

August 9, 2024



**Pennsylvania State Employees'  
Retirement System – 457(b) Plan**

Second Quarter 2024

Executive Summary

---

**Thomas H. Shingler**  
Senior Vice President

**Britton M. Murdoch**  
Senior Vice President

Important Disclosures regarding the use of this document are included at the end of this document. These disclosures are an integral part of this document and should be considered by the user.

Callan

---

**Market Environment**

## Equity and Bond Markets Mixed in 2Q

Many sectors still have ground to make up to recover losses of 2022

### S&P 500 climbed 4.3% in 2Q24

- Emerging markets and non-U.S. small cap equities also posted gains
- U.S. small cap and developed non-U.S. stocks fell.

### Core fixed income eked out a gain

- The Bloomberg Aggregate rose 0.1% despite rates rising over the quarter due to coupon income offsetting price losses.
- Long duration fixed income and non-U.S. bonds fell.
- Interest rates have been volatile as the markets assess when and how swiftly the Fed will begin easing.
- CPI-U came in at 3.0% (year-over-year) in 2Q, falling sharply from last quarter's 3.5%, and improving the prospects for a rate cut later this year.

### Economy reignites in second quarter

- After a weak 1.4% rise in 1Q24, the initial estimate for 2Q24 GDP came in at a brisk 2.8%, with consumer spending and business investment fueling the climb.

Returns for Periods ended 6/30/24

	Quarter	1 Year	1/1/22 - Current	5 Years	10 Years	25 Years
<b>U.S. Equity</b>						
Russell 3000	3.22	23.13	5.96	14.14	12.15	7.82
S&P 500	4.28	24.56	7.29	15.05	12.86	7.67
Russell 2000	-3.28	10.06	-2.18	6.94	7.00	7.60
<b>Global ex-U.S. Equity</b>						
MSCI World ex USA	-0.60	11.22	2.39	6.55	4.27	4.63
MSCI Emerging Markets	5.00	12.55	-2.31	3.10	2.79	--
MSCI ACWI ex USA Small Cap	0.66	11.26	-1.98	6.13	4.44	6.74
<b>Fixed Income</b>						
Bloomberg Aggregate	0.07	2.63	-3.64	-0.23	1.35	3.88
90-day T-Bill	1.32	5.40	3.64	2.16	1.51	1.91
Bloomberg Long Gov/Credit	-1.73	-1.58	-10.91	-2.22	1.65	5.29
Bloomberg Global Agg ex-US	-2.11	-0.66	-7.88	-3.56	-1.86	2.46
<b>Real Estate</b>						
NCREIF Property	-0.26	-5.53	-1.64	3.39	6.07	7.75
FTSE Nareit Equity	0.06	7.79	-5.90	3.90	5.90	9.06
<b>Alternatives</b>						
Cambridge Private Equity*	1.17	5.16	1.70	14.58	13.47	13.37
Cambridge Senior Debt*	0.73	7.73	5.58	6.87	6.73	4.25
HFRI Fund Weighted	0.54	9.80	3.44	6.67	4.77	6.00
Bloomberg Commodity	2.89	5.00	4.79	7.25	-1.29	2.69
<b>CPI-U</b>	0.59	2.97	4.89	4.17	2.80	2.58

\*Cambridge Private Equity and Cambridge Senior Debt data as of 3/31/24.

Returns greater than one year are annualized. Sources: Bloomberg, Callan, Cambridge, FTSE Russell, HFRI, MSCI, NCREIF, S&P Dow Jones Indices

# Diversification Remains Key Risk Control

## Periodic Table of Investment Returns

2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2 Qtrs. 2024
Emerging Markets	Emerging Markets	Emerging Markets	U.S. Fixed	Emerging Markets	Small Cap	Real Estate Funds	Emerging Markets	Small Cap	Large Cap	Real Estate Funds	Small Cap	Emerging Markets	Real Estate Funds	Large Cap	Small Cap	Large Cap	Real Estate Funds	Large Cap	Large Cap
34.00%	32.17%	39.38%	5.24%	78.51%	26.85%	14.96%	18.23%	38.82%	13.69%	13.95%	21.31%	37.28%	7.36%	31.49%	19.96%	28.71%	6.55%	26.29%	15.29%
Real Estate Funds	Non-U.S. Equity	Real Estate Funds	Non-U.S. Fixed	High Yield	Emerging Markets	U.S. Fixed	Non-U.S. Equity	Large Cap	Real Estate Funds	Large Cap	High Yield	Non-U.S. Equity	Cash Equivalent	Small Cap	Large Cap	Real Estate Funds	Cash Equivalent	Non-U.S. Equity	Emerging Markets
20.15%	25.71%	14.84%	4.39%	58.21%	18.88%	7.84%	16.41%	32.39%	11.46%	1.38%	17.13%	24.21%	1.87%	25.52%	18.40%	21.02%	1.46%	17.94%	7.49%
Non-U.S. Equity	Small Cap	Hedge Funds	Cash Equivalent	Non-U.S. Equity	Real Estate Funds	High Yield	Small Cap	Non-U.S. Equity	U.S. Fixed	U.S. Fixed	Large Cap	Large Cap	U.S. Fixed	Non-U.S. Equity	Emerging Markets	Small Cap	Hedge Funds	Small Cap	Hedge Funds
14.47%	18.37%	12.56%	2.06%	33.67%	15.26%	4.98%	16.35%	21.02%	5.97%	0.55%	11.96%	21.83%	0.01%	22.49%	18.31%	14.82%	1.06%	16.93%	6.86%
Hedge Funds	Large Cap	Non-U.S. Equity	Real Estate Funds	Small Cap	High Yield	Non-U.S. Fixed	Large Cap	Real Estate Funds	Small Cap	Cash Equivalent	Emerging Markets	Small Cap	High Yield	Emerging Markets	Non-U.S. Fixed	Non-U.S. Equity	High Yield	High Yield	Non-U.S. Equity
7.61%	15.79%	12.44%	-10.70%	27.17%	15.12%	4.36%	16.00%	12.90%	4.89%	0.05%	11.19%	14.65%	-2.08%	18.44%	10.11%	12.62%	-11.19%	13.44%	4.96%
Large Cap	Real Estate Funds	Non-U.S. Fixed	Hedge Funds	Large Cap	Large Cap	Large Cap	High Yield	Hedge Funds	Hedge Funds	Hedge Funds	Real Estate Funds	Non-U.S. Fixed	Non-U.S. Fixed	High Yield	Non-U.S. Equity	Hedge Funds	U.S. Fixed	Emerging Markets	Cash Equivalent
4.91%	15.27%	11.03%	-19.07%	26.47%	15.06%	2.11%	15.81%	9.73%	4.13%	-0.71%	7.79%	10.51%	-2.15%	14.32%	7.59%	8.23%	-13.01%	9.83%	2.63%
Small Cap	Hedge Funds	U.S. Fixed	High Yield	Hedge Funds	Hedge Funds	Cash Equivalent	Real Estate Funds	High Yield	High Yield	Non-U.S. Equity	Non-U.S. Equity	High Yield	Hedge Funds	Hedge Funds	U.S. Fixed	High Yield	Non-U.S. Equity	Hedge Funds	High Yield
4.55%	13.86%	6.97%	-26.16%	18.57%	10.95%	0.10%	9.79%	7.44%	2.45%	-3.04%	2.75%	7.50%	-3.19%	9.31%	7.51%	5.28%	-14.29%	5.83%	2.58%
Cash Equivalent	High Yield	Large Cap	Small Cap	Non-U.S. Fixed	Non-U.S. Equity	Hedge Funds	Hedge Funds	Cash Equivalent	Cash Equivalent	Small Cap	U.S. Fixed	Hedge Funds	Large Cap	U.S. Fixed	High Yield	Cash Equivalent	Large Cap	Non-U.S. Fixed	Small Cap
3.06%	11.85%	5.49%	-33.79%	7.53%	8.95%	-2.52%	7.67%	0.07%	0.04%	-4.41%	2.65%	7.12%	-4.38%	8.72%	7.11%	0.05%	-18.11%	5.72%	1.73%
High Yield	Non-U.S. Fixed	Cash Equivalent	Large Cap	U.S. Fixed	U.S. Fixed	Small Cap	U.S. Fixed	U.S. Fixed	Emerging Markets	High Yield	Non-U.S. Fixed	Real Estate Funds	Small Cap	Non-U.S. Fixed	Hedge Funds	U.S. Fixed	Non-U.S. Fixed	U.S. Fixed	U.S. Fixed
2.74%	8.16%	5.00%	-37.00%	5.93%	6.54%	-4.18%	4.21%	-2.02%	-2.19%	-4.47%	1.49%	6.66%	-11.01%	5.09%	6.36%	-1.54%	-18.70%	5.53%	-0.71%
U.S. Fixed	Cash Equivalent	High Yield	Non-U.S. Equity	Cash Equivalent	Non-U.S. Fixed	Non-U.S. Equity	Non-U.S. Fixed	Emerging Markets	Non-U.S. Fixed	Non-U.S. Fixed	Hedge Funds	U.S. Fixed	Non-U.S. Equity	Real Estate Funds	Cash Equivalent	Emerging Markets	Emerging Markets	Cash Equivalent	Real Estate Funds
2.43%	4.86%	1.87%	-43.56%	0.21%	4.95%	-12.21%	4.09%	-2.60%	-3.09%	-6.02%	1.25%	3.54%	-14.09%	4.39%	0.67%	-2.54%	-20.09%	5.01%	-3.22%
Non-U.S. Fixed	U.S. Fixed	Small Cap	Emerging Markets	Real Estate Funds	Cash Equivalent	Emerging Markets	Cash Equivalent	Non-U.S. Fixed	Non-U.S. Equity	Emerging Markets	Cash Equivalent	Cash Equivalent	Emerging Markets	Cash Equivalent	Real Estate Funds	Non-U.S. Fixed	Small Cap	Real Estate Funds	Non-U.S. Fixed
-8.65%	4.33%	-1.57%	-53.33%	-30.40%	0.13%	-18.42%	0.11%	-3.08%	-4.32%	-14.92%	0.33%	0.86%	-14.57%	2.28%	0.34%	-7.05%	-20.44%	-12.73%	-5.26%

- Bloomberg Barclays Corp High Yield ● Bloomberg Barclays Global Aggregate ex US ● Bloomberg Barclays US Aggregate
- Credit Suisse Hedge Fund ● ICE BofAML US 3-Month Treasury Bill ● MSCI Emerging Markets ● MSCI World ex USA
- NFI-ODCE (value-weighted net) ● Russell 2000 ● S&P 500

---

# DC Industry Talking Points

2Q24

---

## Litigation Continues...at a Slowed Pace

- ▶ 50+ cases filed in 2023, down from 90+ in 2022
- ▶ The Department of Labor (DOL) is under attack without a permanent Secretary of Labor (Julie Su acting)
  - SCOTUS Chevron deference ruling undercuts DOL's interpretations
  - ESG Rule and Fiduciary Rule lawsuits

## Fiduciary Rule—Take Five?

- ▶ DOL published the new “Retirement Security Rule” in April 2024, to be effective September 23, 2024
- ▶ Redefines fiduciary investment advice; seeks to bring more clarity to definition
- ▶ Two court cases are challenging the DOL, and District Courts have put the effective date on hold—the DOL may appeal

## Investment Topics We're Watching:

- ▶ Two years and counting for the inverted yield curve
  - Increased discussions on money market versus stable value
  - Stable value crediting rates above 3% now
- ▶ Inflation protection continues to be a discussion point for plan sponsors and TDF managers
- ▶ Defining Retirement Income: more education, discussion, and evaluation as products and services come to market
- ▶ On Aug. 1, the Senate introduced a bill that would allow 403(b) plans to include CITs

Callan

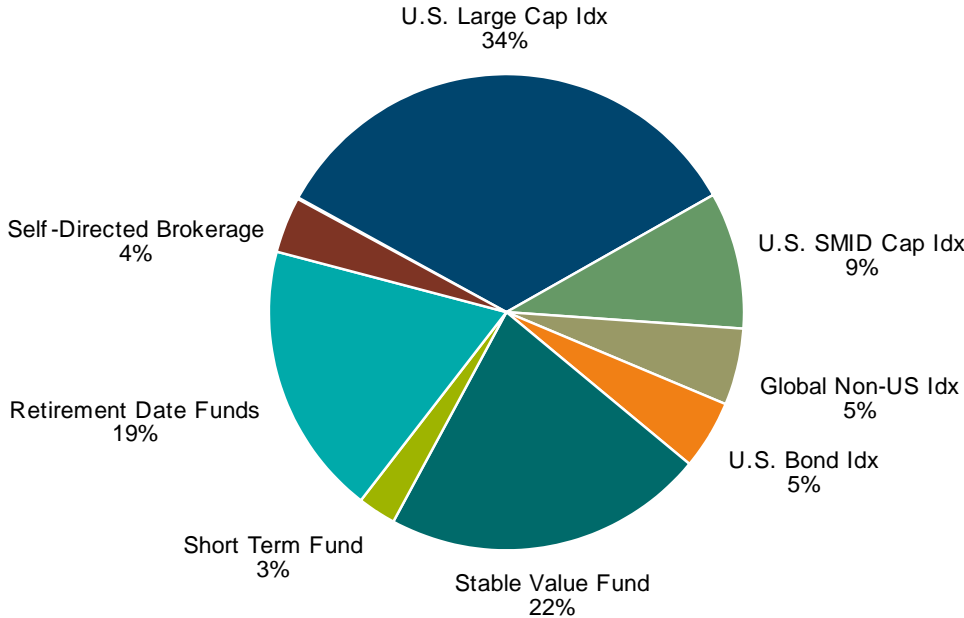
---

**PA SERS 457(b) Plan Performance Review**

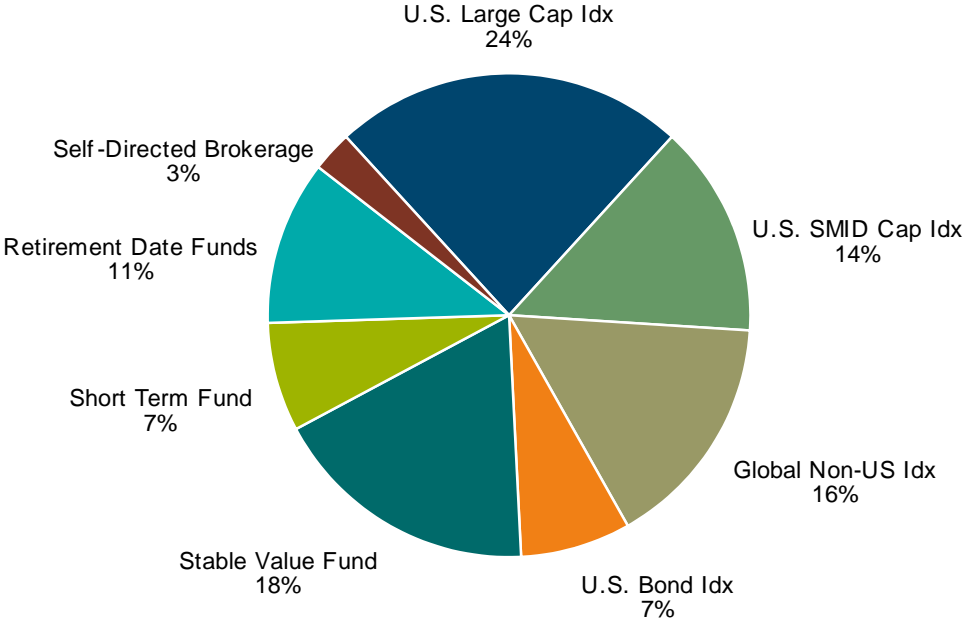
# 457(b) Plan Asset Allocation & Contributions

As of June 30, 2024

### Asset Allocation

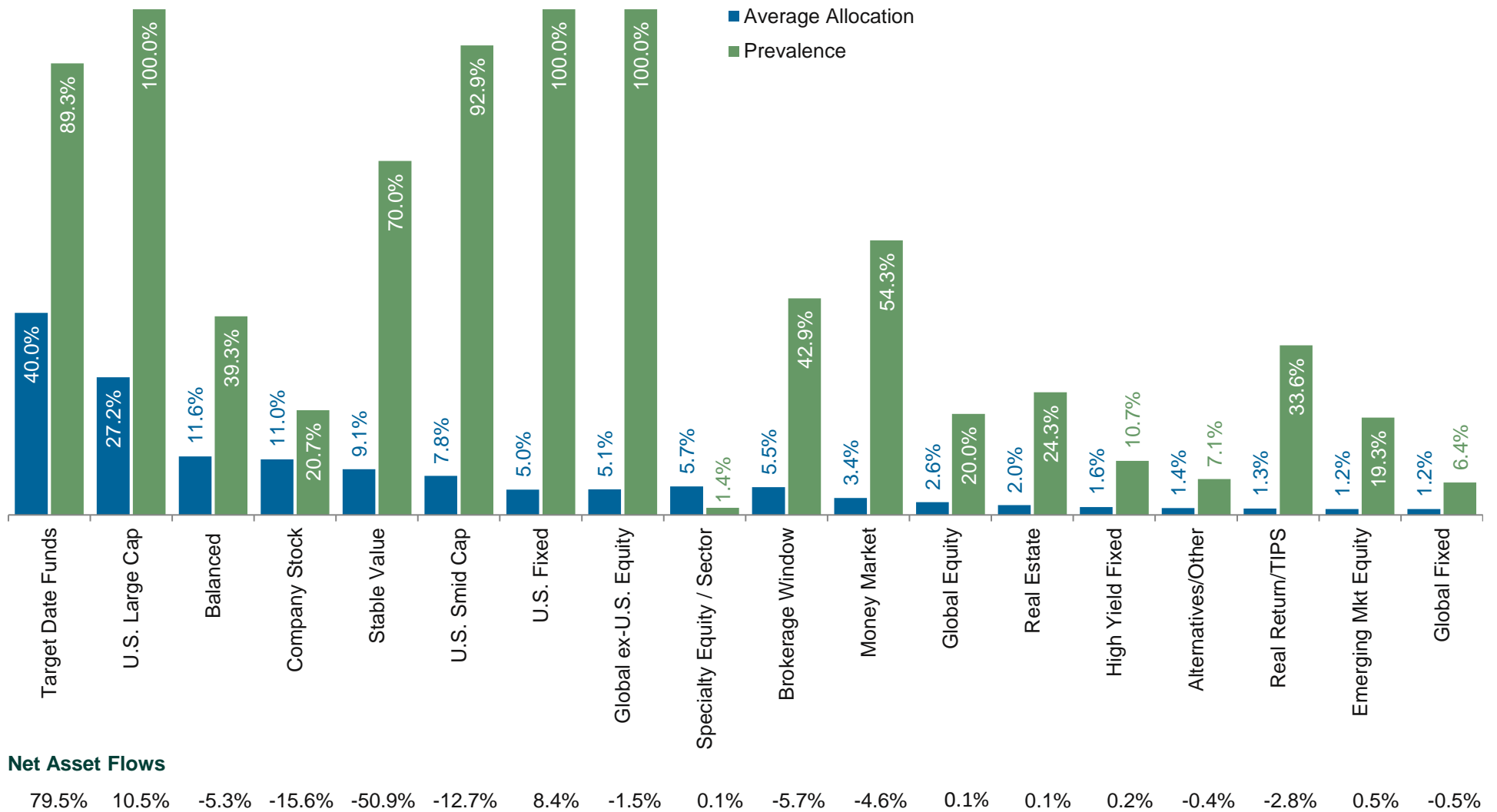


### Contributions



# Callan DC Index Asset Allocation as of 3/31/24

Callan DC Index™ tracks the underlying fund performance, asset allocation, and cash flows of more than 100 large defined contribution plans representing approximately \$400 billion in assets.





# Asset Allocation

As of June 30, 2024

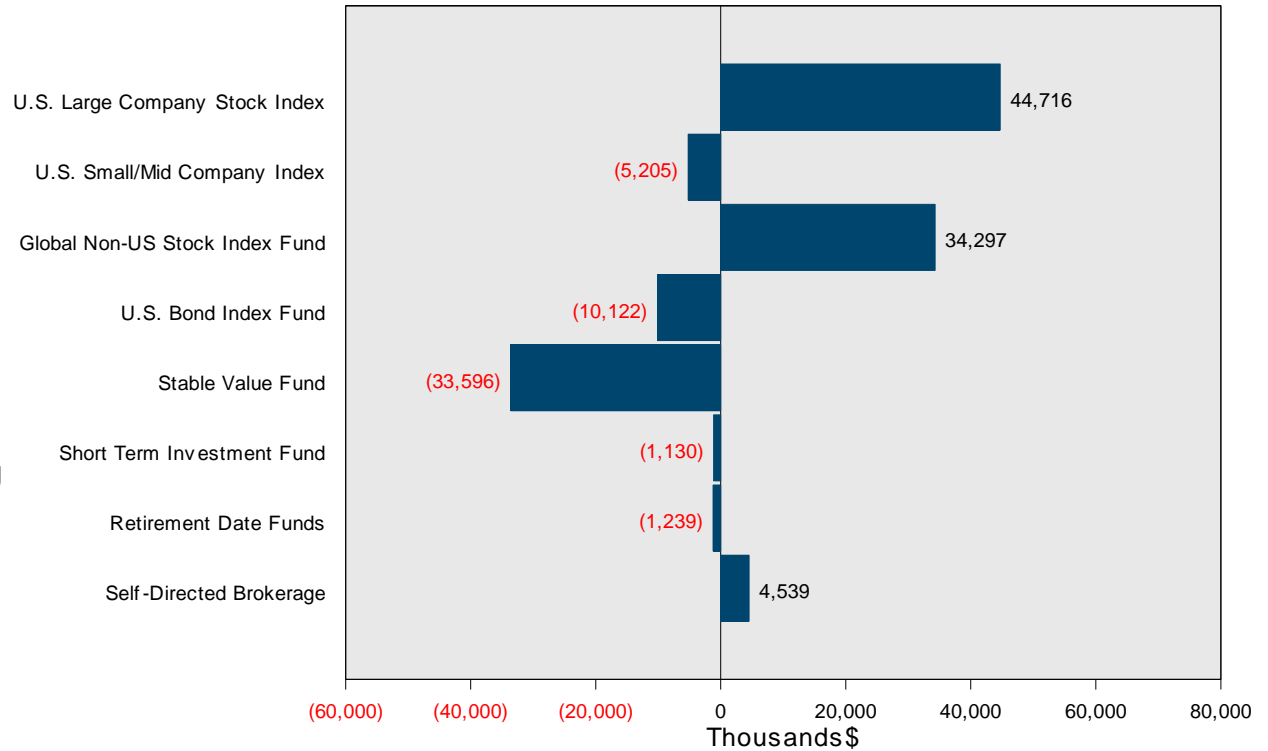
	June 30, 2024			Inv. Return	March 31, 2024	
	Market Value	Weight	Net New Inv.		Market Value	Weight
<b>SERS Retirement Date Funds</b>	<b>\$891,720,656</b>	<b>18.64%</b>	<b>\$(13,003,839)</b>	<b>\$11,764,972</b>	<b>\$892,959,524</b>	<b>18.80%</b>
SERS Post Retirement Fund	206,380,213	4.32%	(8,007,688)	1,956,256	212,431,646	4.47%
SERS 2025 Retirement Fund	132,739,399	2.78%	(3,866,696)	1,290,991	135,315,105	2.85%
SERS 2030 Retirement Fund	143,301,206	3.00%	(3,084,512)	1,694,310	144,691,407	3.05%
SERS 2035 Retirement Fund	136,965,118	2.86%	(2,151,974)	1,900,134	137,216,958	2.89%
SERS 2040 Retirement Fund	94,511,269	1.98%	782,260	1,502,619	92,226,390	1.94%
SERS 2045 Retirement Fund	82,241,125	1.72%	653,093	1,492,087	80,095,945	1.69%
SERS 2050 Retirement Fund	57,113,231	1.19%	1,347,782	1,124,657	54,640,793	1.15%
SERS 2055 Retirement Fund	22,354,854	0.47%	757,140	463,235	21,134,479	0.44%
SERS 2060 Retirement Fund	9,886,886	0.21%	286,012	208,463	9,392,411	0.20%
SERS 2065 Retirement Fund	6,227,355	0.13%	280,744	132,221	5,814,390	0.12%
<b>SERS U.S. Equity</b>	<b>\$2,063,751,111</b>	<b>43.15%</b>	<b>\$(11,025,222)</b>	<b>\$50,536,431</b>	<b>\$2,024,239,902</b>	<b>42.61%</b>
SERS U.S. Large Company Index Fund	1,618,128,200	33.83%	(21,054,544)	65,771,030	1,573,411,714	33.12%
SERS U.S. SMID Company Index Fund	445,622,911	9.32%	10,029,322	(15,234,599)	450,828,188	9.49%
<b>SERS Non-U.S. Equity</b>	<b>\$250,857,060</b>	<b>5.24%</b>	<b>\$31,559,020</b>	<b>\$2,738,412</b>	<b>\$216,559,628</b>	<b>4.56%</b>
SERS Global Non-US Index Fund	250,857,060	5.24%	31,559,020	2,738,412	216,559,628	4.56%
<b>SERS Fixed Income</b>	<b>\$1,396,169,791</b>	<b>29.19%</b>	<b>\$(53,476,859)</b>	<b>\$8,629,254</b>	<b>\$1,441,017,396</b>	<b>30.33%</b>
SERS Short Term Investment Fund	124,548,773	2.60%	(2,684,244)	1,554,137	125,678,879	2.65%
SERS Stable Value Fund	1,048,108,683	21.91%	(40,863,699)	7,267,975	1,081,704,406	22.77%
SERS U.S. Bond Index Fund	223,512,336	4.67%	(9,928,916)	(192,858)	233,634,111	4.92%
<b>Self-Directed Brokerage Account</b>	<b>\$180,354,178</b>	<b>3.77%</b>	<b>\$1,874,821</b>	<b>\$2,664,118</b>	<b>\$175,815,239</b>	<b>3.70%</b>
<b>Total Fund</b>	<b>\$4,782,852,797</b>	<b>100.0%</b>	<b>\$(44,072,079)</b>	<b>\$76,333,187</b>	<b>\$4,750,591,689</b>	<b>100.0%</b>

# Changes in Market Values and Contributions

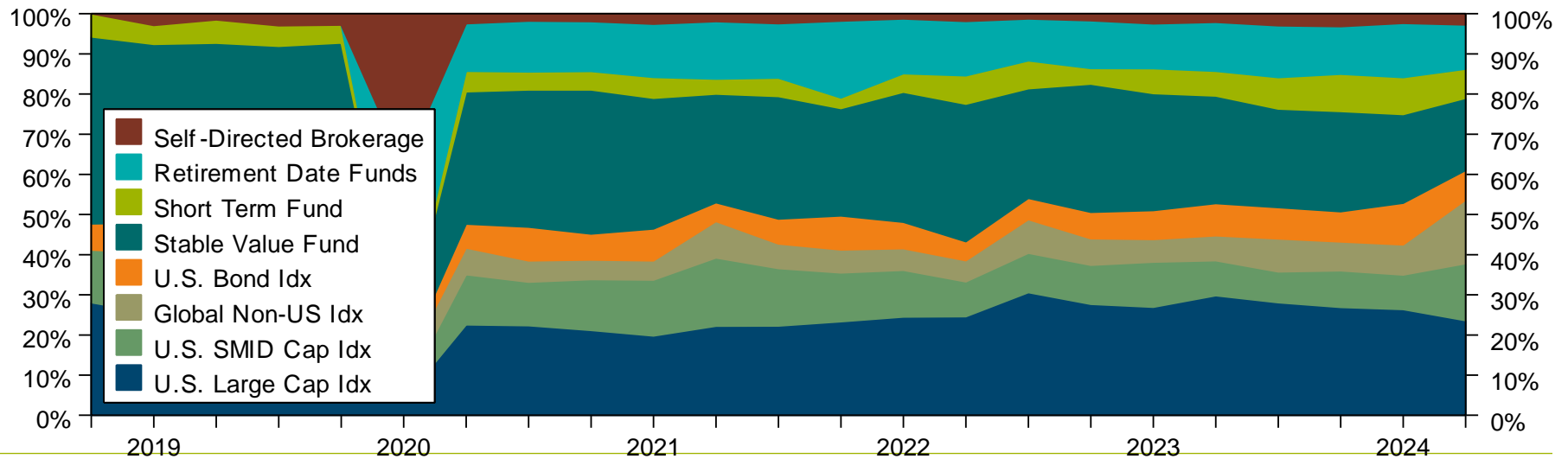
As of June 30, 2024

The chart to the right shows the change in fund values across the various investment options for the quarter ended June 30, 2024. The change in value for each fund is the result of a combination of 3 factors:

1. Market movements
2. Contributions or disbursements into or out of the fund by the participants (and any matching done by the company)
3. Transfers between funds by the participants



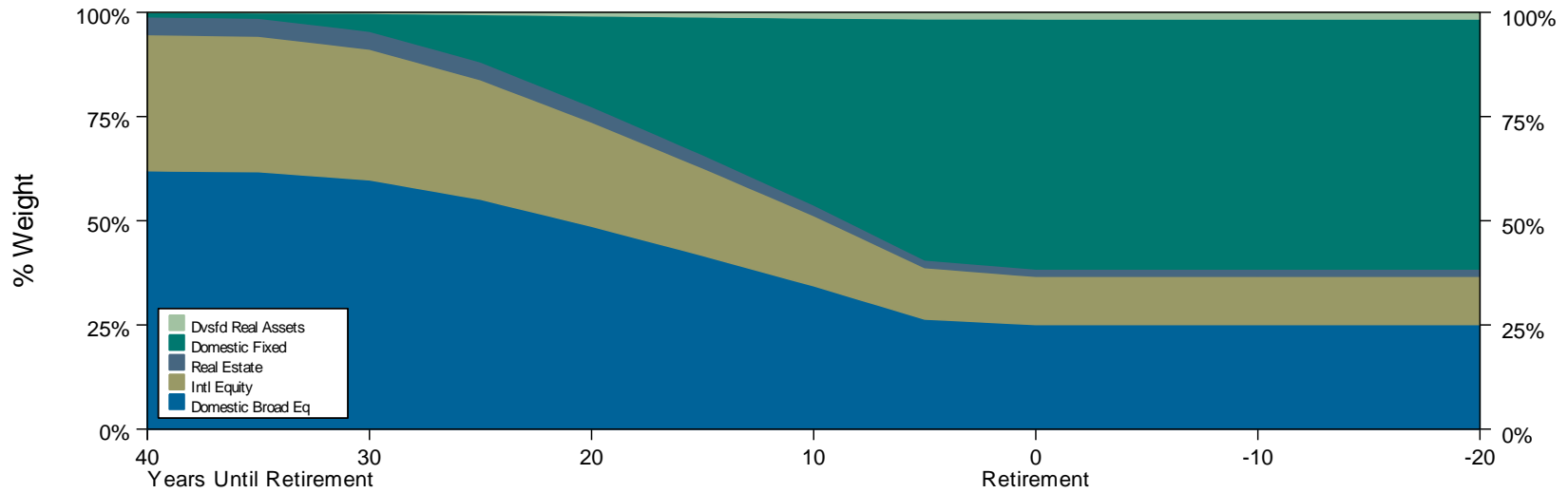
## Historical Allocation of Contributions



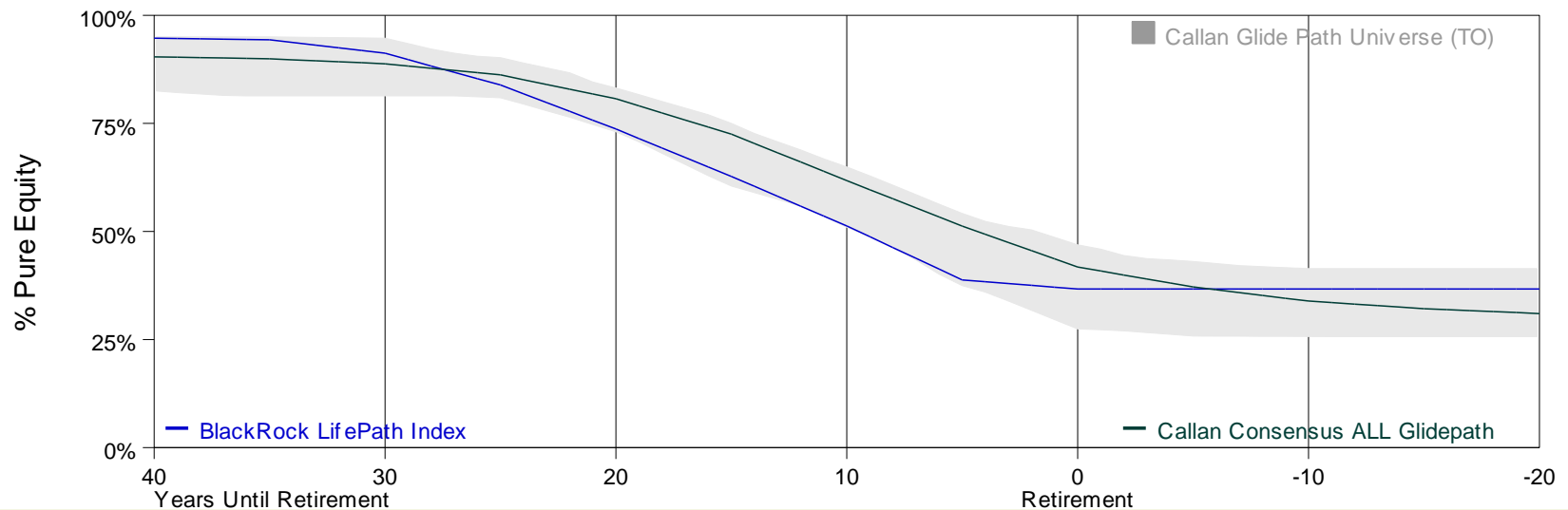
# BlackRock LifePath Retirement Funds

Glidepath and Equity Roll-down Exposure as of June 30, 2024

### BlackRock LifePath Retirement Funds Glidepath



### BlackRock LifePath Retirement Funds Equity Roll-down Exposure



# Cumulative Performance - Net of Fees

As of June 30, 2024

	Last Quarter	Year to Date	Last Year	Last 3 Years	Last 5 Years
<b>Net Performance</b>					
<b>Retirement Date Funds</b>					
SERS Post Retirement Fund	1.01%	3.53%	8.35%	0.17%	4.32%
BlackRock Post Retirement Index	0.98%	3.48%	8.44%	0.21%	4.31%
Callan Tgt Date Ret Inc	0.96%	3.53%	8.27%	0.63%	3.87%
SERS 2025 Retirement Fund	1.03%	3.76%	8.76%	0.43%	5.01%
BlackRock 2025 Index	1.01%	3.73%	8.85%	0.45%	4.99%
Callan Target Date 2025	1.06%	4.78%	10.37%	1.26%	5.70%
SERS 2030 Retirement Fund	1.23%	5.00%	10.70%	1.41%	6.26%
BlackRock 2030 Index	1.20%	4.96%	10.83%	1.44%	6.24%
Callan Target Date 2030	1.22%	5.93%	11.81%	1.85%	6.68%
SERS 2035 Retirement Fund	1.46%	6.24%	12.59%	2.33%	7.45%
BlackRock 2035 Index	1.43%	6.20%	12.74%	2.34%	7.42%
Callan Target Date 2035	1.37%	6.98%	13.29%	2.53%	7.66%
SERS 2040 Retirement Fund	1.68%	7.44%	14.45%	3.20%	8.55%
BlackRock 2040 Index	1.65%	7.41%	14.59%	3.19%	8.50%
Callan Target Date 2040	1.55%	7.99%	14.90%	3.28%	8.55%
SERS 2045 Retirement Fund	1.89%	8.57%	16.21%	4.01%	9.52%
BlackRock 2045 Index	1.86%	8.53%	16.35%	3.97%	9.45%
Callan Target Date 2045	1.64%	8.72%	16.02%	3.83%	9.26%
SERS 2050 Retirement Fund	2.06%	9.42%	17.46%	4.54%	10.09%
BlackRock 2050 Index	2.04%	9.38%	17.61%	4.49%	10.02%
Callan Target Date 2050	1.66%	9.24%	16.64%	4.00%	9.46%
SERS 2055 Retirement Fund	2.16%	9.83%	17.97%	4.75%	10.27%
BlackRock 2055 Index	2.14%	9.79%	18.14%	4.70%	10.21%
Callan Target Date 2055	1.79%	9.49%	16.90%	4.07%	9.63%
SERS 2060 Retirement Fund	2.17%	9.84%	17.99%	4.75%	10.27%
BlackRock 2060 Index	2.15%	9.80%	18.16%	4.70%	10.21%
Callan Target Date 2060	1.78%	9.51%	16.95%	4.09%	9.68%
SERS 2065 Retirement Fund	2.17%	9.85%	18.00%	4.76%	-
BlackRock 2065 Index	2.15%	9.80%	18.16%	4.70%	-
Callan Target Date 2065	1.64%	9.63%	17.05%	3.89%	9.69%

Note: SERS Funds are the top fund in each grouping followed by each fund's respective benchmark and median peer.  
\*Target Date funds replaced risk-based funds in 1Q20.

## Cumulative Performance - Net of Fees

As of June 30, 2024

	Last 7 Years	Last 10 Years	Last 15 Years	Last 20 Years
<b>Net Performance</b>				
<b>Retirement Date Funds</b>				
SERS Post Retirement Fund	4.71%	4.28%	5.95%	-
BlackRock Post Retirement Index	4.70%	4.26%	5.93%	5.21%
Callan Tgt Date Ret Inc	4.16%	3.79%	5.35%	4.28%
SERS 2025 Retirement Fund	5.48%	5.04%	7.41%	-
BlackRock 2025 Index	5.45%	4.99%	7.37%	5.81%
Callan Target Date 2025	5.90%	5.49%	8.11%	6.42%
SERS 2030 Retirement Fund	6.54%	5.89%	8.25%	-
BlackRock 2030 Index	6.50%	5.82%	8.19%	6.30%
Callan Target Date 2030	6.77%	6.27%	8.91%	6.29%
SERS 2035 Retirement Fund	7.53%	6.68%	9.02%	-
BlackRock 2035 Index	7.48%	6.60%	8.95%	6.73%
Callan Target Date 2035	7.59%	6.86%	9.60%	7.20%
SERS 2040 Retirement Fund	8.44%	7.40%	9.73%	-
BlackRock 2040 Index	8.37%	7.29%	9.63%	7.11%
Callan Target Date 2040	8.29%	7.45%	10.09%	6.94%
SERS 2045 Retirement Fund	9.20%	7.98%	10.31%	-
BlackRock 2045 Index	9.11%	7.85%	10.21%	7.43%
Callan Target Date 2045	8.84%	7.85%	10.20%	-
SERS 2050 Retirement Fund	9.64%	8.28%	10.71%	-
BlackRock 2050 Index	9.54%	8.16%	10.61%	7.76%
Callan Target Date 2050	8.97%	8.04%	10.40%	-
SERS 2055 Retirement Fund	9.76%	8.35%	-	-
BlackRock 2055 Index	9.67%	8.23%	-	-
Callan Target Date 2055	9.15%	8.12%	10.38%	-
SERS 2060 Retirement Fund	9.75%	-	-	-
BlackRock 2060 Index	9.68%	-	-	-
Callan Target Date 2060	9.21%	8.23%	-	-

Note: SERS Funds are the top fund in each grouping followed by each fund's respective benchmark and median peer.

\*Funds not listed do not have longer term history.

\*\*Target Date funds replaced risk-based funds in 1Q20.

# Cumulative Performance - Net of Fees

As of June 30, 2024

	Last Quarter	Year to Date	Last Year	Last 3 Years	Last 5 Years
<b>Net Performance</b>					
<b>Domestic Equity</b>					
SERS U.S. Large Company Index	4.28%	15.28%	24.55%	10.01%	15.05%
S&P 500 Index	4.28%	15.29%	24.56%	10.01%	15.05%
Callan Lg Cap Broad MF	3.65%	15.35%	25.28%	7.78%	14.14%
SERS U.S. SMID Company Index	(3.40%)	3.45%	15.11%	(2.19%)	8.89%
Dow Jones US Completion	(3.44%)	3.27%	14.67%	(2.64%)	8.55%
Callan SMID Broad MFs	(3.79%)	3.45%	9.96%	0.43%	8.59%
<b>International Equity</b>					
SERS Global Non-US Index	1.08%	5.80%	11.54%	0.65%	5.77%
MSCI ACWI ex US	0.96%	5.69%	11.62%	0.46%	5.55%
Callan Non US Equity MFs	(0.04%)	4.87%	9.93%	1.70%	6.23%
<b>Domestic Fixed Income</b>					
SERS Short Term Investment Fund	1.31%	2.62%	5.30%	3.07%	2.19%
3-month Treasury Bill	1.32%	2.63%	5.40%	3.03%	2.16%
Callan Cash Database(1)	1.35%	2.71%	5.65%	3.13%	2.31%
SERS Stable Value Fund	0.72%	1.46%	2.86%	2.20%	2.23%
3-month Treasury Bill	1.32%	2.63%	5.40%	3.03%	2.16%
Callan Stable Value SA	0.74%	1.44%	2.87%	2.35%	2.31%
SERS U.S. Bond Index Fund	0.07%	(0.71%)	2.63%	(3.02%)	(0.23%)
Blmbg Aggregate	0.07%	(0.71%)	2.63%	(3.02%)	(0.23%)
Callan Core Bond MFs	0.28%	(0.19%)	3.36%	(2.98%)	0.13%

(1) Callan Cash Database includes STIF, enhanced cash, and money market funds.

\*The Global Non-U.S. Stock Index Fund replaced the International Company Stock Index Fund in 1Q20.

# Cumulative Performance - Net of Fees

As of June 30, 2024

	Last 7 Years	Last 10 Years	Last 15 Years	Last 20 Years
<b>Net Performance</b>				
<b>Domestic Equity</b>				
SERS U.S. Large Company Index	14.28%	12.87%	14.83%	10.33%
S&P 500 Index	14.28%	12.86%	14.82%	10.29%
Callan Lg Cap Broad MF	13.63%	12.01%	14.29%	10.19%
SERS U.S. SMID Company Index	9.00%	8.37%	12.77%	9.45%
Dow Jones US Completion	8.69%	8.10%	12.50%	9.21%
Callan SMID Broad MFs	9.03%	7.72%	12.36%	9.20%
<b>International Equity</b>				
SERS Global Non-US Index	5.42%	4.08%	6.40%	-
MSCI ACWI ex US	5.17%	3.84%	6.21%	5.78%
Callan Non US Equity MFs	5.52%	4.19%	6.90%	6.12%
<b>Domestic Fixed Income</b>				
SERS Short Term Investment Fund	2.13%	1.62%	1.15%	1.70%
3-month Treasury Bill	2.07%	1.51%	1.04%	1.57%
Callan Cash Database(1)	2.25%	1.77%	1.31%	1.92%
SERS Stable Value Fund	2.24%	2.20%	2.53%	3.07%
3-month Treasury Bill	2.07%	1.51%	1.04%	1.57%
Callan Stable Value SA	2.33%	2.28%	2.47%	3.03%
SERS U.S. Bond Index Fund	0.86%	1.33%	2.46%	3.09%
Blmbg Aggregate	0.86%	1.35%	2.50%	3.12%
Callan Core Bond MFs	1.14%	1.54%	3.05%	3.36%

(1) Callan Cash Database includes STIF, enhanced cash, and money market funds.

\*Funds not listed do not have longer term history.

\*The Global Non-U.S. Stock Index Fund replaced the International Company Stock Index Fund in 1Q20.

# Performance Summary & Expense Ratios as of June 30, 2024

Investment Manager	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	7 Year Return	10 Year Return	5 Year Return Consistency	5 Year Risk Quadrant	Expense Ratio
<b>Net of Fee Performance</b>									
<b>Retirement Date Funds</b>									
<b>SERS Post Retirement Fund</b> Callan Tgt Date Ret Inc	1.0 42	8.3 45	0.2 61	4.3 30	4.7 17	4.3 18			0.07 77
BlackRock Post Retirement Index	1.0 47	8.4 43	0.2 61	4.3 31	4.7 17	4.3 19			
<b>SERS 2025 Retirement Fund</b> Callan Target Date 2025	1.0 55	8.8 83	0.4 83	5.0 74	5.5 74	5.0 77			0.07 76
BlackRock 2025 Index	1.0 57	8.8 82	0.4 83	5.0 77	5.5 75	5.0 78			
<b>SERS 2030 Retirement Fund</b> Callan Target Date 2030	1.2 47	10.7 79	1.4 72	6.3 71	6.5 66	5.9 71			0.07 70
BlackRock 2030 Index	1.2 55	10.8 74	1.4 69	6.2 71	6.5 68	5.8 77			
<b>SERS 2035 Retirement Fund</b> Callan Target Date 2035	1.5 38	12.6 66	2.3 62	7.5 66	7.5 55	6.7 71			0.07 76
BlackRock 2035 Index	1.4 43	12.7 62	2.3 62	7.4 66	7.5 58	6.6 74			
<b>SERS 2040 Retirement Fund</b> Callan Target Date 2040	1.7 41	14.4 60	3.2 57	8.5 51	8.4 39	7.4 54			0.07 73
BlackRock 2040 Index	1.7 43	14.6 58	3.2 57	8.5 55	8.4 47	7.3 62			
<b>SERS 2045 Retirement Fund</b> Callan Target Date 2045	1.9 33	16.2 43	4.0 34	9.5 31	9.2 30	8.0 39			0.07 76
BlackRock 2045 Index	1.9 38	16.4 40	4.0 36	9.4 37	9.1 34	7.8 50			
<b>SERS 2050 Retirement Fund</b> Callan Target Date 2050	2.1 23	17.5 26	4.5 19	10.1 16	9.6 13	8.3 27			0.07 73
BlackRock 2050 Index	2.0 27	17.6 21	4.5 23	10.0 19	9.5 19	8.2 39			
<b>SERS 2055 Retirement Fund</b> Callan Target Date 2055	2.2 17	18.0 17	4.7 13	10.3 10	9.8 11	8.3 31			0.07 76
BlackRock 2055 Index	2.1 18	18.1 13	4.7 14	10.2 12	9.7 14	8.2 40			
<b>SERS 2060 Retirement Fund</b> Callan Target Date 2060	2.2 16	18.0 17	4.8 13	10.3 17	9.8 14				0.07 75
BlackRock 2060 Index	2.2 17	18.2 14	4.7 16	10.2 21	9.7 17				

Returns:  
■ above median  
■ third quartile  
■ fourth quartile

Return Consistency:  
■ above median  
■ third quartile  
■ fourth quartile

Risk Quadrant:  
  
Return  
Risk

Expense Ratio:  
■ below median  
■ second quartile  
■ first quartile

Note: For returns, each SERS Fund and corresponding benchmark return are shown with their respective peer group rankings. For returns, lower peer group rankings are more desirable (e.g. 25th percentile equates to top quartile performance). Expense Ratio: Higher peer group rankings are more desirable (e.g. 75th percentile equates to bottom quartile/cheapest fees).



# Performance Summary & Expense Ratios as of June 30, 2024

Investment Manager	Last Quarter Return	Last Year Return	3 Year Return	5 Year Return	7 Year Return	10 Year Return	5 Year Return Consistency	5 Year Risk Quadrant	Expense Ratio
<b>SERS 2065 Retirement Fund</b> Callan Target Date 2065 BlackRock 2065 Index	2.2 15 2.2 17	18.0 22 18.2 16	4.8 15 4.7 19						0.07 68
<b>Domestic Equity</b>									
<b>SERS U.S. Large Company Index</b> Callan Lg Cap Broad MF S&P 500 Index	4.3 40 4.3 40	24.5 51 24.6 51	10.0 23 10.0 23	15.0 39 15.0 39	14.3 44 14.3 44	12.9 42 12.9 42			0.02 100
<b>SERS U.S. Small/Mid Company Index</b> Callan SMID Broad MFs Dow Jones US Completion	-3.4 39 -3.4 39	15.1 14 14.7 16	-2.2 68 -2.6 70	8.9 47 8.6 51	9.0 51 8.7 54	8.4 48 8.1 49			0.03 100
<b>International Equity</b>									
<b>SERS Global Non-U.S. Index Fund</b> Callan Non US Equity MFs MSCI ACWI ex US	1.1 20 1.0 21	11.5 32 11.6 31	0.6 65 0.5 66	5.8 63 5.5 68	5.4 53 5.2 60	4.1 55 3.8 64			0.05 99
<b>Domestic Fixed Income</b>									
<b>SERS Short Term Investment Fund</b> Callan Cash Database 3-month Treasury Bill	1.3 65 1.3 63	5.3 87 5.4 84	3.1 55 3.0 57	2.2 78 2.2 80	2.1 76 2.1 85	1.6 77 1.5 90			0.00 100
<b>Comments:</b> Callan Cash Database includes STIF, enhanced cash, and money market funds.									
<b>SERS Stable Value Fund</b> Callan Stable Value SA 3-month Treasury Bill	0.7 80 1.3 10	2.9 50 5.4 1	2.2 74 3.0 8	2.2 61 2.2 81	2.2 59 2.1 88	2.2 62 1.5 94			0.25 68
<b>SERS U.S. Bond Index Fund</b> Callan Core Bond MFs Blmbg Aggregate	0.1 91 0.1 92	2.6 80 2.6 80	-3.0 56 -3.0 57	-0.2 91 -0.2 91	0.9 85 0.9 85	1.3 82 1.3 80			0.02 100

Returns:  
 above median  
 third quartile  
 fourth quartile

Return Consistency:  
 above median  
 third quartile  
 fourth quartile

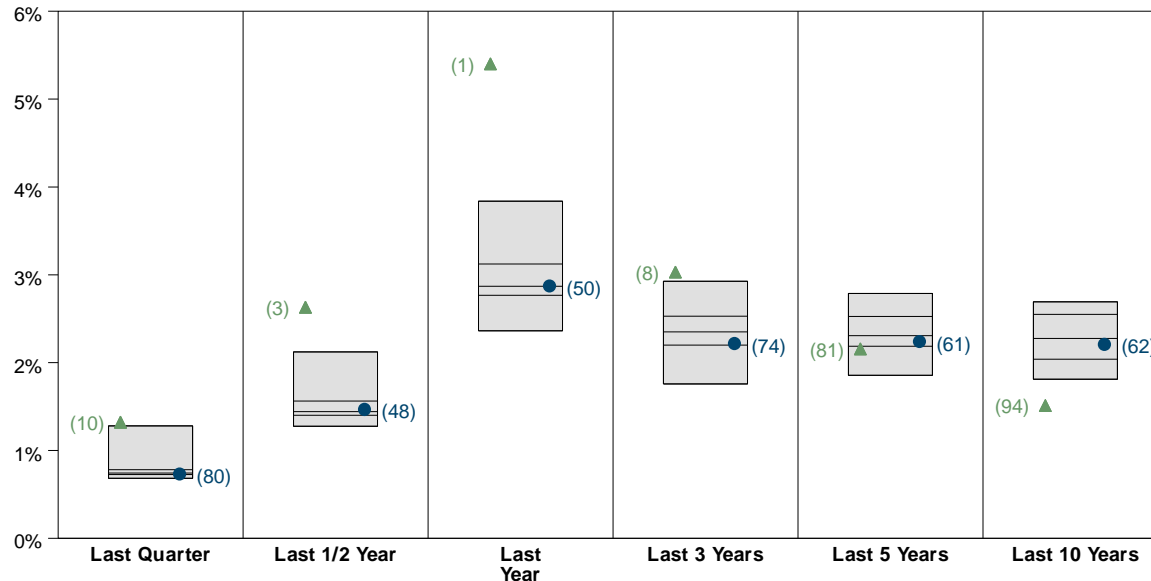
Risk Quadrant:

Expense Ratio:  
 below median  
 second quartile  
 first quartile

Note: For returns, each SERS Fund and corresponding benchmark return are shown with their respective peer group rankings. For returns, lower peer group rankings are more desirable (e.g. 25th percentile equates to top quartile performance). Expense Ratio: Higher peer group rankings are more desirable (e.g. 75th percentile equates to bottom quartile/cheapest fees).

# Stable Value Fund as of June 30, 2024

## Performance vs Callan Stable Value SA (Gross)



	Last Quarter	Last 1/2 Year	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	1.28	2.12	3.84	2.93	2.79	2.69
25th Percentile	0.78	1.56	3.12	2.53	2.53	2.55
Median	0.74	1.44	2.87	2.35	2.31	2.28
75th Percentile	0.73	1.40	2.77	2.20	2.19	2.04
90th Percentile	0.68	1.28	2.36	1.76	1.86	1.81

	Last Quarter	Last 1/2 Year	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
SERS Stable Value Fund ●	0.72	1.46	2.86	2.20	2.23	2.20
3-month Treasury Bill ▲	1.32	2.63	5.40	3.03	2.16	1.51

Manager Diversification*	
Manager	Portfolio
Jennison	2.8%
Dodge & Cox	4.1%
Invesco	61.7%
Loomis Sayles	9.8%
PFM	9.2%
Ramirez (DWDO Manager)	9.3%
STIF	3.2%
<b>Total</b>	<b>100%</b>

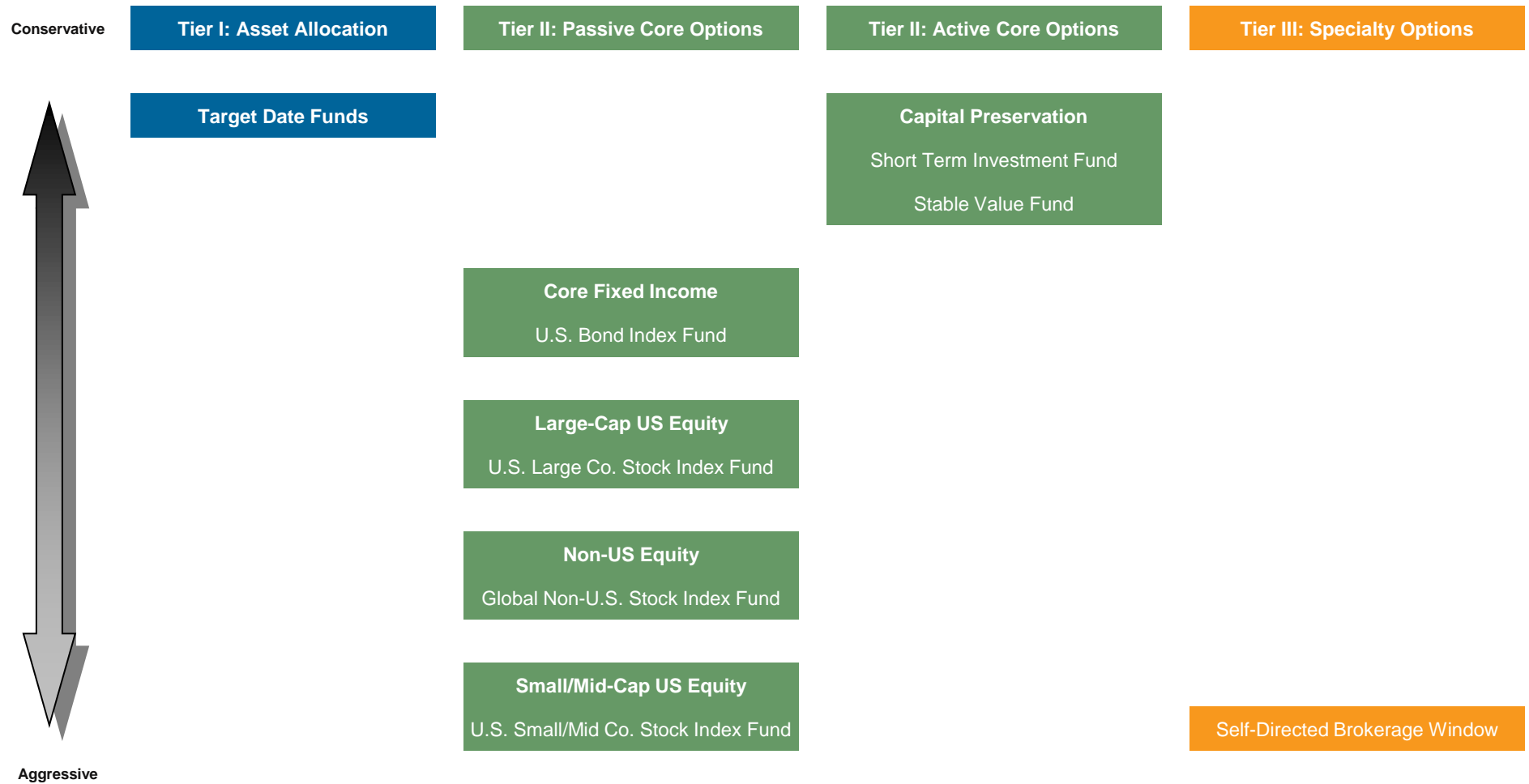
### Wrap Provider Exposure\*

Contract Issuer	Portfolio	Average Fee	Moody's Rating	S&P Rating	Fitch Rating
Nationwide Life Insurance	20.43%	0.14%	A1	A+	NR
Met Tower Life	20.34%	0.15%	Aa3	AA-	AA-
RGA	15.38%	0.15%	A1	AA-	A+
Prudential Insurance Co.	15.34%	0.15%	Aa3	AA-	AA-
Pacific Life Insurance	12.84%	0.15%	Aa3	AA-	AA-
State Street Bank	12.70%	0.15%	Aa2	AA-	AA
	<b>97.03%</b>	<b>0.14%</b>			

\*Source: Invesco

# 457(b) Plan Investment Structure

## Lineup Mapped to Callan's Clean Sheet



Callan

---

**Appendix – Callan Update**

# Published Research Highlights: 2Q24

## Quantifying Sequence-of-Returns Risk



## Sector-Specialist Strategies and Large LPs' Portfolios



## 2024 Asset Manager DEI Study



## 2024 Defined Contribution Trends Survey



## Recent Blog Posts

**Commercial Real Estate Capital Markets and Institutional Investors**

Christine Mays

**A Look at How We Did With Our Capital Markets Assumptions**

Greg Allen and Julia Moriarty

**Is This a Time for Active Managers to Shine?**

Tony Lissuzzo

## Additional Reading

Active vs. Passive quarterly charts

*Capital Markets Review* quarterly newsletter

Monthly Updates to the Periodic Table

*Market Pulse Flipbook* quarterly markets update

Market Intelligence (clients-only)

*Real Estate Indicators* market outlook

# Callan Institute Events

Upcoming conferences, workshops, and webinars

## Callan College

### Intro to Investments—Learn the Fundamentals

This course is for institutional investors, including trustees and staff members of public plans, corporate plans, and nonprofits. This session familiarizes trustees and staff with basic investment theory, terminology, and practices.

– September 24-26, 2024 – Virtual Session via Zoom

Please visit our website at [callan.com/events-education](https://callan.com/events-education) as we add dates to our 2024 calendar!

## Mark Your Calendar

### 2024 Regional Workshops

October 22, 2024 – Denver

October 23, 2024 – Chicago

*Watch your email for further details and an invitation.*

## 2025 National Conference

### Mark your calendars for this event in Scottsdale on April 27-29, 2025

Our annual conference will feature mainstage speakers and Callan lead workshops on a variety of topics.

This year we welcome Zanny Minton Beddoes to the stage.

*Registration for this event will open in January 2025!*

# Introducing CODE: Callan On-Demand Education

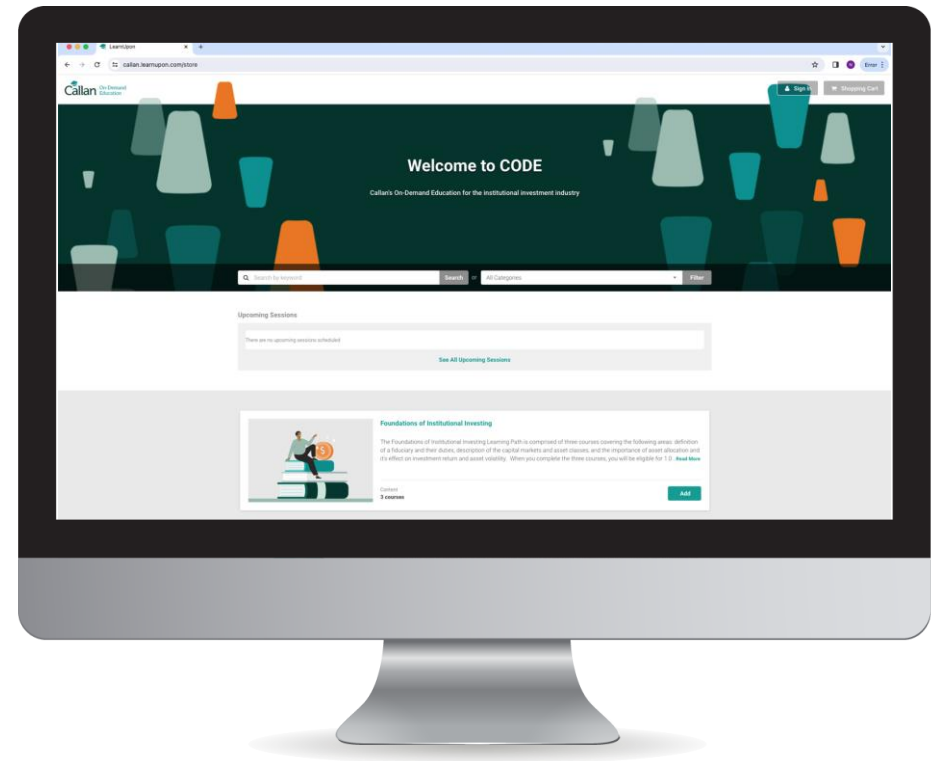


- ▶ Variety of educational courses
- ▶ Interactive and engaging
- ▶ Self-guided modules
- ▶ Eligible for continuing education credits
- ▶ Learning at your own pace

**CODE** courses are designed for investment professionals of all levels—and they're self-guided. Access them anytime, from anywhere, and get continuing education credits for each completed course.

**CODE** is for you, your colleagues, your new hires, and your interns. It's for anyone interested in learning about institutional investing.

[callan.com/code](https://callan.com/code)



## 3 Reasons to Take CODE Courses

- 1 Become a better fiduciary
- 2 Showcase your skills and knowledge
- 3 Learn from Callan's investment experts

---

## Important Disclosures

The content of this document is particular to the client and should not be relied upon by any other individual or entity. There can be no assurance that the performance of any account or investment will be comparable to the performance information presented in this document.

Certain information herein has been compiled by Callan from a variety of sources believed to be reliable but for which Callan has not necessarily verified for accuracy or completeness. Information contained herein may not be current. Callan has no obligation to bring current the information contained herein.

Callan's performance, market value, and, if applicable, liability calculations are inherently estimates based on data available at the time each calculation is performed and may later be determined to be incorrect or require subsequent material adjustment due to many variables including, but not limited to, reliance on third party data, differences in calculation methodology, presence of illiquid assets, the timing and magnitude of unrecognized cash flows, and other data/assumptions needed to prepare such estimated calculations. In no event should the performance measurement and reporting services provided by Callan be used in the calculation, deliberation, policy determination, or any other action of the client as it pertains to determining amounts, timing or activity of contribution levels or funding amounts, rebalancing activity, benefit payments, distribution amounts, and/or performance-based fee amounts, unless the client understands and accepts the inherent limitations of Callan's estimated performance, market value, and liability calculations.

Callan's performance measurement service reports estimated returns for a portfolio and compares them against relevant benchmarks and peer groups, as appropriate; such service may also report on historical portfolio holdings, comparing them to holdings of relevant benchmarks and peer groups, as appropriate ("portfolio holdings analysis"). To the extent that Callan's reports include a portfolio holdings analysis, Callan relies entirely on holdings, pricing, characteristics, and risk data provided by third parties including custodian banks, record keepers, pricing services, index providers, and investment managers. Callan reports the performance and holdings data as received and does not attempt to audit or verify the holdings data. Callan is not responsible for the accuracy or completeness of the performance or holdings data received from third parties and such data may not have been verified for accuracy or completeness.

Callan's performance measurement service may report on illiquid asset classes, including, but not limited to, private real estate, private equity, private credit, hedge funds and infrastructure. The final valuation reports, which Callan receives from third parties, for of these types of asset classes may not be available at the time a Callan performance report is issued. As a result, the estimated returns and market values reported for these illiquid asset classes, as well as for any composites including these illiquid asset classes, including any total fund composite prepared, may not reflect final data, and therefore may be subject to revision in future quarters.

The content of this document may consist of statements of opinion, which are made as of the date they are expressed and are not statements of fact. The opinions expressed herein may change based upon changes in economic, market, financial and political conditions and other factors. Callan has no obligation to bring current the opinions expressed herein.

The information contained herein may include forward-looking statements regarding future results. The forward-looking statements herein: (i) are best estimations consistent with the information available as of the date hereof and (ii) involve known and unknown risks and uncertainties. Actual results may vary, perhaps materially, from the future results projected in this document. Undue reliance should not be placed on forward-looking statements.

Callan is not responsible for reviewing the risks of individual securities or the compliance/non-compliance of individual security holdings with a client's investment policy guidelines.

This document should not be construed as legal or tax advice on any matter. You should consult with legal and tax advisers before applying any of this information to your particular situation.

Reference to, or inclusion in this document of, any product, service or entity should not necessarily be construed as recommendation, approval, or endorsement of such product, service or entity by Callan. This document is provided in connection with Callan's consulting services and should not be viewed as an advertisement of Callan, or of the strategies or products discussed or referenced herein.



---

## Important Disclosures (continued)

The issues considered and risks highlighted herein are not comprehensive and other risks may exist that the user of this document may deem material regarding the enclosed information. Please see any applicable full performance report or annual communication for other important disclosures.

Unless Callan has been specifically engaged to do so, Callan does not conduct background checks or in-depth due diligence of the operations of any investment manager search candidate or investment vehicle, as may be typically performed in an operational due diligence evaluation assignment and in no event does Callan conduct due diligence beyond what is described in its report to the client.

Any decision made on the basis of this document is sole responsibility of the client, as the intended recipient, and it is incumbent upon the client to make an independent determination of the suitability and consequences of such a decision.

Callan undertakes no obligation to update the information contained herein except as specifically requested by the client.

Past performance is no guarantee of future results.