-0.90	-0.57	1.29	-0.88	-1.15	0.90
IM Global Fixed Income (SA+CF) Median		0.55	1.16	7.08	7.08	-0.93	1.85	2.51	2.55	9.04	-12.16	0.52	8.39
Rank		82	87	89	89	76	78	85	66	71	63	71	50
OPPRS Fixed Income	682,981,235	0.84	1.83	6.50	6.50	0.08	2.10	2.66	2.30	7.49	-8.60	1.60	6.98
Bloomberg US Agg Bond Index		0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51
Difference		0.77	2.54	3.87	3.87	3.10	2.33	1.80	0.95	1.96	4.41	3.15	-0.53
IM Global Fixed Income (SA+CF) Median		0.55	1.16	7.08	7.08	-0.93	1.85	2.51	2.55	9.04	-12.16	0.52	8.39
Rank		41	41	55	55	40	47	49	56	65	27	39	61
OLERS Fixed Income	277,563,734	0.28	-0.25	3.72	3.72	-2.81	-0.70	0.50	1.12	6.68	-13.22	-1.71	5.74
Bloomberg US Agg Bond Index		0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51
Difference		0.21	0.46	1.09	1.09	0.21	-0.47	-0.36	-0.23	1.15	-0.21	-0.16	-1.77
IM U.S. Broad Market Fixed Income (SA+CF) Median		0.32	0.00	3.69	3.69	-2.50	0.58	1.58	2.01	6.37	-12.92	-0.74	8.74
Rank		58	65	50	50	76	100	100	100	39	67	92	97
URSJJ Fixed Income	123,910,067	0.00	-0.86	2.09	2.09	-3.47	0.10	1.27	1.75	5.69	-15.02	-0.82	10.70
URSJJ Fixed Income Custom Index		-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	5.19	-15.08	-1.01	9.08
Difference		0.07	0.27	0.50	0.50	0.29	0.54	0.49	0.40	0.50	0.06	0.19	1.62
IM U.S. Broad Market Fixed Income (SA+CF) Median		0.32	0.00	3.69	3.69	-2.50	0.58	1.58	2.01	6.37	-12.92	-0.74	8.74
Rank		98	97	97	97	99	84	78	76	81	97	54	10
OWCRS Fixed Income	27,359,243	0.51	0.92	5.25	5.25	-1.45	1.14	1.88	1.85	7.65	-12.01	-0.10	8.56
OWCRS Fixed Income Custom Index		0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	5.76	-12.75	-1.53	7.22
Difference		0.44	1.52	2.41	2.41	1.37	1.31	0.93	0.41	1.89	0.74	1.43	1.34
IM Global Fixed Income (SA+CF) Median		0.55	1.16	7.08	7.08	-0.93	1.85	2.51	2.55	9.04	-12.16	0.52	8.39
Rank		52	53	59	59	55	62	60	59	62	49	56	50



## **Real Estate**

	Market Value (\$)	Market Performance (%)											
		QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
Real Estate													
OTRS Real Estate	1,599,902,986	-0.23	-6.11	-9.07	-9.07	2.86	1.69	3.52	N/A	-10.76	18.60	11.92	-2.27
OTRS Real Estate Custom Index		-0.55	-2.99	-9.55	-9.55	1.52	2.78	3.96	5.99	-12.29	7.08	21.62	0.85
Difference		0.32	-3.12	0.48	0.48	1.34	-1.09	-0.44	N/A	1.53	11.52	-9.70	-3.12
NCREIF Property Index		-0.26	-1.24	-5.53	-5.53	2.33	3.39	4.37	6.07	-7.94	5.52	17.70	1.60
Difference		0.03	-4.87	-3.54	-3.54	0.53	-1.70	-0.85	N/A	-2.82	13.08	-5.78	-3.87
NCREIF ODCE Index (AWA) (Gross)		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-12.02	7.47	22.17	1.19
Difference		0.22	-3.30	0.19	0.19	0.96	-1.47	-0.84	N/A	1.26	11.13	-10.25	-3.46
OPERS Real Estate	7,500,000	-21.12	-20.42	-17.17	-17.17	-3.52	-4.49	-2.79	-1.42	7.20	6.35	-8.15	-8.51
NCREIF ODCE Index (AWA) (Gross)		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-12.02	7.47	22.17	1.19
Difference		-20.67	-17.61	-7.91	-7.91	-5.42	-7.65	-7.15	-7.83	19.22	-1.12	-30.32	-9.70
OFPRS Real Estate	364,275,852	-1.76	-8.07	-13.76	-13.76	0.48	1.37	3.20	5.71	-8.82	7.01	16.84	0.18
NCREIF Property Index		-0.26	-1.24	-5.53	-5.53	2.33	3.39	4.37	6.07	-7.94	5.52	17.70	1.60
Difference		-1.50	-6.83	-8.23	-8.23	-1.85	-2.02	-1.17	-0.36	-0.88	1.49	-0.86	-1.42
NCREIF ODCE Index (AWA) (Gross)		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-12.02	7.47	22.17	1.19
Difference		-1.31	-5.26	-4.50	-4.50	-1.42	-1.79	-1.16	-0.70	3.20	-0.46	-5.33	-1.01
Real Assets													
OPPRS Real Assets	416,822,698	0.14	-6.18	-8.03	-8.03	2.75	2.98	3.73	3.95	-9.71	13.11	19.08	-0.51
OPPRS Real Assets Blended Benchmark		-0.67	-3.23	-10.00	-10.00	1.02	2.06	2.73	1.40	-12.73	6.55	21.02	0.34
Difference		0.81	-2.95	1.97	1.97	1.73	0.92	1.00	2.55	3.02	6.56	-1.94	-0.85
OLERS Real Assets	133,023,791	1.48	-1.57	-10.47	-10.47	0.72	1.94	2.89	3.51	-14.61	6.13	19.82	0.94
OLERS Real Assets Blended Benchmark		-0.67	-3.23	-10.00	-10.00	1.02	2.09	2.80	2.67	-12.73	6.55	21.02	0.34
Difference		2.15	1.66	-0.47	-0.47	-0.30	-0.15	0.09	0.84	-1.88	-0.42	-1.20	0.60



## **Hedge Funds**

	Market	Market Performance (%)											
	Value (\$)	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
OFPRS Hedge Fund	68,183	1.13	-2.48	-0.96	-0.96	-6.35	-4.58	-2.48	-1.21	16.54	0.36	-26.04	-4.62
HFRI FOF Cnsvt Index		0.53	3.15	6.68	6.68	3.45	4.85	4.35	3.47	5.48	0.08	7.62	6.47
Difference		0.60	-5.63	-7.64	-7.64	-9.80	-9.43	-6.83	-4.68	11.06	0.28	-33.66	-11.09
OPPRS Long/Short Equity	63,853,036	-5.62	-2.51	2.77	2.77	-3.81	3.78	4.33	4.40	15.30	-17.31	0.14	22.68
HFRI FOF Strat Index		0.85	5.93	10.84	10.84	0.58	4.81	4.24	3.52	8.09	-11.71	6.26	14.62
Difference		-6.47	-8.44	-8.07	-8.07	-4.39	-1.03	0.09	0.88	7.21	-5.60	-6.12	8.06



## **Private Equity**

	Market						Perform	ance (%)					
	Value (\$)	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
OTRS Private Equity	1,553,814,447	4.07	2.37	6.52	6.52	8.75	16.78	16.98	16.26	4.78	-0.26	57.72	17.27
OTRS Private Equity Custom Index		9.33	22.27	27.35	27.35	9.11	13.59	12.82	11.61	21.09	-18.40	31.25	13.65
Difference		-5.26	-19.90	-20.83	-20.83	-0.36	3.19	4.16	4.65	-16.31	18.14	26.47	3.62
OFPRS Private Equity	380,390,649	1.52	1.83	2.33	2.33	12.08	15.55	15.29	14.43	8.34	10.18	49.68	7.49
Cambridge US Prvt Eq Index		0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86
Difference		1.52	-0.04	-3.24	-3.24	5.06	0.91	0.62	1.18	-0.73	12.15	8.99	-15.37
OPPRS Private Equity	541,053,251	2.43	4.62	6.38	6.38	8.91	15.69	15.02	13.13	-1.19	-1.91	67.32	15.87
Cambridge US Prvt Eq Index		0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86
Difference		2.43	2.75	0.81	0.81	1.89	1.05	0.35	-0.12	-10.26	0.06	26.63	-6.99
OLERS Private Equity	143,978,484	3.44	4.68	8.80	8.80	6.50	13.73	13.08	10.43	5.29	-3.13	41.10	20.25
Cambridge US Prvt Eq Index		0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86
Difference		3.44	2.81	3.23	3.23	-0.52	-0.91	-1.59	-2.82	-3.78	-1.16	0.41	-2.61
Other Alternatives													
OWCRS Alternative Investments	13,818,984	1.43	5.33	10.02	10.02	4.87	5.86	5.34	4.08	13.09	-5.53	9.60	2.74
OWCRS Alternatives Custom Index		0.61	4.81	8.70	8.70	2.12	4.82	4.34	2.96	6.07	-5.31	6.17	10.88
Difference		0.82	0.52	1.32	1.32	2.75	1.04	1.00	1.12	7.02	-0.22	3.43	-8.14







# **RVK 2024 Capital Market Assumptions**

	2023				2024		Change			
Asset Class	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	Nominal Return (Arith.)	Risk (St. Dev.)	Nominal Return (Geo.)	
Large/Mid Cap US Equity	6.75%	16.00%	5.57%	6.50%	16.00%	5.32%	-0.25%	0.00%	-0.25%	
Small Cap US Equity	7.25%	19.00%	5.61%	7.00%	19.00%	5.35%	-0.25%	0.00%	-0.25%	
Broad US Equity	6.80%	16.10%	5.61%	6.50%	16.10%	5.30%	-0.30%	0.00%	-0.30%	
Dev'd Large/Mid Cap Int'l Equity	8.50%	17.00%	7.19%	8.25%	17.00%	6.94%	-0.25%	0.00%	-0.25%	
Dev'd Small Cap Int'l Equity	9.25%	20.00%	7.46%	9.00%	20.00%	7.21%	-0.25%	0.00%	-0.25%	
Emerging Markets Equity	11.25%	25.00%	8.54%	11.25%	25.00%	8.54%	0.00%	0.00%	0.00%	
Broad International Equity	9.35%	18.70%	7.79%	9.15%	18.85%	7.56%	-0.20%	0.15%	-0.23%	
Global Equity	7.85%	16.40%	6.62%	7.55%	16.60%	6.29%	-0.30%	0.20%	-0.33%	
US Aggregate Fixed Income	4.00%	5.00%	3.88%	4.00%	5.00%	3.88%	0.00%	0.00%	0.00%	
Non-US Dev'd Sov'n Fixed Income UH	2.25%	8.50%	1.90%	2.50%	8.50%	2.15%	0.25%	0.00%	0.25%	
Emerging Markets Debt Hard Currency	7.50%	10.00%	7.04%	7.00%	10.00%	6.54%	-0.50%	0.00%	-0.50%	
Emerging Markets Debt Local Currency	6.50%	11.50%	5.88%	6.00%	11.50%	5.38%	-0.50%	0.00%	-0.50%	
TIPS	4.00%	5.50%	3.85%	4.00%	5.50%	3.85%	0.00%	0.00%	0.00%	
Low Duration Fixed Income	3.25%	2.50%	3.22%	3.25%	2.50%	3.22%	0.00%	0.00%	0.00%	
Long Duration Fixed Income	5.00%	10.00%	4.53%	5.00%	10.00%	4.53%	0.00%	0.00%	0.00%	
High Yield	7.25%	10.50%	6.74%	7.00%	10.50%	6.49%	-0.25%	0.00%	-0.25%	
Bank Loans	6.50%	8.50%	6.16%	6.50%	9.00%	6.12%	0.00%	0.50%	-0.04%	
Core Real Estate	5.75%	12.50%	5.02%	5.75%	12.50%	5.02%	0.00%	0.00%	0.00%	
Global REITs	7.75%	21.00%	5.76%	7.75%	21.00%	5.76%	0.00%	0.00%	0.00%	
MLPs	8.25%	23.00%	5.89%	8.25%	23.00%	5.89%	0.00%	0.00%	0.00%	
Funds of Hedge Funds	5.00%	9.50%	4.57%	5.00%	9.50%	4.57%	0.00%	0.00%	0.00%	
Multi-Strategy Hedge Funds	5.75%	8.50%	5.41%	5.75%	8.50%	5.41%	0.00%	0.00%	0.00%	
GTAA	6.00%	9.00%	5.62%	5.75%	9.00%	5.37%	-0.25%	0.00%	-0.25%	
Private Credit	8.00%	13.00%	7.23%	8.00%	13.00%	7.23%	0.00%	0.00%	0.00%	
Senior Secured Direct Lending	7.00%	9.00%	6.62%	7.00%	9.50%	6.58%	0.00%	0.50%	-0.04%	
Private Equity	10.00%	22.00%	7.86%	9.75%	22.00%	7.61%	-0.25%	0.00%	-0.25%	
Commodities	6.00%	17.50%	4.58%	6.25%	17.50%	4.84%	0.25%	0.00%	0.25%	
Diversified Inflation Strategies	5.90%	11.60%	5.27%	6.00%	11.85%	5.34%	0.10%	0.25%	0.07%	
US Inflation	2.50%	2.50%	2.47%	2.50%	2.50%	2.47%	0.00%	0.00%	0.00%	
Cash Equivalents	2.50%	2.00%	2.48%	2.75%	2.00%	2.73%	0.25%	0.00%	0.25%	



## **Thematic Classification Definitions**

**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:

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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

Value Added Real Estate Opportunistic Real Estate

## **Capital Preservation**

Stable Value

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

## **Inflation**

TIPS
Bank Loans
Core Real Estate
Real Return
Inflation Hedges
REITs
Commodities



## **Custom Index Definitions**

- OTRS Policy Index: OTRS's passive, policy index is calculated monthly and currently consists of 43.2% Russell 3000 Index, 18.8% MSCI ACW ex US IMI (USD) (Gross), 22% OTRS Fixed Income Custom Index, 7% OTRS Real Estate Custom Index, 8% Russell 2000 Index +4%, and 1% S&P/LSTA Lvgd Loan Index +3%. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OTRS Fixed Income Custom Index is calculated monthly and currently consists of 70% Bloomberg US Agg Bond Index and 30% ICE BofAML US High Yield Master II Constrained Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OTRS Real Estate Custom Index is calculated monthly and currently consists of 50% NCREIF ODCE (AWA) (Net) (Monthly) and 50% NCREIF ODCE (AWA) (Net) (Monthly) +1%. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OTRS Private Equity Custom Index is calculated monthly and currently consists of 85% Russell 3000 Index (1 Qtr Lag) and 15% MSCI ACWI ex US (USD) (Gross) (1 Qtr Lag) +2.5%. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPERS Policy Index: OPERS's passive policy index is calculated monthly and currently consists of 40% OPERS US Equity Custom Index, 28% MSCI ACW ex US Index (USD)(Gross), and 32% OPERS Fixed Income Custom Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPERS US Equity Custom Index is calculated monthly and currently consists of 85% Russell 1000 Index and 15% Russell 2000 Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPERS Fixed Income Custom Index is calculated monthly and current consists of 78% Bloomberg US Agg Bond Index, 11% FTSE Treasury Index 20+ Yr Index, and 11% Bloomberg US Treasury US TIPS Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OFPRS Policy Index: OFPRS's passive policy index is calculated monthly and currently consists of 47% Russell 3000 Index, 15% MSCI ACW ex US Index (USD) (Net), 13% Bloomberg US Agg Bond Index, 7% Bloomberg Global Agg ex US Index (USD) (Unhedged), 10% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 4% Cambridge Associates Private Equity Index, and 4% Bloomberg U.S. Treasury Bellwethers 1 Yr +3%. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPPRS Policy Index: OPPRS's passive, policy index is calculated monthly and currently consists of 60% MSCI ACW Index (USD) (Gross), 25% Bloomberg US Universal Bond Index, and 15% NCREIF ODCE Index (AWA) (Net). From 04/01/2021 through 01/31/2024, it consisted of 65% MSCI ACW Index (USD) (Gross), 20% Bloomberg US Universal Bond Index, and 15% NCREIF ODCE Index (AWA) (Net). From 07/01/2020 through 03/31/2021, it consisted of 60% MSCI ACW Index (USD) (Net), 25% Bloomberg US Universal Bond Index, and 15% NCREIF ODCE Index (AWA) (Net). Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPPRS Real Assets Blended Index is calculated monthly and current consists of 100% NCREIF ODCE Index (AWA) (Net) (Monthly). From 01/01/2016 through 08/31/2019, it consisted of 67% NCREIF ODCE Index (AWA) (Net) (Monthly) and 33% Bloomberg Commodity Index (TR). From 08/01/2014 through 12/31/2015, it consisted of 50% NCREIF ODCE Index (AWA) (Net) (Monthly) and 50% Bloomberg Commodity Index (TR). Prior to 08/01/2014, the index consisted of 100% NCREIF ODCE Index (AWA) (Net) (Monthly).



## **Custom Index Definitions Continued**

- OLERS Policy Index: OLERS's passive, policy index is calculated monthly and currently consists of 32.5% S&P 500 Index (Cap Weighted), 10% Russell 2000 Index, 20% MSCI ACW ex US Index (USD) (Gross), 25% Bloomberg US Agg Bond Index, and 12.5% NCREIF ODCE Index (AWA) (Net) (Monthly). Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OLERS Real Assets Blended Index is calculated monthly and current consists of 100% NCREIF ODCE Index (AWA) (Net) (Monthly).
- URSJJ Policy Index: URSJJ's passive, policy index is calculated monthly and currently consists of 40% URSJJ US Equity Custom Index, 28% MSCI ACW ex US Index (USD)(Gross), and 32% URSJJ Fixed Income Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- URSJJ US Equity Custom Index is calculated monthly and current consists of 85% Russell 1000 Index and 15% Russell 2000 Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- URSJJ Fixed Income Custom Index is calculated monthly and current consists of 78% Bloomberg US Agg Bond Index, 11% FTSE Treasury Index 20+ Yr Index, and 11% Bloomberg US Treasury US TIPS Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OWCRS Policy Index: OWCRS's passive, policy index is calculated monthly and currently consists of 65% OWCRS Equity Custom Index, 25% OWCRS Fixed Income Custom Index, and 10% HFRI FoF Composite Index. From 07/01/2020 through 12/01/2021, it consisted of 50% OWCRS Equity Custom Index, 40% Bloomberg US Agg Bond Index, and 10% HFRI FoF Composite Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OWCRS Equity Custom Index is calculated monthly and currently consists of 73% Russell 3000 Index and 27% MSCI ACW Ex US Index (USD) (Net). Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OWCRS Fixed Income Custom Index is calculated monthly and currently consists of 92% Bloomberg US Agg Bond Index and 8% Bloomberg Glbl Agg ex USD Index (Hedged). Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OWCRS Alternatives Custom Index is calculated monthly and currently consists of 100% HFRI FoF Composite Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.







**Capital Markets Review** As of June 30, 2024

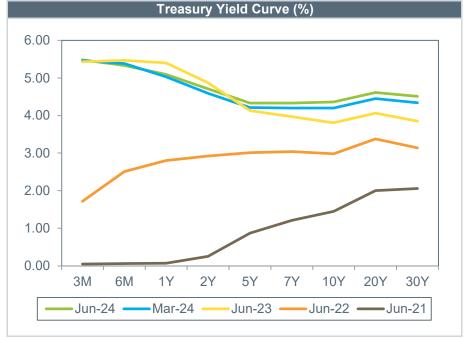
## **Second Quarter Economic Environment**

During Q2, broad global equity markets experienced subdued volatility and continued appreciation, while aggregate fixed income was flat. Within equity markets, results were once again driven by mega cap growth stocks, including NVIDIA and others expected to benefit from further adoption of Al. Within fixed income, the lack of movement in monetary policy and persistently tight spreads among corporate debt led to marginally positive returns for broad fixed income indexes, but longer duration asset prices declined modestly as long-term Treasury yields rose in Q2. Inflationary conditions improved as highlighted by the personal consumption expenditures deflator reading of 2.6% in May (the preferred inflation measure of the US Federal Reserve). The headline Consumer Price Index also came in below expectations at 3.0% in the June reading. The Federal Open Markets Committee (FOMC) indicated that "greater confidence" was necessary with regard to the downward path of inflation prior to considering major policy changes. The "dot plot" released by the FOMC indicated dispersion in rate forecasts among the group with the median member indicating that the Federal Funds Rate would decline by 25 basis points by the end of 2024. The June outlook released by the World Bank forecasted global GDP growth of 2.6% in 2024 and 2.7% in 2025. Global inflation levels were forecasted to be 3.5% this year with expectations that reductions will be more gradual than in prior projections.

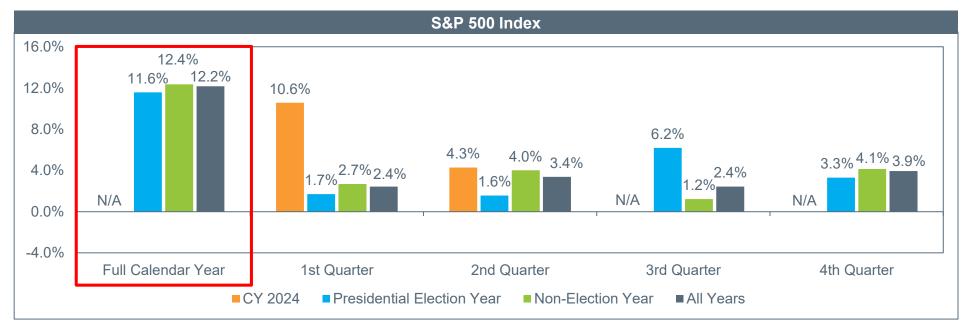
	Key E	conomic Ind	icators	
16 7	30 7	120 ]	70 7	160 ]
14 -	25	100 -	60	140 -
12 -	20 -		50 -	120 -
10 -	10 -	80 -	40 -	100 -
8 -	5 0	60 -	30 -	80 -
6 -	-5 -		20 -	60 -
	-10 -	40 -	10	40 -
	-15 -20	20	0	20
	_			
Unemployment Rate (%) Since 1948	CPI Year-over- Year (% change) Since 1914	US Govt Debt (% of GDP) Since 1940	VIX Index (Volatility) Since 1990	Consumer Confidence Since 1967

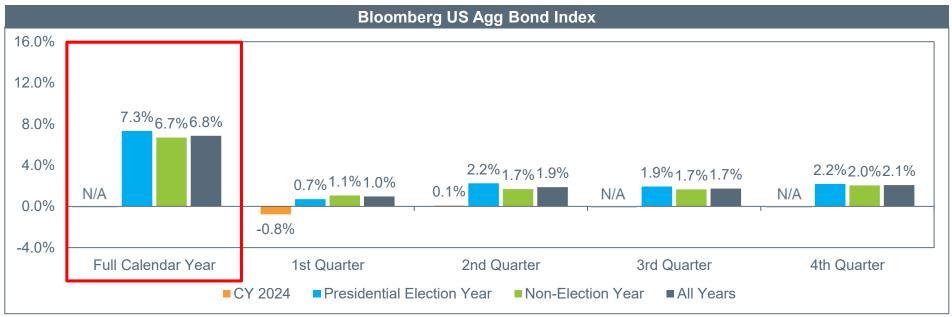
Economic Indicators	Jun-24		Mar-24	Jun-23	Jun-21	20 Yr
Federal Funds Rate (%)	5.33	_	5.33	5.08	0.08	1.60
Breakeven Infl 5 Yr (%)	2.24	$\blacksquare$	2.44	2.17	2.50	1.94
Breakeven Infl 10 Yr (%)	2.27	$\blacksquare$	2.32	2.21	2.34	2.09
CPI YoY (Headline) (%)	3.0	$\blacksquare$	3.5	3.0	5.4	2.6
Unemployment Rate (%)	4.1		3.8	3.6	5.9	5.8
Real GDP YoY (%)	3.1		2.9	2.4	11.9	2.0
PMI - Manufacturing	48.5	$\blacksquare$	50.3	46.0	60.9	53.1
USD Total Wtd Idx	124.52		121.41	119.71	112.61	104.24
WTI Crude Oil per Barrel (\$)	81.5	$\blacksquare$	83.2	70.6	73.5	71.2
Gold Spot per Oz (\$)	2,337	<b>A</b>	2,230	1,906	1,770	1,282

Gold Spot per OZ (\$)	2,337	2,230	1,906	1,770	1,282
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	4.28	15.29	24.56	15.05	12.86
Russell 2000	-3.28	1.73	10.06	6.94	7.00
MSCI EAFE (Net)	-0.42	5.34	11.54	6.46	4.33
MSCI EAFE SC (Net)	-1.84	0.51	7.78	4.19	4.29
MSCI Emg Mkts (Net)	5.00	7.49	12.55	3.10	2.79
Bloomberg US Agg Bond	0.07	-0.71	2.63	-0.23	1.35
ICE BofAML 3 Mo US T-Bill	1.32	2.63	5.40	2.16	1.51
NCREIF ODCE (Gross)	-0.45	-2.81	-9.26	3.16	6.41
FTSE NAREIT Eq REIT (TR)	0.06	-0.13	7.79	3.90	5.90
HFRI FOF Comp	0.44	4.63	8.50	4.78	3.48
Bloomberg Cmdty (TR)	2.89	5.14	5.00	7.25	-1.29









Average quarterly and calendar year returns are measured from: January 1926 to June 2024 for the S&P 500 Index (Cap Wtd); and January 1976 to June 2024 for the Bloomberg US Aggregate Bond Index.



US Equity Review
As of June 30, 2024

## **Second Quarter Review**

#### **Broad Market**

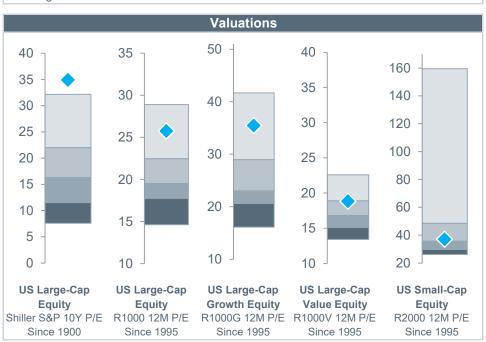
During Q2, US equities posted mixed results across the style spectrum, with broader market cap-weighted indexes delivering modest gains, as demonstrated by the Russell 3000 return of 3.2%. In contrast, returns from equal-weighted broad market indexes were negative highlighting the lack of market breadth in Q2. There was continued dispersion between the "Magnificent Seven" and the broader US market.

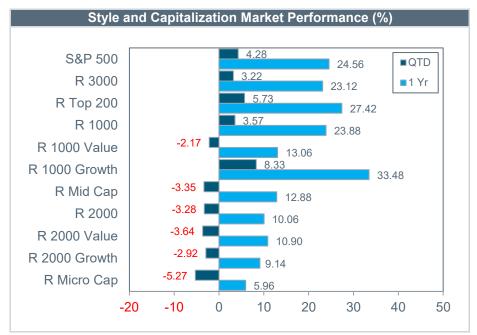
#### **Market Cap**

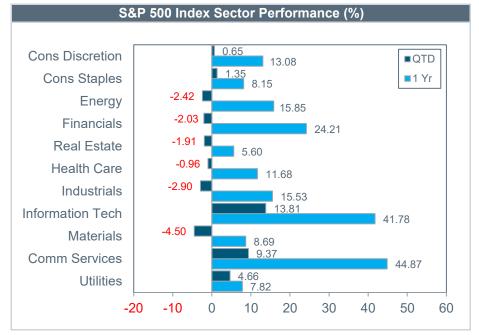
During Q2, large-cap equities significantly outperformed small-cap equities, and value underperformed growth, particularly in the large-cap space, with the Russell 1000 Value and Russell 1000 Growth delivering -2.2% and 8.3%, respectively.

## **Style and Sector**

Median manager excess returns were mostly negative in Q2, except for the small-cap space. The largest dispersion in manager median excess returns occurred in large-cap, with growth managers, in particular, struggling to keep pace with strong benchmark returns compared to value managers, who delivered modest excess returns, on average. This trend of underperformance by median growth managers was consistent in the mid-cap space, but not in the small-cap space, where managers fared better relative to the benchmark.











Non-US Equity Review
As of June 30, 2024

## **Second Quarter Review**

## **Developed Markets**

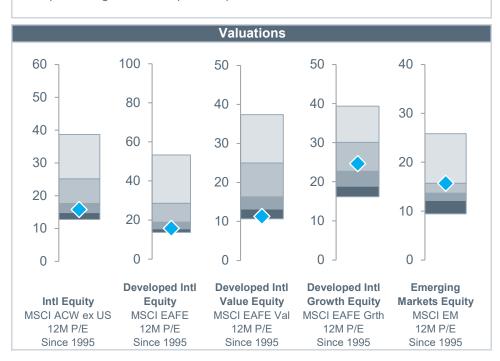
Developed international markets continued to trail their US counterparts in Q2 with the MSCI EAFE Index returning -0.4%. Developed markets were particularly influenced by election results in the European Parliament and the European Central Bank's first interest rate cut since 2019 following the easing of year-over-year inflation.

#### **Emerging Markets**

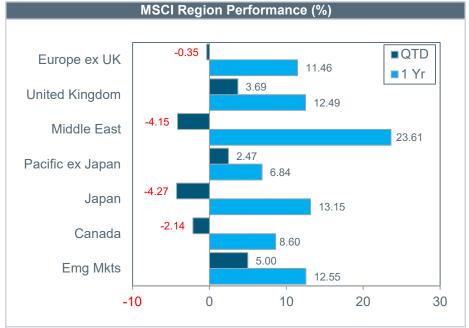
Emerging market equities significantly outperformed developed markets in Q2 reversing a recent trend with the MSCI Emerging Markets Index finishing the quarter up 5.0%. Emerging market value stocks narrowly outperformed growth while small-cap outperformed large-cap.

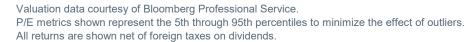
## Market Cap & Style

As with the US Market, large-cap stocks again outpaced small-cap stocks however, in a reversal from the prior quarter, value stocks outperformed their growth counterparts with the MSCI EAFE Value Index outperforming the MSCI EAFE Growth Index. Most developed active managers struggled to beat their index in Q2 with the exception being the small-cap value space.











Fixed Income Review

As of June 30, 2024

## Second Quarter Review

#### **Broad Market**

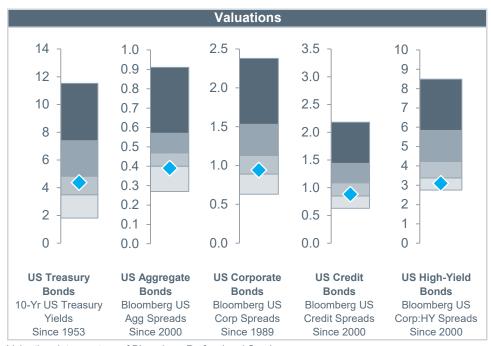
In Q2, the fixed income market experienced volatility due to uncertainty around rate cuts and inflation data. The latest Summary of Economic Projections released by the FOMC indicated only one expected rate cut in 2024 compared to a median forecast of three in the March release. FOMC members continued to stress the need for more confidence in economic data before adjusting policy. US Treasury yields experienced a steady increase across the curve, with the 10-year yield rising by 16 basis points to end at 4.4%. The yield spread between 2- and 10-year Treasury remained negative, marking a record duration of 24 months since the start of the inversion. Against this backdrop, the Bloomberg US Aggregate Bond Index posted a return of 0.1% in Q2.

#### **Credit Market**

Risk assets weathered rising rates, with lower-rated bonds outperforming the broad market. The Bloomberg US Corporate Investment Grade Index returned -0.1%, while the Bloomberg US Corporate High Yield Index returned 1.1%.

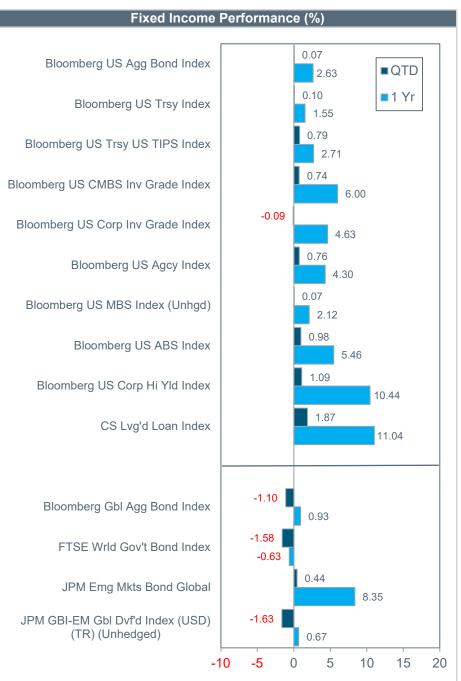
#### **Emerging Market Debt**

Emerging market debt delivered mixed results. The JPMorgan EMBI Global Diversified Index, tracking hard currency bond markets, posted a 0.3% return in Q2. However, the strength of the US dollar led to the underperformance of the JPMorgan GBI-EM Global Diversified Index, tracking local currency bond markets, which declined -1.6% in Q2.





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





Alternatives Review As of June 30, 2024

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

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

In Q2, the HFRI Asset Weighted Composite Index finished the quarter up 0.1% resulting in a year-to-date return of 5.1%. Risk market volatility remained subdued amid uncertainty surrounding the anticipated interest rate policy pivot and the upcoming US presidential election. The long technology trade continues to perform well as NVIDIA and other "Magnificent Seven" stocks continue to push higher even as concentration among hedge fund managers reaches record levels. Long biased tech-oriented hedge funds were top performers during the quarter, with the HFRI EH: Technology Sector Index up 3.2%, and the HFRI EH: Fundamental Growth Index up 2.2%

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

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely posted modest positive returns with limited dispersion. Generally, active managers providing significant diversification underperformed a US-centric blend of 60% equity and 40% fixed income (60/40 blend) as US stocks continued to trend higher. Relatedly, long-biased GTAA strategies featuring higher allocation to US stocks tied to information technology and communication services sectors outpaced peers.

#### **HFRI Hedge Fund Performance (%)** 0.44 HFRI FOF ■ QTD 8.50 1.17 Conv Arbitrage ■1 Yr 0.95 **Equity Hedge** 11.84 1.97 Mkt Neutral Eq 11.15 2.10 Distressed 10.46 -0.84 Macro 5.91 1.36 Relative Value 8.42 0.18 **Event Driven** 10.49 -0.01 Merger Arb 8.30 1.42 Credit Arb 12.61 -5 5 20 0 10 15

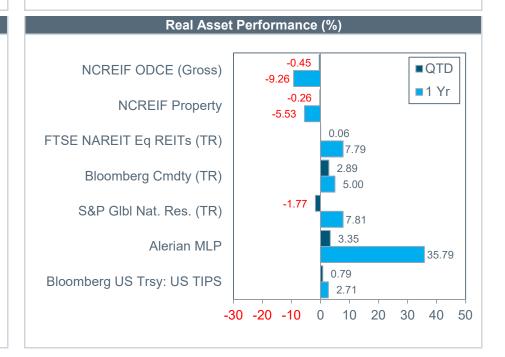
#### **Second Quarter Review - Real Assets**

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

Diversified Inflation Strategy managers tracked closely by RVK underperformed a US-centric 60/40 blend over the quarter. While results were relatively muted, managers with higher allocations to treasury inflation protected securities (TIPS) and exposures to commodities outperformed peers. Notably, managers with higher allocations to real estate investment trusts (REITs) tended to lag peers.

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

Core private real estate generated a negative total return of -0.5% in Q2 as reported by the NFI-ODCE Index, with the total return comprising 1.0% from income and -1.5% from price appreciation. Investors of publicly traded real estate underperformed their private market counterparts, though both were negative. Publicly traded real estate delivered a second quarter total return of -0.9%, as measured by FTSE/NAREIT All REITs Index. Negative price appreciation in institutional real estate, driven by rate expansion, continues to show a slowing pace. Coupled with stabilizing transaction markets and expectations of an interest rate cut in the near-term there is some anticipation from real estate investors that an eventual market inflection point could be realized.





Annual Asset Class Performance As of June 30, 2024

	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD
Best	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	16.09	26.29	15.29
<b>1</b>	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	7.47	18.24	7.49
	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	1.46	16.93	5.34
	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	16.12	22.17	-5.31	13.73	5.14
	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	12.34	14.82	-11.19	13.45	4.63
	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	19.59	10.99	11.26	-11.85	13.16	2.63
	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.42	10.88	10.10	-13.01	9.83	2.58
	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	7.82	6.17	-14.45	7.13	1.73
	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	8.72	7.51	5.96	-18.11	6.07	0.70
	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	8.43	7.11	5.28	-20.09	5.53	0.51
	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	8.39	1.19	0.05	-20.44	5.02	-0.13
	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.79	7.69	0.67	-1.55	-21.39	3.90	-0.71
	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.37	-7.91	-2.81
Worst	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	2.28	-8.00	-2.54	-27.09	-12.02	-4.10
S&P 500 US Larg Cap		mall (Net)		(Net) - (I	MSCI EM Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - Fl	Bloombrg US Corp H Yield - Fl	Bloombr i US Trsy U TIPS - Fl	IS Credit I	v ODO	CE NARI	EIT Eq (	comp	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv



# Oklahoma State Pension Commission



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

	Allocation	า						Performa	ance (%)					
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
Oklahoma State Pension Commission	43,550,367,082	100.00												
OTRS (Teachers) Total Fund	22,795,161,150	52.34	1.22	5.31	11.38	11.38	2.87	7.84	7.72	6.87	12.87	-13.25	18.20	13.22
OTRS Policy Index			2.31	8.14	13.71	13.71	3.90	8.81	8.53	7.55	14.96	-14.07	15.60	15.24
Difference			-1.09	-2.83	-2.33	-2.33	-1.03	-0.97	-0.81	-0.68	-2.09	0.82	2.60	-2.02
OTRS Actual Allocation Index			2.32	8.03	12.76	12.76	3.26	8.60	8.20	7.46	14.19	-14.90	16.21	16.98
Difference			-1.10	-2.72	-1.38	-1.38	-0.39	-0.76	-0.48	-0.59	-1.32	1.65	1.99	-3.76
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Difference			-0.49	1.87	4.38	4.38	-4.13	0.84	0.72	-0.13	5.87	-20.25	11.20	6.22
OPERS (Public Employees) Total Fund	12,170,935,316	27.95	1.19	6.55	12.62	12.62	2.12	7.32	7.27	6.64	16.15	-16.74	12.29	15.18
OPERS Policy Index			1.33	6.18	12.46	12.46	2.01	7.15	7.22	6.65	16.11	-16.62	11.54	15.19
Difference			-0.14	0.37	0.16	0.16	0.11	0.17	0.05	-0.01	0.04	-0.12	0.75	-0.01
OPERS Actual Allocation Index			1.43	6.60	12.96	12.96	2.09	7.97	7.68	6.96	16.21	-16.87	12.14	18.93
Difference			-0.24	-0.05	-0.34	-0.34	0.03	-0.65	-0.41	-0.32	-0.06	0.13	0.15	-3.75
Actuarial Discount Rate (6.5%)			1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Difference			-0.40	3.35	6.12	6.12	-4.38	0.82	0.77	0.14	9.65	-23.24	5.79	8.68
OFPRS (Firefighters) Total Fund	3,712,963,768	8.53	1.23	5.98	10.48	10.48	2.41	7.89	8.31	7.80	12.78	-13.34	13.46	17.97
OFPRS Policy Index			1.56	6.47	11.94	11.94	3.75	8.57	8.54	8.07	14.34	-13.50	16.12	15.02
Difference			-0.33	-0.49	-1.46	-1.46	-1.34	-0.68	-0.23	-0.27	-1.56	0.16	-2.66	2.95
OFPRS Actual Allocation Index			1.71	6.61	11.52	11.52	4.01	8.68	8.54	7.75	13.90	-12.83	16.99	14.72
Difference			-0.48	-0.63	-1.04	-1.04	-1.60	-0.79	-0.23	0.05	-1.12	-0.51	-3.53	3.25
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference			-0.59	2.30	2.98	2.98	-5.09	0.39	0.81	0.30	5.28	-20.84	5.96	10.47
OPPRS (Police) Total Fund	3,174,260,761	7.29	1.03	3.62	7.63	7.63	2.12	6.80	6.65	6.00	8.00	-10.39	17.28	12.17
OPPRS Policy Index			1.78	6.66	11.40	11.40	3.40	7.36	7.18	6.13	13.27	-13.55	14.45	12.33
Difference			-0.75	-3.04	-3.77	-3.77	-1.28	-0.56	-0.53	-0.13	-5.27	3.16	2.83	-0.16
OPPRS Actual Allocation Index			1.27	5.95	11.23	11.23	3.13	7.45	7.13	6.20	13.10	-12.42	13.63	14.47
Difference			-0.24	-2.33	-3.60	-3.60	-1.01	-0.65	-0.48	-0.20	-5.10	2.03	3.65	-2.30
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference			-0.79	-0.06	0.13	0.13	-5.38	-0.70	-0.85	-1.50	0.50	-17.89	9.78	4.67



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

	Allocation							Performa	ance (%)					
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
OLERS (Law Enforcement) Total Fund	1,143,923,260	2.63	0.82	3.81	8.23	8.23	0.85	5.93	6.04	5.59	10.88		14.55	12.26
OLERS Policy Index			1.22	5.87	10.59	10.59	3.18	7.52	7.50	6.90	12.81	-13.05	15.07	12.82
Difference			-0.40	-2.06	-2.36	-2.36	-2.33	-1.59	-1.46	-1.31	-1.93	-1.41	-0.52	-0.56
OLERS Actual Allocation Index			1.33	6.56	12.44	12.44	3.31	9.41	8.71	7.77	14.99	-13.91	14.75	21.91
Difference			-0.51	-2.75	-4.21	-4.21	-2.46	-3.48	-2.67	-2.18	-4.11	-0.55	-0.20	-9.65
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference			-1.00	0.13	0.73	0.73	-6.65	-1.57	-1.46	-1.91	3.38	-21.96	7.05	4.76
URSJJ (Judges) Total Fund	413,388,639	0.95	1.42	6.53	12.85	12.85	2.03	7.23	7.23	6.61	16.23	-16.95	12.08	15.06
URSJJ Policy Index			1.33	6.18	12.46	12.46	2.01	7.16	7.22	6.65	16.11	-16.62	11.54	15.19
Difference			0.09	0.35	0.39	0.39	0.02	0.07	0.01	-0.04	0.12	-0.33	0.54	-0.13
URSJJ Actual Allocation Index			1.43	6.55	12.90	12.90	2.06	7.90	7.65	6.86	16.19	-16.86	12.10	18.70
Difference			-0.01	-0.02	-0.05	-0.05	-0.03	-0.67	-0.42	-0.25	0.04	-0.09	-0.02	-3.64
Actuarial Discount Rate (6.5%)			1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Difference			-0.17	3.33	6.35	6.35	-4.47	0.73	0.73	0.11	9.73	-23.45	5.58	8.56
OWCRS (Wildlife) Total Fund	139,734,187	0.32	1.84	7.86	13.93	13.93	4.39	7.91	7.77	6.97	18.82	-14.41	11.58	13.00
OWCRS Policy Index			1.79	7.68	14.44	14.44	3.11	6.84	6.61	5.91	16.94	-15.39	10.17	12.67
Difference			0.05	0.18	-0.51	-0.51	1.28	1.07	1.16	1.06	1.88	0.98	1.41	0.33
OWCRS Actual Allocation Index			1.73	7.82	14.65	14.65	3.09	7.35	7.51	6.94	17.02	-15.18	10.28	13.21
Difference			0.11	0.04	-0.72	-0.72	1.30	0.56	0.26	0.03	1.80	0.77	1.30	-0.21
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Difference			0.13	4.42	6.93	6.93	-2.61	0.91	0.77	-0.03	11.82	-21.41	4.58	6.00



# Oklahoma State Pension Commission All Plans Summary Asset Allocation & Performance - Gross of Fees

	Allocation	า						Performa	ance (%)					
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
Oklahoma State Pension Commission	43,550,367,082	100.00												
All Public Plans-Total Fund Median			1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47
OTRS (Teachers) Total Fund	22,795,161,150	52.34	1.24	5.37	11.51	11.51	3.03	8.04	7.96	7.17	13.02	-13.08	18.42	13.45
OTRS Policy Index			2.31	8.14	13.71	13.71	3.90	8.81	8.53	7.55	14.96	-14.07	15.60	15.24
Difference			-1.07	-2.77	-2.20	-2.20	-0.87	-0.77	-0.57	-0.38	-1.94	0.99	2.82	-1.79
OTRS Actual Allocation Index			2.32	8.03	12.76	12.76	3.26	8.60	8.20	7.46	14.19	-14.90	16.21	16.98
Difference			-1.08	-2.66	-1.25	-1.25	-0.23	-0.56	-0.24	-0.29	-1.17	1.82	2.21	-3.53
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Difference			-0.47	1.93	4.51	4.51	-3.97	1.04	0.96	0.17	6.02	-20.08	11.42	6.45
Rank			42	58	41	41	53	31	31	34	46	58	9	36
OPERS (Public Employees) Total Fund	12,170,935,316	27.95	1.22	6.60	12.74	12.74	2.24	7.46	7.40	6.76	16.27	-16.64	12.46	15.34
OPERS Policy Index			1.33	6.18	12.46	12.46	2.01	7.15	7.22	6.65	16.11	-16.62	11.54	15.19
Difference			-0.11	0.42	0.28	0.28	0.23	0.31	0.18	0.11	0.16	-0.02	0.92	0.15
OPERS Actual Allocation Index			1.43	6.60	12.96	12.96	2.09	7.97	7.68	6.96	16.21	-16.87	12.14	18.93
Difference			-0.21	0.00	-0.22	-0.22	0.15	-0.51	-0.28	-0.20	0.06	0.23	0.32	-3.59
Actuarial Discount Rate (6.5%)			1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Difference			-0.37	3.40	6.24	6.24	-4.26	0.96	0.90	0.26	9.77	-23.14	5.96	8.84
Rank			44	25	23	23	73	51	53	54	9	94	74	18
OFPRS (Firefighters) Total Fund	3,712,963,768	8.53	1.29	6.12	10.78	10.78	2.73	8.25	8.67	8.16	13.08	-13.03	13.87	18.44
OFPRS Policy Index			1.56	6.47	11.94	11.94	3.75	8.57	8.54	8.07	14.34	-13.50	16.12	15.02
Difference			-0.27	-0.35	-1.16	-1.16	-1.02	-0.32	0.13	0.09	-1.26	0.47	-2.25	3.42
OFPRS Actual Allocation Index			1.71	6.61	11.52	11.52	4.01	8.68	8.54	7.75	13.90	-12.83	16.99	14.72
Difference			-0.42	-0.49	-0.74	-0.74	-1.28	-0.43	0.13	0.41	-0.82	-0.20	-3.12	3.72
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference			-0.53	2.44	3.28	3.28	-4.77	0.75	1.17	0.66	5.58	-20.53	6.37	10.94
Rank			40	39	52	52	60	24	9	6	45	57	57	5



Asset Allocation	&	Performance	- Gross	of Fees
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	Allocation							Performa	ance (%)					
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
OPPRS (Police) Total Fund	3,174,260,761	7.29	1.11	3.79	7.95	7.95	2.45	7.15	7.03	6.40	8.20	-9.99	17.71	12.54
OPPRS Policy Index			1.78	6.66	11.40	11.40	3.40	7.36	7.18	6.13	13.27	-13.55	14.45	12.33
Difference			-0.67	-2.87	-3.45	-3.45	-0.95	-0.21	-0.15	0.27	-5.07	3.56	3.26	0.21
OPPRS Actual Allocation Index			1.27	5.95	11.23	11.23	3.13	7.45	7.13	6.20	13.10	-12.42	13.63	14.47
Difference			-0.16	-2.16	-3.28	-3.28	-0.68	-0.30	-0.10	0.20	-4.90	2.43	4.08	-1.93
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference			-0.71	0.11	0.45	0.45	-5.05	-0.35	-0.47	-1.10	0.70	-17.49	10.21	5.04
Rank			50	88	87	87	69	62	65	68	94	23	13	49
OLERS (Law Enforcement) Total Fund	1,143,923,260	2.63	0.92	4.04	8.71	8.71	1.29	6.42	6.55	6.13	11.38	-14.08	15.04	12.80
OLERS Policy Index			1.22	5.87	10.59	10.59	3.18	7.52	7.50	6.90	12.81	-13.05	15.07	12.82
Difference			-0.30	-1.83	-1.88	-1.88	-1.89	-1.10	-0.95	-0.77	-1.43	-1.03	-0.03	-0.02
OLERS Actual Allocation Index			1.33	6.56	12.44	12.44	3.31	9.41	8.71	7.77	14.99	-13.91	14.75	21.91
Difference			-0.41	-2.52	-3.73	-3.73	-2.02	-2.99	-2.16	-1.64	-3.61	-0.17	0.29	-9.11
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference			-0.90	0.36	1.21	1.21	-6.21	-1.08	-0.95	-1.37	3.88	-21.58	7.54	5.30
Rank			61	84	82	82	87	79	80	75	69	70	37	45
URSJJ (Judges) Total Fund	413,388,639	0.95	1.43	6.55	12.89	12.89	2.06	7.27	7.27	6.65	16.28	-16.93	12.12	15.10
URSJJ Policy Index			1.33	6.18	12.46	12.46	2.01	7.16	7.22	6.65	16.11	-16.62	11.54	15.19
Difference			0.10	0.37	0.43	0.43	0.05	0.11	0.05	0.00	0.17	-0.31	0.58	-0.09
URSJJ Actual Allocation Index			1.43	6.55	12.90	12.90	2.06	7.90	7.65	6.86	16.19	-16.86	12.10	18.70
Difference			0.00	0.00	-0.01	-0.01	0.00	-0.63	-0.38	-0.21	0.09	-0.07	0.02	-3.60
Actuarial Discount Rate (6.5%)			1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Difference			-0.16	3.35	6.39	6.39	-4.44	0.77	0.77	0.15	9.78	-23.43	5.62	8.60
Rank			30	26	21	21	76	58	58	58	8	96	78	20
OWCRS (Wildlife) Total Fund	139,734,187	0.32	1.93	8.04	14.32	14.32	4.74	8.25	8.07	7.24	19.22	-14.14	11.95	13.34
OWCRS Policy Index			1.79	7.68	14.44	14.44	3.11	6.84	6.61	5.91	16.94	-15.39	10.17	12.67
Difference			0.14	0.36	-0.12	-0.12	1.63	1.41	1.46	1.33	2.28	1.25	1.78	0.67
OWCRS Actual Allocation Index			1.73	7.82	14.65	14.65	3.09	7.35	7.51	6.94	17.02	-15.18	10.28	13.21
Difference			0.20	0.22	-0.33	-0.33	1.65	0.90	0.56	0.30	2.20	1.04	1.67	0.13
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00
Difference			0.22	4.60	7.32	7.32	-2.26	1.25	1.07	0.24	12.22	-21.14	4.95	6.34
Rank			6	4	5	5	10	24	26	32	1	70	80	38



						Perform	ance (%)					
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
US Equity												
OTRS US Equity	1.67	11.17	20.17	20.17	6.09	11.41	11.09	10.01	20.78	-16.72	24.40	15.40
Russell 3000 Index	3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89
Difference	-1.55	-2.39	-2.95	-2.95	-1.96	-2.73	-2.39	-2.14	-5.18	2.49	-1.26	-5.49
OPERS US Equity	2.19	12.89	22.22	22.22	8.00	13.91	13.12	11.78	24.64	-17.77	25.96	20.37
OPERS US Equity Custom Index	2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	25.18	-19.29	24.73	20.97
Difference	-0.34	0.58	0.41	0.41	0.96	0.40	0.20	0.03	-0.54	1.52	1.23	-0.60
OFPRS US Equity	2.43	14.23	23.52	23.52	5.38	12.64	12.78	11.52	23.80	-20.77	19.50	25.45
Russell 3000 Index	3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89
Difference	-0.79	0.67	0.40	0.40	-2.67	-1.50	-0.70	-0.63	-2.16	-1.56	-6.16	4.56
OLERS US Equity	0.20	8.91	18.91	18.91	4.53	11.96	11.51	10.40	24.14	-20.76	25.49	19.46
S&P 500 Index (Cap Wtd)	4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	26.29	-18.11	28.71	18.40
Difference	-4.08	-6.38	-5.65	-5.65	-5.48	-3.09	-2.77	-2.46	-2.15	-2.65	-3.22	1.06
URSJJ US Equity	2.57	12.36	21.88	21.88	7.05	13.51	12.89	11.73	25.16	-19.30	24.69	21.02
URSJJ US Equity Custom Index	2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	25.18	-19.29	24.73	20.97
Difference	0.04	0.05	0.07	0.07	0.01	0.00	-0.03	-0.02	-0.02	-0.01	-0.04	0.05
OWCRS US Equity	3.42	13.69	21.80	21.80	9.82	14.51	13.75	12.20	28.34	-17.26	26.38	18.87
Russell 3000 Index	3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89
Difference	0.20	0.13	-1.32	-1.32	1.77	0.37	0.27	0.05	2.38	1.95	0.72	-2.02



						Performa	ance (%)					
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
nternational Equity												
OTRS International Equity	0.75	5.54	12.44	12.44	-0.50	5.64	5.00	4.17	16.80	-20.25	11.24	12.13
MSCI ACW Ex US Index (USD) (Gross)	1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference	-0.42	-0.50	0.27	0.27	-1.47	-0.41	-0.68	-0.17	0.59	-4.68	2.95	1.00
OPERS International Equity	1.01	5.16	10.26	10.26	-0.41	5.47	5.18	4.06	16.01	-17.40	6.98	12.30
MSCI ACW Ex US Index (USD) (Gross)	1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference	-0.16	-0.88	-1.91	-1.91	-1.38	-0.58	-0.50	-0.28	-0.20	-1.83	-1.31	1.17
OFPRS International Equity	1.65	8.15	10.49	10.49	-1.53	7.51	7.66	6.36	12.50	-21.14	7.00	31.77
MSCI ACW Ex US Index (USD) (Net)	0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	15.62	-16.00	7.82	10.65
Difference	0.69	2.46	-1.13	-1.13	-1.99	1.96	2.49	2.52	-3.12	-5.14	-0.82	21.12
DLERS International Equity	1.19	2.75	8.46	8.46	-1.54	4.97	4.79	3.96	16.57	-19.15	7.51	12.49
MSCI ACW Ex US Index (USD) (Gross)	1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference	0.02	-3.29	-3.71	-3.71	-2.51	-1.08	-0.89	-0.38	0.36	-3.58	-0.78	1.36
JRSJJ International Equity	1.14	5.86	11.69	11.69	0.70	5.78	5.42	4.09	15.80	-15.73	8.06	10.86
MSCI ACW Ex US Index (USD) (Gross)	1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference	-0.03	-0.18	-0.48	-0.48	-0.27	-0.27	-0.26	-0.25	-0.41	-0.16	-0.23	-0.27
OWCRS International Equity	-0.32	2.91	7.84	7.84	-0.98	4.62	4.46	3.59	15.14	-15.79	5.57	10.17
MSCI ACW Ex US Index (USD) (Net)	0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	15.62	-16.00	7.82	10.65
Difference	-1.28	-2.78	-3.78	-3.78	-1.44	-0.93	-0.71	-0.25	-0.48	0.21	-2.25	-0.48
otal Equity												
OPPRS Total Equity	1.39	6.58	12.05	12.05	3.07	10.05	9.45	8.48	13.12	-15.22	23.58	18.46
MSCI ACW Index (USD) (Gross)	3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	22.81	-17.96	19.04	16.82
Difference	-1.62	-5.00	-7.87	-7.87	-2.87	-1.23	-1.12	-0.51	-9.69	2.74	4.54	1.64



						Performa	ance (%)					
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
Fixed Income												
OTRS Fixed Income	0.34	0.48	5.09	5.09	-2.77	0.98	2.02	2.42	8.05	-16.24	0.05	11.91
OTRS Fixed Income Custom Index	0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	7.87	-12.41	0.49	7.30
Difference	-0.03	0.20	0.16	0.16	-1.16	-0.02	0.14	0.17	0.18	-3.83	-0.44	4.61
OPERS Fixed Income	-0.08	-0.95	1.97	1.97	-3.55	0.04	1.21	1.70	5.61	-15.02	-0.82	10.54
OPERS Fixed Income Custom Index	-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	5.19	-15.08	-1.01	9.08
Difference	-0.01	0.18	0.38	0.38	0.21	0.48	0.43	0.35	0.42	0.06	0.19	1.46
OFPRS Fixed Income	-1.09	-3.80	-0.52	-0.52	-4.74	-1.27	-0.31	0.52	6.41	-14.23	-2.93	8.25
Bloomberg US Agg Bond Index	0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51
Difference	-1.16	-3.09	-3.15	-3.15	-1.72	-1.04	-1.17	-0.83	0.88	-1.22	-1.38	0.74
OPPRS Fixed Income	0.76	1.67	6.17	6.17	-0.26	1.76	2.27	1.87	7.06	-8.90	1.28	6.63
Bloomberg US Unv Bond Index	0.19	-0.28	3.47	3.47	-2.68	0.11	1.15	1.63	6.17	-12.99	-1.10	7.58
Difference	0.57	1.95	2.70	2.70	2.42	1.65	1.12	0.24	0.89	4.09	2.38	-0.95
OLERS Fixed Income	0.22	-0.38	3.46	3.46	-3.03	-0.94	0.25	0.85	6.41	-13.40	-1.91	5.47
Bloomberg US Agg Bond Index	0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51
Difference	0.15	0.33	0.83	0.83	-0.01	-0.71	-0.61	-0.50	0.88	-0.39	-0.36	-2.04
URSJJ Fixed Income	-0.04	-0.91	2.01	2.01	-3.55	0.02	1.19	1.67	5.60	-15.07	-0.92	10.58
URSJJ Fixed Income Custom Index	-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	5.19	-15.08	-1.01	9.08
Difference	0.03	0.22	0.42	0.42	0.21	0.46	0.41	0.32	0.41	0.01	0.09	1.50
OWCRS Fixed Income	0.44	0.77	4.93	4.93	-1.75	0.87	1.68	1.71	7.33	-12.29	-0.41	8.29
OWCRS Fixed Income Custom Index	0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	5.76	-12.75	-1.53	7.22
Difference	0.37	1.37	2.09	2.09	1.07	1.04	0.73	0.27	1.57	0.46	1.12	1.07



						Performa	ance (%)					
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
Real Estate												
OTRS Real Estate	-0.29	-6.23	-9.34	-9.34	2.58	1.45	3.29	N/A	-11.04	18.29	11.65	-2.48
OTRS Real Estate Custom Index	-0.55	-2.99	-9.55	-9.55	1.52	2.78	3.96	5.99	-12.29	7.08	21.62	0.85
Difference	0.26	-3.24	0.21	0.21	1.06	-1.33	-0.67	N/A	1.25	11.21	-9.97	-3.33
NCREIF Property Index	-0.26	-1.24	-5.53	-5.53	2.33	3.39	4.37	6.07	-7.94	5.52	17.70	1.60
Difference	-0.03	-4.99	-3.81	-3.81	0.25	-1.94	-1.08	N/A	-3.10	12.77	-6.05	-4.08
NCREIF ODCE Index (AWA) (Net)	-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-12.73	6.55	21.02	0.34
Difference	0.38	-3.00	0.66	0.66	1.56	-0.82	-0.16	N/A	1.69	11.74	-9.37	-2.82
OPERS Real Estate	-21.12	-20.42	-17.17	-17.17	-3.52	-4.49	-2.79	-1.42	7.20	6.35	-8.15	-8.51
NCREIF ODCE Index (AWA) (Net)	-0.67	-3.23	-10.00	-10.00	1.02	2.27	3,45	5.47	-12.73	6.55	21.02	0.34
Difference	-20.45	-17.19	-7.17	-7.17	-4.54	-6.76	-6.24	-6.89	19.93	-0.20	-29.17	-8.85
OFPRS Real Estate	-1.89	-8.32	-14.24	-14.24	-0.09	0.76	2.56	5.06	-9.34	6.39	16.14	-0.50
NCREIF ODCE Index (AWA) (Net)	-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-12.73	6.55	21.02	0.34
Difference	-1.22	-5.09	-4.24	-4.24	-1.11	-1.51	-0.89	-0.41	3.39	-0.16	-4.88	-0.84
Real Assets												
Neal Assets												
OPPRS Real Assets	-0.04	-6.50	-8.60	-8.60	1.90	2.20	2.92	3.21	-9.57	11.32	17.79	-1.07
OPPRS Real Assets Blended Benchmark	-0.67	-3.23	-10.00	-10.00	1.02	2.06	2.73	1.40	-12.73	6.55	21.02	0.34
Difference	0.63	-3.27	1.40	1.40	0.88	0.14	0.19	1.81	3.16	4.77	-3.23	-1.41
OLERS Real Assets	1.29	-1.96	-11.15	-11.15	-0.05	1.11	2.03	2.62	-15.27	5.35	18.80	0.06
OLERS Real Assets Blended Benchmark	-0.67	-3.23	-10.00	-10.00	1.02	2.09	2.80	2.67	-12.73	6.55	21.02	0.34
Difference	1.96	1.27	-1.15	-1.15	-1.07	-0.98	-0.77	-0.05	-2.54	-1.20	-2.22	-0.28



						Danfarm	(0/)					
						Performa	ance (%)					
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
Hedge Funds												
OFPRS Hedge Fund	1.13	-2.48	-0.96	-0.96	-6.35	-4.58	-2.48	-1.21	16.54	0.36	-26.04	-4.62
HFRI FOF Cnsvt Index	0.53	3.15	6.68	6.68	3.45	4.85	4.35	3.47	5.48	0.08	7.62	6.47
Difference	0.60	-5.63	-7.64	-7.64	-9.80	-9.43	-6.83	-4.68	11.06	0.28	-33.66	-11.09
OPPRS Long/Short Equity	-5.62	-2.51	2.77	2.77	-3.82	3.67	4.12	4.11	15.30	-17.32	0.11	22.33
MSCI ACW Index (USD) (Gross)	3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	22.81	-17.96	19.04	16.82
Difference	-8.63	-14.09	-17.15	-17.15	-9.76	-7.61	-6.45	-4.88	-7.51	0.64	-18.93	5.51
HFRI FOF Strat Index	0.85	5.93	10.84	10.84	0.58	4.81	4.24	3.52	8.09	-11.71	6.26	14.62
Difference	-6.47	-8.44	-8.07	-8.07	-4.40	-1.14	-0.12	0.59	7.21	-5.61	-6.15	7.71



						Performa	ance (%)					
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
Private Equity												
OTDS British Family	4.07	2.27	C F2	C F2	0.75	40.70	40.00	40.00	4.70	0.00	F7 70	47.07
OTRS Private Equity	4.07	2.37	6.52	6.52	8.75	16.78	16.98	16.26	4.78	<b>-0.26</b> -18.40	57.72	17.27
OTRS Private Equity Custom Index	9.33	22.27	27.35	27.35	9.11	13.59	12.82	11.61	21.09		31.25	13.65
Difference	-5.26	-19.90	-20.83	-20.83	-0.36	3.19	4.16	4.65	-16.31	18.14	26.47	3.62
OFPRS Private Equity	1.52	1.83	2.33	2.33	12.08	15.55	15.29	14.43	8.34	10.18	49.68	7.49
Cambridge US Prvt Eq Index	0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86
Difference	1.52	-0.04	-3.24	-3.24	5.06	0.91	0.62	1.18	-0.73	12.15	8.99	-15.37
OPPRS Private Equity	2.43	4.62	6.38	6.38	8.91	15.69	15.02	13.13	-1.19	-1.91	67.32	15.87
MSCI ACW Index (USD) (Gross)	3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	22.81	-17.96	19.04	16.82
Difference	-0.58	-6.96	-13.54	-13.54	2.97	4.41	4.45	4.14	-24.00	16.05	48.28	-0.95
Cambridge US Prvt Eq Index	0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86
Difference	2.43	2.75	0.81	0.81	1.89	1.05	0.35	-0.12	-10.26	0.06	26.63	-6.99
OLERS Private Equity	3.44	4.68	8.80	8.80	6.50	13.73	13.08	10.43	5.29	-3.13	41.10	20.25
S&P 500 Index+5%	5.56	18.14	30.78	30.78	15.51	20.80	19.99	18.50	32.60	-14.02	35.14	24.32
Difference	-2.12	-13.46	-21.98	-21.98	-9.01	-7.07	-6.91	-8.07	-27.31	10.89	5.96	-4.07
Cambridge US Prvt Eq Index	0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86
Difference	3.44	2.81	3.23	3.23	-0.52	-0.91	-1.59	-2.82	-3.78	-1.16	0.41	-2.61
Other Alternatives												
OWCRS Alternative Investments	1.17	4.80	8.85	8.85	3.82	5.01	4.74	3.66	11.82	-6.41	8.64	2.14
OWCRS Alternatives Custom Index	0.61	4.81	8.70	8.70	2.12	4.82	4.34	2.96	6.07	-5.31	6.17	10.88
Difference	0.56	-0.01	0.15	0.15	1.70	0.19	0.40	0.70	5.75	-1.10	2.47	-8.74



	Performance (%)												
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	
US Equity													
OTRS US Equity	1.69	11.21	20.25	20.25	6.21	11.58	11.32	10.27	20.86	-16.60	24.61	15.62	
Russell 3000 Index	3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89	
Difference	-1.53	-2.35	-2.87	-2.87	-1.84	-2.56	-2.16	-1.88	-5.10	2.61	-1.05	-5.27	
OPERS US Equity	2.21	12.93	22.36	22.36	8.15	14.07	13.26	11.91	24.78	-17.63	26.13	20.53	
OPERS US Equity Custom Index	2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	25.18	-19.29	24.73	20.97	
Difference	-0.32	0.62	0.55	0.55	1.11	0.56	0.34	0.16	-0.40	1.66	1.40	-0.44	
OFPRS US Equity	2.52	14.41	23.88	23.88	5.70	13.00	13.11	11.84	24.14	-20.49	19.85	25.89	
Russell 3000 Index	3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89	
Difference	-0.70	0.85	0.76	0.76	-2.35	-1.14	-0.37	-0.31	-1.82	-1.28	-5.81	5.00	
OLERS US Equity	0.34	9.20	19.55	19.55	5.08	12.53	12.08	10.98	24.81	-20.32	26.08	20.00	
S&P 500 Index (Cap Wtd)	4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	26.29	-18.11	28.71	18.40	
Difference	-3.94	-6.09	-5.01	-5.01	-4.93	-2.52	-2.20	-1.88	-1.48	-2.21	-2.63	1.60	
URSJJ US Equity	2.58	12.36	21.89	21.89	7.06	13.52	12.90	11.74	25.17	-19.30	24.70	21.03	
URSJJ US Equity Custom Index	2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	25.18	-19.29	24.73	20.97	
Difference	0.05	0.05	0.08	0.08	0.02	0.01	-0.02	-0.01	-0.01	-0.01	-0.03	0.06	
OWCRS US Equity	3.46	13.78	21.98	21.98	9.98	14.72	13.98	12.43	28.52	-17.14	26.59	19.18	
Russell 3000 Index	3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	25.96	-19.21	25.66	20.89	
Difference	0.24	0.22	-1.14	-1.14	1.93	0.58	0.50	0.28	2.56	2.07	0.93	-1.71	



	Performance (%)											
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020
International Equity												
OTRS International Equity	0.78	5.60	12.55	12.55	-0.22	6.01	5.41	4.58	16.97	-19.91	11.72	12.61
MSCI ACW Ex US Index (USD) (Gross)	1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference	-0.39	-0.44	0.38	0.38	-1.19	-0.04	-0.27	0.24	0.76	-4.34	3.43	1.48
OPERS International Equity	1.05	5.22	10.39	10.39	-0.26	5.63	5.34	4.23	16.15	-17.30	7.22	12.53
MSCI ACW Ex US Index (USD) (Gross)	1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference	-0.12	-0.82	-1.78	-1.78	-1.23	-0.42	-0.34	-0.11	-0.06	-1.73	-1.07	1.40
OFPRS International Equity	1.70	8.29	10.74	10.74	-1.10	8.03	8.24	7.01	12.79	-20.65	7.66	32.50
MSCI ACW Ex US Index (USD) (Net)	0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	15.62	-16.00	7.82	10.65
Difference	0.74	2.60	-0.88	-0.88	-1.56	2.48	3.07	3.17	-2.83	-4.65	-0.16	21.85
OLERS International Equity	1.34	3.05	9.10	9.10	-0.94	5.66	5.53	4.71	17.27	-18.64	8.17	13.34
MSCI ACW Ex US Index (USD) (Gross)	1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference	0.17	-2.99	-3.07	-3.07	-1.91	-0.39	-0.15	0.37	1.06	-3.07	-0.12	2.21
URSJJ International Equity	1.15	5.88	11.72	11.72	0.72	5.80	5.44	4.12	15.83	-15.72	8.09	10.87
MSCI ACW Ex US Index (USD) (Gross)	1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	16.21	-15.57	8.29	11.13
Difference	-0.02	-0.16	-0.45	-0.45	-0.25	-0.25	-0.24	-0.22	-0.38	-0.15	-0.20	-0.26
OWCRS International Equity	-0.18	3.19	8.43	8.43	-0.45	5.21	5.11	4.23	15.76	-15.34	6.16	10.82
MSCI ACW Ex US Index (USD) (Net)	0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	15.62	-16.00	7.82	10.65
Difference	-1.14	-2.50	-3.19	-3.19	-0.91	-0.34	-0.06	0.39	0.14	0.66	-1.66	0.17
Total Equity												
OPPRS Total Equity	1.46	6.71	12.31	12.31	3.30	10.33	9.76	8.80	13.35	-15.04	23.90	18.81
MSCI ACW Index (USD) (Gross)	3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	22.81	-17.96	19.04	16.82
Difference	-1.55	-4.87	-7.61	-7.61	-2.64	-0.95	-0.81	-0.19	-9.46	2.92	4.86	1.99



		Performance (%)												
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020		
Fixed Income														
OTRS Fixed Income	0.38	0.57	5.29	5.29	-2.59	1.16	2.22	2.63	8.26	-16.10	0.23	12.11		
OTRS Fixed Income Custom Index	0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	7.87	-12.41	0.49	7.30		
Difference	0.01	0.29	0.36	0.36	-0.98	0.16	0.34	0.38	0.39	-3.69	-0.26	4.81		
OPERS Fixed Income	-0.04	-0.90	2.06	2.06	-3.47	0.12	1.29	1.79	5.69	-14.97	-0.72	10.65		
OPERS Fixed Income Custom Index	-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	5.19	-15.08	-1.01	9.08		
Difference	0.03	0.23	0.47	0.47	0.29	0.56	0.51	0.44	0.50	0.11	0.29	1.57		
OFPRS Fixed Income	-1.06	-3.68	-0.20	-0.20	-4.41	-1.00	-0.04	0.78	6.82	-13.89	-2.70	8.41		
Bloomberg US Agg Bond Index	0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51		
Difference	-1.13	-2.97	-2.83	-2.83	-1.39	-0.77	-0.90	-0.57	1.29	-0.88	-1.15	0.90		
OPPRS Fixed Income	0.84	1.83	6.50	6.50	0.08	2.10	2.66	2.30	7.49	-8.60	1.60	6.98		
Bloomberg US Unv Bond Index	0.19	-0.28	3.47	3.47	-2.68	0.11	1.15	1.63	6.17	-12.99	-1.10	7.58		
Difference	0.65	2.11	3.03	3.03	2.76	1.99	1.51	0.67	1.32	4.39	2.70	-0.60		
OLERS Fixed Income	0.28	-0.25	3.72	3.72	-2.81	-0.70	0.50	1.12	6.68	-13.22	-1.71	5.74		
Bloomberg US Agg Bond Index	0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51		
Difference	0.21	0.46	1.09	1.09	0.21	-0.47	-0.36	-0.23	1.15	-0.21	-0.16	-1.77		
URSJJ Fixed Income	0.00	-0.86	2.09	2.09	-3.47	0.10	1.27	1.75	5.69	-15.02	-0.82	10.70		
URSJJ Fixed Income Custom Index	-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	5.19	-15.08	-1.01	9.08		
Difference	0.07	0.27	0.50	0.50	0.29	0.54	0.49	0.40	0.50	0.06	0.19	1.62		
OWCRS Fixed Income	0.51	0.92	5.25	5.25	-1.45	1.14	1.88	1.85	7.65	-12.01	-0.10	8.56		
OWCRS Fixed Income Custom Index	0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	5.76	-12.75	-1.53	7.22		
Difference	0.44	1.52	2.41	2.41	1.37	1.31	0.93	0.41	1.89	0.74	1.43	1.34		



	Performance (%)												
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	
Real Estate													
OTRS Real Estate	-0.23	-6.11	-9.07	-9.07	2.86	1.69	3.52	N/A	-10.76	18.60	11.92	-2.27	
OTRS Real Estate Custom Index	-0.55	-2.99	-9.55	-9.55	1.52	2.78	3.96	5.99	-12.29	7.08	21.62	0.85	
Difference	0.32	-3.12	0.48	0.48	1.34	-1.09	-0.44	N/A	1.53	11.52	-9.70	-3.12	
NCREIF Property Index	-0.26	-1.24	-5.53	-5.53	2.33	3.39	4.37	6.07	-7.94	5.52	17.70	1.60	
Difference	0.03	-4.87	-3.54	-3.54	0.53	-1.70	-0.85	N/A	-2.82	13.08	-5.78	-3.87	
NCREIF ODCE Index (AWA) (Gross)	-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-12.02	7.47	22.17	1.19	
Difference	0.22	-3.30	0.19	0.19	0.96	-1.47	-0.84	N/A	1.26	11.13	-10.25	-3.46	
OPERS Real Estate	-21.12	-20.42	-17.17	-17.17	-3.52	-4.49	-2.79	-1.42	7.20	6.35	-8.15	-8.51	
NCREIF ODCE Index (AWA) (Gross)	-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-12.02	7.47	22.17	1.19	
Difference	-20.67	-17.61	-7.91	-7.91	-5.42	-7.65	-7.15	-7.83	19.22	-1.12	-30.32	-9.70	
OFPRS Real Estate	-1.76	-8.07	-13.76	-13.76	0.48	1.37	3.20	5.71	-8.82	7.01	16.84	0.18	
NCREIF Property Index	-0.26	-1.24	-5.53	-5.53	2.33	3.39	4.37	6.07	-7.94	5.52	17.70	1.60	
Difference	-1.50	-6.83	-8.23	-8.23	-1.85	-2.02	-1.17	-0.36	-0.88	1.49	-0.86	-1.42	
NCREIF ODCE Index (AWA) (Gross)	-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-12.02	7.47	22.17	1.19	
Difference	-1.31	-5.26	-4.50	-4.50	-1.42	-1.79	-1.16	-0.70	3.20	-0.46	-5.33	-1.01	
Real Assets													
OPPRS Real Assets	0.14	-6.18	-8.03	-8.03	2.75	2.98	3.73	3.95	-9.71	13.11	19.08	-0.51	
OPPRS Real Assets Blended Benchmark	-0.67	-3.23	-10.00	-10.00	1.02	2.06	2.73	1.40	-12.73	6.55	21.02	0.34	
Difference	0.81	-2.95	1.97	1.97	1.73	0.92	1.00	2.55	3.02	6.56	-1.94	-0.85	
OLERS Real Assets	1.48	-1.57	-10.47	-10.47	0.72	1.94	2.89	3.51	-14.61	6.13	19.82	0.94	
OLERS Real Assets Blended Benchmark	-0.67	-3.23	-10.00	-10.00	1.02	2.09	2.80	2.67	-12.73	6.55	21.02	0.34	
Difference	2.15	1.66	-0.47	-0.47	-0.30	-0.15	0.09	0.84	-1.88	-0.42	-1.20	0.60	



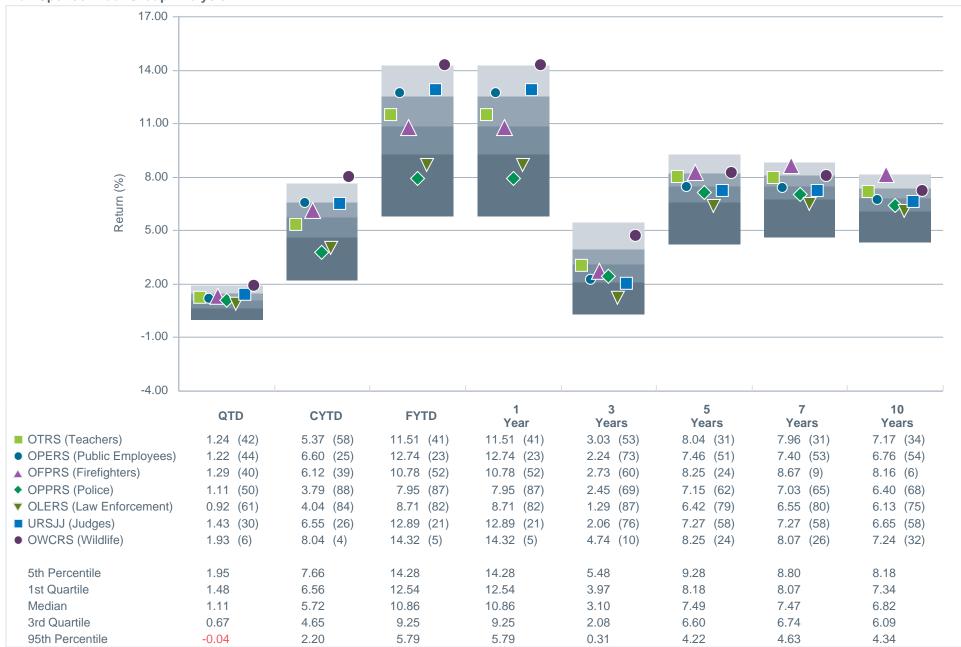
		Performance (%)													
	QTD	CYTD	FYTD	1	3	5	7	10	2023	2022	2021	2020			
Hadra Eurola				Year	Years	Years	Years	Years							
Hedge Funds															
OFPRS Hedge Fund	1.13	-2.48	-0.96	-0.96	-6.35	-4.58	-2.48	-1.21	16.54	0.36	-26.04	-4.62			
HFRI FOF Cnsvt Index	0.53	3.15	6.68	6.68	3.45	4.85	4.35	3.47	5.48	0.08	7.62	6.47			
Difference	0.60	-5.63	-7.64	-7.64	-9.80	-9.43	-6.83	-4.68	11.06	0.28	-33.66	-11.09			
OPPRS Long/Short Equity	-5.62	-2.51	2.77	2.77	-3.81	3.78	4.33	4.40	15.30	-17.31	0.14	22.68			
HFRI FOF Strat Index	0.85	5.93	10.84	10.84	0.58	4.81	4.24	3.52	8.09	-11.71	6.26	14.62			
Difference	-6.47	-8.44	-8.07	-8.07	-4.39	-1.03	0.09	0.88	7.21	-5.60	-6.12	8.06			



	Performance (%)												
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	
Private Equity													
OTRS Private Equity	4.07	2.37	6.52	6.52	8.75	16.78	16.98	16.26	4.78	-0.26	57.72	17.27	
OTRS Private Equity Custom Index	9.33	22.27	27.35	27.35	9.11	13.59	12.82	11.61	21.09	-18.40	31.25	13.65	
Difference	-5.26	-19.90	-20.83	-20.83	-0.36	3.19	4.16	4.65	-16.31	18.14	26.47	3.62	
OFPRS Private Equity	1.52	1.83	2.33	2.33	12.08	15.55	15.29	14.43	8.34	10.18	49.68	7.49	
Cambridge US Prvt Eq Index	0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86	
Difference	1.52	-0.04	-3.24	-3.24	5.06	0.91	0.62	1.18	-0.73	12.15	8.99	-15.37	
OPPRS Private Equity	2.43	4.62	6.38	6.38	8.91	15.69	15.02	13.13	-1.19	-1.91	67.32	15.87	
Cambridge US Prvt Eq Index	0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86	
Difference	2.43	2.75	0.81	0.81	1.89	1.05	0.35	-0.12	-10.26	0.06	26.63	-6.99	
OLERS Private Equity	3.44	4.68	8.80	8.80	6.50	13.73	13.08	10.43	5.29	-3.13	41.10	20.25	
Cambridge US Prvt Eq Index	0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	9.07	-1.97	40.69	22.86	
Difference	3.44	2.81	3.23	3.23	-0.52	-0.91	-1.59	-2.82	-3.78	-1.16	0.41	-2.61	
Other Alternatives													
OWCRS Alternative Investments	1.43	5.33	10.02	10.02	4.87	5.86	5.34	4.08	13.09	-5.53	9.60	2.74	
OWCRS Alternatives Custom Index	0.61	4.81	8.70	8.70	2.12	4.82	4.34	2.96	6.07	-5.31	6.17	10.88	
Difference	0.82	0.52	1.32	1.32	2.75	1.04	1.00	1.12	7.02	-0.22	3.43	-8.14	



### Oklahoma State Pension Commission All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



Performance shown is gross of fees. Parentheses contain percentile ranks. Oklahoma State Pension Commission fiscal year begins on 07/01.



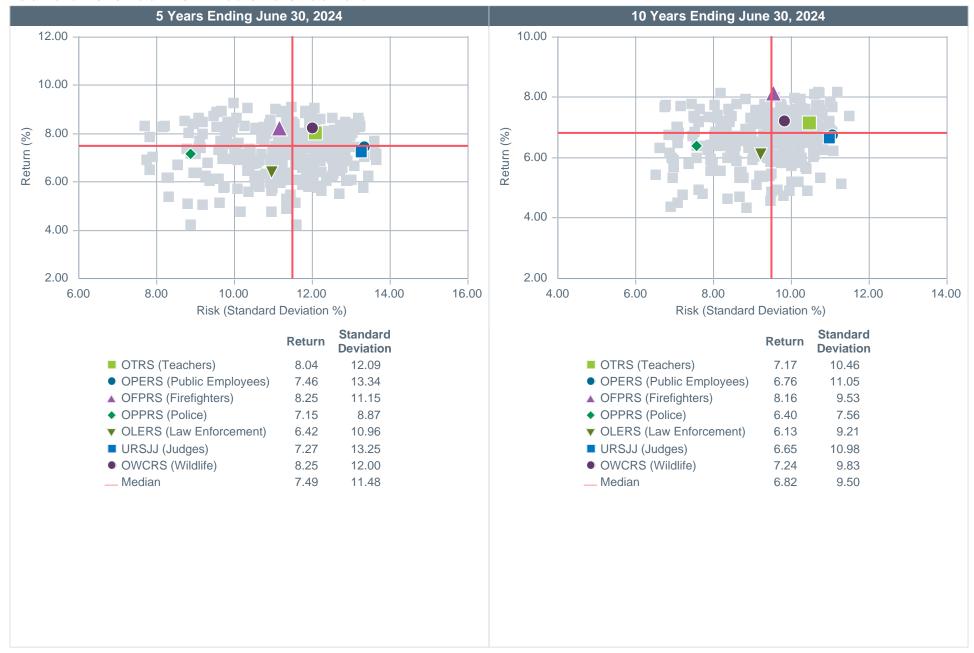
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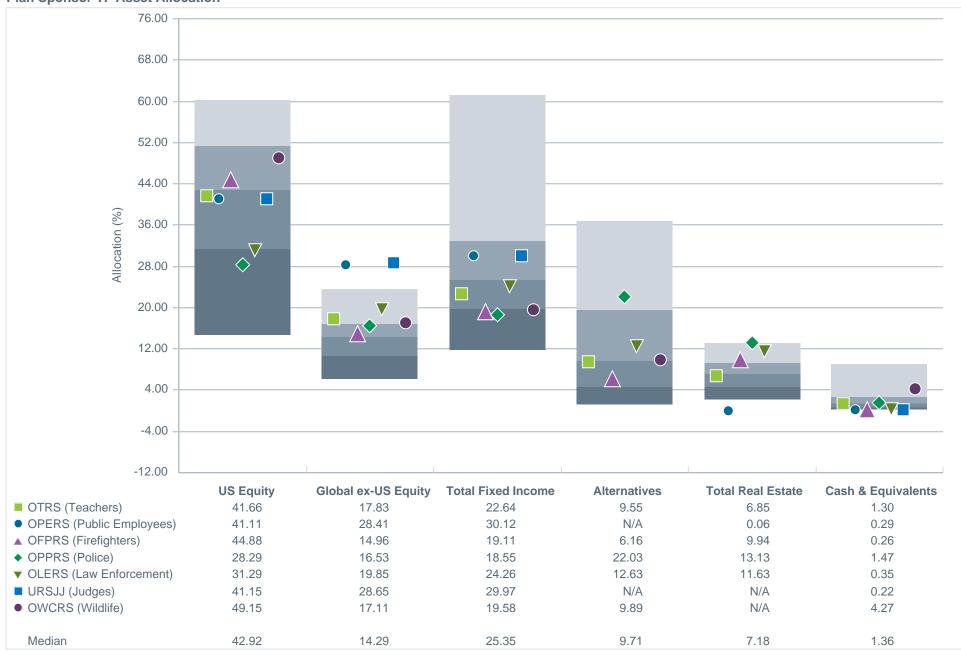
### All Plans Total Fund Risk & Return vs. All Public Plans-Total Fund





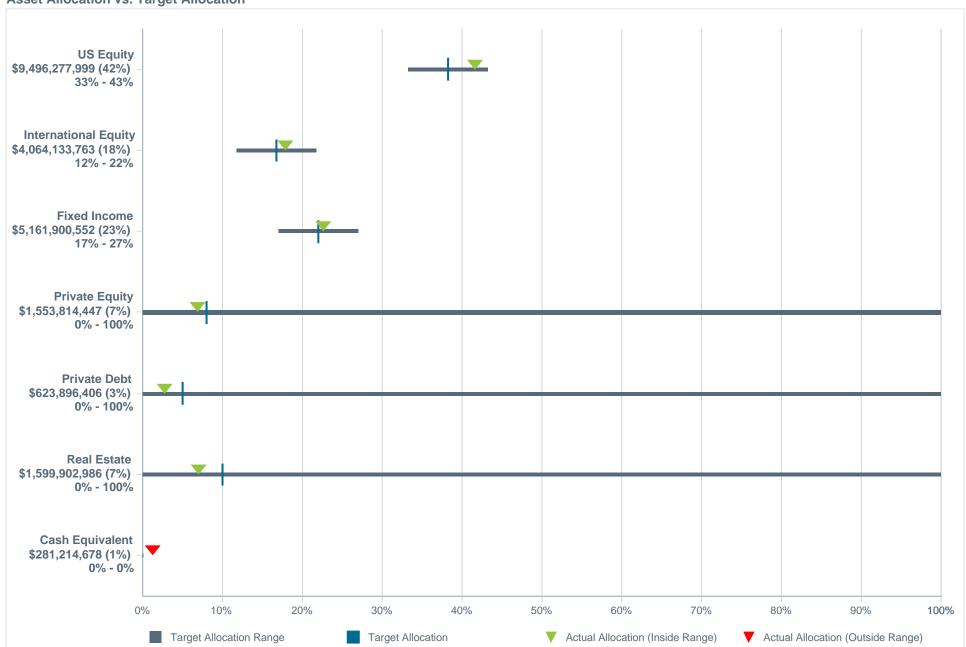


### Oklahoma State Pension Commission All Plans Total Fund vs. All Public Plans-Total Fund Plan Sponsor TF Asset Allocation



Parentheses contain percentile ranks.

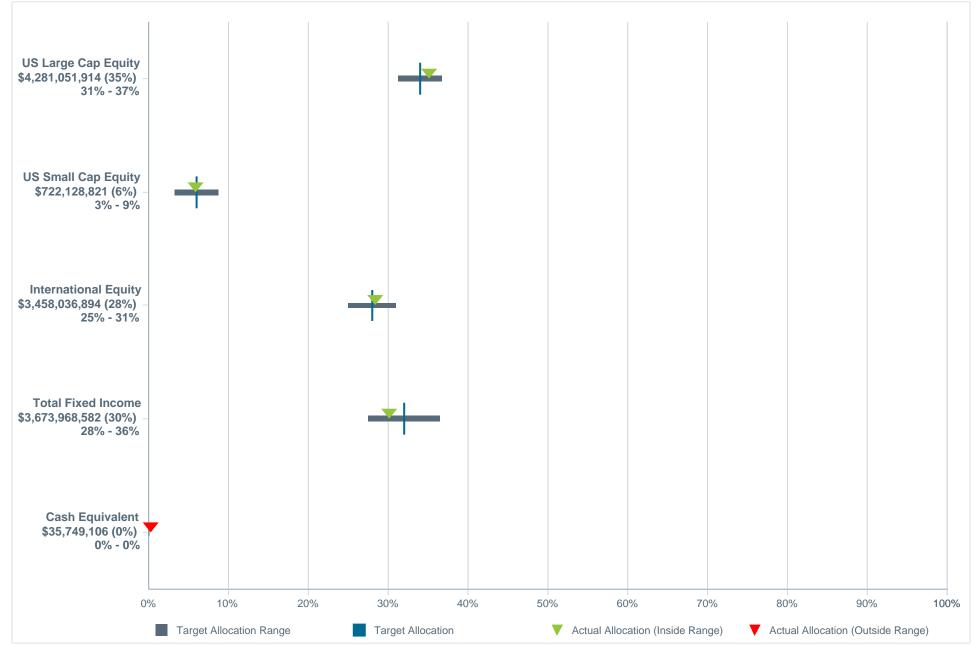




Allocations shown may not sum up to 100% exactly due to rounding. Allocation to Private Equity includes Private Credit. Cash held in short-term investments with the Custodian shall be considered as domestic fixed income for rebalancing purposes.

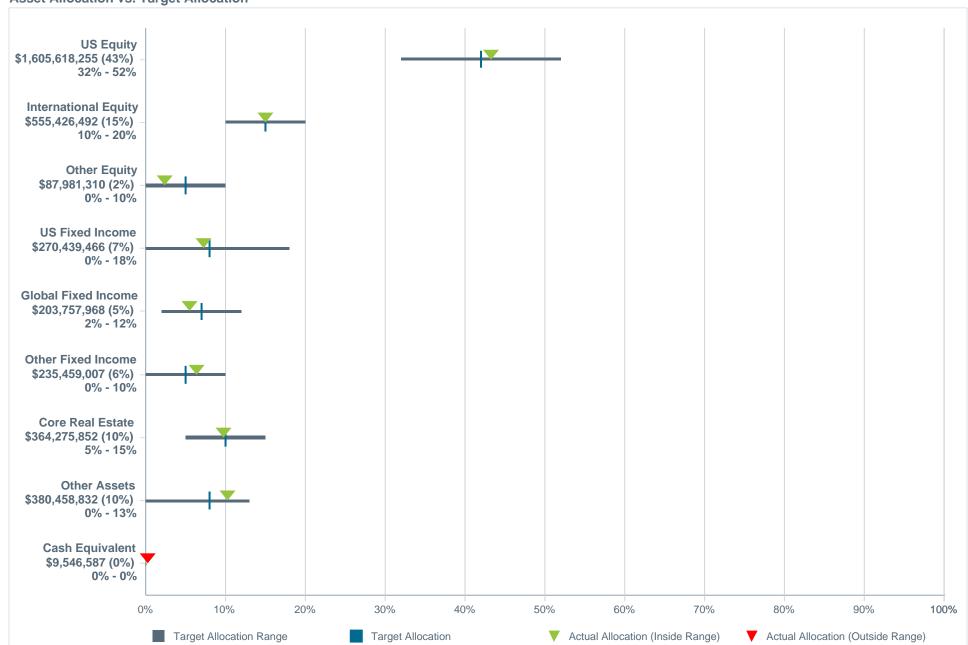






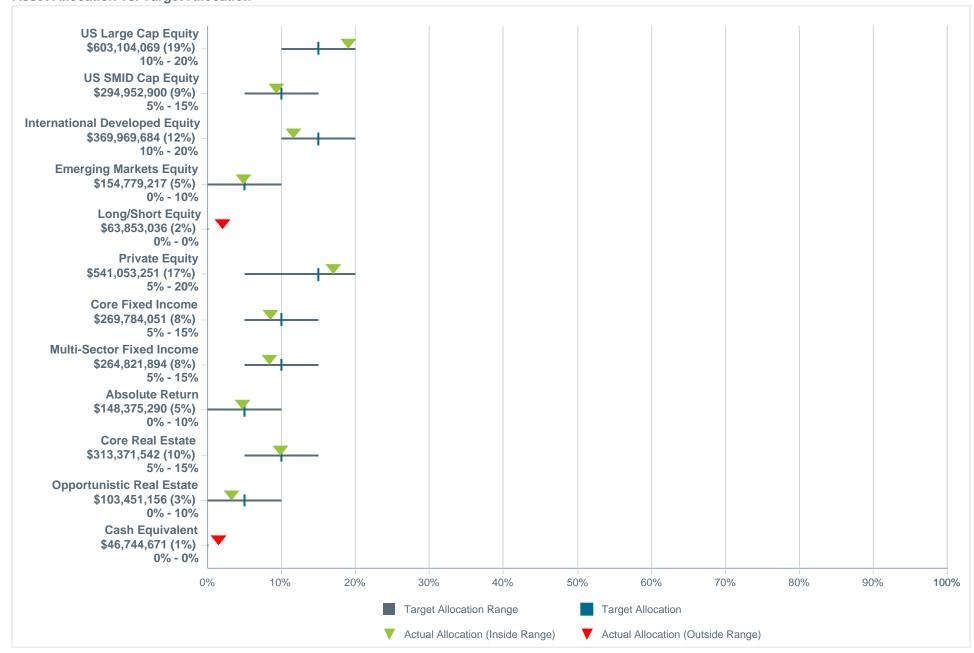
Allocations shown may not sum up to 100% exactly due to rounding. Cash held in short-term investments with the Master Custodian and direct real estate holdings shall be considered as U.S. fixed income for rebalancing purposes.





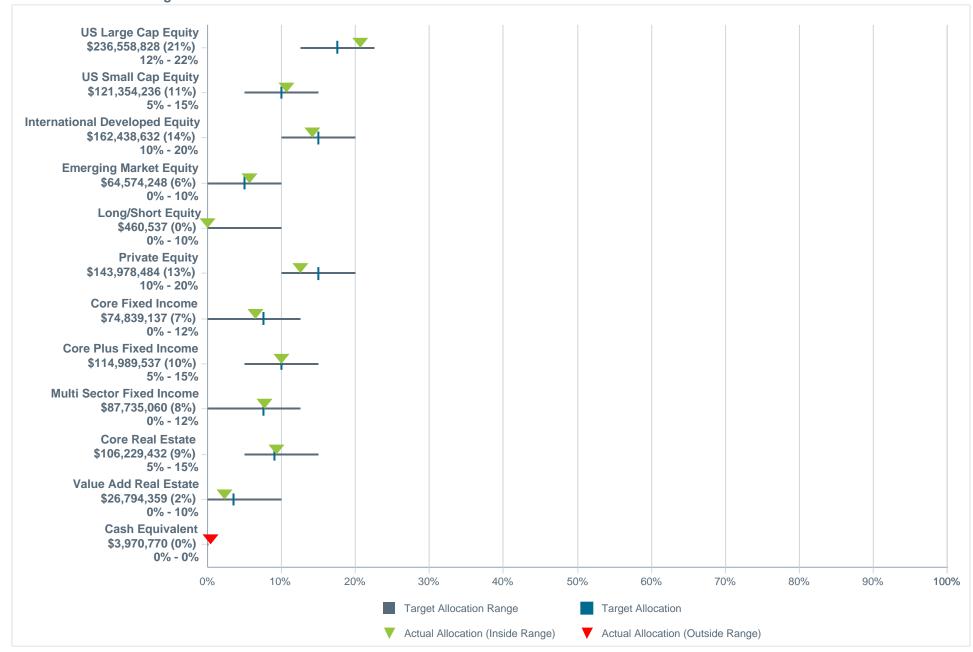






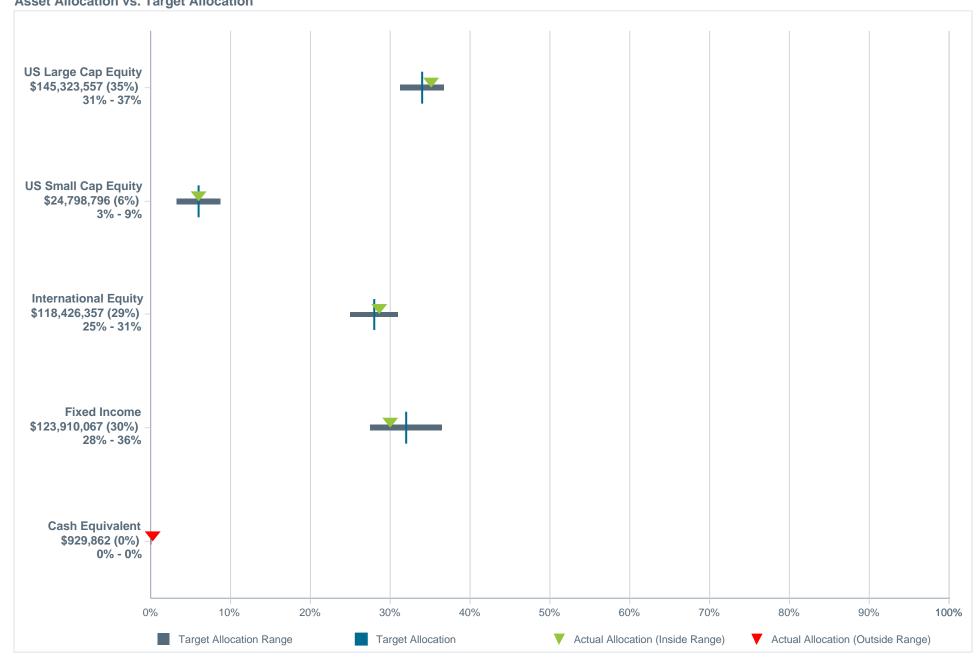






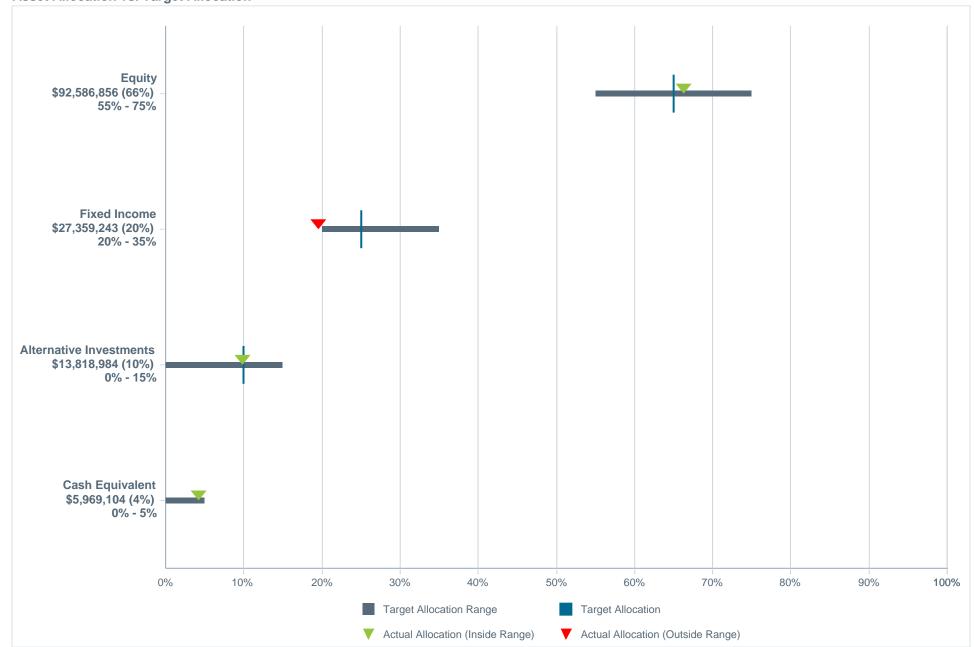






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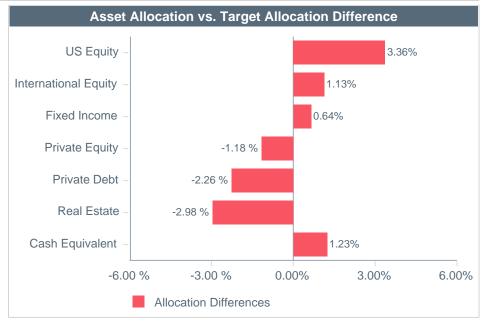
# Oklahoma Teachers' Retirement System (OTRS)



### Oklahoma State Pension Commission Oklahoma Teachers' Retirement System Total Fund Summary

Performance (%)														
			Trailir	ng						Calenda	r Year			
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019	
OTRS Total Fund (Net)	1.22	5.31	11.38	11.38	2.87	7.84	7.72	6.87	12.87	-13.25	18.20	13.22	19.48	
OTRS Policy Index	2.31	8.14	13.71	13.71	3.90	8.81	8.53	7.55	14.96	-14.07	15.60	15.24	21.71	
Difference	-1.09	-2.83	-2.33	-2.33	-1.03	-0.97	-0.81	-0.68	-2.09	0.82	2.60	-2.02	-2.23	
OTRS Actual Allocation Index	2.32	8.03	12.76	12.76	3.26	8.60	8.20	7.46	14.19	-14.90	16.21	16.98	18.94	
Difference	-1.10	-2.72	-1.38	-1.38	-0.39	-0.76	-0.48	-0.59	-1.32	1.65	1.99	-3.76	0.54	
Actuarial Discount Rate (7.0%)	1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	
Difference	-0.49	1.87	4.38	4.38	-4.13	0.84	0.72	-0.13	5.87	-20.25	11.20	6.22	12.48	
OTRS Total Fund (Gross)	1.24	5.37	11.51	11.51	3.03	8.04	7.96	7.17	13.02	-13.08	18.42	13.45	19.83	
OTRS Policy Index	2.31	8.14	13.71	13.71	3.90	8.81	8.53	7.55	14.96	-14.07	15.60	15.24	21.71	
Difference	-1.07	-2.77	-2.20	-2.20	-0.87	-0.77	-0.57	-0.38	-1.94	0.99	2.82	-1.79	-1.88	
OTRS Actual Allocation Index	2.32	8.03	12.76	12.76	3.26	8.60	8.20	7.46	14.19	-14.90	16.21	16.98	18.94	
Difference	-1.08	-2.66	-1.25	-1.25	-0.23	-0.56	-0.24	-0.29	-1.17	1.82	2.21	-3.53	0.89	
All Public Plans-Total Fund Median	1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47	18.63	
Rank	42	58	41	41	53	31	31	34	46	58	9	36	34	

	Asset Allocation vs. Ta	rget Allocation	
	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)
OTRS (Teachers)	22,795,161,150	100.00	100.00
US Equity	9,496,277,999	41.66	38.30
International Equity	4,064,133,763	17.83	16.70
Fixed Income	5,161,900,552	22.64	22.00
Private Equity	1,553,814,447	6.82	8.00
Private Debt	623,896,406	2.74	5.00
Real Estate	1,599,902,986	7.02	10.00
Cash Equivalent	281,214,678	1.23	0.00



Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding. Opportunistic Fixed Income accounts for 2.74% of the Total Fund. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



	Allocation						Perfor	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OTRS Total Fund	22,795,161,150	100.00	1.22	5.31	11.38	11.38	2.87	7.84	7.72	6.87	8.79	12/01/1991
OTRS Policy Index			2.31	8.14	13.71	13.71	3.90	8.81	8.53	7.55	8.96	
Difference			-1.09	-2.83	-2.33	-2.33	-1.03	-0.97	-0.81	-0.68	-0.17	
OTRS Actual Allocation Index			2.32	8.03	12.76	12.76	3.26	8.60	8.20	7.46	N/A	
Difference			-1.10	-2.72	-1.38	-1.38	-0.39	-0.76	-0.48	-0.59	N/A	
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	
Difference			-0.49	1.87	4.38	4.38	-4.13	0.84	0.72	-0.13	1.79	
US Equity	9,496,277,999	41.66	1.67	11.17	20.17	20.17	6.09	11.41	11.09	10.01	10.84	04/01/1990
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	10.64	
Difference			-1.55	-2.39	-2.95	-2.95	-1.96	-2.73	-2.39	-2.14	0.20	
US Active Equity	1,026,051,667	4.50	-1.04	6.38	15.76	15.76	3.45	10.81	10.57	9.60	8.91	12/01/1998
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	8.35	
Difference			-4.26	-7.18	-7.36	-7.36	-4.60	-3.33	-2.91	-2.55	0.56	
Frontier Small Cap Value Equity (SA)	547,097,668	2.40	-0.99	6.79	21.42	21.42	9.26	12.72	10.41	9.36	10.69	06/01/2013
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	7.52	
Difference			2.65	7.64	10.52	10.52	9.79	5.65	4.52	3.13	3.17	
Geneva US Small Cap Growth Equity (SA)	478,953,999	2.10	-1.10	5.92	9.90	9.90	-0.47	8.25	10.40	11.06	11.65	06/01/2013
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	8.73	
Difference			1.82	1.48	0.76	0.76	4.39	2.08	3.12	3.67	2.92	
US Passive Equity (Cap Wgt)	6,128,334,272	26.88	3.17	13.29	22.80	22.80	5.92	12.58	12.27	11.44	12.75	04/01/2012
Northern Trust Russell 3000 Index (SA)	6,128,334,272	26.88	3.17	13.29	22.80	22.80	N/A	N/A	N/A	N/A	20.80	07/01/2022
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	21.02	
Difference			-0.05	-0.27	-0.32	-0.32	N/A	N/A	N/A	N/A	-0.22	
US Passive Equity (Non-Cap Wgt)	2,341,884,885	10.27	-0.89	8.11	15.93	15.93	5.43	9.71	10.42	9.79	11.93	04/01/2012
NTGI SciBetUS HF Ex MulBeEW Gr			-0.93	8.07	16.02	16.02	5.48	9.75	N/A	N/A	N/A	
Difference			0.04	0.04	-0.09	-0.09	-0.05	-0.04	N/A	N/A	N/A	
SciBeta US High FactorExposure Index (SA)	2,341,884,885	10.27	-0.89	8.11	15.93	15.93	5.43	9.71	N/A	N/A	9.05	12/01/2017
NTGI SciBetUS HF Ex MulBeEW Gr			-0.93	8.07	16.02	16.02	5.48	9.75	N/A	N/A	9.09	
Difference			0.04	0.04	-0.09	-0.09	-0.05	-0.04	N/A	N/A	-0.04	

Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month following initial funding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



	Allocation	Allocation					Perfori	mance (%)				
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
International Equity	4,064,133,763	17.83	0.75	5.54	12.44	12.44	-0.50	5.64	5.00	4.17	7.29	02/01/1996
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.56	
Difference			-0.42	-0.50	0.27	0.27	-1.47	-0.41	-0.68	-0.17	1.73	
Causeway Intl Opportunities (SA)	382,889,622	1.68	3.37	7.54	13.96	13.96	5.07	8.04	6.48	4.86	8.15	05/01/2003
MSCI ACW Ex US Val Index (USD) (Gross)			1.55	5.21	14.24	14.24	4.30	5.98	5.09	3.40	7.68	
Difference			1.82	2.33	-0.28	-0.28	0.77	2.06	1.39	1.46	0.47	
NT ACWI Ex US Ex China Investable Market Fund (CF)	3,152,595,147	13.83	0.52	5.94	13.50	13.50	N/A	N/A	N/A	N/A	14.61	09/01/2022
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	13.89	
Difference			-0.65	-0.10	1.33	1.33	N/A	N/A	N/A	N/A	0.72	
Harding Loevner International Equity (SA)	528,645,929	2.32	0.31	1.91	N/A	N/A	N/A	N/A	N/A	N/A	3.58	08/01/2023
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	7.75	
Difference			-0.86	-4.13	N/A	N/A	N/A	N/A	N/A	N/A	-4.17	



	Allocation	Allocation					Perfor	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	5,161,900,552	22.64	0.34	0.48	5.09	5.09	-2.77	0.98	2.02	2.42	6.03	04/01/1990
OTRS Fixed Income Blended Benchmark			0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	N/A	
Difference			-0.03	0.20	0.16	0.16	-1.16	-0.02	0.14	0.17	N/A	
Loomis Sayles Multisector Full Discretion (SA)	1,523,818,397	6.68	0.37	1.02	6.93	6.93	-1.39	2.66	2.96	2.81	5.34	07/01/1999
OTRS Fixed Income Blended Benchmark			0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	4.66	
Difference			0.00	0.74	2.00	2.00	0.22	1.66	1.08	0.56	0.68	
Mackay Shields Core+ Extended Discretion (SA)	1,513,216,520	6.64	1.05	2.09	7.98	7.98	-0.61	2.44	2.77	2.49	4.34	11/01/2004
OTRS Fixed Income Blended Benchmark			0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	4.04	
Difference			0.68	1.81	3.05	3.05	1.00	1.44	0.89	0.24	0.30	
Lord Abbett Core Plus Full Discretion (SA)	1,458,564,274	6.40	0.75	1.30	6.38	6.38	-1.16	1.40	2.11	2.34	4.16	11/01/2004
OTRS Fixed Income Blended Benchmark			0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	4.04	
Difference			0.38	1.02	1.45	1.45	0.45	0.40	0.23	0.09	0.12	
Hoisington Active Duration Long Bonds (SA)	666,301,361	2.92	-2.16	-5.72	-6.69	-6.69	-11.93	-4.75	-1.64	0.64	4.08	11/01/2004
Bloomberg US Trsy Index			0.10	-0.86	1.55	1.55	-3.26	-0.65	0.44	0.91	2.54	
Difference			-2.26	-4.86	-8.24	-8.24	-8.67	-4.10	-2.08	-0.27	1.54	
Private Equity	1,553,814,447	6.82	4.07	2.37	6.52	6.52	8.75	16.78	16.98	16.26	16.13	07/01/2015
OTRS Private Equity Custom Index			9.33	22.27	27.35	27.35	9.11	13.59	12.82	11.61	11.71	
Difference			-5.26	-19.90	-20.83	-20.83	-0.36	3.19	4.16	4.65	4.42	
Franklin Park Private Equity LP	1,548,981,549	6.80	4.13	2.44	6.59	6.59	8.81	16.89	17.20	16.37	16.22	07/01/2015
Private Debt	623,896,406	2.74	1.07	1.88	9.95	9.95	10.09	8.25	8.06	N/A	8.13	07/01/2015
S&P/LSTA Leveraged Loan 100 Index +3%			2.82	5.65	14.10	14.10	9.03	8.40	8.03	7.29	7.75	
Difference			-1.75	-3.77	-4.15	-4.15	1.06	-0.15	0.03	N/A	0.38	
PIMCO Bravo III LP	169,611,884	0.74	-1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	04/01/2017
PIMCO Corporate Opportunities II LP	70,959,256	0.31	-8.38	-12.46	66.87	66.87	37.54	24.68	20.08	N/A	19.93	10/01/2016
Bloomberg US Unv Bond Index			0.19	-0.28	3.47	3.47	-2.68	0.11	1.15	1.63	1.04	
Difference			-8.57	-12.18	63.40	63.40	40.22	24.57	18.93	N/A	18.89	
Private Credit Fund O LLC	196,736,838	0.86	3.21	5.00	N/A	N/A	N/A	N/A	N/A	N/A	7.49	09/01/2023
Scissor-Tail Credit Fund LLC	179,115,532	0.79	5.41	5.41	N/A	N/A	N/A	N/A	N/A	N/A	10.46	10/01/2023

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	Allocation						Perfor	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Real Estate	1,599,902,986	7.02	-0.29	-6.23	-9.34	-9.34	2.58	1.45	3.29	N/A	4.84	07/01/2015
OTRS Real Estate Custom Index			-0.55	-2.99	-9.55	-9.55	1.52	2.78	3.96	5.99	5.14	
Difference			0.26	-3.24	0.21	0.21	1.06	-1.33	-0.67	N/A	-0.30	
AEW Core Property Trust (CF)	376,001,958	1.65	-0.96	-2.85	-7.26	-7.26	4.68	4.10	4.88	6.10	6.58	07/01/2011
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	6.80	
Difference			-0.29	0.38	2.74	2.74	3.66	1.83	1.43	0.63	-0.22	
Heitman America Real Estate (CF)	371,497,766	1.63	-1.77	-6.08	-9.91	-9.91	5.13	3.35	4.16	6.10	6.99	05/01/2011
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	7.06	
Difference			-1.10	-2.85	0.09	0.09	4.11	1.08	0.71	0.63	-0.07	
American Strategic Value Realty (CF)	114,088,056	0.50	-2.63	-6.72	-10.45	-10.45	2.42	3.59	5.00	N/A	6.40	12/01/2014
NCREIF ODCE Index (AWA) (Net)	, ,		-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.38	
Difference			-1.96	-3.49	-0.45	-0.45	1.40	1.32	1.55	N/A	1.02	
AG Realty Value X LP	39,920,527	0.18	-1.25	-3.81	-6.36	-6.36	10.05	4.78	N/A	N/A	4.78	07/01/2019
NCREIF ODCE Index (AWA) (Net)	, ,		-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.27	
Difference			-0.58	-0.58	3.64	3.64	9.03	2.51	N/A	N/A	2.51	
AGXI Non-Core Real Estate	28,914,143	0.13	6.42	7.57	10.75	10.75	N/A	N/A	N/A	N/A	1.84	11/01/2022
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-12.47	
Difference			7.09	10.80	20.75	20.75	N/A	N/A	N/A	N/A	14.31	
Artemis Real Estate III LP	30,880,574	0.14	1.81	-4.52	-0.38	-0.38	20.59	18.13	N/A	N/A	N/A	02/01/2019
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.46	
Difference			2.48	-1.29	9.62	9.62	19.57	15.86	N/A	N/A	N/A	
Artemis Real Estate IV LP	10,528,040	0.05	-5.39	-7.80	-19.07	-19.07	N/A	N/A	N/A	N/A	-47.04	07/01/2022
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-10.37	
Difference			-4.72	-4.57	-9.07	-9.07	N/A	N/A	N/A	N/A	-36.67	
Blackstone Real Estate Partners X	24,182,406	0.11	-2.26	0.63	-12.61	-12.61	N/A	N/A	N/A	N/A	N/A	04/01/2023
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-10.21	
Difference			-1.59	3.86	-2.61	-2.61	N/A	N/A	N/A	N/A	N/A	
Dune Real Estate III LP	11,300,626	0.05	-2.56	4.03	-35.27	-35.27	-10.41	-10.55	-4.17	N/A	-0.84	11/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.34	
Difference			-1.89	7.26	-25.27	-25.27	-11.43	-12.82	-7.62	N/A	-6.18	

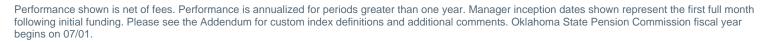
Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month following initial funding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



	Allocation						Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Dune Real Estate IV LP	57,757,269	0.25	1.82	0.18	0.15	0.15	19.38	N/A	N/A	N/A	-2.69	09/01/2019
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.34	
Difference			2.49	3.41	10.15	10.15	18.36	N/A	N/A	N/A	-5.03	
EQT Exeter Ind Value VI	23,238,010	0.10	-7.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-7.97	03/01/2024
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-3.23	
Difference			-7.30	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-4.74	
FCP Realty IV LP	40,409,267	0.18	1.57	-1.23	-3.76	-3.76	10.59	7.16	N/A	N/A	-0.42	12/01/2018
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.66	
Difference			2.24	2.00	6.24	6.24	9.57	4.89	N/A	N/A	-3.08	
FCP Realty V LP	89,622,837	0.39	1.57	-3.47	-7.56	-7.56	N/A	N/A	N/A	N/A	-12.04	10/01/2021
NCREIF ODCE Index (AWA) (Net)	, ,		-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-1.15	
Difference			2.24	-0.24	2.44	2.44	N/A	N/A	N/A	N/A	-10.89	
GreenOak US II LP	11,969,441	0.05	-5.98	-37.92	-37.80	-37.80	-24.38	-23.75	-16.11	N/A	-11.43	10/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.29	
Difference			-5.31	-34.69	-27.80	-27.80	-25.40	-26.02	-19.56	N/A	-16.72	
GreenOak US III LP	38,344,762	0.17	-0.87	-20.02	-17.96	-17.96	0.20	-4.75	N/A	N/A	-9.34	06/01/2018
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	3.06	
Difference			-0.20	-16.79	-7.96	-7.96	-0.82	-7.02	N/A	N/A	-12.40	
Harbert European Real Estate V LP	38,640,088	0.17	1.42	-0.10	3.17	3.17	6.94	7.49	N/A	N/A	0.60	12/01/2018
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.66	
Difference			2.09	3.13	13.17	13.17	5.92	5.22	N/A	N/A	-2.06	
Invesco VI Global Real Estate Fund	49,712,277	0.22	2.75	-9.12	-12.14	-12.14	N/A	N/A	N/A	N/A	-7.45	10/01/2022
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-11.92	
Difference			3.42	-5.89	-2.14	-2.14	N/A	N/A	N/A	N/A	4.47	
Invesco Strategic Opportunity (CF)	12,318,673	0.05	-4.94	-2.80	-6.93	-6.93	19.93	N/A	N/A	N/A	33.51	10/01/2019
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.16	
Difference			-4.27	0.43	3.07	3.07	18.91	N/A	N/A	N/A	31.35	
L&B Golden Driller (SA)	44,143	0.00	0.00	-0.01	-0.03	-0.03	-23.12	-15.34	-6.88	N/A	N/A	07/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.47	
Difference			0.67	3.22	9.97	9.97	-24.14	-17.61	-10.33	N/A	N/A	



	Allocation						Perfori	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Landmark Real Estate IX LP	2,161,923	0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	04/01/2024
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-0.67	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Landmark Real Estate VII LP	4,551,164	0.02	0.59	-1.07	-3.00	-3.00	-1.83	-2.81	-0.93	N/A	5.19	12/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.38	
Difference			1.26	2.16	7.00	7.00	-2.85	-5.08	-4.38	N/A	-0.19	
Lyrical-OTRS Realty Partner IV LP	54,127,810	0.24	-3.12	-1.61	-0.65	-0.65	4.47	6.41	10.13	N/A	4.49	11/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.34	
Difference			-2.45	1.62	9.35	9.35	3.45	4.14	6.68	N/A	-0.85	
Starwood Opportunity X LP	7,416,320	0.03	-12.22	-19.29	-24.50	-24.50	4.04	4.10	6.84	N/A	8.02	07/01/2015
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	4.62	
Difference			-11.55	-16.06	-14.50	-14.50	3.02	1.83	3.39	N/A	3.40	
Starwood Opportunity XI LP	51,926,318	0.23	2.78	2.41	10.72	10.72	7.99	9.19	N/A	N/A	14.90	08/01/2018
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.83	
Difference			3.45	5.64	20.72	20.72	6.97	6.92	N/A	N/A	12.07	
Starwood Opportunity XII LP	84,163,033	0.37	11.33	11.33	7.79	7.79	N/A	N/A	N/A	N/A	9.66	01/01/2022
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-4.13	
Difference			12.00	14.56	17.79	17.79	N/A	N/A	N/A	N/A	13.79	
TPG Real Estate IV LP	15,980,543	0.07	6.37	-18.33	-44.00	-44.00	N/A	N/A	N/A	N/A	-49.77	01/01/2023
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-10.65	
Difference			7.04	-15.10	-34.00	-34.00	N/A	N/A	N/A	N/A	-39.12	
Property ACQ Fund	10,050,000	0.04	11.49	11.49	11.49	11.49	2.72	-3.60	N/A	N/A	-6.49	08/01/2017





	Allocatio				Perfor	mance (%)	)					
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OTRS Total Fund	22,795,161,150	100.00	1.24	5.37	11.51	11.51	3.03	8.04	7.96	7.17	9.11	12/01/1991
OTRS Policy Index			2.31	8.14	13.71	13.71	3.90	8.81	8.53	7.55	8.96	
Difference			-1.07	-2.77	-2.20	-2.20	-0.87	-0.77	-0.57	-0.38	0.15	
OTRS Actual Allocation Index			2.32	8.03	12.76	12.76	3.26	8.60	8.20	7.46	N/A	
Difference			-1.08	-2.66	-1.25	-1.25	-0.23	-0.56	-0.24	-0.29	N/A	
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	
Difference			-0.47	1.93	4.51	4.51	-3.97	1.04	0.96	0.17	2.11	
All Public Plans-Total Fund Median			1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	8.01	
Rank			42	58	41	41	53	31	31	34	3	
US Equity	9,496,277,999	41.66	1.69	11.21	20.25	20.25	6.21	11.58	11.32	10.27	10.91	04/01/1990
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	10.64	
Difference			-1.53	-2.35	-2.87	-2.87	-1.84	-2.56	-2.16	-1.88	0.27	
IM U.S. Equity (SA+CF) Median			-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	11.53	
Rank			31	33	34	34	48	48	47	47	69	
US Active Equity	1,026,051,667	4.50	-0.94	6.59	16.23	16.23	4.03	11.39	11.12	10.07	9.39	12/01/1998
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	8.35	
Difference			-4.16	-6.97	-6.89	-6.89	-4.02	-2.75	-2.36	-2.08	1.04	
IM U.S. Equity (SA+CF) Median			-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	9.98	
Rank			47	55	48	48	63	50	49	50	61	
Frontier Small Cap Value Equity (SA)	547,097,668	2.40	-0.89	7.01	21.94	21.94	9.82	13.39	11.15	10.18	11.53	06/01/2013
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	7.52	
Difference			2.75	7.86	11.04	11.04	10.35	6.32	5.26	3.95	4.01	
IM U.S. Small Cap Value Equity (SA+CF) Median			-3.48	1.97	12.96	12.96	4.12	9.92	8.22	8.09	9.54	
Rank			13	10	5	5	6	12	13	12	10	
Geneva US Small Cap Growth Equity (SA)	478,953,999	2.10	-1.01	6.11	10.32	10.32	0.05	8.86	11.07	11.69	12.22	06/01/2013
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	8.73	
Difference			1.91	1.67	1.18	1.18	4.91	2.69	3.79	4.30	3.49	
IM U.S. Small Cap Growth Equity (SA+CF) Median			-2.59	5.02	9.47	9.47	-2.78	8.73	11.09	10.22	11.26	
Rank			32	42	46	46	29	48	51	29	32	



	Allocation											
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Passive Equity (Cap Wgt)	6,128,334,272	26.88	3.17	13.29	22.82	22.82	5.93	12.59	12.28	11.44	12.76	04/01/2012
Northern Trust Russell 3000 Index (SA)	6,128,334,272	26.88	3.17	13.29	22.82	22.82	N/A	N/A	N/A	N/A	20.81	07/01/2022
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	21.02	
Difference			-0.05	-0.27	-0.30	-0.30	N/A	N/A	N/A	N/A	-0.21	
IM U.S. Large Cap Equity (SA+CF) Median			2.80	13.58	23.37	23.37	8.73	14.20	13.75	12.46	21.03	
Rank			47	53	54	54	N/A	N/A	N/A	N/A	52	
US Passive Equity (Non-Cap Wgt)	2,341,884,885	10.27	-0.88	8.16	16.03	16.03	5.50	9.78	10.49	9.85	11.98	04/01/2012
NTGI SciBetUS HF Ex MulBeEW Gr			-0.93	8.07	16.02	16.02	5.48	9.75	N/A	N/A	N/A	
Difference			0.05	0.09	0.01	0.01	0.02	0.03	N/A	N/A	N/A	
SciBeta US High FactorExposure Index (SA)	2,341,884,885	10.27	-0.88	8.16	16.03	16.03	5.50	9.78	N/A	N/A	9.12	12/01/2017
NTGI SciBetUS HF Ex MulBeEW Gr			-0.93	8.07	16.02	16.02	5.48	9.75	N/A	N/A	9.09	
Difference			0.05	0.09	0.01	0.01	0.02	0.03	N/A	N/A	0.03	
IM U.S. Large Cap Index Equity (SA+CF) Median			3.57	14.24	23.91	23.91	8.96	14.64	13.97	12.56	13.24	
Rank			83	83	84	84	95	84	N/A	N/A	84	
International Equity	4,064,133,763	17.83	0.78	5.60	12.55	12.55	-0.22	6.01	5.41	4.58	7.71	02/01/1996
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.56	
Difference			-0.39	-0.44	0.38	0.38	-1.19	-0.04	-0.27	0.24	2.15	
IM International Equity (SA+CF) Median			0.35	5.34	11.44	11.44	1.83	6.99	6.27	5.27	7.26	
Rank			41	46	41	41	71	66	69	71	43	
Causeway Intl Opportunities (SA)	382,889,622	1.68	3.45	7.72	14.40	14.40	5.43	8.40	6.83	5.18	8.30	05/01/2003
MSCI ACW Ex US Val Index (USD) (Gross)			1.55	5.21	14.24	14.24	4.30	5.98	5.09	3.40	7.68	
Difference			1.90	2.51	0.16	0.16	1.13	2.42	1.74	1.78	0.62	
IM ACWI Ex US Value (SA+CF) Median			0.89	5.08	12.09	12.09	3.01	7.14	6.41	4.94	8.60	
Rank			8	20	38	38	22	31	37	46	62	
NT ACWI Ex US Ex China Investable Market Fund (CF)	3,152,595,147	13.83	0.52	5.96	13.52	13.52	N/A	N/A	N/A	N/A	14.63	09/01/2022
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	13.89	
Difference			-0.65	-0.08	1.35	1.35	N/A	N/A	N/A	N/A	0.74	
IM ACWI Ex US Core (SA+CF) Median			1.19	7.07	13.29	13.29	1.83	7.04	6.30	4.65	14.96	
Rank			68	67	50	50	N/A	N/A	N/A	N/A	64	
Harding Loevner International Equity (SA)	528,645,929	2.32	0.42	2.13	N/A	N/A	N/A	N/A	N/A	N/A	3.90	08/01/2023
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	7.75	
Difference			-0.75	-3.91	N/A	N/A	N/A	N/A	N/A	N/A	-3.85	
IM ACWI Ex US Core (SA+CF) Median			1.19	7.07	13.29	13.29	1.83	7.04	6.30	4.65	8.60	
Rank			71	100	N/A	N/A	N/A	N/A	N/A	N/A	93	



	Allocation	า	Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	5,161,900,552	22.64	0.38	0.57	5.29	5.29	-2.59	1.16	2.22	2.63	6.22	04/01/1990
OTRS Fixed Income Blended Benchmark			0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	N/A	
Difference			0.01	0.29	0.36	0.36	-0.98	0.16	0.34	0.38	N/A	
IM U.S. Fixed Income (SA+CF) Median			0.67	0.92	4.71	4.71	-0.63	1.36	2.01	2.15	5.32	
Rank			65	59	41	41	78	58	42	34	19	
Loomis Sayles Multisector Full Discretion (SA)	1,523,818,397	6.68	0.42	1.13	7.17	7.17	-1.17	2.89	3.18	3.00	5.54	07/01/1999
OTRS Fixed Income Blended Benchmark			0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	4.66	
Difference			0.05	0.85	2.24	2.24	0.44	1.89	1.30	0.75	0.88	
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median			0.42	0.33	4.34	4.34	-2.32	0.92	1.88	2.24	4.90	
Rank			49	19	13	13	25	8	13	18	14	
Mackay Shields Core+ Extended Discretion (SA)	1,513,216,520	6.64	1.10	2.19	8.20	8.20	-0.41	2.64	2.98	2.70	4.58	11/01/2004
OTRS Fixed Income Blended Benchmark			0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	4.04	
Difference			0.73	1.91	3.27	3.27	1.20	1.64	1.10	0.45	0.54	
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median			0.42	0.33	4.34	4.34	-2.32	0.92	1.88	2.24	3.97	
Rank			7	10	10	10	13	11	16	24	21	
Lord Abbett Core Plus Full Discretion (SA)	1,458,564,274	6.40	0.79	1.37	6.54	6.54	-1.00	1.57	2.27	2.50	4.33	11/01/2004
OTRS Fixed Income Blended Benchmark			0.37	0.28	4.93	4.93	-1.61	1.00	1.88	2.25	4.04	
Difference			0.42	1.09	1.61	1.61	0.61	0.57	0.39	0.25	0.29	
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median			0.42	0.33	4.34	4.34	-2.32	0.92	1.88	2.24	3.97	
Rank			14	15	15	15	19	25	25	31	26	
Hoisington Active Duration Long Bonds (SA)	666,301,361	2.92	-2.14	-5.69	-6.61	-6.61	-11.85	-4.67	-1.55	0.74	4.21	11/01/2004
Bloomberg US Trsy Index			0.10	-0.86	1.55	1.55	-3.26	-0.65	0.44	0.91	2.54	
Difference			-2.24	-4.83	-8.16	-8.16	-8.59	-4.02	-1.99	-0.17	1.67	
IM U.S. Long Duration (SA+CF) Median			-1.48	-3.24	-0.23	-0.23	-7.96	-1.35	0.94	2.26	4.86	
Rank			100	100	100	100	100	100	100	100	97	



	Allocation	<u> </u>					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Private Equity	1,553,814,447	6.82	4.07	2.37	6.52	6.52	8.75	16.78	16.98	16.26	16.13	07/01/2015
OTRS Private Equity Custom Index			9.33	22.27	27.35	27.35	9.11	13.59	12.82	11.61	11.71	
Difference			-5.26	-19.90	-20.83	-20.83	-0.36	3.19	4.16	4.65	4.42	
Franklin Park Private Equity LP	1,548,981,549	6.80	4.13	2.44	6.59	6.59	8.81	16.89	17.20	16.49	16.35	07/01/2015
Private Debt	623,896,406	2.74	1.07	1.88	9.95	9.95	10.09	8.25	8.06	N/A	8.13	07/01/2015
S&P/LSTA Leveraged Loan 100 Index +3%			2.82	5.65	14.10	14.10	9.03	8.40	8.03	7.29	7.75	
Difference			-1.75	-3.77	-4.15	-4.15	1.06	-0.15	0.03	N/A	0.38	
PIMCO Bravo III LP	169,611,884	0.74	-1.14	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	04/01/2017
PIMCO Corporate Opportunities II LP	70,959,256	0.31	-8.38	-12.46	66.87	66.87	37.54	24.68	20.08	N/A	19.93	10/01/2016
Bloomberg US Unv Bond Index			0.19	-0.28	3.47	3.47	-2.68	0.11	1.15	1.63	1.04	
Difference			-8.57	-12.18	63.40	63.40	40.22	24.57	18.93	N/A	18.89	
Private Credit Fund O LLC	196,736,838	0.86	3.21	5.00	N/A	N/A	N/A	N/A	N/A	N/A	7.49	09/01/2023
Scissor-Tail Credit Fund LLC	179,115,532	0.79	5.41	5.41	N/A	N/A	N/A	N/A	N/A	N/A	10.46	10/01/2023
Real Estate	1,599,902,986	7.02	-0.23	-6.11	-9.07	-9.07	2.86	1.69	3.52	N/A	5.05	07/01/2015
OTRS Real Estate Custom Index			-0.55	-2.99	-9.55	-9.55	1.52	2.78	3.96	5.99	5.14	
Difference			0.32	-3.12	0.48	0.48	1.34	-1.09	-0.44	N/A	-0.09	
AEW Core Property Trust (CF)	376,001,958	1.65	-0.96	-2.85	-7.26	-7.26	4.68	4.10	4.88	6.52	7.10	07/01/201
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	7.77	
Difference			-0.51	-0.04	2.00	2.00	2.78	0.94	0.52	0.11	-0.67	
Heitman America Real Estate (CF)	371,497,766	1.63	-1.59	-5.74	-9.11	-9.11	5.94	4.09	4.94	6.87	7.78	05/01/201
NCREIF ODCE Index (AWA) (Gross)	, ,		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	8.04	
Difference			-1.14	-2.93	0.15	0.15	4.04	0.93	0.58	0.46	-0.26	
American Strategic Value Realty (CF)	114,088,056	0.50	-2.38	-6.23	-9.51	-9.51	3.53	4.75	6.18	N/A	7.64	12/01/2014
NCREIF ODCE Index (AWA) (Gross)	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.34	
Difference			-1.93	-3.42	-0.25	-0.25	1.63	1.59	1.82	N/A	1.30	
AG Realty Value X LP	39,920,527	0.18	-1.25	-3.81	-6.36	-6.36	10.05	4.78	N/A	N/A	4.78	07/01/2019
NCREIF ODCE Index (AWA) (Gross)	,		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.16	
Difference			-0.80	-1.00	2.90	2.90	8.15	1.62	N/A	N/A	1.62	
AGXI Non-Core Real Estate	28,914,143	0.13	6.42	7.57	10.75	10.75	N/A	N/A	N/A	N/A	1.84	11/01/2022
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-11.70	
` / ` /			6.87	10.38	20.01	20.01	N/A	N/A	N/A	N/A	13.54	



	Allocation			Perfor	mance (%	)						
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Artemis Real Estate III LP	30,880,574	0.14	1.81	-4.52	-0.38	-0.38	20.59	18.13	N/A	N/A	N/A	02/01/2019
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.37	
Difference			2.26	-1.71	8.88	8.88	18.69	14.97	N/A	N/A	N/A	
Artemis Real Estate IV LP	10,528,040	0.05	-5.39	-7.80	-19.07	-19.07	N/A	N/A	N/A	N/A	-47.04	07/01/2022
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-9.62	
Difference			-4.94	-4.99	-9.81	-9.81	N/A	N/A	N/A	N/A	-37.42	
Blackstone Real Estate Partners X	24,182,406	0.11	-2.26	0.63	-12.61	-12.61	N/A	N/A	N/A	N/A	N/A	04/01/2023
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-9.46	
Difference			-1.81	3.44	-3.35	-3.35	N/A	N/A	N/A	N/A	N/A	
Dune Real Estate III LP	11,300,626	0.05	-2.56	4.03	-35.27	-35.27	-10.41	-10.55	-4.17	N/A	-0.07	11/01/2014
NCREIF ODCE Index (AWA) (Gross)	,,.		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.28	
Difference			-2.11	6.84	-26.01	-26.01	-12.31	-13.71	-8.53	N/A	-6.35	
Dune Real Estate IV LP	57,757,269	0.25	1.82	0.18	0.15	0.15	19.38	N/A	N/A	N/A	-2.69	09/01/2019
NCREIF ODCE Index (AWA) (Gross)	, , , , , , , , , , , , , , , , , , , ,		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.27	
Difference			2.27	2.99	9.41	9.41	17.48	N/A	N/A	N/A	-5.96	
EQT Exeter Ind Value VI	23,238,010	0.10	-7.97	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-7.97	03/01/2024
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-2.81	
Difference			-7.52	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-5.16	
FCP Realty IV LP	40,409,267	0.18	1.57	-1.23	-3.76	-3.76	10.59	7.16	N/A	N/A	-0.42	12/01/2018
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.59	
Difference			2.02	1.58	5.50	5.50	8.69	4.00	N/A	N/A	-4.01	
FCP Realty V LP	89,622,837	0.39	1.57	-3.47	-7.56	-7.56	N/A	N/A	N/A	N/A	-12.04	10/01/2021
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-0.28	
Difference			2.02	-0.66	1.70	1.70	N/A	N/A	N/A	N/A	-11.76	
GreenOak US II LP	11,969,441	0.05	-5.98	-37.92	-37.80	-37.80	-24.38	-23.75	-16.11	N/A	-10.74	10/01/2014
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.23	
Difference			-5.53	-35.11	-28.54	-28.54	-26.28	-26.91	-20.47	N/A	-16.97	
GreenOak US III LP	38,344,762	0.17	-0.87	-20.02	-17.96	-17.96	0.20	-4.75	N/A	N/A	-9.34	06/01/2018
NCREIF ODCE Index (AWA) (Gross)	, , ,		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.99	
Difference			-0.42	-17.21	-8.70	-8.70	-1.70	-7.91	N/A	N/A	-13.33	



	Allocation	1					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Harbert European Real Estate V LP	38,640,088	0.17	1.42	-0.10	3.17	3.17	6.94	7.49	N/A	N/A	0.60	12/01/2018
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.59	
Difference			1.87	2.71	12.43	12.43	5.04	4.33	N/A	N/A	-2.99	
Invesco VI Global Real Estate Fund	49,712,277	0.22	2.75	-9.12	-12.14	-12.14	N/A	N/A	N/A	N/A	-7.45	10/01/2022
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-11.18	
Difference			3.20	-6.31	-2.88	-2.88	N/A	N/A	N/A	N/A	3.73	
Invesco Strategic Opportunity (CF)	12,318,673	0.05	-4.94	-2.80	-6.93	-6.93	19.93	N/A	N/A	N/A	33.51	10/01/2019
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.05	
Difference			-4.49	0.01	2.33	2.33	18.03	N/A	N/A	N/A	30.46	
L&B Golden Driller (SA)	44,143	0.00	0.00	-0.01	-0.03	-0.03	-23.12	-15.34	-6.88	-4.55	-4.55	07/01/2014
NCREIF ODCE Index (AWA) (Gross)	•		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.41	
Difference			0.45	2.80	9.23	9.23	-25.02	-18.50	-11.24	-10.96	-10.96	
Landmark Real Estate IX LP	2,161,923	0.01	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	04/01/2024
NCREIF ODCE Index (AWA) (Gross)	•		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-0.45	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Landmark Real Estate VII LP	4,551,164	0.02	0.59	-1.07	-3.00	-3.00	-1.83	-2.81	-0.93	N/A	6.64	12/01/2014
NCREIF ODCE Index (AWA) (Gross)	•		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.34	
Difference			1.04	1.74	6.26	6.26	-3.73	-5.97	-5.29	N/A	0.30	
Lyrical-OTRS Realty Partner IV LP	54,127,810	0.24	-3.12	-1.61	-0.65	-0.65	4.47	6.41	10.13	N/A	6.06	11/01/2014
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.28	
Difference			-2.67	1.20	8.61	8.61	2.57	3.25	5.77	N/A	-0.22	
Starwood Opportunity X LP	7,416,320	0.03	-12.22	-19.29	-24.50	-24.50	4.04	4.10	6.84	N/A	8.65	07/01/2015
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	5.55	
Difference			-11.77	-16.48	-15.24	-15.24	2.14	0.94	2.48	N/A	3.10	
Starwood Opportunity XI LP	51,926,318	0.23	2.78	2.41	10.72	10.72	7.99	9.19	N/A	N/A	14.90	08/01/2018
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.75	
Difference			3.23	5.22	19.98	19.98	6.09	6.03	N/A	N/A	11.15	
Starwood Opportunity XII LP	84,163,033	0.37	11.33	11.33	7.79	7.79	N/A	N/A	N/A	N/A	9.66	01/01/2022
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-3.32	
Difference			11.78	14.14	17.05	17.05	N/A	N/A	N/A	N/A	12.98	



	Allocation						Perfori	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
TPG Real Estate IV LP	15,980,543	0.07	6.37	-18.33	-44.00	-44.00	N/A	N/A	N/A	N/A	-49.77	01/01/2023
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-9.91	
Difference			6.82	-15.52	-34.74	-34.74	N/A	N/A	N/A	N/A	-39.86	
Property ACQ Fund	10,050,000	0.04	11.49	11.49	11.49	11.49	2.72	-3.59	N/A	N/A	-2.19	08/01/2017



#### Oklahoma State Pension Commission Oklahoma Teachers' Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



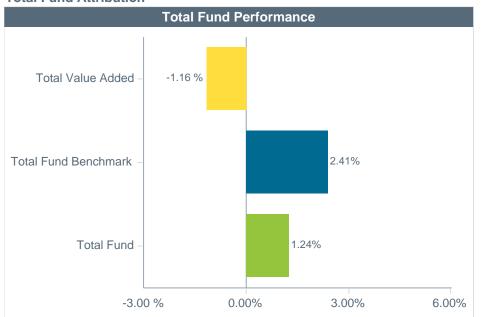
## Oklahoma State Pension Commission Oklahoma Teachers' Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



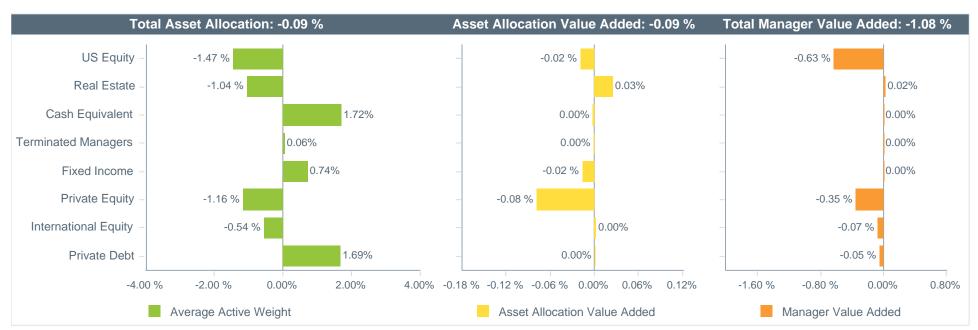
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#### Oklahoma State Pension Commission Oklahoma Teachers' Retirement System Total Fund Attribution





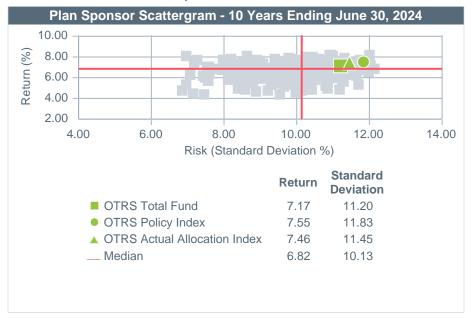


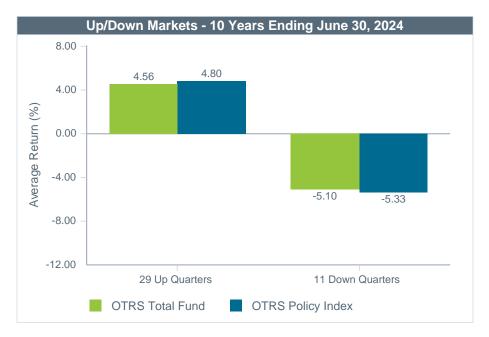
Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution calculation. Allocation to Private Equity includes Private Credit.

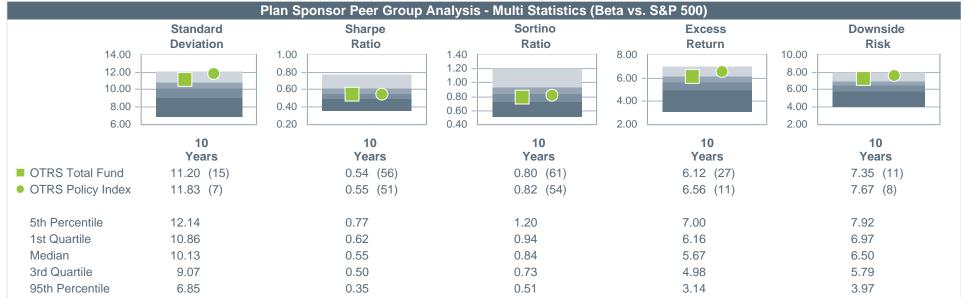


### Oklahoma State Pension Commission Oklahoma Teachers' Retirement System

Total Fund Risk & Return, Up/Down Markets, and Multi Statistics

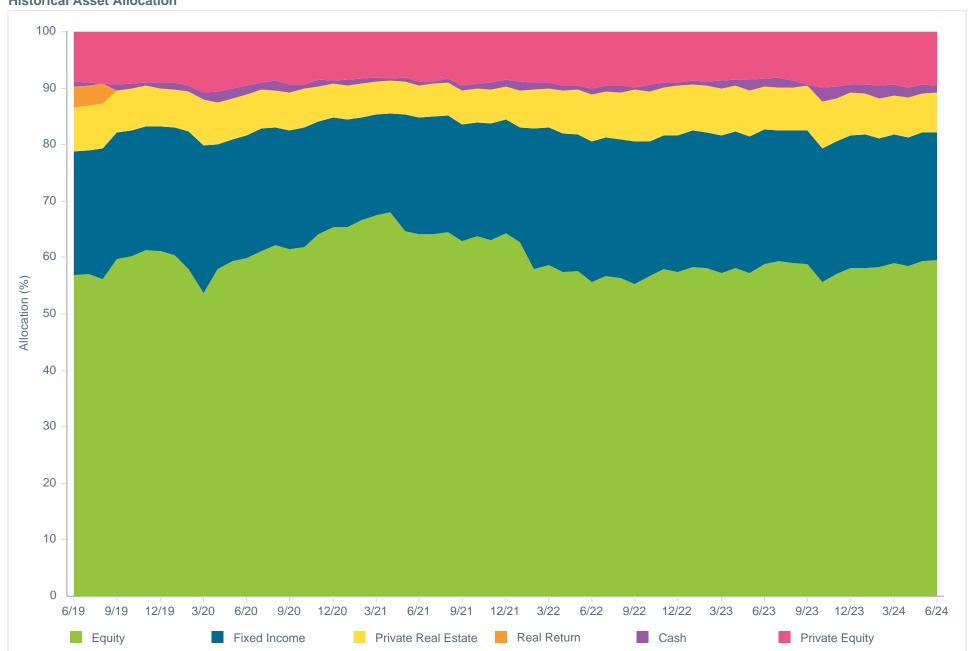






Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.







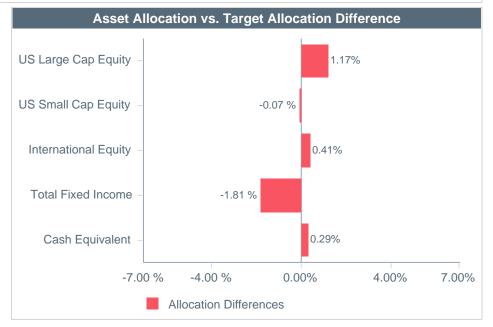
## Oklahoma Public Employees Retirement System (OPERS)



#### Oklahoma State Pension Commission Oklahoma Public Employees Retirement System Total Fund Summary

Performance (%)													
			Trailin	ng						Calenda	r Year		
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
<b>OPERS Total Fund (Net)</b>	1.19	6.55	12.62	12.62	2.12	7.32	7.27	6.64	16.15	-16.74	12.29	15.18	21.23
OPERS Policy Index	1.33	6.18	12.46	12.46	2.01	7.15	7.22	6.65	16.11	-16.62	11.54	15.19	21.46
Difference	-0.14	0.37	0.16	0.16	0.11	0.17	0.05	-0.01	0.04	-0.12	0.75	-0.01	-0.23
OPERS Actual Allocation Index	1.43	6.60	12.96	12.96	2.09	7.97	7.68	6.96	16.21	-16.87	12.14	18.93	20.87
Difference	-0.24	-0.05	-0.34	-0.34	0.03	-0.65	-0.41	-0.32	-0.06	0.13	0.15	-3.75	0.36
Actuarial Discount Rate (6.5%)	1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Difference	-0.40	3.35	6.12	6.12	-4.38	0.82	0.77	0.14	9.65	-23.24	5.79	8.68	14.73
OPERS Total Fund (Gross)	1.22	6.60	12.74	12.74	2.24	7.46	7.40	6.76	16.27	-16.64	12.46	15.34	21.38
OPERS Policy Index	1.33	6.18	12.46	12.46	2.01	7.15	7.22	6.65	16.11	-16.62	11.54	15.19	21.46
Difference	-0.11	0.42	0.28	0.28	0.23	0.31	0.18	0.11	0.16	-0.02	0.92	0.15	-0.08
OPERS Actual Allocation Index	1.43	6.60	12.96	12.96	2.09	7.97	7.68	6.96	16.21	-16.87	12.14	18.93	20.87
Difference	-0.21	0.00	-0.22	-0.22	0.15	-0.51	-0.28	-0.20	0.06	0.23	0.32	-3.59	0.51
All Public Plans-Total Fund Median	1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47	18.63
Rank	44	25	23	23	73	51	53	54	9	94	74	18	13

Asset Allo	cation vs. Target <i>I</i>	Allocation	
	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)
<b>OPERS (Public Employees)</b>	12,170,935,316	100.00	100.00
US Large Cap Equity	4,281,051,914	35.17	34.00
US Small Cap Equity	722,128,821	5.93	6.00
International Equity	3,458,036,894	28.41	28.00
Total Fixed Income	3,673,968,582	30.19	32.00
Cash Equivalent	35,749,106	0.29	0.00



Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding. Fixed Income includes the Grand Centre Real Estate allocation for Policy purposes. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



	Allocation					Perfor	mance (%	<b>6</b> )				
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OPERS Total Fund	12,170,935,316	100.00	1.19	6.55	12.62	12.62	2.12	7.32	7.27	6.64	N/A	03/01/1987
OPERS Policy Index			1.33	6.18	12.46	12.46	2.01	7.15	7.22	6.65	8.07	
Difference			-0.14	0.37	0.16	0.16	0.11	0.17	0.05	-0.01	N/A	
OPERS Actual Allocation Index			1.43	6.60	12.96	12.96	2.09	7.97	7.68	6.96	8.14	
Difference			-0.24	-0.05	-0.34	-0.34	0.03	-0.65	-0.41	-0.32	N/A	
Actuarial Discount Rate (6.5%)			1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	
Difference			-0.40	3.35	6.12	6.12	-4.38	0.82	0.77	0.14	N/A	
US Equity	5,003,180,734	41.11	2.19	12.89	22.22	22.22	8.00	13.91	13.12	11.78	N/A	09/01/1988
OPERS US Equity Custom Index			2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	N/A	
Difference			-0.34	0.58	0.41	0.41	0.96	0.40	0.20	0.03	N/A	
US Active Large Cap Equity	401,791,476	3.30	5.62	20.34	36.01	36.01	10.45	14.28	13.51	11.60	N/A	08/01/2003
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	10.69	
Difference			2.05	6.10	12.13	12.13	1.71	-0.33	-0.42	-0.91	N/A	
Westfield Large Cap Growth Equity (SA)	401,791,476	3.30	5.62	20.34	36.01	36.01	10.45	18.37	17.74	N/A	18.50	02/01/2017
Russell 1000 Grth Index			8.33	20.70	33.48	33.48	11.28	19.34	18.64	16.33	19.07	
Difference			-2.71	-0.36	2.53	2.53	-0.83	-0.97	-0.90	N/A	-0.57	
US Large Cap Enhanced Index Equity	1,374,302,112	11.29	3.50	15.59	24.96	24.96	10.09	14.67	13.43	12.02	N/A	03/01/2000
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	7.88	
Difference			-0.07	1.35	1.08	1.08	1.35	0.06	-0.50	-0.49	N/A	
State Street Large Cap Enhanced Index (SA)	688,137,219	5.65	3.06	16.06	25.44	25.44	10.26	14.99	14.01	12.65	10.35	09/01/2004
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	10.59	
Difference			-0.51	1.82	1.56	1.56	1.52	0.38	0.08	0.14	-0.24	
Mellon EB DV Large Cap Stock Index (SA)	686,164,894	5.64	3.53	14.65	23.97	23.97	9.75	14.24	12.76	11.33	9.73	06/01/2004
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	10.38	
Difference			-0.04	0.41	0.09	0.09	1.01	-0.37	-1.17	-1.18	-0.65	
Dillerence			-0.04	0.41	0.09	0.09	1.01	-0.37	-1.17	-1.10	-0.03	



	Allocation	Allocation					Perfori	mance (%	5)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Large Cap Passive Equity	2,504,958,325	20.58	2.71	13.08	22.27	22.27	8.33	14.35	13.76	12.43	N/A	01/01/2003
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	11.08	
Difference			-0.86	-1.16	-1.61	-1.61	-0.41	-0.26	-0.17	-0.08	N/A	
BlackRock Russell 1000 Value (CF)	366,066,348	3.01	-2.17	6.62	13.06	13.06	5.43	N/A	N/A	N/A	9.45	01/01/2021
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	9.53	
Difference			0.00	0.00	0.00	0.00	-0.09	N/A	N/A	N/A	-0.08	
Blackrock Russell 1000 Index (CF)	2,138,891,977	17.57	3.59	14.25	23.94	23.94	8.77	14.64	13.96	12.54	14.72	09/01/2010
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	14.69	
Difference			0.02	0.01	0.06	0.06	0.03	0.03	0.03	0.03	0.03	
US Active Small Cap Equity	722,128,821	5.93	-4.19	2.65	8.98	8.98	1.20	10.64	10.31	9.19	N/A	08/01/2003
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	8.67	
Difference			-0.91	0.92	-1.08	-1.08	3.78	3.70	3.46	2.19	N/A	
BHMS Small Cap Value Equity (SA)	255,079,761	2.10	-3.80	1.44	8.38	8.38	5.26	12.88	10.17	9.34	10.54	12/01/2004
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	6.83	
Difference			-0.16	2.29	-2.52	-2.52	5.79	5.81	4.28	3.11	3.71	
UBS US Small Cap Growth Equity (SA)	221,767,825	1.82	-5.35	6.78	11.47	11.47	-5.30	8.69	10.99	9.44	N/A	06/01/2003
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	9.28	
Difference			-2.43	2.34	2.33	2.33	-0.44	2.52	3.71	2.05	N/A	
DePrince Race & Zollo Small Cap Value (SA)	245,281,235	2.02	-3.52	0.38	7.44	7.44	2.92	8.95	8.60	7.91	9.50	03/01/2011
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	7.80	
Difference			0.12	1.23	-3.46	-3.46	3.45	1.88	2.71	1.68	1.70	



	Allocation	Allocation					Perfori	mance (%	b)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
International Equity	3,458,036,894	28.41	1.01	5.16	10.26	10.26	-0.41	5.47	5.18	4.06	N/A	05/01/1994
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.63	
Difference			-0.16	-0.88	-1.91	-1.91	-1.38	-0.58	-0.50	-0.28	N/A	
International Core Active Equity	769,994,897	6.33	1.45	3.59	9.66	9.66	1.66	4.78	4.31	3.06	N/A	08/01/2003
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	7.28	
Difference			0.28	-2.45	-2.51	-2.51	0.69	-1.27	-1.37	-1.28	N/A	
Mondrian ACWI ex US Equity (SA)	769,994,897	6.33	1.45	3.59	9.66	9.66	1.66	4.78	4.31	3.06	N/A	08/01/2001
MSCI ACW Ex US Val Index (USD) (Gross)			1.55	5.21	14.24	14.24	4.30	5.98	5.09	3.40	6.16	
Difference			-0.10	-1.62	-4.58	-4.58	-2.64	-1.20	-0.78	-0.34	N/A	
International Core Passive Equity	1,984,118,842	16.30	1.14	5.86	11.69	11.69	0.70	5.79	5.42	4.09	N/A	08/01/2003
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	7.28	
Difference			-0.03	-0.18	-0.48	-0.48	-0.27	-0.26	-0.26	-0.25	N/A	
Blackrock ACWI Ex US Index (CF)	1,984,118,842	16.30	1.14	5.86	11.69	11.69	0.70	5.79	5.42	4.09	5.40	11/01/2009
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.64	
Difference			-0.03	-0.18	-0.48	-0.48	-0.27	-0.26	-0.26	-0.25	-0.24	
International Growth Equity	703,923,156	5.78	0.20	4.92	7.06	7.06	-5.19	4.72	4.96	4.49	5.85	05/01/2005
MSCI ACW Ex US Grth Index (USD) (Gross)			0.86	6.89	10.21	10.21	-2.32	5.81	6.03	5.09	6.21	
Difference			-0.66	-1.97	-3.15	-3.15	-2.87	-1.09	-1.07	-0.60	-0.36	
Baille Gifford Intl Growth Equity (SA)	317,090,953	2.61	-0.59	3.24	3.47	3.47	-9.35	3.58	3.91	4.14	4.73	10/01/2013
MSCI ACW Ex US Grth Index (USD) (Gross)			0.86	6.89	10.21	10.21	-2.32	5.81	6.03	5.09	5.66	
Difference			-1.45	-3.65	-6.74	-6.74	-7.03	-2.23	-2.12	-0.95	-0.93	
Blackrock ACWI Ex US Growth (CF)	386,832,202	3.18	0.85	6.34	10.20	10.20	-1.14	5.68	5.88	4.75	6.00	11/01/2009
MSCI ACW Ex US Grth Index (USD) (Gross)			0.86	6.89	10.21	10.21	-2.32	5.81	6.03	5.09	6.29	
Difference			-0.01	-0.55	-0.01	-0.01	1.18	-0.13	-0.15	-0.34	-0.29	



	Allocation						Perfori	mance (%	5)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	3,666,468,582	30.12	-0.08	-0.95	1.97	1.97	-3.55	0.04	1.21	1.70	N/A	04/01/1989
OPERS Fixed Income Custom Index			-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	N/A	
Difference			-0.01	0.18	0.38	0.38	0.21	0.48	0.43	0.35	N/A	
Active Fixed Income	1,443,879,020	11.86	-0.47	-2.04	0.48	0.48	-5.14	-0.80	0.78	1.61	N/A	08/01/2003
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.17	
Difference			-0.54	-1.33	-2.15	-2.15	-2.12	-0.57	-0.08	0.26	N/A	
MetWest Core Plus Fixed Income (SA)	1,120,071,198	9.20	0.03	-1.00	2.56	2.56	-3.00	0.29	1.39	1.76	N/A	09/01/2001
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.42	
Difference			-0.04	-0.29	-0.07	-0.07	0.02	0.52	0.53	0.41	N/A	
Hoisington Long Duration Fixed Income (SA)	323,807,822	2.66	-2.20	-5.71	-6.62	-6.62	-11.83	-4.75	-1.66	0.73	N/A	10/01/1991
Bloomberg US Trsy Lng Trm Bond Index			-1.82	-5.01	-5.61	-5.61	-10.49	-4.26	-1.46	0.60	5.69	
Difference			-0.38	-0.70	-1.01	-1.01	-1.34	-0.49	-0.20	0.13	N/A	
Enhanced Fixed Income	1,812,204,127	14.89	0.12	-0.41	3.08	3.08	-2.77	0.20	1.21	1.67	N/A	06/01/2000
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.93	
Difference			0.05	0.30	0.45	0.45	0.25	0.43	0.35	0.32	N/A	
Blackrock Enhanced Core (SA)	1,812,204,127	14.89	0.12	-0.41	3.08	3.08	-2.77	0.20	1.21	1.67	N/A	06/01/2000
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.93	
Difference			0.05	0.30	0.45	0.45	0.25	0.43	0.35	0.32	N/A	
Passive Fixed Income	410,385,436	3.37	0.89	0.92	2.81	2.81	-1.27	2.16	2.57	2.02	2.93	03/01/2010
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	2.21	
Difference			0.82	1.63	0.18	0.18	1.75	2.39	1.71	0.67	0.72	
Blackrock TIPS (CF)	410,385,436	3.37	0.89	0.92	2.81	2.81	-1.27	2.16	2.57	2.02	2.93	03/01/2010
Bloomberg US Trsy US TIPS Index			0.79	0.70	2.71	2.71	-1.33	2.07	2.47	1.91	2.88	
Difference			0.10	0.22	0.10	0.10	0.06	0.09	0.10	0.11	0.05	



	Allocatio			Perfor	mance (%	)						
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OPERS Total Fund	12,170,935,316	100.00	1.22	6.60	12.74	12.74	2.24	7.46	7.40	6.76	8.23	03/01/1987
OPERS Policy Index			1.33	6.18	12.46	12.46	2.01	7.15	7.22	6.65	8.07	
Difference			-0.11	0.42	0.28	0.28	0.23	0.31	0.18	0.11	0.16	
OPERS Actual Allocation Index			1.43	6.60	12.96	12.96	2.09	7.97	7.68	6.96	8.14	
Difference			-0.21	0.00	-0.22	-0.22	0.15	-0.51	-0.28	-0.20	0.09	
Actuarial Discount Rate (6.5%)			1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	
Difference			-0.37	3.40	6.24	6.24	-4.26	0.96	0.90	0.26	1.73	
All Public Plans-Total Fund Median			1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	8.27	
Rank			44	25	23	23	73	51	53	54	58	
US Equity	5,003,180,734	41.11	2.21	12.93	22.36	22.36	8.15	14.07	13.26	11.91	10.70	09/01/1988
OPERS US Equity Custom Index			2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	N/A	
Difference			-0.32	0.62	0.55	0.55	1.11	0.56	0.34	0.16	N/A	
IM U.S. Equity (SA+CF) Median			-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	11.80	
Rank			29	28	29	29	31	28	32	33	89	
US Active Large Cap Equity	401,791,476	3.30	5.65	20.40	36.13	36.13	10.56	14.38	13.62	11.75	10.15	08/01/2003
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	10.69	
Difference			2.08	6.16	12.25	12.25	1.82	-0.23	-0.31	-0.76	-0.54	
IM U.S. Large Cap Equity (SA+CF) Median			2.80	13.58	23.37	23.37	8.73	14.20	13.75	12.46	10.83	
Rank			18	15	8	8	22	49	52	60	76	
Westfield Large Cap Growth Equity (SA)	401,791,476	3.30	5.65	20.40	36.13	36.13	10.56	18.48	17.92	N/A	18.67	02/01/2017
Russell 1000 Grth Index			8.33	20.70	33.48	33.48	11.28	19.34	18.64	16.33	19.07	
Difference			-2.68	-0.30	2.65	2.65	-0.72	-0.86	-0.72	N/A	-0.40	
IM U.S. Large Cap Growth Equity (SA+CF) Median			5.62	18.76	30.72	30.72	8.78	16.69	16.91	14.96	17.43	
Rank			50	40	27	27	28	25	29	N/A	26	



	Allocation						Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Large Cap Enhanced Index Equity	1,374,302,112	11.29	3.51	15.61	24.99	24.99	10.11	14.69	13.45	12.05	7.06	03/01/2000
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	7.88	
Difference			-0.06	1.37	1.11	1.11	1.37	0.08	-0.48	-0.46	-0.82	
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median			4.19	16.29	26.29	26.29	10.11	14.95	14.24	12.92	8.70	
Rank			75	63	66	66	50	64	70	81	100	
State Street Large Cap Enhanced Index (SA)	688,137,219	5.65	3.06	16.08	25.48	25.48	10.29	15.03	14.04	12.68	10.41	09/01/2004
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	10.59	
Difference			-0.51	1.84	1.60	1.60	1.55	0.42	0.11	0.17	-0.18	
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median			4.19	16.29	26.29	26.29	10.11	14.95	14.24	12.92	11.11	
Rank			77	54	59	59	41	49	57	61	94	
Mellon EB DV Large Cap Stock Index (SA)	686,164,894	5.64	3.54	14.66	23.99	23.99	9.77	14.26	12.78	11.35	9.77	06/01/2004
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	10.38	
Difference			-0.03	0.42	0.11	0.11	1.03	-0.35	-1.15	-1.16	-0.61	
IM U.S. Large Cap Enhanced Index Equity (SA+CF) Median			4.19	16.29	26.29	26.29	10.11	14.95	14.24	12.92	10.90	
Rank			74	76	78	78	63	70	75	82	96	
US Large Cap Passive Equity	2,504,958,325	20.58	2.72	13.09	22.28	22.28	8.34	14.36	13.77	12.44	11.18	01/01/2003
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	11.08	
Difference			-0.85	-1.15	-1.60	-1.60	-0.40	-0.25	-0.16	-0.07	0.10	
BlackRock Russell 1000 Value (CF)	366,066,348	3.01	-2.17	6.63	13.07	13.07	5.43	N/A	N/A	N/A	9.46	01/01/2021
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	9.53	
Difference			0.00	0.01	0.01	0.01	-0.09	N/A	N/A	N/A	-0.07	
IM U.S. Large Cap Value Equity (SA+CF) Median			-1.24	8.20	16.79	16.79	7.72	11.47	10.68	9.59	12.02	
Rank			68	67	83	83	85	N/A	N/A	N/A	83	
Blackrock Russell 1000 Index (CF)	2,138,891,977	17.57	3.60	14.25	23.95	23.95	8.78	14.64	13.97	12.55	14.72	09/01/2010
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	14.69	
Difference			0.03	0.01	0.07	0.07	0.04	0.03	0.04	0.04	0.03	
IM U.S. Large Cap Index Equity (SA+CF) Median			3.57	14.24	23.91	23.91	8.96	14.64	13.97	12.56	14.72	
Rank			48	49	45	45	52	48	51	51	50	



	Allocation	Allocation					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Active Small Cap Equity	722,128,821	5.93	-4.11	2.81	9.71	9.71	2.05	11.60	11.10	9.91	11.57	08/01/2003
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	8.67	
Difference			-0.83	1.08	-0.35	-0.35	4.63	4.66	4.25	2.91	2.90	
IM U.S. Small Cap Equity (SA+CF) Median			-3.10	2.95	11.19	11.19	1.39	9.17	9.12	8.80	10.61	
Rank			73	52	65	65	45	22	23	29	22	
BHMS Small Cap Value Equity (SA)	255,079,761	2.10	-3.69	1.67	8.91	8.91	5.74	13.42	10.70	9.88	11.16	12/01/2004
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	6.83	
Difference			-0.05	2.52	-1.99	-1.99	6.27	6.35	4.81	3.65	4.33	
IM U.S. Small Cap Value Equity (SA+CF) Median			-3.48	1.97	12.96	12.96	4.12	9.92	8.22	8.09	9.12	
Rank			55	56	81	81	32	11	15	15	9	
UBS US Small Cap Growth Equity (SA)	221,767,825	1.82	-5.31	6.85	11.63	11.63	-4.62	9.69	11.76	10.16	10.92	06/01/2003
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	9.28	
Difference			-2.39	2.41	2.49	2.49	0.24	3.52	4.48	2.77	1.64	
IM U.S. Small Cap Growth Equity (SA+CF) Median			-2.59	5.02	9.47	9.47	-2.78	8.73	11.09	10.22	11.58	
Rank			80	36	35	35	63	37	42	51	80	
DePrince Race & Zollo Small Cap Value (SA)	245,281,235	2.02	-3.44	0.54	8.82	8.82	4.20	10.15	9.57	8.75	10.29	03/01/2011
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	7.80	
Difference			0.20	1.39	-2.08	-2.08	4.73	3.08	3.68	2.52	2.49	
IM U.S. Micro Cap Equity (SA+CF) Median			-3.07	2.73	9.38	9.38	-0.82	9.74	9.13	9.18	10.81	
Rank			55	67	52	52	23	47	40	60	61	
International Equity	3,458,036,894	28.41	1.05	5.22	10.39	10.39	-0.26	5.63	5.34	4.23	5.82	05/01/1994
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.63	
Difference			-0.12	-0.82	-1.78	-1.78	-1.23	-0.42	-0.34	-0.11	0.19	
IM All ACWI Ex US (SA+CF) Median			0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	7.23	
Rank			40	59	55	55	70	80	76	80	100	
International Core Active Equity	769,994,897	6.33	1.54	3.77	10.04	10.04	2.02	5.15	4.68	3.43	6.91	08/01/2003
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	7.28	
Difference			0.37	-2.27	-2.13	-2.13	1.05	-0.90	-1.00	-0.91	-0.37	
IM All ACWI Ex US (SA+CF) Median			0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	7.94	
Rank			28	74	58	58	40	88	87	92	93	
Mondrian ACWI ex US Equity (SA)	769,994,897	6.33	1.54	3.77	10.04	10.04	2.02	5.15	4.68	3.43	6.76	08/01/2001
MSCI ACW Ex US Val Index (USD) (Gross)			1.55	5.21	14.24	14.24	4.30	5.98	5.09	3.40	6.16	
Difference			-0.01	-1.44	-4.20	-4.20	-2.28	-0.83	-0.41	0.03	0.60	
IM ACWI Ex US Core (SA+CF) Median			1.19	7.07	13.29	13.29	1.83	7.04	6.30	4.65	N/A	
Rank			31	90	76	76	33	92	90	99	N/A	



	Allocation			Perfor	mance (%)	)						
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
International Core Passive Equity	1,984,118,842	16.30	1.15	5.88	11.72	11.72	0.72	5.81	5.45	4.13	6.58	08/01/2003
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	7.28	
Difference			-0.02	-0.16	-0.45	-0.45	-0.25	-0.24	-0.23	-0.21	-0.70	
Blackrock ACWI Ex US Index (CF)	1,984,118,842	16.30	1.15	5.88	11.72	11.72	0.72	5.81	5.45	4.13	5.44	11/01/2009
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.64	
Difference			-0.02	-0.16	-0.45	-0.45	-0.25	-0.24	-0.23	-0.21	-0.20	
International Growth Equity	703,923,156	5.78	0.23	4.98	7.19	7.19	-4.93	5.00	5.23	4.73	6.01	05/01/2005
MSCI ACW Ex US Grth Index (USD) (Gross)			0.86	6.89	10.21	10.21	-2.32	5.81	6.03	5.09	6.21	
Difference			-0.63	-1.91	-3.02	-3.02	-2.61	-0.81	-0.80	-0.36	-0.20	
IM ACWI Ex US Growth (SA+CF) Median			-0.08	5.20	8.53	8.53	-0.44	6.90	7.02	5.98	7.39	
Rank			49	55	72	72	85	90	93	92	100	
Baille Gifford Intl Growth Equity (SA)	317,090,953	2.61	-0.54	3.34	3.67	3.67	-8.89	4.06	4.38	4.56	5.14	10/01/2013
MSCI ACW Ex US Grth Index (USD) (Gross)			0.86	6.89	10.21	10.21	-2.32	5.81	6.03	5.09	5.66	
Difference			-1.40	-3.55	-6.54	-6.54	-6.57	-1.75	-1.65	-0.53	-0.52	
IM ACWI Ex US Growth (SA+CF) Median			-0.08	5.20	8.53	8.53	-0.44	6.90	7.02	5.98	6.52	
Rank			53	70	94	94	96	98	98	93	97	
Blackrock ACWI Ex US Growth (CF)	386,832,202	3.18	0.88	6.37	10.26	10.26	-1.09	5.74	5.93	4.81	6.06	11/01/2009
MSCI ACW Ex US Grth Index (USD) (Gross)			0.86	6.89	10.21	10.21	-2.32	5.81	6.03	5.09	6.29	
Difference			0.02	-0.52	0.05	0.05	1.23	-0.07	-0.10	-0.28	-0.23	
IM ACWI Ex US Growth (SA+CF) Median			-0.08	5.20	8.53	8.53	-0.44	6.90	7.02	5.98	7.84	
Rank			31	40	33	33	57	85	82	92	100	



	Allocation						Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	3,666,468,582	30.12	-0.04	-0.90	2.06	2.06	-3.47	0.12	1.29	1.79	5.93	04/01/1989
OPERS Fixed Income Custom Index			-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	N/A	
Difference			0.03	0.23	0.47	0.47	0.29	0.56	0.51	0.44	N/A	
IM U.S. Broad Market Fixed Income (SA+CF) Median			0.32	0.00	3.69	3.69	-2.50	0.58	1.58	2.01	5.71	
Rank			99	98	97	97	99	82	77	72	26	
Active Fixed Income	1,443,879,020	11.86	-0.45	-1.99	0.57	0.57	-5.03	-0.68	0.89	1.71	4.70	08/01/2003
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.17	
Difference			-0.52	-1.28	-2.06	-2.06	-2.01	-0.45	0.03	0.36	1.53	
IM U.S. Broad Market Fixed Income (SA+CF) Median			0.32	0.00	3.69	3.69	-2.50	0.58	1.58	2.01	3.88	
Rank			100	100	100	100	100	100	98	79	13	
MetWest Core Plus Fixed Income (SA)	1,120,071,198	9.20	0.04	-0.95	2.64	2.64	-2.90	0.40	1.49	1.85	4.44	09/01/2001
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.42	
Difference			-0.03	-0.24	0.01	0.01	0.12	0.63	0.63	0.50	1.02	
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median			0.42	0.33	4.34	4.34	-2.32	0.92	1.88	2.24	4.47	
Rank			96	98	95	95	92	78	77	80	53	
Hoisington Long Duration Fixed Income (SA)	323,807,822	2.66	-2.16	-5.64	-6.48	-6.48	-11.71	-4.62	-1.53	0.86	6.34	10/01/1991
Bloomberg US Trsy Lng Trm Bond Index			-1.82	-5.01	-5.61	-5.61	-10.49	-4.26	-1.46	0.60	5.69	
Difference			-0.34	-0.63	-0.87	-0.87	-1.22	-0.36	-0.07	0.26	0.65	
IM U.S. Long Duration (SA+CF) Median			-1.48	-3.24	-0.23	-0.23	-7.96	-1.35	0.94	2.26	N/A	
Rank			100	100	100	100	100	100	100	100	N/A	
Enhanced Fixed Income	1,812,204,127	14.89	0.18	-0.35	3.18	3.18	-2.69	0.28	1.29	1.75	4.17	06/01/2000
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.93	
Difference			0.11	0.36	0.55	0.55	0.33	0.51	0.43	0.40	0.24	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			0.26	-0.19	3.21	3.21	-2.63	0.31	1.38	1.82	4.38	
Rank			67	59	53	53	57	57	61	60	73	
Blackrock Enhanced Core (SA)	1,812,204,127	14.89	0.18	-0.35	3.18	3.18	-2.69	0.28	1.29	1.75	4.17	06/01/2000
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.93	
Difference			0.11	0.36	0.55	0.55	0.33	0.51	0.43	0.40	0.24	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			0.26	-0.19	3.21	3.21	-2.63	0.31	1.38	1.82	4.38	
Rank			67	59	53	53	57	57	61	60	73	



	Allocation	Allocation					Perfori	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Passive Fixed Income	410,385,436	3.37	0.89	0.92	2.82	2.82	-1.26	2.16	2.58	2.03	2.94	03/01/2010
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	2.21	
Difference			0.82	1.63	0.19	0.19	1.76	2.39	1.72	0.68	0.73	
Blackrock TIPS (CF)	410,385,436	3.37	0.89	0.92	2.82	2.82	-1.26	2.16	2.58	2.03	2.94	03/01/2010
Bloomberg US Trsy US TIPS Index			0.79	0.70	2.71	2.71	-1.33	2.07	2.47	1.91	2.88	
Difference			0.10	0.22	0.11	0.11	0.07	0.09	0.11	0.12	0.06	
IM U.S. TIPS (SA+CF) Median			0.88	0.92	2.75	2.75	-1.26	2.12	2.59	2.02	2.95	
Rank			45	45	45	45	52	44	52	48	51	



#### Oklahoma State Pension Commission Oklahoma Public Employees Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



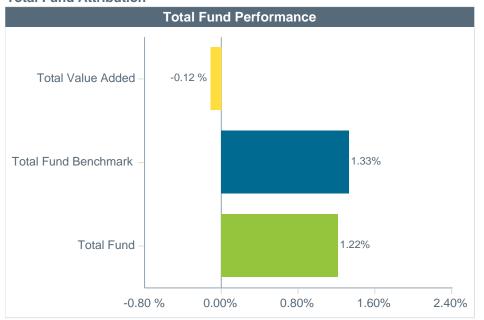
#### Oklahoma State Pension Commission Oklahoma Public Employees Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



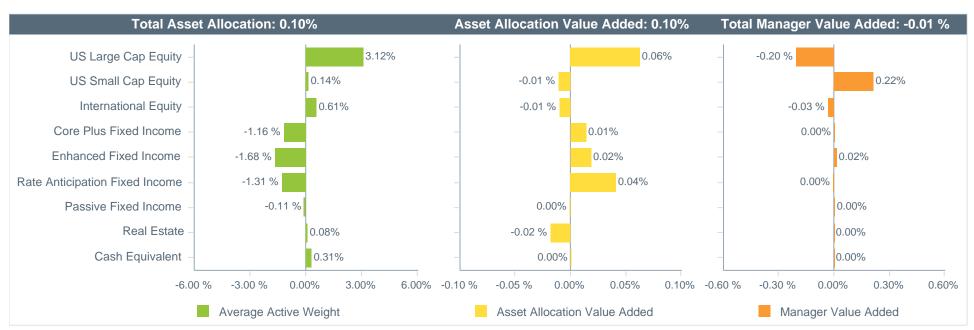
Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.



## Oklahoma State Pension Commission Oklahoma Public Employees Retirement System Total Fund Attribution





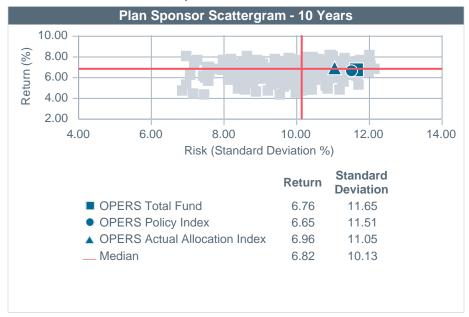


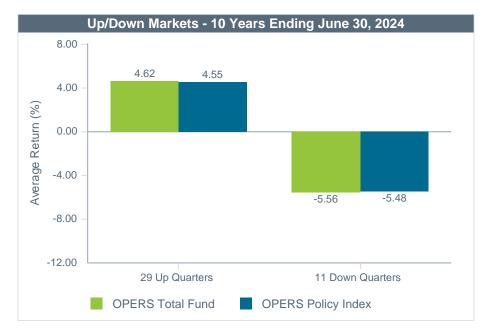
Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution calculation.

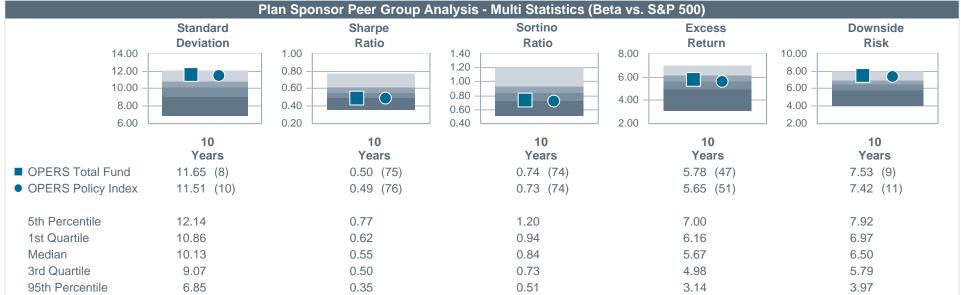


### Oklahoma State Pension Commission Oklahoma Public Employees Retirement System

Total Fund Risk & Return, Up/Down Markets, and Multi Statistics

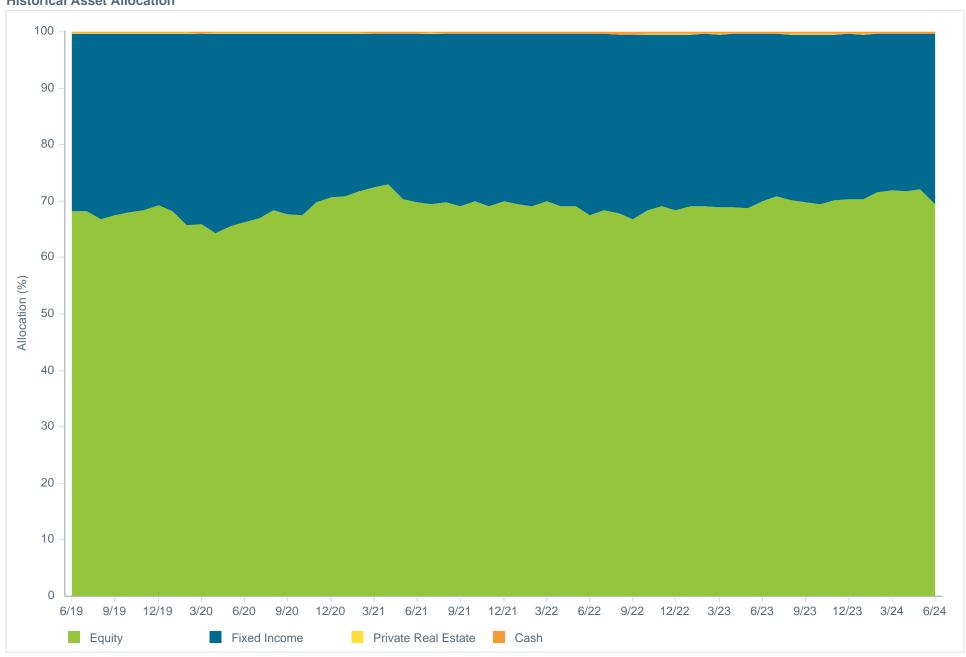






Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.







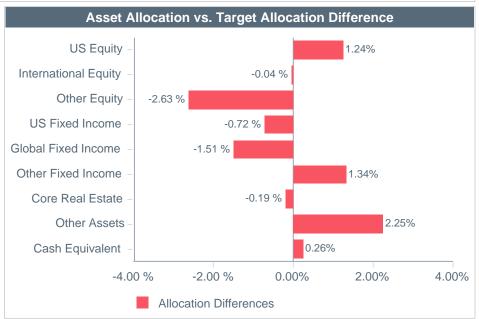
# Oklahoma Firefighters Pension & Retirement System (OFPRS)



## Oklahoma State Pension Commission Oklahoma Firefighters Pension & Retirement System Total Fund Summary

Performance (%)													
			Trailir	ng						Calenda	r Year		
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
OFPRS Total Fund (Net)	1.23	5.98	10.48	10.48	2.41	7.89	8.31	7.80	12.78		13.46	17.97	19.77
OFPRS Policy Index	1.56	6.47	11.94	11.94	3.75	8.57	8.54	8.07	14.34	-13.50	16.12	15.02	21.76
Difference	-0.33	-0.49	-1.46	-1.46	-1.34	-0.68	-0.23	-0.27	-1.56	0.16	-2.66	2.95	-1.99
OFPRS Actual Allocation Index	1.71	6.61	11.52	11.52	4.01	8.68	8.54	7.75	13.90	-12.83	16.99	14.72	20.30
Difference	-0.48	-0.63	-1.04	-1.04	-1.60	-0.79	-0.23	0.05	-1.12	-0.51	-3.53	3.25	-0.53
Actuarial Discount Rate (7.5%)	1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference	-0.59	2.30	2.98	2.98	-5.09	0.39	0.81	0.30	5.28	-20.84	5.96	10.47	12.27
OFPRS Total Fund (Gross)	1.29	6.12	10.78	10.78	2.73	8.25	8.67	8.16	13.08	-13.03	13.87	18.44	20.15
OFPRS Policy Index	1.56	6.47	11.94	11.94	3.75	8.57	8.54	8.07	14.34	-13.50	16.12	15.02	21.76
Difference	-0.27	-0.35	-1.16	-1.16	-1.02	-0.32	0.13	0.09	-1.26	0.47	-2.25	3.42	-1.61
OFPRS Actual Allocation Index	1.71	6.61	11.52	11.52	4.01	8.68	8.54	7.75	13.90	-12.83	16.99	14.72	20.30
Difference	-0.42	-0.49	-0.74	-0.74	-1.28	-0.43	0.13	0.41	-0.82	-0.20	-3.12	3.72	-0.15
All Public Plans-Total Fund Median	1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47	18.63
Rank	40	39	52	52	60	24	9	6	45	57	57	5	29

Asset	: Allocation vs. Targ	get Allocation	
	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)
OFPRS (Firefighters)	3,712,963,768	100.00	100.00
US Equity	1,605,618,255	43.24	42.00
International Equity	555,426,492	14.96	15.00
Other Equity	87,981,310	2.37	5.00
US Fixed Income	270,439,466	7.28	8.00
Global Fixed Income	203,757,968	5.49	7.00
Other Fixed Income	235,459,007	6.34	5.00
Core Real Estate	364,275,852	9.81	10.00
Other Assets	380,458,832	10.25	8.00
Cash Equivalent	9,546,587	0.26	0.00

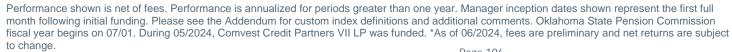


Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



## Oklahoma State Pension Commission Oklahoma Firefighters Pension & Retirement System Asset Allocation & Performance - Net of Fees

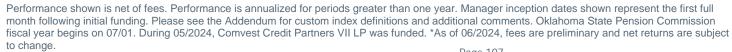
	Allocation	Allocation					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OFPRS Total Fund	3,712,963,768	100.00	1.23	5.98	10.48	10.48	2.41	7.89	8.31	7.80	7.14	01/01/1997
OFPRS Policy Index			1.56	6.47	11.94	11.94	3.75	8.57	8.54	8.07	7.65	
Difference			-0.33	-0.49	-1.46	-1.46	-1.34	-0.68	-0.23	-0.27	-0.51	
OFPRS Actual Allocation Index			1.71	6.61	11.52	11.52	4.01	8.68	8.54	7.75	7.54	
Difference			-0.48	-0.63	-1.04	-1.04	-1.60	-0.79	-0.23	0.05	-0.40	
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	
Difference			-0.59	2.30	2.98	2.98	-5.09	0.39	0.81	0.30	-0.36	
Total Equity	2,161,044,747	58.20	2.24	12.67	20.10	20.10	3.63	11.33	11.54	10.40	8.14	01/01/1997
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	9.45	
Difference			-0.98	-0.89	-3.02	-3.02	-4.42	-2.81	-1.94	-1.75	-1.31	
US Equity	1,605,618,255	43.24	2.43	14.23	23.52	23.52	5.38	12.64	12.78	11.52	8.77	01/01/1997
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	9.45	
Difference			-0.79	0.67	0.40	0.40	-2.67	-1.50	-0.70	-0.63	-0.68	
US Large Cap Equity	1,131,489,414	30.47	4.54	17.45	27.89	27.89	8.78	14.43	13.66	12.23	9.08	12/01/1996
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	9.48	
Difference			0.97	3.21	4.01	4.01	0.04	-0.18	-0.27	-0.28	-0.40	
US Large Cap Core Equity	510,272,421	13.74	4.75	17.32	27.19	27.19	10.16	14.94	13.89	12.54	9.47	12/01/1997
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	8.76	
Difference			0.47	2.03	2.63	2.63	0.15	-0.11	-0.39	-0.32	0.71	
Liquidity Pool - SSgA Equity Index (CF)	197,311,215	5.31	4.29	15.29	24.56	24.56	9.99	N/A	N/A	N/A	N/A	03/01/2021
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	13.13	
Difference			0.01	0.00	0.00	0.00	-0.02	N/A	N/A	N/A	N/A	
Intech Enhanced Investment Tech (SA)	312,961,206	8.43	5.17	19.84	30.35	30.35	10.39	15.52	14.31	12.92	10.00	01/01/2002
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	9.27	
Difference			0.89	4.55	5.79	5.79	0.38	0.47	0.03	0.06	0.73	
US Large Cap Value Equity	294,911,113	7.94	-1.29	7.58	16.32	16.32	6.29	10.30	9.50	8.49	8.02	12/01/1996
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	8.34	
Difference			0.88	0.96	3.26	3.26	0.77	1.29	0.89	0.26	-0.32	
Beutel Goodman American Equity (SA)	147,828,851	3.98	-1.14	9.25	15.47	15.47	7.44	12.66	11.34	N/A	12.49	04/01/2016
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	9.74	
Difference			1.03	2.63	2.41	2.41	1.92	3.65	2.73	N/A	2.75	





## Oklahoma State Pension Commission Oklahoma Firefighters Pension & Retirement System Asset Allocation & Performance - Net of Fees

	Allocatio		Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Aristotle US Equity (SA)	147,082,263	3.96	-1.44	5.88	16.97	16.97	5.11	N/A	N/A	N/A	11.87	09/01/2020
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	12.29	
Difference			0.73	-0.74	3.91	3.91	-0.41	N/A	N/A	N/A	-0.42	
US Large Cap Growth Equity	326,305,879	8.79	10.07	28.20	41.58	41.58	7.16	16.56	16.83	14.93	8.71	12/01/1996
Russell 1000 Grth Index			8.33	20.70	33.48	33.48	11.28	19.34	18.64	16.33	10.04	
Difference			1.74	7.50	8.10	8.10	-4.12	-2.78	-1.81	-1.40	-1.33	
Fred Alger Capital Appreciation (SA)	326,305,879	8.79	10.07	28.20	41.58	41.58	7.53	16.81	17.00	15.03	16.17	07/01/2010
Russell 1000 Grth Index			8.33	20.70	33.48	33.48	11.28	19.34	18.64	16.33	17.56	
Difference			1.74	7.50	8.10	8.10	-3.75	-2.53	-1.64	-1.30	-1.39	
US Small Cap Equity	474,128,842	12.77	-2.02	7.91	13.68	13.68	-2.36	8.32	10.64	9.76	8.72	01/01/1997
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	7.92	
Difference			1.26	6.18	3.62	3.62	0.22	1.38	3.79	2.76	0.80	
Liqiduity Pool - SSgA Small Cap Completeness Index (CF)	78,515,848	2.11	-3.20	3.82	15.21	15.21	-1.70	N/A	N/A	N/A	N/A	03/01/2021
Russell Sm Cap Compl Index			-3.21	3.77	14.97	14.97	-1.78	9.10	9.18	8.52	0.36	
Difference			0.01	0.05	0.24	0.24	0.08	N/A	N/A	N/A	N/A	
US Small Cap Value Equity	187,282,909	5.04	-5.19	2.03	11.46	11.46	2.63	8.58	8.72	8.81	9.07	12/01/1996
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	8.66	
Difference			-1.55	2.88	0.56	0.56	3.16	1.51	2.83	2.58	0.41	
Earnest Partner Small Cap Value Equity (SA)	93,465,035	2.52	-5.81	1.47	10.36	10.36	3.43	10.85	10.33	9.60	8.94	08/01/2005
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	6.58	
Difference			-2.17	2.32	-0.54	-0.54	3.96	3.78	4.44	3.37	2.36	
River Road Small Cap Value Equity (SA)	93,817,874	2.53	-6.04	1.59	10.93	10.93	4.90	7.88	8.24	8.81	7.14	04/01/2007
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	5.96	
Difference			-2.40	2.44	0.03	0.03	5.43	0.81	2.35	2.58	1.18	
US Small Cap Growth Equity	208,330,085	5.61	1.73	14.30	16.06	16.06	-10.90	4.60	10.34	9.12	6.64	07/01/1995
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	7.29	
Difference			4.65	9.86	6.92	6.92	-6.04	-1.57	3.06	1.73	-0.65	
Lord Abbett Small Cap Growth Equity (SA)	98,464,483	2.65	1.13	14.14	10.87	10.87	-9.37	5.38	11.91	8.46	10.01	04/01/2011
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	8.76	
Difference			4.05	9.70	1.73	1.73	-4.51	-0.79	4.63	1.07	1.25	





#### **Oklahoma State Pension Commission** Oklahoma Firefighters Pension & Retirement System **Asset Allocation & Performance - Net of Fees**

	Allocatio	n		Performance (%)										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date		
Hood River Small Cap Growth Equity (SA)	109,832,007	2.96	2.23	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.23	04/01/2024		
Russell 2500 Grth Index			-4.22	3.93	9.02	9.02	-4.11	7.58	9.26	8.77	-4.22			
Difference			6.45	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.45			
Other Equity														
OFP LGT Co-Invest Fund III	35,440,376	0.95	6.73	7.47	15.90	15.90	N/A	N/A	N/A	N/A	10.07	01/01/2022		
OFP Schroders P/E Global DIR III	52,540,934	1.42	6.74	6.74	13.69	13.69	N/A	N/A	N/A	N/A	9.63	01/01/2022		
International Equity	555,426,492	14.96	1.65	8.15	10.49	10.49	-1.53	7.51	7.66	6.36	5.33	01/01/1997		
MSCI ACW Ex US Index (USD) (Net)			0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	N/A			
Difference			0.69	2.46	-1.13	-1.13	-1.99	1.96	2.49	2.52	N/A			
International Developed Equity	358,662,512	9.66	0.24	8.32	10.86	10.86	-0.47	9.25	9.56	7.96	6.06	01/01/1997		
MSCI ACW Ex US Index (USD) (Net)			0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	N/A			
Difference			-0.72	2.63	-0.76	-0.76	-0.93	3.70	4.39	4.12	N/A			
Liquidity Pool - SSgA MSCI ACWI ex US (CF)	78,255,185	2.11	1.00	5.79	11.70	11.70	0.65	N/A	N/A	N/A	N/A	03/01/2021		
MSCI ACW Ex US Index (USD) (Net)	, ,		0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	2.42			
Difference			0.04	0.10	0.08	0.08	0.19	N/A	N/A	N/A	N/A			
Chautauqua Intl Growth Equity (CF)	170.676.311	4.60	1.40	6.72	7.84	7.84	-0.45	8.94	8.67	6.90	8.58	08/01/2012		
MSCI ACW Ex US Index (USD) (Net)	,		0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	5.94			
Difference			0.44	1.03	-3.78	-3.78	-0.91	3.39	3.50	3.06	2.64			
WCM Berkeley Street Intl Equity (SA)	187.958.112	5.06	-1.09	10.68	13.28	13.28	-1.00	9.40	10.33	9.13	10.45	08/01/2012		
MSCI EAFE Index (USD) (Net)	101,000,112	0.00	-0.42	5.34	11.54	11.54	2.89	6.46	5.73	4.33	6.90	00/01/2012		
Difference			-0.67	5.34	1.74	1.74	-3.89	2.94	4.60	4.80	3.55			
Emerging Markets Equity	118,508,795	3.19	7.18	7.60	9.19	9.19	-5.10	2.15	2.06	1.83	4.01	08/01/2012		
MSCI Emg Mkts Index (USD) (Net)	110,000,100	00	5.00	7.49	12.55	12.55	-5.07	3.10	3.54	2.79	3.57	00,01,2012		
Difference			2.18	0.11	-3.36	-3.36	-0.03	-0.95	-1.48	-0.96	0.44			
RBC GAM Emerging Markets Equity (CF)	62,498,900	1.68	8.46	7.38	9.61	9.61	-1.75	3.60	N/A	N/A	4.14	01/01/2019		
MSCI Emg Mkts Index (USD) (Net)	<b>0</b> 2,700,000	1100	5.00	7.49	12.55	12.55	-5.07	3.10	3.54	2.79	4.71	0 1/0 1/2010		
Difference			3.46	-0.11	-2.94	-2.94	3.32	0.50	N/A	N/A	-0.57			
Wellington Emerging Markets (CF)	56,009,895	1.51	5.78	7.85	8.71	8.71	-8.40	0.64	N/A	N/A	1.38	01/01/2019		
MSCI Emg Mkts Index (USD) (Net)	30,003,033	1.01	5.00	7.49	12.55	12.55	-5.07	3.10	3.54	2.79	4.71	01/01/2019		
Difference			0.78	0.36	-3.84	-3.84	-3.33	-2.46	N/A	N/A	-3.33			
Dillorollo			0.10	0.00	0.04	0.0-1	0.00	2.40	14//1	14/71	0.00			

Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month following initial funding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01. During 05/2024, Comvest Credit Partners VII LP was funded. \*As of 06/2024, fees are preliminary and net returns are subject to change.



	Allocation	Allocation					Perfori	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	474,197,434	12.77	-1.09	-3.80	-0.52	-0.52	-4.74	-1.27	-0.31	0.52	3.94	01/01/1997
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	4.13	
Difference			-1.16	-3.09	-3.15	-3.15	-1.72	-1.04	-1.17	-0.83	-0.19	
Garcia Hamilton Core Fixed Income (SA)	54,859,951	1.48	-0.01	-1.46	1.15	1.15	-2.77	-0.17	0.86	1.54	1.54	07/01/2014
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	1.35	
Difference			-0.08	-0.75	-1.48	-1.48	0.25	0.06	0.00	0.19	0.19	
Orleans Core Fixed Income (SA)*	28,700,470	0.77	0.39	-0.10	3.45	3.45	-2.73	-0.01	1.07	1.43	1.43	07/01/2014
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	1.35	
Difference			0.32	0.61	0.82	0.82	0.29	0.22	0.21	0.08	0.08	
Liquidity Pool - SSgA Aggregate Bond (CF)	186,735,148	5.03	0.14	-0.59	2.69	2.69	-3.01	N/A	N/A	N/A	N/A	03/01/2021
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	-2.56	
Difference			0.07	0.12	0.06	0.06	0.01	N/A	N/A	N/A	N/A	
Brandywine Global Fixed Income (CF)*	203,757,968	5.49	-2.51	-7.24	-3.77	-3.77	-7.23	-2.09	-0.93	-0.34	2.25	08/01/2009
FTSE Wrld Govt Bond Index			-1.58	-3.96	-0.63	-0.63	-6.92	-3.20	-1.28	-1.20	0.26	
Difference			-0.93	-3.28	-3.14	-3.14	-0.31	1.11	0.35	0.86	1.99	

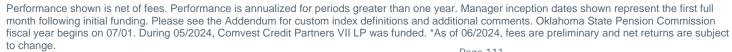


	Allocation	n					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Other Fixed Income												
Comment Condit Bortonero VIII B	24.044.054	0.50	2.00	F 74	40.00	40.00	NI/A	NI/A	NI/A	NI/A	0.55	04/04/0000
Comvest Credit Partners VI LP	21,944,851	0.59	3.08	5.71	<b>12.89</b> 10.44	12.89	N/A	N/A 3.92	N/A	<b>N/A</b> 4.31	9.55	01/01/2023
Bloomberg US Corp Hi Yld Index Difference			1.09	2.58		10.44	1.64 N/A	3.92 N/A	4.23 N/A	4.31 N/A	10.64 -1.09	
Difference			1.99	3.13	2.45	2.45	IN/A	IN/A	IN/A	N/A	-1.09	
Comvest Credit Partners VII LP	1,000,000	0.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	06/01/2024
Bloomberg US Corp Hi Yld Index			1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	0.94	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.94	
PIMCO Corporate Opportunities II LP	25,130,172	0.68	-8.43	-12.54	67.41	67.41	37.81	24.58	20.11	N/A	19.83	12/01/2016
Bloomberg US Corp Hi Yld Index	, ,		1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	4.81	
Difference			-9.52	-15.12	56.97	56.97	36.17	20.66	15.88	N/A	15.02	
PIMCO Bravo III LP	48,040,994	1.29	-1.19	-1.98	11.17	11.17	9.87	8.57	N/A	N/A	9.44	12/01/2017
Bloomberg US Corp Hi Yld Index	10,010,001	1120	1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	4.17	12/01/2011
Difference			-2.28	-4.56	0.73	0.73	8.23	4.65	N/A	N/A	5.27	
PIMCO Private Income (CF)	103,932,374	2.80	2.75	3.77	7.57	7.57	5.72	7.49	N/A	N/A	7.24	05/01/2019
Bloomberg US Corp Hi Yld Index	100,502,014	2.00	1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	4.00	00/01/2010
Difference			1.66	1.19	-2.87	-2.87	4.08	3.57	N/A	N/A	3.24	
PIMCO Bravo IV LP	35,410,616	0.95	-4.44	-9.22	-7.47	-7.47	N/A	N/A	N/A	N/A	-8.40	10/01/2021
Bloomberg US Corp Hi Yld Index	33,113,313	0.00	1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	1.47	10/01/2021
Difference			-5.53	-11.80	-17.91	-17.91	N/A	N/A	N/A	N/A	-9.87	
Core Real Estate	364,275,852	9.81	-1.89	-8.32	-14.24	-14.24	-0.09	0.76	2.56	5.06	5.06	05/01/2005
NCREIF ODCE Index (AWA) (Net)	307,213,032	3.01	-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.49	03/01/2000
Difference			-1.22	-5.09	-4.24	-4.24	-1.11	-1.51	-0.89	-0.41	-0.43	
JP Morgan Strategic Property (CF)*	89,630,607	2.41	1.09	-4.71	-14.96	-14.96	-1.34	0.57	2.00	4.30	5.60	04/01/2005
NCREIF ODCE Index (AWA) (Net)	09,030,007	2.41	-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.46	04/01/2000
Difference			1.76	-1.48	-4.96	-4.96	-2.36	-1.70	-1.45	-1.17	0.14	
AC Not Longo Poplay III LD	24 564 070	0.50				10.18						02/04/204
AG Net Lease Realty III LP NCREIF ODCE Index (AWA) (Net)	21,564,078	0.58	<b>1.68</b> -0.67	<b>6.69</b> -3.23	<b>10.18</b> -10.00	-10.00	<b>8.83</b> 1.02	<b>7.91</b> 2.27	<b>7.93</b> 3.45	<b>7.15</b> 5.47	<b>6.00</b> 5.79	03/01/2014
Difference			2.35	9.92	20.18	20.18	7.81	5.64	4.48	1.68	0.21	
Dillotofice			2.30	9.92	20.10	20.10	7.01	3.04	4.40	1.00	0.21	
AG Realty Value XI LP	13,395,475	0.36	-2.95	-2.15	2.77	2.77	N/A	N/A	N/A	N/A	-8.09	11/01/2022
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-12.47	
Difference			-2.28	1.08	12.77	12.77	N/A	N/A	N/A	N/A	4.38	

Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month following initial funding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01. During 05/2024, Comvest Credit Partners VII LP was funded. \*As of 06/2024, fees are preliminary and net returns are subject to change.



	Allocation	n					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Mesirow Real Estate Value IV LP	52,878,271	1.42	0.85	0.85	2.26	2.26	13.10	N/A	N/A	N/A	N/A	06/01/2021
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.18	
Difference			1.52	4.08	12.26	12.26	12.08	N/A	N/A	N/A	N/A	
Dune Real Estate III LP	5,256,319	0.14	-2.58	4.52	-40.65	-40.65	-12.65	-11.89	-5.20	-0.30	-0.30	05/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.65	
Difference			-1.91	7.75	-30.65	-30.65	-13.67	-14.16	-8.65	-5.77	-5.95	
Portfolio Advisors Real Estate LP	3,036,320	0.08	-0.49	-5.27	-8.91	-8.91	-3.30	-6.94	-4.29	0.67	0.66	06/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.70	
Difference			0.18	-2.04	1.09	1.09	-4.32	-9.21	-7.74	-4.80	-5.04	
Landmark Real Estate VII LP	3,231,635	0.09	0.00	-1.70	-3.38	-3.38	-2.11	-2.97	-1.04	N/A	6.29	09/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.56	
Difference			0.67	1.53	6.62	6.62	-3.13	-5.24	-4.49	N/A	0.73	
JP Morgan Special Situation Property (CF)*	44,855,107	1.21	-3.02	-10.86	-25.59	-25.59	-8.53	-3.16	-0.16	N/A	3.32	11/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.34	
Difference			-2.35	-7.63	-15.59	-15.59	-9.55	-5.43	-3.61	N/A	-2.02	
Hall Capital III LP	1,553,165	0.04	-69.69	-69.69	-71.43	-71.43	-40.79	-24.51	-16.83	N/A	-13.11	11/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.34	
Difference			-69.02	-66.46	-61.43	-61.43	-41.81	-26.78	-20.28	N/A	-18.45	
Dune Real Estate IV LP	48,131,054	1.30	1.82	0.18	0.14	0.14	19.44	N/A	N/A	N/A	0.50	08/01/2019
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.30	
Difference			2.49	3.41	10.14	10.14	18.42	N/A	N/A	N/A	-1.80	
Hall Capital Real Estate LP	6,014,196	0.16	-23.17	-23.17	-21.33	-21.33	-7.56	0.14	N/A	N/A	0.21	09/01/2018
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.87	
Difference			-22.50	-19.94	-11.33	-11.33	-8.58	-2.13	N/A	N/A	-2.66	
Terracap Partners V LP	35,836,543	0.97	-2.13	-30.96	-32.15	-32.15	-7.36	N/A	N/A	N/A	N/A	05/01/2021
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	2.12	
Difference			-1.46	-27.73	-22.15	-22.15	-8.38	N/A	N/A	N/A	N/A	
OFP Centerbridge Real Estate II	18,612,073	0.50	0.12	2.09	0.66	0.66	N/A	N/A	N/A	N/A	-4.41	08/01/2022
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-10.79	
Difference			0.79	5.32	10.66	10.66	N/A	N/A	N/A	N/A	6.38	





	Allocatio	n					Perfori	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Private Equity	380,390,649	10.24	1.52	1.83	2.33	2.33	12.08	15.55	15.29	14.43	15.54	03/01/2014
Capital Dynamics Global Secondaries IV	20,282,607	0.55	-1.00	-0.46	-3.51	-3.51	-0.88	5.14	8.01	N/A	8.04	12/01/2014
Capital Dynamics Global Secondaries VI	26,703,002	0.72	-4.65	-0.52	-5.17	-5.17	N/A	N/A	N/A	N/A	78.99	01/01/2023
Ardian AESF VI LP	33,551,000	0.90	0.66	-2.54	-5.02	-5.02	8.47	12.23	11.94	N/A	10.81	02/01/2017
Pomona Capital IX LP	16,988,662	0.46	-0.95	-0.92	-4.37	-4.37	5.37	14.80	N/A	N/A	23.82	02/01/2018
Pomona Capital X LP	32,372,298	0.87	5.57	5.57	7.64	7.64	N/A	N/A	N/A	N/A	N/A	01/01/2022
Argonaut Private Equity IV LP	23,566,045	0.63	0.80	0.80	2.56	2.56	28.82	19.07	N/A	N/A	15.38	08/01/2018
Argonaut Private Equity V LP	12,217,723	0.33	41.49	41.59	44.03	44.03	N/A	N/A	N/A	N/A	14.27	01/01/2022
Ardian ASF VIII LP	54,950,427	1.48	1.02	1.95	1.60	1.60	11.57	N/A	N/A	N/A	21.99	05/01/2020
IFM Global Infrastructure Fund LP	121,360,900	3.27	0.98	-0.13	3.18	3.18	N/A	N/A	N/A	N/A	N/A	12/01/2021
Riverside Micro Cap VI LP	7,997,074	0.22	-4.60	-8.18	-5.14	-5.14	N/A	N/A	N/A	N/A	-10.79	10/01/2022
OFP Adams Street Co-Invest Fund V	25,425,420	0.68	4.49	15.21	25.78	25.78	N/A	N/A	N/A	N/A	17.04	07/01/2022



	Allocation	n					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OFPRS Total Fund	3,712,963,768	100.00	1.29	6.12	10.78	10.78	2.73	8.25	8.67	8.16	8.33	07/01/1989
OFPRS Policy Index			1.56	6.47	11.94	11.94	3.75	8.57	8.54	8.07	N/A	
Difference			-0.27	-0.35	-1.16	-1.16	-1.02	-0.32	0.13	0.09	N/A	
OFPRS Actual Allocation Index			1.71	6.61	11.52	11.52	4.01	8.68	8.54	7.75	8.21	
Difference			-0.42	-0.49	-0.74	-0.74	-1.28	-0.43	0.13	0.41	0.12	
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	
Difference			-0.53	2.44	3.28	3.28	-4.77	0.75	1.17	0.66	0.83	
All Public Plans-Total Fund Median			1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	8.26	
Rank			40	39	52	52	60	24	9	6	43	
Total Equity	2,161,044,747	58.20	2.31	12.84	20.44	20.44	3.99	11.72	11.93	10.68	9.56	07/01/1989
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	10.62	
Difference			-0.91	-0.72	-2.68	-2.68	-4.06	-2.42	-1.55	-1.47	-1.06	
US Equity	1,605,618,255	43.24	2.52	14.41	23.88	23.88	5.70	13.00	13.11	11.84	10.13	07/01/1989
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	10.62	
Difference			-0.70	0.85	0.76	0.76	-2.35	-1.14	-0.37	-0.31	-0.49	
IM U.S. Equity (SA+CF) Median			-1.26	7.28	15.67	15.67	5.85	11.33	10.98	10.03	11.51	
Rank			28	24	25	25	51	36	33	33	93	
US Large Cap Equity	1,131,489,414	30.47	4.60	17.58	28.18	28.18	9.03	14.67	13.87	12.46	10.61	07/01/1989
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	10.76	
Difference			1.03	3.34	4.30	4.30	0.29	0.06	-0.06	-0.05	-0.15	
IM U.S. Large Cap Equity (SA+CF) Median			2.80	13.58	23.37	23.37	8.73	14.20	13.75	12.46	11.28	
Rank			25	24	26	26	45	45	49	51	88	
US Large Cap Core Equity	510,272,421	13.74	4.77	17.37	27.27	27.27	10.23	15.00	13.94	12.61	10.43	11/01/1996
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	9.68	
Difference			0.49	2.08	2.71	2.71	0.22	-0.05	-0.34	-0.25	0.75	
IM U.S. Large Cap Core Equity (SA+CF) Median			3.44	15.15	24.63	24.63	9.44	14.68	13.80	12.65	10.25	
Rank			19	24	26	26	36	40	49	53	38	
Liquidity Pool - SSgA Equity Index (CF)	197,311,215	5.31	4.29	15.29	24.56	24.56	9.99	N/A	N/A	N/A	11.97	04/01/2021
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	12.00	
Difference			0.01	0.00	0.00	0.00	-0.02	N/A	N/A	N/A	-0.03	
IM U.S. Large Cap Core Equity (SA+CF) Median			3.44	15.15	24.63	24.63	9.44	14.68	13.80	12.65	11.27	
Rank			34	48	52	52	41	N/A	N/A	N/A	39	





	Allocation	ı					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Intech Enhanced Investment Tech (SA)	312,961,206	8.43	5.21	19.91	30.50	30.50	10.52	15.65	14.44	13.12	10.23	02/01/2002
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	9.38	
Difference			0.93	4.62	5.94	5.94	0.51	0.60	0.16	0.26	0.85	
IM U.S. Large Cap Index Equity (SA+CF) Median			3.57	14.24	23.91	23.91	8.96	14.64	13.97	12.56	9.45	
Rank			14	13	13	13	12	14	14	15	15	
US Large Cap Value Equity	294,911,113	7.94	-1.19	7.78	16.77	16.77	6.72	10.72	9.88	8.83	9.49	06/01/1990
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	9.67	
Difference			0.98	1.16	3.71	3.71	1.20	1.71	1.27	0.60	-0.18	
IM U.S. Large Cap Value Equity (SA+CF) Median			-1.24	8.20	16.79	16.79	7.72	11.47	10.68	9.59	10.98	
Rank			47	56	51	51	69	66	68	72	95	
Beutel Goodman American Equity (SA)	147,828,851	3.98	-1.05	9.44	15.91	15.91	7.88	13.13	11.81	N/A	13.25	05/01/2016
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	9.57	
Difference			1.12	2.82	2.85	2.85	2.36	4.12	3.20	N/A	3.68	
IM U.S. Large Cap Value Equity (SA+CF) Median			-1.24	8.20	16.79	16.79	7.72	11.47	10.68	9.59	11.45	
Rank			42	33	58	58	48	23	23	N/A	17	
Aristotle US Equity (SA)	147,082,263	3.96	-1.34	6.09	17.45	17.45	5.56	N/A	N/A	N/A	12.34	09/01/2020
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	12.29	
Difference			0.83	-0.53	4.39	4.39	0.04	N/A	N/A	N/A	0.05	
IM U.S. Large Cap Value Equity (SA+CF) Median			-1.24	8.20	16.79	16.79	7.72	11.47	10.68	9.59	14.61	
Rank			54	73	45	45	84	N/A	N/A	N/A	79	
US Large Cap Growth Equity	326,305,879	8.79	10.17	28.44	42.14	42.14	7.60	17.06	17.32	15.43	10.69	07/01/1989
Russell 1000 Grth Index			8.33	20.70	33.48	33.48	11.28	19.34	18.64	16.33	11.38	
Difference			1.84	7.74	8.66	8.66	-3.68	-2.28	-1.32	-0.90	-0.69	
IM U.S. Large Cap Growth Equity (SA+CF) Median			5.62	18.76	30.72	30.72	8.78	16.69	16.91	14.96	12.33	
Rank			4	3	4	4	64	45	41	40	100	
Fred Alger Capital Appreciation (SA)	326,305,879	8.79	10.17	28.44	42.14	42.14	7.97	17.30	17.50	15.54	16.82	08/01/2010
Russell 1000 Grth Index			8.33	20.70	33.48	33.48	11.28	19.34	18.64	16.33	17.09	
Difference			1.84	7.74	8.66	8.66	-3.31	-2.04	-1.14	-0.79	-0.27	
IM U.S. Large Cap Growth Equity (SA+CF) Median			5.62	18.76	30.72	30.72	8.78	16.69	16.91	14.96	15.97	
Rank			4	3	4	4	61	41	37	36	28	



	Allocatio	n					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Small Cap Equity	474,128,842	12.77	-1.88	8.19	14.21	14.21	-1.91	8.84	11.17	10.24	9.87	07/01/1992
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	9.22	
Difference			1.40	6.46	4.15	4.15	0.67	1.90	4.32	3.24	0.65	
IM U.S. Small Cap Equity (SA+CF) Median			-3.10	2.95	11.19	11.19	1.39	9.17	9.12	8.80	12.36	
Rank			30	15	32	32	74	57	23	23	94	
Liqiduity Pool - SSgA Small Cap Completeness Index (CF)	78,515,848	2.11	-3.20	3.82	15.21	15.21	-1.70	N/A	N/A	N/A	0.47	04/01/2021
Russell Sm Cap Compl Index			-3.21	3.77	14.97	14.97	-1.78	9.10	9.18	8.52	0.41	
Difference			0.01	0.05	0.24	0.24	0.08	N/A	N/A	N/A	0.06	
IM U.S. Small Cap Equity (SA+CF) Median			-3.10	2.95	11.19	11.19	1.39	9.17	9.12	8.80	2.61	
Rank			54	40	25	25	73	N/A	N/A	N/A	70	
US Small Cap Value Equity	187,282,909	5.04	-5.00	2.41	12.25	12.25	3.43	9.57	9.70	9.75	10.61	09/01/1992
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	9.96	
Difference			-1.36	3.26	1.35	1.35	3.96	2.50	3.81	3.52	0.65	
IM U.S. Small Cap Value Equity (SA+CF) Median			-3.48	1.97	12.96	12.96	4.12	9.92	8.22	8.09	12.79	
Rank			82	44	53	53	61	53	21	19	100	
Earnest Partner Small Cap Value Equity (SA)	93,465,035	2.52	-5.75	1.59	10.78	10.78	4.35	11.90	11.33	10.56	9.66	09/01/2005
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	6.74	
Difference			-2.11	2.44	-0.12	-0.12	4.88	4.83	5.44	4.33	2.92	
IM U.S. Small Cap Value Equity (SA+CF) Median			-3.48	1.97	12.96	12.96	4.12	9.92	8.22	8.09	8.89	
Rank			92	56	65	65	44	23	10	9	29	
River Road Small Cap Value Equity (SA)	93,817,874	2.53	-5.72	2.23	12.00	12.00	5.67	8.85	9.23	9.75	7.94	05/01/2007
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	5.93	
Difference			-2.08	3.08	1.10	1.10	6.20	1.78	3.34	3.52	2.01	
IM U.S. Small Cap Value Equity (SA+CF) Median			-3.48	1.97	12.96	12.96	4.12	9.92	8.22	8.09	8.31	
Rank			92	48	56	56	32	67	32	19	65	
US Small Cap Growth Equity	208,330,085	5.61	1.87	14.58	16.52	16.52	-10.54	5.03	10.77	9.51	7.96	07/01/1992
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	8.00	
Difference			4.79	10.14	7.38	7.38	-5.68	-1.14	3.49	2.12	-0.04	
IM U.S. Small Cap Growth Equity (SA+CF) Median			-2.59	5.02	9.47	9.47	-2.78	8.73	11.09	10.22	12.31	
Rank			12	14	20	20	90	94	58	67	100	
Lord Abbett Small Cap Growth Equity (SA)	98,464,483	2.65	1.28	14.47	11.54	11.54	-8.71	6.19	12.74	9.24	10.51	05/01/2011
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	8.53	
Difference			4.20	10.03	2.40	2.40	-3.85	0.02	5.46	1.85	1.98	
IM U.S. Small Cap Growth Equity (SA+CF) Median			-2.59	5.02	9.47	9.47	-2.78	8.73	11.09	10.22	10.92	
Rank			16	15	36	36	83	88	30	74	68	

Performance shown is gross of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month following initial funding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01. During 05/2024, Comvest Credit Partners VII LP was funded.



	Allocatio	n					Perfori	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Hood River Small Cap Growth Equity (SA)	109,832,007	2.96	2.37	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2.37	04/01/2024
Russell 2500 Grth Index			-4.22	3.93	9.02	9.02	-4.11	7.58	9.26	8.77	-4.22	
Difference			6.59	N/A	N/A	N/A	N/A	N/A	N/A	N/A	6.59	
IM U.S. Small Cap Growth Equity (SA+CF) Median			-2.59	5.02	9.47	9.47	-2.78	8.73	11.09	10.22	-2.59	
Rank			9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	9	
Other Equity												
OFP LGT Co-Invest Fund III	35,440,376	0.95	6.73	7.47	15.90	15.90	N/A	N/A	N/A	N/A	10.07	01/01/2022
OFP Schroders P/E Global DIR III	52,540,934	1.42	6.74	6.74	13.69	13.69	N/A	N/A	N/A	N/A	9.63	01/01/2022
International Equity	555,426,492	14.96	1.70	8.29	10.74	10.74	-1.10	8.03	8.24	7.01	N/A	07/01/1989
MSCI ACW Ex US Index (USD) (Net)			0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	N/A	
Difference			0.74	2.60	-0.88	-0.88	-1.56	2.48	3.07	3.17	N/A	
IM International Equity (SA+CF) Median			0.35	5.34	11.44	11.44	1.83	6.99	6.27	5.27	8.04	
Rank			23	22	56	56	74	33	17	21	N/A	
International Developed Equity	358,662,512	9.66	0.29	8.48	11.14	11.14	0.10	9.91	10.29	8.79	6.77	04/01/1994
MSCI ACW Ex US Index (USD) (Net)			0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	N/A	
Difference			-0.67	2.79	-0.48	-0.48	-0.36	4.36	5.12	4.95	N/A	
IM International Equity Developed Markets (SA+CF) Median			0.22	5.31	11.39	11.39	1.75	6.97	6.20	5.29	7.37	
Rank			50	20	53	53	69	14	6	6	73	
Liquidity Pool - SSgA MSCI ACWI ex US (CF)	78,255,185	2.11	1.00	5.79	11.70	11.70	0.65	N/A	N/A	N/A	2.29	04/01/2021
MSCI ACW Ex US Index (USD) (Net)			0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	2.08	
Difference			0.04	0.10	0.08	0.08	0.19	N/A	N/A	N/A	0.21	
IM All ACWI Ex US (SA+CF) Median			0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	2.97	
Rank			41	50	46	46	58	N/A	N/A	N/A	58	
Chautauqua Intl Growth Equity (CF)	170,676,311	4.60	1.40	6.72	7.84	7.84	-0.45	8.94	8.75	7.16	8.90	09/01/2012
MSCI ACW Ex US Index (USD) (Net)			0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	5.80	
Difference			0.44	1.03	-3.78	-3.78	-0.91	3.39	3.58	3.32	3.10	
IM All ACWI Ex US (SA+CF) Median			0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	7.53	
Rank			31	41	82	82	71	16	11	16	12	
WCM Berkeley Street Intl Equity (SA)	187,958,112	5.06	-0.99	10.97	13.81	13.81	0.16	10.70	11.63	10.49	11.88	09/01/2012
MSCI EAFE Index (USD) (Net)			-0.42	5.34	11.54	11.54	2.89	6.46	5.73	4.33	6.71	
Difference			-0.57	5.63	2.27	2.27	-2.73	4.24	5.90	6.16	5.17	
IM EAFE Core (SA+CF) Median			0.02	5.60	11.42	11.42	3.21	7.17	6.48	5.23	7.61	

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	Allocation	Allocation					Perfori	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
<b>Emerging Markets Equity</b>	118,508,795	3.19	7.26	7.77	9.53	9.53	-4.77	2.51	2.34	2.02	2.81	09/01/2012
MSCI Emg Mkts Index (USD) (Net)			5.00	7.49	12.55	12.55	-5.07	3.10	3.54	2.79	3.63	
Difference			2.26	0.28	-3.02	-3.02	0.30	-0.59	-1.20	-0.77	-0.82	
IM Emerging Markets Equity (SA+CF) Median			4.71	7.69	13.59	13.59	-2.85	4.70	4.95	4.31	5.19	
Rank			14	50	74	74	60	84	95	97	98	
RBC GAM Emerging Markets Equity (CF)	62,498,900	1.68	8.46	7.38	9.61	9.61	-1.75	3.60	N/A	N/A	4.21	02/01/2019
MSCI Emg Mkts Index (USD) (Net)			5.00	7.49	12.55	12.55	-5.07	3.10	3.54	2.79	3.17	
Difference			3.46	-0.11	-2.94	-2.94	3.32	0.50	N/A	N/A	1.04	
IM Emerging Markets Equity (SA+CF) Median			4.71	7.69	13.59	13.59	-2.85	4.70	4.95	4.31	5.17	
Rank			6	53	74	74	44	64	N/A	N/A	65	
Wellington Emerging Markets (CF)	56,009,895	1.51	5.96	8.21	9.45	9.45	-7.73	1.36	N/A	N/A	2.12	02/01/2019
MSCI Emg Mkts Index (USD) (Net)			5.00	7.49	12.55	12.55	-5.07	3.10	3.54	2.79	3.17	
Difference			0.96	0.72	-3.10	-3.10	-2.66	-1.74	N/A	N/A	-1.05	
IM Emerging Markets Equity (SA+CF) Median			4.71	7.69	13.59	13.59	-2.85	4.70	4.95	4.31	5.17	
Rank			30	46	74	74	81	92	N/A	N/A	94	



	Allocatio	n					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	474,197,434	12.77	-1.06	-3.68	-0.20	-0.20	-4.41	-1.00	-0.04	0.78	4.96	07/01/1989
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.08	
Difference			-1.13	-2.97	-2.83	-2.83	-1.39	-0.77	-0.90	-0.57	-0.12	
IM Global Fixed Income (SA+CF) Median			0.55	1.16	7.08	7.08	-0.93	1.85	2.51	2.55	N/A	
Rank			82	87	89	89	76	78	85	66	N/A	
Garcia Hamilton Core Fixed Income (SA)	54,859,951	1.48	0.04	-1.37	1.35	1.35	-2.59	0.01	1.04	1.73	1.71	08/01/2014
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	1.38	
Difference			-0.03	-0.66	-1.28	-1.28	0.43	0.24	0.18	0.38	0.33	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			0.26	-0.19	3.21	3.21	-2.63	0.31	1.38	1.82	1.87	
Rank			97	100	98	98	45	78	79	61	67	
Orleans Core Fixed Income (SA)	28,700,470	0.77	0.48	0.02	3.65	3.65	-2.57	0.14	1.22	1.58	1.65	08/01/2014
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	1.38	
Difference			0.41	0.73	1.02	1.02	0.45	0.37	0.36	0.23	0.27	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			0.26	-0.19	3.21	3.21	-2.63	0.31	1.38	1.82	1.87	
Rank			13	31	35	35	43	69	68	73	72	
Liquidity Pool - SSgA Aggregate Bond (CF)	186,735,148	5.03	0.14	-0.59	2.69	2.69	-3.01	N/A	N/A	N/A	-2.24	04/01/2021
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	-2.25	
Difference			0.07	0.12	0.06	0.06	0.01	N/A	N/A	N/A	0.01	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			0.26	-0.19	3.21	3.21	-2.63	0.31	1.38	1.82	-1.85	
Rank			80	80	80	80	87	N/A	N/A	N/A	87	
Brandywine Global Fixed Income (CF)	203,757,968	5.49	-2.48	-7.06	-3.26	-3.26	-6.65	-1.64	-0.47	0.15	2.86	10/01/2009
FTSE Wrld Govt Bond Index			-1.58	-3.96	-0.63	-0.63	-6.92	-3.20	-1.28	-1.20	-0.02	
Difference			-0.90	-3.10	-2.63	-2.63	0.27	1.56	0.81	1.35	2.88	
IM Global Fixed Income (SA+CF) Median			0.55	1.16	7.08	7.08	-0.93	1.85	2.51	2.55	3.11	
Rank			96	99	99	99	93	89	90	80	53	



	Allocation	n					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Other Fixed Income												
0 10 10 0 10 0	04.044.054	0.50	0.00		40.00	40.00	21/2	21/4	D1/A	D1/A	0.55	0.4.10.4.10.000
Comvest Credit Partners VI LP	21,944,851	0.59	3.08	5.71	12.89	12.89	N/A	N/A	N/A	N/A	9.55	01/01/2023
Bloomberg US Corp Hi Yld Index			1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	10.64	
Difference			1.99	3.13	2.45	2.45	N/A	N/A	N/A	N/A	-1.09	
Comvest Credit Partners VII LP	1,000,000	0.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	06/01/2024
Bloomberg US Corp Hi Yld Index			1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	0.94	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	-0.94	
PIMCO Corporate Opportunities II LP	25,130,172	0.68	-8.43	-12.54	67.41	67.41	37.81	24.58	20.11	N/A	20.07	01/01/2017
Bloomberg US Corp Hi Yld Index	20,100,112	0.00	1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	4.61	01/01/2011
Difference			-9.52	-15.12	56.97	56.97	36.17	20.66	15.88	N/A	15.46	
PIMCO Bravo III LP	48,040,994	1.29	-1.19	-1.98	11.17	11.17	9.87	8.57	N/A	N/A	9.44	12/01/2017
Bloomberg US Corp Hi Yld Index			1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	4.17	
Difference			-2.28	-4.56	0.73	0.73	8.23	4.65	N/A	N/A	5.27	
PIMCO Private Income (CF)	103,932,374	2.80	2.75	3.77	7.57	7.57	5.72	7.49	N/A	N/A	7.24	05/01/2019
Bloomberg US Corp Hi Yld Index	, ,		1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	4.00	
Difference			1.66	1.19	-2.87	-2.87	4.08	3.57	N/A	N/A	3.24	
PIMCO Bravo IV LP	35,410,616	0.95	-4.44	-9.22	-7.47	-7.47	N/A	N/A	N/A	N/A	-8.40	10/01/2021
Bloomberg US Corp Hi Yld Index	00,410,010	0.00	1.09	2.58	10.44	10.44	1.64	3.92	4.23	4.31	1.47	10/01/2021
Difference			-5.53	-11.80	-17.91	-17.91	N/A	N/A	N/A	N/A	-9.87	
Silloronio C				11.00	11.01		14/71	14/71	14// (	14// (	0.01	
Core Real Estate	364,275,852	9.81	-1.76	-8.07	-13.76	-13.76	0.48	1.37	3.20	5.71	5.54	05/01/2005
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.46	
Difference			-1.31	-5.26	-4.50	-4.50	-1.42	-1.79	-1.16	-0.70	-0.92	
JP Morgan Strategic Property (CF)	89.630.607	2.41	1.36	-4.17	-14.01	-14.01	-0.28	1.58	2.99	5.27	6.32	05/01/2005
NCREIF ODCE Index (AWA) (Gross)	, ,		-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.46	
Difference			1.81	-1.36	-4.75	-4.75	-2.18	-1.58	-1.37	-1.14	-0.14	
AG Net Lease Realty III LP	21,564,078	0.58	1.68	6.69	10.18	10.18	8.83	7.91	7.93	7.15	6.05	04/01/2014
NCREIF ODCE Index (AWA) (Gross)	21,304,070	0.50	-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.55	04/01/2014
Difference			2.13	9.50	19.44	19.44	6.93	4.75	3.57	0.74	-0.50	
AOD K VI VIID	40.005.4==	0.00										4410410555
AG Realty Value XI LP	13,395,475	0.36	-2.95	-2.15	2.77	2.77	N/A	N/A	N/A	N/A	-8.09	11/01/2022
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-11.70	
Difference			-2.50	0.66	12.03	12.03	N/A	N/A	N/A	N/A	3.61	

Performance shown is gross of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month following initial funding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01. During 05/2024, Comvest Credit Partners VII LP was funded.



		n Performance (%)											
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date	
Mesirow Real Estate Value IV LP	52,878,271	1.42	0.85	0.85	2.26	2.26	13.10	N/A	N/A	N/A	N/A	06/01/2021	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.13		
Difference			1.30	3.66	11.52	11.52	11.20	N/A	N/A	N/A	N/A		
Dune Real Estate III LP	5,256,319	0.14	-2.58	4.52	-40.65	-40.65	-12.65	-11.89	-5.20	-0.30	-0.30	06/01/2014	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.66		
Difference			-2.13	7.33	-31.39	-31.39	-14.55	-15.05	-9.56	-6.71	-6.96		
Landmark Real Estate VII LP	3,231,635	0.09	0.00	-1.70	-3.38	-3.38	-2.11	-2.97	-1.04	N/A	6.34	10/01/2014	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.23		
Difference			0.45	1.11	5.88	5.88	-4.01	-6.13	-5.40	N/A	0.11		
JP Morgan Special Situation Property (CF)	44,855,107	1.21	-2.50	-9.85	-23.99	-23.99	-6.77	-1.39	1.60	N/A	5.06	12/01/2014	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.34		
Difference			-2.05	-7.04	-14.73	-14.73	-8.67	-4.55	-2.76	N/A	-1.28		
Hall Capital III LP	1,553,165	0.04	-69.69	-69.69	-71.43	-71.43	-40.79	-24.51	-16.83	N/A	-13.22	12/01/2014	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.34		
Difference			-69.24	-66.88	-62.17	-62.17	-42.69	-27.67	-21.19	N/A	-19.56		
Dune Real Estate IV LP	48,131,054	1.30	1.82	0.18	0.14	0.14	19.44	N/A	N/A	N/A	0.50	09/01/2019	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.27		
Difference			2.27	2.99	9.40	9.40	17.54	N/A	N/A	N/A	-2.77		
Hall Capital Real Estate LP	6,014,196	0.16	-23.17	-23.17	-21.33	-21.33	-7.56	0.14	N/A	N/A	0.20	10/01/2018	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.48		
Difference			-22.72	-20.36	-12.07	-12.07	-9.46	-3.02	N/A	N/A	-3.28		
Terracap Partners V LP	35,836,543	0.97	-2.13	-30.96	-32.15	-32.15	-7.36	N/A	N/A	N/A	N/A	05/01/2021	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	3.04		
Difference			-1.68	-28.15	-22.89	-22.89	-9.26	N/A	N/A	N/A	N/A		
OFP Centerbridge Real Estate II	18,612,073	0.50	0.12	2.09	0.66	0.66	N/A	N/A	N/A	N/A	-4.41	08/01/2022	
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-10.01		
Difference			0.57	4.90	9.92	9.92	N/A	N/A	N/A	N/A	5.60		



	Allocatio	Performance (%)										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Private Equity	380,390,649	10.24	1.52	1.83	2.33	2.33	12.08	15.55	15.29	14.43	15.67	04/01/2014
Capital Dynamics Global Secondaries IV	20,282,607	0.55	-1.00	-0.46	-3.51	-3.51	-0.88	5.14	8.01	N/A	8.12	01/01/2015
Capital Dynamics Global Secondaries VI	26,703,002	0.72	-4.65	-0.52	-5.17	-5.17	N/A	N/A	N/A	N/A	78.99	01/01/2023
Ardian AESF VI LP	33,551,000	0.90	0.66	-2.54	-5.02	-5.02	8.47	12.23	11.94	N/A	11.08	04/01/2017
Pomona Capital IX LP	16,988,662	0.46	-0.95	-0.92	-4.37	-4.37	5.37	14.80	N/A	N/A	24.17	03/01/2018
Pomona Capital X LP	32,372,298	0.87	5.57	5.57	7.64	7.64	N/A	N/A	N/A	N/A	N/A	01/01/2022
Argonaut Private Equity IV LP	23,566,045	0.63	0.80	0.80	2.56	2.56	28.82	19.07	N/A	N/A	15.62	09/01/2018
Argonaut Private Equity V LP	12,217,723	0.33	41.49	41.59	44.03	44.03	N/A	N/A	N/A	N/A	14.27	01/01/2022
Ardian ASF VIII LP	54,950,427	1.48	1.02	1.95	1.60	1.60	11.57	N/A	N/A	N/A	21.99	05/01/2020
IFM Global Infrastructure Fund LP	121,360,900	3.27	0.98	-0.13	3.18	3.18	N/A	N/A	N/A	N/A	N/A	12/01/2021
Riverside Micro Cap VI LP	7,997,074	0.22	-4.60	-8.18	-5.14	-5.14	N/A	N/A	N/A	N/A	-10.79	10/01/2022
OFP Adams Street Co-Invest Fund V	25,425,420	0.68	4.49	15.21	25.78	25.78	N/A	N/A	N/A	N/A	17.04	07/01/2022



#### Oklahoma State Pension Commission Oklahoma Firefighters Pension & Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



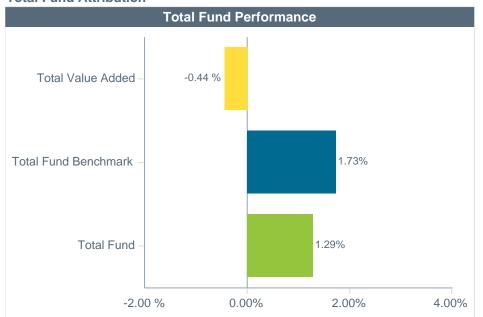
#### Oklahoma State Pension Commission Oklahoma Firefighters Pension & Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis

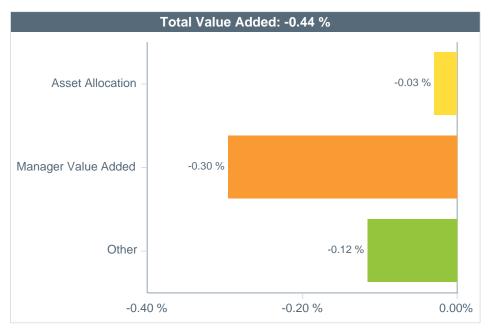


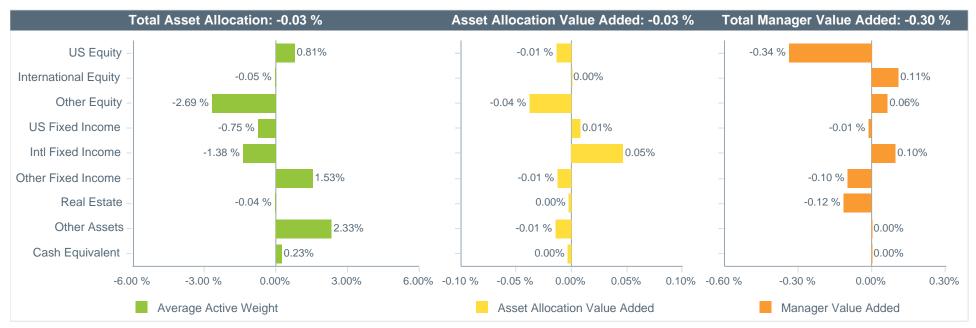
Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.



### Oklahoma State Pension Commission Oklahoma Firefighters Pension & Retirement System Total Fund Attribution





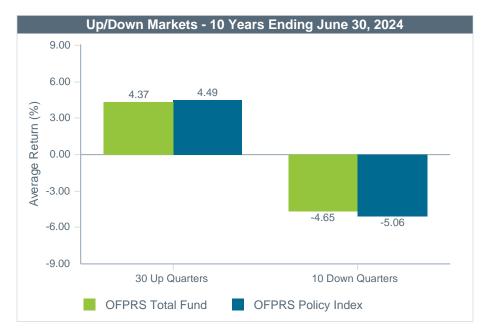


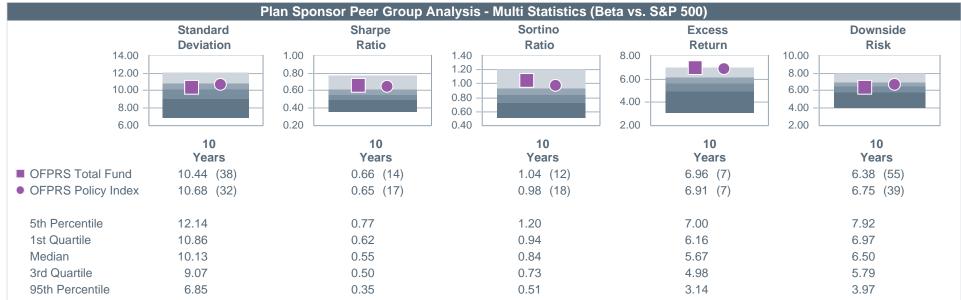
Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution calculation. Allocation to Other Equity includes opportunistic equity; Other Fixed Income includes non-core Fixed Income; and Other Assets include Hedge Funds and Private Equity.



## Oklahoma State Pension Commission Oklahoma Firefighters Pension & Retirement System Total Fund Risk & Return, Up/Down Markets, and Multi Statistics

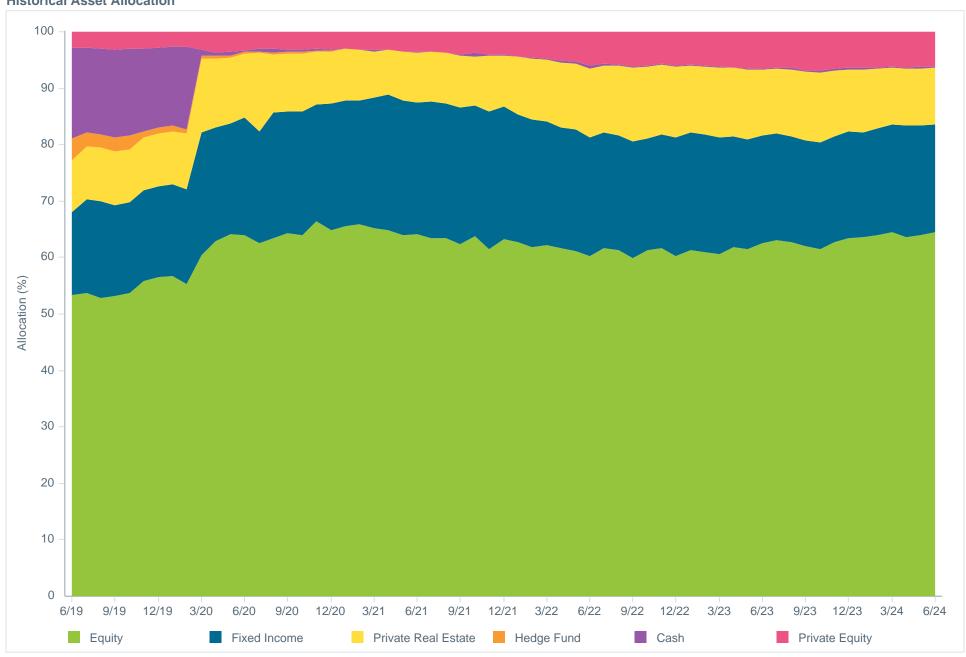






Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.







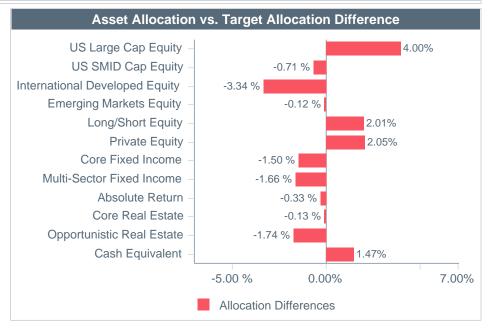
# Oklahoma Police Pension & Retirement System (OPPRS)



#### Oklahoma State Pension Commission Oklahoma Police Pension & Retirement System Total Fund Summary

				Per	rformance	e (%)							
			Trailir	ng						Calenda	r Year		
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
OPPRS Total Fund (Net)	1.03	3.62	7.63	7.63	2.12	6.80	6.65	6.00	8.00		17.28	12.17	15.22
OPPRS Policy Index	1.78	6.66	11.40	11.40	3.40	7.36	7.18	6.13	13.27	-13.55	14.45	12.33	18.79
Difference	-0.75	-3.04	-3.77	-3.77	-1.28	-0.56	-0.53	-0.13	-5.27	3.16	2.83	-0.16	-3.57
OPPRS Actual Allocation Index	1.27	5.95	11.23	11.23	3.13	7.45	7.13	6.20	13.10	-12.42	13.63	14.47	15.02
Difference	-0.24	-2.33	-3.60	-3.60	-1.01	-0.65	-0.48	-0.20	-5.10	2.03	3.65	-2.30	0.20
Actuarial Discount Rate (7.5%)	1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference	-0.79	-0.06	0.13	0.13	-5.38	-0.70	-0.85	-1.50	0.50	-17.89	9.78	4.67	7.72
OPPRS Total Fund (Gross)	1.11	3.79	7.95	7.95	2.45	7.15	7.03	6.40	8.20	-9.99	17.71	12.54	15.68
OPPRS Policy Index	1.78	6.66	11.40	11.40	3.40	7.36	7.18	6.13	13.27	-13.55	14.45	12.33	18.79
Difference	-0.67	-2.87	-3.45	-3.45	-0.95	-0.21	-0.15	0.27	-5.07	3.56	3.26	0.21	-3.11
OPPRS Actual Allocation Index	1.27	5.95	11.23	11.23	3.13	7.45	7.13	6.20	13.10	-12.42	13.63	14.47	15.02
Difference	-0.16	-2.16	-3.28	-3.28	-0.68	-0.30	-0.10	0.20	-4.90	2.43	4.08	-1.93	0.66
All Public Plans-Total Fund Median	1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47	18.63
Rank	50	88	87	87	69	62	65	68	94	23	13	49	85

Asset Alloc	ation vs. Target A	Allocation	
	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)
OPPRS (Police)	3,174,260,761	100.00	100.00
US Large Cap Equity	603,104,069	19.00	15.00
US SMID Cap Equity	294,952,900	9.29	10.00
International Developed Equity	369,969,684	11.66	15.00
Emerging Markets Equity	154,779,217	4.88	5.00
Long/Short Equity	63,853,036	2.01	0.00
Private Equity	541,053,251	17.05	15.00
Core Fixed Income	269,784,051	8.50	10.00
Multi-Sector Fixed Income	264,821,894	8.34	10.00
Absolute Return	148,375,290	4.67	5.00
Core Real Estate	313,371,542	9.87	10.00
Opportunistic Real Estate	103,451,156	3.26	5.00
Cash Equivalent	46,744,671	1.47	0.00



Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



	Allocatio	n					Perfor	mance (%	o)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OPPRS Total Fund	3,174,260,761	100.00	1.03	3.62	7.63	7.63	2.12	6.80	6.65	6.00	6.37	07/01/2005
OPPRS Policy Index			1.78	6.66	11.40	11.40	3.40	7.36	7.18	6.13	6.12	
Difference			-0.75	-3.04	-3.77	-3.77	-1.28	-0.56	-0.53	-0.13	0.25	
OPPRS Actual Allocation Index			1.27	5.95	11.23	11.23	3.13	7.45	7.13	6.20	6.51	
Difference			-0.24	-2.33	-3.60	-3.60	-1.01	-0.65	-0.48	-0.20	-0.14	
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	
Difference			-0.79	-0.06	0.13	0.13	-5.38	-0.70	-0.85	-1.50	-1.13	
Total Equity	2,027,712,157	63.88	1.39	6.58	12.05	12.05	3.07	10.05	9.45	8.48	7.80	07/01/2005
MSCI ACW Index (USD) (Gross)			3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	8.34	
Difference			-1.62	-5.00	-7.87	-7.87	-2.87	-1.23	-1.12	-0.51	-0.54	
US Equity												
Northern Trust Russell 1000 Index (SA)	603,104,069	19.00	3.58	14.24	23.91	23.91	8.76	14.61	13.93	12.51	N/A	07/01/1998
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	8.33	
Difference			0.01	0.00	0.03	0.03	0.02	0.00	0.00	0.00	N/A	
Boston Partners SMID Value Equity (SA)	167,943,297	5.29	-3.24	4.83	14.88	14.88	4.10	9.83	7.63	7.53	N/A	06/01/1997
Russell 2500 Val Index			-4.31	1.50	11.24	11.24	2.15	8.01	7.02	6.77	9.08	
Difference			1.07	3.33	3.64	3.64	1.95	1.82	0.61	0.76	N/A	
Silvercrest Small Cap Growth Equity (SA)	127,009,603	4.00	-3.10	2.10	0.30	0.30	-7.48	9.17	9.96	9.00	6.99	01/01/2014
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	7.25	
Difference			-0.18	-2.34	-8.84	-8.84	-2.62	3.00	2.68	1.61	-0.26	
International Equity												
Mondrian International Value Equity (SA)	185,195,432	5.83	1.03	3.56	10.97	10.97	3.56	5.19	4.56	3.24	N/A	04/01/2004
MSCI EAFE Val Index (USD) (Gross)			0.36	5.08	14.54	14.54	6.31	6.76	5.27	3.65	5.50	
Difference			0.67	-1.52	-3.57	-3.57	-2.75	-1.57	-0.71	-0.41	N/A	
Barings Focused EAFE Plus Equity (SA)	184,774,252	5.82	-1.46	0.24	5.03	5.03	-0.57	4.29	4.17	4.29	4.59	02/01/2012
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.99	
Difference			-2.63	-5.80	-7.14	-7.14	-1.54	-1.76	-1.51	-0.05	-1.40	



	Allocation											
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Axiom Emerging Markets Equity (SA)	95,869,348	3.02	5.71	11.64	14.21	14.21	N/A	N/A	N/A	N/A	5.19	08/01/2022
MSCI Emg Mkts Index (USD) (Gross)			5.12	7.68	12.97	12.97	-4.68	3.49	3.93	3.18	7.89	
Difference			0.59	3.96	1.24	1.24	N/A	N/A	N/A	N/A	-2.70	
Wasatch EM Small Cap (SA)	58,909,869	1.86	7.40	5.10	17.18	17.18	-3.93	10.25	8.27	5.96	6.00	08/01/2012
MSCI Emg Mkts Sm Cap Index (USD) (Gross)			6.07	7.25	20.57	20.57	3.07	10.50	7.53	5.56	6.72	
Difference			1.33	-2.15	-3.39	-3.39	-7.00	-0.25	0.74	0.40	-0.72	
Fixed Income	682,981,235	21.52	0.76	1.67	6.17	6.17	-0.26	1.76	2.27	1.87	N/A	07/01/2005
Bloomberg US Unv Bond Index			0.19	-0.28	3.47	3.47	-2.68	0.11	1.15	1.63	3.23	
Difference			0.57	1.95	2.70	2.70	2.42	1.65	1.12	0.24	N/A	
Agincourt Core Fixed Income (SA)	269,784,051	8.50	0.19	-0.50	3.02	3.02	-2.74	0.14	1.23	1.66	N/A	07/01/1998
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.85	
Difference			0.12	0.21	0.39	0.39	0.28	0.37	0.37	0.31	N/A	
Loomis Sayles Global World Bond (SA)	83,850,333	2.64	-1.76	-4.20	-0.51	-0.51	-7.28	-2.60	-0.78	-0.69	1.37	05/01/2008
FTSE Wrld Govt Bond Index			-1.58	-3.96	-0.63	-0.63	-6.92	-3.20	-1.28	-1.20	0.53	
Difference			-0.18	-0.24	0.12	0.12	-0.36	0.60	0.50	0.51	0.84	
Oaktree Global Credit (SA)	168,930,907	5.32	1.99	4.80	12.00	12.00	3.81	4.10	3.79	3.75	5.45	01/01/1998
Oaktree Global Credit Custom Index			1.55	3.58	10.88	10.88	3.00	4.13	3.44	3.15	4.62	
Difference			0.44	1.22	1.12	1.12	0.81	-0.03	0.35	0.60	0.83	
Absolute Return	148,375,290	4.67	1.55	5.77	9.42	9.42	3.41	2.69	2.67	1.53	2.85	12/01/2010
Wellington Global Total Return (CF)	77,222,296	2.43	2.15	3.62	5.95	5.95	3.37	2.82	3.52	N/A	3.22	12/01/2016
ICE BofAML 3 Mo US T-Bill Index+4%			2.32	4.66	9.62	9.62	7.15	6.24	6.15	5.57	6.03	
Difference			-0.17	-1.04	-3.67	-3.67	-3.78	-3.42	-2.63	N/A	-2.81	
TCW MetWest Unconstrained (SA)	66,103,500	2.08	0.97	1.86	6.66	6.66	0.91	N/A	N/A	N/A	1.07	01/01/2021
ICE BofAML 3 Mo US T-Bill Index+3%			2.07	4.16	8.56	8.56	6.12	5.22	5.13	4.56	5.68	
Difference			-1.10	-2.30	-1.90	-1.90	-5.21	N/A	N/A	N/A	-4.61	
Private Credit	12,040,653	0.38	6.45	10.54	17.39	17.39	7.35	10.53	10.06	N/A	9.58	10/01/2016



	Allocation											
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Real Assets	416,822,698	13.13	-0.04	-6.50	-8.60	-8.60	1.90	2.20	2.92	3.21	N/A	01/01/1998
OPPRS Real Assets Blended Benchmark			-0.67	-3.23	-10.00	-10.00	1.02	2.06	2.73	1.40	5.17	
Difference			0.63	-3.27	1.40	1.40	0.88	0.14	0.19	1.81	N/A	
JP Morgan Strategic Property (CF)	140,336,755	4.42	1.14	-8.95	-14.84	-14.84	-1.14	0.74	2.12	4.36	3.65	11/01/2007
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	3.79	
Difference			1.81	-5.72	-4.84	-4.84	-2.16	-1.53	-1.33	-1.11	-0.14	
Blackstone Property Partners (CF)	173,034,787	5.45	1.00	-5.39	-3.97	-3.97	3.15	3.05	4.14	N/A	6.65	12/01/2014
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	5.38	
Difference			1.67	-2.16	6.03	6.03	2.13	0.78	0.69	N/A	1.27	
Private Real Estate	103,451,156	3.26	-3.70	-5.03	-6.91	-6.91	5.54	6.00	7.17	8.64	7.93	08/01/2011
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	6.85	
Difference			-3.03	-1.80	3.09	3.09	4.52	3.73	3.72	3.17	1.08	
Columbus Square (SA)	4,688,517	0.15	3.88	7.10	15.39	15.39	7.99	3.81	4.51	6.21	N/A	03/01/1995
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	7.12	
Difference			4.55	10.33	25.39	25.39	6.97	1.54	1.06	0.74	N/A	
Long/Short Equity	63,853,036	2.01	-5.62	-2.51	2.77	2.77	-3.82	3.67	4.12	4.11	5.00	05/01/2012
MSCI ACW Index (USD) (Gross)			3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	10.25	
Difference			-8.63	-14.09	-17.15	-17.15	-9.76	-7.61	-6.45	-4.88	-5.25	
HFRI FOF Strat Index			0.85	5.93	10.84	10.84	0.58	4.81	4.24	3.52	4.07	
Difference			-6.47	-8.44	-8.07	-8.07	-4.40	-1.14	-0.12	0.59	0.93	
K2 Ascent (CF)	63,479,827	2.00	-5.63	-2.47	2.84	2.84	-3.82	N/A	N/A	N/A	3.01	06/01/2020
HFRI FOF Strat Index			0.85	5.93	10.84	10.84	0.58	4.81	4.24	3.52	6.51	
Difference			-6.48	-8.40	-8.00	-8.00	-4.40	N/A	N/A	N/A	-3.50	
Private Equity	541,053,251	17.05	2.43	4.62	6.38	6.38	8.91	15.69	15.02	13.13	12.83	07/01/2003
MSCI ACW Index (USD) (Gross)			3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	9.24	
Difference			-0.58	-6.96	-13.54	-13.54	2.97	4.41	4.45	4.14	3.59	
Cambridge US Prvt Eq Index			0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	14.65	
Difference			2.43	2.75	0.81	0.81	1.89	1.05	0.35	-0.12	-1.82	



Market	ion Performance (%)										
Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
3,174,260,761	100.00	1.11	3.79	7.95	7.95	2.45	7.15	7.03	6.40	6.72	07/01/2005
		1.78	6.66	11.40	11.40	3.40	7.36	7.18	6.13	6.12	
		-0.67	-2.87	-3.45	-3.45	-0.95	-0.21	-0.15	0.27	0.60	
		1.27	5.95	11.23	11.23	3.13	7.45	7.13	6.20	6.51	
		-0.16	-2.16	-3.28	-3.28	-0.68	-0.30	-0.10	0.20	0.21	
		1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	
		-0.71	0.11	0.45	0.45	-5.05	-0.35	-0.47	-1.10	-0.78	
		1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	6.89	
		50	88	87	87	69	62	65	68	62	
2,027,712,157	63.88	1.46	6.71	12.31	12.31	3.30	10.33	9.76	8.80	8.09	07/01/2005
, , ,		3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	8.34	
		-1.55	-4.87	-7.61	-7.61	-2.64	-0.95	-0.81	-0.19	-0.25	
		1.10	8.32	15.94	15.94	4.80	10.71	10.04	8.70	8.66	
		46	63	67	67	67	54	55	50	65	
603 104 060	10.00	2 50	1/1 2/1	22.02	23 03	9 77	1462	12 04	12.52	9 11	07/01/1998
003,104,009	13.00										07/01/1990
		49	50	47	47	52	54	57	56	13	
467.042.207	F 20	2.06	F 20	4F 70	45.70	4.00	40 FF	0.25	0.00	0.70	06/01/1997
107,943,297	5.29										00/01/1997
		29	31	10	10	41	31	30	30	IN/A	
127,009,603	4.00	-2.93	2.45	1.00	1.00	-6.75	10.05	10.87	9.93	7.90	01/01/2014
		-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	7.25	
		-0.01	-1.99	-8.14	-8.14	-1.89	3.88	3.59	2.54	0.65	
		-2.59	5.02	9.47	9.47	-2.78	8.73	11.09	10.22	9.57	
		56	69	85	85	71	33	54	57	94	
	2,027,712,157	2,027,712,157 63.88 603,104,069 19.00	1.78 -0.67 1.27 -0.16 1.82 -0.71 1.11 50  2,027,712,157 63.88 1.46 3.01 -1.55 1.10 46  603,104,069 19.00 3.58 3.57 0.01 3.57 49  167,943,297 5.29 -2.96 -4.31 1.35 -3.88 29  127,009,603 4.00 -2.93 -2.92 -0.01 -2.59	1.78 6.66 -0.67 -2.87 1.27 5.95 -0.16 -2.16 1.82 3.68 -0.71 0.11 1.11 5.72 50 88  2,027,712,157 63.88 1.46 6.71 3.01 11.58 -1.55 -4.87 1.10 8.32 46 63  603,104,069 19.00 3.58 14.24 0.01 0.00 3.57 14.24 49 50  167,943,297 5.29 -2.96 5.30 -4.31 1.50 1.35 3.80 -3.88 3.52 29 31  127,009,603 4.00 -2.93 2.45 -2.92 4.44 -0.01 -1.99 -2.59 5.02	1.78	1.78 6.66 11.40 11.40 -0.67 -2.87 -3.45 -3.45 1.27 5.95 11.23 11.23 -0.16 -2.16 -3.28 -3.28 1.82 3.68 7.50 7.50 -0.71 0.11 0.45 0.45 1.11 5.72 10.86 10.86 50 88 87 87  2,027,712,157 63.88 1.46 6.71 12.31 12.31 3.01 11.58 19.92 19.92 -1.55 -4.87 -7.61 -7.61 1.10 8.32 15.94 15.94 46 63 67 67  603,104,069 19.00 3.58 14.24 23.93 23.93 3.57 14.24 23.88 23.88 0.01 0.00 0.05 0.05 3.57 14.24 23.91 23.91 49 50 47 47  167,943,297 5.29 -2.96 5.30 15.72 15.72 -4.31 1.50 11.24 11.24 1.35 3.80 4.48 4.48 -3.88 3.52 11.97 11.97 29 31 18 18  127,009,603 4.00 -2.93 2.45 1.00 1.00 -2.92 4.44 9.14 9.14 -0.01 -1.99 -8.14 -8.14 -2.59 5.02 9.47 9.47	1.78 6.66 11.40 11.40 3.40 -0.67 -2.87 -3.45 -3.45 -0.95 1.27 5.95 11.23 11.23 3.13 -0.16 -2.16 -3.28 -3.28 -0.68 1.82 3.68 7.50 7.50 7.50 -0.71 0.11 0.45 0.45 -5.05 1.11 5.72 10.86 10.86 3.10 50 88 87 87 69  2,027,712,157 63.88 1.46 6.71 12.31 12.31 3.30 3.01 11.58 19.92 19.92 5.94 -1.55 -4.87 -7.61 -7.61 -2.64 1.10 8.32 15.94 15.94 4.80 46 63 67 67 67 67  603,104,069 19.00 3.58 14.24 23.93 23.93 8.77 3.57 14.24 23.88 23.88 8.74 0.01 0.00 0.05 0.05 0.03 3.57 14.24 23.91 23.91 8.96 49 50 47 47 52  167,943,297 5.29 -2.96 5.30 15.72 15.72 4.82 -4.31 1.50 11.24 11.24 2.15 1.35 3.80 4.48 4.48 2.67 -3.88 3.52 11.97 11.97 3.77 29 31 18 18 41  127,009,603 4.00 -2.93 2.45 1.00 1.00 -6.75 -2.92 4.44 9.14 9.14 -4.86 -0.01 -1.99 -8.14 -8.14 -1.89 -2.59 5.02 9.47 9.47 -2.78	1.78 6.66 11.40 11.40 3.40 7.36   -0.67 -2.87 -3.45 -3.45 -0.95 -0.21   1.27 5.95 11.23 11.23 3.13 7.45   -0.16 -2.16 -3.28 -3.28 -0.68 -0.30   1.82 3.68 7.50 7.50 7.50 7.50 7.50   -0.71 0.11 0.45 0.45 -5.05 -0.35   1.11 5.72 10.86 10.86 3.10 7.49   50 88 87 87 69 62    2,027,712,157 63.88 1.46 6.71 12.31 12.31 3.30 10.33   3.01 11.58 19.92 19.92 5.94 11.28   -1.55 -4.87 -7.61 -7.61 -2.64 -0.95   1.10 8.32 15.94 15.94 4.80 10.71   46 63 67 67 67 54    603,104,069 19.00 3.58 14.24 23.93 23.93 8.77 14.62   3.57 14.24 23.93 23.91 8.96 14.64   49 50 47 47 52 54   167,943,297 5.29 -2.96 5.30 15.72 15.72 4.82 10.55   -4.31 1.50 11.24 11.24 2.15 8.01   1.35 3.80 4.48 4.48 2.67 2.54   -3.88 3.52 11.97 11.97 3.77 9.72   29 31 18 18 41 31   127,009,603 4.00 -2.93 2.45 1.00 1.00 -6.75 10.05   -2.92 4.44 9.14 9.14 -4.86 6.17   -0.01 -1.99 -8.14 -8.14 -1.89 3.88   -2.59 5.02 9.47 9.47 -2.78 8.73	1.78 6.66 11.40 11.40 3.40 7.36 7.18 -0.67 -2.87 -3.45 -3.45 -0.95 -0.21 -0.15 1.27 5.95 11.23 11.23 3.13 7.45 7.13 -0.16 -2.16 -3.28 -3.28 -0.68 -0.30 -0.10 1.82 3.68 7.50 7.50 7.50 7.50 7.50 7.50 7.50 -0.71 0.11 0.45 0.45 -5.05 -0.35 -0.47 1.11 5.72 10.86 10.86 3.10 7.49 7.47 50 88 87 87 69 62 65  2,027,712,157 63.88 1.46 6.71 12.31 12.31 3.30 10.33 9.76 3.01 11.58 19.92 19.92 5.94 11.28 10.57 -1.55 -4.87 -7.61 -7.61 -2.64 -0.95 -0.81 1.10 8.32 15.94 15.94 4.80 10.71 10.04 46 63 67 67 67 67 54 55  603,104,069 19.00 3.58 14.24 23.93 23.93 8.77 14.62 13.94	1.78	1.78



	Allocatio	n					Perfor	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
International Equity												
Mondrian International Value Equity (SA)	185,195,432	5.83	1.13	3.76	11.42	11.42	3.98	5.63	5.01	3.67	6.02	04/01/2004
MSCI EAFE Val Index (USD) (Gross)	, ,		0.36	5.08	14.54	14.54	6.31	6.76	5.27	3.65	5.50	
Difference			0.77	-1.32	-3.12	-3.12	-2.33	-1.13	-0.26	0.02	0.52	
IM International Value Equity (SA+CF) Median			0.40	4.47	11.25	11.25	3.59	7.38	5.93	4.86	6.94	
Rank			32	60	48	48	44	77	74	81	88	
Barings Focused EAFE Plus Equity (SA)	184,774,252	5.82	-1.36	0.44	5.44	5.44	-0.17	4.80	4.81	4.99	5.19	02/01/2012
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.99	
Difference			-2.53	-5.60	-6.73	-6.73	-1.14	-1.25	-0.87	0.65	-0.80	
IM International Equity (SA+CF) Median			0.35	5.34	11.44	11.44	1.83	6.99	6.27	5.27	7.56	
Rank			80	91	87	87	71	85	81	59	96	
Axiom Emerging Markets Equity (SA)	95,869,348	3.02	5.90	12.06	14.86	14.86	N/A	N/A	N/A	N/A	5.50	08/01/2022
MSCI Emg Mkts Index (USD) (Gross)			5.12	7.68	12.97	12.97	-4.68	3.49	3.93	3.18	7.89	
Difference			0.78	4.38	1.89	1.89	N/A	N/A	N/A	N/A	-2.39	
IM Emerging Markets Equity (SA+CF) Median			4.71	7.69	13.59	13.59	-2.85	4.70	4.95	4.31	10.37	
Rank			30	20	44	44	N/A	N/A	N/A	N/A	83	
Wasatch EM Small Cap (SA)	58,909,869	1.86	7.69	5.68	18.47	18.47	-2.87	11.59	9.67	7.29	7.25	08/01/2012
MSCI Emg Mkts Sm Cap Index (USD) (Gross)			6.07	7.25	20.57	20.57	3.07	10.50	7.53	5.56	6.72	
Difference			1.62	-1.57	-2.10	-2.10	-5.94	1.09	2.14	1.73	0.53	
IM Emerging Markets Equity (SA+CF) Median			4.71	7.69	13.59	13.59	-2.85	4.70	4.95	4.31	5.29	
Rank			11	67	29	29	51	10	8	10	16	
Fixed Income	682,981,235	21.52	0.84	1.83	6.50	6.50	0.08	2.10	2.66	2.30	4.24	07/01/2005
Bloomberg US Unv Bond Index			0.19	-0.28	3.47	3.47	-2.68	0.11	1.15	1.63	3.23	
Difference			0.65	2.11	3.03	3.03	2.76	1.99	1.51	0.67	1.01	
IM U.S. Fixed Income (SA+CF) Median			0.67	0.92	4.71	4.71	-0.63	1.36	2.01	2.15	3.46	
Rank			39	32	26	26	42	34	29	43	29	
Agincourt Core Fixed Income (SA)	269,784,051	8.50	0.23	-0.42	3.18	3.18	-2.59	0.29	1.39	1.83	4.29	07/01/1998
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.85	
Difference			0.16	0.29	0.55	0.55	0.43	0.52	0.53	0.48	0.44	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			0.26	-0.19	3.21	3.21	-2.63	0.31	1.38	1.82	4.29	
Rank			56	63	53	53	45	55	49	50	51	



	Allocation	n					Perfor	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Loomis Sayles Global World Bond (SA)	83,850,333	2.64	-1.67	-4.03	-0.16	-0.16	-6.95	-2.27	-0.44	-0.35	1.68	05/01/2008
FTSE Wrld Govt Bond Index			-1.58	-3.96	-0.63	-0.63	-6.92	-3.20	-1.28	-1.20	0.53	
Difference			-0.09	-0.07	0.47	0.47	-0.03	0.93	0.84	0.85	1.15	
IM Global Fixed Income (SA+CF) Median			0.55	1.16	7.08	7.08	-0.93	1.85	2.51	2.55	2.87	
Rank			91	88	88	88	95	93	90	88	74	
Oaktree Global Credit (SA)	168,930,907	5.32	2.12	5.09	12.63	12.63	4.44	4.72	4.43	4.38	5.95	01/01/1998
Oaktree Global Credit Custom Index			1.55	3.58	10.88	10.88	3.00	4.13	3.44	3.15	4.62	
Difference			0.57	1.51	1.75	1.75	1.44	0.59	0.99	1.23	1.33	
Absolute Return	148,375,290	4.67	1.64	5.96	9.81	9.81	3.90	3.20	3.24	2.17	3.34	12/01/2010
Wellington Global Total Return (CF)	77,222,296	2.43	2.20	3.74	6.21	6.21	3.83	3.19	3.97	N/A	3.65	12/01/2016
ICE BofAML 3 Mo US T-Bill Index+4%			2.32	4.66	9.62	9.62	7.15	6.24	6.15	5.57	6.03	
Difference			-0.12	-0.92	-3.41	-3.41	-3.32	-3.05	-2.18	N/A	-2.38	
TCW MetWest Unconstrained (SA)	66,103,500	2.08	1.08	2.09	7.14	7.14	1.38	N/A	N/A	N/A	1.53	01/01/2021
ICE BofAML 3 Mo US T-Bill Index+3%			2.07	4.16	8.56	8.56	6.12	5.22	5.13	4.56	5.68	
Difference			-0.99	-2.07	-1.42	-1.42	-4.74	N/A	N/A	N/A	-4.15	
Private Credit	12,040,653	0.38	6.45	10.54	17.39	17.39	7.35	10.53	10.06	N/A	9.58	10/01/2016
Real Assets	416,822,698	13.13	0.14	-6.18	-8.03	-8.03	2.75	2.98	3.73	3.95	5.15	01/01/1998
OPPRS Real Assets Blended Benchmark			-0.67	-3.23	-10.00	-10.00	1.02	2.06	2.73	1.40	5.17	
Difference			0.81	-2.95	1.97	1.97	1.73	0.92	1.00	2.55	-0.02	
JP Morgan Strategic Property (CF)	140,336,755	4.42	1.36	-8.55	-14.10	-14.10	-0.32	1.59	3.00	5.27	4.54	11/01/2007
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	4.74	
Difference			1.81	-5.74	-4.84	-4.84	-2.22	-1.57	-1.36	-1.14	-0.20	
Blackstone Property Partners (CF)	173,034,787	5.45	1.23	-4.96	-3.28	-3.28	4.46	4.09	5.74	N/A	8.05	12/01/2014
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	6.34	
Difference			1.68	-2.15	5.98	5.98	2.56	0.93	1.38	N/A	1.71	
Private Real Estate	103,451,156	3.26	-3.70	-5.03	-6.91	-6.91	5.54	6.00	7.17	8.64	7.93	08/01/2011
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	7.82	
Difference			-3.25	-2.22	2.35	2.35	3.64	2.84	2.81	2.23	0.11	
Columbus Square (SA)	4,688,517	0.15	3.88	7.10	15.39	15.39	7.99	3.81	4.51	6.32	12.02	03/01/199
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	8.13	
Difference			4.33	9.91	24.65	24.65	6.09	0.65	0.15	-0.09	3.89	

Performance shown for Private Equity is net of fees. Performance shown is gross of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month following initial funding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01. Total Equity includes Public Equity, Private Equity, and Long/Short Equity.



	Allocation	1					Perfor	mance (%)	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Long/Short Equity	63,853,036	2.01	-5.62	-2.51	2.77	2.77	-3.81	3.78	4.33	4.40	5.34	05/01/2012
MSCI ACW Index (USD) (Gross)			3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	10.25	
Difference			-8.63	-14.09	-17.15	-17.15	-9.75	-7.50	-6.24	-4.59	-4.91	
HFRI FOF Strat Index			0.85	5.93	10.84	10.84	0.58	4.81	4.24	3.52	4.07	
Difference			-6.47	-8.44	-8.07	-8.07	-4.39	-1.03	0.09	0.88	1.27	
K2 Ascent (CF)	63,479,827	2.00	-5.63	-2.47	2.84	2.84	-3.82	N/A	N/A	N/A	3.01	06/01/2020
HFRI FOF Strat Index			0.85	5.93	10.84	10.84	0.58	4.81	4.24	3.52	6.51	
Difference			-6.48	-8.40	-8.00	-8.00	-4.40	N/A	N/A	N/A	-3.50	
Private Equity	541,053,251	17.05	2.43	4.62	6.38	6.38	8.91	15.69	15.02	13.13	12.83	07/01/2003
MSCI ACW Index (USD) (Gross)			3.01	11.58	19.92	19.92	5.94	11.28	10.57	8.99	9.24	
Difference			-0.58	-6.96	-13.54	-13.54	2.97	4.41	4.45	4.14	3.59	
Cambridge US Prvt Eq Index			0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	14.65	
Difference			2.43	2.75	0.81	0.81	1.89	1.05	0.35	-0.12	-1.82	



### Oklahoma State Pension Commission Oklahoma Police Pension & Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



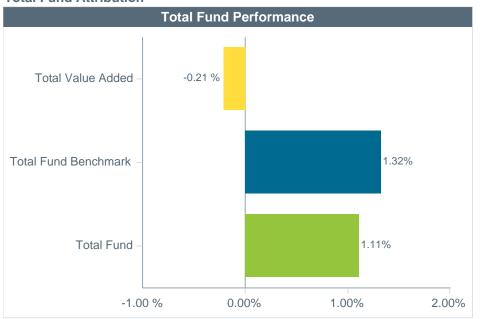
### Oklahoma State Pension Commission Oklahoma Police Pension & Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis

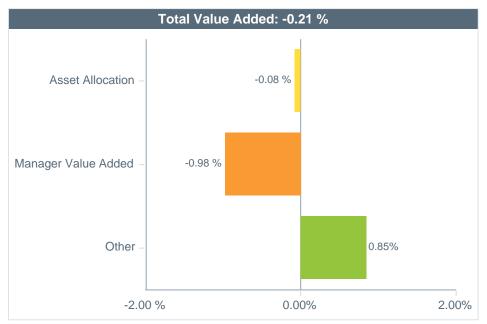


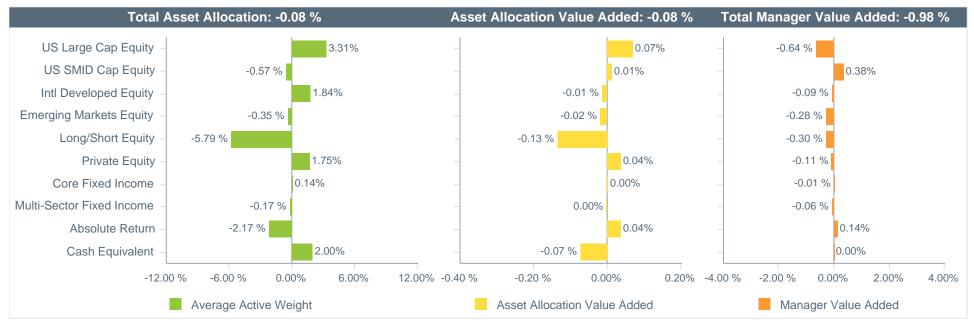
Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.



### Oklahoma State Pension Commission Oklahoma Police Pension & Retirement Fund Total Fund Attribution





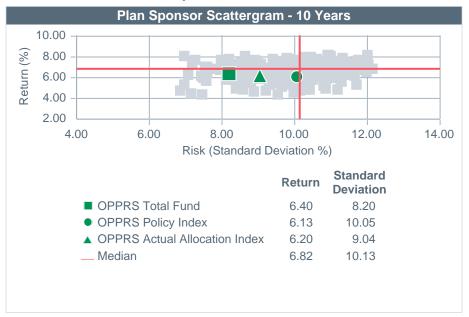


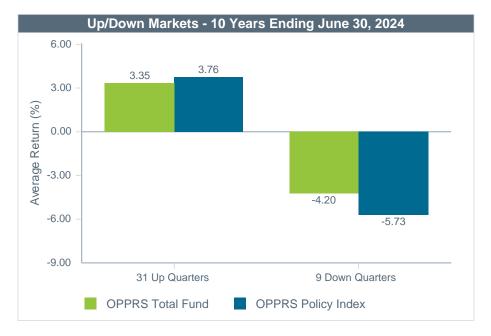
Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution calculation. Allocation to Multi-Sector Fixed Income includes Private Credit.

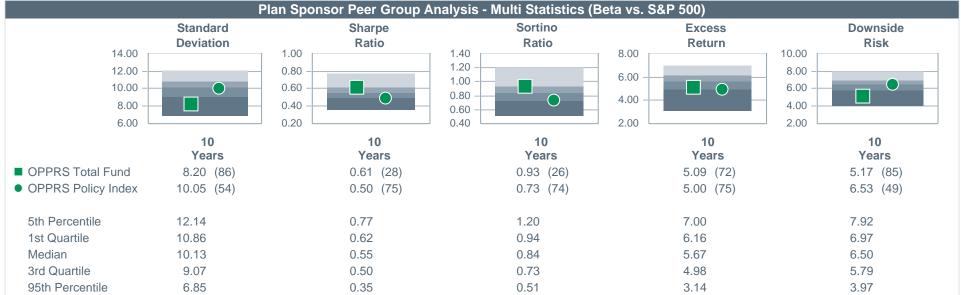


### Oklahoma State Pension Commission Oklahoma Police Pension & Retirement System

Total Fund Risk & Return, Up/Down Markets, and Multi Statistics



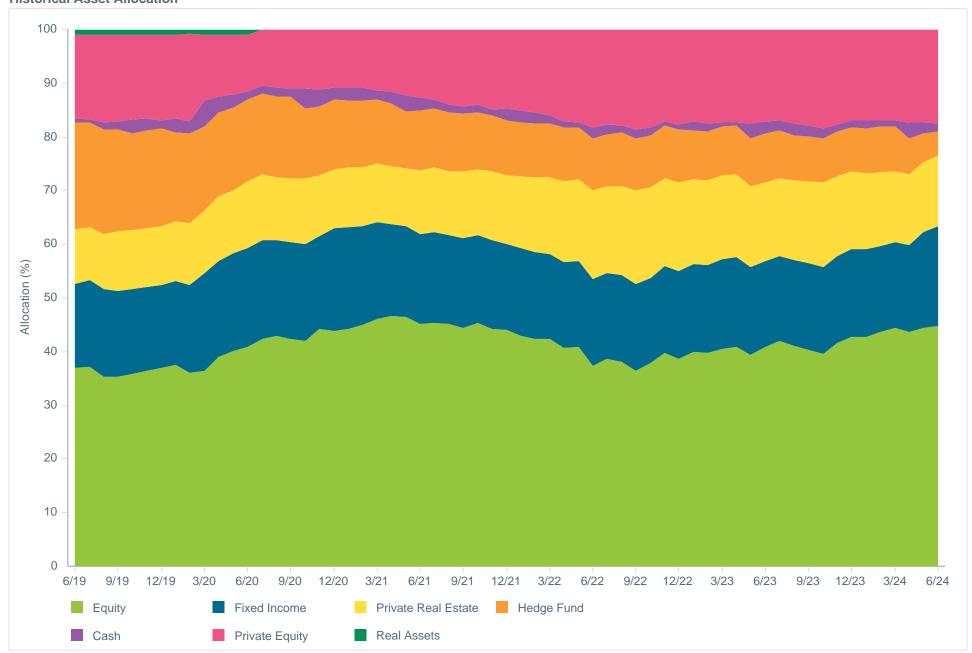




Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.



Oklahoma State Pension Commission Oklahoma Police Pension & Retirement Fund Historical Asset Allocation



Allocation to Fixed Income includes Private Credit.



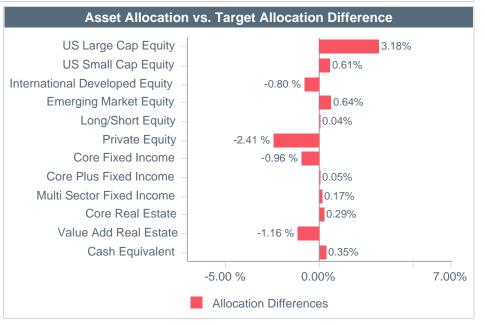
## Oklahoma Law Enforcement Retirement System (OLERS)



#### Oklahoma State Pension Commission Oklahoma Law Enforcement Retirement System Total Fund Summary

				Per	rformance	e (%)							
			Trailir	ng						Calenda	r Year		
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
OLERS Total Fund (Net)	0.82	3.81	8.23	8.23	0.85	5.93	6.04	5.59	10.88		14.55	12.26	17.44
OLERS Policy Index	1.22	5.87	10.59	10.59	3.18	7.52	7.50	6.90	12.81	-13.05	15.07	12.82	19.82
Difference	-0.40	-2.06	-2.36	-2.36	-2.33	-1.59	-1.46	-1.31	-1.93	-1.41	-0.52	-0.56	-2.38
OLERS Actual Allocation Index	1.33	6.56	12.44	12.44	3.31	9.41	8.71	7.77	14.99	-13.91	14.75	21.91	17.33
Difference	-0.51	-2.75	-4.21	-4.21	-2.46	-3.48	-2.67	-2.18	-4.11	-0.55	-0.20	-9.65	0.11
Actuarial Discount Rate (7.5%)	1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50	7.50
Difference	-1.00	0.13	0.73	0.73	-6.65	-1.57	-1.46	-1.91	3.38	-21.96	7.05	4.76	9.94
OLERS Total Fund (Gross)	0.92	4.04	8.71	8.71	1.29	6.42	6.55	6.13	11.38	-14.08	15.04	12.80	18.07
OLERS Policy Index	1.22	5.87	10.59	10.59	3.18	7.52	7.50	6.90	12.81	-13.05	15.07	12.82	19.82
Difference	-0.30	-1.83	-1.88	-1.88	-1.89	-1.10	-0.95	-0.77	-1.43	-1.03	-0.03	-0.02	-1.75
OLERS Actual Allocation Index	1.33	6.56	12.44	12.44	3.31	9.41	8.71	7.77	14.99	-13.91	14.75	21.91	17.33
Difference	-0.41	-2.52	-3.73	-3.73	-2.02	-2.99	-2.16	-1.64	-3.61	-0.17	0.29	-9.11	0.74
All Public Plans-Total Fund Median	1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47	18.63
Rank	61	84	82	82	87	79	80	75	69	70	37	45	58

Asset Alloc	ation vs. Target <i>I</i>	Allocation	
	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)
OLERS (Law Enforcement)	1,143,923,260	100.00	100.00
US Large Cap Equity	236,558,828	20.68	17.50
US Small Cap Equity	121,354,236	10.61	10.00
International Developed Equity	162,438,632	14.20	15.00
Emerging Market Equity	64,574,248	5.64	5.00
Long/Short Equity	460,537	0.04	0.00
Private Equity	143,978,484	12.59	15.00
Core Fixed Income	74,839,137	6.54	7.50
Core Plus Fixed Income	114,989,537	10.05	10.00
Multi Sector Fixed Income	87,735,060	7.67	7.50
Core Real Estate	106,229,432	9.29	9.00
Value Add Real Estate	26,794,359	2.34	3.50
Cash Equivalent	3,970,770	0.35	0.00



Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



#### **Oklahoma State Pension Commission Oklahoma Law Enforcement Retirement System Asset Allocation & Performance - Net of Fees**

	Allocatio	Performance (%)										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OLERS Total Fund	1,143,923,260	100.00	0.82	3.81	8.23	8.23	0.85	5.93	6.04	5.59	29.44	10/01/1990
OLERS Policy Index			1.22	5.87	10.59	10.59	3.18	7.52	7.50	6.90	8.36	
Difference			-0.40	-2.06	-2.36	-2.36	-2.33	-1.59	-1.46	-1.31	21.08	
OLERS Actual Allocation Index			1.33	6.56	12.44	12.44	3.31	9.41	8.71	7.77	8.53	
Difference			-0.51	-2.75	-4.21	-4.21	-2.46	-3.48	-2.67	-2.18	20.91	
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	
Difference			-1.00	0.13	0.73	0.73	-6.65	-1.57	-1.46	-1.91	21.94	
US Large Cap Equity	236,558,828	20.68	1.37	11.17	21.77	21.77	6.62	13.50	13.38	11.99	13.11	04/01/2010
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	13.59	
Difference			-2.91	-4.12	-2.79	-2.79	-3.39	-1.55	-0.90	-0.87	-0.48	
Hotchkis Wiley Large Cap Value Equity (SA)	57,697,108	5.04	-2.71	6.68	17.78	17.78	7.59	11.26	9.90	9.29	11.82	11/01/1990
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	10.40	
Difference			-0.54	0.06	4.72	4.72	2.07	2.25	1.29	1.06	1.42	
NTGI S&P 500 Index (CF)	119,551,138	10.45	4.28	15.31	24.58	24.58	10.04	15.05	14.26	12.84	11.81	08/01/2008
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	11.81	
Difference			0.00	0.02	0.02	0.02	0.03	0.00	-0.02	-0.02	0.00	
Polen Focus Growth (CF)	59,310,582	5.18	0.08	8.35	19.87	19.87	0.49	11.70	N/A	N/A	15.02	01/01/2019
Russell 1000 Grth Index			8.33	20.70	33.48	33.48	11.28	19.34	18.64	16.33	21.67	
Difference			-8.25	-12.35	-13.61	-13.61	-10.79	-7.64	N/A	N/A	-6.65	
US Small Cap Equity	121,354,236	10.61	-2.08	4.34	12.64	12.64	0.36	8.65	7.77	7.24	N/A	11/01/2009
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	10.70	
Difference			1.20	2.61	2.58	2.58	2.94	1.71	0.92	0.24	N/A	
Kennedy Capital Small Cap Value Equity (SA)	60,492,695	5.29	-2.84	2.53	14.36	14.36	4.64	10.56	8.04	7.93	20.47	02/01/1996
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	8.99	
Difference			0.80	3.38	3.46	3.46	5.17	3.49	2.15	1.70	11.48	
Wellington Small Cap Growth (CF)	60,861,541	5.32	-1.42	6.14	10.97	10.97	-3.99	6.26	7.07	N/A	8.49	08/01/2016
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	8.52	
Difference			1.50	1.70	1.83	1.83	0.87	0.09	-0.21	N/A	-0.03	



#### **Oklahoma State Pension Commission Oklahoma Law Enforcement Retirement System Asset Allocation & Performance - Net of Fees**

	Allocation				Performance (%)								
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date	
International Equity	227,012,880	19.85	1.19	2.75	8.46	8.46	-1.54	4.97	4.79	3.96	N/A	04/01/1994	
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.73		
Difference			0.02	-3.29	-3.71	-3.71	-2.51	-1.08	-0.89	-0.38	N/A		
Mondrian International Equity (SA)	87,834,491	7.68	1.01	3.51	10.86	10.86	3.46	5.09	4.44	3.10	4.82	01/01/2005	
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.59		
Difference			-0.16	-2.53	-1.31	-1.31	2.49	-0.96	-1.24	-1.24	-0.77		
Barings Focused Intl Equity (SA)	74,604,141	6.52	-1.46	0.24	5.03	5.03	-0.57	4.31	4.18	4.30	4.90	02/01/2012	
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.99		
Difference			-2.63	-5.80	-7.14	-7.14	-1.54	-1.74	-1.50	-0.04	-1.09		
William Blair Emerging Markets Leaders (CF)	44,373,978	3.88	3.53	4.57	6.14	6.14	-9.60	1.74	3.26	N/A	4.49	09/01/2016	
MSCI Emg Mkts Index (USD) (Gross)			5.12	7.68	12.97	12.97	-4.68	3.49	3.93	3.18	5.40		
Difference			-1.59	-3.11	-6.83	-6.83	-4.92	-1.75	-0.67	N/A	-0.91		
Wasatch EM Small Cap CI A (CF)	20,200,270	1.77	7.40	5.10	17.18	17.18	-3.93	10.25	8.27	5.95	6.03	07/01/2012	
MSCI Emg Mkts Index (USD) (Gross)			5.12	7.68	12.97	12.97	-4.68	3.49	3.93	3.18	4.09		
Difference			2.28	-2.58	4.21	4.21	0.75	6.76	4.34	2.77	1.94		
Private Equity	143,978,484	12.59	3.44	4.68	8.80	8.80	6.50	13.73	13.08	10.43	9.32	12/01/2001	
S&P 500 Index+5%			5.56	18.14	30.78	30.78	15.51	20.80	19.99	18.50	14.74		
Difference			-2.12	-13.46	-21.98	-21.98	-9.01	-7.07	-6.91	-8.07	-5.42		
Cambridge US Prvt Eq Index			0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	13.50		
Difference			3.44	2.81	3.23	3.23	-0.52	-0.91	-1.59	-2.82	-4.18		



	Allocation	n					Perfori	mance (%	o)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	277,563,734	24.26	0.22	-0.38	3.46	3.46	-3.03	-0.94	0.25	0.85	N/A	10/01/1990
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.01	
Difference			0.15	0.33	0.83	0.83	-0.01	-0.71	-0.61	-0.50	N/A	
NTGI Aggregate Index (SA)	74,839,137	6.54	0.07	-0.71	2.61	2.61	-3.00	-0.22	0.87	1.35	3.00	04/01/2004
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	2.96	
Difference			0.00	0.00	-0.02	-0.02	0.02	0.01	0.01	0.00	0.04	
TCW Core Plus Fixed Income (SA)	114,989,537	10.05	0.08	-0.91	2.54	2.54	-3.28	0.18	1.30	1.74	4.68	12/01/1993
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	4.32	
Difference			0.01	-0.20	-0.09	-0.09	-0.26	0.41	0.44	0.39	0.36	
Loomis Sayles	87,735,060	7.67	0.36	0.70	5.83	5.83	N/A	N/A	N/A	N/A	-2.02	09/01/2021
Bloomberg US Govt Crdt Bond Index			0.05	-0.68	2.74	2.74	-3.11	-0.07	1.04	1.51	-3.67	
Difference			0.31	1.38	3.09	3.09	N/A	N/A	N/A	N/A	1.65	
Real Assets	133,023,791	11.63	1.29	-1.96	-11.15	-11.15	-0.05	1.11	2.03	2.62	N/A	06/01/1999
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	6.41	
Difference			1.96	1.27	-1.15	-1.15	-1.07	-1.16	-1.42	-2.85	N/A	
Core Real Estate												
JPMCB Strategic Property (CF)	87,530,396	7.65	1.12	-4.66	-14.84	-14.84	-1.18	0.67	2.05	4.29	5.83	04/01/2012
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	6.49	
Difference			1.79	-1.43	-4.84	-4.84	-2.20	-1.60	-1.40	-1.18	-0.66	
UBS Trumbull Property (SA)	14,449,036	1.26	-1.14	-3.08	-8.66	-8.66	-1.40	-0.96	0.11	2.52	3.38	01/01/2013
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	6.30	
Difference			-0.47	0.15	1.34	1.34	-2.42	-3.23	-3.34	-2.95	-2.92	
Colcord Center (CF)	4,250,000	0.37	12.74	15.57	1.22	1.22	2.03	4.52	4.28	5.60	4.62	05/01/2008
Value Add Real Estate	26,794,359	2.34	1.49	7.91	4.74	4.74	N/A	N/A	N/A	N/A	6.39	03/01/2022
NCREIF ODCE Index (AWA) (Net)			-0.67	-3.23	-10.00	-10.00	1.02	2.27	3.45	5.47	-4.42	
Difference			2.16	11.14	14.74	14.74	N/A	N/A	N/A	N/A	10.81	



	Allocatio				Perfor	mance (%	)					
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OLERS Total Fund	1,143,923,260	100.00	0.92	4.04	8.71	8.71	1.29	6.42	6.55	6.13	7.88	10/01/1990
OLERS Policy Index			1.22	5.87	10.59	10.59	3.18	7.52	7.50	6.90	8.36	
Difference			-0.30	-1.83	-1.88	-1.88	-1.89	-1.10	-0.95	-0.77	-0.48	
OLERS Actual Allocation Index			1.33	6.56	12.44	12.44	3.31	9.41	8.71	7.77	8.53	
Difference			-0.41	-2.52	-3.73	-3.73	-2.02	-2.99	-2.16	-1.64	-0.65	
Actuarial Discount Rate (7.5%)			1.82	3.68	7.50	7.50	7.50	7.50	7.50	7.50	7.50	
Difference			-0.90	0.36	1.21	1.21	-6.21	-1.08	-0.95	-1.37	0.38	
All Public Plans-Total Fund Median			1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	8.35	
Rank			61	84	82	82	87	79	80	75	87	
US Large Cap Equity	236,558,828	20.68	1.47	11.38	22.23	22.23	6.98	13.85	13.75	12.39	13.43	04/01/2010
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	13.59	
Difference			-2.81	-3.91	-2.33	-2.33	-3.03	-1.20	-0.53	-0.47	-0.16	
Hotchkis Wiley Large Cap Value Equity (SA)	57,697,108	5.04	-2.46	7.20	18.84	18.84	8.30	11.90	10.53	9.94	11.86	11/01/1990
Russell 1000 Val Index			-2.17	6.62	13.06	13.06	5.52	9.01	8.61	8.23	10.40	
Difference			-0.29	0.58	5.78	5.78	2.78	2.89	1.92	1.71	1.46	
IM U.S. Large Cap Value Equity (SA+CF) Median			-1.24	8.20	16.79	16.79	7.72	11.47	10.68	9.59	11.64	
Rank			73	62	30	30	40	44	55	40	38	
NTGI S&P 500 Index (CF)	119,551,138	10.45	4.28	15.31	24.59	24.59	10.05	15.07	14.28	12.87	11.83	08/01/2008
S&P 500 Index (Cap Wtd)			4.28	15.29	24.56	24.56	10.01	15.05	14.28	12.86	11.81	
Difference			0.00	0.02	0.03	0.03	0.04	0.02	0.00	0.01	0.02	
IM U.S. Large Cap Index Equity (SA+CF) Median			3.57	14.24	23.91	23.91	8.96	14.64	13.97	12.56	11.80	
Rank			27	15	17	17	13	16	22	26	40	
Polen Focus Growth (CF)	59,310,582	5.18	0.21	8.62	20.48	20.48	0.99	12.26	N/A	N/A	15.59	01/01/2019
Russell 1000 Grth Index			8.33	20.70	33.48	33.48	11.28	19.34	18.64	16.33	21.67	
Difference			-8.12	-12.08	-13.00	-13.00	-10.29	-7.08	N/A	N/A	-6.08	
IM U.S. Large Cap Growth Equity (SA+CF) Median			5.62	18.76	30.72	30.72	8.78	16.69	16.91	14.96	19.40	
Rank			89	92	83	83	95	88	N/A	N/A	86	



	Allocatio	n					Perfor	mance (%	)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
US Small Cap Equity	121,354,236	10.61	-1.87	4.79	13.61	13.61	1.23	9.58	8.70	8.14	N/A	11/01/2009
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	10.70	
Difference			1.41	3.06	3.55	3.55	3.81	2.64	1.85	1.14	N/A	
Kennedy Capital Small Cap Value Equity (SA)	60,492,695	5.29	-2.61	3.00	15.42	15.42	5.60	11.58	9.04	8.93	12.05	02/01/1996
Russell 2000 Val Index			-3.64	-0.85	10.90	10.90	-0.53	7.07	5.89	6.23	8.99	
Difference			1.03	3.85	4.52	4.52	6.13	4.51	3.15	2.70	3.06	
IM U.S. Small Cap Value Equity (SA+CF) Median			-3.48	1.97	12.96	12.96	4.12	9.92	8.22	8.09	11.51	
Rank			36	40	28	28	33	25	37	29	24	
Wellington Small Cap Growth (CF)	60,861,541	5.32	-1.23	6.56	11.86	11.86	-3.21	7.12	7.93	N/A	9.33	08/01/2016
Russell 2000 Grth Index			-2.92	4.44	9.14	9.14	-4.86	6.17	7.28	7.39	8.52	
Difference			1.69	2.12	2.72	2.72	1.65	0.95	0.65	N/A	0.81	
IM U.S. Small Cap Growth Equity (SA+CF) Median			-2.59	5.02	9.47	9.47	-2.78	8.73	11.09	10.22	11.96	
Rank			36	39	34	34	53	76	91	N/A	90	
International Equity	227,012,880	19.85	1.34	3.05	9.10	9.10	-0.94	5.66	5.53	4.71	N/A	04/01/1994
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.73	
Difference			0.17	-2.99	-3.07	-3.07	-1.91	-0.39	-0.15	0.37	N/A	
IM International Equity (SA+CF) Median			0.35	5.34	11.44	11.44	1.83	6.99	6.27	5.27	7.39	
Rank			29	77	67	67	73	74	65	68	N/A	
Mondrian International Equity (SA)	87,834,491	7.68	1.13	3.76	11.42	11.42	3.98	5.63	5.01	3.67	5.32	01/01/2005
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.59	
Difference			-0.04	-2.28	-0.75	-0.75	3.01	-0.42	-0.67	-0.67	-0.27	
IM All ACWI Ex US (SA+CF) Median			0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	6.34	
Rank			38	74	48	48	18	80	82	89	92	
Barings Focused Intl Equity (SA)	74,604,141	6.52	-1.36	0.44	5.44	5.44	-0.16	4.81	4.81	4.99	5.60	02/01/2012
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.99	
Difference			-2.53	-5.60	-6.73	-6.73	-1.13	-1.24	-0.87	0.65	-0.39	
IM All ACWI Ex US (SA+CF) Median			0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	7.39	
Rank			82	100	91	91	70	92	85	59	93	
William Blair Emerging Markets Leaders (CF)	44,373,978	3.88	3.73	4.97	6.98	6.98	-8.87	2.55	4.08	N/A	5.29	09/01/2016
MSCI Emg Mkts Index (USD) (Gross)			5.12	7.68	12.97	12.97	-4.68	3.49	3.93	3.18	5.40	
Difference			-1.39	-2.71	-5.99	-5.99	-4.19	-0.94	0.15	N/A	-0.11	
IM Emerging Markets Equity (SA+CF) Median			4.71	7.69	13.59	13.59	-2.85	4.70	4.95	4.31	6.33	
Rank			64	72	81	81	87	84	67	N/A	75	



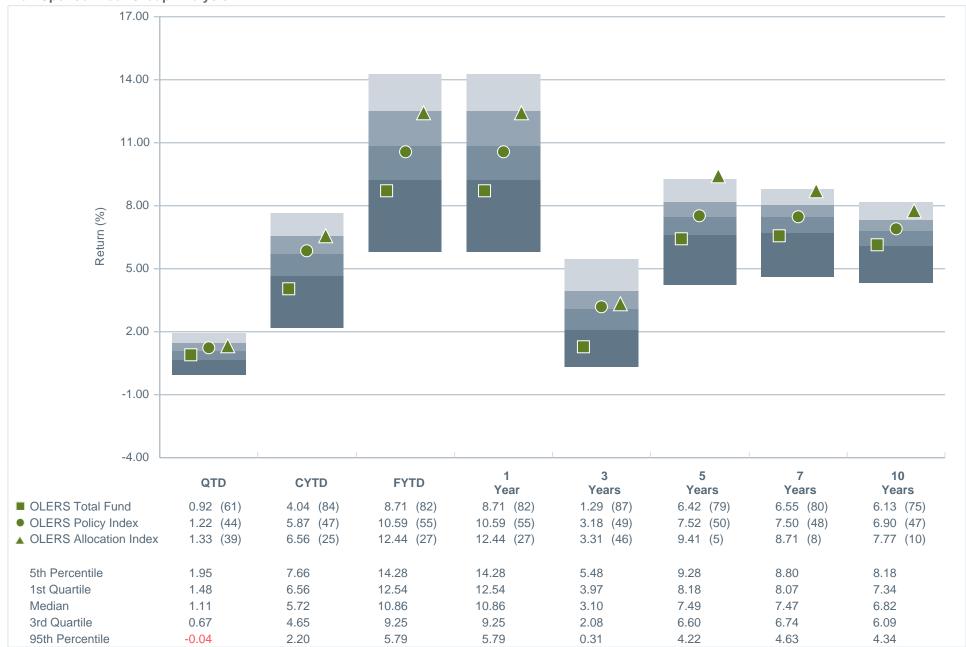
	Allocation					Perfor	mance (%	)				
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Wasatch EM Small Cap CI A (CF)	20,200,270	1.77	7.69	5.72	18.67	18.67	-2.65	11.74	9.79	7.47	7.56	07/01/2012
MSCI Emg Mkts Index (USD) (Gross)			5.12	7.68	12.97	12.97	-4.68	3.49	3.93	3.18	4.09	
Difference			2.57	-1.96	5.70	5.70	2.03	8.25	5.86	4.29	3.47	
IM Emerging Markets Equity (SA+CF) Median			4.71	7.69	13.59	13.59	-2.85	4.70	4.95	4.31	5.38	
Rank			11	66	28	28	50	9	7	9	15	
Private Equity	143,978,484	12.59	3.44	4.68	8.80	8.80	6.50	13.73	13.08	10.43	N/A	10/01/1990
S&P 500 Index+5%			5.56	18.14	30.78	30.78	15.51	20.80	19.99	18.50	16.69	
Difference			-2.12	-13.46	-21.98	-21.98	-9.01	-7.07	-6.91	-8.07	N/A	
Cambridge US Prvt Eq Index			0.00	1.87	5.57	5.57	7.02	14.64	14.67	13.25	14.66	
Difference			3.44	2.81	3.23	3.23	-0.52	-0.91	-1.59	-2.82	N/A	
Fixed Income	277,563,734	24.26	0.28	-0.25	3.72	3.72	-2.81	-0.70	0.50	1.12	5.82	10/01/1990
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	5.01	
Difference			0.21	0.46	1.09	1.09	0.21	-0.47	-0.36	-0.23	0.81	
IM Global Fixed Income (SA+CF) Median			0.55	1.16	7.08	7.08	-0.93	1.85	2.51	2.55	N/A	
Rank			59	65	68	68	69	75	76	64	N/A	
NTGI Aggregate Index (SA)	74,839,137	6.54	0.08	-0.70	2.63	2.63	-2.98	-0.20	0.90	1.38	2.96	04/01/2004
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	2.96	
Difference			0.01	0.01	0.00	0.00	0.04	0.03	0.04	0.03	0.00	
IM U.S. Broad Market Core Fixed Income (SA+CF) Median			0.26	-0.19	3.21	3.21	-2.63	0.31	1.38	1.82	3.41	
Rank			92	95	90	90	79	92	90	90	93	
TCW Core Plus Fixed Income (SA)	114,989,537	10.05	0.16	-0.75	2.87	2.87	-2.97	0.50	1.63	2.06	5.05	12/01/1993
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	4.32	
Difference			0.09	-0.04	0.24	0.24	0.05	0.73	0.77	0.71	0.73	
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median			0.42	0.33	4.34	4.34	-2.32	0.92	1.88	2.24	5.10	
Rank			88	96	92	92	93	77	66	67	55	
Loomis Sayles	87,735,060	7.67	0.45	0.88	6.20	6.20	N/A	N/A	N/A	N/A	-1.78	09/01/2021
Bloomberg US Govt Crdt Bond Index			0.05	-0.68	2.74	2.74	-3.11	-0.07	1.04	1.51	-3.67	
Difference			0.40	1.56	3.46	3.46	N/A	N/A	N/A	N/A	1.89	
IM U.S. Broad Market Core+ Fixed Income (SA+CF) Median			0.42	0.33	4.34	4.34	-2.32	0.92	1.88	2.24	-2.76	
Rank			43	24	17	17	N/A	N/A	N/A	N/A	26	



	Allocatio				Perfor	mance (%)	)					
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Real Assets	133,023,791	11.63	1.48	-1.57	-10.47	-10.47	0.72	1.94	2.89	3.51	6.03	06/01/1999
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	7.40	
Difference			1.93	1.24	-1.21	-1.21	-1.18	-1.22	-1.47	-2.90	-1.37	
Core Real Estate												
JPMCB Strategic Property (CF)	87,530,396	7.65	1.36	-4.21	-14.06	-14.06	-0.31	1.60	3.01	5.28	6.79	04/01/2012
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	7.46	
Difference			1.81	-1.40	-4.80	-4.80	-2.21	-1.56	-1.35	-1.13	-0.67	
UBS Trumbull Property (SA)	14,449,036	1.26	-0.91	-2.51	-7.80	-7.80	-0.71	-0.24	0.90	3.44	4.32	01/01/2013
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	7.25	
Difference			-0.46	0.30	1.46	1.46	-2.61	-3.40	-3.46	-2.97	-2.93	
Colcord Center (CF)	4,250,000	0.37	12.74	15.57	1.22	1.22	2.03	4.52	4.28	5.60	4.62	05/01/2008
Value Add Real Estate	26,794,359	2.34	1.49	7.91	4.74	4.74	N/A	N/A	N/A	N/A	6.39	03/01/2022
NCREIF ODCE Index (AWA) (Gross)			-0.45	-2.81	-9.26	-9.26	1.90	3.16	4.36	6.41	-3.56	
Difference			1.94	10.72	14.00	14.00	N/A	N/A	N/A	N/A	9.95	



## Oklahoma State Pension Commission Oklahoma Law Enforcement Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



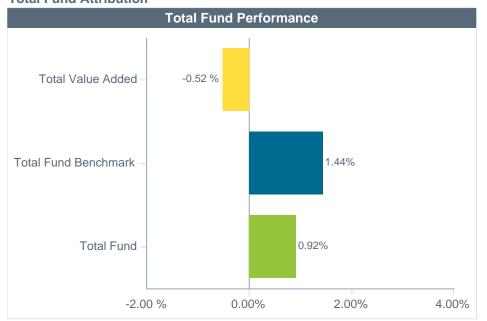
### Oklahoma State Pension Commission Oklahoma Law Enforcement Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis

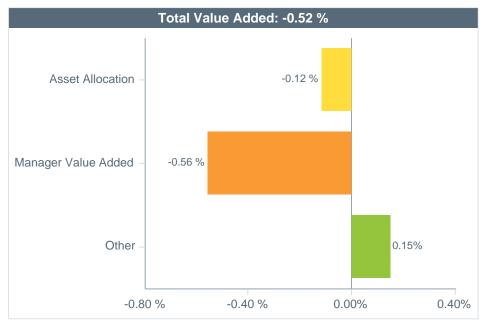


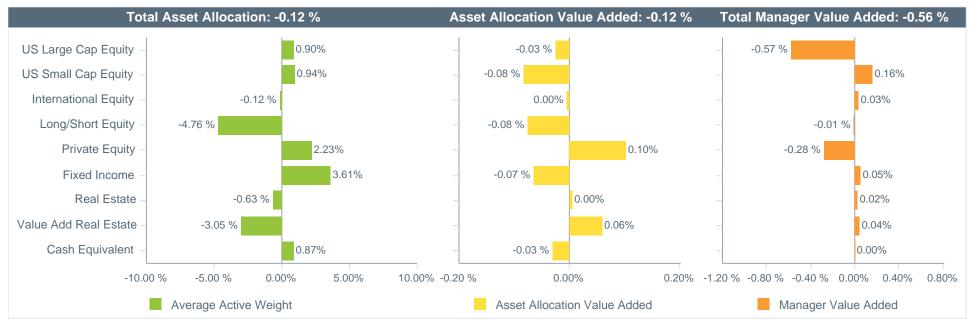
Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.



## Oklahoma State Pension Commission Oklahoma Law Enforcement Retirement System Total Fund Attribution







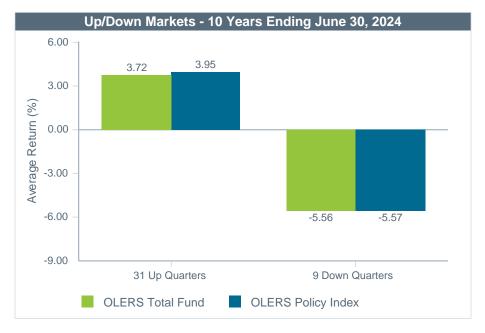
Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution calculation.

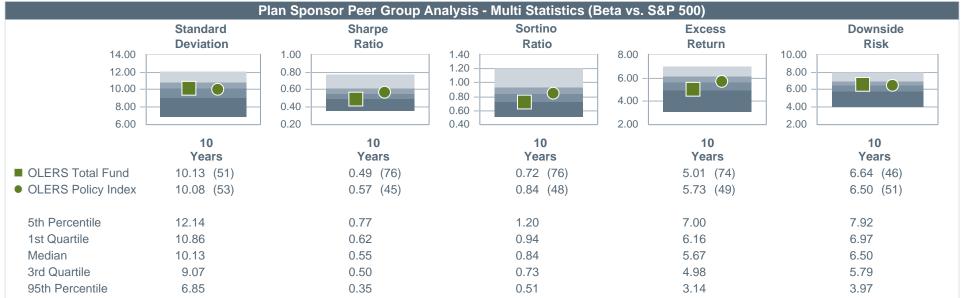


## Oklahoma State Pension Commission Oklahoma Law Enforcement Retirement System

Total Fund Risk & Return, Up/Down Markets, and Multi Statistics



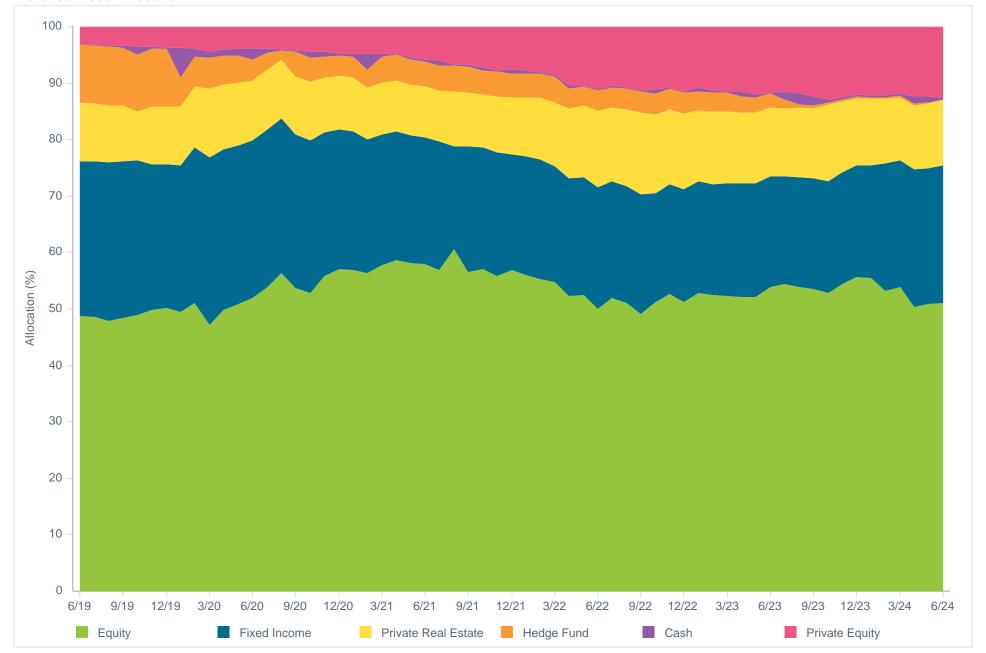




Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.









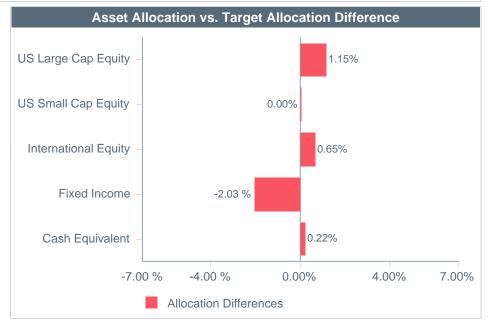
# Uniform Retirement System for Justices & Judges (URSJJ)



## Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges Total Fund Summary

Performance (%)													
			Trailir	ng						Calenda	r Year		
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
URSJJ Total Fund (Net)	1.42	6.53	12.85	12.85	2.03	7.23	7.23	6.61	16.23	-16.95	12.08	15.06	21.36
URSJJ Policy Index	1.33	6.18	12.46	12.46	2.01	7.16	7.22	6.65	16.11	-16.62	11.54	15.19	21.51
Difference	0.09	0.35	0.39	0.39	0.02	0.07	0.01	-0.04	0.12	-0.33	0.54	-0.13	-0.15
URSJJ Actual Allocation Index	1.43	6.55	12.90	12.90	2.06	7.90	7.65	6.86	16.19	-16.86	12.10	18.70	21.01
Difference	-0.01	-0.02	-0.05	-0.05	-0.03	-0.67	-0.42	-0.25	0.04	-0.09	-0.02	-3.64	0.35
Actuarial Discount Rate (6.5%)	1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50	6.50
Difference	-0.17	3.33	6.35	6.35	-4.47	0.73	0.73	0.11	9.73	-23.45	5.58	8.56	14.86
URSJJ Total Fund (Gross)	1.43	6.55	12.89	12.89	2.06	7.27	7.27	6.65	16.28	-16.93	12.12	15.10	21.40
URSJJ Policy Index	1.33	6.18	12.46	12.46	2.01	7.16	7.22	6.65	16.11	-16.62	11.54	15.19	21.51
Difference	0.10	0.37	0.43	0.43	0.05	0.11	0.05	0.00	0.17	-0.31	0.58	-0.09	-0.11
URSJJ Actual Allocation Index	1.43	6.55	12.90	12.90	2.06	7.90	7.65	6.86	16.19	-16.86	12.10	18.70	21.01
Difference	0.00	0.00	-0.01	-0.01	0.00	-0.63	-0.38	-0.21	0.09	-0.07	0.02	-3.60	0.39
All Public Plans-Total Fund Median	1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47	18.63
Rank	30	26	21	21	76	58	58	58	8	96	78	20	12

Asse	t Allocation vs. Ta	rget Allocation	
	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)
URSJJ (Judges)	413,388,639	100.00	100.00
US Large Cap Equity	145,323,557	35.15	34.00
US Small Cap Equity	24,798,796	6.00	6.00
International Equity	118,426,357	28.65	28.00
Fixed Income	123,910,067	29.97	32.00
Cash Equivalent	929,862	0.22	0.00



Parentheses contain percentile ranks. Allocations shown may not sum up to 100% exactly due to rounding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



# Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges Asset Allocation & Performance - Net of Fees

	Allocati			Perfor	mance (%	<b>b</b> )						
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
URSJJ Total Fund	413,388,639	100.00	1.42	6.53	12.85	12.85	2.03	7.23	7.23	6.61	N/A	06/01/1986
URSJJ Policy Index			1.33	6.18	12.46	12.46	2.01	7.16	7.22	6.65	8.58	
Difference			0.09	0.35	0.39	0.39	0.02	0.07	0.01	-0.04	N/A	
URSJJ Actual Allocation Index			1.43	6.55	12.90	12.90	2.06	7.90	7.65	6.86	8.19	
Difference			-0.01	-0.02	-0.05	-0.05	-0.03	-0.67	-0.42	-0.25	N/A	
Actuarial Discount Rate (6.5%)			1.59	3.20	6.50	6.50	6.50	6.50	6.50	6.50	6.50	
Difference			-0.17	3.33	6.35	6.35	-4.47	0.73	0.73	0.11	N/A	
US Equity	170,122,353	41.15	2.57	12.36	21.88	21.88	7.05	13.51	12.89	11.73	N/A	10/01/1989
URSJJ US Equity Custom Index			2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	N/A	
Difference			0.04	0.05	0.07	0.07	0.01	0.00	-0.03	-0.02	N/A	
BlackRock Russell 1000 Index (CF)	145,323,557	35.15	3.58	14.25	23.96	23.96	8.77	14.63	13.95	12.54	14.19	07/01/2009
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	14.71	
Difference			0.01	0.01	0.08	0.08	0.03	0.02	0.02	0.03	-0.52	
BlackRock Russell 2000 Index (CF)	24,798,796	6.00	-3.28	1.75	10.10	10.10	-2.48	7.05	6.97	7.17	11.39	07/01/2009
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	11.24	
Difference			0.00	0.02	0.04	0.04	0.10	0.11	0.12	0.17	0.15	
International Equity	118,426,357	28.65	1.14	5.86	11.69	11.69	0.70	5.78	5.42	4.09	N/A	05/01/1994
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.63	
Difference			-0.03	-0.18	-0.48	-0.48	-0.27	-0.27	-0.26	-0.25	N/A	
BlackRock MSCI ACWI Ex US (CF)	118,426,357	28.65	1.14	5.86	11.69	11.69	0.70	5.78	5.42	4.09	5.37	10/01/2009
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.52	
Difference			-0.03	-0.18	-0.48	-0.48	-0.27	-0.27	-0.26	-0.25	-0.15	



# Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges Asset Allocation & Performance - Net of Fees

	Allocation			Perfori	mance (%	5)						
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Fixed Income	123,910,067	29.97	-0.04	-0.91	2.01	2.01	-3.55	0.02	1.19	1.67	N/A	10/01/1989
URSJJ Fixed Income Custom Index			-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	N/A	
Difference			0.03	0.22	0.42	0.42	0.21	0.46	0.41	0.32	N/A	
BlackRock US Fixed Income (SA)	62,072,204	15.02	0.17	-0.37	3.12	3.12	-2.72	0.18	1.19	1.64	N/A	06/01/2000
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.93	
Difference			0.10	0.34	0.49	0.49	0.30	0.41	0.33	0.29	N/A	
MetWest US Fixed Income (SA)	35,925,392	8.69	-0.04	-1.02	2.53	2.53	-3.03	0.29	1.38	1.72	N/A	09/01/2001
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.42	
Difference			-0.11	-0.31	-0.10	-0.10	-0.01	0.52	0.52	0.37	N/A	
Hoisington US Long Duration Fixed Income (SA)	12,254,893	2.96	-2.22	-5.77	-6.75	-6.75	-11.95	-4.79	-1.69	0.59	N/A	10/01/1991
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	4.69	
Difference			-2.29	-5.06	-9.38	-9.38	-8.93	-4.56	-2.55	-0.76	N/A	
BlackRock TIPS (CF)	13,657,577	3.30	0.89	0.92	2.81	2.81	-1.27	2.16	2.57	2.02	2.93	03/01/2010
Bloomberg US Trsy US TIPS Index			0.79	0.70	2.71	2.71	-1.33	2.07	2.47	1.91	2.88	
Difference			0.10	0.22	0.10	0.10	0.06	0.09	0.10	0.11	0.05	



## Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges Asset Allocation & Performance - Gross of Fees

	Allocation						Perfori	mance (%	6)			
	Market	%	QTD	CYTD	FYTD	1 Year	3	5	7	10	Since	Inception
URSJJ Total Fund	Value (\$) 413,388,639	100.00	1.43	6.55	12.89	12.89	Years 2.06	Years <b>7.27</b>	Years <b>7.27</b>	Years 6.65	8.32	Date 06/01/1986
URSJJ Policy Index	413,300,039	100.00	1.33	6.18	12.46	12.46	2.06	7.16	7.22	6.65	8.58	00/01/1960
Difference			0.10	0.10	0.43	0.43	0.05	0.11	0.05	0.00	-0.26	
URSJJ Actual Allocation Index			1.43	6.55	12.90	12.90	2.06	7.90	7.65	6.86	8.19	
Difference			0.00	0.00	-0.01	-0.01	0.00	-0.63	-0.38	-0.21	0.13	
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	
Difference			-0.28	3.11	5.89	5.89	-4.94	0.27	0.27	-0.35	1.32	
All Public Plans-Total Fund Median			1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	8.42	
Rank			30	26	21	21	76	58	58	58	56	
US Equity	170,122,353	41.15	2.58	12.36	21.89	21.89	7.06	13.52	12.90	11.74	10.01	10/01/1989
URSJJ US Equity Custom Index	110,122,000		2.53	12.31	21.81	21.81	7.04	13.51	12.92	11.75	N/A	10,01,1000
Difference			0.05	0.05	0.08	0.08	0.02	0.01	-0.02	-0.01	N/A	
All Public Plans-US Equity Segment Median			2.03	11.56	19.66	19.66	6.57	12.37	12.03	10.99	N/A	
Rank			37	36	34	34	42	32	34	31	N/A	
BlackRock Russell 1000 Index (CF)	145,323,557	35.15	3.59	14.25	23.96	23.96	8.78	14.64	13.96	12.54	14.20	07/01/2009
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	14.71	
Difference			0.02	0.01	0.08	0.08	0.04	0.03	0.03	0.03	-0.51	
IM U.S. Large Cap Core Equity (SA+CF) Median			3.44	15.15	24.63	24.63	9.44	14.68	13.80	12.65	14.71	
Rank			47	58	58	58	60	51	48	54	72	
BlackRock Russell 2000 Index (CF)	24,798,796	6.00	-3.27	1.76	10.11	10.11	-2.47	7.06	6.99	7.19	11.41	07/01/2009
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	11.24	
Difference			0.01	0.03	0.05	0.05	0.11	0.12	0.14	0.19	0.17	
IM U.S. Small Cap Core Equity (SA+CF) Median			-2.73	2.87	11.28	11.28	1.82	9.69	9.25	8.86	13.20	
Rank			63	70	59	59	91	88	87	89	98	



## Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges Asset Allocation & Performance - Gross of Fees

	Allocation						Perfor	mance (%	6)			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
International Equity	118,426,357	28.65	1.15	5.88	11.72	11.72	0.72	5.80	5.44	4.12	5.62	05/01/1994
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.63	
Difference			-0.02	-0.16	-0.45	-0.45	-0.25	-0.25	-0.24	-0.22	-0.01	
All Public Plans-Intl. Equity Segment Median			0.07	5.51	11.46	11.46	0.80	6.80	6.49	5.24	N/A	
Rank			27	41	44	44	51	76	77	91	N/A	
BlackRock MSCI ACWI Ex US (CF)	118,426,357	28.65	1.15	5.88	11.72	11.72	0.72	5.80	5.44	4.12	5.44	11/01/2009
MSCI ACW Ex US Index (USD) (Gross)			1.17	6.04	12.17	12.17	0.97	6.05	5.68	4.34	5.64	
Difference			-0.02	-0.16	-0.45	-0.45	-0.25	-0.25	-0.24	-0.22	-0.20	
IM All ACWI Ex US (SA+CF) Median			0.60	5.75	10.84	10.84	1.06	6.83	6.50	5.25	6.94	
Rank			37	48	46	46	56	77	72	81	91	
Fixed Income	123,910,067	29.97	0.00	-0.86	2.09	2.09	-3.47	0.10	1.27	1.75	5.71	10/01/1989
URSJJ Fixed Income Custom Index			-0.07	-1.13	1.59	1.59	-3.76	-0.44	0.78	1.35	N/A	
Difference			0.07	0.27	0.50	0.50	0.29	0.54	0.49	0.40	N/A	
BlackRock US Fixed Income (SA)	62,072,204	15.02	0.23	-0.31	3.22	3.22	-2.64	0.27	1.28	1.73	4.22	06/01/2000
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.93	
Difference			0.16	0.40	0.59	0.59	0.38	0.50	0.42	0.38	0.29	
IM U.S. Broad Market Fixed Income (SA+CF) Median			0.32	0.00	3.69	3.69	-2.50	0.58	1.58	2.01	4.59	
Rank			68	70	67	67	65	73	78	78	77	
MetWest US Fixed Income (SA)	35,925,392	8.69	-0.02	-0.98	2.60	2.60	-2.93	0.40	1.48	1.82	4.31	09/01/2001
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	3.42	
Difference			-0.09	-0.27	-0.03	-0.03	0.09	0.63	0.62	0.47	0.89	
IM U.S. Broad Market Fixed Income (SA+CF) Median			0.32	0.00	3.69	3.69	-2.50	0.58	1.58	2.01	4.10	
Rank			98	98	93	93	82	62	58	68	31	
Hoisington US Long Duration Fixed Income (SA)	12,254,893	2.96	-2.18	-5.70	-6.61	-6.61	-11.82	-4.66	-1.55	0.73	6.29	10/01/1991
Bloomberg US Agg Bond Index			0.07	-0.71	2.63	2.63	-3.02	-0.23	0.86	1.35	4.69	
Difference			-2.25	-4.99	-9.24	-9.24	-8.80	-4.43	-2.41	-0.62	1.60	
IM U.S. Long Duration (SA+CF) Median			-1.48	-3.24	-0.23	-0.23	-7.96	-1.35	0.94	2.26	N/A	
Rank			100	100	100	100	100	100	100	100	N/A	



# Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges Asset Allocation & Performance - Gross of Fees

	Allocation	Allocation					Perfori	mance (%	<b>6</b> )			
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
BlackRock TIPS (CF)	13,657,577	3.30	0.89	0.92	2.82	2.82	-1.26	2.16	2.58	2.03	2.94	03/01/2010
Bloomberg US Trsy US TIPS Index			0.79	0.70	2.71	2.71	-1.33	2.07	2.47	1.91	2.88	
Difference			0.10	0.22	0.11	0.11	0.07	0.09	0.11	0.12	0.06	
IM U.S. TIPS (SA+CF) Median			0.88	0.92	2.75	2.75	-1.26	2.12	2.59	2.02	2.95	
Rank			45	45	45	45	52	44	52	48	51	



#### Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



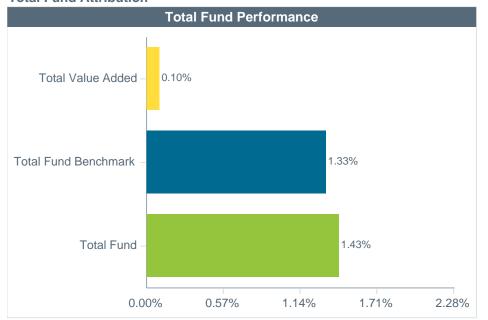
### Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis

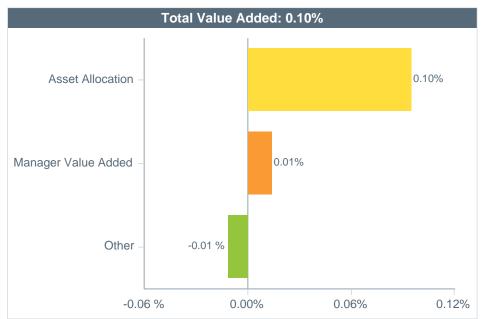


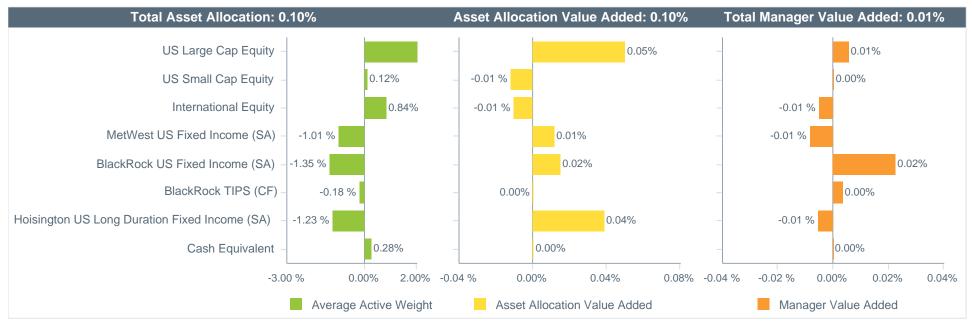
Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.



## Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges Total Fund Attribution





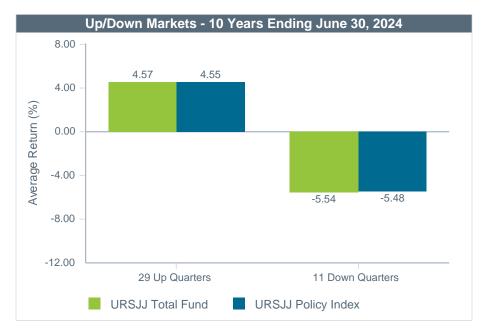


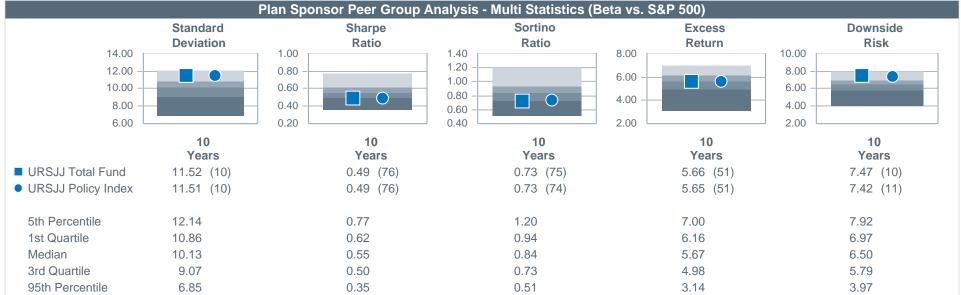
Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution calculation.



# Oklahoma State Pension Commission Uniform Retirement System for Justices & Judges Total Fund Risk & Return, Up/Down Markets, and Multi Statistics

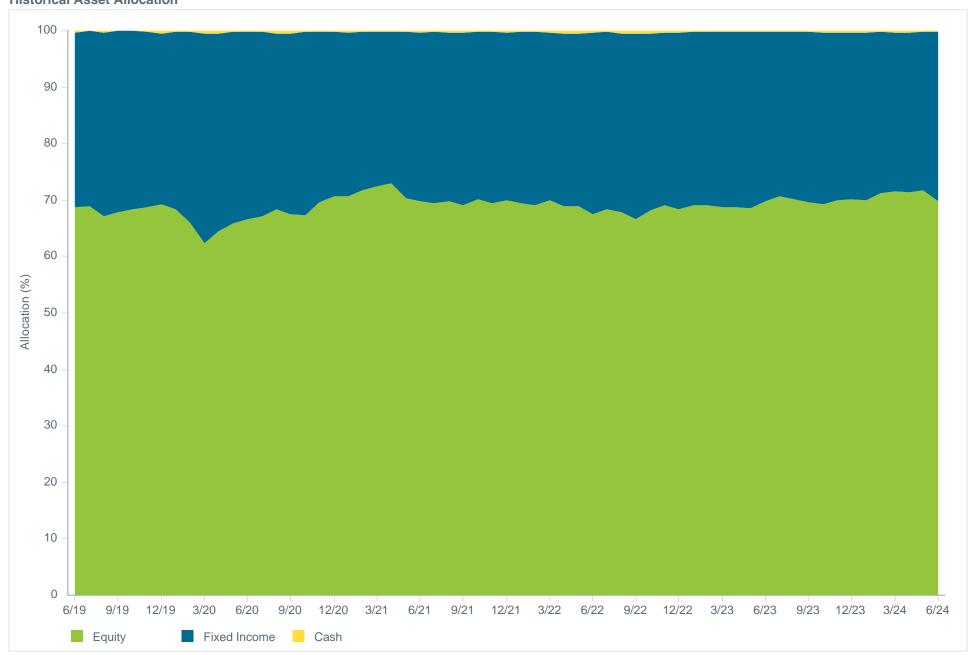






Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.







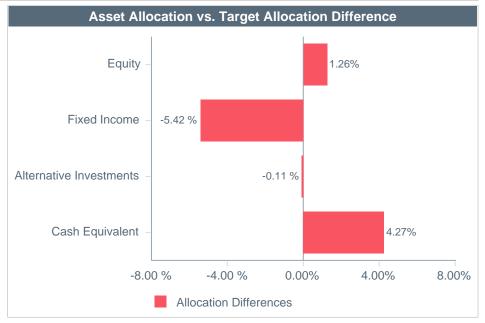
# Oklahoma Wildlife Conservation Retirement System (OWCRS)

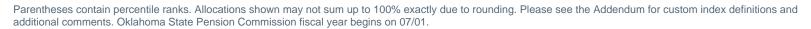


## Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System Total Fund Summary

	Performance (%)															
			Trailir	ng				Calendar Year								
	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019			
OWCRS Total Fund (Net)	1.84	7.86	13.93	13.93	4.39	7.91	7.77	6.97	18.82	-14.41	11.58	13.00	19.21			
OWCRS Policy Index	1.79	7.68	14.44	14.44	3.11	6.84	6.61	5.91	16.94	-15.39	10.17	12.67	17.53			
Difference	0.05	0.18	-0.51	-0.51	1.28	1.07	1.16	1.06	1.88	0.98	1.41	0.33	1.68			
OWCRS Actual Allocation Index	1.73	7.82	14.65	14.65	3.09	7.35	7.51	6.94	17.02	-15.18	10.28	13.21	20.53			
Difference	0.11	0.04	-0.72	-0.72	1.30	0.56	0.26	0.03	1.80	0.77	1.30	-0.21	-1.32			
Actuarial Discount Rate (7.0%)	1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00	7.00			
Difference	0.13	4.42	6.93	6.93	-2.61	0.91	0.77	-0.03	11.82	-21.41	4.58	6.00	12.21			
OWCRS Total Fund (Gross)	1.93	8.04	14.32	14.32	4.74	8.25	8.07	7.24	19.22	-14.14	11.95	13.34	19.46			
OWCRS Policy Index	1.79	7.68	14.44	14.44	3.11	6.84	6.61	5.91	16.94	-15.39	10.17	12.67	17.53			
Difference	0.14	0.36	-0.12	-0.12	1.63	1.41	1.46	1.33	2.28	1.25	1.78	0.67	1.93			
OWCRS Actual Allocation Index	1.73	7.82	14.65	14.65	3.09	7.35	7.51	6.94	17.02	-15.18	10.28	13.21	20.53			
Difference	0.20	0.22	-0.33	-0.33	1.65	0.90	0.56	0.30	2.20	1.04	1.67	0.13	-1.07			
All Public Plans-Total Fund Median	1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	12.68	-12.66	14.18	12.47	18.63			
Rank	6	4	5	5	10	24	26	32	1	70	80	38	39			

Asset Allocation vs. Target Allocation											
	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)								
OWCRS (Wildlife)	139,734,187	100.00	100.00								
Equity	92,586,856	66.26	65.00								
Fixed Income	27,359,243	19.58	25.00								
Alternative Investments	13,818,984	9.89	10.00								
Cash Equivalent	5,969,104	4.27	0.00								







# Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System Asset Allocation & Performance - Net of Fees

	Allocation			Performance (%)									
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date	
OWCRS Total Fund	139,734,187	100.00	1.84	7.86	13.93	13.93	4.39	7.91	7.77	6.97	6.34	01/01/2006	
OWCRS Policy Index			1.79	7.68	14.44	14.44	3.11	6.84	6.61	5.91	6.31		
Difference			0.05	0.18	-0.51	-0.51	1.28	1.07	1.16	1.06	0.03		
OWCRS Actual Allocation Index			1.73	7.82	14.65	14.65	3.09	7.35	7.51	6.94	6.65		
Difference			0.11	0.04	-0.72	-0.72	1.30	0.56	0.26	0.03	-0.31		
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00		
Difference			0.13	4.42	6.93	6.93	-2.61	0.91	0.77	-0.03	-0.66		
Equity	92,586,856	66.26	2.41	10.78	17.98	17.98	6.89	11.33	11.36	10.33	9.04	01/01/2006	
OWCRS Equity Custom Index			2.62	11.41	19.96	19.96	5.31	10.79	9.88	9.02	N/A		
Difference			-0.21	-0.63	-1.98	-1.98	1.58	0.54	1.48	1.31	N/A		
iShares:Russell 1000 L/C ldx;K (BRGKX)	7,430,056	5.32	3.55	14.21	23.87	23.87	8.71	14.22	13.61	12.25	16.16	03/01/2020	
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	16.59		
Difference			-0.02	-0.03	-0.01	-0.01	-0.03	-0.39	-0.32	-0.26	-0.43		
Vanguard S-C Id;Inst (VSCIX)	5,230,414	3.74	-4.15	3.06	11.50	11.50	0.34	8.34	8.57	8.03	8.80	12/01/2005	
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	7.59		
Difference			-0.87	1.33	1.44	1.44	2.92	1.40	1.72	1.03	1.21		
Bank of Oklahoma Managed Equity (SA)	56,014,378	40.09	4.16	14.71	22.55	22.55	10.72	N/A	N/A	N/A	20.87	04/01/2020	
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	20.63		
Difference			0.94	1.15	-0.57	-0.57	2.67	N/A	N/A	N/A	0.24		
Vanguard Dev Mkt;Adm (VTMGX)	8,153,671	5.84	-0.70	4.42	10.59	10.59	1.79	6.52	5.66	4.50	4.51	09/01/1999	
MSCI Wrld Ex US Index (USD) (Net)			-0.60	4.96	11.22	11.22	2.82	6.55	5.86	4.27	4.53		
Difference			-0.10	-0.54	-0.63	-0.63	-1.03	-0.03	-0.20	0.23	-0.02		
Dodge & Cox Intnl Stck;I (DODFX)	5,891,862	4.22	0.02	3.15	8.73	8.73	3.54	6.70	4.77	3.51	4.02	03/01/2014	
MSCI ACW Ex US Index (USD) (Net)			0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	4.24		
Difference			-0.94	-2.54	-2.89	-2.89	3.08	1.15	-0.40	-0.33	-0.22		
MFS Intl New Dis;R6 (MIDLX)	5,631,132	4.03	-0.78	0.70	6.76	6.76	-2.43	3.09	4.16	4.15	4.48	03/01/2014	
MSCI ACW Ex US Grth Index (USD) (Net)			0.72	6.68	9.88	9.88	-2.62	5.49	5.69	4.74	5.03		
Difference			-1.50	-5.98	-3.12	-3.12	0.19	-2.40	-1.53	-0.59	-0.55		



# Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System Asset Allocation & Performance - Net of Fees

	Allocation	on			Performance (%)								
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date	
DFA Emg Mkts Value;I (DFEVX)	4,235,342	3.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	07/01/2024	
MSCI Emg Mkts Val Index (USD) (Net)			5.08	6.46	14.13	14.13	-1.09	2.91	3.41	1.96	N/A		
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A		
Fixed Income	27,359,243	19.58	0.44	0.77	4.93	4.93	-1.75	0.87	1.68	1.71	2.71	01/01/2006	
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	3.04		
Difference			0.37	1.37	2.09	2.09	1.07	1.04	0.73	0.27	-0.33		
Bank of Oklahoma Managed Fixed Income (SA)	14,639,254	10.48	0.55	0.46	3.83	3.83	-2.66	0.05	1.03	1.18	2.42	12/01/2005	
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	3.08		
Difference			0.48	1.06	0.99	0.99	0.16	0.22	0.08	-0.26	-0.66		
PIMCO:Income;Inst (PIMIX)	5,652,368	4.05	0.44	1.82	7.23	7.23	1.12	2.67	3.24	3.98	3.18	08/01/2017	
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	0.90		
Difference			0.37	2.42	4.39	4.39	3.94	2.84	2.29	2.54	2.28		
PIMCO:Intl Bd (DH);Inst (PFORX)	3,473,944	2.49	0.16	1.36	7.17	7.17	-0.13	1.17	2.37	3.10	0.59	03/01/2020	
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	-1.56		
Difference			0.09	1.96	4.33	4.33	2.69	1.34	1.42	1.66	2.15		
Baird Aggregate Bd;Inst (BAGIX)	3,593,677	2.57	0.24	-0.21	3.69	3.69	-2.73	N/A	N/A	N/A	-2.27	09/01/2020	
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	-2.45		
Difference			0.17	0.39	0.85	0.85	0.09	N/A	N/A	N/A	0.18		
Alternative Investments	13,818,984	9.89	1.17	4.80	8.85	8.85	3.82	5.01	4.74	3.66	3.71	12/01/2010	
OWCRS Alternatives Custom Index			0.61	4.81	8.70	8.70	2.12	4.82	4.34	2.96	N/A		
Difference			0.56	-0.01	0.15	0.15	1.70	0.19	0.40	0.70	N/A		
First Eagle:Global;I (SGIIX)	4,700,222	3.36	1.14	7.76	11.44	11.44	5.21	8.08	7.30	6.49	7.20	08/01/2017	
MSCI Wrld Index (USD) (Net)			2.63	11.75	20.19	20.19	6.86	11.78	10.88	9.16	10.64		
Difference			-1.49	-3.99	-8.75	-8.75	-1.65	-3.70	-3.58	-2.67	-3.44		
Calamos:Mkt Neut Inc;I (CMNIX)	4,566,570	3.27	1.54	3.44	6.55	6.55	3.36	4.08	4.08	3.81	4.06	08/01/2017	
Bloomberg US Govt/Credit Bond Index			0.05	-0.68	2.74	2.74	-3.11	-0.07	1.04	1.51	0.99		
Difference			1.49	4.12	3.81	3.81	6.47	4.15	3.04	2.30	3.07		
Neub Berman L/S;Inst (NLSIX)	4,552,191	3.26	0.90	2.98	8.31	8.31	3.85	7.41	6.57	5.39	10.96	10/01/2022	
HFRX EH Index			1.65	5.11	9.13	9.13	4.19	5.92	4.45	3.26	7.91		
Difference			-0.75	-2.13	-0.82	-0.82	-0.34	1.49	2.12	2.13	3.05		

Performance shown is net of fees. Performance is annualized for periods greater than one year. Manager inception dates shown represent the first full month following initial funding. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01. During 06/2024, DFA Emg Mkts Value;I (DFEVX) was funded. Invsc Oppen Dev Mkt;R6 (ODVIX) was liquidated.



## Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System Asset Allocation & Performance - Gross of Fees

	Allocati	on										
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
OWCRS Total Fund	139,734,187	100.00	1.93	8.04	14.32	14.32	4.74	8.25	8.07	7.24	6.57	01/01/2006
OWCRS Policy Index			1.79	7.68	14.44	14.44	3.11	6.84	6.61	5.91	6.31	
Difference			0.14	0.36	-0.12	-0.12	1.63	1.41	1.46	1.33	0.26	
OWCRS Actual Allocation Index			1.73	7.82	14.65	14.65	3.09	7.35	7.51	6.94	6.65	
Difference			0.20	0.22	-0.33	-0.33	1.65	0.90	0.56	0.30	-0.08	
Actuarial Discount Rate (7.0%)			1.71	3.44	7.00	7.00	7.00	7.00	7.00	7.00	7.00	
Difference			0.22	4.60	7.32	7.32	-2.26	1.25	1.07	0.24	-0.43	
All Public Plans-Total Fund Median			1.11	5.72	10.86	10.86	3.10	7.49	7.47	6.82	6.76	
Rank			6	4	5	5	10	24	26	32	63	
Equity	92,586,856	66.26	2.48	10.92	18.27	18.27	7.16	11.56	11.53	10.44	9.10	01/01/2006
OWCRS Equity Custom Index			2.62	11.41	19.96	19.96	5.31	10.79	9.88	9.02	N/A	
Difference			-0.14	-0.49	-1.69	-1.69	1.85	0.77	1.65	1.42	N/A	
iShares:Russell 1000 L/C ldx;K (BRGKX)	7,430,056	5.32	3.57	14.25	23.95	23.95	8.83	14.36	13.76	12.41	16.30	03/01/2020
Russell 1000 Index			3.57	14.24	23.88	23.88	8.74	14.61	13.93	12.51	16.59	
Difference			0.00	0.01	0.07	0.07	0.09	-0.25	-0.17	-0.10	-0.29	
IM U.S. Large Cap Equity (MF) Median			3.70	15.15	25.35	25.35	7.95	14.27	13.79	12.16	16.07	
Rank			53	57	57	57	38	49	51	46	47	
Vanguard S-C Id;Inst (VSCIX)	5,230,414	3.74	-4.14	3.08	11.54	11.54	0.38	8.38	8.62	8.08	8.84	12/01/2005
Russell 2000 Index			-3.28	1.73	10.06	10.06	-2.58	6.94	6.85	7.00	7.59	
Difference			-0.86	1.35	1.48	1.48	2.96	1.44	1.77	1.08	1.25	
IM U.S. Small Cap Core Equity (MF) Median			-3.30	1.69	10.03	10.03	1.23	7.91	7.22	7.02	7.57	
Rank			74	29	33	33	60	41	13	19	7	
Bank of Oklahoma Managed Equity (SA)	56,014,378	40.09	4.21	14.81	22.75	22.75	10.90	N/A	N/A	N/A	21.05	04/01/2020
Russell 3000 Index			3.22	13.56	23.12	23.12	8.05	14.14	13.48	12.15	20.63	
Difference			0.99	1.25	-0.37	-0.37	2.85	N/A	N/A	N/A	0.42	
Vanguard Dev Mkt;Adm (VTMGX)	8,153,671	5.84	-0.68	4.45	10.67	10.67	1.87	6.60	5.74	4.58	4.59	09/01/1999
MSCI Wrld Ex US Index (USD) (Net)			-0.60	4.96	11.22	11.22	2.82	6.55	5.86	4.27	4.53	
Difference			-0.08	-0.51	-0.55	-0.55	-0.95	0.05	-0.12	0.31	0.06	
IM All ACWI Ex US (MF) Median			0.57	5.90	10.19	10.19	-0.12	5.75	5.25	4.05	5.00	
Rank			75	68	47	47	23	25	36	33	65	



## Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System Asset Allocation & Performance - Gross of Fees

	Allocatio	on			Performance (%)							
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date
Dodge & Cox Intnl Stck;I (DODFX)	5,891,862	4.22	0.17	3.47	9.40	9.40	4.19	7.37	5.43	4.17	4.67	03/01/2014
MSCI ACW Ex US Index (USD) (Net)			0.96	5.69	11.62	11.62	0.46	5.55	5.17	3.84	4.24	
Difference			-0.79	-2.22	-2.22	-2.22	3.73	1.82	0.26	0.33	0.43	
IM ACWI Ex US Core (MF) Median			0.91	5.87	11.17	11.17	0.38	6.01	5.32	4.00	4.32	
Rank			66	93	75	75	3	17	43	40	28	
MFS Intl New Dis;R6 (MIDLX)	5,631,132	4.03	-0.55	1.16	7.73	7.73	-1.54	4.03	5.12	5.11	5.45	03/01/2014
MSCI ACW Ex US Grth Index (USD) (Net)			0.72	6.68	9.88	9.88	-2.62	5.49	5.69	4.74	5.03	
Difference			-1.27	-5.52	-2.15	-2.15	1.08	-1.46	-0.57	0.37	0.42	
IM ACWI Ex US Growth (MF) Median			-0.29	5.97	8.34	8.34	-3.80	5.46	5.54	4.69	4.83	
Rank			60	90	57	57	27	81	62	39	32	
DFA Emg Mkts Value;I (DFEVX)	4,235,342	3.03	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	07/01/2024
MSCI Emg Mkts Val Index (USD) (Net)			5.08	6.46	14.13	14.13	-1.09	2.91	3.41	1.96	N/A	
Difference			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
IM Emerging Markets Equity (MF) Median			4.55	7.87	12.54	12.54	-4.54	4.34	4.46	3.79	N/A	
Rank			N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
Fixed Income	27,359,243	19.58	0.51	0.92	5.25	5.25	-1.45	1.14	1.88	1.85	2.78	01/01/2006
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	3.04	
Difference			0.44	1.52	2.41	2.41	1.37	1.31	0.93	0.41	-0.26	
Bank of Oklahoma Managed Fixed Income (SA)	14,639,254	10.48	0.59	0.53	3.99	3.99	-2.50	0.22	1.22	1.38	2.61	12/01/2005
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	3.08	
Difference			0.52	1.13	1.15	1.15	0.32	0.39	0.27	-0.06	-0.47	
IM U.S. Broad Market Fixed Income (SA+CF) Median			0.32	0.00	3.69	3.69	-2.50	0.58	1.58	2.01	3.79	
Rank			17	23	42	42	52	78	81	95	100	
PIMCO:Income;Inst (PIMIX)	5,652,368	4.05	0.56	2.08	7.77	7.77	1.62	3.31	4.01	4.85	3.95	08/01/2017
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	0.90	
Difference			0.49	2.68	4.93	4.93	4.44	3.48	3.06	3.41	3.05	
IM Multi-Sector General Bond (MF) Median			0.58	1.39	6.59	6.59	-0.83	1.62	2.29	2.56	2.17	
Rank			52	37	35	35	9	9	3	1	3	



## Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System Asset Allocation & Performance - Gross of Fees

	Allocation				Performance (%)								
	Market Value (\$)	%	QTD	CYTD	FYTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Incep.	Inception Date	
PIMCO:Intl Bd (DH);Inst (PFORX)	3,473,944	2.49	0.31	1.68	7.84	7.84	0.42	1.74	2.94	3.67	1.16	03/01/2020	
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	-1.56		
Difference			0.24	2.28	5.00	5.00	3.24	1.91	1.99	2.23	2.72		
IM International Fixed Income (MF) Median			-0.82	-2.22	2.67	2.67	-3.72	-1.74	-0.93	-1.21	-1.81		
Rank			6	6	7	7	2	2	1	1	3		
Baird Aggregate Bd;Inst (BAGIX)	3,593,677	2.57	0.32	-0.06	4.00	4.00	-2.44	N/A	N/A	N/A	-1.97	09/01/2020	
OWCRS Fixed Income Custom Index			0.07	-0.60	2.84	2.84	-2.82	-0.17	0.95	1.44	-2.45		
Difference			0.25	0.54	1.16	1.16	0.38	N/A	N/A	N/A	0.48		
IM U.S. Broad Market Core Fixed Income (MF) Median			0.37	-0.04	3.75	3.75	-2.57	0.52	1.56	2.05	-1.81		
Rank			56	55	40	40	38	N/A	N/A	N/A	61		
Alternative Investments	13,818,984	9.89	1.43	5.33	10.02	10.02	4.87	5.86	5.34	4.08	4.02	12/01/2010	
OWCRS Alternatives Custom Index			0.61	4.81	8.70	8.70	2.12	4.82	4.34	2.96	N/A		
Difference			0.82	0.52	1.32	1.32	2.75	1.04	1.00	1.12	N/A		
First Eagle:Global;I (SGIIX)	4,700,222	3.36	1.35	8.21	12.39	12.39	6.11	9.01	8.22	7.40	8.12	08/01/2017	
MSCI Wrld Index (USD) (Net)			2.63	11.75	20.19	20.19	6.86	11.78	10.88	9.16	10.64		
Difference			-1.28	-3.54	-7.80	-7.80	-0.75	-2.77	-2.66	-1.76	-2.52		
Calamos:Mkt Neut Inc;I (CMNIX)	4,566,570	3.27	1.78	3.93	7.54	7.54	4.33	5.07	5.09	4.83	5.07	08/01/2017	
Bloomberg US Govt/Credit Bond Index			0.05	-0.68	2.74	2.74	-3.11	-0.07	1.04	1.51	0.99		
Difference			1.73	4.61	4.80	4.80	7.44	5.14	4.05	3.32	4.08		
Neub Berman L/S;Inst (NLSIX)	4,552,191	3.26	1.22	3.64	9.91	9.91	5.49	9.12	8.26	7.07	12.67	10/01/2022	
HFRX EH Index			1.65	5.11	9.13	9.13	4.19	5.92	4.45	3.26	7.91		
Difference			-0.43	-1.47	0.78	0.78	1.30	3.20	3.81	3.81	4.76		



## Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis



Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments. Oklahoma State Pension Commission fiscal year begins on 07/01.



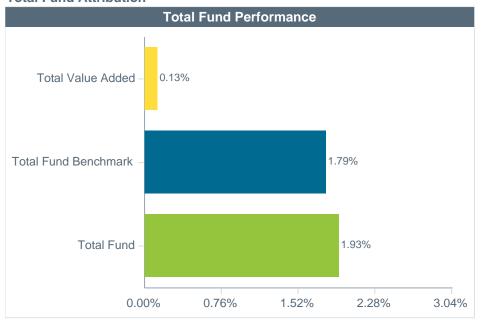
## Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System vs. All Public Plans-Total Fund Plan Sponsor Peer Group Analysis

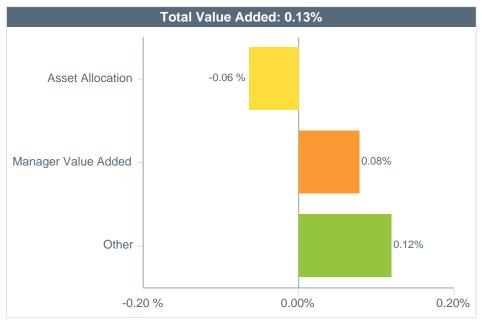


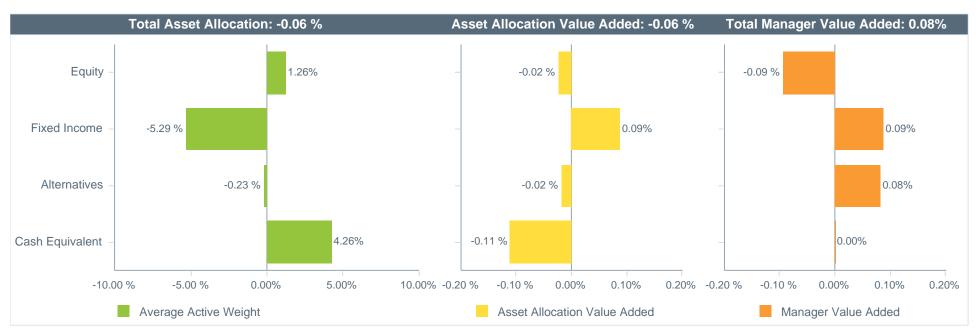
Performance shown is gross of fees. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.



## Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System Total Fund Attribution





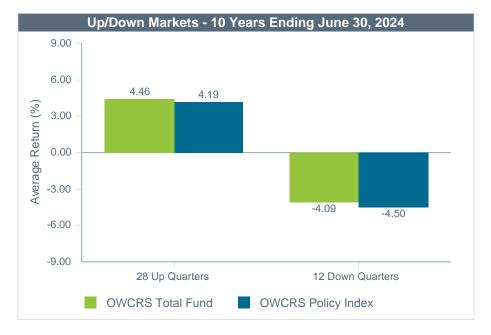


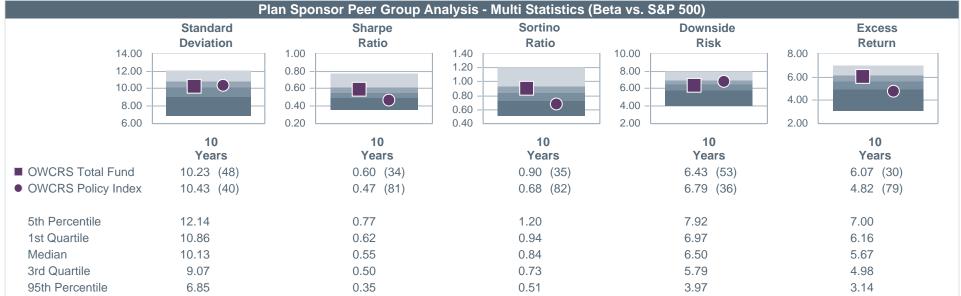
Performance shown is gross of fees. Calculation is based on monthly periodicity. See Glossary for additional information regarding the Total Fund Attribution calculation.



# Oklahoma State Pension Commission Oklahoma Wildlife Conservation Retirement System Total Fund Risk & Return, Up/Down Markets, and Multi Statistics

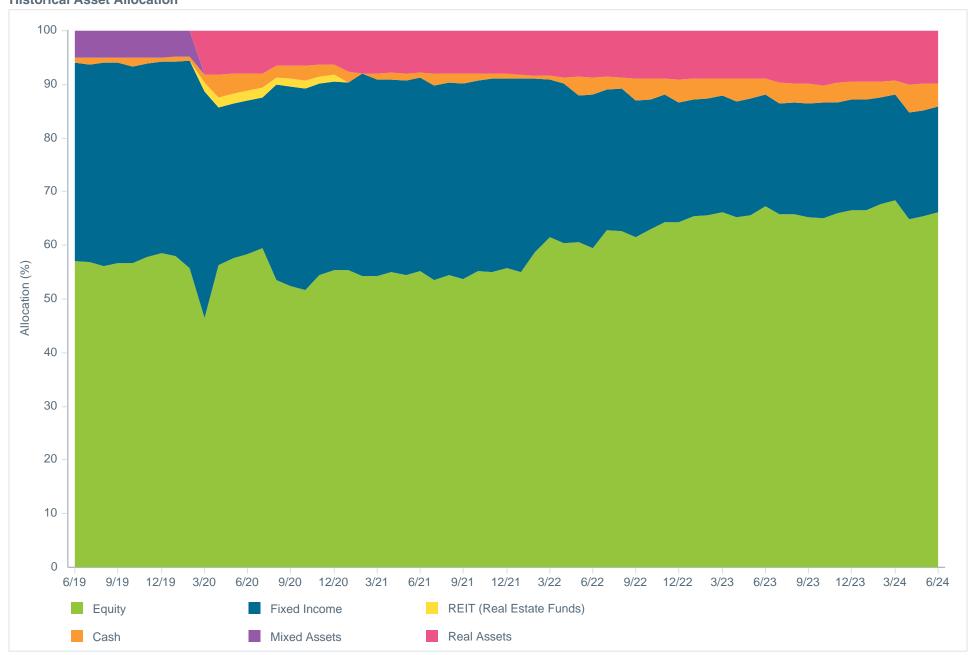






Performance shown is gross of fees. Calculation is based on quarterly periodicity. Parentheses contain percentile ranks. Please see the Addendum for custom index definitions and additional comments.









Oklahoma State Pension Commission
As of June 30, 2024
Addendum

#### **Performance Comments:**

- Fiscal year begins on 07/01.
- RVK began monitoring the assets of Oklahoma State Pension Commission as of 07/01/2020. Prior historical data on market values and performance was provided by the prior investment consultant and/or custodian bank.
- Manager inception dates shown reflect the first full month of performance following initial funding.
- Mutual fund performance prior to 07/01/2020 or client inception is product specific.
- Manager inception dates shown represent the first full month following initial funding.
- Indices show N/A for since inception returns when the fund contains more history than the corresponding benchmark.
- Net of fees performance show N/A for since inception returns when the fund contains more gross of fees performance history.

#### **Custom Index Comments:**

- The active Actual Allocation Index of each plan is calculated monthly based on beginning of period investment weights applied to the corresponding primary benchmark return.
- OTRS Policy Index: OTRS's passive, policy index is calculated monthly and currently consists of 43.2% Russell 3000 Index, 18.8% MSCI ACW ex US (USD) (Gross), 22% OTRS Fixed Income Custom Index, 7% OTRS Real Estate Custom Index, 8% OTRS Private Equity Custom Index, and 1% S&P/LSTA Lvgd Loan 100 Index +3%. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OTRS Fixed Income Custom Index is calculated monthly and currently consists of 70% Bloomberg US Agg Bond Index and 30% ICE BofAML US High Yield Master II Constrained Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OTRS Real Estate Custom Index is calculated monthly and currently consists of 50% NCREIF ODCE (AWA) (Net) (Monthly) and 50% NCREIF ODCE (AWA) (Net) (Monthly) +1%. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OTRS Private Equity Custom Index is calculated monthly and currently consists of 85% Russell 3000 Index (1 Qtr Lag) and 15% MSCI ACWI ex US (USD) (Gross) (1 Qtr Lag) +2.5%. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPERS Policy Index: OPERS's passive, policy index is calculated monthly and currently consists of 40% OPERS US Equity Custom Index, 28% MSCI ACW ex US Index (USD) (Gross), and 32% OPERS Fixed Income Custom Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPERS US Equity Custom Index is calculated monthly and currently consists of 85% Russell 1000 Index and 15% Russell 2000 Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPERS Fixed Income Custom Index is calculated monthly and current consists of 78% Bloomberg US Agg Bond Index, 11% FTSE Treasury Index 20+ Yr Index, and 11% Bloomberg US Treasury US TIPS Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OFPRS Policy Index: OFPRS's passive, policy index is calculated monthly and currently consists of 47% Russell 3000 Index, 15% MSCI ACW ex US Index (USD) (Net), 13% Bloomberg US Agg Bond Index, 7% Bloomberg Global Agg ex US Index (USD) (Unhedged), 10% NCREIF Fund Index-Open End Diversified Core Equity (VW) (Net), 4% Cambridge Associates Private Equity Index, and 4% Bloomberg U.S. Treasury Bellwethers 1 Yr +3%. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPPRS Policy Index: OPPRS's passive, policy index is calculated monthly and currently consists of 60% MSCI ACW Index (USD) (Gross), 25% Bloomberg US Universal Bond Index, and 15% NCREIF ODCE Index (AWA) (Net). From 04/01/2021 through 01/31/2024, it consisted of 65% MSCI ACW Index (USD) (Gross), 20% Bloomberg US Universal Bond Index, and 15% NCREIF ODCE Index (AWA) (Net). From 07/01/2020 through 03/31/2021, it consisted of 60% MSCI ACW Index (USD) (Net), 25% Bloomberg US Universal Bond Index, and 15% NCREIF ODCE Index (AWA) (Net). Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OPPRS Real Assets Blended Index: is calculated monthly and current consists of 100% NCREIF ODCE Index (AWA) (Net) (Monthly). From 01/01/2016 through 08/31/2019, it consisted of 67% NCREIF ODCE Index (AWA) (Net) (Monthly) and 33% Bloomberg Commodity Index (TR). From 08/01/2014 through 12/31/2015, it consisted of 50% NCREIF ODCE Index (AWA) (Net) (Monthly) and 50% Bloomberg Commodity Index (TR). Prior to 08/01/2014, the index consisted of 100% NCREIF ODCE Index (AWA) (Net) (Monthly).
- Oaktree Global Credit Custom Index is calculated monthly and current consists of 50% ICE BofAML Global High Yield Index and 50% Credit Suisse Leveraged Loan Index.
- OLERS Policy Index: OLERS's passive, policy index is calculated monthly and currently consists of 32.5% S&P 500 Index (Cap Weighted), 10% Russell 2000 Index, 20% MSCI ACW ex US Index (USD) (Gross), 25% Bloomberg US Agg Bond Index, and 12.5% NCREIF ODCE Index (AWA) (Net) (Monthly). Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OLERS Real Assets Blended Index: is calculated monthly and current consists of 100% NCREIF ODCE Index (AWA) (Net) (Monthly).
- URSJJ Policy Index: URSJJ's passive, policy index is calculated monthly and currently consists of 40% URSJJ US Equity Custom Index, 28% MSCI ACW ex US Index (USD) (Gross), and 32% URSJJ Fixed Income Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.



As of June 30, 2024

## **Custom Index Comments (Cont.):**

- URSJJ US Equity Custom Index is calculated monthly and current consists of 85% Russell 1000 Index and 15% Russell 2000 Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- URSJJ Fixed Income Custom Index is calculated monthly and current consists of 78% Bloomberg US Agg Bond Index, 11% FTSE Treasury Index 20+ Yr Index, and 11% Bloomberg US Treasury US TIPS Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OWCRS Policy Index: OWCRS's passive, policy index is calculated monthly and currently consists of 65% OWCRS Equity Custom Index, 25% OWCRS Fixed Income Custom Index, and 10% HFRI FoF Composite Index. From 07/01/2020 through 12/01/2021, it consisted of 50% OWCRS Equity Custom Index, 40% Bloomberg US Agg Bond Index, and 10% HFRI FoF Composite Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OWCRS Equity Custom Index is calculated monthly and currently consists of 73% Russell 3000 Index and 27% MSCI ACW Ex US Index (USD) (Net). Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OWCRS Fixed Income Custom Index is calculated monthly and currently consists of 92% Bloomberg US Agg Bond Index and 8% Bloomberg Glbl Agg ex USD Index (Hedged). Performance prior to 07/01/2020 was calculated by the prior investment consultant.
- OWCRS Alternatives Custom Index is calculated monthly and currently consists of 100% HFRI FoF Composite Index. Performance prior to 07/01/2020 was calculated by the prior investment consultant.



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>	<u>S&amp;P</u>	Moody's	Explanation
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 "EMEA" represents securities based in Europe, the Middle East, and Africa. 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

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 & Distribution (%) - Due to disclosure guidelines set by each investment manager, portfolio characteristics and distribution percentages 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).

interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

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	5
US SMid Cap Equity	85	Private Credit	5
US Small Cap Equity	85		
REITs	85		
Non-US Small Cap Equity	85		
Emerging Markets Equity	85		
Core Fixed Income	85		
Core Plus Fixed Income	80		

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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.

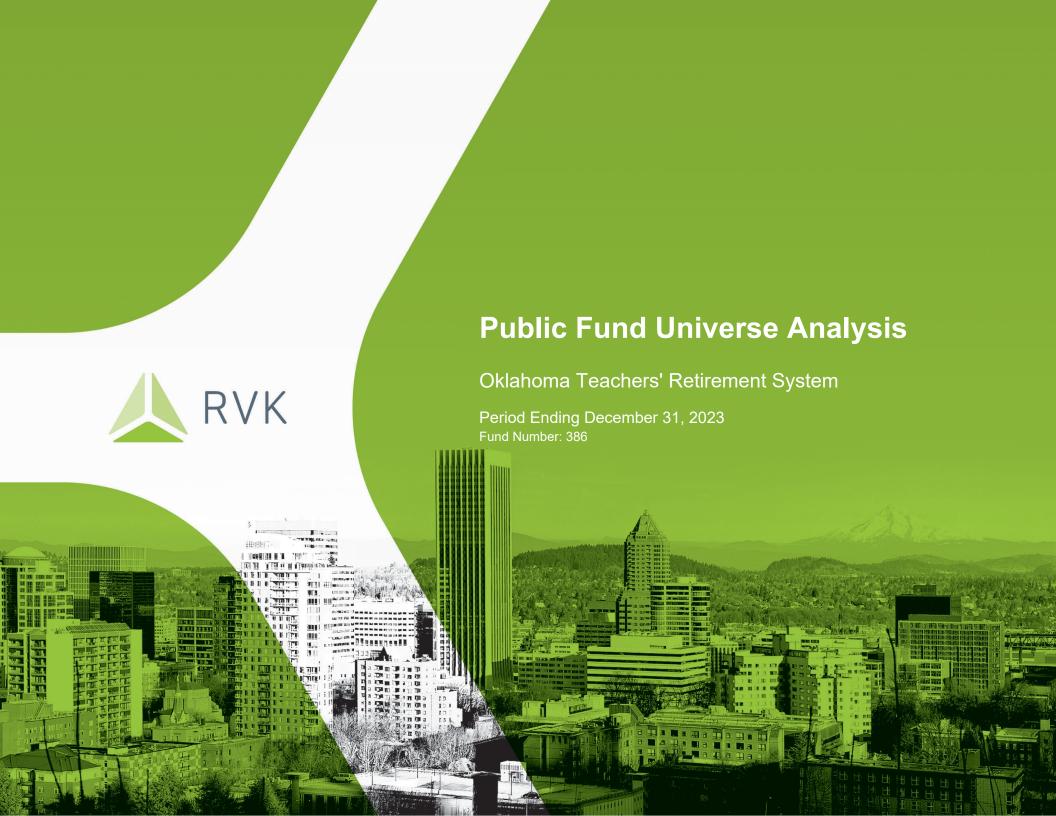
Unit Value - The dollar value of a portfolio, assuming an initial nominal investment of \$100, growing at the compounded rate of %Return for a given period.

**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.





# Report and Firm Summary

The following report is a compilation of data provided to RVK, Inc. by 68 public funds throughout the United States. We are a registered investment advisor with the Securities Exchange Commission under the Investment Advisors Act of 1940. Our firm provides investment consulting services to over 200 clients across more than 500 plans with total assets under advisement in excess of \$3 trillion. The confidentiality of participants is maintained by revealing the fund name only to each individual fund. For more information about services provided by RVK, please visit our website at www.RVKInc.com.



Participants As of December 31, 2023

Alameda County Employees' Retirement Association

Arlington County Employees' Retirement System

Chicago Teachers' Pension Fund

City of Jacksonville Police and Fire Retirement Fund

City of Milwaukee Employes' Retirement System

Civilian Employees' Retirement System of the Police Department of Kansas City,

Missouri

Contra Costa County Employees' Retirement Association

Fire and Police Pension Association of Colorado

Gila River Indian Community Retirement Plan

Kansas City, Missouri Employees' Retirement System

Kern County Employees' Retirement Association

Los Angeles County Employees Retirement Association

Los Angeles Water & Power Employees Retirement Plan

Maryland State Retirement and Pension System

Merced County Employees' Retirement Association

Montana Teachers' Retirement System

Nevada Public Employees' Retirement System

North Carolina Retirement System

Oklahoma Firefighters Pension and Retirement System

Oklahoma Police Pension and Retirement System

Oklahoma Teachers' Retirement System (Fund No. 386)

Oklahoma Wildlife Conservation Retirement System

Pennsylvania Public School Employees' Retirement System

Police Retirement System of Kansas City, Missouri

Public School and Education ERS of Missouri

San Diego City Employees' Retirement System

San Diego Transit Corporation Employees Retirement

Santa Barbara County Employees' Retirement System

South Dakota Retirement System

Anchorage Police & Fire Retirement System

California State Teachers' Retirement System

City of Austin Employees' Retirement System

City of Jacksonville Retirement System

City of Plano Retirement Security Plan

Confederated Tribes of the Warm Springs Tribal Council Pension Fund

**Employees Retirement System of Texas** 

Fresno County Employees' Retirement Association

Imperial County Employees' Retirement System

Kansas Public Employees' Retirement System

Los Angeles City Employees' Retirement System

Los Angeles Fire and Police Pension System

Marin County Employees' Retirement Association

Mendocino County Employees' Retirement Association

Montana Public Employees' Retirement System

Municipality of Anchorage Pre-Funding Program

New York State Common Retirement Fund

Ohio Public Employees' Retirement System

Oklahoma Law Enforcement Retirement System

Oklahoma Public Employees Retirement System

Oklahoma Uniform Retirement System for Justices and Judges

Orange County Employees' Retirement System

Pennsylvania State Employees' Retirement System

Public Employees Retirement Association of New Mexico

San Bernardino County Employees' Retirement Association

San Diego County Employees Retirement Association

San Mateo County Employees' Retirement Association

Sonoma County Employees' Retirement Association



Participants As of December 31, 2023

State of New Jersey Pension Fund

Teachers' Retirement System of the State of Illinois

The Navajo Nation Retirement Plan

Vermont Pension Investment Committee

West Virginia Investment Management Board

State of Michigan Retirement Systems

State Teachers Retirement System of Ohio

Teachers' Retirement System of Kentucky

Ventura County Employees' Retirement Association

Virginia Retirement System

Wyoming Retirement System



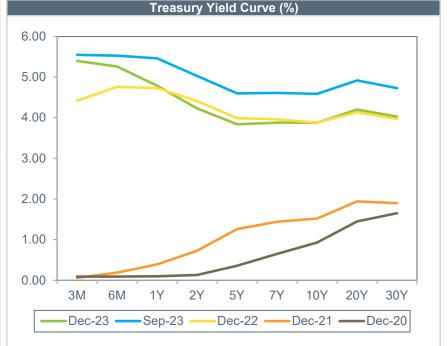
Capital Markets Review As of December 31, 2023

# **Fourth Quarter Economic Environment**

In Q4, most risk assets rebounded from subdued conditions in the previous guarter to finish the year with significant positive returns—a stark turnaround compared to performance in 2022. For instance, the MSCI All Country World Index, a broad measure of the global stock market, returned 22.2% in 2023 compared to returns of -18.4% in 2022. Fixed income markets also ended the year firmly in positive territory. Despite the positive market performance, some recent indicators of economic activity have provided investors reason for caution. For example, commodity prices and energy stocks broadly declined amidst slowing inflation. The manufacturing Purchasing Managers' Index (PMI) remained in contractionary territory throughout the year. However, other economic indicators were more positive, with the services PMI remaining in expansionary territory and corporate earnings proving more resilient than expected. The labor market remained healthy as the unemployment rate finished the year at 3.7%. The Dec. Consumer Price Index (CPI) report showed a higher than expected uptick in monthly inflation and annual inflation of 3.4%. The annual level represents a significant drop compared to the CPI measure of 6.5% in Dec. 2022. The Federal Open Market Committee (FOMC) anticipates further progress in bringing inflation down to target levels, with the current forecast for their preferred inflation measure, the PCE Price Index, projecting a decline to 2.4% by the end of 2024.

	Key I	Economic Ind	icators	
16 7		120 ]	70 ]	160 7
14 -	25 - 20 -	100 -	60	140 -
12 -	15 -		50 -	120 -
10 -	10 -	80 -	40 -	100 -
8 - 6 -	5 0	60 -	30 -	80 -
4 -	-5 -		20 -	60 -
2 -	-10 - -15 -	40 -	10	40 -
0	-20	20	0	20
Unemployment	t CPI Year-over- Year (% change)	US Govt Debt (% of GDP)	VIX Index (Volatility)	Consumer Confidence
Since 1948	Since 1914	Since 1940	Since 1990	

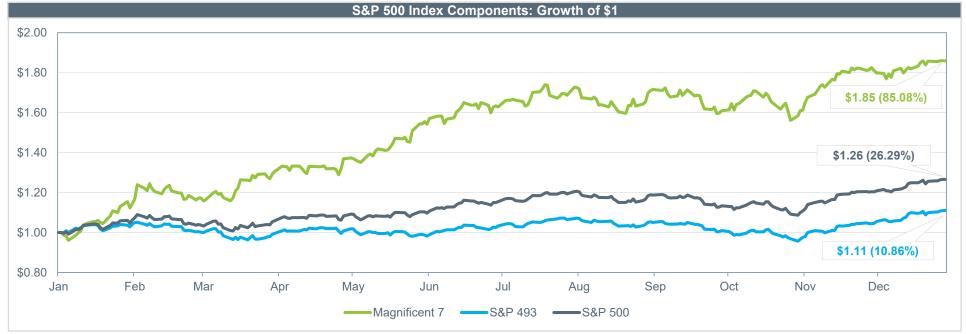
Economic Indicators	Dec-23	Sep-23	Dec-22	Dec-20	20 Yr
Federal Funds Rate (%)	5.33 —	5.33	4.33	0.09	1.49
Breakeven Infl 5 Yr (%)	2.14	2.25			
Breakeven Infl 10 Yr (%)	2.17	2.34	2.30	1.99	
CPI YoY (Headline) (%)	3.4	3.7	6.5	1.4	2.6
Unemployment Rate (%)	3.7	3.8	3.5	6.7	
Real GDP YoY (%) PMI - Manufacturing	3.1 ▲ 47.2 ▼	2.9 49.0	0.9 48.4	-1.5 60.5	2.0 53.4
USD Total Wtd Idx	47.2 ▼ 118.77 ▼	122.77	121.40	111.33	103.87
WTI Crude Oil per Barrel (\$)	71.7	90.8	80.3	48.5	70.2
Gold Spot per Oz (\$)	2,068	1,872			
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	11.69	26.29	26.29	15.69	12.03
` '	11.69 14.03		26.29 16.93		12.03 7.16
S&P 500 (Cap Wtd)		16.93		15.69	
S&P 500 (Cap Wtd) Russell 2000	14.03	16.93	16.93	15.69 9.97	7.16
S&P 500 (Cap Wtd) Russell 2000 MSCI EAFE (Net)	14.03 10.42	16.93 18.24	16.93 18.24	15.69 9.97 8.16	7.16 4.28
S&P 500 (Cap Wtd) Russell 2000 MSCI EAFE (Net) MSCI EAFE SC (Net)	14.03 10.42 11.14	16.93 18.24 13.16 9.83	16.93 18.24 13.16	15.69 9.97 8.16 6.58	7.16 4.28 4.80
S&P 500 (Cap Wtd) Russell 2000 MSCI EAFE (Net) MSCI EAFE SC (Net) MSCI Emg Mkts (Net)	14.03 10.42 11.14 7.86	16.93 18.24 13.16 9.83 5.53	16.93 18.24 13.16 9.83	15.69 9.97 8.16 6.58 3.68	7.16 4.28 4.80 2.66
S&P 500 (Cap Wtd) Russell 2000 MSCI EAFE (Net) MSCI EAFE SC (Net) MSCI Emg Mkts (Net) Bloomberg US Agg Bond	14.03 10.42 11.14 7.86 6.82	16.93 18.24 13.16 9.83 5.53 5.02	16.93 18.24 13.16 9.83 5.53	15.69 9.97 8.16 6.58 3.68 1.10	7.16 4.28 4.80 2.66 1.81
S&P 500 (Cap Wtd) Russell 2000 MSCI EAFE (Net) MSCI EAFE SC (Net) MSCI Emg Mkts (Net) Bloomberg US Agg Bond ICE BofAML 3 Mo US T-Bill	14.03 10.42 11.14 7.86 6.82 1.37 -4.83	16.93 18.24 13.16 9.83 5.53 5.02 -12.02	16.93 18.24 13.16 9.83 5.53 5.02	15.69 9.97 8.16 6.58 3.68 1.10 1.88	7.16 4.28 4.80 2.66 1.81 1.25
S&P 500 (Cap Wtd) Russell 2000 MSCI EAFE (Net) MSCI EAFE SC (Net) MSCI Emg Mkts (Net) Bloomberg US Agg Bond ICE BofAML 3 Mo US T-Bill NCREIF ODCE (Gross)	14.03 10.42 11.14 7.86 6.82 1.37 -4.83	16.93 18.24 13.16 9.83 5.53 5.02 -12.02	16.93 18.24 13.16 9.83 5.53 5.02 -12.02	15.69 9.97 8.16 6.58 3.68 1.10 1.88 4.25	7.16 4.28 4.80 2.66 1.81 1.25 7.29





2023: Year in Review As of December 31, 2023







US Equity Review As of December 31, 2023

# **Fourth Quarter Review**

### **Broad Market**

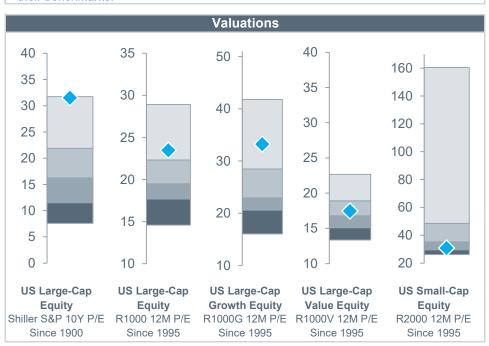
Following negative returns in Q3, US equity ended the year on a high note, with the Russell 3000 returning 12.1% in Q4 and 26.0% for the calendar year. Performance was driven by a group of the largest, growth-oriented companies commonly referred to as the "Magnificent 7." Stocks in the high beta, growth, and quality factor groups performed best in 2023, according to data from S&P Global. However, value and momentum factors also provided significant absolute returns during the year.

## **Market Cap**

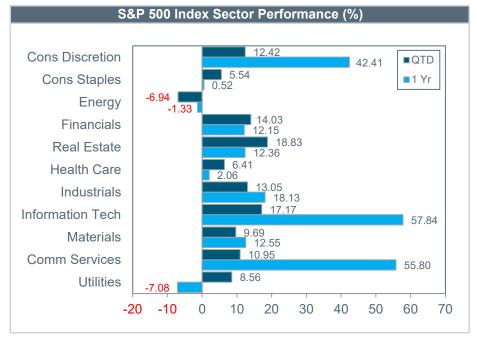
Although small cap stocks fared better than large cap stocks in Q4, they finished the year with a lower calendar year return of 16.9% versus 26.5% for large cap stocks, as measured by the Russell 2000 and Russell 1000, respectively.

# **Style and Sector**

Across active managers, median peer group performance suggests that many strategies did not outperform their respective benchmarks for Q4 and the calendar year. Given the strong returns delivered by growth indexes, growth-oriented managers generally had lower rates of success. In contrast, value-oriented managers were relatively more effective in providing excess returns compared to their benchmarks.







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 December 31, 2023

# **Fourth Quarter Review**

# **Developed Markets**

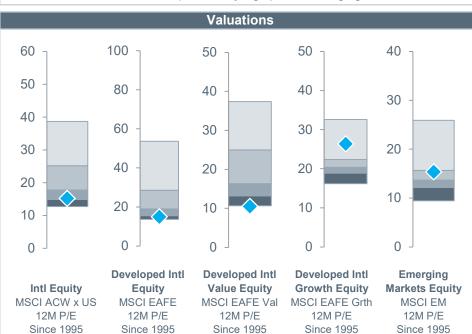
Developed international markets trailed their US counterparts in Q4. Growth stocks outperformed value stocks during the quarter; however, value outpaced growth for the calendar year.

# **Emerging Markets**

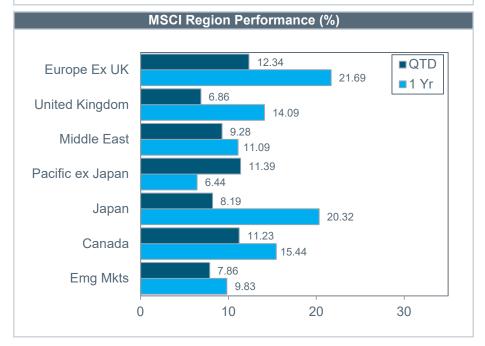
Emerging market equities lagged developed markets in Q4. Value stocks outperformed their growth counterparts, and small-cap outperformed large-cap. Within China, despite a reported uptick in economic growth for Q3 and continued governmental stimulus, the MSCI China Index remained in negative territory in Q4 as investor sentiment remain muted. The majority of active emerging market managers outperformed their benchmarks for the quarter and the calendar year.

# Market Cap & Style

All developed market sectors delivered positive absolute performance during the quarter except for energy, which had a negative return in Q4 in spite of initially rallying following the start of the Israel/ Hamas war in October. Despite continued pledges of production cuts by OPEC, weak results were driven by waning global demand, moderating inflation, and a mild European winter. The European Central Bank and Bank of England have both pushed back against near-term rate cuts as the Eurozone continues to see persistently high price and wage growth.









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.



Fixed Income Review

As of December 31, 2023

# **Fourth Quarter Review**

### **Broad Market**

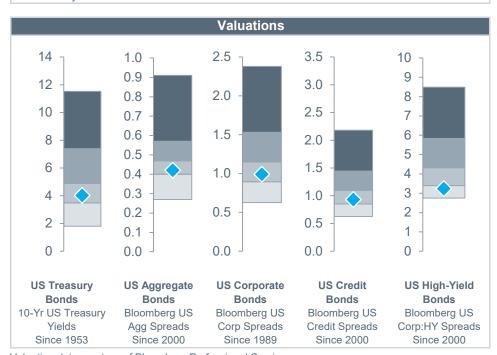
The fixed income market surged in Q4, fueled by moderating economic data, cooling inflation, and investor expectations for more accommodative FOMC policy, along with an increased likelihood of a soft landing for the US economy. The Bloomberg US Aggregate Bond Index gained 6.8% in Q4 and 5.5% for the calendar year. The US 10-year Treasury yield fell 71 basis points during the quarter to end the year at 3.9%, matching its yield at the start of year. Longer duration assets responded to the rate environment and the potential for rate cuts in 2024 with sharply positive results in Q4.

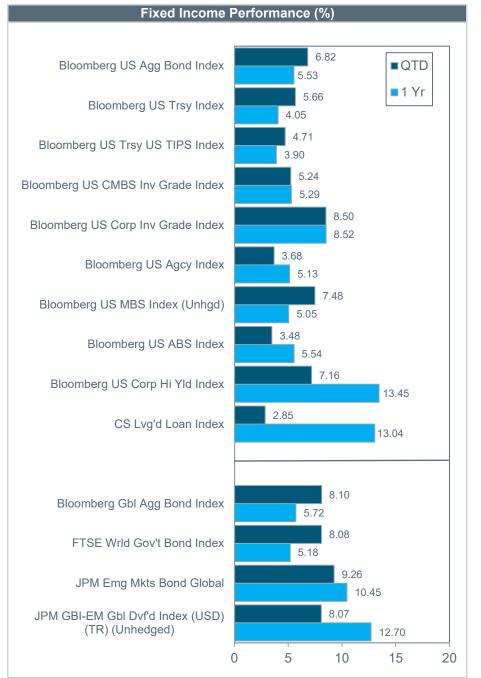
### **Credit Market**

Across plus sectors, spreads tightened and risk assets rallied amid falling rates. The Bloomberg US Corporate Investment Grade Index returned 8.5% in Q4 and 8.5% for the calendar year, while the Bloomberg US Corporate High Yield Index returned 7.2% in Q4 and 13.5% for the calendar year.

# **Emerging Market Debt**

Emerging market debt experienced a robust rally in Q4. The JPMorgan EMBI Global Diversified Index, which follows hard currency emerging markets, returned 9.2% in Q4 and 11.1% for the calendar year. The JPMorgan GBI-EM Global Diversified Index, reflecting local currency emerging markets, gained 8.1% in Q4 and 12.7% for the calendar year.





Valuation data courtesy of Bloomberg Professional Service.

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



Alternatives Review As of December 31, 2023

# Fourth Quarter Review - Absolute Return

## **General Market - Hedge Funds**

In Q4, results were more mixed amidst a broad market rally. Credit Arbitrage, Equity Activist, and Directional Quant peer groups indicated the highest returns while most other strategy groups posted modest single-digit gains. Due to the combination of rising equity markets and a reasonable short selling environment supported by elevated rates, both long-biased and market neutral Long/Short Equity managers generated strong market capture despite generally limited exposure to the "Magnificent 7" stocks. Income-oriented strategies provided attractive returns for the first time in years, as managers took advantage of elevated interest rates. Additionally, rates volatility created opportunity for relative value trading.

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

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely posted significant gains in Q4. However, nearly all active managers underperformed a US-centric 60/40 blend of equity and fixed income both in Q4 and for the calendar year. The top-performing long-biased GTAA strategies in Q4 featured higher allocations to US equities and exposure to the technology sector. Underperforming managers tended to have larger emerging markets exposure and significant value tilts.

#### **HFRI Hedge Fund Performance (%)** 3.65 HFRI FOF QTD 6.59 1.41 Conv Arbitrage ■1 Yr 5.61 **Equity Hedge** 10.54 1.44 Mkt Neutral Eq 5.61 3.21 Distressed 6.73 -1.08 Macro -0.60 2.58 Relative Value 6.95 5.41 **Event Driven** 10.37 4.34 Merger Arb 5.84 3.77 Credit Arb 10.50 -5 0 5 10 15

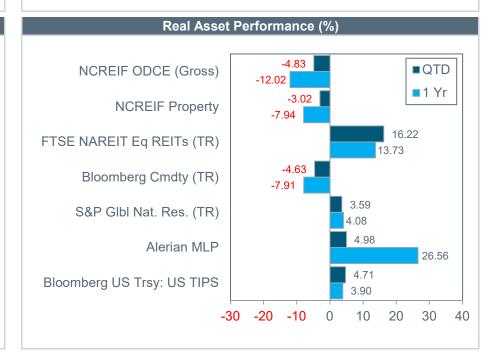
## **Fourth Quarter Review - Real Assets**

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

Diversified Inflation Strategy managers tracked closely by RVK reported positive performance. Managers that had larger exposures to listed infrastructure and real estate equities outperformed peers most significantly, while those with larger exposure to the energy and agriculture commodity sector tended to underperform peers.

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

In Q4, core private real estate generated a negative return of -4.8% (on a preliminary and gross of fee basis), as reported by the NFI-ODCE Index, with the total return comprising of 1.0% from income and -5.8% from price appreciation. The income return improved slightly on a percentage basis from the prior quarter, but continues to trend at the lower end of historical levels due to elevated borrowing costs and expenses. Publicly traded real estate outperformed private market counterparts, delivering returns of 17.6% in Q4 as measured by the FTSE/NAREIT All REITs Index. Private real estate markets continued to experience similar trends as the prior five quarters. Significant headwinds persisted due to lingering disruptions in capital markets from 2022.





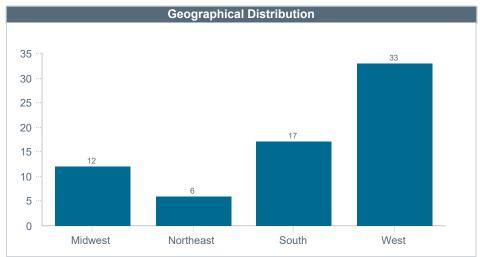
Annual Asset Class Performance As of December 31, 2023

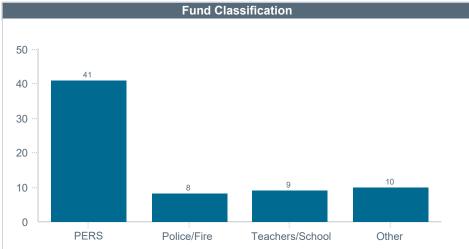
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	CYTD
Best	78.51	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	16.09	26.29
1	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	7.47	18.24
	46.78	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	1.46	16.93
	31.78	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	16.12	22.17	-5.31	13.73
	28.01	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	12.34	14.82	-11.19	13.45
	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	19.59	10.99	11.26	-11.85	13.16
	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.42	10.88	10.10	-13.01	9.83
	18.91	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	7.82	6.17	-14.45	7.13
	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	8.72	7.51	5.96	-18.11	6.59
	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	8.43	7.11	5.28	-20.09	5.53
	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	8.39	1.19	0.05	-20.44	5.02
	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01		7.69	0.67	-1.55	-21.39	3.90
	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.37	-7.91
Worst	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	2.28	-8.00	-2.54	-27.09	-12.02
S&P 500 US Larg Cap		mall (Net)		(Net) - (N	MSCI EM Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - Fl	Bloombrg US Corp H Yield - FI	Bloombro i US Trsy U TIPS - FI	S Crodit I	ov ODO	CE NAR	EIT Eq (	FRI FOF Comp ndex - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv

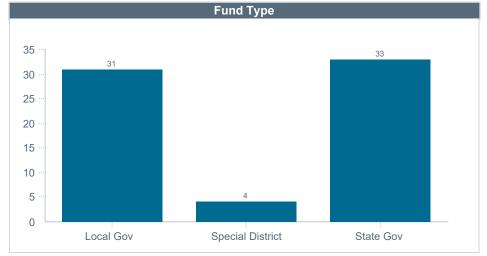


Universe Characteristics As of December 31, 2023





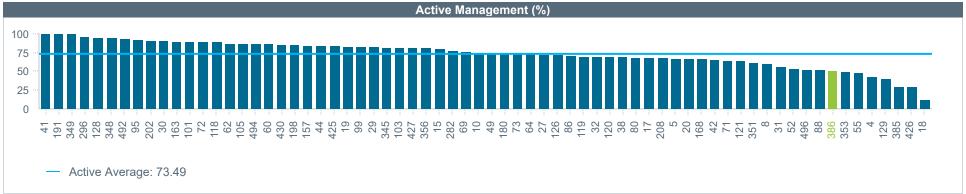


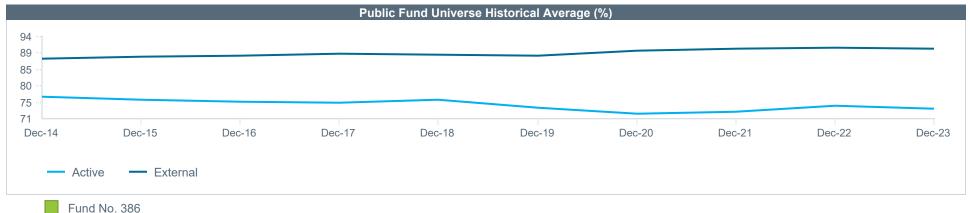


Universe: 68 funds











Portfolio Management Statistics

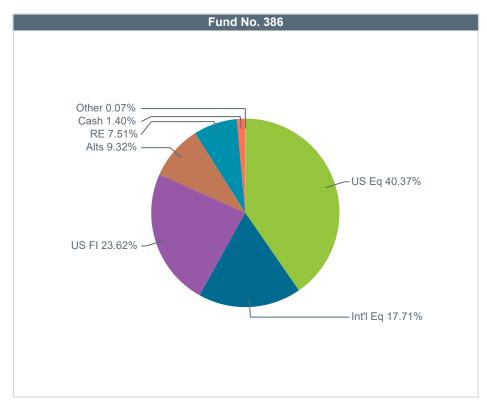
As of December 31, 2023

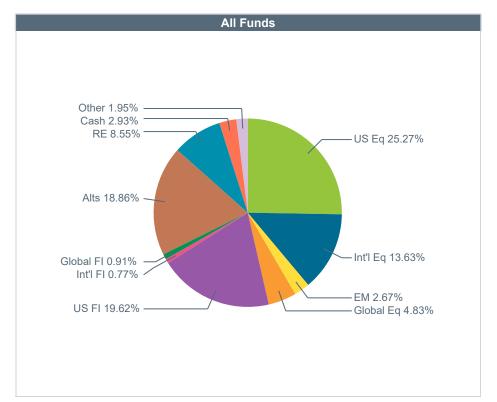
	Actively Managed (%)	Passively Managed (%)	Externally Managed (%)	Internally Managed (%)
Asset Range				
Over \$20B	72.70	27.30	77.54	22.46
\$10B-\$20B	70.40	29.60	92.10	7.90
\$5B-\$10B	69.30	30.70	98.04	1.96
\$1B-\$5B	76.78	23.22	98.94	1.06
\$500MM-\$1B	82.11	17.89	99.99	0.01
Under \$500MM	75.37	24.63	100.00	0.00
Fund No. 386	50.32	49.68	100.00	0.00

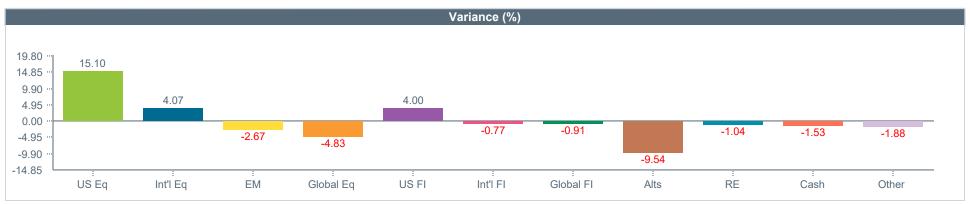
Percentages shown for asset ranges are representative of the average allocation.

	Active Ma	nagement	External Ma	anagement
Portfolio (%)	Public Fund Universe	Fund No. 386	Public Fund Universe	Fund No. 386
90 to 100	10	0	53	1
50 to 89	51	1	8	0
10 to 49	7	0	7	0
Less than 10	0	0	0	0
<b>Total Funds Reporting</b>	68	1	68	1

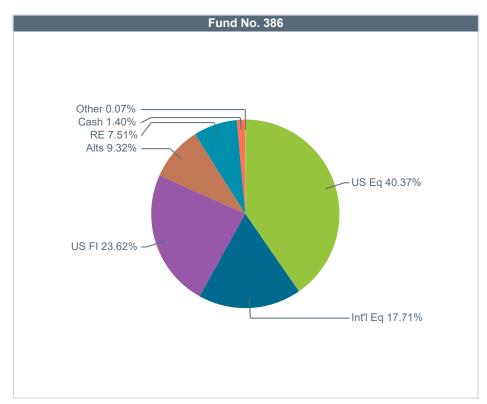


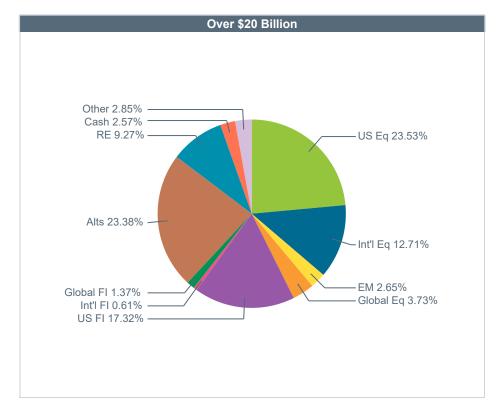


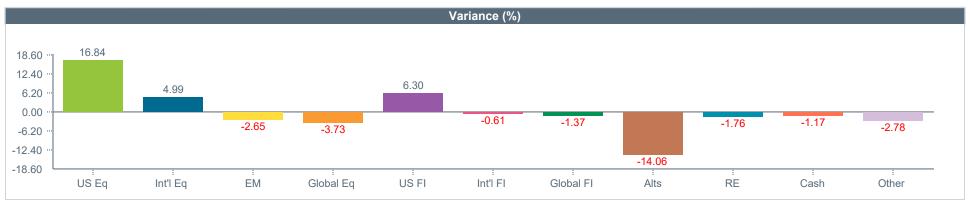




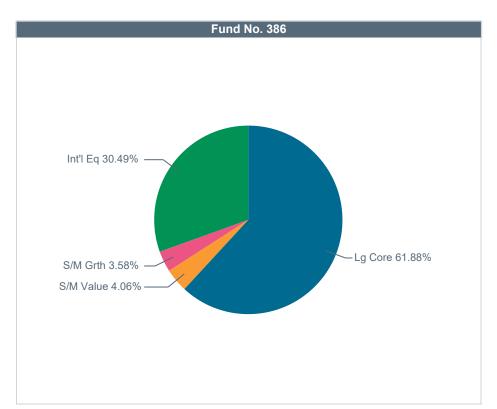


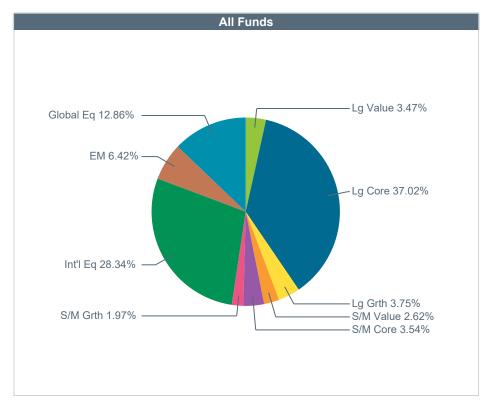


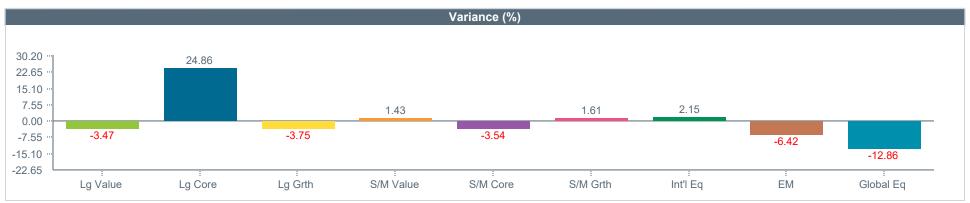




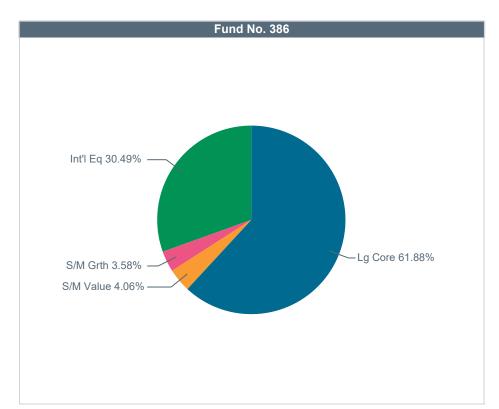


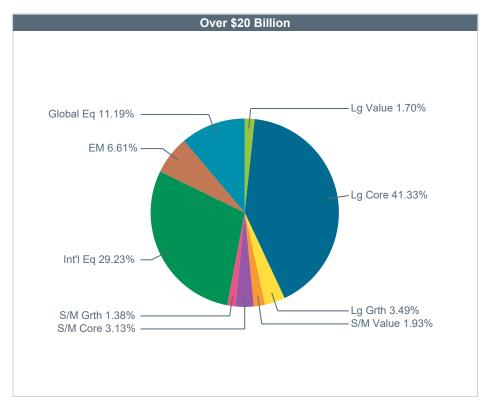


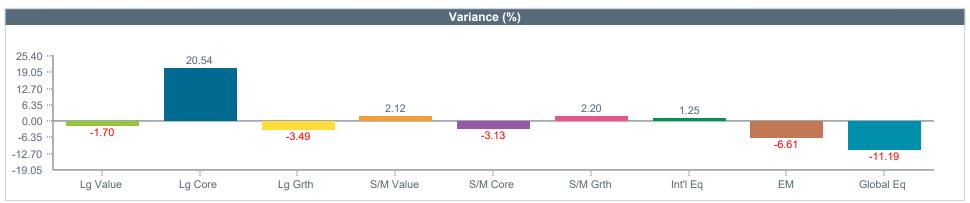




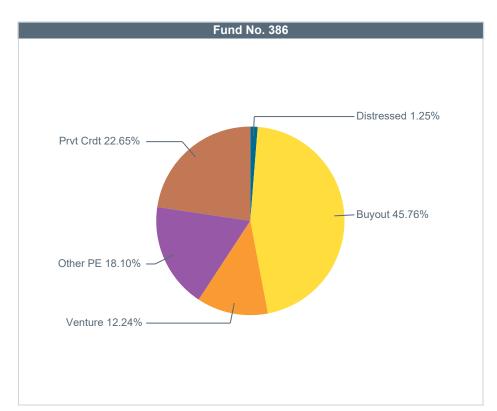


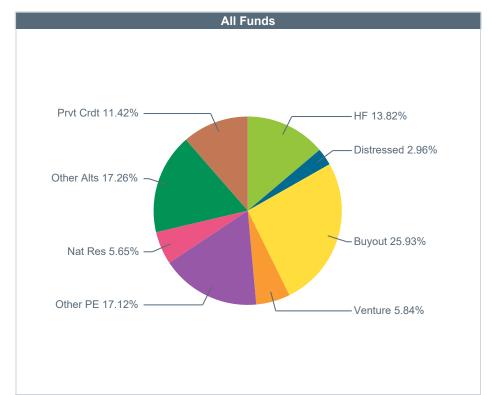


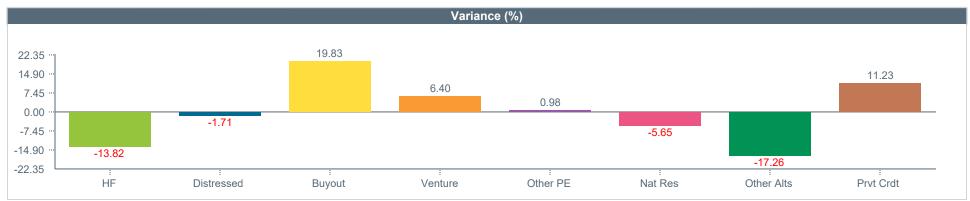






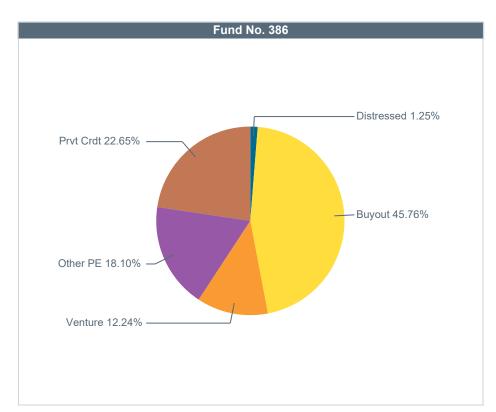


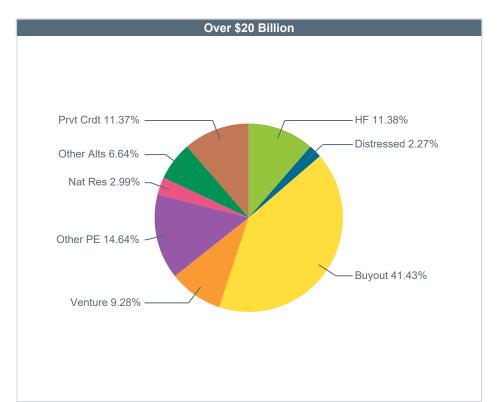


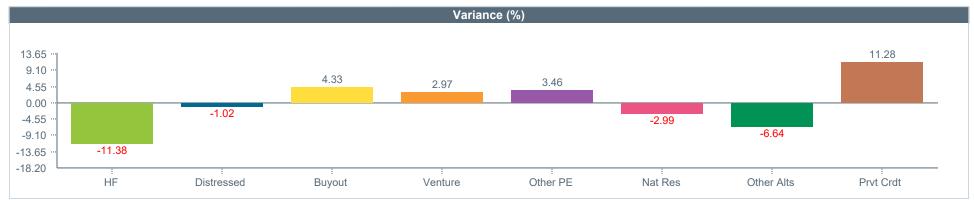


Allocations shown may not sum up to 100% exactly due to rounding. Allocation to Other PE for Fund No. 386 consists of 0.59% Growth Equity, 9.76% Multi Strategy, 2.87% Oil and Gas, 0.16% Private Debt, 0.11% Secondary, and 4.62% Special Situation investments.



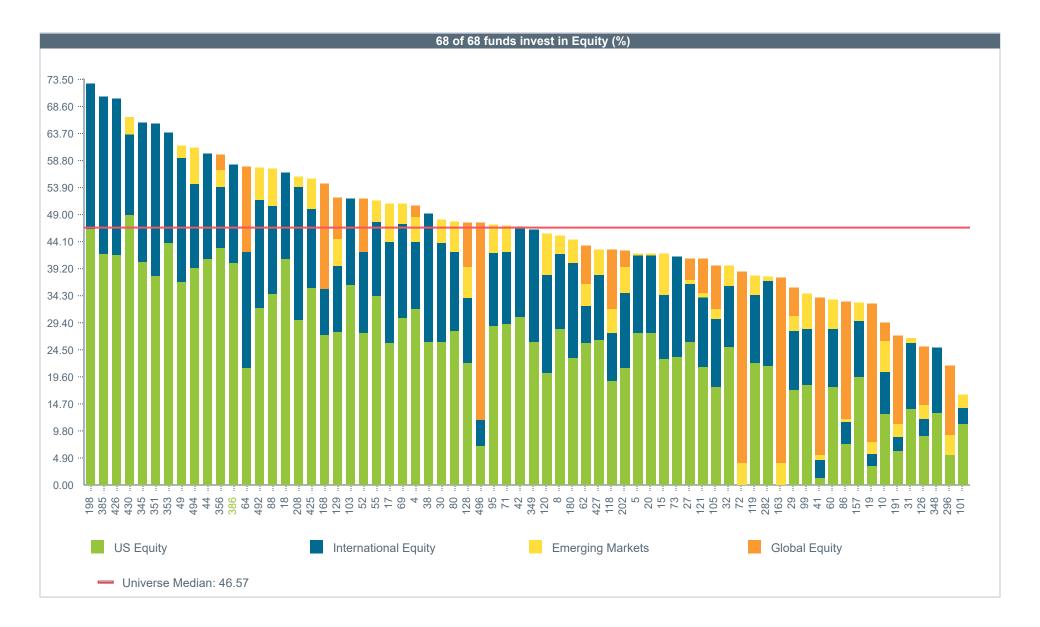






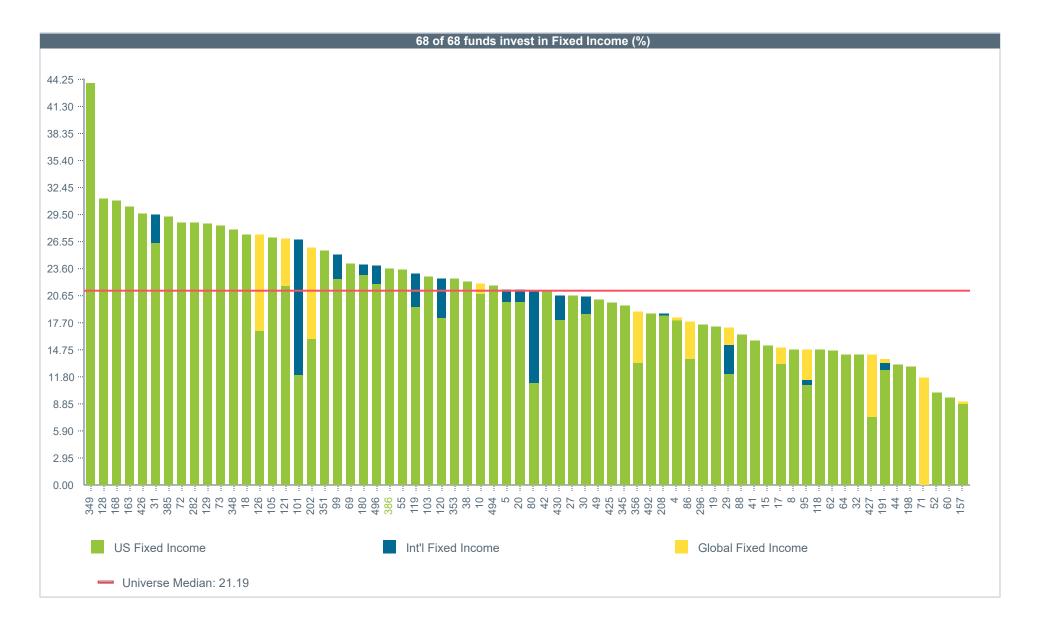


Equity Style Allocation As of December 31, 2023



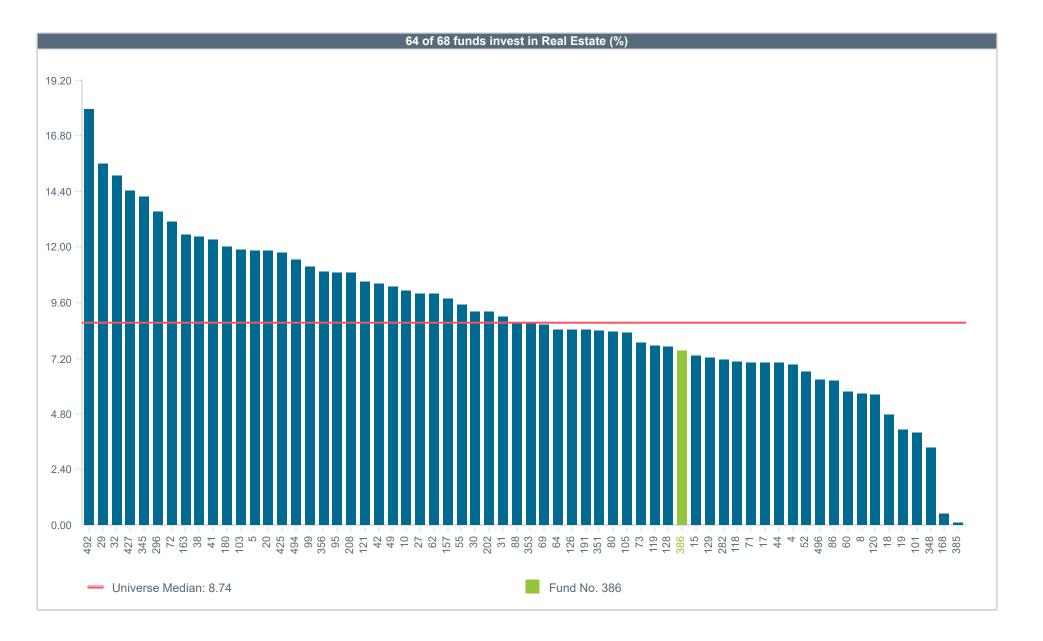


Fixed Income Style Allocation As of December 31, 2023



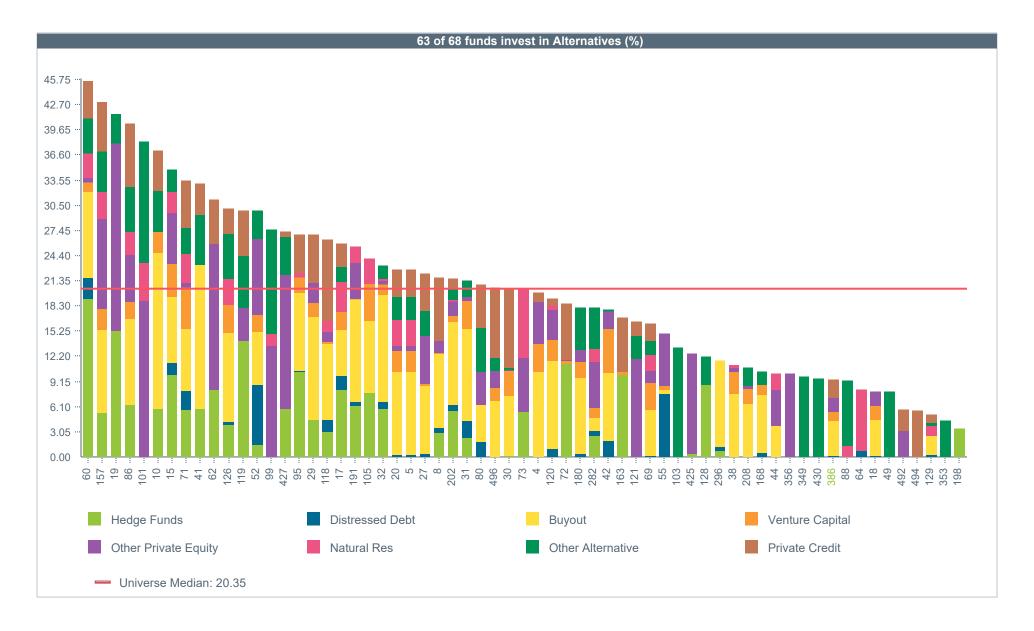


Real Estate Allocation As of December 31, 2023





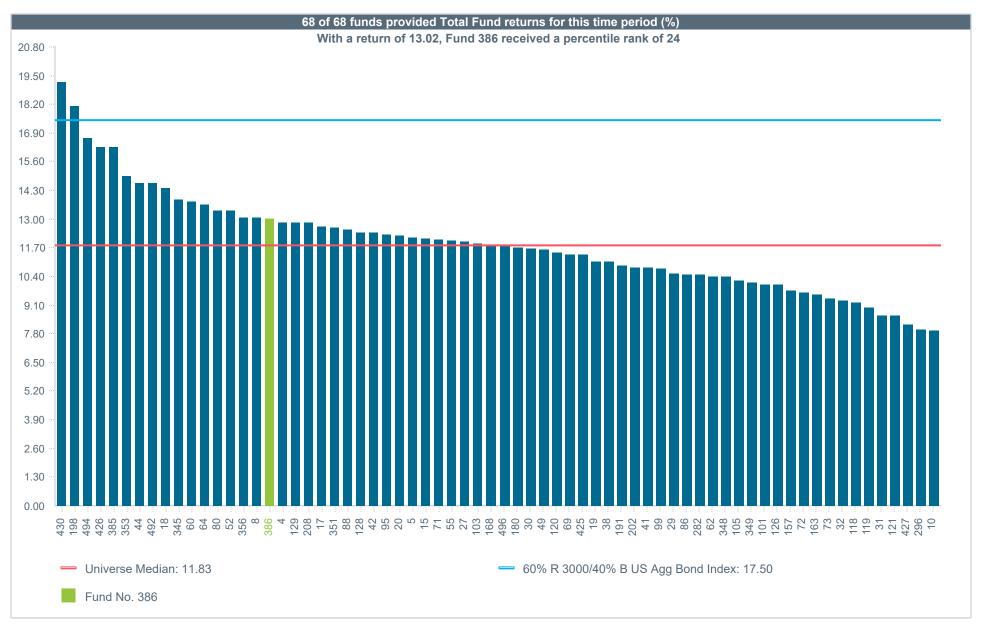
Alternatives Style Allocation As of December 31, 2023





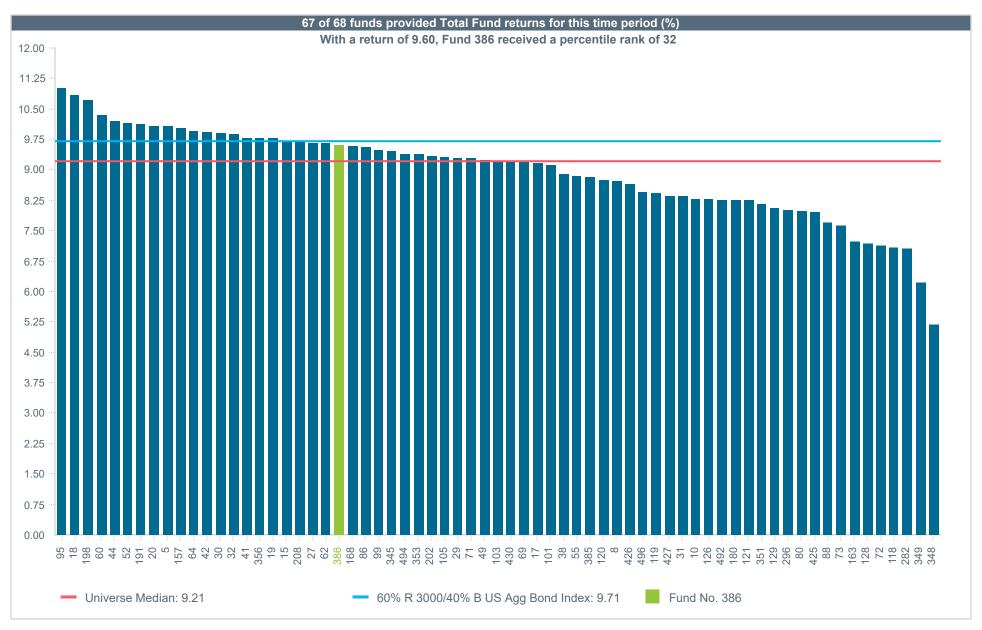


1 Year Annualized Total Fund Returns As of December 31, 2023



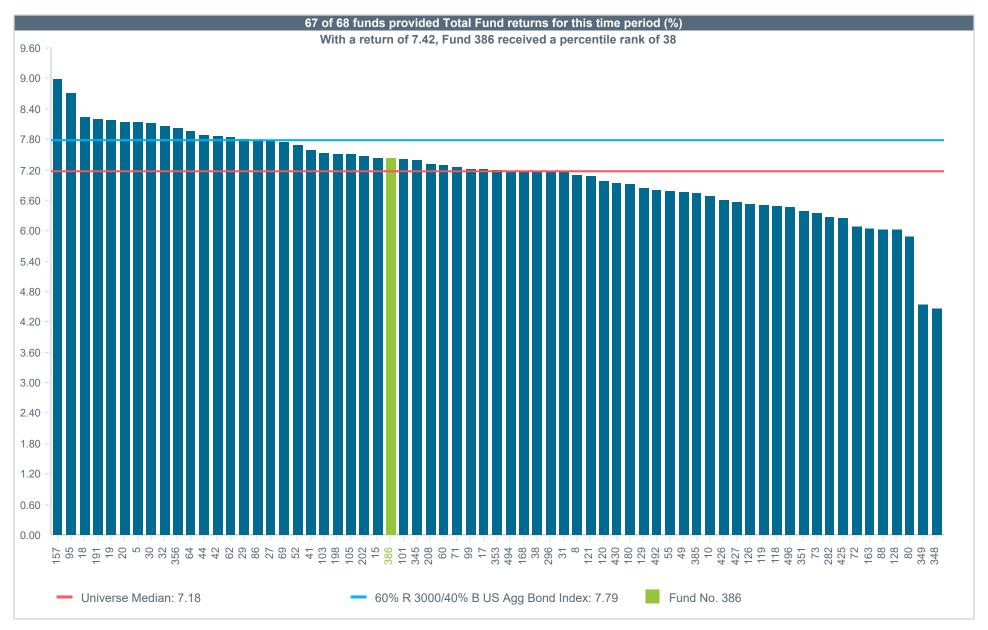


5 Year Annualized Total Fund Returns As of December 31, 2023



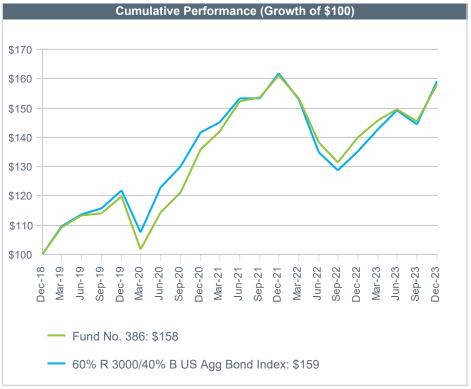


10 Year Annualized Total Fund Returns As of December 31, 2023





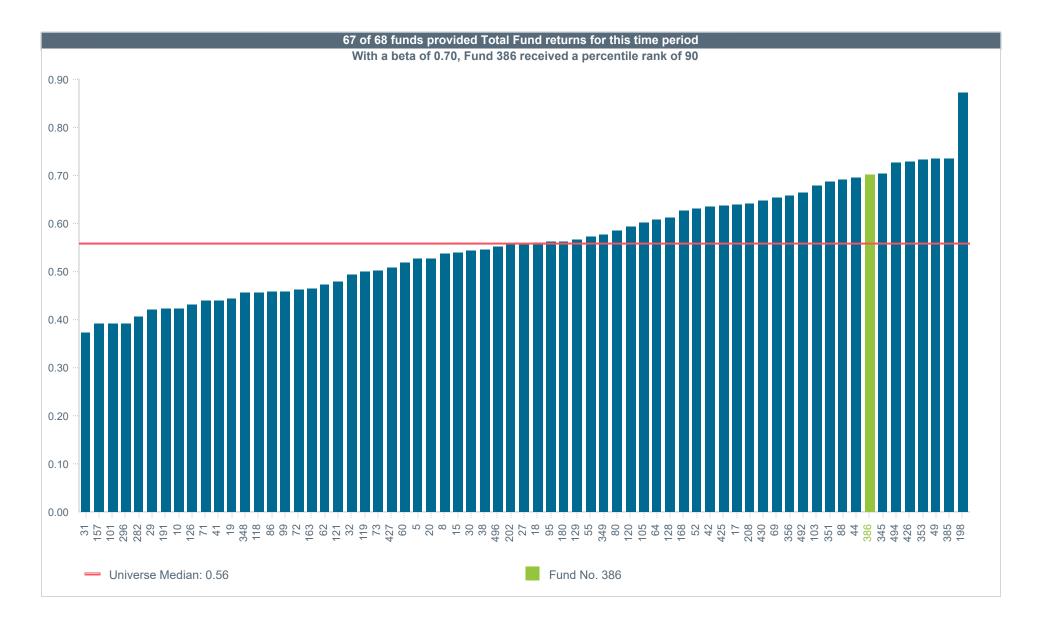




Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 386	13.02	5.17	9.60
60% R 3000/40% B US Agg Bond Index	17.50	3.88	9.71
Variance	-4.48	1.29	-0.11

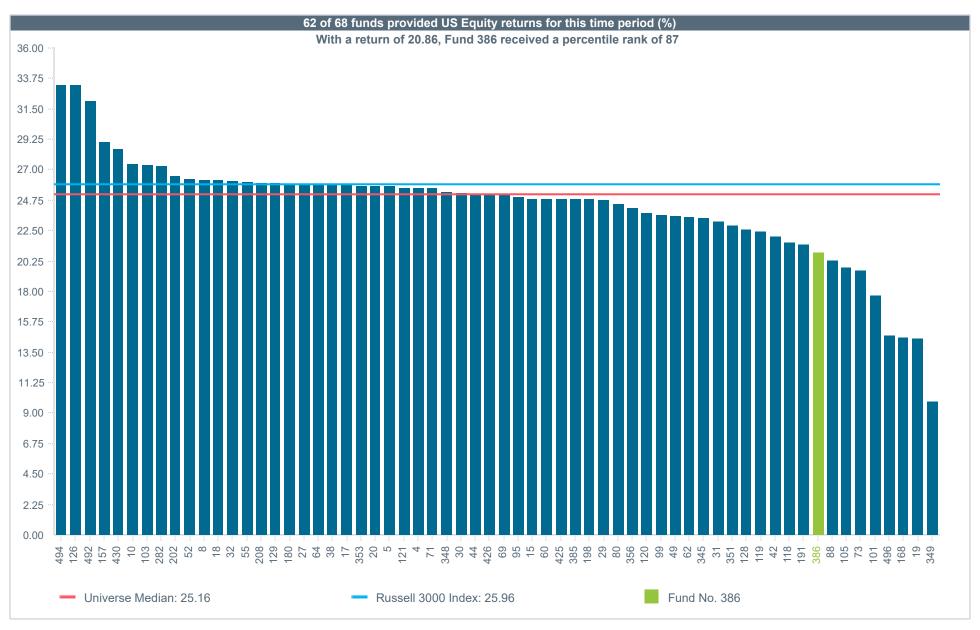


10 Year Total Fund Beta As of December 31, 2023

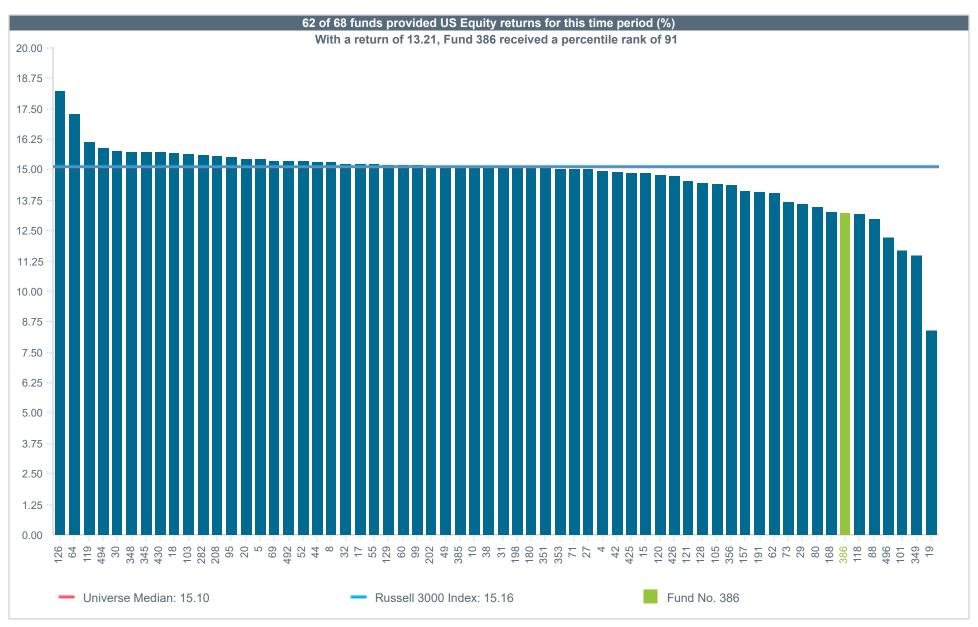


Funds with less history than the specified time period will not appear in the chart. Benchmark used is the S&P 500 Index (Cap Wtd).

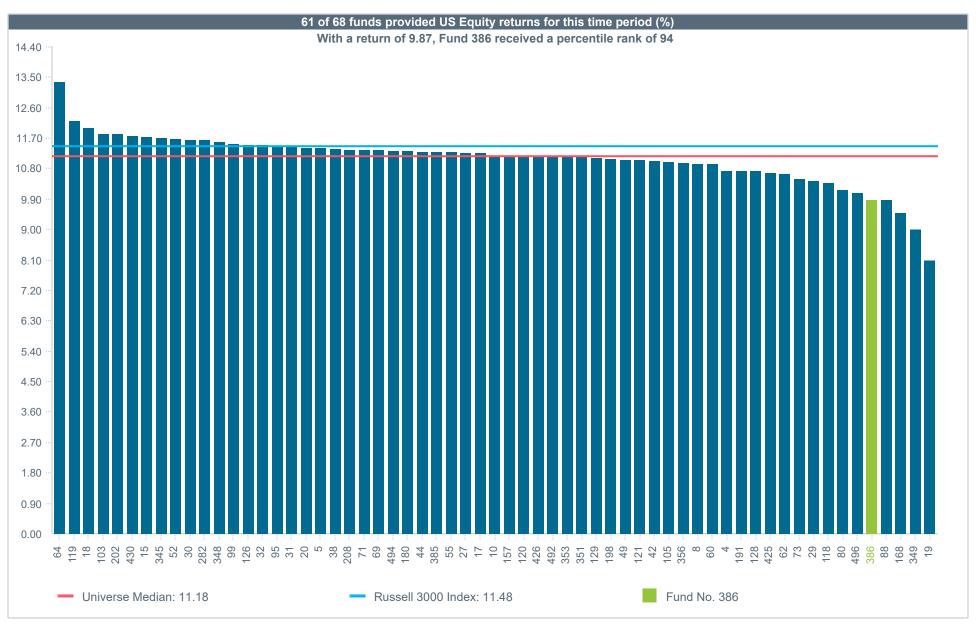






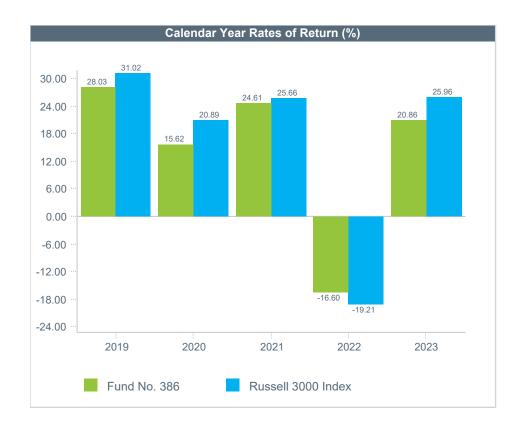


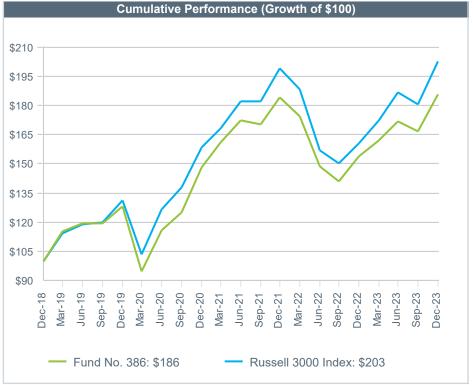






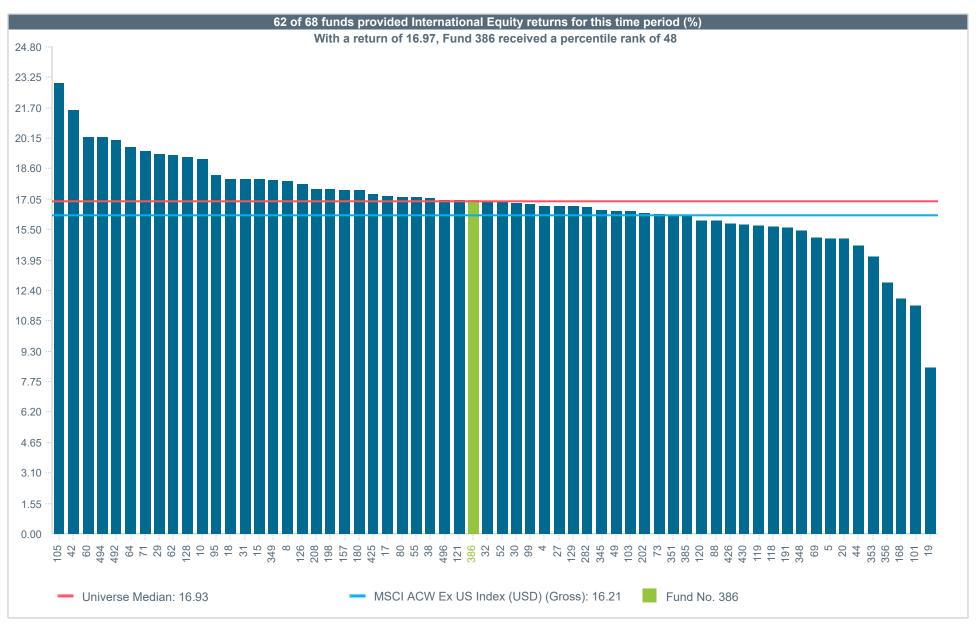
Fund No. 386 vs. Russell 3000 Index



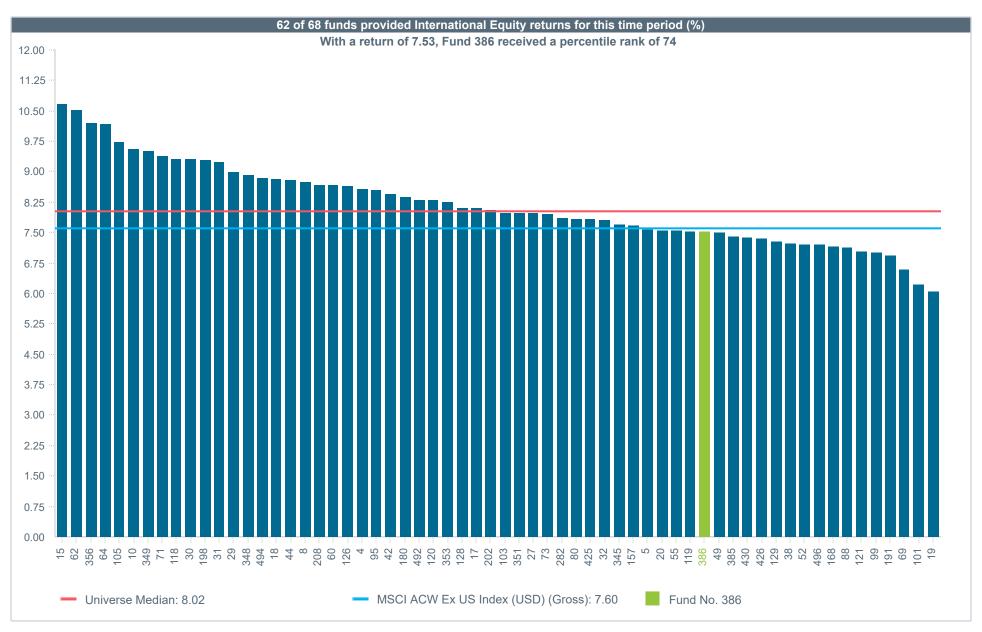


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 386	20.86	7.89	13.21
Russell 3000 Index	25.96	8.54	15.16
Variance	-5.10	-0.65	-1.95

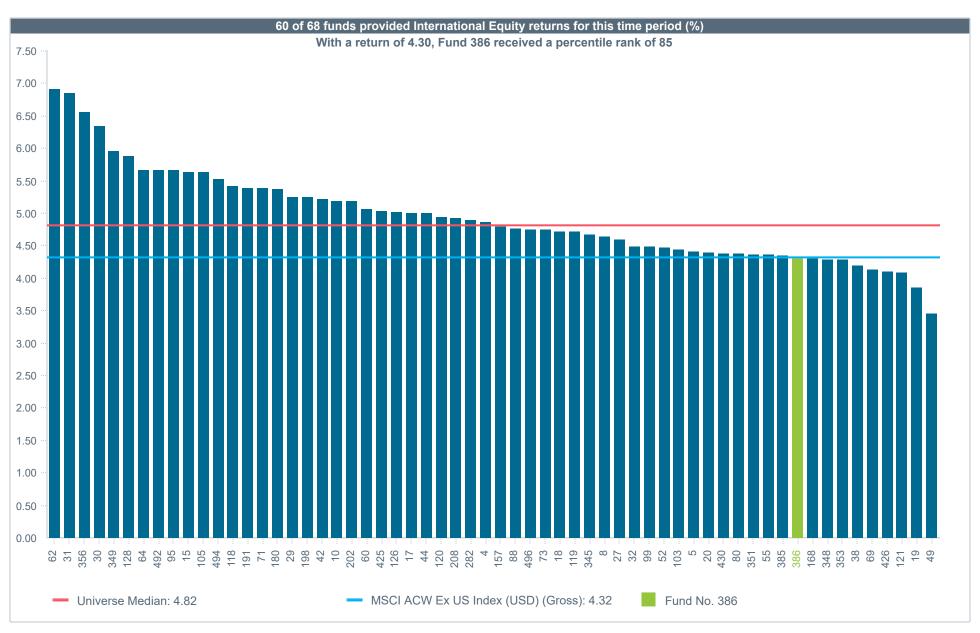




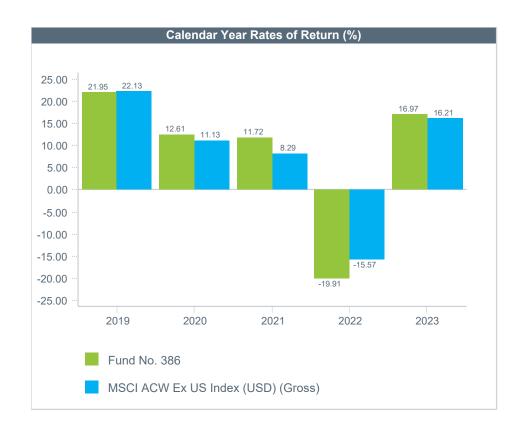


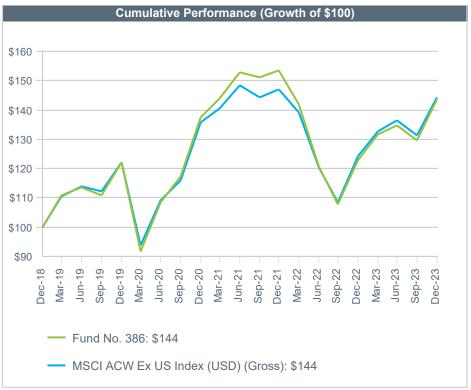










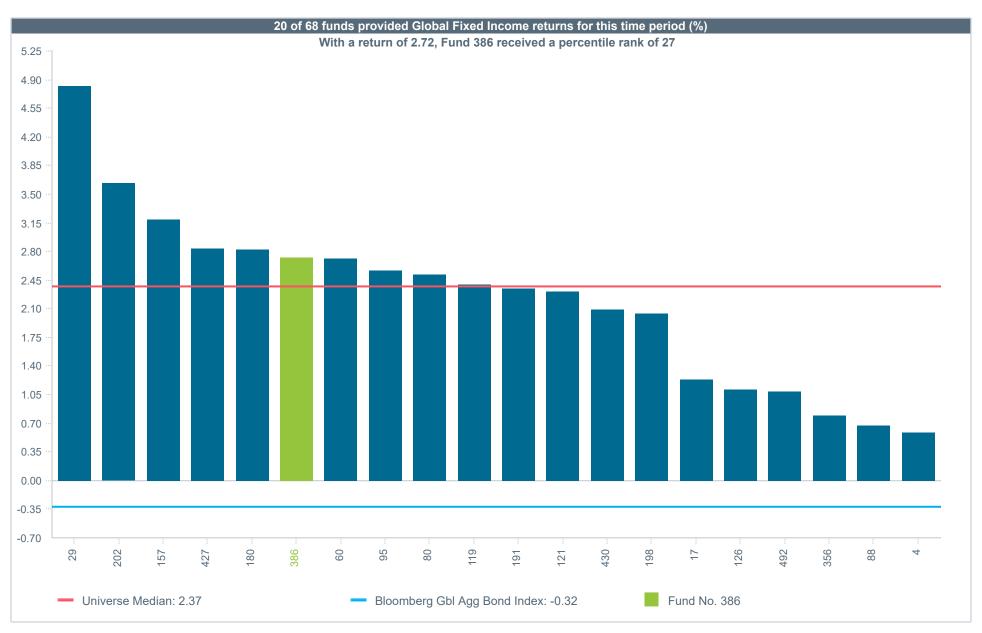


Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 386	16.97	1.53	7.53
MSCI ACW Ex US Index (USD) (Gross)	16.21	2.04	7.60
Variance	0.76	-0.51	-0.07

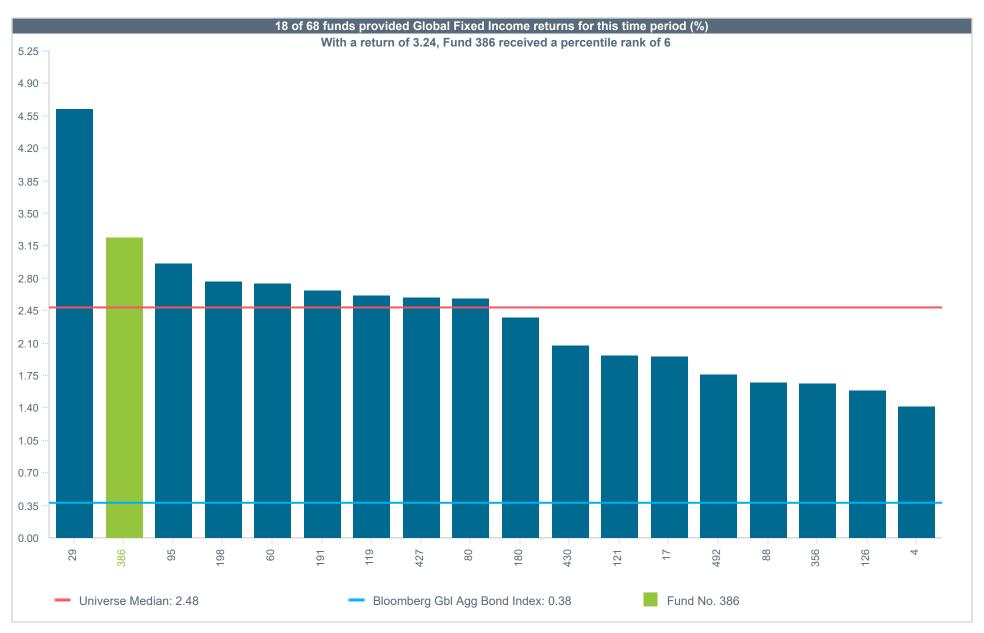




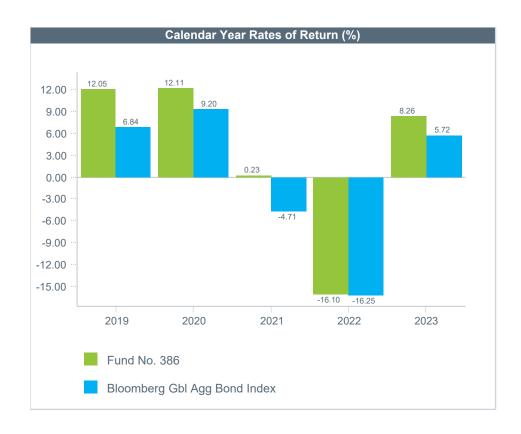


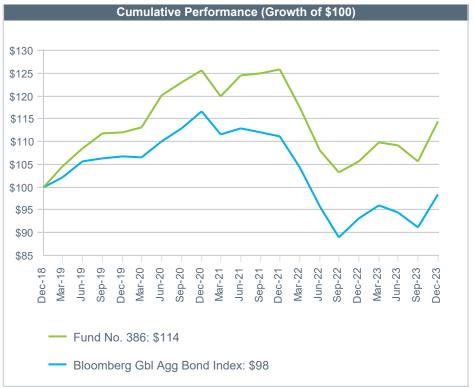










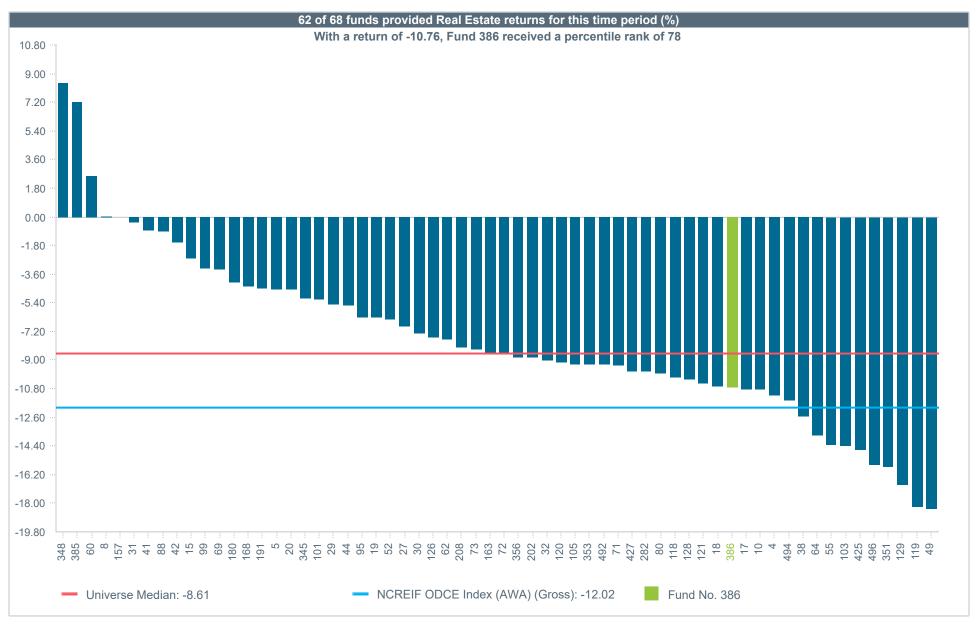


Annualized Returns (%)				
	1 Year	3 Years	5 Years	
Fund No. 386	8.26	-3.08	2.72	
Bloomberg Gbl Agg Bond Index	5.72	-5.51	-0.32	
Variance	2.54	2.43	3.04	



1 Year Annualized Real Estate Returns

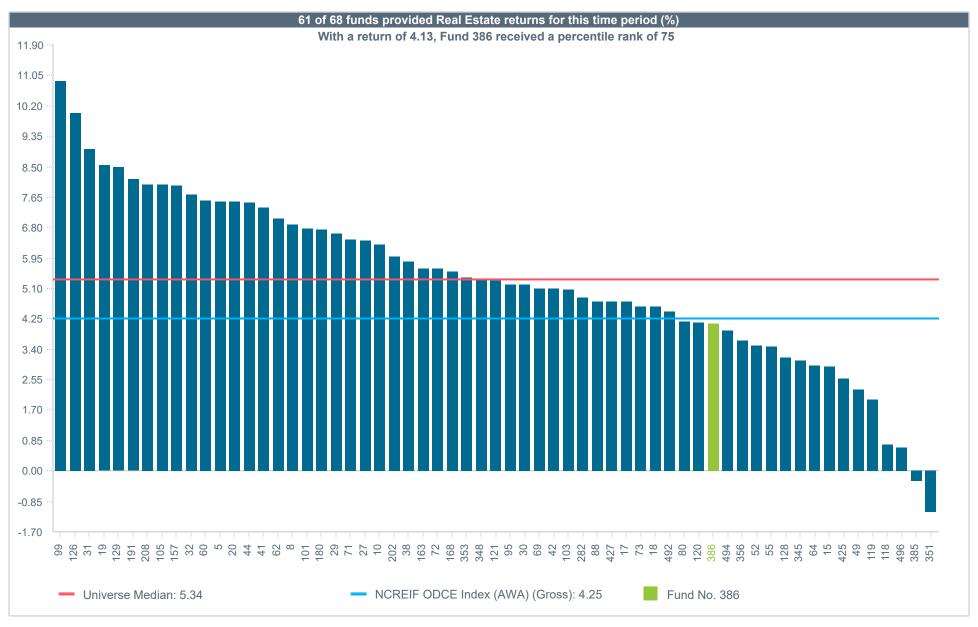
As of December 31, 2023



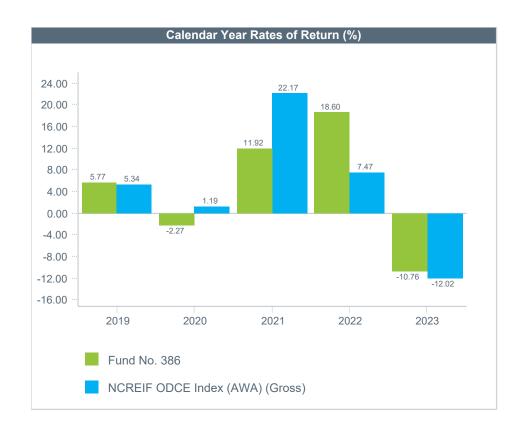


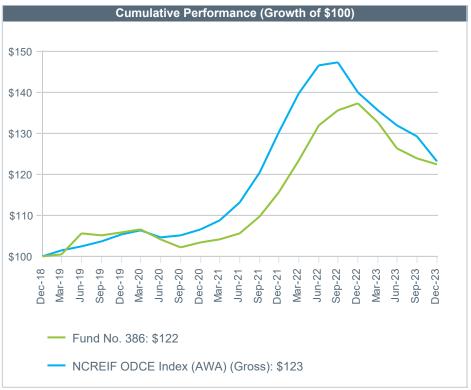
5 Year Annualized Real Estate Returns

As of December 31, 2023



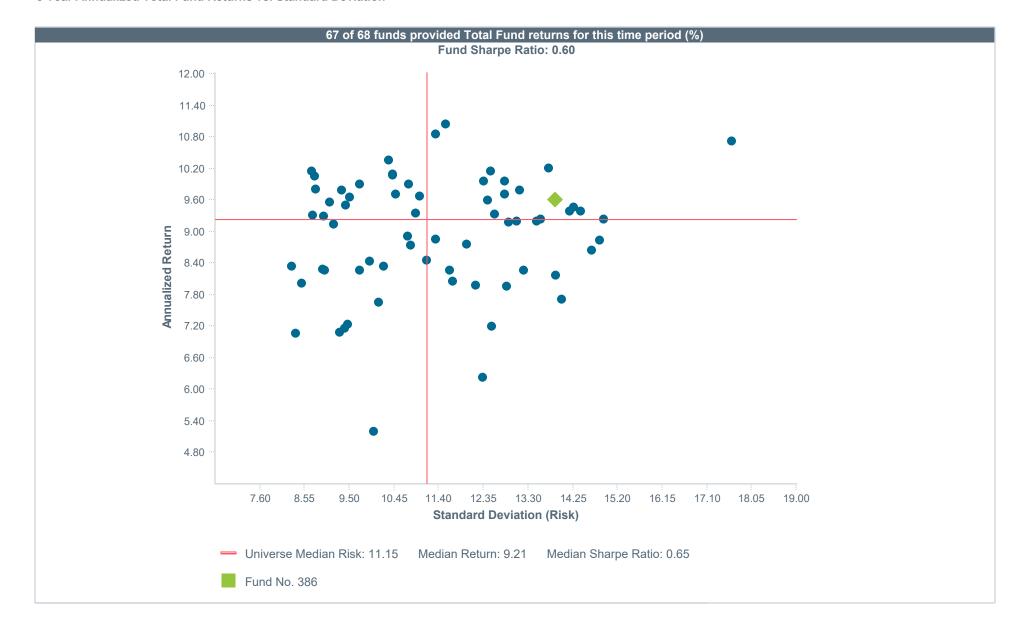






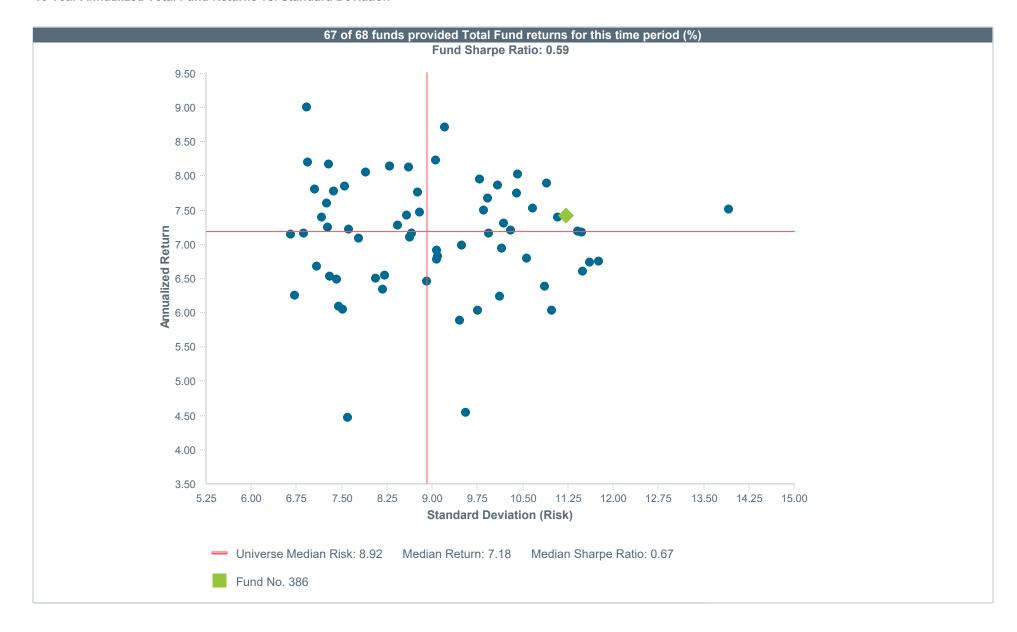
Annualized Returns (%)			
	1 Year	3 Years	5 Years
Fund No. 386	-10.76	5.81	4.13
NCREIF ODCE Index (AWA) (Gross)	-12.02	4.92	4.25
Variance	1.26	0.89	-0.12











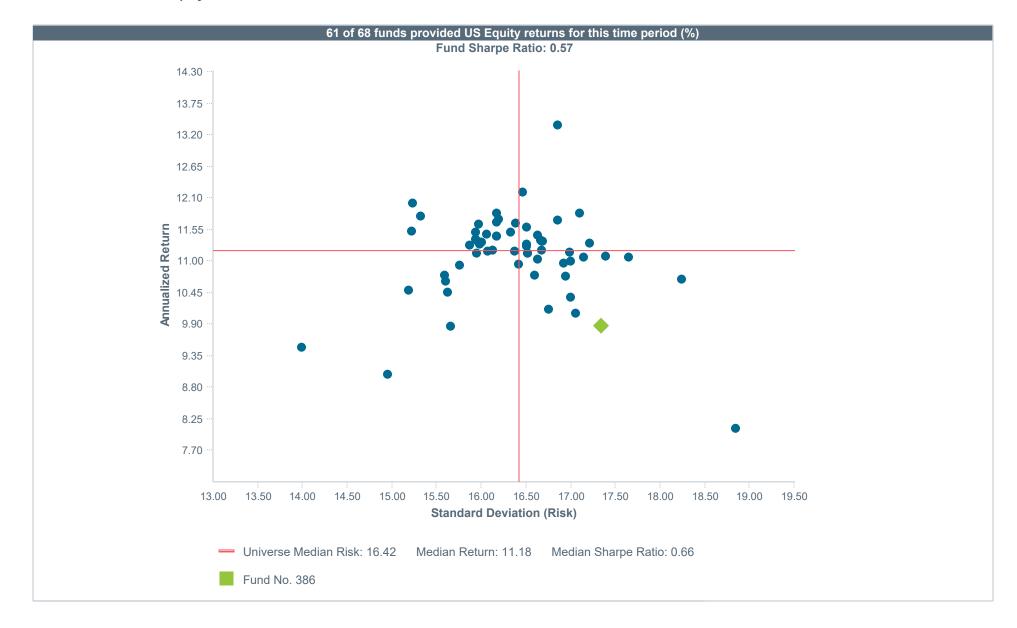












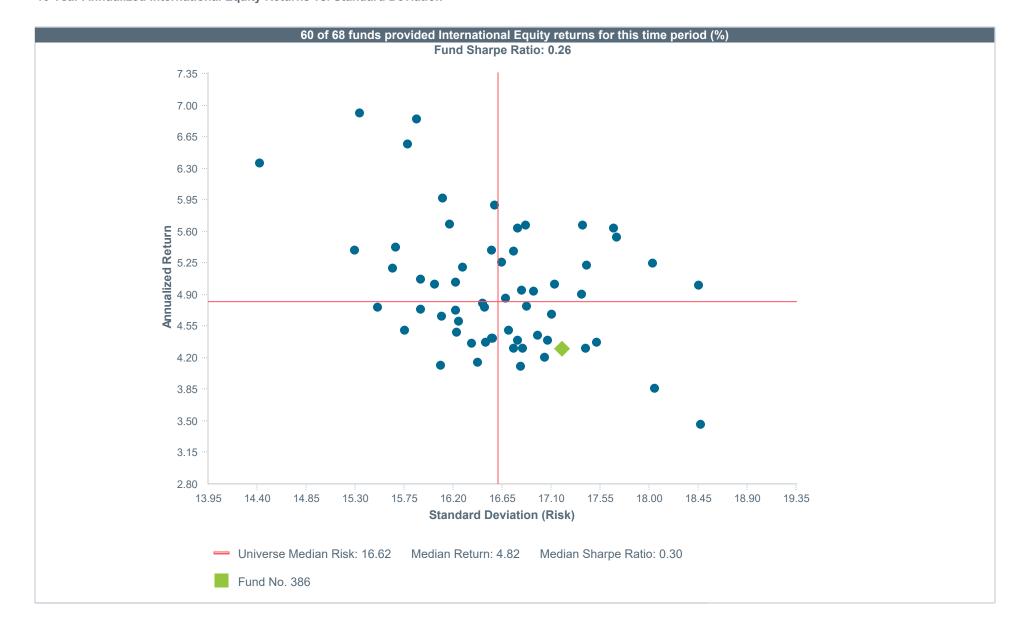






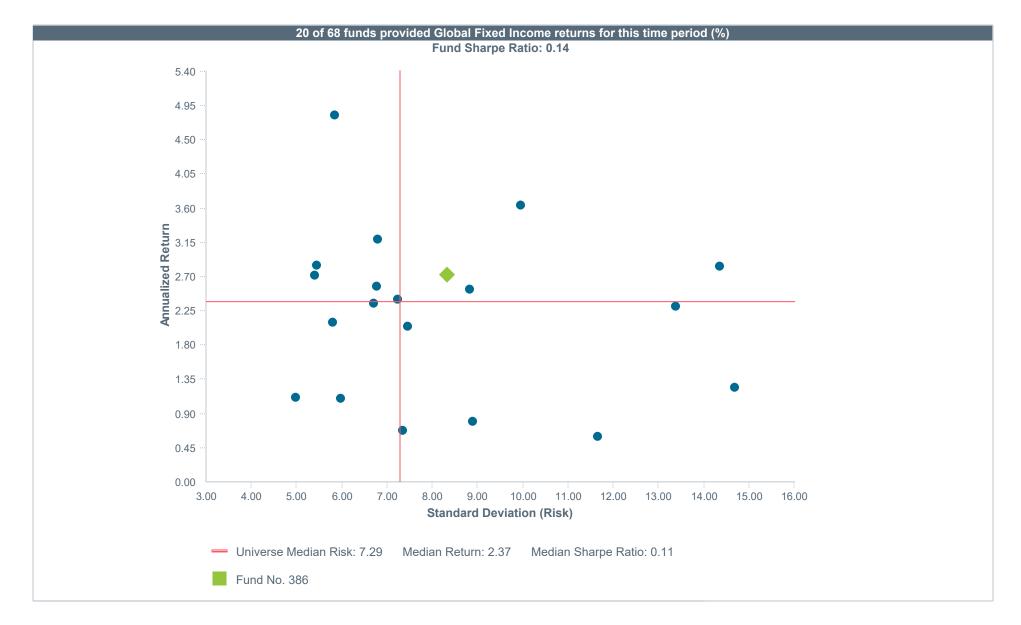






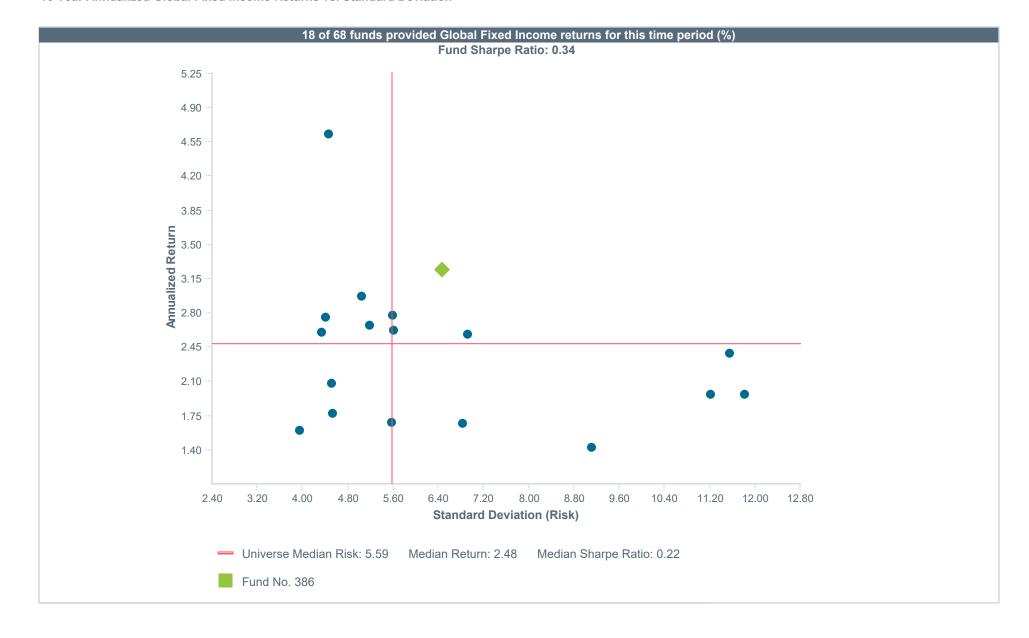






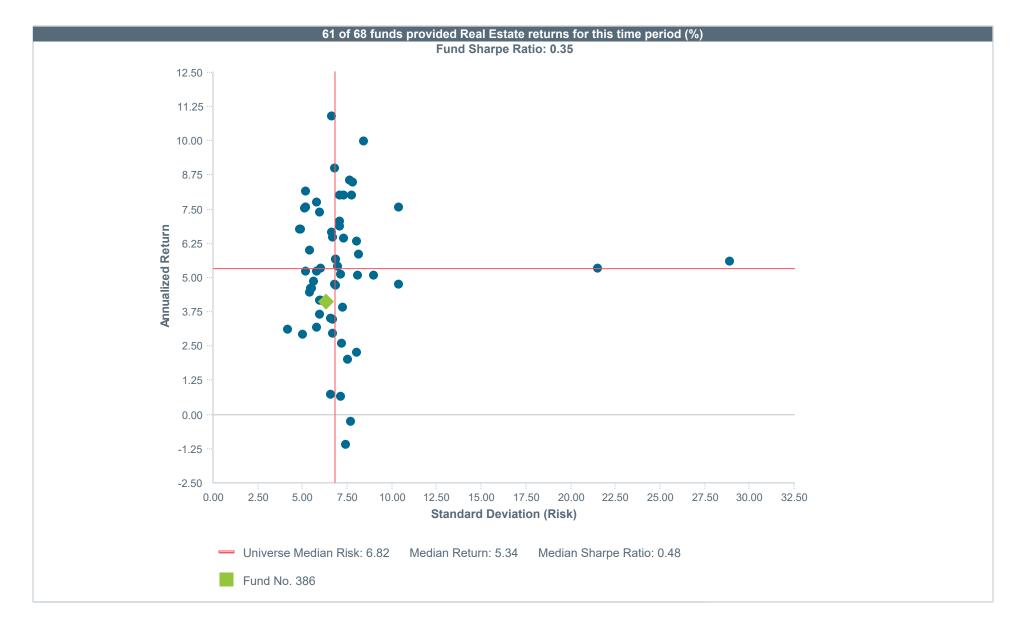








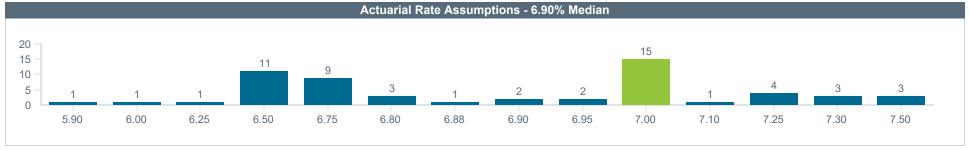


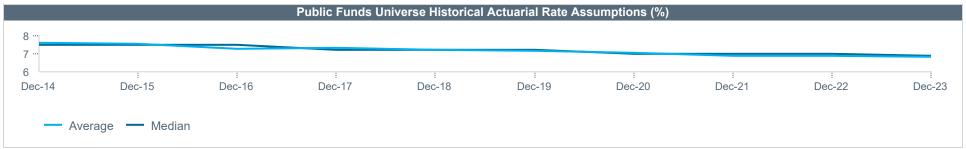


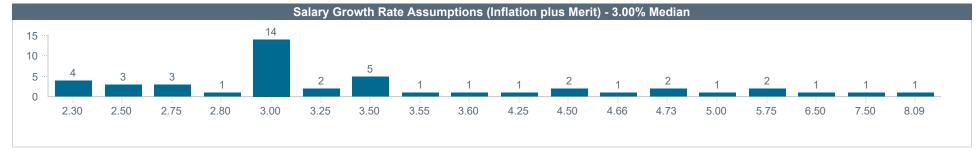




Actuarial Assumption Rates As of December 31, 2023









Funds that did not provide data will not appear in the chart.



Overlay Survey Summary

As of December 31, 2023

## **Overlay Survey Summary**

Q1. Of the 68 participants in the 2023 Q4 Public Fund Report, 44 participants provided a response to the Overlay Survey. Of those participants, 21 are currently using a form of overlay, 3 are considering evaluating a form of overlay, and 20 are not currently using or considering evaluating any form of overlay.

- Q2. Of the 19 participants that provided a response to the Overlay Survey and have exposure to an overlay manager or managers, the purposes of the overlay programs are distributed as follows:
  - 37 % Manage foreign currency risk
  - 32 % Generate alpha
  - 0 % Match Plan liabilities more closely (either as part of an explicit or conceptual framework)
  - 0 % Express a view on US Dollar
  - 0 % Manage market risk within an LDI construct
  - 26 % Tactical asset allocation
  - 63 % Cash equitization
  - 47 % Rebalancing management
  - 32 % Transition management
  - 11 % Other
- Q3. Of the 10 participants that provided a response to the Overlay Survey and have exposure to a currency manager or managers, the program structures are distributed as follows:
  - 50 % Static hedge ratio
  - 40 % Dynamic hedging program where manager varies the hedge ratio
  - 20 % Alpha generating currency manager focused on absolute return
- Q4. Of the 6 participants that provided a response to the Overlay Survey and indicated use of a hedge ratio on a currency program, the responses are distributed as follows:
  - 1 response indicated 25 % hedge on All Equities
  - 5 responses indicated 50 % hedge on Developed Equity exposure
  - 1 response indicated 65 % hedge on Developed Equity exposure
  - 1 response indicated 75 % hedge on Developed Equity exposure
  - 2 responses indicated 50 % hedge on International Equity exposure
  - 1 response indicated 65 % hedge on International Equity exposure



Supplemental Questions As of December 31, 2023

# **Supplemental Questions**

- Q1. Of the 45 respondents, the methods of Private Equity reporting are distributed as follows:
  - 47 % Valuations and cash flows are updated and reflected as received by custodian
  - 2 % Reported on a 1 month lag to account for additional valuations and cash flow activity
  - 51 % Reported on a 1 quarter lag to account for most all valuations and cash flow activity
- Q2. Of the 49 respondents, the methods of Private Real Estate reporting are distributed as follows:
  - 49 % Valuations and cash flows are updated and reflected as received by custodian
  - 6 % Reported on a 1 month lag to account for additional valuations and cash flow activity
  - 45 % Reported on a 1 quarter lag to account for most all valuations and cash flow activity
- Q3. Of the 49 respondents, the responses to whether or not Private Equity and/or Private Real Estate valuations are restated once final valuations are received from the managers are distributed as follows:
  - 29 % Answered 'Yes' valuations are restated
  - 71 % Answered 'No' valuations are not restated
- Q4. Of the 42 respondents, the responses to whether or not a third party risk software provider is used are distributed as follows:
  - 36 % Answered 'Yes'
  - 64 % Answered 'No'



Addendum and Glossary

As of December 31, 2023

## **Miscellaneous Comments**

- Performance shown is gross of fees, with the exception of the following:
  - Funds 8, 31, 49, 60, 350, and 351: Performance shown is net of fees.
  - Funds 4, 55, 75, and 85: Performance shown for Real Estate is net of fees.
- Performance shown is calculated using quarterly performance provided by participating public funds.
- Performance shown may differ from a fund's actual performance due to rounding.
- Net Assets Available for Benefits includes funding percentage valuation as of dates between December 2022 and December 2023.
  - Fund 96: Net Assets Available for Benefits shown is the higher funded ratio for one of two commingled systems reported by the fund.
- Allocations shown reflect dedicated managers/mandates rather than actual exposure, with the exception of the following:
  - Funds 29, 86, and 119: Performance shown for Global Fixed Income includes US and Non-US Fixed Income funds.
  - Fund 121: Performance shown for Global Fixed Income includes Non-US Fixed Income funds.
  - Funds 4, 42, 64, 99, 202, and 240: Performance shown for US Fixed Income includes US and Non-US Fixed Income funds.

## **Glossary of Terms**

**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. Calculation is based on quarterly periodicity.

Return - Compounded rate of return for the period.

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

**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. Calculation is based on quarterly periodicity.

**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. Calculation is based on quarterly periodicity.





# Report and Firm Summary

The following report is a compilation of data provided to RVK, Inc. by 66 public funds throughout the United States. We are a registered investment advisor with the Securities Exchange Commission under the Investment Advisors Act of 1940. Our firm provides investment consulting services to over 200 clients across more than 500 plans with total assets under advisement in excess of \$3 trillion. The confidentiality of participants is maintained by revealing the fund name only to each individual fund. For more information about services provided by RVK, please visit our website at www.RVKInc.com.



Participants As of December 31, 2023

Alameda County Employees' Retirement Association

Arlington County Employees' Retirement System

Chicago Teachers' Pension Fund

City of Jacksonville Police and Fire Retirement Fund

City of Milwaukee Employes' Retirement System

Civilian Employees' Retirement System of the Police Department of Kansas City,

Missouri

Contra Costa County Employees' Retirement Association

Fire and Police Pension Association of Colorado

Gila River Indian Community Retirement Plan

Kansas Public Employees' Retirement System

Los Angeles City Employees' Retirement System

Los Angeles Fire and Police Pension System

Marin County Employees' Retirement Association

Mendocino County Employees' Retirement Association

Montana Public Employees' Retirement System

Municipality of Anchorage Pre-Funding Program

New York State Common Retirement Fund

Ohio Public Employees' Retirement System

Oklahoma Law Enforcement Retirement System

Oklahoma Public Employees Retirement System

Oklahoma Uniform Retirement System for Justices and Judges

Orange County Employees' Retirement System

Police Retirement System of Kansas City, Missouri

Public School and Education ERS of Missouri

San Diego City Employees' Retirement System

San Diego Transit Corporation Employees Retirement

Santa Barbara County Employees' Retirement System

South Dakota Retirement System

State of New Jersey Pension Fund

Anchorage Police & Fire Retirement System

California State Teachers' Retirement System

City of Austin Employees' Retirement System

City of Jacksonville Retirement System

City of Plano Retirement Security Plan

Confederated Tribes of the Warm Springs Tribal Council Pension Fund

**Employees Retirement System of Texas** 

Fresno County Employees' Retirement Association

Kansas City, Missouri Employees' Retirement System

Kern County Employees' Retirement Association

Los Angeles County Employees Retirement Association

Los Angeles Water & Power Employees Retirement Plan

Maryland State Retirement and Pension System

Merced County Employees' Retirement Association

Montana Teachers' Retirement System

Nevada Public Employees' Retirement System

North Carolina Retirement System

Oklahoma Firefighters Pension and Retirement System

Oklahoma Police Pension and Retirement System

Oklahoma Teachers' Retirement System

Oklahoma Wildlife Conservation Retirement System (Fund No. 430)

Pennsylvania State Employees' Retirement System

Public Employees Retirement Association of New Mexico

San Bernardino County Employees' Retirement Association

San Diego County Employees Retirement Association

San Mateo County Employees' Retirement Association

Sonoma County Employees' Retirement Association

State of Michigan Retirement Systems



Participants As of December 31, 2023

Teachers' Retirement System of the State of Illinois

The Navajo Nation Retirement Plan

Vermont Pension Investment Committee

West Virginia Investment Management Board

State Teachers Retirement System of Ohio Teachers' Retirement System of Kentucky

Ventura County Employees' Retirement Association

Virginia Retirement System

Wyoming Retirement System



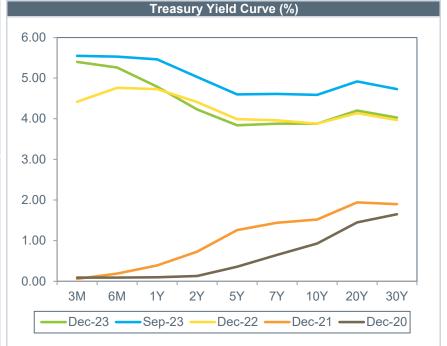
Capital Markets Review As of December 31, 2023

## **Fourth Quarter Economic Environment**

In Q4, most risk assets rebounded from subdued conditions in the previous guarter to finish the year with significant positive returns—a stark turnaround compared to performance in 2022. For instance, the MSCI All Country World Index, a broad measure of the global stock market, returned 22.2% in 2023 compared to returns of -18.4% in 2022. Fixed income markets also ended the year firmly in positive territory. Despite the positive market performance, some recent indicators of economic activity have provided investors reason for caution. For example, commodity prices and energy stocks broadly declined amidst slowing inflation. The manufacturing Purchasing Managers' Index (PMI) remained in contractionary territory throughout the year. However, other economic indicators were more positive, with the services PMI remaining in expansionary territory and corporate earnings proving more resilient than expected. The labor market remained healthy as the unemployment rate finished the year at 3.7%. The Dec. Consumer Price Index (CPI) report showed a higher than expected uptick in monthly inflation and annual inflation of 3.4%. The annual level represents a significant drop compared to the CPI measure of 6.5% in Dec. 2022. The Federal Open Market Committee (FOMC) anticipates further progress in bringing inflation down to target levels, with the current forecast for their preferred inflation measure, the PCE Price Index, projecting a decline to 2.4% by the end of 2024.

Key Economic Indicators								
16 7		120 ]	70 ]	160 7				
14 -	25 - 20 -	100 -	60	140 -				
12 -	15 -		50 -	120 -				
10 -	10 -	80 -	40 -	100 -				
8 - 6 -	5 0	60 -	30 -	80 -				
4 -	-5 -		20 -	60 -				
2 -	-10 - -15 -	40 -	10	40 -				
0	-20	20	0	20				
Unemployment	t CPI Year-over- Year (% change)	US Govt Debt (% of GDP)	VIX Index (Volatility)	Consumer Confidence				
Since 1948	Since 1914	Since 1940	Since 1990					

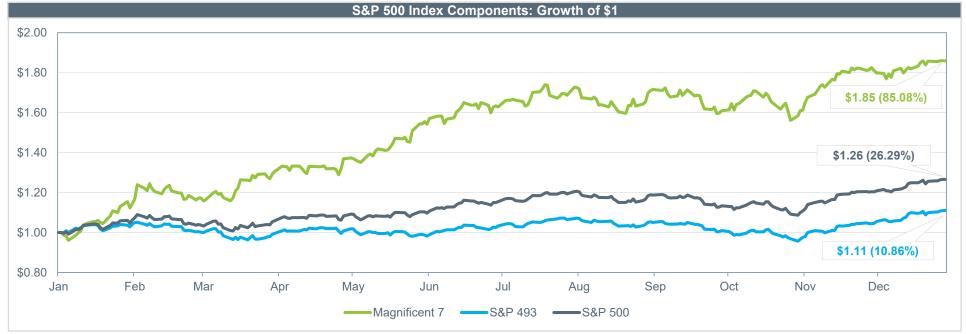
Economic Indicators	Dec-23	Sep-23	Dec-22	Dec-20	20 Yr
Federal Funds Rate (%)	5.33 —	5.33	4.33	0.09	1.49
Breakeven Infl 5 Yr (%)	2.14	2.25	2.38	1.97	1.94
Breakeven Infl 10 Yr (%)	2.17	2.34	2.30	1.99	2.10
CPI YoY (Headline) (%)	3.4	3.7	6.5	1.4	2.6
Unemployment Rate (%)	3.7	3.8	3.5	6.7	5.9
Real GDP YoY (%)	3.1	2.9	0.9	-1.5	2.0
PMI - Manufacturing USD Total Wtd Idx	47.2 ▼ 118 77 ▼	49.0	48.4	60.5	53.4
WTI Crude Oil per Barrel (\$)	118.77 ▼ 71.7 ▼	122.77 90.8	121.40 80.3	111.33 48.5	103.87 70.2
Gold Spot per Oz (\$)	2,068	1,872	1,824	1,898	1,238
,	,				
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	11.69	26.29	26.29	15.69	12.03
Russell 2000	14.03	16.93	16.93	9.97	7.16
MSCI EAFE (Net)	10.42	18.24	18.24	8.16	4.28
MSCI EAFE SC (Net)	11.14	13.16	13.16	6.58	4.80
MSCI Emg Mkts (Net)	7.86	9.83	9.83	3.68	2.66
Bloomberg US Agg Bond	6.82	5.53	5.53	1.10	1.81
ICE BofAML 3 Mo US T-Bill	1.37	5.02	5.02	1.88	1.25
NCREIF ODCE (Gross)	-4.83	-12.02	-12.02	4.25	7.29
FTSE NAREIT Eq REIT (TR)	16.22	13.73	13.73	7.39	7.65
HFRI FOF Comp	3.41	6.35	6.35	5.14	3.25
Bloomberg Cmdty (TR)	-4.63	-7.91	-7.91	7.23	-1.11





2023: Year in Review As of December 31, 2023







US Equity Review
As of December 31, 2023

## **Fourth Quarter Review**

#### **Broad Market**

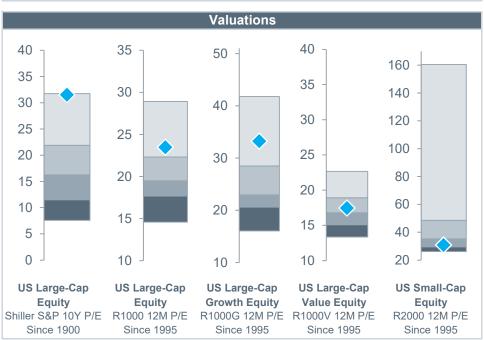
Following negative returns in Q3, US equity ended the year on a high note, with the Russell 3000 returning 12.1% in Q4 and 26.0% for the calendar year. Performance was driven by a group of the largest, growth-oriented companies commonly referred to as the "Magnificent 7." Stocks in the high beta, growth, and quality factor groups performed best in 2023, according to data from S&P Global. However, value and momentum factors also provided significant absolute returns during the year.

## **Market Cap**

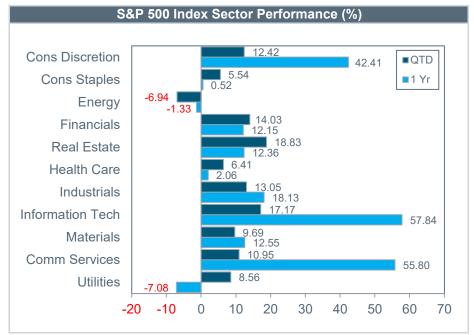
Although small cap stocks fared better than large cap stocks in Q4, they finished the year with a lower calendar year return of 16.9% versus 26.5% for large cap stocks, as measured by the Russell 2000 and Russell 1000, respectively.

#### **Style and Sector**

Across active managers, median peer group performance suggests that many strategies did not outperform their respective benchmarks for Q4 and the calendar year. Given the strong returns delivered by growth indexes, growth-oriented managers generally had lower rates of success. In contrast, value-oriented managers were relatively more effective in providing excess returns compared to their benchmarks.







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 December 31, 2023

## **Fourth Quarter Review**

## **Developed Markets**

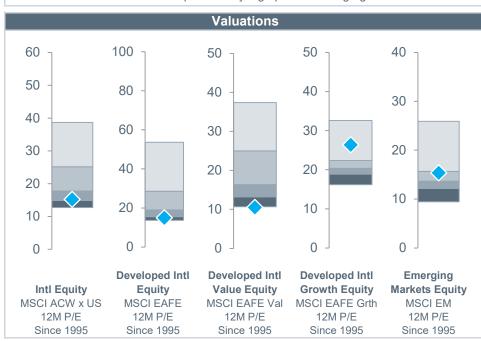
Developed international markets trailed their US counterparts in Q4. Growth stocks outperformed value stocks during the quarter; however, value outpaced growth for the calendar year.

## **Emerging Markets**

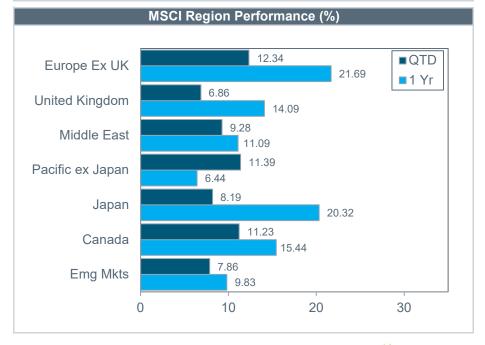
Emerging market equities lagged developed markets in Q4. Value stocks outperformed their growth counterparts, and small-cap outperformed large-cap. Within China, despite a reported uptick in economic growth for Q3 and continued governmental stimulus, the MSCI China Index remained in negative territory in Q4 as investor sentiment remain muted. The majority of active emerging market managers outperformed their benchmarks for the quarter and the calendar year.

## **Market Cap & Style**

All developed market sectors delivered positive absolute performance during the quarter except for energy, which had a negative return in Q4 in spite of initially rallying following the start of the Israel/ Hamas war in October. Despite continued pledges of production cuts by OPEC, weak results were driven by waning global demand, moderating inflation, and a mild European winter. The European Central Bank and Bank of England have both pushed back against near-term rate cuts as the Eurozone continues to see persistently high price and wage growth.









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.



Fixed Income Review

As of December 31, 2023

## **Fourth Quarter Review**

#### **Broad Market**

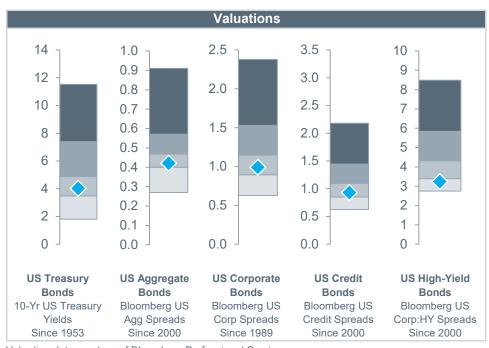
The fixed income market surged in Q4, fueled by moderating economic data, cooling inflation, and investor expectations for more accommodative FOMC policy, along with an increased likelihood of a soft landing for the US economy. The Bloomberg US Aggregate Bond Index gained 6.8% in Q4 and 5.5% for the calendar year. The US 10-year Treasury yield fell 71 basis points during the quarter to end the year at 3.9%, matching its yield at the start of year. Longer duration assets responded to the rate environment and the potential for rate cuts in 2024 with sharply positive results in Q4.

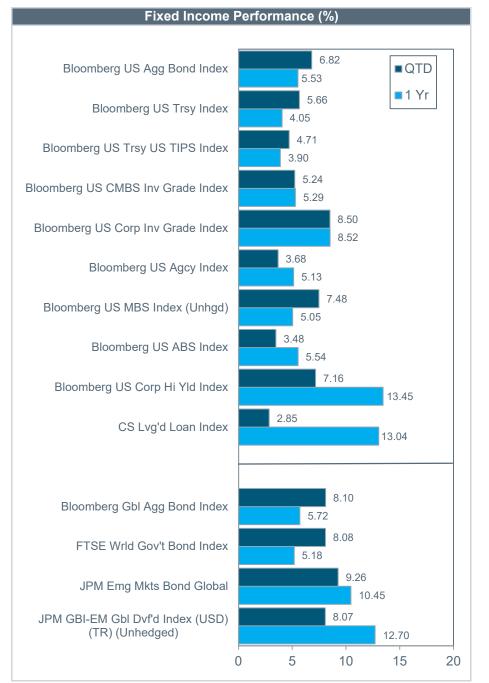
#### **Credit Market**

Across plus sectors, spreads tightened and risk assets rallied amid falling rates. The Bloomberg US Corporate Investment Grade Index returned 8.5% in Q4 and 8.5% for the calendar year, while the Bloomberg US Corporate High Yield Index returned 7.2% in Q4 and 13.5% for the calendar year.

## **Emerging Market Debt**

Emerging market debt experienced a robust rally in Q4. The JPMorgan EMBI Global Diversified Index, which follows hard currency emerging markets, returned 9.2% in Q4 and 11.1% for the calendar year. The JPMorgan GBI-EM Global Diversified Index, reflecting local currency emerging markets, gained 8.1% in Q4 and 12.7% for the calendar year.







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



Alternatives Review As of December 31, 2023

## Fourth Quarter Review - Absolute Return

## **General Market - Hedge Funds**

In Q4, results were more mixed amidst a broad market rally. Credit Arbitrage, Equity Activist, and Directional Quant peer groups indicated the highest returns while most other strategy groups posted modest single-digit gains. Due to the combination of rising equity markets and a reasonable short selling environment supported by elevated rates, both long-biased and market neutral Long/Short Equity managers generated strong market capture despite generally limited exposure to the "Magnificent 7" stocks. Income-oriented strategies provided attractive returns for the first time in years, as managers took advantage of elevated interest rates. Additionally, rates volatility created opportunity for relative value trading.

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

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely posted significant gains in Q4. However, nearly all active managers underperformed a US-centric 60/40 blend of equity and fixed income both in Q4 and for the calendar year. The top-performing long-biased GTAA strategies in Q4 featured higher allocations to US equities and exposure to the technology sector. Underperforming managers tended to have larger emerging markets exposure and significant value tilts.

#### **HFRI Hedge Fund Performance (%)** 3.65 HFRI FOF QTD 6.59 1.41 Conv Arbitrage ■1 Yr 5.61 **Equity Hedge** 10.54 1.44 Mkt Neutral Eq 5.61 3.21 Distressed 6.73 -1.08 Macro -0.60 2.58 Relative Value 6.95 5.41 **Event Driven** 10.37 4.34 Merger Arb 5.84 3.77 Credit Arb 10.50 -5 0 5 10 15

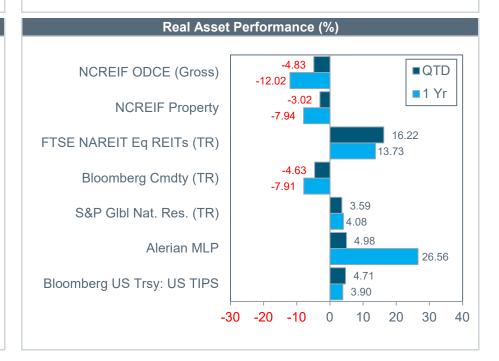
### **Fourth Quarter Review - Real Assets**

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

Diversified Inflation Strategy managers tracked closely by RVK reported positive performance. Managers that had larger exposures to listed infrastructure and real estate equities outperformed peers most significantly, while those with larger exposure to the energy and agriculture commodity sector tended to underperform peers.

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

In Q4, core private real estate generated a negative return of -4.8% (on a preliminary and gross of fee basis), as reported by the NFI-ODCE Index, with the total return comprising of 1.0% from income and -5.8% from price appreciation. The income return improved slightly on a percentage basis from the prior quarter, but continues to trend at the lower end of historical levels due to elevated borrowing costs and expenses. Publicly traded real estate outperformed private market counterparts, delivering returns of 17.6% in Q4 as measured by the FTSE/NAREIT All REITs Index. Private real estate markets continued to experience similar trends as the prior five quarters. Significant headwinds persisted due to lingering disruptions in capital markets from 2022.





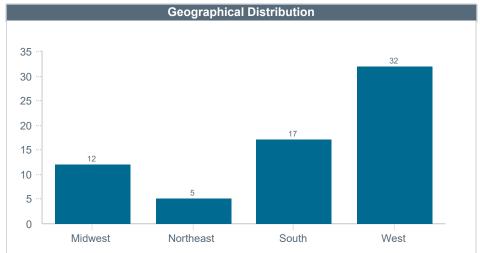
Annual Asset Class Performance As of December 31, 2023

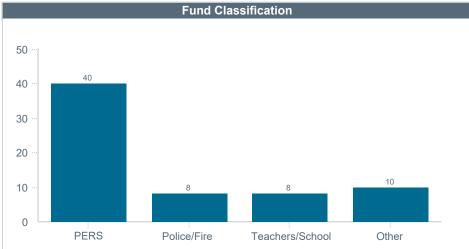
	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	CYTD
Best	78.51	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	16.09	26.29
1	58.21	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	7.47	18.24
	46.78	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	1.46	16.93
	31.78	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	16.12	22.17	-5.31	13.73
	28.01	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	12.34	14.82	-11.19	13.45
	27.17	16.36	4.98	16.00	8.96	4.89	0.05	8.77	10.71	-4.02	19.59	10.99	11.26	-11.85	13.16
	26.46	15.12	2.11	15.81	7.44	3.64	-0.27	8.52	7.77	-4.38	18.42	10.88	10.10	-13.01	9.83
	18.91	15.06	0.10	10.94	2.47	3.37	-0.81	6.67	7.62	-4.62	14.32	7.82	6.17	-14.45	7.13
	11.47	10.16	-4.18	8.78	0.07	2.45	-1.44	4.68	7.50	-4.68	8.72	7.51	5.96	-18.11	6.59
	11.41	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.01	8.43	7.11	5.28	-20.09	5.53
	5.93	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.25	8.39	1.19	0.05	-20.44	5.02
	1.92	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01		7.69	0.67	-1.55	-21.39	3.90
	0.21	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.37	-7.91
Worst	-29.76	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.89	2.28	-8.00	-2.54	-27.09	-12.02
S&P 500 US Larg Cap		mall (Net)		(Net) - (N	MSCI EM Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - Fl	Bloombrg US Corp H Yield - FI	Bloombro i US Trsy U TIPS - FI	S Crodit I	ov ODO	CE NAR	EIT Eq (	FRI FOF Comp ndex - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv

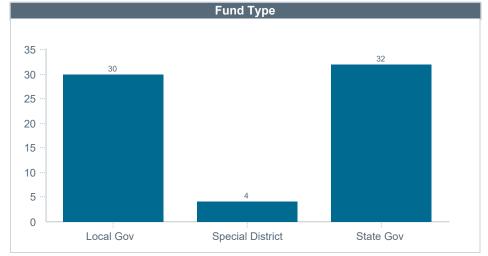


Universe Characteristics As of December 31, 2023





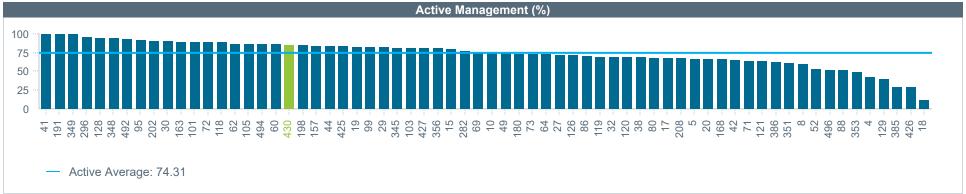


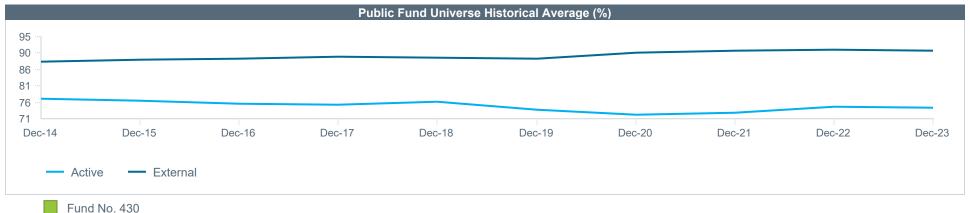


Universe: 66 funds











Portfolio Management Statistics

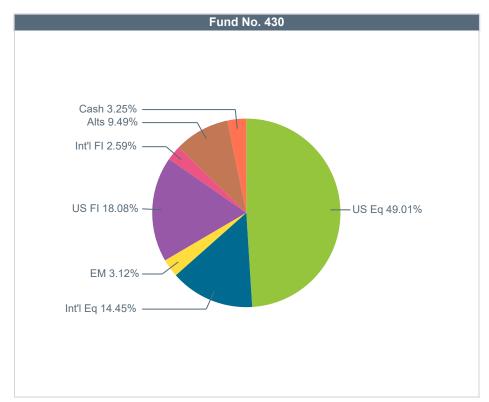
As of December 31, 2023

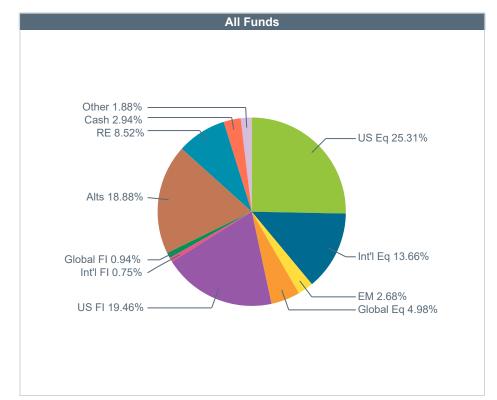
	Actively Managed (%)	Passively Managed (%)	Externally Managed (%)	Internally Managed (%)
Asset Range				
Over \$20B	73.93	26.07	78.91	21.09
\$10B-\$20B	70.40	29.60	92.10	7.90
\$5B-\$10B	69.30	30.70	98.04	1.96
\$1B-\$5B	78.80	21.20	98.86	1.14
\$500MM-\$1B	82.11	17.89	99.99	0.01
Under \$500MM	75.37	24.63	100.00	0.00
Fund No. 430	85.32	14.68	100.00	0.00

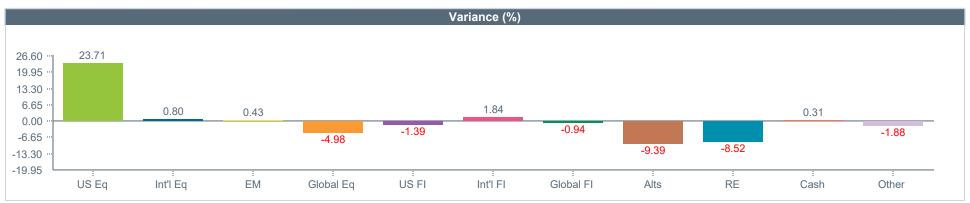
Percentages shown for asset ranges are representative of the average allocation.

	Active Ma	nagement	External Management				
Portfolio (%)	Public Fund Universe	Fund No. 430	Public Fund Universe	Fund No. 430			
90 to 100	10	0	52	1			
50 to 89	50	1	8	0			
10 to 49	6	0	6	0			
Less than 10	0	0	0	0			
<b>Total Funds Reporting</b>	66	1	66	1			



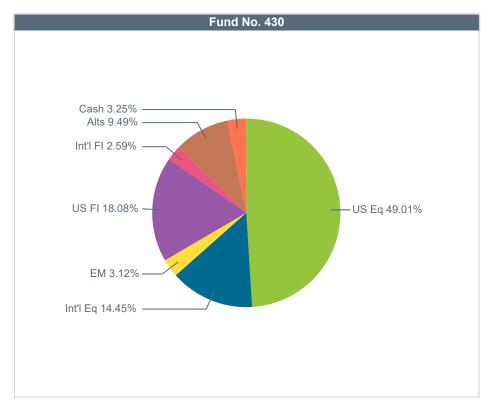


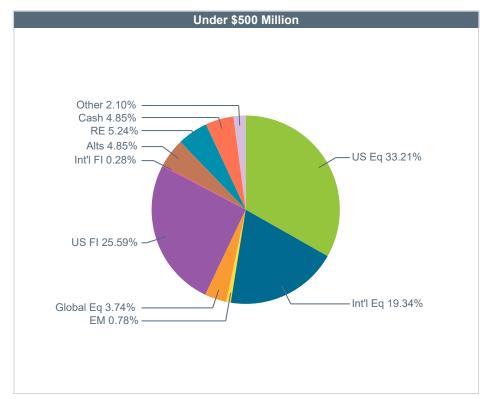


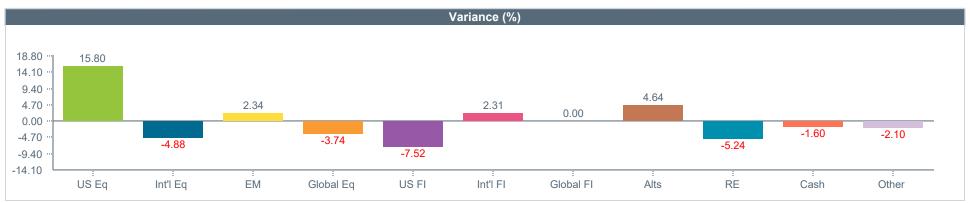






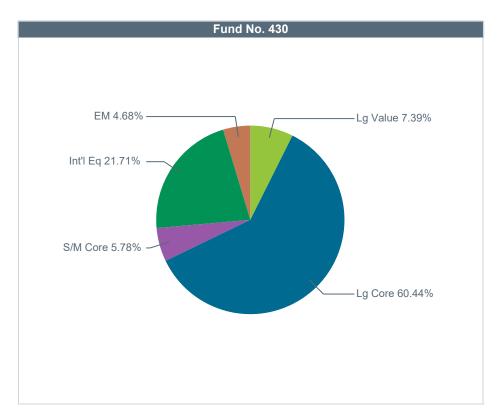


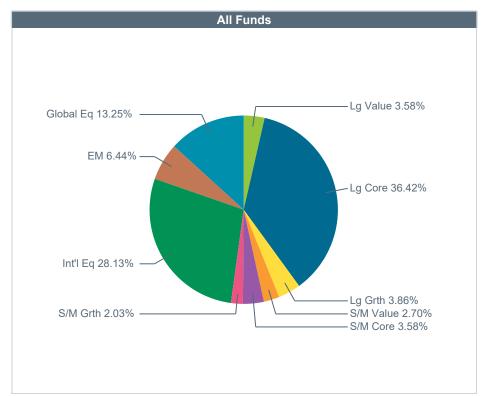


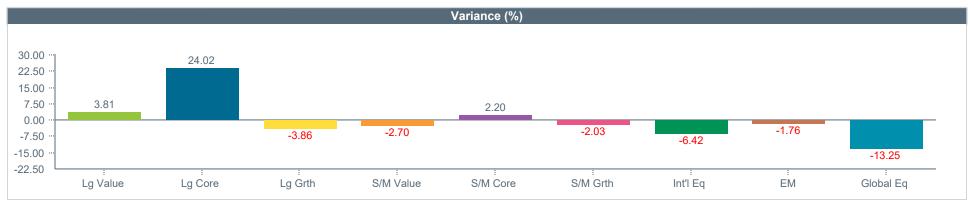




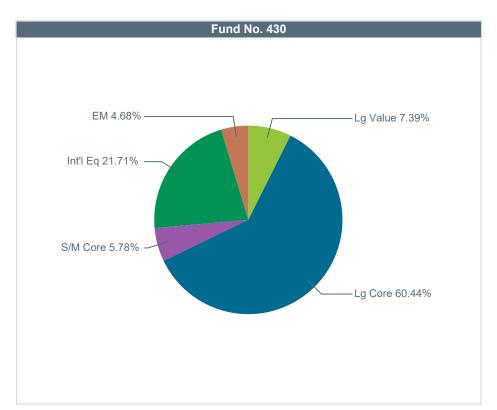


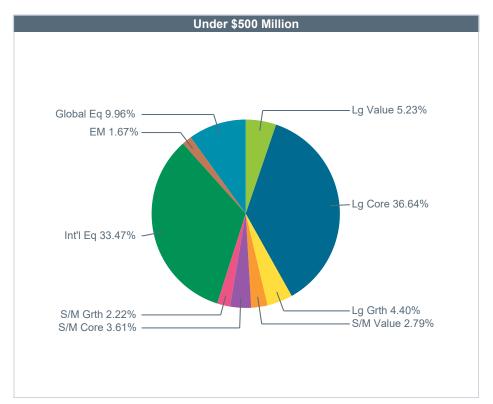


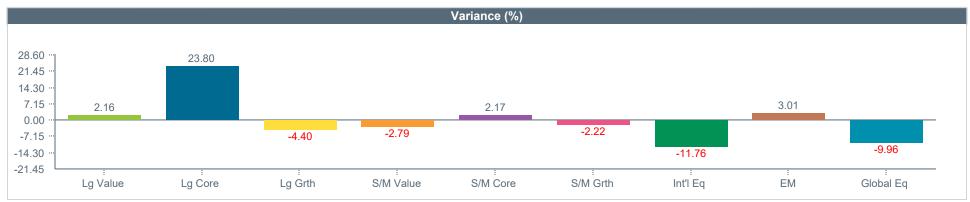




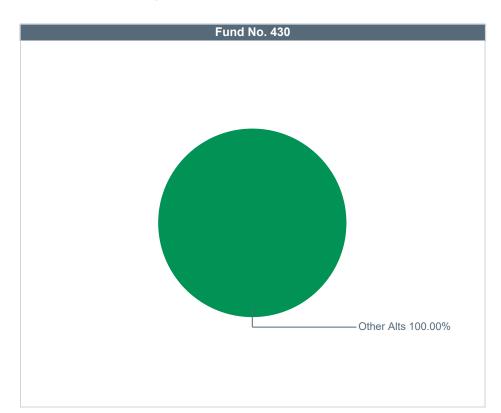


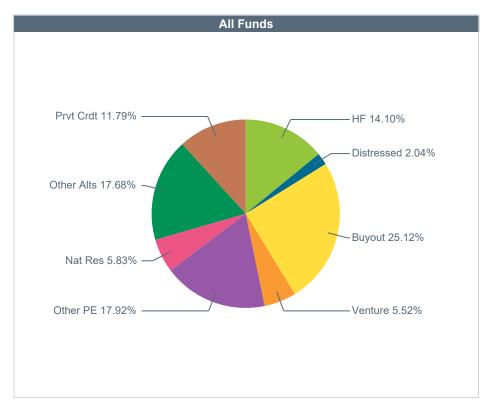


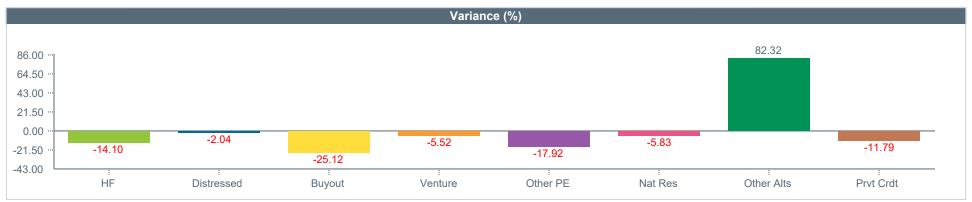




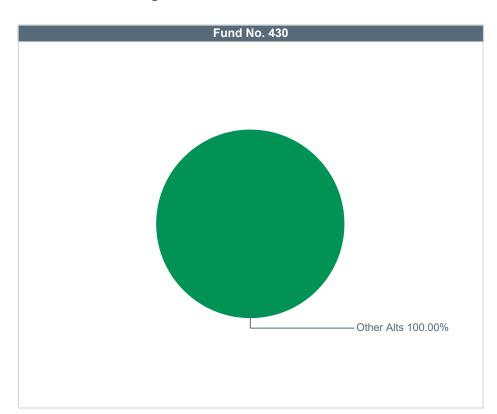


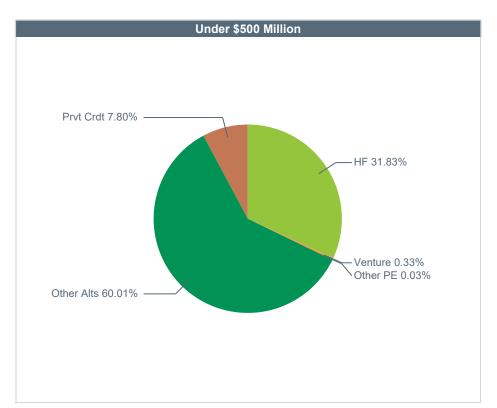


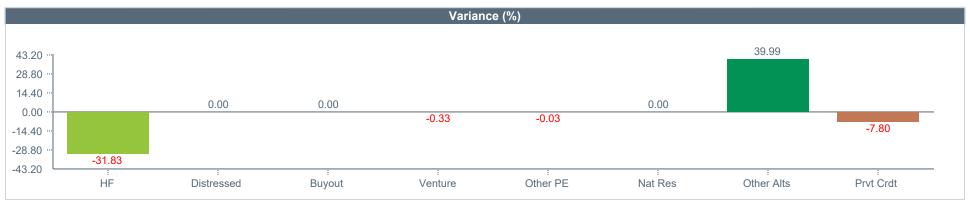






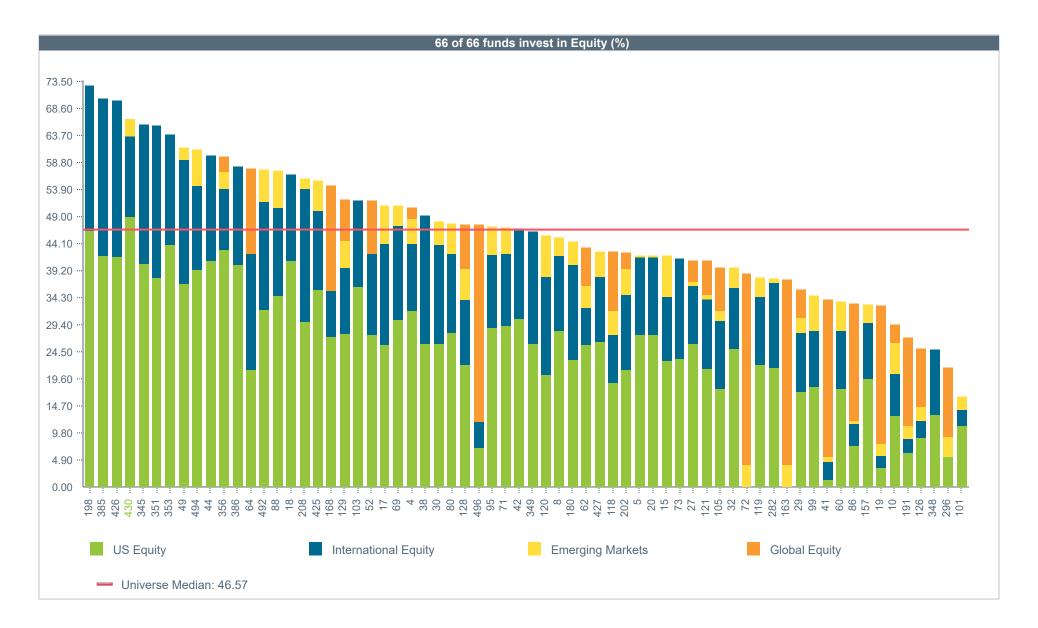






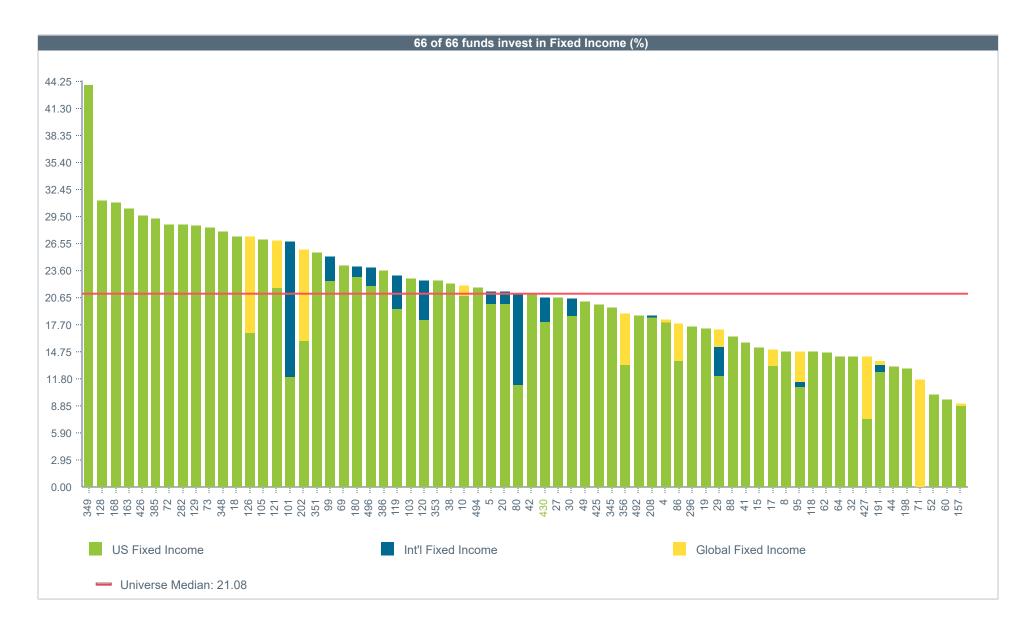


Equity Style Allocation As of December 31, 2023



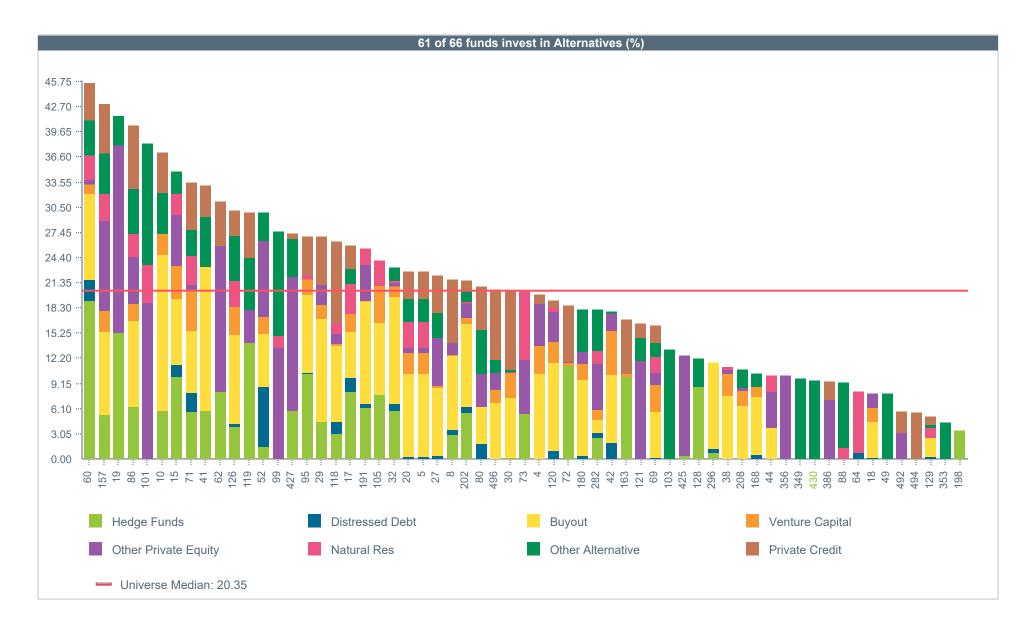


Fixed Income Style Allocation As of December 31, 2023



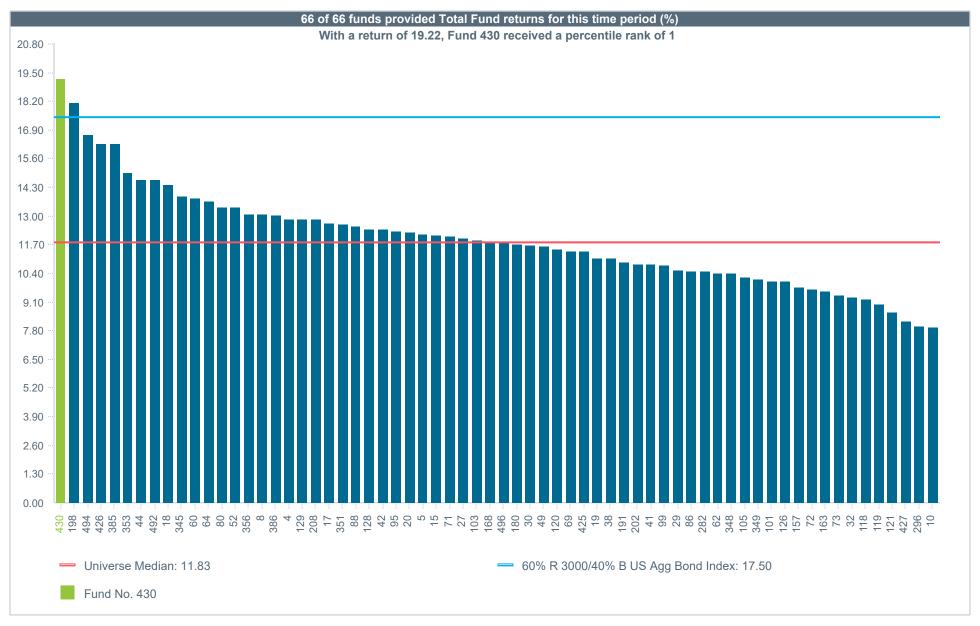


Alternatives Style Allocation As of December 31, 2023





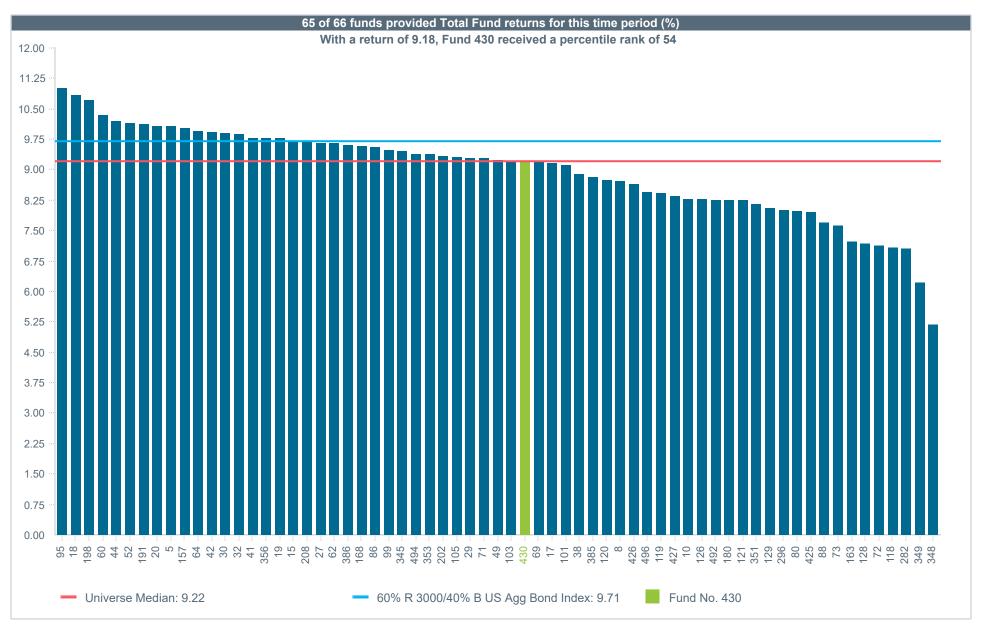
1 Year Annualized Total Fund Returns As of December 31, 2023





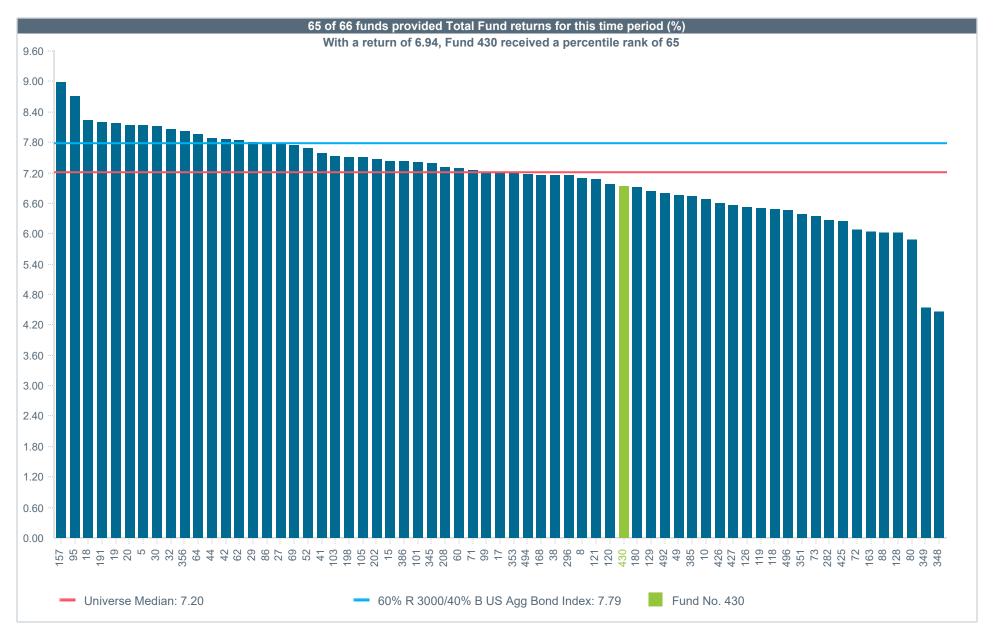
5 Year Annualized Total Fund Returns

As of December 31, 2023

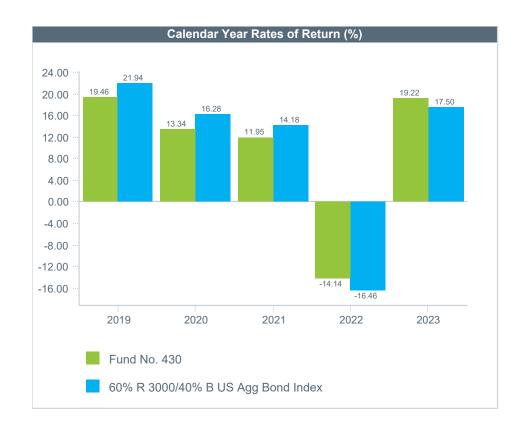


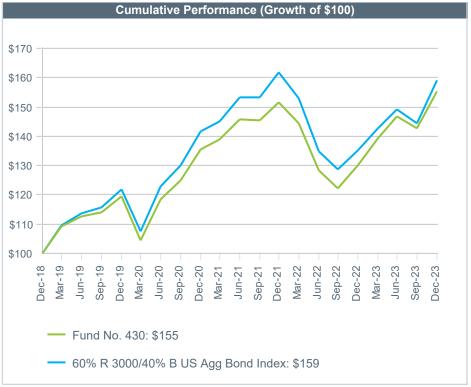


10 Year Annualized Total Fund Returns As of December 31, 2023





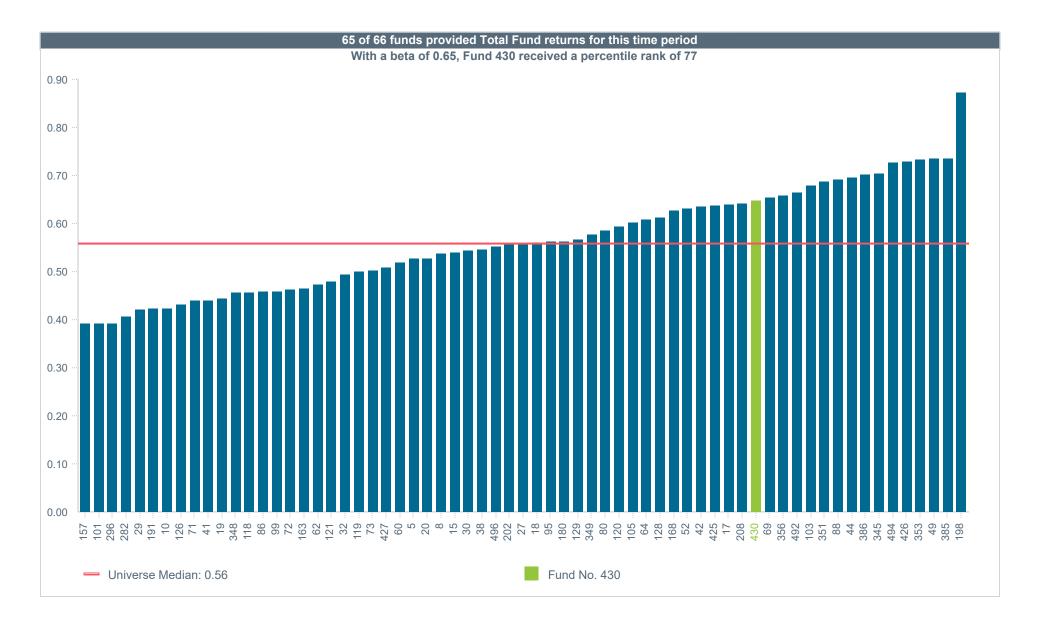




		Annualized Retu	rns (%)
	1 Year	3 Years	5 Years
Fund No. 430	19.22	4.65	9.18
60% R 3000/40% B US Agg Bond Index	17.50	3.88	9.71
Variance	1.72	0.77	-0.53

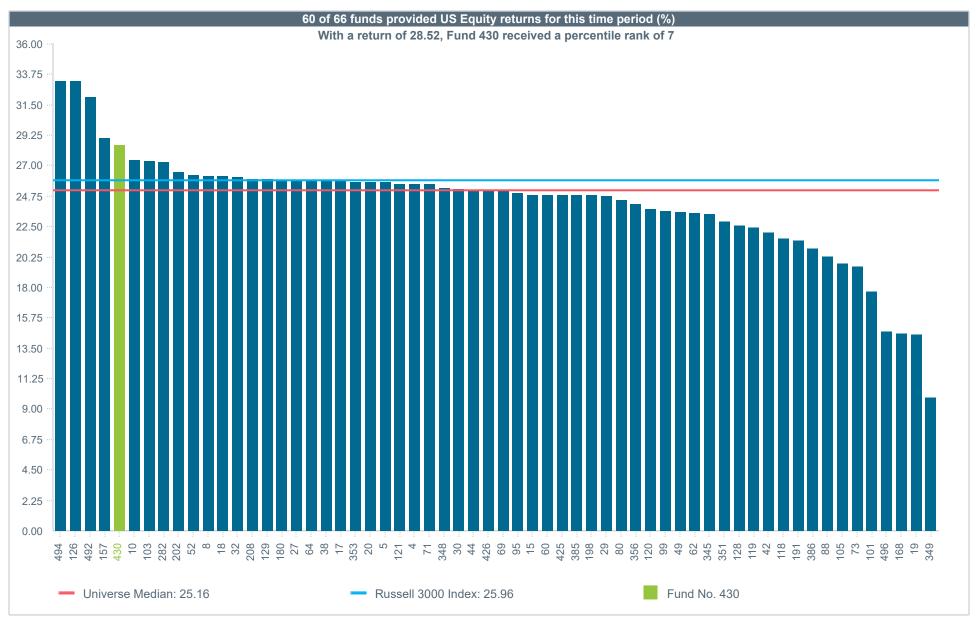


10 Year Total Fund Beta As of December 31, 2023

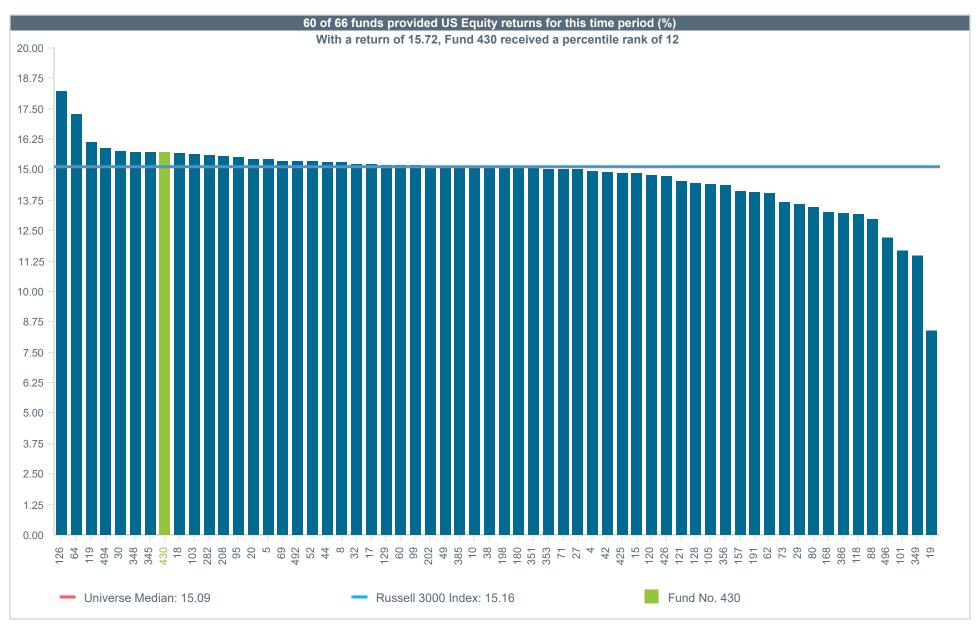


Funds with less history than the specified time period will not appear in the chart. Benchmark used is the S&P 500 Index (Cap Wtd).

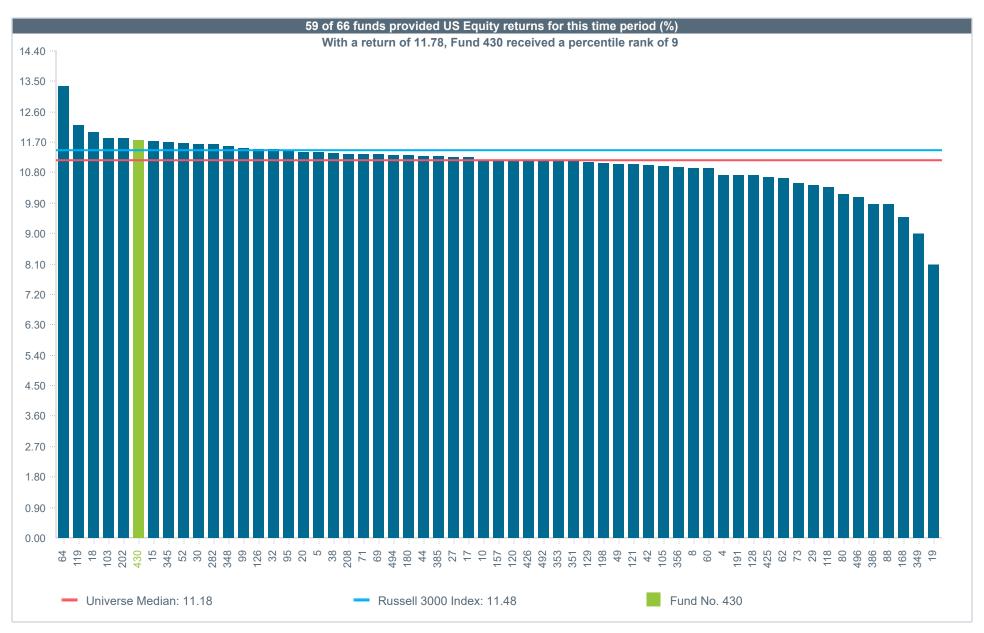




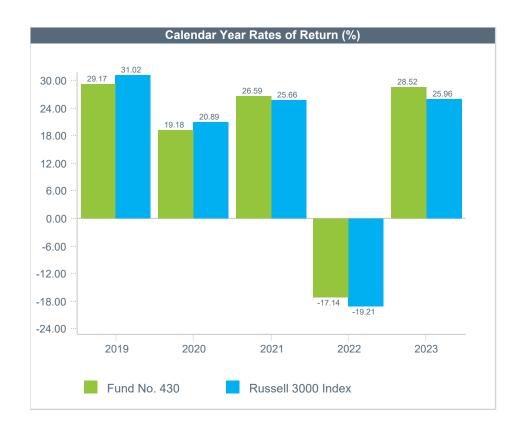


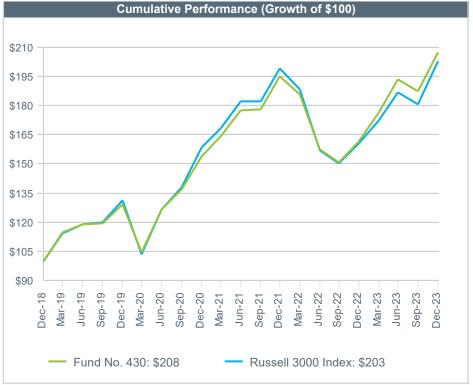






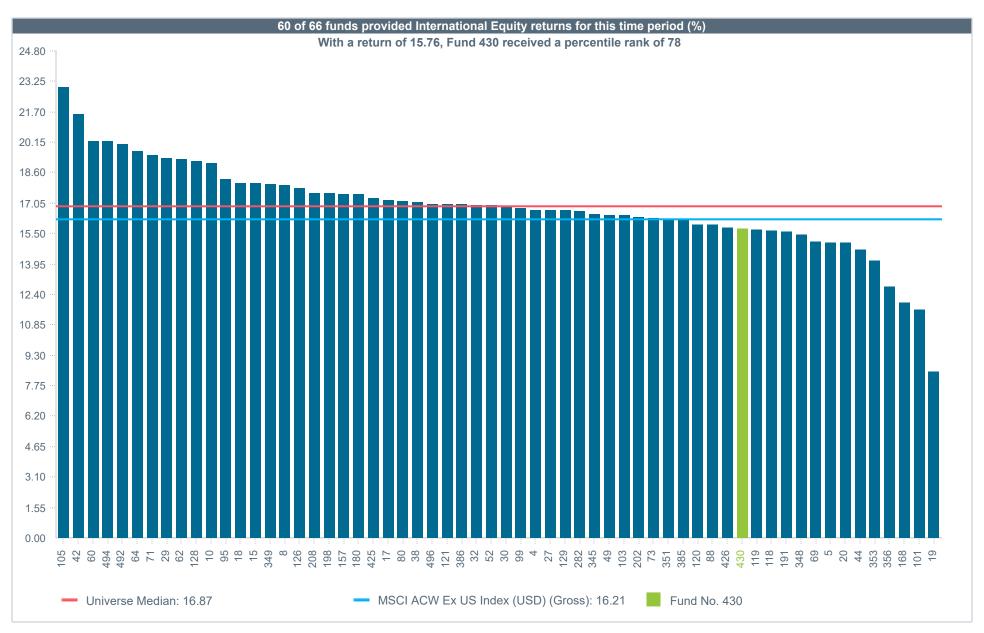




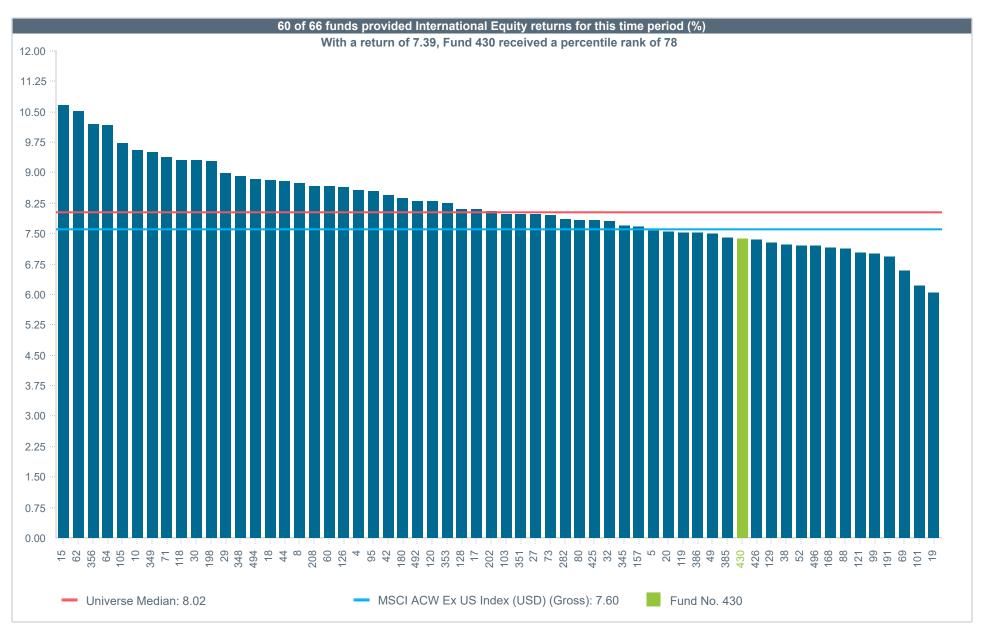


		Annualized Retu	rns (%)
	1 Year	3 Years	5 Years
Fund No. 430	28.52	10.47	15.72
Russell 3000 Index	25.96	8.54	15.16
Variance	2.56	1.93	0.56

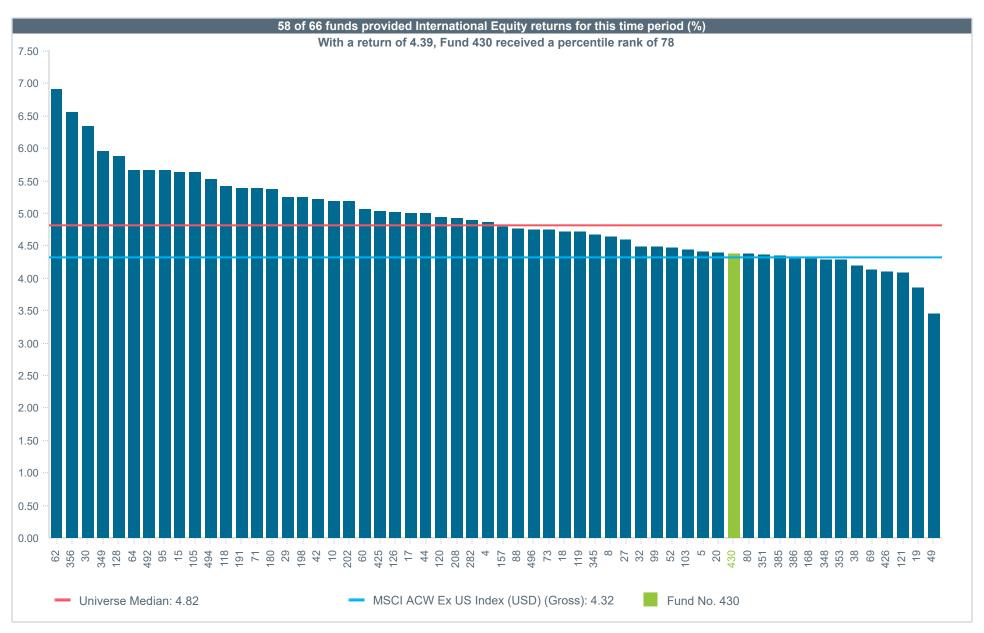




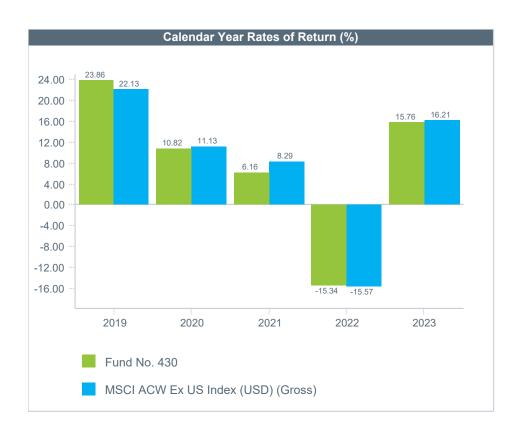


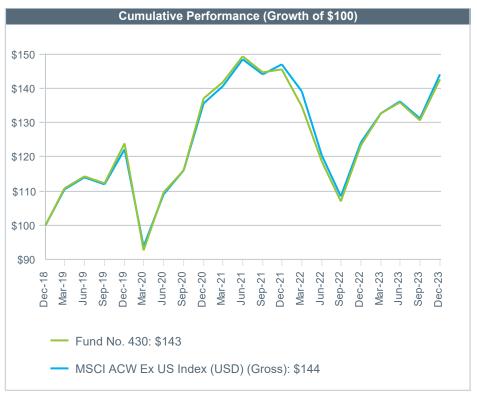






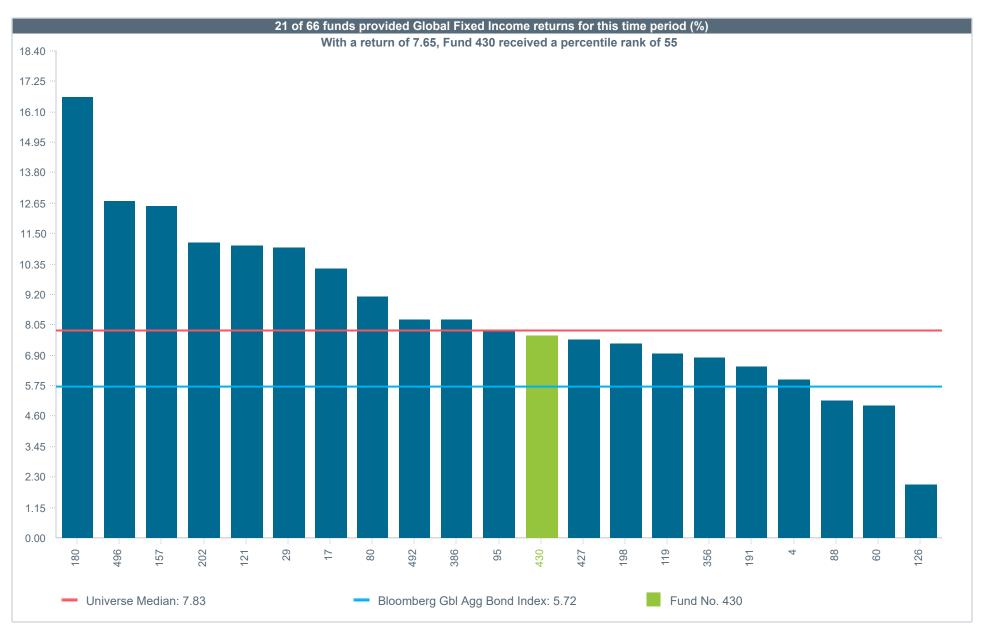




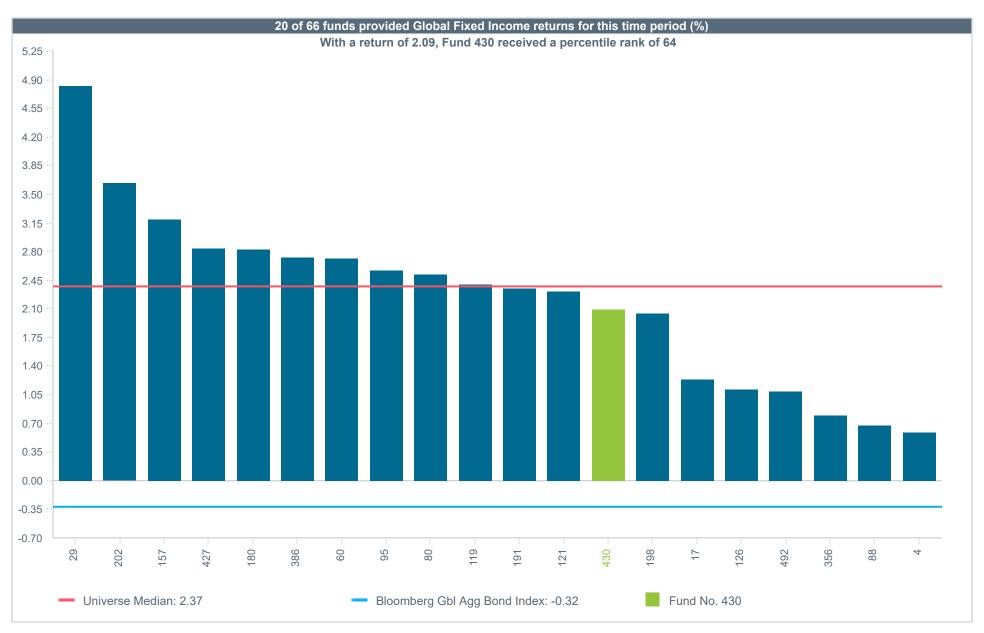


		Annualized Retu	rns (%)
	1 Year	3 Years	5 Years
Fund No. 430	15.76	1.33	7.39
MSCI ACW Ex US Index (USD) (Gross)	16.21	2.04	7.60
Variance	-0.45	-0.71	-0.21

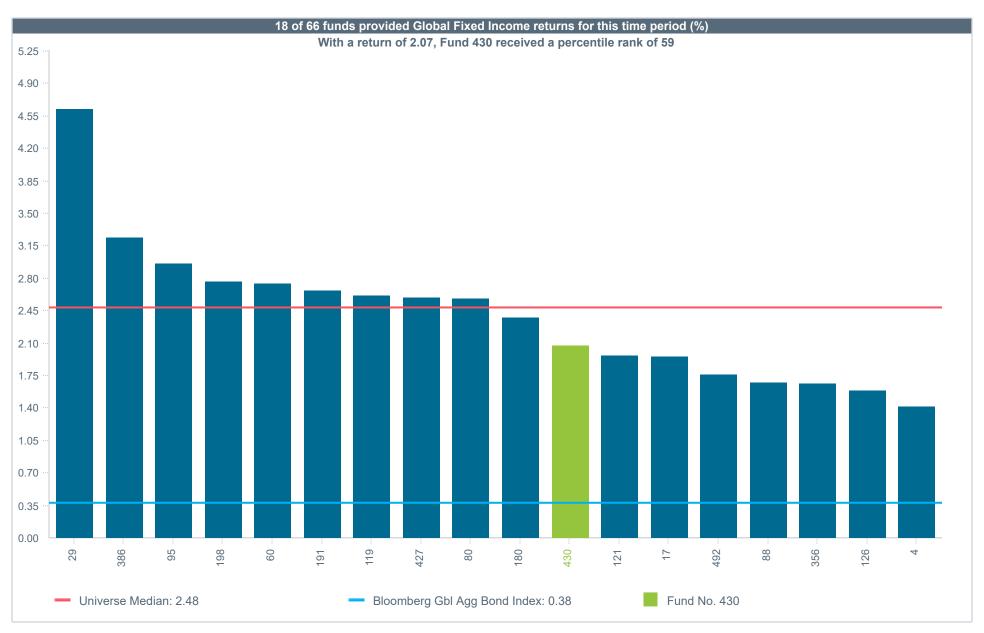




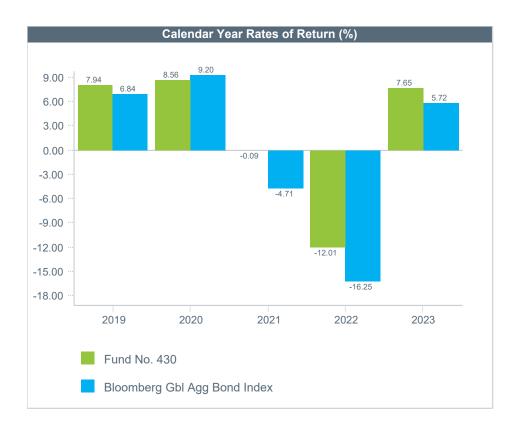


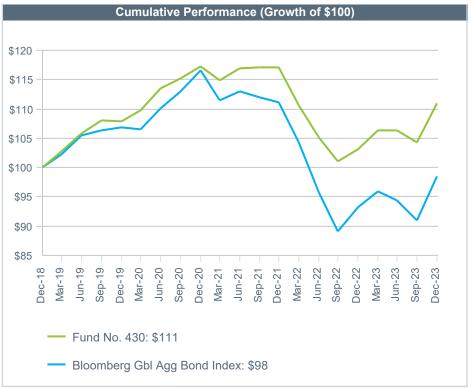












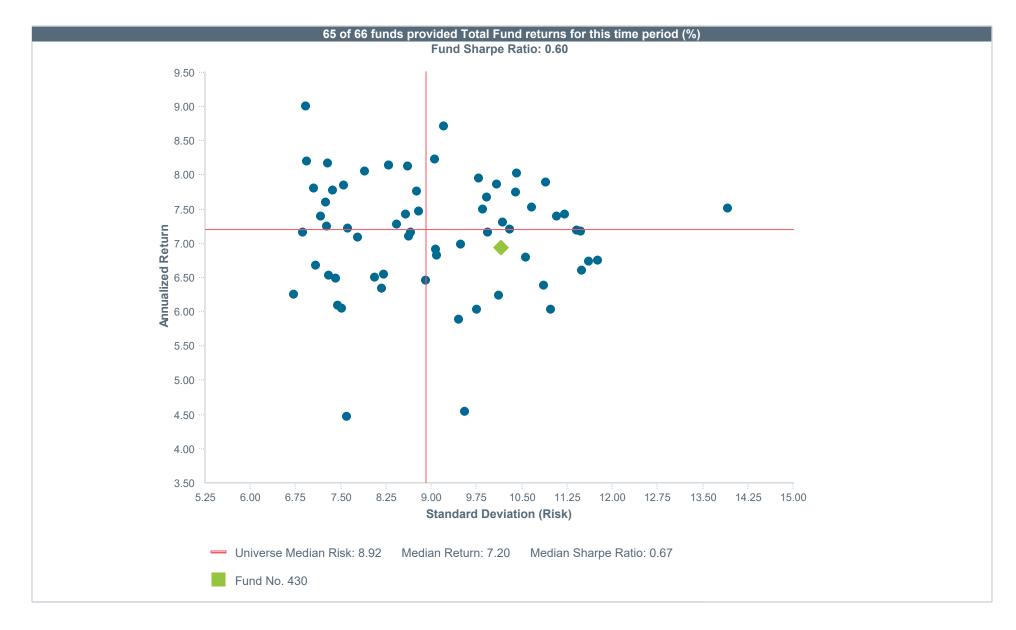
		Annualized Retur	ns (%)
	1 Year	3 Years	5 Years
Fund No. 430	7.65	-1.82	2.09
Bloomberg Gbl Agg Bond Index	5.72	-5.51	-0.32
Variance	1.93	3.69	2.41





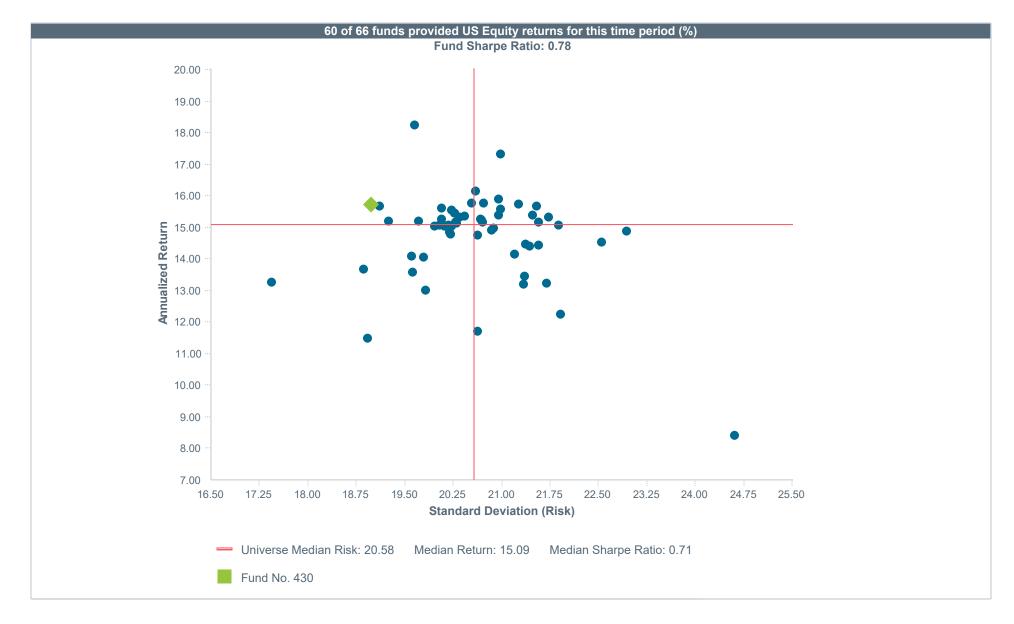


















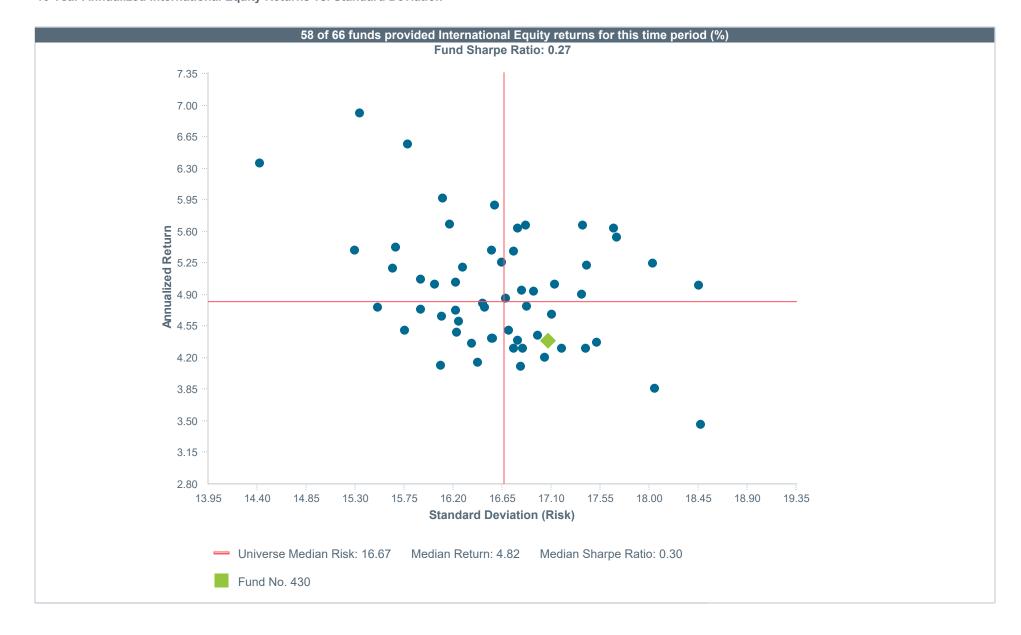






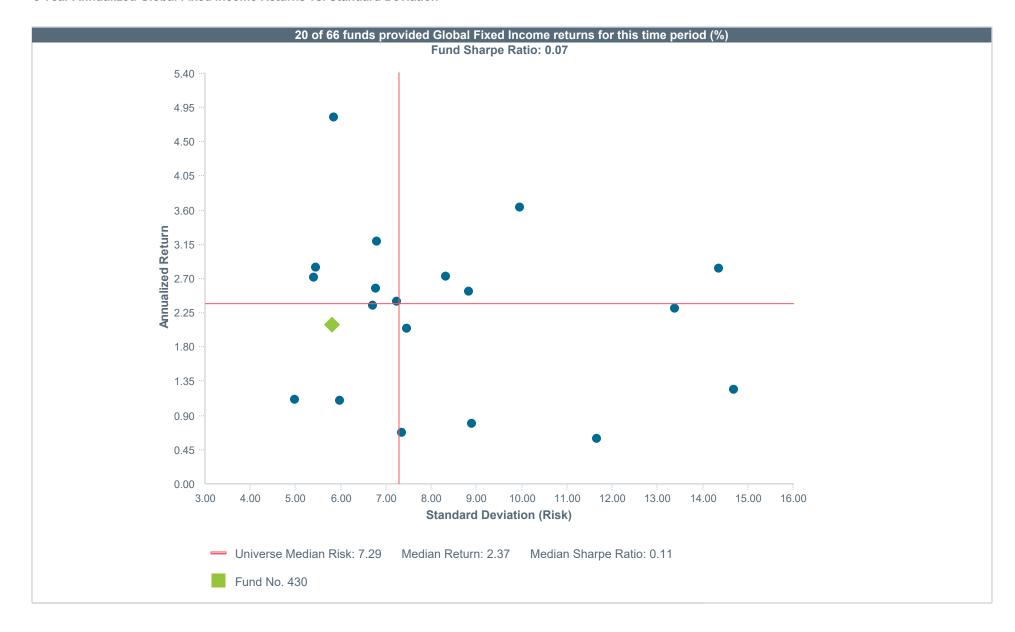






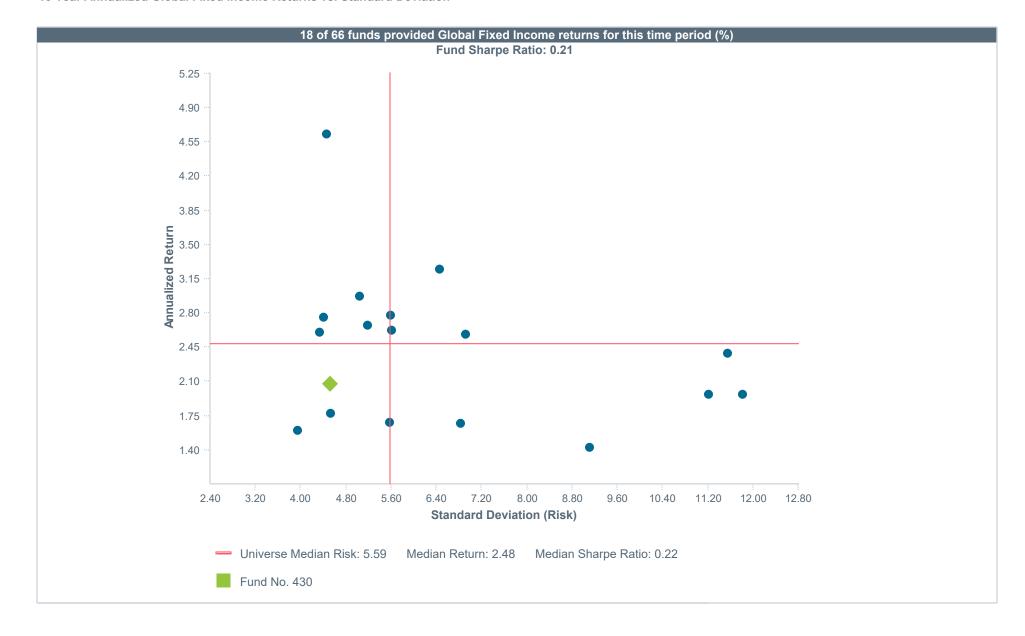








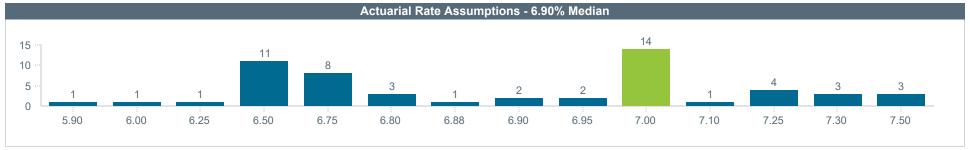


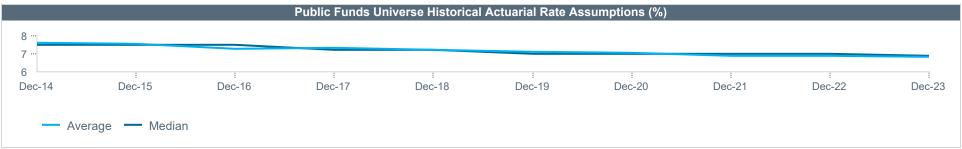


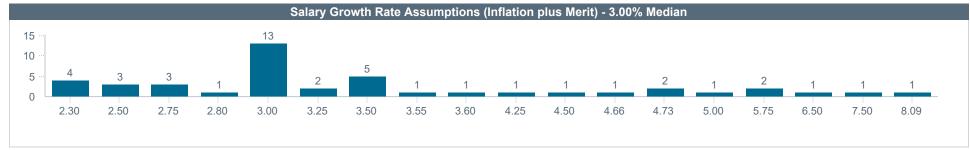




Actuarial Assumption Rates As of December 31, 2023









Funds that did not provide data will not appear in the chart.



Overlay Survey Summary

As of December 31, 2023

## **Overlay Survey Summary**

Q1. Of the 66 participants in the 2023 Q4 Public Fund Report, 42 participants provided a response to the Overlay Survey. Of those participants, 20 are currently using a form of overlay, 3 are considering evaluating a form of overlay, and 19 are not currently using or considering evaluating any form of overlay.

- Q2. Of the 18 participants that provided a response to the Overlay Survey and have exposure to an overlay manager or managers, the purposes of the overlay programs are distributed as follows:
  - 33 % Manage foreign currency risk
  - 28 % Generate alpha
  - 0 % Match Plan liabilities more closely (either as part of an explicit or conceptual framework)
  - 0 % Express a view on US Dollar
  - 0 % Manage market risk within an LDI construct
  - 28 % Tactical asset allocation
  - 67 % Cash equitization
  - 50 % Rebalancing management
  - 33 % Transition management
  - 11 % Other
- Q3. Of the 9 participants that provided a response to the Overlay Survey and have exposure to a currency manager or managers, the program structures are distributed as follows:
  - 44 % Static hedge ratio
  - 44 % Dynamic hedging program where manager varies the hedge ratio
  - 22 % Alpha generating currency manager focused on absolute return
- Q4. Of the 5 participants that provided a response to the Overlay Survey and indicated use of a hedge ratio on a currency program, the responses are distributed as follows:
  - 1 response indicated 25 % hedge on All Equities
  - 4 responses indicated 50 % hedge on Developed Equity exposure
  - 1 response indicated 65 % hedge on Developed Equity exposure
  - 2 responses indicated 50 % hedge on International Equity exposure
  - 1 response indicated 65 % hedge on International Equity exposure



Supplemental Questions As of December 31, 2023

# **Supplemental Questions**

- Q1. Of the 43 respondents, the methods of Private Equity reporting are distributed as follows:
  - 49 % Valuations and cash flows are updated and reflected as received by custodian
  - 2 % Reported on a 1 month lag to account for additional valuations and cash flow activity
  - 49 % Reported on a 1 quarter lag to account for most all valuations and cash flow activity
- Q2. Of the 47 respondents, the methods of Private Real Estate reporting are distributed as follows:
  - 51 % Valuations and cash flows are updated and reflected as received by custodian
  - 6 % Reported on a 1 month lag to account for additional valuations and cash flow activity
  - 43 % Reported on a 1 quarter lag to account for most all valuations and cash flow activity
- Q3. Of the 47 respondents, the responses to whether or not Private Equity and/or Private Real Estate valuations are restated once final valuations are received from the managers are distributed as follows:
  - 28 % Answered 'Yes' valuations are restated
  - 72 % Answered 'No' valuations are not restated
- Q4. Of the 40 respondents, the responses to whether or not a third party risk software provider is used are distributed as follows:
  - 35 % Answered 'Yes'
  - 65 % Answered 'No'



Addendum and Glossary

As of December 31, 2023

## **Miscellaneous Comments**

- · Performance shown is gross of fees, with the exception of the following:
  - Funds 8, 31, 49, 60, 350, and 351: Performance shown is net of fees.
  - Funds 4, 55, 75, and 85: Performance shown for Real Estate is net of fees.
- Performance shown is calculated using quarterly performance provided by participating public funds.
- Performance shown may differ from a fund's actual performance due to rounding.
- Net Assets Available for Benefits includes funding percentage valuation as of dates between December 2022 and December 2023.
  - Fund 96: Net Assets Available for Benefits shown is the higher funded ratio for one of two commingled systems reported by the fund.
- · Allocations shown reflect dedicated managers/mandates rather than actual exposure, with the exception of the following:
  - Funds 29, 86, and 119: Performance shown for Global Fixed Income includes US and Non-US Fixed Income funds.
  - Fund 121: Performance shown for Global Fixed Income includes Non-US Fixed Income funds.
  - Funds 4, 42, 64, 99, 202, and 240: Performance shown for US Fixed Income includes US and Non-US Fixed Income funds.

## **Glossary of Terms**

**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. Calculation is based on quarterly periodicity.

Return - Compounded rate of return for the period.

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

**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. Calculation is based on quarterly periodicity.

**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. Calculation is based on quarterly periodicity.



