

# Callan



September 27, 2023

## **Second Quarter 2023 Summary Investment Presentation**

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**Economic and Capital Markets Review**

# Equity Markets Rebound Sharply in 1Q and 2Q; Fixed Income Markets Down in 2Q

## S&P 500 up 16.9% in first half of 2023.

- US equities rallied in the quarter as inflation eased and exuberance over artificial intelligence platforms fueled certain technology stocks.
- One year equity returns are strong again as steep market declines from the first half of 2022 (S&P 500: -20%) have rolled off.

## Fixed income positive year to date as high inflation began to ease but declined last quarter as interest rates rose.

- Bloomberg Aggregate: up 3% in 1Q but declined 0.8% in 2Q as Fed continued to raise rates.
- One year returns still recuperating from largest calendar year decline ever for the Bloomberg Aggregate (-13%).
- CPI-U: +3% year-over year for 2Q, down from +6.5% for the year ended Dec. 2022

Inflation was 4% in May, its lowest level since March 2021.

Economic data defied expectations of recession; GDP growth was revised up to 2.0% in 1Q, and hit 2.4% in 2Q

- Job market remains solid, providing support to Fed efforts to fight inflation

## Returns for Periods ended 6/30/23

	Quarter	Year to Date	1 Year	5 Years	10 Years	25 Years
<b>U.S. Equity</b>						
Russell 3000	8.39	16.17	18.95	11.39	12.34	7.72
S&P 500	8.74	16.89	19.59	12.31	12.86	7.61
Russell 2000	5.21	8.09	12.31	4.21	8.26	7.26
<b>Global ex-U.S. Equity</b>						
MSCI World ex USA	3.03	11.29	17.41	4.58	5.40	4.49
MSCI Emerging Markets	0.90	4.89	1.75	0.93	2.95	--
MSCI ACWI ex USA Small Cap	2.05	6.84	10.93	2.62	5.75	6.73
<b>Fixed Income</b>						
Bloomberg Aggregate	-0.84	2.09	-0.94	0.77	1.52	3.90
90-day T-Bill	1.17	2.25	3.59	1.55	0.98	1.89
Bloomberg Long Gov/Credit	-1.29	4.39	-2.56	0.66	2.86	5.33
Bloomberg Global Agg ex-US	-2.16	0.83	-1.83	-2.65	-0.90	2.62
<b>Real Estate</b>						
NCREIF Property	-1.81	-3.59	-6.44	5.94	7.84	8.53
FTSE Nareit Equity	2.62	5.37	-0.13	4.55	6.42	8.32
<b>Alternatives</b>						
CS Hedge Fund Index	1.71	1.87	3.17	4.52	4.06	5.49
Cambridge Private Equity*	2.12	2.95	-4.62	15.98	15.04	13.83
Bloomberg Commodity	-2.56	-7.79	-9.61	4.73	-0.99	2.04
Gold Spot Price	-2.86	5.65	6.76	8.99	4.66	7.76
<b>Inflation - CPI-U</b>	1.08	2.80	2.97	3.90	2.71	2.54

\*Cambridge PE data as of 1Q23

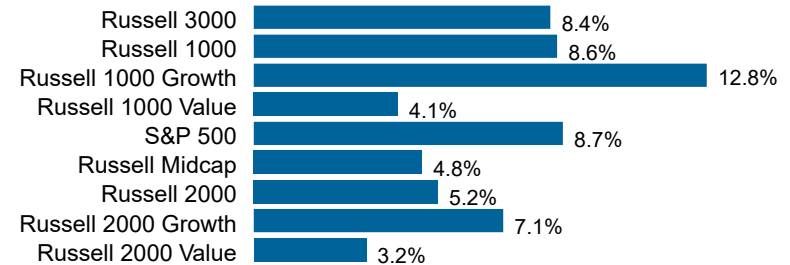
Sources: Bloomberg, Callan, Cambridge, Credit Suisse, FTSE Russell, MSCI, NCREIF, S&P Dow Jones Indices

# U.S. Equity Performance: 2Q23

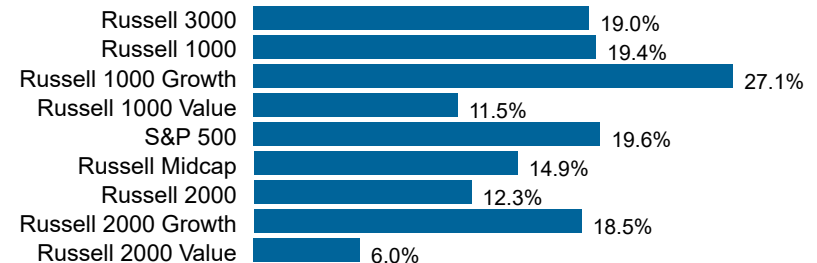
Large cap growth stocks lead broad indices higher; small cap indices continue to lag large caps

- ▶ The S&P 500 posted a second straight quarter of positive performance, gaining 8.7%; large cap growth led all styles, advancing 12.8%. All U.S. equity indices produced absolute positive returns; small value and low volatility produced the lowest 2Q returns.
- ▶ Nine of the 11 S&P 500 Index sectors produced a positive 2Q return.
  - Information Technology (17.2%), Consumer Discretionary (14.6%), and Communication Services (13.1%) drove the overall index return; all other sectors underperformed the index.
- ▶ Similar to the first quarter, small caps (Russell 2000) underperformed large caps (Russell 1000) and growth outperformed value during the quarter, a reversal of trend from 2022.
  - Financials (-1.1%) detracted returns for the Russell 2000 (5.2%) while Health Care was the only small cap sector to produce double digit returns (11.2%) within the small cap index.

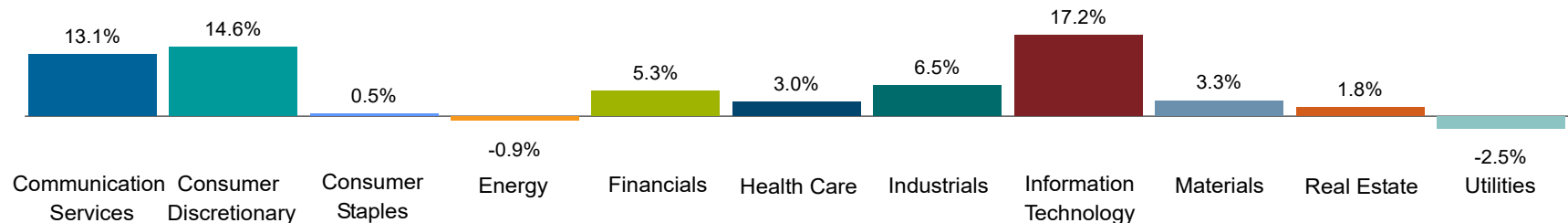
## U.S. Equity: Quarter Ended 6/30/23



## U.S. Equity: One-Year Returns Ended 6/30/23



## Industry Sector Quarterly Performance (S&P 500) as of 6/30/23



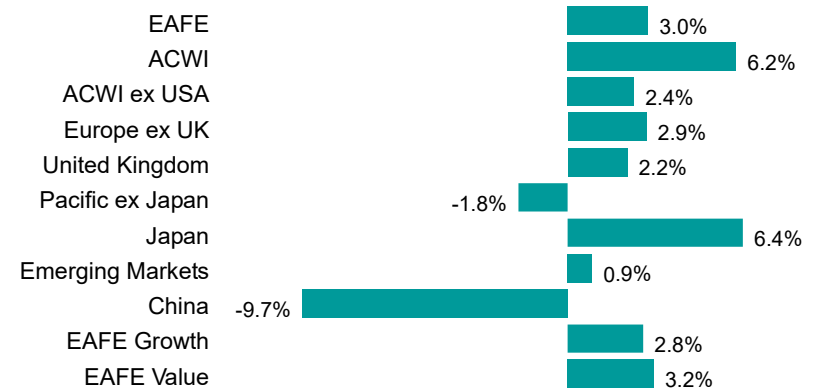
Sources: FTSE Russell, S&P Dow Jones Indices

# Global/Global ex-U.S. Equity Performance: 2Q23

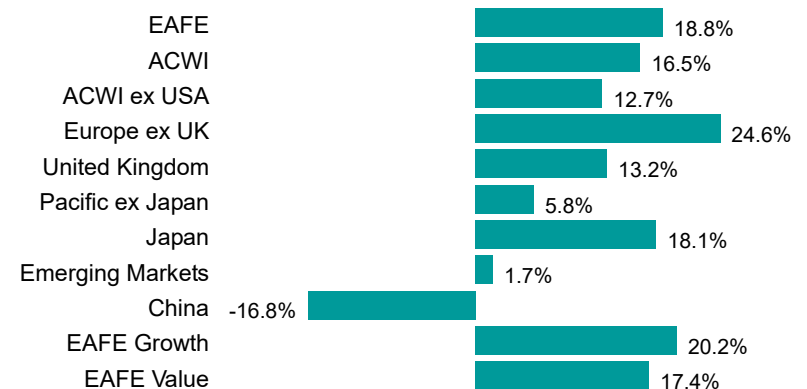
## Continued market rally

- ▶ The second quarter of the year saw global markets led higher by mega cap technology stocks, in part due to increased optimism around artificial intelligence advancements.
- ▶ Mega cap technology companies, which are primarily U.S.-based, led markets higher and resulted in large dispersions between U.S. growth and value indices. Outside of the U.S., growth and value index returns were relatively balanced.
- ▶ Market expectations of a recession decreased as inflation showed signs of abating while the Fed kept rates unchanged in June.
- ▶ Japan outperformed other regions in local currency as valuations continued to be attractive alongside the Bank of Japan's easy monetary policy.
- ▶ Developed markets outperformed emerging markets as China weighed on EM indices.

Global Equity Returns: Quarter Ended 6/30/23



Global Equity Returns: One Year Ended 6/30/23



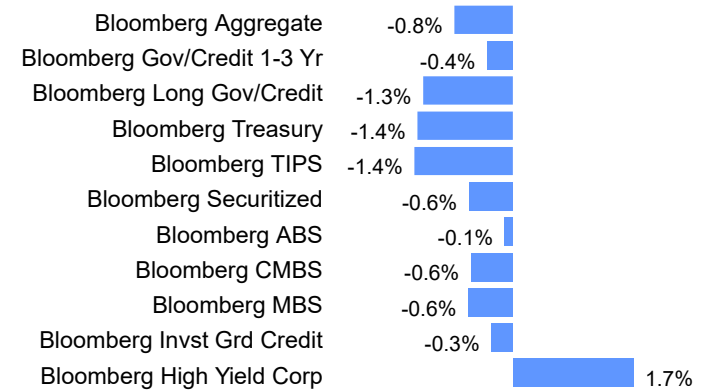
Source: MSCI

# U.S. Fixed Income Performance: 2Q23

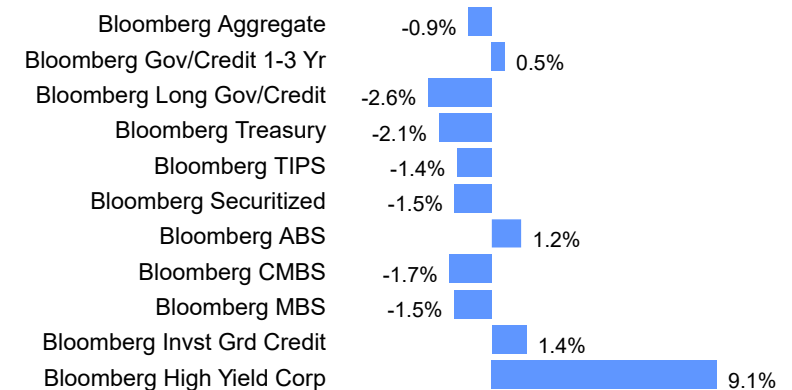
## Bloomberg Aggregate down as rates rose

- ▶ Risk appetite and solid economic news spurred returns for spread sectors and lower quality over safe-haven Treasuries.
- ▶ U.S. Treasury yield curve inversion steepened to 106 bps from 58 bps on 3/31:
  - 2- year UST: 4.87%; 10-year UST: 3.81%
- ▶ TIPS performed in line with nominal U.S. Treasuries. Five-year breakeven spreads narrowed to 2.18% from 2.4% on 3/31; Fed and markets expect inflation to trend down over longer periods.
- ▶ Fed Funds target raised to 5.00% - 5.25%
  - Paused at June meeting but suggested that further hikes are likely
  - Median expectation from Fed is 5.6% for year-end 2023
  - Market expectations are similar at 5.4%; up sharply from expectations for cuts at the end of 1Q
- ▶ Valuations fair
  - Credit spreads have not widened materially and are close to historical averages
  - Demand has remained robust with muted issuance

### U.S. Fixed Income Returns: Quarter Ended 6/30/23



### U.S. Fixed Income Returns: One Year Ended 6/30/23



Sources: Bloomberg, S&P Dow Jones Indices

# U.S. Private Real Estate Performance: 2Q23

Income returns positive but appreciation returns negative once again

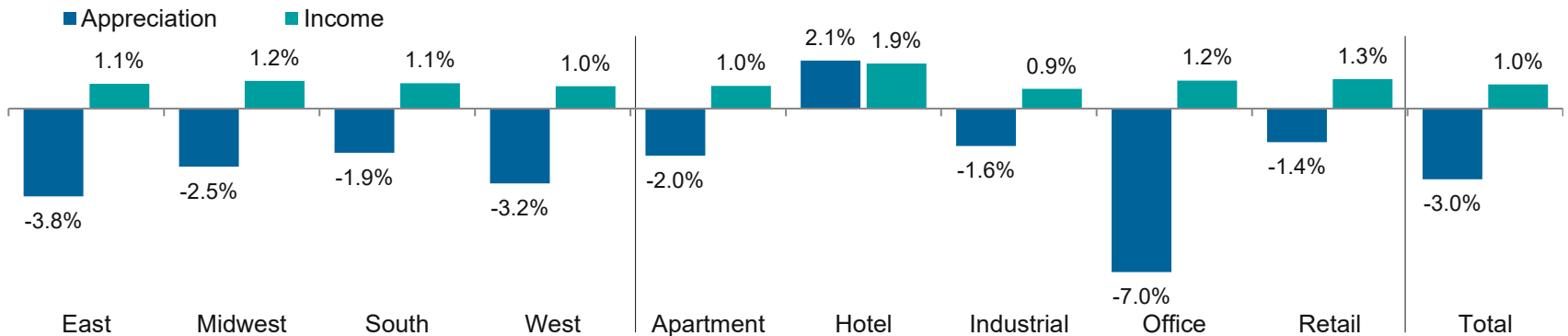
## Valuations reflect higher interest rates

- ▶ Income returns were positive across sectors and regions.
- ▶ All property sectors and regions, except for Hotel, experienced negative appreciation.
- ▶ Valuations are reflective of higher interest rates, which have put upward pressure on capitalization rate and discount rate assumptions.
- ▶ Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios.

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
NCREIF ODCE	-2.9%	-10.7%	7.0%	5.6%	7.8%
Income	0.7%	2.5%	2.8%	3.0%	3.4%
Appreciation	-3.6%	-13.0%	4.2%	2.5%	4.3%
NCREIF Property Index	-2.0%	-6.6%	6.8%	5.9%	7.8%
Income	1.0%	4.0%	4.1%	4.2%	4.6%
Appreciation	-3.0%	-10.3%	2.6%	1.6%	3.1%

Returns are geometrically linked

## NCREIF Property Index Quarterly Returns by Region and Property Type



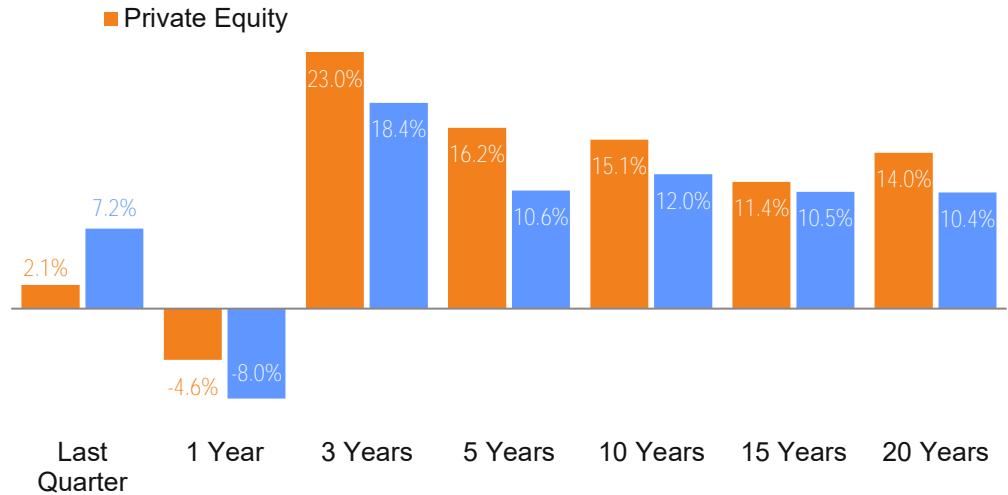
Source: NCREIF, ODCE return is net

# Private Equity Performance

## Smoothing effect across both down and up markets

- ▶ While private equity does not experience the same sharp declines as public equity during market downturns, it also does not rebound as quickly—as seen in 1Q23.
- ▶ Just as private equity was only down about a third as much as the public markets in 2022, it was up about a third as much in 1Q23.
- ▶ As has been the case for the past year, the tech-heavy venture capital and growth equity strategies continued to decline more than buyouts and other corporate finance strategies.
- ▶ Portfolio companies are typically valued internally by the manager on a quarterly basis. Valuations are based on the operating metrics of the company, recent comparable transactions, and public market comps.

Net IRRs as of 03/31/23



Net IRRs by Strategy as of 03/31/23

Strategy	Last Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Venture Capital	-0.7%	-16.4%	25.0%	20.4%	18.7%	13.2%
Growth Equity	1.3%	-9.3%	21.3%	16.5%	15.1%	12.7%
Buyouts	3.5%	0.7%	23.9%	16.0%	15.2%	10.8%
Mezzanine	3.5%	6.1%	14.9%	10.9%	11.1%	10.3%
Credit Opportunities	2.0%	4.0%	13.4%	7.3%	7.9%	9.2%
Control-Oriented Distressed	1.6%	2.6%	26.0%	13.9%	12.1%	10.7%
<b>Total Private Equity</b>	<b>2.1%</b>	<b>-4.6%</b>	<b>23.0%</b>	<b>16.2%</b>	<b>15.1%</b>	<b>14.0%</b>

Source: Refinitiv/Cambridge



# Private Equity Overview

## Fundraising remains steady

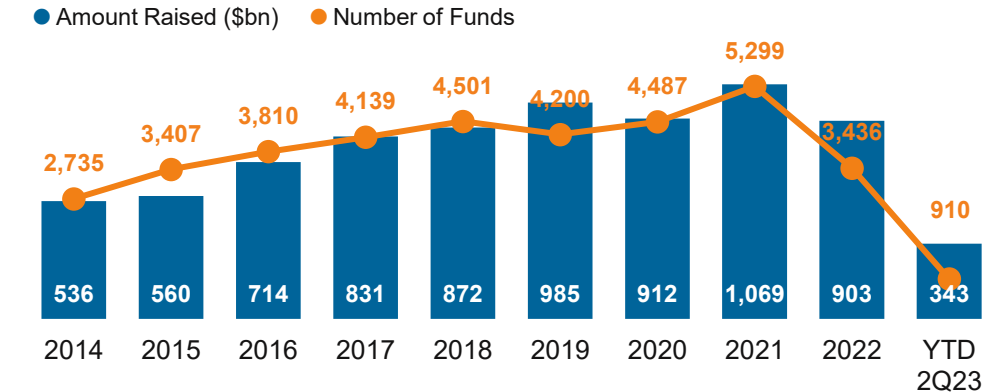
### Fundraising varies by strategy type

- ▶ Fundraising continued to decline through 2022 and into 2023, after peaking in 2021.
- ▶ 1H23 saw a significant drop in venture capital fundraising (-62%) compared to 1H23, with buyout fundraising falling less sharply (-26%).
- ▶ Fundraising is concentrated in larger funds as LPs have been consolidating with high-conviction GPs.
- ▶ Fundraising timelines are extending due to so many funds in the market, slowing distributions, and constrained LP commitment budgets.

### Dry powder levels off

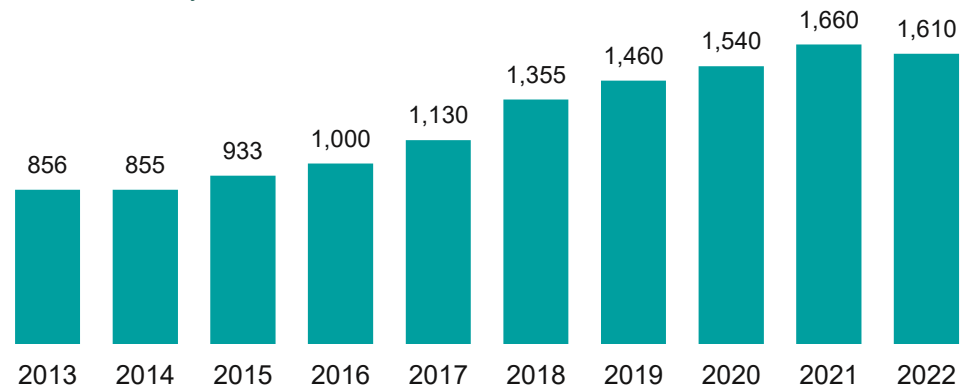
- ▶ Level of dry powder influenced by two factors: fundraising and capital deployment.
- ▶ Dry powder peaked in 2021 at \$1.7 trillion due to strong annual fundraising levels.
- ▶ Dry powder dropped slightly in 2022 due to a slower fundraising environment.

### Annual Fundraising



### Dry Powder (\$bn)

Cumulative as of yearend



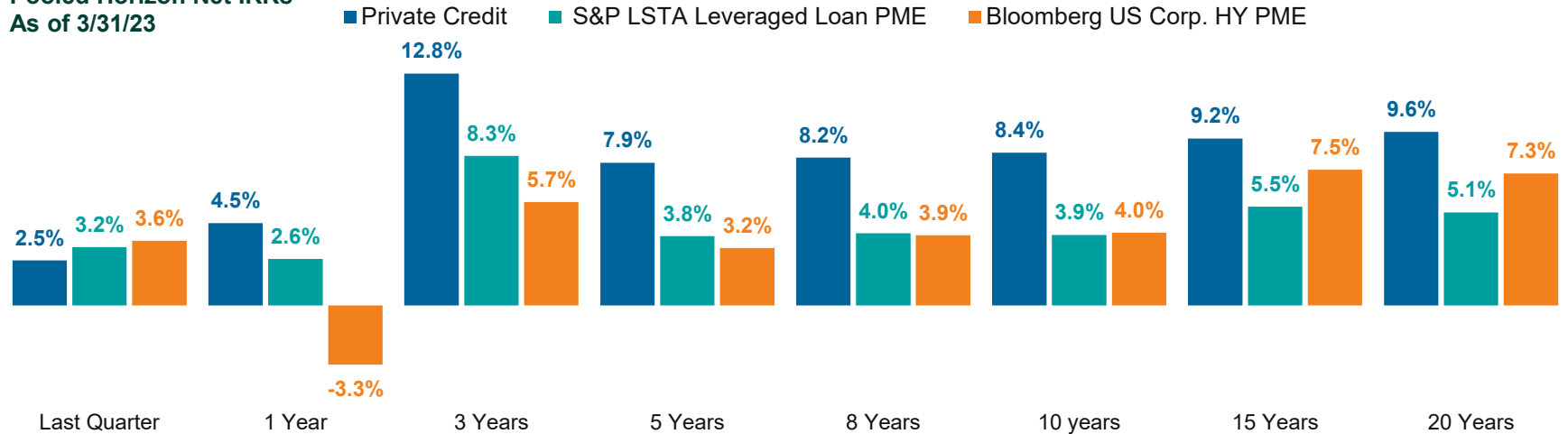
2023 Dry Powder not yet available.

Source: PitchBook

# Private Credit Market Overview

Performance over time and compared to relevant indices

**Pooled Horizon Net IRRs  
As of 3/31/23**



**Pooled Horizon Net IRRs by Strategy  
As of 3/31/23**

Strategy	Last Quarter	1 Year	3 Years	5 Years	8 Years	10 Years	15 Years	20 Years
Senior Debt	2.8	4.3	8.8	5.9	7.0	6.8	7.0	6.9
Mezzanine	3.5	6.1	14.9	10.9	11.2	11.0	10.5	11.4
Credit Opportunities	2.0	4.0	13.4	7.3	7.3	7.9	9.2	9.4
<b>Total Private Credit</b>	<b>2.5</b>	<b>4.5</b>	<b>12.8</b>	<b>7.9</b>	<b>8.2</b>	<b>8.4</b>	<b>9.2</b>	<b>9.6</b>

Private credit performance varies across sub-asset class and underlying return drivers. On average, the asset class has generated net IRRs of 8% to 10% for trailing periods ended March 31, 2023. Higher-risk strategies performed better than lower-risk strategies.

\*PME: Public market equivalent, a benchmark that applies the cash flows of the private credit funds to a public market index and then calculates an IRR.

Source: Refinitiv/Cambridge

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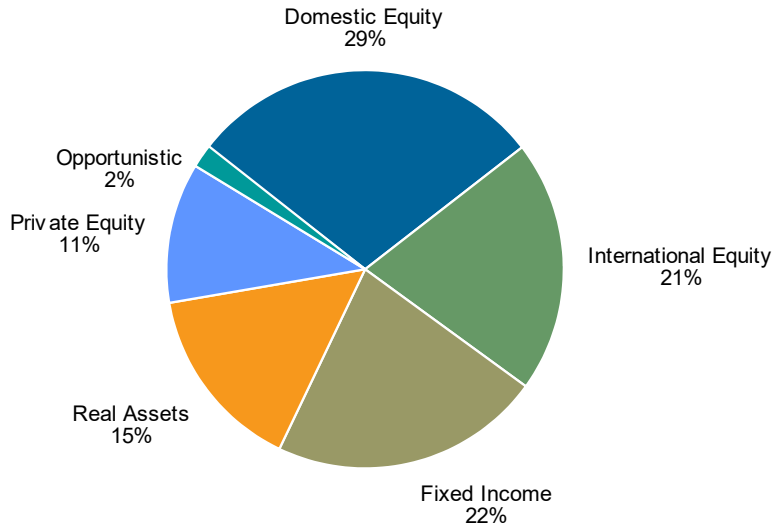
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**MCERA Total Fund Review**

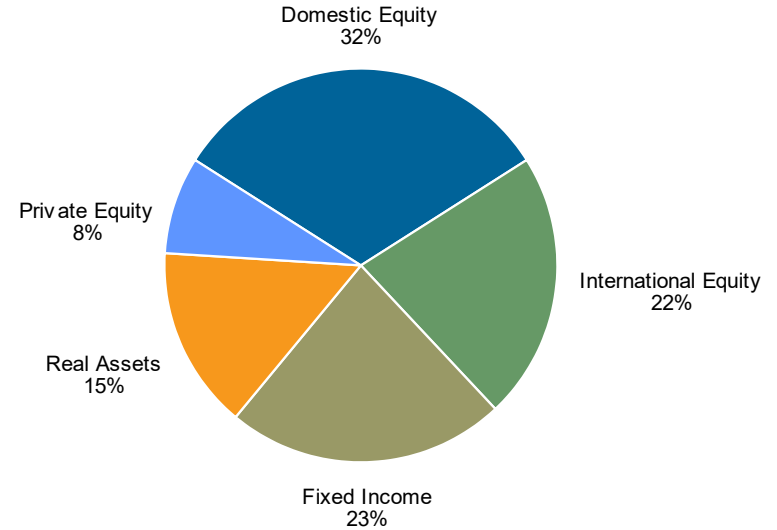
# Total Fund Asset Allocation

As of June 30, 2023

**Actual Asset Allocation**



**Target Asset Allocation**



Asset Class	\$000s Actual	Weight Actual	Min Target	Target	Max Target	Percent Difference	\$000s Difference
Domestic Equity	941,653	30.2%	28.0%	32.0%	36.0%	(1.8%)	(56,781)
International Equity	630,976	20.2%	19.0%	22.0%	25.0%	(1.8%)	(55,448)
Fixed Income	683,995	21.9%	20.0%	23.0%	26.0%	(1.1%)	(33,630)
Real Assets	454,883	14.6%	12.0%	15.0%	18.0%	(0.4%)	(13,133)
Private Equity	349,745	11.2%	0.0%	8.0%	12.0%	3.2%	100,136
Opportunistic	58,856	1.9%	0.0%	0.0%	5.0%	1.9%	58,856
<b>Total</b>	<b>3,120,107</b>	<b>100.0%</b>		<b>100.0%</b>			

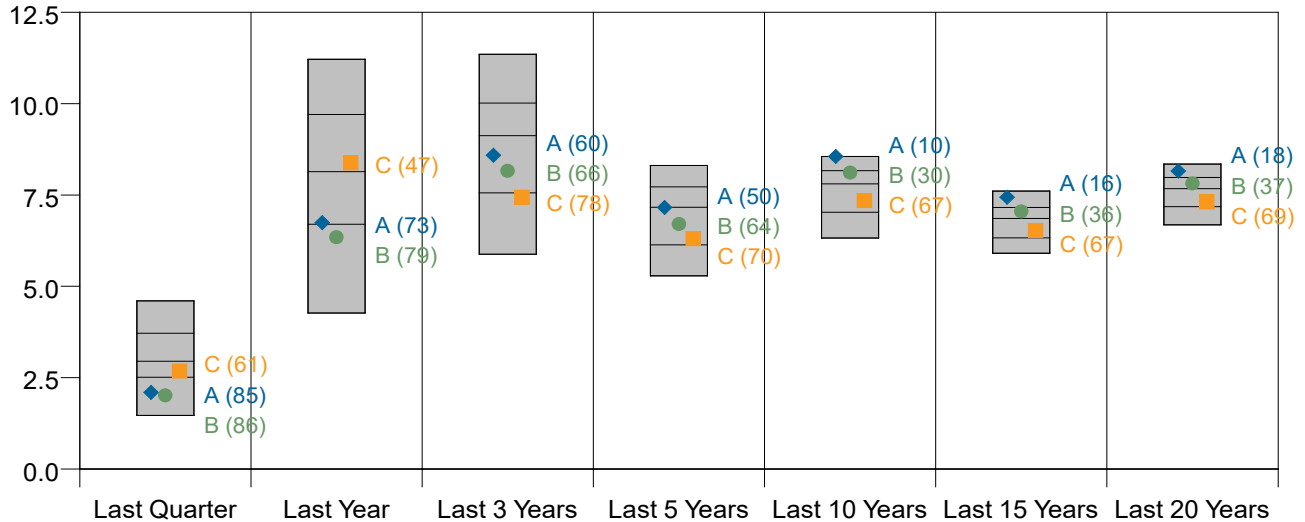
# Total Fund Asset Distribution

	June 30, 2023			March 31, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
<b>Domestic Equity</b>	<b>\$941,653,319</b>	<b>30.18%</b>	<b>\$(15,807,005)</b>	<b>\$66,847,908</b>	<b>\$890,612,416</b>	<b>28.92%</b>
Parametric Domestic Equity Futures (1)	-43,747,877	(1.40%)	(12,050,295)	(2,169,294)	-29,528,288	(0.96%)
SSGA Russell 1000 Index (2)	746,546,463	23.93%	(2,842,251)	58,985,749	690,402,965	22.42%
DFA Small Cap Core	238,854,734	7.66%	(914,459)	10,031,454	229,737,739	7.46%
<b>International Equity</b>	<b>\$630,976,059</b>	<b>20.22%</b>	<b>\$(8,410,699)</b>	<b>\$9,028,426</b>	<b>\$630,358,332</b>	<b>20.47%</b>
Morgan Stanley Value	209,244,881	6.71%	0	6,655,747	202,589,135	6.58%
Artisan Partners Growth	194,458,010	6.23%	0	1,621,046	192,836,964	6.26%
TimesSquare Intl Small Cap	102,148,690	3.27%	(219,283)	(1,572,465)	103,940,439	3.38%
FIAM Select Emerging Equity	102,485,168	3.28%	0	1,993,493	100,491,675	3.26%
Parametric International Equity Futures	22,639,309	0.73%	(8,191,416)	330,605	30,500,120	0.99%
<b>Fixed Income</b>	<b>\$683,994,759</b>	<b>21.92%</b>	<b>\$11,105,669</b>	<b>\$(5,285,588)</b>	<b>\$678,174,679</b>	<b>22.03%</b>
Wellington Core Plus	282,140,018	9.04%	(2,818,844)	(1,651,458)	286,610,320	9.31%
Western Core Plus	299,536,290	9.60%	(3,513,504)	(1,045,062)	304,094,857	9.88%
Parametric Fixed Income Futures	102,318,451	3.28%	17,438,017	(2,589,068)	87,469,502	2.84%
<b>Real Assets</b>	<b>\$454,882,606</b>	<b>14.58%</b>	<b>\$(2,229,415)</b>	<b>\$(8,917,703)</b>	<b>\$466,029,724</b>	<b>15.14%</b>
<b>Real Estate</b>	<b>\$231,671,864</b>	<b>7.43%</b>	<b>\$(2,136,815)</b>	<b>\$(7,631,883)</b>	<b>\$241,440,562</b>	<b>7.84%</b>
Woodmont	17,099,992	0.55%	0	0	17,099,992	0.56%
UBS Trumbull Property Fund	97,094,000	3.11%	(885,277)	(3,381,425)	101,360,702	3.29%
AEW Core Property Trust	117,477,873	3.77%	(1,251,538)	(4,250,458)	122,979,869	3.99%
<b>Public Real Assets</b>	<b>\$223,210,742</b>	<b>7.15%</b>	<b>\$(92,600)</b>	<b>\$(1,285,820)</b>	<b>\$224,589,162</b>	<b>7.29%</b>
INVESCO Commodities Fund	52,378,973	1.68%	(92,600)	(1,575,991)	54,047,565	1.76%
BlackRock TIPS Index Fund	56,918,205	1.82%	0	(804,340)	57,722,544	1.87%
KBI Global Resources Fund	59,600,752	1.91%	0	(473,022)	60,073,774	1.95%
Blackrock REIT Index Fund	54,312,812	1.74%	0	1,567,533	52,745,279	1.71%
<b>Opportunistic (3)</b>	<b>\$58,855,733</b>	<b>1.89%</b>	<b>\$(1,155,141)</b>	<b>\$1,852,744</b>	<b>\$58,158,129</b>	<b>1.89%</b>
CarVal Credit Value V	23,354,245	0.75%	(80,633)	568,996	22,865,882	0.74%
Fortress Credit Opps Fund V	13,004,006	0.42%	1,017,094	242,315	11,744,597	0.38%
Varde Dislocation Fund	22,497,482	0.72%	(2,091,602)	1,041,434	23,547,650	0.76%
<b>Private Equity (4)</b>	<b>\$349,744,896</b>	<b>11.21%</b>	<b>\$(5,980,052)</b>	<b>\$(0)</b>	<b>\$355,724,948</b>	<b>11.55%</b>
Abbott ACE VI	36,099,702	1.16%	0	0	36,099,702	1.17%
Abbott ACE VII	40,421,073	1.30%	(1,400,000)	0	41,821,073	1.36%
Abbott 2016	68,567,391	2.20%	(2,962,500)	0	71,529,891	2.32%
Abbott 2017	19,848,114	0.64%	0	0	19,848,114	0.64%
Abbott 2021	9,789,060	0.31%	1,418,750	0	8,370,310	0.27%
Pathway PPEF 2008	41,963,894	1.34%	(1,721,941)	0	43,685,835	1.42%
Pathway PE I-7	33,404,929	1.07%	(1,044,387)	(0)	34,449,316	1.12%
Pathway PE I-8	61,449,289	1.97%	(2,960,548)	(0)	64,409,837	2.09%
Pathway PE I-9	16,942,167	0.54%	(189,440)	0	17,131,607	0.56%
Pathway PE I-10	20,922,292	0.67%	2,543,029	(0)	18,379,263	0.60%
Pathway PE I-11	336,984	0.01%	336,984	0	-	-
<b>Total Fund</b>	<b>\$3,120,107,373</b>	<b>100.0%</b>	<b>\$(22,476,643)</b>	<b>\$63,525,788</b>	<b>\$3,079,058,228</b>	<b>100.0%</b>

# Total Fund Performance – Annualized

Returns for Periods Ended June 30, 2023

Group: Callan Public Fund Sponsor - Large (>1B)



	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years	Last 15 Years	Last 20 Years
10th Percentile	4.61	11.22	11.36	8.31	8.56	7.61	8.35
25th Percentile	3.72	9.71	10.02	7.73	8.17	7.16	7.98
Median	2.95	8.14	9.13	7.17	7.81	6.86	7.68
75th Percentile	2.52	6.70	7.56	6.14	7.03	6.33	7.18
90th Percentile	1.47	4.27	5.88	5.29	6.32	5.91	6.68

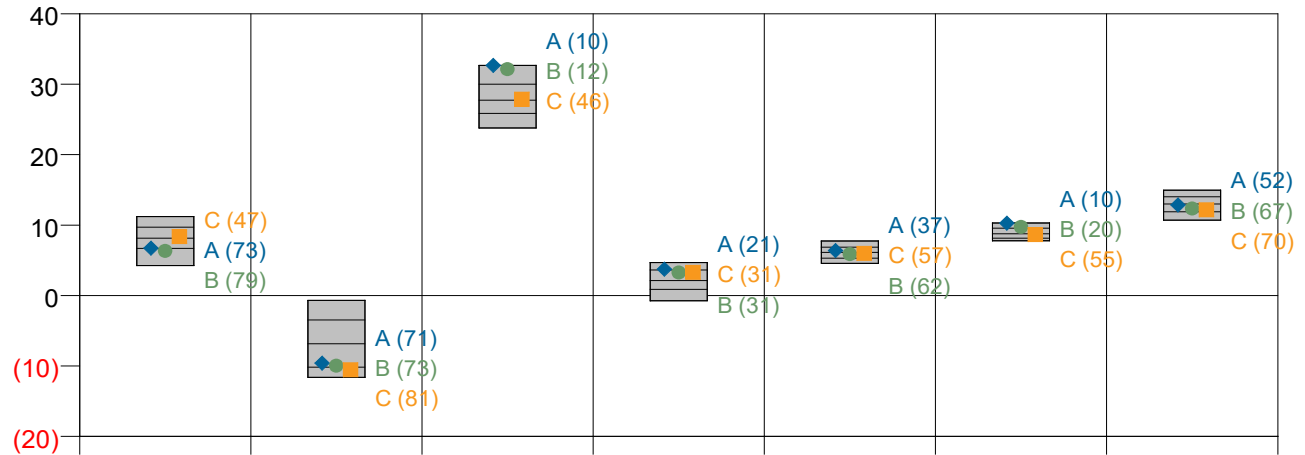
MCERA Total Fund - Gross	◆ A	2.10	6.75	8.59	7.16	8.56	7.44	8.16
MCERA Total Fund - Net	● B	2.02	6.35	8.16	6.71	8.11	7.05	7.82
MCERA Total Fund Target	■ C	2.68	8.38	7.44	6.31	7.35	6.53	7.32

Current Quarter Target = 32.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI Index, 23% Bloomberg Aggregate Index, 8.0% NCREIF NFI-ODCE Equal Weight Net, 1.8% Bloomberg Commodity Price Index, 1.8% S&P Global Natural Resources Index, 1.8% S&P DJ US Select REIT Index, 1.8% Bloomberg US TIPS Index, 4.8% Russell 3000 Index (Lagged) and 3.2% MSCI ACWI ex US IMI Index (Lagged).

# Total Fund Performance – Fiscal Year

## Fiscal Year Returns

Group: Callan Public Fund Sponsor - Large (>1B)

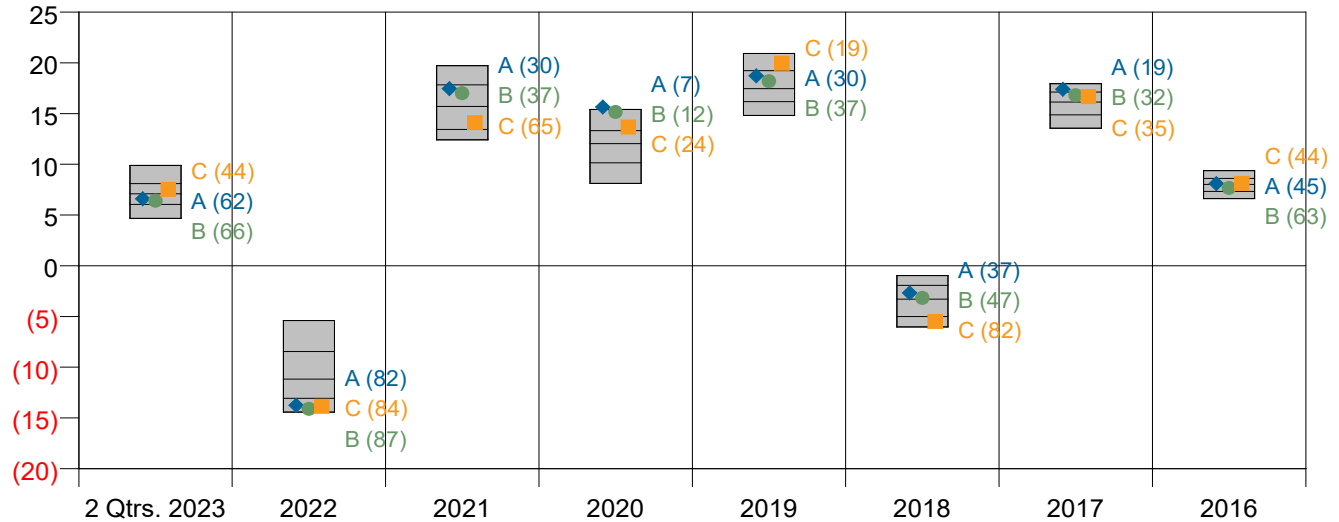


	Fiscal YTD 2023	Fiscal Year 2022	Fiscal Year 2021	Fiscal Year 2020	Fiscal Year 2019	Fiscal Year 2018	Fiscal Year 2017
10th Percentile	11.22	(0.68)	32.69	4.70	7.76	10.32	14.96
25th Percentile	9.71	(3.45)	30.01	3.63	6.87	9.56	14.03
Median	8.14	(6.83)	27.74	2.13	6.13	8.78	13.00
75th Percentile	6.70	(10.17)	25.87	0.88	5.31	8.14	11.90
90th Percentile	4.27	(11.60)	23.81	(0.73)	4.58	7.79	10.72
MCERA Total Fund - Gross	◆ A 6.75	(9.60)	32.69	3.74	6.39	10.29	12.88
MCERA Total Fund - Net	● B 6.35	(9.95)	32.15	3.26	5.88	9.74	12.37
MCERA Total Fund Target	■ C 8.38	(10.52)	27.89	3.29	5.99	8.67	12.20

# Total Fund Performance – Calendar Years

Returns for Periods Ended June 30, 2023

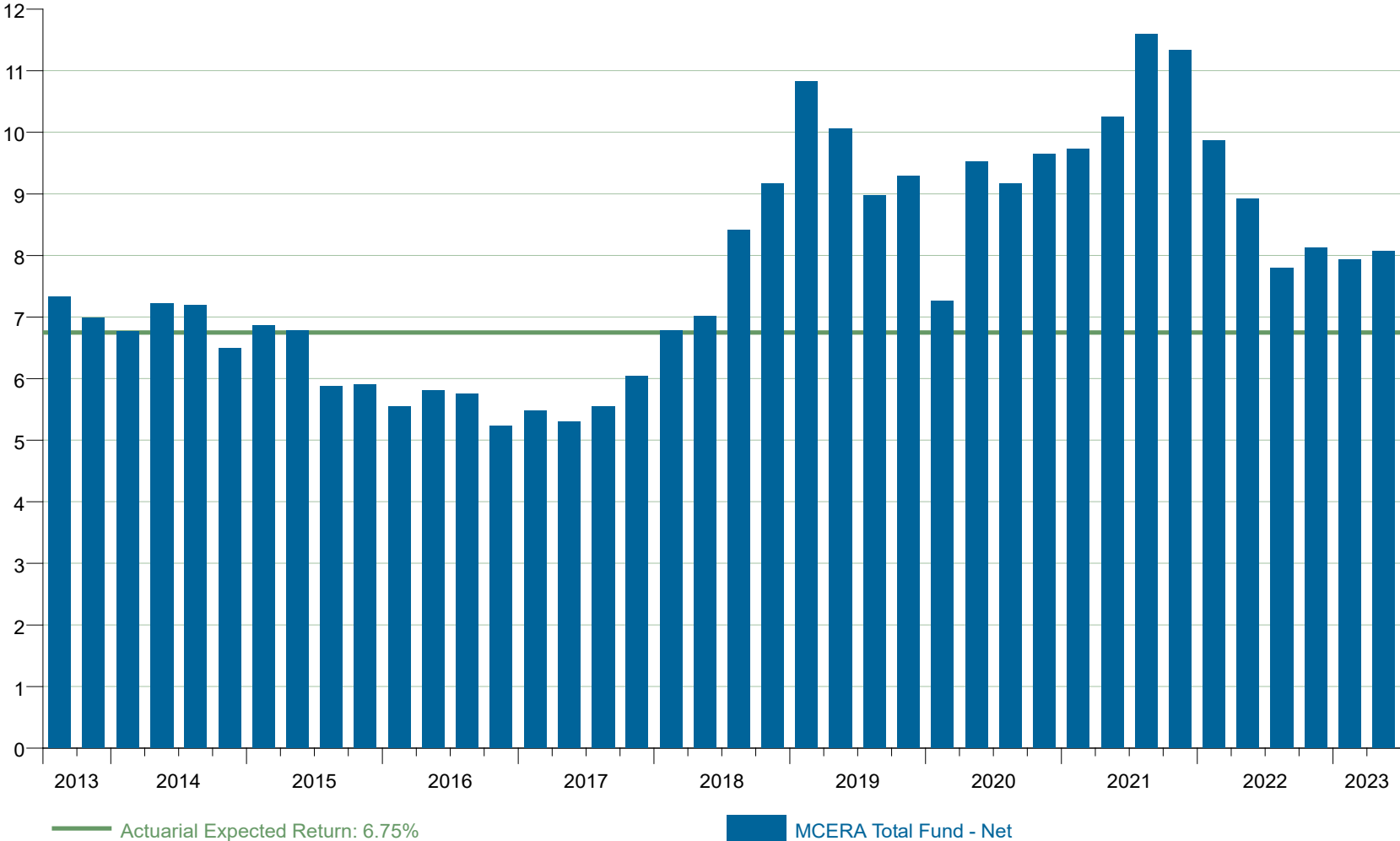
Group: Callan Public Fund Sponsor - Large (>1B)



	2 Qtrs. 2023	2022	2021	2020	2019	2018	2017	2016	
10th Percentile	9.89	(5.38)	19.72	15.41	20.92	(0.95)	17.97	9.39	
25th Percentile	8.10	(8.44)	17.84	13.33	19.24	(1.92)	17.13	8.63	
Median	7.10	(11.16)	15.71	12.04	17.45	(3.28)	16.14	8.02	
75th Percentile	6.06	(13.06)	13.44	10.16	16.18	(4.99)	14.89	7.33	
90th Percentile	4.68	(14.42)	12.43	8.13	14.83	(6.02)	13.57	6.63	
Total Fund - Gross	◆ A	6.60	(13.75)	17.47	15.66	18.73	(2.68)	17.41	8.10
MCERA Total Fund - Net	● B	6.42	(14.09)	17.01	15.16	18.19	(3.16)	16.81	7.68
Total Fund Target	■ C	7.53	(13.84)	14.12	13.68	19.97	(5.49)	16.68	8.13

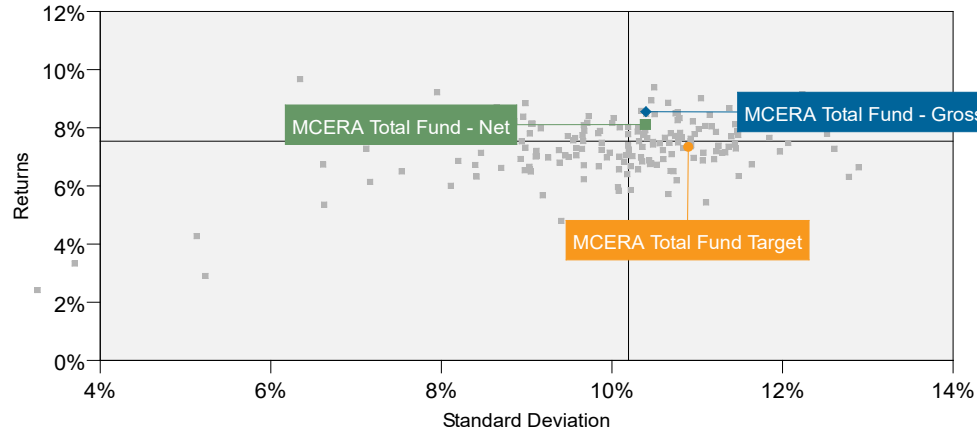


# Annualized 10 Year Total Fund Net Returns (Quarterly Roll)

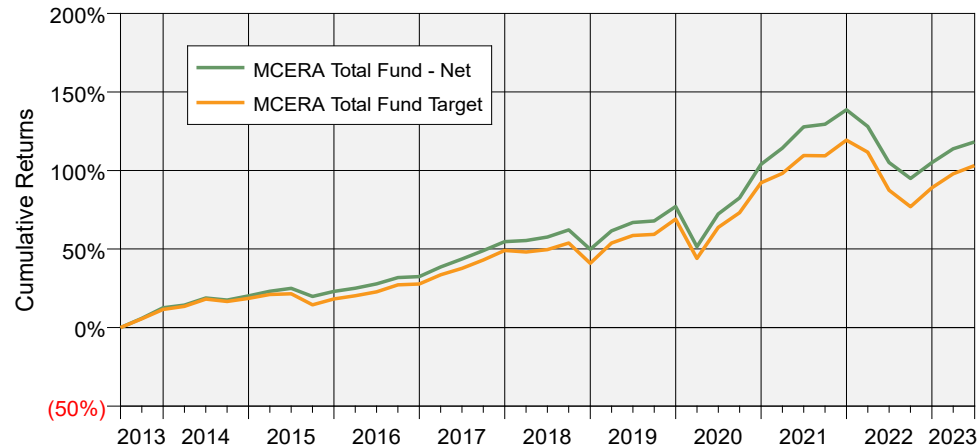


# Total Fund – Cumulative Returns Relative to Target

Ten Year Annualized Risk vs. Return  
As of June 30, 2023



Total Fund Cumulative Returns vs. Target  
10 Years Ended June 30, 2023



# Watchlist

## Investment Manager Monitoring Summary Report Active Managers as of June 30, 2023




Investment Manager	Organization/ Team	3 Year Performance vs Benchmark	3 Year Performance vs Peers	5 Year Performance vs Benchmark	5 Year Performance vs Peers	Qualify for Watchlist?	Date Added
<b>DFA Small Cap Core Equity</b> <i>Russell 2000 Index</i>				N/A	N/A		
<b>Morgan Stanley International Value Equity</b> <i>MSCI EAFE Index</i>						Yes	4Q17
<b>Artisan International Growth Equity</b> <i>MSCI EAFE Index</i>						Yes	4Q17
<b>TimesSquare International Small Cap Equity</b> <i>MSCI EAFE Small Cap Index</i>				N/A	N/A		
<b>Fidelity Emerging Markets Equity</b> <i>MSCI Emerging Markets Index</i>		N/A	N/A	N/A	N/A		
<b>Wellington Core Plus Fixed Income</b> <i>Bloomberg U.S Aggregate Index</i>						No	
<b>Western Asset Core Plus Fixed Income</b> <i>Bloomberg U.S Aggregate Index</i>		N/A	N/A	N/A	N/A		
<b>Invesco Balanced Risk Commodity Fund</b> <i>Bloomberg Commodity Index</i>						Yes	4Q20
<b>KBI Global Natural Resources Fund</b> <i>S&amp;P Global Natural Resource Index</i>			N/A		N/A	No	
<b>UBS Trumbull Property Fund*</b> <i>NFI-ODCE Index</i>		N/A	N/A	N/A	N/A		4Q19

\*UBS Trumbull Property Fund placed on watch for organizational concerns. Quantitative criteria for private market portfolios under review by Governance Committee.

### Quantitative Criteria

If a manager trails its relevant benchmark by more than 100 basis points (net of fees) and ranks in the bottom quartile of its peer universe (gross of fees ranking) for the trailing three years, or if a manager trails its relevant benchmark (net of fees) or ranks below median of its peer universe (gross of fees ranking) for the trailing five years, then the manager may be placed on the Watchlist.

### Color Code

	meets watch list criteria, no concerns, no actions recommended
	concerns exist, no actions recommended
	violates watch list criteria, concerns exist, action to be determined

# Watchlist

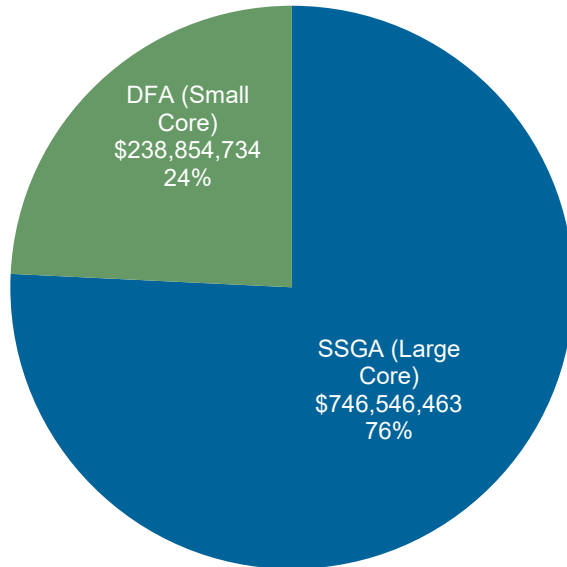
Investment Manager	3 Year Net Return Trails Benchmark by more than 100 bps (relative return shown in bps)	<u>AND</u>	3 Year Gross Return Ranks 75th - 100th%	<u>OR</u>	5 Year Net Return Trails Benchmark (relative return shown in bps)	<u>OR</u>	5 Year Gross Return Ranks 50th - 100th%	Qualify for Watchlist (Quantitative)
<b>DFA Small Cap Core Equity</b> <i>Russell 2000 Index</i>	690		12th		N/A		N/A	No
<b>Morgan Stanley International Value Equity</b> <i>MSCI EAFE Index</i>	-188		97th		-15		41st	Yes
<b>Artisan International Growth Equity</b> <i>MSCI EAFE Index</i>	-487		81st		-19		64th	Yes
<b>TimesSquare International Small Cap Equity</b> <i>MSCI EAFE Small Cap Index</i>	-426		84th		N/A		N/A	Yes
<b>Fidelity Emerging Markets Equity</b> <i>MSCI Emerging Markets Index</i>	N/A		N/A		N/A		N/A	No
<b>Wellington Core Plus Fixed Income</b> <i>Bloomberg U.S Aggregate Index</i>	71		73rd		71		39th	No
<b>Western Asset Core Plus Fixed Income</b> <i>Bloomberg U.S Aggregate Index</i>	N/A		N/A		N/A		N/A	No
<b>Invesco Balanced Risk Commodity Fund</b> <i>Bloomberg Commodity Index</i>	-104		68th		-3		62nd	Yes
<b>KBI Global Natural Resources Fund</b> <i>S&amp;P Global Natural Resource Index</i>	160		N/A		648		N/A	No
<b>UBS Trumbull Property Fund</b> <i>NCREIF NFI-ODCE Index</i>	Quantitative criteria for private markets portfolios under review by Governance Committee. On watch due to organizational changes.							Under Review

Callan

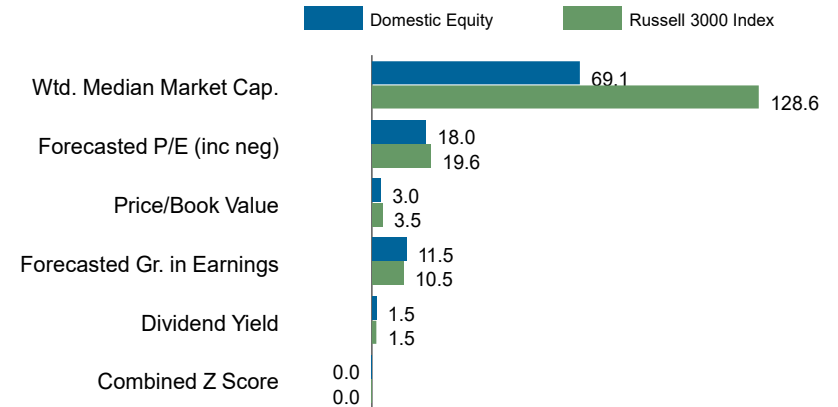
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**MCERA Asset Class Review**

# Domestic Equity Composite



## Portfolio Characteristics as of June 30, 2023

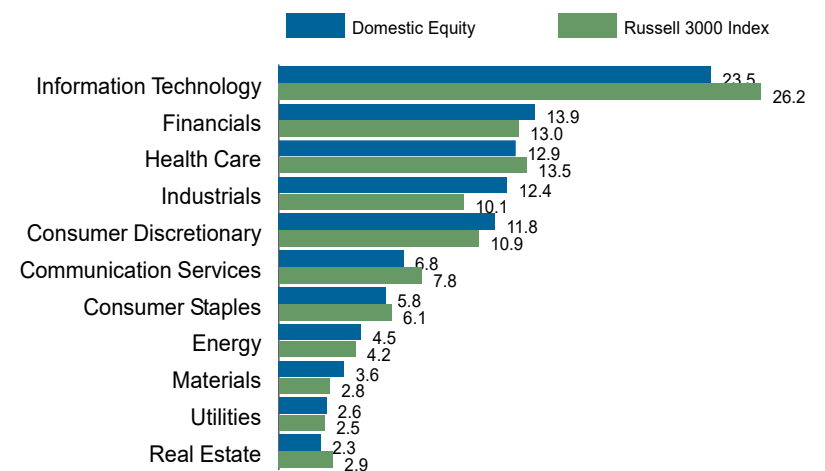


## Style Exposure Matrix

### Holdings as of June 30, 2023

	-- Domestic Equity		-- Russell 3000 Index	
	Value	Core	Growth	Total
Large	15.1% (94)	17.0% (94)	30.6% (101)	62.7% (289)
	18.9% (94)	21.3% (94)	38.4% (101)	78.7% (289)
Mid	3.9% (155)	5.5% (205)	6.8% (209)	16.2% (569)
	4.6% (157)	5.0% (207)	5.5% (214)	15.1% (578)
Small	4.4% (236)	7.5% (388)	6.3% (284)	18.1% (908)
	1.5% (313)	2.2% (487)	1.9% (356)	5.6% (1156)
Micro	1.4% (366)	1.1% (259)	0.5% (129)	3.0% (754)
	0.2% (262)	0.3% (452)	0.1% (153)	0.6% (867)
Total	24.8% (851)	31.1% (946)	44.2% (723)	100.0% (2520)
	25.2% (826)	28.9% (1240)	45.9% (824)	100.0% (2890)

## Sector Allocation as of June 30, 2023



# Domestic Equity Composite

## Returns and Rankings for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Domestic Equity - Net</b>	<b>7.56</b>	<b>18.86</b>	<b>15.75</b>	<b>11.00</b>	<b>12.04</b>
Domestic Equity Target	8.39	18.95	13.89	11.39	12.34
<b>SSGA - Net</b>	<b>8.56</b>	<b>19.34</b>	<b>13.61</b>	<b>11.70</b>	<b>12.57</b>
Large Cap Blended Benchmark	8.58	19.36	13.59	11.71	12.56
Ranking vs. Large Cap Equity	48	46	53	44	53
<b>DFA Small Core - Net</b>	<b>4.31</b>	<b>14.84</b>	<b>17.72</b>	<b>--</b>	<b>--</b>
Russell 2000 Index	5.21	12.31	10.82	4.21	8.26
Ranking vs. Small Cap Equity	51	38	12	--	--

## Returns and Rankings for Calendar Years

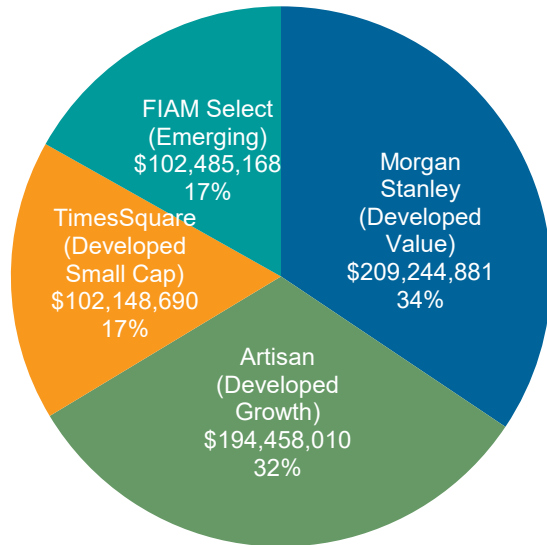
	2 Qtrs.		2021	2020	2019
	2023	2022			
<b>Domestic Equity - Net</b>	<b>14.56</b>	<b>(17.43)</b>	<b>29.74</b>	<b>17.85</b>	<b>28.77</b>
Domestic Equity Target	16.17	(19.21)	25.66	20.89	31.02
<b>SSGA - Net</b>	<b>16.62</b>	<b>(19.06)</b>	<b>27.16</b>	<b>18.33</b>	<b>31.43</b>
Large Cap Blended Benchmark	16.68	(19.13)	27.15	18.40	31.49
Ranking vs. Large Cap Equity	47	55	49	53	43
<b>DFA Small Core - Net</b>	<b>7.75</b>	<b>(12.97)</b>	<b>29.22</b>	<b>11.74</b>	<b>21.77</b>
Russell 2000 Index	8.09	(20.44)	14.82	19.96	25.52
Ranking vs. Small Cap Equity	55	21	21	54	71

- The domestic equity composite underperformed the benchmark over the quarter and generally performed in line with the benchmark over the last year.
- Although small cap has underperformed large cap recently, DFA's relative outperformance has been very beneficial over the last one and three years.
  - They exclude stocks with the lowest profitability and highest relative prices (high growth). While detrimental year-to-date as those types of stocks have outperformed, it has greatly benefitted relative returns in 2021-2022 when the market favored more value-oriented stocks.

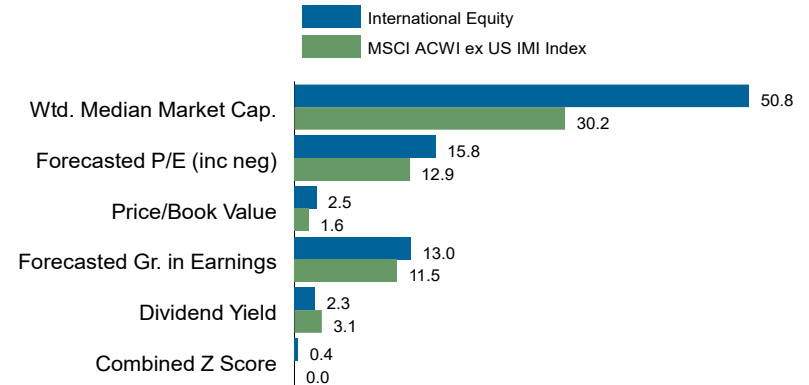
The Domestic Equity Target consists of the Russell 3000 Index.

The Large Cap Blended Benchmark consists of the S&P 500 Index to 7/31/2021 and the Russell 1000 Index thereafter.

# International Equity Composite



## Portfolio Characteristics as of June 30, 2023

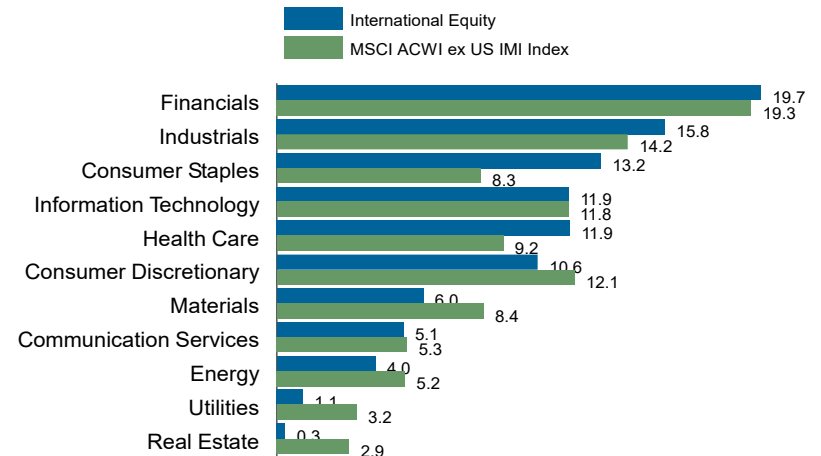


## Region & Style Exposure Matrix

### Holdings as of June 30, 2023

Region	International Equity				MSCI ACWI ex US IMI Index			
	Value	Core	Growth	Total	Value	Core	Growth	Total
Europe	7.7% (17)	24.9% (42)	26.4% (53)	59.0% (112)	12.8%	14.2%	15.0%	42.0%
N. America	--	2.5% (6)	2.6% (4)	5.1% (10)	1.4%	1.7%	1.4%	4.5%
Pacific	0.1% (1)	4.4% (14)	8.8% (25)	13.2% (40)	8.0%	8.3%	7.6%	24.0%
Emerging	3.5% (26)	7.7% (48)	11.5% (48)	22.7% (122)	8.2%	9.2%	12.2%	29.5%
Total	11.2% (44)	39.5% (110)	49.3% (130)	100.0% (284)	30.5%	33.3%	36.2%	100.0%

## Sector Allocation as of June 30, 2023





# International Equity Composite

## Returns and Rankings for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>International Equity - Net</b>	<b>1.37</b>	<b>13.78</b>	<b>4.43</b>	<b>2.59</b>	<b>4.61</b>
International Equity - Target	2.38	12.47	7.33	3.38	4.88
<b>MSIM - Net</b>	<b>3.14</b>	<b>19.29</b>	<b>7.05</b>	<b>4.24</b>	<b>5.02</b>
MSCI EAFE Index	2.95	18.77	8.93	4.39	5.41
Ranking vs. Non-US Developed Value Equity	52	34	97	41	62
<b>Artisan - Net</b>	<b>0.84</b>	<b>17.13</b>	<b>4.06</b>	<b>4.20</b>	<b>4.95</b>
MSCI EAFE Index	2.95	18.77	8.93	4.39	5.41
Ranking vs. Non-US Developed Growth Equity	93	43	81	64	83
<b>TimesSquare - Net</b>	<b>(1.51)</b>	<b>11.82</b>	<b>1.44</b>	--	--
MSCI EAFE Small Cap	0.58	10.18	5.70	1.31	6.19
Ranking vs. International Small Cap Equity	89	45	84	--	--
<b>FIAM Select EM - Net</b>	<b>1.98</b>	<b>3.74</b>	--	--	--
MSCI Emerging Markets Index	0.90	1.75	2.32	0.93	2.95
Ranking vs. Emerging Markets Equity	45	55	--	--	--

## Returns and Rankings for Periods Ended June 30, 2023

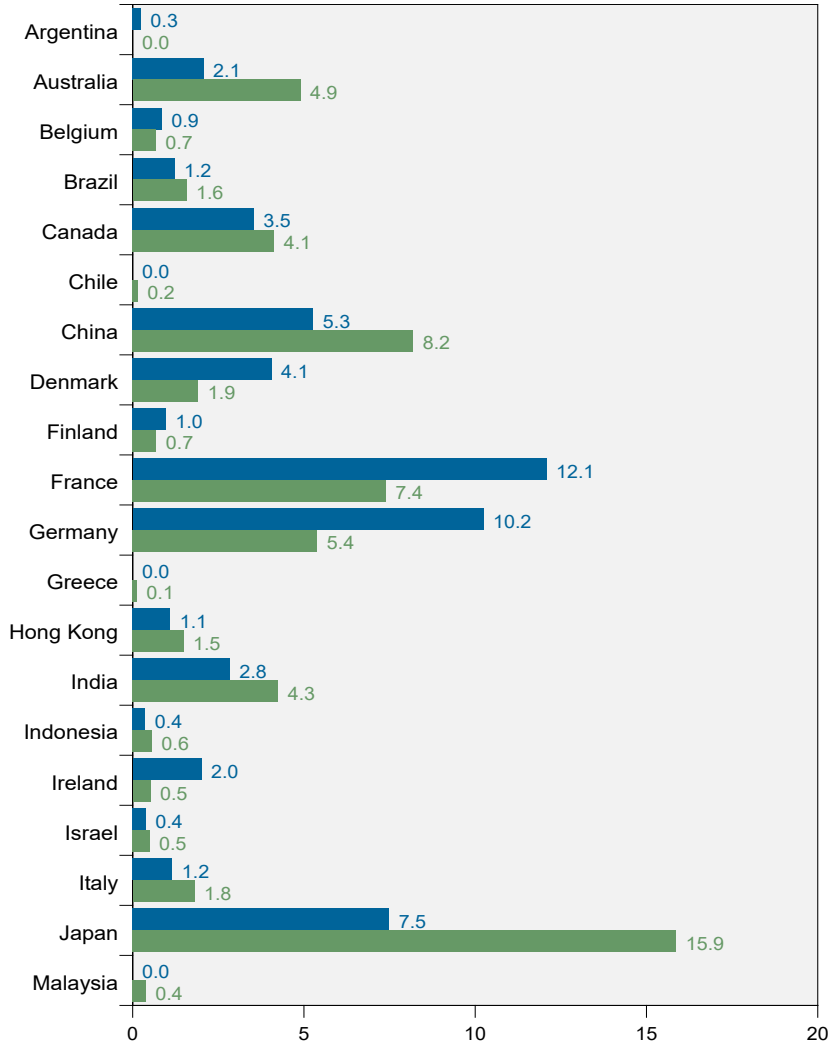
	2 Qtrs.				
	2023	2022	2021	2020	2019
<b>International Equity - Net</b>	<b>10.21</b>	<b>(19.28)</b>	<b>5.28</b>	<b>10.79</b>	<b>23.52</b>
International Equity - Target	9.10	(16.58)	8.53	11.12	21.63
<b>MSIM - Net</b>	<b>14.48</b>	<b>(13.62)</b>	<b>4.70</b>	<b>12.00</b>	<b>20.93</b>
MSCI EAFE Index	11.67	(14.45)	11.26	7.82	22.01
Ranking vs. Non-US Developed Value Equity	1	92	98	1	34
<b>Artisan - Net</b>	<b>9.47</b>	<b>(19.08)</b>	<b>8.59</b>	<b>8.09</b>	<b>29.62</b>
MSCI EAFE Index	11.67	(14.45)	11.26	7.82	22.01
Ranking vs. Non-US Developed Growth Equity	93	30	60	96	26
<b>TimesSquare - Net</b>	<b>7.53</b>	<b>(26.82)</b>	<b>2.18</b>	<b>13.87</b>	--
MSCI EAFE Small Cap	5.53	(21.39)	10.10	12.34	24.96
Ranking vs. International Small Cap Equity	41	74	93	39	--
<b>FIAM Select EM - Net</b>	<b>7.32</b>	<b>(23.89)</b>	--	--	--
MSCI Emerging Markets Index	4.89	(20.09)	(2.54)	18.31	18.44
Ranking vs. Emerging Markets Equity	42	70	--	--	--

- The International Equity composite underperformed during the quarter on a relative basis, but one year performance is still strong.
  - Morgan Stanley: an overweight to IT and industrials contributed to performance.
  - Artisan: selection within China and an underweight to Japan weighed on relative returns.
  - TimesSquare: selection within Europe, particularly industrials and health care detracted from performance.
  - FIAM: positive selection within industrials (Brazil) and communication services (S. Korea) benefitted performance.

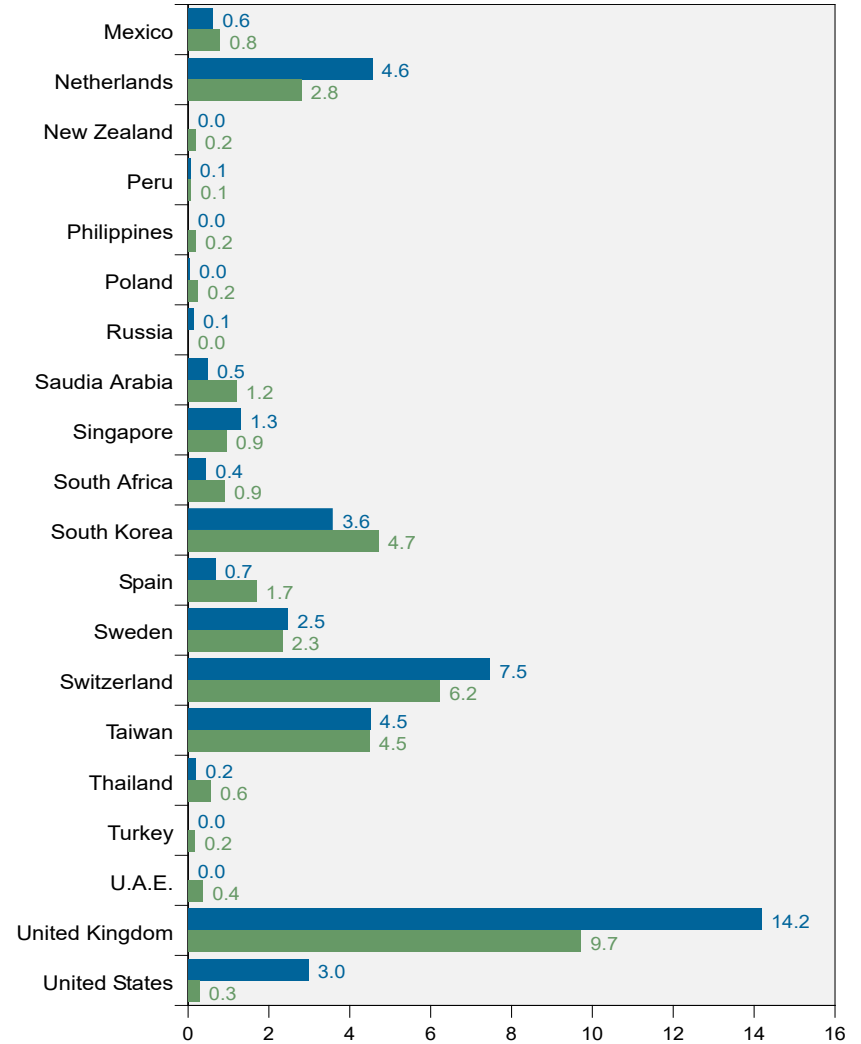
The International Equity Target is comprised of 100% MSCI EAFE Index through 06/30/2010, and 100% MSCI ACWI ex-US IMI Index thereafter.

# International Equity Composite

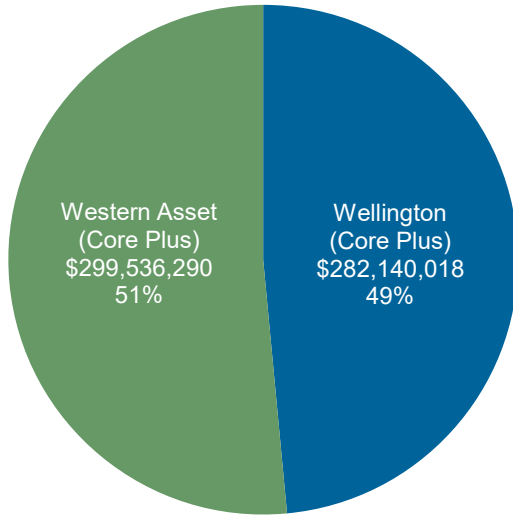
Country Allocations as of June 30, 2023



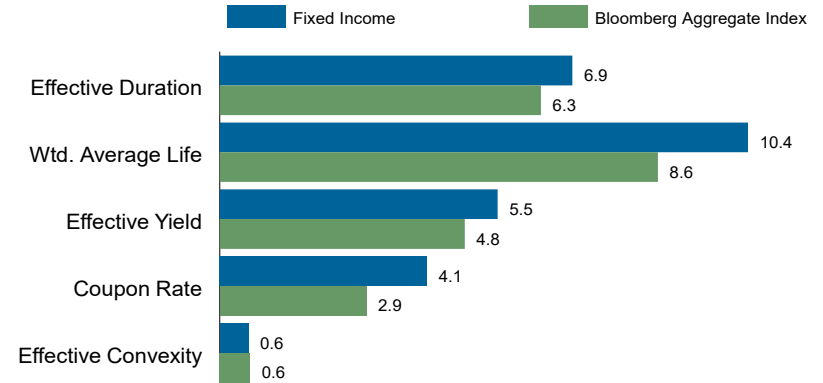
-- International Equity  
-- MSCI ACWI ex US IMI Index



# Fixed Income Composite

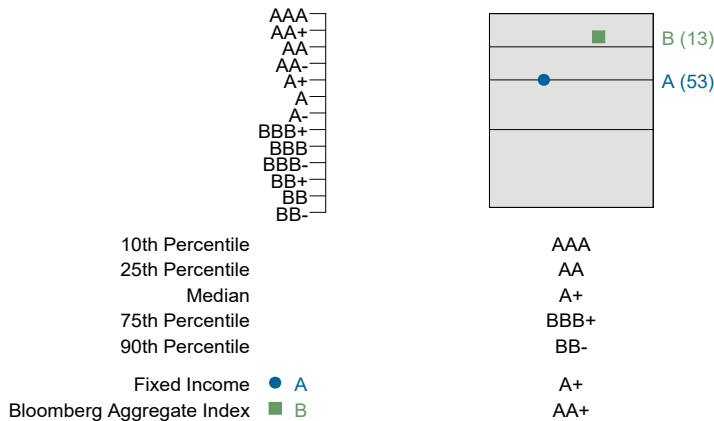


## Portfolio Characteristics as of June 30, 2023

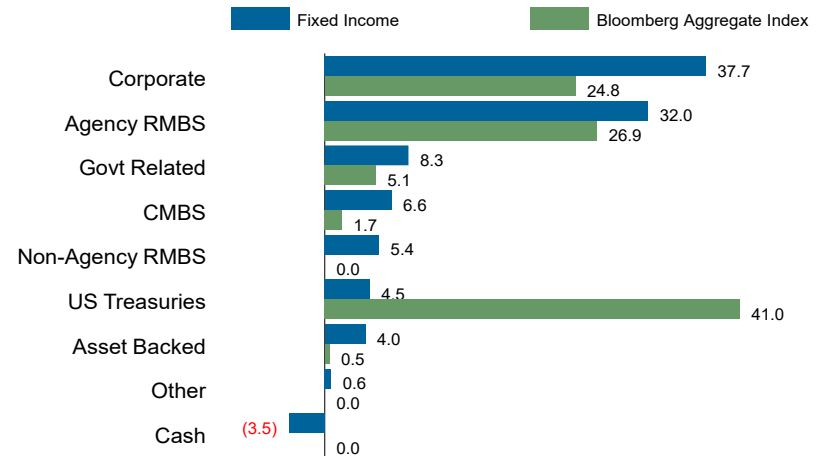


## Quality Rating as of June 30, 2023

### Total Domestic Fixed Income Database



## Sector Allocation as of June 30, 2023



# Fixed Income Composite

## Returns and Rankings for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Fixed Income - Net</b>	<b>(0.81)</b>	<b>(2.40)</b>	<b>(4.06)</b>	<b>0.65</b>	<b>1.59</b>
Fixed Income Target	(0.84)	(0.84)	(4.11)	0.31	1.10
<b>Wellington - Net</b>	<b>(0.63)</b>	<b>0.74</b>	<b>(3.25)</b>	<b>1.48</b>	<b>2.37</b>
Bloomberg Aggregate Index	(0.84)	(0.94)	(3.96)	0.77	1.52
Ranking vs. Core Plus Fixed Income	66	37	73	39	42
<b>Western Asset - Net</b>	<b>(0.40)</b>	<b>0.55</b>	<b>(1.81)</b>	<b>2.11</b>	<b>2.48</b>
Western Asset Blended Benchmark	(0.84)	(0.68)	(2.58)	1.37	1.84
Ranking vs. Core Plus Fixed Income	28				

## Returns and Rankings for Calendar Years

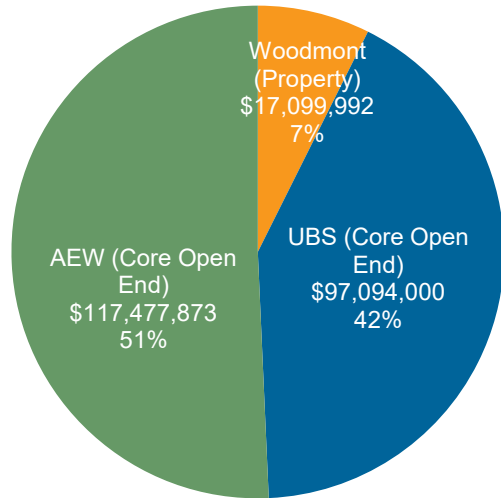
	2 Qtrs.				
	2023	2022	2021	2020	2019
<b>Fixed Income - Net</b>	<b>2.48</b>	<b>(15.56)</b>	<b>(2.50)</b>	<b>11.47</b>	<b>8.60</b>
Fixed Income Target	2.09	(13.58)	(2.79)	8.08	8.21
<b>Wellington - Net</b>	<b>2.74</b>	<b>(13.68)</b>	<b>(0.71)</b>	<b>9.93</b>	<b>9.95</b>
Bloomberg Aggregate Index	2.09	(13.01)	(1.54)	7.51	8.72
Ranking vs. Core Plus Fixed Income	48	63	64	26	43
<b>Western Asset - Net</b>	<b>3.14</b>	<b>(11.71)</b>	<b>(0.43)</b>	<b>10.03</b>	<b>9.82</b>
Western Asset Blended Benchmark	2.09	(11.01)	(1.03)	7.08	9.52
Ranking vs. Core Plus Fixed Income	18				

- The Fixed Income composite slightly outperformed the benchmark during the quarter but trailed over the last year. Performance over the last year still includes the Colchester Global and Western Asset Intermediate Credit portfolios (transitioned in 4Q22).
  - Wellington: investment grade credit and high yield allocations contributed to relative returns.
  - Western Asset: emerging markets exposure and an overweight to investment grade credit and high yield contributed to performance.

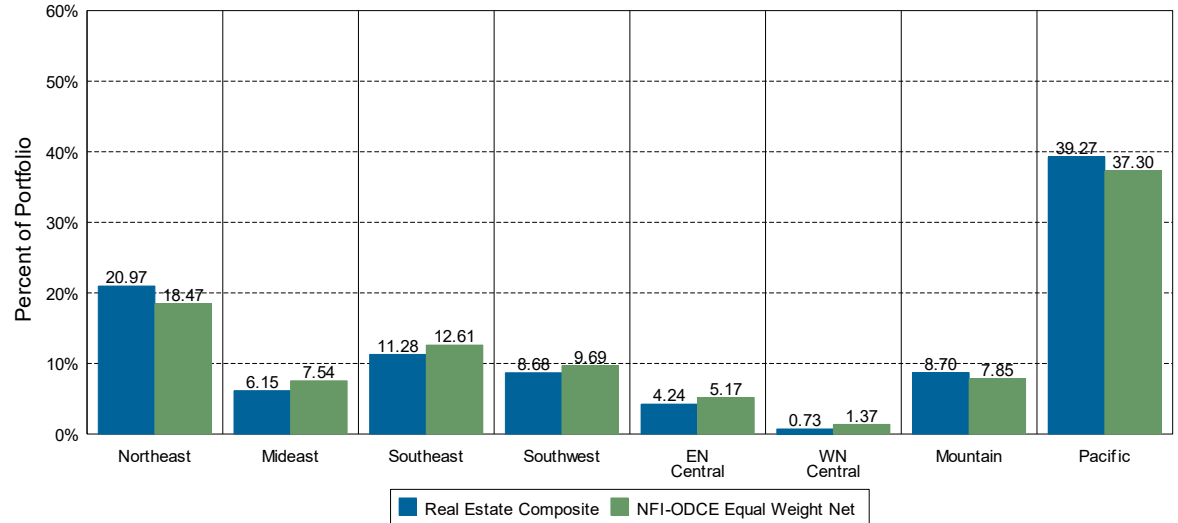
Fixed Income Target is comprised of 100% Bloomberg US Aggregate Index until March 2014, 50% Bloomberg US Aggregate Index, 25% Bloomberg US Intermediate Credit Index, and 25% FTSE World Government Bond Index until November 2022, and 100% Bloomberg US Aggregate Index thereafter.

Western Asset Blended Benchmark is comprised of the Bloomberg US Aggregate Index until March 2014, the Bloomberg US Intermediate Credit Index to 11/6/2022, and the Bloomberg US Aggregate Index thereafter.

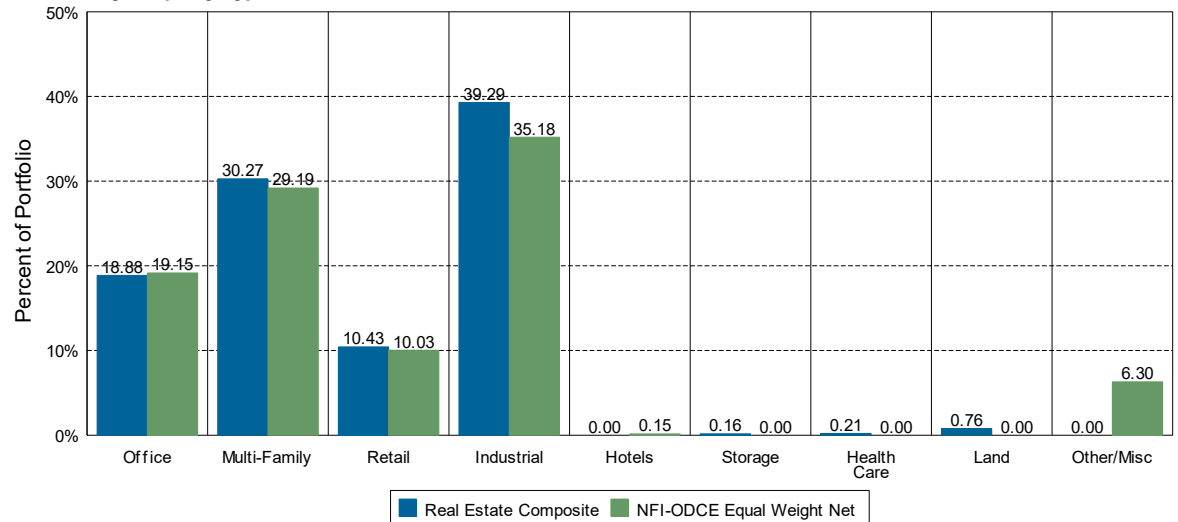
# Real Estate Composite



Diversification by Geographic Region as of March 31, 2023



Diversification by Property Type as of March 31, 2023



# Real Estate Composite

## Returns and Rankings for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Real Estate - Net</b>	<b>(3.35)</b>	<b>(12.20)</b>	<b>3.75</b>	<b>2.70</b>	<b>7.78</b>
Real Estate Target	(3.05)	(10.51)	7.59	6.07	8.09
<b>AEW Core Property Trust - Net</b>	<b>(3.67)</b>	<b>(10.35)</b>	<b>7.21</b>	<b>5.74</b>	<b>7.60</b>
NFI-ODCE Equal Wt Net Index	(3.05)	(10.51)	7.59	6.07	8.12
Ranking vs. Core Open End Funds	85	63	69	73	73
<b>UBS Trumbull Property Fund - Net</b>	<b>(3.52)</b>	<b>(15.38)</b>	<b>2.00</b>	<b>0.68</b>	<b>4.43</b>
NFI-ODCE Equal Wt Net Index	(3.05)	(10.51)	7.59	6.07	8.12
Ranking vs. Core Open End Funds	84	88	92	96	96

## Returns and Rankings for Calendar Years

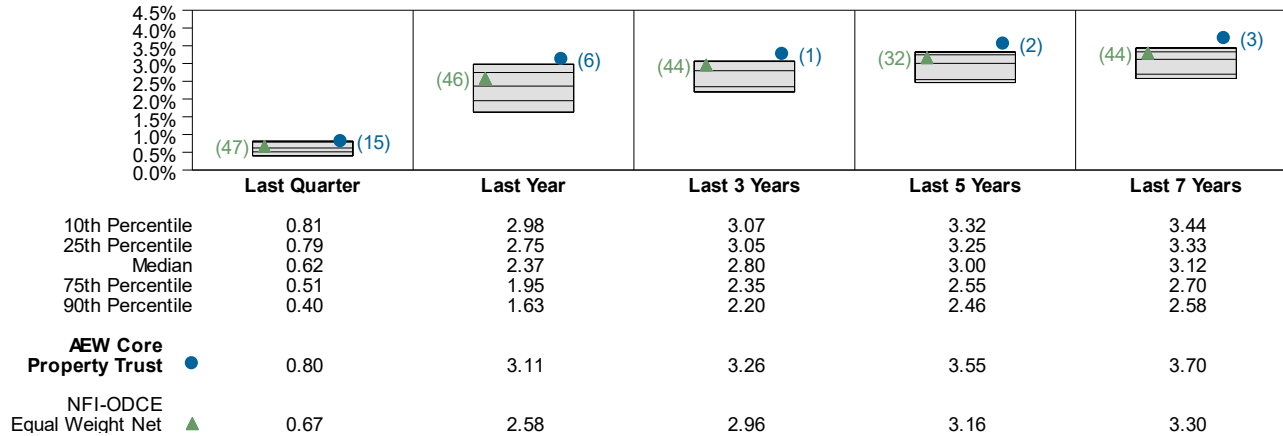
	2 Qtrs.				
	2023	2022	2021	2020	2019
<b>Real Estate - Net</b>	<b>(8.53)</b>	<b>6.20</b>	<b>16.16</b>	<b>(2.29)</b>	<b>0.64</b>
Real Estate Target	(6.44)	7.56	21.88	0.75	5.18
<b>AEW Core Property Trust - Net</b>	<b>(7.32)</b>	<b>7.95</b>	<b>21.00</b>	<b>0.57</b>	<b>5.29</b>
NFI-ODCE Equal Wt Net Index	(6.44)	7.56	21.88	0.75	5.18
Ranking vs. Core Open End Funds	81	54	59	66	71
<b>UBS Trumbull Property Fund - Net</b>	<b>(10.46)</b>	<b>5.21</b>	<b>15.41</b>	<b>(4.68)</b>	<b>(2.88)</b>
NFI-ODCE Equal Wt Net Index	(6.44)	7.56	21.88	0.75	5.18
Ranking vs. Core Open End Funds	92	82	89	96	96

- The AEW Core Property Trust's current leverage is 26% (NFI-ODCE leverage: 25.6%).
  - Only the retail sector produced a positive return for AEW during the quarter.
- The UBS Trumbull Property Fund's current leverage is 20%.
  - UBS had similar sector performance as AEW with retail as the only positive sector. Not surprisingly, the office sector for both funds was the largest detractor.

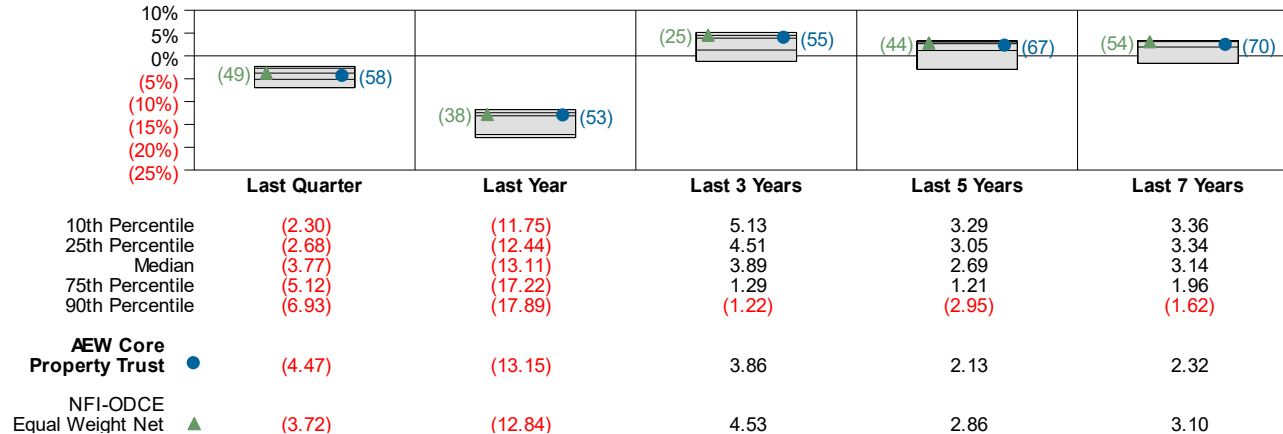
The Real Estate Target is comprised of the NCREIF Classic Index through 12/31/2004, NCREIF Total Property Index through 12/31/2014, and the NFI-ODCE Equal Weight Net thereafter.

# AEW Income and Appreciation Returns

## Income Rankings vs Callan Real Estate ODCE Periods ended June 30, 2023

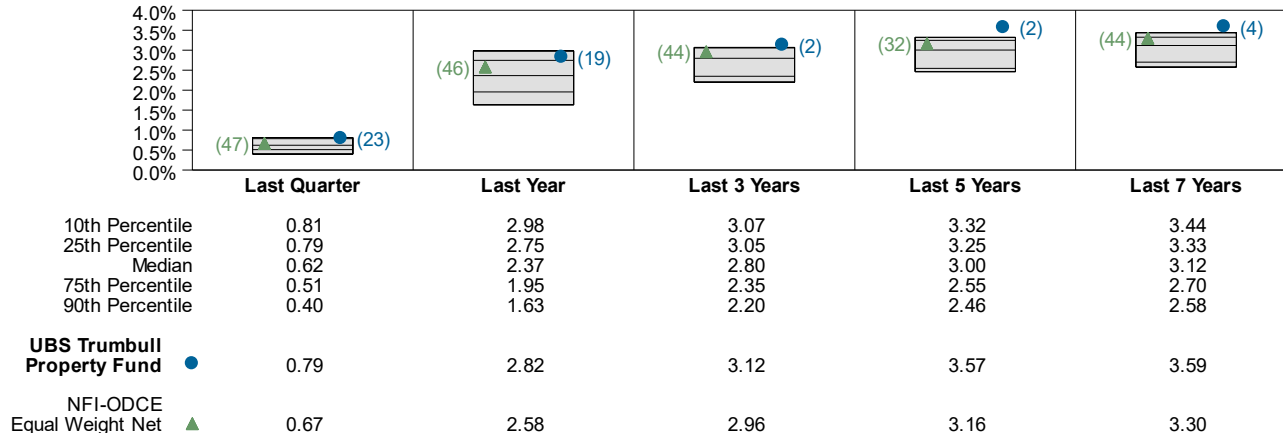


## Appreciation Rankings vs Callan Real Estate ODCE Periods ended June 30, 2023

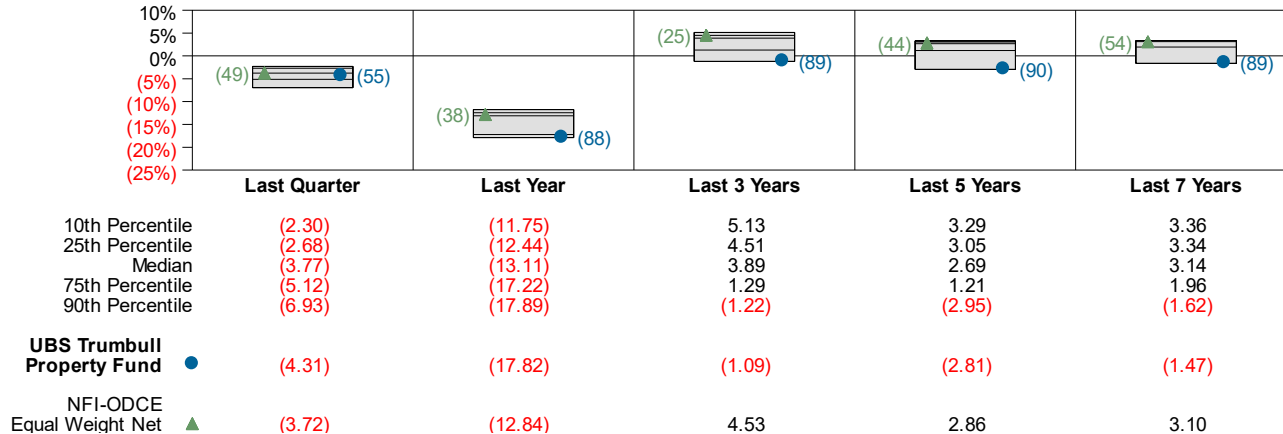


# UBS Income and Appreciation Returns

## Income Rankings vs Callan Real Estate ODCE Periods ended June 30, 2023



## Appreciation Rankings vs Callan Real Estate ODCE Periods ended June 30, 2023



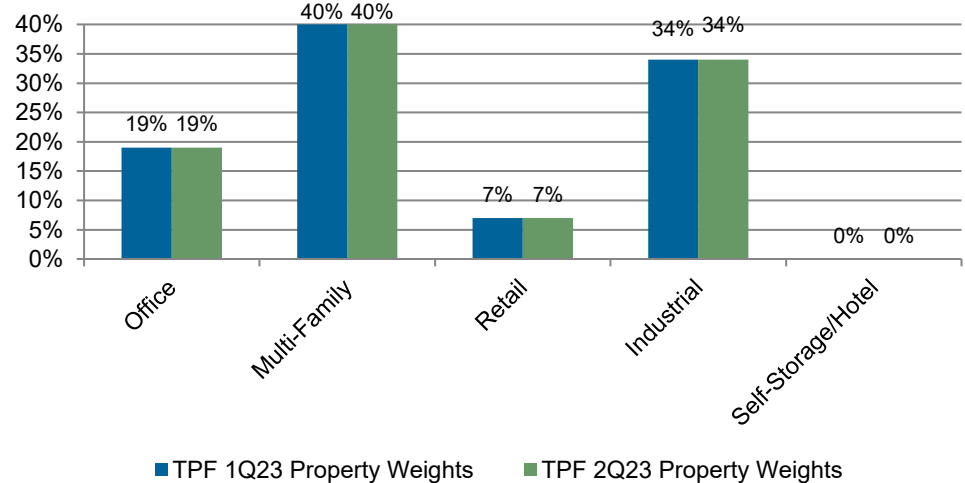


# UBS Trumbull Property Fund Snapshot

As of June 30, 2023

As of 2Q 2023	
Gross Asset Value	\$15.1B
Net Asset Value	\$11.9B
Leverage	20.4%
Number of Investments	138
Number of Investors	439
Redemption Queue	\$6.2 billion
2Q23 Redemption Queue Payout	\$125 million
Contribution Queue	\$0 million

Property Type Weights (Change from Prior Quarter)



- The Fund has a current redemption pool of \$6.2 billion. The Fund made a 2Q 2023 redemption payment of \$125 million after electing not to make a 1Q 2023 redemption payment. In 2022, the Fund paid out a total of \$1.85 billion, compared to the initial target for 2022 redemption payments of \$2.5 billion. The Non-Strategic Asset portfolio began with 44 properties and now has just three assets remaining, after this quarter's dispositions of one apartment building and one retail asset.
- In September 2019, the fund announced investors would have a choice between two fee incentives: Loyalty Incentive (discounted fees of 15% over 3 years or 25% over 4 years) and Top-up Incentive (\$0 base fee on additional dollars deposited). In January 2023, UBS announced they are extending these programs.
  - In 2019, MCERA elected for the 4 year/25% discount loyalty incentive on approximately \$100 million NAV (effective January 1, 2020). In 2023, MCERA again elected for the 4 year/25% discount loyalty incentive on the total NAV effective January 1, 2024.

## NFI-ODCE Funds - Net of Fee Returns

As of June 30, 2023

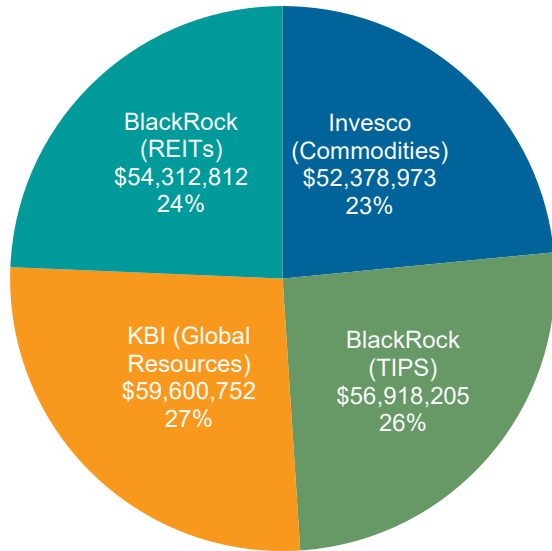
Fund Name	Last Quarter	Last Year	Last 3 Years	Last 5 Years
<b>AEW Core Property Trust</b>	<b>-3.58%</b>	<b>-10.22%</b>	<b>7.32%</b>	<b>5.83%</b>
ARA Core Property Fund	-2.45%	-9.94%	7.39%	6.17%
ASB Allegiance Real Estate Fund	-6.41%	-13.76%	3.61%	3.55%
Bailard Real Estate Fund	-1.19%	-2.23%	10.88%	9.62%
Barings Core Property Fund	-4.35%	-14.06%	3.55%	4.18%
BentallGreenOak BGO Diversified	-4.52%	-10.94%	7.81%	6.03%
BlackRock U.S. Core Property Fund	-4.46%	-10.73%	6.48%	5.82%
CBRE U.S. Core Partners LP	-0.48%	-9.36%	13.04%	10.17%
CIM Urban Income Investments	-3.04%	-10.27%	8.60%	6.69%
Clarion Lion Property Fund	-6.11%	-15.45%	6.64%	5.83%
DWS RREEF America REIT II	-2.07%	-11.77%	7.47%	6.44%
GWL U.S. Property Fund L.P.	-2.50%	-9.86%	9.29%	6.81%
Heitman America Real Estate Trust	-2.20%	-9.09%	9.55%	5.68%
Intercontinental U.S. Real Estate Investment Fund	-6.27%	-14.27%	5.63%	5.74%
Invesco Core Real Estate USA	-2.70%	-10.46%	6.56%	5.27%
J.P. Morgan Strategic Property Fund	-1.82%	-11.32%	6.13%	4.75%
LaSalle US Property Fund	-1.77%	-8.74%	8.79%	6.66%
MetLife Core Property Fund	-4.51%	-10.36%	8.82%	7.27%
Morgan Stanley Prime Property Fund	-2.24%	-7.08%	8.46%	6.83%
NYL Madison Core Property Fund	-1.41%	-5.83%	11.14%	8.71%
PGIM PRISA	-1.95%	-9.35%	7.71%	6.48%
Principal U.S. Core Property	-1.88%	-10.51%	7.31%	6.12%
Stockbridge Smart Markets Fund	-3.81%	-9.20%	9.78%	7.98%
TA Realty	-1.17%	-5.97%	13.05%	10.58%
<b>UBS Trumbull Property Fund</b>	<b>-3.54%</b>	<b>-15.46%</b>	<b>1.95%</b>	<b>0.65%</b>

## NFI-ODCE Funds - Gross of Fee All Sector Returns

As of June 30, 2023

Fund Name	Retail 2Q 2023	Apartment 2Q 2023	Industrial 2Q 2023	Office 2Q 2023
<b>AEW</b>	<b>1.53%</b>	<b>-2.05%</b>	<b>-0.21%</b>	<b>-10.09%</b>
ARA	0.70%	-0.79%	0.27%	-8.40%
ASB	0.65%	-1.31%	-2.99%	-10.75%
Bailard	2.48%	-0.91%	1.32%	-5.51%
Barings	-0.42%	-1.11%	-2.41%	-9.30%
BGO	-5.73%	-1.69%	1.26%	-13.54%
BlackRock	-1.36%	-2.30%	0.70%	-10.67%
CBRE	1.02%	-0.56%	0.71%	-1.16%
CIM Group	-0.44%	1.18%	2.62%	-8.53%
Clarion	-1.34%	-2.56%	-1.35%	-13.94%
DWS	-0.30%	-1.03%	-0.37%	-5.32%
Everwest	-0.02%	-1.95%	1.19%	-11.76%
Heitman	-1.18%	-0.33%	-0.73%	-5.45%
Intercontinental	0.95%	-2.43%	-0.31%	-11.32%
Invesco	-2.11%	-2.94%	-0.08%	-4.12%
JP Morgan	0.56%	0.37%	-0.32%	-3.46%
LaSalle	0.75%	-1.56%	0.55%	-7.57%
MetLife	0.62%	-2.76%	-2.18%	-5.65%
MSIM	-2.41%	1.38%	1.01%	-10.94%
NYLIM	1.55%	-1.69%	1.70%	-3.66%
PGIM	0.54%	-1.49%	0.63%	-5.80%
Principal	0.61%	-0.71%	2.06%	-8.09%
Stockbridge	-1.58%	-3.75%	-2.02%	-5.91%
TA Realty	-1.32%	-0.98%	1.81%	-9.92%
<b>UBS</b>	<b>0.98%</b>	<b>-1.75%</b>	<b>-0.82%</b>	<b>-9.01%</b>

# Real Assets Composite



- The BlackRock TIPS and REITs Funds are passive.
- Invesco underperformed primarily due to an overweight to industrial metals. China is the world's top metals consumer, and consumption has declined given the country's continued economic weakness.
- KBI outperformed the index with energy efficiency as the top sector benefitting from automotive and construction ties.

## Returns and Rankings for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
<b>Real Assets - Net</b>	<b>(0.68)</b>	<b>0.65</b>	<b>11.99</b>	<b>6.45</b>
Real Assets Target	(1.24)	(0.92)	11.59	4.72
<b>BlackRock TIPS Index Fund - Net</b>	<b>(1.40)</b>	<b>(1.36)</b>	<b>(0.09)</b>	<b>2.55</b>
Bloomberg US TIPS Index	(1.42)	(1.40)	(0.12)	2.49
Ranking vs. Real Returns Database	35	47	47	29
<b>BlackRock REIT Index Fund - Net</b>	<b>2.96</b>	<b>(0.79)</b>	<b>9.08</b>	<b>3.23</b>
S&P Dow Jones US Select REIT	2.92	(0.69)	9.17	3.28
Ranking vs. Real Estate Mutual Funds	23	24	9	80
<b>Invesco Commodity Fund - Net</b>	<b>(3.09)</b>	<b>(7.11)</b>	<b>16.78</b>	<b>4.70</b>
Bloomberg Commodity Index	(2.56)	(9.61)	17.82	4.73
Ranking vs. Commodities Funds	54	19	68	62
<b>KBI Global Resources Fund - Net</b>	<b>(1.00)</b>	<b>12.68</b>	<b>19.36</b>	<b>11.66</b>
S&P Global Natural Resources Index	(3.88)	7.64	17.76	5.18

## Returns and Rankings Calendar Years

	2 Qtrs. 2023	2022	2021	2020
<b>Real Assets - Net</b>	<b>2.06</b>	<b>(9.41)</b>	<b>23.96</b>	<b>11.08</b>
Real Assets Target	(0.95)	(3.52)	25.60	0.57
<b>BlackRock TIPS Index Fund - Net</b>	<b>2.08</b>	<b>(11.96)</b>	<b>5.92</b>	<b>11.17</b>
Bloomberg US TIPS Index	1.87	(11.85)	5.96	10.99
Ranking vs. Real Returns Database	12	76	41	18
<b>BlackRock REIT Index Fund - Net</b>	<b>5.80</b>	<b>(26.08)</b>	<b>45.80</b>	<b>(11.21)</b>
S&P Dow Jones US Select REIT Index	5.77	(25.96)	45.91	(11.20)
Ranking vs. Real Estate Mutual Funds	21	51	17	96
<b>Invesco Commodity Fund - Net</b>	<b>(4.71)</b>	<b>9.00</b>	<b>19.68</b>	<b>7.58</b>
Bloomberg Commodity Index	(7.79)	16.09	27.11	(3.12)
Ranking vs. Commodities Funds	7	83	87	1
<b>KBI Global Resources Fund - Net</b>	<b>5.23</b>	<b>(7.85)</b>	<b>24.08</b>	<b>29.17</b>
S&P Global Natural Resources Index	(3.49)	9.59	24.40	(0.05)

## Private Equity Portfolio (as of 3/31/23)

- 91% Paid-In through 12/31/22.

- When ranked against the Thomson-Cambridge Private Equity Database, MCERA is ranked in the second quartile for Total Value to Paid-In (TVPI) basis.

- The total portfolio is well diversified by vintage year and investment type.

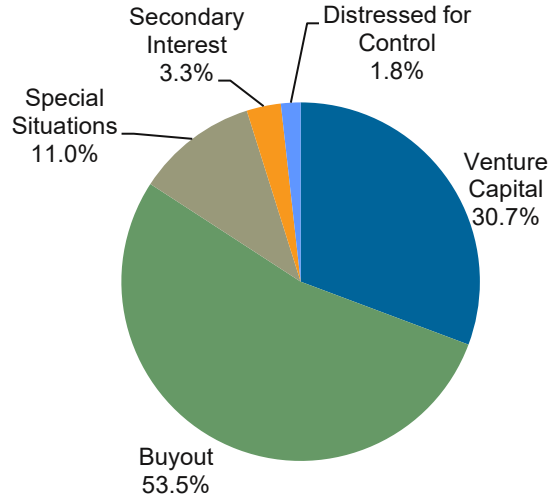
	March 31, 2023	Quarter Change	December 31, 2022
<b>Summary</b>			
Vintage Years	16 in 2008-2023		16 in 2008-2023
# Total Partnerships	539	6	533
# Active Partnerships	516	6	510
# Liquidated Partnerships	23	-	23
<b>Changes in Value</b>			
Capital Commitments	\$500,000,000	\$50,000,000	\$450,000,000
Paid-In Capital	\$411,037,346	\$1,371,815	\$409,665,531
Uncalled Capital	\$104,542,581	\$48,895,654	\$55,646,927
% Paid-In	82.21%	(8.83%)	91.04%
Distributed Capital	\$465,377,568	\$5,167,691	\$460,209,877
Net Asset Value	\$355,724,948	\$2,050,218	\$353,674,730
<b>Total Realized and Unrealized Value</b>	<b>\$821,102,516</b>	<b>\$7,217,909</b>	<b>\$813,884,607</b>
<b>Ratios and Performance</b>			
Distributions to Paid-In Capital (DPI)	1.13x	0.01x	1.12x
Residual Value to Paid-In Capital (RVPI)	0.87x	0.00x	0.86x
Total Value to Paid-In Capital (TVPI)	2.00x	0.01x	1.99x
Quartile Ranking	2nd		2nd
Net IRR	15.34%	(0.13%)	15.47%
<b>Additional Performance Metrics</b>			
Distribution Rate, as % of Beginning NAV		1.46%	
Unrealized Gain/(Loss), Dollars		\$5,846,094	
Unrealized Gain/(Loss), %		1.65%	

Quartile Rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database.

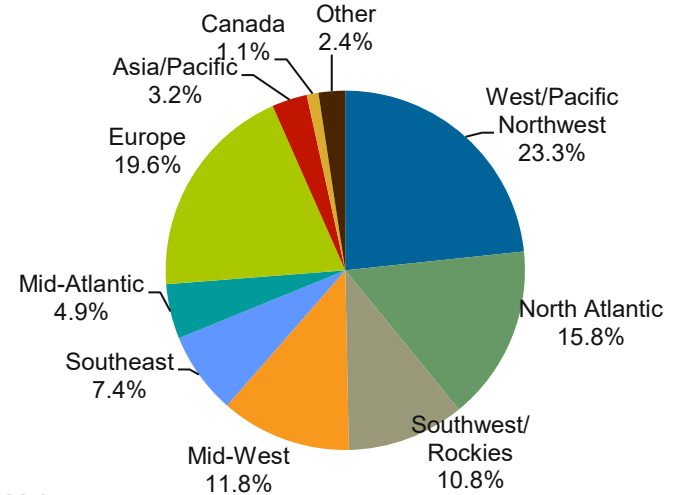
Pathway does not include capital called for fees towards the commitment. Paid-in may exceed the total commitment due to fees and/or currency effects.

# Private Equity Portfolio Exposure

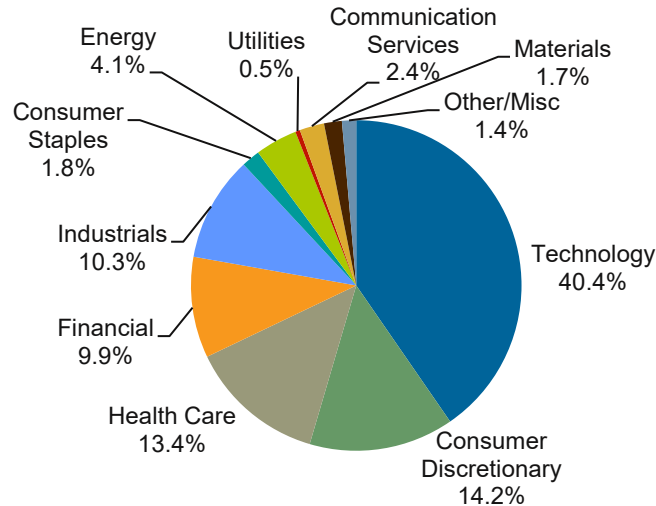
Strategy Mix by Net Asset Value



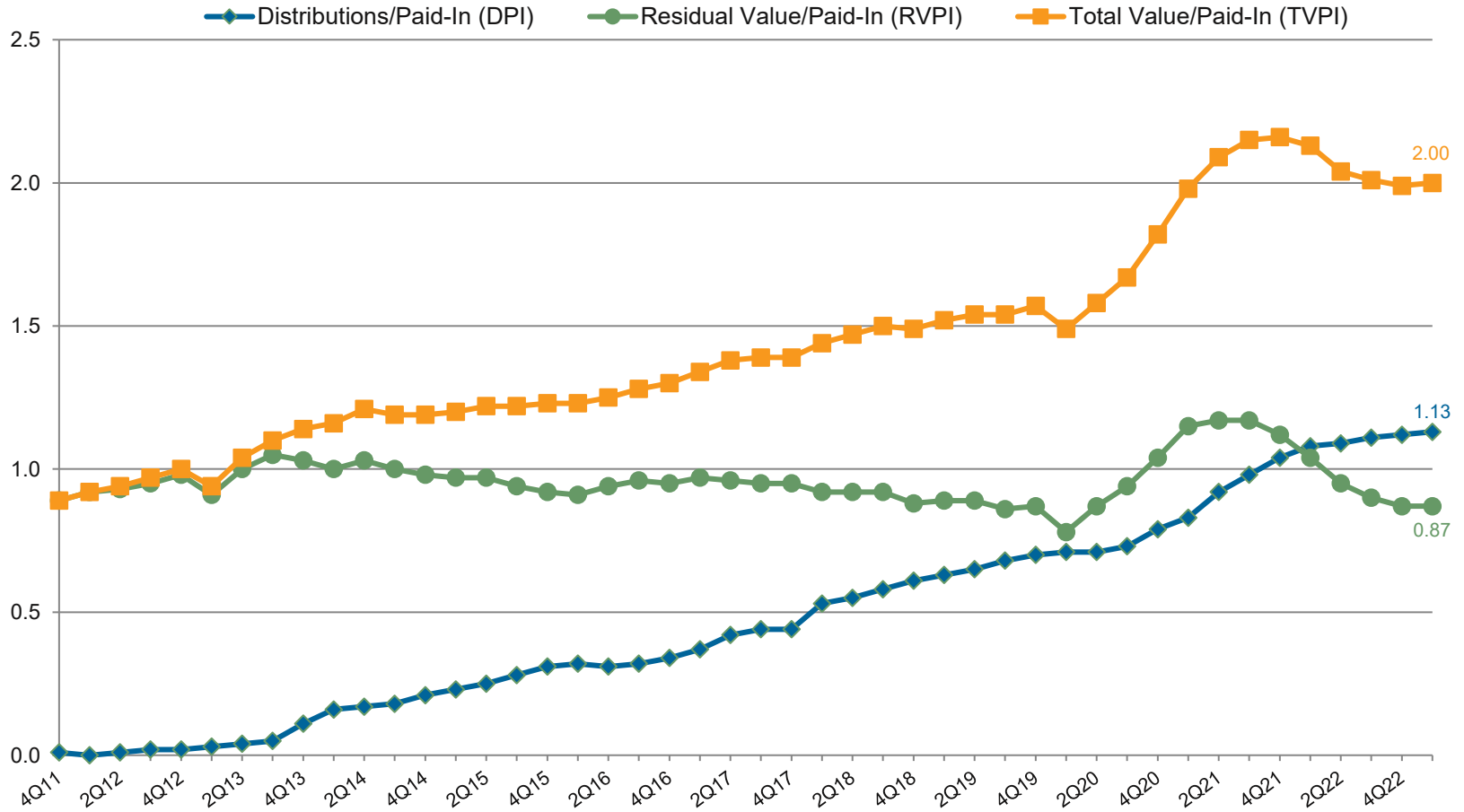
Geographic Mix by Net Asset Value



Industry Mix by Net Asset Value



# Private Equity Ratios – Changes Over Time



# Opportunistic Portfolio

- 63% Paid-In through 6/30/23.
- The total portfolio is diversified by industry type and geographic location.

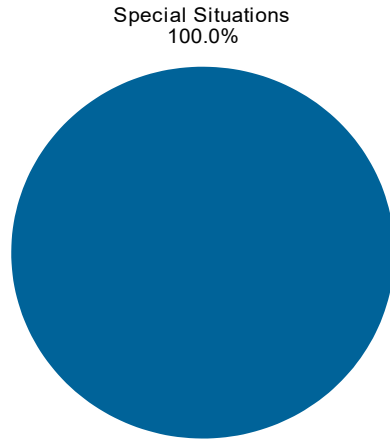
	June 30, 2023	Quarter Change	March 31, 2023
<b>Summary</b>			
Vintage Year	2020		2020
# Total Partnerships	193	-	193
# Active Partnerships	193	-	193
# Liquidated Partnerships	0	-	0
<b>Changes in Value</b>			
Capital Commitments	\$100,000,000	-	\$100,000,000
Paid-In Capital	\$63,127,360	\$1,056,215	\$62,071,145
Uncalled Capital	\$38,701,549	\$(1,056,215)	\$39,757,764
% Paid-In	63.13%	1.06%	62.07%
Distributed Capital	\$11,804,356	\$2,016,100	\$9,788,256
Net Asset Value	\$58,855,733	\$697,604	\$58,158,129
<b>Total Realized and Unrealized Value</b>	<b>\$70,660,089</b>	<b>\$2,713,704</b>	<b>\$67,946,385</b>
<b>Ratios and Performance</b>			
Distributions to Paid-In Capital (DPI)	0.19x	0.03x	0.16x
Residual Value to Paid-In Capital (RVPI)	0.93x	(0.00)x	0.94x
Total Value to Paid-In Capital (TVPI)	1.12x	0.02x	1.09x
Quartile Ranking	3rd		3rd
Net IRR	7.20%	0.68%	6.52%
<b>Additional Performance Metrics</b>			
Distribution Rate, as % of Beginning NAV		3.47%	
Unrealized Gain/(Loss), Dollars		\$1,657,489	
Unrealized Gain/(Loss), %		2.85%	

Quartile rankings against the 2020 vintage Control Oriented Distressed and Credit Opportunities Refinitiv/Cambridge Database.

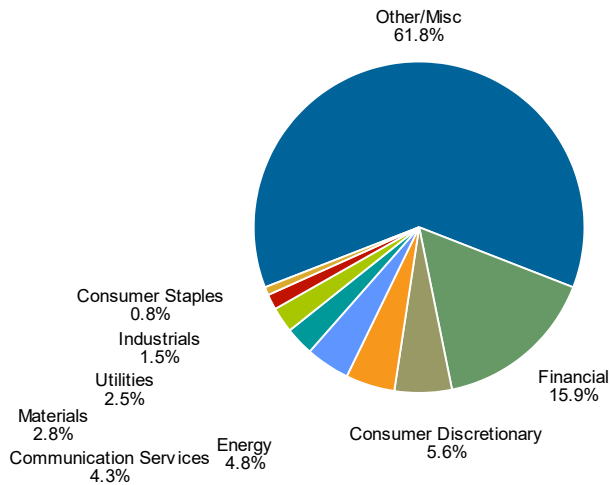


# Opportunistic Portfolio Exposure

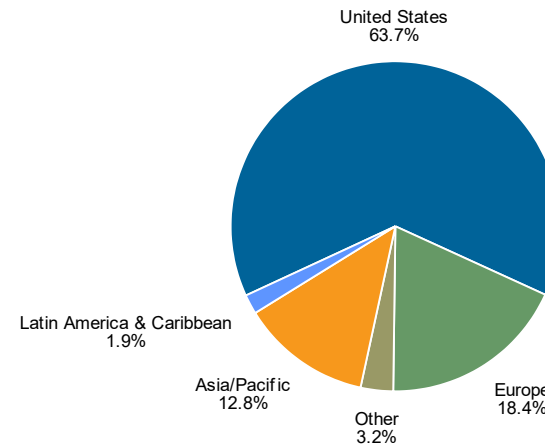
## Strategy Mix by Net Asset Value



## Industry Mix by Net Asset Value



## Geographic Mix by Net Asset Value



CarVal and Fortress do not categorize their assets by industry and therefore classify their investments as Other.

CarVal portfolio by asset class: corporate securities, loan portfolios, structured credit, and special opportunities/hard assets.

Fortress portfolio by asset class: asset backed securities, commercial real estate and debt securities, consumer loans, corporate debt and securities (distressed), corporate debt and securities (stressed), corporate loan originations, diversified credit, legal assets, preferred and common equity corporate securities, residential, and transportation assets.

Callan

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Appendix

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Domestic Equity</b>	<b>7.59%</b>	<b>18.99%</b>	<b>15.88%</b>	<b>11.13%</b>	<b>12.15%</b>
Equity Benchmark	8.39%	18.95%	13.89%	11.39%	12.34%
SSGA Russell 1000 Index (1) Blended Benchmark*	8.57% 8.58%	19.37% 19.36%	13.63% 13.59%	11.73% 11.71%	12.59% 12.56%
DFA Small Cap Core Russell 2000 Index	4.39% 5.21%	15.22% 12.31%	18.11% 10.82%	- 4.21%	- 8.26%
<b>International Equity</b>	<b>1.54%</b>	<b>14.51%</b>	<b>5.13%</b>	<b>3.31%</b>	<b>5.35%</b>
International Benchmark	2.38%	12.47%	7.33%	3.38%	4.88%
Morgan Stanley Value	3.29%	19.96%	7.65%	4.84%	5.67%
Artisan Partners Growth	1.04%	18.06%	4.90%	5.04%	5.89%
MSCI EAFE Index	2.95%	18.77%	8.93%	4.39%	5.41%
TimesSquare Intl Small Cap	(1.30%)	12.77%	2.31%	-	-
MSCI EAFE Small Cap Index	0.58%	10.18%	5.70%	1.31%	6.19%
FIAM Select Emerging Equity	2.13%	4.34%	-	-	-
MSCI Emerging Markets Index	0.90%	1.75%	2.32%	0.93%	2.95%
<b>Fixed Income</b>	<b>(0.77%)</b>	<b>(2.23%)</b>	<b>(3.87%)</b>	<b>0.91%</b>	<b>1.80%</b>
Fixed Income Benchmark	(0.84%)	(0.83%)	(4.11%)	0.31%	1.11%
Wellington Core Plus	(0.58%)	0.93%	(3.07%)	1.67%	2.51%
Bloomberg Aggregate Index	(0.84%)	(0.94%)	(3.96%)	0.77%	1.52%
Western Asset Core Plus	(0.35%)	0.77%	(1.58%)	2.36%	2.65%
Blended Benchmark**	(0.84%)	(0.68%)	(2.58%)	1.37%	1.84%
<b>Real Assets</b>	<b>(1.92%)</b>	<b>(5.80%)</b>	<b>7.77%</b>	<b>4.89%</b>	<b>8.45%</b>
Real Asset Benchmark	(2.20%)	(5.92%)	9.73%	5.83%	7.28%
<b>Private Real Estate</b>	<b>(3.17%)</b>	<b>(11.55%)</b>	<b>4.49%</b>	<b>3.50%</b>	<b>8.59%</b>
NFI-ODCE Equal Weight Net	(3.05%)	(10.51%)	7.59%	6.07%	8.12%
UBS Trumbull Property Fund	(3.36%)	(14.83%)	2.65%	1.41%	5.31%
AEW Core Property Trust	(3.46%)	(9.56%)	8.16%	6.73%	8.60%
<b>Public Real Assets</b>	<b>(0.57%)</b>	<b>1.05%</b>	<b>12.46%</b>	<b>6.88%</b>	<b>-</b>
Public Real Assets Benchmark	(1.24%)	(0.92%)	11.59%	4.72%	-
BlackRock TIPS Index Fund	(1.39%)	(1.33%)	(0.06%)	2.58%	-
Bloomberg US TIPS Index	(1.42%)	(1.40%)	(0.12%)	2.49%	2.08%
BlackRock REIT Index Fund	2.97%	(0.73%)	9.14%	3.29%	-
DJ US Select REIT Index	2.92%	(0.69%)	9.17%	3.28%	5.75%
Invesco Commodity Fund	(2.92%)	(6.52%)	17.58%	5.43%	-
Bloomberg Commodity Index	(2.56%)	(9.61%)	17.82%	4.73%	(0.99%)
KBI Global Resources Fund	(0.79%)	13.63%	20.38%	12.61%	-
S&P Global Natural Resources Index	(3.88%)	7.64%	17.76%	5.18%	5.10%
<b>Opportunistic****</b>	<b>3.19%</b>	<b>12.76%</b>	<b>-</b>	<b>-</b>	<b>-</b>
S&P/LSTA Leveraged Loans Index + 250	3.71%	13.39%	8.88%	6.71%	6.61%
<b>Private Equity****</b>	<b>0.00%</b>	<b>(1.28%)</b>	<b>20.28%</b>	<b>17.73%</b>	<b>17.44%</b>
<b>Total Fund</b>	<b>2.10%</b>	<b>6.75%</b>	<b>8.59%</b>	<b>7.16%</b>	<b>8.56%</b>
Total Fund - NOF	2.02%	6.35%	8.16%	6.71%	8.07%
Total Fund - IRR	2.22%	6.99%	8.86%	7.10%	8.58%
Total Fund Target	2.68%	8.38%	7.44%	6.31%	7.35%
Public Fund Sponsor Database	3.46%	9.27%	7.96%	6.71%	7.54%

The Total Fund/Plan IRR Calculation is based upon best available data.

(1) MCERA changed mandates from the S&P 500 Index to Russell 1000 Index on 7/31/2021.

\*Blended Benchmark = S&P 500 Index through 7/31/21 and Russell 1000 Index thereafter.

\*\*Blended Benchmark = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit until 11/06/2022.

Currently the Bloomberg Aggregate.

\*\*\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	FY 2023	FY 2022	FY 2021	FY 2020	FY 2019
<b>Domestic Equity</b>	<b>18.99%</b>	<b>(13.33%)</b>	<b>50.89%</b>	<b>2.37%</b>	<b>6.41%</b>
Equity Benchmark	18.95%	(13.87%)	44.16%	6.53%	8.98%
SSGA Russell 1000 Index (1)	19.37%	(12.71%)	40.82%	7.46%	10.44%
Blended Benchmark*	19.36%	(12.78%)	40.79%	7.51%	10.42%
DFA Small Cap Core	15.22%	(14.63%)	67.48%	(11.40%)	-
Russell 2000 Index	12.31%	(25.20%)	62.03%	(6.63%)	(3.31%)
<b>International Equity</b>	<b>14.51%</b>	<b>(22.45%)</b>	<b>30.86%</b>	<b>(1.79%)</b>	<b>3.12%</b>
International Benchmark	12.47%	(19.86%)	37.18%	(4.74%)	0.26%
Morgan Stanley Value	19.96%	(18.82%)	28.11%	0.59%	0.95%
Artisan Partners Growth	18.06%	(21.86%)	25.10%	0.73%	9.99%
MSCI EAFE Index	18.77%	(17.77%)	32.35%	(5.13%)	1.08%
TimesSquare Intl Small Cap	12.77%	(30.98%)	37.57%	(2.24%)	-
MSCI EAFE Small Cap Index	10.18%	(23.98%)	40.98%	(3.52%)	(6.35%)
FIAM Select Emerging Equity	4.34%	-	-	-	-
MSCI Emerging Markets Index	1.75%	(25.28%)	40.90%	(3.39%)	1.22%
<b>Fixed Income</b>	<b>(2.23%)</b>	<b>(11.73%)</b>	<b>2.95%</b>	<b>9.35%</b>	<b>7.68%</b>
Fixed Income Benchmark	(0.83%)	(11.61%)	0.60%	7.29%	7.36%
Wellington Core Plus	0.93%	(11.52%)	1.97%	10.09%	8.35%
Bloomberg Aggregate Index	(0.94%)	(10.29%)	(0.33%)	8.74%	7.87%
Western Asset Core Plus	0.77%	(9.79%)	4.87%	8.18%	8.94%
Blended Benchmark**	(0.68%)	(8.96%)	2.25%	6.97%	8.23%
Colchester Global	-	(16.40%)	4.53%	4.09%	5.88%
FTSE World Govt Bond Index	(2.49%)	(16.77%)	0.76%	4.60%	5.48%
<b>Real Assets</b>	<b>(5.80%)</b>	<b>11.77%</b>	<b>18.88%</b>	<b>(1.63%)</b>	<b>3.10%</b>
Real Asset Benchmark	(5.92%)	17.17%	19.87%	(3.21%)	3.80%
<b>Private Real Estate</b>	<b>(11.55%)</b>	<b>23.78%</b>	<b>4.20%</b>	<b>0.99%</b>	<b>3.08%</b>
NFI-ODCE Equal Weight Net	(10.51%)	28.90%	7.97%	1.70%	5.99%
UBS Trumbull Property Fund	(14.83%)	24.51%	1.99%	(0.86%)	0.04%
AEW Core Property Trust	(9.56%)	28.42%	8.95%	2.35%	6.92%
<b>Public Real Assets</b>	<b>1.05%</b>	<b>(0.30%)</b>	<b>41.18%</b>	<b>(4.91%)</b>	<b>3.14%</b>
Public Real Assets Benchmark	(0.92%)	4.24%	34.55%	(10.20%)	0.91%
BlackRock TIPS Index Fund	(1.33%)	(5.12%)	6.64%	8.43%	4.95%
Bloomberg US TIPS Index	(1.40%)	(5.14%)	6.51%	8.28%	4.84%
BlackRock REIT Index Fund	(0.73%)	(6.41%)	39.95%	(17.64%)	9.81%
DJ US Select REIT Index	(0.69%)	(6.41%)	39.98%	(17.71%)	9.75%
Invesco Commodity Fund	(6.52%)	16.15%	49.69%	(13.42%)	(7.44%)
Bloomberg Commodity Index	(9.61%)	24.27%	45.61%	(17.38%)	(6.75%)
KBI Global Resources Fund	13.63%	(7.55%)	66.04%	(0.81%)	4.65%
S&P Global Natural Resources Index	7.64%	2.27%	48.36%	(17.36%)	(4.63%)
<b>Opportunistic****</b>	<b>12.76%</b>	<b>(1.84%)</b>	<b>-</b>	<b>-</b>	<b>-</b>
S&P/LSTA Leveraged Loans Index + 250	13.39%	(0.27%)	14.15%	0.66%	6.48%
<b>Private Equity****</b>	<b>(1.28%)</b>	<b>0.56%</b>	<b>75.28%</b>	<b>11.53%</b>	<b>16.55%</b>
<b>Total Fund</b>	<b>6.75%</b>	<b>(9.60%)</b>	<b>32.69%</b>	<b>3.74%</b>	<b>6.39%</b>
Total Fund - NOF	6.35%	(9.95%)	32.15%	3.26%	5.88%
Total Fund - IRR	6.99%	(9.41%)	32.67%	3.25%	6.05%
Total Fund Target	8.38%	(10.52%)	27.89%	3.29%	5.99%
Public Fund Sponsor Database	9.27%	(9.51%)	27.02%	3.02%	6.19%

The Total Fund/Plan IRR Calculation is based upon best available data.

(1) MCERA changed mandates from the S&P 500 Index to Russell 1000 Index on 7/31/2021.

\*Blended Benchmark = S&P 500 Index through 7/31/21 and Russell 1000 Index thereafter.

\*\*Blended Benchmark = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit until 11/06/2022.

Currently the Bloomberg Aggregate.

\*\*\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	FY 2018	FY 2017	FY 2016	FY 2015	FY 2014
<b>Domestic Equity</b>	<b>16.87%</b>	<b>19.56%</b>	<b>(0.59%)</b>	<b>7.52%</b>	<b>24.38%</b>
Equity Benchmark	14.78%	18.51%	2.14%	7.29%	25.22%
SSGA Russell 1000 Index (1)	14.40%	17.97%	4.08%	7.42%	24.60%
Blended Benchmark*	14.37%	17.90%	3.99%	7.42%	24.61%
Russell 2000 Index	17.57%	24.60%	(6.73%)	6.49%	23.64%
DFA Value	15.64%	22.72%	(5.31%)	3.50%	25.92%
Russell 2000 Value Index	13.10%	24.86%	(2.58%)	0.78%	22.54%
Russell 2000 Growth Index	21.86%	24.40%	(10.75%)	12.34%	24.73%
<b>International Equity</b>	<b>8.05%</b>	<b>18.41%</b>	<b>(6.92%)</b>	<b>(1.97%)</b>	<b>22.56%</b>
International Benchmark	7.75%	20.43%	(9.61%)	(4.97%)	22.28%
Morgan Stanley Value	6.61%	17.87%	(7.41%)	(2.55%)	20.84%
Artisan Partners Growth	8.77%	14.74%	(10.76%)	0.60%	23.64%
MSCI EAFE Index	6.84%	20.27%	(10.16%)	(4.22%)	23.57%
MSCI EAFE Small Cap Index	12.45%	23.18%	(3.67%)	(0.77%)	29.08%
Parametric Emerging	4.27%	18.89%	(7.65%)	(9.22%)	17.38%
MSCI Emerging Markets Index	8.20%	23.75%	(12.05%)	(5.12%)	14.31%
FIAM International Small Cap	12.26%	23.14%	(2.74%)	1.65%	27.34%
S&P EPAC Sm Cp (Net)	11.27%	22.97%	(4.77%)	0.33%	29.15%
<b>Fixed Income</b>	<b>0.31%</b>	<b>1.28%</b>	<b>6.68%</b>	<b>(0.57%)</b>	<b>6.02%</b>
Fixed Income Benchmark	0.21%	(0.83%)	7.05%	(1.02%)	4.36%
Wellington Core Plus	0.34%	2.40%	6.05%	1.79%	6.31%
Bloomberg Aggregate Index	(0.40%)	(0.31%)	6.00%	1.86%	4.37%
Western Asset Core Plus	(0.02%)	3.11%	5.09%	1.44%	5.22%
Blended Benchmark**	(0.36%)	1.36%	4.97%	1.51%	4.18%
Colchester Global	1.47%	(0.81%)	8.29%	(7.61%)	-
FTSE World Govt Bond Index	1.90%	(4.14%)	11.26%	(9.02%)	6.85%
<b>Real Assets</b>	<b>7.29%</b>	<b>4.10%</b>	<b>13.68%</b>	<b>22.79%</b>	<b>13.73%</b>
Real Asset Benchmark	8.58%	4.30%	6.79%	13.15%	11.21%
<b>Private Real Estate</b>	<b>7.60%</b>	<b>6.55%</b>	<b>19.84%</b>	<b>22.84%</b>	<b>13.73%</b>
NFI-ODCE Equal Weight Net	7.68%	7.23%	11.24%	13.64%	11.37%
NCREIF Total Index	7.19%	6.97%	10.64%	12.98%	11.21%
UBS Trumbull Property Fund	7.70%	5.60%	10.71%	12.57%	10.39%
AEW Core Property Trust	8.16%	7.77%	11.61%	13.22%	11.85%
AEW Partners V Fund	163.23%	27.65%	35.97%	44.36%	27.76%
RREEF America REIT III	-	(15.40%)	(9.18%)	24.69%	27.46%
<b>Public Real Assets</b>	<b>6.80%</b>	<b>0.39%</b>	<b>1.14%</b>	<b>-</b>	<b>-</b>
Public Real Assets Benchmark	9.51%	1.01%	1.32%	-	-
BlackRock TIPS Index Fund	2.30%	(0.38%)	4.35%	-	-
Bloomberg US TIPS Index	2.11%	(0.63%)	4.35%	(1.73%)	4.44%
BlackRock REIT Index Fund	5.26%	(1.79%)	24.06%	-	-
DJ US Select REIT Index	4.23%	(2.43%)	22.85%	5.21%	13.27%
Invesco Commodity Fund	12.37%	(8.47%)	(12.99%)	-	-
Bloomberg Commodity Index	7.35%	(6.50%)	(13.32%)	(23.71%)	8.21%
KBI Global Resources Fund	7.54%	13.43%	(9.16%)	-	-
S&P Global Natural Resources Index	24.07%	14.70%	(9.47%)	(18.09%)	21.06%
<b>Private Equity****</b>	<b>20.80%</b>	<b>20.43%</b>	<b>9.29%</b>	<b>10.45%</b>	<b>25.66%</b>
<b>Total Fund</b>	<b>10.29%</b>	<b>12.88%</b>	<b>2.68%</b>	<b>5.52%</b>	<b>19.22%</b>
Total Fund - NOF	9.74%	12.34%	2.19%	5.02%	18.65%
Total Fund - IRR	10.18%	12.81%	2.56%	5.54%	19.19%
Total Fund Target	8.67%	12.20%	0.98%	2.91%	18.09%
Public Fund Sponsor Database	8.35%	12.41%	0.79%	3.28%	16.49%
6.75% Actuarial Assumption	6.75%	6.75%	6.75%	6.75%	6.75%

The Total Fund/Plan IRR Calculation is based upon best available data.

(1) MCERA changed mandates from the S&P 500 Index to Russell 1000 Index on 7/31/2021.

\*Blended Benchmark = S&P 500 Index through 7/31/21 and Russell 1000 Index thereafter.

\*\*Blended Benchmark = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit until 11/06/2022.

Currently the Bloomberg Aggregate.

\*\*\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	12/2022- 6/2023	2022	2021	2020	2019
<b>Domestic Equity</b>	<b>14.62%</b>	<b>(17.34%)</b>	<b>29.89%</b>	<b>17.98%</b>	<b>28.93%</b>
Equity Benchmark	16.17%	(19.21%)	25.66%	20.89%	31.02%
SSGA Russell 1000 Index (1)	16.63%	(19.04%)	27.19%	18.36%	31.46%
Blended Benchmark*	16.68%	(19.13%)	27.15%	18.40%	31.49%
DFA Small Cap Core	7.92%	(12.68%)	29.64%	12.12%	22.19%
Russell 2000 Index	8.09%	(20.44%)	14.82%	19.96%	25.52%
<b>International Equity</b>	<b>10.56%</b>	<b>(18.76%)</b>	<b>6.03%</b>	<b>11.57%</b>	<b>24.44%</b>
International Benchmark	9.10%	(16.58%)	8.53%	11.12%	21.63%
Morgan Stanley Value	14.79%	(13.12%)	5.28%	12.65%	21.63%
Artisan Partners Growth	9.90%	(18.42%)	9.46%	8.96%	30.65%
MSCI EAFE Index	11.67%	(14.45%)	11.26%	7.82%	22.01%
TimesSquare Intl Small Cap	7.98%	(26.19%)	3.05%	14.84%	-
MSCI EAFE Small Cap Index	5.53%	(21.39%)	10.10%	12.34%	24.96%
FIAM Select Emerging Equity	7.63%	(23.44%)	-	-	-
MSCI Emerging Markets Index	4.89%	(20.09%)	(2.54%)	18.31%	18.44%
Parametric Emerging	-	-	-	4.84%	13.48%
MSCI Emerging Markets Index	4.89%	(20.09%)	(2.54%)	18.31%	18.44%
<b>Fixed Income</b>	<b>2.56%</b>	<b>(15.39%)</b>	<b>(2.30%)</b>	<b>11.95%</b>	<b>8.87%</b>
Fixed Income Benchmark	2.09%	(13.56%)	(2.79%)	8.10%	8.21%
Wellington Core Plus	2.84%	(13.52%)	(0.53%)	10.14%	10.16%
Bloomberg Aggregate Index	2.09%	(13.01%)	(1.54%)	7.51%	8.72%
Western Asset Core Plus	3.24%	(11.50%)	(0.19%)	10.28%	10.11%
Blended Benchmark**	2.09%	(11.01%)	(1.03%)	7.08%	9.52%
Colchester Global	-	-	(7.62%)	11.58%	8.02%
FTSE World Govt Bond Index	1.66%	(18.26%)	(6.97%)	10.11%	5.90%
<b>Real Assets</b>	<b>(3.37%)</b>	<b>(0.91%)</b>	<b>20.34%</b>	<b>3.70%</b>	<b>7.26%</b>
Real Asset Benchmark	(3.90%)	2.81%	23.70%	1.67%	9.32%
<b>Private Real Estate</b>	<b>(8.19%)</b>	<b>6.93%</b>	<b>16.98%</b>	<b>(1.50%)</b>	<b>1.54%</b>
NFI-ODCE Equal Weight Net	(6.44%)	7.56%	21.88%	0.75%	5.18%
UBS Trumbull Property Fund	(10.17%)	5.86%	16.14%	(4.03%)	(1.91%)
AEW Core Property Trust	(6.92%)	8.90%	22.10%	1.68%	6.24%
<b>Public Real Assets</b>	<b>2.27%</b>	<b>(9.04%)</b>	<b>24.48%</b>	<b>11.56%</b>	<b>15.95%</b>
Public Real Assets Benchmark	(0.95%)	(3.52%)	25.60%	0.57%	14.08%
BlackRock TIPS Index Fund	2.10%	(11.93%)	5.95%	11.20%	8.53%
Bloomberg US TIPS Index	1.87%	(11.85%)	5.96%	10.99%	8.43%
BlackRock REIT Index Fund	5.83%	(26.03%)	45.89%	(11.16%)	23.15%
DJ US Select REIT Index	5.77%	(25.96%)	45.91%	(11.20%)	23.10%
Invesco Commodity Fund	(4.38%)	9.71%	20.51%	8.33%	6.23%
Bloomberg Commodity Index	(7.79%)	16.09%	27.11%	(3.12%)	7.69%
KBI Global Resources Fund	5.67%	(7.06%)	25.13%	30.27%	25.87%
S&P Global Natural Resources Index	(3.49%)	9.59%	24.40%	(0.05%)	16.41%
<b>Opportunistic****</b>	<b>7.08%</b>	<b>(0.04%)</b>	<b>14.20%</b>	<b>-</b>	<b>-</b>
S&P/LSTA Leveraged Loans Index + 250	7.65%	1.91%	7.70%	5.79%	11.14%
<b>Private Equity****</b>	<b>1.82%</b>	<b>(12.00%)</b>	<b>46.43%</b>	<b>38.01%</b>	<b>18.53%</b>
<b>Total Fund</b>	<b>6.60%</b>	<b>(13.75%)</b>	<b>17.47%</b>	<b>15.66%</b>	<b>18.73%</b>
Total Fund - NOF	6.42%	(14.09%)	17.01%	15.16%	18.19%
Total Fund - IRR	6.87%	(13.79%)	17.28%	14.94%	18.66%
Total Fund Target	7.53%	(13.84%)	14.12%	13.68%	19.97%
Public Fund Sponsor Database	7.92%	(12.68%)	13.92%	12.13%	18.27%

The Total Fund/Plan IRR Calculation is based upon best available data.

(1) MCERA changed mandates from the S&P 500 Index to Russell 1000 Index on 7/31/2021.

\*Blended Benchmark = S&P 500 Index through 7/31/21 and Russell 1000 Index thereafter.

\*\*Blended Benchmark = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit until 11/06/2022.

Currently the Bloomberg Aggregate.

\*\*\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	2018	2017	2016	2015	2014
<b>Domestic Equity</b>	<b>(5.14%)</b>	<b>20.85%</b>	<b>13.35%</b>	<b>(0.72%)</b>	<b>11.02%</b>
Equity Benchmark	(5.24%)	21.13%	12.74%	0.48%	12.56%
SSGA Russell 1000 Index (1)	(4.36%)	21.86%	12.03%	1.44%	13.69%
Blended Benchmark*	(4.38%)	21.83%	11.96%	1.38%	13.69%
Russell 2000 Index	(11.01%)	14.65%	21.31%	(4.41%)	4.89%
Columbus Circle Growth	-	29.80%	3.13%	(6.66%)	4.51%
Russell 2000 Growth Index	(9.31%)	22.17%	11.32%	(1.38%)	5.60%
DFA Value	-	7.68%	29.11%	(6.06%)	5.04%
Russell 2000 Value Index	(12.86%)	7.84%	31.74%	(7.47%)	4.22%
<b>International Equity</b>	<b>(12.81%)</b>	<b>29.99%</b>	<b>0.23%</b>	<b>(0.66%)</b>	<b>(3.27%)</b>
International Benchmark	(14.76%)	27.81%	4.41%	(4.60%)	(3.89%)
Morgan Stanley Value	(12.86%)	26.28%	(0.82%)	1.17%	(5.10%)
Artisan Partners Growth	(9.79%)	32.52%	(8.53%)	(2.61%)	0.24%
MSCI EAFE Index	(13.79%)	25.03%	1.00%	(0.81%)	(4.90%)
MSCI EAFE Small Cap	(17.89%)	33.01%	2.18%	9.59%	(4.95%)
Parametric Emerging	(12.89%)	28.61%	13.85%	(15.12%)	(3.00%)
MSCI Emerging Markets Index	(14.57%)	37.28%	11.19%	(14.92%)	(2.19%)
FIAM International Small Cap	(17.56%)	32.96%	1.13%	12.54%	(5.75%)
S&P EPAC Sm Cp (Nt)	(18.58%)	33.47%	1.34%	8.58%	(3.43%)
<b>Fixed Income</b>	<b>(0.09%)</b>	<b>5.43%</b>	<b>4.55%</b>	<b>(0.61%)</b>	<b>4.46%</b>
Fixed Income Benchmark	(0.17%)	4.55%	2.70%	(0.39%)	3.74%
Wellington Core Plus	(0.17%)	5.11%	4.93%	0.30%	6.40%
Bloomberg Aggregate Index	0.01%	3.54%	2.65%	0.55%	5.97%
Western Asset Core Plus	(0.07%)	4.43%	5.21%	1.25%	4.56%
Blended Benchmark**	0.01%	3.67%	3.68%	0.90%	4.45%
Colchester Global	(0.47%)	8.68%	4.33%	(5.52%)	-
FTSE World Govt Bond Index	(0.84%)	7.49%	1.60%	(3.57%)	(0.48%)
<b>Real Assets</b>	<b>1.01%</b>	<b>7.91%</b>	<b>9.37%</b>	<b>18.37%</b>	<b>15.55%</b>
Real Asset Benchmark	0.40%	7.42%	11.18%	5.44%	11.82%
<b>Private Real Estate</b>	<b>7.30%</b>	<b>6.57%</b>	<b>8.11%</b>	<b>29.00%</b>	<b>15.55%</b>
NFI-ODCE Equal Weight Net	7.30%	6.92%	8.36%	14.18%	11.42%
NCREIF Total Index	6.72%	6.96%	7.97%	13.33%	11.82%
UBS Trumbull Property Fund	6.97%	6.29%	7.21%	12.93%	11.56%
AEW Core Property Trust	7.73%	7.96%	8.49%	13.76%	11.31%
AEW Partners V Fund	9.77%	165.19%	31.70%	45.46%	46.59%
RREEF America REIT III	-	(5.95%)	(15.70%)	8.52%	27.93%
<b>Public Real Assets</b>	<b>(7.59%)</b>	<b>10.03%</b>	<b>11.14%</b>	<b>-</b>	<b>-</b>
Public Real Assets Benchmark	(7.27%)	7.95%	14.37%	-	-
BlackRock TIPS Index Fund	(1.12%)	3.24%	4.84%	-	-
Bloomberg US TIPS Index	(1.26%)	3.01%	4.68%	(1.44%)	3.64%
BlackRock REIT Index Fund	(4.16%)	6.10%	8.62%	-	-
DJ US Select REIT Index	(4.22%)	3.76%	6.68%	4.48%	32.00%
MSCI REIT Index	(4.57%)	5.07%	8.60%	2.52%	30.38%
Invesco Commodity Fund	(10.99%)	5.91%	11.05%	-	-
Bloomberg Commodity Index	(11.25%)	1.70%	11.77%	(24.66%)	(17.01%)
KBI Global Resources Fund	(13.86%)	25.66%	21.17%	-	-
S&P Global Natural Resources Index	(13.08%)	21.98%	31.45%	(24.50%)	(10.18%)
<b>Private Equity****</b>	<b>16.44%</b>	<b>22.16%</b>	<b>13.53%</b>	<b>11.24%</b>	<b>14.19%</b>
<b>Total Fund</b>	<b>(2.68%)</b>	<b>17.41%</b>	<b>8.10%</b>	<b>2.73%</b>	<b>7.10%</b>
Total Fund - NOF	(3.16%)	16.81%	7.61%	2.24%	6.59%
Total Fund -IRR	(2.90%)	17.29%	8.11%	2.70%	7.02%
Total Fund Target	(5.49%)	16.68%	8.13%	(0.34%)	6.28%
Public Fund Sponsor Database	(3.99%)	15.66%	7.64%	0.02%	6.19%

The Total Fund/Plan IRR Calculation is based upon best available data.

(1) MCERA changed mandates from the S&P 500 Index to Russell 1000 Index on 7/31/2021.

\*Blended Benchmark = S&P 500 Index through 7/31/21 and Russell 1000 Index thereafter.

\*\*Blended Benchmark = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit until 11/06/2022.

Currently the Bloomberg Aggregate.

\*\*\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.

## Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
<b>Net-of-Fees</b>					
<b>Domestic Equity</b>	<b>7.56%</b>	<b>18.87%</b>	<b>15.75%</b>	<b>11.00%</b>	<b>11.97%</b>
Equity Benchmark	8.39%	18.95%	13.89%	11.39%	12.34%
SSGA Russell 1000 Index (1)	8.56%	19.34%	13.61%	11.70%	12.56%
Blended Benchmark*	8.58%	19.36%	13.59%	11.71%	12.56%
DFA Small Cap Core	4.31%	14.84%	17.72%	-	-
Russell 2000 Index	5.21%	12.31%	10.82%	4.21%	8.26%
<b>International Equity</b>	<b>1.37%</b>	<b>13.78%</b>	<b>4.43%</b>	<b>2.59%</b>	<b>4.55%</b>
International Benchmark	2.38%	12.47%	7.33%	3.38%	4.88%
Morgan Stanley Value	3.14%	19.29%	7.05%	4.24%	5.02%
Artisan Partners Growth	0.84%	17.13%	4.06%	4.20%	4.95%
MSCI EAFE Index	2.95%	18.77%	8.93%	4.39%	5.41%
TimesSquare Intl Small Cap	(1.51%)	11.82%	1.44%	-	-
MSCI EAFE Small Cap Index	0.58%	10.18%	5.70%	1.31%	6.19%
FIAM Select Emerging Equity	1.98%	3.74%	-	-	-
MSCI Emerging Markets Index	0.90%	1.75%	2.32%	0.93%	2.95%
<b>Fixed Income</b>	<b>(0.81%)</b>	<b>(2.40%)</b>	<b>(4.06%)</b>	<b>0.65%</b>	<b>1.53%</b>
Fixed Income Benchmark	(0.84%)	(0.83%)	(4.11%)	0.31%	1.11%
Wellington Core Plus	(0.63%)	0.74%	(3.25%)	1.48%	2.30%
Bloomberg Aggregate Index	(0.84%)	(0.94%)	(3.96%)	0.77%	1.52%
Western Asset Core Plus	(0.40%)	0.55%	(1.81%)	2.11%	2.38%
Blended Benchmark**	(0.84%)	(0.68%)	(2.58%)	1.37%	1.84%
<b>Real Assets</b>	<b>(2.06%)</b>	<b>(6.36%)</b>	<b>7.15%</b>	<b>4.25%</b>	<b>7.79%</b>
Real Assets Benchmark	(2.20%)	(5.92%)	9.73%	5.83%	7.28%
<b>Private Real Estate</b>	<b>(3.35%)</b>	<b>(12.20%)</b>	<b>3.75%</b>	<b>2.70%</b>	<b>7.78%</b>
NFI-ODCE Equal Weight Net	(3.05%)	(10.51%)	7.59%	6.07%	8.12%
UBS Trumbull Property Fund	(3.52%)	(15.38%)	2.00%	0.68%	4.43%
AEW Core Property Trust	(3.67%)	(10.35%)	7.21%	5.74%	7.60%
<b>Public Real Assets</b>	<b>(0.68%)</b>	<b>0.65%</b>	<b>11.99%</b>	<b>6.45%</b>	<b>-</b>
Public Real Assets Benchmark	(1.24%)	(0.92%)	11.59%	4.72%	-
BlackRock TIPS Index Fund	(1.40%)	(1.36%)	(0.09%)	2.55%	-
Bloomberg US TIPS Index	(1.42%)	(1.40%)	(0.12%)	2.49%	2.08%
BlackRock REIT Index Fund	2.96%	(0.79%)	9.08%	3.23%	-
DJ US Select REIT Index	2.92%	(0.69%)	9.17%	3.28%	5.75%
Invesco Commodity Fund	(3.09%)	(7.11%)	16.78%	4.70%	-
Bloomberg Commodity Index	(2.56%)	(9.61%)	17.82%	4.73%	(0.99%)
KBI Global Resources Fund	(1.00%)	12.68%	19.36%	11.66%	-
S&P Global Natural Resources Index	(3.88%)	7.64%	17.76%	5.18%	5.10%
<b>Private Equity****</b>	<b>0.00%</b>	<b>(1.75%)</b>	<b>19.60%</b>	<b>16.90%</b>	<b>16.21%</b>
<b>Opportunistic****</b>	<b>2.85%</b>	<b>11.17%</b>	<b>-</b>	<b>-</b>	<b>-</b>
S&P/LSTA Leveraged Loans Index + 250	3.71%	13.39%	8.88%	6.71%	6.61%
<b>Total Fund</b>	<b>2.02%</b>	<b>6.35%</b>	<b>8.16%</b>	<b>6.71%</b>	<b>8.07%</b>
Total Fund Target	2.68%	8.38%	7.44%	6.31%	7.35%
Public Fund Sponsor Database	3.46%	9.27%	7.96%	6.71%	7.54%

\* Current Quarter Target = 32.0% Russell 3000 Index, 23.0% Blmbg:Aggregate, 22.0% MSCI ACWI xUS IMI, 8.0% NCREIF NFI-ODCE Eq Wt Net, 4.8% Russell 3000 Index (Lagged), 3.2% MSCI ACWI ex US IMI (Lagged), 1.8% Blmbg Commodity TR Idx, 1.8% S&P DJ US Select REIT, 1.8% Blmbg TIPS, 1.8% S&P Global Nat Res and 0.0%.

(1) MCERA changed mandates from the S&P 500 Index to Russell 1000 Index on 7/31/2021.

\*Blended Benchmark = S&P 500 Index through 7/31/21 and Russell 1000 Index thereafter.

\*\*Blended Benchmark = Bloomberg Aggregate through 2/10/14 and Bloomberg U.S. Intermediate Credit until 11/06/2022.

Currently the Bloomberg Aggregate.

\*\*\*\*Current market values are those of the prior quarter, adjusted for capital calls and distributions of current quarter.



## Total Private Equity Period Ended March 31, 2023

### Private Equity Allocation Overview

The MCERA private equity portfolio was initiated in 2008 and currently utilizes two gatekeepers, Abbott Capital ("Abbott") and Pathway Capital Management ("Pathway"), to help the plan reach its desired private equity allocation of 8%. MCERA is invested in fund-of-funds vehicles.

	March 31, 2023	Quarter Change	December 31, 2022
<b>Summary</b>			
Vintage Years	16 in 2008-2023		16 in 2008-2023
# Total Partnerships	539	6	533
# Active Partnerships	516	6	510
# Liquidated Partnerships	23	-	23
<b>Changes in Value</b>			
Capital Commitments	\$500,000,000	\$50,000,000	\$450,000,000
Paid-In Capital	\$411,037,346	\$1,371,815	\$409,665,531
Uncalled Capital	\$104,542,581	\$48,895,654	\$55,646,927
% Paid-In	82.21%	(8.83%)	91.04%
Distributed Capital	\$465,377,568	\$5,167,691	\$460,209,877
Net Asset Value	\$355,724,948	\$2,050,218	\$353,674,730
<b>Total Realized and Unrealized Value</b>	<b>\$821,102,516</b>	<b>\$7,217,909</b>	<b>\$813,884,607</b>
<b>Ratios and Performance</b>			
Distributions to Paid-In Capital (DPI)	1.13x	0.01x	1.12x
Residual Value to Paid-In Capital (RVPI)	0.87x	0.00x	0.86x
Total Value to Paid-In Capital (TVPI)	2.00x	0.01x	1.99x
Quartile Ranking	2 <sup>nd</sup>		2 <sup>nd</sup>
Net IRR	15.34%	(0.13%)	15.47%
<b>Additional Performance Metrics</b>			
Distribution Rate, as % of Beginning NAV		1.46%	
Unrealized Gain/(Loss), Dollars		\$5,846,094	
Unrealized Gain/(Loss), %		1.65%	

Quartile rankings against the All Private Equity, All Regions Refinitiv/Cambridge Database.

Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.

**Total Private Equity  
Private Equity Investment Portfolio  
Quarterly Changes in Market Value**

	<b>Beg. of Period Market</b>	<b>+ Capital Contri- butions</b>	<b>+ Accounting Income</b>	<b>- Mgmt. Fees</b>	<b>+ Appre- ciation</b>	<b>- Dist. of Income &amp; Real. Gains</b>	<b>- Return of Capital</b>	<b>- Dist. of Recallable Capital</b>	<b>= End of Period Market</b>
03/2009	0	5,576,029	(301,039)	558,424	(601,309)	0	0	0	4,115,257
06/2009	4,115,257	225,000	10,022	331,250	(68,925)	0	0	0	3,950,104
09/2009	3,950,104	1,378,170	(15,473)	384,375	(17,463)	0	0	0	4,910,963
12/2009	4,910,963	2,035,317	(45,633)	384,375	310,671	0	0	0	6,826,943
03/2010	6,826,943	1,405,159	(55,406)	384,375	(106,094)	0	0	0	7,686,227
06/2010	7,686,227	1,225,000	(19,095)	384,375	(194,748)	0	0	0	8,313,009
09/2010	8,313,009	2,838,797	(50,285)	437,500	411,669	0	0	0	11,075,690
12/2010	11,075,690	3,963,461	(110,914)	437,500	702,011	0	0	0	15,192,748
03/2011	15,192,748	2,841,483	(127,842)	437,500	678,042	0	0	0	18,146,931
06/2011	18,146,931	3,960,774	(184,803)	437,500	996,942	133,755	69,654	0	22,278,935
09/2011	22,278,935	8,609,888	(265,645)	437,500	(195,435)	0	0	0	29,990,243
12/2011	29,990,243	5,617,948	(175,287)	437,500	529,487	0	0	0	35,524,891
03/2012	35,524,891	6,281,785	(173,125)	437,500	2,079,434	0	0	0	43,275,485
06/2012	43,275,485	7,874,800	(113,404)	437,500	692,927	331,545	120,080	0	50,840,683
09/2012	50,840,683	4,558,302	(303,027)	437,500	1,105,721	260,954	215,388	0	55,287,837
12/2012	55,287,837	11,334,284	(41,281)	437,500	2,708,758	288,586	275,607	0	68,287,905
03/2013	68,287,905	5,239,926	(120,123)	437,500	1,886,426	78,940	352,195	0	74,425,498
06/2013	74,425,498	5,359,974	(147,222)	562,625	2,651,531	514,376	515,820	0	80,696,960
09/2013	80,696,960	7,768,201	(226,298)	516,250	5,890,689	1,165,176	355,990	0	92,092,136
12/2013	92,092,136	12,666,640	(54,150)	516,250	6,253,270	2,563,309	3,688,605	0	104,189,733
03/2014	104,189,733	10,332,824	(204,331)	516,250	4,125,365	6,302,488	654,422	0	110,970,431
06/2014	110,970,431	10,513,534	75,076	516,250	7,884,217	746,471	2,533,431	0	125,647,106
09/2014	125,647,106	17,570,746	10,500	516,250	1,245,992	1,615,602	2,925,053	0	139,417,439
12/2014	139,417,439	10,833,803	(61,667)	558,750	3,052,494	1,112,031	4,049,723	0	147,521,565
03/2015	147,521,565	8,258,958	22,076	558,750	3,915,369	1,080,998	4,004,433	0	154,073,787
06/2015	154,073,787	12,520,450	(252,087)	558,750	7,392,432	2,171,067	5,209,351	0	165,795,414
09/2015	165,795,414	12,661,165	8,918	537,500	2,632,199	1,814,825	5,406,163	0	173,339,208
12/2015	173,339,208	10,950,390	(73,852)	636,937	3,903,312	5,200,032	3,213,356	0	179,068,733
03/2016	179,068,733	4,401,061	(299,677)	558,750	2,098,534	2,134,279	907,141	0	181,668,481
06/2016	181,668,481	10,147,317	56,802	609,194	7,769,013	384,668	1,481,019	0	197,166,732
09/2016	197,166,732	5,546,669	152,647	590,069	8,407,843	2,838,197	1,439,821	0	206,405,805
12/2016	206,405,805	9,423,568	(337,203)	609,852	7,772,643	2,210,046	6,703,806	0	213,741,108
03/2017	213,741,108	6,022,843	(48,597)	624,466	11,538,200	2,611,810	5,480,599	0	222,536,678
06/2017	222,536,678	5,942,110	39,415	654,116	13,245,307	4,835,151	9,091,365	59,349	227,123,528
09/2017	227,123,528	16,537,410	(30,778)	637,141	9,591,347	5,248,683	7,736,243	0	239,599,440
12/2017	239,599,440	13,884,994	21,740	635,673	11,666,611	4,382,265	16,309,746	0	243,845,101
03/2018	243,845,101	7,150,727	(163,332)	643,100	10,972,723	7,403,967	3,491,705	0	250,266,447
06/2018	250,266,447	11,444,547	(144,165)	672,751	14,602,061	4,351,051	7,785,725	0	263,359,363
09/2018	263,359,363	7,431,280	(238,296)	657,497	12,294,502	4,011,337	8,778,135	0	269,399,880
12/2018	269,399,880	14,191,664	3,385,950	656,029	(1,352,804)	9,915,706	9,598,228	0	265,454,727
03/2019	265,454,727	5,829,912	(283,332)	656,246	12,966,290	5,633,889	3,667,549	0	274,009,912
06/2019	274,009,912	7,676,263	82,950	663,197	15,115,571	5,061,949	6,031,822	0	285,127,728
09/2019	285,127,728	5,716,776	(98,346)	649,492	4,630,383	3,987,114	9,749,615	0	280,990,321
12/2019	280,990,321	9,453,814	(64,183)	648,025	15,541,711	4,095,571	8,559,460	0	292,618,608
03/2020	292,618,608	5,768,820	(253,673)	631,679	(25,000,599)	1,860,850	4,697,321	0	265,943,305
06/2020	265,943,305	6,096,856	(398,568)	638,630	37,419,176	4,788,106	2,210,521	0	301,423,511
09/2020	301,423,511	8,476,454	(283,955)	626,319	36,764,232	9,123,639	3,268,060	0	333,362,224

**Total Private Equity  
Private Equity Investment Portfolio  
Quarterly Changes in Market Value**

	<b>Beg. of Period Market</b>	<b>+ Capital Contri- butions</b>	<b>+ Accounting Income</b>	<b>- Mgmt. Fees</b>	<b>+ Appre- ciation</b>	<b>- Dist. of Income &amp; Real. Gains</b>	<b>- Return of Capital</b>	<b>- Dist. of Recallable Capital</b>	<b>= End of Period Market</b>
12/2020	333,362,224	6,410,411	440,671	624,852	59,923,839	22,255,279	1,735,582	0	375,521,433
03/2021	375,888,469	6,293,006	(8,377)	618,149	62,111,231	15,524,819	5,639,753	0	422,501,608
06/2021	422,501,608	12,581,962	302,035	618,705	53,954,874	37,342,702	7,370,019	0	444,009,053
09/2021	444,009,053	5,860,537	527,097	678,287	32,248,941	23,721,423	5,612,936	0	452,632,983
12/2021	452,632,983	8,450,393	778,528	597,445	13,192,956	25,592,278	6,012,866	0	442,852,270
03/2022	442,852,270	3,859,756	253,740	598,111	(10,474,273)	17,366,511	3,033,784	0	415,493,087
06/2022	415,493,087	3,185,692	223,305	598,667	(30,261,655)	4,544,512	2,307,378	0	381,189,872
09/2022	381,189,872	3,895,196	262,663	588,503	(9,306,076)	8,185,975	2,406,569	0	364,860,608
12/2022	364,860,608	3,582,686	370,969	579,388	(3,897,589)	3,402,515	7,260,041	0	353,674,730
03/2023	353,674,730	1,371,815	208,353	569,669	6,207,410	4,341,554	826,137	0	355,724,948
	0	411,037,346	1,458,987	31,368,237	439,974,420	272,536,002	192,782,217	59,349	355,724,948

Returns

Net Since Inception IRR = 15.34%

Ratios

Capital Account = \$355,724,948

Total Value = \$821,102,516

Committed Capital = \$500,000,000

Paid In Capital = \$411,037,346

Remaining Commitment = \$104,542,581

PIC Multiple (Paid In Capital/Committed Capital) = 82.21%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$460,267,529

TVPI Investment Multiple (Total Value/Paid In Capital) = 2.00x

DPI Realization Multiple (Distributions/Paid In Capital) = 1.13x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.87x

Uncalled capital above does not reflect currency fluctuations for Pathway's investments in foreign partnerships.

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## Investment Manager Returns

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The table below details the rates of return for the Fund's investment managers over various time periods ended June 30, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

### Returns for Periods Ended June 30, 2023

	Last Quarter	Last Year	Last 2-1/2 Years
<b>Opportunistic**</b>	<b>2.85%</b>	<b>11.17%</b>	<b>6.75%</b>
S&P/LSTA Leveraged Loans Index + 250	3.71%	13.39%	6.90%
CarVal Credit Value V	2.14%	7.79%	6.46%
Fortress Credit Opps Fund V	1.60%	2.89%	14.20%
Varde Dislocation Fund	4.28%	17.82%	5.46%

\*\* Estimate

Performance shown is Net-of-Fee

## Opportunistic Period Ended June 30, 2023

### Private Equity Allocation Overview

Marin County's Private Credit portfolio started in 4Q20.

	June 30, 2023	Quarter Change	March 31, 2023
<b>Summary</b>			
Vintage Year	2020		2020
# Total Partnerships	193	-	193
# Active Partnerships	193	-	193
# Liquidated Partnerships	0	-	0
<b>Changes in Value</b>			
Capital Commitments	\$100,000,000	-	\$100,000,000
Paid-In Capital	\$63,127,360	\$1,056,215	\$62,071,145
Uncalled Capital	\$38,701,549	\$(1,056,215)	\$39,757,764
% Paid-In	63.13%	1.06%	62.07%
Distributed Capital	\$11,804,356	\$2,016,100	\$9,788,256
Net Asset Value	\$58,855,733	\$697,604	\$58,158,129
<b>Total Realized and Unrealized Value</b>	<b>\$70,660,089</b>	<b>\$2,713,704</b>	<b>\$67,946,385</b>
<b>Ratios and Performance</b>			
Distributions to Paid-In Capital (DPI)	0.19x	0.03x	0.16x
Residual Value to Paid-In Capital (RVPI)	0.93x	(0.00)x	0.94x
Total Value to Paid-In Capital (TVPI)	1.12x	0.02x	1.09x
Quartile Ranking	3 <sup>rd</sup>		3 <sup>rd</sup>
Net IRR	7.20%	0.68%	6.52%
<b>Additional Performance Metrics</b>			
Distribution Rate, as % of Beginning NAV		3.47%	
Unrealized Gain/(Loss), Dollars		\$1,657,489	
Unrealized Gain/(Loss), %		2.85%	

Quartile rankings against the 2020 vintage Control Oriented Distressed and Credit Opportunities Refinitiv/Cambridge Database.

## Opportunistic Private Equity Investment Portfolio Quarterly Changes in Market Value

	Beg. of Period Market	+ Capital Contri- butions	+ Accounting Income	- Mgmt. Fees	+ Appre- ciation	- Income & Real. Gains	Dist. of Return of Capital	- Dist. of Recallable Capital	= End of Period Market
12/2020	0	10,097,955	1,856,820	53,206	(432,759)	0	0	0	11,468,811
03/2021	11,468,811	10,050,000	646,023	63,920	(25,696)	0	0	0	22,075,219
06/2021	22,075,219	6,650,000	1,596,358	169,489	96,848	0	0	0	30,248,936
09/2021	30,248,936	1,675,000	158,997	123,700	301,176	0	0	0	32,260,409
12/2021	32,260,409	6,520,495	127,546	125,634	564,673	0	386,587	0	38,960,902
03/2022	38,960,902	8,375,000	(511,420)	96,137	453,329	0	0	0	47,181,674
06/2022	47,181,674	9,790,677	(3,302,882)	186,982	696,775	0	0	1,755,954	52,423,308
09/2022	52,423,308	0	1,453,517	186,965	32,377	0	0	0	53,722,238
12/2022	53,722,238	8,912,018	1,390,869	212,303	(19,091)	0	1,341,769	0	62,451,963
03/2023	62,451,963	0	1,940,359	217,329	287,082	0	6,303,946	0	58,158,129
06/2023	58,158,129	1,056,215	1,609,749	195,256	242,996	0	2,016,100	0	58,855,733
	0	63,127,360	6,965,938	1,630,919	2,197,710	0	10,048,402	1,755,954	58,855,733

### Returns

Net Since Inception IRR = 7.20%

### Ratios

Capital Account = \$58,855,733

Total Value = \$70,660,089

Committed Capital = \$100,000,000

Paid In Capital = \$63,127,360

Remaining Commitment = \$38,701,549

PIC Multiple (Paid In Capital/Committed Capital) = 63.13%

Total Economic Exposure (Capital Account + Remaining Commitment) = \$97,557,282

TVPI Investment Multiple (Total Value/Paid In Capital) = 1.12x

DPI Realization Multiple (Distributions/Paid In Capital) = 0.19x

RVPI Residual Multiple (Capital Account/Paid In Capital) = 0.93x

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