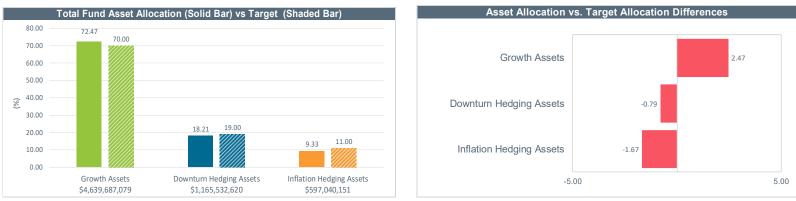
# **Quarterly Investment Performance** Analysis Vermont Pension Investment Commission

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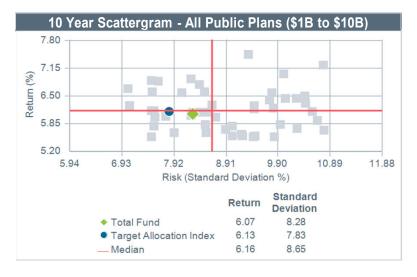
#### Vermont Pension Investment Commission Total Fund Dashboard Summary

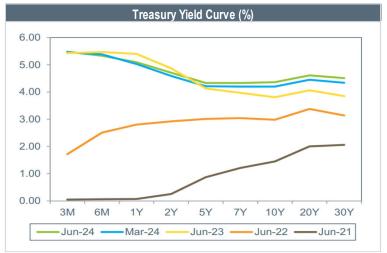
#### As of June 30, 2024



		S	Schedule	of Investa	ble Asset	S				
								Endi	ing Marke	t %
Period Ending	Begin	ning Mar	ket Value	+ Net	Cash Flow	+ Gair	n/Loss =		Value	Return
Quarter	e	6,343,132	,221	-31	,002,682	90,1	30,312	6,40	2,259,851	1.43
			Total F	und Perfo	ormance					
									Since	
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Incep.	Incep. Date
Total Fund	1.43	5.23	10.21	2.98	7.19	6.07	8.05	11.67	6.11	7/1/2005
Target Allocation Index	1.12	4.70	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference	0.31	0.53	0.52	-0.34	-0.13	-0.06	0.56	-0.45	-0.10	
Thematic Target Allocation Index	1.83	7.42	13.95	3.65	-	-	-	16.87	-	
Difference	-0.40	-2.19	-3.74	-0.67	-	-	-	-5.20	-	

		Per	formance	e by Alloc	ation Buc	ket				
									Since	
	QTD	CYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Incep.	Incep. Date
Growth Assets	1.99	7.78	14.15	5.05		-		15.76	10.50	9/1/2020
MSCI ACW IM Index (USD) (Net)	2.38	10.28	18.40	4.70	10.36	8.17	10.33	21.58	10.18	
Difference	-0.39	-2.50	-4.25	0.35	-	-	-	-5.82	0.32	
Downturn Hedging Assets	0.17	-0.53	2.66	-2.93	-	-	-	5.58	-2.51	9/1/2020
Bloomberg US Agg Bond Index	0.07	-0.71	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference	0.10	0.18	0.03	0.09	-	-	-	0.05	0.12	
Inflation Hedging Assets	-0.29	-1.81	-3.42	-0.20	-	-	-	-5.96	0.05	9/1/2020
Consumer Price Index+2.5%	1.21	3.69	5.55	7.59	6.77	5.37	5.10	5.94	7.70	
Difference	-1.50	-5.50	-8.97	-7.79	-	-	-	-11.90	-7.65	





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



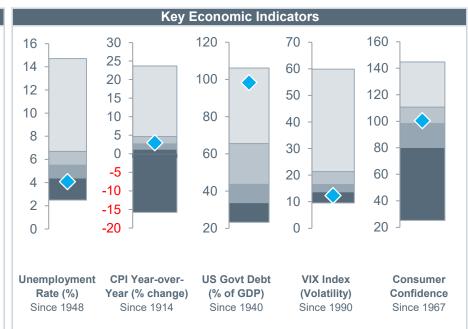
#### **Capital Markets Review**

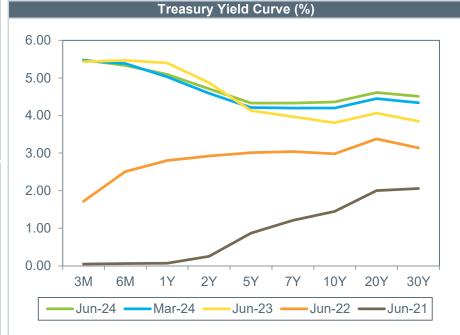
#### As of June 30, 2024

#### Second Quarter Economic Environment

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

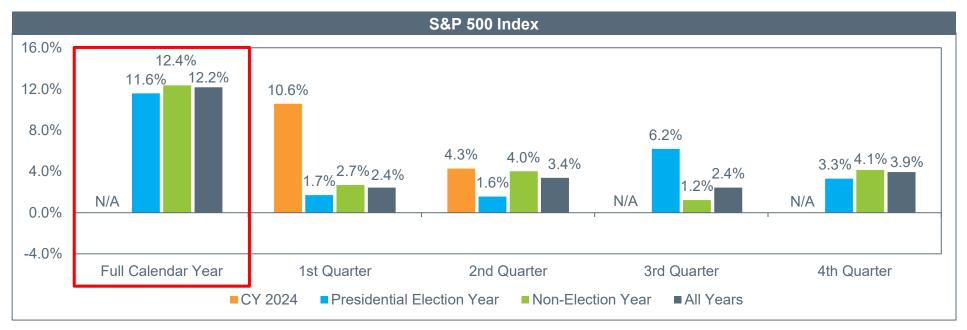
Economic Indicators	Jun-24	Mar-24	Jun-23	Jun-21	20 Yr
Federal Funds Rate (%)	5.33 -	5.33	5.08	0.08	1.60
Breakeven Infl 5 Yr (%)	2.24 🔻	2.44	2.17	2.50	1.94
Breakeven Infl 10 Yr (%)	2.27 🔻	2.32	2.21	2.34	2.09
CPI YoY (Headline) (%)	3.0 🔻	3.5	3.0	5.4	2.6
Unemployment Rate (%)	4.1 🔺	3.8	3.6	5.9	5.8
Real GDP YoY (%)	3.1 🔺	2.9	2.4	11.9	2.0
PMI - Manufacturing	48.5 🔻	50.3	46.0	60.9	53.1
USD Total Wtd Idx	124.52 🔺	121.41	119.71	112.61	104.24
WTI Crude Oil per Barrel (\$)	81.5 🔻	83.2	70.6	73.5	71.2
Gold Spot per Oz (\$)	2,337 🔺	2,230	1,906	1,770	1,282
Market Performance (%)	QTD	CYTD	1 Yr	5 Yr	10 Yr
S&P 500 (Cap Wtd)	4.28	15.29	24.56	15.05	12.86
Russell 2000	-3.28	1.73	10.06	6.94	7.00
MSCI EAFE (Net)	-0.42	5.34	11.54	6.46	4.33
MSCI EAFE SC (Net)	-1.84	0.51	7.78	4.19	4.29
MSCI Emg Mkts (Net)	5.00	7.49	12.55	3.10	2.79
Bloomberg US Agg Bond	0.07	-0.71	2.63	-0.23	1.35
ICE BofAML 3 Mo US T-Bill	1.32	2.63	5.40	2.16	1.51
NCREIF ODCE (Gross)	-0.45	-2.81	-9.26	3.16	6.41
FTSE NAREIT Eq REIT (TR)	0.06	-0.13	7.79	3.90	5.90
HFRI FOF Comp	0.44	4.63	8.50	4.78	3.48
Bloomberg Cmdty (TR)	2.89	5.14	5.00	7.25	-1.29

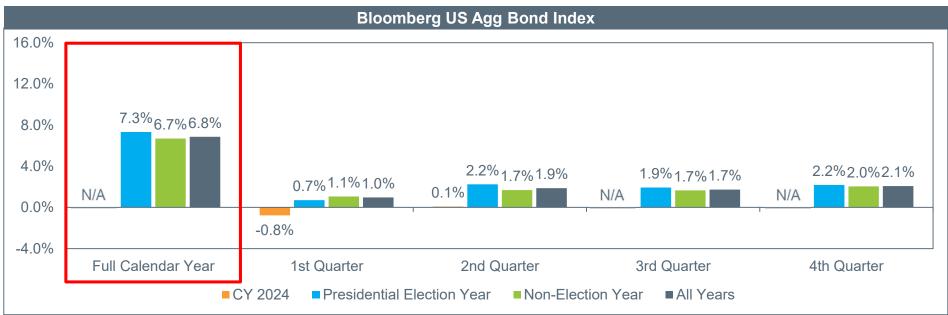






#### Average Historical Performance During Presidential Election Years





Average quarterly and calendar year returns are measured from:

January 1926 to June 2024 for the S&P 500 Index (Cap Wtd); and

January 1976 to June 2024 for the Bloomberg US Aggregate Bond Index.



#### Second Quarter Review

#### **Broad Market**

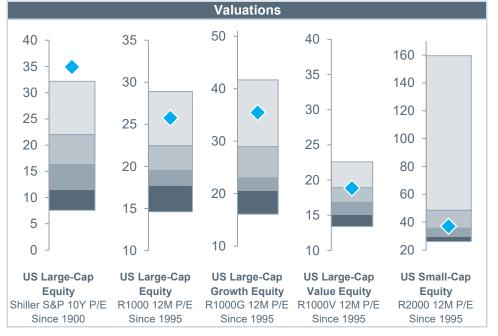
During Q2, US equities posted mixed results across the style spectrum, with broader market cap-weighted indexes delivering modest gains, as demonstrated by the Russell 3000 return of 3.2%. In contrast, returns from equal-weighted broad market indexes were negative highlighting the lack of market breadth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

#### Market Cap

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

#### **Style and Sector**

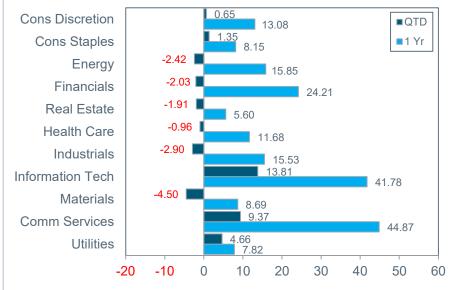
Median manager excess returns were mostly negative in Q2, except for the smallcap space. The largest dispersion in manager median excess returns occurred in large-cap, with growth managers, in particular, struggling to keep pace with strong benchmark returns compared to value managers, who delivered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



#### Style and Capitalization Market Performance (%)



#### 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.



#### **Non-US Equity Review**

#### As of June 30, 2024

#### Second Quarter Review

#### **Developed Markets**

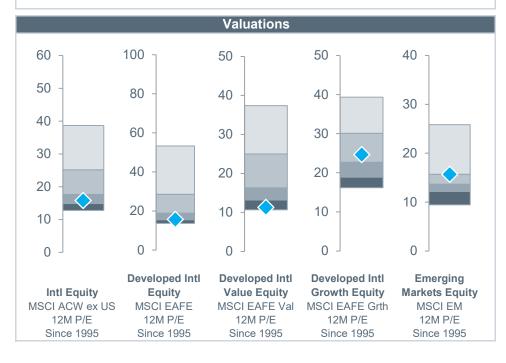
Developed international markets continued to trail their US counterparts in Q2 with the MSCI EAFE Index returning -0.4%. Developed markets were particularly influenced by election results in the European Parliament and the European Central Bank's first interest rate cut since 2019 following the easing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

#### **Emerging Markets**

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

#### Market Cap & Style

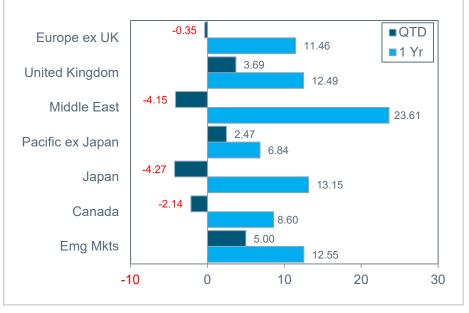
As with the US Market, large-cap stocks again outpaced small-cap stocks however, in a reversal from the prior quarter, value stocks outperformed their growth counterparts with the MSCI EAFE Value Index outperforming the MSCI EAFE Growth Index. Most developed active managers struggled to beat their index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



MSCI Style and Capitalization Market Performance (%)



#### MSCI Region Performance (%)



🙏 RVK

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**

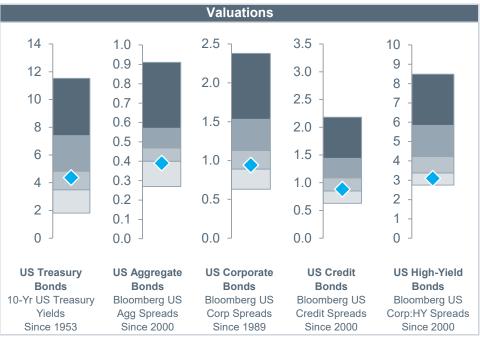
In Q2, the fixed income market experienced volatility due to uncertainty around rate cuts and inflation data. The latest Summary of Economic Projections released by the FOMC indicated only one expected rate cut in 2024 compared to a median forecast of three in the March release. FOMC members continued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

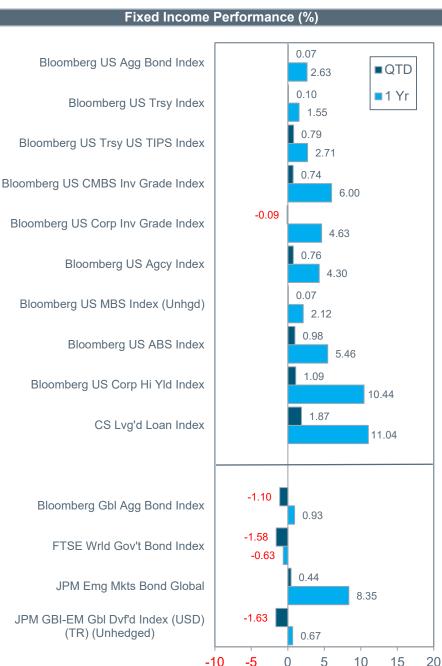
#### **Credit Market**

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

#### **Emerging Market Debt**

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





Valuation data courtesy of Bloomberg Professional Service.

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

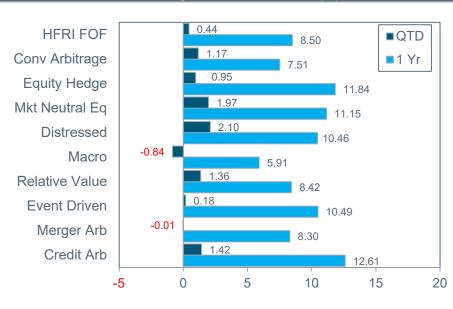
#### Second Quarter Review - Absolute Return

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

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

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

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



#### HFRI Hedge Fund Performance (%)

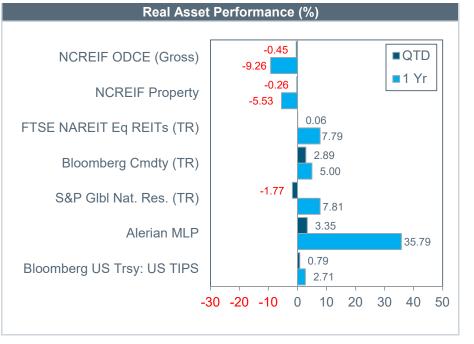
#### Second Quarter Review - Real Assets

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

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

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

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





	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	YTD
Best	27.94	22.49	20.00	38.82	30.14	15.02	21.31	37.28	8.35	31.49	19.96	43.24	16.09	26.29	15.29
Î	26.85	15.99	18.23	32.39	19.31	9.59	17.13	33.01	1.87	26.00	18.40	28.71	7.47	18.24	7.49
	22.04	13.56	18.06	29.30	13.69	3.20	11.96	25.03	0.01	25.53	18.31	27.11	1.46	16.93	5.34
	18.88	8.29	17.32	22.78	12.50	1.38	11.77	21.83	-1.26	24.96	16.12	22.17	-5.31	13.73	5.23
	16.83	7.84	16.35	13.94	5.97	0.55	11.19	14.65	-2.08	22.01	13.16	14.82	-11.19	13.45	5.14
	16.36	4.98	16.00	8.96	4.89	0.05	9.29	13.96	-3.33	19.59	12.34	14.06	-11.72	13.16	4.82
	15.12	2.11	15.81	7.99	4.04	-0.27	8.77	10.71	-4.02	18.42	10.99	11.26	-11.85	11.67	2.63
	15.06	1.81	12.69	7.44	3.64	-0.81	8.52	7.77	-4.38	17.15	10.88	10.10	-13.01	9.83	2.58
	14.44	0.10	10.94	2.47	3.37	-1.44	6.67	7.62	-4.62	14.32	7.82	6.17	-14.45	7.13	1.73
	10.16	-4.18	8.78	0.07	2.45	-2.20	4.68	7.50	-4.68	8.72	7.51	5.96	-18.11	6.07	0.70
	7.75	-5.72	6.98	-2.02	0.04	-3.30	2.65	5.23	-11.0	1 8.43	7.11	5.28	-20.09	5.53	0.51
	6.54	-12.14	4.79	-2.60	-2.19	-4.41	2.18	3.54	-11.2	5 8.39	1.19	0.05	-20.44	5.02	-0.13
	6.31	-13.32	4.21	-8.61	-4.90	-4.47	1.00	3.01	-13.7	9 7.69	0.67	-1.55	-21.39	3.90	-0.71
	5.70	-15.94	0.11	-8.83	-4.95	-14.92	0.51	1.70	-14.5	7 5.34	-3.12	-2.52	-24.37	-7.91	-2.80
Worst	0.13	-18.42	-1.06	-9.52	-17.01	-24.66	0.33	0.86	-17.8	9 2.28	-8.00	-2.54	-27.09	-12.02	-4.10
Total Fu Net (Al Plans)		rge <mark>US Sn</mark>	nall (Net)	E EAFE	E SC - Int'l (Net)	i EM Bloc - Int'i US Mkts Bor	Agg U	S Corp	US Trsy	Bloombrg US Gov Credit Lng - Fl	NCREIF ODCE (Gross) - Real Estate	FTSE NAREIT Eq REITs Index (TR)	Comp Index -	Bloombrg Cmdty (TR) - Commod.	ICE BofAML 3 Mo T-Bill - Cash Equiv

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



# **Combined** Plans

#### As of June 30, 2024

#### **Manager Research Updates**

Each quarter RVK sends a short questionnaire to each of the VPIC's investment managers which serves as the basis for providing VPIC and Staff with updates on the Funds' investment managers; critical and non-critical updates from the quarter are included below. In addition, RVK's Manager Research team keeps the VPIC RVK Consulting Team and VPIC Staff informed of any organizational or investment related developments (should any arise) intraquarter.

#### Manager Research Updates: Critical

There were no critical manager updates during the quarter.

#### Manager Research Updates: Non-Critical

There were no non-critical manager updates during this quarter.



#### Vermont Pension Investment Commission Asset Allocation By Manager

June 30, 2024 : \$6,402,259,851		Market Value (\$)	Allocation (%)
	Blackrock S&P 500 (Eql Wtd) (SA)	254,512,831	3.98
	Champlain US Mid Cap Core (SA)	179,359,452	2.80
	SSgA Russell 2000 Growth (Ex Tobacco) (SA)	26,416	0.00
	Acadian International All Cap (SA)	2,017,937	0.03
	Acadian ACWI Ex-US Fund (CF)	318,483,345	4.97
	Mondrian International Equity (SA)	1,636,106	0.03
	BlackRock MSCI ACW IMI (SA)	1,674,824,073	26.16
	Blackrock MSCI World LCTR (SA)	233,902,758	3.65
	Artisan Global Opportunities (CF)	359,397,304	5.61
	PIMCO Liquidation (SA)	313,856	0.00
	Wellington Opportunistic EMD (CF)	126,585,365	1.98
	PIMCO Unconstrained (SA)	47,072	0.00
	Private Debt	613,473,457	9.58
	Private Equity	696,239,633	10.87
	Non-Core Real Estate	178,867,474	2.79
	BlackRock US Agg (SA)	884,726,291	13.82
	PIMCO Core (SA)	276,839,849	4.32
	Vermont Cash (SA)	3,966,481	0.06
	BlackRock TIPS (SA)	158,651,047	2.48
	UBS Trumbull Properties (CF)	186,025,725	2.91
	Hammes HIGH Fund (CF)	24,571,492	0.38
	Blue Owl Real Estate VI LP	6,836,955	0.11
	Farmland	105,621,327	1.65
	Private Infrastructure	115,329,957	1.80
	Real Estate Cash (CF)	3,648	0.00

Allocations shown may not sum up to 100% exactly due to rounding. Market values for SSgA Russell 2000 Growth (SA), PIMCO Unconstrained (SA), Mondrian International Equity (SA), and Acadian International All Cap (SA) represent residual assets after liquidation.



#### Vermont Pension Investment Commission Total Fund

Asset Allocation vs.Target Allocation

Thematic	c Buckets vs. Target	Allocation	
	Market Value (\$)	Allocation (%)	Target (%)
Growth Assets	4,639,687,079	72.47	70.00
Downturn Hedging Assets	1,165,532,620	18.21	19.00
Inflation Hedging Assets	597,040,151	9.33	11.00
Total Fund	6,402,259,851	100.00	100.00

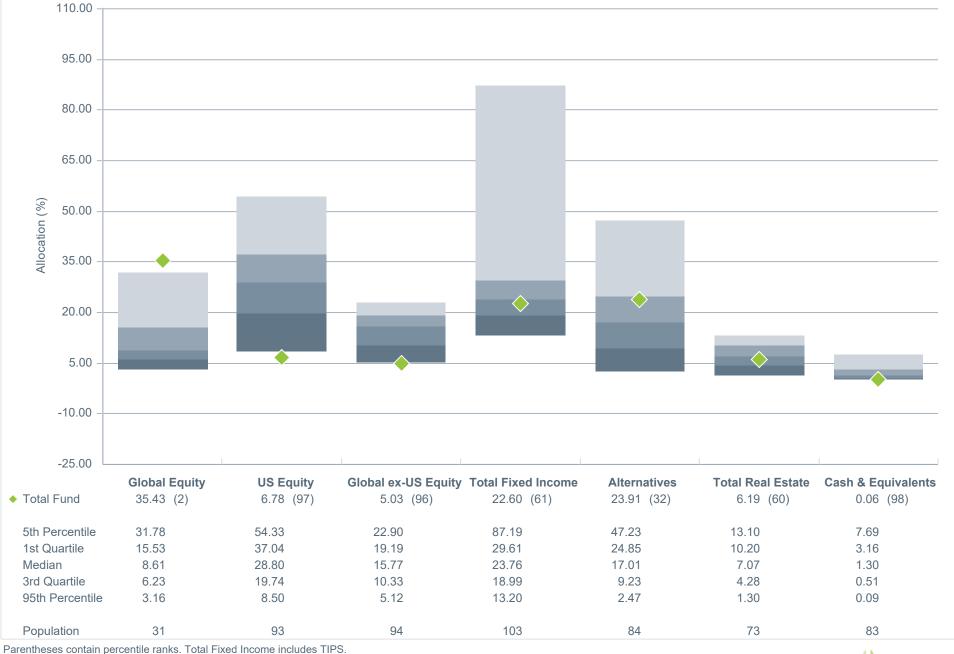
# Thematic Buckets vs. Target Allocation Differences Growth Assets 2.47% Downturn Hedging Assets -0.79% Inflation Hedging Assets -1.67% -10.00% -5.00% 0.00% 5.00%

	Market Value (\$)	Allocation (%)	Target (%)			
JS Large Cap Equity	254,512,831	3.98	4.00	US Large Cap Equity	-0.02%	
JS SMID Cap Equities	179,385,868	2.80	3.00	US SMID Cap Equities		-0.20%
Global Equity	2,268,124,135	35.43	30.00	Global Equity	-4.69%	10.12%
nternational Equity	322,137,388	5.03	7.00	International Equity	-1.97%	
Private Equity	696,239,633	10.87	10.00	Private Equity	0.87%	
High Yield Fixed Income	313,856	0.00	0.00	. ,	0.0770	0.000/
Global Fixed Income	126,632,437	1.98	2.00	High Yield Fixed Income	0.000/	0.00%
Private Debt	613,473,457	9.58	10.00	Global Fixed Income	-0.02%	
Non-Core Real Estate	178,867,474	2.79	4.00	Private Debt	-0.42%	
Core Fixed Income	1,161,566,139	18.14	19.00	Non-Core Real Estate	-1.21%	
Cash Equivalents	3,966,481	0.06	0.00	Core Fixed Income	-3.60%	2.75%
<b>FIPS</b>	158,651,047	2.48	2.00	Cash Equivalents		0.06%
Core Real Estate	217,437,820	3.40	4.00	TIPS	-1.11%	— 1.59%
Farmland	105,621,327	1.65	2.00	Core Real Estate	-0.60%	
Private Infrastructure	115,329,957	1.80	3.00	Farmland	-0.35%	
Fotal Fund	6,402,259,851	100.00	100.00	Private Infrastructure	-1.20%	
				-20.00	% -10.00% 0.0	0% 10.00% 20
				Difference Overwe	eight Due to Unc	called Capital

Allocations shown may not sum up to 100% exactly due to rounding. Please note, the "Detailed Asset Allocation vs. Target Allocation Differences" table reflects the Commission's decision to allocate uncalled / uncommitted capital in line with long-term thematic allocations: 70% to Growth Assets (Blackrock MSCI ACW IMI Fund), 19% to Downturn Hedging Assets (Blackrock US Aggregate Fund), and of 11% to Inflation Hedging Assets (Blackrock TIPS Fund).



#### Vermont Pension Investment Commission All Public Plans (\$1B to \$10B) (Custom PG) Plan Sponsor TF Asset Allocation

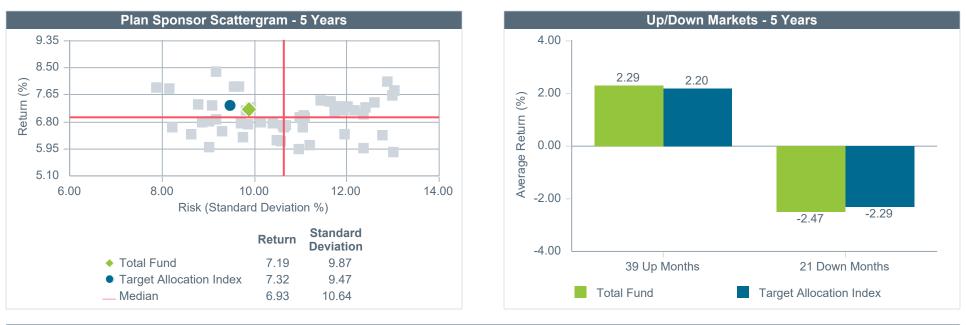


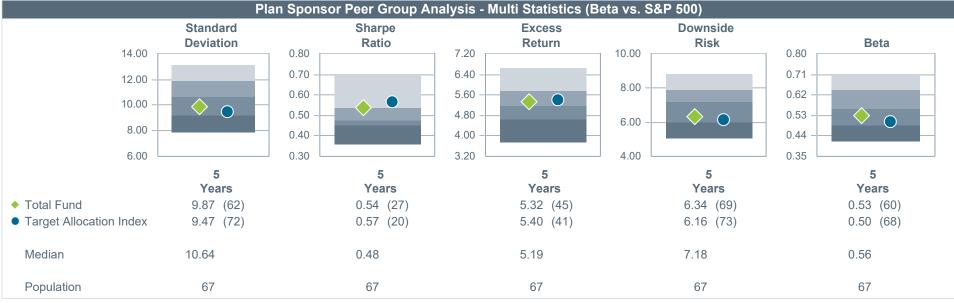
KVK



Performance shown is net of fees. Parentheses contain percentile ranks.



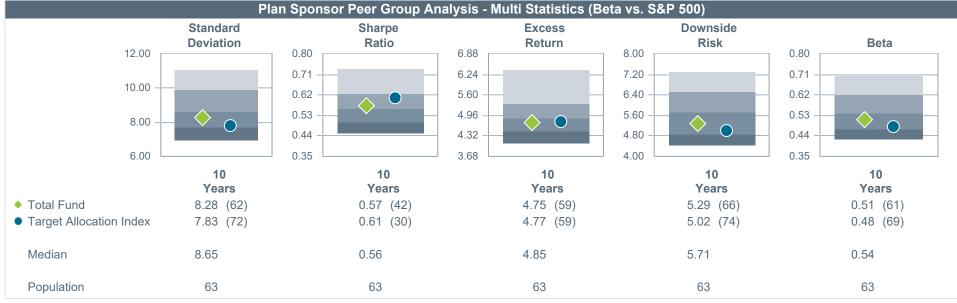




Performance shown is net of fees. Calculation is based on monthly periodicity. Parentheses contain percentile ranks.







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



	Allocatio	on					Perfor	mance (%)	)			
	Market Value (\$)	Actual (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Total Fund	6,402,259,851	100.00	1.43	10.21	10.21	2.98	7.19	6.07	8.05	11.67	6.11	07/01/2005
Target Allocation Index			1.12	9.69	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference			0.31	0.52	0.52	-0.34	-0.13	-0.06	0.56	-0.45	-0.10	
Actual Allocation Index			0.94	9.87	9.87	2.56	6.54	5.72	7.34	12.28	5.99	
Difference			0.49	0.34	0.34	0.42	0.65	0.35	0.71	-0.61	0.12	
Thematic Target Allocation Index			1.83	13.95	13.95	3.65	-	-	-	16.87	-	
Difference			-0.40	-3.74	-3.74	-0.67	-	-	-	-5.20	-	
Growth Assets	4,639,687,079	72.47	1.99	14.15	14.15	5.05	-	-	-	15.76	10.50	09/01/2020
MSCI ACW IM Index (USD) (Net)			2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	10.18	
Difference			-0.39	-4.25	-4.25	0.35	-	-	-	-5.82	0.32	
Downturn Hedging Assets	1,165,532,620	18.21	0.17	2.66	2.66	-2.93	-	-	-	5.58	-2.51	09/01/2020
Bloomberg US Agg Bond Index			0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference			0.10	0.03	0.03	0.09	-	-	-	0.05	0.12	
Inflation Hedging Assets	597,040,151	9.33	-0.29	-3.42	-3.42	-0.20	-	-	-	-5.96	0.05	09/01/2020
Consumer Price Index+2.5%			1.21	5.55	5.55	7.59	6.77	5.37	5.10	5.94	7.70	
Difference			-1.50	-8.97	-8.97	-7.79	-	-	-	-11.90	-7.65	



	All	ocation						Perfor	mance (%	<b>6</b> )			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Total Fund	6,402,259,851	100.00	100.00	1.43	10.21	10.21	2.98	7.19	6.07	8.05	11.67	6.11	07/01/200
Target Allocation Index				1.12	9.69	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference				0.31	0.52	0.52	-0.34	-0.13	-0.06	0.56	-0.45	-0.10	
Actual Allocation Index				0.94	9.87	9.87	2.56	6.54	5.72	7.34	12.28	5.99	
Difference				0.49	0.34	0.34	0.42	0.65	0.35	0.71	-0.61	0.12	
All Public Plans (\$1B to \$10B)				0.86	9.43	9.43	2.86	6.93	6.16	8.30	11.42	6.43	
Rank				14	31	31	44	40	58	75	43	74	
Domestic Equity	433,898,699	6.78	7.00	-3.70	9.11	9.11	1.87	9.47	9.55	-	14.38	11.16	01/01/201 <sup>,</sup>
Russell 3000 Index				3.22	23.12	23.12	8.05	14.14	12.15	14.49	25.96	13.13	
Difference				-6.92	-14.01	-14.01	-6.18	-4.67	-2.60	-	-11.58	-1.97	
US Large Cap Equity	254,512,831	3.98	4.00	-2.67	11.57	11.57	4.76	10.90	10.07	13.40	13.85	9.41	07/01/200
S&P 500 Index (Cap Wtd)				4.28	24.56	24.56	10.01	15.05	12.86	14.82	26.29	10.50	
Difference				-6.95	-12.99	-12.99	-5.25	-4.15	-2.79	-1.42	-12.44	-1.09	
Blackrock S&P 500 (Eql Wtd) (SA)	254,512,831	3.98	-	-2.67	11.57	11.57	4.73	10.88	-	-	13.85	10.88	07/01/2019
S&P 500 Index (Eq Wtd)				-2.63	11.79	11.79	4.84	10.94	10.04	14.00	13.87	10.94	
Difference				-0.04	-0.22	-0.22	-0.11	-0.06	-	-	-0.02	-0.06	
IM U.S. Large Cap Equity (SA+CF) Median				2.76	23.01	23.01	7.96	13.40	11.77	14.04	24.33	13.40	
Rank				89	93	93	88	73	-	-	76	73	
US SMID Cap Equities	179,385,868	2.80	3.00	-5.12	5.75	5.75	-1.88	7.45	8.99	12.85	14.95	8.82	07/01/200
Russell 2500 Index				-4.27	10.47	10.47	-0.29	8.31	7.99	12.36	17.42	8.68	
Difference				-0.85	-4.72	-4.72	-1.59	-0.86	1.00	0.49	-2.47	0.14	
Champlain US Mid Cap Core (SA)	179,359,452	2.80	-	-5.12	5.75	5.75	-1.88	7.44	9.72	-	14.94	12.26	10/01/2009
Custom SMID Cap Equity Index				-3.30	11.52	11.52	-0.08	8.46	7.98	12.33	17.15	11.17	
Difference				-1.82	-5.77	-5.77	-1.80	-1.02	1.74	-	-2.21	1.09	
IM U.S. SMID Cap Equity (SA+CF) Median				-3.71	10.86	10.86	1.45	9.09	8.61	12.60	16.42	11.54	
Rank				81	80	80	76	72	22	-	61	26	
Global Equity	2,268,124,135	35.43	30.00	2.38	19.02	19.02	4.58	10.90	-	-	22.25	7.08	02/01/2018
MSCI ACW IM Index (USD) (Net)				2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	7.82	
Difference				0.00	0.62	0.62	-0.12	0.54	-	-	0.67	-0.74	
BlackRock MSCI ACW IMI (SA)	1,674,824,073	26.16	-	2.52	18.80	18.80	5.07	10.78	-	-	22.05	10.78	07/01/2019
MSCI ACW IM Index (USD) (Net)				2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	10.36	
Difference				0.14	0.40	0.40	0.37	0.42	-	-	0.47	0.42	
IM Global Equity (SA+CF) Median				0.73	14.14	14.14	3.73	9.66	7.85	10.52	19.42	9.66	
Rank				27	32	32	36	37	-	-	36	37	



	All	ocation							mance (%	<b>b</b> )			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Blackrock MSCI World LCTR (SA)	233,902,758	3.65	-	2.83	18.69	18.69	-	-	-	-	22.14	4.66	09/01/2021
MSCI Wrld Index (USD) (Net)				2.63	20.19	20.19	6.86	11.78	9.16	11.07	23.79	5.68	
Difference				0.20	-1.50	-1.50	-	-	-	-	-1.65	-1.02	
IM Global Equity (SA+CF) Median				0.73	14.14	14.14	3.73	9.66	7.85	10.52	19.42	2.92	
Rank				24	33	33	-	-	-	-	36	34	
Artisan Global Opportunities (CF)	359,397,304	5.61	-	1.43	20.32	20.32	1.11	11.32	-	-	23.53	10.82	07/01/2018
MSCI ACW Index (USD) (Net)				2.87	19.38	19.38	5.43	10.76	8.43	10.35	22.20	9.90	
Difference				-1.44	0.94	0.94	-4.32	0.56	-	-	1.33	0.92	
IM Global Equity (SA+CF) Median				0.73	14.14	14.14	3.73	9.66	7.85	10.52	19.42	8.88	
Rank				42	28	28	76	29	-	-	28	25	
International Equity	322,137,388	5.03	7.00	2.43	19.17	19.17	2.58	6.66	4.53	6.45	16.90	5.05	07/01/2005
Custom MSCI ACW Ex US Composite Index (USD) (Net)				0.96	11.62	11.62	1.74	5.99	4.25	6.82	15.62	5.29	
Difference				1.47	7.55	7.55	0.84	0.67	0.28	-0.37	1.28	-0.24	
Acadian ACWI Ex-US Fund (CF)	318,483,345	4.97	-	2.47	19.42	19.42	3.56	8.63	6.67	8.88	17.09	6.24	11/01/2005
Custom MSCI ACW Ex US Index (USD) (Net)				0.96	11.62	11.62	0.80	5.40	3.95	6.62	15.62	4.82	
Difference				1.51	7.80	7.80	2.76	3.23	2.72	2.26	1.47	1.42	
IM All ACWI Ex US (SA+CF) Median				0.48	10.18	10.18	0.58	5.96	4.44	7.17	16.45	5.46	
Rank				15	3	3	12	14	10	10	43	28	
Acadian International All Cap (SA)	2,017,937	0.03	-	-	-	-	-	-	-	-	-	-	11/01/2005
MSCI EAFE IM Index (USD) (Net)				-0.62	11.02	11.02	1.96	6.13	4.31	6.87	17.51	5.02	
Difference				-	-	-	-	-	-	-	-	-	
IM All EAFE (SA+CF) Median				-0.11	10.33	10.33	2.03	6.77	4.61	7.60	17.81	5.41	
Rank				-	-	-	-	-	-	-	-	-	
Mondrian International Equity (SA)	1,636,106	0.03	-	-	-	-	-	-	-	-	-	-	07/01/2005
MSCI EAFE Index (USD) (Net)				-0.42	11.54	11.54	2.89	6.46	4.33	6.76	18.24	5.22	
Difference				-	-	-	-	-	-	-	-	-	
IM All EAFE (SA+CF) Median				-0.11	10.33	10.33	2.03	6.77	4.61	7.60	17.81	5.77	
Rank				-	-	-	-	-	-	-	-	-	
Fixed Income	1,288,512,432	20.13	21.00	0.19	3.44	3.44	-2.89	0.00	1.79	-	6.42	2.75	01/01/2011
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	2.01	
Difference				0.12	0.81	0.81	0.13	0.23	0.44	-	0.89	0.74	
Core Fixed Income	1,161,566,139	18.14	19.00	0.16	2.77	2.77	-2.90		-		5.72	-2.49	09/01/2020
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference				0.09	0.14	0.14	0.12	-	-	-	0.19	0.14	



	All	ocation						Perfor	mance (%	6)			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
BlackRock US Agg (SA)	884,726,291	13.82	-	0.12	2.64	2.64	-2.99	-0.21	-	-	5.66	-0.04	06/01/2019
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	0.02	
Difference				0.05	0.01	0.01	0.03	0.02	-	-	0.13	-0.06	
IM U.S. Broad Mkt Core FI (SA+CF)				0.17	2.96	2.96	-2.89	0.05	1.53	2.91	5.81	0.31	
Rank				73	74	74	62	79	-	-	56	85	
PIMCO Core (SA)	276,839,849	4.32	-	0.27	3.19	3.19	-2.64	-	-	-	5.90	-2.13	09/01/2020
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference				0.20	0.56	0.56	0.38	-	-	-	0.37	0.50	
IM U.S. Broad Mkt Core FI (SA+CF)				0.17	2.96	2.96	-2.89	0.05	1.53	2.91	5.81	-2.36	
Rank				24	40	40	22	-	-	-	44	31	
Emerging Markets Debt	126,585,365	1.98	2.00	0.40	9.68	9.68	-2.20	-	-	-	12.10	-1.01	09/01/2020
JPM Emg Mkts Bond Gbl Index (USD)				0.44	8.35	8.35	-2.22	0.27	2.35	4.98	10.45	-1.05	
Difference				-0.04	1.33	1.33	0.02	-	-	-	1.65	0.04	
Wellington Opportunistic EMD (CF)	126,585,365	1.98	-	0.40	9.68	9.68	-2.20	0.57	2.63	-	12.10	4.67	12/01/2009
JPM Emg Mkts Bond Gbl Index (USD)				0.44	8.35	8.35	-2.22	0.27	2.35	4.98	10.45	4.34	
Difference				-0.04	1.33	1.33	0.02	0.30	0.28	-	1.65	0.33	
IM Emerging Markets Debt (SA+CF) Median				0.16	8.74	8.74	-1.67	0.67	2.14	4.78	11.91	3.82	
Rank				43	33	33	67	54	28	-	48	21	
High Yield Fixed Income	313,856	0.00	0.00	-	-	-	-	-	-	-	-	-	06/01/2006
Bloomberg US Corp Hi Yld Index				1.09	10.44	10.44	1.64	3.92	4.31	7.44	13.45	6.48	
Difference				-	-	-	-	-	-	-	-	-	
PIMCO Liquidation (SA)	313,856	0.00	-	-	-	-	-	-	-	-	-	-	08/01/2018
Bloomberg US Corp Hi Yld Index				1.09	10.44	10.44	1.64	3.92	4.31	7.44	13.45	4.38	
Difference				-	-	-	-	-	-	-	-	-	
IM U.S. High Yield Bonds (SA+CF) Median				1.25	9.84	9.84	1.79	3.72	3.88	6.90	11.93	4.09	
Rank				-	-	-	-	-	-	-	-	-	
Private Debt	613,473,457	9.58	10.00	2.94	11.12	11.12	10.67	8.68	-	-	9.93	8.23	01/01/2018
CS Lvg'd Loan Index+2% (Spliced)				2.38	13.26	13.26	8.08	6.93	5.29	6.42	15.30	6.27	
Difference				0.56	-2.14	-2.14	2.59	1.75	-	-	-5.37	1.96	
Private Equity	696,239,633	10.87	10.00	4.00	6.21	6.21	14.41	19.61	18.82	-	4.82	18.01	01/01/2013
Cambridge US Prvt Eq Index				0.00	5.57	5.57	7.02	14.64	13.25	14.82	9.07	14.15	
Difference				4.00	0.64	0.64	7.39	4.97	5.57	-	-4.25	3.86	



	All	ocation						Perfor	mance (%	)			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Non-Core Real Estate	178,867,474	2.79	4.00	1.31	2.43	2.43	9.03	7.18	-	-	1.91	9.27	09/01/2014
NCREIF ODCE Index+2% (Spliced)				-0.17	-8.18	-8.18	3.04	4.08	6.42	7.50	-10.96	6.54	
Difference				1.48	10.61	10.61	5.99	3.10	-	-	12.87	2.73	
Inflation Hedging Assets (Spliced)	597,040,151	9.33	11.00	-0.29	-3.42	-3.42	-0.20	-0.42	3.66	-	-5.96	6.43	01/01/2011
CPI+2.5% (Spliced)				1.21	5.55	5.55	7.59	6.41	7.61	8.30	5.94	8.71	
Difference				-1.50	-8.97	-8.97	-7.79	-6.83	-3.95	-	-11.90	-2.28	
TIPS	158,651,047	2.48	2.00	0.93	2.81	2.81	-1.22	-			3.92	-0.20	09/01/2020
Bloomberg US Trsy US TIPS Index				0.79	2.71	2.71	-1.33	2.07	1.91	3.11	3.90	-0.28	
Difference				0.14	0.10	0.10	0.11	-	-	-	0.02	0.08	
BlackRock TIPS (SA)	158,651,047	2.48	-	0.93	2.81	2.81	-1.34	2.05	1.87	-	3.92	2.67	12/01/2009
Bloomberg US Trsy US TIPS Index				0.79	2.71	2.71	-1.33	2.07	1.91	3.11	3.90	2.71	
Difference				0.14	0.10	0.10	-0.01	-0.02	-0.04	-	0.02	-0.04	
IM U.S. TIPS (SA+CF) Median				0.83	2.66	2.66	-1.38	2.01	1.88	2.96	3.81	2.57	
Rank				25	40	40	43	42	58	-	37	43	
Core Real Estate	217,437,820	3.40	4.00	-1.88	-10.32	-10.32	0.27	-0.30	3.35	-	-16.07	6.21	01/01/2011
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	7.18	
Difference				-1.22	-0.33	-0.33	-0.75	-2.57	-2.12	-	-3.34	-0.97	
UBS Trumbull Properties (CF)	186,025,725	2.91	-	-1.80	-10.34	-10.34	0.26	-0.28	3.02	4.81	-16.11	4.29	07/01/2005
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	5.27	
Difference				-1.14	-0.35	-0.35	-0.76	-2.55	-2.45	-1.81	-3.38	-0.98	
Hammes HIGH Fund (CF)	24,571,492	0.38	-	2.67	-	-	-	-	-	-	-	-0.53	01/01/2024
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	-3.22	
Difference				3.33	-	-	-	-	-	-	-	2.69	
Blue Owl Real Estate VI LP	6,836,955	0.11	-	-14.17	-	-	-	-	-	-	-	-14.17	02/01/2024
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	-3.22	
Difference				-13.51	-	-	-	-	-	-	-	-10.95	
Farmland	105,621,327	1.65	2.00	0.25	-1.17	-1.17	2.30		-	-	1.76	2.48	08/01/2020
NCREIF Farmland Index (TR)				-0.21	2.54	2.54	6.77	5.82	6.90	9.28	4.96	6.45	
Difference				0.46	-3.71	-3.71	-4.47	-	-	-	-3.20	-3.97	
Nuveen Global Agriculture (CF)	105,621,327	1.65	-	0.25	-1.17	-1.17	2.30	-	-	-	1.76	2.48	08/01/2020
NCREIF Farmland Index (TR)				-0.21	2.54	2.54	6.77	5.82	6.90	9.28	4.96	6.45	
Difference				0.46	-3.71	-3.71	-4.47	-	-	-	-3.20	-3.97	



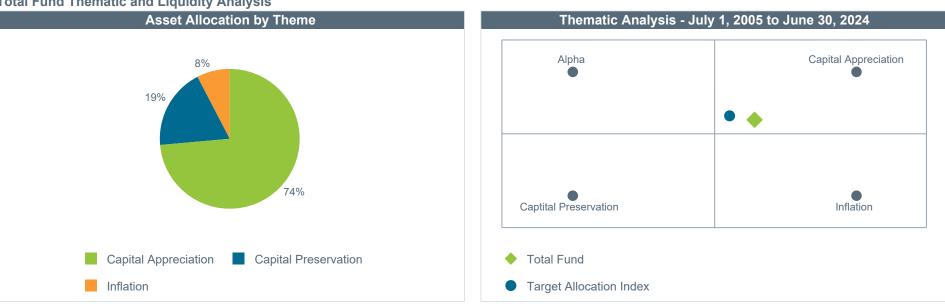
	Alle	Allocation				Performance (%)							
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Private Infrastructure	115,329,957	1.80	3.00	0.29	0.29	0.29	-	-	-	-	-	0.29	07/01/2023
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	6.06	
Difference				-1.05	-5.77	-5.77	-	-	-	-	-	-5.77	
IFM Global Infrastructure Fund (CF)	99,874,507	1.56	-	-0.13	-	-	-	-	-	-	-	-0.13	02/01/2024
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	3.13	
Difference				-1.47	-	-	-	-	-	-	-	-3.26	
IFM Net Zero Infrastructure Fund (CF)	15,455,450	0.24	-	3.04	-	-	-	-	-	-	-	3.04	03/01/2024
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	2.24	
Difference				1.70	-	-	-	-	-	-	-	0.80	
Cash Equivalents	3,966,481	0.06	0.00	1.28	5.55	5.55	3.27	2.22	1.11	0.79	4.89	1.51	07/01/2005
ICE BofAML 3 Mo US T-Bill Index				1.32	5.40	5.40	3.03	2.16	1.51	1.04	5.02	1.54	
Difference				-0.04	0.15	0.15	0.24	0.06	-0.40	-0.25	-0.13	-0.03	



#### Vermont Pension Investment Commission

#### Total Fund Thematic and Liquidity Analysis

#### As of June 30, 2024





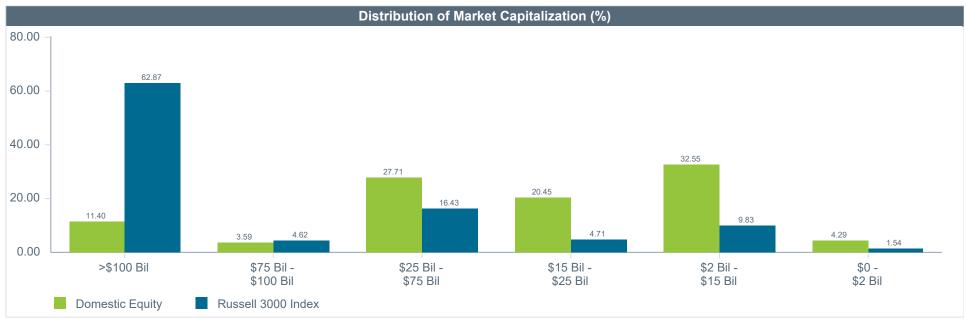
Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic, and custom index descriptions. Allocations may not sum to 100% due to rounding.



#### Vermont Pension Investment Commission Domestic Equity vs. Russell 3000 Index Portfolio Characteristics

Top Ten Equity Holdings											
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)							
Pure Storage Inc	0.95	0.04	0.91	23.50							
Nutanix Inc	0.84	0.03	0.81	-7.89							
Freshpet Inc	0.81	0.01	0.80	11.68							
Cullen/Frost Bankers Inc	0.81	0.01	0.80	-8.90							
Fortive Corp	0.80	0.05	0.75	-13.76							
Everest Group Ltd	0.80	0.03	0.77	-3.64							
AMETEK Inc	0.78	0.07	0.71	-8.70							
Okta Inc	0.68	0.03	0.65	-10.52							
Planet Fitness Inc	0.65	0.01	0.64	17.50							
Edwards Lifesciences Corp	0.64	0.11	0.53	-3.34							
% of Portfolio	7.76	0.39	7.37								

Portfolio Characteristics								
	Portfolio	Benchmark						
Wtd. Avg. Mkt. Cap (\$M)	63,286	876,938						
Median Mkt. Cap (\$M)	27,276	2,138						
Price/Earnings Ratio	22.61	25.83						
Price/Book Ratio	3.25	4.57						
5 Yr. EPS Growth Rate (%)	10.96	17.51						
Current Yield (%)	1.44	1.36						
Beta (5 Years, Monthly)	1.02	1.00						
Number of Securities	593	2,925						

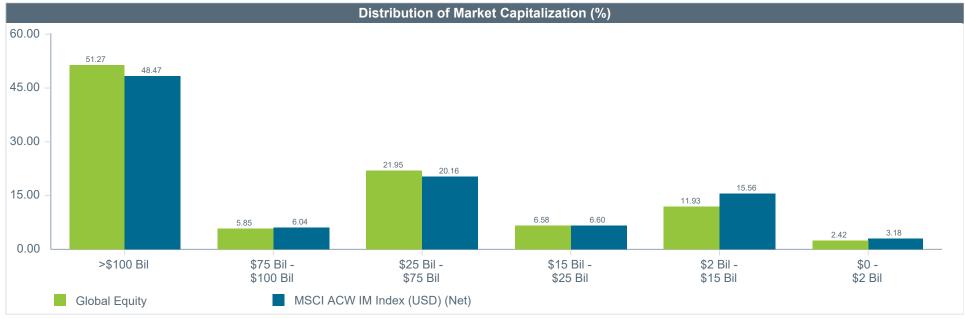




#### Vermont Pension Investment Commission Global Equity vs. MSCI ACW IM Index (USD) (Net) Portfolio Characteristics

Top Ten Equity Holdings										
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)						
Microsoft Corp	3.80	3.82	-0.02	6.42						
Apple Inc	3.31	3.74	-0.43	22.99						
NVIDIA Corporation	3.27	3.74	-0.47	36.74						
Amazon.com Inc	2.44	2.19	0.25	7.13						
Alphabet Inc	1.62	1.30	0.32	20.82						
Novo Nordisk A/S	1.44	0.57	0.87	13.26						
Meta Platforms Inc	1.17	1.34	-0.17	3.94						
Advanced Micro Devices Inc	1.00	0.32	0.68	-10.13						
Boston Scientific Corp	1.00	0.14	0.86	12.44						
Alphabet Inc	1.00	1.13	-0.13	20.60						
% of Portfolio	20.05	18.29	1.76							

Portfolio Characteristics								
	Portfolio	Benchmark						
Wtd. Avg. Mkt. Cap (\$M)	574,556	589,227						
Median Mkt. Cap (\$M)	2,330	2,274						
Price/Earnings Ratio	23.61	21.64						
Price/Book Ratio	4.08	3.68						
5 Yr. EPS Growth Rate (%)	15.01	15.18						
Current Yield (%)	1.67	1.97						
Beta (5 Years, Monthly)	0.99	1.00						
Number of Securities	9,148	8,847						



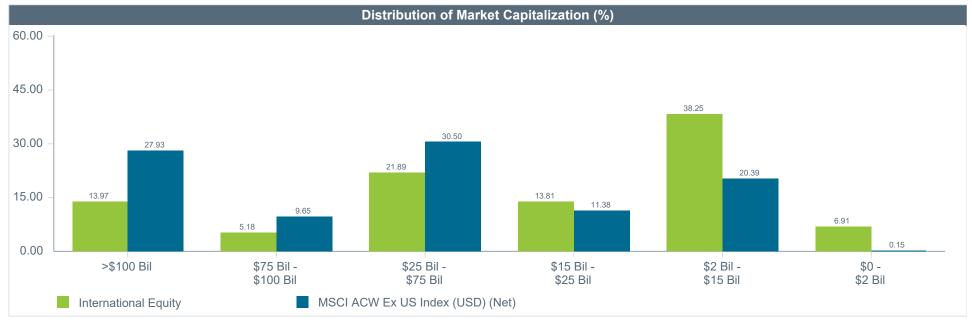
Alphabet Inc. is shown twice in the Top Ten Equity Holdings, but represents two different share classes: GOOGL (Class A) and GOOG (Class C)



#### Vermont Pension Investment Commission International Equity vs. MSCI ACW Ex US Index (USD) (Net) Portfolio Characteristics

Top Ten Equity Holdings												
	Portfolio Weight (%)	Benchmark Weight (%)	Active Weight (%)	Quarterly Return (%)								
Novo Nordisk A/S	3.36	1.81	1.55	13.26								
China Construction Bank Corp	2.56	0.27	2.29	22.54								
ABB Ltd	2.55	0.34	2.21	19.45								
Wolters Kluwer NV	2.20	0.16	2.04	6.78								
Roche Holding AG	2.08	0.75	1.33	8.87								
Hon Hai Precision Industry Co Ltd	1.89	0.32	1.57	40.74								
Industria De Diseno Textil Inditex SA	1.86	0.21	1.65	0.31								
Mediatek Incorporation	1.74	0.25	1.49	15.57								
PetroChina Company Limited	1.55	0.08	1.47	22.48								
Logitech International SA, Apples	1.54	0.06	1.48	7.88								
% of Portfolio	21.33	4.25	17.08									

Portfolio Characteristics								
	Portfolio	Benchmark						
Ntd. Avg. Mkt. Cap (\$M)	60,610	112,367						
Vledian Mkt. Cap (\$M)	817	9,176						
Price/Earnings Ratio	11.43	16.27						
Price/Book Ratio	2.90	2.57						
5 Yr. EPS Growth Rate (%)	17.57	10.28						
Current Yield (%)	3.88	3.02						
Beta (5 Years, Monthly)	1.02	1.00						
Number of Securities	1,136	2,159						





#### Vermont Pension Investment Commission Total Equity Country/Region Allocation

Total Equity MSCI ACW IM Index (USD) (Net)				Total Equity	MSCI ACW IM Index (USD) (Net)
Canada	2.35	2.79	Brazil	0.64	0.45
United States	59.45	61.31	Chile	0.03	0.05
Americas	61.80	64.10	Colombia	0.01	0.01
Australia	1.80	1.76	Mexico	0.12	0.22
Hong Kong	0.80	0.58	Peru	0.01	0.02
Japan	4.86	5.65	Americas	0.81	0.74
New Zealand	0.04	0.07	China	2.65	2.12
Singapore	0.24	0.38	India	1.95	2.29
Asia Pacific	7.74	8.45	Indonesia	0.18	0.17
Austria	0.07	0.07	Korea	0.97	1.31
Belgium	0.12	0.20	Malaysia	0.14	0.17
Denmark	2.03	0.88	Philippines	0.03	0.06
Finland	0.19	0.24	Taiwan	2.77	2.14
France	1.68	2.20	Thailand	0.23	0.17
Germany	1.81	1.89	Asia Pacific	8.93	8.42
Ireland	1.48	1.12	Czech Republic	0.02	0.01
Israel	0.52	0.24	Egypt	0.01	0.01
Italy	0.74	0.58	Greece	0.03	0.05
Netherlands	1.55	1.39	Hungary	0.05	0.02
Norway	0.15	0.19	Kuwait	0.06	0.08
Portugal	0.07	0.04	Poland	0.15	0.10
Spain	0.73	0.57	Qatar	0.05	0.08
Sweden	0.90	0.84	Saudi Arabia	0.27	0.25
Switzerland	2.98	2.46	South Africa	0.37	0.36
United Kingdom	4.16	3.74	Turkey	0.09	0.11
EMEA	19.17	16.65	United Arab Emirates	0.07	0.12
Developed Markets	88.71	89.21	EMEA	1.16	1.21
-			Emerging Markets	10.90	10.37



#### Vermont Pension Investment Commission Total Equity Country/Region Allocation

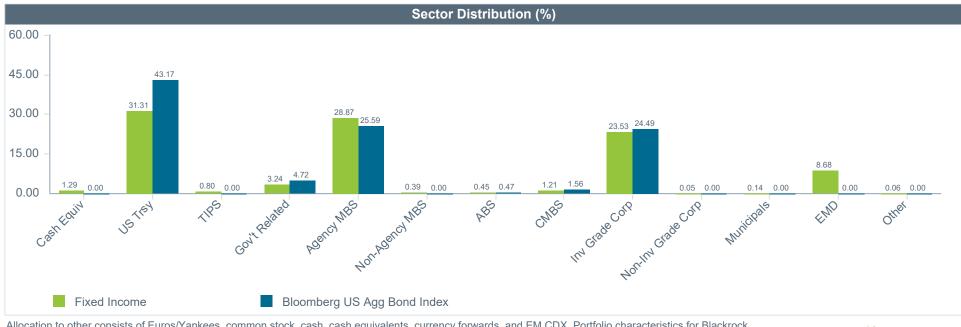
Total Equity		MSCI ACW IM Index (USD) (Net)
Argentina	0.06	0.09
Kazakhstan	0.00	0.00
Malta	0.00	0.00
Oman	0.06	0.11
Frontier Markets	0.13	0.21
Other	0.26	0.21
Total	100.00	100.00



#### **Vermont Pension Investment Commission**

# Fixed Income vs. Bloomberg US Agg Bond Index Portfolio Characteristics

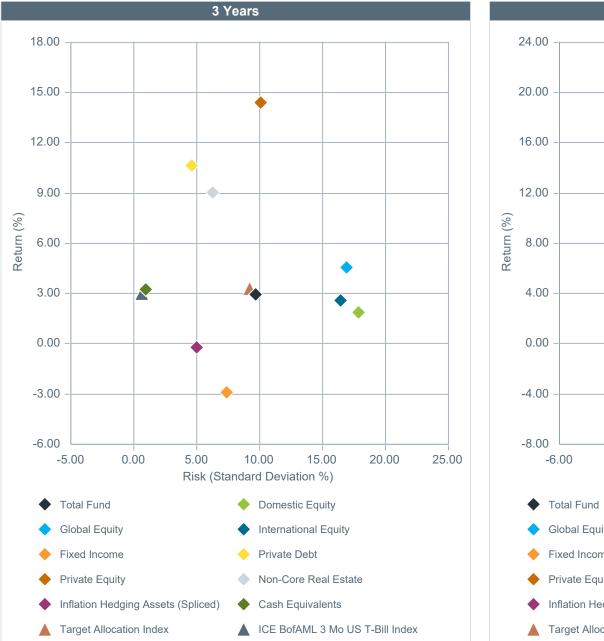
Portfolio Characteristics									
	Portfolio	Benchmark							
Effective Duration	6.15	6.13							
Convexity	0.44	0.57							
Avg. Maturity	8.68	8.43							
Avg. Quality	Aa3	Aa2/Aa3							
Yield To Maturity (%)	5.35	5.00							
Coupon Rate (%)	3.82	3.30							



Allocation to other consists of Euros/Yankees, common stock, cash, cash equivalents, currency forwards, and EM CDX. Portfolio characteristics for Blackrock US Agg (SA) is proxied using benchmark statistics. PIMCO Unconstrained is excluded from calculations due to fund liquidation.



#### Vermont Pension Investment Commission Risk and Return

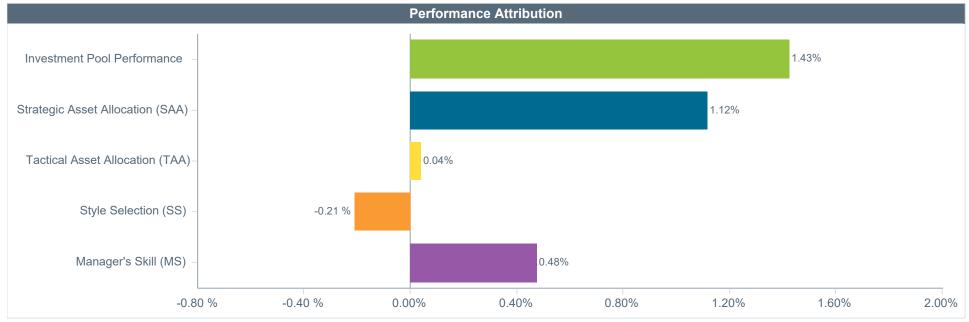


**5** Years 4 ۲ 0.00 6.00 12.00 18.00 24.00 Risk (Standard Deviation %) Domestic Equity International Equity **Global Equity** Fixed Income ٠ Private Debt Non-Core Real Estate **Private Equity** ۲ Inflation Hedging Assets (Spliced) Cash Equivalents ٠ Target Allocation Index ICE BofAML 3 Mo US T-Bill Index 

Performance shown is net of fees. Calculation is based on monthly periodicity. Funds or composites with less history than the specified time period will not appear in the chart.



#### Vermont Pension Investment Commission Total Fund Attribution - IDP

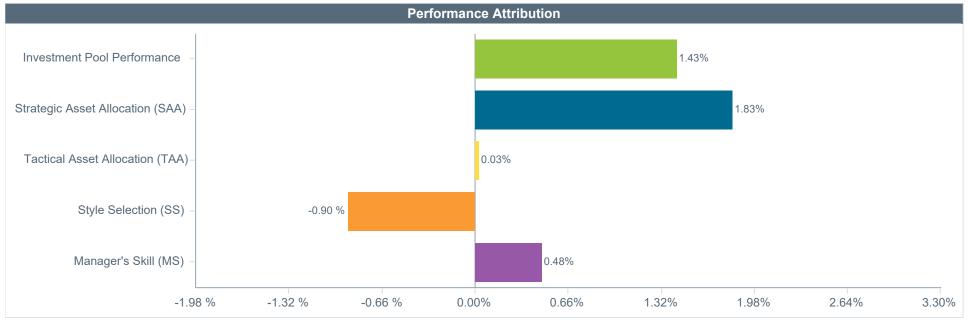


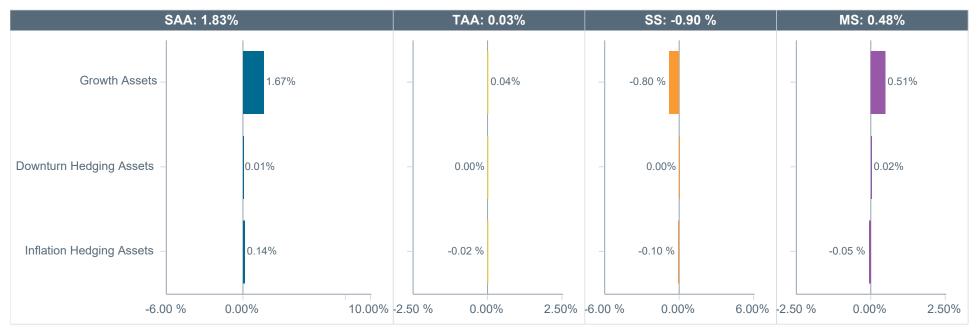
SAA: 1.12%			TAA:	TAA: 0.04% SS: -0.21 %			MS: 0.48%							
US Large Cap Equity		0.17%		_	0.00%			_	-0.28 %			_	0.00%	
US SMID Cap Equities	-0.13 %			_	0.00%			_		0.03%		_	-0.05 %	
International Equity	_	0.07%		_	-0.02 %			_	0.00%			_		0.07%
Global Equity	_	0.72%		_		0.10%		_		0.04%		_	-0.03 %	
Private Equity	_	0.00%		_	0.00%			_		0.00%		_		0.43%
Global Fixed Income	_	0.00%		_		0.00%		_		0.01%		_	0.00%	
Private Debt	_	0.24%		_	-0.02 %			_		0.00%		_		0.05%
Non-Core Real Estate	0.00%			_		0.00%		_	0.00%			_		0.04%
Core Fixed Income	_	0.01%		_	0.00%			_		0.00%		_		0.02%
Core Real Estate	-0.02 %			_		0.00%		_		0.00%		_	-0.04 %	
TIPS	_	0.02%		_		0.01%		_		0.00%		_		0.00%
Farmland	0.00%					0.00%		_		0.00%		_		0.01%
Private Infrastructure	_	0.04%		_	-0.02 %			_	0.00%			_	-0.02 %	
Cash Equivalents	_	0.00%		_		0.00%		_		0.00%		_	0.00%	
ligh Yield Fixed Income	_	0.00%		_		0.00%		_		0.00%		_		0.00%
	-4.00 % 0.0	0% 5	5.00% -	2.50 9	% 0.0	0%	2.50%	-2.50 %	6 0.00	)%	2.50%	-2.50 %	6 0.0	0% 2.50

Performance shown is net of fees. Calculation is based on monthly. Private Asset market values, performance and benchmarks are valued quarterly and shown as of most recently available quarter end, adjusted for subsequent cash flows. RVK cautions that the interpretation of time-weighted data on non-marketable investments, such as Private Equity, is imperfect at best and can potentially be misleading. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



#### Vermont Pension Investment Commission Total Fund Attribution - IDP





Performance shown is net of fees. Calculation is based on monthly. Private Asset market values, performance and benchmarks are valued quarterly and shown as of most recently available quarter end, adjusted for subsequent cash flows. RVK cautions that the interpretation of time-weighted data on non-marketable investments, such as Private Equity, is imperfect at best and can potentially be misleading. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



# Special Insert: Time-Weighted Return (TWR) and Internal Rate of Return (IRR) Methodologies and Differences

## Time Weighted Return (TWR)

- TWR is the return produced over time by a fund independent of contributions or withdrawals.
- It isolates the fund's return attributed the manager's actions, excluding the impact of cash flow timing.
- It is suited for **liquid investments** because the fund managers do not control investor cash inflows and outflows.

# Internal Rate of Return (IRR)

- IRR is the discount rate that equates the cost of an investment with the net cash flows associated with that investment.
- It accounts for the timing and magnitude of fund cash inflows and outflows.
- It is suited for **illiquid investments** because general partners typically exercise control over the size and timing of cash inflows and outflows.

1 - TWR calculations equally weight each period, while IRR calculations give more weight to periods where more capital is invested.

- For a TWR calculation, negative and positive periods are weighted by the measurement period (e.g., a monthly return) without consideration of cash flows to calculate a total return.
- For an IRR calculation, negative cash flows from smaller sized investment will have a smaller effect on the total return. Conversely, a negative cash flow early in the investment period will have a meaningful impact on the total return.
- 2 TWR calculations include each valuation period while IRR calculations ignore intra-period valuations.
  - For example, when calculating the IRR from 12/31/2013 to 12/31/2014, IRR ignores the market values shown at 3/31/2014, 6/30/2014, and 9/30/2014. TWR incorporates these market values into the calculation. IRR calculations depend on cash flows to produce a return while TWR does not and depends on discrete calculation periods using beginning / ending valuation regardless of cash flows.
  - This causes investments with volatile valuations (i.e. private equity early on in a fund's life) to have more negative performance when evaluated using a TWR.
- 3 Therefore, TWR and IRR calculations can be significantly different for the same investment over a given measurement period.



# Special Insert: Time IRR vs TWR Calculations Example

## Withdrawal Example – TWR vs IRR

Date	Reported Value	Cash Flow	MV after CF	Days	Day Weights	Weighted Cash Flow	Monthly TWR
12/31/2022	\$290,000						
1/31/2023	\$293,000			31	0.66		1.03%
2/15/2023	\$298,000	-\$25,000	\$273,000	46	0.49	(\$12,222)	1.71%
2/28/2023	\$260,000			59	0.34		-4.76%
3/31/2023	\$267,000			90	-		2.69%

• The IRR return 0.72% is higher than the TWR 0.50% because the \$25,000 withdrawal out of the portfolio is made **prior to a period** of relatively **bad performance**.

Time Weighted Return: **0.50%** Internal Rate of Return: **0.72%** 

- Decision was assumed to be made by the client thus the manager will not receive credit for the decision in the TWR calculation.
- When a large withdrawal is made prior to a period of relatively good (bad) performance, the IRR will understate (overstate) a portfolios performance, relative to TWR.

### Contribution Example – TWR vs IRR

Date	Reported Value	Cash Flow	MV after CF	Days	Day Weights	Weighted Cash Flow	Monthly TWR
12/31/2022	\$290,000						
1/31/2023	\$293,000			31	0.66		1.03%
2/15/2023	\$298,000	+\$25,000	\$323,000	46	0.49	\$12,222	1.71%
2/28/2023	\$307,619			59	0.34		-4.76%
3/31/2023	\$315,901			90	-		2.69%

- The IRR return 0.30% is lower than the TWR 0.50% because the \$25,000 contribution into the portfolio is made **prior to a period** of relatively **bad performance**.
- In this case the manager is assumed to have no role in the cash flow decision thus they will not be impacted by the bad timing of the cash flow.
- When a large contribution is made prior to a period of relatively good (bad) performance, the IRR will overstate (understate) a portfolios performance, relative to TWR.

Time Weighted Return: **0.50%** Internal Rate of Return: **0.30%** 



#### Vermont Pension Investment Commission

# Executive Summary

#### General Comments

- Through this reporting period, Vermont Pension Investment Commission has committed a total of \$1,998,121,781 to 45 non-marketable alternative investments.
- The average age of active investments (based upon vintage year and weighted by commitment) was 4.54 years.
- A total of \$1,414,801,595 has been called or otherwise contributed to date.
- Distributions have totaled \$529,099,279 since plan inception.
- The residual estimated value of interests in these partnerships/investments is \$1,445,378,560.
- Since inception net performance for the investments are as follows:
  - Annualized since-inception estimated Internal Rate of Return (IRR) of 14.69%.
  - Were an investment into the benchmark index (MSCI ACW IM Index (USD) (Net)) ("Index IRR") made with the identical cash-flow pattern, the resulting return would be equal to 10.66% indicating roughly 402 basis points of annualized out-performance.
  - For every \$1 paid into the portfolio, \$1.40 has been returned as a distribution or is held in residual value (multiple on invested capital = 1.40x).



#### **Private Credit - Direct Lending**

- Private Credit Direct Lending funds account for 19.57% of commitments, 19.17% of contributed funds, 21.78% of distributed funds, and 16.05% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 9.55%
  - MSCI ACW IM Index (USD) (Net) IRR of 9.83%
  - o A multiple on invested capital of 1.28x.

#### Private Credit - Distressed/Special Situations

- Private Credit Distressed/Special Situations funds account for 5.00% of commitments, 5.76% of contributed funds, 0.83% of distributed funds, and 6.79% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 12.09%
  - o MSCI ACW IM Index (USD) (Net) IRR of 12.76%
  - A multiple on invested capital of 1.26x.

#### Private Credit - Specialty Finance

- Private Credit Specialty Finance funds account for 11.76% of commitments, 15.97% of contributed funds, 4.62% of distributed funds, and 16.28% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 9.40%
  - MSCI ACW IM Index (USD) (Net) IRR of 11.55%
  - A multiple on invested capital of 1.15x.

#### Private Equity - Buyout

- Private Equity Buyout funds account for 15.36% of commitments, 16.08% of contributed funds, 19.03% of distributed funds, and 17.85% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 20.32%
  - MSCI ACW IM Index (USD) (Net) IRR of 11.36%
  - A multiple on invested capital of 1.58x.



#### Vermont Pension Investment Commission Executive Summary

#### **Private Equity - Co-Investment**

- Private Equity Co-Investment funds account for 2.25% of commitments, 2.50% of contributed funds, 0.95% of distributed funds, and 3.47% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 19.95%
  - MSCI ACW IM Index (USD) (Net) IRR of 12.53%
  - A multiple on invested capital of 1.56x.

#### Private Equity - Fund of Funds

- Private Equity Fund of Funds funds account for 4.70% of commitments, 3.56% of contributed funds, 3.41% of distributed funds, and 4.11% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 15.68%
  - MSCI ACW IM Index (USD) (Net) IRR of 9.73%
  - A multiple on invested capital of 1.54x.

#### **Private Equity - Growth Equity**

- Private Equity Growth Equity funds account for 0.35% of commitments, 0.19% of contributed funds, 0.00% of distributed funds, and 0.18% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of -3.48%
  - MSCI ACW IM Index (USD) (Net) IRR of 21.42%
  - A multiple on invested capital of 0.96x.

#### **Private Equity - Natural Resources**

- Private Equity Natural Resources funds account for 1.50% of commitments, 1.38% of contributed funds, 0.50% of distributed funds, and 1.07% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of -4.10%
  - MSCI ACW IM Index (USD) (Net) IRR of 9.93%
  - A multiple on invested capital of 0.93x.



#### Vermont Pension Investment Commission Executive Summary

#### **Private Equity - Non-US Private Equity**

- Private Equity Non-US Private Equity funds account for 4.75% of commitments, 2.93% of contributed funds, 3.24% of distributed funds, and 3.12% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 17.07%
  - MSCI ACW IM Index (USD) (Net) IRR of 12.01%
  - A multiple on invested capital of 1.50x.

#### Private Equity - Secondaries

- Private Equity Secondaries funds account for 13.26% of commitments, 11.94% of contributed funds, 20.56% of distributed funds, and 10.62% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 22.16%
  - MSCI ACW IM Index (USD) (Net) IRR of 10.51%
  - A multiple on invested capital of 1.55x.

#### Private Equity - Venture

- Private Equity Venture funds account for 4.45% of commitments, 5.00% of contributed funds, 8.66% of distributed funds, and 7.04% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 22.15%
  - MSCI ACW IM Index (USD) (Net) IRR of 10.64%
  - A multiple on invested capital of 2.09x.

#### Real Estate - Opportunistic

- Real Estate Opportunistic funds account for 7.76% of commitments, 10.87% of contributed funds, 13.21% of distributed funds, and 9.32% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 8.28%
  - MSCI ACW IM Index (USD) (Net) IRR of 9.71%
  - A multiple on invested capital of 1.33x.



## Vermont Pension Investment Commission Executive Summary

#### **Real Estate - Value Added**

- Real Estate Value Added funds account for 9.26% of commitments, 4.65% of contributed funds, 3.21% of distributed funds, and 4.09% of reported residual value.
- Pooled portfolio since inception performance is as follows:
  - Annualized since-inception IRR of 13.83%
  - MSCI ACW IM Index (USD) (Net) IRR of 15.19%
  - A multiple on invested capital of 1.16x.



Alternative Investment Private Equity Fund Performance Listing

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
HarbourVest Partners IX - Buyout LP	2011	Private Equity - Buyout	24,000,000	21,167,188	33,896,481	12,068,344	17.55	2nd	9.43	2.17
HarbourVest Partners IX - Credit Opportunities LP	2011	Private Equity - Fund of Funds	4,000,000	3,550,265	4,287,477	1,474,310	11.96	2nd	9.96	1.62
HarbourVest Partners IX - Venture LP	2011	Private Equity - Venture	12,000,000	11,437,671	23,656,832	13,308,573	21.03	1st	9.13	3.23
Dover Street VIII LP (HarbourVest)	2012	Private Equity - Secondaries	25,000,000	23,000,000	37,303,810	1,598,475	19.30	2nd	8.62	1.69
HarbourVest International Private Equity Partners VII Partnership LP	/ 2014	Private Equity - Non-US Private Equity	15,000,000	13,837,500	14,549,275	14,379,945	17.00	3rd	10.10	2.09
HarbourVest Partners X - Buyout LP	2015	Private Equity - Buyout	45,500,000	39,246,537	30,822,165	41,259,545	21.35	1st	10.73	1.84
HarbourVest Partners X - Venture LP	2015	Private Equity - Venture	19,500,000	18,672,922	13,597,791	33,742,288	24.17	1st	10.33	2.54
Dover Street IX LP (HarbourVest)	2016	Private Equity - Secondaries	40,000,000	35,600,000	37,631,729	23,637,750	20.36	2nd	10.67	1.72
Dover Street X LP (HarbourVest)	2018	Private Equity - Secondaries	100,000,000	74,500,000	26,396,936	87,226,743	24.85	2nd	9.20	1.53
HarbourVest International Private Equity Partners VIII Partnership LP	y 2018	Private Equity - Fund of Funds	60,000,000	46,800,000	13,745,339	57,585,401	16.28	3rd	9.69	1.52
HarbourVest Partners XI - Buyout LP	2018	Private Equity - Buyout	75,000,000	58,650,000	18,049,654	73,314,642	23.72	1st	12.21	1.56
HarbourVest Partners XI - Micro Buyout LP	2018	Private Equity - Buyout	12,500,000	11,412,500	3,989,870	14,238,789	30.42	1st	13.93	1.60
HarbourVest Partners Co-Investment V	LP 2019	Private Equity - Co- Investment	25,000,000	19,375,000	4,955,951	32,317,698	20.70	2nd	11.27	1.92
HarbourVest Partners XI - Venture LP	2019	Private Equity - Venture	37,500,000	34,875,000	8,458,139	48,101,273	22.05	1st	11.64	1.62
Pontifax Global Food and Agriculture Technology II LP	2019	Private Equity - Natural Resources	30,000,000	19,510,458	2,633,142	15,518,472	-4.10	4th	9.93	0.93
Siguler Guff Small Buyout Opportunities Fund IV LP	2019	Private Equity - Buyout	50,000,000	44,286,162	11,689,916	54,677,329	20.24	1st	11.45	1.50
HarbourVest HIPEP IX LP	2020	Private Equity - Non-US Private Equity	80,000,000	27,600,000	2,590,150	30,785,209	17.34	N/A	17.62	1.21
NB Strategic Co-Investment Partners IV LP	2020	Private Equity - Buyout	25,000,000	22,719,842	1,803,275	28,551,639	17.71	2nd	10.41	1.34

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



Alternative Investment Private Equity Fund Performance Listing

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Accel-KKR Growth Capital Partners IV L	P 2021	Private Equity - Growth Equity	7,000,000	2,700,758	0	2,592,902	-3.48	N/A	21.42	0.96
HarbourVest Partners Co-Investment VI LP	2021	Private Equity - Co- Investment	20,000,000	16,013,829	61,982	17,886,979	14.01	N/A	20.57	1.12
NB Secondary Opportunities V LP	2021	Private Equity - Secondaries	70,000,000	27,513,084	6,758,190	31,258,672	47.96	N/A	20.63	1.38
CA Secondaries Aggregation Vehicle LP	2022	Private Equity - Secondaries	10,000,000	4,519,596	687,963	4,459,114	29.25	N/A	25.90	1.14
Dunes Point Capital III	2022	Private Equity - Buyout	25,000,000	11,840,829	0	12,839,611	N/M	N/A	N/M	1.08
HarbourVest Partners XII - Venture LP	2022	Private Equity - Venture	20,000,000	5,750,000	113,097	6,561,735	18.73	N/A	26.03	1.16
Siguler Guff Small Buyout Opportunities Fund V LP	2022	Private Equity - Buyout	50,000,000	18,150,000	443,445	21,011,403	21.49	N/A	23.37	1.18
Dover Street XI LP (HarbourVest)	2023	Private Equity - Secondaries	20,000,000	3,800,000	0	5,370,891	N/M	N/A	N/M	1.41
HarbourVest HIPEP X LP	2023	Private Equity - Fund of Funds	30,000,000	0	0	280,922	N/M	N/A	N/M	
			932,000,000	616,529,142	298,122,609	686,048,654	20.16		10.99	1.60

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



Alternative Investment Real Estate Fund Performance Listing

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Siguler Guff Distressed Real Estate Opportunities Fund II LP	2013	Real Estate - Opportunistic	40,000,000	35,272,308	34,971,694	14,143,864	6.66	4th	8.56	1.39
Siguler Guff DREOF II Co-Investment Fund LP	2016	Real Estate - Opportunistic	15,000,000	13,113,146	8,322,757	6,972,419	3.41	4th	6.31	1.17
Blue Vista Real Estate Partners V	2018	Real Estate - Value Added	35,000,000	33,250,000	16,461,061	29,354,899	18.84	1st	-3.06	1.38
Brookfield Strategic Real Estate Partner	s 2019	Real Estate - Opportunistic	100,000,000	105,369,296	26,579,182	113,566,566	10.83	3rd	3.66	1.33
Hammes Partners IV LP	2021	Real Estate - Value Added	20,000,000	825,009	80,673	308,991	N/M	N/A	N/M	0.47
AG Realty Value XI LP	2022	Real Estate - Value Added	50,000,000	11,250,000	0	10,303,139	-13.20	N/A	N/M	0.92
Blue Owl Real Estate Fund VI	2023	Real Estate - Value Added	50,000,000	4,722,499	185,532	3,407,145	N/M	N/A	N/M	0.76
Hammes Income & Growth Healthcare Fund LP	2023	Real Estate - Value Added	30,105,933	15,776,521	261,565	15,747,963	N/M	N/A	N/M	1.01
			340,105,933	219,578,780	86,862,464	193,804,986	8.80		0.47	1.28

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



Alternative Investment Private Credit Fund Performance Listing

Fund Name	Vintage	Asset Class	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Fund IRR (%)	Quartile	Index IRR (%)	Fund Multiple
Benefit Street Partners Senior Secured Opportunities Fund	2016	Private Credit - Direct Lending	70,000,000	70,000,000	59,505,351	30,430,611	6.47	4th	6.87	1.28
(Arcmont) Direct Lending Fund III (USD- SLP	L) 2018	Private Credit - Direct Lending	70,000,000	62,023,571	27,393,120	58,965,628	12.91	1st	7.74	1.39
Benefit Street Partners Senior Secured Opportunities Fund II (Levered US)	2019	Private Credit - Direct Lending	75,000,000	64,496,342	16,573,137	63,171,930	11.93	2nd	9.24	1.24
AG Direct Lending Fund IV LP	2020	Private Credit - Direct Lending	50,000,000	47,449,533	10,772,319	50,922,825	11.89	2nd	8.59	1.30
Ares Pathfinder LP	2020	Private Credit - Specialty Finance	65,000,000	56,009,160	4,641,899	63,098,765	12.38	N/A	9.45	1.21
Kennedy Lewis Capital Partners Master (Offshore) LP	II 2020	Private Credit - Distressed/Special Situations	50,000,000	50,403,647	3,713,339	63,398,599	11.66	3rd	8.59	1.33
Ares Pathfinder Core LP	2021	Private Credit - Specialty Finance	170,000,000	170,000,000	19,797,746	172,219,929	8.31	N/A	10.94	1.13
KLCP Domestic III LP	2021	Private Credit - Distressed/Special Situations	50,000,000	31,045,572	701,446	34,755,399	14.26	1st	14.44	1.14
AG Direct Lending Evergreen Fund LP	2022	Private Credit - Direct Lending	51,015,848	27,265,848	1,015,848	28,561,234	6.16	4th	13.55	1.08
KKR US Direct Lending Evergreen Fund	2023	Private Credit - Direct Lending	75,000,000	0	0	0 *	N/M	N/A	N/M	
			726,015,848	578,693,673	144,114,206	565,524,920	9.83		8.81	1.23

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



#### Vermont Pension Investment Commission Alternative Investment Private Equity Vintage Year Composite

#### As of March 31, 2024

#### Average Commitment-weighted Active Investment Age (in years): 5.13

Vintage Year	Commitment	Paid In Capital	Distributions					
viiitage real	(\$)	(\$)	Distributions (\$)	Valuation (\$)	Vintage Year IRR (%)	Index IRR (%)	Vintage Year Multiple	Cumulative Multiple
2011	40,000,000	36,155,124	61,840,790	26,851,227	18.64	9.68	2.45	2.45
2012	25,000,000	23,000,000	37,303,810	1,598,475	19.30	8.62	1.69	2.16
2014	15,000,000	13,837,500	14,549,275	14,379,945	17.00	10.10	2.09	2.14
2015	65,000,000	57,919,459	44,419,956	75,001,833	22.57	10.57	2.06	2.11
2016	40,000,000	35,600,000	37,631,729	23,637,750	20.36	10.67	1.72	2.03
2018	247,500,000	191,362,500	62,181,799	232,365,575	21.80	10.46	1.54	1.77
2019	142,500,000	118,046,620	27,737,148	150,614,772	18.46	11.27	1.51	1.70
2020	105,000,000	50,319,842	4,393,425	59,336,848	17.55	13.54	1.27	1.66
2021	97,000,000	46,227,671	6,820,172	51,738,553	31.73	20.67	1.27	1.63
2022	105,000,000	40,260,425	1,244,506	44,871,863	22.16	26.88	1.15	1.60
2023	50,000,000	3,800,000	0	5,651,813	N/M	N/M	1.49	1.60
TOTAL	932,000,000	616,529,142	298,122,609	686,048,654	20.16	10.99		1.60

Index IRR represents the dollar-weighted returns calculated using the MSCI ACW IM Index (USD) (Net) assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Vintage Year IRR is the annualized since-inception net internal rate for the indicated fund or composite. This report may contain valuations for investments that are preliminary estimates of valuation as of the date of reporting which reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Vintage Year Multiple is the since inception sum of distributions and valuation divided by paid in capital. Cumulative Multiple is the since inception sum of distributions and valuation divided by paid in capital for all investments through the indicated vintage year.



## Vermont Pension Investment Commission Alternative Investment Real Estate Vintage Year Composite

#### Average Commitment-weighted Active Investment Age (in years): 4.07

Vintage Year	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Vintage Year IRR (%)	Index IRR (%)	Vintage Year Multiple	Cumulative Multiple
2013	40,000,000	35,272,308	34,971,694	14,143,864	6.66	8.56	1.39	1.39
2016	15,000,000	13,113,146	8,322,757	6,972,419	3.41	6.31	1.17	1.33
2018	35,000,000	33,250,000	16,461,061	29,354,899	18.84	-3.06	1.38	1.35
2019	100,000,000	105,369,296	26,579,182	113,566,566	10.83	3.66	1.33	1.34
2021	20,000,000	825,009	80,673	308,991	N/M	N/M	0.47	1.34
2022	50,000,000	11,250,000	0	10,303,139	-13.20	N/M	0.92	1.31
2023	80,105,933	20,499,021	447,097	19,155,108	N/M	N/M	0.96	1.28
TOTAL	340,105,933	219,578,780	86,862,464	193,804,986	8.80	0.47		1.28

Index IRR represents the dollar-weighted returns calculated using the NCREIF ODCE Index (AWA)(Net) assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Vintage Year IRR is the annualized since-inception net internal rate for the indicated fund or composite. This report may contain valuations for investments that are preliminary estimates of valuation as of the date of reporting which reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Vintage Year Multiple is the since inception sum of distributions and valuation divided by paid in capital. Cumulative Multiple is the since inception sum of distributions and valuation divided by paid in capital for all investments through the indicated vintage year.



## Vermont Pension Investment Commission Alternative Investment Private Credit Vintage Year Composite

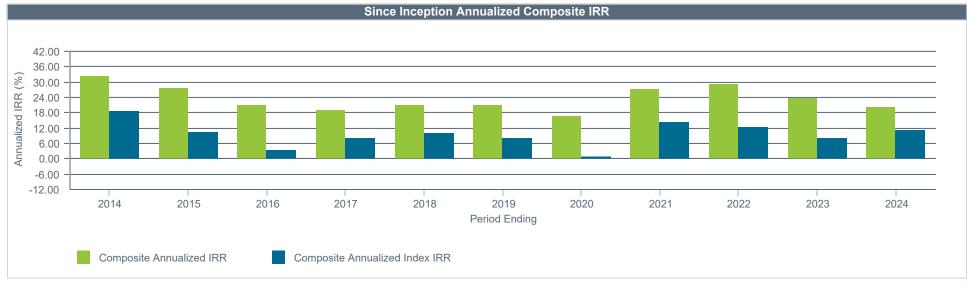
#### Average Commitment-weighted Active Investment Age (in years): 3.92

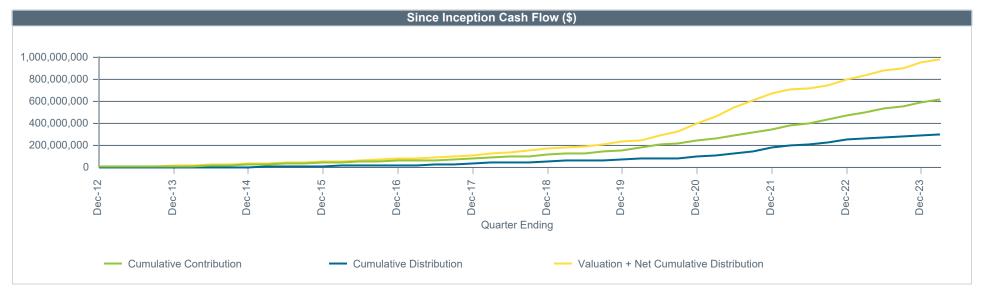
Vintage Year	Commitment (\$)	Paid In Capital (\$)	Distributions (\$)	Valuation (\$)	Vintage Year IRR (%)	Index IRR (%)	Vintage Year Multiple	Cumulative Multiple
2016	70,000,000	70,000,000	59,505,351	30,430,611	6.47	4.74	1.28	1.28
2018	70,000,000	62,023,571	27,393,120	58,965,628	12.91	5.66	1.39	1.34
2019	75,000,000	64,496,342	16,573,137	63,171,930	11.93	7.12	1.24	1.30
2020	165,000,000	153,862,340	19,127,557	177,420,189	11.92	6.70	1.28	1.29
2021	220,000,000	201,045,572	20,499,192	206,975,328	8.92	9.12	1.13	1.23
2022	51,015,848	27,265,848	1,015,848	28,561,234	6.16	11.32	1.08	1.23
2023	75,000,000	0	0	0	N/M	N/M		1.23
TOTAL	726,015,848	578,693,673	144,114,206	565,524,920	9.83	6.74		1.23

Index IRR represents the dollar-weighted returns calculated using the Credit Suisse Lvgd Loan Index assuming an index investment with the same cash flow timing. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated. Applicable IRRs are marked with 'N/M' for not material. Vintage Year IRR is the annualized since-inception net internal rate for the indicated fund or composite. This report may contain valuations for investments that are preliminary estimates of valuation as of the date of reporting which reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. Vintage Year Multiple is the since inception sum of distributions and valuation divided by paid in capital. Cumulative Multiple is the since inception sum of distributions and valuation divided by paid in capital for all investments through the indicated vintage year.



## Alternative Investment Private Equity Composite Performance and Cash Flow Summary

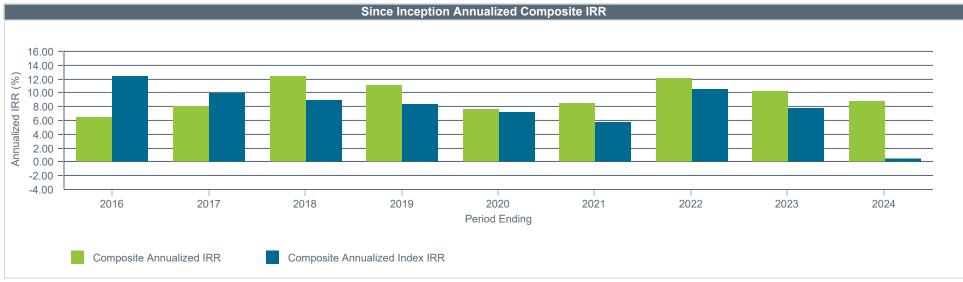


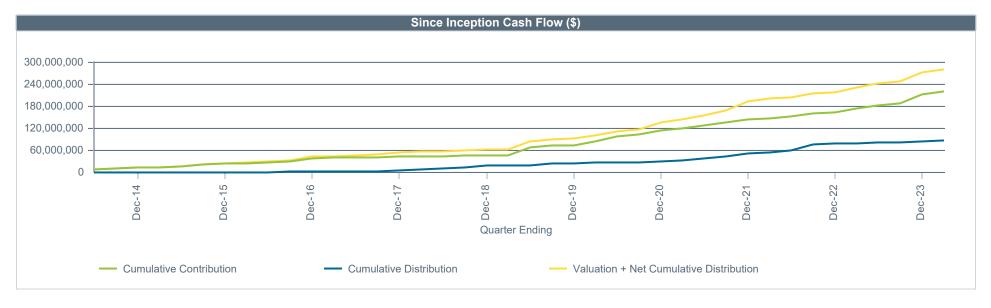


Index IRR represents the dollar-weighted returns calculated using the MSCI ACW IM Index (USD) (Net) assuming an index investment with the same cash flow timing. This report may contain valuations for investments that are preliminary estimates of valuation as of the date of reporting which reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated.



## Alternative Investment Real Estate Composite Performance and Cash Flow Summary

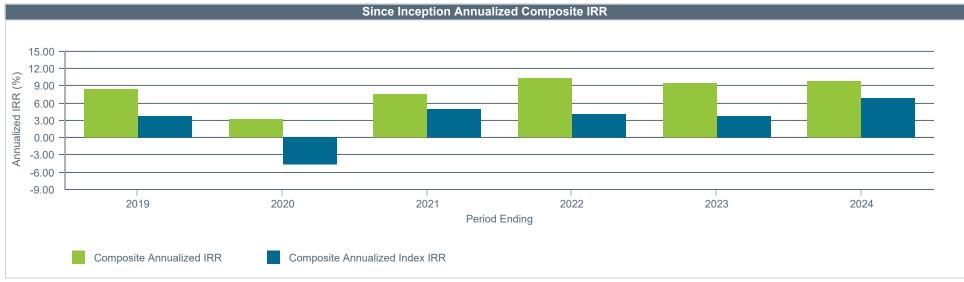


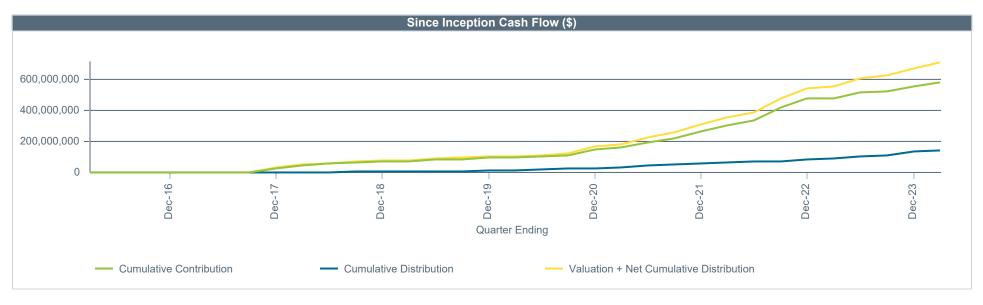


Index IRR represents the dollar-weighted returns calculated using the NCREIF ODCE Index (AWA)(Net) assuming an index investment with the same cash flow timing. This report may contain valuations for investments that are preliminary estimates of valuation as of the date of reporting which reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated.



## Alternative Investment Private Credit Composite Performance and Cash Flow Summary





Index IRR represents the dollar-weighted returns calculated using the Credit Suisse Lvgd Loan Index assuming an index investment with the same cash flow timing. This report may contain valuations for investments that are preliminary estimates of valuation as of the date of reporting which reflect the estimated impact of subsequent net cash contributions/distributions. These figures may be used in calculations contained in this report. IRRs are shown only for investments with one year or more of cash flows and for which an accurate IRR could be calculated.





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

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## Vermont Municipal Employees' Retirement System Asset Allocation By Manager

June 30, 2024 : \$987,890,205		Market Value (\$)	Allocation (%)
	Blackrock S&P 500 (Eql Wtd) (SA)	40,719,111	4.12
	Champlain US Mid Cap Core (SA)	27,208,788	2.75
	■ SSgA Russell 2000 Growth (Ex Tobacco) (SA)	6,179	0.00
	Acadian International All Cap (SA)	274,173	0.03
	Acadian ACWI Ex-US Fund (CF)	45,462,750	4.60
	Mondrian International Equity (SA)	259,353	0.03
	BlackRock MSCI ACW IMI (SA)	269,017,184	27.23
	Blackrock MSCI World LCTR (SA)	35,524,792	3.60
	Artisan Global Opportunities (CF)	56,295,683	5.70
	PIMCO Liquidation (SA)	59,151	0.01
	Wellington Opportunistic EMD (CF)	18,505,833	1.87
	PIMCO Unconstrained (SA)	13,656	0.00
	Private Debt	94,056,124	9.52
	Private Equity	104,308,035	10.56
	Non-Core Real Estate	27,084,212	2.74
	BlackRock US Agg (SA)	133,429,093	13.51
	PIMCO Core (SA)	42,955,356	4.35
	Vermont Cash (SA)	992,122	0.10
	BlackRock TIPS (SA)	24,044,891	2.43
	UBS Trumbull Properties (CF)	28,901,758	2.93
	Hammes HIGH Fund (CF)	3,706,390	0.38
	Blue Owl Real Estate VI LP	1,042,097	0.11
	Farmland	16,564,048	1.68
	Private Infrastructure	17,458,860	1.77
	Real Estate Cash (CF)	567	0.00

Allocations shown may not sum up to 100% exactly due to rounding. Market values for SSgA Russell 2000 Growth (SA), PIMCO Unconstrained (SA), Mondrian International Equity (SA), and Acadian International All Cap (SA) represent residual assets after liquidation.



## Vermont Municipal Employees' Retirement System **Total Fund**

**Asset Allocation vs. Target Allocation** 

US Large Cap Equity

International Equity Private Equity

**Global Equity** 

Private Debt

TIPS

US SMID Cap Equities

High Yield Fixed Income

**Global Fixed Income** 

Non-Core Real Estate Core Fixed Income

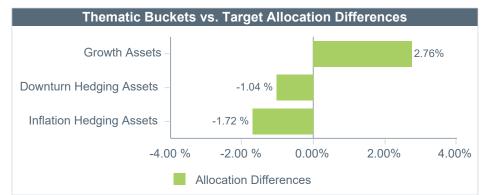
**Cash Equivalents** 

Core Real Estate Farmland

Total Fund

Private Infrastructure

	Market Value	Allocation	Target
	(\$)	(%)	(%)
Growth Assets	718,795,023	72.76	70.00
Downturn Hedging Assets	177,376,571	17.96	19.00
Inflation Hedging Assets	91,718,612	9.28	11.00
Total Fund	987,890,205	100.00	100.00



Detailed As	set Allocation vs. Ta	rget Allocation		Detailed Asset Alloc	cation vs. Target All	ocation Differences
	Market Value (\$)	Allocation (%)	Target (%)	US Large Cap Equity –		0.12%
p Equity	40,719,111	4.12	4.00	US SMID Cap Equities –	-0.25 %	
p Equities	27,214,967	2.75	3.00	Global Equity –	T	6.53%
,	360,837,658	36.53	30.00			0.55%
Equity	45,996,276	4.66	7.00	International Equity -	-2.34 %	
/	104,308,035	10.56	10.00	Private Equity -		0.56%
ked Income	59,151	0.01	0.00	High Yield Fixed Income –		0.01%
Income	18,519,488	1.87	2.00			
	94,056,124	9.52	10.00	Global Fixed Income –	-0.13 %	
al Estate	27,084,212	2.74	4.00	Private Debt –	-0.48 %	
icome	176,384,449	17.85	19.00	Non-Core Real Estate –	-1.26 %	
ents	992,122	0.10	0.00	Core Fixed Income	-1.15 %	
	24,044,891	2.43	2.00		-1.13 /0	
tate	33,650,813	3.41	4.00	Cash Equivalents –		0.10%
	16,564,048	1.68	2.00	TIPS –		0.43%
tructure	17,458,860	1.77	3.00	Core Real Estate –	-0.59 %	
	987,890,205	100.00	100.00			
				Farmland –	-0.32 %	
				Private Infrastructure -	-1.23 %	
				-15.00 %	0.00	0% 1
				_		

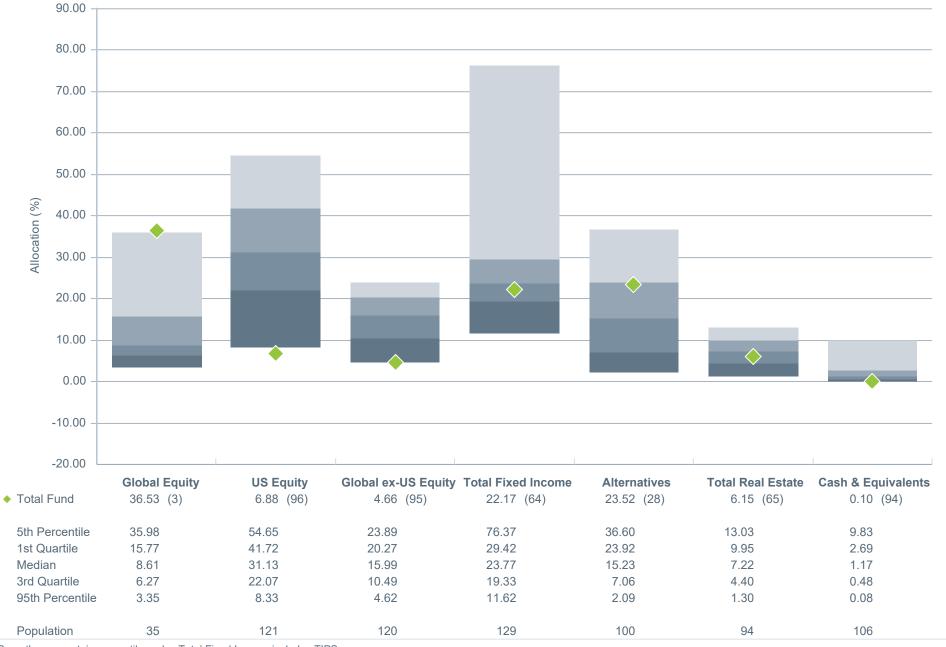
0.12% -0.25 % 6.53% -2.34 % 0.56% 0.01% -0.13 % -0.48 % -1.26 % -1.15 % 0.10% 0.43% -0.59 %

-0.32 % -1.23 % 0.00% 15.00% Allocation Differences



Allocations shown may not sum up to 100% exactly due to rounding.

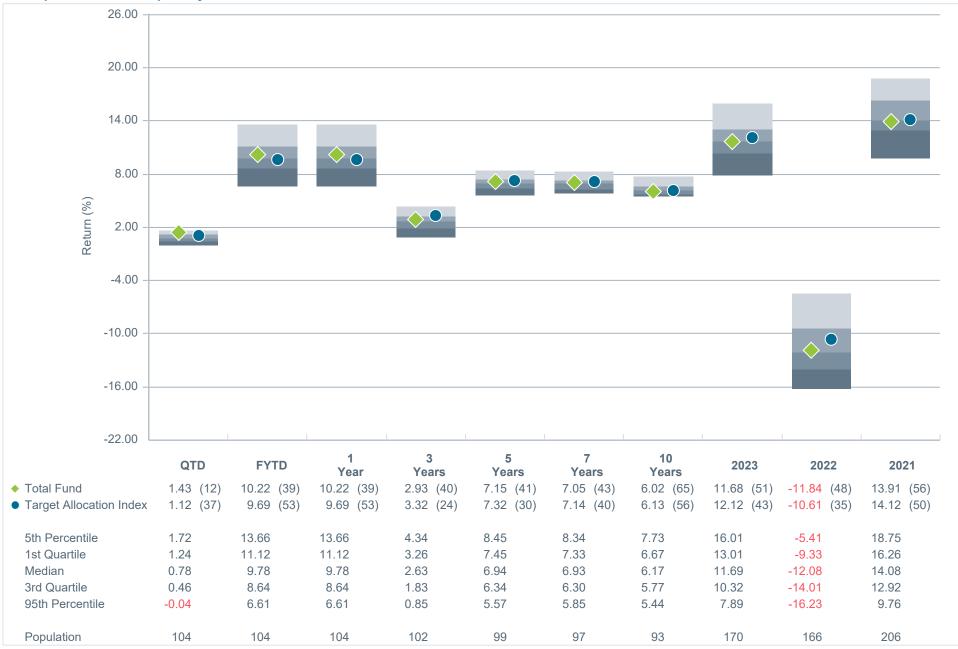
## Vermont Municipal Employees' Retirement System All Public Plans (\$500M to \$5B) (Custom PG) Plan Sponsor TF Asset Allocation



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Parentheses contain percentile ranks. Total Fixed Income includes TIPS.

## Vermont Municipal Employees' Retirement System All Public Plans (\$500M to \$5B) (Custom PG) Plan Sponsor Peer Group Analysis



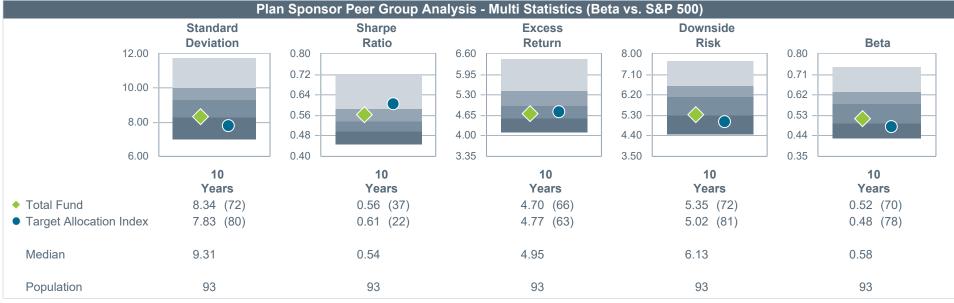
Performance shown is net of fees. Parentheses contain percentile ranks.



## Vermont Municipal Employees' Retirement System

Vermont Municipal Employees' Retirement System vs. All Public Plans (\$500M to \$5B) (Custom PG)





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



	Allocat	ion					Perform	nance (%)				
	Market Value (\$)	Actual (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Total Fund	987,890,205	100.00	1.43	10.22	10.22	2.93	7.15	6.02	8.05	11.68	6.20	07/01/2005
Target Allocation Index			1.12	9.69	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference			0.31	0.53	0.53	-0.39	-0.17	-0.11	0.56	-0.44	-0.01	
Actual Allocation Index			0.95	9.86	9.86	2.44	6.54	5.68	7.31	12.25	5.97	
Difference			0.48	0.36	0.36	0.49	0.61	0.34	0.74	-0.57	0.23	
Thematic Target Allocation Index			1.83	13.95	13.95	3.65	-	-	-	16.87	-	
Difference			-0.40	-3.73	-3.73	-0.72	-	-	-	-5.19	-	
Growth Assets	718,795,023	72.76	1.99	14.21	14.21	4.98	-	-	-	15.84	10.50	09/01/2020
MSCI ACW IM Index (USD) (Net)			2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	10.18	
Difference			-0.39	-4.19	-4.19	0.28	-	-	-	-5.74	0.32	
Downturn Hedging Assets	177,376,571	17.96	0.17	2.61	2.61	-2.92	-	-	-	5.52	-2.51	09/01/2020
Bloomberg US Agg Bond Index			0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference			0.10	-0.02	-0.02	0.10	-	-	-	-0.01	0.12	
Inflation Hedging Assets	91,718,612	9.28	-0.28	-3.39	-3.39	-0.34	-	-	-	-6.09	-0.06	09/01/2020
Consumer Price Index+2.5%			1.21	5.55	5.55	7.59	6.77	5.37	5.10	5.94	7.70	
Difference			-1.49	-8.94	-8.94	-7.93	-	-	-	-12.03	-7.76	



	A	location							mance (%	,			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Total Fund	987,890,205	100.00	100.00	1.43	10.22	10.22	2.93	7.15	6.02	8.05	11.68	6.20	07/01/2005
Target Allocation Index				1.12	9.69	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference				0.31	0.53	0.53	-0.39	-0.17	-0.11	0.56	-0.44	-0.01	
Actual Allocation Index				0.95	9.86	9.86	2.44	6.54	5.68	7.31	12.25	5.97	
Difference				0.48	0.36	0.36	0.49	0.61	0.34	0.74	-0.57	0.23	
All Public Plans (\$500M to \$5B)				0.78	9.78	9.78	2.63	6.94	6.17	8.30	11.69	6.43	
Rank				12	39	39	40	41	65	69	51	63	
Domestic Equity	67,934,078	6.88	7.00	-3.66	9.15	9.15	1.97	9.53	9.58	-	14.33	11.18	01/01/2011
Russell 3000 Index				3.22	23.12	23.12	8.05	14.14	12.15	14.49	25.96	13.13	
Difference				-6.88	-13.97	-13.97	-6.08	-4.61	-2.57	-	-11.63	-1.95	
US Large Cap Equity	40,719,111	4.12	4.00	-2.67	11.58	11.58	4.76	10.91	10.07	13.41	13.85	9.68	07/01/2005
S&P 500 Index (Cap Wtd)				4.28	24.56	24.56	10.01	15.05	12.86	14.82	26.29	10.50	
Difference				-6.95	-12.98	-12.98	-5.25	-4.14	-2.79	-1.41	-12.44	-0.82	
Blackrock S&P 500 (Eql Wtd) (SA)	40,719,111	4.12	-	-2.67	11.58	11.58	4.70	10.87	-	-	13.85	10.87	07/01/2019
S&P 500 Index (Eq Wtd)				-2.63	11.79	11.79	4.84	10.94	10.04	14.00	13.87	10.94	
Difference				-0.04	-0.21	-0.21	-0.14	-0.07	-	-	-0.02	-0.07	
IM U.S. Large Cap Equity (SA+CF) Median				2.53	23.00	23.00	8.00	13.53	11.85	14.06	24.36	13.53	
Rank				89	92	92	88	73	-	-	76	73	
US SMID Cap Equities	27,214,967	2.75	3.00	-5.12	5.78	5.78	-1.87	7.45	8.96	12.85	14.98	8.93	07/01/2005
Russell 2500 Index				-4.27	10.47	10.47	-0.29	8.31	7.99	12.36	17.42	8.68	
Difference				-0.85	-4.69	-4.69	-1.58	-0.86	0.97	0.49	-2.44	0.25	
Champlain US Mid Cap Core (SA)	27,208,788	2.75	-	-5.12	5.78	5.78	-1.88	7.44	9.71	-	14.97	12.24	10/01/2009
Custom SMID Cap Equity Index				-3.30	11.52	11.52	-0.08	8.46	7.98	12.33	17.15	11.17	
Difference				-1.82	-5.74	-5.74	-1.80	-1.02	1.73	-	-2.18	1.07	
IM U.S. SMID Cap Equity (SA+CF) Median				-3.73	10.74	10.74	1.21	9.01	8.69	12.60	16.45	11.53	
Rank				80	79	79	75	72	24	-	61	27	
Global Equity	360,837,658	36.53	30.00	2.38	19.03	19.03	4.58	10.99	-	-	22.25	7.14	02/01/2018
MSCI ACW IM Index (USD) (Net)				2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	7.82	
Difference				0.00	0.63	0.63	-0.12	0.63	-	-	0.67	-0.68	
BlackRock MSCI ACW IMI (SA)	269,017,184	27.23	-	2.53	18.80	18.80	5.02	10.75			22.04	10.75	07/01/2019
MSCI ACW IM Index (USD) (Net)				2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	10.36	
Difference				0.15	0.40	0.40	0.32	0.39	-	-	0.46	0.39	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	9.67	
Rank				27	32	32	36	37	-	-	36	37	

	A	location		Performance (%)									
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Blackrock MSCI World LCTR (SA)	35,524,792	3.60	-	2.83	18.69	18.69	-	-	-	-	22.13	4.69	09/01/2021
MSCI Wrld Index (USD) (Net)				2.63	20.19	20.19	6.86	11.78	9.16	11.07	23.79	5.68	
Difference				0.20	-1.50	-1.50	-	-	-	-	-1.66	-0.99	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	2.92	
Rank				24	33	33	-	-	-	-	36	33	
Artisan Global Opportunities (CF)	56,295,683	5.70	-	1.43	20.32	20.32	1.06	11.91	-	-	23.53	11.31	07/01/2018
MSCI ACW Index (USD) (Net)				2.87	19.38	19.38	5.43	10.76	8.43	10.35	22.20	9.90	
Difference				-1.44	0.94	0.94	-4.37	1.15	-	-	1.33	1.41	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	8.89	
Rank				42	28	28	77	23	-	-	28	19	
International Equity	45,996,276	4.66	7.00	2.42	19.16	19.16	2.66	6.73	4.58	-	16.91	5.33	01/01/2011
Custom MSCI ACW Ex US Composite Index (USD) (Net)				0.96	11.62	11.62	1.74	5.99	4.25	6.82	15.62	5.34	
Difference				1.46	7.54	7.54	0.92	0.74	0.33	-	1.29	-0.01	
Acadian ACWI Ex-US Fund (CF)	45,462,750	4.60	-	2.47	19.42	19.42	3.56	8.63	6.67	8.88	17.09	6.24	11/01/2005
Custom MSCI ACW Ex US Index (USD) (Net)				0.96	11.62	11.62	0.80	5.40	3.95	6.62	15.62	4.82	
Difference				1.51	7.80	7.80	2.76	3.23	2.72	2.26	1.47	1.42	
IM All ACWI Ex US (SA+CF) Median				0.48	10.12	10.12	0.54	6.00	4.43	7.15	16.45	5.43	
Rank				17	3	3	12	14	9	8	43	29	
Acadian International All Cap (SA)	274,173	0.03	-	-	-	-	-	-	-	-	-	-	11/01/2005
MSCI EAFE IM Index (USD) (Net)				-0.62	11.02	11.02	1.96	6.13	4.31	6.87	17.51	5.02	
Difference				-	-	-	-	-	-	-	-	-	
IM All EAFE (SA+CF) Median				-0.11	10.34	10.34	2.05	6.77	4.60	7.60	17.79	5.43	
Rank				-	-	-	-	-	-	-	-	-	
Mondrian International Equity (SA)	259,353	0.03	-	-	-	-	-	-	-	-	-	-	07/01/2005
MSCI EAFE Index (USD) (Net)				-0.42	11.54	11.54	2.89	6.46	4.33	6.76	18.24	5.22	
Difference				-	-	-	-	-	-	-	-	-	
IM All EAFE (SA+CF) Median				-0.11	10.34	10.34	2.05	6.77	4.60	7.60	17.79	5.82	
Rank				-	-	-	-	-	-	-	-	-	
Fixed Income	194,963,089	19.74	21.00	0.19	3.46	3.46	-2.87	0.01	1.78	-	6.44	2.75	01/01/2011
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	2.01	
Difference				0.12	0.83	0.83	0.15	0.24	0.43	-	0.91	0.74	
Core Fixed Income	176,384,449	17.85	19.00	0.16	2.78	2.78	-2.90	-	-	-	5.72	-2.49	09/01/2020
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference				0.09	0.15	0.15	0.12	-	-	-	0.19	0.14	



	AI	location		Performance (%)									
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
BlackRock US Agg (SA)	133,429,093	13.51	-	0.12	2.65	2.65	-2.99	-0.21	-	-	5.67	-0.03	06/01/2019
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	0.02	
Difference				0.05	0.02	0.02	0.03	0.02	-	-	0.14	-0.05	
IM U.S. Broad Mkt Core FI (SA+CF)				0.18	2.97	2.97	-2.90	0.05	1.52	2.91	5.80	0.31	
Rank				74	73	73	60	77	-	-	55	85	
PIMCO Core (SA)	42,955,356	4.35	-	0.27	3.19	3.19	-2.63	-	-	-	5.90	-2.13	09/01/2020
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference				0.20	0.56	0.56	0.39	-	-	-	0.37	0.50	
IM U.S. Broad Mkt Core FI (SA+CF)				0.18	2.97	2.97	-2.90	0.05	1.52	2.91	5.80	-2.36	
Rank				24	41	41	21	-	-	-	44	30	
Emerging Markets Debt	18,505,833	1.87	2.00	0.40	9.68	9.68	-2.20	-	-		12.10	-1.01	09/01/2020
JPM Emg Mkts Bond Gbl Index (USD)				0.44	8.35	8.35	-2.22	0.27	2.35	4.98	10.45	-1.05	
Difference				-0.04	1.33	1.33	0.02	-	-	-	1.65	0.04	
Wellington Opportunistic EMD (CF)	18,505,833	1.87	-	0.40	9.68	9.68	-2.20	0.57	2.63	-	12.10	4.66	12/01/2009
JPM Emg Mkts Bond Gbl Index (USD)				0.44	8.35	8.35	-2.22	0.27	2.35	4.98	10.45	4.34	
Difference				-0.04	1.33	1.33	0.02	0.30	0.28	-	1.65	0.32	
IM Emerging Markets Debt (SA+CF) Median				0.11	8.45	8.45	-1.68	0.66	2.14	4.78	11.96	3.82	
Rank				41	33	33	66	54	28	-	48	21	
High Yield Fixed Income	59,151	0.01	0.00	-	-	-	-	-	-	-	-	-	06/01/2006
Bloomberg US Corp Hi Yld Index				1.09	10.44	10.44	1.64	3.92	4.31	7.44	13.45	6.48	
Difference				-	-	-	-	-	-	-	-	-	
PIMCO Liquidation (SA)	59,151	0.01	-	-	-	-	-	-	-	-	-	-	08/01/2018
Bloomberg US Corp Hi Yld Index				1.09	10.44	10.44	1.64	3.92	4.31	7.44	13.45	4.38	
Difference				-	-	-	-	-	-	-	-	-	
IM U.S. High Yield Bonds (SA+CF) Median				1.27	9.85	9.85	1.84	3.72	3.92	6.90	12.04	4.12	
Rank				-	-	-	-	-	-	-	-	-	
Private Debt	94,056,124	9.52	10.00	2.94	11.14	11.14	10.72	8.73	-	-	9.93	8.27	01/01/2018
CS Lvg'd Loan Index+2% (Spliced)				2.38	13.26	13.26	8.08	6.93	5.29	6.42	15.30	6.27	
Difference				0.56	-2.12	-2.12	2.64	1.80	-	-	-5.37	2.00	
Private Equity	104,308,035	10.56	10.00	4.06	6.39	6.39	14.79	19.77	18.47	-	4.99	18.53	01/01/2013
Cambridge US Prvt Eq Index				0.00	5.57	5.57	7.02	14.64	13.25	14.82	9.07	14.15	
Difference				4.06	0.82	0.82	7.77	5.13	5.22	-	-4.08	4.38	



	A	Allocation			Performance (%)								
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Non-Core Real Estate	27,084,212	2.74	4.00	1.42	2.64	2.64	9.31	7.39	-	-	2.13	9.23	09/01/2014
NCREIF ODCE Index+2% (Spliced)				-0.17	-8.18	-8.18	3.04	4.08	6.42	7.50	-10.96	6.54	
Difference				1.59	10.82	10.82	6.27	3.31	-	-	13.09	2.69	
Inflation Hedging Assets (Spliced)	91,718,612	9.28	11.00	-0.28	-3.37	-3.37	-0.31	-0.47	3.47	-	-6.05	6.27	01/01/2011
CPI+2.5% (Spliced)				1.21	5.55	5.55	7.59	6.41	7.61	8.30	5.94	8.71	
Difference				-1.49	-8.92	-8.92	-7.90	-6.88	-4.14	-	-11.99	-2.44	
TIPS	24,044,891	2.43	2.00	0.93	2.81	2.81	-1.22	-	-	-	3.92	-0.20	09/01/2020
Bloomberg US Trsy US TIPS Index				0.79	2.71	2.71	-1.33	2.07	1.91	3.11	3.90	-0.28	
Difference				0.14	0.10	0.10	0.11	-	-	-	0.02	0.08	
BlackRock TIPS (SA)	24,044,891	2.43	-	0.93	2.81	2.81	-1.22	2.12	1.90	-	3.92	2.70	12/01/2009
Bloomberg US Trsy US TIPS Index				0.79	2.71	2.71	-1.33	2.07	1.91	3.11	3.90	2.71	
Difference				0.14	0.10	0.10	0.11	0.05	-0.01	-	0.02	-0.01	
IM U.S. TIPS (SA+CF) Median				0.85	2.68	2.68	-1.37	2.03	1.89	3.03	3.81	2.63	
Rank				28	42	42	39	40	44	-	37	44	
Core Real Estate	33,650,813	3.41	4.00	-1.88	-10.33	-10.33	0.27	-0.30	3.10	-	-16.07	6.00	01/01/2011
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	7.18	
Difference				-1.22	-0.34	-0.34	-0.75	-2.57	-2.37	-	-3.34	-1.18	
UBS Trumbull Properties (CF)	28,901,758	2.93	-	-1.80	-10.34	-10.34	0.27	-0.28	2.69	4.57	-16.10	4.11	07/01/2005
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	5.27	
Difference				-1.14	-0.35	-0.35	-0.75	-2.55	-2.78	-2.05	-3.37	-1.16	
Hammes HIGH Fund (CF)	3,706,390	0.38	-	2.67	-	-	-	-	-	-	-	-0.53	01/01/2024
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	-3.22	
Difference				3.33	-	-	-	-	-	-	-	2.69	
Blue Owl Real Estate VI LP	1,042,097	0.11	-	-14.17	-	-	-	-	-	-	-	-14.17	02/01/2024
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	-3.22	
Difference				-13.51	-	-	-	-	-	-	-	-10.95	
Farmland	16,564,048	1.68	2.00	0.25	-1.17	-1.17	2.30	-	-	-	1.76	2.48	08/01/2020
NCREIF Farmland Index (TR)				-0.21	2.54	2.54	6.77	5.82	6.90	9.28	4.96	6.45	
Difference				0.46	-3.71	-3.71	-4.47	-	-	-	-3.20	-3.97	
Nuveen Global Agriculture (CF)	16,564,048	1.68	-	0.25	-1.17	-1.17	2.30	-	-	-	1.76	2.28	04/01/2020
NCREIF Farmland Index (TR)				-0.21	2.54	2.54	6.77	5.82	6.90	9.28	4.96	6.08	
Difference				0.46	-3.71	-3.71	-4.47	-	-	-	-3.20	-3.80	



	AI	Allocation			Performance (%)								
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Private Infrastructure	17,458,860	1.77	3.00	0.29	0.29	0.29	-	-	-	-	-	0.29	07/01/2023
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	6.06	
Difference				-1.05	-5.77	-5.77	-	-	-	-	-	-5.77	
IFM Global Infrastructure Fund (CF)	15,106,830	1.53	-	-0.13	-	-	-	-	-	-	-	-0.13	02/01/2024
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	3.13	
Difference				-1.47	-	-	-	-	-	-	-	-3.26	
IFM Net Zero Infrastructure Fund (CF)	2,352,031	0.24	-	3.04	-	-	-	-	-	-	-	3.04	03/01/2024
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	2.24	
Difference				1.70	-	-	-	-	-	-	-	0.80	
Cash Equivalents	992,122	0.10	0.00	1.28	5.20	5.20	3.06	2.04	1.03	-	4.57	0.78	01/01/2011
ICE BofAML 3 Mo US T-Bill Index				1.32	5.40	5.40	3.03	2.16	1.51	1.04	5.02	1.14	
Difference				-0.04	-0.20	-0.20	0.03	-0.12	-0.48	-	-0.45	-0.36	



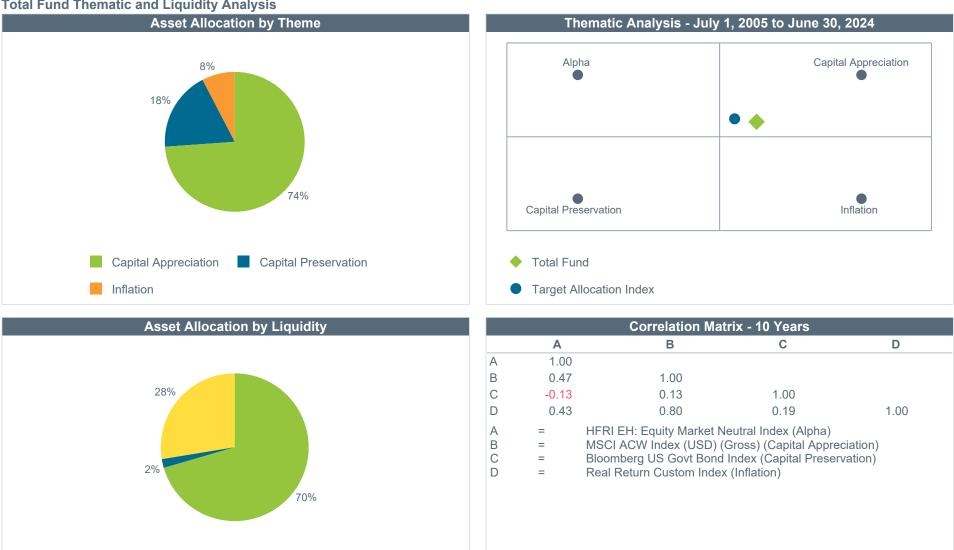
# Vermont Municipal Employees' Retirement System

## As of June 30, 2024

**Total Fund Thematic and Liquidity Analysis** 

Liquid

**Liquidity Rating** 



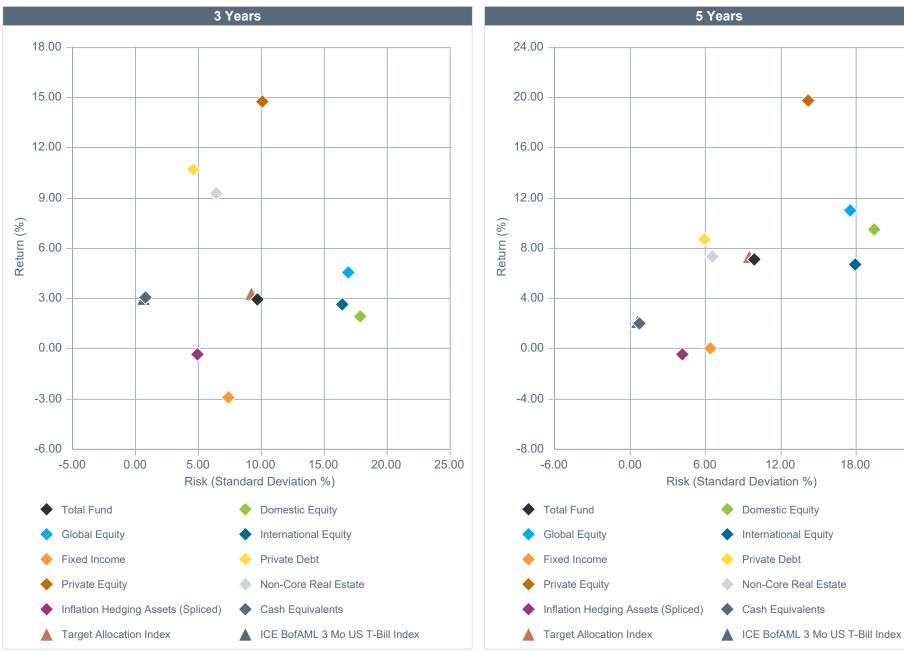
Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic, and custom index descriptions. Allocations may not sum to 100% due to rounding.

Less Liquid Not Liquid

64



## Vermont Municipal Employees' Retirement System **Risk and Return**



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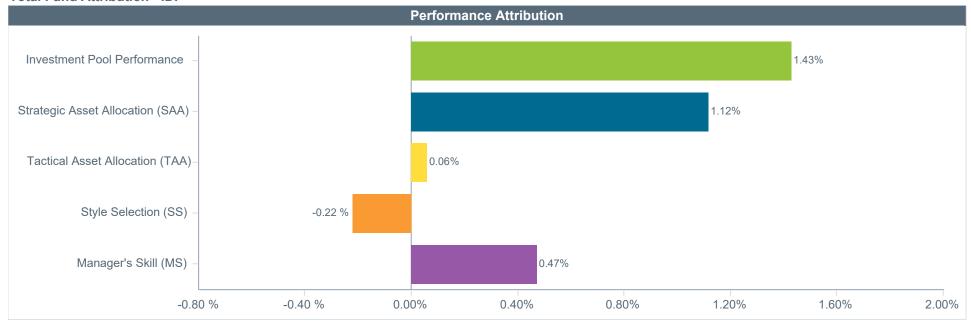
18.00

24.00

Performance shown is net of fees. Calculation is based on monthly periodicity. Funds or composites with less history than the specified time period will not appear in the chart.



#### Vermont Municipal Employees' Retirement System Total Fund Attribution - IDP



	SAA: 1.12%				TAA:	0.06%			SS: -0	.22 %			MS: (	0.47%
US Large Cap Equity		0.17%		_		0.00%		_	-0.29 %			_	0.00%	
US SMID Cap Equities -	-0.13 %	F		_	0.00%			_		0.03%		_	-0.05 %	
International Equity -		0.07%		_	-0.02 %			_	0.00%			_		0.07%
Global Equity –		0.72%		_		0.11%		_		0.04%		_	-0.03 %	F
Private Equity -		0.00%		_	0.00%			_		0.00%		_		0.42%
Global Fixed Income -		0.00%		_	0.00%			_		0.01%		_	0.00%	
Private Debt -		0.24%		_	-0.02 %			_	0.00%			_		0.05%
Non-Core Real Estate -	0.00%			_		0.00%		_	0.00%			_		0.04%
Core Fixed Income –		0.01%		_	0.00%			_		0.00%		_		0.02%
Core Real Estate -	-0.02 %			_		0.00%		_		0.00%		_	-0.04 %	
TIPS –		0.02%		_		0.01%		_		0.00%		_		0.00%
Farmland –	0.00%			_		0.00%		_		0.00%		_		0.01%
Private Infrastructure -		0.04%		_	-0.02 %			_	0.00%			_	-0.02 %	
Cash Equivalents –		0.00%		_		0.00%		_		0.00%		_	0.00%	
High Yield Fixed Income -		0.00%		-		0.00%		_		0.00%		_		0.00%
-4.00	0 % 0.0	0%	6.00% -3	3.00 %	0.0	0%	3.00%	-2.50 %	% 0.00	)%	2.50%	-2.50 9	% 0.0	0% 2.50%

Performance shown is net of fees. Calculation is based on monthly. Private Asset market values, performance and benchmarks are valued quarterly and shown as of most recently available quarter end, adjusted for subsequent cash flows. RVK cautions that the interpretation of time-weighted data on non-marketable investments, such as Private Equity, is imperfect at best and can potentially be misleading. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



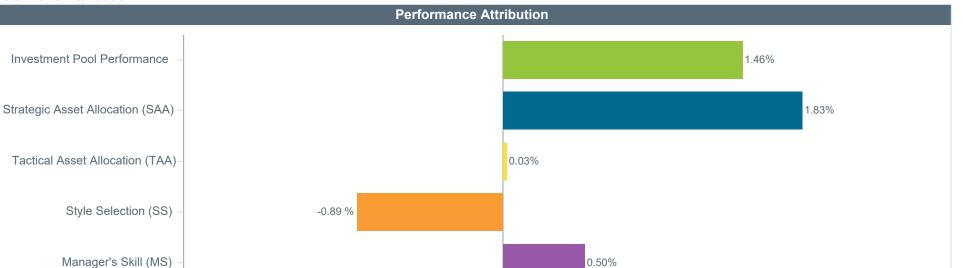
## Vermont Municipal Employees' Retirement System

-1.95 %

-1.30 %

-0.65 %

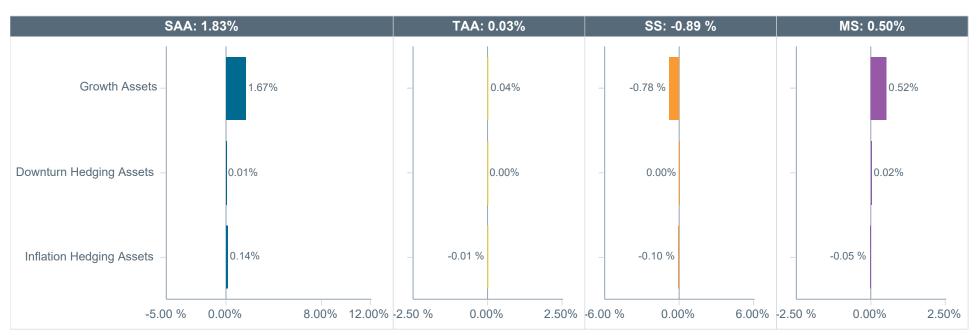
## **Total Fund Attribution - IDP**



0.00%

0.65%

1.30%



Performance shown is gross of fees. Calculation is based on monthly. Private Asset market values, performance and benchmarks are valued quarterly and shown as of most recently available quarter end, adjusted for subsequent cash flows. RVK cautions that the interpretation of time-weighted data on non-marketable investments, such as Private Equity, is imperfect at best and can potentially be misleading. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



1.95%

2.60%

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## Vermont State Employees' Retirement System Asset Allocation By Manager

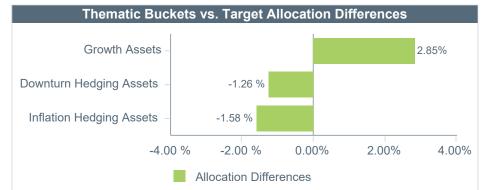
June 30, 2024 : \$2,637,641,353		Market Value (\$)	Allocation (%)
	■ Blackrock S&P 500 (Eql Wtd) (SA)	105,469,892	4.00
	■ Champlain US Mid Cap Core (SA)	73,068,844	2.77
	■ SSgA Russell 2000 Growth (Ex Tobacco) (SA)	10,025	0.00
	Acadian International All Cap (SA)	768,964	0.03
	Acadian ACWI Ex-US Fund (CF)	127,228,050	4.82
	Mondrian International Equity (SA)	680,145	0.03
	BlackRock MSCI ACW IMI (SA)	701,023,567	26.58
	Blackrock MSCI World LCTR (SA)	98,452,534	3.73
	Artisan Global Opportunities (CF)	143,480,106	5.44
	PIMCO Liquidation (SA)	155,943	0.01
	Wellington Opportunistic EMD (CF)	51,546,051	1.95
	PIMCO Unconstrained (SA)	26,783	0.00
	Private Debt	253,573,696	9.61
	Private Equity	290,798,969	11.02
	Non-Core Real Estate	75,175,295	2.85
	BlackRock US Agg (SA)	355,448,063	13.48
	PIMCO Core (SA)	111,010,357	4.21
	Vermont Cash (SA)	1,374,243	0.05
	BlackRock TIPS (SA)	68,624,347	2.60
	UBS Trumbull Properties (CF)	75,538,764	2.86
	Hammes HIGH Fund (CF)	9,937,953	0.38
	Blue Owl Real Estate VI LP	2,789,503	0.11
	Farmland	44,643,156	1.69
	Private Infrastructure	46,814,621	1.77
	Real Estate Cash (CF)	1,481	0.00

Allocations shown may not sum up to 100% exactly due to rounding. Market values for SSgA Russell 2000 Growth (SA), PIMCO Unconstrained (SA), Mondrian International Equity (SA), and Acadian International All Cap (SA) represent residual assets after liquidation.



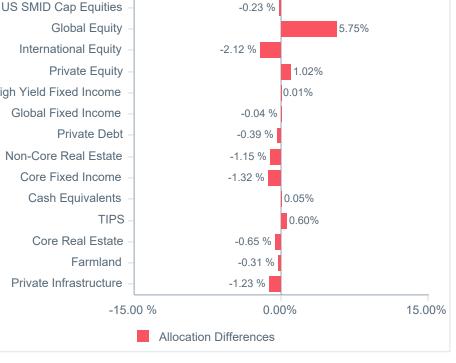
## Vermont State Employees' Retirement System **Total Fund Asset Allocation vs. Target Allocation**

	Market Value (\$)	Allocation (%)	Target (%)
Assets	1,921,458,865	72.85	70.00
rn Hedging Assets	467,832,663	17.74	19.00
Hedging Assets	248,349,825	9.42	11.00
und	2,637,641,353	100.00	100.00
	_,,		



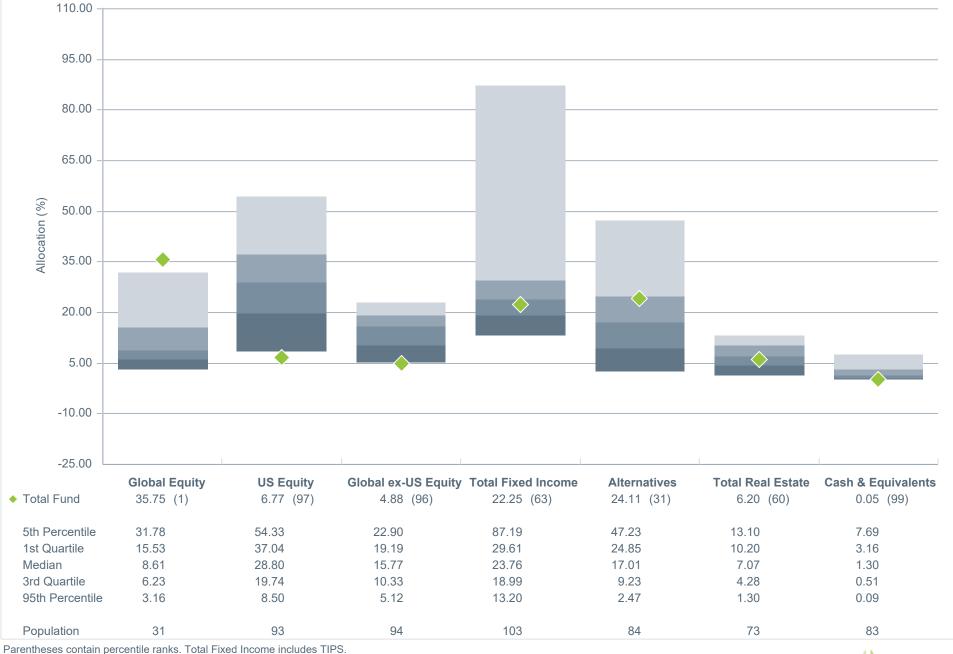
Detailed Ass	Detai			
	Market Value (\$)	Allocation (%)	Target (%)	US Large
US Large Cap Equity	105,469,892	4.00	4.00	US SMID C
US SMID Cap Equities	73,078,869	2.77	3.00	GI
Global Equity	942,956,207	35.75	30.00	
International Equity	128,677,160	4.88	7.00	Internati
Private Equity	290,798,969	11.02	10.00	Pr
High Yield Fixed Income	155,943	0.01	0.00	High Yield Fix
Global Fixed Income	51,572,833	1.96	2.00	
Private Debt	253,573,696	9.61	10.00	Global Fix
Non-Core Real Estate	75,175,295	2.85	4.00	F
Core Fixed Income	466,458,420	17.68	19.00	Non-Core
Cash Equivalents	1,374,243	0.05	0.00	
TIPS	68,624,347	2.60	2.00	Core Fix
Core Real Estate	88,267,702	3.35	4.00	Cash I
Farmland	44,643,156	1.69	2.00	
Private Infrastructure	46,814,621	1.77	3.00	Core
Total Fund	2,637,641,353	100.00	100.00	Core
				Private In

#### ailed Asset Allocation vs. Target Allocation Differences e Cap Equity 0.00% Cap Equities -0.23 %



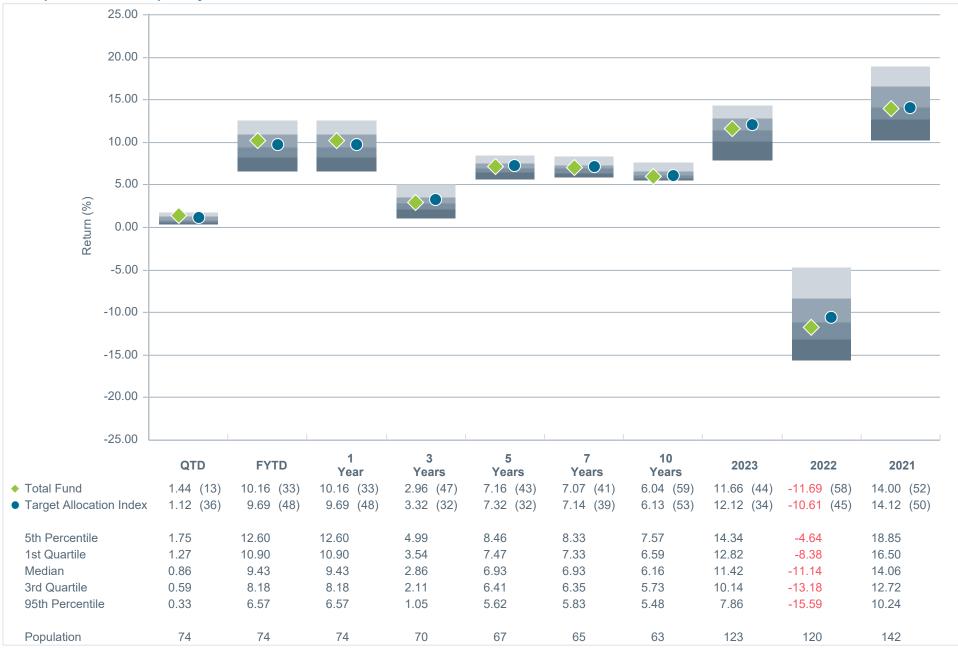


## Vermont State Employees' Retirement System All Public Plans (\$1B to \$10B; Median) (Custom PG) Plan Sponsor TF Asset Allocation



KVK

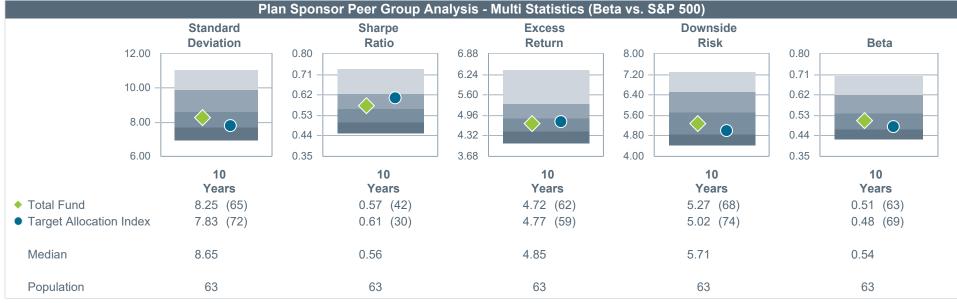
## Vermont State Employees' Retirement System All Public Plans (\$1B to \$10B) (Custom PG) Plan Sponsor Peer Group Analysis



Performance shown is net of fees. Parentheses contain percentile ranks.







KVK

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

	Allocatio	on					Perfor	mance (%)				
	Market Value (\$)	Actual (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Total Fund	2,637,641,353	100.00	1.44	10.16	10.16	2.96	7.16	6.04	8.05	11.66	6.13	07/01/2005
Target Allocation Index			1.12	9.69	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference			0.32	0.47	0.47	-0.36	-0.16	-0.09	0.56	-0.46	-0.08	
Actual Allocation Index			0.94	9.82	9.82	2.56	6.61	5.70	7.33	12.26	5.94	
Difference			0.50	0.34	0.34	0.40	0.55	0.34	0.72	-0.60	0.19	
Thematic Target Allocation Index			1.83	13.95	13.95	3.65	-	-	-	16.87	-	
Difference			-0.39	-3.79	-3.79	-0.69	-	-	-	-5.21	-	
Growth Assets	1,921,458,865	72.85	1.99	14.06	14.06	5.05	-	-	-	15.69	10.49	09/01/2020
MSCI ACW IM Index (USD) (Net)			2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	10.18	
Difference			-0.39	-4.34	-4.34	0.35	-	-	-	-5.89	0.31	
Downturn Hedging Assets	467,832,663	17.74	0.17	2.64	2.64	-2.92	-	-	-	5.56	-2.50	09/01/2020
Bloomberg US Agg Bond Index			0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference			0.10	0.01	0.01	0.10	-	-	-	0.03	0.13	
Inflation Hedging Assets	248,349,825	9.42	-0.25	-3.20	-3.20	-0.58	-	-	-	-5.75	-0.25	09/01/2020
Consumer Price Index+2.5%			1.21	5.55	5.55	7.59	6.77	5.37	5.10	5.94	7.70	
Difference			-1.46	-8.75	-8.75	-8.17	-	-	-	-11.69	-7.95	



	All	ocation						Perfor	mance (%	6)			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Total Fund	2,637,641,353	100.00	100.00	1.44	10.16	10.16	2.96	7.16	6.04	8.05	11.66	6.13	07/01/2005
Target Allocation Index				1.12	9.69	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference				0.32	0.47	0.47	-0.36	-0.16	-0.09	0.56	-0.46	-0.08	
Actual Allocation Index				0.94	9.82	9.82	2.56	6.61	5.70	7.33	12.26	5.94	
Difference				0.50	0.34	0.34	0.40	0.55	0.34	0.72	-0.60	0.19	
All Public Plans (\$1B to \$10B)				0.86	9.43	9.43	2.86	6.93	6.16	8.30	11.42	6.43	
Rank				13	33	33	47	43	59	75	44	71	
Domestic Equity	178,548,761	6.77	7.00	-3.69	9.10	9.10	1.93	9.48	9.53	-	14.33	11.15	01/01/2011
Russell 3000 Index				3.22	23.12	23.12	8.05	14.14	12.15	14.49	25.96	13.13	
Difference				-6.91	-14.02	-14.02	-6.12	-4.66	-2.62	-	-11.63	-1.98	
US Large Cap Equity	105,469,892	4.00	4.00	-2.67	11.58	11.58	4.75	10.90	10.07	13.41	13.85	9.52	07/01/2005
S&P 500 Index (Cap Wtd)				4.28	24.56	24.56	10.01	15.05	12.86	14.82	26.29	10.50	
Difference				-6.95	-12.98	-12.98	-5.26	-4.15	-2.79	-1.41	-12.44	-0.98	
Blackrock S&P 500 (Eql Wtd) (SA)	105,469,892	4.00	-	-2.67	11.58	11.58	4.69	10.86	-	-	13.85	10.86	07/01/2019
S&P 500 Index (Eq Wtd)				-2.63	11.79	11.79	4.84	10.94	10.04	14.00	13.87	10.94	
Difference				-0.04	-0.21	-0.21	-0.15	-0.08	-	-	-0.02	-0.08	
IM U.S. Large Cap Equity (SA+CF) Median				2.53	23.00	23.00	8.00	13.53	11.85	14.06	24.36	13.53	
Rank				89	92	92	88	73	-	-	76	73	
US SMID Cap Equities	73,078,869	2.77	3.00	-5.12	5.77	5.77	-1.88	7.45	8.93	12.82	14.97	8.93	07/01/2005
Russell 2500 Index				-4.27	10.47	10.47	-0.29	8.31	7.99	12.36	17.42	8.68	
Difference				-0.85	-4.70	-4.70	-1.59	-0.86	0.94	0.46	-2.45	0.25	
Champlain US Mid Cap Core (SA)	73,068,844	2.77	-	-5.12	5.77	5.77	-1.88	7.45	9.70	-	14.96	12.23	10/01/2009
Custom SMID Cap Equity Index				-3.30	11.52	11.52	-0.08	8.46	7.98	12.33	17.15	11.17	
Difference				-1.82	-5.75	-5.75	-1.80	-1.01	1.72	-	-2.19	1.06	
IM U.S. SMID Cap Equity (SA+CF) Median				-3.73	10.74	10.74	1.21	9.01	8.69	12.60	16.45	11.53	
Rank				80	79	79	75	72	24	-	61	27	
Global Equity	942,956,207	35.75	30.00	2.39	19.02	19.02	4.58	10.91	-	-	22.24	7.09	02/01/2018
MSCI ACW IM Index (USD) (Net)				2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	7.82	
Difference				0.01	0.62	0.62	-0.12	0.55	-	-	0.66	-0.73	
BlackRock MSCI ACW IMI (SA)	701,023,567	26.58	-	2.53	18.80	18.80	5.01	10.74	-	-	22.04	10.74	07/01/2019
MSCI ACW IM Index (USD) (Net)				2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	10.36	
Difference				0.15	0.40	0.40	0.31	0.38	-	-	0.46	0.38	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	9.67	
Rank				27	32	32	36	37	-	-	36	37	



	All	ocation						Perfor	mance (%	b)			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Blackrock MSCI World LCTR (SA)	98,452,534	3.73	-	2.83	18.68	18.68	-	-	-	-	22.13	4.67	09/01/202
MSCI Wrld Index (USD) (Net)				2.63	20.19	20.19	6.86	11.78	9.16	11.07	23.79	5.68	
Difference				0.20	-1.51	-1.51	-	-	-	-	-1.66	-1.01	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	2.92	
Rank				24	33	33	-	-	-	-	36	33	
Artisan Global Opportunities (CF)	143,480,106	5.44	-	1.43	20.32	20.32	1.06	11.29	-	-	23.53	10.79	07/01/2018
MSCI ACW Index (USD) (Net)				2.87	19.38	19.38	5.43	10.76	8.43	10.35	22.20	9.90	
Difference				-1.44	0.94	0.94	-4.37	0.53	-	-	1.33	0.89	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	8.89	
Rank				42	28	28	77	30	-	-	28	26	
International Equity	128,677,160	4.88	7.00	2.43	19.17	19.17	2.61	6.65	4.54	-	16.91	5.28	01/01/2011
Custom MSCI ACW Ex US Composite Index (USD) (Net)				0.96	11.62	11.62	1.74	5.99	4.25	6.82	15.62	5.34	
Difference				1.47	7.55	7.55	0.87	0.66	0.29	-	1.29	-0.06	
Acadian ACWI Ex-US Fund (CF)	127,228,050	4.82	-	2.47	19.42	19.42	3.56	8.63	6.67	8.88	17.09	6.24	11/01/2005
Custom MSCI ACW Ex US Index (USD) (Net)				0.96	11.62	11.62	0.80	5.40	3.95	6.62	15.62	4.82	
Difference				1.51	7.80	7.80	2.76	3.23	2.72	2.26	1.47	1.42	
IM All ACWI Ex US (SA+CF) Median				0.48	10.12	10.12	0.54	6.00	4.43	7.15	16.45	5.43	
Rank				17	3	3	12	14	9	8	43	29	
Acadian International All Cap (SA)	768,964	0.03	-	-	-	-	-	-	-	-	-	-	11/01/2005
MSCI EAFE IM Index (USD) (Net)				-0.62	11.02	11.02	1.96	6.13	4.31	6.87	17.51	5.02	
Difference				-	-	-	-	-	-	-	-	-	
IM All EAFE (SA+CF) Median				-0.11	10.34	10.34	2.05	6.77	4.60	7.60	17.79	5.43	
Rank				-	-	-	-	-	-	-	-	-	
Mondrian International Equity (SA)	680,145	0.03	-	-	-	-	-	-	-	-	-	-	07/01/2005
MSCI EAFE Index (USD) (Net)				-0.42	11.54	11.54	2.89	6.46	4.33	6.76	18.24	5.22	
Difference				-	-	-	-	-	-	-	-	-	
IM All EAFE (SA+CF) Median				-0.11	10.34	10.34	2.05	6.77	4.60	7.60	17.79	5.82	
Rank				-	-	-	-	-	-	-	-	-	
Fixed Income	518,187,197	19.65	21.00	0.19	3.48	3.48	-2.87	0.01	1.78	-	6.47	2.75	01/01/2011
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	2.01	
Difference				0.12	0.85	0.85	0.15	0.24	0.43	-	0.94	0.74	
Core Fixed Income	466,458,420	17.68	19.00	0.16	2.77	2.77	-2.90	-	-	-	5.72	-2.49	09/01/2020
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference				0.09	0.14	0.14	0.12	-	-	-	0.19	0.14	



	All	ocation						Perfor	mance (%	<b>b</b> )			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
BlackRock US Agg (SA)	355,448,063	13.48	-	0.12	2.65	2.65	-2.99	-0.21	-	-	5.67	-0.03	06/01/2019
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	0.02	
Difference				0.05	0.02	0.02	0.03	0.02	-	-	0.14	-0.05	
IM U.S. Broad Mkt Core FI (SA+CF)				0.18	2.97	2.97	-2.90	0.05	1.52	2.91	5.80	0.31	
Rank				74	73	73	60	77	-	-	55	85	
PIMCO Core (SA)	111,010,357	4.21	-	0.27	3.19	3.19	-2.63	-	-	-	5.90	-2.13	09/01/2020
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference				0.20	0.56	0.56	0.39	-	-	-	0.37	0.50	
IM U.S. Broad Mkt Core FI (SA+CF)				0.18	2.97	2.97	-2.90	0.05	1.52	2.91	5.80	-2.36	
Rank				24	41	41	21	-	-	-	44	30	
Emerging Markets Debt	51,546,051	1.95	2.00	0.40	9.68	9.68	-2.20	-			12.10	-1.01	09/01/2020
JPM Emg Mkts Bond Gbl Index (USD)				0.44	8.35	8.35	-2.22	0.27	2.35	4.98	10.45	-1.05	
Difference				-0.04	1.33	1.33	0.02	-	-	-	1.65	0.04	
Wellington Opportunistic EMD (CF)	51,546,051	1.95	-	0.40	9.68	9.68	-2.20	0.57	2.63	-	12.10	4.66	12/01/2009
JPM Emg Mkts Bond Gbl Index (USD)				0.44	8.35	8.35	-2.22	0.27	2.35	4.98	10.45	4.34	
Difference				-0.04	1.33	1.33	0.02	0.30	0.28	-	1.65	0.32	
IM Emerging Markets Debt (SA+CF) Median				0.11	8.45	8.45	-1.68	0.66	2.14	4.78	11.96	3.82	
Rank				41	33	33	66	54	28	-	48	21	
High Yield Fixed Income	155,943	0.01	0.00	-	-	-	-	-	-	-	-	-	06/01/2006
Bloomberg US Corp Hi Yld Index				1.09	10.44	10.44	1.64	3.92	4.31	7.44	13.45	6.48	
Difference				-	-	-	-	-	-	-	-	-	
PIMCO Liquidation (SA)	155,943	0.01	-	-	-	-	-	-	-	-	-	-	08/01/2018
Bloomberg US Corp Hi Yld Index				1.09	10.44	10.44	1.64	3.92	4.31	7.44	13.45	4.38	
Difference				-	-	-	-	-	-	-	-	-	
IM U.S. High Yield Bonds (SA+CF) Median				1.27	9.85	9.85	1.84	3.72	3.92	6.90	12.04	4.12	
Rank				-	-	-	-	-	-	-	-	-	
Private Debt	253,573,696	9.61	10.00	2.93	11.13	11.13	10.67	8.67	-	-	9.95	8.23	01/01/2018
CS Lvg'd Loan Index+2% (Spliced)				2.38	13.26	13.26	8.08	6.93	5.29	6.42	15.30	6.27	
Difference				0.55	-2.13	-2.13	2.59	1.74	-	-	-5.35	1.96	
Private Equity	290,798,969	11.02	10.00	4.00	6.19	6.19	14.35	19.57	18.82	-	4.81	18.18	01/01/2013
Cambridge US Prvt Eq Index				0.00	5.57	5.57	7.02	14.64	13.25	14.82	9.07	14.15	
Difference				4.00	0.62	0.62	7.33	4.93	5.57	-	-4.26	4.03	



	Alle	ocation						Perfor	mance (%	»)			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Non-Core Real Estate	75,175,295	2.85	4.00	1.31	2.44	2.44	9.02	7.17			1.95	9.18	09/01/2014
NCREIF ODCE Index+2% (Spliced)				-0.17	-8.18	-8.18	3.04	4.08	6.42	7.50	-10.96	6.54	
Difference				1.48	10.62	10.62	5.98	3.09	-	-	12.91	2.64	
Inflation Hedging Assets (Spliced)	248,349,825	9.42	11.00	-0.25	-3.20	-3.20	-0.58	-0.64	3.59	-	-5.75	6.37	01/01/2011
CPI+2.5% (Spliced)				1.21	5.55	5.55	7.59	6.41	7.61	8.30	5.94	8.71	
Difference				-1.46	-8.75	-8.75	-8.17	-7.05	-4.02	-	-11.69	-2.34	
TIPS	68,624,347	2.60	2.00	0.93	2.80	2.80	-1.22	-	-	-	3.92	-0.20	09/01/2020
Bloomberg US Trsy US TIPS Index				0.79	2.71	2.71	-1.33	2.07	1.91	3.11	3.90	-0.28	
Difference				0.14	0.09	0.09	0.11	-	-	-	0.02	0.08	
BlackRock TIPS (SA)	68,624,347	2.60	-	0.93	2.81	2.81	-1.22	2.12	1.90	-	3.92	2.70	12/01/2009
Bloomberg US Trsy US TIPS Index				0.79	2.71	2.71	-1.33	2.07	1.91	3.11	3.90	2.71	
Difference				0.14	0.10	0.10	0.11	0.05	-0.01	-	0.02	-0.01	
IM U.S. TIPS (SA+CF) Median				0.85	2.68	2.68	-1.37	2.03	1.89	3.03	3.81	2.63	
Rank				28	42	42	39	41	44	-	37	44	
Core Real Estate	88,267,702	3.35	4.00	-1.89	-10.33	-10.33	-0.65	-0.85	3.13	-	-16.07	6.03	01/01/2011
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	7.18	
Difference				-1.23	-0.34	-0.34	-1.67	-3.12	-2.34	-	-3.34	-1.15	
UBS Trumbull Properties (CF)	75,538,764	2.86	-	-1.80	-10.34	-10.34	-0.65	-0.83	2.75	4.61	-16.11	4.14	07/01/2005
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	5.27	
Difference				-1.14	-0.35	-0.35	-1.67	-3.10	-2.72	-2.01	-3.38	-1.13	
Hammes HIGH Fund (CF)	9,937,953	0.38	-	2.67	-	-	-	-	-	-	-	-0.53	01/01/2024
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	-3.22	
Difference				3.33	-	-	-	-	-	-	-	2.69	
Blue Owl Real Estate VI LP	2,789,503	0.11	-	-14.17	-	-	-	-	-	-	-	-14.17	02/01/2024
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	-3.22	
Difference				-13.51	-	-	-	-	-	-	-	-10.95	
Farmland	44,643,156	1.69	2.00	0.25	-1.17	-1.17	2.30		-		1.76	2.48	08/01/2020
NCREIF Farmland Index (TR)				-0.21	2.54	2.54	6.77	5.82	6.90	9.28	4.96	6.45	
Difference				0.46	-3.71	-3.71	-4.47	-	-	-	-3.20	-3.97	
Nuveen Global Agriculture (CF)	44,643,156	1.69	-	0.25	-1.17	-1.17	2.30	-	-	-	1.76	2.28	04/01/2020
NCREIF Farmland Index (TR)				-0.21	2.54	2.54	6.77	5.82	6.90	9.28	4.96	6.08	
Difference				0.46	-3.71	-3.71	-4.47	-	-	-	-3.20	-3.80	

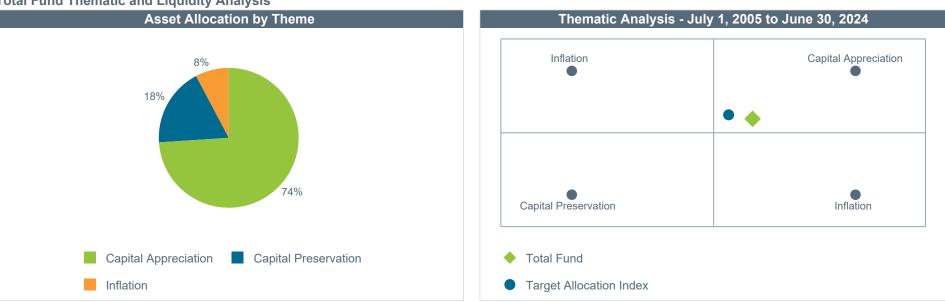


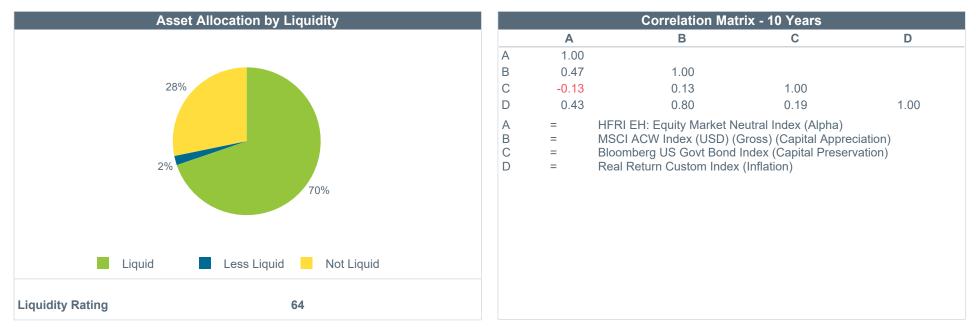
	Alle	ocation						Perfor	mance (%	5)			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Private Infrastructure	46,814,621	1.77	3.00	0.29	0.29	0.29	-	-	-	-	-	0.29	07/01/2023
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	6.06	
Difference				-1.05	-5.77	-5.77	-	-	-	-	-	-5.77	
IFM Global Infrastructure Fund (CF)	40,505,978	1.54	-	-0.13	-	-	-	-	-	-	-	-0.13	02/01/2024
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	3.13	
Difference				-1.47	-	-	-	-	-	-	-	-3.26	
IFM Net Zero Infrastructure Fund (CF)	6,308,643	0.24	-	3.04	-	-	-	-	-	-	-	3.04	03/01/2024
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	2.24	
Difference				1.70	-	-	-	-	-	-	-	0.80	
Cash Equivalents	1,374,243	0.05	0.00	1.28	5.81	5.81	3.40	2.28	1.14	-	5.15	0.86	01/01/2011
ICE BofAML 3 Mo US T-Bill Index				1.32	5.40	5.40	3.03	2.16	1.51	1.04	5.02	1.14	
Difference				-0.04	0.41	0.41	0.37	0.12	-0.37	-	0.13	-0.28	



### Vermont State Employees' Retirement System Total Fund Thematic and Liquidity Analysis

### As of June 30, 2024

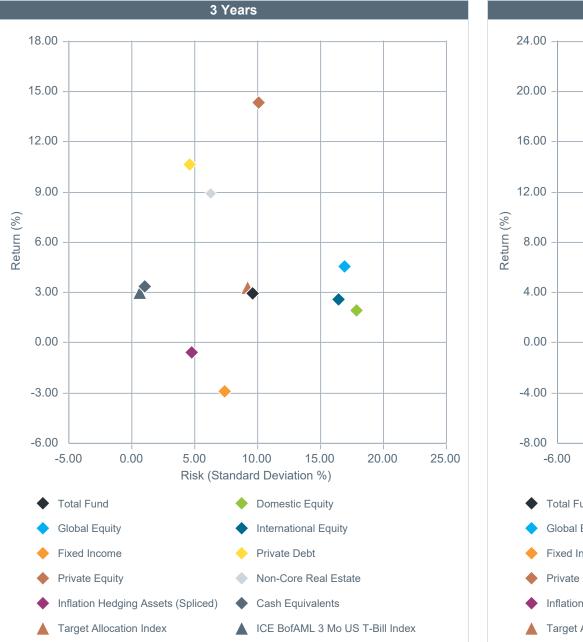


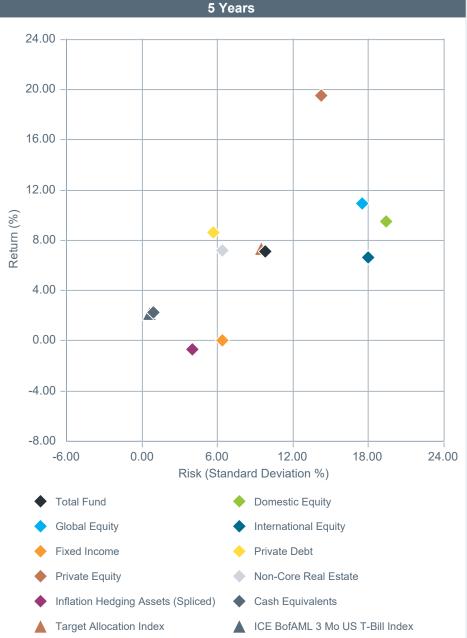


Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic, and custom index descriptions. Allocations may not sum to 100% due to rounding.



## Vermont State Employees' Retirement System Risk and Return

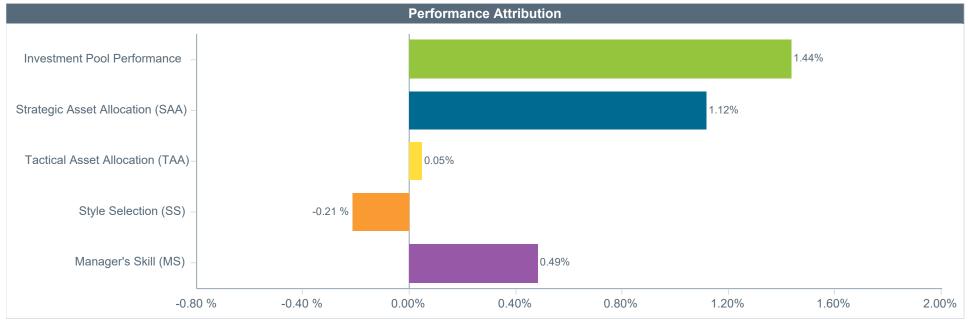




Performance shown is net of fees. Calculation is based on monthly periodicity. Funds or composites with less history than the specified time period will not appear in the chart.



### Vermont State Employees' Retirement System Total Fund Attribution - IDP

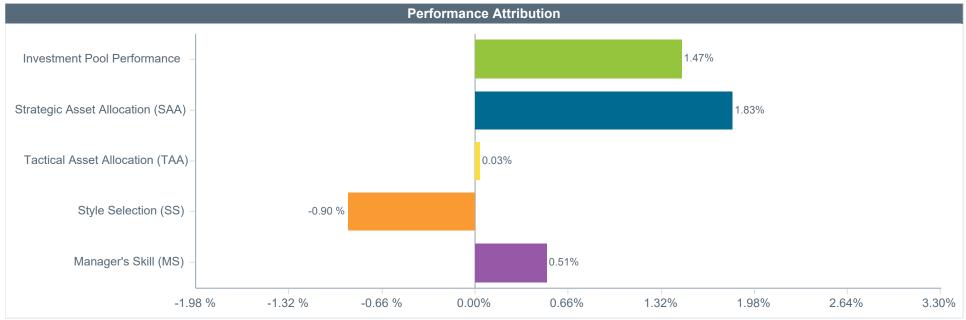


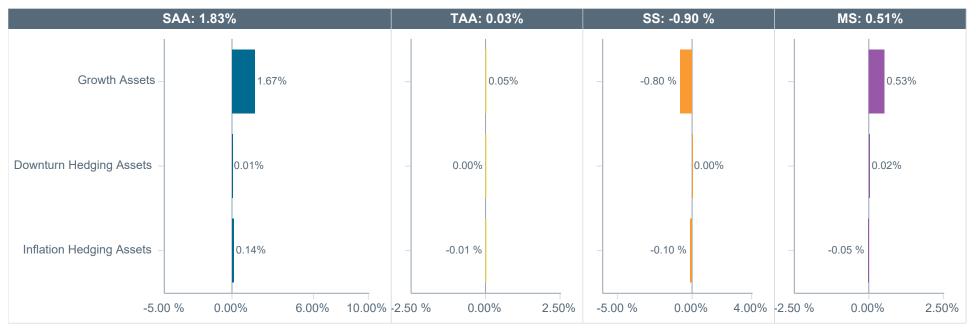
	SAA: 1.12%				TAA:	0.05%			SS: -0	.21 %			MS: (	).49%
US Large Cap Equity –		0.17%		_	0.00%			_	-0.28 %			_	0.00%	
US SMID Cap Equities -	-0.13 %			_	0.00%			_		0.03%		_	-0.05 %	
International Equity -		0.07%		_	-0.02 %			_	0.00%			_		0.07%
Global Equity -		0.72%		_		0.10%		_		0.04%		_	-0.03 %	
Private Equity -		0.00%		_	0.00%			_		0.00%		_		0.44%
Global Fixed Income -		0.00%		_	0.00%			_		0.01%		_	0.00%	
Private Debt -		0.24%		_	-0.02 %			_	0.00%			_		0.05%
Non-Core Real Estate -	0.00%			_		0.00%		_	0.00%			_		0.04%
Core Fixed Income –		0.01%		_	0.00%			_		0.00%		_		0.02%
Core Real Estate -	-0.02 %			_		0.00%		_		0.00%		_	-0.04 %	
TIPS –		0.02%		_		0.01%		_		0.00%		_		0.00%
Farmland –	0.00%			_		0.00%		_		0.00%		_		0.01%
Private Infrastructure -		0.04%		_	-0.02 %			_		0.00%		_	-0.02 %	
Cash Equivalents -		0.00%		_		0.00%		_		0.00%		_	0.00%	
High Yield Fixed Income		0.00%		_		0.00%		_		0.00%		_		0.00%
-4.00	0.0	0%	5.00%	-2.50 %	6 0.0	0%	2.50%	-2.50 %	6 0.00	0%	2.50%	-2.50	% 0.0	0% 2.50

Performance shown is net of fees. Calculation is based on monthly. Private Asset market values, performance and benchmarks are valued quarterly and shown as of most recently available quarter end, adjusted for subsequent cash flows. RVK cautions that the interpretation of time-weighted data on non-marketable investments, such as Private Equity, is imperfect at best and can potentially be misleading. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



### Vermont State Employees' Retirement System Total Fund Attribution - IDP





Performance shown is gross of fees. Calculation is based on monthly. Private Asset market values, performance and benchmarks are valued quarterly and shown as of most recently available quarter end, adjusted for subsequent cash flows. RVK cautions that the interpretation of time-weighted data on non-marketable investments, such as Private Equity, is imperfect at best and can potentially be misleading. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.





### Vermont State Teachers' Retirement System Asset Allocation By Manager

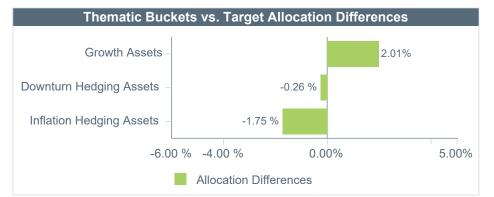
June 30, 2024 : \$2,776,727,708		Market Value (\$)	Allocation (%)
	Blackrock S&P 500 (Eql Wtd) (SA)	108,323,829	3.90
	Champlain US Mid Cap Core (SA)	79,081,820	2.85
	SSgA Russell 2000 Growth (Ex Tobacco) (SA)	10,212	0.00
	Acadian International All Cap (SA)	974,800	0.04
	Acadian ACWI Ex-US Fund (CF)	145,792,545	5.25
	Mondrian International Equity (SA)	696,607	0.03
	BlackRock MSCI ACW IMI (SA)	704,783,323	25.38
	Blackrock MSCI World LCTR (SA)	99,925,432	3.60
	Artisan Global Opportunities (CF)	159,621,515	5.75
	PIMCO Liquidation (SA)	98,762	0.00
	Wellington Opportunistic EMD (CF)	56,533,482	2.04
	PIMCO Unconstrained (SA)	6,633	0.00
	Private Debt	265,843,637	9.57
	Private Equity	301,132,629	10.84
	Non-Core Real Estate	76,607,967	2.76
	BlackRock US Agg (SA)	395,849,135	14.26
	PIMCO Core (SA)	122,874,135	4.43
	Vermont Cash (SA)	1,599,531	0.06
	BlackRock TIPS (SA)	65,981,809	2.38
	UBS Trumbull Properties (CF)	81,585,202	2.94
	Hammes HIGH Fund (CF)	10,927,149	0.39
	Blue Owl Real Estate VI LP	3,005,355	0.11
	Farmland	44,414,124	1.60
	Private Infrastructure	51,056,476	1.84
	Real Estate Cash (CF)	1,600	0.00

Allocations shown may not sum up to 100% exactly due to rounding. Market values for SSgA Russell 2000 Growth (SA), PIMCO Unconstrained (SA), Mondrian International Equity (SA), and Acadian International All Cap (SA) represent residual assets after liquidation.



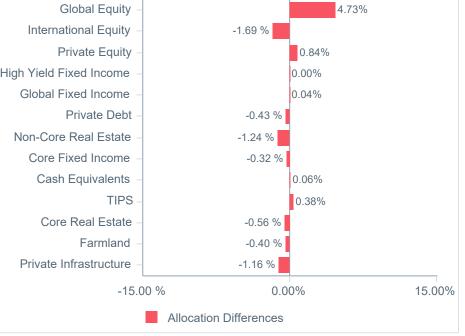
### **Vermont State Teachers' Retirement System Total Fund Asset Allocation vs. Target Allocation**

(\$)	(%)	Target (%)
1,999,433,192	72.01	70.00
520,322,802	18.74	19.00
256,971,714	9.25	11.00
2,776,727,708	100.00	100.00
	1,999,433,192 520,322,802 256,971,714	1,999,433,19272.01520,322,80218.74256,971,7149.25

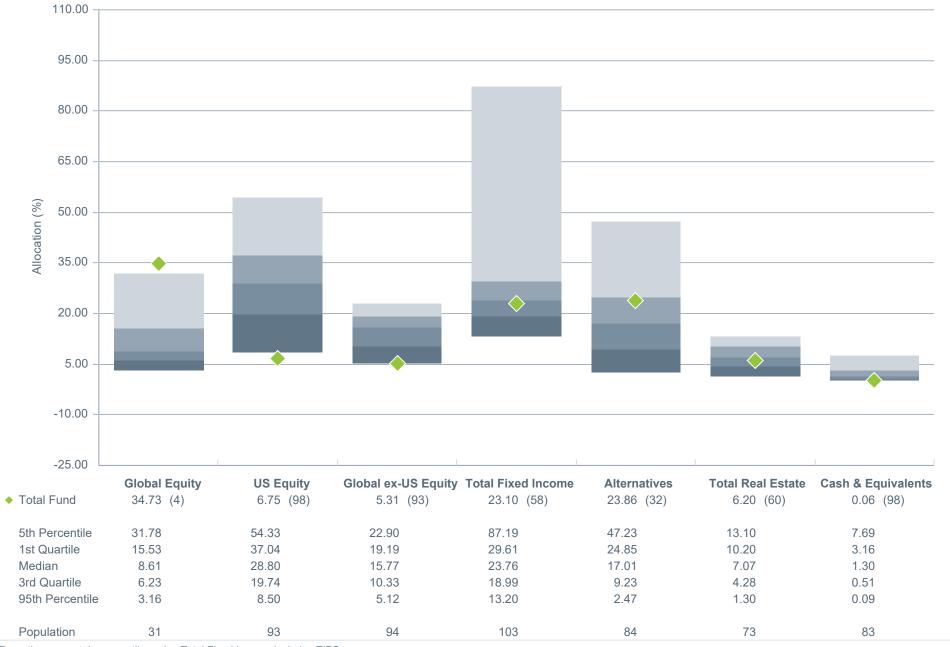


Detailed Ass	set Allocation vs. Ta	rget Allocation	
	Market Value (\$)	Allocation (%)	Target (%)
US Large Cap Equity	108,323,829	3.90	4.00
US SMID Cap Equities	79,092,032	2.85	3.00
Global Equity	964,330,270	34.73	30.00
International Equity	147,463,952	5.31	7.00
Private Equity	301,132,629	10.84	10.00
High Yield Fixed Income	98,762	0.00	0.00
Global Fixed Income	56,540,115	2.04	2.00
Private Debt	265,843,637	9.57	10.00
Non-Core Real Estate	76,607,967	2.76	4.00
Core Fixed Income	518,723,270	18.68	19.00
Cash Equivalents	1,599,532	0.06	0.00
TIPS	65,981,809	2.38	2.00
Core Real Estate	95,519,306	3.44	4.00
Farmland	44,414,124	1.60	2.00
Private Infrastructure	51,056,476	1.84	3.00
Total Fund	2,776,727,708	100.00	100.00

### **Detailed Asset Allocation vs. Target Allocation Differences** US Large Cap Equity -0.10 % US SMID Cap Equities -0.15 % Global Equity 4.73%

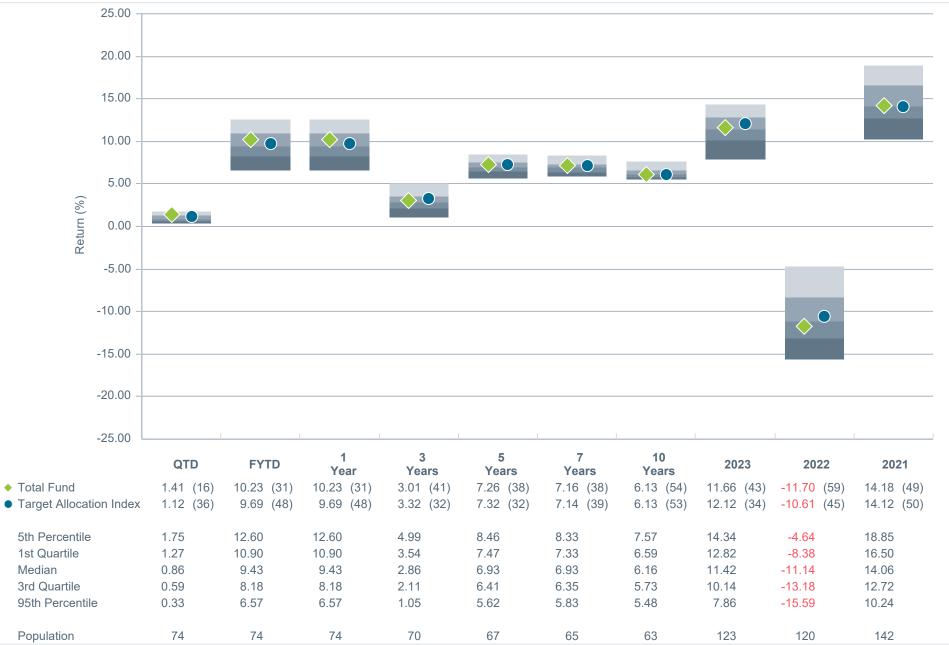


### Vermont State Teachers' Retirement System All Public Plans (\$1B to \$10B) (Custom PG) Plan Sponsor TF Asset Allocation





Parentheses contain percentile ranks. Total Fixed Income includes TIPS.

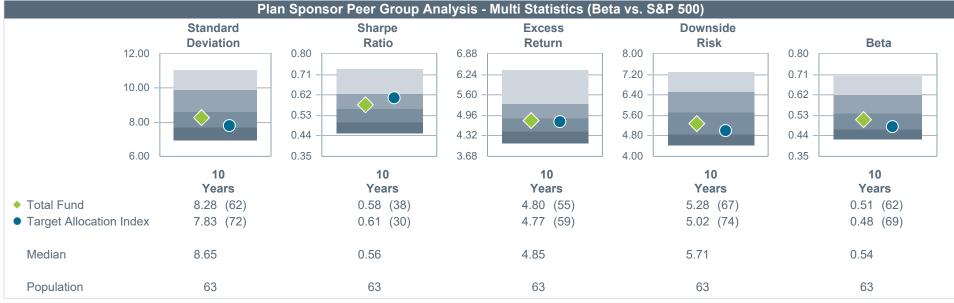


Performance shown is net of fees. Parentheses contain percentile ranks.



### Vermont State Teachers' Retirement System Vermont State Teachers' Retirement System vs. All Public Plans (\$1B to \$10B) (Custom PG)





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



	Allocatio	on					Perfor	mance (%)	)			
	Market Value (\$)	Actual (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Total Fund	2,776,727,708	100.00	1.41	10.23	10.23	3.01	7.26	6.13	8.08	11.66	6.08	07/01/2005
Target Allocation Index			1.12	9.69	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference			0.29	0.54	0.54	-0.31	-0.06	0.00	0.59	-0.46	-0.13	
Actual Allocation Index			0.94	9.92	9.92	2.60	6.71	5.73	7.35	12.30	5.86	
Difference			0.47	0.31	0.31	0.41	0.55	0.40	0.73	-0.64	0.22	
Thematic Target Allocation Index			1.83	13.95	13.95	3.65	-	-	-	16.87	-	
Difference			-0.42	-3.72	-3.72	-0.64	-	-	-	-5.21	-	
Growth Assets	1,999,433,192	72.01	1.97	14.18	14.18	5.07	-	-	-	15.76	10.55	09/01/2020
MSCI ACW IM Index (USD) (Net)			2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	10.18	
Difference			-0.41	-4.22	-4.22	0.37	-	-	-	-5.82	0.37	
Downturn Hedging Assets	520,322,802	18.74	0.17	2.70	2.70	-2.95	-	-	-	5.62	-2.53	09/01/2020
Bloomberg US Agg Bond Index			0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference			0.10	0.07	0.07	0.07	-	-	-	0.09	0.10	
Inflation Hedging Assets	256,971,714	9.25	-0.33	-3.67	-3.67	0.20	-	-	-	-6.14	0.35	09/01/2020
Consumer Price Index+2.5%			1.21	5.55	5.55	7.59	6.77	5.37	5.10	5.94	7.70	
Difference			-1.54	-9.22	-9.22	-7.39	-	-	-	-12.08	-7.35	



	All	ocation						Perfor	mance (%	6)			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Total Fund	2,776,727,708	100.00	100.00	1.41	10.23	10.23	3.01	7.26	6.13	8.08	11.66	6.08	07/01/2005
Target Allocation Index				1.12	9.69	9.69	3.32	7.32	6.13	7.49	12.12	6.21	
Difference				0.29	0.54	0.54	-0.31	-0.06	0.00	0.59	-0.46	-0.13	
Actual Allocation Index				0.94	9.92	9.92	2.60	6.71	5.73	7.35	12.30	5.86	
Difference				0.47	0.31	0.31	0.41	0.55	0.40	0.73	-0.64	0.22	
All Public Plans (\$1B to \$10B)				0.86	9.43	9.43	2.86	6.93	6.16	8.30	11.42	6.43	
Rank				16	31	31	41	38	54	67	43	75	
Domestic Equity	187,415,860	6.75	7.00	-3.72	9.11	9.11	1.77	9.43	9.57	-	14.43	11.15	01/01/2011
Russell 3000 Index				3.22	23.12	23.12	8.05	14.14	12.15	14.49	25.96	13.13	
Difference				-6.94	-14.01	-14.01	-6.28	-4.71	-2.58	-	-11.53	-1.98	
US Large Cap Equity	108,323,829	3.90	4.00	-2.67	11.57	11.57	4.76	10.90	10.07	13.40	13.86	9.40	07/01/2005
S&P 500 Index (Cap Wtd)				4.28	24.56	24.56	10.01	15.05	12.86	14.82	26.29	10.50	
Difference				-6.95	-12.99	-12.99	-5.25	-4.15	-2.79	-1.42	-12.43	-1.10	
Blackrock S&P 500 (Eql Wtd) (SA)	108,323,829	3.90	-	-2.67	11.57	11.57	4.70	10.86	-	-	13.86	10.86	07/01/2019
S&P 500 Index (Eq Wtd)				-2.63	11.79	11.79	4.84	10.94	10.04	14.00	13.87	10.94	
Difference				-0.04	-0.22	-0.22	-0.14	-0.08	-	-	-0.01	-0.08	
IM U.S. Large Cap Equity (SA+CF) Median				2.53	23.00	23.00	8.00	13.53	11.85	14.06	24.36	13.53	
Rank				89	92	92	88	73	-	-	76	73	
US SMID Cap Equities	79,092,032	2.85	3.00	-5.12	5.71	5.71	-1.89	7.44	9.06	12.89	14.91	8.83	07/01/2005
Russell 2500 Index				-4.27	10.47	10.47	-0.29	8.31	7.99	12.36	17.42	8.68	
Difference				-0.85	-4.76	-4.76	-1.60	-0.87	1.07	0.53	-2.51	0.15	
Champlain US Mid Cap Core (SA)	79,081,820	2.85	-	-5.12	5.72	5.72	-1.89	7.44	9.69	-	14.91	12.22	10/01/2009
Custom SMID Cap Equity Index				-3.30	11.52	11.52	-0.08	8.46	7.98	12.33	17.15	11.17	
Difference				-1.82	-5.80	-5.80	-1.81	-1.02	1.71	-	-2.24	1.05	
IM U.S. SMID Cap Equity (SA+CF) Median				-3.73	10.74	10.74	1.21	9.01	8.69	12.60	16.45	11.53	
Rank				80	79	79	75	72	24	-	61	27	
Global Equity	964,330,270	34.73	30.00	2.38	19.03	19.03	4.59	10.90	-	-	22.27	7.07	02/01/2018
MSCI ACW IM Index (USD) (Net)				2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	7.82	
Difference				0.00	0.63	0.63	-0.11	0.54	-	-	0.69	-0.75	
BlackRock MSCI ACW IMI (SA)	704,783,323	25.38	-	2.52	18.81	18.81	5.02	10.74	-	-	22.06	10.74	07/01/2019
MSCI ACW IM Index (USD) (Net)				2.38	18.40	18.40	4.70	10.36	8.17	10.33	21.58	10.36	
Difference				0.14	0.41	0.41	0.32	0.38	-	-	0.48	0.38	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	9.67	
Rank				27	32	32	36	37	-	-	36	37	



	All	ocation						Perfor	mance (%	)			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Blackrock MSCI World LCTR (SA)	99,925,432	3.60	-	2.83	18.69	18.69	-	-	-	-	22.14	4.70	09/01/2021
MSCI Wrld Index (USD) (Net)				2.63	20.19	20.19	6.86	11.78	9.16	11.07	23.79	5.68	
Difference				0.20	-1.50	-1.50	-	-	-	-	-1.65	-0.98	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	2.92	
Rank				24	33	33	-	-	-	-	36	33	
Artisan Global Opportunities (CF)	159,621,515	5.75	-	1.43	20.32	20.32	1.08	11.30	-	-	23.53	10.81	07/01/2018
MSCI ACW Index (USD) (Net)				2.87	19.38	19.38	5.43	10.76	8.43	10.35	22.20	9.90	
Difference				-1.44	0.94	0.94	-4.35	0.54	-	-	1.33	0.91	
IM Global Equity (SA+CF) Median				0.73	14.28	14.28	3.73	9.67	7.92	10.58	19.40	8.89	
Rank				42	28	28	77	29	-	-	28	26	
International Equity	147,463,952	5.31	7.00	2.43	19.17	19.17	2.53	6.65	4.51	-	16.90	5.22	01/01/2011
Custom MSCI ACW Ex US Composite Index (USD) (Net)				0.96	11.62	11.62	1.74	5.99	4.25	6.82	15.62	5.34	
Difference				1.47	7.55	7.55	0.79	0.66	0.26	-	1.28	-0.12	
Acadian ACWI Ex-US Fund (CF)	145,792,545	5.25	-	2.47	19.42	19.42	3.56	8.63	6.67	8.88	17.09	6.24	11/01/2005
Custom MSCI ACW Ex US Index (USD) (Net)				0.96	11.62	11.62	0.80	5.40	3.95	6.62	15.62	4.82	
Difference				1.51	7.80	7.80	2.76	3.23	2.72	2.26	1.47	1.42	
IM All ACWI Ex US (SA+CF) Median				0.48	10.12	10.12	0.54	6.00	4.43	7.15	16.45	5.43	
Rank				17	3	3	12	14	9	8	43	29	
Acadian International All Cap (SA)	974,800	0.04	-	-	-	-	-	-	-	-	-	-	11/01/2005
MSCI EAFE IM Index (USD) (Net)				-0.62	11.02	11.02	1.96	6.13	4.31	6.87	17.51	5.02	
Difference				-	-	-	-	-	-	-	-	-	
IM All EAFE (SA+CF) Median				-0.11	10.34	10.34	2.05	6.77	4.60	7.60	17.79	5.43	
Rank				-	-	-	-	-	-	-	-	-	
Mondrian International Equity (SA)	696,607	0.03	-	-	-	-	-	-	-	-	-	-	07/01/2005
MSCI EAFE Index (USD) (Net)				-0.42	11.54	11.54	2.89	6.46	4.33	6.76	18.24	5.22	
Difference				-	-	-	-	-	-	-	-	-	
IM All EAFE (SA+CF) Median				-0.11	10.34	10.34	2.05	6.77	4.60	7.60	17.79	5.82	
Rank				-	-	-	-	-	-	-	-	-	
Fixed Income	575,362,146	20.72	21.00	0.18	3.46	3.46	-2.90	0.00	1.80	-	6.44	2.76	01/01/2011
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	2.01	
Difference				0.11	0.83	0.83	0.12	0.23	0.45	-	0.91	0.75	
Core Fixed Income	518,723,270	18.68	19.00	0.16	2.77	2.77	-2.90	-	-		5.72	-2.49	09/01/2020
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference				0.09	0.14	0.14	0.12	_	-	_	0.19	0.14	



	All	ocation						Perfor	mance (%	<b>b</b> )			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
BlackRock US Agg (SA)	395,849,135	14.26	-	0.12	2.64	2.64	-2.99	-0.21	-	-	5.65	-0.03	06/01/2019
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	0.02	
Difference				0.05	0.01	0.01	0.03	0.02	-	-	0.12	-0.05	
IM U.S. Broad Mkt Core FI (SA+CF)				0.18	2.97	2.97	-2.90	0.05	1.52	2.91	5.80	0.31	
Rank				74	75	75	60	77	-	-	56	85	
PIMCO Core (SA)	122,874,135	4.43	-	0.27	3.19	3.19	-2.62	-	-	-	5.90	-2.12	09/01/2020
Bloomberg US Agg Bond Index				0.07	2.63	2.63	-3.02	-0.23	1.35	2.50	5.53	-2.63	
Difference				0.20	0.56	0.56	0.40	-	-	-	0.37	0.51	
IM U.S. Broad Mkt Core FI (SA+CF)				0.18	2.97	2.97	-2.90	0.05	1.52	2.91	5.80	-2.36	
Rank				24	41	41	20	-	-	-	44	30	
Emerging Markets Debt	56,533,482	2.04	2.00	0.40	9.68	9.68	-2.20	-	-	-	12.10	-1.01	09/01/2020
JPM Emg Mkts Bond Gbl Index (USD)				0.44	8.35	8.35	-2.22	0.27	2.35	4.98	10.45	-1.05	
Difference				-0.04	1.33	1.33	0.02	-	-	-	1.65	0.04	
Wellington Opportunistic EMD (CF)	56,533,482	2.04	-	0.40	9.68	9.68	-2.20	0.57	2.64	-	12.10	4.66	12/01/2009
JPM Emg Mkts Bond Gbl Index (USD)				0.44	8.35	8.35	-2.22	0.27	2.35	4.98	10.45	4.34	
Difference				-0.04	1.33	1.33	0.02	0.30	0.29	-	1.65	0.32	
IM Emerging Markets Debt (SA+CF) Median				0.11	8.45	8.45	-1.68	0.66	2.14	4.78	11.96	3.82	
Rank				41	33	33	66	54	28	-	48	21	
High Yield Fixed Income	98,762	0.00	0.00	-	-	-	-	-	-	-	-	-	05/01/2006
Bloomberg US Corp Hi Yld Index				1.09	10.44	10.44	1.64	3.92	4.31	7.44	13.45	6.44	
Difference				-	-	-	-	-	-	-	-	-	
PIMCO Liquidation (SA)	98,762	0.00	-	-	-	-	-	-	-	-	-	-	08/01/2018
Bloomberg US Corp Hi Yld Index				1.09	10.44	10.44	1.64	3.92	4.31	7.44	13.45	4.38	
Difference				-	-	-	-	-	-	-	-	-	
IM U.S. High Yield Bonds (SA+CF) Median				1.27	9.85	9.85	1.84	3.72	3.92	6.90	12.04	4.12	
Rank				-	-	-	-	-	-	-	-	-	
Private Debt	265,843,637	9.57	10.00	2.95	11.10	11.10	10.65	8.66	-	-	9.91	8.21	01/01/2018
CS Lvg'd Loan Index+2% (Spliced)				2.38	13.26	13.26	8.08	6.93	5.29	6.42	15.30	6.27	
Difference				0.57	-2.16	-2.16	2.57	1.73	-	-	-5.39	1.94	
Private Equity	301,132,629	10.84	10.00	3.98	6.16	6.16	14.33	19.59	18.82	-	4.77	17.57	01/01/2013
Cambridge US Prvt Eq Index				0.00	5.57	5.57	7.02	14.64	13.25	14.82	9.07	14.15	
Difference				3.98	0.59	0.59	7.31	4.95	5.57	-	-4.30	3.42	



	All	ocation						Perfor	mance (%	<b>6</b> )			
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Non-Core Real Estate	76,607,967	2.76	4.00	1.28	2.33	2.33	8.94	7.11	-	-	1.80	9.36	09/01/2014
NCREIF ODCE Index+2% (Spliced)				-0.17	-8.18	-8.18	3.04	4.08	6.42	7.50	-10.96	6.54	
Difference				1.45	10.51	10.51	5.90	3.03	-	-	12.76	2.82	
Inflation Hedging Assets (Spliced)	256,971,714	9.25	11.00	-0.33	-3.67	-3.67	0.20	-0.18	3.79	-	-6.14	6.54	01/01/2011
CPI+2.5% (Spliced)				1.21	5.55	5.55	7.59	6.41	7.61	8.30	5.94	8.71	
Difference				-1.54	-9.22	-9.22	-7.39	-6.59	-3.82	-	-12.08	-2.17	
TIPS	65,981,809	2.38	2.00	0.93	2.82	2.82	-1.22	-	-	-	3.92	-0.19	09/01/2020
Bloomberg US Trsy US TIPS Index				0.79	2.71	2.71	-1.33	2.07	1.91	3.11	3.90	-0.28	
Difference				0.14	0.11	0.11	0.11	-	-	-	0.02	0.09	
BlackRock TIPS (SA)	65,981,809	2.38	-	0.93	2.82	2.82	-1.22	2.12	1.90	-	3.92	2.70	12/01/2009
Bloomberg US Trsy US TIPS Index				0.79	2.71	2.71	-1.33	2.07	1.91	3.11	3.90	2.71	
Difference				0.14	0.11	0.11	0.11	0.05	-0.01	-	0.02	-0.01	
IM U.S. TIPS (SA+CF) Median				0.85	2.68	2.68	-1.37	2.03	1.89	3.03	3.81	2.63	
Rank				28	42	42	39	40	44	-	37	44	
Core Real Estate	95,519,306	3.44	4.00	-1.88	-10.32	-10.32	1.14	0.21	3.64	-	-16.07	6.44	01/01/2011
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	7.18	
Difference				-1.22	-0.33	-0.33	0.12	-2.06	-1.83	-	-3.34	-0.74	
UBS Trumbull Properties (CF)	81,585,202	2.94	-	-1.80	-10.34	-10.34	1.14	0.24	3.38	5.06	-16.11	4.49	07/01/2005
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	5.27	
Difference				-1.14	-0.35	-0.35	0.12	-2.03	-2.09	-1.56	-3.38	-0.78	
Hammes HIGH Fund (CF)	10,927,149	0.39	-	2.67	-	-	-	-	-	-	-	-0.53	01/01/2024
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	-3.22	
Difference				3.33	-	-	-	-	-	-	-	2.69	
Blue Owl Real Estate VI LP	3,005,355	0.11	-	-14.17	-	-	-	-	-	-	-	-14.17	02/01/2024
NCREIF ODCE Index (AWA) (Net)				-0.66	-9.99	-9.99	1.02	2.27	5.47	6.62	-12.73	-3.22	
Difference				-13.51	-	-	-	-	-	-	-	-10.95	
Farmland	44,414,124	1.60	2.00	0.25	-1.17	-1.17	2.30	-	-		1.76	2.48	08/01/2020
NCREIF Farmland Index (TR)				-0.21	2.54	2.54	6.77	5.82	6.90	9.28	4.96	6.45	
Difference				0.46	-3.71	-3.71	-4.47	-	-	-	-3.20	-3.97	
Nuveen Global Agriculture (CF)	44,414,124	1.60	-	0.25	-1.17	-1.17	2.30	-	-	-	1.76	2.28	04/01/2020
NCREIF Farmland Index (TR)				-0.21	2.54	2.54	6.77	5.82	6.90	9.28	4.96	6.08	
Difference				0.46	-3.71	-3.71	-4.47	-	-	-	-3.20	-3.80	



	Alle					Perfor	mance (%	)					
	Market Value (\$)	Actual (%)	Policy (%)	QTD	FYTD	1 Year	3 Years	5 Years	10 Years	15 Years	2023	Since Incep.	Inception Date
Private Infrastructure	51,056,476	1.84	3.00	0.28	0.28	0.28	-	-	-	-	-	0.28	07/01/2023
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	6.06	
Difference				-1.06	-5.78	-5.78	-	-	-	-	-	-5.78	
IFM Global Infrastructure Fund (CF)	44,261,699	1.59	-	-0.13	-	-	-	-	-	-	-	-0.13	02/01/2024
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	3.13	
Difference				-1.47	-	-	-	-	-	-	-	-3.26	
IFM Net Zero Infrastructure Fund (CF)	6,794,777	0.24	-	3.04	-	-	-	-	-	-	-	3.04	03/01/2024
Consumer Price Index+3%				1.34	6.06	6.06	8.11	7.29	5.88	5.61	6.45	2.24	
Difference				1.70	-	-	-	-	-	-	-	0.80	
Cash Equivalents	1,599,532	0.06	0.00	1.28	5.33	5.33	3.22	2.20	1.11	-	4.65	0.84	01/01/2011
ICE BofAML 3 Mo US T-Bill Index				1.32	5.40	5.40	3.03	2.16	1.51	1.04	5.02	1.14	
Difference				-0.04	-0.07	-0.07	0.19	0.04	-0.40	-	-0.37	-0.30	



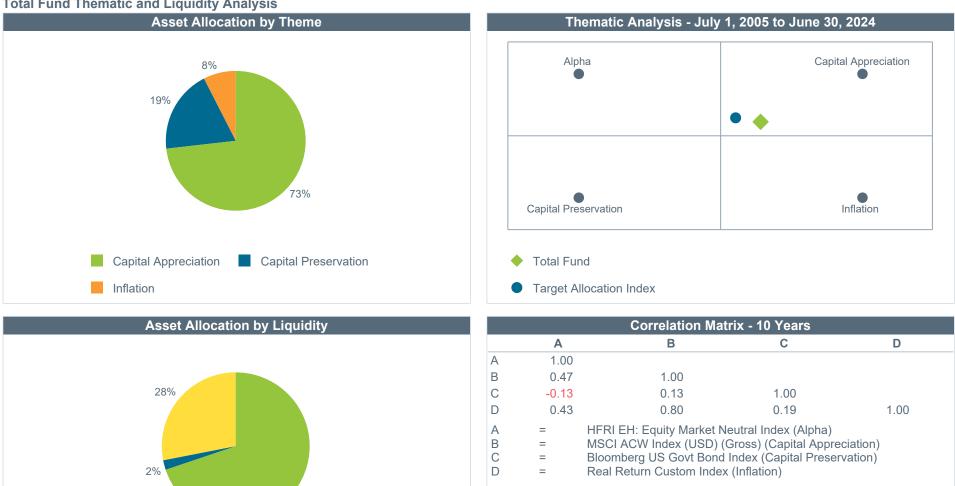
### **Vermont State Teachers' Retirement System**

### As of June 30, 2024

**Total Fund Thematic and Liquidity Analysis** 

Liauid

**Liquidity Rating** 



Asset Allocation by Theme is based on dedicated manager allocations; as such, thematic allocations are approximations. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating. Please see the Glossary for additional information regarding liquidity, thematic, and custom index descriptions. Allocations may not sum to 100% due to rounding.

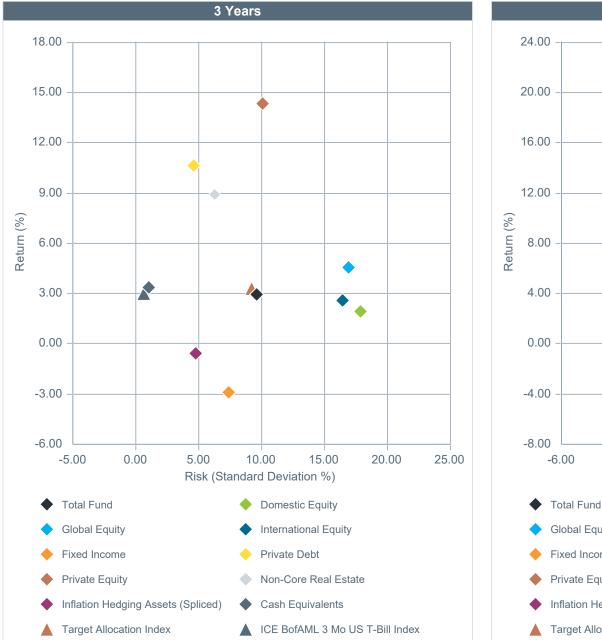
70%

Less Liquid Not Liquid

64



## Vermont State Teachers' Retirement System Risk and Return

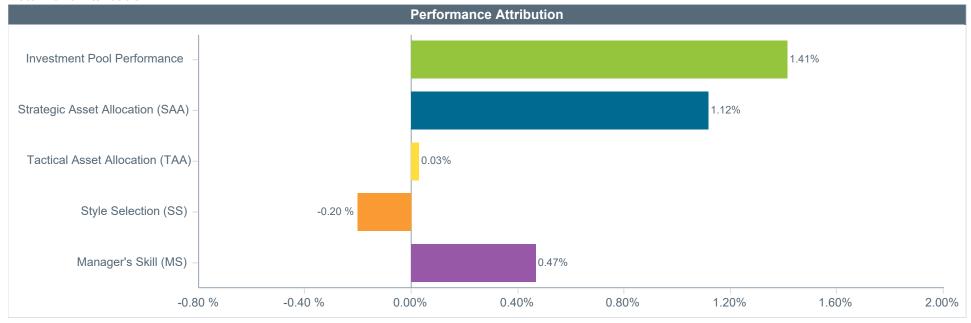


**5** Years ۲ 0.00 6.00 12.00 18.00 24.00 Risk (Standard Deviation %) Total Fund Domestic Equity International Equity Global Equity Private Debt Fixed Income ٠ Non-Core Real Estate **Private Equity** ۲ Inflation Hedging Assets (Spliced) Cash Equivalents ٠ Target Allocation Index ICE BofAML 3 Mo US T-Bill Index 

Performance shown is net of fees. Calculation is based on monthly periodicity. Funds or composites with less history than the specified time period will not appear in the chart.



### Vermont State Teachers' Retirement System Total Fund Attribution - IDP

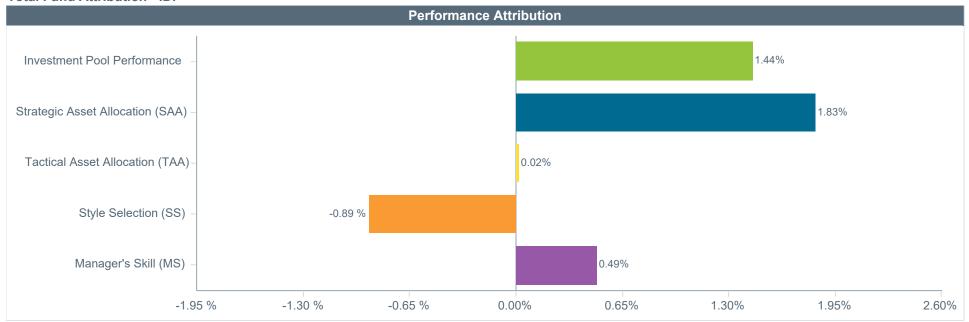


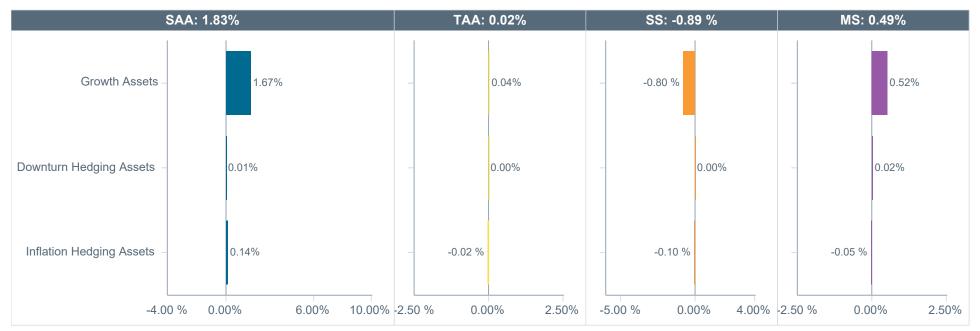
	SAA: 1.12%				TAA:	0.03%			SS: -0	.20 %			MS: (	).47%
US Large Cap Equity –		0.17%		-	-0.01 %			_	-0.27 %			-	0.00%	
US SMID Cap Equities –	-0.13 %			_	0.00%			_		0.03%			-0.06 %	
International Equity -		0.07%		_	-0.02 %			_	0.00%			_		0.08%
Global Equity –		0.72%		_		0.09%		_		0.04%		_	-0.03 %	Ē
Private Equity -		0.00%		_	0.00%			_		0.00%		_		0.42%
Global Fixed Income -		0.00%		_		0.00%		_		0.01%		_	0.00%	
Private Debt -		0.24%		_	-0.03 %			_	0.00%			_		0.05%
Non-Core Real Estate -	0.00%			_		0.00%		_	0.00%			-		0.04%
Core Fixed Income –		0.01%		_	0.00%			_		0.00%		_		0.02%
Core Real Estate -	-0.02 %			_		0.00%		_		0.00%		_	-0.04 %	
TIPS –		0.02%		_		0.00%		_		0.00%		_		0.00%
Farmland –	0.00%			_		0.00%		_		0.00%		_		0.01%
Private Infrastructure -		0.04%		_	-0.02 %			_		0.00%		_	-0.02 %	
Cash Equivalents –		0.00%		-		0.00%		_		0.00%		_	0.00%	
High Yield Fixed Income -		0.00%				0.00%		_		0.00%				0.00%
-3.00	0 % 0.0	0% 3	3.00% 5.00%	-2.50 %	6 0.0	0%	2.50%	-2.50 %	0.00	)%	2.50%	-2.50 %	6 0.0	0% 2.50%

Performance shown is net of fees. Calculation is based on monthly. Private Asset market values, performance and benchmarks are valued quarterly and shown as of most recently available quarter end, adjusted for subsequent cash flows. RVK cautions that the interpretation of time-weighted data on non-marketable investments, such as Private Equity, is imperfect at best and can potentially be misleading. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



### Vermont State Teachers' Retirement System Total Fund Attribution - IDP





Performance shown is gross of fees. Calculation is based on monthly. Private Asset market values, performance and benchmarks are valued quarterly and shown as of most recently available quarter end, adjusted for subsequent cash flows. RVK cautions that the interpretation of time-weighted data on non-marketable investments, such as Private Equity, is imperfect at best and can potentially be misleading. See Glossary for additional information regarding the Total Fund Attribution - IDP calculation.



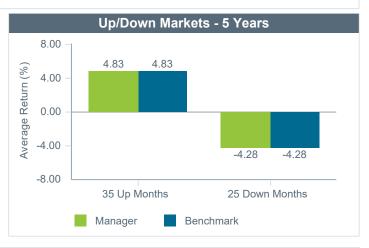
# **Investment Manager Profiles**

### Manager: Blackrock S&P 500 (Eql Wtd) (SA) Benchmark: S&P 500 Index (Eq Wtd)

**Peer Group:** IM U.S. Large Cap Equity (SA+CF)

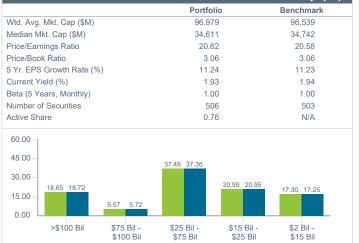
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019		
Manager	-2.67	11.57	4.73	10.88	N/A	N/A	13.85	-11.52	29.44	13.03	N/A		
Benchmark	-2.63	11.79	4.84	10.94	10.69	10.04	13.87	-11.45	29.63	12.83	29.24		
Difference	-0.04	-0.22	-0.11	-0.06	N/A	N/A	-0.02	-0.07	-0.19	0.20	N/A		
Peer Group Median	2.53	23.00	8.00	13.53	13.16	11.85	24.36	-17.59	26.49	16.93	29.74		
Rank	89	92	88	73	N/A	N/A	76	34	21	60	N/A		
Population	788	761	736	703	664	588	797	832	845	859	898		



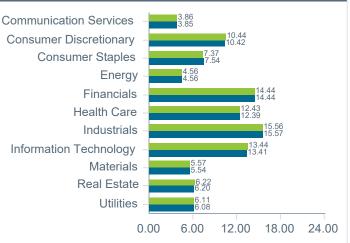




### Portfolio Characteristics and Dist. of Market Cap (%)



### Sector Weights (%)



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



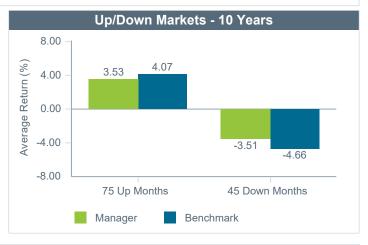
### Manager: Champlain US Mid Cap Core (SA)

Benchmark: Custom SMID Cap Equity Index

	Peer Group:	IM U.S. SMID (	Cap Equity (SA+CF)
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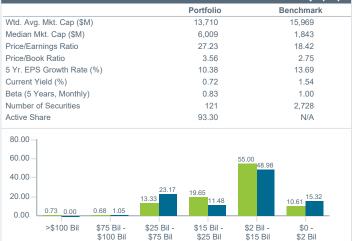
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019		
Manager	-5.12	5.75	-1.88	7.44	9.04	9.72	14.94	-23.95	19.93	27.32	27.29		
Benchmark	-3.30	11.52	-0.08	8.46	8.24	7.98	17.15	-18.85	18.74	19.99	26.65		
Difference	-1.82	-5.77	-1.80	-1.02	0.80	1.74	-2.21	-5.10	1.19	7.33	0.64		
Peer Group Median	-3.73	10.74	1.21	9.01	9.41	8.69	16.45	-17.67	22.31	16.31	28.21		
Rank	80	79	75	72	57	24	61	73	60	33	58		
Population	188	188	181	169	150	130	192	198	201	208	205		



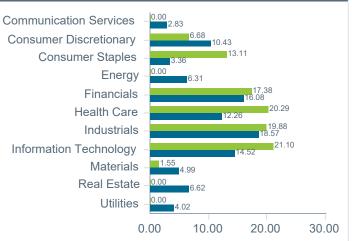




#### Portfolio Characteristics and Dist. of Market Cap (%)



### Sector Weights (%)



Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. The Custom SMID Cap Equity Index currently consists of 50% Russell Midcap Index and 50% Russell 2000 index. From 08/2020 through 12/2020 it consisted of 50% Russell 2500 index and 50% Russell 2000 index. Prior data was provided by the previous consultant.



### Manager: BlackRock MSCI ACW IMI (SA)

### **Benchmark:** MSCI ACW IM Index (USD) (Net) **Peer Group:** IM Global Equity (SA+CF)

Performance 1 3 5 7 10 QTD 2023 2022 2021 2020 2019 Year Years Years Years Years Manager 2.52 18.80 5.07 10.78 N/A N/A 22.05 -18.14 18.73 16.77 N/A 16.25 Benchmark 2.38 18.40 4.70 10.36 9 62 8 17 21.58 -18.40 18.22 26.35 0.26 0.52 Difference 0.14 0.40 0.37 0.42 N/A N/A 0.47 0.51 N/A Peer Group Median 0.73 14.28 3.73 9.67 9.22 7.92 19.40 -17.31 18.10 15.11 26.48 Rank 27 32 36 37 N/A N/A 36 54 45 45 N/A 464 425 302 525 Population 510 496 379 515 525 533 538







#### Portfolio Characteristics and Dist. of Market Cap (%) **Region Weights (%)** Portfolio Benchmark Wtd. Avg. Mkt. Cap (\$M) 590,881 589,227 65.32 Median Mkt. Cap (\$M) 2,274 2.271 Americas Price/Earnings Ratio 21.69 21.64 65.11 Price/Book Ratio 3.68 3.68 5 Yr. EPS Growth Rate (%) 15.18 15.22 16.88 Current Yield (%) 1.96 1.97 Asia Pacific 1.00 Beta (5 Years, Monthly) 1.00 16.90 Number of Securities 8,958 8,847 Active Share 0.93 N/A 17.59 EMEA 60.00 17.78 48.52 48.47 45.00 30.00 0.21 20.06 20.16 Other 15.58 15.56 15.00 0.21 6.01 6.04 6.57 6.60 3.26 3.18 0.00 >\$100 Bil \$75 Bil -\$25 Bil -\$15 Bil -\$2 Bil -\$0 -0.00 25.00 50.00 75.00 100.00 \$100 Bil \$75 Bil \$25 Bil \$15 Bil \$2 Bil

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



### Manager: Blackrock MSCI World LCTR (SA)

**Benchmark:** MSCI Wrld Index (USD) (Net) **Peer Group:** IM Global Equity (SA+CF)

Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019		
Manager	2.83	18.69	N/A	N/A	N/A	N/A	22.14	-19.40	N/A	N/A	N/A		
Benchmark	2.63	20.19	6.86	11.78	10.88	9.16	23.79	-18.14	21.82	15.90	27.67		
Difference	0.20	-1.50	N/A	N/A	N/A	N/A	-1.65	-1.26	N/A	N/A	N/A		
Peer Group Median	0.73	14.28	3.73	9.67	9.22	7.92	19.40	-17.31	18.10	15.11	26.48		
Rank	24	33	N/A	N/A	N/A	N/A	36	60	N/A	N/A	N/A		
Population	510	496	464	425	379	302	515	525	525	533	538		



Median

9.19



0.72



-0.89



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

5.03



7.35

### Manager: Artisan Global Opportunities (CF)

Benchmark: MSCI ACW IM Index (USD) (Net) Peer Group: IM Global Equity (SA+CF)

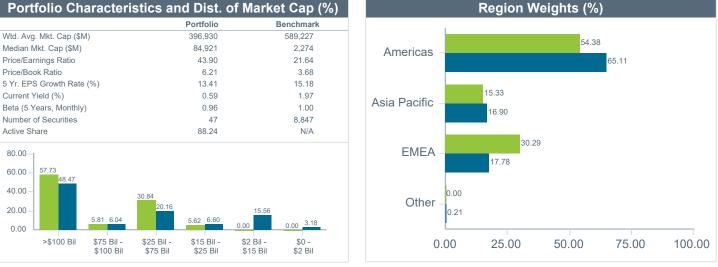
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019		
Manager	1.40	20.16	1.10	11.26	11.31	10.97	23.41	-30.20	14.10	40.32	35.89		
Benchmark	2.38	18.40	4.70	10.36	9.62	8.17	21.58	-18.40	18.22	16.25	26.35		
Difference	-0.98	1.76	-3.60	0.90	1.69	2.80	1.83	-11.80	-4.12	24.07	9.54		
Peer Group Median	0.73	14.28	3.73	9.67	9.22	7.92	19.40	-17.31	18.10	15.11	26.48		
Rank	42	29	77	30	23	11	28	92	76	11	9		
Population	510	496	464	425	379	302	515	525	525	533	538		











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



### Manager: Acadian ACW Ex US Equity (CF)

### Benchmark: MSCI ACW Ex US Index (USD) (Net) Peer Group: IM All ACWI Ex US (SA+CF)

Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019		
Manager	2.34	19.86	2.62	9.01	8.30	7.57	17.55	-16.23	14.99	14.46	20.84		
Benchmark	0.96	11.62	0.46	5.55	5.17	3.84	15.62	-16.00	7.82	10.65	21.51		
Difference	1.38	8.24	2.16	3.46	3.13	3.73	1.93	-0.23	7.17	3.81	-0.67		
Peer Group Median	0.57	10.59	1.06	6.85	6.49	5.23	17.15	-17.00	9.59	14.78	25.13		
Rank	15	3	32	15	13	10	47	46	10	51	73		
Population	138	138	138	137	137	133	139	149	154	166	173		



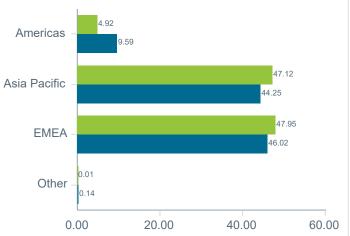




#### Portfolio Characteristics and Dist. of Market Cap (%)



### **Region Weights (%)**



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



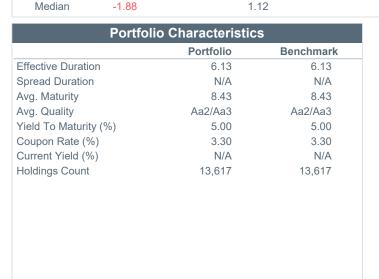
### Manager: BlackRock US Agg (SA)

· · · · · · · · · · · · · · · · ·													
Performance													
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019		
Manager	0.12	2.64	-2.99	-0.21	N/A	N/A	5.66	-13.08	-1.62	7.54	N/A		
Benchmark	0.07	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51	8.72		
Difference	0.05	0.01	0.03	0.02	N/A	N/A	0.13	-0.07	-0.07	0.03	N/A		
Peer Group Median	0.18	2.97	-2.90	0.05	1.09	1.52	5.80	-13.13	-1.47	8.03	8.82		
Rank	74	75	60	79	N/A	N/A	55	46	60	67	N/A		
Population	125	121	114	112	105	98	126	131	131	134	137		

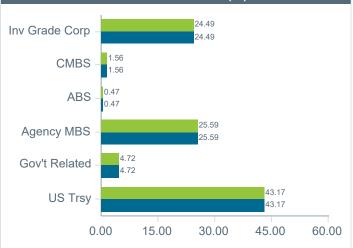








Sector Distribution (%)



Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Portfolio characteristics are proxied using benchmark statistics.



### Manager: PIMCO Core (SA) Benchmark: Bloomberg US Agg Bond Index

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

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	0.27	3.19	-2.64	N/A	N/A	N/A	5.90	-12.41	-1.68	N/A	N/A
Benchmark	0.07	2.63	-3.02	-0.23	0.86	1.35	5.53	-13.01	-1.55	7.51	8.72
Difference	0.20	0.56	0.38	N/A	N/A	N/A	0.37	0.60	-0.13	N/A	N/A
Peer Group Median	0.18	2.97	-2.90	0.05	1.09	1.52	5.80	-13.13	-1.47	8.03	8.82
Rank	24	41	22	N/A	N/A	N/A	44	17	70	N/A	N/A
Population	125	121	114	112	105	98	126	131	131	134	137

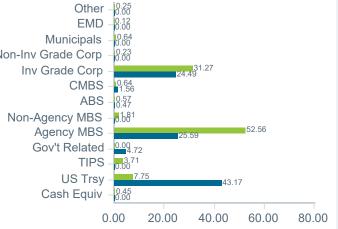






Portfo	Secto					
	Portfolio	Benchmark				
Effective Duration	6.00	6.13	Other –			
Spread Duration	3.79	N/A	EMD -			
Avg. Maturity	8.09	8.43	Municipals -			
Avg. Quality	Aa2	Aa2/Aa3	Non-Inv Grade Corp -00			
Yield To Maturity (%)	5.36	5.00	Inv Grade Corp -			
Coupon Rate (%)	4.60	3.30	CMBS -			
Current Yield (%)	N/A	N/A	ABS -			
Holdings Count	305	13,617	Non-Agency MBS -			
-			Agency MBS –			
			Gov't Related –			
			TIPS –			
			US Trsy –			
			Cash Equiv -0			
			0.0			

Sector Distribution (%)



Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Allocation to "other" consists of Euro/Yankees.



### Manager: Wellington Opportunistic EMD (CF)

### **Benchmark:** JPM Emg Mkts Bond Gbl Index (USD) **Peer Group:** IM Emerging Markets Debt (SA+CF)

Performance 3 5 10 1 7 QTD 2023 2022 2021 2020 2019 Year Years Years Years Years Manager 0.40 9.68 -2.20 0.57 1.62 2.63 12.10 -16.73 -3.32 7.69 15.84 Benchmark 0.44 8.35 -2.22 0.27 1.38 2.35 10.45 -16.45 -1.51 5.88 14.42 -0.04 1.33 0.02 1.65 -0.28 -1.81 1.42 Difference 0.30 0.24 0.28 1.81 Peer Group Median 0.11 8.45 0.66 1.58 2.14 11.96 -12.60 -2.63 5.96 13.82 -1.68 Rank 41 33 66 54 50 28 48 82 60 25 11 Population 118 117 112 108 104 87 125 132 134 137 137

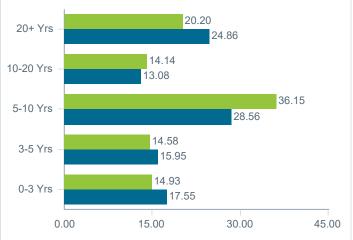






	Portfolio	Benchmark
Effective Duration	6.66	6.62
Spread Duration	6.35	6.59
Avg. Maturity	11.73	11.84
Avg. Quality	Ba1	Baa3
Yield To Maturity (%)	7.78	6.71
Coupon Rate (%)	5.71	5.03
Current Yield (%)	7.11	5.64
Holdings Count	392	972

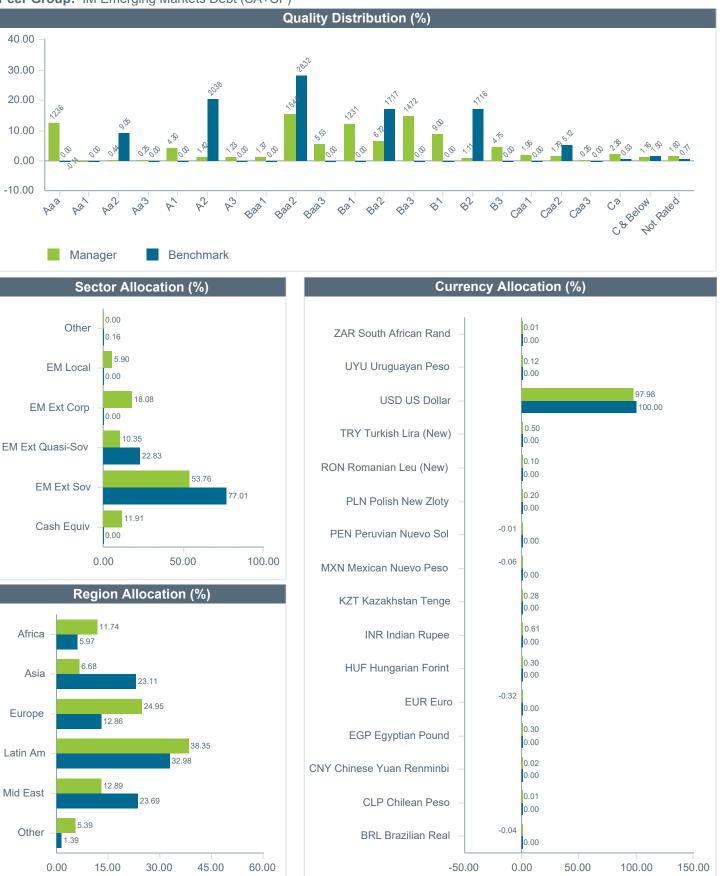






### Manager: Wellington Opportunistic EMD (CF)

### Benchmark: JPM Emg Mkts Bond Gbl Index (USD)



Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Region allocation to other consists of cash, cash equivalents, currency forwards, EM CDX and North America. Region allocation to other consists of EM goverment debt.



### Manager: Blackrock TIPS (SA) Benchmark: Bloomberg US Trsy US TIPS Index Peer Group: IM U.S. TIPS (SA+CF)

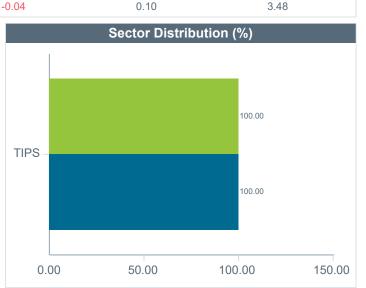
Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	0.93	2.81	-1.34	2.05	2.42	1.87	3.92	-12.01	5.81	10.97	8.33
Benchmark	0.79	2.71	-1.33	2.07	2.47	1.91	3.90	-11.85	5.96	10.99	8.43
Difference	0.14	0.10	-0.01	-0.02	-0.05	-0.04	0.02	-0.16	-0.15	-0.02	-0.10
Peer Group Median	0.85	2.68	-1.37	2.03	2.43	1.89	3.81	-11.94	5.68	10.61	8.34
Rank	28	42	45	45	52	60	37	63	39	36	51
Population	29	28	24	23	23	20	30	29	28	28	29







	Portfolio	Benchmark
Effective Duration	4.91	4.91
Spread Duration	4.91	4.91
Avg. Maturity	7.14	7.14
Avg. Quality	Aa1	Aa1
Yield To Maturity (%)	4.77	4.77
Coupon Rate (%)	0.91	0.91
Current Yield (%)	N/A	N/A
Holdings Count	48	48



Performance shown is net of fees and client specific. Calculation is based on monthly periodicity. Parentheses contain percentile ranks. Portfolio characteristics are proxied using benchmark statistics.



### Manager: UBS Trumbull Property (CF)

Benchmark: NCREIF ODCE Index (AWA) (Net)

Actual

Correlation 0.93

-0.37

-0.34

-0.47

-0.41

-0.41

-0.35

-0.11

-0.36

0.10

-0.69

0.20

0.91

0.93

**Actual Correlation - 10 Years** 

NCREIF ODCE Index (AWA) (Net)

MSCI EAFE Index (USD) (Net)

Bloomberg US Agg Bond Index

Bloomberg Cmdty Index (TR)

ICE BofAML 3 Mo US T-Bill Index

NCREIF ODCE Index (AWA) (Gross)

Cons Price Index (Unadjusted)

Wilshire US REIT Index

HFRI FOF Comp Index

NCREIF Property Index

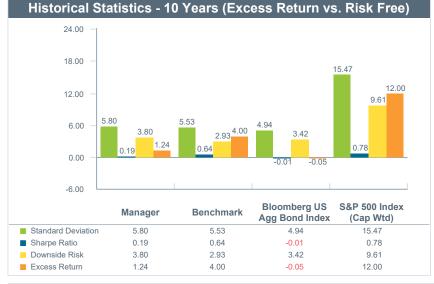
MSCI Emg Mkts Index (USD) (Net)

Bloomberg US Trsy US TIPS Index

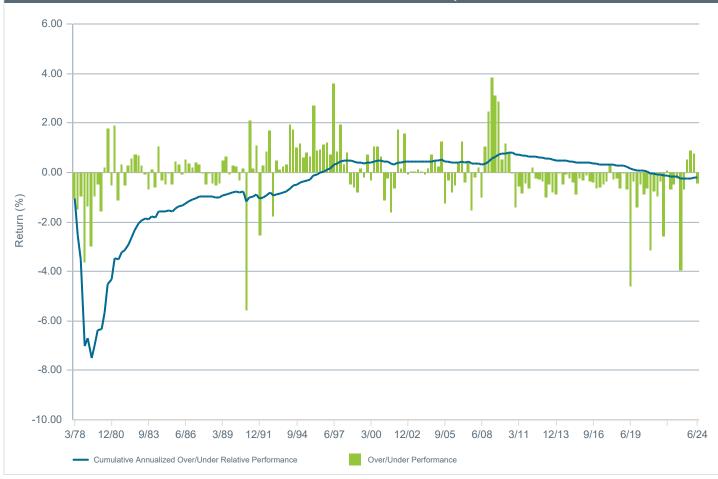
S&P 500 Index (Cap Wtd)

Russell 2000 Index

Performance											
	QTD	1 Year	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
Manager	-1.09	-8.45	-1.42	-0.97	0.15	2.60	-15.61	5.16	15.42	-4.74	-2.87
Benchmark	-0.66	-9.99	1.02	2.27	3.45	5.47	-12.73	6.55	21.02	0.34	4.39
Difference	-0.43	1.54	-2.44	-3.24	-3.30	-2.87	-2.88	-1.39	-5.60	-5.08	-7.26



### **Relative Performance - Since Inception**



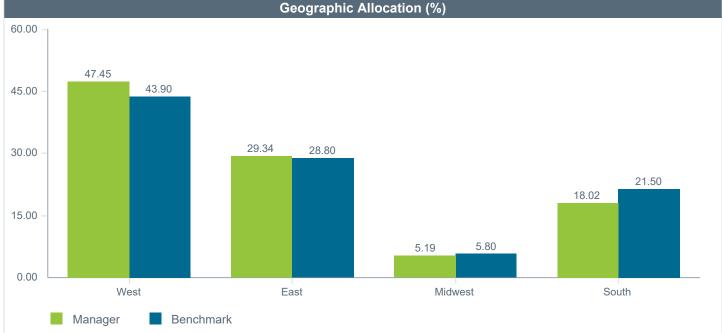


### Investment Strategy

The Fund pursues a diversified core real estate strategy that seeks to produce attractive risk-adjusted returns by focusing on selective acquisitions, diversification, active portfolio management, and asset management. The Fund invests in well-leased, stabilized assets in major US metropolitan markets and receives the majority of its return from the income component. Diversification for the Fund is consistently pursued on many levels, including geographic region, property type, and economic sector. The Fund has historically maintained a leverage ratio significantly lower than the NCREIF ODCE Index and invests 5-15% of its gross assets in value-added type real estate investment opportunities.

Investment Profile	
Fund Inception	1978
Legal Structure	LP
Fund Structure	Open-End
Gross Real Estate Assets (mm) \$	13,749
Fund Leverage %	22.20
Portfolio Occupancy %	92.00
Cash Reserve %	1.40
Number of Investments	124
Number of Limited Partners	434





Performance shown is net and product specific. Calculation is based on quarterly periodicity. Investment profile data shown is provided by the investment manager and is as of the most recently available quarter end. Allocation data shown is based on NAV. Benchmark allocation to "Other" consists of entertainment (theaters, golf courses, bowling alleys), healthcare (hospitals, clinics), manufactured homes, parking lots, self-storage units, senior living, and undeveloped land.



# Addendum & Glossary

# Vermont Pension Investment Commission Fee Schedule

	Fee Schedule	Market Value As of 06/30/2024 (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Blackrock S&P 500 (Eql Wtd) (SA)	0.020 % of Assets	254,512,831	50,903	0.020
Champlain US Mid Cap Core (SA)	0.850 % of First \$50 M 0.750 % of Next \$50 M 0.650 % Thereafter	179,359,452	1,315,836	0.734
BlackRock MSCI ACW IMI (SA)	0.025 % of Assets	1,674,824,073	418,706	0.025
Blackrock MSCI World LCTR (SA)	0.060 % of First \$100 M 0.050 % Thereafter	233,902,758	126,951	0.054
Artisan Global Opportunities (CF)	0.750 % of Assets	359,397,304	2,695,480	0.750
Acadian International All Cap (SA)	0.700 % of First \$25 M 0.600 % of Next \$25 M 0.500 % of Next \$25 M 0.300 % Thereafter	2,017,937	14,126	0.700
Acadian ACWI Ex-US Fund (CF)	0.700 % of First \$25 M 0.600 % of Next \$25 M 0.500 % of Next \$25 M 0.300 % Thereafter	318,483,345	1,180,450	0.371
Mondrian International Equity (SA)	0.500 % of First \$50 M 0.350 % of Next \$50 M 0.300 % Thereafter	1,636,106	8,181	0.500
Nellington Opportunistic EMD (CF)	0.550 % of Assets	126,585,365	696,220	0.550
PIMCO Liquidation (SA)	0.300 % of Assets	313,856	942	0.300
BlackRock US Agg (SA)	0.030 % of Assets	884,726,291	265,418	0.030
PIMCO Core (SA)	0.190 % of Assets	276,839,849	525,996	0.190
BlackRock TIPS (SA)	0.025 % of Assets	158,651,047	39,663	0.025
UBS Trumbull Properties (CF)	0.955 % of First \$10 M 0.825 % of Next \$15 M 0.805 % of Next \$25 M 0.790 % of Next \$50 M 0.670 % of Next \$150 M 0.600 % of Next \$150 M 0.560 % of Next \$200 M 0.520 % Thereafter	186,025,725	1,391,872	0.748
Hammes HIGH Fund (CF)	0.900 % of Assets	24,571,492	221,143	0.900
Total Fund		6,402,259,851	10,132,179	0.158

Mutual Fund fees are sourced from Morningstar and/or the investment manager. UBS also has a variable fee ranging from 0.00% to 0.25%. The variable fee has been suspended from 4/01/2018 to 3/31/2022. Total fund fee shown excludes fees on Private Assets.



## Vermont Pension Investment Commission Addendum

### Performance Related Comments

- RVK began monitoring the plan's assets as of 9/2020. Prior data was provided by the previous consultant.
- Performance shown is net of fees and client specific.
- Inception dates shown represent the first full month of available performance.
- Fiscal year ends 6/30.
- Private Asset market values and performance are lagged to match custodian reported net asset values. Accordingly, fund reported performance will lag benchmark reported performance.
- Composite and respective index inception dates for the thematic allocations to Growth Assets, Downturn Hedging Assets, and inflation Hedging Assets, begin as of 09/01/2020.
- PIMCO Liquidation (SA) consists of residual assets from Vermont Pension's High Yield allocation.
- During 12/2020, the Real Assets composite consisting of Core Real Estate, Non-Core Real Estate, and Private Infrastructure/Land was replaced by the Inflation Hedging Assets composite consisting of TIPS, Core Real Estate, and Private Infrastructure/Land. A new Non-Core Real Estate composite was created.
- Inflation Hedging Assets (Spliced) consists of the Real Return composite prior to 08/31/2020 and the Inflation Hedging Assets Composite thereafter.
- During 06/2021, the inception dates for Blackrock S&P 500, Artisan Global Opportunities and Wellington EMD were adjusted to reflect the first full month of performance.
- In an effort to preserve manager history, from 10/2005 through 08/2022 the Acadian Int'I All Cap (SA) returns have been backfilled into the Acadian ACWI Ex-US Fund (CF) manager return history.

### Decisions Made by the Commission Over the Last 18 Months

### Manager Additions

- Angelo Gordon Direct Lending, Harbourvest Dover X, Harbourvest XI Funds, Neuberger Berman, Benefit Street Partners II, Kennedy Lewis Capital II, Ares Pathfinder Fund I, Blackrock MSCI World LCTR (SA), Harbourvest HIPEP IX, Ares Pathfinder Core, Neuberger Berman V., Accel-KKR GCP IV LP, HCF VI, Acadian ACWI Ex-US, HarbourVest XII Venture, Cambridge Secondaries, Angelo Gordon Realty Value XI, HarbourVest Dover XI, Hammes Partners IV LP, Dunes Point Capital III LP, Hammes HIGH Fund (CF), Blue Owl Real Estate VI LP, IFM Global Infrastructure Fund (CF), IFM Net Zero Infrastructure Fund (CF), and KKR Direct Lending Evergreen LP.
   Manager Liquidations
- SGA International Small Cap (CF), Pinnacle Natural Resources, Blackrock Transition Account, Acadian International All Cap (SA), and Mondrian International Equity (SA). Policy Changes
- During 01/2021, the board approved an updated target allocation index and fund level benchmarks. Benchmark changes were reflected starting 01/2021.
- During 06/2021, the board approved updated target allocations. Benchmark changes were reflected starting 07/2021.
- During 06/2022, the board approved updated target allocations. Benchmark changes were reflected starting 07/2022.
- During 06/2023, the board approved updated target allocations. Benchmark changes were reflected starting 07/2023.
- During 06/2024, the board approved updated target allocations. Benchmark changes were reflected starting 07/2024, which includes updating the Global Equity weight from 30% to 32% and International Equity weight from 7% to 5% to capture the transition of the terminated Mondrian investment assets (IE) to the MSCI ACW IM Index (Net) (GE).

### **Historical Transition Comments**

- SGA International Small Cap (CF) was liquidated during 09/2020. Remaining market value represents residual assets.
- Angelo Gordon Direct Lending IV was funded during 09/2020.
- Wellington Small Cap Value (SA), SSgA Russell 2000 Growth (SA), Pinnacle Natural Resources (CF) and PIMCO Unconstrained (SA) were liquidated prior to 09/2020. Remaining market values represent residual assets.
- The Wellington Small Cap Value (SA) liquidation was completed during 03/2021.
- Ares Pathfinder Fund I was funded during 04/2021.
- During 06/2021, Blackrock Transition was liquidated.
- During 08/2021, Blackrock MSCI World LCTR (SA) was funded.
- The Pinnacle Natural Resources (CF) liquidation was completed during 09/2021.
- Ares Pathfinder Core was funded during 10/2021.



# Vermont Pension Investment Commission Addendum

### Historical Transition Comments (Cont'd)

- During 12/2021, Harbourvest HIPEP IX was funded.
- During 03/2022, Neuberger Berman Secondary Investment V was funded.
- During 06/2022, Accel-KKR GCP IV, LP was funded.
- During 07/2022, HCF VI was funded.
- During 08/2022, Acadian ACWI Ex-US Fund (CF), Angelo Gordon Direct Lending Fund V, Kennedy Lewis CP ILL CNTRL, and Siguler Guff SBOF V were funded, Acadian International All Cap (SA) was liquidated, and Mondrian International Equity (SA) allocation was reduced.
- During 09/2022, HarbvourVest XII Venture was funded.
- During 12/2022, Mondrian International Equity (SA) was liquidated with assets being transferred to BlackRock MSCI ACW IMI (SA). Cambridge Secondaries was funded and BlackRock Transition was funded to move assets to BlackRock MSCI ACW IMI (SA).
- During 03/2023, Angelo Gordon Realty XI was funded.
- During 06/2023, HarbourVest Dover XI was funded.
- During 08/2023, BlackRock Transition was liquidated.
- During 09/2023, Hammes Partners IV LP was funded.
- During 11/2023, Dunes Point Capital III LP was funded.
- During 12/2023, Hammes HIGH Fund (CF) was funded.
- During 01/2024, Blue Owl Real Estate VI LP and IFM Global Infrastructure Fund (CF) were funded.
- During 02/2024, IFM Net Zero Infrastructure Fund (CF) was funded.
- During 04/2024, KKR Direct Lending Evergreen LP was funded.

### Benchmark Comments

- As of 7/1/2023, the target allocation Index consists of 4% S&P 500 Index (Cap Wtd), 3% Russell 2500 Index, 30% MSCI ACW IM Index (USD) (Net), 7% MSCI ACW Ex US Index (USD) (Net), 19% Bloomberg US Aggregate Bond Index, 4% NCREIF ODCE Index (AWA) (Net)+2%, 2% JP Morgan Emerging Mkts Bond Gbl Index, 10% Credit Suisse Leveraged Loan Index + 2%, 10% Cambridge US PE Index, 2% NCREIF Farmland Index, 3% Consumer Priced Index (All Urban Consumers)+3%, 2% Bloomberg US TIPS Index and 4% NCREIF ODCE Index (AWA) (Net). From 1/2023 through 6/2023 the index consisted of 4% S&P 500 Index (Cap Wtd), 3% Russell 2500 Index, 29% MSCI ACW IM Index (USD) (Net), 7% MSCI ACW Ex US Index (USD) (Net), 19% Bloomberg US Aggregate Bond Index, 4% NCREIF ODCE Index (AWA) (Net)+2%, 4% JP Morgan Emerging Mkts Bond Gbl Index. 10% Credit Suisse Leveraged Loan Index + 2%. 10% Cambridge US PE Index. 2% NCREIF Farmland Index. 2% Consumer Priced Index (All Urban Consumers) +3%, 3% Bloomberg US TIPS Index and 3% NCREIF ODCE Index (AWA) (Net). From 7/2022 through 12/2022 the index consisted of 4% S&P 500 Index (Cap Wtd), 3% Russell 2500 Index, 7% MSCI EAFE Index, 29% MSCI ACW IM Index (USD) (Net), 19% Bloomberg US Aggregate Bond Index, 4% NCREIF ODCE Index (AWA) (Net)+2%, 4% JP Morgan Emerging Mkts Bond Gbl Index, 10% Credit Suisse Leveraged Loan Index + 2%, 10% Cambridge US PE Index, 2% NCREIF Farmland Index, 2% Consumer Priced Index (All Urban Consumers)+3%, 3% Bloomberg US TIPS Index and 3% NCREIF ODCE Index (AWA) (Net). From 07/2021 through 06/2022 the index consisted of 4% S&P 500 Index (Cap Wtd), 3% Russell 2500 Index, 7% MSCI EAFE Index, 29% MSCI ACW IM Index (USD) (Net), 19% Bloomberg US Aggregate Bond Index, 4% NCREIF ODCE Index (AWA) (Net)+2%, 4% JP Morgan Emerging Mkts Bond Gbl Index, 10% Credit Suisse Leveraged Loan Index + 2%, 10% Cambridge US PE Index, 3% NCREIF Farmland Index, 3% Bloomberg US TIPS Index and 4% NCREIF ODCE Index (AWA) (Net). From 01/2021 through 06/2021 the index consisted of 4% S&P 500 Index (Cap Wtd), 3% Russell 2500 Index, 5% MSCI EAFE Index, 29% MSCI ACW IM Index (USD) (Net), 2% MSCI EAFE Small Cap Index, 20% Bloomberg US Aggregate Bond Index, 3% NCREIF ODCE Index (AWA) (Net)+2%, 4% JP Morgan Emerging Mkts Bond Gbl Index, 10% Credit Suisse Leveraged Loan Index + 2%, 10% Cambridge US PE Index and 10% CPI+ 2.5%. From 08/31/2020 through 12/31/2020, the index consisted of 4% S&P 500 Index (Cap Wtd), 3% Russell 2500 Index, 5% MSCI EAFE Index, 29% MSCI ACW IM Index (USD) (Net), 2% MSCI EAFE Small Cap Index, 20% Bloomberg US Aggregate Bond Index, 3% Bloomberg US Treasury US TIPS Index (TR), 4% JP Morgan Emerging Mkts Bond Gbl Index, 10% S&P/LSTA Leveraged Loan Index (TR), 10% Cambridge US PE Index and 10% NCREIF Property Index. Prior data was provided by the previous consultant.
- The Actual Allocation Indices are calculated monthly using beginning of month investment weights applied to each corresponding benchmark return.
- The Custom SMID Cap Equity Index currently consists of 50% Russell Midcap Index and 50% Russell 2000 index. From 08/2020 through 12/2020 it consisted of 50% Russell 2500 index and 50% Russell 2000 index. From 08/2020 through 12/2020 it consisted of 50% Russell 2500 index and 50% Russell 2000 index.
- The CPI+2.5% (Spliced) consists of the NCREIF Property Index prior to 08/31/2020 and the Consumer Price Index+2.5% thereafter.



# Vermont Pension Investment Commission Addendum

### **Benchmark Comments (Cont'd)**

- CS Lvg'd Loan Index+2% (Spliced) consists of the S&P/LSTA Loan Index prior to 12/31/2020 and the Credit Suisse Leveraged Loan Index+2% thereafter.
- NCREIF ODCE Index+2% (Spliced) consists of the NCREIF Property Index prior to 12/31/2020 and the NCREIF ODCE Index (Net)+2% thereafter.
- In an effort to preserve benchmark history, from 11/2005 through 08/2022 the MSCI EAFE IM Index (USD) (Net) benchmark returns have been backfilled into the MSCI ACW Ex US Index (USD) (Net) return history. The benchmark name has been updated to the Custom MSCI ACW Ex US Index (USD) (Net) in the report to reflect this change.
- The Thematic Target Allocation Index currently consists of 70% MSCI ACW IM Index (USD) (Net), 19% Bloomberg US Aggregate Bond Index, and 11% Consumer Price Index+2.5%. From 08/2021 through 06/2023 it consisted of 71% MSCI ACW IM Index (USD) (Net), 19% Bloomberg US Aggregate Bond Index, and 10% Consumer Price Index+2.5%. From 09/2020 through 07/2021 it consisted of 70% MSCI ACW IM Index (USD) (Net), 20% Bloomberg US Aggregate Bond Index, and 10% Consumer Price Index+2.5%.
- In an effort to preserve benchmark history, from 07/2005 through 12/2022 the MSCI EAFE IM Index (USD) (Net) benchmark returns have been backfilled into the MSCI ACW Ex US Index (USD) (Net) return history. The benchmark name has been updated to the Custom MSCI ACW Ex US Composite Index (USD) (Net) in the report to reflect this change.



Active Return - The difference between the investment manager/composite performance relative to the performance of an appropriate market benchmark.

Active Share - Measures the degree to which the holdings of a fund differ from the holdings of the benchmark. Active share is calculated by taking the sum of the absolute value of the differences of the weight of each holding in the fund versus the weight of each holding in the benchmark and dividing by two.

Alpha - A measure of the difference between a portfolio's actual returns and its expected performance, given its level of risk as measured by beta. It is a measure of the portfolio's historical performance not explained by movements of the market or a portfolio's non-systematic return.

Alpha Ratio - A measure of a portfolio's non-systematic return per unit of downside risk. It is measured by dividing the alpha of a portfolio by the downside risk. The non-systematic return is a measure of a portfolio's historical performance not explained by movements of the market.

Average Quality - Bond quality ratings are reported using the investment managers' and the index providers' preferred rating agency. Average Quality for managers unable to provide this statistic is instead provided by Morningstar; if unavailable on Morningstar, it has been estimated using a credit quality distribution provided by the manager. There are two primary rating agencies in the US. Moody's assigns ratings on a system that employs up to four symbols (consisting of letters and numbers), such as, Aaa, Aa2, etc., with Aaa being the highest or safest rating. Standard & Poor's (S&P) employs a system that uses + and - along with letters, such as AAA, AA+, etc. The two rating agencies' systems are summarized below:

<u>S&amp;P</u>	<u>Moody's</u>	Explanation	<u>S&amp;P</u>	<u>Moody's</u>	Explanation		
Higher Cred	it Quality – In	vestment Grade	Lower Credit Quality – Below Investment Grade				
AAA	Aaa	Prime/Highest credit quality	BB+	Ba1	Speculative/Low credit quality		
AA+	Aa1	High credit quality	BB	Ba2			
AA	Aa2		BB-	Ba3			
AA-	Aa3		B+	B1	Highly speculative		
A+	A1	Upper-medium credit quality	В	B2			
А	A2		B-	B3			
A-	A3		CCC+	Caa1	Substantial credit/default risk		
BBB+	Baa1	Lower-medium credit quality	CCC	Caa2	Extremely speculative		
BBB	Baa2		CCC-	Caa3			
BBB-	Baa3		CC	Са	Vulnerable to default		
			С	Ca			
			D	С	In default		

Benchmark Effect - The difference between the blended return of each respective managers' benchmark within a composite and the composite's benchmark return.

Beta - A measure of the sensitivity of a portfolio to the movements in the market. It is a measure of a portfolio's non-diversifiable or systematic risk.

**Box Plots** - A graphical representation of the distribution of observations. From top to bottom, the four boxes represent the spread between the maximum value and the minimum value in each quartile. A quartile represents the values that divide the observations into four quarters (i.e., 1<sup>st</sup> quartile, 2<sup>nd</sup> quartile, 3<sup>rd</sup> quartile, and 4<sup>th</sup> quartile). The median observation is where the 2<sup>nd</sup> quartile and 3<sup>rd</sup> quartile meet.

**Buy and Hold Attribution** - At the beginning of the time period under analysis, the manager and benchmark portfolios are broken down into segments (i.e., styles, sectors, countries, and regions) based on the desired type of attribution. The formula assumes zero turn-over to the manager and benchmark portfolios throughout the period and calculates the segment returns ("buy and hold returns") to arrive at performance attribution. Due to portfolio turnover, buy and hold attribution may not accurately represent quarterly performance relative to the benchmark. Country, region, sector, and style allocations are as of the date one quarter prior to the reporting date, and the returns shown are for those segments throughout the quarter reported. Due to disclosure guidelines set by each investment manager, equity characteristics shown are as of the most recent date available. The following is the methodology for segment classification:

Sector - Attribution is calculated using the Global Industry Classification Standard (GICS), which is a detailed and comprehensive structure for sector and industry analysis. Stocks are classified by their primary sector as defined by S&P Capital IQ data. Attribution to "other" is the result of securities based in industries that do not fit into any GICS classification.

**Country/Region** - Attribution is calculated using the Morgan Stanley Capital International (MSCI) region standards. Stocks are classified by their domicile country/region, as defined by S&P Capital IQ data, and thus may differ from the classification of the investment manager and/or index provider. Attribution to "EMEA" represents securities based in Europe, the Middle East, and Africa. Attribution to "Other" is the result of securities based in countries/regions that do not fit into any MSCI classification.

Style - Stocks are classified into the following style boxes: large/mid/small vs. growth/neutral/value. Stocks are classified along large/mid/small categories at the time of the Russell index rebalancing, using the index market cap boundaries as cutoff points. Stocks are classified along growth/neutral/value categories at the time of the Russell index rebalancing, using the price/book ratio as supplied by S&P Capital IQ. Stocks in the Russell 3000 Index portfolio are sorted by price/book ratio; names with the highest price/book ratio that make up 1/3 of the total market capitalization are assigned to the growth category, and names that make up the subsequent 1/3 of the total market capitalization are assigned to the names are assigned to the value category. Stocks are unclassified when there is not enough data to determine a size and style metric.

Portfolio Characteristics and Buy and Hold Attribution reports utilize product-specific data for all mutual funds and commingled funds.



#### Capital Markets Review -

**Breakeven Inflation** - Measures the expected inflation rate at each stated maturity by taking the difference between the real yield of the inflationlinked maturity curve and the yield of the closest nominal Treasury maturity.

**Consumer Confidence** - Measures domestic consumer confidence as defined by the degree of optimism on the state of the economy that consumers express through saving and spending.

Consumer Price Index (CPI) - Measures the change in the price level of consumer goods and services.

**Federal Funds Rate** - The interest rate at which a depository institution lends funds maintained at the Federal Reserve to another depository institution overnight. It is one of the most influential interest rates in the US economy, since it affects monetary and financial conditions, which in turn have a bearing on key aspects of the broad economy including employment, growth and inflation.

Option-Adjusted Spread - Measures the flat spread of an index or bond to the Treasury yield curve after removing the effect of any embedded options.

Purchasing Managers Index (PMI) - Measures economic activity by surveying purchasing managers on a monthly basis as to whether business conditions have improved, worsened, or stayed the same.

Real Gross Domestic Product (Real GDP) - An inflation-adjusted measure that reflects the value of all goods and services produced by an economy in a given year.

Unemployment Rate - The percentage of the total labor force that is unemployed but actively seeking employment.

US Dollar Total Weighted Index - Measures the value of the US Dollar relative to a basket of other world currencies. It is calculated as the weighted geometric mean of the dollar's value versus the EUR, GBP, CAD, SEK, CHF, and JPY.

VIX - Measures the implied volatility of S&P 500 Index options by looking at the market's expectation of the S&P 500 Index volatility over the next 30 day period. Commonly referred to as the "fear index" or the "fear gauge."

Cash Flow Effect - The composite's active return minus the sum of each managers' active return minus the benchmark effect.

**Consistency** - The percentage of quarters that a product achieved a rate of return higher than that of its benchmark. The higher the consistency figure, the more value a manager has contributed to the product's performance.

Convexity - A measure of the shape of the curve that describes the relationship between bond prices and bond yields.

**Correlation** - A statistical measure of the relationship between asset class returns. A value of 1.00 is a perfect correlation; that is, the asset classes always move in the same direction. A value of -1.00 indicates a perfect negative correlation, in which the asset classes always move in opposite directions of each other. A value of 0 indicates there is no relationship between the direction of returns of the two asset classes. Correlation calculations only consider the direction of changes relative to two variables and not the magnitude of those changes.

Coupon Rate - The percentage rate of interest paid on a bond or fixed income security; it is typically paid twice per year.

Current Yield - The annual income of a security divided by the security's current price.

**Down Market Capture** - Down market by definition is negative benchmark return and down market capture represents the ratio in % terms of the average portfolios return over the benchmark during the down market period. The lower the value of the down market capture the better the product's performance.

**Downside Risk** - A measure similar to standard deviation that focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative returns for the selected periodicity. The higher the factor, the riskier the product.

Earnings Per Share - It is backward looking, calculated using the one year current EPS divided by the one year EPS five years ago.

Effective Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield.

Excess Return vs. Market - Average of the monthly arithmetic difference between the manager's return and the benchmark return over a specified time period, shown on an annualized basis.

**Excess Return vs. Risk Free** - Average of the monthly arithmetic difference between the manager's return and the risk-free return (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) over a specified time period, shown on an annualized basis.

Excess Risk - A measure of the standard deviation of a portfolio's performance relative to the risk-free return.

Expense Ratios - Morningstar is the source for mutual fund expense ratios.

Gain/Loss - The net increase or decrease in the market value of a portfolio excluding its Net Cash Flow for a given period.

**Indices** - All indices and related information are considered intellectual property and are licensed by each index provider. The indices may not be copied, used, or distributed without the index provider's prior written approval. Index providers make no warranties and bear no liability with respect to the indices, any related data, their quality, accuracy, suitability, and/or completeness.

Information Ratio - Measured by dividing the active rate of return by the tracking error. The higher the information ratio, the more value-added contribution by the manager.



Liability Driven Investing (LDI) - A method to optimally structure asset investments relative to liabilities. The change in liabilities is estimated by the Ryan Labs Generic PPA Index of appropriate duration for that Plan. This benchmark is based on generic data and is therefore an approximation. RVK is not an actuarial firm, and does not have actuarial expertise.

Estimated Funded Status - The estimated ratio of a Plan's assets relative to its future liabilities. This is calculated by dividing the Plan's asset market value by the estimated present value of its liabilities. The higher the estimated funded status, the better the Plan's ability to cover its projected benefit obligations. An estimated funded status of 100% indicates a Plan that is fully funded.

Estimated PV of Liabilities - An estimate of a Plan's future liabilities in present value terms. The beginning of the period liability is provided by the Plan's actuary. The period-end present value liability estimate provided in this report is derived by applying the estimated percentage change generated using the Ryan Labs Generic PPA Index with duration similar to that reported on the most recent actuarial valuation report. Duration of Liabilities - The sensitivity of the value of a Plan's liabilities to changes in interest rates, as calculated by the Plan's actuary. Duration of Assets - The dollar-weighted average duration of all the individual Plan assets.

Estimated Plan Hedge Ratio - The estimate of how well a Plan's investment portfolio is hedged against changes in interest rates - a primary driver of funded status movements. This is calculated by dividing the dollar-weighted values of both the Plan asset duration by the liability duration and multiplying by the estimated funded status. An estimated plan hedge ratio of zero indicates that the Plan's liabilities have not been hedged, whereas a value of one indicates fully hedged.

Modified Duration - The approximate percentage change in a bond's price for a 100 basis point change in yield, assuming the bonds' expected cash flows do not change.

**Mutual Fund Performance** - Whenever possible, manager performance is extended for any share class that does not have 10 years of history. Using Morningstar's methodology, a single ticker within the same fund family (often the oldest share class) is chosen to append historical performance.

**Net Cash Flow** - The sum, in dollars, of a portfolio's contributions and withdrawals. This includes all management fees and expenses only when performance shown is gross of fees.

#### Peer Groups -

Plan Sponsor Peer Groups - RVK utilizes the Mellon Analytical Solutions Trust Universe along with the Investment Metrics Plan Sponsor Universe. The combined Mellon Analytical Solutions Trust Universe and Investment Metrics Plan Sponsor Universe is used for comparison of total fund composite results and utilizes actual client performance compiled from consultant and custodian data. The Plan Sponsor Peer Group database includes performance and other quantitative data for over 2,100 plans which include corporate, endowment, foundation, public, and Taft Hartley plans. Investment Manager Peer Groups - RVK utilizes Investment Metrics' Peer Groups for investment manager peer comparison and ranking. The Investment Metrics Peer Group database includes performance and other quantitative data for over 840 investment management firms and 29,000 investments products, across more than 160 standard peer groups. Mutual Fund Peer Groups are net of fees.

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

1 - Highest Statistical Value 100 - Lowest Statistical Value

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

Performance Methodology - RVK calculates performance for investment managers and composites using different methodologies.

**Investment Managers** - Performance is calculated for interim periods between all large external cash flows for a given month and geometrically linked to calculate period returns. An external cash flow is defined as cash, securities, or assets that enter or exit a portfolio. RVK defines a "large cash flow" as a net aggregate cash flow of  $\geq 10\%$  of the beginning-period portfolio market value or any cash flow that causes RVK calculated performance to deviate from manager/custodian reported performance in excess of 5 basis points for a given month.

**Composites** - The Modified Dietz methodology is utilized to calculate asset class, sub-asset class, and total fund composite performance. The Modified Dietz method calculates a time-weighted total rate of return that considers the timing of external cash flows; however, it does not utilize interim period performance to mitigate the impact of significant cash in- and outflows to the composite.

RVK calculates performance beginning with the first full month following inception. Since inception performance may vary from manager reported performance due to RVK using the first full month of returns as the inception date. Performance for both managers and composites is annualized for periods greater than one year.

Portfolio Characteristics & Distribution (%) - Due to disclosure guidelines set by each investment manager, portfolio characteristics and distribution percentages shown are as of the most recent date available.

Price to Earnings Ratio - The ratio valuing a company's current share price relative to its trailing 12-month per-share earnings (EPS).

Private Equity Quartile Ranks - Private Equity quartile ranks are generated using vintage year peer group data provided by Thomson Reuters, and are based on each fund's annualized, since inception internal rate of return (IRR). Three Private Equity peer groups are available via Thomson Reuters: Buyout, Venture, and All Private Equity. Ranks are available quarterly, at a one-quarter lag.

R-Squared - The percentage of a portfolio's performance explained by the behavior of the appropriate benchmark. High R-Squared means a higher correlation of the portfolio's performance to the appropriate benchmark.

Return - Compounded rate of return for the period.

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

Risk Free Benchmark – ICE BofAML 3 Mo US T-Bill Index unless specified otherwise.



**RVK Liquidity Rating** - A qualitative method for determining the relative amount of liquidity in a portfolio. The characteristics considered when determining relative liquidity include trading volume, gates for redemption, leverage, nature of transactions, and pricing mechanisms. The RVK Liquidity Rating is calculated using beginning of month investment weights applied to each corresponding asset class liquidity rating.

Asset Class	<b>RVK Liquidity Rating</b>	Asset Class	RVK Liquidity Rating
Liquid Investments		Less Liquid Investments	
T-Bills and Treasurys Cash Equivalents TIPS	100 98 95	Fixed Income Plus Sector Stable Value (Plan Sponsor Directed) Hedge Funds of Funds	50 50 35
US Large Cap Equity Diversified Real Return Stable Value (Participant Directed)	95 93 91		
Global Equity Non-US Large Cap Equity	90 90	Not Liquid Investments Core Real Estate	25
Global Tactical Asset Allocation MLPs US Mid Cap Equity	88 85 85	Core Plus Real Estate Non-Core Real Estate Private Equity	15 5 5
US SMid Cap Equity US SMid Cap Equity US Small Cap Equity REITs	85 85 85	Private Credit	5
Non-US Small Cap Equity Emerging Markets Equity Core Fixed Income	85 85 85		
Core Plus Fixed Income	80		

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

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

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

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

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

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

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

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

**Opportunistic Real Estate** 

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

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

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

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

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



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

**Treynor Ratio** - Similar to Sharpe ratio, but focuses on beta rather than excess risk (standard deviation). Treynor ratio represents the excess rate of return over the risk-free rate (i.e., ICE BofAML 3 Mo US T-Bill Index unless specified otherwise) divided by the beta. The result is the absolute rate of return per unit of risk. The higher the value, the better historical risk-adjusted performance.

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

**Up Market Capture** - Up market by definition is positive benchmark return and up market capture represents the ratio in % terms of the average portfolio's return over the benchmark during the up market period. The higher the value of the up market capture the better the product's performance.

Yield to Maturity - The rate of return achieved on a bond or other fixed income security assuming the security is bought and held to maturity and that the coupon interest paid over the life of the bond will be reinvested at the same rate of return. The 30-Day SEC Yield is similar to the Yield to Maturity and is reported for mutual funds.

Yield to Worst - The bond yield calculated by using the worst possible yield taking into consideration all call, put, and optional sink dates.



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