



# FIRST QUARTER 2023 PERFORMANCE REPORT

VENTURA COUNTY EMPLOYEES' RETIREMENT ASSOCIATION



MARCH 31, 2023

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#### **ECONOMIC ENVIRONMENT**

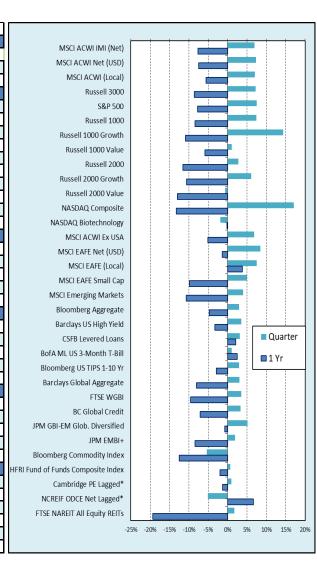
- Q4 Real GDP (third estimate) increased at an annual rate of 2.6%.
  - Retail sales ended March at +1.0% on a YoY basis. In the same period last year the YoY growth rate was +7.1%.
  - Corporate profits as a percent of GDP ended October 2022 at 10.4%, down from 11.3% in the same period last year and remain elevated relative to historical levels.
  - The inventory-to-sales ratio ended February was 1.36 up from 1.29 one year ago. Levels have remained relatively constant since early 2010 with a spike to 1.7 in April 2020.
  - The U.S. trade deficit narrowed in November as imports decreased more than exports.
- The unemployment rate was 3.5% ended Q1, flat versus Q4; U-6, a broader measure of unemployment, increased to 6.7% in Q1 from 6.5% in Q4.
  - The labor force participation rate ended Q1 up to 62.6% up from 62.3% in Q4. Labor force participation declined to 60.2% in April 2020 and is at levels below the 10 year pre-pandemic average of 63.0%.
- The Case-Shiller Home Price Index (ended February) declined to 293.2 from 294.3 in Q4 and remains at levels higher than that of pre-financial crisis levels of 150.9.
- Rolling 12-month seasonally-adjusted CPI ended Q1 at 4.59% down from 6.42% in Q4. In the same period last year, it was 8.55%; Capacity Utilization increased to 79.80 in Q1 from 78.91% in Q4.
- Fed Funds rate increased in Q1 by 0.50% to a targeted range of 4.75%-to-5.00% up from a targeted range of 4.25%-to-4.50% ended Q4. The 10-year Treasury Yield (constant maturity) finished Q1 at 3.66% up from 3.62% in Q4.
- The Fed continues scaling back asset purchases. The Fed continues to reduce the size of its balance sheet after a period of rapid growth post-pandemic.
- S&P valuations increased in Q1 to 28.3x from 28.65x in Q4 and are lower than the 10-year average of 29.01x.
  - Cyclically adjusted Shiller PE ratio remains above the long-term average of 17.01x.



## **MARKET ENVIRONMENT**

#### Q1 2023 OVERVIEW

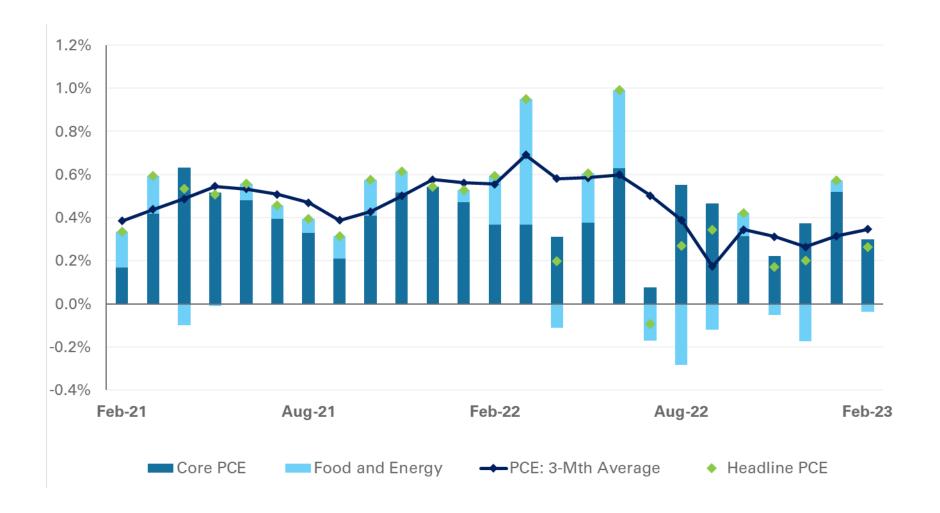
0 :						
		Qtr.	1 Yr.	3 Yr.	5 Yr.	10 Yr.
World Equity Benchmarks						
MSCI ACWI IMI (Net)	World with Small Cap	6.95%	-7.69%	15.64%	6.58%	7.95%
MSCI ACWI Net (USD)	World W/O Small Cap	7.31%	-7.44%	15.36%	6.93%	8.06%
MSCI ACWI (Local)	World (Local Currency)	7.02%	-5.61%	15.76%	8.07%	9.25%
Domestic Equity Benchmarks						
Russell 3000	Domestic All Cap	7.18%	-8.58%	18.48%	10.45%	11.73%
S&P 500	Large Core	7.50%	-7.73%	18.60%	11.19%	12.24%
Russell 1000	Large Core	7.46%	-8.39%	18.55%	10.87%	12.01%
Russell 1000 Growth	Large Growth	14.37%	-10.90%	18.58%	13.66%	14.59%
Russell 1000 Value	Large Value	1.01%	-5.91%	17.93%	7.50%	9.13%
Russell 2000	Small Core	2.74%	-11.61%	17.51%	4.71%	8.04%
Russell 2000 Growth	Small Growth	6.07%	-10.60%	13.36%	4.26%	8.49%
Russell 2000 Value	Small Value	-0.66%	-12.96%	21.01%	4.55%	7.22%
NASDAQ Composite	Large Growth	17.05%	-13.28%	17.56%	12.60%	15.30%
NASDAQ Biotechnology	Biotech	-1.87%	-0.16%	7.52%	4.91%	10.00%
International Equity Benchmarks						
MSCI ACWI Ex USA	World ex-US	6.87%	-5.07%	11.80%	2.47%	4.17%
MSCI EAFE Net (USD)	Int'l Developed	8.47%	-1.38%	12.98%	3.52%	5.00%
MSCI EAFE (Local)	Int'l Developed (Local Currency)	7.49%	3.84%	14.63%	6.25%	7.34%
MSCI EAFE Small Cap	Small Cap Int'l	4.92%	-9.83%	12.07%	0.87%	5.86%
MSCI Emerging Markets	Emerging Equity	3.96%	-10.70%	7.83%	-0.91%	2.00%
Domestic Fixed Income Benchmarks						
Bloomberg Aggregate	Core Bonds	2.96%	-4.78%	-2.77%	0.90%	1.36%
Barclays US High Yield	High Yield	3.57%	-3.35%	5.91%	3.21%	4.10%
CSFB Levered Loans	Bank Loans	3.11%	2.12%	8.38%	3.55%	3.86%
BofA ML US 3-Month T-Bill	Cash	1.07%	2.50%	0.89%	1.41%	0.87%
Bloomberg US TIPS 1-10 Yr	Inflation	2.94%	-2.93%	2.89%	3.18%	1.55%
Global Fixed Income Benchmarks						
Barclays Global Aggregate	Global Core Bonds	3.01%	-8.07%	-3.43%	-1.34%	0.07%
FTSE WGBI	World Gov. Bonds	3.51%	-9.55%	-5.29%	-2.35%	-0.60%
BC Global Credit	Global Bonds	3.33%	-7.09%	-1.40%	-0.28%	1.06%
JPM GBI-EM Glob. Diversified	Em. Mkt. Bonds (Local Currency)	5.16%	-0.72%	0.87%	-2.37%	-1.52%
JPM EMBI+	Em. Mkt. Bonds	1.87%	-8.42%	-4.94%	-3.12%	0.17%
Alternative Benchmarks						
Bloomberg Commodity Index	Commodities	-5.36%	-12.49%	20.82%	5.36%	-1.72%
HFRI Fund of Funds Composite Index	Fund of Hedge Funds	0.71%	-1.94%	7.17%	3.10%	3.24%
Cambridge PE Lagged*	Private Equity	1.00%	-1.33%	18.48%	15.94%	14.77%
NCREIF ODCE Net Lagged*	Real Estate	-5.13%	6.67%	9.01%	7.74%	9.12%
FTSE NAREIT All Equity REITs	REIT	1.74%	-19.37%	10.17%	6.25%	6.45%
CPI + 2%	Inflation/Real Assets	1.44%	7.09%	7.46%	5.95%	4.71%





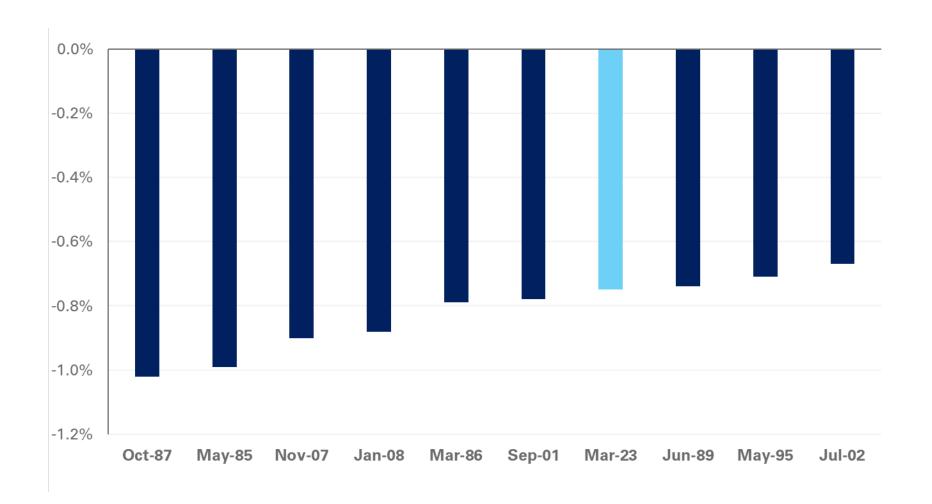
<sup>\*</sup> As of 12/31/2022

#### **CORE INFLATION REMAINED ELEVATED**





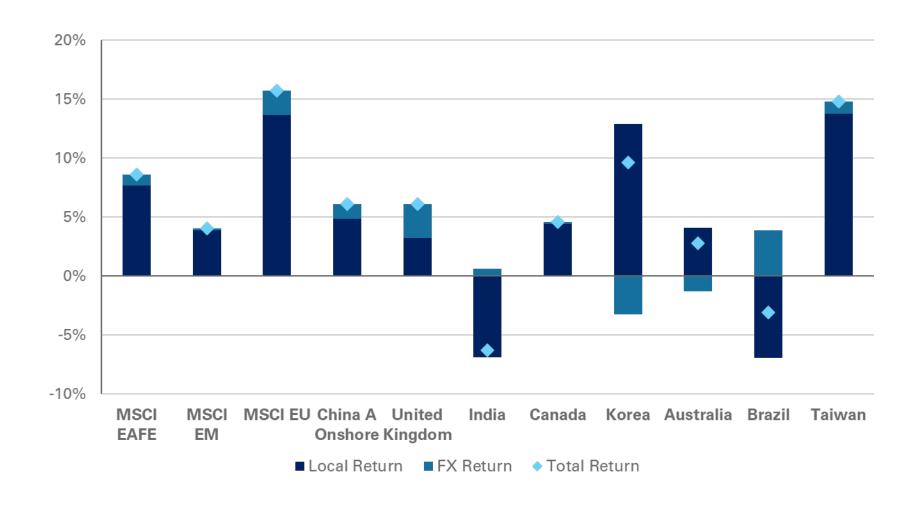
## THE 2-YEAR TREASURY YIELD FELL DRAMATICALLY





Data calculated since 12/31/1984; There are 11 instances since 1979 where the 2-year treasury experienced monthly declines larger than March 2023. Source: FactSet

## **DOLLAR WEAKNESS SUPPORTED NON-U.S. ASSETS**

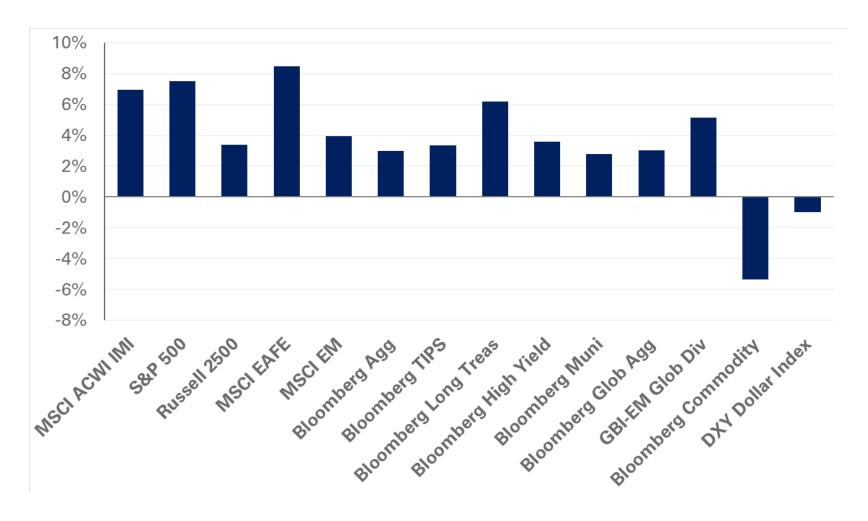




Source: MSCI, FactSet

#### **EQUITIES HELD STRONG FOR THE QUARTER**

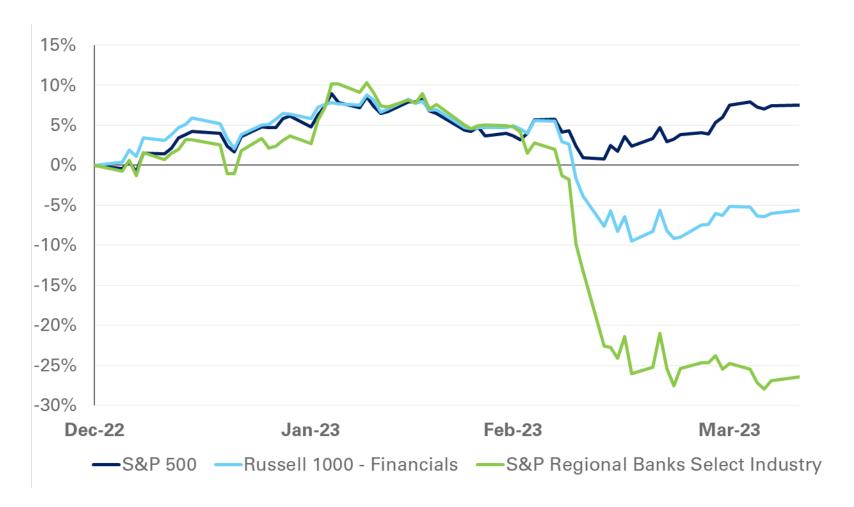
2023 FIRST QUARTER TOTAL RETURNS





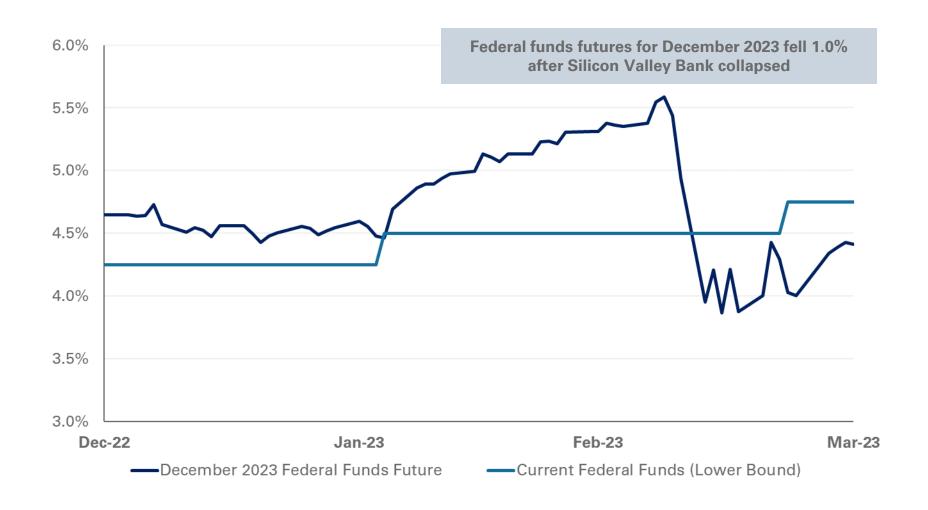
#### THE FINANCIAL SECTOR UNDERPERFORMED

#### 2023 CUMULATIVE TOTAL RETURNS





## **FUTURE RATE EXPECTATIONS ARE VOLATILE**





Source: FactSet



#### **TOTAL FUND PERFORMANCE SUMMARY**

	Market Value (\$)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	7 Yrs (%)	10 Yrs (%)
Total Fund	7,322,859,998	4.22 (29)	4.78 (44)	-5.07 (73)	12.84 (13)	7.47 (9)	8.51 (13)	7.76 (9)
Policy Index		5.39 (1)	7.35 (1)	-4.79 (65)	12.17 (24)	7.26 (14)	8.25 (17)	7.75 (10)
60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg		5.58 (1)	6.00 (12)	-7.50 (100)	7.69 (100)	3.83 (100)	5.51 (100)	5.00 (100)
InvMetrics Public DB > \$1 Billion Median		3.77	4.71	-4.41	11.13	6.10	7.63	7.04

- For the five-year period ending March 31, 2023, the Fund returned 7.47%, outperforming the Policy Index by 0.21% and ranking in the 9th percentile among its peers. The Fund's volatility, measured by standard deviation, ranked in the 70th percentile. The risk-adjusted return, or Sharpe ratio, ranked in the 30th percentile, indicating that the Fund earned more return per unit of volatility than 70% of its peers.
- For the three-year period ending March 31, 2023, the Fund returned 12.84%, outperforming the Policy Index by 0.67% and ranking in the 13th percentile among its peers. Over this period, the Fund's volatility ranked in the 79th percentile, and the Fund's Sharpe Ratio ranked in the 36th percentile.
- For the one-year period ending March 31, 2023, the Fund returned -5.07%, under-performing the Policy Index by 0.28% and ranking in the 73rd percentile among its peers.
- For the one-year period, the Fund experienced a net investment loss of \$374 million, which includes a net investment gain of \$301 million within the first calendar quarter of 2023. Assets decreased from \$7.82 billion one year ago to \$7.32 billion.
- The Fund returned 7.76% over the ten-year period ending March 31, 2023, exceeding the current actuarial rate of return of 7.25%.

3 Years Ending March 31, 2023									
Return Standard Sharpe Sortino Deviation Ratio Ratio									
Total Fund	12.84 (13)	11.73 (79)	1.01 (36)	1.73 (40)					
Policy Index	12.17 (24)	13.10 (94)	0.87 (77)	1.46 (80)					
60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg	7.69 (100)	13.40 (97)	0.55 (100)	0.85 (100)					

5 Years Ending March 31, 2023									
Return Standard Sharpe S Deviation Ratio									
Total Fund	7.47 (9)	11.43 (70)	0.56 (30)	0.83 (30)					
Policy Index	7.26 (14)	12.46 (89)	0.51 (36)	0.75 (36)					
60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg	3.83 (100)	12.39 (88)	0.25 (100)	0.35 (100)					

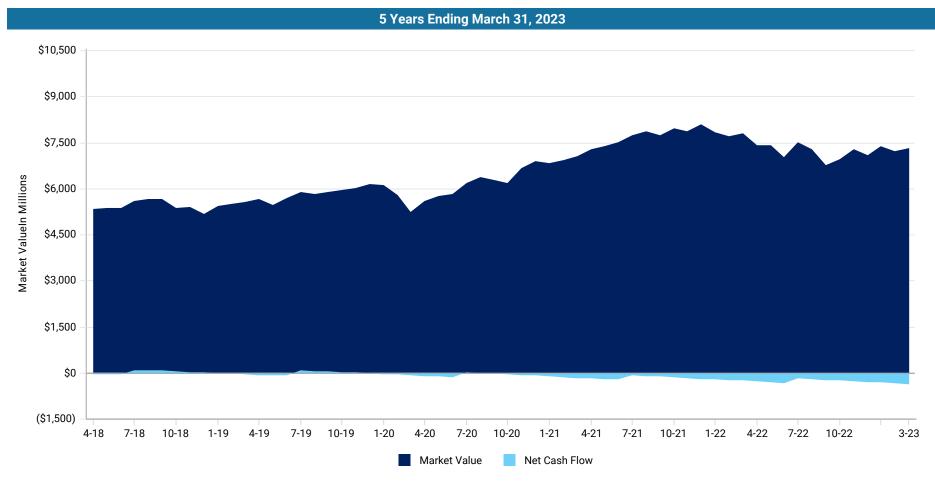
<sup>\*\*</sup>As of 5/1/2022, the policy index was changed to 26% Russell 3000, 9% MSCI ACWI Index , 15% MSCI ACWI ex US, 10% Bloomberg Agg, 8% (50% CS Lev Loan/50% ICE BofA US HY BBB Rated Constrained Index), 18% Russell 3000+2%, 6% CPI+2%, 8% NCREIF ODCE Index.



<sup>\*</sup>Fiscal Year ends June 30.

<sup>\*</sup>Performance returns are reported net of fees unless otherwise noted

#### **TOTAL FUND ASSET GROWTH SUMMARY**

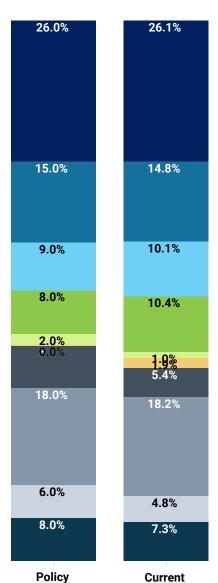


	Last Three Months	FYTD	1 Year	3 Years	5 Years
Beginning Market Value	7,091,598,557	7,027,344,063	7,817,324,158	5,267,482,093	5,337,941,269
Net Cash Flow	-70,081,507	-46,838,621	-119,930,742	-263,856,003	-327,137,950
Net Investment Change	301,342,948	342,354,556	-374,533,419	2,348,992,933	2,341,815,704
Ending Market Value	7,322,859,998	7,322,859,998	7,322,859,998	7,322,859,998	7,322,859,998
Net Change	231,261,441	295,515,935	-494,464,160	2,055,377,905	1,984,918,729



# **ASSET ALLOCATION VS. POLICY TARGETS**





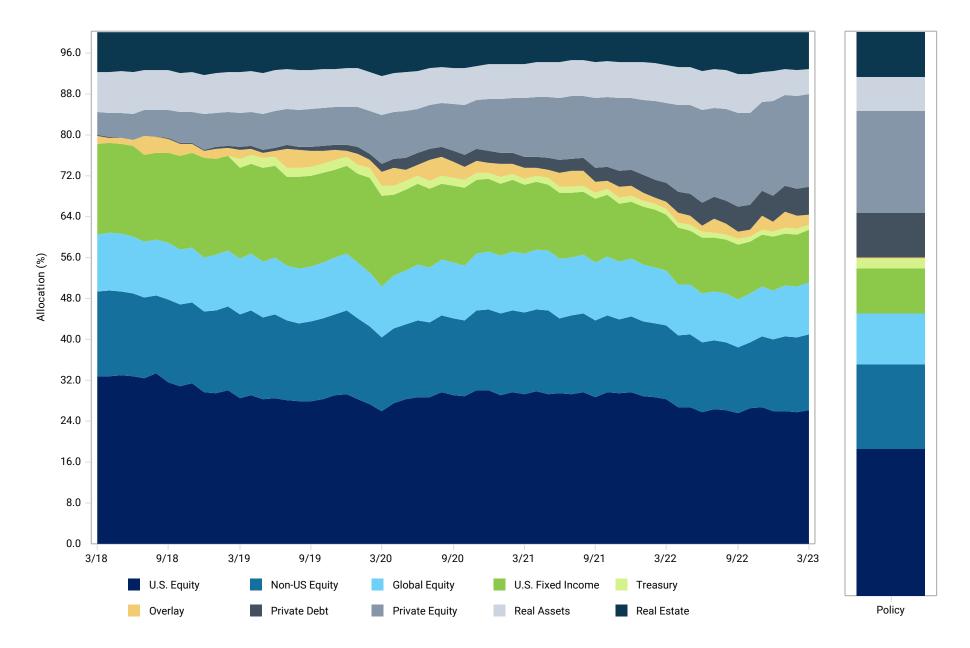
	Current (\$)	Current (%)	Policy (%)	Differences* (%)	Policy Range (%)	Within Range
U.S. Equity	1,914,618,058	26.1	26.0	0.1	20.0 - 32.0	Yes
■ Non-US Equity	1,082,607,508	14.8	15.0	-0.2	12.0 - 20.0	Yes
Global Equity	738,460,175	10.1	9.0	1.1	7.0 - 13.0	Yes
U.S. Fixed Income	761,631,824	10.4	8.0	2.4	6.0 - 12.0	Yes
Treasury	76,755,368	1.0	2.0	-1.0	0.0 - 5.0	Yes
Overlay	137,020,893	1.9	0.0	1.9	0.0 - 3.0	Yes
■ Private Debt	394,481,961	5.4	8.0	-2.6	4.0 - 12.0	Yes
■ Private Equity	1,330,751,613	18.2	18.0	0.2	14.0 - 22.0	Yes
Real Assets	355,104,055	4.8	6.0	-1.2	4.0 - 8.0	Yes
■ Real Estate	531,428,543	7.3	8.0	-0.7	5.0 - 11.0	Yes
Total	7,322,859,998	100.0	100.0	0.0		

\*Difference between Policy and Current Allocation Cash represents assets in Parametric Overlay.

Policy Index as of 5/1/2022: 26% Russell 3000, 9% MSCI ACWI Index , 15% MSCI ACWI ex US, 10% Bloomberg Agg, 8% (50% CS Lev Loan/ 50% ICE BofA US HY BBB Rated Constrained Index), 18% Russell 3000+2%, 6% CPI+2%, 8% NCREIF ODCE Index

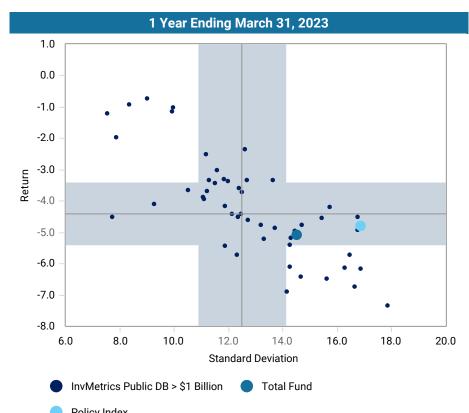


# **TOTAL FUND ALLOCATION HISTORY**

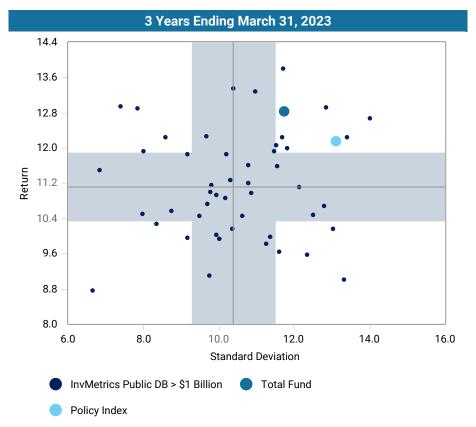




## **TOTAL FUND RISK/RETURN**



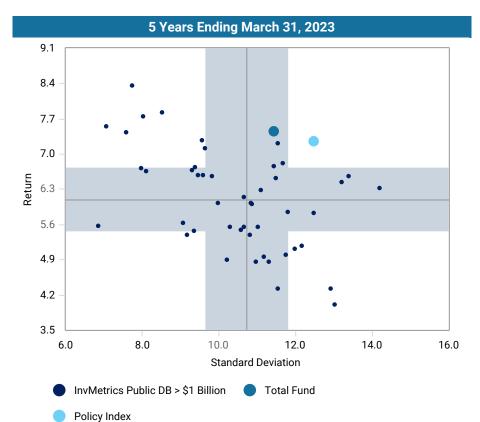
Policy	index			
	1 Year E	Inding March 31,	, 2023	
	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio
Total Fund	-5.1 (73)	14.5 (76)	-0.5 (45)	-0.6 (45)
Policy Index	-4.8 (65)	16.9 (98)	-0.4 (11)	-0.5 (12)
Population	51	51	51	51



3 Years Ending March 31, 2023									
	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio					
Total Fund	12.8 (13)	11.7 (79)	1.0 (36)	1.7 (40)					
Policy Index	12.2 (24)	13.1 (94)	0.9 (77)	1.5 (80)					
Population	49	49	49	49					



# **TOTAL FUND RISK/RETURN**



9.6								
9.0 –	•	•						
8.4 –					•			
7.8 –	•	•	•		•	•		
7.2 -		•	•	•	•	•	•	
6.6 -	•	•				•		
6.0 –	•	•	•	•••	•	•		
5.4 –					•			
4.8								
5.6	6.4	7.2	8.0	8.8	9.6	10.4	11.2	12.0
			Stand	lard Devia	tion			
● In	vMetrics Pu	ıblic DB > S	\$1 Billion	Total	al Fund			

10 Years Ending March 31, 2023

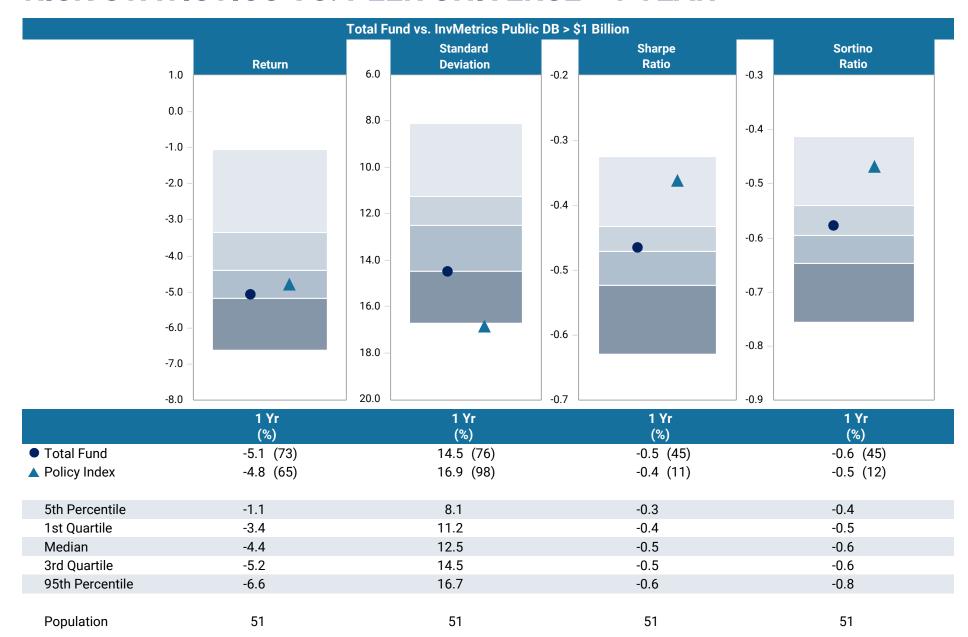
	5 Years Ending March 31, 2023								
	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio					
Total Fund	7.5 (9)	11.4 (70)	0.6 (30)	0.8 (30)					
Policy Index	7.3 (14)	12.5 (89)	0.5 (36)	0.8 (36)					
Population	48	48	48	48					

10 Years Ending March 31, 2023									
	Return	Standard Deviation	Sharpe Ratio	Sortino Ratio					
Total Fund	7.8 (9)	9.2 (71)	0.8 (38)	1.2 (38)					
Policy Index	7.8 (10)	9.8 (86)	0.7 (46)	1.1 (43)					
Population	46	46	46	46					



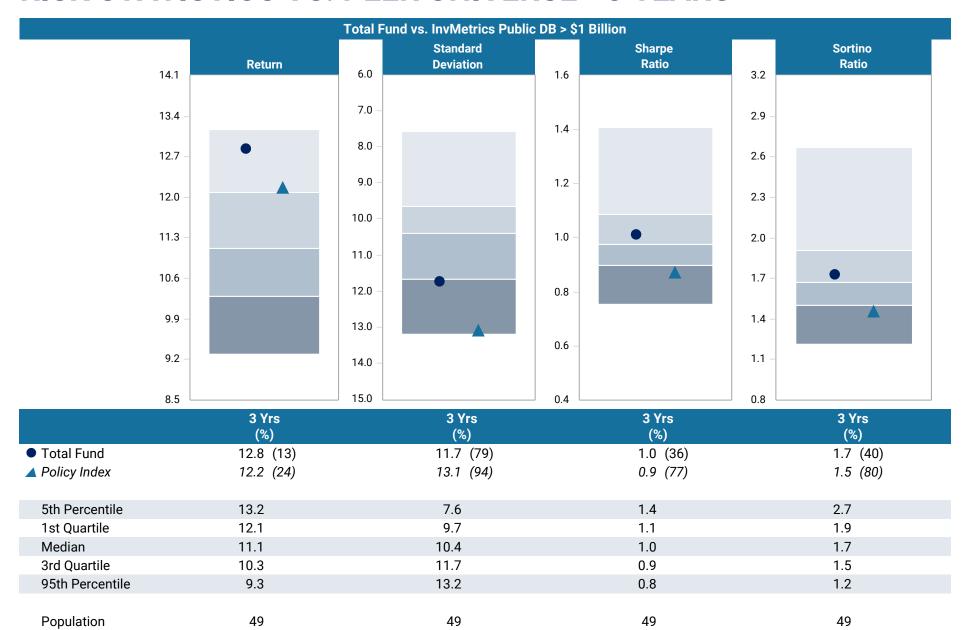
Policy Index

#### **RISK STATISTICS VS. PEER UNIVERSE - 1 YEAR**



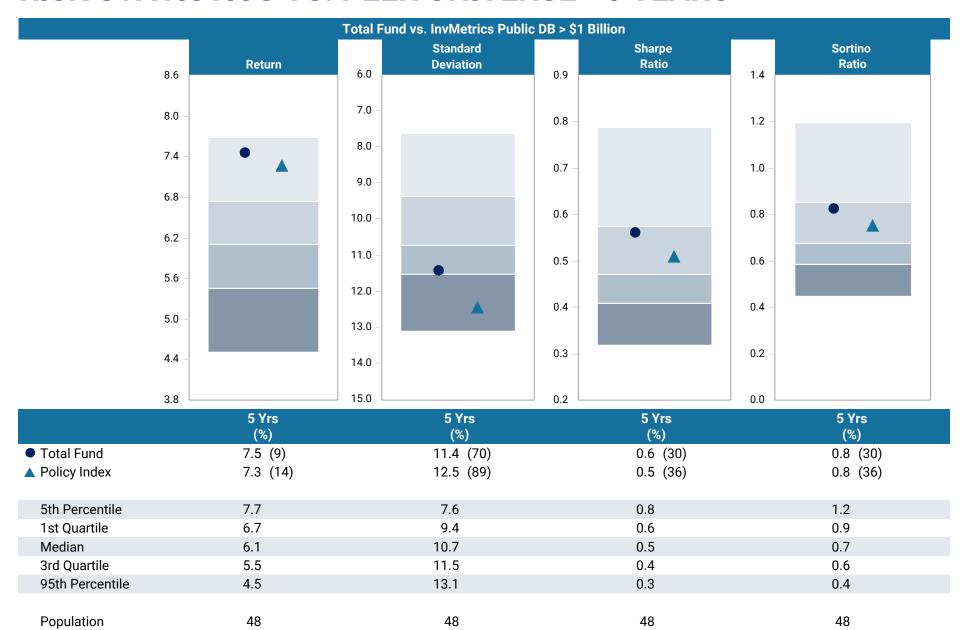


#### **RISK STATISTICS VS. PEER UNIVERSE - 3 YEARS**





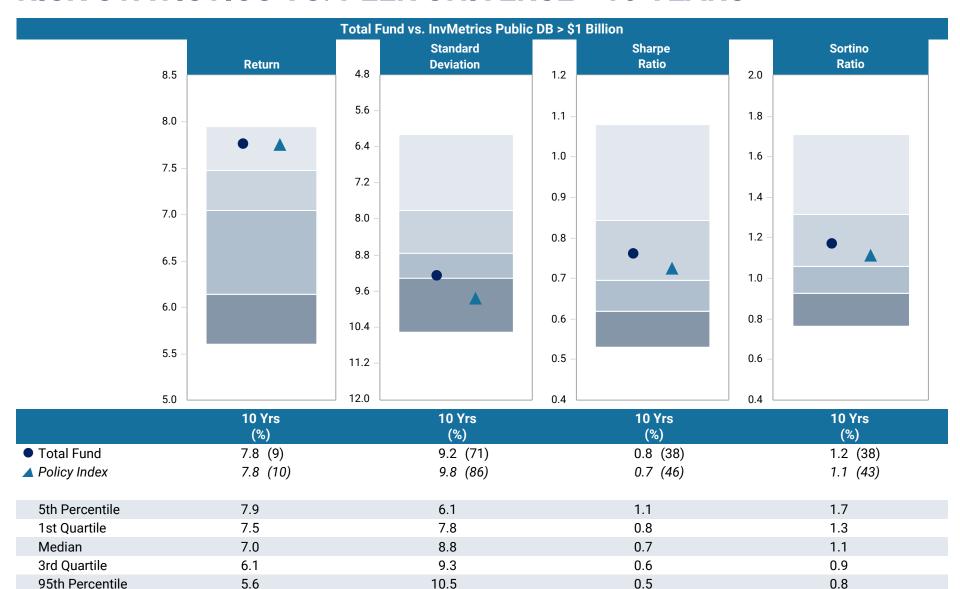
#### **RISK STATISTICS VS. PEER UNIVERSE - 5 YEARS**





46

#### **RISK STATISTICS VS. PEER UNIVERSE - 10 YEARS**





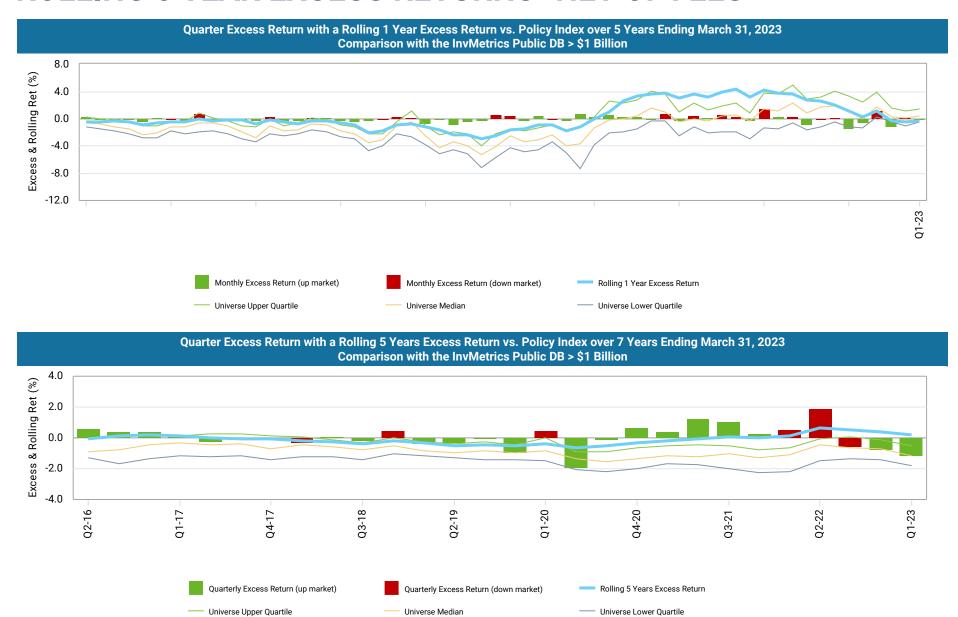
Population

46

46

46

#### **ROLLING 5 YEAR EXCESS RETURNS- NET OF FEES**





#### **TOTAL FUND ATTRIBUTION ANALYSIS**

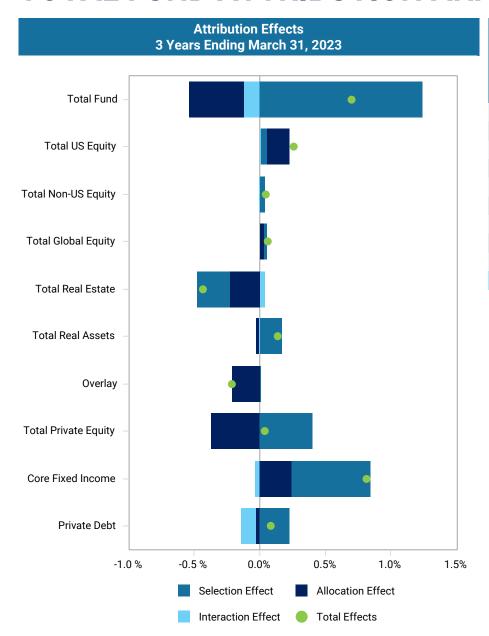


Attribution Summary 1 Year Ending March 31, 2023									
	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Interaction Effects (%)	Total Effects (%)		
Total US Equity	-8.6	-8.6	0.0	0.1	-0.1	0.0	-0.1		
Total Non-US Equity	-3.2	-5.1	1.8	0.3	0.0	0.0	0.2		
Total Global Equity	-7.1	-7.4	0.3	0.1	0.0	0.0	0.0		
Total Real Estate	-6.8	-3.9	-2.9	-0.2	-0.2	0.0	-0.5		
Total Real Assets	-6.9	7.1	-13.9	-0.8	0.2	-0.2	-0.9		
Overlay	5.5	2.5	3.0	0.0	0.0	0.0	0.0		
Total Private Equity	-1.1	-6.8	5.7	0.9	0.1	-0.3	0.7		
Private Debt	0.5	-0.3	0.9	0.1	-0.2	0.0	-0.1		
Core Fixed Income	-2.7	-4.8	2.1	0.2	-0.1	0.0	0.2		
Total Fund	-5.1	-4.8	-0.2	0.6	-0.4	-0.4	-0.2		

<sup>\*</sup>Total Actual and Index returns are weighted average calculations.



#### **TOTAL FUND ATTRIBUTION ANALYSIS**



			tion Sui ng Mar	mmary ch 31, 20	)23		
	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Interaction Effects (%)	Total Effects (%)
Total US Equity	18.8	18.5	0.3	0.0	0.2	0.0	0.3
Total Non-US Equity	12.2	11.8	0.4	0.0	0.0	0.0	0.0
<b>Total Global Equity</b>	15.7	15.4	0.4	0.0	0.0	0.0	0.1
Total Real Estate	4.6	7.5	-2.8	-0.3	-0.2	0.0	-0.4
Total Real Assets	10.3	7.5	2.9	0.2	0.0	0.0	0.1
Overlay	4.6	0.9	3.7	0.0	-0.2	0.0	-0.2
<b>Total Private Equity</b>	22.1	21.3	0.7	0.4	-0.4	0.0	0.0
Core Fixed Income	0.4	-2.8	3.2	0.6	0.2	0.0	8.0
Private Debt	3.3	0.0	3.3	0.2	0.0	-0.1	0.1
Total Fund	12.8	12.1	0.7	1.2	-0.4	-0.1	0.7

<sup>\*</sup>Total Actual and Index returns are weighted average calculations.



#### **TOTAL FUND ATTRIBUTION ANALYSIS**



			tion Sui ng Mar	mmary ch 31, 20	)23		
	Wtd. Actual Return (%)	Wtd. Index Return (%)	Excess Return (%)	Selection Effect (%)	Allocation Effect (%)	Interaction Effects (%)	Total Effects (%)
Total US Equity	10.7	10.5	0.2	0.0	0.1	0.0	0.2
Total Non-US Equity	2.8	2.5	0.3	0.0	0.0	0.0	0.0
Total Global Equity	7.3	6.9	0.4	0.0	0.0	0.0	0.0
Total Real Estate	3.9	6.6	-2.6	-0.2	-0.1	0.0	-0.3
Fixed Income	1.1	1.2	-0.1	0.0	0.0	0.0	0.0
Total Real Assets	3.8	6.5	-2.7	-0.2	0.0	0.0	-0.3
Overlay	3.7	1.4	2.3	0.0	-0.1	0.0	-0.1
Total Private Equity	19.0	13.4	5.6	0.9	-0.3	-0.2	0.4
Private Debt	2.0	0.0	2.0	0.1	0.0	-0.1	0.0
Core Fixed Income	1.0	-0.3	1.3	0.2	0.2	0.0	0.3
Total Fund	7.5	7.3	0.2	0.8	-0.3	-0.3	0.2

<sup>\*</sup>Total Actual and Index returns are weighted average calculations.



		1 Year Ending	March 31, 2023			
	1 Year Return	1 Year Standard Deviation	1 Year Jensen Alpha	1 Year Tracking Error	1 Year Information Ratio	1 Year Beta
Total Equity	-6.82 (55)	23.01 (39)	0.89 (54)	0.92 (1)	0.81 (17)	1.02 (47)
MSCI AC World Index (Net)	-7.44 (61)	22.59 (34)	0.00	0.00	-	1.00
Total US Equity	-8.58 (59)	24.06 (44)	0.08 (56)	0.38 (1)	0.08 (56)	1.01 (39)
Russell 3000	-8.58 <i>(</i> 59)	23.91 (41)	0.00	0.00	-	1.00
Total Non-US Equity	-3.23 (40)	23.16 (31)	2.17 (38)	1.96 (1)	1.04 (17)	1.02 (53)
MSCI ACWI ex USA	-5.07 (56)	22.60 (21)	0.00	0.00	-	1.00
Total Global Equity	-7.10 (58)	22.59 (34)	0.36 (59)	0.13 (1)	2.69 (1)	1.00 (53)
MSCI AC World Index (Net)	-7.44 (61)	22.59 (34)	0.00	0.00	-	1.00
Fixed Income	-2.04 (46)	7.36 (41)	0.27 (32)	1.68 (2)	0.69 (15)	0.84 (56)
Total Fixed Income Policy Index	-3.27 (56)	8.68 (50)	0.00	0.00	-	1.00
US Fixed Income	-2.22 (48)	9.92 (64)	2.77 (11)	1.57 (13)	1.70 (5)	1.01 (28)
Blmbg. U.S. Aggregate Index	-4.78 (70)	9.70 (60)	0.00	0.00	-	1.00



	1 Year Return	1 Year Standard Deviation
Total Real Assets	-6.86	18.17
Real Assets Index	7.08	1.75
Total Real Estate	-6.82	6.38
NCREIF ODCE Net	-3.91	7.93
Total Private Equity	-1.05	6.27
Private Equity Benchmark	-6.75	23.95



		3 Years Ending	March 31, 2023			
	3 Years Return	3 Years Standard Deviation	3 Years Jensen Alpha	3 Years Tracking Error	3 Years Information Ratio	3 Years Beta
Total Equity	16.31 (39)	18.44 (35)	0.58 (47)	0.79 (1)	1.14 (4)	1.02 (46)
MSCI AC World Index (Net)	15.36 (48)	18.04 (27)	0.00	0.00	-	1.00
Total US Equity	18.77 (46)	19.74 (39)	0.15 (61)	0.50 (1)	0.57 (12)	1.01 (37)
Russell 3000	18.48 (50)	19.59 (36)	0.00	0.00	-	1.00
Total Non-US Equity	12.16 (64)	17.77 (16)	0.19 (62)	1.96 (1)	0.20 (55)	1.02 (67)
MSCI ACWI ex USA	11.80 (66)	17.35 (9)	0.00	0.00	-	1.00
Total Global Equity	15.74 (44)	18.04 (27)	0.33 (50)	0.18 (1)	1.89 (1)	1.00 (53)
MSCI AC World Index (Net)	15.36 (48)	18.04 (27)	0.00	0.00	-	1.00
Fixed Income	1.99 (26)	5.14 (40)	3.39 (30)	1.60 (6)	2.26 (1)	0.88 (54)
Total Fixed Income Policy Index	-1.66 (79)	5.61 (45)	0.00	0.00	-	1.00
US Fixed Income	1.13 (34)	6.73 (65)	4.15 (31)	1.87 (16)	2.12 (1)	1.03 (27)
Blmbg. U.S. Aggregate Index	-2.77 (91)	6.29 (55)	0.00	0.00	-	1.00



	3 Years Return	3 Years Standard Deviation
Total Real Assets	10.34	12.89
Real Assets Index	7.46	1.54
Total Real Estate	4.61	7.58
NCREIF ODCE Net	7.46	8.62
Total Private Equity	22.06	10.52
Private Equity Benchmark	21.34	19.68



		5 Years Ending	March 31, 2023			
	5 Years Return	5 Years Standard Deviation	5 Years Jensen Alpha	5 Years Tracking Error	5 Years Information Ratio	5 Years Beta
Total Equity	7.77 (36)	18.17 (37)	0.71 (42)	0.88 (1)	0.99 (2)	1.02 (43)
MSCI AC World Index (Net)	6.93 (49)	17.75 (28)	0.00	0.00	-	1.00
Total US Equity	10.66 (23)	19.36 (32)	0.14 (30)	0.50 (1)	0.43 (6)	1.01 (54)
Russell 3000	10.45 (25)	19.22 (30)	0.00	0.00	-	1.00
Total Non-US Equity	2.76 (55)	17.55 (14)	0.30 (60)	1.63 (1)	0.19 (48)	1.01 (71)
MSCI ACWI ex USA	2.47 (62)	17.37 (9)	0.00	0.00	-	1.00
Total Global Equity	7.34 (44)	17.74 (28)	0.39 (48)	0.15 (1)	2.54 (1)	1.00 (54)
MSCI AC World Index (Net)	6.93 (49)	17.75 (28)	0.00	0.00	-	1.00
Fixed Income	3.09 (11)	4.53 (35)	1.49 (14)	1.72 (10)	0.84 (1)	0.86 (51)
Total Fixed Income Policy Index	1.60 (46)	4.97 (39)	0.00	0.00	-	1.00
US Fixed Income	2.29 (24)	5.70 (54)	1.38 (27)	2.17 (19)	0.64 (2)	0.97 (30)
Blmbg. U.S. Aggregate Index	0.90 (86)	5.46 (47)	0.00	0.00	-	1.00



	5 Years Return	5 Years Standard Deviation
Total Real Assets	3.75	13.44
Real Assets Index	6.47	1.37
Total Real Estate	3.95	6.06
NCREIF ODCE Net	6.56	6.80
Total Private Equity	18.99	8.97
Private Equity Benchmark	13.38	19.28



	Alle	ocation			Performance (%)							
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date	
Total Fund	7,322,859,998	100.0	100.0	4.2 (29)	4.8 (44)	<b>-5.1</b> (73)	12.8 (13)	7.5 (9)	7.8 (9)	8.0 (14)	Apr-94	
Policy Index				<u>5.4</u> (1)	<u>7.3</u> (1)	<u>-4.8</u> (65)	<u>12.2</u> (24)	<u>7.3</u> (14)	<u>7.8</u> (10)	<u>7.9</u> (18)		
Over/Under				-1.2	-2.5	-0.3	0.6	0.2	0.0	0.1		
60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg				<u>5.6</u> (1)	<u>6.0</u> (12)	<u>-7.5</u> (100)	<u>7.7</u> (100)	<u>3.8</u> (100)	<u>5.0</u> (100)			
Over/Under				-1.4	-1.2	2.4	5.1	3.7	2.8			
InvMetrics Public DB > \$1 Billion Median				3.8	4.7	-4.4	11.1	6.1	7.0	7.3		
Total Fund ex Parametric	7,261,186,891	99.2	100.0	4.0	4.4	-5.4	12.8	7.4		7.3	Nov-13	
Total Fund ex Private Equity	5,992,108,385	81.8	82.0	5.3 (1)	6.9 (2)	<b>-5.7</b> (85)	11.3 (44)	6.1 (50)	6.8 (56)	7.7 (55)	Jan-12	
Policy Index				<u>5.4</u> (1)	<u>7.3</u> (1)	<u>-4.8</u> (65)	<u>12.2</u> (24)	<u>7.3</u> (14)	<u>7.8</u> (10)	<u>8.5</u> (10)		
Over/Under				-0.1	-0.4	-0.9	-0.9	-1.2	-1.0	-0.8		
InvMetrics Public DB > \$1 Billion Median				3.8	4.7	-4.4	11.1	6.1	7.0	7.8		
Total US Equity	1,914,618,058	26.1	26.0	7.3 (29)	9.9 (42)	<b>-8.6</b> (59)	18.8 (46)	10.7 (23)	11.9 (22)	9.5 (67)	Jan-94	
Russell 3000				<u>7.2</u> (30)	<u>9.7</u> (43)	<u>-8.6</u> (59)	<u>18.5</u> (50)	<u>10.5</u> (25)	<u>11.5</u> (29)	<u>9.7</u> (60)		
Over/Under				0.1	0.2	0.0	0.3	0.2	0.4	-0.2		
eV All US Equity Median				4.6	9.1	-7.7	18.4	8.5	10.1	9.9		
Western U.S. Index Plus	169,611,262	2.3		7.5 (32)	10.0 (36)	<del>-9.2</del> (72)	20.0 (22)	10.5 (36)	12.1 (26)	7.2 (70)	Jun-07	
S&P 500 Index				<u>7.5</u> (32)	<u>10.0</u> (36)	<u>-7.7</u> (60)	<u>18.6</u> (37)	<u>11.2</u> (24)	<u>12.2</u> (25)	<u>8.6</u> (39)		
Over/Under				0.0	0.0	-1.5	1.4	-0.7	-0.1	-1.4		
eV US Large Cap Equity Median				5.0	8.7	-6.8	17.5	9.5	11.0	8.1		
Blackrock Russell 1000 Index	1,660,303,604	22.7		7.5 (32)	9.9 (37)	<del>-8.4</del> (65)	18.6 (37)	10.9 (29)		11.4 (33)	May-17	
Russell 1000 Index				<u>7.5</u> (32)	<u>9.9</u> (37)	<u>-8.4</u> (65)	<u>18.6</u> (37)	<u>10.9</u> (29)		<u>11.4</u> (33)		
Over/Under				0.0	0.0	0.0	0.0	0.0		0.0		
eV US Large Cap Equity Median				5.0	8.7	-6.8	17.5	9.5		10.2		
Blackrock Russell 2500 Index	84,703,192	1.2		3.5 (59)	8.1 (69)	-10.3 (71)	19.5 (60)	6.7 (62)		7.6 (62)	May-17	
Russell 2500 Index				<u>3.4</u> (60)	<u>7.9</u> (70)	<u>-10.4</u> (72)	<u>19.4</u> (60)	<u>6.6</u> (63)		<u>7.5</u> (63)		
Over/Under				0.1	0.2	0.1	0.1	0.1		0.1		
eV US Small-Mid Cap Equity Median				4.4	9.8	-7.1	20.4	7.5		8.2		

<sup>\*</sup>As of 5/1/2022, the policy index was changed to 26% Russell 3000, 9% MSCI ACWI Index , 15% MSCI ACWI ex US, 10% Bloomberg Agg, 8% (50% CS Lev Loan/50% ICE BofA US HY BBB Rated Constrained Index), 18% Russell 3000+2%, 6% CPI+2%, 8% NCREIF ODCE Index.



	Alle	ocation			Performance (%)						
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Non-US Equity	1,082,607,508	14.8	15.0	8.5 (47)	12.8 (42)	<b>-3.2</b> (40)	12.2 (64)	2.8 (55)	4.5 (72)	6.0 (50)	Mar-94
MSCI ACWI ex USA				<u>6.9</u> (76)	<u>10.0</u> (77)	<u>-5.1</u> (56)	<u>11.8</u> (66)	<u>2.5</u> (62)	<u>4.2</u> (84)	<u>4.9</u> (100)	
Over/Under				1.6	2.8	1.9	0.4	0.3	0.3	1.1	
MSCI AC World x USA in LC (Net)				<u>6.2</u> (86)	<u>8.9</u> (83)	<u>-0.1</u> (15)	<u>12.9</u> (53)	<u>5.1</u> (17)	<u>6.7</u> (20)		
Over/Under				2.3	3.9	-3.1	-0.7	-2.3	-2.2		
eV ACWI ex-US All Cap Equity Median				8.3	12.2	-4.5	13.3	3.0	5.3	5.9	
BlackRock ACWI ex-U.S. Index	552,385,514	7.5		6.6 (78)	10.0 (78)	<b>-5.5</b> (64)	12.4 (59)	2.6 (58)	4.5 (73)	3.0 (66)	Apr-07
MSCI AC World ex USA IMI (Net)				<u>6.6</u> (79)	<u>9.9</u> (78)	<u>-5.8</u> (66)	<u>12.2</u> (62)	<u>2.4</u> (67)	<u>4.3</u> (81)	<u>2.7</u> (72)	
Over/Under				0.0	0.1	0.3	0.2	0.2	0.2	0.3	
eV ACWI ex-US All Cap Equity Median				8.3	12.2	-4.5	13.3	3.0	5.3	3.4	
Sprucegrove	259,522,558	3.5		8.8 (37)	15.4 (15)	0.3 (14)	14.6 (31)	1.9 (76)	4.3 (81)	6.5 (48)	Apr-02
MSCI EAFE (Net)				<u>8.5</u> (46)	<u>15.4</u> (15)	<u>-1.4</u> (23)	<u>13.0</u> (53)	<u>3.5</u> (39)	<u>5.0</u> (66)	<u>5.6</u> (79)	
Over/Under				0.3	0.0	1.7	1.6	-1.6	-0.7	0.9	
eV ACWI ex-US All Cap Equity Median				8.3	12.2	-4.5	13.3	3.0	5.3	6.4	
Walter Scott	270,699,436	3.7		12.0 (11)	16.3 (10)	<b>-1.6</b> (23)	10.3 (83)	6.9 (4)	6.5 (23)	6.4 (19)	Jan-11
MSCI EAFE (Net)				<u>8.5</u> (46)	<u>15.4</u> (15)	<u>-1.4</u> (23)	<u>13.0</u> (53)	<u>3.5</u> (39)	<u>5.0</u> (66)	<u>4.7</u> (58)	
Over/Under				3.5	0.9	-0.2	-2.7	3.4	1.5	1.7	
eV ACWI ex-US All Cap Equity Median				8.3	12.2	-4.5	13.3	3.0	5.3	5.2	
Total Global Equity	738,460,175	10.1	9.0	7.4 (41)	10.0 (56)	<b>-7.1</b> (58)	15.7 (44)	7.3 (44)	8.0 (53)	6.5 (67)	May-05
MSCI AC World Index (Net)				<u>7.3</u> (43)	<u>9.7</u> (59)	<u>-7.4</u> (61)	<u>15.4</u> (48)	<u>6.9</u> (49)	<u>8.1</u> (52)	<u>7.0</u> (55)	
Over/Under				0.1	0.3	0.3	0.3	0.4	-0.1	-0.5	
eV All Global Equity Median				6.7	10.5	-6.4	15.1	6.9	8.1	7.3	
BlackRock MSCI ACWI Equity Index	738,460,175	10.1		7.4 (41)	10.0 (56)	<del>-7.1</del> (58)	15.7 (44)	7.3 (44)	8.5 (43)	9.4 (45)	Aug-12
MSCI AC World Index (Net)				<u>7.3</u> (43)	<u>9.7</u> (59)	<u>-7.4</u> (61)	<u>15.4</u> (48)	<u>6.9</u> (49)	<u>8.1</u> (52)	<u>9.0</u> (54)	
Over/Under				0.1	0.3	0.3	0.3	0.4	0.4	0.4	
eV All Global Equity Median				6.7	10.5	-6.4	15.1	6.9	8.1	9.2	
Total Private Equity	1,330,751,613	18.2	18.0	-0.7	-4.3	-1.1	22.1	19.0	17.0	16.5	Jan-12
Private Equity Benchmark				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	21.3	<u>13.4</u>	<u>14.9</u>	<u>16.1</u>	
Over/Under				-8.4	-15.7	5.7	8.0	5.6	2.1	0.4	



	Allo	ocation					Perforn	nance (%)			
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
US Fixed Income	761,631,824	10.4	8.0	3.7 (15)	3.0 (23)	<b>-2.2</b> (48)	1.1 (34)	2.3 (24)	2.3 (36)	5.2 (17)	Mar-94
Blmbg. U.S. Aggregate Index				<u>3.0</u> (41)	<u>-0.1</u> (85)	<u>-4.8</u> (70)	<u>-2.8</u> (91)	<u>0.9</u> (86)	<u>1.4</u> (69)	<u>4.5</u> (40)	
Over/Under				0.7	3.1	2.6	3.9	1.4	0.9	0.7	
eV All US Fixed Inc Median				2.7	1.4	-2.6	0.2	1.5	1.8	4.3	
BlackRock U.S. Debt Fund	158,436,170	2.2		3.2 (33)	<b>-0.1</b> (85)	<b>-4.8</b> (69)	-2.7 (91)	0.9 (85)	1.4 (66)	4.3 (43)	Dec-95
Blmbg. U.S. Aggregate Index				<u>3.0</u> (41)	<u>-0.1</u> (85)	<u>-4.8</u> (70)	<u>-2.8</u> (91)	<u>0.9</u> (86)	<u>1.4</u> (69)	<u>4.3</u> (44)	
Over/Under				0.2	0.0	0.0	0.1	0.0	0.0	0.0	
eV All US Fixed Inc Median				2.7	1.4	-2.6	0.2	1.5	1.8	4.2	
Western	190,524,528	2.6		3.5 (20)	0.2 (80)	- <mark>6.2</mark> (86)	<b>-1.5</b> (78)	1.1 (78)	2.0 (41)	5.1 (18)	Jan-97
Blmbg. U.S. Aggregate Index				<u>3.0</u> (41)	<u>-0.1</u> (85)	<u>-4.8</u> (70)	<u>-2.8</u> (91)	<u>0.9</u> (86)	<u>1.4</u> (69)	<u>4.3</u> (45)	
Over/Under				0.5	0.3	-1.4	1.3	0.2	0.6	8.0	
eV All US Fixed Inc Median				2.7	1.4	-2.6	0.2	1.5	1.8	4.2	
Reams	281,451,293	3.8		4.7 (8)	6.7 (8)	2.8 (2)	4.6 (18)	3.8 (5)	2.6 (31)	4.9 (21)	Oct-01
Blmbg. U.S. Aggregate Index				<u>3.0</u> (41)	<u>-0.1</u> (85)	<u>-4.8</u> (70)	<u>-2.8</u> (91)	<u>0.9</u> (86)	<u>1.4</u> (69)	<u>3.5</u> (55)	
Over/Under				1.7	6.8	7.6	7.4	2.9	1.2	1.4	
Reams Custom Index				<u>1.1</u> (93)	<u>2.4</u> (33)	<u>2.4</u> (5)	<u>1.0</u> (36)	<u>1.6</u> (47)	<u>1.1</u> (84)	<u>3.3</u> (62)	
Over/Under				3.6	4.3	0.4	3.6	2.2	1.5	1.6	
eV All US Fixed Inc Median				2.7	1.4	-2.6	0.2	1.5	1.8	3.6	
Loomis Strategic Alpha	46,522,423	0.6		1.9 (74)	3.4 (20)	<b>-1.8</b> (43)	3.8 (20)	1.9 (34)		2.3 (43)	Aug-13
Blmbg. U.S. Aggregate Index				<u>3.0</u> (41)	<u>-0.1</u> (85)	<u>-4.8</u> (70)	<u>-2.8</u> (91)	<u>0.9</u> (86)		<u>1.6</u> (67)	
Over/Under				-1.1	3.5	3.0	6.6	1.0		0.7	
eV All US Fixed Inc Median				2.7	1.4	-2.6	0.2	1.5		2.1	
Loomis Sayles Multi Strategy	84,697,410	1.2		3.1 (37)	2.8 (25)	<b>-4.0</b> (60)	3.2 (22)	2.6 (18)	3.2 (19)	5.3 (12)	Aug-05
5% Bmbg. U.S. Int Agg / 65% Blmbg. U.S. Agg / 30% FTSE HY				<u>3.1</u> (33)	<u>2.1</u> (37)	<u>-4.2</u> (63)	<u>-0.1</u> (57)	<u>1.6</u> (44)	<u>2.2</u> (39)	<u>4.0</u> (27)	
Over/Under				0.0	0.7	0.2	3.3	1.0	1.0	1.3	
eV All US Fixed Inc Median				2.7	1.4	-2.6	0.2	1.5	1.8	3.3	
Treasuries	76,755,368	1.0	2.0	3.3	-2.7	-7.7	-6.2			-0.6	Apr-19
Reams 10-Year Treasuries	76,755,368	1.0		3.3	-2.7	-7.7	-6.2			-0.6	Apr-19
Blmbg. U.S. Treasury: 7-10 Year				<u>3.5</u>	<u>-1.2</u>	<u>-5.7</u>	<u>-5.2</u>			<u>-0.2</u>	
Over/Under				-0.2	-1.5	-2.0	-1.0			-0.4	
Private Credit	394,481,961	5.4	8.0	0.7	1.3	0.5	8.4	8.0		7.6	Jan-18
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				3.3	<u>7.1</u>	<u>-0.3</u>	<u>7.6</u>	<u>4.4</u>		<u>4.3</u>	
Over/Under				-2.6	-5.8	0.8	0.8	3.6		3.3	



	All	ocation			Performance (%)						
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Real Estate	531,428,543	7.3	8.0	-3.8	-8.4	-6.8	4.6	3.9	6.7	7.2	Apr-94
NCREIF ODCE Net				<u>-3.4</u>	<u>-8.1</u>	<u>-3.9</u>	<u>7.5</u>	<u>6.6</u>	<u>8.5</u>	<u>7.9</u>	
Over/Under				-0.4	-0.3	-2.9	-2.9	-2.7	-1.8	-0.7	
Prudential Real Estate	212,869,196	2.9		-1.8	-7.3	-2.3	8.2	7.5	9.3	6.6	Jul-04
NCREIF ODCE Net				<u>-3.4</u>	<u>-8.1</u>	<u>-3.9</u>	<u>7.5</u>	6.6	<u>8.5</u>	<u>7.0</u>	
Over/Under				1.6	8.0	1.6	0.7	0.9	8.0	-0.4	
UBS Real Estate	234,169,214	3.2		-7.2	-12.3	-8.9	2.4	1.8	5.2	6.0	Apr-03
NCREIF ODCE Net				<u>-3.4</u>	<u>-8.1</u>	<u>-3.9</u>	<u>7.5</u>	6.6	<u>8.5</u>	<u>7.1</u>	
Over/Under				-3.8	-4.2	-5.0	-5.1	-4.8	-3.3	-1.1	
LaSalle Income + Growth VIII Limited Partnership	62,501,654	0.9		1.8	3.8	13.9	13.8			13.4	Mar-20
NCREIF ODCE Net				<u>-3.4</u>	<u>-8.1</u>	<u>-3.9</u>	<u>7.5</u>			<u>7.5</u>	
Over/Under				5.2	11.9	17.8	6.3			5.9	
Alterra IOS Venture II	21,888,479	0.3		0.0	-5.3	-5.3				-5.3	Apr-22
NCREIF ODCE Net				<u>-3.4</u>	<u>-8.1</u>	<u>-3.9</u>				<u>-3.9</u>	
Over/Under				3.4	2.8	-1.4				-1.4	
Total Real Assets	355,104,055	4.8	6.0	4.0	5.8	-6.9	10.3	3.8		3.9	May-13
Real Assets Index				2.2	<u>3.4</u>	<u>7.1</u>	<u>7.5</u>	<u>6.5</u>		<u>6.4</u>	
Over/Under				1.8	2.4	-14.0	2.8	-2.7		-2.5	
Bridgewater All Weather Fund	136,491,055	1.9		7.0	2.5	-13.2	4.3	2.8		3.9	Sep-13
CPI + 5% (Unadjusted)				<u>2.9</u>	<u>5.7</u>	<u>10.2</u>	<u>10.6</u>	<u>9.1</u>		<u>7.8</u>	
Over/Under				4.1	-3.2	-23.4	-6.3	-6.3		-3.9	
Tortoise Energy Infrastructure	111,795,674	1.5		2.6	19.8	8.2	38.1	6.8		2.9	May-13
Tortoise MLP Index				<u>2.3</u>	<u>21.3</u>	<u>13.1</u>	<u>45.1</u>	<u>7.4</u>		<u>1.0</u>	
Over/Under				0.3	-1.5	-4.9	-7.0	-0.6		1.9	
Brookfield Infra Fund IV B LP	49,678,350	0.7		4.1	2.6	8.1	9.3			9.3	Apr-20
CPI + 2% (Unadjusted)				<u>2.2</u>	<u>3.4</u>	<u>7.1</u>	<u>7.5</u>			<u>7.5</u>	
Over/Under				1.9	-0.8	1.0	1.8			1.8	
Harbourvest Real Assets Fund IV L.P.	57,138,976	0.8		0.0	26.4	26.4				35.2	Apr-21
CPI + 2% (Unadjusted)				2.2	<u>3.4</u>	<u>7.1</u>				<u>8.9</u>	
Over/Under				-2.2	23.0	19.3				26.3	
Overlay	137,020,893	1.9	0.0								
Parametric	61,673,107	0.8									
Abbott Capital Cash	75,347,786	1.0									



	Alle	Performance (%)									
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Total Private Equity	1,330,751,613	18.2	18.0	-0.7	-4.3	-1.1	22.1	19.0	17.0	16.5	Jan-12
Private Equity Benchmark				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	21.3	<u>13.4</u>	<u>14.9</u>	<u>16.1</u>	
Over/Under				-8.4	-15.7	5.7	8.0	5.6	2.1	0.4	
C A Global All PE (Qtr Lag)				<u>0.8</u>	<u>-5.9</u>	<u>-6.9</u>	<u>16.8</u>	<u>14.8</u>	<u>13.9</u>	<u>13.8</u>	
Over/Under				-1.5	1.6	5.8	5.3	4.2	3.1	2.7	
Adams Street Global Fund Series	248,975,452	3.4		-2.8	-10.2	-14.0	19.8	18.0	15.8	15.2	Jan-12
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8	<u>12.7</u>	<u>14.0</u>	<u>15.2</u>	
Over/Under				-10.5	-21.6	-7.2	-1.0	5.3	1.8	0.0	
Harbourvest	107,039,659	1.5		0.0	-3.6	-3.0	14.5	15.2		17.4	Aug-13
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8	<u>12.7</u>		<u>13.5</u>	
Over/Under				-7.7	-15.0	3.8	-6.3	2.5		3.9	
Pantheon Global Secondary Funds	89,442,196	1.2		-2.0	6.5	6.5	14.0	12.0	12.7	12.2	Jan-12
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8	<u>12.7</u>	<u>14.0</u>	<u>15.2</u>	
Over/Under				-9.7	-4.9	13.3	-6.8	-0.7	-1.3	-3.0	
Drive Capital Fund II	29,760,745	0.4		0.0	1.8	-9.0	19.8	20.8		2.9	Sep-16
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8	<u>12.7</u>		<u>13.9</u>	
Over/Under				-7.7	-9.6	-2.2	-1.0	8.1		-11.0	
Abbott Secondary Opportunities	10,393,841	0.1		2.1	-3.4	-8.7	24.0	23.0		21.8	Jan-18
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8	<u>12.7</u>		<u>12.0</u>	
Over/Under				-5.6	-14.8	-1.9	3.2	10.3		9.8	
Clearlake Capital Partners V	12,352,542	0.2		-1.5	-13.3	20.6	12.0	25.2		24.8	Mar-18
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8	<u>12.7</u>		12.0	
Over/Under				-9.2	-24.7	27.4	-8.8	12.5		12.8	
Battery Ventures XII	27,060,246	0.4		-6.8	-18.3	-2.7	38.1	22.9		22.9	Apr-18
Russell 3000 + 2%				<u>7.7</u>	11.4	<u>-6.8</u>	20.8	12.7		<u>12.7</u>	
Over/Under				-14.5	-29.7	4.1	17.3	10.2		10.2	
Insight Venture Partners X	49,849,161	0.7		-3.8	-23.0	-22.2	26.6			20.0	May-18
Russell 3000 + 2%				<u>7.7</u>	11.4	<u>-6.8</u>	20.8			<u>12.8</u>	
Over/Under				-11.5	-34.4	-15.4	5.8			7.2	
GTCR Fund XII	32,806,157	0.4		1.7	-2.0	7.8	33.0			3.1	Jun-18
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			12.3	
Over/Under				-6.0	-13.4	14.6	12.2			-9.2	
Buenaventure One, LLC	201,286,742	2.7		1.2	0.0	12.4	24.5			16.4	Jul-18
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>12.3</u>	
Over/Under				-6.5	-11.4	19.2	3.7			4.1	



	Allocation  Market % of Policy						Perform	nance (%)			
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
ECI 11	9,391,092	0.1		13.5	4.0	-9.8	27.6			25.3	Jan-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>			<u>15.9</u>	
Over/Under				5.8	-7.4	-3.0	6.8			9.4	
Buenaventure Two, LLC	2,032,650	0.0		1.2	1.3	14.2	23.1			33.6	Dec-18
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>			<u>13.1</u>	
Over/Under				-6.5	-10.1	21.0	2.3			20.5	
The Resolute Fund IV L.P	31,572,669	0.4		4.2	16.3	39.2	33.8			42.6	Jan-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>			<u>15.9</u>	
Over/Under				-3.5	4.9	46.0	13.0			26.7	
GGV Capital VII L.P.	13,438,596	0.2		-3.0	-8.1	-4.4	15.2			4.9	Feb-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>			<u>14.0</u>	
Over/Under				-10.7	-19.5	2.4	-5.6			-9.1	
GGV Discovery II, L.P.	3,908,017	0.1		-0.3	-1.6	21.0	31.3			20.7	Feb-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>			<u>14.0</u>	
Over/Under				-8.0	-13.0	27.8	10.5			6.7	
Drive Capital Overdrive Fund I	13,946,430	0.2		-0.2	-1.3	1.3	34.0			23.9	May-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>			<u>12.2</u>	
Over/Under				-7.9	-12.7	8.1	13.2			11.7	
Riverside Micro Cap Fund V, LP	11,986,502	0.2		0.0	4.6	21.8	18.4			6.6	May-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>12.2</u>	
Over/Under				-7.7	-6.8	28.6	-2.4			-5.6	
GGV Capital VII Plus, LP	3,170,309	0.0		2.9	-4.6	-3.5	11.1			8.7	Jun-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>14.4</u>	
Over/Under				-4.8	-16.0	3.3	-9.7			-5.7	
Astorg VII L.P.	9,807,949	0.1		-7.4	-22.5	-7.6	14.2			-2.4	Jul-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>			<u>12.7</u>	
Over/Under				-15.1	-33.9	-0.8	-6.6			-15.1	
M/C Partners Fund VIII LP. Limited Partnership	8,073,351	0.1		-2.3	-0.6	18.1	11.7			-8.0	Jul-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>12.7</u>	
Over/Under				-10.0	-12.0	24.9	-9.1			-20.7	
Genstar Capital Partners IX	9,938,459	0.1		3.0	24.3	30.1	33.7			N/A	Aug-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>				
Over/Under				-4.7	12.9	36.9	12.9				



	Allocation Soft Policy 3 Mo						Perform	nance (%)			
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Genstar IX Opportunities Fund I	3,000,119	0.0		2.4	25.1	28.9	26.0			21.7	Aug-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	<u>20.8</u>			<u>12.5</u>	
Over/Under				-5.3	13.7	35.7	5.2			9.2	
ABRY Partners IX, LP	12,021,764	0.2		0.0	12.9	22.7	11.5			4.8	Sep-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>13.4</u>	
Over/Under				-7.7	1.5	29.5	-9.3			-8.6	
Advent International GPE IX LP	12,478,202	0.2		-2.8	-19.8	-35.7	36.7			28.3	Nov-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>12.7</u>	
Over/Under				-10.5	-31.2	-28.9	15.9			15.6	
Drive Capital Fund III LP	7,966,593	0.1		0.0	10.2	16.0	8.5			7.6	Dec-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>11.7</u>	
Over/Under				-7.7	-1.2	22.8	-12.3			-4.1	
Oak HC/FT Partners III LP	22,696,230	0.3		-5.1	-33.2	-31.0	25.2			18.7	Dec-19
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>11.7</u>	
Over/Under				-12.8	-44.6	-24.2	4.4			7.0	
TA XIII A LP	12,457,434	0.2		0.7	3.7	7.8	28.6			24.1	Jan-20
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>11.0</u>	
Over/Under				-7.0	-7.7	14.6	7.8			13.1	
Dover Street X, LP	29,024,264	0.4		0.0	3.6	15.1	36.8			34.1	Feb-20
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			<u>11.3</u>	
Over/Under				-7.7	-7.8	21.9	16.0			22.8	
Hellman & Friedman CP IX	24,515,670	0.3		7.6	-1.2	0.8	8.6			8.6	Apr-20
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>	20.8			20.8	
Over/Under				-0.1	-12.6	7.6	-12.2			-12.2	
Clearlake Capital Partners VI	27,076,323	0.4		3.0	-2.0	0.4				27.3	Jun-20
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>14.7</u>	
Over/Under				-4.7	-13.4	7.2				12.6	
Flexpoint Fund IV	6,951,836	0.1		-30.4	-18.3	-4.5				13.1	Jun-20
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>14.7</u>	
Over/Under				-38.1	-29.7	2.3				-1.6	
Battery Ventures XIII	17,069,283	0.2		0.6	-2.1	20.2				16.7	Jun-20
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>14.7</u>	
Over/Under				-7.1	-13.5	27.0				2.0	



	Allocation  Market % of Police						Perform	nance (%)			
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Green Equity Investors VIII, L.P.	14,234,485	0.2		3.4	3.2	6.5				3.6	Nov-20
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>12.8</u>	
Over/Under				-4.3	-8.2	13.3				-9.2	
CapVest Private Equity Partners IV, SCSp	10,290,264	0.1		2.0	11.2	26.6				43.4	Dec-20
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>7.8</u>	
Over/Under				-5.7	-0.2	33.4				35.6	
Drive Capital Fund IV LP	3,628,598	0.0		0.0	-2.9	-5.4				-4.4	Jan-22
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-9.1</u>	
Over/Under				-7.7	-14.3	1.4				4.7	
Great Hill Equity Partners VII	7,132,749	0.1		-1.2	-3.9	-4.9				87.3	Jan-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>5.9</u>	
Over/Under				-8.9	-15.3	1.9				81.4	
Vitruvian Investment Partners IV	16,411,639	0.2		7.3	16.5	30.2				N/A	Jan-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>					
Over/Under				-0.4	5.1	37.0					
CRV XVIII, L.P.	14,239,178	0.2		-6.8	-7.6	-0.8				N/A	Mar-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>					
Over/Under				-14.5	-19.0	6.0					
GGV Capital VIII, L.P.	5,944,326	0.1		-0.3	1.0	1.5				11.1	May-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				0.6	
Over/Under				-8.0	-10.4	8.3				10.5	
GGV Discovery III, L.P.	2,630,328	0.0		3.4	18.6	18.6				30.3	May-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>0.6</u>	
Over/Under				-4.3	7.2	25.4				29.7	
Oak HC/FT Partners IV, L.P.	9,189,429	0.1		3.2	9.0	19.7				10.3	May-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>0.6</u>	
Over/Under				-4.5	-2.4	26.5				9.7	
Prairie Capital VII, LP	3,974,907	0.1		-1.4	-1.9	15.2				1.7	Jun-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>0.2</u>	
Over/Under				-9.1	-13.3	22.0				1.5	
GGV Capital VIII Plus, L.P.	1,095,548	0.0		-1.4	0.2	4.5				2.5	Jul-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-1.2</u>	
Over/Under				-9.1	-11.2	11.3				3.7	



	All				Perforn	nance (%)					
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Flexpoint Overage Fund IV A, L.P.	2,548,298	0.0		0.7	0.4	3.9				6.7	Jul-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-1.2</u>	
Over/Under				-7.0	-11.0	10.7				7.9	
Abbott Secondary Opportunities II, L.P.	15,881,796	0.2		-0.5	30.3	30.3				66.0	Jul-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-1.2</u>	
Over/Under				-8.2	18.9	37.1				67.2	
Genstar X Opportunities Fund I, LP	3,113,819	0.0		1.2	0.5	11.2				6.7	Sep-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-4.3</u>	
Over/Under				-6.5	-10.9	18.0				11.0	
Charlesbank Overage Fund X	4,729,209	0.1		1.8	7.1	8.4				9.2	Sep-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-4.3</u>	
Over/Under				-5.9	-4.3	15.2				13.5	
Charlesbank Equity Fund X	11,868,336	0.2		9.7	13.4	14.0				10.3	Sep-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-4.3</u>	
Over/Under				2.0	2.0	20.8				14.6	
GTCR Fund XIII	14,799,447	0.2		-2.6	-2.0	24.5				37.9	Sep-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-4.3</u>	
Over/Under				-10.3	-13.4	31.3				42.2	
Hellman & Friedman CP X	14,071,181	0.2		5.8	-3.3	-4.8				-3.4	Nov-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-6.3</u>	
Over/Under				-1.9	-14.7	2.0				2.9	
Genstar Capital Partners X LP	8,857,605	0.1		1.3	1.3	14.1				11.3	Dec-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-5.7</u>	
Over/Under				-6.4	-10.1	20.9				17.0	
TA XIV A LP	5,260,298	0.1		-1.8	-13.2	-13.2				-10.1	Dec-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-5.7</u>	
Over/Under				-9.5	-24.6	-6.4				-4.4	
CVC Capital Partners VIII A LP	12,190,301	0.2		-2.7	14.8	15.9				21.0	Dec-21
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-5.7</u>	
Over/Under				-10.4	3.4	22.7				26.7	
Drive Capital Overdrive	4,054,912	0.1		0.8	-3.0	-5.5				-4.8	Feb-22
Russell 3000 + 2%				<u>7.7</u>	11.4	<u>-6.8</u>				<u>-5.0</u>	
Over/Under				-6.9	-14.4	1.3				0.2	



	All	Allocation % of Policy					Perforr	nance (%)			
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Drive Capital Fund IV LP	3,628,598	0.0		0.0	-2.9	-5.4				-4.7	Feb-22
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-5.0</u>	
Over/Under				-7.7	-14.3	1.4				0.3	
Kinderhook Capital Fund 7	4,666,995	0.1		42.8	31.7	11.5				10.5	Mar-22
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-3.3</u>	
Over/Under				35.1	20.3	18.3				13.8	
Pantheon Global Secondary Funds VII	4,702,645	0.1		-9.7	3.0	3.0				3.0	Apr-22
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-6.8</u>	
Over/Under				-17.4	-8.4	9.8				9.8	
Harbourvest PTN Co Inv VI LP	11,596,610	0.2		0.0	-8.5	-8.5				-8.5	Apr-22
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>	<u>-6.8</u>				<u>-6.8</u>	
Over/Under				-7.7	-19.9	-1.7				-1.7	
Clearlake Capital Partners VII	10,064,917	0.1		-0.9	-2.6					-2.6	May-22
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>					<u>2.3</u>	
Over/Under				-8.6	-14.0					-4.9	
Battery Ventures XIV	1,310,469	0.0		-1.9							Jul-22
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>					<u>11.4</u>	
Over/Under				-9.6							
Oak HC/FT Partners V	1,157,275	0.0		-4.3							Jul-22
Russell 3000 + 2%				<u>7.7</u>	<u>11.4</u>					<u>11.4</u>	
Over/Under				-12.0							
Advent International GPE X LP	1,453,529	0.0		5.3						-12.6	Oct-22
Russell 3000 + 2%				<u>7.7</u>						<u>16.0</u>	
Over/Under				-2.4						-28.6	
GTCR Strategic Growth 1/A	573,146	0.0		-35.2						-35.2	Oct-22
Russell 3000 + 2%				<u>7.7</u>						<u>16.0</u>	
Over/Under				-42.9						-51.2	
GTCR Strategic Growth 1/B	263,444	0.0		5.1						7.5	Oct-22
Russell 3000 + 2%				<u>7.7</u>						<u>16.0</u>	
Over/Under				-2.6						-8.5	
Riverside Micro Cap Fund VI, LP	5,424,496	0.1		0.0						-10.0	Oct-22
Russell 3000 + 2%				<u>7.7</u>						<u>16.0</u>	
Over/Under				-7.7						-26.0	
Ridgemont Equity Partners IV	1,551,812	0.0		0.0						0.0	Jan-23
Russell 3000 + 2%				<u>7.7</u>						<u>7.7</u>	
Over/Under				-7.7						-7.7	
CapVest Private Equity Partners V, SCSp	349,134	0.0									Apr-23
Puccall 2000 ± 2%											

Russell 3000 + 2%

Over/Under



	Allocation  Market % of Police						Perfor	mance (%)			
	Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
Private Credit	394,481,961	5.4	8.0	0.7	1.3	0.5	8.4	8.0		7.6	Jan-18
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index Over/Under				3.3 -2.6	<u>7.1</u> -5.8	<u>-0.3</u>	<u>7.6</u>	<u>4.4</u>		<u>4.3</u> 3.3	
CVI Credit Value Fund IV	26.006.411	0.4		1.9	8.6	0.8 8.6	0.8	3.6		7.2	lan 10
	26,986,411	0.4					8.0	7.6			Jan-18
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index Over/Under				3.3 -1.4	7.1 1.5	<u>-0.3</u> 8.9	7.6 0.4	<u>4.4</u> 3.2		<u>4.3</u> 2.9	
Monroe Capital Private Credit Fund III	21,689,890	0.3		4.0	7.1	10.0	11.8			11.4	Dec-18
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				3.3	<u>7.1</u>	<u>-0.3</u>	<u>7.6</u>			<u>4.6</u>	
Over/Under				0.7	0.0	10.3	4.2			6.8	
Bluebay Direct Lending Fund III	16,978,894	0.2		0.0	3.4	5.7	9.8			9.5	Apr-19
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				<u>3.3</u>	<u>7.1</u>	<u>-0.3</u>	<u>7.6</u>			<u>4.0</u>	
Over/Under				-3.3	-3.7	6.0	2.2			5.5	
Pimco Private Income Fund	70,631,984	1.0		-0.7	-0.4	-0.4	8.6			8.0	Nov-19
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				<u>3.3</u>	<u>7.1</u>	<u>-0.3</u>	<u>7.6</u>			<u>3.3</u>	
Over/Under				-4.0	-7.5	-0.1	1.0			4.7	
Bridge Debt Strategies III Limited Partner	15,370,065	0.2		0.0	1.5	2.1	6.9			6.4	Jan-20
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				<u>3.3</u>	<u>7.1</u>	<u>-0.3</u>	<u>7.6</u>			<u>2.8</u>	
Over/Under				-3.3	-5.6	2.4	-0.7			3.6	
PIMCO Corp Opps Fund III	48,951,943	0.7		-2.2	-6.3	-10.7				31.0	May-20
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				<u>3.3</u>	<u>7.1</u>	<u>-0.3</u>				<u>6.2</u>	
Over/Under				-5.5	-13.4	-10.4				24.8	
Torchlight Debt Fund VII, L.P.	13,390,463	0.2		1.8	6.2	7.7				4.1	Jan-21
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				<u>3.3</u>	<u>7.1</u>	<u>-0.3</u>				<u>1.3</u>	
Over/Under				-1.5	-0.9	8.0				2.8	
Torchlight Debt Fund VIII, L.P.	2,000,000	0.0		0.0						0.0	Jan-23
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				<u>3.3</u>						3.3	
Over/Under				-3.3						-3.3	
Crayhill Principal Strategies Fund II	13,234,911	0.2		0.2	4.3	-14.6				18.0	May-21
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				<u>3.3</u>	<u>7.1</u>	<u>-0.3</u>				<u>0.2</u>	
Over/Under				-3.1	-2.8	-14.3				17.8	
CVI Credit Value Fund A V	20,855,321	0.3		4.8	5.1	4.2				6.4	Jun-21
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index				3.3	<u>7.1</u>	<u>-0.3</u>				0.0	
Over/Under				1.5	-2.0	4.5				6.4	



Allocation  Market % of Policy 3 Mo				Performance (%)						
Market Value (\$)	% of Portfolio	Policy (%)	3 Mo (%)	FYTD (%)	1 Yr (%)	3 Yrs (%)	5 Yrs (%)	10 Yrs (%)	Inception (%)	Inception Date
23,801,529	0.3		1.3	2.1	4.5				4.9	Aug-21
			<u>3.3</u> -2.0	<u>7.1</u> -5.0	<u>-0.3</u> 4.8				<u>-0.7</u> 5.6	
15,598,520	0.2		1.6	3.2	8.7				6.3	Sep-21
			3.3	<u>7.1</u>	<u>-0.3</u>				<u>-1.1</u>	
17.550.650	0.0									0 01
17,559,659	0.2									Sep-21
			-3.3	-5.8	<u>-0.3</u> 1.6				- <u>1.1</u> 1.9	
2,769,804	0.0		0.0	2.1	-2.9				6.6	Nov-21
			3.3 -3.3	<u>7.1</u> -5.0	<u>-0.3</u> -2.6				<u>-1.4</u> 8.0	
11,482,304	0.2		0.0	-9.7	-10.6				-8.1	Dec-21
			3.3 -3.3	<u>7.1</u> -16.8	<u>-0.3</u> -10.3				<u>-1.1</u> -7.0	
25,077,179	0.3		2.1	4.0	8.3				6.6	Jan-22
			3.3 -1.2	7.1 -3.1	<u>-0.3</u> 8.6				- <u>2.2</u> 8.8	
12,597,266	0.2		2.2	1.1					1.1	May-22
			3.3	<u>7.1</u>					<u>1.4</u>	,
00.760.016	0.0		***	-0.0						D 00
20,708,910	0.3									Dec-22
			-1.8						<u>3.1</u> -1.6	
14,736,901	0.2									Apr-23
	Market Value (\$) 23,801,529 15,598,520 17,559,659 2,769,804 11,482,304 25,077,179 12,597,266 20,768,916	Market Value (\$)         % of Portfolio           23,801,529         0.3           15,598,520         0.2           17,559,659         0.2           2,769,804         0.0           11,482,304         0.2           25,077,179         0.3           12,597,266         0.2           20,768,916         0.3	Market Value (\$)         % of Portfolio Portfolio         Policy (%)           23,801,529         0.3           15,598,520         0.2           17,559,659         0.2           2,769,804         0.0           11,482,304         0.2           25,077,179         0.3           12,597,266         0.2           20,768,916         0.3	Market Value (\$)         % of Portfolio (%)         Policy (%)         3 Mo (%)           23,801,529         0.3         1.3           3.3         -2.0           15,598,520         0.2         1.6           3.3         -1.7           17,559,659         0.2         0.0           3.3         -3.3           2,769,804         0.0         0.0           3.3         -3.3           11,482,304         0.2         0.0           3.3         -3.3           25,077,179         0.3         2.1           3.3         -1.2           12,597,266         0.2         2.2           3.3         -1.1           20,768,916         0.3         1.5           3.3         -1.8	Market Value (\$)         % of Portfolio         Policy (%)         3 Mo (%)         FYTD (%)           23,801,529         0.3         1.3         2.1           3.3         7.1         -2.0         -5.0           15,598,520         0.2         1.6         3.2           3.3         7.1         -1.7         -3.9           17,559,659         0.2         0.0         1.3           2,769,804         0.0         0.0         2.1           3.3         7.1           -3.3         -5.8           2,769,804         0.0         0.0         2.1           3.3         7.1           -3.3         -5.0           11,482,304         0.2         0.0         -9.7           3.3         7.1           -3.3         7.1         -1.8           25,077,179         0.3         2.1         4.0           3.3         7.1         -1.2         -3.1           12,597,266         0.2         2.2         1.1           20,768,916         0.3         1.5         3.3           -1.1         -6.0         -6.0           20,768,916         0.3         1.5         3.3 <td>Market Value (\$)         % of Portfolio         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)           23,801,529         0.3         1.3         2.1         4.5           3.3         7.1         -0.3           -2.0         -5.0         4.8           15,598,520         0.2         1.6         3.2         8.7           3.3         7.1         -0.3           -1.7         -3.9         9.0           17,559,659         0.2         0.0         1.3         1.3           3.3         7.1         -0.3         -3.3         -5.8         1.6           2,769,804         0.0         0.0         2.1         -2.9         3.3         7.1         -0.3           -3.3         -5.8         1.6         -2.9         3.3         7.1         -0.3           -3.3         -5.0         -2.6         -2.9         -3.3         -5.0         -2.6           11,482,304         0.2         0.0         -9.7         -10.6         -10.3         -3.3         -16.8         -10.3           -3.3         -7.1         -0.3         -3.3         -7.1         -0.3         -1.2         -3.1         8.6</td> <td>Market Value (\$)         % of Value (\$)         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)         3 Yrs (%)           23,801,529         0.3         1.3         2.1         4.5         3.3         7.1         -0.3         -0.3         -2.0         -5.0         4.8         15,598,520         0.2         1.6         3.2         8.7         3.3         7.1         -0.3         -0.3         -1.7         -3.9         9.0         17,559,659         0.2         0.0         1.3         1.3         1.3         3.3         7.1         -0.3         -0.3         -3.3         -5.8         1.6         2,769,804         0.0         0.0         2.1         -2.9         3.3         7.1         -0.3         -3.3         -5.0         -2.6         11,482,304         0.2         0.0         -9.7         -10.6         3.3         7.1         -0.3         -3.3         -16.8         -10.3         25,077,179         0.3         2.1         4.0         8.3         3.3         7.1         -0.3         -1.2         -3.1         8.6         12,597,266         0.2         2.2         1.1         -1.1         -6.0         20,768,916         0.3         1.5         3.3         -1.8         -1.8</td> <td>Market Value (\$)         % of Portfolio         Policy (\$)         3 Mo (\$)         FYTD (\$)         1 Yr (\$)         3 Yrs (\$)         5 Yrs (\$)           23,801,529         0.3         1.3         2.1         4.5         3.3         7.1         -0.3</td> <td>Market Value (\$)         % of Portfolio (%)         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)         3 Yrs (%)         5 Yrs (%)         10 Yrs (%)           23,801,529         0.3         1.3         2.1         4.5         3.3         7.1         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -1.6         -0.3         -1.6         -0.3         -1.6         -0.3         -1.6         -0.3         -1.2         -3.1<td>Market Value (\$)         % of Portfolio         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)         3 Yrs (%)         5 Yrs (%)         10 Yrs (%)         Inception (%)           23,801,529         0.3         1.3         2.1         4.5         4.9         4.9           3.3         7.1         -0.3         -0.7         -5.6         -5.6         -5.6         -6.3         -6.3         -1.1         -6.3         -1.1         -7.4         -7.4         -1.7         -3.9         9.0         7.4         -1.1</td></td>	Market Value (\$)         % of Portfolio         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)           23,801,529         0.3         1.3         2.1         4.5           3.3         7.1         -0.3           -2.0         -5.0         4.8           15,598,520         0.2         1.6         3.2         8.7           3.3         7.1         -0.3           -1.7         -3.9         9.0           17,559,659         0.2         0.0         1.3         1.3           3.3         7.1         -0.3         -3.3         -5.8         1.6           2,769,804         0.0         0.0         2.1         -2.9         3.3         7.1         -0.3           -3.3         -5.8         1.6         -2.9         3.3         7.1         -0.3           -3.3         -5.0         -2.6         -2.9         -3.3         -5.0         -2.6           11,482,304         0.2         0.0         -9.7         -10.6         -10.3         -3.3         -16.8         -10.3           -3.3         -7.1         -0.3         -3.3         -7.1         -0.3         -1.2         -3.1         8.6	Market Value (\$)         % of Value (\$)         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)         3 Yrs (%)           23,801,529         0.3         1.3         2.1         4.5         3.3         7.1         -0.3         -0.3         -2.0         -5.0         4.8         15,598,520         0.2         1.6         3.2         8.7         3.3         7.1         -0.3         -0.3         -1.7         -3.9         9.0         17,559,659         0.2         0.0         1.3         1.3         1.3         3.3         7.1         -0.3         -0.3         -3.3         -5.8         1.6         2,769,804         0.0         0.0         2.1         -2.9         3.3         7.1         -0.3         -3.3         -5.0         -2.6         11,482,304         0.2         0.0         -9.7         -10.6         3.3         7.1         -0.3         -3.3         -16.8         -10.3         25,077,179         0.3         2.1         4.0         8.3         3.3         7.1         -0.3         -1.2         -3.1         8.6         12,597,266         0.2         2.2         1.1         -1.1         -6.0         20,768,916         0.3         1.5         3.3         -1.8         -1.8	Market Value (\$)         % of Portfolio         Policy (\$)         3 Mo (\$)         FYTD (\$)         1 Yr (\$)         3 Yrs (\$)         5 Yrs (\$)           23,801,529         0.3         1.3         2.1         4.5         3.3         7.1         -0.3	Market Value (\$)         % of Portfolio (%)         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)         3 Yrs (%)         5 Yrs (%)         10 Yrs (%)           23,801,529         0.3         1.3         2.1         4.5         3.3         7.1         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -0.3         -1.6         -0.3         -1.6         -0.3         -1.6         -0.3         -1.6         -0.3         -1.6         -0.3         -1.2         -3.1 <td>Market Value (\$)         % of Portfolio         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)         3 Yrs (%)         5 Yrs (%)         10 Yrs (%)         Inception (%)           23,801,529         0.3         1.3         2.1         4.5         4.9         4.9           3.3         7.1         -0.3         -0.7         -5.6         -5.6         -5.6         -6.3         -6.3         -1.1         -6.3         -1.1         -7.4         -7.4         -1.7         -3.9         9.0         7.4         -1.1</td>	Market Value (\$)         % of Portfolio         Policy (%)         3 Mo (%)         FYTD (%)         1 Yr (%)         3 Yrs (%)         5 Yrs (%)         10 Yrs (%)         Inception (%)           23,801,529         0.3         1.3         2.1         4.5         4.9         4.9           3.3         7.1         -0.3         -0.7         -5.6         -5.6         -5.6         -6.3         -6.3         -1.1         -6.3         -1.1         -7.4         -7.4         -1.7         -3.9         9.0         7.4         -1.1

50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index Over/Under

Policy Index as of May, 2022: 26% Russell 3000 Index, 15% MSCI ACWI ex U.S., 9% MSCI ACWI, 18% Private Equity Benchmark, 10% Bloomberg US Aggregate, 8% 50% CS Leveraged Loan/50% ICE BofA US HY BB-B Rated Constrained Index, 8% NCREIF ODCE, 6% Real Assets Index.

Total U.S. Equity Benchmark: Russell 3000 Index. Prior to January 2016, the Benchmark is a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Prior to January 2016 the Total U.S. Equity Benchmark was a dynamic hybrid using the respective managers' market value weights within the U.S. Equity component toward their benchmark. Prior to May 2013, the Dow Jones U.S. Total Stock Market Index. Prior to May 2007, the Russell 3000 Index.

Reams Custom Index: Merrill Lynch 3 Month Libor Constant Maturity Index, prior to February 2013 the Bloomberg Aggregate.

Loomis Custom Index: 65% Bloomberg US Aggregate, 30% Citigroup High Yield Market Index and 5% JPM Non-US Hedged Bond Index.

Total Real Estate Benchmark: NCREIF ODCE; prior to January 2006, the NCREIF Property Index.

Total Real Assets Benchmark CPI + 4% from inception until 6/30/2019; CPI +2% from 6/30/2019 to present.

Real Estate managers and NCREIF ODCE are valued on a quarterly basis. Performance is not applicable in mid-quarter months, therefore 0% return is shown.

Please Note: Private Equity performance is shown on a time-weighted return basis. Values are cash adjusted with current month cash flows. Fiscal year ends 6/30.



					Performar	nce (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Fund	<b>-11.7</b> (63)	19.1 (11)	13.6 (16)	18.7 (21)	<b>-3.6</b> (48)	16.0 (40)	8.6 (20)	<b>-0.9</b> (63)	6.3 (34)	18.1 (19)
Policy Index	<u>-12.9</u> (77)	<u>15.8</u> (47)	<u>14.4</u> (11)	<u>20.7</u> (8)	<u>-3.6</u> (47)	<u>16.2</u> (33)	<u>7.4</u> (66)	<u>0.7</u> (24)	<u>6.6</u> (24)	<u>17.2</u> (29)
Over/Under	1.2	3.3	-0.8	-2.0	0.0	-0.2	1.2	-1.6	-0.3	0.9
60% MSCI ACWI (Net)/ 40% Bloomberg Global Agg	<u>-17.3</u> (100)	<u>8.8</u> (100)	<u>14.0</u> (13)	<u>18.6</u> (24)	<u>-6.0</u> (87)	<u>17.1</u> (14)	<u>5.7</u> (95)	<u>-2.5</u> (92)	<u>2.8</u> (97)	<u>12.1</u> (78)
Over/Under	5.6	10.3	-0.4	0.1	2.4	-1.1	2.9	1.6	3.5	6.0
InvMetrics Public DB > \$1 Billion Median	-10.7	15.5	11.5	17.1	-3.7	15.7	7.6	-0.4	5.7	15.6
Total Fund ex Parametric	-11.9	19.6	13.4	18.6	-3.7	16.3	9.2	-1.0	6.3	
Total Fund ex Private Equity	<b>-14.0</b> (86)	14.8 (57)	12.7 (32)	19.6 (15)	<b>-4.8</b> (71)	15.9 (43)	8.6 (17)	<b>-1.4</b> (76)	6.1 (42)	16.2 (40)
Policy Index	<u>-12.9</u> (77)	<u>15.8</u> (47)	<u>14.4</u> (11)	<u>20.7</u> (8)	<u>-3.6</u> (47)	<u>16.2</u> (33)	<u>7.4</u> (66)	<u>0.7</u> (24)	<u>6.6</u> (24)	<u>17.2</u> (29)
Over/Under	-1.1	-1.0	-1.7	-1.1	-1.2	-0.3	1.2	-2.1	-0.5	-1.0
InvMetrics Public DB > \$1 Billion Median	-10.7	15.5	11.5	17.1	-3.7	15.7	7.6	-0.4	5.7	15.6
Total US Equity	-19.4 (62)	26.5 (44)	20.5 (37)	31.6 (27)	<b>-5.0</b> (36)	21.4 (38)	13.0 (47)	0.5 (37)	12.5 (29)	34.0 (55)
Russell 3000	<u>-19.2</u> (61)	<u>25.7</u> (49)	<u>20.9</u> (36)	<u>31.0</u> (32)	<u>-5.2</u> (38)	<u>21.1</u> (40)	<u>12.7</u> (48)	<u>-0.5</u> (45)	<u>11.3</u> (38)	<u>33.5</u> (59)
Over/Under	-0.2	8.0	-0.4	0.6	0.2	0.3	0.3	1.0	1.2	0.5
eV All US Equity Median	-17.0	25.5	15.2	28.2	-7.2	19.1	12.4	-1.1	9.7	34.8
Western U.S. Index Plus	-20.9 (71)	28.5 (28)	17.9 (41)	33.5 (20)	<del>-5.3</del> (50)	22.7 (38)	13.8 (28)	1.1 (41)	14.2 (20)	32.9 (52)
S&P 500 Index	<u>-18.1</u> (62)	<u>28.7</u> (27)	<u>18.4</u> (40)	<u>31.5</u> (34)	<u>-4.4</u> (41)	<u>21.8</u> (43)	<u>12.0</u> (39)	<u>1.4</u> (38)	<u>13.7</u> (25)	<u>32.4</u> (57)
Over/Under	-2.8	-0.2	-0.5	2.0	-0.9	0.9	1.8	-0.3	0.5	0.5
eV US Large Cap Equity Median	-15.0	26.0	14.4	29.1	-5.4	20.8	10.1	0.0	11.6	33.1
Blackrock Russell 1000 Index	-19.2 (67)	26.6 (46)	21.0 (34)	31.4 (34)	<del>-4.7</del> (44)					
Russell 1000 Index	<u>-19.1</u> (66)	<u>26.5</u> (48)	<u>21.0</u> (34)	<u>31.4</u> (34)	<u>-4.8</u> (45)					
Over/Under	-0.1	0.1	0.0	0.0	0.1					
eV US Large Cap Equity Median	-15.0	26.0	14.4	29.1	-5.4					
Blackrock Russell 2500 Index	-18.3 (55)	18.2 (69)	20.0 (43)	27.8 (52)	<del>-9</del> .9 (50)					
Russell 2500 Index	<u>-18.4</u> (56)	<u>18.2</u> (69)	<u>20.0</u> (43)	<u>27.8</u> (52)	<u>-10.0</u> (51)					
Over/Under	0.1	0.0	0.0	0.0	0.1					
eV US Small-Mid Cap Equity Median	-17.3	23.4	17.0	28.0	-10.0					



					Performar	nce (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Non-US Equity	-17.0	9.0	9.3	21.0	-13.0	26.5	6.6	-4.8	-3.6	16.3
MSCI ACWI ex USA	<u>-16.0</u>	<u>7.8</u>	<u>10.7</u>	<u>21.5</u>	<u>-14.2</u>	<u>27.2</u>	<u>4.5</u>	<u>-5.7</u>	<u>-3.9</u>	<u>15.3</u>
Over/Under	-1.0	1.2	-1.4	-0.5	1.2	-0.7	2.1	0.9	0.3	1.0
MSCI AC World x USA in LC (Net)	<u>-9.6</u>	<u>13.0</u>	<u>6.0</u>	<u>20.8</u>	<u>-10.6</u>	<u>18.2</u>	<u>7.0</u>	<u>1.9</u>	<u>6.0</u>	<u>20.1</u>
Over/Under	-7.4	-4.0	3.3	0.2	-2.4	8.3	-0.4	-6.7	-9.6	-3.8
BlackRock ACWI ex-U.S. Index	<del>-16.4</del> (39)	8.7 (57)	11.2 (66)	21.9 (71)	-14.6 (44)	28.1 (58)	4.7 (27)	<b>-4.5</b> (73)	<del>-3.8</del> (46)	16.0 (76)
MSCI AC World ex USA IMI (Net)	<u>-16.6</u> (41)	<u>8.5</u> (59)	<u>11.1</u> (66)	<u>21.6</u> (71)	<u>-14.8</u> (46)	<u>27.8</u> (59)	<u>4.4</u> (30)	<u>-4.6</u> (74)	<u>-3.9</u> (47)	<u>15.8</u> (77)
Over/Under	0.2	0.2	0.1	0.3	0.2	0.3	0.3	0.1	0.1	0.2
eV ACWI ex-US All Cap Equity Median	-19.0	10.0	15.5	24.5	-15.2	29.0	1.5	-0.6	-4.2	20.0
Sprucegrove	<del>-12.0</del> (21)	6.9 (72)	4.0 (84)	17.3 (87)	-13.8 (37)	27.5 (62)	11.9 (2)	<del>-9</del> .1 (95)	<del>-3.2</del> (42)	17.1 (69)
MSCI EAFE (Net)	<u>-14.5</u> (32)	<u>11.3</u> (37)	<u>7.8</u> (75)	<u>22.0</u> (70)	<u>-13.8</u> (37)	<u>25.0</u> (77)	<u>1.0</u> (54)	<u>-0.8</u> (53)	<u>-4.9</u> (61)	<u>22.8</u> (34)
Over/Under	2.5	-4.4	-3.8	-4.7	0.0	2.5	10.9	-8.3	1.7	-5.7
eV ACWI ex-US All Cap Equity Median	-19.0	10.0	15.5	24.5	-15.2	29.0	1.5	-0.6	-4.2	20.0
Walter Scott	<del>-22.6</del> (70)	11.3 (37)	20.4 (36)	27.5 (30)	<del>-7</del> .1 (1)	26.6 (67)	5.1 (25)	<b>-0.4</b> (48)	<del>-3.5</del> (44)	11.8 (92)
MSCI EAFE (Net)	<u>-14.5</u> (32)	<u>11.3</u> (37)	<u>7.8</u> (75)	<u>22.0</u> (70)	<u>-13.8</u> (37)	<u>25.0</u> (77)	<u>1.0</u> (54)	<u>-0.8</u> (53)	<u>-4.9</u> (61)	<u>22.8</u> (34)
Over/Under	-8.1	0.0	12.6	5.5	6.7	1.6	4.1	0.4	1.4	-11.0
eV ACWI ex-US All Cap Equity Median	-19.0	10.0	15.5	24.5	-15.2	29.0	1.5	-0.6	-4.2	20.0
Total Global Equity	-18.1	18.9	16.7	27.1	-9.0	24.5	9.0	-3.8	1.9	22.0
MSCI AC World Index (Net)	<u>-18.4</u>	<u>18.5</u>	<u>16.3</u>	<u>26.6</u>	<u>-9.4</u>	<u>24.0</u>	<u>7.9</u>	<u>-2.4</u>	<u>4.2</u>	<u>22.8</u>
Over/Under	0.3	0.4	0.4	0.5	0.4	0.5	1.1	-1.4	-2.3	-0.8
BlackRock MSCI ACWI Equity Index	<del>-18</del> .1 (49)	18.9 (49)	16.7 (46)	27.1 (47)	<del>-9.0</del> (48)	24.5 (41)	8.4 (32)	- <mark>2.0</mark> (65)	4.6 (44)	23.2 (62)
MSCI AC World Index (Net)	<u>-18.4</u> (50)	<u>18.5</u> (52)	<u>16.3</u> (48)	<u>26.6</u> (50)	<u>-9.4</u> (52)	<u>24.0</u> (45)	<u>7.9</u> (37)	<u>-2.4</u> (68)	<u>4.2</u> (47)	<u>22.8</u> (64)
Over/Under	0.3	0.4	0.4	0.5	0.4	0.5	0.5	0.4	0.4	0.4
eV All Global Equity Median	-18.4	18.7	15.7	26.5	-9.2	23.1	6.1	-0.5	3.7	25.8
Total Private Equity	1.6	54.8	24.5	8.3	18.7	16.9	7.6	14.7	19.0	17.9
Private Equity Benchmark	<u>-17.6</u>	28.8	<u>24.5</u>	<u>34.9</u>	<u>-2.4</u>	<u>24.8</u>	<u>16.0</u>	<u>3.5</u>	<u>15.8</u>	<u>37.5</u>
Over/Under	19.2	26.0	0.0	-26.6	21.1	-7.9	-8.4	11.2	3.2	-19.6



					Performan	ce (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
US Fixed Income	-10.7	-0.6	11.1	8.5	0.0	4.4	4.9	0.3	3.0	-0.1
Blmbg. U.S. Aggregate Index	<u>-13.0</u>	<u>-1.5</u>	<u>7.5</u>	<u>8.7</u>	<u>0.0</u>	<u>3.5</u>	<u>2.6</u>	<u>0.5</u>	<u>6.0</u>	<u>-2.0</u>
Over/Under	2.3	0.9	3.6	-0.2	0.0	0.9	2.3	-0.2	-3.0	1.9
BlackRock U.S. Debt Fund	<del>-13.1</del> (75)	<b>-1.6</b> (87)	7.6 (35)	8.7 (44)	0.0 (56)	3.6 (54)	2.7 (55)	0.6 (47)	6.2 (29)	<b>-2.0</b> (77)
Blmbg. U.S. Aggregate Index	<u>-13.0</u> (74)	<u>-1.5</u> (85)	<u>7.5</u> (36)	<u>8.7</u> (44)	<u>0.0</u> (56)	<u>3.5</u> (55)	<u>2.6</u> (56)	<u>0.5</u> (47)	<u>6.0</u> (31)	<u>-2.0</u> (77)
Over/Under	-0.1	-0.1	0.1	0.0	0.0	0.1	0.1	0.1	0.2	0.0
eV All US Fixed Inc Median	-9.4	-0.1	5.9	8.1	0.3	3.8	3.1	0.5	3.9	-0.3
Western	<del>-16.1</del> (90)	<b>-1.6</b> (86)	10.9 (14)	10.6 (27)	<b>-0.6</b> (68)	6.0 (28)	4.1 (40)	0.9 (34)	7.4 (19)	<b>-1.2</b> (64)
Blmbg. U.S. Aggregate Index	<u>-13.0</u> (74)	<u>-1.5</u> (85)	<u>7.5</u> (36)	<u>8.7</u> (44)	<u>0.0</u> (56)	<u>3.5</u> (55)	<u>2.6</u> (56)	<u>0.5</u> (47)	<u>6.0</u> (31)	<u>-2.0</u> (77)
Over/Under	-3.1	-0.1	3.4	1.9	-0.6	2.5	1.5	0.4	1.4	8.0
eV All US Fixed Inc Median	-9.4	-0.1	5.9	8.1	0.3	3.8	3.1	0.5	3.9	-0.3
Reams	<del>-5</del> .0 (28)	0.1 (44)	12.0 (11)	6.6 (66)	0.7 (43)	2.5 (70)	6.0 (29)	0.3 (56)	<del>-3.6</del> (100)	2.5 (21)
Blmbg. U.S. Aggregate Index	<u>-13.0</u> (74)	<u>-1.5</u> (85)	<u>7.5</u> (36)	<u>8.7</u> (44)	<u>0.0</u> (56)	<u>3.5</u> (55)	<u>2.6</u> (56)	<u>0.5</u> (47)	<u>6.0</u> (31)	<u>-2.0</u> (77)
Over/Under	8.0	1.6	4.5	-2.1	0.7	-1.0	3.4	-0.2	-9.6	4.5
Reams Custom Index	<u>1.2</u> (4)	<u>0.2</u> (42)	<u>1.1</u> (94)	<u>2.6</u> (94)	<u>2.1</u> (6)	<u>1.1</u> (91)	<u>0.7</u> (88)	<u>0.2</u> (59)	<u>0.2</u> (94)	<u>-0.4</u> (52)
Over/Under	-6.2	-0.1	10.9	4.0	-1.4	1.4	5.3	0.1	-3.8	2.9
eV All US Fixed Inc Median	-9.4	-0.1	5.9	8.1	0.3	3.8	3.1	0.5	3.9	-0.3
Loomis Strategic Alpha	<del>-7.9</del> (40)	1.5 (31)	10.9 (13)	4.3 (83)	0.6 (46)	3.3 (60)	6.1 (29)	<b>-1.0</b> (76)	2.4 (66)	
Blmbg. U.S. Aggregate Index	<u>-13.0</u> (74)	<u>-1.5</u> (85)	<u>7.5</u> (36)	<u>8.7</u> (44)	<u>0.0</u> (56)	<u>3.5</u> (55)	<u>2.6</u> (56)	<u>0.5</u> (47)	<u>6.0</u> (31)	
Over/Under	5.1	3.0	3.4	-4.4	0.6	-0.2	3.5	-1.5	-3.6	
eV All US Fixed Inc Median	-9.4	-0.1	5.9	8.1	0.3	3.8	3.1	0.5	3.9	
Loomis Sayles Multi Strategy	<b>-11.5</b> (62)	1.3 (32)	12.9 (10)	9.4 (35)	<b>-0.8</b> (71)	8.4 (12)	8.2 (20)	<del>-2.3</del> (85)	6.8 (23)	1.4 (24)
5% Bmbg. U.S. Int Agg / 65% Blmbg. U.S. Agg / 30% FTSE HY	<u>-12.2</u> (67)	<u>0.5</u> (37)	<u>7.3</u> (39)	<u>10.2</u> (29)	<u>-0.6</u> (67)	<u>4.5</u> (40)	<u>7.0</u> (25)	<u>-1.2</u> (78)	<u>4.6</u> (44)	<u>0.8</u> (29)
Over/Under	0.7	0.8	5.6	-0.8	-0.2	3.9	1.2	-1.1	2.2	0.6
eV All US Fixed Inc Median	-9.4	-0.1	5.9	8.1	0.3	3.8	3.1	0.5	3.9	-0.3
Treasuries	-16.6	-3.6	11.4							
Reams 10-Year Treasuries	-16.6	-3.6	11.4							
Blmbg. U.S. Treasury: 7-10 Year	-14.9	<u>-3.1</u>	<u>10.0</u>							
Over/Under	-1.7	-0.5	1.4							
Private Credit	3.4	15.9	7.1	8.4	4.7					
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>	<u>6.1</u>	<u>13.3</u>	<u>1.0</u>					
Over/Under	9.2	10.1	1.0	-4.9	3.7					



					Performa	nce (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Real Estate	3.6	18.8	-2.7	0.3	6.9	5.9	6.8	12.8	11.6	10.6
NCREIF ODCE Net	<u>6.5</u>	<u>21.0</u>	<u>0.3</u>	<u>4.4</u>	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	12.9
Over/Under	-2.9	-2.2	-3.0	-4.1	-0.5	-0.8	-1.0	-1.2	0.1	-2.3
Prudential Real Estate	5.9	21.1	2.1	5.9	8.2	7.0	8.2	14.5	12.5	13.8
NCREIF ODCE Net	<u>6.5</u>	<u>21.0</u>	<u>0.3</u>	<u>4.4</u>	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	12.9
Over/Under	-0.6	0.1	1.8	1.5	0.8	0.3	0.4	0.5	1.0	0.9
UBS Real Estate	5.3	15.6	-4.7	-2.8	6.2	5.4	6.2	11.9	10.6	9.3
NCREIF ODCE Net	<u>6.5</u>	<u>21.0</u>	<u>0.3</u>	<u>4.4</u>	<u>7.4</u>	<u>6.7</u>	<u>7.8</u>	<u>14.0</u>	<u>11.5</u>	<u>12.9</u>
Over/Under	-1.2	-5.4	-5.0	-7.2	-1.2	-1.3	-1.6	-2.1	-0.9	-3.6
LaSalle Income + Growth VIII Limited Partnership	23.6	44.5								
NCREIF ODCE Net	<u>6.5</u>	21.0								
Over/Under	17.1	23.5								
Alterra IOS Venture II										
NCREIF ODCE Net										
Over/Under										
Total Real Assets	-9.7	16.4	0.0	14.4	-7.3	7.2	11.7	-13.8	10.2	
Real Assets Index	<u>8.6</u>	<u>9.2</u>	3.4	<u>5.3</u>	6.0	6.2	<u>6.2</u>	<u>4.8</u>	<u>4.8</u>	
Over/Under	-18.3	7.2	-3.4	9.1	-13.3	1.0	5.5	-18.6	5.4	
Bridgewater All Weather Fund	-21.9	11.8	9.6	16.7	-5.0	11.9	10.0	-6.8	7.6	
CPI + 5% (Unadjusted)	<u>11.8</u>	<u>12.4</u>	<u>6.4</u>	<u>7.4</u>	<u>7.0</u>	<u>7.2</u>	<u>7.2</u>	<u>5.8</u>	<u>5.8</u>	
Over/Under	-33.7	-0.6	3.2	9.3	-12.0	4.7	2.8	-12.6	1.8	
Tortoise Energy Infrastructure	30.4	41.4	-29.4	8.0	-13.3	-3.5	15.9	-27.1	15.7	
Tortoise MLP Index	<u>26.4</u>	<u>41.6</u>	<u>-27.9</u>	<u>10.9</u>	<u>-13.7</u>	<u>-5.7</u>	21.0	<u>-34.1</u>	<u>8.0</u>	
Over/Under	4.0	-0.2	-1.5	-2.9	0.4	2.2	-5.1	7.0	7.7	
Brookfield Infra Fund IV B LP	6.6	13.9								
CPI + 2% (Unadjusted)	<u>8.6</u>	<u>9.2</u>								
Over/Under	-2.0	4.7								
Harbourvest Real Assets Fund IV L.P.	26.4									
CPI + 2% (Unadjusted)	<u>8.6</u>									
Over/Under	17.8									
Overlay										
Parametric										
Abbott Capital Cash										



					Performa	ince (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Total Private Equity	1.6	54.8	24.5	8.3	18.7	16.9	7.6	14.7	19.0	17.9
Private Equity Benchmark	<u>-17.6</u>	28.8	<u>24.5</u>	<u>34.9</u>	<u>-2.4</u>	<u>24.8</u>	<u>16.0</u>	<u>3.5</u>	<u>15.8</u>	<u>37.5</u>
Over/Under	19.2	26.0	0.0	-26.6	21.1	-7.9	-8.4	11.2	3.2	-19.6
C A Global All PE (Qtr Lag)	<u>-2.8</u>	<u>48.2</u>	<u>15.0</u>	<u>7.8</u>	<u>16.4</u>	<u>15.9</u>	<u>8.5</u>	<u>7.0</u>	<u>16.3</u>	<u>15.9</u>
Over/Under	4.4	6.6	9.5	0.5	2.3	1.0	-0.9	7.7	2.7	2.0
Adams Street Global Fund Series	-7.0	68.4	26.9	4.1	19.6	13.4	7.1	10.3	19.6	15.7
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>	<u>33.6</u>	<u>-3.3</u>	<u>23.6</u>	<u>15.0</u>	<u>2.5</u>	<u>14.8</u>	<u>36.2</u>
Over/Under	10.6	40.2	3.6	-29.5	22.9	-10.2	-7.9	7.8	4.8	-20.5
Harbourvest	-3.3	36.0	19.6	12.2	22.7	23.2	6.7	28.5	18.5	
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3	<u>33.6</u>	<u>-3.3</u>	23.6	<u>15.0</u>	<u>2.5</u>	<u>14.8</u>	
Over/Under	14.3	7.8	-3.7	-21.4	26.0	-0.4	-8.3	26.0	3.7	
Pantheon Global Secondary Funds	3.2	40.2	6.4	-0.4	17.3	24.1	15.5	6.4	16.7	14.9
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3	<u>33.6</u>	<u>-3.3</u>	23.6	<u>15.0</u>	<u>2.5</u>	<u>14.8</u>	<u>36.2</u>
Over/Under	20.8	12.0	-16.9	-34.0	20.6	0.5	0.5	3.9	1.9	-21.3
Drive Capital Fund II	-9.0	68.3	12.3	53.0	-2.5	-33.7				
Russell 3000 + 2%	<u>-17.6</u>	28.2	<u>23.3</u>	<u>33.6</u>	<u>-3.3</u>	<u>23.6</u>				
Over/Under	8.6	40.1	-11.0	19.4	0.8	-57.3				
Abbott Secondary Opportunities	-10.6	59.9	40.5	8.9	26.0					
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>	<u>33.6</u>	<u>-3.3</u>					
Over/Under	7.0	31.7	17.2	-24.7	29.3					
Clearlake Capital Partners V	-35.5	94.9	27.8	50.2						
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3	<u>33.6</u>						
Over/Under	-17.9	66.7	4.5	16.6						
Battery Ventures XII	4.4	102.2	46.7	5.7						
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3	<u>33.6</u>						
Over/Under	22.0	74.0	23.4	-27.9						
Insight Venture Partners X	-10.2	69.7	46.2	21.4						
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3	<u>33.6</u>						
Over/Under	7.4	41.5	22.9	-12.2						



					Performan	ce (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
GTCR Fund XII	6.0	47.4	55.6	-18.8						
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>	<u>33.6</u>						
Over/Under	23.6	19.2	32.3	-52.4						
Buenaventure One, LLC	11.1	46.9	17.7	6.7						
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>	<u>33.6</u>						
Over/Under	28.7	18.7	-5.6	-26.9						
ECI 11	5.7	34.2	20.8	34.2						
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>	<u>33.6</u>						
Over/Under	23.3	6.0	-2.5	0.6						
Buenaventure Two, LLC	12.9	35.3	16.0	16.8						
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>	<u>33.6</u>						
Over/Under	30.5	7.1	-7.3	-16.8						
The Resolute Fund IV L.P	24.7	34.6	42.2	81.6						
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3	<u>33.6</u>						
Over/Under	42.3	6.4	18.9	48.0						
GGV Capital VII L.P.	5.9	40.2	9.7							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>							
Over/Under	23.5	12.0	-13.6							
GGV Discovery II, L.P.	36.1	49.2	11.2							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>							
Over/Under	53.7	21.0	-12.1							
Drive Capital Overdrive Fund I	1.6	63.1	45.4							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>							
Over/Under	19.2	34.9	22.1							
Riverside Micro Cap Fund V, LP	34.1	32.0	1.7							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>							
Over/Under	51.7	3.8	-21.6							
GGV Capital VII Plus, LP	0.9	14.2	15.7							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>							
Over/Under	18.5	-14.0	-7.6							



					Performan	ice (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Astorg VII L.P.	-2.4	14.7	62.3							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>							
Over/Under	15.2	-13.5	39.0							
M/C Partners Fund VIII LP. Limited Partnership	28.8	9.7	-35.1							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3							
Over/Under	46.4	-18.5	-58.4							
Genstar Capital Partners IX	31.8	46.4	27.1							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3							
Over/Under	49.4	18.2	3.8							
Genstar IX Opportunities Fund I	32.4	35.1	12.6							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3							
Over/Under	50.0	6.9	-10.7							
ABRY Partners IX, LP	25.2	30.9	-15.0							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3							
Over/Under	42.8	2.7	-38.3							
Advent International GPE IX LP	-30.4	185.4	29.0							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	<u>23.3</u>							
Over/Under	-12.8	157.2	5.7							
Drive Capital Fund III LP	16.0	21.1	-9.0							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3							
Over/Under	33.6	-7.1	-32.3							
Oak HC/FT Partners III LP	-6.6	93.6	3.2							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3							
Over/Under	11.0	65.4	-20.1							
TA XIII A LP	12.8	74.1	1.9							
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>	23.3							
Over/Under	30.4	45.9	-21.4							



					Performar	nce (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Dover Street X, LP	14.7	58.0								
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>								
Over/Under	32.3	29.8								
Hellman & Friedman CP IX	0.2	21.7								
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>								
Over/Under	17.8	-6.5								
Clearlake Capital Partners VI	2.9	67.4								
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>								
Over/Under	20.5	39.2								
Flexpoint Fund IV	37.3	33.9								
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>								
Over/Under	54.9	5.7								
Battery Ventures XIII	19.4	26.0								
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>								
Over/Under	37.0	-2.2								
Green Equity Investors VIII, L.P.	3.0	2.2								
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>								
Over/Under	20.6	-26.0								
CapVest Private Equity Partners IV, SCSp	29.8	71.2								
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>								
Over/Under	47.4	43.0								
Drive Capital Fund IV LP	-5.4									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	12.2									
Great Hill Equity Partners VII	-11.3	368.6								
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>								
Over/Under	6.3	340.4								



					Performan	ice (%)				
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Vitruvian Investment Partners IV	34.0	-100.0								
Russell 3000 + 2%	<u>-17.6</u>	28.2								
Over/Under	51.6	-128.2								
CRV XVIII, L.P.	13.1									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	30.7									
GGV Capital VIII, L.P.	8.8									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	26.4									
GGV Discovery III, L.P.	29.0									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	46.6									
Oak HC/FT Partners IV, L.P.	22.9									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	40.5									
Prairie Capital VII, LP	13.6									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	31.2									
GGV Capital VIII Plus, L.P.	5.8									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	23.4									
Flexpoint Overage Fund IV A, L.P.	11.6									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	29.2									
Abbott Secondary Opportunities II, L.P.	29.5									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	47.1									
Genstar X Opportunities Fund I, LP	10.0									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	27.6									
Charlesbank Overage Fund X	10.9									
Russell 3000 + 2%	<u>-17.6</u>									
Over/Under	28.5									



		Performance (%)  2022 2021 2020 2019 2018 2017 2016 2015 2014 2013										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013		
Charlesbank Equity Fund X	7.3											
Russell 3000 + 2%	<u>-17.6</u>											
Over/Under	24.9											
GTCR Fund XIII	27.8											
Russell 3000 + 2%	<u>-17.6</u>											
Over/Under	45.4											
Hellman & Friedman CP X	-10.0											
Russell 3000 + 2%	<u>-17.6</u>											
Over/Under	7.6											
Genstar Capital Partners X LP	12.6											
Russell 3000 + 2%	<u>-17.6</u>											
Over/Under	30.2											
TA XIV A LP	-11.6											
Russell 3000 + 2%	<u>-17.6</u>											
Over/Under	6.0											
CVC Capital Partners VIII A LP	16.5											
Russell 3000 + 2%	<u>-17.6</u>											
Over/Under	34.1											
Drive Capital Overdrive												
Russell 3000 + 2%												
Over/Under												
Drive Capital Fund IV LP												
Russell 3000 + 2%												
Over/Under												
Kinderhook Capital Fund 7												
Russell 3000 + 2%												
Over/Under												
Pantheon Global Secondary Funds VII												
Russell 3000 + 2%												
Over/Under												
Harbourvest PTN Co Inv VI LP												
Russell 3000 + 2%												
Over/Under												
Clearlake Capital Partners VI	2.9	67.4										
Russell 3000 + 2%	<u>-17.6</u>	<u>28.2</u>										
Over/Under	20.5	39.2										



		Performance (%)									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	
Battery Ventures XIV											
Russell 3000 + 2%											
Over/Under											
Oak HC/FT Partners V											
Russell 3000 + 2%											
Over/Under											
Advent International GPE X LP											
Russell 3000 + 2%											
Over/Under											
GTCR Strategic Growth 1/A											
Russell 3000 + 2%											
Over/Under											
GTCR Strategic Growth 1/B											
Russell 3000 + 2%											
Over/Under											
Riverside Micro Cap Fund VI, LP											
Russell 3000 + 2%											
Over/Under											
Ridgemont Equity Partners IV											
Russell 3000 + 2%											
Over/Under											
CapVest Private Equity Partners V, SCSp											
Russell 3000 + 2%											
Over/Under											



	Performance (%)									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Private Credit	3.4	15.9	7.1	8.4	4.7					
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>	<u>6.1</u>	<u>13.3</u>	<u>1.0</u>					
Over/Under	9.2	10.1	1.0	-4.9	3.7					
CVI Credit Value Fund IV	7.7	14.7	2.1	7.1	4.6					
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>	<u>6.1</u>	<u>13.3</u>	<u>1.0</u>					
Over/Under	13.5	8.9	-4.0	-6.2	3.6					
Monroe Capital Private Credit Fund III	9.2	13.9	11.2	11.2						
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>	<u>6.1</u>	<u>13.3</u>						
Over/Under	15.0	8.1	5.1	-2.1						
Bluebay Direct Lending Fund III	8.4	14.8	7.1							
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>	<u>6.1</u>							
Over/Under	14.2	9.0	1.0							
Pimco Private Income Fund	1.6	15.9	11.3							
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>	<u>6.1</u>							
Over/Under	7.4	10.1	5.2							
Bridge Debt Strategies III Limited Partner	3.3	15.4	2.6							
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>	<u>6.1</u>							
Over/Under	9.1	9.6	-3.5							
PIMCO Corp Opps Fund III	1.9	64.7								
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>								
Over/Under	7.7	58.9								
Torchlight Debt Fund VII, L.P.	6.0	1.4								
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>	<u>5.8</u>								
Over/Under	11.8	-4.4								
Torchlight Debt Fund VIII, L.P.										
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index										
Over/Under										
Crayhill Principal Strategies Fund II	30.1									
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>									
Over/Under	35.9									
CVI Credit Value Fund A V	-1.0									
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>									
Over/Under	4.8									



	Performance (%)										
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013	
Bridge Debt Strategies Fund IV LP	6.2										
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>										
Over/Under	12.0										
Cross Ocean USD ESS Fund IV	8.4										
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>										
Over/Under	14.2										
Harbourvest Direct Lending L	1.3										
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>										
Over/Under	7.1										
Bain Capital Special Situations Asia Fund II	9.5										
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>										
Over/Under	15.3										
Arbour Lane Credit Opp III A	-10.6										
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>										
Over/Under	-4.8										
Monroe Private Capital Fund IV	6.1										
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index	<u>-5.8</u>										
Over/Under	11.9										
Crescent Cove Opportunity Fund LP											
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index											
Over/Under											
VWH Partners III LP											
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index											
Over/Under											
Harbourview Royalties I											
50% CS Leveraged Loan / 50% ICE BofA US HY BB-B Rated Constrained Index											



Over/Under

# PRIVATE EQUITY LP PERFORMANCE

												Since Incept	ion
Fund Name	Vintage Year	Initial Closing Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Abbott Secondary Opportunities, LP.	2017	12/21/2017	\$25,000,000	\$25,043,477	\$319,240	99%	\$30,343,875	\$10,334,528	\$40,678,403	\$15,634,926	24.6%	1.21x	1.62x
Abbott Secondary Opportunities II, LP.	2020	1/31/2020	\$40,000,000	\$15,606,722	\$24,393,278		\$4,200,000	\$15,881,796	\$20,081,796	\$4,475,074	43.8%	0.27x	1.29x
ABRY Partners IX	2019	12/6/2018	\$10,600,000	\$10,043,310	\$2,164,800	95%	\$1,608,110	\$12,463,924	\$14,072,034	\$4,028,724	1.8%	0.16x	1.4x
Adams Street 2010 U.S. Fund	2010	5/21/2010	\$42,500,000	\$37,442,500	\$5,057,500	88%	\$67,869,468	\$27,972,959	\$95,842,427	\$58,384,714	16.9%	1.81x	2.56x
Adams Street 2010 Non-U.S. Dev. Mkts Fund	2010	5/21/2010	\$25,500,000	\$22,962,749	\$2,537,251	90%	\$33,935,811	\$10,704,888	\$44,640,699	\$21,676,361	13.2%	1.48x	1.94x
Adams Street 2010 Non-U.S. Emg Mkts Fund	2010	1/3/2011	\$8,500,000	\$7,633,000	\$867,000	90%	\$7,835,579	\$7,682,574	\$15,518,153	\$7,885,153	10.6%	1.03x	2.03x
Adams Street 2010 Direct Fund	2010	5/21/2010	\$8,500,000	\$8,168,500	\$331,500	96%	\$12,560,694	\$2,797,221	\$15,357,915	\$7,182,718	11.9%	1.54x	1.88x
Adams Street 2013 Global Fund	2013	6/27/2013	\$75,000,000	\$69,319,741	\$5,680,259	92%	\$66,364,205	\$80,876,507	\$147,240,712	\$77,910,243	14.4%	0.96x	2.12x
Adams Street 2016 Global Fund	2016	8/16/2016	\$60,000,000	\$49,384,776	\$10,615,224	82%	\$21,068,412	\$73,061,096	\$94,129,508	\$44,744,732	20.2%	0.43x	1.91x
Adams Street Co-Investment Fund IV A	2018	9/24/2018	\$30,000,000	\$28,267,931	\$5,062,521	94%	\$10,574,191	\$34,122,472	\$44,696,663	\$16,360,924	21.5%	0.37x	1.58x
Adams Street Co-Investment Fund V	2022	9/30/2021	\$35,000,000	\$5,250,000	\$29,750,000	15%		\$5,576,426	\$5,576,426	\$326,426	17.4%		1.06x
Adams Street Global Secondary Fund 7	2022	11/4/2022	\$25,000,000	\$4,822,560	\$20,177,440	19%		\$4,750,000	\$4,750,000	(\$72,560)	-5.2%		0.98x
Advent International GPE IX	2019	5/23/2019	\$10,000,000	\$9,100,641	\$899,359	91%	\$999,600	\$12,439,461	\$13,439,061	\$4,338,420	23.8%	0.11x	1.48x
Advent International GPE X	2022	4/28/2022	\$20,000,000	\$1,500,000	\$18,500,000	8%		\$1,378,528	\$1,378,528	(\$121,472)	-22.4%		0.92x
Astorg VII	2019	12/17/2018	\$8,732,861	\$7,770,216	\$962,645	89%		\$9,487,107	\$9,487,107	\$1,716,891	11.1%		1.22x
Astorg VIII	2022	2/1/2022	\$18,423,572	\$2,987,691	\$15,435,881	16%		\$2,854,016	\$2,854,016	(\$133,675)	-8.1%		0.96x
Battery Ventures XII	2018	2/1/2018	\$9,050,000	\$8,161,290	\$888,710	90%	\$5,136,085	\$19,263,205	\$24,399,290	\$16,238,000	35.6%	0.63x	2.99x
Battery Ventures XII Side Fund	2018	2/1/2018	\$5,050,000	\$4,772,755	\$277,245	95%	\$5,643,608	\$9,785,488	\$15,429,096	\$10,656,341	39.8%	1.18x	3.23x
Battery Ventures XIII	2020	2/11/2020	\$9,240,000	\$7,392,000	\$1,848,000	80%		\$9,845,614	\$9,845,614	\$2,453,614	16.8%		1.33x
Battery Ventures XIII Side Fund	2020	2/11/2020	\$6,160,000	\$5,020,400	\$1,139,600	82%		\$7,115,040	\$7,115,040	\$2,094,640	20.2%		1.42x
Battery Ventures XIV	2022	2/24/2022	\$10,000,000	\$1,450,000	\$8,550,000	15%		\$1,335,318	\$1,335,318	(\$114,682)	-19.6%		0.92x
Buenaventure One, LLC	2018	1/5/2018	\$289,599,750		\$144,029,160	50%	\$17,233,156	\$201,286,688	\$218,519,844	\$72,949,254	20.4%	0.12x	1.5x
CapVest Equity Partners IV	2019	7/11/2018	\$12,481,439	\$8,224,804	\$4,256,635	66%		\$10,042,717	\$10,042,717	\$1,817,913	13.1%		1.22x
CapVest Equity Partners V	2021	11/23/2021	\$18,811,934	\$346,467	\$18,465,467			(\$238,517)	(\$238,517)		-100.00%		-0.69x
Charlesbank Equity Fund X	2020	11/20/2020	\$24,000,000	\$10,474,475	\$13,525,525	44%	\$95,719	\$11,735,957	\$11,831,676	\$1,357,201	13.0%	0.01x	1.13x
Charlesbank Equity Overage Fund X	2020	11/20/2020	\$6,000,000	\$4,337,517	\$1,662,483	72%	\$31,636	\$4,729,209	\$4,760,845	\$423,328	10.6%	0.01x	1.1x
Charlesbank Technology Opportunies Fund II	2023	2/21/2023	\$20,000,000		\$20,000,000			<del></del>					
Clearlake Capital Partners V	2017	12/22/2017	\$9,950,000	\$14,059,510	\$2,129,324	79%	\$17,758,524	\$12,535,892	\$30,294,416	\$16,188,748	42.9%	1.26x	2.15x
Clearlake Capital Partners VI	2020	1/2/2020	\$18,700,000	\$18,922,043	\$522,109	101%	\$1,566,382	\$26,297,215	\$27,863,597	\$8,941,554	24.5%	0.08x	1.47x
Clearlake Capital Partners VII	2021	9/17/2021	\$20,000,000	\$10,274,689	\$9,725,311	51%	\$487	\$10,055,129	\$10,055,616	(\$219,073)	-3.4%	0x	0.98x
CRV XVIII	2020	7/2/2020	\$15,000,000	\$12,112,500	\$2,887,500	81%		\$13,161,136	\$13,161,136	\$1,048,636	5.5%		1.09x
CRV XIX	2022	1/27/2022	\$10,000,000	\$1,275,000	\$8,725,000	13%		\$1,078,038	\$1,078,038	(\$196,962)	-21.9%		0.85x
CVC Capital Partners VIII	2020	5/22/2020	\$19,933,263	\$11,423,819	\$8,509,444	57%	\$13,084	\$12,006,005	\$12,019,089	\$595,270	6.9%	0x	1.05x
Drive Capital Fund II	2016	8/19/2016	\$15,000,000	\$14,946,053	\$57,157	100%	\$5,047,070	\$28,124,443	\$33,171,513	\$18,222,250	20.7%		2.22x
Drive Capital Fund III	2019	4/5/2019	\$7,500,000	\$6,222,690	\$1,277,310	83%		\$7,966,595	\$7,966,595	\$1,743,905	14.2%		1.28x
Drive Capital Fund IV	2021	12/27/2021	\$10,000,000	\$3,833,000	\$6,167,000	38%		\$3,628,599	\$3,628,599	(\$204,401)	-5.4%		0.95x
Drive Capital Overdrive Fund I	2019	4/5/2019	\$7,500,000	\$7,349,050	\$150,950	98%	\$12,492	\$13,946,433	\$13,958,925	\$6,609,875	26.2%		1.9x
Drive Capital Overdrive Fund II	2021	12/27/2021	\$10,000,000	\$4,234,953	\$5,765,047	42%	 #2.004.612	\$4,054,912	\$4,054,912	(\$180,041)	-5.5%	0.44	0.96x
ECI 11	2018	7/5/2018	\$9,754,977	\$8,828,660	\$926,317	91%	\$3,884,612	\$8,474,088	\$12,358,700	\$3,530,040	17.6%	0.44x	1.4x
ECI 12	2022	7/15/2022	\$20,626,003		\$20,670,759								



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## PRIVATE EQUITY LP PERFORMANCE

												Since Incept	
		Initial										Distributions	
Fund Name	Vintage Year	Closing Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	to Paid In Multiple (DPI)	Paid In Multiple (TVPI)
nata Carital Barta and IV	2019	2/21/2010	<b>₫7</b> E00 000	¢7 107 411	#2C2 E00	95%	#2 220 CO2	¢0.014.240	£12.12E.040	<b>₫</b> Ε 007 020	24.10/		1.84x
enstar Capital Partners IX enstar Capital Partners IX Opportunities Program	2019	2/21/2019 2/21/2019	\$7,500,000 \$2,500,000	\$7,137,411 \$2,156,762	\$362,589 \$343,238	95% 86%	\$3,220,692 \$940,541	\$9,914,348 \$2,995,571	\$13,135,040 \$3.936.112	\$5,997,629 \$1,779,350	34.1% 27.2%	0.45x 0.44x	1.84x 1.83x
enstar Capital Partners X	2019	4/1/2021	\$15,000,000	\$8,514,275	\$6,485,725	57%	4940,54 i 	\$8,857,602	\$8,857,602	\$343,327	5.7%	0.44x 	1.03x 1.04x
enstar Capital Partners X Opportunities Program	2021	4/1/2021	\$5.000,000	\$2,973,446	\$2.026.554	57% 59%		\$3.113.821	\$3.113.821	\$140.375	5.4%		1.04x 1.05x
SV Capital VII	2021	8/15/2018	\$10,160,000	\$2,973,446 \$9,550,400	\$2,026,554 \$609,600	94%	\$69,608	\$13,438,593	\$13,508,201	\$140,375 \$3,957,801	13.2%	0.01x	1.05x
SV Capital VII Plus	2019	8/15/2018	\$2,540,000	\$2,476,500	\$63,500	98%		\$3,170,308	\$3,170,308	\$693,808	9.3%	0.01X 	1.28
GV Capital VIII	2019	10/30/2020		\$5,186,700	\$3,993,300	57%		\$5,944,328	\$5,170,306 \$5,944,328	\$757,628	10.9%		1.15
SV Capital VIII	2020	10/30/2020	\$2,295,000	\$1,055,700	\$1,239,300	46%		\$1,095,548	\$1,095,548	\$39,848	2.8%		1.04
SV Discovery II	2020	8/15/2018	\$2,295,000	\$1,953,000	\$1,239,300	93%		\$3,921,640	\$3,921,640	\$1,968,640	29.0%		2.01>
3V Discovery III	2019	10/30/2010	\$3,825,000	\$1,778,625	\$2,046,375	93% 47%		\$2,544,971	\$2,544,971	\$766.346	28.1%		1.43>
eat Hill Equity Partners VII	2020	6/28/2019	\$8,900,000	\$8,159,058	\$740,942	92%	\$2,458,521	\$8,379,464	\$10,837,985	\$2,678,927	50.0%	0.3x	1.33
		11/1/2021				92%							
eat Hill Equity Partners VIII	2021		\$25,000,000	\$1,288,109	\$23,711,891		 #110.000	(\$266,479)	(\$266,479)	 #1 202 F67	-100.0%		-0.21
een Equity Investors VIII	2019	10/18/2019		\$13,070,155	\$2,049,081	87%	\$119,236 	\$14,234,486	\$14,353,722	\$1,283,567 	6.1%	0.01x	1.1x
een Equity Investors IX	2022	3/1/2022	\$13,300,000	 #24 E22 002	\$13,300,000			(\$17,732)	(\$17,732)		-100.0%	 0 E2	1.00
CR Fund XII	2017	9/29/2017	\$30,000,000	\$24,532,892	\$5,467,108	82%	\$12,846,870	\$32,806,161	\$45,653,031	\$21,120,139	26.1%	0.52x	1.86
CR Fund XIII	2020	10/27/2020		\$15,343,652	\$14,656,348	51%	\$3,268,145	\$14,799,906	\$18,068,051	\$2,724,399	23.2%	0.21x	1.18
CR Strategic Growth Fund I	2022	1/18/2022	\$10,000,000	\$1,108,000	\$8,892,000	11%		\$762,949	\$762,949		-71.2%		0.69
rbourVest - Dover Street VIII	2013	5/30/2013	\$67,500,000	\$62,184,954	\$5,400,000	92%	\$98,517,562	\$7,076,275	\$105,593,837	\$43,323,929	19.9%	1.58x	1.7x
rbourVest - Dover Street IX	2016	12/16/2016		\$52,800,000	\$7,200,000	88%	\$54,192,006	\$37,945,317	\$92,137,323	\$39,337,323	23.0%	1.03x	1.75
rbourVest - Dover Street X	2019	5/31/2019	\$40,000,000	\$25,300,000	\$14,700,000	63%	\$9,539,725	\$29,024,260	\$38,563,985	\$13,263,985	33.6%	0.38x	1.52
rbourVest - Dover Street XI	2023	1/27/2023	\$40,000,000		\$40,000,000								
rbourVest Partners Co-Investment IV	2017	6/2/2017	\$30,000,000	\$24,464,388	\$5,732,352	82%	\$23,670,200	\$22,264,117	\$45,934,317	\$21,469,929	16.5%	0.97x	1.88
rbourVest Partners Co-Investment V	2019	7/31/2018	\$35,000,000	\$27,125,000	\$7,875,000	78%	\$5,592,394	\$39,753,940	\$45,346,334	\$18,221,334	21.5%	0.21x	1.67
rbourVest Partners Co-Investment VI	2021	6/24/2021	\$35,000,000	\$12,250,000	\$22,750,000	35%		\$11,596,604	\$11,596,604	(\$653,396)	-11.6%		0.95
Ilman & Friedman Capital Partners IX	2019	9/28/2018	\$19,800,000	\$20,312,185	\$537,072	103%	\$1,156,489	\$24,459,791	\$25,616,280	\$5,304,095	11.6%	0.06x	1.26
Ilman & Friedman Capital Partners X	2021	5/10/2021	\$20,000,000	\$14,412,643	\$5,587,357		\$20,061	\$14,049,225	\$14,069,286	(\$343,357)	-2.5%	0x	0.98
Ilman & Friedman Investors XI	2023	3/31/2023	\$20,000,000		\$20,000,000								
sight Venture Partners X	2017	10/13/2017	\$25,000,000	\$26,180,872	\$808,138	105%	\$11,332,732	\$49,530,423	\$60,863,155	\$34,682,283	26.7%	0.43x	2.32
de Equity Investors II	2022	3/1/2022	\$6,700,000		\$6,700,000			-\$6,201.00	-\$6,201.00		-100.0%		
nderhook Capital Fund 7	2022	1/28/2022	\$10,000,000	\$3,482,652	\$6,517,348	35%	\$4,083	\$3,204,960	\$3,209,043	-\$273,609	-16.2%	0x	0.92
C Partners VIII	2019	4/2/2018	\$10,000,000	\$7,647,432	\$2,352,568	76%	\$929,368	\$7,980,943	\$8,910,311	\$1,262,879	8.1%	0.12x	1.17
C Partners IX	2022	5/6/2022	\$10,000,000		\$10,000,000								
ık HC/FT Partners III	2019	7/31/2019	\$15,000,000	\$15,048,730	\$1,348,190	100%	\$1,396,920	\$22,516,636	\$23,913,556	\$8,864,826	23.4%	0.09x	1.59
ik HC/FT Partners IV	2021	2/17/2021	\$10,000,000	\$8,162,570	\$1,837,430	82%		\$9,022,985	\$9,022,985	\$860,415	7.9%		1.11:
ik HC/FT Partners V	2022	5/11/2022	\$10,000,000	\$981,141	\$9,018,859	10%		\$1,013,125	\$1,013,125	\$31,984	12.5%		1.03
ntheon Global Secondary Fund IV	2010	6/24/2010	\$15,000,000	\$9,960,000	\$2,040,000	66%	\$14,929,293	\$954,067	\$15,883,360	\$5,923,360	12.8%	1.5x	1.59
ntheon Global Secondary Fund V	2015	2/6/2015	\$50,000,000	\$39,616,509	\$10,383,491	79%	\$31,434,484	\$33,901,156	\$65,335,640	\$25,881,645	13.2%	0.79x	1.65
ntheon Global Secondary Fund VI	2018	2/24/2020	\$25,000,000	\$17,347,805	\$7,887,113	69%	\$3,474,621	\$25,125,410	\$28,600,031	\$11,252,226	25.8%	0.2x	1.65
ntheon Global Secondary Fund VII	2022	10/28/2021	\$25,000,000	\$4,728,180	\$20,271,820	19%	\$61,529	\$4,694,768	\$4,756,297	\$28,117	0.8%	0.01x	1.01
airie Capital VII QP	2021	4/6/2021	\$10,800,000	\$3,672,000	\$7,128,000	34%		\$3,974,905	\$3,974,905	\$302,905	6.3%		1.08
e Resolute Fund IV	2018	5/2/2018	\$20,000,000	\$21,313,069	\$2,493,677	107%	\$12,695,432	\$31,572,672	\$44,268,104	\$22,955,035	40.1%	0.6x	2.08
dgemont Equity Partners IV	2021	10/29/2021	\$20,000,000	\$1,551,812	\$18,448,188			\$1,385,370	\$1,385,370	-\$166,442	-40.0%		0.89
verside Micro-Cap Fund V	2018	8/21/2018	\$10,000,000	\$8,316,296	\$1,683,704	83%		\$11,886,583	\$11,886,583	\$3,570,287	17.2%		1.43
verside Micro-Cap Fund VI	2021	8/26/2021	\$20,000,000	\$5,556,974	\$14,443,026	28%		\$5,025,387	\$5,025,387		-63.1%		0.9x
XIII	2019	5/2/2019	\$10,000,000	\$9,800,000	\$200,000	98%	\$3,650,000	\$12,457,435	\$16,107,435	\$6,307,435	31.1%	0.37x	1.64
ruvian Investment Partnership IV	2020	6/3/2020	\$20,339,910	\$13,882,777	\$6,457,133	68%		\$15,680,440	\$15,680,440	\$1,797,663	12.3%	0.37X 	1.13>

Total VCERA Private Equity Program

1. Includes recycled/recallable distributions received to date.



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1.63x

5/21/2010 \$1,933,753,709 \$1,171,366,877 \$780,596,844 61% \$612,014,505 \$1,295,133,933 \$1,907,181,583 \$735,740,863 18.1%

<sup>2.</sup> Add'l Fees represents notional interest paid/(received).

<sup>2.</sup> Add'l Fees for Pantheon Global Secondary Fund V includes notional interest paid/(received) and management fee rebates paid to VCERA.

Note: Private Equity performance data is reported net of fees.

Performance shown is based on 3/31/2023 statement of investments produced by Abbott Capital.

## PRIVATE CREDIT LP PERFORMANCE

												Since Incep	tion
Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Distributions to Paid In Multiple (DPI)	Total Value to Paid In Multiple (TVPI)
Arbour Lane Credit Opp III A	2021	11/15/2021	\$30,000,000	\$12,662,011	\$17,337,989	42%	\$0	\$11,482,304	\$11.482.304	-\$1,179,707	-9.5%	0x	0.91x
Bain Capital Special Situations Asia Fund II	2021	7/26/2021	\$25.000.000	\$2,529,966	\$22,470,034	10%	\$0	\$2,769,804	\$2,769,804	-\$1,179,707 \$0	6.9%	0x	1.09x
BlueBay Direct Lending III	2021	2/12/2019	\$25,000,000	\$16,105,933	\$8,894,067	64%	\$0 \$3,075,371	\$2,769,804 \$16,978,894	\$2,769,804	\$3,948,331	9.2%	0.19x	1.09x 1.25x
											7.3%	0.19x 0.44x	1.25x 1.08x
Bridge Debt Strategies III	2019 2021	12/20/2019	\$25,000,000	\$24,072,665	\$927,335 -\$792.071	96% 103%	\$10,596,913	\$15,370,065	\$25,966,979	\$1,894,314	7.3% 5.2%		1.08x 1.05x
Bridge Debt Strategies Fund IV		7/26/2021	\$25,000,000	\$25,792,071			\$3,379,815	\$23,801,529	\$27,181,345	\$1,389,273		0.13x	
Crayhill Principal Strategies II	2021	4/23/2021	\$25,000,000	\$20,540,801	\$4,459,199	82%	\$7,883,584	\$13,234,911	\$21,118,495	\$577,694	3.1%	0.38x	1.03x
Crescent Cove Opportunity Fund LP	2022	5/20/2022	\$25,000,000	\$12,500,000	\$12,500,000	50%	\$41,250	\$12,597,266	\$12,638,516	\$138,516	1.1%	0x	1.01x
Cross Ocean USD ESS Fund IV	2021	6/21/2021	\$25,000,000	\$16,423,006	\$8,576,994	66%	\$1,742,488	\$15,598,520	\$17,341,008	\$918,002	7.6%	0.11x	1.06x
CVI Credit Value Fund IV	2017	12/31/2017	\$30,000,000	\$33,600,000	-\$3,600,000	112%	\$15,895,312	\$26,986,411	\$42,881,723	\$9,281,723	8.1%	0.47x	1.28x
CVI Credit Value Fund V	2021	3/29/2021	\$30,000,000	\$19,674,333	\$10,325,667	66%	\$1,618	\$20,855,321	\$20,856,939	\$1,182,606	5.5%	0x	1.06x
HarbourView Royalties Fund I	2023	3/16/2023	\$30,000,000	\$14,736,901	\$15,263,099	49%	\$0	\$14,736,901	\$14,736,901	\$0	0.0%	0x	1x
Harbourvest Direct Lending L	2021	6/21/2021	\$25,000,000	\$18,974,922	\$6,025,078	76%	\$1,640,752	\$17,559,659	\$19,200,411	\$225,489	1.7%	0.09x	1.01x
Kennedy Lewis Capital Partners III	2023		\$30,000,000										
Monroe Capital Private Credit Fund III	2018	9/5/2018	\$25,000,000	\$21,253,151	\$3,746,849	85%	\$8,503,976	\$21,689,890	\$30,193,866	\$8,940,715	11.9%	0.4x	1.42x
Monroe Capital Private Credit Fund IV	2022	1/10/2022	\$30,000,000	\$31,672,755	-\$1,672,755	106%	\$8,123,720	\$25,077,179	\$33,200,899	\$1,528,144	7.9%	0.26x	1.05x
Pantheon Credit Opportunity II	2022		\$50,000,000										
PIMCO Corporate Opportunity Fund III	2020	1/26/2020	\$50,000,000	\$45,000,000	\$5,000,000	90%	\$126,148	\$48,951,943	\$49,078,091	\$4,078,091	6.0%	0x	1.09x
PIMCO Corporate Opportunity Fund IV	2022		\$100,000,000										
PIMCO Private Income Fund	2019	3/25/2019	\$55,000,000	\$55,000,000	\$0	100%	\$22,651	\$70,631,984	\$70,654,635	\$15,654,635	8.6%	0x	1.28x
Torchlight Debt Fund VII	2021	1/25/2021	\$25,000,000	\$13,765,285	\$11,234,715	55%	\$1,265,285	\$13,390,463	\$14,655,748	\$890,463	5.2%	0.09x	1.06x
Torchlight Debt Fund VIII	2022	1/1/2023	\$40,000,000	\$2,000,000	\$38,000,000	5%	\$0	\$2,000,000	\$2,000,000	\$0	0.0%	0x	1x
VWH Partners III LP	2022	12/1/2022	\$50,000,000	\$20,459,950	\$29,540,050	41%	\$0	\$20,768,916	\$20,768,916	\$308,966	1.8%	0x	1.02x
Total VCERA Private Credit Program			\$775,000,000	\$406,763,751	<i>\$188,236,249</i>	52%	\$62,298,883	\$394,481,961	\$456,780,845	<b>\$</b> 49,777,255	7.0%	0.15x	1.12x

<sup>1.</sup> Includes recycled/recallable distributions received to date.

Note: Private Credit performance data is reported net of fees.

Performance shown is based on 3/31/2023 cash-adjusted market values.



## PRIVATE REAL ASSETS LP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>		Distributions to Date	Valuation	Total Value	- Net Benefit	IRR	Since Incepti Distributions to Paid In Multiple (DPI)	
Brookfield Infrastructure Fund IV, LP Harbourvest Real Assets Fund IV, LP	2019 2019	10/21/2019 7/15/2019	\$50,000,000 \$100,000,000	\$52,086,990 \$52,052,632	-\$2,086,990 \$47,947,368	104% 52%	\$8,312,802 \$16,993,094	\$49,678,350 \$57,138,976	\$57,991,152 \$74,132,070	\$5,904,161 \$22,079,438	9.4% 41.7%	0.16x 0.33x	1.11x 1.42x
Total VCERA Private Real Assets Program			\$150,000,000	\$104,139,622	\$45,860,378	69%	\$25,305,896	\$106,817,326	\$132,123,222	\$27,983,600	19.8%	0.24x	1.27x

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Note: Private Real Assets performance data is reported net of fees.

Performance shown is based on 3/31/2023 cash-adjusted market values.



March 31, 2023

<sup>1.</sup> Includes recycled/recallable distributions received to date.

## PRIVATE REAL ESTATE LP PERFORMANCE

Fund Name	Vintage Year	Initial Investment Date	Commitment	Capital Called to Date <sup>1</sup>	Outstanding Commitment <sup>1</sup>	Call Ratio	Distributions to Date	Valuation	Total Value	Net Benefit	IRR	Since Incep Distributions to Paid In Multiple (DPI)	
Alterra IOS Venture II LP LaSalle Income & Growth Fund VIII, LP	2022 2019	4/7/2022 2/26/2020	\$35,000,000 \$100,000,000	\$22,527,540 \$75,090,739	\$12,472,460 \$26,499,899	64% 75%	\$0 \$25,162,914	\$21,888,479 \$62,501,654	\$21,888,479 \$87,664,569	-\$639,061 \$12,573,830	-4.9% 16.3%	0x 0.34x	0.97x 1.17x
Total VCERA Private Real Estate Program			\$135,000,000	\$97,618,279	\$38,972,359	72%	\$25,162,914	\$84,390,133	\$109,553,047	\$11,934,768	12.7%	0.26x	1.12x

61

Note: Private Real Estate performance data is reported net of fees.

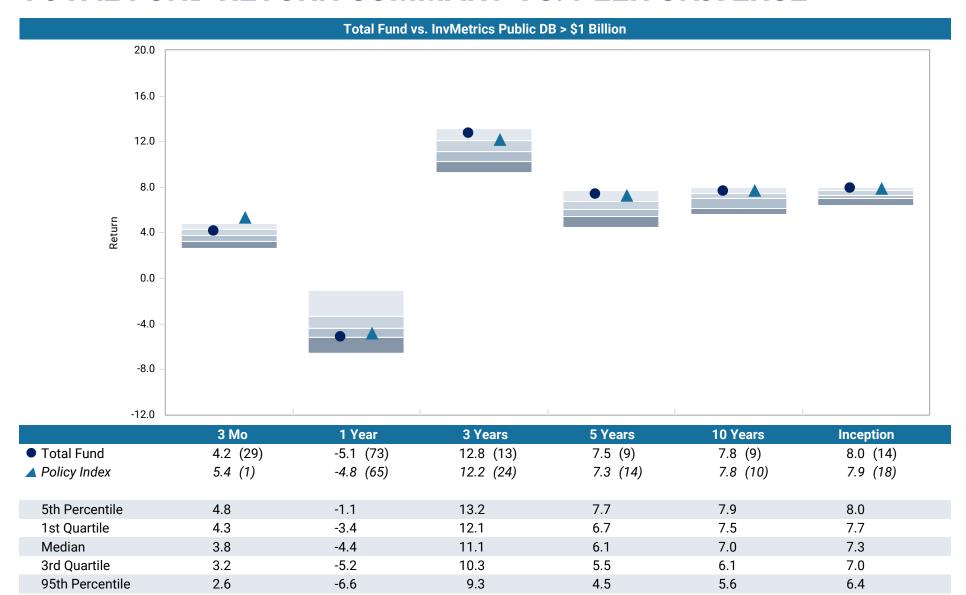
Performance shown is based on 3/31/2023 cash-adjusted market values.



March 31, 2023

<sup>1.</sup> Includes recycled/recallable distributions received to date.

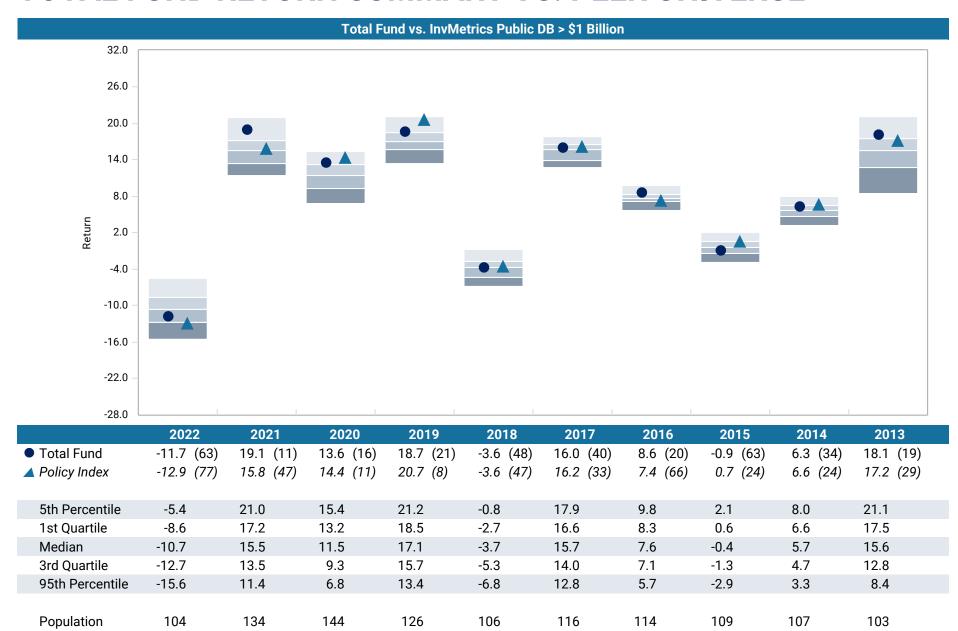
### TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE





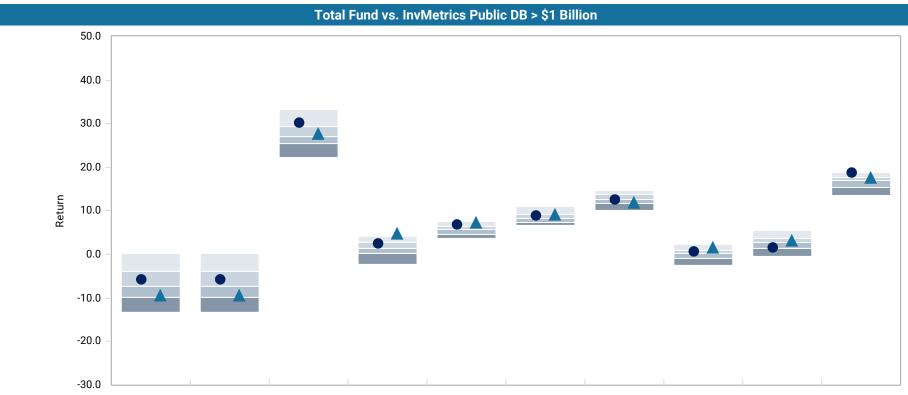
Population

### TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE





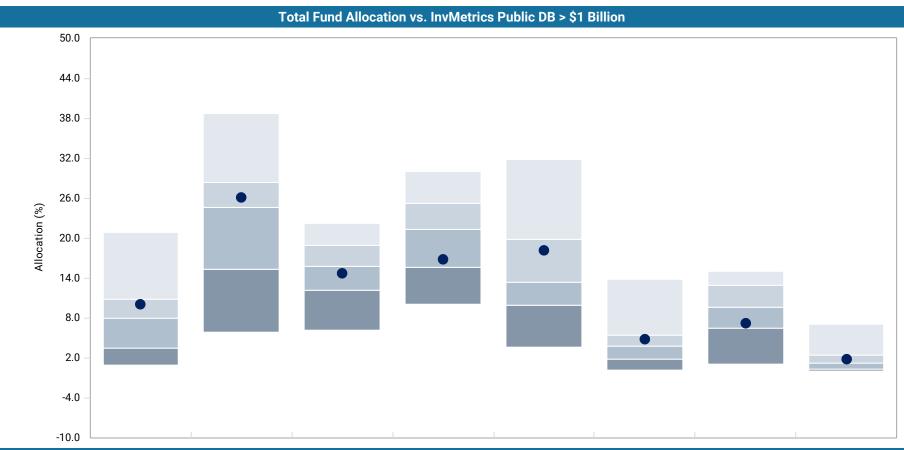
### TOTAL FUND RETURN SUMMARY VS. PEER UNIVERSE



	Fiscal 2022	Fiscal 2021	Fiscal 2020	Fiscal 2019	Fiscal 2018	Fiscal 2017	Fiscal 2016	Fiscal 2015	Fiscal 2014	Fiscal 2013
<ul><li>Total Fund</li></ul>	-5.8 (40)	-5.8 (40)	30.3 (20)	2.5 (31)	7.0 (11)	8.9 (32)	12.6 (50)	0.8 (34)	1.7 (71)	18.8 (5)
▲ Policy Index	-9.4 (73)	-9.4 (73)	27.8 (40)	4.8 (1)	7.4 (7)	9.2 (21)	12.0 (64)	1.6 (7)	3.2 (39)	17.6 (27)
5th Percentile	0.2	0.2	33.3	4.1	7.7	11.1	14.8	2.3	5.5	18.8
1st Quartile	-3.9	-3.9	29.4	2.9	6.4	9.1	13.7	0.9	3.7	17.8
Median	-7.2	-7.2	27.0	1.3	5.7	8.2	12.6	0.2	2.7	17.0
3rd Quartile	-9.9	-9.9	25.4	0.2	4.7	7.5	11.6	-0.9	1.5	15.5
95th Percentile	-13.3	-13.3	22.2	-2.2	3.7	6.7	10.1	-2.5	-0.5	13.6
Population	110	110	147	129	103	81	78	75	71	65



## **TOTAL FUND ALLOCATIONS VS. PEER UNIVERSE**



	<b>Global Equity</b>	US Equity	Global ex-US Equity	Total Fixed Income	Private Equity	Real Assets/Commod	Total Real Estate	Cash & Equivalents
<ul><li>Total Fund</li></ul>	10.1 (28)	26.1 (41)	14.8 (59)	16.8 (70)	18.2 (37)	4.8 (30)	7.3 (70)	1.9 (34)
5th Percentile	20.9	38.7	22.2	30.0	31.8	13.9	15.1	7.1
1st Quartile	10.9	28.5	19.0	25.2	19.9	5.4	13.0	2.4
Median	8.0	24.6	15.7	21.3	13.5	3.8	9.6	1.3
3rd Quartile	3.6	15.4	12.2	15.6	10.0	1.9	6.5	0.3
95th Percentile	1.0	5.9	6.3	10.1	3.7	0.2	1.2	0.1
Population	19	48	49	50	37	28	40	37





## **DUE DILIGENCE MONITOR**

The items below summarize the recent quarter's performance and any changes or announcements from the Plan's managers/products. A "-" indicates there were no material announcements. A "Yes" indicates there was an announcement and a brief summary is provided on the following pages. NEPC's Due Diligence Committee meets every two weeks to review events as they relate to investment managers and determine if any action should be taken (by NEPC and/or by our clients). Events are rated: No Action, Watch, Hold, Client Review or Terminate. NEPC's recommendation in view of the recent quarter's developments (performance, manager events, and any of the longer-term trending data) is refreshed quarterly.

Investment Options	Performance (One Year Period)	Changes/ Announcements (Recent Quarter)	Comments
Western U.S. Index Plus	-	-	
BlackRock Russell 1000 Index	-	-	
BlackRock Russell 2500 Index	-	-	
BlackRock MSCI ACWI ex-U.S. Index	-	-	
Sprucegrove	Top Quartile	-	
Walter Scott	Top Quartile	-	
BlackRock MSCI ACWI Index	-	-	
PIMCO PIF	N/A	Yes	
BlackRock U.S. Debt Fund	-	-	
Western	Bottom Quartile	-	
Reams	Top Quartile	-	
Loomis Sayles Strategic Alpha	-	Yes	
Loomis Sayles Multi-Sector Full Discretion	-	Yes	



## **DUE DILIGENCE MONITOR**

Manager   Product	New Updates	NEPC Status
Loomis Sayles   Strategic Alpha and Multisector Full Disretion	Loomis Sayles announced on April 27, 2023 that it is folding its Bank Loan team into the Full Discretion group, with the expectation that this will be official by the end of June 2023. There will be no changes to the named portfolio managers on any strategies (legacy Bank Loans or Full Discretion). Loomis conveyed the primary impetus for this move is due to Loomis' perceived convergence of the bank loan and high yield markets. Matt Eagan, from the Full Discretion portfolio management team, indicated that with the deterioration in quality in the bank loan market, the Full Discretion team believes there will be more opportunity in bank loans for the Full Discretion strategies.  John Bell currently leads the Bank Loans team, which also includes portfolio managers Michael Klawitter and Heather Young. Mr. Bell will report into Matt Eagan and Elaine Stokes. NEPC Research would also note that Loomis has had limited traction with its bank loan strategies, which currently has \$2.3 billion in assets under management, while the Full Discretion team oversees \$61 billion as of March 31, 2023.  Given the stability in portfolio management, NEPC Research is comfortable with the change in structure.	No Action

NEPC Due Diligence Committee Recommendation Key					
No Action	Informational items have surfaced; no action is recommended.				
Watch	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.				
Hold	Serious issues have surfaced to be concerned over; manager cannot participate in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.				
Client Review	Very serious issues have surfaced with an Investment Manager; manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to review the manager.				
Terminate	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to replace the manager.				



## **DUE DILIGENCE MONITOR**

Manager   Product	New Updates	NEPC Status
PIMCO   Corporate Opportunities III, Private Income Fund	On February 13, 2023, PIMCO provided NEPC with an update on the various workplace discrimination lawsuits that have been filed against the firm in recent years. PIMCO noted that the complaints from 2019 and 2020 have officially been "resolved and dismissed". However, they were not able to provide any real specifics, so there is no transparency around fault. They also noted that those matters were "dismissed with prejudice" (i.e. the plaintiffs cannot refile for the same claim again). While these original claims have been resolved, there was another filing by two former employees in May 2022 that remains outstanding and appears to still only be in the preliminary stages of the litigation process. PIMCO noted that the May 2022 matter is an employment related claim also but could not offer any other specific information.  PIMCO was placed on a firmwide WATCH status in December 2020 as a result of the original complaints. The team noted trainings and other initiatives have been implemented to help combat and hopefully stem the seemingly steady flow of these complaints. PIMCO does not anticipate any further claims at this time, however, there is certainly no guarantee that this will be the case. Ultimately, we believe the WATCH remains appropriate and we will continue to engage with the firm as it progresses through these issues.	No Action (WATCH status)

NEPC Due Diligence Committee Recommendation Key					
No Action	Informational items have surfaced; no action is recommended.				
Watch	Issues have surfaced to be concerned over; manager can participate in future searches, but current and prospective clients must be made aware of the issues.				
Hold	Serious issues have surfaced to be concerned over; manager cannot participate in future searches unless a client specifically requests, but current and prospective clients must be made aware of the issues.				
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Terminate	We have lost all confidence in the product; manager would not be recommended for searches and clients would be discouraged from using. The manager cannot participate in future searches unless a client specifically requests. Current clients must be advised to replace the manager.				



### **INVESTMENT GUIDELINES**

#### Blackrock Russell 1000 Index Fund

- The Blackrock Russell 1000 Index Fund shall be invested and reinvested primarily in a portfolio of Equity Securities with the objective of approximating as closely as practicable the capitalization weighted total rate of return of the Russell 1000 Index (large cap companies).

#### Blackrock Russell 2500 Index Fund

– The Blackrock Russell 2500 Index Fund shall be invested and reinvested primarily in a portfolio of Equity Securities with the objective of approximating as closely as practicable the capitalization weighted total rate of return of the Russell 2500 Index (mid and small cap companies).

### Western Asset Management Index Plus Separate Account

– The objective of the Portfolio is to maximize the long term total return in the Portfolio while providing a core domestic equity exposure to the Standard & Poor's ("S&P") 500 Index and managing Portfolio risk. The Manager shall aim to exceed the total return of the S&P 500 index with all dividends reinvested in the index by 75 basis points on an annualized basis over a full market cycle.

#### Blackrock MSCI ACWI ex-U.S. IMI Index Fund

– The BlackRock MSCI ACWI ex-U.S. IMI Index Fund shall be invested and reinvested in a portfolio of International Equity Securities whose total rates of return will approximate as closely as practicable the capitalization-weighted total rates of return of the equity markets of selected non-U.S. developed and emerging countries.

#### Blackrock MSCI ACWI Equity Index Fund

– The BlackRock MSCI ACWI Equity Index Fund shall be invested and reinvested primarily in a portfolio of U.S. Equity Securities and International Equity Securities with the objective of approximating as closely as practicable the capitalization-weighted total rates of return of the equity markets of the U.S., non- U.S. developed and emerging countries.



### **INVESTMENT GUIDELINES**

### Sprucegrove U.S. International Pooled Fund

- The Fund seeks to maximize the long-term rate of return while seeking to preserve investment capital by investing primarily in equity and quasi-equity securities of companies with more value characteristics located in developed markets in the Europe, Australasia and the Far East ("EAFE") Index and to outperform the index, net of fees and achieve a high ranking relative to similar funds over a full market cycle.

#### Walter Scott & Partners International Fund

– The Fund will invest in equity securities that meet certain quantitative and qualitative investment criteria and will seek long-term capital appreciation. The Fund will tend to focus on those industries or sectors with more growth characteristics and experiencing upper quartile economic growth and may avoid industries which are in secular economic decline. The Fund seeks to outperform the MSCI Europe, Australasia and the Far East ("EAFE") Index net of fees, and achieve a high ranking relative to similar funds over a full market cycle.

#### Blackrock U.S. Debt Index Fund

– The U.S. Debt Index Fund shall be invested and reinvested primarily in a portfolio of Debt Securities with the objective of approximating as closely as practicable the total rate of return of the market for Debt Securities as defined by the Bloomberg Barclays U.S. Aggregate Bond Index.

#### Western Asset Management Core Plus Fixed Income Separate Account

– The objective of the Portfolio is to provide above-average total return in a manner that is consistent with the typical rate-of-return volatility exhibited by broad market fixed income portfolios. The Fund will seek to outperform the Bloomberg Barclays U.S. Aggregate Index, net of fees, over a full market cycle.

#### Reams Unconstrained Fixed Income Separate Account

- The Portfolio will be broadly diversified across markets, sectors, securities, and maturities in a manner consistent with accepted standards of prudence. The objective of the Portfolio is to maximize risk-adjusted total return by systematically pursuing relative value opportunities throughout all sectors of the fixed income market. The Portfolio will seek returns in excess of the Bloomberg/Barclays U.S Aggregate Bond Index and/or the three month London Interbank Offered Rate ("LIBOR") in U.S. dollars plus 3% net of fees with an expected risk volatility goal of approximately 4 to 6% over a full market cycle.



### **INVESTMENT GUIDELINES**

#### Loomis, Sayles & Company Multisector Full Discretion Separate Account

– The fixed income portfolio should be broadly diversified across markets, sectors, securities, and maturities in a manner consistent with accepted standards of prudence. The objective of the Portfolio is to provide above-average total return in a manner that is consistent with the typical rate-of-return volatility exhibited by broad market fixed income portfolios. The return of the Manager should exceed that of the custom benchmark (30% of the rate of return of the Citigroup High-Yield Index, 5% of the rate of return of the J.P. Morgan Non-U.S. Hedged Bond Index and 65% of the rate of return of the Bloomberg Barclays U.S. Aggregate Bond Index), net of fees, over a full market cycle.

#### Loomis, Sayles & Company Strategic Alpha Fund

- The objective of the Fund is to provide absolute returns in excess of the Bloomberg/Barclays U.S Aggregate Bond Index and/or the three month London Interbank Offered Rate ("LIBOR") in U.S. dollars plus 3% net of fees with an expected risk volatility goal of approximately 4 to 6% over a full market cycle.

#### Reams 10-Year Treasuries

– The portfolio shall be invested in 10-Year U.S. Treasury Debt Securities with the objective of returning the rate of return on a 10-Year U.S. Treasury Debt Security.

#### • Bridgewater Associates All Weather Portfolio

– The investment objective of the Fund is to seek to provide attractive returns with relatively limited risks, with no material bias to perform better or worse in any particular type of economic environment. In other words, the portfolio seeks to perform approximately as well in rising or falling inflation periods, or in periods of strong or weak economic growth. To achieve this objective, the Fund holds investments in different asset classes that have different biases to economic conditions. The Manager will seek to outperform the CPI + 4% (Unadjusted) benchmark net of fees over a full market cycle.

### • Tortoise Energy Infrastructure Master Limited Partnership

– The Manager will invest in master limited partnerships with an investment approach that emphasizes a long-term, buy-and-hold philosophy with low turnover in an effort to achieve a portfolio characterized by high current income, high growth and low volatility. The Manager invests primarily in long-haul pipelines and gathering & processing pipelines. The Manager will seek to outperform the Wells Fargo MLP Index net of fees over a full market cycle.



#### **INVESTMENT GUIDELINES**

#### PGIM Real Estate Property Investment Separate Account

PRISA is a broadly diversified equity real estate portfolio that invests primarily in existing, incomeproducing properties with strong cash flow that is expected to increase over time and thereby provide the potential for capital appreciation. The Fund's performance objective is to produce a total return each year that meets or exceeds the National Council of Real Estate Investment Fiduciaries Fund Index – Open-End Diversified Core Equity ("NCREIF-ODCE") net of fees, while maintaining the benefits of a broadly diversified, core real estate portfolio.

#### UBS Realty Investors Trumbull Property Fund

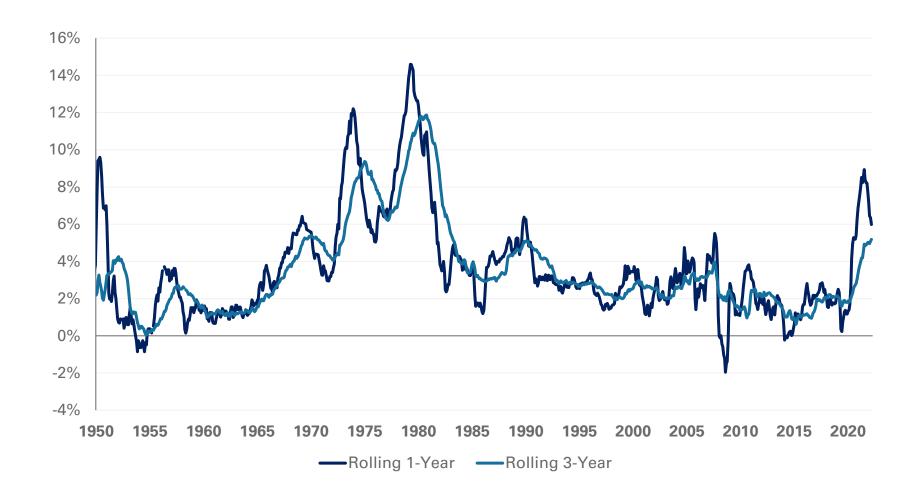
– The Fund seeks to provide investors with strategic market access to high-quality private commercial real estate with the financial objective of providing superior risk-adjusted returns across the real estate cycles. Maximize the quality and growth of the Fund's income by acquiring and aggressively managing high quality assets in major US metropolitan markets to minimize risk through diversification by property type, geographic location and economic sector. The Fund's performance objective is to outperform the National Council of Real Estate Investment Fiduciaries Fund Index – Open-End Diversified Core Equity ("NCREIF-ODCE") index net of fees, and a 5% real rate of return (inflation-adjusted return) over a full market cycle.







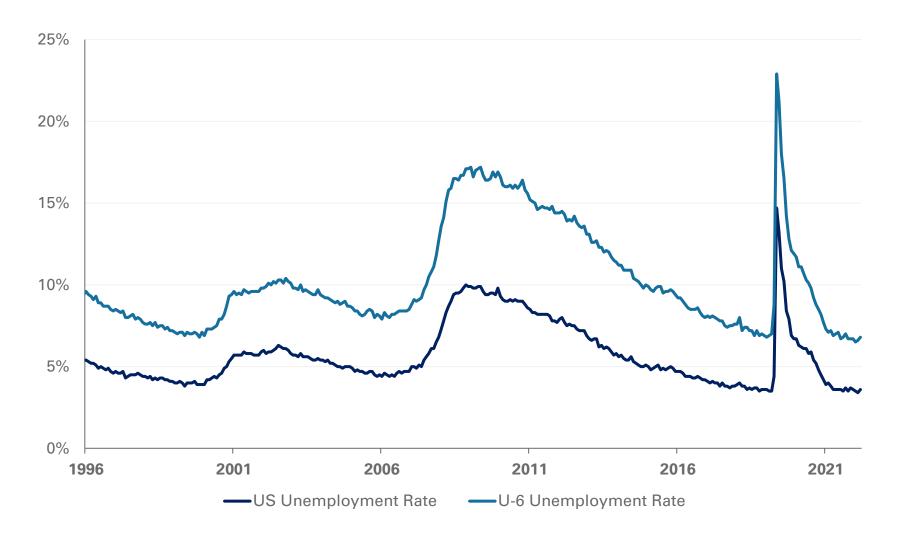
## **INFLATION**





Source: Bureau of Labor Statistics, FactSet

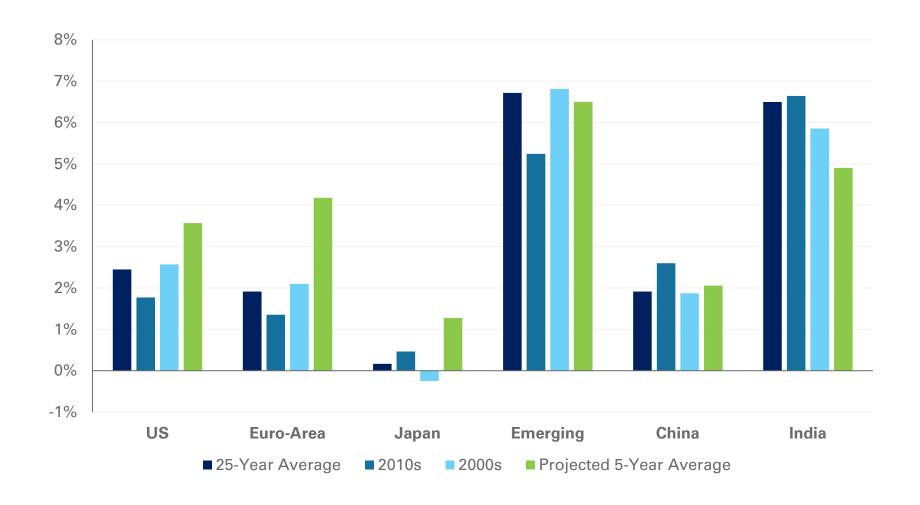
## **U.S. UNEMPLOYMENT RATES**





Source: FactSet

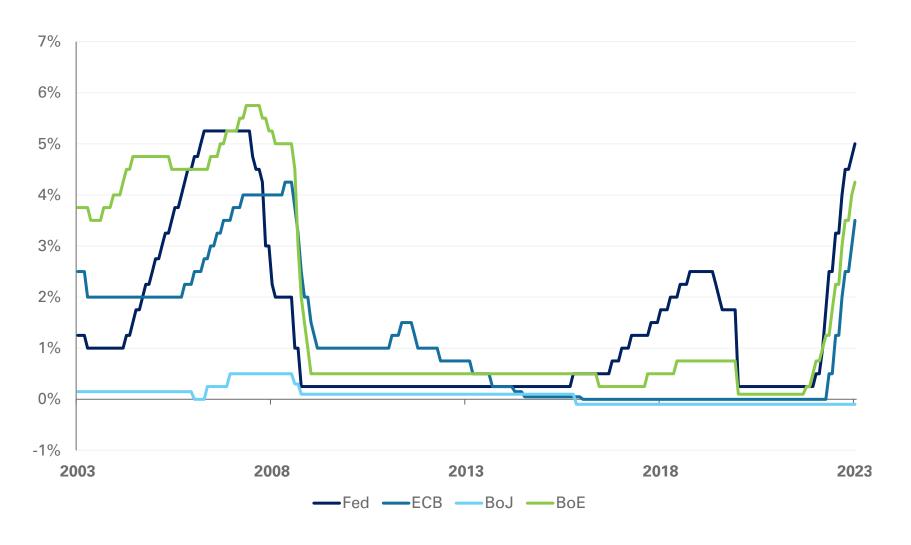
## **HISTORICAL INFLATION**





Source: IMF, FactSet

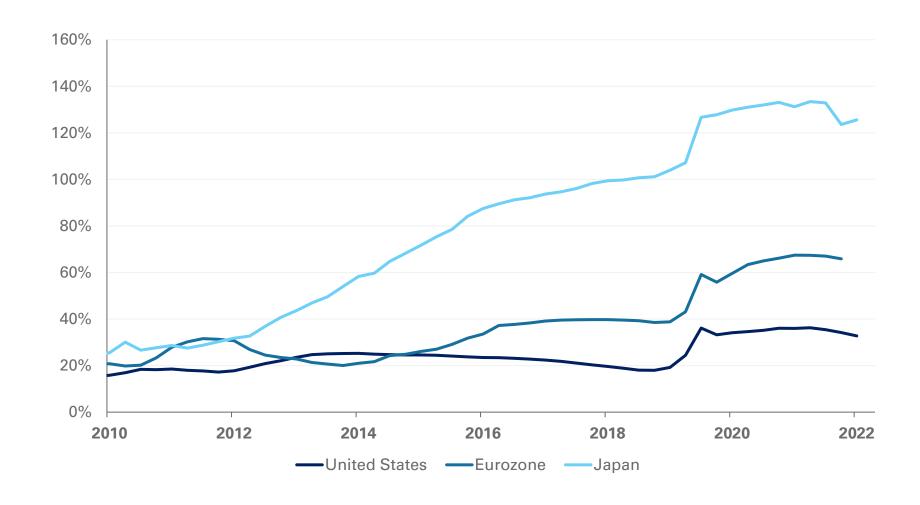
## **CENTRAL BANK POLICY RATES**





Source: Federal Reserve, ECB, Bank of Japan, Bank of England, FactSet

## **CENTRAL BANK BALANCE SHEETS**





Source: FactSet

## **CURRENCIES**

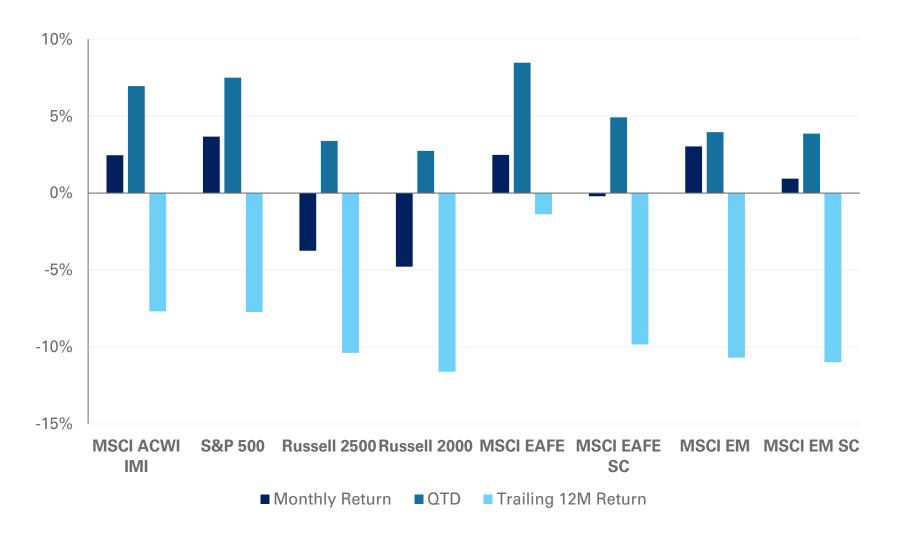
Currencies	Spot	1 Month	QTD	1 Year
Euro	1.09	2.4%	1.8%	-2.4%
British Pound	1.24	2.1%	2.8%	-6.1%
Japanese Yen	133.09	2.3%	-0.9%	-8.8%
Swiss Franc	0.91	2.6%	1.3%	0.7%
Australian Dollar	0.67	-0.7%	-1.2%	-10.8%
New Zealand Dollar	1.60	1.0%	-1.1%	-10.0%
Canadian Dollar	1.35	0.6%	0.1%	-7.7%
Chinese Yuan	6.87	1.0%	1.2%	-7.7%
Taiwanese Dollar	30.45	0.1%	0.9%	-5.9%
Korean Won	1302	1.6%	-2.9%	-6.9%
Vietnamese Dong	23466	1.3%	0.5%	-2.7%
Thai Baht	34.20	3.4%	1.3%	-2.8%
Philippines Peso	54.37	1.8%	2.5%	-4.8%
Indian Rupee	82.18	0.6%	0.7%	-7.8%
Russian Ruble	77.70	-3.4%	-6.0%	6.0%
Mexican Peso	18.06	1.5%	7.9%	10.4%
Brazilian Real	5.07	3.0%	4.1%	-6.3%
Chilean Peso	0.02	5.7%	10.0%	12.0%
Argentine Peso	208.99	-5.7%	-15.3%	-46.9%
South African Rand	17.74	3.5%	-4.1%	-17.6%



Source: FactSet



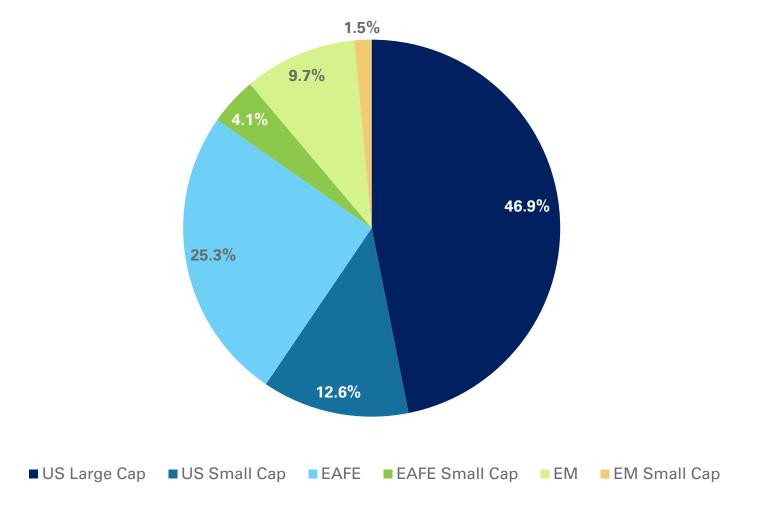
## **EQUITY INDEX PERFORMANCE**





Source: MSCI, S&P, Russell, FactSet

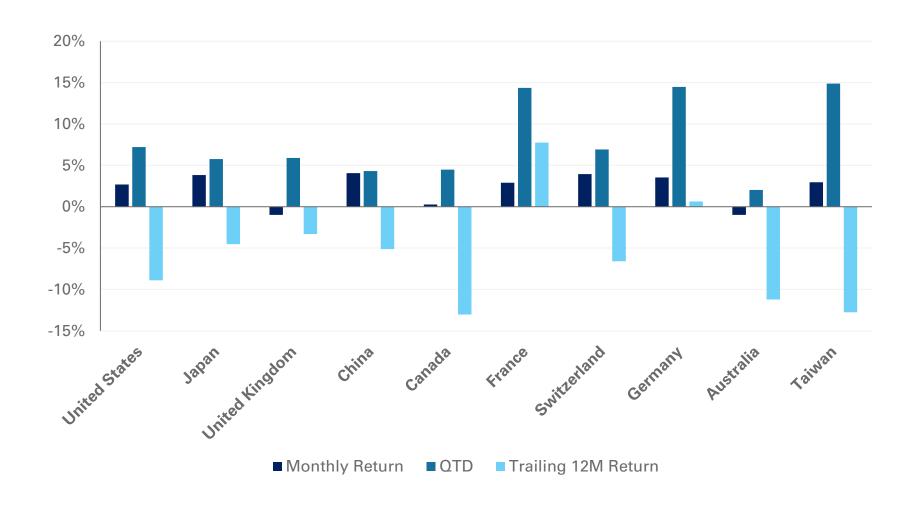
## **MSCI ACWI IMI WEIGHTS**





Source: MSCI, FactSet

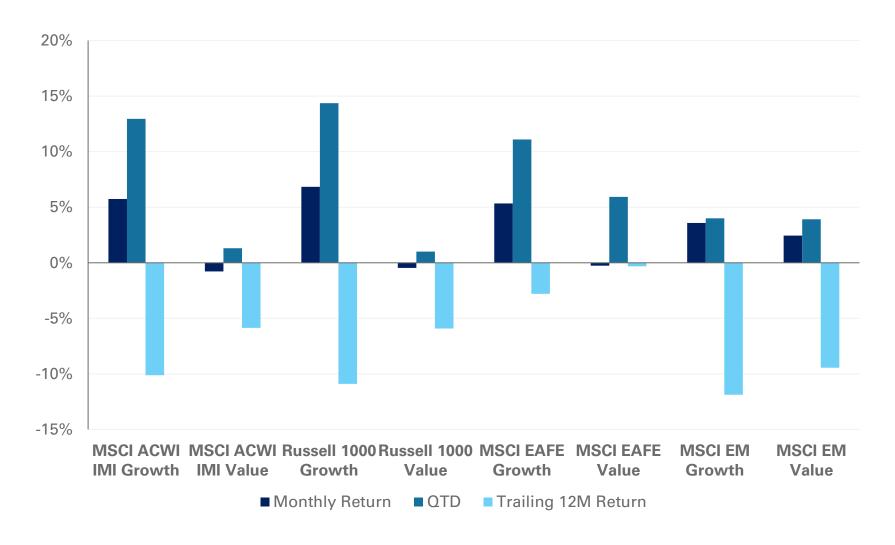
## **EQUITY INDEX PERFORMANCE**





Source: MSCI, FactSet

#### STYLE INDEX PERFORMANCE





Source: MSCI, Russell, FactSet

## **SECTOR INDEX PERFORMANCE**

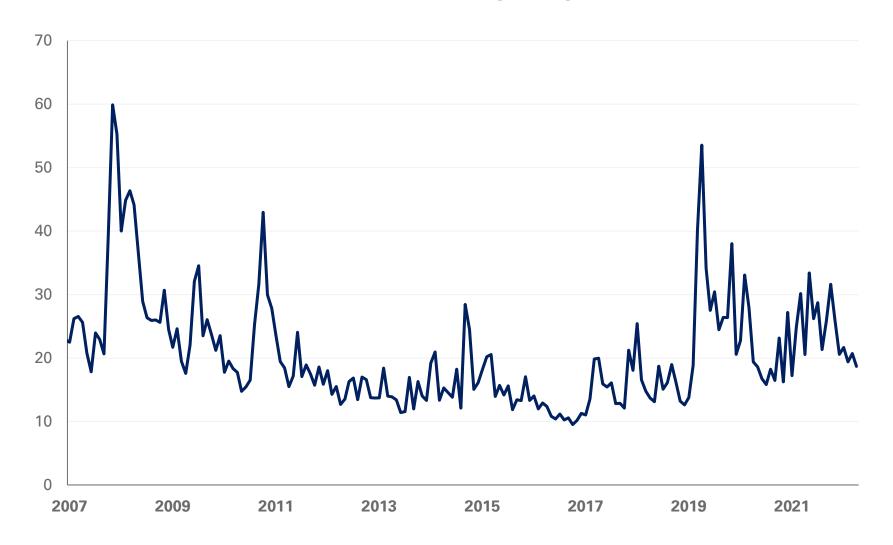
	Monthly Return	QTD	Trailing 12M Return	Index Weight
MSCI ACWI IMI	2.5%	6.9%	-7.7%	100.0%
Communication Services	8.1%	16.5%	-15.8%	6.9%
Consumer Discretionary	3.2%	13.4%	-11.4%	11.4%
Consumer Staples	4.4%	3.4%	0.4%	7.2%
Energy	-1.7%	-3.2%	5.8%	4.9%
Financials	-7.1%	-1.9%	-11.1%	13.8%
Health Care	2.7%	-1.5%	-5.4%	12.0%
Industrials	1.5%	7.1%	-1.3%	11.2%
Information Technology	9.0%	20.0%	-7.5%	21.4%
Materials	1.6%	5.8%	-9.3%	5.3%
Real Estate	-2.7%	0.1%	-21.3%	3.1%
Utilities	4.7%	-0.6%	-6.4%	2.9%

	Monthly Return	QTD	Trailing 12M Return	Index Weight
S&P 500	3.7%	7.5%	-7.7%	100.0%
Communication Services	10.4%	20.5%	-17.8%	8.1%
Consumer Discretionary	3.1%	16.1%	-19.6%	10.1%
Consumer Staples	4.2%	0.8%	1.2%	7.2%
Energy	-0.2%	-4.7%	13.6%	4.6%
Financials	-9.6%	-5.6%	-14.2%	12.9%
Health Care	2.2%	-4.3%	-3.7%	14.2%
Industrials	0.7%	3.5%	0.2%	8.7%
Information Technology	10.9%	21.8%	-4.6%	26.1%
Materials	-1.0%	4.3%	-6.3%	2.6%
Real Estate	-1.4%	1.9%	-19.7%	2.6%
Utilities	4.9%	-3.2%	-6.2%	2.9%



Source (Top): MSCI, FactSet Source (Bottom: S&P, FactSet

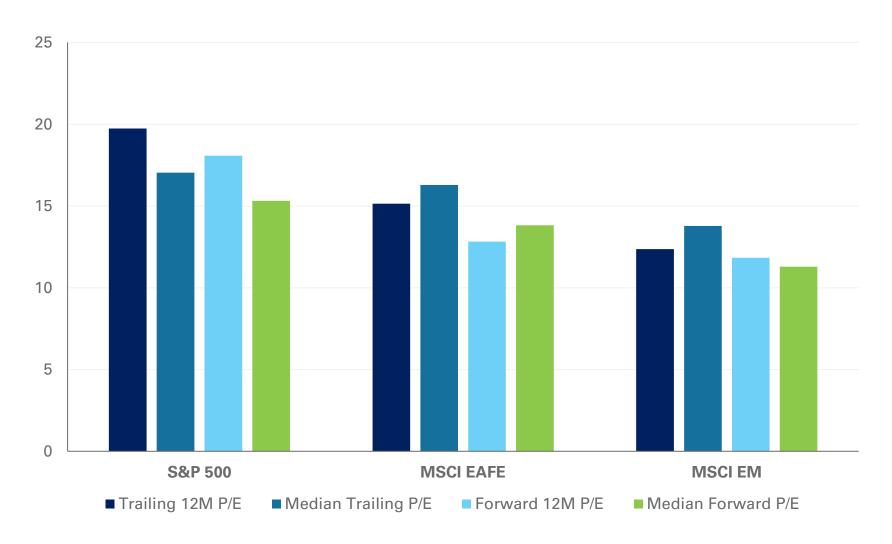
# **EQUITY VOLATILITY INDEX (VIX)**





Source: CBOE, FactSet

## **GLOBAL EQUITY VALUATIONS**

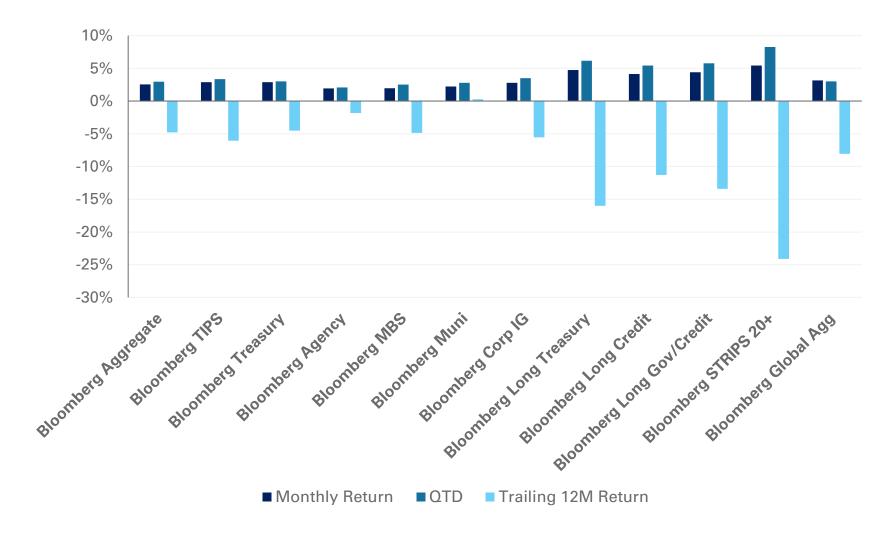




Median calculated based on 20-year monthly data Source: S&P, MSCI, FactSet



#### SAFE-HAVEN FIXED INCOME PERFORMANCE





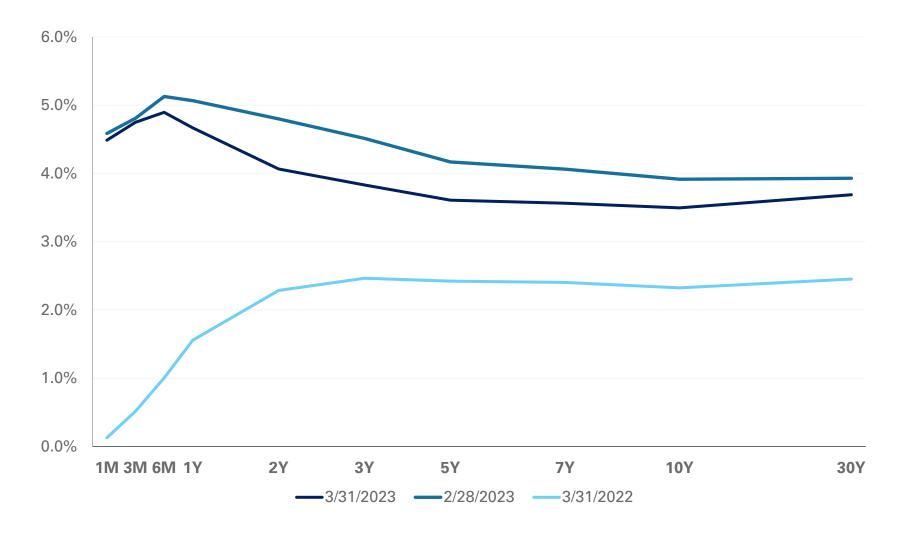
Source: Bloomberg, FactSet

## **FIXED INCOME CHARACTERISTICS**

	Yield to Worst	Yield to Worst Spread (bps)		
Bloomberg Aggregate	4.40%	57	6.3	
Bloomberg TIPS	4.07%	-	5.1	
Bloomberg Treasury	3.83%	-	6.3	
Bloomberg Agency	4.33%	28	3.2	
Bloomberg MBS	4.51%	63	5.9	
Bloomberg Muni	3.25%	-	6.1	
Bloomberg Corp IG	5.17%	138	7.3	
Bloomberg Long Treasury	3.77%	-	16.4	
Bloomberg Long Credit	5.28%	159	13.1	
Bloomberg Long Gov/Credit	4.58%	86	14.6	
Bloomberg STRIPS 20+	3.77%	-	25.2	
Bloomberg Global Agg	3.54%	54	6.8	



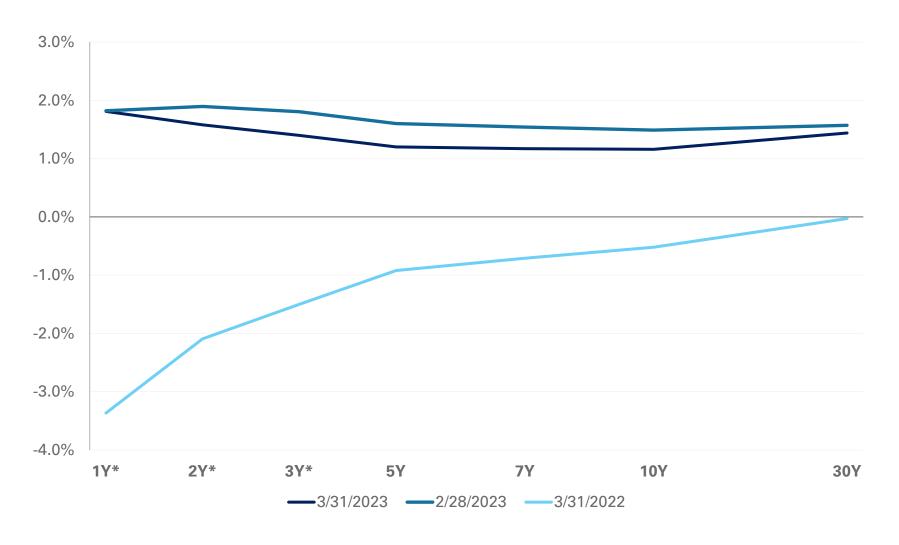
## **US TREASURY YIELD CURVE**





Source: FactSet

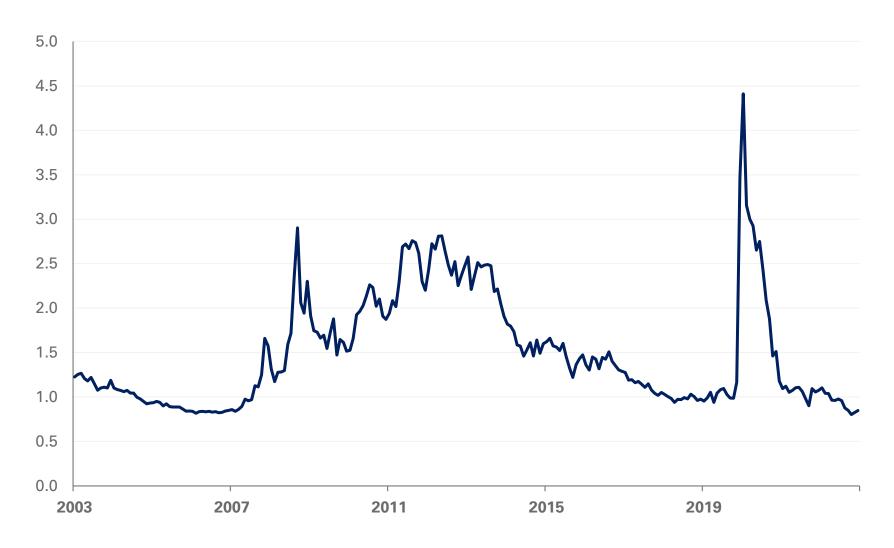
## **US TREASURY REAL YIELD CURVE**





Notes: \*Real yields are calculated based on a weighted average of select off-the-run TIPS yields Source: NEPC, Bloomberg, FactSet

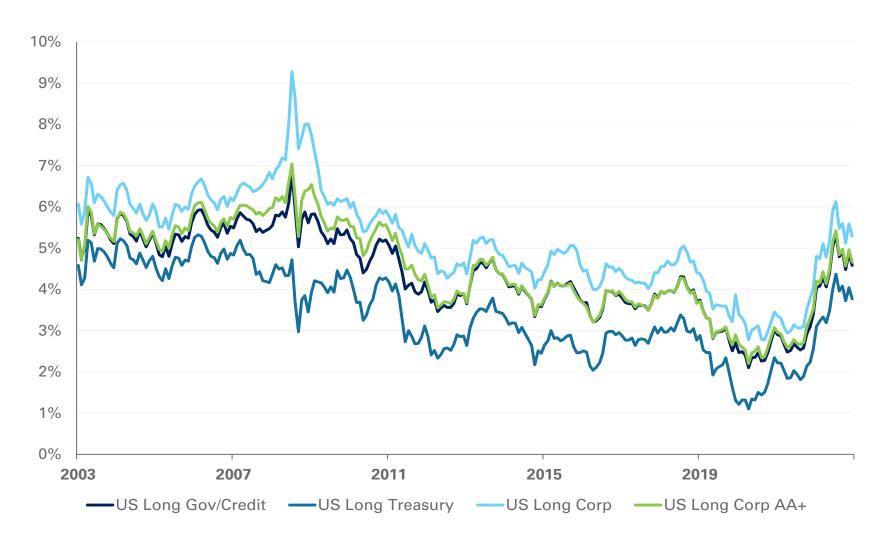
## **MUNI-TO-TREASURY RATIO**





Numerator represents yield-to-worst for municipal bonds Source: Bloomberg, FactSet

## **LONG DURATION YIELDS**





Source: Bloomberg, FactSet

## LONG DURATION CORPORATE SPREADS

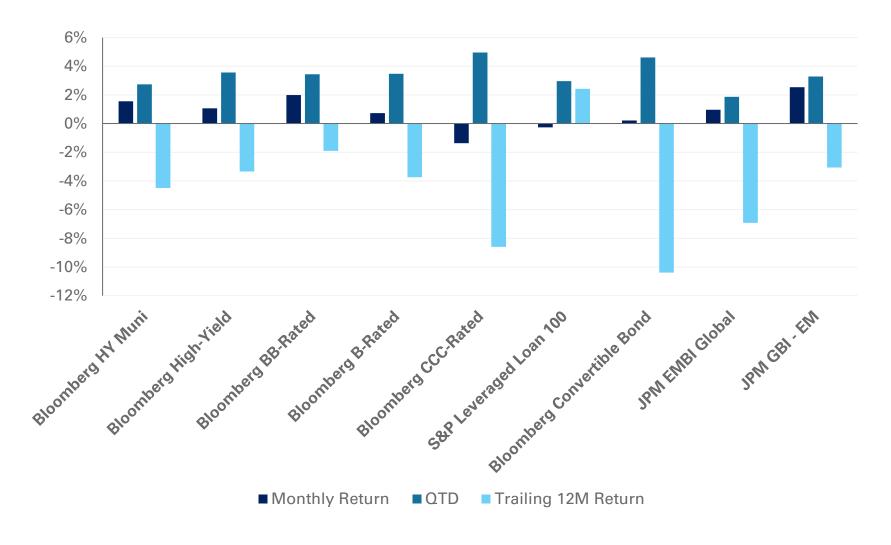




Median calculated based on 20-year of monthly data Source: Bloomberg, FactSet



## RETURN-SEEKING CREDIT INDEX PERFORMANCE





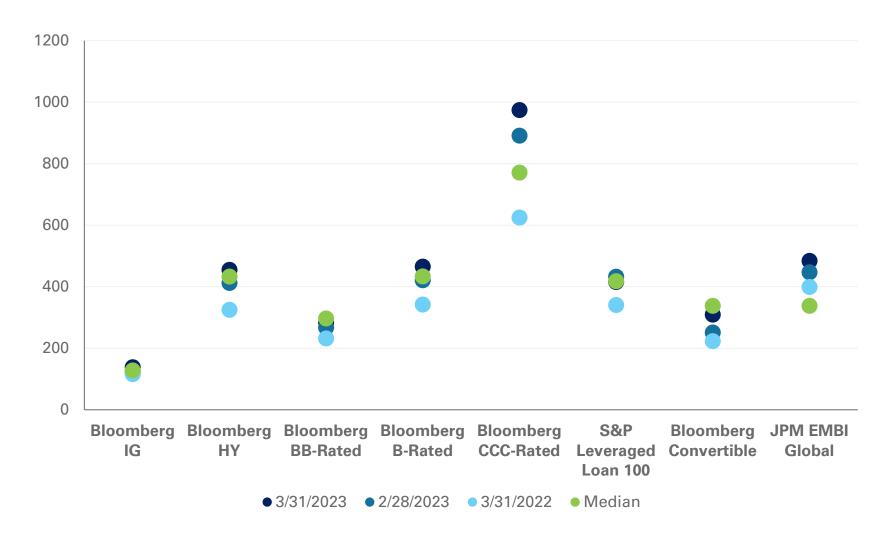
Source: Bloomberg, S&P, JPM, FactSet

## **RETURN-SEEKING CREDIT CHARACTERISTICS**

	Yield to Worst	Spread (bps)	Duration (Years)
Bloomberg HY Muni	5.68%	-	7.7
Bloomberg High-Yield	8.52%	455	3.7
Bloomberg BB-Rated	6.80%	283	4.1
Bloomberg B-Rated	8.68%	465	3.4
Bloomberg CCC-Rated	13.44%	974	3.2
S&P/LSTA Leveraged Loan 100	9.35%	415	-
Bloomberg Convertible Bond	0.73%	309	2.1
JPM EMBI Global	8.51%	484	6.9
JPM GBI - EM	4.96%	-	5.3



#### **CREDIT SPREADS**

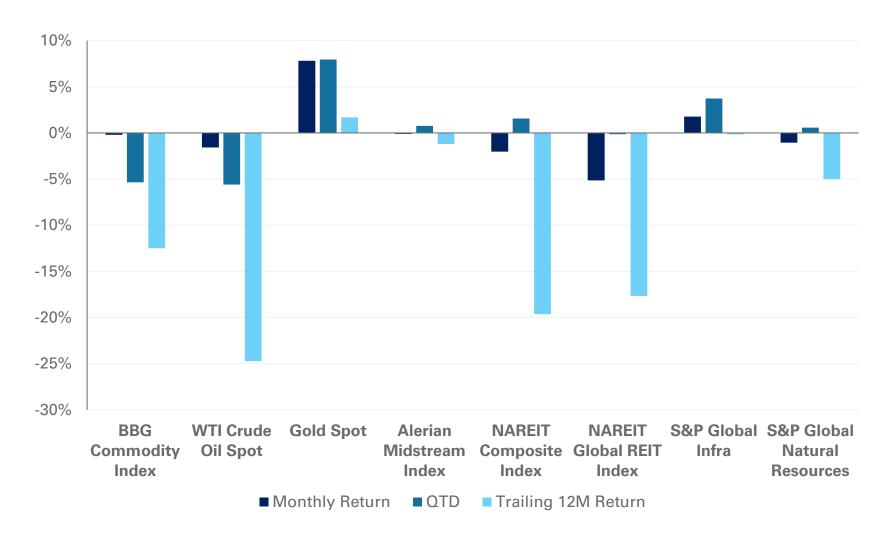




Median calculated based on 20-year of monthly data Source: Bloomberg, S&P, JPM, FactSet



#### REAL ASSETS INDEX PERFORMANCE





Source: Bloomberg, Alerian, NAREIT, S&P, FactSet

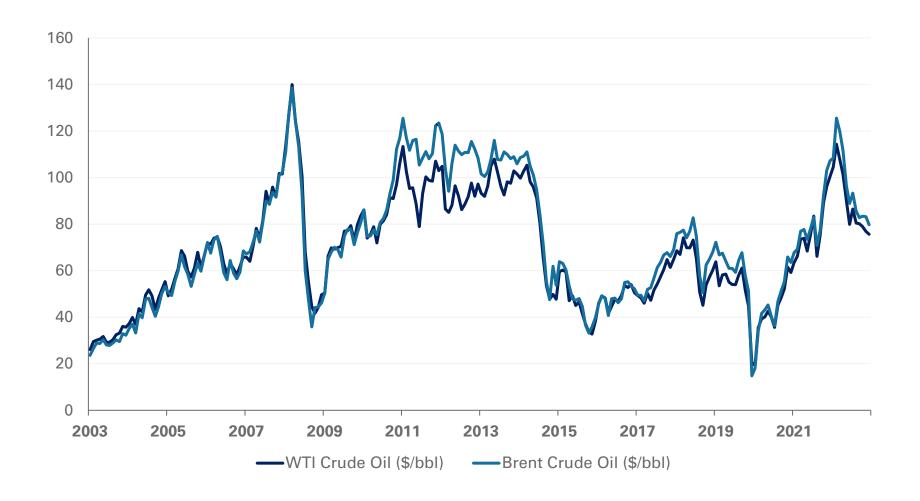
## **REAL ASSETS INDEX PERFORMANCE**

Index	1 Month	3 Month	YTD	1 Year	3 Year	5 Year
Bloomberg Commodity Index	-0.2%	-5.4%	-5.4%	-12.4%	20.7%	5.3%
Bloomberg Sub Agriculture Index	1.0%	0.0%	0.0%	-3.6%	23.6%	8.4%
Coffee	-8.1%	3.1%	3.1%	-19.4%	9.6%	1.3%
Corn	5.2%	-1.2%	-1.2%	-3.8%	28.3%	8.9%
Cotton	-1.1%	-0.1%	-0.1%	-24.4%	25.5%	4.3%
Soybean	2.2%	0.4%	0.4%	7.2%	26.2%	8.5%
Soybean Oil	-7.2%	-12.5%	-12.5%	-8.4%	36.8%	14.9%
Sugar	11.3%	20.3%	20.3%	27.5%	31.7%	10.9%
Wheat	-1.5%	-12.7%	-12.7%	-34.3%	1.5%	3.2%
Bloomberg Sub Energy	-6.9%	-18.7%	-18.7%	-25.0%	25.3%	-1.5%
Brent Crude	-3.0%	-5.2%	-5.2%	-6.4%	51.4%	10.7%
Heating Oil	-4.5%	-13.8%	-13.8%	8.5%	48.4%	11.5%
Natural Gas	-22.3%	-50.4%	-50.4%	-62.5%	-15.3%	-21.5%
Unleaded Gas	2.3%	2.1%	2.1%	10.9%	77.0%	12.8%
WTI Crude Oil	-1.6%	-5.2%	-5.2%	-14.4%	41.1%	-1.5%
Bloomberg Sub Industrial Metals	-0.3%	-2.1%	-2.1%	-22.1%	21.0%	5.9%
Aluminum	1.6%	1.0%	1.0%	-31.1%	14.1%	2.4%
Copper	0.5%	8.4%	8.4%	-12.0%	22.5%	6.2%
Nickel	-3.8%	-20.4%	-20.4%	-25.2%	27.7%	12.6%
Zinc	-2.0%	-0.1%	-0.1%	-24.7%	17.4%	1.2%
Bloomberg Sub Precious Metals	9.2%	6.3%	6.3%	-0.4%	8.2%	7.1%
Gold	7.6%	8.1%	8.1%	0.7%	5.9%	7.1%
Silver	15.1%	0.8%	0.8%	-3.8%	17.8%	6.8%
Bloomberg Sub Livestock	-2.3%	-4.3%	-4.3%	-2.8%	6.0%	-2.5%
Lean Hogs	-8.4%	-19.6%	-19.6%	-24.7%	7.1%	-8.9%
Live Cattle	1.6%	5.0%	5.0%	12.0%	5.2%	0.9%



Source: Bloomberg, FactSet

## **OIL MARKETS**





Source: WTI, Brent, FactSet

## **GOLD SPOT PRICE**





Source: FactSet

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A "since inception" return, if reported, begins with the first full month after funding, although actual inception dates (e.g. the middle of a month) and the timing of cash flows are taken into account in Composite return calculations.

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Source of private fund performance benchmark data: Cambridge Associates, via Refinitiv



