RVK

Performance Report

Ohio Retirement Study Council

June 30, 2025

PORTLAND BOISE CHICAGO NEW YORK

INDEX GLOSSARY

S&P 500: The **S&P 500 Index (Cap Wtd)** is a commonly recognized, market-capitalization weighted index of 500 widely held equity securities designed to measure broad US equity performance.

R 3000: The **Russell 3000 Index** is a market-capitalization weighted index of 3,000 widely held equity securities designed to measure performance of the entire U.S. stock market.

Wilshire 5000: The **Wilshire 5000 Index** is a market-capitalization weighted index of more than 6,700 widely held equity securities designed to measure performance of the entire U.S. stock market.

MSCI ACW Ex US: The **MSCI ACW (All Country World) Ex US Index** is designed to measure equity market performance in global developed and emerging markets, excluding the US. The 22 underlying developed countries are: *Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.* The 23 emerging market countries are: *Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Peru, Philippines, Poland, Russia, Qatar, South Africa, Taiwan, Thailand, Turkey, and United Arab Emirates.*

MSCI ACW Ex US Investable Mkt: The **MSCI ACW Ex US Investable Mkt Index** is designed to measure equity performance across 22 of 23 Developed Markets (DM) countries (excluding the United States) and 24 Emerging Markets (EM) countries. With 6,174 constituents, the index covers approximately 99% of the global equity opportunity set outside the US.

MSCI EAFE: The **MSCI EAFE (Europe, Australasia, Far East) Index** is designed to measure equity market performance of 21 developed countries, excluding the US & Canada: *Australia, Austria, Belgium, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.*

MSCI World Ex US: The **MSCI World Index Ex US Index** is designed to measure the equity market performance of developed markets. The MSCI World Index consists of the following 22 developed market country indexes: Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and the United Kingdom.

MSCI Emerging Markets: The **MSCI Emerging Markets Index** is designed to measure equity market performance of emerging markets. The MSCI Emerging Markets Index consists of the following 24 emerging market country indexes: Brazil, Chile, China, Colombia, Czech Republic, Egypt, Greece, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Pakistan, Peru, Philippines, Poland, Qatar, Russia, South Africa, Taiwan, Thailand, Turkey* and United Arab Emirates.

Bloomberg US Agg Bond: The **Bloomberg US Aggregate Bond Index** covers the US dollar-denominated, investment-grade, fixed-rate, taxable bond market of SEC-registered securities: US Treasury and agency bonds, domestic corporate debt, and mortgage-backed securities.

Bloomberg US Universal: The **Bloomberg US Universal Index** covers US dollar-denominated, taxable bonds that are rated either investment grade or high-yield.

Bloomberg US Trsy: **The Bloomberg US Treasury Index** measures US dollar-denominated, fixed-rate, nominal debt issued by the US Treasury.

Bloomberg US Trsy: US TIPS: The **Bloomberg US Treasury: US TIPS Index** is an unmanaged index that consists of inflation-protected securities issued by the U.S. Treasury.

Bloomberg Mortgage: The **Bloomberg US Mortgage Backed Securities (MBS) Index** tracks agency mortgage backed pass-through securities (both fixed-rate and hybrid ARM) guaranteed by Ginnie Mae (GNMA), Fannie Mae (FNMA), and Freddie Mac (FHLMC).

Bloomberg CMBS: The **U.S. Bloomberg CMBS Investment Grade Index** measures the market of conduit and fusion CMBS deals with a minimum current deal size of $300mn.

Bloomberg US High Yield: The **Bloomberg US Corporate High Yield Bond Index** measures the USD-denominated, high yield, fixed-rate corporate bond market. Securities are classified as high yield if the middle rating of Moody's, Fitch and S&P is Ba1/BB+/BB+ or below.

Bloomberg Global High Yield: The **Bloomberg Global High-Yield Index** provides a broad-based measure of the global high-yield fixed income markets.

CS High Yield Dev Countries Only: The **Credit Suisse High Yield Dev Countries Only Index** tracks the performance of noninvestment-grade corporate bonds from developed countries.

CS Leveraged Loan: The **Credit Suisse Leveraged Loan Index** is an index designed to mirror the investable universe of the $US-denominated leveraged loan market.

JPMorgan GBI-EM Glbl Dvf'd: The **JPMorgan GBI-EM Global Diversified Total Return Index (Unhedged)** is a global emerging markets index that consists of regularly traded, liquid fixed-rate, domestic currency government bonds.

JPMorgan Emerging Markets Bond Global: The **JPMorgan Emerging Markets Bond Global Index** is a global emerging markets index that consists of regularly traded, liquid fixed-rate, US dollar-denominated government bonds.

NCREIF ODCE: The **NCREIF ODCE (Open End Diversified Core) Index** is an index of investment returns reporting on both a historical and current basis the results of 16 open-end commingled funds pursuing a core investment strategy, some of which have performance histories dating back to the 1970s. The NCREIF ODCE Index is capitalization-weighted and performance is time-weighted.

NCREIF Property: The **NCREIF Property Index** prepared by the National Council of Real Estate Investment Fiduciaries is a quarterly time series composite return measure for over 6,000 individual commercial real estate properties acquired in the private market for investment purposes. Total performance represents returns from appreciation and income, and includes multi-family, office, retail, and industrial properties.

NCREIF Timberland: The **NCREIF Timberland Index** is a quarterly time series composite return measure of investment performance of a large pool of individual U.S. timber properties acquired in the private market for investment purposes only.

NCREIF Farmland: The **NCREIF Farmland Index** is a quarterly time series composite return measure of investment performance of a large pool of individual farmland properties acquired in the private market for investment purposes only.

HFRI FOF Composite: The **HFRI FOF (Fund of Funds) Composite Index** is an equal-weighted index that contains over 400 constituent hedge fund of funds, both domestic and offshore.

Burgiss All Private Equity: The **Burgiss All Private Equity Benchmark** is a composite of nearly 1400 private equity funds derived from the holdings of over 200 institutional investors.

Alerian MLP: The **Alerian MLP Index** is a market-capitalization weighted index of the 50 most prominent energy Master Limited Partnerships.

S&P Goldman Sachs Commodity: The **S&P Goldman Sachs Commodity Index** is a composite index of commodity sector returns representing an unleveraged, long-only investment in commodity futures that is broadly diversified across the spectrum of commodities. Components are weighted by their respective world production quantities.

3 Month LIBOR Rate: The **3 Month LIBOR Rate Index** is the rate of interest at which banks offer to lend money to one anther in the wholesale money markets in London.

S&P Risk Parity Index – 8% Target Volatility: The **S&P Risk Parity Index – 8% Target Volatility Index** seeks to measure the performance of a multi-asset risk parity strategy that allocates risk equally among U.S. dollar-denominated equity, fixed income, and commodities futures contracts, while targeting a volatility level of 8%.

S&P GSCI Gold: The **S&P GSCI Gold Index** provides investors with a reliable and publicly available benchmark tracking the COMEX gold future.

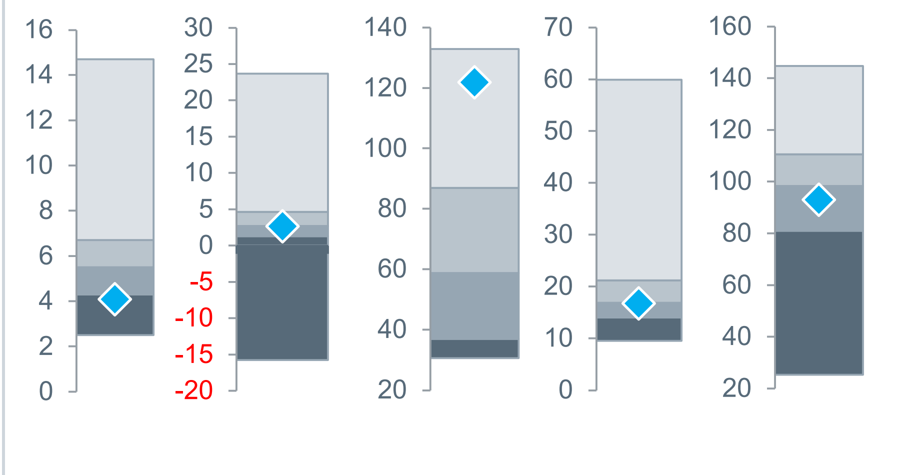
FTSE Dev Core 50/50 Infrastructure: The **FTSE Dev Core 50/50 Infrastructure Index** is a market-capitalization-weighted index of worldwide infrastructure and infrastructure-related securities.

Capital Markets Review

Second Quarter Economic Environment

The US tariff policy negotiations were front and center for investors throughout Q2. On April 2nd, the unexpected breadth and scale of the announced tariffs triggered a sharp drop in equity markets and contributed to significant dislocations in the US Treasury market. A 90-day tariff pause was declared on April 9th, reducing tariffs for most countries to the previously established 10% rate. This, along with subsequent progression in trade deals, contributed to a rebound in risk assets that continued through the latter half of the quarter. Global equity markets finished Q2 with returns of 11.6%, as measured by the MSCI All Country World Investable Market Index. Non-US developed and emerging market regional returns outpaced the US equity market with contributions from a weakening US Dollar and economic stimulus within major countries. Global bond markets, amid the volatility in Q2, delivered positive performance during the quarter, as inflationary pressures have remained subdued despite initial concerns that tariffs would cause a significant one-time shock. However, the Organisation for Economic Cooperation and Development (OECD) projected headline inflation for OECD countries of 4.2% in 2025, up from forecasts of 3.7% released in December 2024. The US Federal Open Market Committee (FOMC) maintained its policy rate range. At present, the FOMC forecasts indicate a continued expectation for rate reductions totaling 50 basis points in 2025.

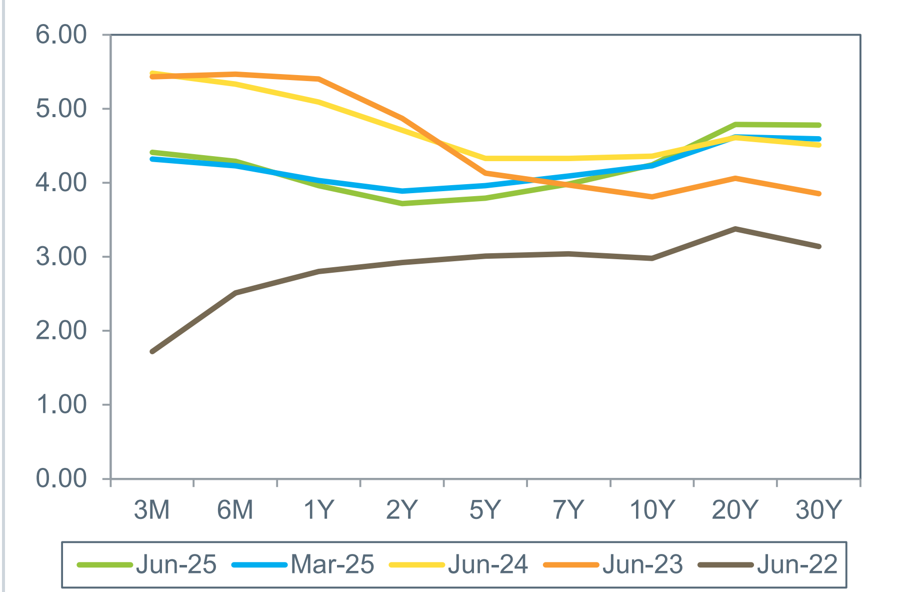
Key Economic Indicators



Economic Indicators	Jun-25		Mar-25	Jun-24	Jun-22	20 Yr
Federal Funds Rate (%)	4.33	–	4.33	5.33	1.58	1.72
Breakeven Infl. - 5 Yr (%)	2.31	▼	2.63	2.24	2.62	1.92
Breakeven Infl. - 10 Yr (%)	2.28	▼	2.37	2.27	2.34	2.08
CPI YoY (Headline) (%)	2.7	▲	2.4	3.0	9.1	2.6
Unemployment Rate (%)	4.1	▼	4.2	4.1	3.6	5.8
Real GDP YoY (%)	3.8	▲	2.0	3.0	1.9	1.9
PMI - Manufacturing	49.0	–	49.0	48.5	53.0	52.8
USD Total Wtd Idx	119.83	▼	126.94	124.52	121.05	104.92
WTI Crude Oil per Barrel ($)	65.1	▼	71.5	81.5	105.8	72.3
Gold Spot per Oz ($)	3,303	▲	3,118	2,337	1,807	1,400

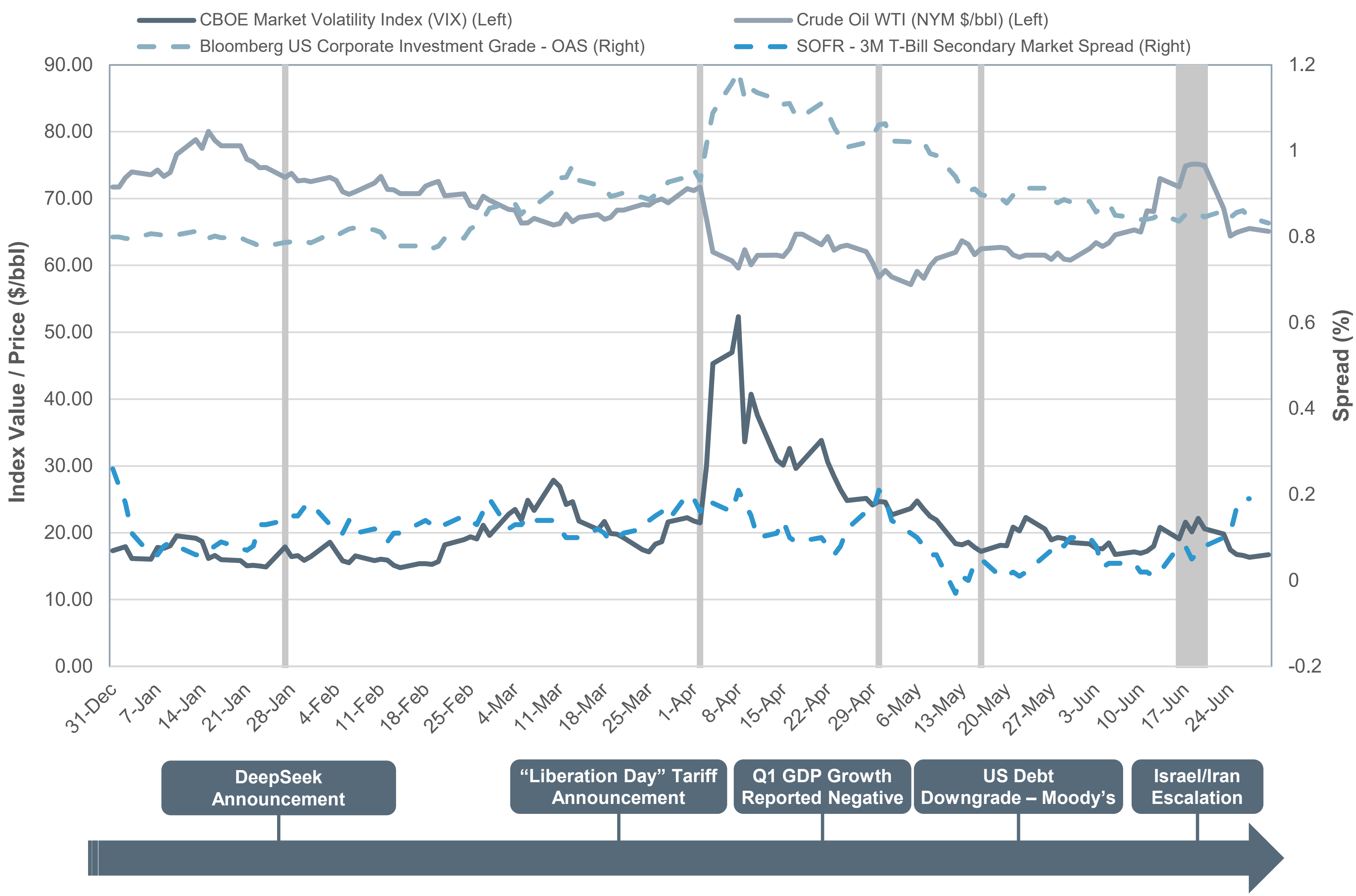
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	10.94	6.20	15.16	16.64	13.65
Russell 2000	8.50	-1.79	7.68	10.04	7.12
MSCI EAFE (Net)	11.78	19.45	17.73	11.16	6.51
MSCI EAFE SC (Net)	16.59	20.89	22.46	9.28	6.51
MSCI Emg Mkts (Net)	11.99	15.27	15.29	6.81	4.81
Bloomberg US Agg Bond	1.21	4.02	6.08	-0.73	1.76
ICE BofA 3 Mo US T-Bill	1.04	2.07	4.68	2.76	1.97
NCREIF ODCE (Gross)	1.03	2.10	3.54	3.43	5.35
FTSE NAREIT Eq REIT (TR)	-1.16	-0.25	8.60	8.63	6.32
HFRI FOF Comp	3.33	2.93	7.15	6.19	3.81
Bloomberg Cmdty (TR)	-3.08	5.53	5.77	12.68	1.99

Treasury Yield Curve (%)



Treasury data courtesy of the US Department of the Treasury. Economic data courtesy of Bloomberg Professional Service.

Market Volatility Indicators – 2025 (CYTD)



All data courtesy of FactSet.

Second Quarter Review

Broad Market

The US tariff policy announcement caused a significant market drawdown to start Q2. However, following the initial tariff pause and other positive developments, market volatility waned and market returns rebounded with the Russell 3000 Index returning 11.0% in Q2.

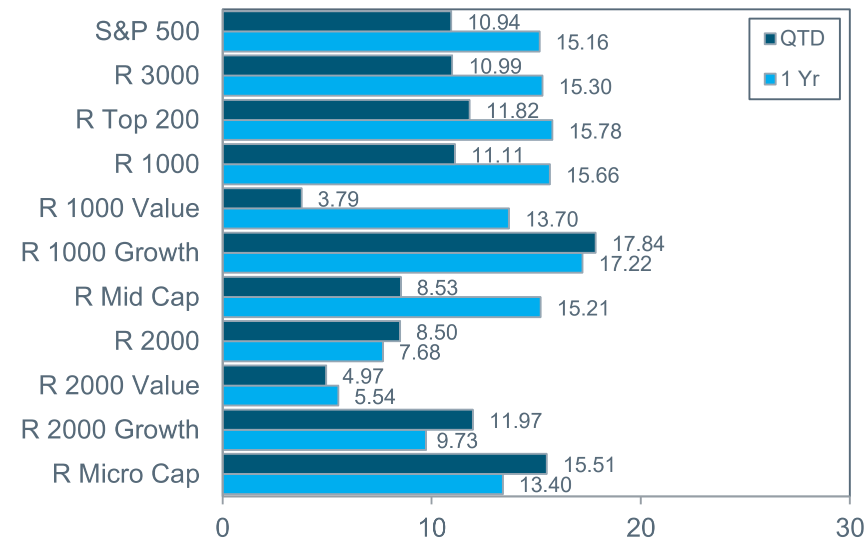
Market Cap

Growth stocks outperformed value stocks with the Russell 3000 Growth Index returning 17.6% while the Russell 3000 Value Index was more muted at 3.8%. Large-cap outperformed small-cap as measured by the Russell 1000 and Russell 2000 returning 11.1% and 8.5%, respectively. The primary contributor to the performance of the Russell 3000 Index was the recovery of the information technology sector which returned 23.7% in Q2.

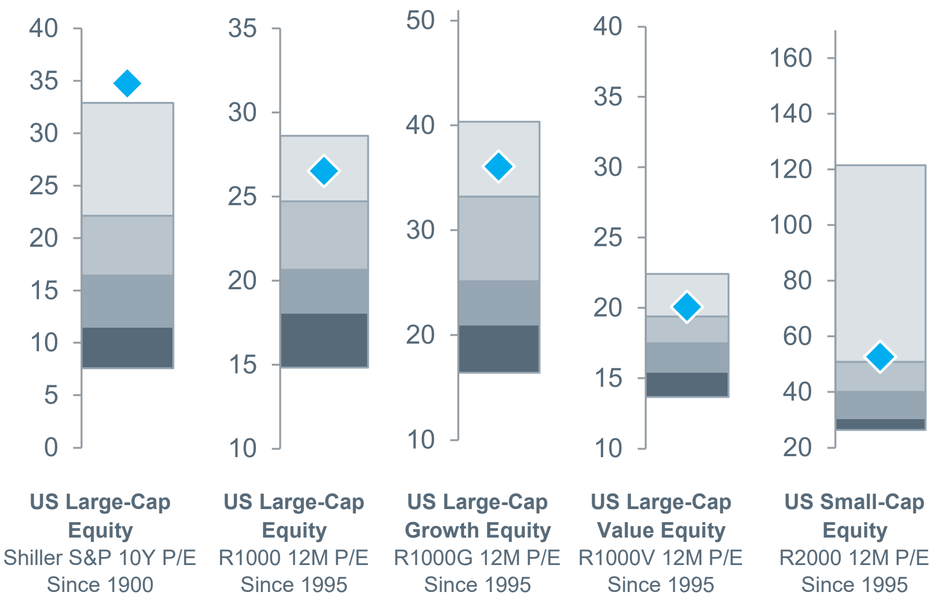
Style and Sector

Active value managers across the cap spectrum tended to have an easier time outperforming their benchmark than active growth managers. As in past quarters characterized by strong mega-cap growth performance, the strong absolute performance and concentration of growth indexes again played a role in the difficulty experienced by active growth managers.

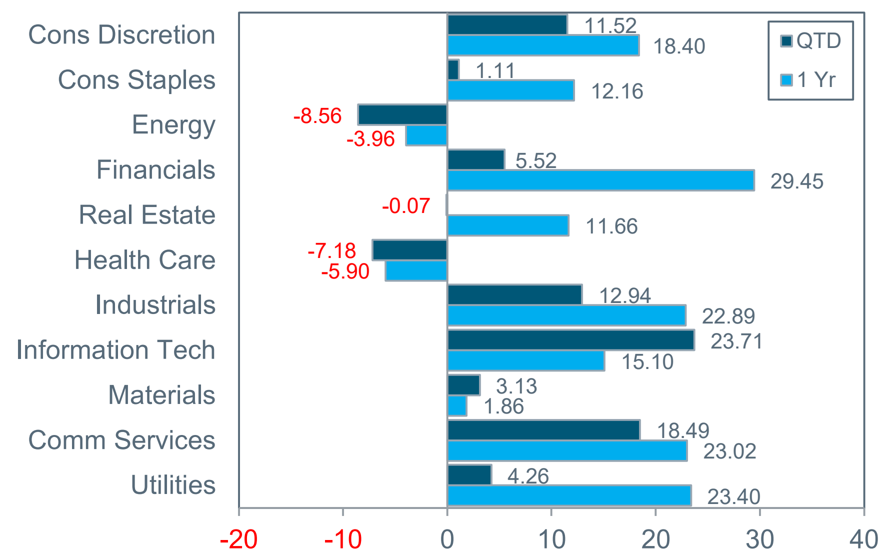
Style and Capitalization Market Performance (%)



Valuations



S&P 500 Index Sector Performance (%)



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

RVK

Second Quarter Review

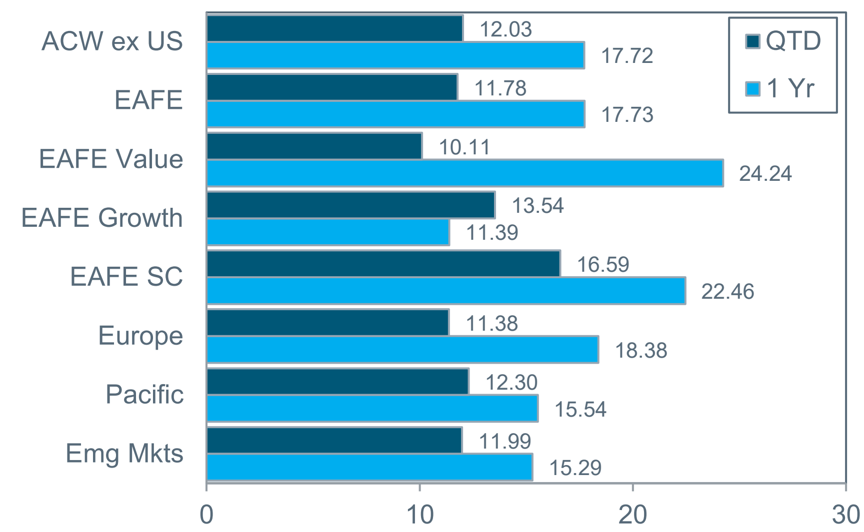
Developed Markets

Developed international markets delivered double digit returns that slightly outpaced their US counterparts in Q2, with the MSCI EAFE Index posting an 11.8% return during the quarter. This was driven, in part, by a weakening US Dollar and stimulus measures from foreign governments. Growth stocks outperformed value stocks in Q2, but remain significantly behind on a year-to-date basis. Small-cap stocks outperformed large-cap stocks during the quarter. All countries in the space posted positive returns for the quarter, while energy was the only sector with a negative return.

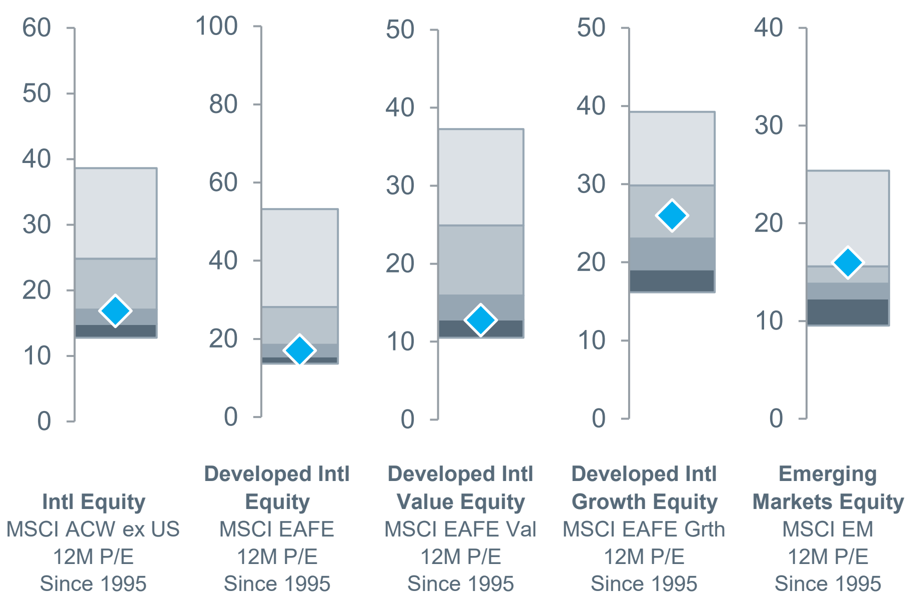
Emerging Markets

Emerging markets also experienced double digit returns in Q2, with the MSCI Emerging Markets Index returning 12.0% during the quarter. Growth stocks in emerging markets outpaced value stocks in Q2 with the group now outpacing their value counterparts for the year-to-date period. Small-cap stocks outperformed large-cap stocks during the quarter. Among the largest countries in the region, the top performers were South Korea and Taiwan, which benefited from renewed positive sentiment around companies contributing to AI development, and India, which rebounded from a more difficult Q1. China delivered positive market returns for Q2, but lagged other stronger performing countries.

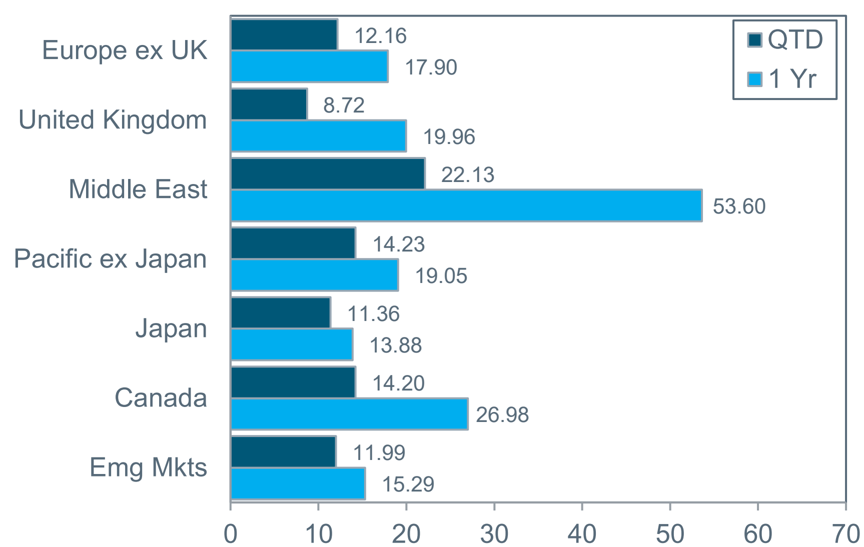
MSCI Style and Capitalization Market Performance (%)



Valuations



MSCI Region Performance (%)



Valuation data courtesy of Bloomberg Professional Service.
P/E metrics shown represent the 5th through 95th percentiles to minimize the effect of outliers.
All returns are shown net of foreign taxes on dividends.

Second Quarter Review

Broad Market

In Q2, the US yield curve steepened as short-term Treasury yields declined while long-term yields rose. The spread between 2-year and 10-year Treasuries widened by 18 basis points. The 10-year Treasury yield ended the quarter at 4.24%, essentially flat with the prior quarter-end, after fluctuating between 4.00% and 4.60% amid market volatility. These market movements reflected investor reactions to proposed tariffs, tax policy uncertainty and increased concerns over fiscal deficit, and tensions in the Middle East. The FOMC held its policy rate steady at 4.25%–4.50%, signaling a patient approach as it monitors the key economic data points and evolving policy dynamics. The Bloomberg US Aggregate Bond Index returned 1.2%.

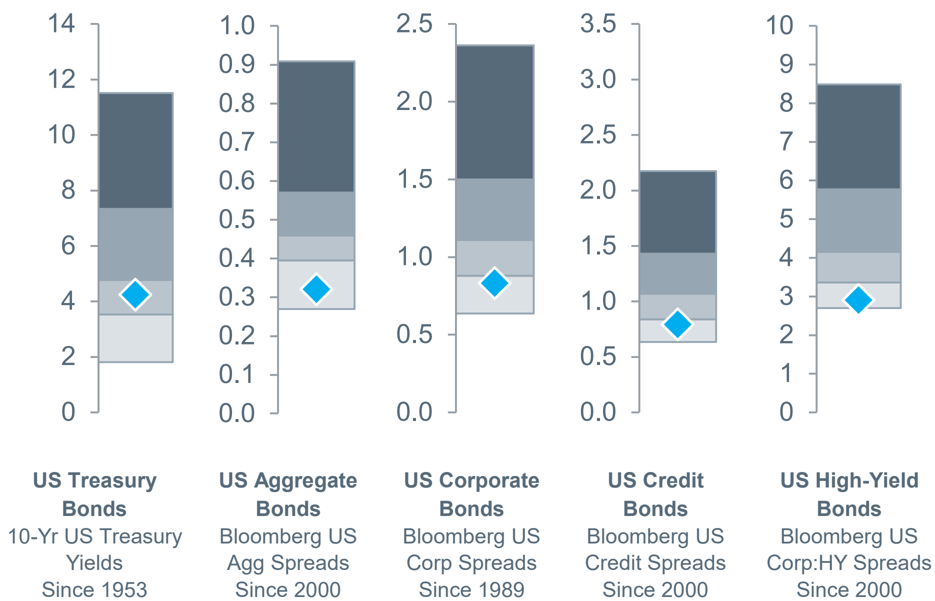
Credit Market

Risk sentiment improved during the quarter, fueling a strong rally in credit markets. The Bloomberg US Corporate Investment Grade Index gained 1.8%, while the Bloomberg US Corporate High Yield Index surged 3.5%.

Emerging Market Debt

Emerging market debt also saw strong performance, helped by a weaker US dollar. Local currency bonds outpaced hard currency issues: the JPMorgan GBI-EM Global Diversified Index rose 7.6%, versus a 3.3% gain for the JPMorgan EMBI Global Diversified Index.

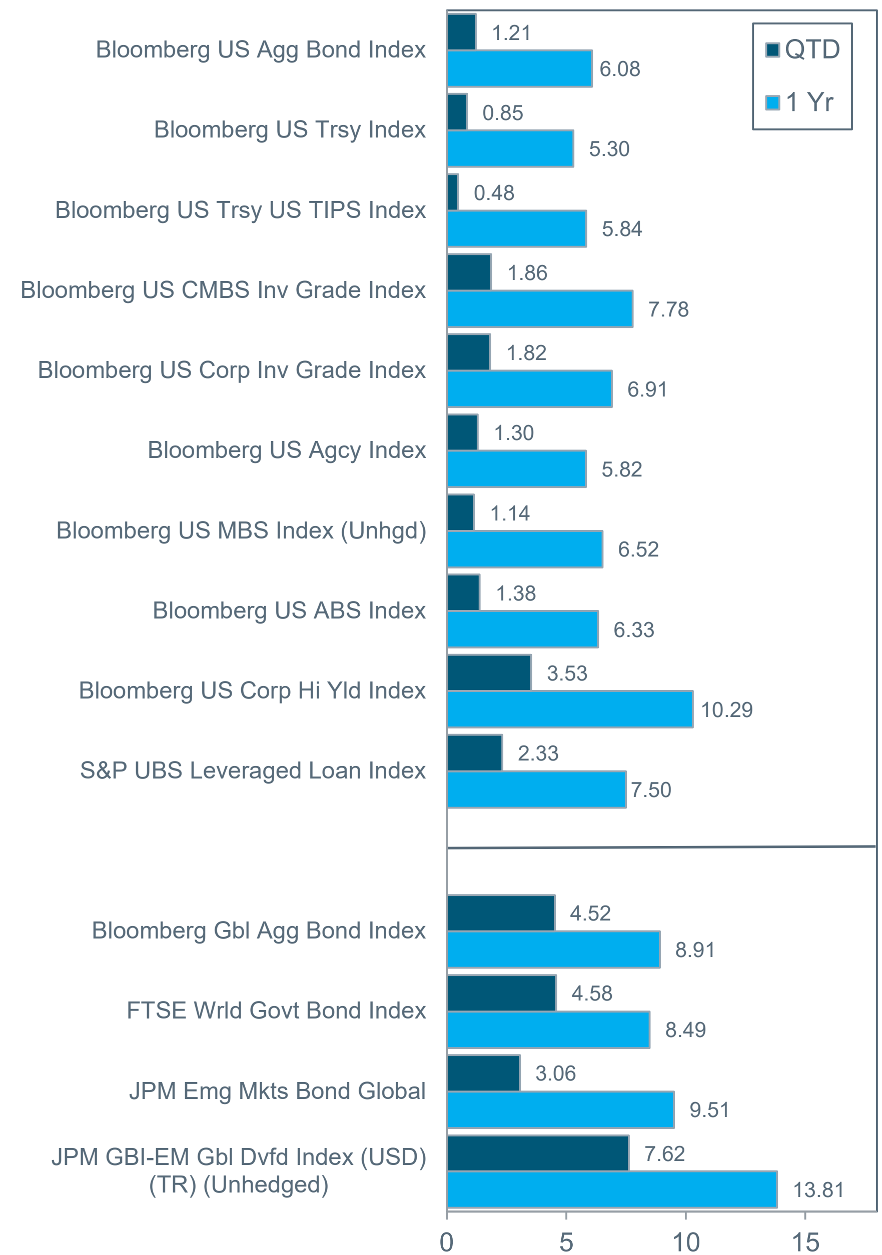
Valuations



Valuation data courtesy of Bloomberg Professional Service.

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

Fixed Income Performance (%)



Second Quarter Review - Absolute Return

General Market - Hedge Funds

Hedge Fund returns were broadly positive in Q2 amid elevated macroeconomic uncertainty. Preliminary performance suggests that the HFRI Asset Weighted Composite Index finished the quarter with a 2.0% return, bringing its year-to-date return to 2.5%. Equity oriented managers were top performers. Alpha generation was strong, particularly on the long side, as global equities recovered sharply from their April lows and implied volatility declined from its April highs. Event Driven strategies were particularly strong in Q2 following a muted Q1. Macro strategies delivered mixed results with some properly positioned to capitalize on the volume of economic events. Diversified strategies remained consistently positive during Q2.

General Market - Global Tactical Asset Allocation (GTAA)

Global Tactical Asset Allocation (GTAA) strategies that RVK follows closely generated positive performance in Q2 with some outperforming a US centric blend of 60% equity and 40% fixed income (60/40 blend). The top performing long-biased GTAA strategies benefited from allocations to developed international equities, particularly European stocks, as well as industrials and information technology sectors. Managers that trailed peers held higher exposures to long duration bonds and MLPs. Alternative Risk Premia strategies posted disparate returns.

Second Quarter Review - Real Assets

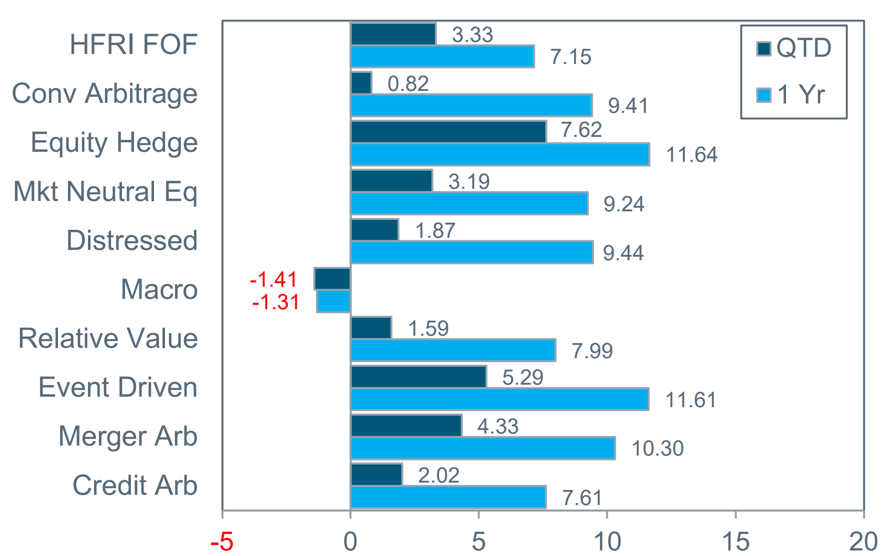
General Market - Diversified Inflation Strategies (DIS)

Diversified Inflation Strategy (DIS) managers tracked closely by RVK reported positive performance for the quarter but underperformed a 60/40 blend. The top performing managers benefited from larger exposures to listed infrastructure and precious metals within commodities. Managers that lagged peers had higher exposure to energy and soft commodities as supply and production expanded. Allocations to REITs detracted as returns were negatively impacted by investor uncertainty around US policy shifts, elevated interest rates, and volatility from geopolitical conflicts.

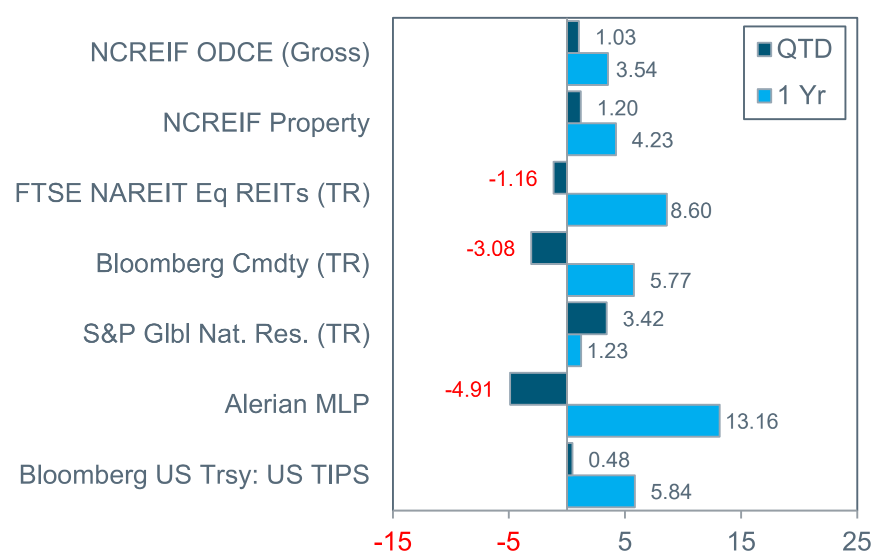
General Market - Real Estate

Core private real estate generated a positive 1.0% total return in Q2 (on a preliminary and gross of fee basis), as reported by the NFI-ODCE Index, driven primarily from a 1.0% return from income with price appreciation being incrementally positive. Investors in publicly traded real estate underperformed their private market counterparts. Publicly traded real estate delivered a total return of -1.1%, as measured by FTSE/NAREIT All REITs Index, however it remains positive year-to-date with returns of 1.7%. There continues to be encouraging signs of price stabilization across commercial real estate.

HFRI Hedge Fund Performance (%)



Real Asset Performance (%)



NCREIF Property Index is shown N/A until available.

Annual Asset Class Performance

As of June 30, 2025

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	YTD
Best	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	25.02	20.89
	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	11.54	19.45
	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	9.15	15.27
	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	8.73	6.20
	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	8.19	5.53
	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	7.50	4.67
	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	5.38	4.57
	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	5.25	4.02
	-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	3.82	3.38
	-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	1.84	2.93
	-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	1.82	2.10
	-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	1.25	2.07
	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.57	5.34	-3.12	-2.52	-24.34	-7.91	-1.43	-0.25
Worst	-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	-4.15	-1.79

S&P 500 - US Large Cap	R 2000 - US Small Cap	MSCI EAFE (Net) - Int'l Dev.	MSCI EAFE SC (Net) - Int'l SC	MSCI EM (Net) - Int'l Emg Mkts	Bloombrg US Agg Bond - FI	Bloombrg US Corp Hi Yield - FI	Bloombrg US Trsy US TIPS - FI	Bloombrg US Gov Credit Lng - FI	NCREIF ODCE (Gross) - Real Estate	FTSE NAREIT Eq REITs Index (TR)	HFRI FOF Comp Index - ARS	Bloombrg Cmdty (TR) - Commod.	ICE BofA 3 Mo T-Bill - Cash Equiv

NCREIF ODCE (Gross) performance is reported quarterly; performance is shown N/A in interim-quarter months.

RVK

Performance Report - All Systems

Asset Allocation & Performance - Gross of Fees

	Market Value ($000)	Trailing Performance (%)						Calendar Year Performance (%)			
		2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
PERS (DB)	**109,451,827**	**7.25**	**10.87**	**9.50**	**9.04**	**7.72**	**7.68**	**8.96**	**11.42**	**-11.95**	**15.43**
PERS (DB) Total Fund Benchmark		6.84	10.60	8.53	8.54	7.29	7.25	7.93	10.46	-11.44	15.28
Difference		0.41	0.27	0.96	0.50	0.43	0.43	1.03	0.97	-0.51	0.15
Rank		20	43	48	57	54	47	61	52	69	53
PERS (HC 115)	**14,156,611**	**8.00**	**12.19**	**10.69**	**8.66**	**7.31**	**6.94**	**10.00**	**13.97**	**-15.51**	**14.34**
PERS (HC 115) Total Fund Benchmark		7.62	11.82	10.28	8.28	6.90	6.58	9.53	13.65	-15.56	13.76
Difference		0.37	0.38	0.41	0.38	0.41	0.36	0.47	0.32	0.04	0.58
Rank		6	10	20	72	69	80	31	12	96	65
STRS	**100,613,227**	**6.63**	**10.55**	**9.62**	**10.42**	**8.88**	**8.65**	**10.11**	**11.64**	**-9.52**	**19.36**
STRS Total Fund Benchmark		6.24	10.76	9.70	9.78	8.44	8.18	10.48	12.39	-10.90	17.36
Difference		0.38	-0.21	-0.08	0.64	0.44	0.47	-0.37	-0.76	1.38	1.99
Rank		40	51	43	14	8	9	28	46	43	11
OP&F	**19,830,029**	**8.83**	**14.47**	**9.86**	**10.99**	**8.71**	**8.47**	**11.13**	**9.52**	**-8.73**	**20.48**
OP&F Total Fund Benchmark		7.30	12.93	9.18	9.08	7.62	7.27	10.03	10.30	-10.57	16.29
Difference		1.53	1.54	0.68	1.92	1.09	1.20	1.10	-0.78	1.84	4.19
Rank		2	1	37	9	13	13	13	80	34	9
SERS	**20,639,914**	**7.45**	**11.97**	**10.18**	**11.30**	**9.59**	**9.26**	**10.33**	**10.66**	**-4.89**	**17.88**
SERS Total Fund Benchmark		6.06	10.12	8.66	8.85	7.77	7.50	9.36	10.00	-7.91	14.66
Difference		1.38	1.85	1.52	2.45	1.82	1.76	0.97	0.66	3.02	3.22
Rank		17	13	30	6	3	3	24	67	8	22
HPRS	**1,195,191**	**6.53**	**11.26**	**11.70**	**11.81**	**9.46**	**8.71**	**10.85**	**15.03**	**-8.92**	**16.92**
HPRS Total Fund Benchmark		5.23	9.98	11.21	10.95	8.84	8.21	11.69	14.41	-9.21	16.63
Difference		1.30	1.29	0.49	0.86	0.62	0.50	-0.84	0.62	0.28	0.29
Rank		45	30	7	3	4	6	17	4	37	36
All Public Plans > $1B-Total Fund Median		*6.44*	*10.55*	*9.43*	*9.19*	*7.77*	*7.58*	*9.28*	*11.44*	*-10.38*	*15.55*

OPERS health care plan is not a pension plan and therefore has significantly different characteristics including a shorter focus asset allocation with more liquidity than the pension plans. For purposes of this study, the OPERS health care plan has been included in the results. The results for OPERS health care plan is reflected in the PERS 115 trust subsequent to October 2014 and in the PERS HC results prior to October 2014.

Performance shown is gross of fees but is net of embedded fees on externally managed real estate and alternative investments. Ranks are shown against All Public Plans >$1B-Total Fund. PERS (DB): 5 Year performance reduced 0.23%, 7 Year performance reduced 0.16%, and 10 Year performance reduced 0.11% due to change in distribution methodology in private equity and real estate portfolios. Rank = Percentile Rank. Peer group includes 212 participants as of Q2 2025.

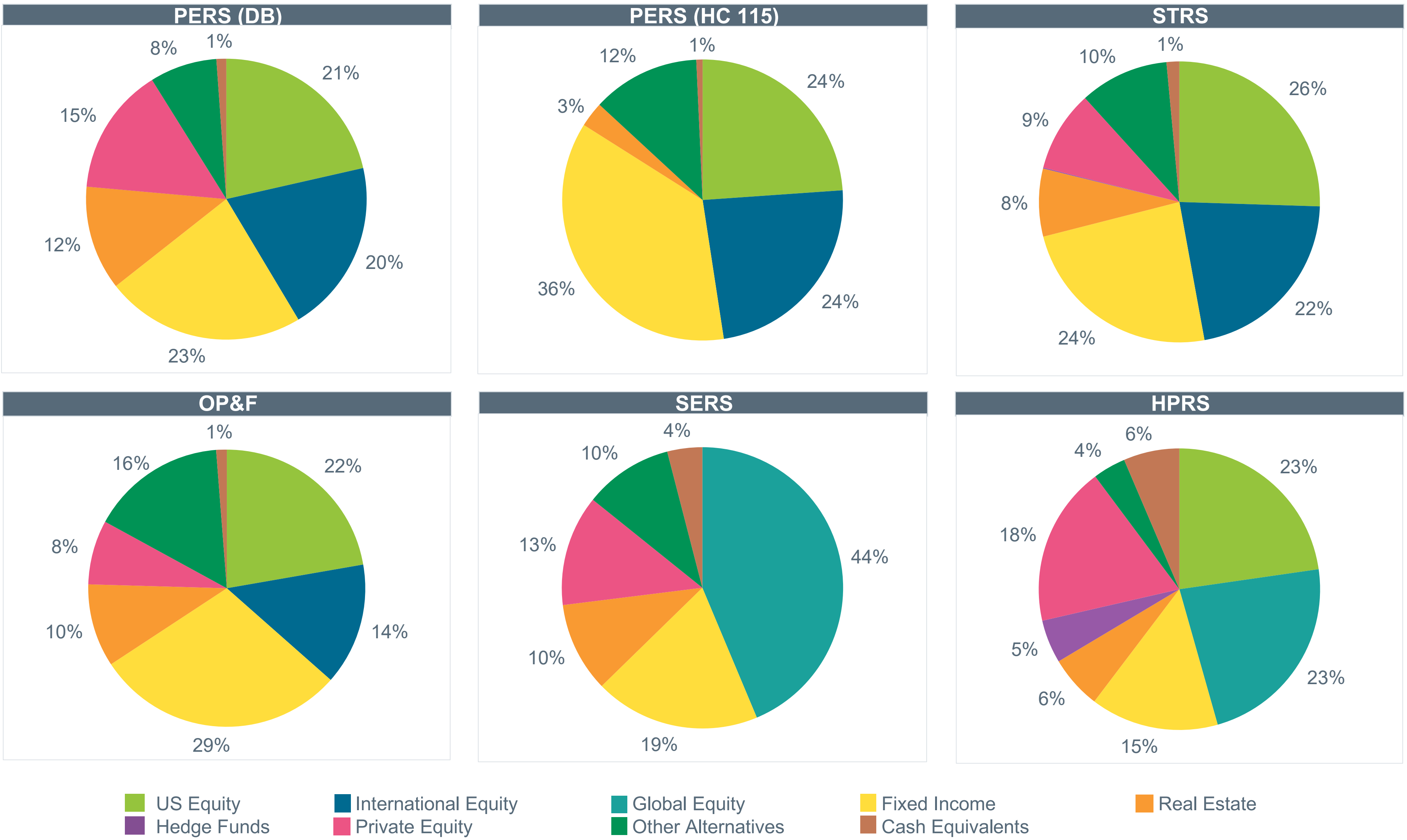
RVK

Asset Allocation & Performance - Net of Fees

	Market Value ($000)	Trailing Performance (%)						Calendar Year Performance (%)			
		2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
PERS (DB)	**109,451,827**	**7.20**	**10.74**	**9.36**	**8.93**	**7.61**	**7.55**	**8.82**	**11.26**	**-12.03**	**15.34**
PERS (DB) Total Fund Benchmark		6.84	10.60	8.53	8.54	7.29	7.25	7.93	10.46	-11.44	15.28
Difference		0.35	0.14	0.83	0.39	0.32	0.31	0.90	0.81	-0.59	0.06
PERS (HC 115)	**14,156,611**	**8.00**	**12.19**	**10.69**	**8.66**	**7.31**	**6.92**	**10.00**	**13.97**	**-15.51**	**14.34**
PERS (HC 115) Total Fund Benchmark		7.62	11.82	10.28	8.28	6.90	6.58	9.53	13.65	-15.56	13.76
Difference		0.37	0.38	0.41	0.38	0.41	0.34	0.47	0.32	0.04	0.58
STRS	**100,613,227**	**6.56**	**10.41**	**9.49**	**10.29**	**8.75**	**8.52**	**9.97**	**11.51**	**-9.64**	**19.24**
STRS Total Fund Benchmark		6.24	10.76	9.70	9.78	8.44	8.18	10.48	12.39	-10.90	17.36
Difference		0.31	-0.36	-0.22	0.51	0.31	0.34	-0.51	-0.89	1.26	1.88
OP&F	**19,830,029**	**8.54**	**13.87**	**9.32**	**10.35**	**8.09**	**7.85**	**10.58**	**9.03**	**-9.38**	**19.63**
OP&F Total Fund Benchmark		7.30	12.93	9.18	9.08	7.62	7.27	10.03	10.30	-10.57	16.29
Difference		1.24	0.95	0.14	1.27	0.47	0.58	0.55	-1.26	1.19	3.34
SERS	**20,639,914**	**7.10**	**11.17**	**9.40**	**10.56**	**8.87**	**8.55**	**9.54**	**9.89**	**-5.60**	**17.13**
SERS Total Fund Benchmark		6.06	10.12	8.66	8.85	7.77	7.50	9.36	10.00	-7.91	14.66
Difference		1.04	1.05	0.75	1.71	1.11	1.05	0.19	-0.11	2.31	2.48
HPRS	**1,195,191**	**6.32**	**10.75**	**11.14**	**11.24**	**8.95**	**8.19**	**10.30**	**14.39**	**-9.38**	**16.31**
HPRS Total Fund Benchmark		5.23	9.98	11.21	10.95	8.84	8.21	11.69	14.41	-9.21	16.63
Difference		1.09	0.78	-0.08	0.30	0.11	-0.02	-1.39	-0.02	-0.18	-0.32

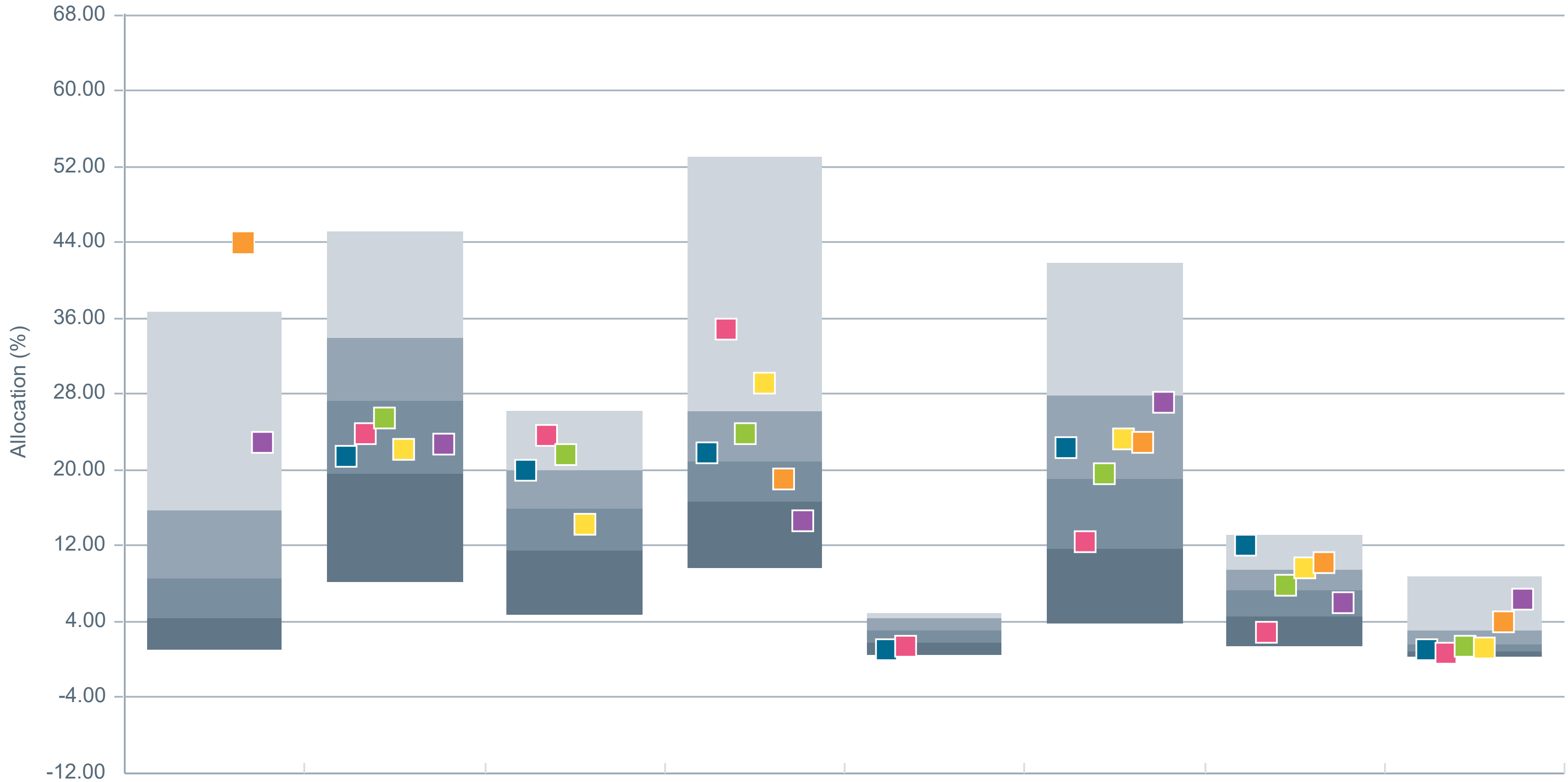
Performance shown is net of all investment management costs. PERS (DB): 5 Year performance reduced 0.23%, 7 Year performance reduced 0.16%, and 10 Year performance reduced 0.11% due to change in distribution methodology in private equity and real estate portfolios.

Ohio Retirement Study Council
Current Asset Allocation by Asset Class



Allocations shown may not sum up to 100% exactly due to rounding. Cash Equivalents for PERS (DB) and PERS (HC 115) consists of cash, rebalancing, and additional annuity.

Plan Sponsor Peer Group Analysis - Total Fund Asset Allocation



	Global Equity	US Equity	Global ex-US Equity	US Fixed	Emg Mkt Fixed	Alternatives	Total Real Estate	Cash & Equivalents
PERS (DB)	N/A	21.45 (71)	19.95 (27)	21.90 (46)	1.09 (84)	22.44 (37)	12.04 (9)	1.13 (65)
PERS (HC 115)	N/A	23.91 (64)	23.67 (10)	34.92 (10)	1.48 (80)	12.41 (72)	2.89 (89)	0.73 (82)
STRS	N/A	25.52 (59)	21.68 (18)	23.92 (36)	N/A	19.62 (48)	7.81 (44)	1.46 (55)
OP&F	N/A	22.27 (69)	14.26 (61)	29.23 (18)	N/A	23.32 (35)	9.69 (24)	1.24 (62)
SERS	43.68 (1)	N/A	N/A	19.02 (64)	N/A	22.95 (36)	10.33 (19)	4.02 (18)
HPRS	22.88 (20)	22.71 (68)	N/A	14.73 (84)	N/A	27.13 (26)	6.11 (58)	6.44 (8)
Median	8.54	27.48	15.90	21.08	3.02	18.97	7.16	1.73

Allocations shown may not add up to 100% due to rounding. US Fixed Income may include allocations to Intl. Fixed Income not explicitly broken out by the plans. Parentheses contain percentile ranks. Cash Equivalents for PERS (DB) consists of cash, rebalancing, and additional annuity. Cash Equivalents for PERS (HC 115) consists of cash and rebalancing.


PERS (DB)
PERS (HC 115)
STRS
OP&F
SERS
HPRS
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
2020
2025
Target
US Equity
International Equity
Global Equity
Fixed Income
Real Estate
Hedge Funds
Private Equity
Other Alternatives
Cash Equivalents

Summary

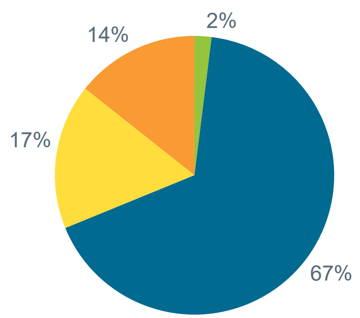
Alpha: Aims to continually provide a return in excess of the portfolio benchmark return for a given level of risk and are intended to provide diversification (primarily with the Capital Appreciation and Capital Preservation components).
(Includes: Hedge Funds, Global Tactical Asset Allocation (GTAA), and Risk Parity)

Capital Appreciation: Seeks high level of capital gains through increased risk-return trade-off.
(Includes: Public & Private Equities, High Yield, Emerging Markets Debt, MLPs, Timber, Non-Core Real Estate, Opportunistic Investments, and Securitized Debt)

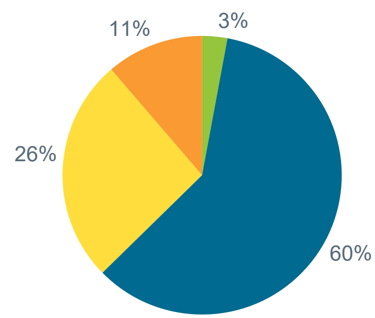
Capital Preservation: Conservative strategy designed to avoid risk of loss of principal.
(Includes: Core Fixed Income and Cash Equivalents)

Inflation: Provide returns that will keep pace with normal inflationary movements in the long-term market. Designed not to lose value in an inflationary environment.
(Includes: TIPS, Commodities, Real Return, Floating Rate Debt, REITs, and Core Real Estate)

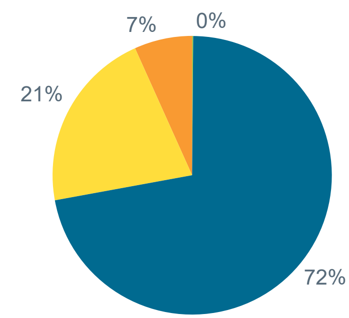
PERS (DB)



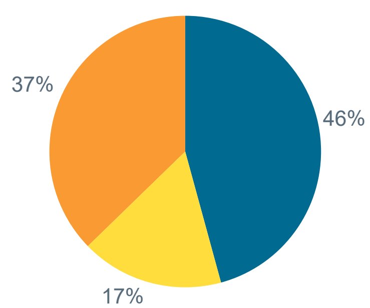
PERS (HC 115)



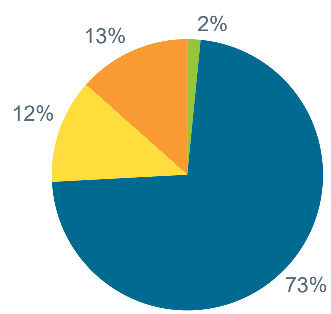
STRS



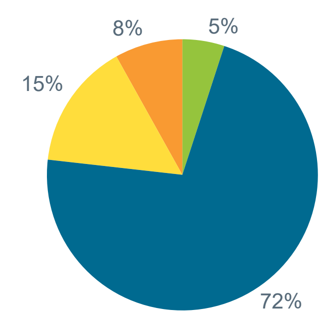
OP&F



SERS



HPRS



Asset Allocation by Thematic Category percentages are provided by the Plans. Allocations are based on dedicated composite allocations and not underlying investment manager exposures; as such, thematic allocations are approximations. OP&F does not have any dedicated exposure to Alpha strategies, but does have alpha exposure embedded within other asset class buckets. Allocations shown may not sum up to exactly 100% due to rounding. Please see the Glossary for additional information regarding thematic descriptions.

Summary

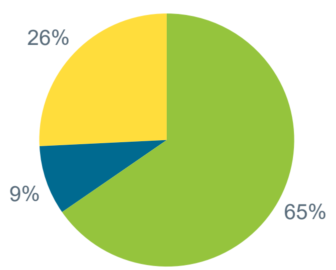
RVK Liquidity Rating - A qualitative method developed and calculated by RVK for determining the relative amount of liquidity in a portfolio.

Liquid Investments: Publicly traded assets, largely exchanged traded with significant trading volume for the overall asset classes. Takes a relatively small discount or time required to raise cash, but generally expected to clear at quoted bid prices within several trading days.

Less Liquid Investments: Smaller trading volume, non-exchange traded, or vehicle-based liquidity constraints. Moderate to significant discount to raise cash, expected to see fewer purchase-oriented bids, or time required to receive cash is significantly greater than several trading days.

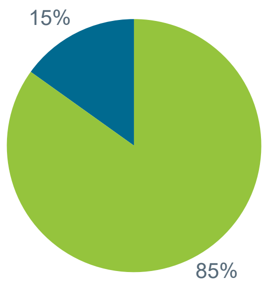
Not Liquid Investments: Private appraisal-based transactions, vehicle-based liquidity constraints, or privately held assets. Extreme discount to raise cash or 6-12+ months required to receive cash.

PERS (DB)



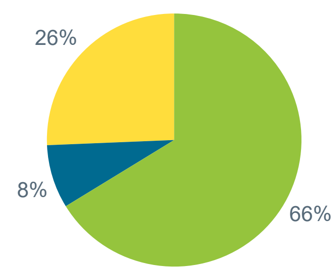
PERS (DB) Liquidity Rating 65

PERS (HC 115)



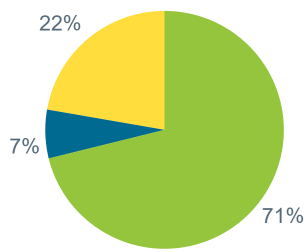
PERS (HC 115) Liquidity Rating 88

STRS



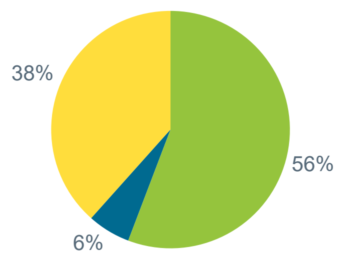
STRS Liquidity Rating 69

OP&F



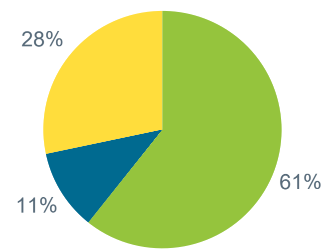
OP&F Liquidity Rating 64

SERS



SERS Liquidity Rating 63

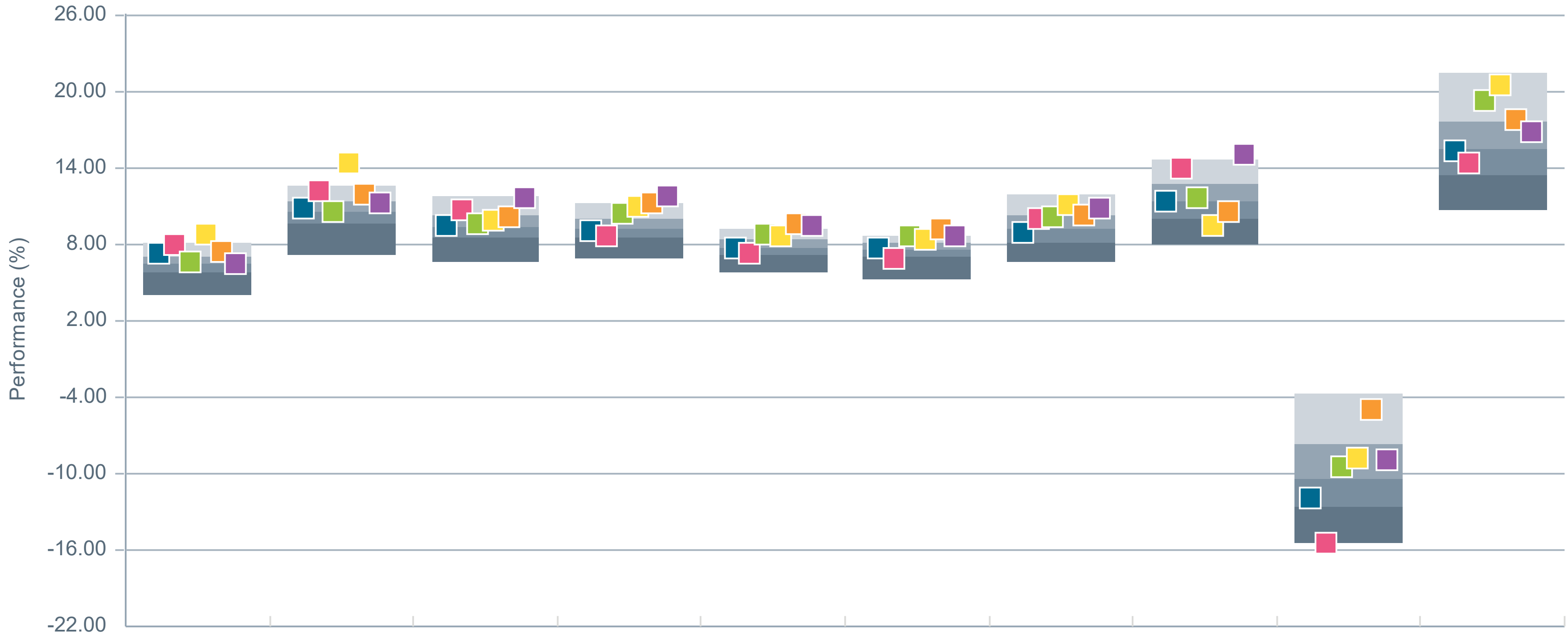
HPRS



HPRS Liquidity Rating 54

Asset Allocation by Liquidity percentages are provided by the Plans. Allocations are based on dedicated composite allocations and not underlying investment manager exposures; as such, liqudity allocations are approximations. Allocations shown may not sum up to exactly 100% due to rounding. The RVK Liquidity Rating is calculated by RVK using beginning of quarter investment weights applied to each corresponding asset class liquidity rating. Please see the glossary for additional information regarding liquidity and custom index descriptions.

Plan Sponsor Peer Group - Total Fund Performance

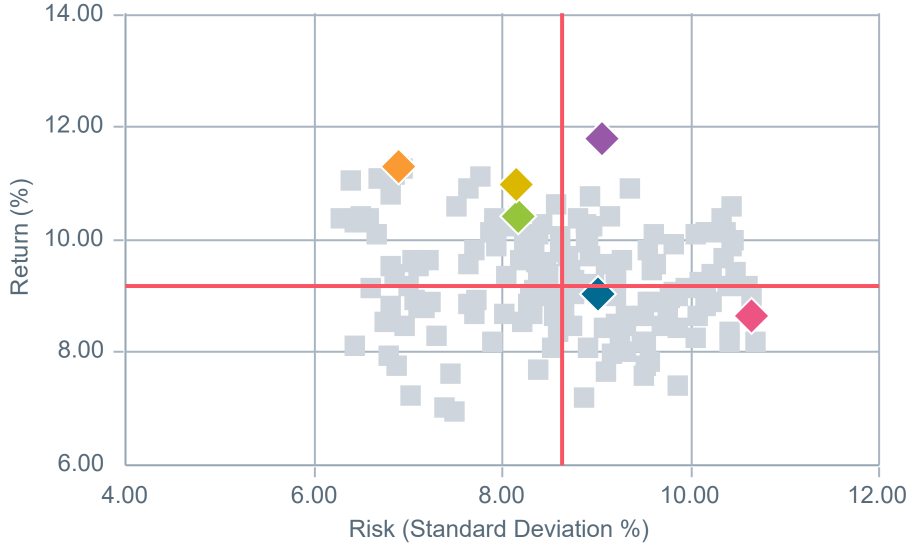


	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
PERS (DB)	7.25 (20)	10.87 (43)	9.50 (48)	9.04 (57)	7.72 (54)	7.68 (47)	8.96 (61)	11.42 (52)	-11.95 (69)	15.43 (53)
PERS (HC 115)	8.00 (6)	12.19 (10)	10.69 (20)	8.66 (72)	7.31 (69)	6.94 (80)	10.00 (31)	13.97 (12)	-15.51 (96)	14.34 (65)
STRS	6.63 (40)	10.55 (51)	9.62 (43)	10.42 (14)	8.88 (8)	8.65 (9)	10.11 (28)	11.64 (46)	-9.52 (43)	19.36 (11)
OP&F	8.83 (2)	14.47 (1)	9.86 (37)	10.99 (9)	8.71 (13)	8.47 (13)	11.13 (13)	9.52 (80)	-8.73 (34)	20.48 (9)
SERS	7.45 (17)	11.97 (13)	10.18 (30)	11.30 (6)	9.59 (3)	9.26 (3)	10.33 (24)	10.66 (67)	-4.89 (8)	17.88 (22)
HPRS	6.53 (45)	11.26 (30)	11.70 (7)	11.81 (3)	9.46 (4)	8.71 (6)	10.85 (17)	15.03 (4)	-8.92 (37)	16.92 (36)
Median	6.44	10.55	9.43	9.19	7.77	7.58	9.28	11.44	-10.38	15.55
Population	208	207	202	198	194	191	226	238	236	277

Performance shown is gross of fees. Parentheses contain percentile ranks. PERS (DB): 5 Year performance reduced 0.23%, 7 Year performance reduced 0.16%, and 10 Year performance reduced 0.11% due to change in distribution methodology in private equity and real estate portfolios. Rank = Percentile Rank. Peer group includes 212 participants as of Q2 2025.

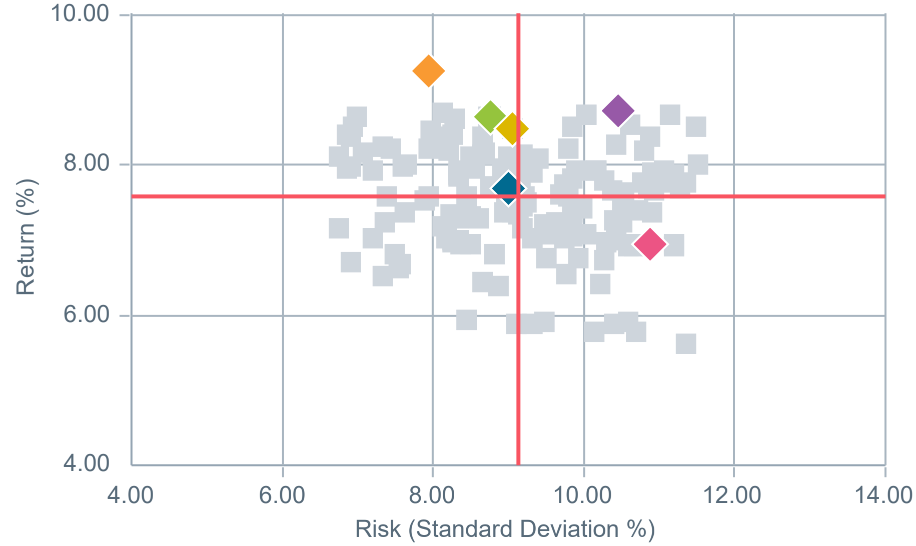
RVK

Plan Sponsor Peer Group Scattergram - 5 Years



	Return	Standard Deviation
PERS (DB)	9.04	9.02
PERS (HC 115)	8.66	10.65
STRS	10.42	8.18
OP&F	10.99	8.14
SERS	11.30	6.90
HPRS	11.81	9.06
Median	9.19	8.63

Plan Sponsor Peer Group Scattergram - 10 Years



	Return	Standard Deviation
PERS (DB)	7.68	8.99
PERS (HC 115)	6.94	10.87
STRS	8.65	8.75
OP&F	8.47	9.06
SERS	9.26	7.94
HPRS	8.71	10.45
Median	7.58	9.13

Sharpe Ratio - 5 Year

PERS (DB)	0.71
PERS (HC 115)	0.59
STRS	0.92
OP&F	0.99
SERS	1.19
HPRS	0.99
All Public Plans > $1B-Total Fund Median	*0.75*

Sharpe Ratio - 10 Year

PERS (DB)	0.66
PERS (HC 115)	0.50
STRS	0.77
OP&F	0.73
SERS	0.91
HPRS	0.67
All Public Plans > $1B-Total Fund Median	*0.62*

Performance shown is gross of fees.

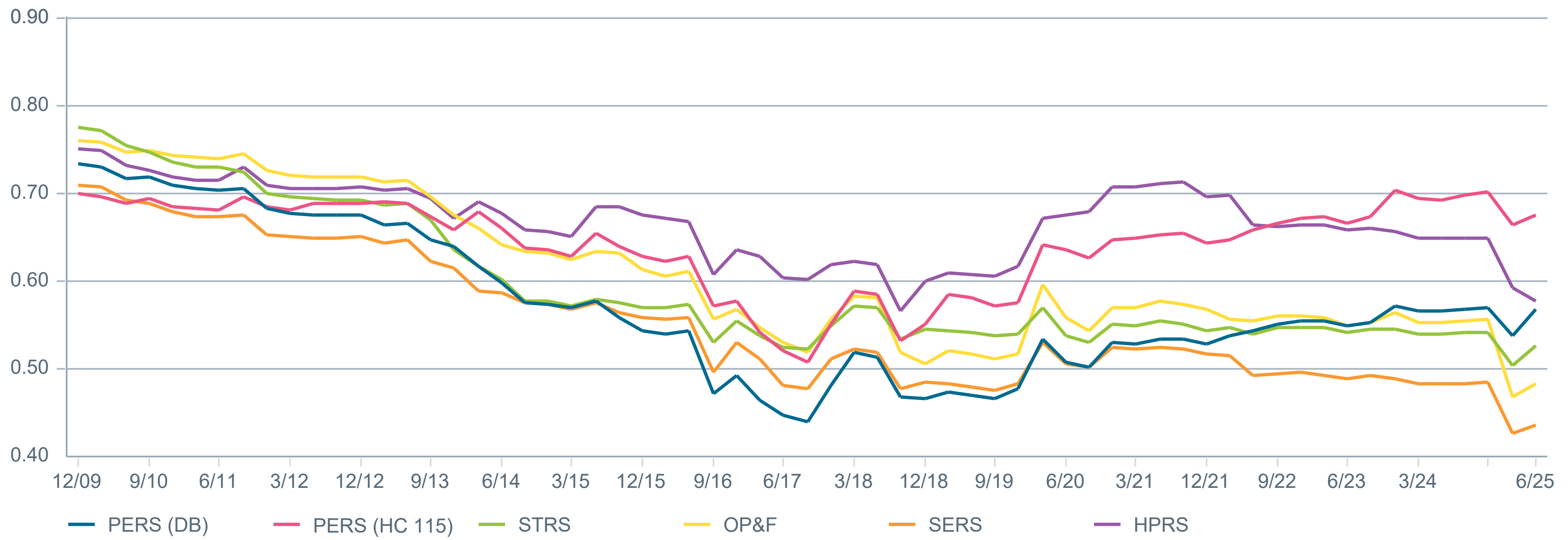
Summary

Beta is a measure of the sensitivity of a portfolio to the movements of the U.S. equity market as represented by the S&P 500 Index (Cap Wtd). Beta measures a portfolio's non-diversifiable or systematic risk. As an example, a Beta of 0.70 indicates that a portfolio captures roughly 70% of the S&P 500 Index return. If the S&P 500 Index returns 10%, the portfolio would be expected to return 7%.

Equity Beta

	3 Years	5 Years	7 Years	10 Years
PERS (DB)	0.49	0.57	0.53	0.53
PERS (HC 115)	0.62	0.67	0.65	0.65
STRS	0.49	0.53	0.53	0.53
OP&F	0.37	0.48	0.52	0.53
SERS	0.39	0.44	0.47	0.48
HPRS	0.49	0.58	0.64	0.64
S&P 500 Index (Cap Wtd)	1.00	1.00	1.00	1.00

5 Year Rolling Equity Beta



Performance shown is gross of fees and is calculated using quarterly periodicity.

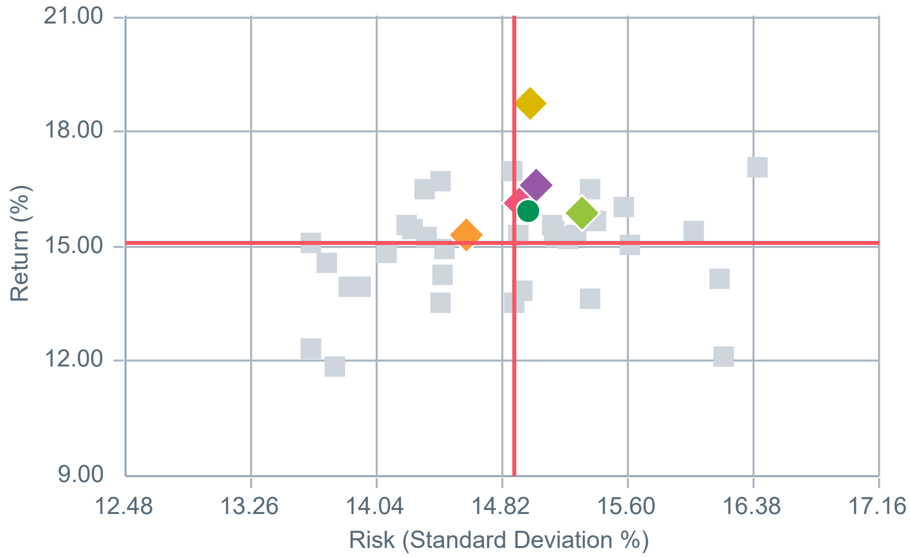
Performance										
	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
US Equity										
PERS (DB)	**6.03**	**15.48**	**19.20**	**16.13**	**13.54**	**12.91**	**23.74**	**25.95**	**-18.97**	**26.30**
Russell 3000 Index	5.75	15.30	19.08	15.96	13.55	12.96	23.81	25.96	-19.21	25.66
Difference	0.28	0.19	0.12	0.17	-0.02	-0.05	-0.07	-0.01	0.24	0.64
Rank	47	27	10	22	13	17	19	19	61	34
PERS (HC 115)	**6.03**	**15.48**	**19.20**	**16.13**	**13.54**	**12.91**	**23.74**	**25.95**	**-18.97**	**26.30**
Russell 3000 Index	5.75	15.30	19.08	15.96	13.55	12.96	23.81	25.96	-19.21	25.66
Difference	0.28	0.19	0.12	0.17	-0.02	-0.05	-0.07	-0.01	0.24	0.64
Rank	47	27	10	22	13	17	19	19	61	34
STRS	**5.27**	**13.52**	**18.85**	**15.89**	**13.67**	**13.09**	**23.57**	**25.25**	**-19.50**	**26.53**
Russell 3000 Index	5.75	15.30	19.08	15.96	13.55	12.96	23.81	25.96	-19.21	25.66
Difference	-0.48	-1.78	-0.23	-0.07	0.12	0.13	-0.24	-0.71	-0.30	0.87
Rank	70	69	17	24	12	15	20	21	73	32
OP&F	**7.91**	**17.78**	**19.92**	**18.76**	**15.40**	**14.74**	**27.17**	**23.13**	**-17.23**	**30.14**
Wilshire 5000 Index	5.73	15.21	19.10	16.16	13.75	13.18	23.76	26.14	-19.04	26.70
Difference	2.18	2.57	0.83	2.59	1.65	1.56	3.41	-3.01	1.81	3.45
Rank	16	5	3	1	1	1	2	49	38	5
SERS	**6.10**	**15.31**	**18.33**	**15.33**	**13.14**	**12.67**	**23.38**	**23.13**	**-18.51**	**24.90**
Russell 3000 Index	5.75	15.30	19.08	15.96	13.55	12.96	23.81	25.96	-19.21	25.66
Difference	0.35	0.01	-0.75	-0.63	-0.41	-0.29	-0.43	-2.83	0.70	-0.76
Rank	45	33	24	39	21	23	21	49	59	43
HPRS	**4.79**	**13.47**	**18.39**	**16.61**	**13.47**	**12.98**	**22.15**	**25.38**	**-17.27**	**27.38**
Russell 3000 Index	5.75	15.30	19.08	15.96	13.55	12.96	23.81	25.96	-19.21	25.66
Difference	-0.96	-1.83	-0.69	0.64	-0.08	0.02	-1.66	-0.58	1.94	1.71
Rank	80	70	22	13	16	16	31	20	38	26
All Public Plans > $1B-US Equity Segment Median	*6.02*	*14.52*	*17.80*	*15.12*	*11.89*	*11.55*	*20.67*	*23.03*	*-17.92*	*24.31*

Performance shown is gross of fees. Ranks are shown against All Public Plans >$1B-US Equity Segment. Rank = Percentile Rank. Peer group includes 212 participants as of Q2 2025.

Ohio Retirement Study Council
Risk & Return - US Equity
All Public Plans > $1B-US Equity Segment

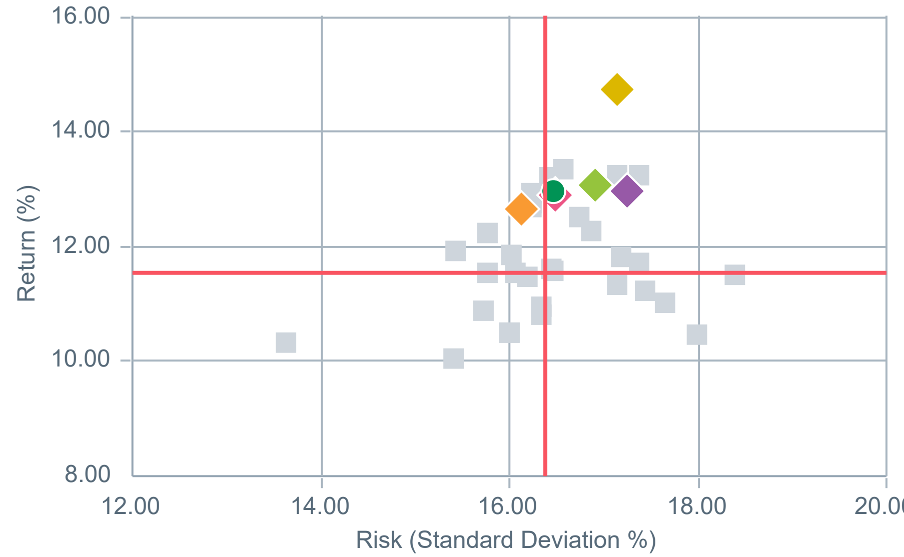
As of June 30, 2025

Plan Sponsor Peer Group Scattergram - 5 Years



	Return	Standard Deviation
PERS (DB)	16.13	14.93
PERS (HC 115)	16.13	14.93
STRS	15.89	15.31
OP&F	18.76	14.99
SERS	15.33	14.60
HPRS	16.61	15.03
Russell 3000 Index	15.96	14.98
Median	15.12	14.89

Plan Sponsor Peer Group Scattergram - 10 Years



	Return	Standard Deviation
PERS (DB)	12.91	16.48
PERS (HC 115)	12.91	16.48
STRS	13.09	16.90
OP&F	14.74	17.15
SERS	12.67	16.13
HPRS	12.98	17.25
Russell 3000 Index	12.96	16.46
Median	11.55	16.39

Sharpe Ratio - 5 Years

PERS (DB)	0.92
PERS (HC 115)	0.92
STRS	0.89
OP&F	1.07
SERS	0.89
HPRS	0.94
Russell 3000 Index	0.91
All Public Plans > $1B-US Equity Segment Median	*0.87*

Sharpe Ratio - 10 Years

PERS (DB)	0.71
PERS (HC 115)	0.71
STRS	0.71
OP&F	0.79
SERS	0.71
HPRS	0.69
Russell 3000 Index	0.72
All Public Plans > $1B-US Equity Segment Median	*0.65*

Performance shown is gross of fees.

RVK

Performance										
	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
International Equity										
PERS (DB)	**18.73**	**18.69**	**15.67**	**11.28**	**7.80**	**7.63**	**7.35**	**17.50**	**-17.51**	**9.00**
PERS (DB) International Equity Custom Benchmark	17.73	17.67	13.60	10.04	6.39	6.14	5.40	15.12	-16.85	7.89
Difference	1.00	1.02	2.07	1.24	1.41	1.48	1.95	2.38	-0.65	1.11
Rank	33	47	29	30	27	17	31	37	55	60
PERS (HC 115)	**18.73**	**18.69**	**15.67**	**11.28**	**7.80**	**7.63**	**7.35**	**17.50**	**-17.51**	**9.00**
PERS (HC 115) International Equity Custom Benchmark	17.73	17.67	13.60	10.04	6.39	6.14	5.40	15.12	-16.85	7.89
Difference	1.00	1.02	2.07	1.24	1.41	1.48	1.95	2.38	-0.65	1.11
Rank	33	47	29	30	27	17	31	37	55	60
STRS	**15.85**	**17.59**	**16.35**	**13.30**	**8.94**	**8.28**	**11.11**	**16.83**	**-9.11**	**13.20**
STRS International Equity Custom Benchmark	14.23	15.61	15.10	11.78	8.12	7.40	9.51	16.93	-11.64	12.36
Difference	1.62	1.98	1.24	1.51	0.81	0.87	1.61	-0.10	2.53	0.84
Rank	81	59	17	9	10	9	9	52	3	19
OP&F	**20.63**	**20.42**	**17.08**	**13.18**	**8.07**	**7.43**	**6.00**	**19.82**	**-15.75**	**11.79**
OP&F International Equity Custom Benchmark	17.88	17.83	13.92	10.20	6.48	6.19	5.22	15.63	-16.58	8.53
Difference	2.75	2.59	3.16	2.97	1.59	1.24	0.78	4.19	0.83	3.26
Rank	17	22	8	9	24	32	49	10	37	31
SERS	**16.94**	**19.37**	**17.36**	**13.35**	**9.34**	**8.52**	**13.32**	**18.60**	**-16.03**	**10.76**
SERS International Equity Custom Benchmark	14.93	17.59	15.62	11.01	7.19	6.55	10.45	18.17	-15.87	7.46
Difference	2.01	1.79	1.73	2.34	2.15	1.97	2.86	0.43	-0.15	3.30
Rank	72	27	7	9	7	4	4	22	38	45
HPRS Global Equity	**14.86**	**19.16**	**17.53**	**N/A**	**N/A**	**N/A**	**11.68**	**24.61**	**-22.67**	**N/A**
HPRS Global Equity Custom Benchmark	10.05	16.17	17.35	N/A	N/A	N/A	17.49	22.20	-18.36	N/A
Difference	4.81	2.99	0.18	N/A	N/A	N/A	-5.81	2.40	-4.31	N/A
All Public Plans > $1B-Intl. Equity Segment Median	*18.03*	*17.75*	*14.88*	*10.51*	*7.23*	*7.12*	*5.83*	*17.01*	*-17.06*	*9.52*

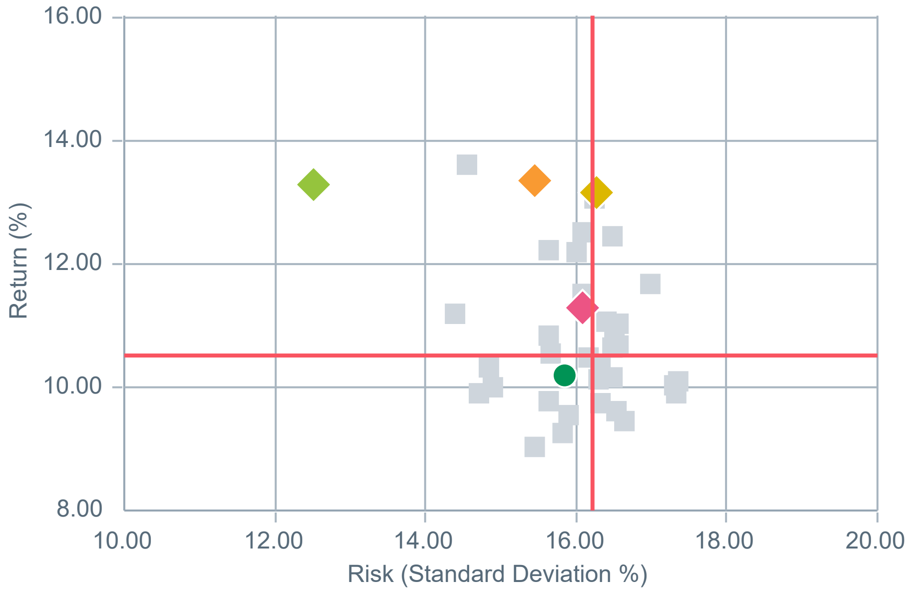
Performance shown is gross of fees. Ranks are shown against All Public Plans >$1B-Intl. Equity Segment. HPRS Global Equity consists of domestic equity and broad international equity holdings. Rank = Percentile Rank. Peer group includes 212 participants as of Q2 2025.

RVK

Risk & Return - International Equity

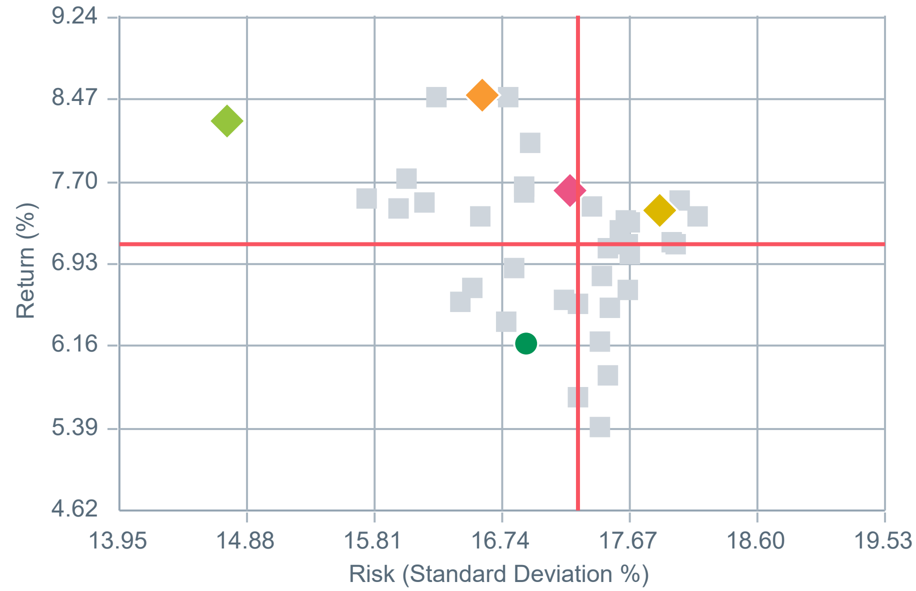
All Public Plans > $1B-Intl. Equity Segment

Plan Sponsor Peer Group Scattergram - 5 Years



	Return	Standard Deviation
PERS (DB)	11.28	16.09
PERS (HC 115)	11.28	16.09
STRS	13.30	12.52
OP&F	13.18	16.26
SERS	13.35	15.44
MSCI ACW Ex US IMI (Net)	10.20	15.86
Median	10.51	16.21

Plan Sponsor Peer Group Scattergram - 10 Years



	Return	Standard Deviation
PERS (DB)	7.63	17.23
PERS (HC 115)	7.63	17.23
STRS	8.28	14.74
OP&F	7.43	17.88
SERS	8.52	16.59
MSCI ACW Ex US IMI (Net)	6.18	16.91
Median	7.12	17.29

Sharpe Ratio - 5 Years

PERS (DB)	0.59
PERS (HC 115)	0.59
STRS	0.86
OP&F	0.69
SERS	0.73
MSCI ACW Ex US IMI (Net)	0.53
All Public Plans > $1B-Intl. Equity Segment Median	*0.54*

Sharpe Ratio - 10 Years

PERS (DB)	0.41
PERS (HC 115)	0.41
STRS	0.49
OP&F	0.39
SERS	0.47
MSCI ACW Ex US IMI (Net)	0.33
All Public Plans > $1B-Intl. Equity Segment Median	*0.37*

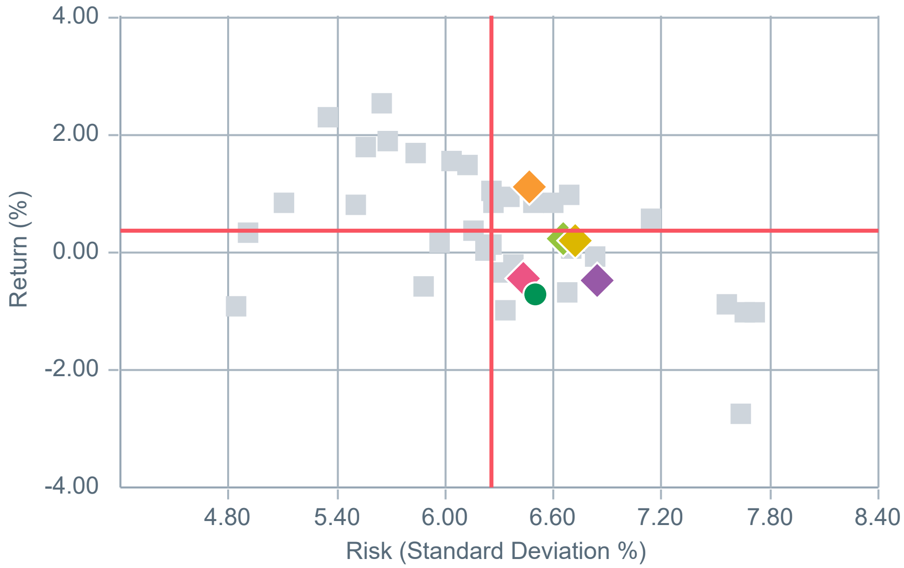
Performance shown is gross of fees.

RVK

Performance										
	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
Fixed Income										
PERS (DB) Core Fixed Income	**4.15**	**6.39**	**2.53**	**-0.45**	**2.11**	**2.02**	**1.49**	**5.29**	**-12.93**	**-0.98**
PERS (DB) Core Fixed Income Custom Benchmark	4.02	6.08	2.55	-0.73	1.77	1.76	1.25	5.53	-13.01	-1.54
Difference	0.13	0.31	-0.02	0.28	0.33	0.27	0.24	-0.24	0.08	0.56
Rank	22	32	68	71	72	78	65	68	66	85
PERS (HC 115) Core Fixed Income	**4.15**	**6.39**	**2.53**	**-0.45**	**2.11**	**2.02**	**1.49**	**5.29**	**-12.93**	**-0.98**
PERS (HC 115) Core Fixed Income Custom Benchmark	4.02	6.08	2.55	-0.73	1.77	1.76	1.25	5.53	-13.01	-1.54
Difference	0.13	0.31	-0.02	0.28	0.33	0.27	0.24	-0.24	0.08	0.56
Rank	22	32	68	71	72	78	65	68	66	85
STRS Core Fixed Income	**4.22**	**6.90**	**3.63**	**0.24**	**2.37**	**2.40**	**2.28**	**6.32**	**-12.51**	**-0.76**
Bloomberg US Universal index	4.10	6.52	3.28	-0.15	2.11	2.11	2.04	6.17	-12.99	-1.10
Difference	0.13	0.39	0.35	0.38	0.26	0.29	0.24	0.15	0.49	0.34
Rank	20	20	40	54	56	52	48	36	57	82
OP&F Core Fixed Income	**4.23**	**6.74**	**3.55**	**0.21**	**2.21**	**2.37**	**2.52**	**6.63**	**-13.30**	**-0.54**
Bloomberg US Agg Bond Index	4.02	6.08	2.55	-0.73	1.77	1.76	1.25	5.53	-13.01	-1.55
Difference	0.20	0.66	1.00	0.93	0.44	0.62	1.27	1.10	-0.29	1.00
Rank	19	25	41	55	68	53	46	34	70	75
SERS Core Fixed Income	**4.70**	**7.63**	**4.33**	**1.11**	**3.18**	**2.99**	**3.03**	**7.39**	**-12.21**	**-0.56**
Bloomberg US Agg Bond Index	4.02	6.08	2.55	-0.73	1.77	1.76	1.25	5.53	-13.01	-1.55
Difference	0.68	1.55	1.78	1.84	1.41	1.23	1.78	1.86	0.80	0.99
Rank	4	8	27	29	17	32	35	17	50	75
HPRS Core Fixed Income	**4.75**	**6.71**	**2.80**	**-0.47**	**2.05**	**2.09**	**1.49**	**5.35**	**-13.00**	**-1.50**
Bloomberg US Agg Bond Index	4.02	6.08	2.55	-0.73	1.77	1.76	1.25	5.53	-13.01	-1.55
Difference	0.73	0.64	0.25	0.25	0.28	0.33	0.24	-0.18	0.01	0.05
Rank	4	26	60	71	76	76	65	68	68	92
All Public Plans > $1B-US Fixed Income Segment Median	*3.83*	*5.87*	*3.10*	*0.39*	*2.58*	*2.45*	*2.11*	*5.79*	*-12.28*	*0.15*

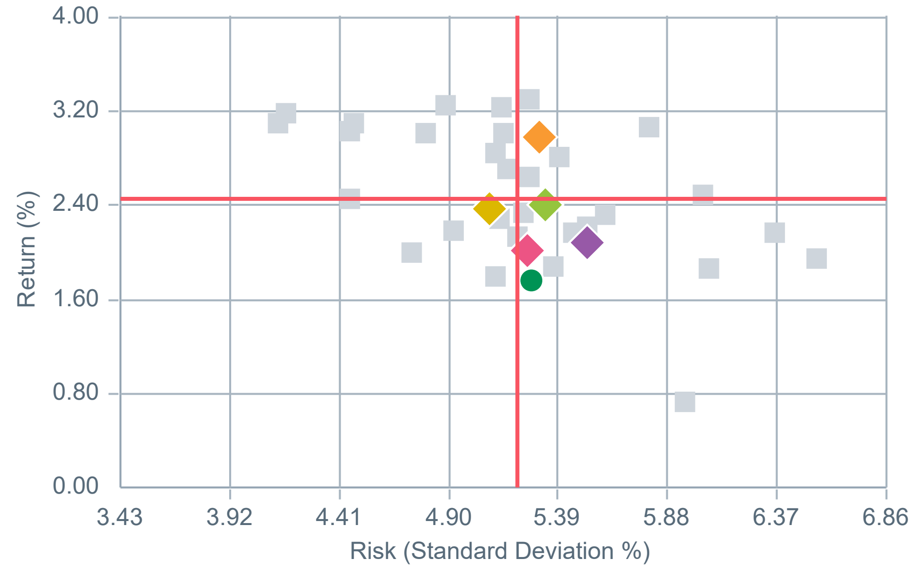
Performance shown is gross of fees. Ranks are shown against All Public Plans >$1B-US Fixed Income Segment. PERS (DB), PERS (HC), and OP&F performance for Total Fixed Income is unavailable, so Core Fixed Income is shown for illustrative purposes. Rank = Percentile Rank. Peer group includes 212 participants as of Q2 2025.

Plan Sponsor Peer Group Scattergram - 5 Years



	Return	Standard Deviation
PERS (DB) Core Fixed Income	-0.45	6.44
PERS (HC 115) Core Fixed Income	-0.45	6.44
STRS Core Fixed Income	0.24	6.66
OP&F Core Fixed Income	0.21	6.72
SERS Core Fixed Income	1.11	6.46
HPRS Core Fixed Income	-0.47	6.84
Bloomberg US Agg Bond Index	-0.73	6.50
Median	0.39	6.25

Plan Sponsor Peer Group Scattergram - 10 Years



	Return	Standard Deviation
PERS (DB) Core Fixed Income	2.02	5.25
PERS (HC 115) Core Fixed Income	2.02	5.25
STRS Core Fixed Income	2.40	5.33
OP&F Core Fixed Income	2.37	5.08
SERS Core Fixed Income	2.99	5.31
HPRS Core Fixed Income	2.09	5.52
Bloomberg US Agg Bond Index	1.76	5.27
Median	2.45	5.21

Sharpe Ratio - 5 Years

PERS (DB) Core Fixed Income	-0.49
PERS (HC 115) Core Fixed Income	-0.49
STRS Core Fixed Income	-0.36
OP&F Core Fixed Income	-0.36
SERS Core Fixed Income	-0.23
HPRS Core Fixed Income	0.70
Bloomberg US Agg Bond Index	-0.53
All Public Plans > $1B-US Fixed Income Segment Median	*-0.38*

Sharpe Ratio - 10 Years

PERS (DB) Core Fixed Income	0.04
PERS (HC 115) Core Fixed Income	0.04
STRS Core Fixed Income	0.11
OP&F Core Fixed Income	0.10
SERS Core Fixed Income	0.22
HPRS Core Fixed Income	0.82
Bloomberg US Agg Bond Index	-0.02
All Public Plans > $1B-US Fixed Income Segment Median	*0.11*

Performance shown is gross of fees.

Performance										
	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
Additional Fixed Income										
PERS (DB) US Treasury	**3.98**	**5.29**	**1.41**	**-1.63**	**1.26**	**1.18**	**0.37**	**3.84**	**-12.47**	**-2.27**
PERS (DB) US Treasury Custom Benchmark	3.95	5.46	1.58	-1.57	1.30	1.21	0.58	4.05	-12.46	-2.32
Difference	0.02	-0.17	-0.17	-0.06	-0.04	-0.03	-0.21	-0.21	-0.01	0.05
PERS (DB) EMD	**8.71**	**12.82**	**11.81**	**4.15**	**3.97**	**3.90**	**4.49**	**17.02**	**-13.50**	**-4.65**
PERS (DB) EMD Custom Benchmark	8.84	11.69	8.38	1.87	2.66	2.83	1.62	11.60	-14.07	-5.18
Difference	-0.13	1.14	3.43	2.27	1.31	1.07	2.87	5.42	0.57	0.53
PERS (DB) High Yield	**4.57**	**9.34**	**9.41**	**5.81**	**5.34**	**5.22**	**7.24**	**12.68**	**-10.41**	**5.16**
Bloomberg U.S. High Yield Index	4.57	10.29	9.93	5.97	5.31	5.38	8.19	13.45	-11.19	5.28
Difference	0.00	-0.95	-0.52	-0.16	0.03	-0.16	-0.95	-0.76	0.78	-0.12
PERS (DB) Securitized Debt	**5.44**	**11.68**	**7.36**	**5.15**	**5.43**	**4.55**	**13.82**	**7.38**	**-13.23**	**5.20**
PERS (DB) Securitized Debt Custom Benchmark	4.53	9.40	4.51	4.30	3.20	3.52	14.68	-0.43	-13.17	4.50
Difference	0.91	2.28	2.85	0.86	2.23	1.03	-0.86	7.81	-0.05	0.71
PERS (DB) TIPS	**4.66**	**5.85**	**2.34**	**1.61**	**2.99**	**2.66**	**1.83**	**3.91**	**-11.82**	**5.96**
Bloomberg U.S. TIPS Index	4.67	5.84	2.34	1.61	2.99	2.67	1.84	3.90	-11.85	5.96
Difference	-0.01	0.00	0.00	0.00	-0.01	-0.02	0.00	0.01	0.03	0.00
PERS (DB) Investment Grade Credit	**4.47**	**7.16**	**N/A**	**N/A**	**N/A**	**N/A**	**1.98**	**N/A**	**N/A**	**N/A**
Bloomberg US Corporate Investment Grade Credit Index	4.17	6.91	N/A	N/A	N/A	N/A	2.13	N/A	N/A	N/A
Difference	0.30	0.26	N/A	N/A	N/A	N/A	-0.14	N/A	N/A	N/A
PERS (DB) Private Credit	**3.50**	**4.81**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**	**N/A**
PERS (DB) Private Credit Benchmark	2.91	7.02	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Difference	0.59	-2.21	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PERS (HC 115) EMD	**8.71**	**12.82**	**11.81**	**4.15**	**3.97**	**3.90**	**4.49**	**17.02**	**-13.50**	**-4.65**
PERS (HC 115) EMD Custom Benchmark	8.84	11.69	8.38	1.87	2.66	2.83	1.62	11.60	-14.07	-5.18
Difference	-0.13	1.14	3.43	2.27	1.31	1.07	2.87	5.42	0.57	0.53
PERS (HC 115) High Yield	**4.57**	**9.34**	**9.41**	**5.81**	**5.34**	**5.22**	**7.24**	**12.68**	**-10.41**	**5.16**
Bloomberg Barclays U.S. High Yield Index	4.57	10.29	9.93	5.97	5.31	5.38	8.19	13.45	-11.19	5.28
Difference	0.00	-0.95	-0.52	-0.16	0.03	-0.16	-0.95	-0.76	0.78	-0.12

Performance shown is gross of fees.

	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
Additional Fixed Income										
PERS (HC 115) Securitized Debt	5.44	11.68	7.36	5.15	5.43	4.55	13.82	7.38	-13.23	5.20
PERS (HC 115) Securitized Debt Custom Benchmark	4.53	9.40	4.51	4.30	3.20	3.52	14.68	-0.43	-13.17	4.50
Difference	0.91	2.28	2.85	0.86	2.23	1.03	-0.86	7.81	-0.05	0.71
PERS (HC 115) TIPS	4.66	5.85	2.34	1.61	2.99	2.66	1.83	3.91	-11.82	5.96
Bloomberg U.S. Tips Index	4.67	5.84	2.34	1.61	2.99	2.67	1.84	3.90	-11.85	5.96
Difference	-0.01	0.00	0.00	0.00	-0.01	-0.02	0.00	0.01	0.03	0.00
PERS (HC 115) Investment Grade Credit	4.47	7.16	N/A	N/A	N/A	N/A	1.98	N/A	N/A	N/A
Bloomberg US Corporate Investment Grade Credit Index	4.17	6.91	N/A	N/A	N/A	N/A	2.13	N/A	N/A	N/A
Difference	0.30	0.26	N/A	N/A	N/A	N/A	-0.14	N/A	N/A	N/A
PERS (HC 115) US Treasury	3.98	5.29	1.41	-1.63	1.26	1.18	0.37	3.84	-12.47	-2.27
PERS (HC 115) US Treasury Custom Benchmark	3.95	5.46	1.58	-1.57	1.30	1.21	0.58	4.05	-12.46	-2.32
Difference	0.02	-0.17	-0.17	-0.06	-0.04	-0.03	-0.21	-0.21	-0.01	0.05
STRS Liquid Treasury Portfolio	3.99	6.31	2.88	0.17	2.00	N/A	2.48	4.32	-7.71	-1.67
Bloomberg US Intermediate Treasury Index	3.98	6.27	2.83	0.12	1.94	N/A	2.42	4.28	-7.77	-1.72
Difference	0.01	0.04	0.05	0.05	0.06	N/A	0.06	0.04	0.06	0.05
OP&F High Yield	5.08	10.72	9.85	6.20	5.47	5.45	8.46	12.09	-9.60	5.35
ICE BofA U.S. High Yield Master II Constrained Index	4.55	10.24	9.85	5.99	5.16	5.26	8.20	13.47	-11.25	5.34
Difference	0.53	0.48	0.00	0.21	0.31	0.19	0.26	-1.38	1.65	0.01
OP&F Private Credit Fixed Income	1.68	8.06	10.77	11.36	9.46	8.47	13.97	17.38	4.87	15.80
S&P LTSA Levered Loan Index + 2%	3.78	8.99	9.36	11.14	7.43	N/A	11.79	15.31	-0.63	10.58
Difference	-2.10	-0.93	1.41	0.22	2.03	N/A	2.18	2.07	5.50	5.22
OP&F US TIPS	11.39	9.82	-0.61	2.91	4.94	5.18	0.72	-0.05	-21.16	15.47
Bridgewater Custom US TIPS Index	6.82	6.18	-0.80	-0.55	2.74	3.26	-2.11	2.14	-25.71	11.81
Difference	4.57	3.63	0.20	3.46	2.20	1.92	2.83	-2.19	4.55	3.66
OP&F US Treasury	2.03	0.21	-3.38	N/A	N/A	N/A	-5.16	-1.28	-13.62	-2.31
Bloomberg US Agg Bond Index Ex Financing	1.79	1.17	-2.21	N/A	N/A	N/A	-3.92	0.31	-14.99	-1.68
Difference	0.24	-0.95	-1.17	N/A	N/A	N/A	-1.24	-1.59	1.37	-0.63

Performance shown is gross of fees. OP&F's Levered Bond Portfolio is a combination of the Core Fixed Income and US Treasury Composites, levered two times to one using Treasury futures.

RVK

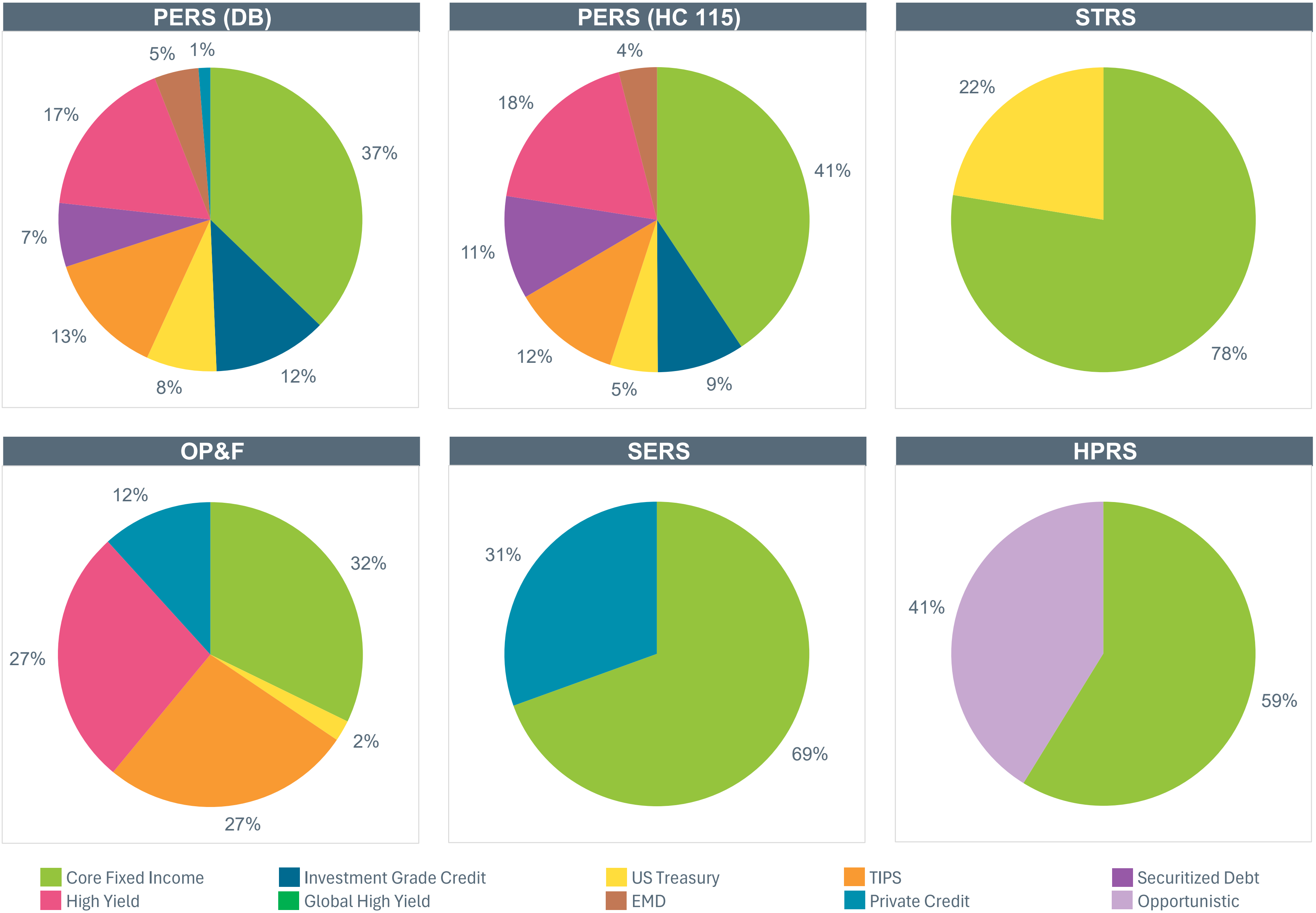
Additional Fixed Income Performance

	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
OP&F Levered Bond Portfolio	**6.34**	**6.69**	**-0.30**	**-4.75**	**-1.43**	**-0.19**	**-2.84**	**4.72**	**-26.89**	**-2.97**
Bloomberg US Agg Bond Index + Leverage Factor	5.83	7.15	-0.23	-4.87	-1.27	-0.39	-2.95	5.25	-26.84	-3.30
Difference	0.51	-0.46	-0.07	0.11	-0.15	0.20	0.11	-0.53	-0.05	0.33
SERS Private Credit	**4.23**	**10.29**	**10.43**	**12.21**	**N/A**	**N/A**	**12.99**	**12.25**	**6.80**	**16.30**
3 Month LIBOR Rate + 4.5%	4.52	9.67	9.31	7.46	N/A	N/A	10.13	9.60	6.00	4.67
Difference	-0.28	0.62	1.12	4.76	N/A	N/A	2.86	2.65	0.80	11.62

Performance shown is gross of fees. OP&F's Levered Bond Portfolio consists of core fixed income, levered two times to one using Treasury futures.

Ohio Retirement Study Council
Current Fixed Income Asset Allocation

As of June 30, 2025

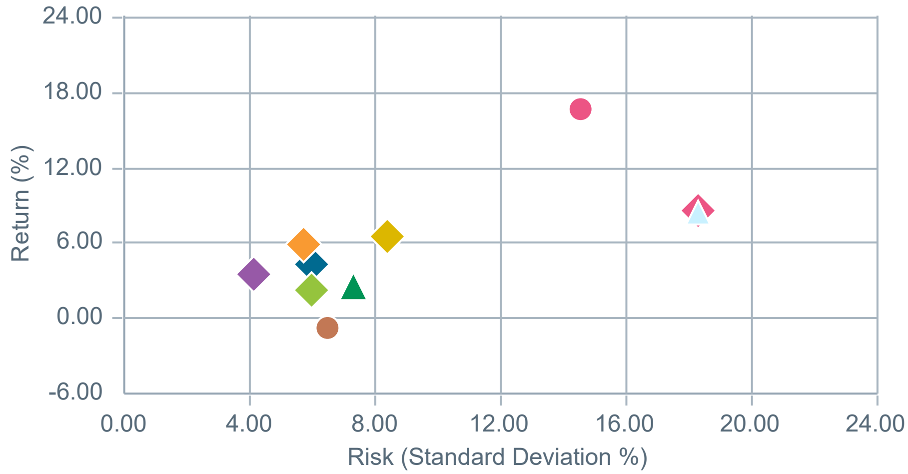


Allocations shown may not sum up to 100% exactly due to rounding. OP&F's Levered Bond Portfolio consists of core fixed income, levered two times to one using Treasury futures.

Performance										
	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
Real Estate										
PERS (DB)	**0.66**	**-0.47**	**-1.71**	**4.30**	**5.06**	**6.53**	**-3.94**	**-5.78**	**15.07**	**17.08**
PERS (DB) Real Estate Custom Benchmark	2.27	2.02	-4.22	2.87	3.77	5.56	-7.19	-12.03	21.81	14.49
Difference	-1.61	-2.49	2.51	1.43	1.29	0.97	3.25	6.26	-6.73	2.59
PERS (DB) REITs	**-0.71**	**7.89**	**4.77**	**N/A**	**N/A**	**N/A**	**8.01**	**14.04**	**N/A**	**N/A**
PERS (DB) REITs Benchmark	-0.60	8.03	4.72	N/A	N/A	N/A	8.02	14.03	N/A	N/A
Difference	-0.11	-0.14	0.05	N/A	N/A	N/A	-0.01	0.01	N/A	N/A
PERS (HC 115) REITs	**-0.71**	**7.89**	**4.77**	**8.55**	**4.51**	**5.45**	**8.01**	**14.04**	**-25.86**	**46.02**
DJ US Select Real Estate Securities TR Index	-0.60	8.03	4.72	8.51	4.48	5.42	8.02	14.03	-26.03	45.91
Difference	-0.11	-0.14	0.05	0.04	0.03	0.02	-0.01	0.01	0.18	0.11
STRS	**-0.66**	**-1.51**	**-5.37**	**2.22**	**2.98**	**4.76**	**-5.74**	**-7.32**	**5.56**	**20.64**
STRS Real Estate Custom Benchmark	2.09	5.05	-1.39	4.66	4.49	5.62	1.80	-4.72	0.85	21.38
Difference	-2.75	-6.56	-3.98	-2.43	-1.51	-0.86	-7.54	-2.60	4.71	-0.74
OP&F	**2.26**	**5.35**	**-2.80**	**6.47**	**6.52**	**8.58**	**-2.79**	**-10.80**	**23.99**	**24.21**
NCREIF ODCE Index (AWA) (Net) (1 Qtr Lag)	1.82	1.17	-5.07	2.01	2.92	4.71	-8.04	-12.88	20.96	13.64
Difference	0.44	4.17	2.27	4.46	3.60	3.87	5.25	2.08	3.03	10.57
SERS	**1.57**	**1.59**	**-0.96**	**5.83**	**6.36**	**7.76**	**-5.15**	**-4.14**	**17.90**	**18.47**
NCREIF Property Index (1 Qtr Lag)	2.19	2.72	-2.11	3.25	4.04	5.42	-3.47	-8.39	16.08	12.15
Difference	-0.62	-1.14	1.14	2.58	2.32	2.33	-1.68	4.26	1.82	6.32
HPRS	**0.76**	**-0.74**	**-2.22**	**3.49**	**5.01**	**6.14**	**-3.49**	**-4.47**	**7.64**	**14.28**
HPRS Real Estate Custom Benchmark (Net)	0.36	-1.60	-3.31	2.28	3.79	5.53	-4.39	-5.67	5.90	12.91
Difference	0.41	0.86	1.08	1.21	1.22	0.61	0.90	1.20	1.74	1.37
NCREIF ODCE Index (AWA) (Net)	**1.67**	**2.67**	**-6.21**	**2.54**	**2.78**	**4.42**	**-2.27**	**-12.73**	**6.55**	**21.02**

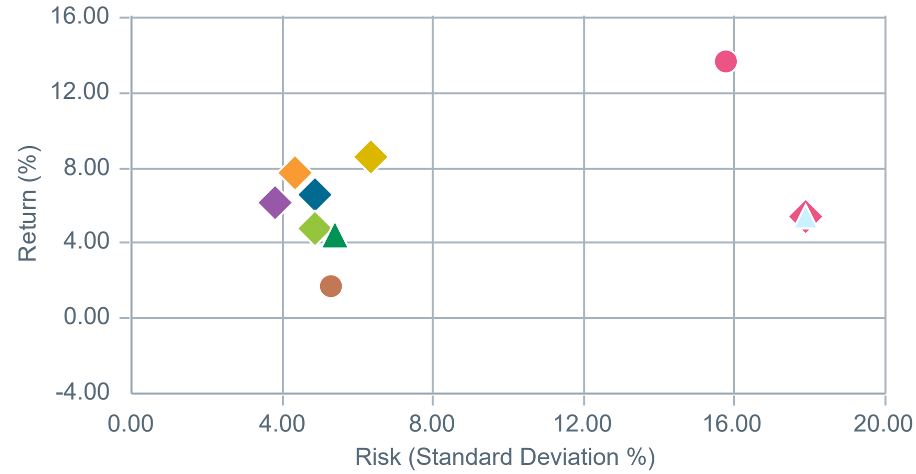
Performance shown may be net or gross of fees depending on underlying investments. Prior to 2008, HPRS's real estate portfolio consisted of two buildings. Since then, HPRS has shifted its focus to externally managed funds. PERS (DB): 5 Year performance reduced 0.71%, 7 Year performance reduced 0.51%, and 10 Year performance reduced 0.36% due to change in distribution methodology in real estate portfolios.

Risk & Return Scattergram - 5 Years



	Return	Standard Deviation
PERS (DB)	4.30	5.94
PERS (HC 115) REITs	8.55	18.29
STRS	2.22	5.99
OP&F	6.47	8.40
SERS	5.83	5.73
HPRS	3.49	4.13
NCREIF ODCE Index (AWA) (Net)	2.54	7.29
DJ US Select RE Securities TR Index	8.51	18.28
S&P 500 Index (Cap Wtd)	16.64	14.55
Bloomberg US Agg Bond Index	-0.73	6.50

Risk & Return Scattergram - 10 Years



	Return	Standard Deviation
PERS (DB)	6.53	4.87
PERS (HC 115) REITs	5.45	17.91
STRS	4.76	4.86
OP&F	8.58	6.33
SERS	7.76	4.35
HPRS	6.14	3.79
NCREIF ODCE Index (AWA) (Net)	4.42	5.41
DJ US Select RE Securities TR Index	5.42	17.89
S&P 500 Index (Cap Wtd)	13.65	15.78
Bloomberg US Agg Bond Index	1.76	5.27

Sharpe Ratio - 5 Years

PERS (DB)	0.24
PERS (HC 115) REITs	0.39
STRS	-0.05
OP&F	0.42
SERS	0.71
HPRS	0.15
NCREIF ODCE Index (AWA) (Net)	0.00
S&P 500 Index (Cap Wtd)	0.97
Bloomberg US Agg Bond Index	-0.53

Sharpe Ratio - 10 Years

PERS (DB)	0.82
PERS (HC 115) REITs	0.28
STRS	0.51
OP&F	0.94
SERS	1.35
HPRS	0.92
NCREIF ODCE Index (AWA) (Net)	0.42
S&P 500 Index (Cap Wtd)	0.78
Bloomberg US Agg Bond Index	-0.02

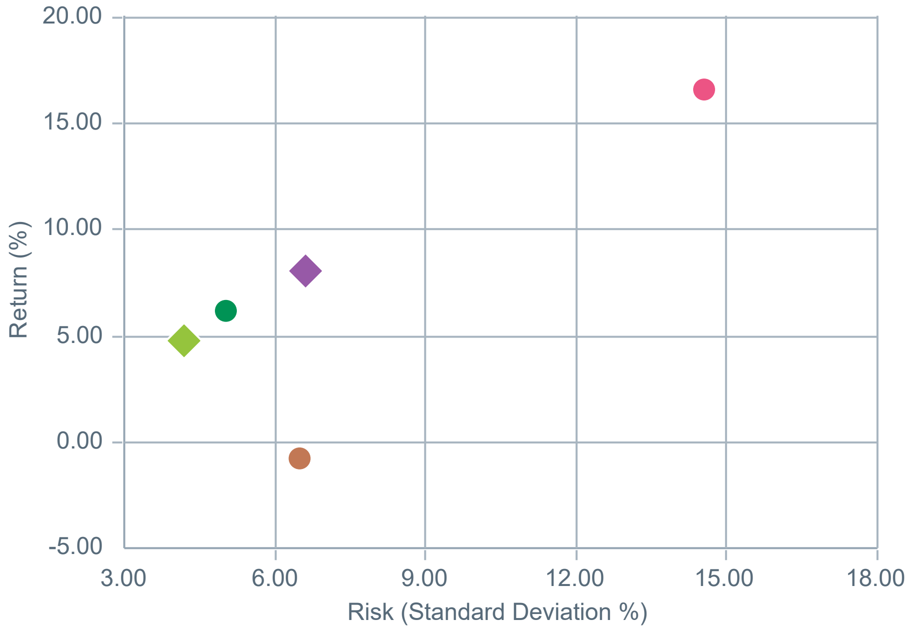
Performance shown may be net or gross of fees depending on underlying investments.

All Plans - Hedge Funds Performance

Performance										
	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
Hedge Funds										
STRS	**6.25**	**8.21**	**3.81**	**4.79**	**2.58**	**2.74**	**6.11**	**-1.78**	**6.05**	**2.14**
HFRI FOF Comp Index	2.81	7.03	6.46	6.17	4.61	3.80	9.15	6.07	-5.31	6.17
Difference	3.44	1.19	-2.66	-1.38	-2.03	-1.06	-3.04	-7.85	11.36	-4.04
HPRS	**5.76**	**13.27**	**9.27**	**8.04**	**6.23**	**4.70**	**12.63**	**7.78**	**-6.68**	**8.09**
HFRI FOF Comp Index	2.81	7.03	6.46	6.17	4.61	3.80	9.15	6.07	-5.31	6.17
Difference	2.95	6.24	2.81	1.87	1.63	0.90	3.48	1.70	-1.37	1.92

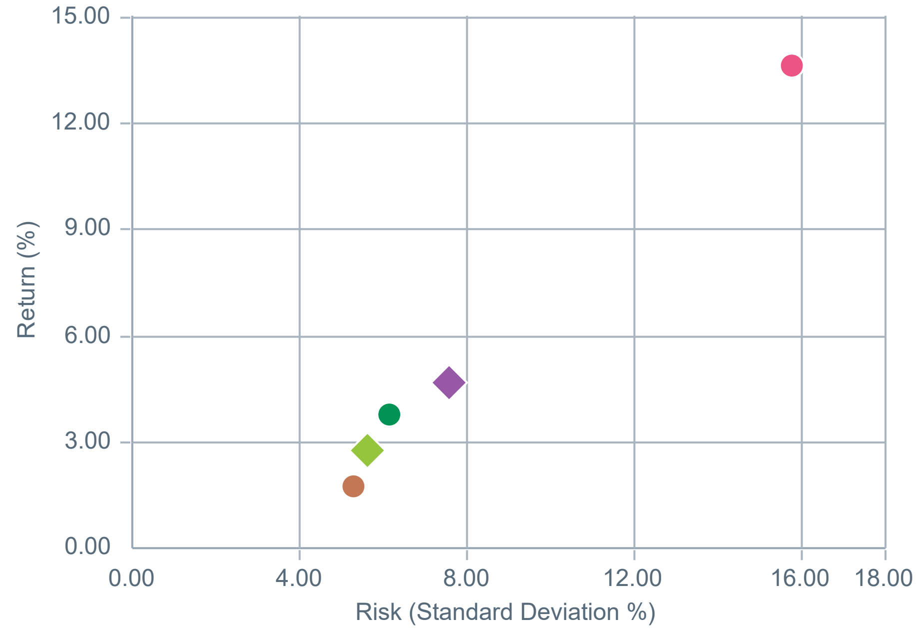
Performance shown is net of fees. PERS (DB) has no Hedge Fund target allocation and remaining assets are liquidating.

Risk & Return Scattergram - 5 Years



	Return	Standard Deviation
STRS	4.79	4.20
HPRS	8.04	6.60
HFRI FOF Comp Index	6.17	5.01
S&P 500 Index (Cap Wtd)	16.64	14.55
Bloomberg US Agg Bond Index	-0.73	6.50

Risk & Return Scattergram - 10 Years



	Return	Standard Deviation
STRS	2.74	5.60
HPRS	4.70	7.58
HFRI FOF Comp Index	3.80	6.14
S&P 500 Index (Cap Wtd)	13.65	15.78
Bloomberg US Agg Bond Index	1.76	5.27

Sharpe Ratio - 5 Years

STRS	0.46
HPRS	0.81
HFRI FOF Comp Index	*0.68*
S&P 500 Index (Cap Wtd)	0.97
Bloomberg US Agg Bond Index	-0.53

Sharpe Ratio - 10 Years

STRS	0.16
HPRS	0.39
HFRI FOF Comp Index	*0.32*
S&P 500 Index (Cap Wtd)	0.78
Bloomberg US Agg Bond Index	-0.02

Performance shown is net of fees. PERS (DB) has no Hedge Fund target allocation and remaining assets are liquidating.

Performance										
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
Private Equity										
PERS (DB)	**4.45**	**8.26**	**5.89**	**16.09**	**12.98**	**12.60**	**9.21**	**6.93**	**-4.79**	**44.84**
PERS (DB) Private Equity Custom Benchmark	2.71	7.04	3.39	15.98	12.51	12.14	8.76	5.27	-1.25	49.22
Difference	1.74	1.22	2.50	0.11	0.47	0.46	0.45	1.66	-3.54	-4.38
STRS	**2.45**	**4.94**	**-0.25**	**15.00**	**13.62**	**13.45**	**5.53**	**0.77**	**-6.49**	**53.50**
STRS Private Equity Benchmark	2.62	6.48	1.73	N/A	N/A	N/A	7.70	3.67	-5.40	N/A
Difference	-0.17	-1.54	-1.97	N/A	N/A	N/A	-2.17	-2.89	-1.09	N/A
OP&F	**2.74**	**7.18**	**3.72**	**16.09**	**13.98**	**13.97**	**6.93**	**7.68**	**-9.91**	**54.51**
OP&F Private Equity Custom Benchmark	2.73	7.17	3.71	16.09	13.98	13.97	6.93	7.68	-9.91	54.51
Difference	0.01	0.01	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SERS	**6.28**	**9.99**	**7.75**	**19.63**	**16.40**	**16.27**	**10.80**	**8.12**	**7.57**	**48.06**
Burgiss All Private Equity Benchmark	5.16	6.42	2.45	14.13	11.74	11.67	8.01	3.77	-0.81	44.38
Difference	1.13	3.57	5.31	5.51	4.66	4.60	2.79	4.36	8.38	3.68
HPRS	**2.82**	**6.31**	**6.74**	**17.41**	**12.72**	**11.45**	**5.86**	**8.97**	**5.76**	**36.53**
HPRS Private Equity Custom Benchmark	2.82	6.31	6.74	17.41	12.72	12.14	5.86	8.97	5.76	36.53
Difference	0.00	0.00	0.00	0.00	0.00	-0.69	0.00	0.00	0.00	0.00

Performance shown is net of fees. HPRS's private equity portfolio did not begin in earnest until after 2008. Therefore longer period trailing returns relative to the benchmark may not be relevant. The STRS Private Equity Benchmark is the quarterly Cambridge Associates Private Equity and Venture Capital Index, one quarter lagged to be consistent with external fund reporting, effective July 1, 2021. PERS DB: 5 Year performance reduced 1.36%, 7 Year performance reduced 0.97%, and 10 Year performance reduced 0.67% due to change in distribution methodology in private equity portfolios.

RVK

Performance										
	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
Other Alternatives										
PERS (DB) Commodities	**4.79**	**5.19**	**0.06**	**14.29**	**2.22**	**0.35**	**5.62**	**-7.54**	**15.88**	**36.99**
PERS (DB) Commodities Custom Benchmark	4.63	4.86	-0.16	13.84	1.62	-0.22	5.38	-7.91	16.09	35.46
Difference	0.16	0.33	0.22	0.44	0.61	0.56	0.24	0.37	-0.21	1.53
PERS (DB) Risk Parity	**7.06**	**8.55**	**4.26**	**2.83**	**2.88**	**3.90**	**5.74**	**8.53**	**-29.78**	**11.94**
PERS (DB) Risk Parity Custom Benchmark	7.02	8.37	3.74	2.34	2.36	3.42	5.04	7.67	-30.25	11.56
Difference	0.04	0.18	0.52	0.49	0.52	0.48	0.70	0.86	0.47	0.37
PERS (HC 115) Commodities	**5.04**	**5.44**	**0.14**	**14.34**	**2.26**	**0.37**	**5.62**	**-7.54**	**15.88**	**36.99**
PERS (HC 115) Commodities Custom Benchmark	4.88	5.12	-0.08	13.90	1.65	-0.19	5.38	-7.91	16.09	35.46
Difference	0.16	0.33	0.22	0.44	0.61	0.56	0.24	0.37	-0.21	1.53
PERS (HC 115) Risk Parity	**7.06**	**8.55**	**4.26**	**2.83**	**2.88**	**3.90**	**5.74**	**8.53**	**-29.78**	**11.94**
PERS (HC 115) Risk Parity Custom Benchmark	7.02	8.37	3.74	2.34	2.36	3.42	5.04	7.67	-30.25	11.56
Difference	0.04	0.18	0.52	0.49	0.52	0.48	0.70	0.86	0.47	0.37

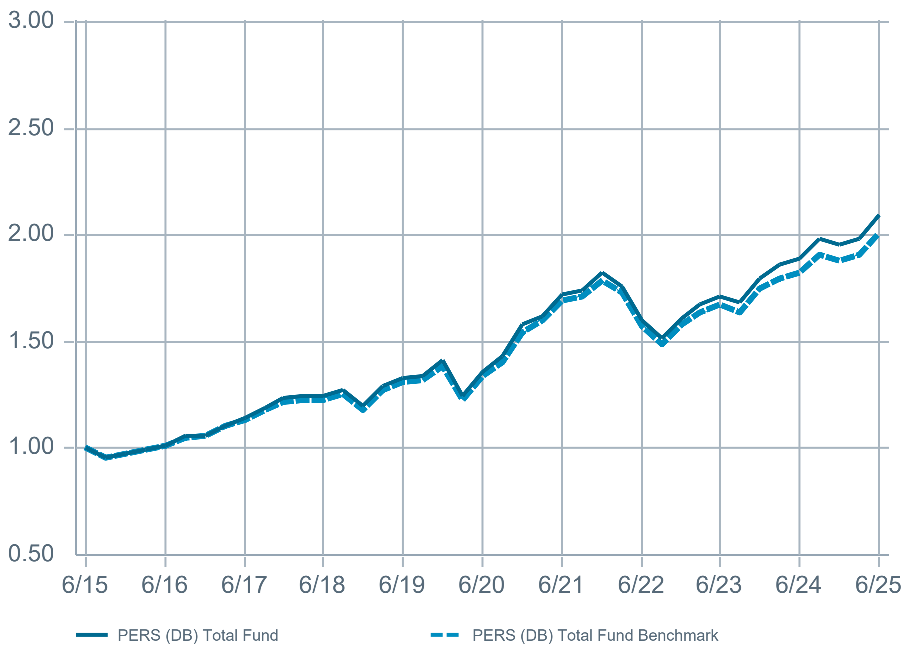
Performance shown may be net or gross of fees depending on underlying investments. PERS (DB) and PERS (HC115) opportunistic investment portfolios were closed during Q2 2025.

	Trailing Performance (%)						Calendar Year Performance (%)			
	2 Quarters	1 Year	3 Years	5 Years	7 Years	10 Years	2024	2023	2022	2021
Other Alternatives										
STRS Opportunistic/Diversified Investments	**5.44**	**10.91**	**9.86**	**12.96**	**8.30**	**7.29**	**10.80**	**10.89**	**4.55**	**23.68**
STRS Opportunistic/Diversified Blended Benchmark	2.29	7.00	6.42	N/A	N/A	N/A	9.54	9.13	0.40	N/A
Difference	3.15	3.92	3.44	N/A	N/A	N/A	1.26	1.75	4.15	N/A
OP&F Real Assets	**2.71**	**5.84**	**5.77**	**6.49**	**5.97**	**5.21**	**6.25**	**5.03**	**10.03**	**7.85**
OP&F Real Assets Custom Benchmark	0.48	9.70	5.94	8.76	6.64	6.25	19.15	5.12	3.34	9.84
Difference	2.22	-3.86	-0.17	-2.27	-0.67	-1.04	-12.90	-0.09	6.69	-1.99
OP&F MLPs	**5.41**	**25.05**	**27.76**	**29.20**	**13.20**	**7.54**	**44.05**	**19.03**	**30.50**	**41.02**
Alerian MLP Index	5.08	30.79	22.94	25.96	12.68	6.74	44.53	14.02	21.53	38.43
Difference	0.33	-5.73	4.82	3.24	0.52	0.80	-0.47	5.01	8.97	2.59
OP&F Gold	**22.06**	**34.26**	**16.28**	**N/A**	**N/A**	**N/A**	**20.93**	**7.34**	**-2.45**	**-3.62**
S&P GSCI Gold Index Minus the Cost of Financing	21.72	33.33	15.87	N/A	N/A	N/A	20.31	7.25	-2.97	-4.41
Difference	0.33	0.93	0.41	N/A	N/A	N/A	0.62	0.09	0.51	0.79
SERS Opportunistic & Tactical Portfolio	**5.80**	**11.69**	**7.23**	**10.60**	**7.04**	**7.03**	**9.25**	**7.82**	**-1.12**	**22.04**
SERS Opportunistic Custom Benchmark	5.15	8.03	4.54	1.27	2.35	3.69	3.25	7.53	-11.01	0.46
Difference	0.65	3.66	2.69	9.34	4.69	3.34	6.01	0.29	9.89	21.58
SERS Global Infrastructure	**4.83**	**11.39**	**N/A**	**N/A**	**N/A**	**N/A**	**9.19**	**N/A**	**N/A**	**N/A**
Consumer Price Index+1.2%	3.75	7.84	N/A	N/A	N/A	N/A	8.23	N/A	N/A	N/A
Difference	1.08	3.55	N/A	N/A	N/A	N/A	0.96	N/A	N/A	N/A
HPRS Real Assets	**4.41**	**9.48**	**17.43**	**21.79**	**13.55**	**N/A**	**17.61**	**19.76**	**24.62**	**29.85**
HPRS Real Assets Custom Benchmark (Net)	4.41	9.41	17.10	21.42	13.98	N/A	17.49	19.06	24.23	29.17
Difference	0.00	0.07	0.34	0.37	-0.43	N/A	0.12	0.70	0.40	0.68

Performance shown may be net or gross of fees depending on underlying investments. The OP&F Gold composite was incepted during the second half of 2020. Beginning with the Dec. 2021 report, STRS will report Opportunistic/Diversified Investments (which includes Hedge Funds). Effective July 1, 2021, the STRS Opportunistic/diversified blended benchmark consists of the actual Opportunistic Investments Portfolio weight multiplied by the Cambridge Associates Private Credit Index one quarter lagged to be consistent with external fund reporting plus the actual weight of the Diversified Investments Portfolio multiplied by the HFRI Fund of Funds Composite Index, which is a monthly index where subsequent revisions will be reflected in the following period.

Plan Specific Pages

Growth of $1 - 10 Years



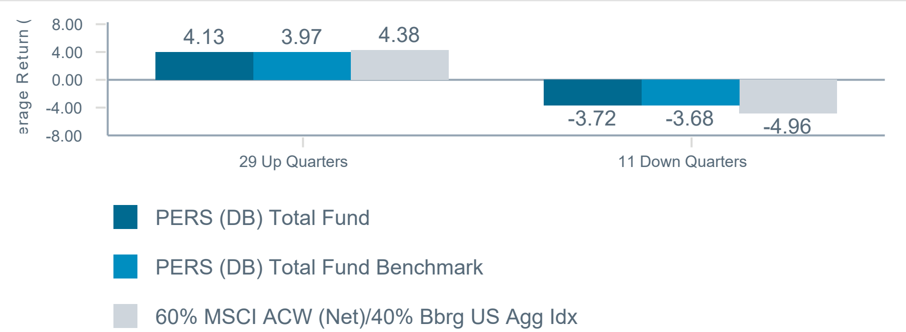
MPT Stats

	5 Years	10 Years
Maximum Return	10.35	10.35
Minimum Return	-9.04	-11.66
Standard Deviation	9.02	8.99
vs. PERS (DB) Total Fund Benchmark		
Info Ratio	0.47	0.50
Tracking Error	1.05	0.84
Alpha	0.34	0.35
vs. S&P 500 Index (Cap Wtd)		
Beta	0.57	0.53
vs. ICE BofA 3 Mo US T-Bill Index		
Sharpe Ratio	0.71	0.66

Asset Allocation vs. Targets

	Market Value ($)	Allocation (%)	Target (%)
US Equity	23,476,503,701	21.45	21.00
International Equity	21,837,481,144	19.95	20.00
Core Fixed Income	9,367,496,154	8.56	8.80
U.S. Treasury	1,889,360,404	1.73	2.00
High Yield	4,344,935,352	3.97	4.00
Global High Yield	3,521	0.00	0.00
EMD	1,191,538,618	1.09	1.00
Securitized Debt	1,712,127,675	1.56	1.00
TIPS	3,295,813,844	3.01	3.00
Investment Grade Credit	3,050,096,937	2.79	3.00
Real Estate	12,113,028,660	11.07	12.00
REITs	1,062,057,397	0.97	1.00
Hedge Funds	1,512,130	0.00	0.00
Commodities	3,400,557,963	3.11	3.00
Private Equity	16,088,537,321	14.70	15.00
Risk Parity	2,144,558,815	1.96	2.00
Cash Equivalents	1,220,136,375	1.11	0.00
Additional Annuity	14,423,882	0.01	0.00
Other Pension Assets	462	0.00	0.00
Risk Mitigation	2,927,381,731	2.67	3.00
TAA	-	0.00	0.00
Private Credit	314,274,977	0.29	0.20
Total Fund	109,451,827,064	100.00	100.00

Up/Down Markets - 10 Years

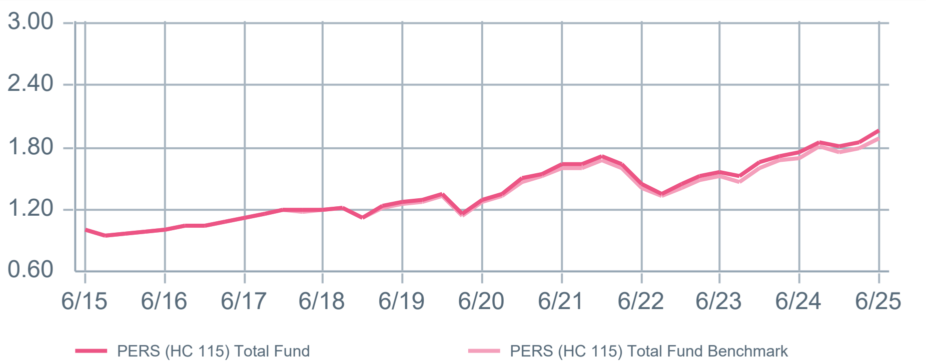


Performance shown is gross of fees. Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

Summary

- PERS HC was formed in 2005, segregating HC from the DB assets. PERS HC 115 was formed October 2014 to hold all HC assets of PERS, and has a performance inception date of January 2015.
- OPERS health care plan is not a pension plan and therefore has significantly different characteristics including a shorter focus asset allocation with more liquidity than the pension plans. For purposes of this study, the OPERS health care plan has been included in the results. The results for OPERS HC plan were reflected in the PERS HC since 2005 through October 2014, and then transferred to and renamed PERS HC 115 at that time.

Growth of $1 - 10 Years



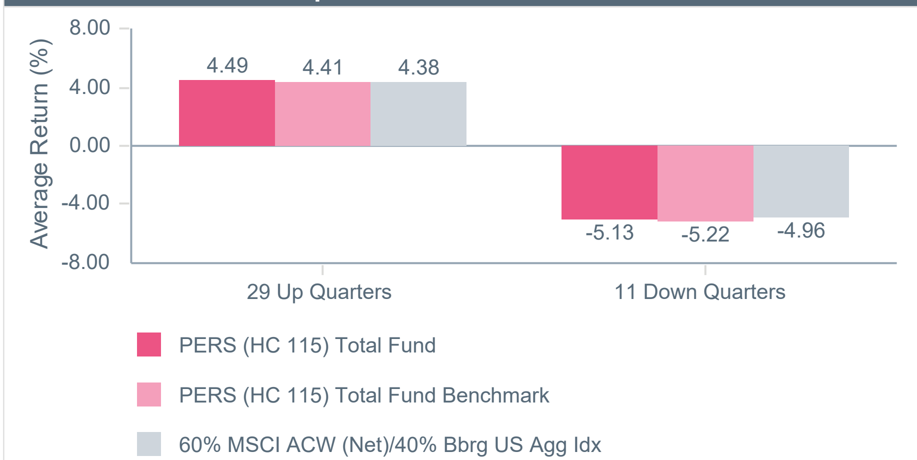
Asset Allocation vs. Targets

	Market Value ($)	Allocation (%)	Target (%)
US Equity	3,384,455,308	23.91	23.50
International Equity	3,350,466,513	23.67	23.50
Core Fixed Income	2,095,175,535	14.80	15.00
EMD	208,978,087	1.48	1.50
High Yield	950,833,995	6.72	7.00
Securitized Debt	564,235,380	3.99	4.00
TIPS	595,894,856	4.21	4.00
Global High Yield	17,665	0.00	0.00
REITs	409,437,168	2.89	3.00
Hedge Funds	915,964	0.01	0.00
Commodities	591,454,377	4.18	4.00
Risk Parity	410,569,505	2.90	3.00
Cash Equivalents	102,741,989	0.73	0.00
U.S. Treasury	260,600,029	1.84	2.00
Investment Grade Credit	477,022,721	3.37	3.50
Risk Mitigation	753,811,541	5.32	6.00
Total Fund	14,156,610,631	100.00	100.00

MPT Stats

	5 Years	10 Years
Maximum Return	10.25	12.24
Standard Deviation	10.65	10.87
Minimum Return	-11.96	-14.63
vs. PERS (HC 115) Total Fund Benchmark		
Info Ratio	1.02	0.86
Tracking Error	0.34	0.39
Alpha	0.43	0.39
vs. S&P 500 Index (Cap Wtd)		
Beta	0.67	0.65
vs. ICE BofA 3 Mo US T-Bill Index		
Sharpe Ratio	0.59	0.50

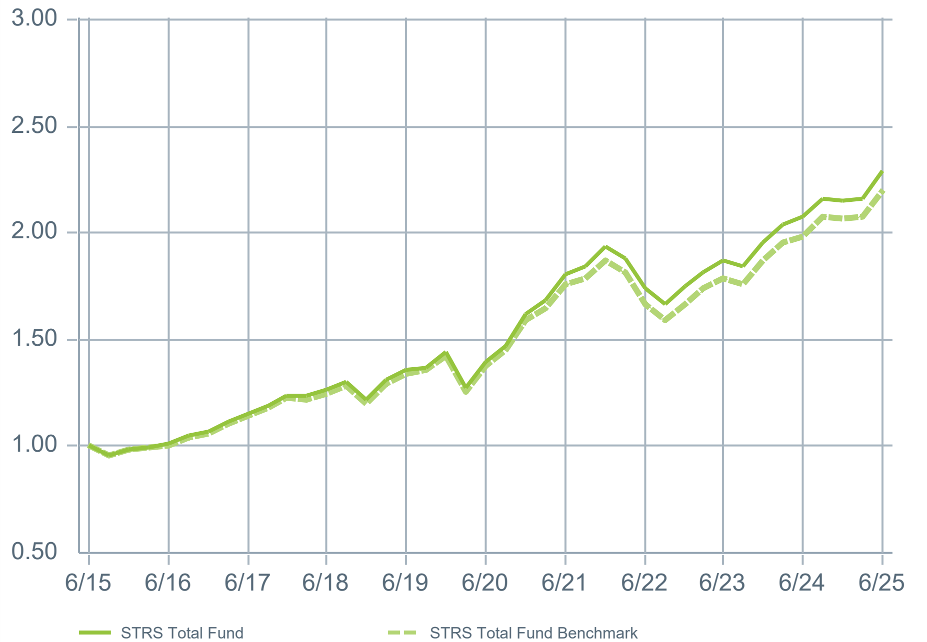
Up/Down Markets - 10 Years



Performance shown is gross of fees. Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

RVK

Growth of $1 - 10 Years



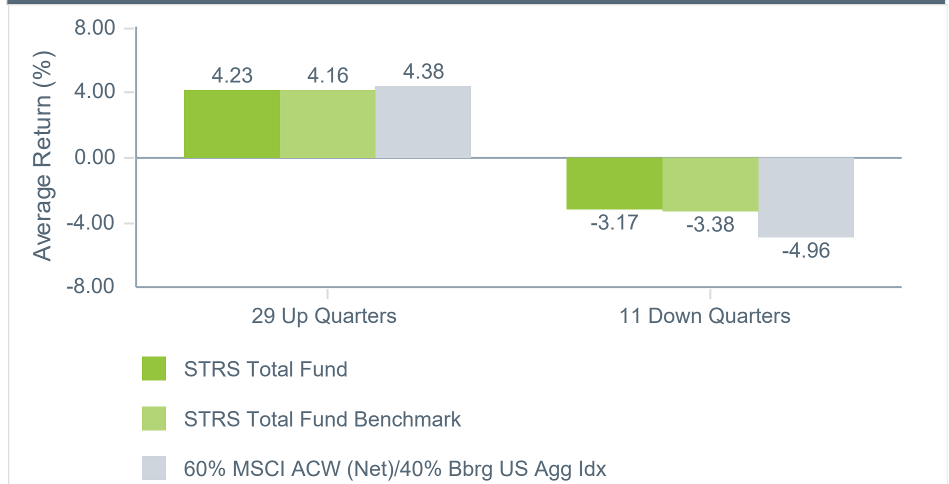
Asset Allocation vs. Targets

	Market Value ($)	Allocation (%)	Target (%)
US Equity	25,671,717,587	25.52	26.00
International Equity	21,813,332,242	21.68	22.00
Fixed Income	24,064,351,508	23.92	22.00
Real Estate	7,854,283,895	7.81	10.00
Opportunistic (Incl. Hedge Funds)	10,351,808,206	10.29	10.00
Private Equity	9,384,176,995	9.33	9.00
Cash Equivalents	1,473,556,826	1.46	1.00
Total Fund	100,613,227,259	100.00	100.00

MPT Stats

	5 Years	10 Years
Maximum Return	10.00	10.00
Minimum Return	-7.59	-11.51
Standard Deviation	8.18	8.75
vs. STRS Total Fund Benchmark		
Info Ratio	0.88	0.83
Tracking Error	0.66	0.53
Alpha	0.83	0.47
vs. S&P 500 Index (Cap Wtd)		
Beta	0.53	0.53
vs. ICE BofA 3 Mo US T-Bill Index		
Sharpe Ratio	0.92	0.77

Up/Down Markets - 10 Years



Performance shown is gross of fees. Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

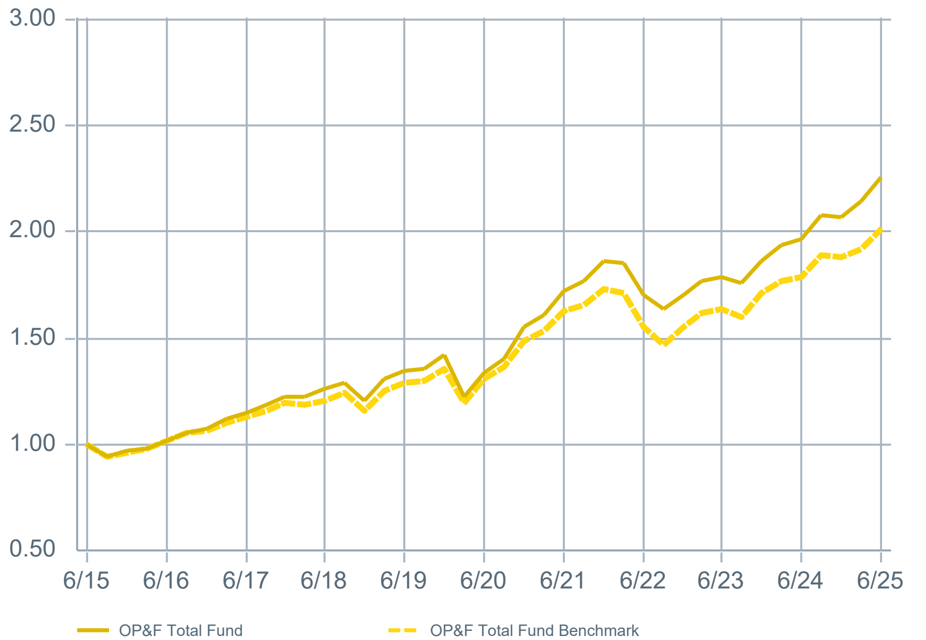
Ohio Retirement Study Council

Police & Fire Pension Fund

Total Fund Characteristics

As of June 30, 2025

Growth of $1 - 10 Years



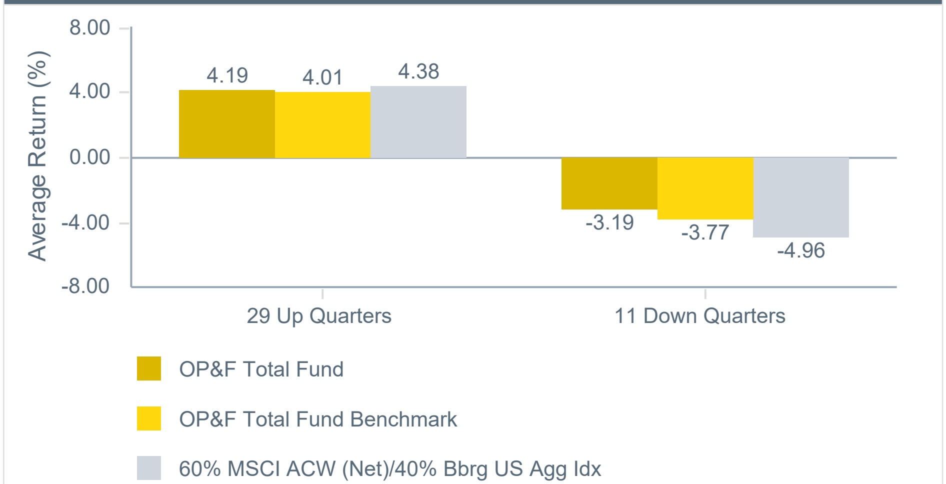
Asset Allocation vs. Targets

	Market Value ($)	Allocation (%)	Target (%)
US Equity	4,415,394,923	22.27	16.08
International Equity	2,827,006,023	14.26	10.40
High Yield Fixed Income	1,580,201,058	7.97	6.40
US TIPS	1,539,516,884	7.76	12.00
Levered Bond Portfolio	1,995,947,295	10.07	20.00
Private Credit	679,687,817	3.43	3.20
Real Estate	1,922,228,730	9.69	9.60
Private Markets	1,491,872,296	7.52	6.80
MLPs	1,127,140,708	5.68	4.00
Real Assets	1,262,569,274	6.37	5.60
Gold	335,965,129	1.69	4.32
Cash Equivalents	245,975,540	1.24	0.00
Commodities	406,523,668	2.05	1.60
Total Fund	19,830,029,345	100.00	100.00

MPT Stats

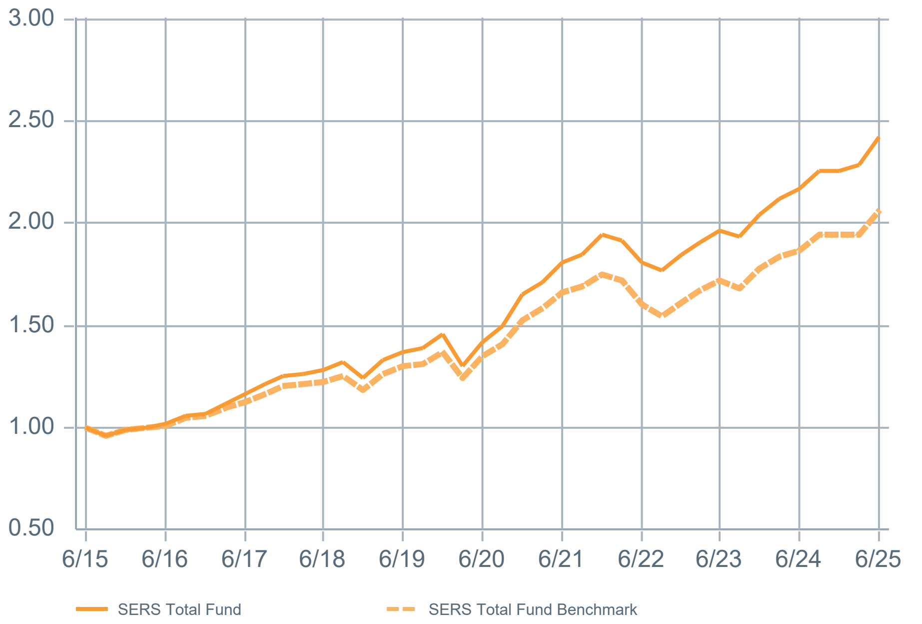
	5 Years	10 Years
Maximum Return	10.66	10.66
Minimum Return	-8.39	-13.55
Standard Deviation	8.14	9.06
vs. OP&F Total Fund Benchmark		
Info Ratio	1.18	0.81
Tracking Error	1.48	1.41
Alpha	2.36	1.21
vs. S&P 500 Index (Cap Wtd)		
Beta	0.48	0.53
vs. ICE BofA 3 Mo US T-Bill Index		
Sharpe Ratio	0.99	0.73

Up/Down Markets - 10 Years



Performance shown is gross of fees. Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.
OP&F's target allocations are based on notional value, and have been scaled to 100% for this report.

Growth of $1 - 10 Years



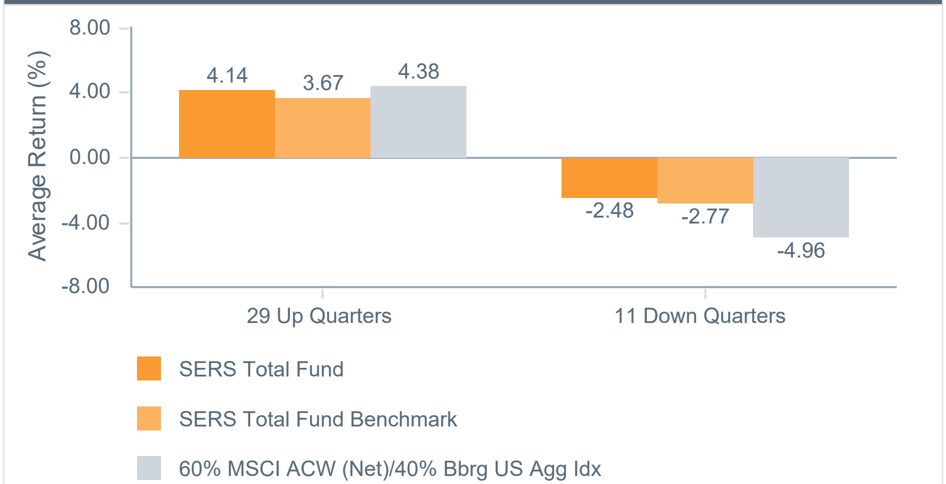
Asset Allocation vs. Targets

	Market Value ($)	Allocation (%)	Target (%)
Global Equity	9,015,304,862	43.68	40.00
Fixed Income	2,727,410,242	13.21	18.00
Private Credit	1,197,649,833	5.80	5.00
Real Estate	2,131,797,407	10.33	13.00
Infrastructure	1,459,085,067	7.07	7.00
Opportunistic Investments	648,130,063	3.14	0.00
Private Equity	2,629,938,916	12.74	14.00
Cash Equivalents	830,598,024	4.02	3.00
Total Fund	20,639,914,414	100.00	100.00

MPT Stats

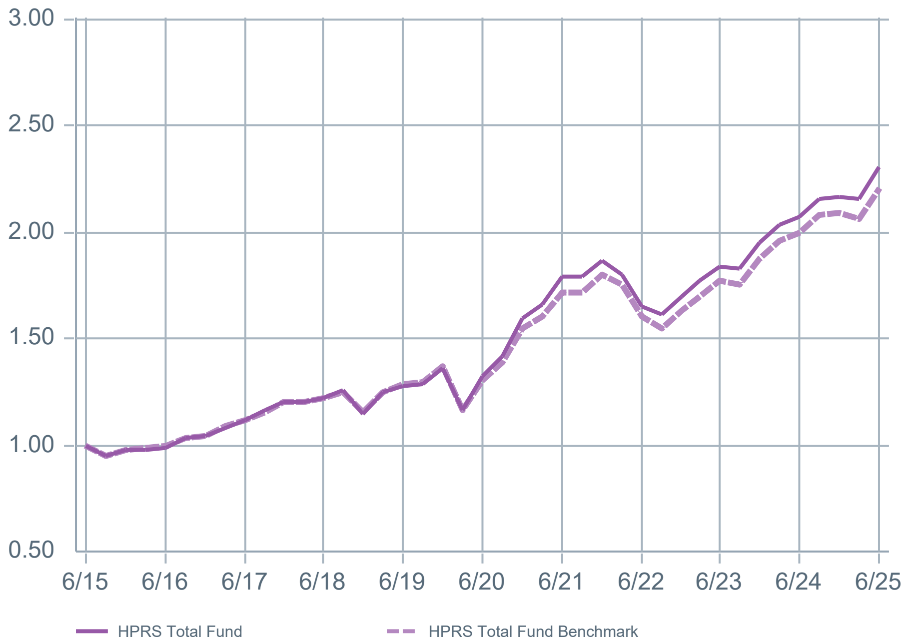
	5 Years	10 Years
Maximum Return	9.94	9.94
Minimum Return	-5.31	-11.00
Standard Deviation	6.90	7.94
vs. SERS Total Fund Benchmark		
Info Ratio	2.11	1.60
Tracking Error	1.07	1.06
Alpha	2.68	1.43
vs. S&P 500 Index (Cap Wtd)		
Beta	0.44	0.48
vs. ICE BofA 3 Mo US T-Bill Index		
Sharpe Ratio	1.19	0.91

Up/Down Markets - 10 Years



Performance shown is gross of fees. Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

Growth of $1 - 10 Years



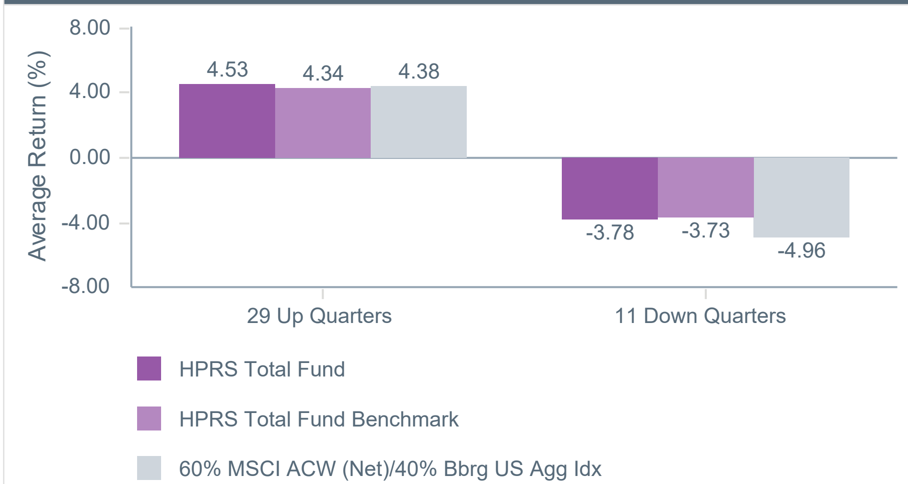
Asset Allocation vs. Targets

	Market Value ($)	Allocation (%)	Target (%)
US Equity	271,466,790	22.71	22.00
Global Equity	273,487,268	22.88	23.00
Fixed Income	176,079,058	14.73	17.00
Real Estate	72,990,470	6.11	5.00
Hedge Funds	59,441,234	4.97	5.00
Private Equity	219,738,721	18.39	20.00
Real Assets	45,062,305	3.77	5.00
Cash Equivalents	76,925,506	6.44	3.00
Total Fund	1,195,191,352	100.00	100.00

MPT Stats

	5 Years	10 Years
Maximum Return	12.33	13.60
Minimum Return	-8.01	-14.84
Standard Deviation	9.06	10.45
vs. HPRS Total Fund Benchmark		
Info Ratio	0.67	0.47
Tracking Error	1.21	1.10
Alpha	0.58	0.18
vs. S&P 500 Index (Cap Wtd)		
Beta	0.58	0.64
vs. ICE BofA 3 Mo US T-Bill Index		
Sharpe Ratio	0.99	0.67

Up/Down Markets - 10 Years



Performance shown is gross of fees. Calculations are based on quarterly periodicity. Allocations shown may not sum up to 100% exactly due to rounding.

Appendix

Performance Related Comments

- Performance shown is gross of fees unless otherwise noted and is annualized for periods greater than one year.
- Peer group ranks are measured in percentiles.
- Total Fund performance shown is net of embedded fees on externally managed real estate and alternative investments.
- All quarterly market value and performance data, including custom benchmark performance, is provided by the individual Plans.
- In 2005, the 401(h) Health Care Trust portfolio assets were segregated from the pension portfolio and invested with a more conservative asset-allocation. In 2014, the 115 Health Care Trust portfolio was created as another funding vehicle for post-employment health care for members in the Traditional Pension Plan and Combined Plan. Assets were segregated into the 115 Health Care Trust beginning September 2014, with the initial health care disbursements from the trust commencing late 2015 for January 2016 premium reimbursements. Favorable rulings from the Internal Revenue Service received March 2016 allowed OPERS to consolidate health care assets from the VEBA Trust and the 401(h) Health Care Trust into the 115 Health Care Trust.

Asset Class Fee Comparison – as of 6/30/2025

(annualized fees shown in basis points)								
	Domestic Equity	**Global Equity**	**International Equity**	**Fixed Income**	**Real Estate**	**Private Equity**	**Hedge Funds**	**Other Alternatives**
PERS (DB)	2	-	30	5	85	47	-	73
PERS (HC 115)	2	-	30	5	-	-	-	73
STRS	14	-	25	6	57	83	92	74
OP&F	46	-	37	47	60	71	-	61
SERS	19	-	26	57	-	109	-	108
HPRS	6	49	-	60	133	134	106	129

- Fees for Private Equity are based on committed capital, with the exception of SERS and OP&F, which is based on AUM.
- PERS (DB) and PERS (HC 115) Other Alternatives include Risk Parity, Opportunistic, and Commodities.
- PERS (DB) and PERS (HC 115) expenses for Real Estate, Other Alternatives, and Private Equity include net management fees and partnership expenses. Fees are estimated and are for externally managed accounts or portfolios.
- PERS (DB) and PERS (HC 115) are in the process of liquidating all Hedge Funds
- STRS Other Alternatives fees include Opportunistic/Diversified Investments excluding Hedge Fund exposure.
- OP&F Fixed income fee is the weighted average of Core Fixed Income, High Yield, Private Credit Fixed Income, and US TIPS. Core Fixed income and US TIPS fees are on the notional value of the portfolio.
- OP&F Other Alternatives fees include Real Assets, MLPs, Gold, Commodities, and Private Markets.
- SERS Other Alternatives fees include Opportunistic and Tactical Portfolio.
- HPRS Other Alternatives fees include Real Assets.

<u>Percentage of Assets Managed by External Managers – as of 6/30/2025</u>

Percentage of Assets Managed by External Managers - As of 6/30/2025								
	Total Fund	Domestic Equity	International Equity	Fixed Income	Real Estate	Private Equity	Hedge Funds	Other Alternatives
PERS (DB)	48%	3%	85%	17%	92%	100%	100%	5%
PERS (HC 115)	27%	3%	85%	17%	-	-	100%	-
STRS	32%	3%	45%	9%	25%	87%	100%	75%
OP&F	100%	100%	100%	100%	100%	100%	-	100%
SERS	95%	100%	100%	97%	100%	100%	100%	88%
HPRS	100%	100%	100%	100%	100%	100%	100%	100%

- PERS (DB) and PERS (HC 115) Other Alternatives include Risk Parity, Risk Mitigation Strategies, and Commodities.
- STRS Other Alternatives include Opportunistic/Diversified Investments (includes Hedge Fund exposure).
- OP&F Other Alternatives include Real Assets, MLPs, Gold, Commodities, and Private Markets.
- OP&F's Cash is 100% externally managed.
- SERS Other Alternatives include Opportunistic Investments and Tactical Portfolio.
- SERS has one internally-managed Cash mandate.
- HPRS Other Alternatives include Real Assets.

<u>Percentage of Actively Managed Assets – as of 6/30/2025</u>

Percentage of Assets Actively Managed - As of 6/30/2025								
	Total Fund	Domestic Equity	International Equity	Fixed Income	Real Estate	Private Equity	Hedge Funds	Other Alternatives
PERS (DB)	76%	21%	91%	87%	100%	100%	100%	100%
PERS (HC 115)	69%	21%	91%	88%	100%	-	100%	100%
STRS	88%	57%	94%	100%	100%	100%	100%	100%
OP&F	85%	80%	100%	84%	100%	100%	-	93%
SERS	84%	28%	95%	100%	98%	100%	100%	100%
HPRS	81%	15%	100%	100%	100%	100%	100%	100%

- PERS (DB) and PERS (HC 115) Other Alternatives include Risk Parity, Risk Mitigation Strategies, and Commodities.
- STRS Other Alternatives include Opportunistic/Diversified Investments (includes Hedge Fund exposure).
- STRS International Equity beginning 12/31/2024 reflects recategorization of passive component contained in an active portfolio.
- OP&F Other Alternatives include Real Assets, MLPs, Gold, Commodities, and Private Markets.
- SERS Other Alternatives include Opportunistic Investments and Tactical Portfolio.
- SERS has one internally-managed Cash mandate.
- HPRS Other Alternatives include Real Assets.

Appendix

Peer Group Comments

- Rank = Percentile Rank
- The All Public Plan >$1B Total Fund peer group includes 212 participants as of Q2 2025.

Custom Benchmark Glossary

PERS (DB) Total Fund Custom Benchmark:
- 21.0% Russell 3000 Index
- 20.0% PERS (DB) International Equity Custom Benchmark
- 8.8% PERS (DB) Core Fixed Income Custom Benchmark
- 2.0% PERS (DB) U.S. Treasury Custom Benchmark
- 4.0% Bloomberg U.S. High Yield Index
- 1.0% PERS (DB) EMD Custom Benchmark
- 1.0% PERS (DB) Securitized Debt Custom Benchmark
- 3.0% Bloomberg U.S. TIPS Index
- 3.0% Bloomberg U.S. Corporate Bond Index
- 0.2% S&P UBS Leveraged Loan Index
- 12.0% PERS (DB) Real Estate Custom Benchmark
- 1.0% Dow Jones U.S. Select Real Estate Securities TR Index
- 3.0% PERS (DB) Commodities Custom Benchmark
- 15.0% PERS (DB) Private Equity Custom Benchmark
- 2.0% PERS (DB) Risk Parity Custom Benchmark
- 3.0% PERS (DB) Risk Mitigation Custom Benchmark

PERS (HC 115) Total Fund Custom Benchmark:
- 23.5% Russell 3000 Index
- 23.5% PERS (HC 115) International Equity Custom Benchmark
- 15.0% PERS (HC 115) Core Fixed Income Custom Benchmark
- 1.5% PERS (HC 115) EMD Custom Benchmark
- 7.0% Bloomberg U.S. High Yield Index
- 4.0% PERS (HC 115) Securitized Debt Custom Benchmark
- 4.0% Bloomberg U.S. TIPS Index
- 3.5% Bloomberg U.S. Corporate Bond Index
- 2.0% PERS (HC 115) U.S. Treasury Custom Benchmark
- 3.0% Dow Jones U.S. Select Real Estate Securities TR Index
- 4.0% PERS (HC 115) Commodities Custom Benchmark
- 3.0% PERS (HC 115) Risk Parity Custom Benchmark
- 6.0% PERS (HC 115) Risk Mitigation Custom Benchmark

STRS Total Fund Custom Benchmark:
- 26.0% Russell 3000 Index
- 22.0% MSCI World Ex US Index (50% Hedged)/ MSCI Emg Mkts Index
- 22.0% STRS Fixed Income Blended Benchmark
- 10.0% STRS Real Estate Custom Benchmark
- 19.0% Alternative Investment Blended Benchmark
- 1.0% ICE BofA US 3-Month Treasury Bill Index

OP&F Total Fund Custom Benchmark:
- 20.1% Wilshire 5000 Index
- 13.0% MSCI ACW Ex US IMI Index (Net)
- 8.0% ICE BofA US High Yield Constrained Index
- 7.5% Bridgewater Custom US TIPS Index
- 12.5% Bloomberg US Aggregate Bond Index + Leverage Factor
- 4.0% S&P LTSA Levered Loan Index + 2%
- 12.0% NCREIF ODCE (Net) (1 Quarter Lag)
- 8.5% OP&F Private Equity Custom Benchmark
- 5.0% Alerian Midstream Energy Index
- 7.0% OP&F Real Assets Custom Index
- 0.4% S&P GSCI Gold Index Minus the Cost of Financing
- 2.0% Bloomberg Commodity TR Index

*OP&F's target allocations are based on notional value, and have been scaled to 100% for this report.

SERS Total Fund Custom Benchmark:
- 40.0% MSCI All Country World Net Total Return Index (USD)
- 18.0% Bloomberg Barclays US Aggregate Bond Index
- 7.0% Quarterly Smoothed CPI +1.20% per Quarter
- 13.0% NCREIF Property Index (1 Quarter Lag)
- 5.0% 90 Day T-Bill + 4.5%
- 14.0% Burgiss All Private Equity (1 Quarter Lag)
- 3.0% FTSE 30 Day T-Bill Index

HPRS Total Fund Custom Benchmark:
- 22.0% Russell 3000 Index
- 23.0% MSCI ACWI Index
- 17.0% HPRS Fixed Income Custom Benchmark
- 5.0% HPRS Total Real Estate Composite (Net)
- 5.0% HFRI FOF Composite Index
- 20.0% HPRS Total Private Equity Composite
- 5.0% HPRS Real Assets Composite (Net)
- 3.0% BofA Merrill Lynch 91-Day T-Bill

Custom Benchmark Glossary

PERS (DB) International Equity Custom Benchmark:
- 55% MSCI World Ex US Standard Index
- 10% MSCI World Ex US Small Cap Index
- 31% MSCI Emerging Markets Standard Index
- 4% MSCI Emerging Markets Small Cap Index

PERS (DB) Core Fixed Income Custom Benchmark:
- Bloomberg US Aggregate Bond Index
- From 2012-2014: Barclays Capital 75% U.S. Aggregate ex Govt/25% U.S. Govt Index

PERS (DB) EMD Custom Benchmark:
- 50% JP Morgan Emerging Markets Bond Index Global
- 50% JP Morgan Government Bond Index-Emerging Markets Global Diversified

PERS (DB) Securitized Debt Custom Benchmark:
- 50% Bloomberg Non-Agency Investment Grade CMBS: BBB Total Return Index (Unhedged) (USD)
- 50% Bloomberg Non-Agency CMBS Agg Eligible Total Return Index Value (Unhedged) (USD)
- Prior to 2018: Non-Agency CMBS component of the U.S. Aggregate Index plus 160 annualized basis points

PERS (DB) Real Estate Custom Benchmark:
- NFI-ODCE Index (Net) + 0.85% (1 Quarter Lag)
- Prior to 2013: NCREIF Property Index (1 Quarter Lag)

PERS (DB) Private Equity Custom Benchmark:
- State Street Private Equity Index (1 Quarter Lag)
- Prior to 2015: 60% Russell 3000 Index, 40% MSCI ACWI Ex US IMI plus 300 basis points (1 Quarter Lag)
- Prior to 2013: Russell 3000 Index + 300 bps (1 Quarter Lag)

PERS (DB) Hedge Funds Custom Benchmark:
- 65% HFRI Event Driven (Total) Index
- 35% HFRI Relative (Total) Index

PERS (DB) Risk Parity Custom Benchmark:
- S&P Risk Parity 10% Target Volatility Index
- Prior to Q3 2024: HFR Risk Parity Institutional Custom Index, S&P Risk Parity 10% Target Volatility Index
- Prior to Q4 2023: HFR Risk Parity Institutional Custom Index

PERS (DB) Commodities Custom Benchmark:
- Bloomberg Commodity Index
- Bloomberg Gold Subindex Total Return Index
- Prior to 5/1/2025: Bloomberg Commodity Index
- Prior to Q3 2021: Goldman Sachs Commodity Index

PERS (DB) US Treasury Custom Benchmark:
- Bloomberg US Treasury 1-5 Year TR Index
- Prior to 5/1/2025: Bloomberg US Treasury Total Return Unhedged USD

PERS (HC 115) International Equity Custom Benchmark:
- 55% MSCI World Ex US Standard Index
- 10% MSCI World Ex US Small Cap Index
- 31% MSCI Emerging Markets Standard Index
- 4% MSCI Emerging Markets Small Cap Index

PERS (HC 115) Core Fixed Income Custom Benchmark:
- Bloomberg US Aggregate Bond Index
- From 2012-2014: Barclays Capital 75% U.S. Aggregate ex Govt/25% U.S. Govt Index

PERS (HC 115) EMD Custom Benchmark:
- 50% JP Morgan Emerging Markets Bond Global Index
- 50% JP Morgan Government Bond Index-Emerging Markets Global Diversified

PERS (HC 115) Securitized Debt Custom Benchmark:
- 50% Bloomberg Non-Agency Investment Grade CMBS: BBB Total Return Index (Unhedged) (USD)
- 50% Bloomberg Non-Agency CMBS Agg Eligible Total Return Index Value (Unhedged) (USD)
- Prior to 2018: Non-Agency CMBS component of the U.S. Aggregate Index plus 160 annualized basis points

PERS (HC 115) Hedge Funds Custom Benchmark:
- 65% HFRI Event Driven (Total) Index
- 35% HFRI Relative (Total) Index

PERS (HC 115) Risk Parity Custom Benchmark:
- S&P Risk Parity 10% Target Volatility Index
- Prior to Q3 2024: HFR Risk Parity Institutional Custom Index, S&P Risk Parity 10% Target Volatility Index
- Prior to Q4 2023: HFR Risk Parity Institutional Custom Index

Custom Benchmark Glossary

PERS (HC 115) Commodities Custom Benchmark:
- Bloomberg Commodity Index
- Bloomberg Gold Subindex Total Return Index
- Prior to 5/1/2025: Bloomberg Commodity Index

PERS (HC 115) US Treasury Custom Benchmark:
- Bloomberg US Treasury 1-5 Year TR Index
- Prior to 5/1/2025: Bloomberg US Treasury Total Return Unhedged USD

STRS International Equity Custom Benchmark:
- 80% MSCI EAFE Index
- 20% MSCI Emerging Markets Index

STRS Real Estate Custom Benchmark:
- 85% NCREIF Property Index
- 15% FTSE NAREIT Equity REITs Index

STRS Private Equity Benchmark:
- The Private Equity Benchmark is the quarterly Cambridge Associates Private Equity and Venture Capital Index, one quarter lagged to be consistent with external fund reporting, effective July 1, 2021.

STRS Opportunistic/Diversified Blended Benchmark:
- Effective July 1, 2021, the Opportunistic/diversified blended benchmark consists of the actual Opportunistic Investments Portfolio weight multiplied by the Cambridge Associates Private Credit Index one quarter lagged to be consistent with external fund reporting plus the actual weight of the Diversified Investments Portfolio multiplied by the HFRI Fund of Funds Composite Index, which is a monthly index where subsequent revisions will be reflected in the following period.

OP&F Real Assets Custom Benchmark:
- 60% FTSE Dev Core 50/50 Infrastructure Index
- 20% NCREIF Timberland Index
- 20% NCREIF Farmland Index (1 Quarter Lag)
- Prior to 2024Q1: 45% FTSE Dev Core 50/50 Infrastructure Index, 35% NCREIF Timberland Index, 20% NCREIF Farmland Index (1 Quarter Lag)

OP&F Private Equity Custom Benchmark:
- Actual net of fee return of the Private Equity Composite

OP&F International Equity Custom Benchmark:
- MSCI ACWI Ex US IMI Index
- Prior to 2025Q2: MSCI ACWI Ex US Iran/Sudan Free IMI Index
- Prior to 2012Q4: MSCI ACW Ex US IM Index (USD (Net)

SERS International Equity Custom Benchmark:
- MSCI ACW Ex US Index (USD) (Net)
- Prior to 2014Q1: MSCI ACWI ex-US (Net) Index (dev. markets 50% hedged)
- Prior to 2013Q3: MSCI ACWI ex-US (Gross) Index (dev. markets 50% hedged)

SERS Opportunistic Custom Benchmark:
- Bloomberg US Aggregate Bond Index + 2%
- Prior to 2020Q1: SERS Total Fund Custom Benchmark

HPRS International Equity Custom Benchmark:
- 67% MSCI Emerging Markets
- 33% MSCI EAFE Small Cap

HPRS Fixed Income Custom Benchmark:
- 40% Bloomberg Aggregate Bond Index
- 60% Credit Suisse Leveraged Loans

HPRS Total Private Equity Custom Benchmark:
- Private Equity Composite Performance
- Prior to 2017Q1: Wilshire 5000 + 3% (1 Quarter Lag)
- Prior to 2010Q3: CPI + 5%

Glossary

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.

Benchmark - A standard against which the performance of a fund or investment manager can be measured.

Beta - A measure of the sensitivity of a portfolio to the movements in the market. A beta of 1.0 indicates the same level of stock market risk as the S&P 500 Index (Cap Wtd), unless otherwise noted. Lower betas indicate lower stock market risk. Beta is a measure of a portfolio's non-diversifiable or systematic risk.

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.
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.
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."
Downside Risk - A measure similar to standard deviation, but focuses only on the negative returns of the fund or investment. The higher the factor, the riskier the fund or investment.

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.

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.

Excess Return - Arithmetic difference between the fund or investment return and the risk-free return (or other specified market index) over a specified time period, shown on an annualized basis.

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 relative to the market benchmark.

Maximum Return - The maximum quarterly return earned over the specified time period.

Minimum Return - The minimum quarterly return earned over the specified time period.

Glossary

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 returns compiled from consultant and custodial data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans. Plan Sponsor Peer Groups are gross of fees.

Percentile Rankings - Percentile rank compares an individual fund's performance with those of other funds within a defined peer group of managers possessing a similar investment style. Percentile rank identifies the percentage of a fund's peer group that has a higher return (or other comparative measurement) than the fund being ranked. Conversely, 100 minus the individual fund's ranking will identify the percentage of funds within the peer group that have a lower return than the fund being ranked.

1 - Highest Statistical Value 100 - Lowest Statistical Value

Example: American Funds AMCP;R-4 (RAFEX) is ranked in the 4th percentile within the IM US Equity Large-Cap Growth Funds (MF) Peer Group for the Sharpe Ratio. Within the IM US Equity Large-Cap Growth Funds peer group, 4% of the other funds performed better than American Funds AMCP;R-4 (RAFEX), while 96% of the funds performed worse.

Performance Methodology - RVK calculates performance 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.

Return - Compounded rate of return for the period.

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

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	RVK Liquidity Rating	Asset Class	RVK Liquidity Rating
Liquid Investments		**Less Liquid Investments**	
T-Bills and Treasurys	100	Fixed Income Plus Sector	50
Cash Equivalents	98	Bank Loans	50
TIPS	95	Emerging Markets Debt	50
US Large Cap Equity	95	Hedge Funds	35
Diversified Real Return	93	Hedge Funds of Funds	35
Non-US Large Cap Equity	90	**Not Liquid Investments**	
Global Tactical Asset Allocation	88	Core Real Estate	25
US Small Cap Equity	85	Core Plus Real Estate	15
REITs	85	Plus Only Real Estate	5
Non-US Small Cap Equity	85	Private Equity	5
Emerging Markets Equity	85		
Core Fixed Income	85		
Core Plus Fixed Income	80		

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

Standard Deviation - A statistical measure of the range of a portfolio's performance and is a commonly used proxy for overall investment risk. The variability of a return around its average return over a specified time period.

Glossary

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

Alpha	Capital Appreciation	Capital Preservation	Inflation
Absolute Return Strategies	Public Equity	Core Fixed Income	TIPS
Currency Overlay	Private Equity	CMBS Fixed Income	Bank Loans
GTAA (Global Tactical Asset Allocation)	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	
	MLPs		
	Value Added Real Estate		
	Opportunistic Real Estate		

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

Unit Value - The dollar value of a portfolio, assuming an initial nominal investment of $1.00, 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 portfolios return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

RVK