

November 2023



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

Third Quarter 2023

Executive Summary

Thomas H. Shingler
Senior Vice President

Britton M. Murdoch
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 Markets Down in 3Q, Following Rebound in First Half of 2023

Stocks and bonds still have ground to make up after declines in 2022

- ▶ S&P 500 down 3.3% in 3Q23.
 - Loss through first three quarters of 2022 was 23.9%; rebound in the following three quarters reduced the loss to 2.9% by June, but decline in 3Q shows S&P is still over 7% below 1/2022 high-water mark
- ▶ Fixed income recovered in first half of 2023 as high inflation began to ease; speculation about interest rate cuts evaporated in 2Q
 - Bloomberg Aggregate: up 3% in 1Q, but declined 0.8% in 2Q and another 3.2% in 3Q as Fed continued to raise rates
 - CPI-U: +3.7% year-over year for 3Q, and still up 5.8% since the start of 2022
- ▶ Economic data defied expectations of recession in 2023; GDP growth came in at 2.1% in 1Q and 2.2% in 2Q, and surged to a stunning 4.9% in 3Q
 - Job market remains solid, providing support to Fed efforts to fight inflation

Returns for Periods ended 9/30/23

	Quarter	YTD	Since 1/2022	5 Years	10 Years	25 Years
U.S. Equity						
Russell 3000	-3.25	12.39	-5.36	9.14	11.28	8.09
S&P 500	-3.27	13.07	-4.30	9.92	11.91	7.92
Russell 2000	-5.13	2.54	-10.98	2.40	6.65	8.00
Global ex-U.S. Equity						
MSCI World ex USA	-4.10	6.73	-4.97	3.44	3.84	4.98
MSCI Emerging Markets	-2.93	1.82	-11.12	0.56	2.07	--
MSCI ACWI ex USA Small Cap	-1.70	5.03	-9.45	2.58	4.35	7.41
Fixed Income						
Bloomberg Aggregate	-3.23	-1.21	-8.29	0.10	1.13	3.59
90-day T-Bill	1.31	3.60	2.89	1.72	1.11	1.89
Bloomberg Long Gov/Credit	-9.37	-5.40	-19.12	-1.21	1.94	4.67
Bloomberg Global Agg ex-US	-4.00	-3.20	-12.79	-3.10	-1.73	2.04
Real Estate						
NCREIF Property	-1.98	-5.66	-0.26	5.13	7.33	8.29
FTSE Nareit Equity	-7.13	-2.14	-15.80	2.77	5.96	8.49
Alternatives						
CS Hedge Fund Index	1.81	3.71	2.72	4.77	4.08	5.96
Cambridge Private Equity*	1.59	3.71	0.39	15.37	14.91	13.67
Bloomberg Commodity	4.71	-3.44	6.74	6.13	-0.75	2.45
Gold Spot Price	-3.28	2.18	1.17	9.30	3.47	7.60
Inflation - CPI-U	0.88	3.70	5.81	4.04	2.77	2.56

*Cambridge PE data as of 2Q23

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

Diversification Remains Key Risk Control

Periodic Table of Investment Returns

2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	3 Qtrs. 2023
Emerging Markets	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
25.55%	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%	13.07%
Non-U.S. Equity	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
20.38%	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%	6.73%
Small Cap	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	High Yield
18.33%	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%	5.86%
Non-U.S. Fixed	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	Hedge Funds
12.54%	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%	3.71%
Real Estate Funds	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	Cash Equivalent
12.00%	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%	3.60%
High Yield	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	Small Cap
11.13%	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%	2.54%
Large Cap	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	Emerging Markets
10.88%	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%	1.82%
Hedge Funds	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
9.64%	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%	-1.21%
U.S. Fixed	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	Non-U.S. Fixed
4.34%	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%	-3.20%
Cash Equivalent	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
1.33%	-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%	-8.14%

- 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

Roth Catch-Ups, DOL Advisory Opinion, & Litigation

Implementation of Roth catch-up contributions delayed

- ▶ SECURE 2.0 included a provision requiring age-50 catch-up contributions be made on a Roth basis for individuals making more than \$145,000 in the previous year.
- ▶ In August, the IRS delayed implementation of this provision from 2024 to 2026.
- ▶ Plan sponsors, recordkeepers, and payroll providers continue to engage on what and how to implement.

DOL Advisory Opinion to Citigroup

- ▶ In October, the DOL issued an Advisory Opinion stating that a program established by Citigroup that involves the payment of fees for diverse asset managers overseeing assets in the firm's retirement plans would not violate ERISA.
- ▶ The DOL said that Citigroup's payment of these fees would represent a settlor function, and the inclusion of diverse managers would not violate ERISA as long as plan fiduciaries exercised the same processes and care as with the selection and/or retention of any other asset managers.

Litigation roundup

- ▶ Litigation involving DC plans has continued apace in 2023.
- ▶ Common areas targeted by plaintiffs have included the selection and/or retention of investment options (with a recent particular focus on target date funds) and the level and competitiveness of plan fees.
- ▶ More recently, several lawsuits have challenged plan fiduciaries' use of forfeitures to offset future employer contributions rather than cover plan expenses. The cases are ongoing.
- ▶ The ongoing pace of litigation reinforces the need for plan fiduciaries to continue managing and reviewing fees, funds, and services.

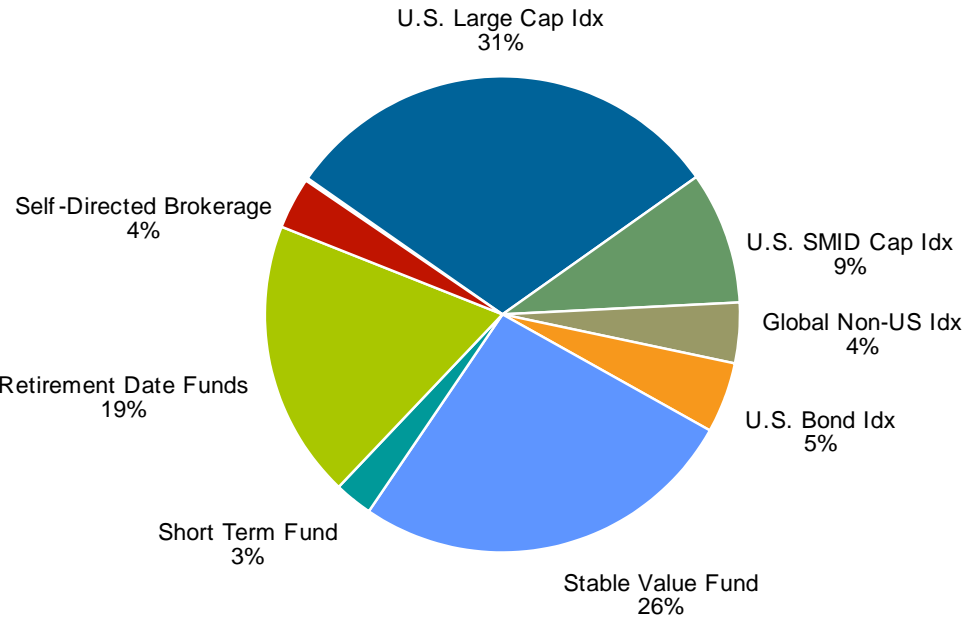
Callan

PA SERS 457(b) Plan Performance Review

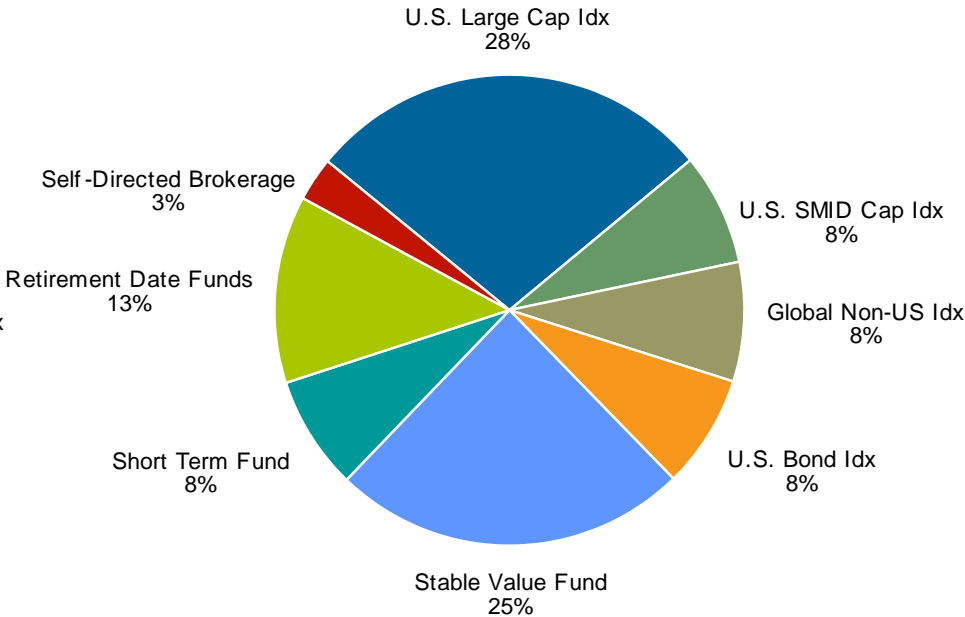
457(b) Plan Asset Allocation & Contributions

As of September 30, 2023

Asset Allocation



Contributions



Asset Allocation

As of September 30, 2023

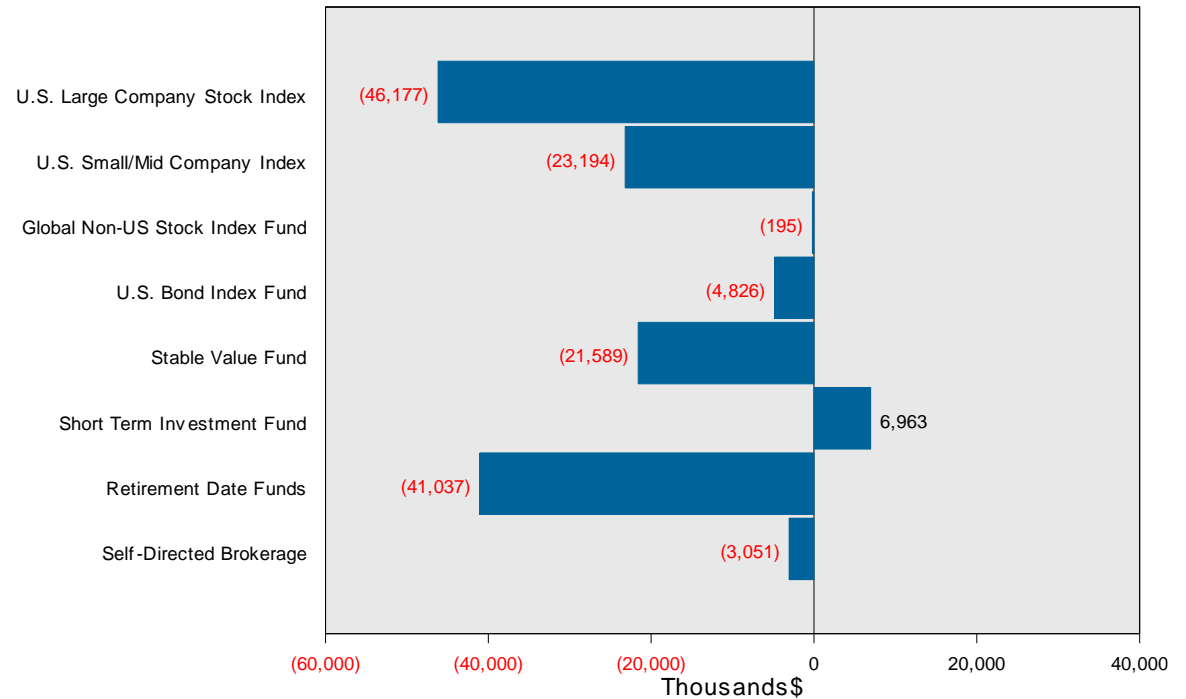
	September 30, 2023			June 30, 2023		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
SERS Retirement Date Funds	\$803,663,312	18.93%	\$(10,658,020)	\$(30,378,970)	\$844,700,301	19.29%
SERS Post Retirement Fund	202,841,589	4.78%	(7,131,518)	(7,130,723)	217,103,830	4.96%
SERS 2025 Retirement Fund	131,259,620	3.09%	(3,713,405)	(4,879,165)	139,852,190	3.19%
SERS 2030 Retirement Fund	131,098,258	3.09%	(3,043,968)	(5,063,436)	139,205,662	3.18%
SERS 2035 Retirement Fund	121,173,053	2.85%	244,443	(4,726,885)	125,655,495	2.87%
SERS 2040 Retirement Fund	79,031,827	1.86%	340,628	(3,143,725)	81,834,925	1.87%
SERS 2045 Retirement Fund	66,381,262	1.56%	648,650	(2,645,022)	68,377,634	1.56%
SERS 2050 Retirement Fund	44,415,231	1.05%	1,012,289	(1,737,318)	45,140,260	1.03%
SERS 2055 Retirement Fund	16,720,005	0.39%	685,529	(647,942)	16,682,418	0.38%
SERS 2060 Retirement Fund	6,771,589	0.16%	312,659	(261,454)	6,720,384	0.15%
SERS 2065 Retirement Fund	3,970,877	0.09%	(13,327)	(143,298)	4,127,503	0.09%
SERS U.S. Equity	\$1,678,935,279	39.54%	\$(11,735,336)	\$(57,636,041)	\$1,748,306,656	39.92%
SERS U.S. Large Company Index Fund	1,296,859,208	30.54%	(1,867,565)	(44,309,423)	1,343,036,196	30.67%
SERS U.S. SMID Company Index Fund	382,076,072	9.00%	(9,867,771)	(13,326,618)	405,270,460	9.25%
SERS Non-U.S. Equity	\$175,724,725	4.14%	\$7,425,362	\$(7,620,385)	\$175,919,747	4.02%
SERS Global Non-US Index Fund	175,724,725	4.14%	7,425,362	(7,620,385)	175,919,747	4.02%
SERS Fixed Income	\$1,437,691,386	33.86%	\$(20,997,302)	\$1,545,459	\$1,457,143,228	33.28%
SERS Short Term Investment Fund	112,389,142	2.65%	5,653,649	1,309,592	105,425,901	2.41%
SERS Stable Value Fund	1,119,837,294	26.37%	(28,799,436)	7,209,988	1,141,426,742	26.07%
SERS U.S. Bond Index Fund	205,464,949	4.84%	2,148,486	(6,974,121)	210,290,585	4.80%
Self-Directed Brokerage Account	\$149,864,187	3.53%	\$1,432,754	\$(4,483,944)	\$152,915,377	3.49%
Total Fund	\$4,245,878,889	100.0%	\$(34,532,541)	\$(98,573,880)	\$4,378,985,310	100.0%

Changes in Market Values and Contributions

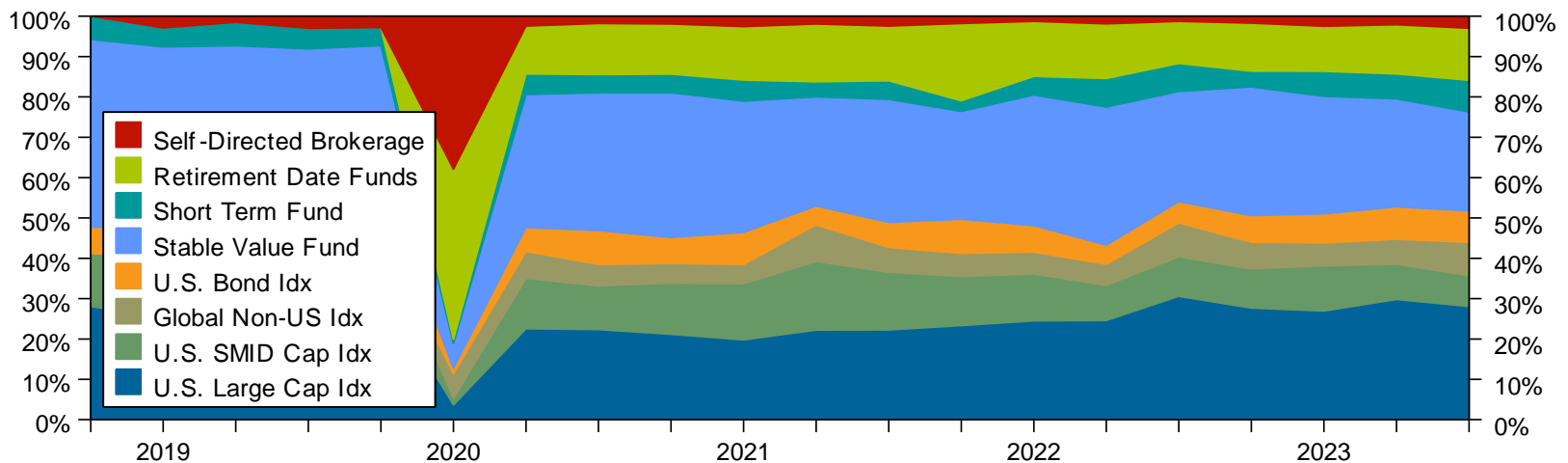
As of September 30, 2023

- The chart to the right shows the change in fund values across the various investment options for the quarter ended September 30, 2023. 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.

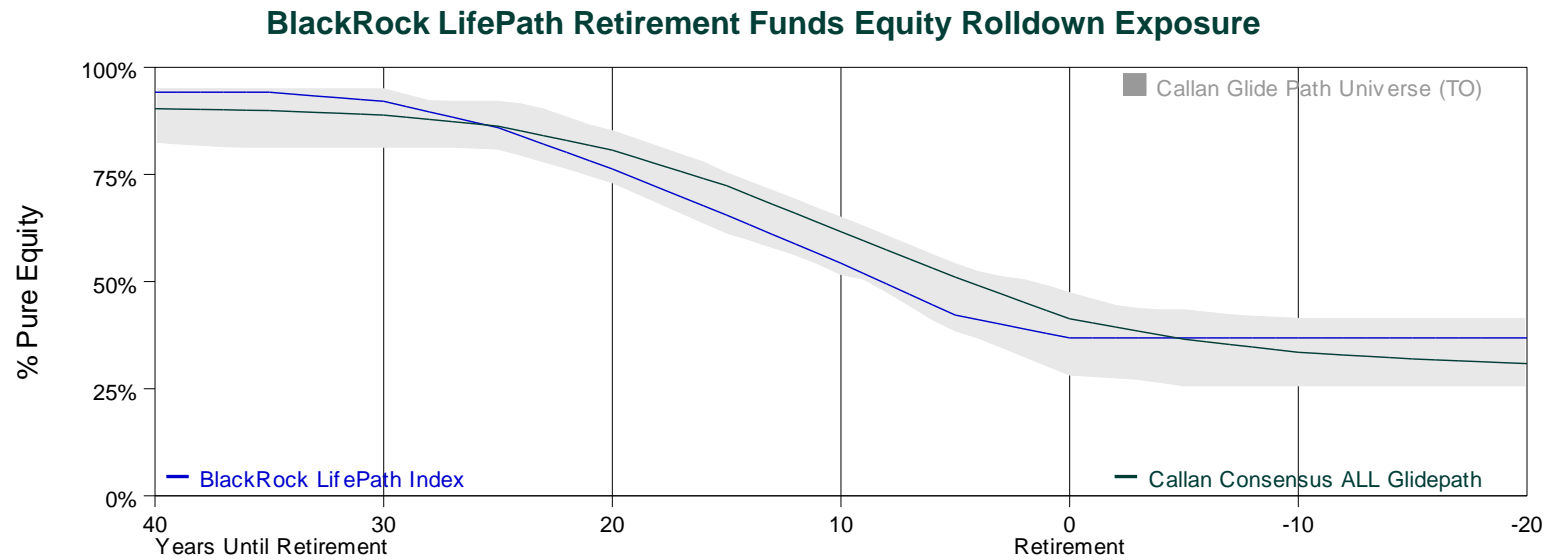
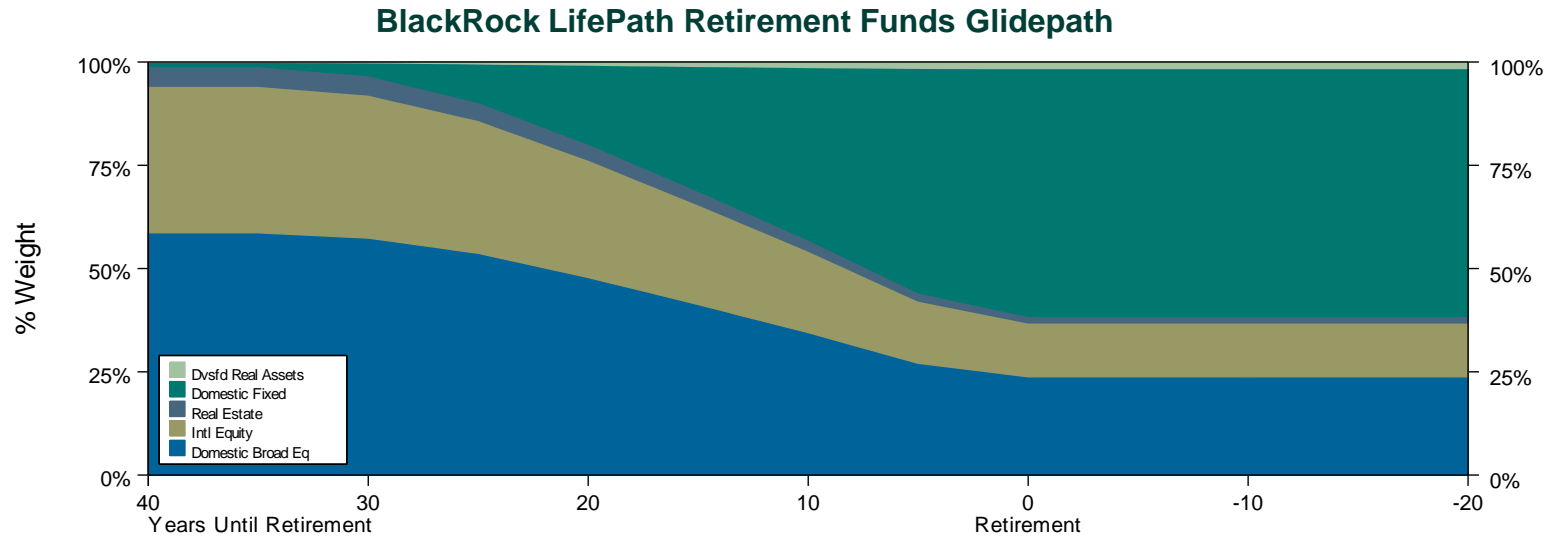


Historical Allocation of Contributions



Blackrock LifePath Retirement Funds

Glidepath and Equity Roll-down Exposure as of September 30, 2023



Cumulative Performance - Net of Fees

As of September 30, 2023

	Last Quarter	Year to Date	Last Year	Last 3 Years	Last 5 Years
Net Performance					
Retirement Date Funds					
SERS Post Retirement Fund	(3.37%)	2.61%	7.42%	0.01%	2.94%
BlackRock Post Retirement Index	(3.30%)	2.52%	7.39%	0.04%	2.94%
Callan Tgt Date Ret Inc	(2.72%)	2.70%	7.08%	0.09%	2.61%
SERS 2025 Retirement Fund	(3.55%)	3.07%	8.52%	1.06%	3.36%
BlackRock 2025 Index	(3.47%)	2.97%	8.43%	1.07%	3.34%
Callan Target Date 2025	(3.12%)	4.11%	10.05%	2.06%	3.68%
SERS 2030 Retirement Fund	(3.68%)	4.37%	11.09%	2.47%	4.12%
BlackRock 2030 Index	(3.57%)	4.32%	11.00%	2.49%	4.09%
Callan Target Date 2030	(3.34%)	4.99%	11.90%	2.98%	4.19%
SERS 2035 Retirement Fund	(3.74%)	5.63%	13.54%	3.83%	4.83%
BlackRock 2035 Index	(3.60%)	5.60%	13.40%	3.83%	4.79%
Callan Target Date 2035	(3.54%)	5.92%	13.94%	4.09%	4.82%
SERS 2040 Retirement Fund	(3.79%)	6.86%	15.94%	5.07%	5.46%
BlackRock 2040 Index	(3.63%)	6.85%	15.75%	5.05%	5.41%
Callan Target Date 2040	(3.62%)	6.87%	15.84%	5.07%	5.23%
SERS 2045 Retirement Fund	(3.80%)	7.98%	18.11%	6.10%	6.02%
BlackRock 2045 Index	(3.61%)	8.00%	17.91%	6.07%	5.94%
Callan Target Date 2045	(3.74%)	7.61%	17.13%	5.69%	5.58%
SERS 2050 Retirement Fund	(3.72%)	8.74%	19.45%	6.69%	6.35%
BlackRock 2050 Index	(3.51%)	8.79%	19.22%	6.64%	6.27%
Callan Target Date 2050	(3.76%)	7.92%	17.79%	5.94%	5.65%
SERS 2055 Retirement Fund	(3.65%)	9.03%	19.87%	6.83%	6.44%
BlackRock 2055 Index	(3.44%)	9.09%	19.66%	6.80%	6.37%
Callan Target Date 2055	(3.75%)	8.04%	18.03%	6.01%	5.78%
SERS 2060 Retirement Fund	(3.66%)	9.03%	19.88%	6.82%	6.43%
BlackRock 2060 Index	(3.44%)	9.09%	19.67%	6.79%	6.37%
Callan Target Date 2060	(3.76%)	8.03%	18.02%	6.10%	5.76%
SERS 2065 Retirement Fund	(3.67%)	9.06%	19.89%	6.79%	-
BlackRock 2065 Index	(3.45%)	9.09%	19.68%	6.79%	-
Callan Target Date 2065	(3.81%)	8.32%	18.30%	5.93%	5.92%

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 September 30, 2023

	Last 7 Years	Last 10 Years	Last 15 Years	Last 20 Years
Net Performance				
Retirement Date Funds				
SERS Post Retirement Fund	3.58%	3.88%	4.95%	-
BlackRock Post Retirement Index	3.56%	3.86%	4.94%	4.94%
Callan Tgt Date Ret Inc	3.14%	3.43%	4.43%	3.55%
SERS 2025 Retirement Fund	4.61%	4.80%	5.76%	-
BlackRock 2025 Index	4.56%	4.75%	5.74%	5.79%
Callan Target Date 2025	5.06%	5.29%	6.22%	-
SERS 2030 Retirement Fund	5.53%	5.52%	6.32%	-
BlackRock 2030 Index	5.47%	5.45%	6.29%	6.23%
Callan Target Date 2030	5.83%	5.91%	6.76%	6.49%
SERS 2035 Retirement Fund	6.42%	6.19%	6.84%	-
BlackRock 2035 Index	6.34%	6.11%	6.79%	6.62%
Callan Target Date 2035	6.61%	6.44%	7.30%	-
SERS 2040 Retirement Fund	7.20%	6.79%	7.29%	-
BlackRock 2040 Index	7.10%	6.68%	7.22%	6.95%
Callan Target Date 2040	7.18%	6.83%	7.65%	7.09%
SERS 2045 Retirement Fund	7.80%	7.26%	7.65%	-
BlackRock 2045 Index	7.68%	7.13%	7.56%	7.27%
Callan Target Date 2045	7.60%	7.21%	7.73%	-
SERS 2050 Retirement Fund	8.10%	7.51%	7.94%	-
BlackRock 2050 Index	7.98%	7.39%	7.87%	7.57%
Callan Target Date 2050	7.70%	7.30%	7.79%	-
SERS 2055 Retirement Fund	8.17%	7.58%	-	-
BlackRock 2055 Index	8.06%	7.47%	-	-
Callan Target Date 2055	7.78%	7.41%	8.28%	-
SERS 2060 Retirement Fund	8.15%	-	-	-
BlackRock 2060 Index	8.06%	-	-	-
Callan Target Date 2060	7.85%	7.65%	-	-

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 September 30, 2023

	Last Quarter	Year to Date	Last Year	Last 3 Years	Last 5 Years
Net Performance					
Domestic Equity					
SERS U.S. Large Company Index	(3.27%)	13.07%	21.61%	10.15%	9.93%
S&P 500 Index	(3.27%)	13.07%	21.62%	10.15%	9.92%
Callan Lg Cap Broad MF	(3.12%)	13.10%	21.47%	8.76%	8.61%
SERS U.S. SMID Company Index	(3.36%)	8.90%	14.62%	5.01%	4.70%
Dow Jones US Completion	(3.38%)	8.76%	14.26%	4.57%	4.40%
Callan SMID Broad MFs	(5.20%)	4.26%	12.91%	6.96%	4.44%
International Equity					
SERS Global Non-US Index	(4.09%)	5.60%	20.89%	3.89%	2.81%
MSCI ACWI ex US	(3.77%)	5.34%	20.39%	3.74%	2.58%
Callan Non US Equity MFs	(5.13%)	6.64%	23.88%	5.25%	3.07%
Domestic Fixed Income					
SERS Short Term Investment Fund	1.28%	3.63%	4.57%	1.77%	1.77%
3-month Treasury Bill	1.31%	3.60%	4.47%	1.70%	1.72%
Callan Cash Database(1)	1.36%	3.80%	4.77%	1.80%	1.87%
SERS Stable Value Fund	0.69%	1.95%	2.49%	1.95%	2.17%
3-month Treasury Bill	1.31%	3.60%	4.47%	1.70%	1.72%
Callan Stable Value SA	0.72%	2.05%	2.64%	2.16%	2.31%
SERS U.S. Bond Index Fund	(3.24%)	(1.21%)	0.66%	(5.22%)	0.10%
Blmbg Aggregate	(3.23%)	(1.21%)	0.64%	(5.21%)	0.10%
Callan Core Bond MFs	(3.05%)	(0.72%)	0.93%	(4.97%)	0.35%

(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 September 30, 2023

	Last 7 Years	Last 10 Years	Last 15 Years	Last 20 Years
Net Performance				
Domestic Equity				
SERS U.S. Large Company Index	12.25%	11.93%	11.31%	9.76%
S&P 500 Index	12.24%	11.91%	11.28%	9.72%
Callan Lg Cap Broad MF	11.48%	10.95%	10.73%	9.56%
SERS U.S. SMID Company Index	8.25%	8.03%	9.85%	9.52%
Dow Jones US Completion	7.97%	7.79%	9.63%	9.28%
Callan SMID Broad MFs	8.56%	7.76%	9.55%	9.01%
International Equity				
SERS Global Non-US Index	4.95%	3.57%	-	-
MSCI ACWI ex US	4.74%	3.35%	4.31%	6.02%
Callan Non US Equity MFs	5.03%	3.66%	5.10%	6.22%
Domestic Fixed Income				
SERS Short Term Investment Fund	1.66%	1.23%	0.96%	1.55%
3-month Treasury Bill	1.55%	1.11%	0.80%	1.41%
Callan Cash Database(1)	1.72%	1.38%	1.19%	1.76%
SERS Stable Value Fund	2.13%	2.15%	2.61%	-
3-month Treasury Bill	1.55%	1.11%	0.80%	1.41%
Callan Stable Value SA	2.28%	2.20%	2.54%	3.12%
SERS U.S. Bond Index Fund	(0.10%)	1.11%	2.47%	2.81%
Blmbg Aggregate	(0.09%)	1.13%	2.53%	2.85%
Callan Core Bond MFs	0.20%	1.32%	2.99%	3.05%

(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 September 30, 2023

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
Net of Fee Performance									
Retirement Date Funds									
SERS Post Retirement Fund Callan Tgt Date Ret Inc BlackRock Post Retirement Index	-3.4 88	7.4 36	0.0 52	2.9 28	3.6 22	3.9 19			0.08 73
SERS 2025 Retirement Fund Callan Target Date 2025 BlackRock 2025 Index	-3.5 79	8.5 83	1.1 84	3.4 68	4.6 76	4.8 74			0.08 72
SERS 2030 Retirement Fund Callan Target Date 2030 BlackRock 2030 Index	-3.7 74	11.1 74	2.5 76	4.1 55	5.5 74	5.5 74			0.08 70
SERS 2035 Retirement Fund Callan Target Date 2035 BlackRock 2035 Index	-3.7 69	13.5 63	3.8 63	4.8 49	6.4 63	6.2 72			0.08 72
SERS 2040 Retirement Fund Callan Target Date 2040 BlackRock 2040 Index	-3.8 69	15.9 46	5.1 50	5.5 31	7.2 49	6.8 56			0.08 68
SERS 2045 Retirement Fund Callan Target Date 2045 BlackRock 2045 Index	-3.8 60	18.1 22	6.1 33	6.0 23	7.8 29	7.3 45			0.08 72
SERS 2050 Retirement Fund Callan Target Date 2050 BlackRock 2050 Index	-3.7 46	19.4 6	6.7 16	6.3 12	8.1 21	7.5 39			0.08 68
SERS 2055 Retirement Fund Callan Target Date 2055 BlackRock 2055 Index	-3.7 30	19.9 6	6.8 12	6.4 9	8.2 17	7.6 42			0.08 72
SERS 2060 Retirement Fund Callan Target Date 2060 BlackRock 2060 Index	-3.7 35	19.9 10	6.8 13	6.4 12	8.2 26				0.08 75

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 September 30, 2023

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
SERS 2065 Retirement Fund Callan Target Date 2065 BlackRock 2065 Index	-3.7 35 -3.4 18	19.9 13 19.7 16	6.8 19 6.8 19						0.08 53
Domestic Equity									
SERS U.S. Large Company Index Callan Lg Cap Broad MF S&P 500 Index	-3.3 57 -3.3 57	21.6 50 21.6 50	10.2 39 10.2 39	9.9 30 9.9 31	12.2 43 12.2 43	11.9 34 11.9 35			0.02 100
SERS U.S. Small/Mid Company Index Callan SMID Broad MFs Dow Jones US Completion	-3.4 25 -3.4 26	14.6 33 14.3 40	5.0 58 4.6 61	4.7 46 4.4 52	8.2 56 8.0 59	8.0 41 7.8 49			0.03 98
International Equity									
SERS Global Non-U.S. Index Fund Callan Non US Equity MFs MSCI ACWI ex US	-4.1 38 -3.8 31	20.9 70 20.4 70	3.9 52 3.7 53	2.8 56 2.6 65	5.0 53 4.7 59	3.6 54 3.3 68			0.05 99
Domestic Fixed Income									
SERS Short Term Investment Fund Callan Cash Database 3-month Treasury Bill	1.3 74 1.3 72	4.6 68 4.5 69	1.8 55 1.7 57	1.8 76 1.7 83	1.7 66 1.5 83	1.2 77 1.1 91			0.00 100
Comments: Callan Cash Database includes STIF, enhanced cash, and money market funds.									
SERS Stable Value Fund Callan Stable Value SA 3-month Treasury Bill	0.7 86 1.3 2	2.5 80 4.5 2	2.0 77 1.7 88	2.2 67 1.7 91	2.1 67 1.5 93	2.1 65 1.1 96			0.25 63
SERS U.S. Bond Index Fund Callan Core Bond MFs Blmbg Aggregate	-3.2 71 -3.2 71	0.7 76 0.6 76	-5.2 70 -5.2 69	0.1 75 0.1 75	-0.1 85 -0.1 84	1.1 79 1.1 79			0.02 98

Returns:
 above median
 third quartile
 fourth quartile

Return Consistency:
 above median
 third quartile
 fourth quartile

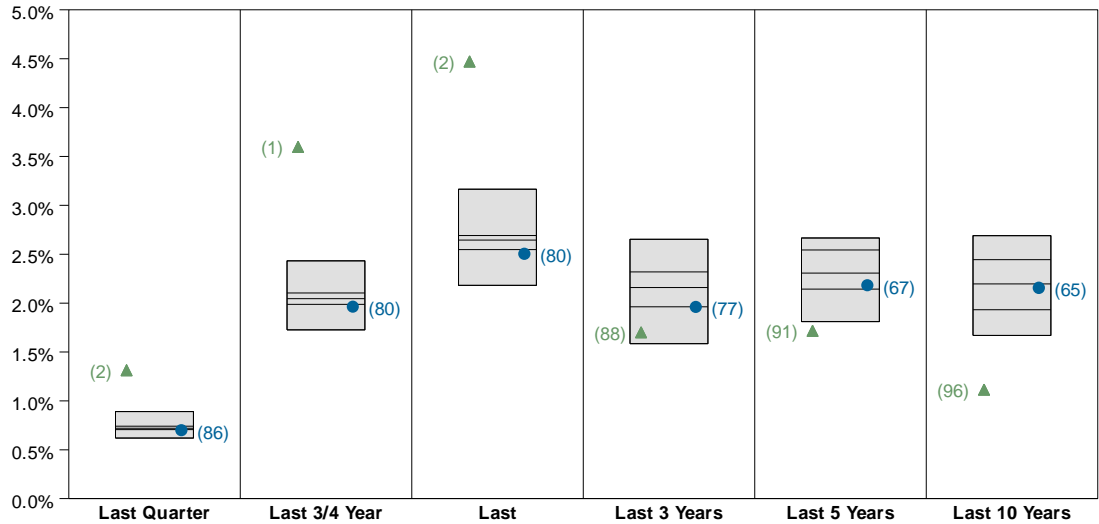
Risk Quadrant:

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 September 30, 2023

Performance vs Callan Stable Value SA (Gross)



	Last Quarter	Last 3/4 Year	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
10th Percentile	0.89	2.43	3.16	2.65	2.67	2.69
25th Percentile	0.74	2.10	2.69	2.32	2.54	2.44
Median	0.72	2.05	2.64	2.16	2.31	2.20
75th Percentile	0.71	1.99	2.55	1.96	2.14	1.93
90th Percentile	0.62	1.73	2.18	1.58	1.81	1.67
SERS Stable Value Fund ●	0.69	1.95	2.49	1.95	2.17	2.15
3-month Treasury Bill ▲	1.31	3.60	4.47	1.70	1.72	1.11

Manager Diversification*

Manager	Portfolio
Barksdale (DWDO Manager)	9.2%
Dodge & Cox	4.0%
Invesco	61.4%
Loomis Sayles	4.0%
PFM	9.1%
Ramirez (DWDO Manager)	9.1%
STIF	3.1%
Total	100%

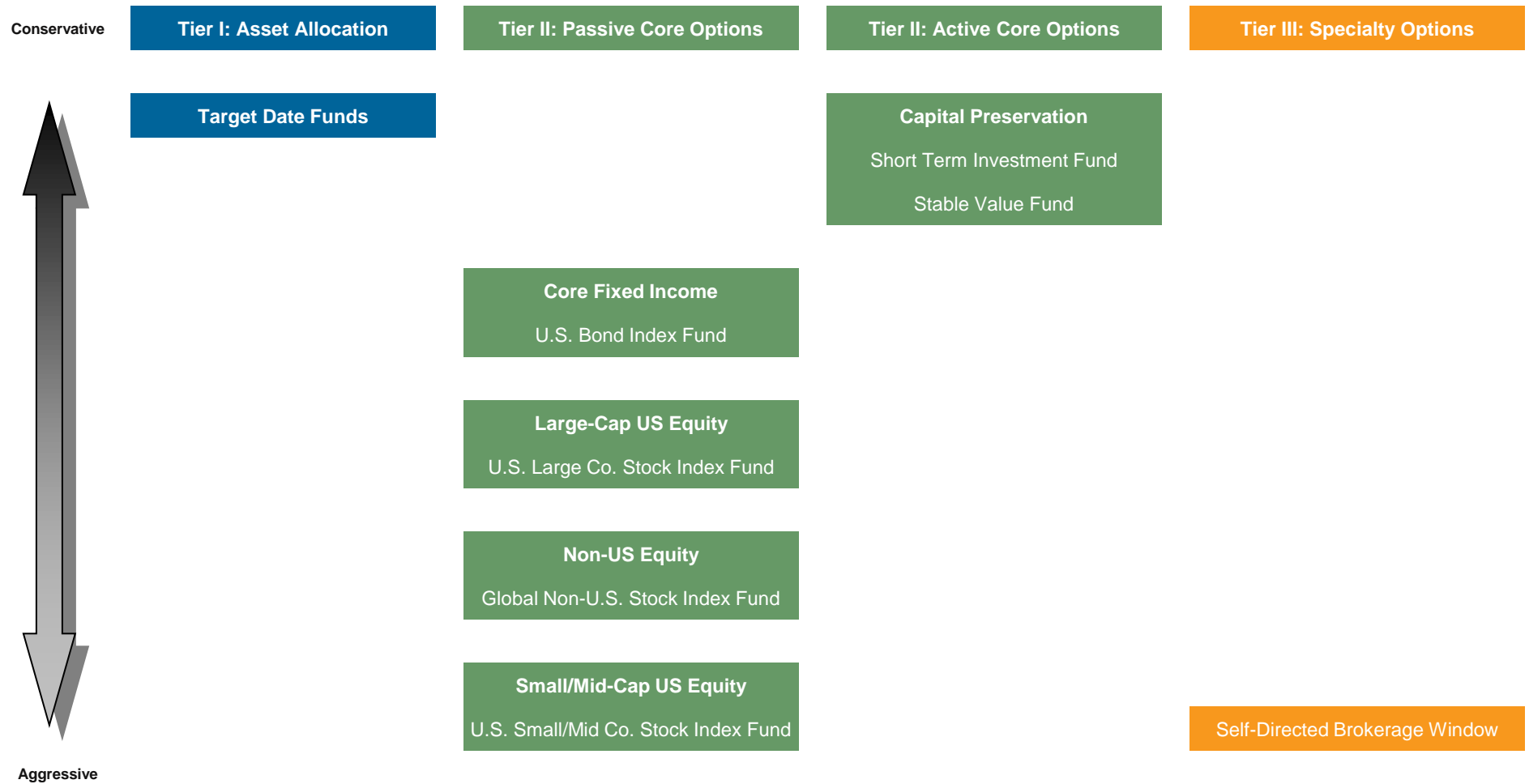
Wrap Provider Exposure*

Contract Issuer	Portfolio	Average Fee	Moody's Rating	S&P Rating	Fitch Rating
Nationwide Life Insurance	20.47%	0.15%	A1	A+	NR
Transamerica	20.38%	0.15%	A1	A+	WD
RGA	15.39%	0.15%	A1	AA-	A
Prudential Insurance Co.	15.38%	0.15%	Aa3	AA-	AA-
Pacific Life Insurance	12.85%	0.15%	Aa3	AA-	AA-
State Street Bank	12.77%	0.15%	Aa2	AA-	AA+
	97.22%	0.15%			

*Source: Invesco

457(b) Plan Investment Structure

Lineup Mapped to Callan's Clean Sheet

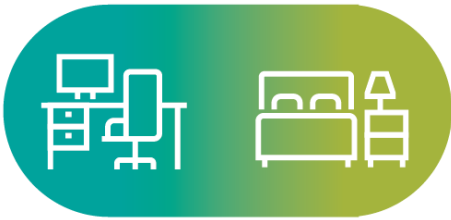


Callan

Appendix – Callan Update

Published Research Highlights from 3Q23

**Office-to-Residential
Conversions: Vast Opportunity
or Unfeasible Challenge?**



**Four-Part Series: The ESG Rule
Explained**



**Callan Discount Rate Reporter:
Regular Update on Corporate
DB Plans**



**How Your Public DB Plan's
Returns Compare: Quarterly
Update**



Recent Blog Posts

**An Investor's
Guide to the
Nasdaq-100's
Special
Rebalance**

Mark Wood

**A Deeper Dive
Into the Tradeoff
Between Return
and Risk**

Kevin Machiz

**S&P Global
Moves Away
from Numeric
ESG Credit
Indicators**

Kristin Bradbury

Additional Reading

Alternatives Focus quarterly newsletter

Active vs. Passive quarterly charts

Capital Markets Review quarterly newsletter

Monthly Updates to the Periodic Table

Market Pulse Flipbook quarterly markets update

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.

- November 1–2, 2023 – Atlanta, Georgia
- March 5–7, 2024 – Virtual Session via Zoom

Intro to Alternatives

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 alternative investments like private equity, hedge funds, and real estate and how they can play a key role in any portfolio. You will learn about the importance of allocations to alternatives and how to consider integrating, evaluating, and monitoring them.

- February 21–22, 2024 – Virtual Session via Zoom

Please visit our website at callan.com/events-education as we add dates to our 2023 and 2024 calendar!

Mark Your Calendar

2023 Regional Workshops

October 24, 2023 – New York
October 26, 2023 – Chicago

2024 National Conference

April 8–10, 2024 – San Francisco

2024 Regional Workshops

June 25, 2024 – Atlanta
June 27, 2024 – San Francisco

Watch your email for further details and an invitation.

Webinars & Research Café Sessions

Webinar: ESG Study

November 7, 2023 – Virtual Session via Zoom

Webinar: The Retirement Conundrum

November 15, 2023 – Virtual Session via Zoom

Research Café: Conversion of Commercial Real Estate

December 6, 2023 – Virtual Session via Zoom

Important Disclosures

Information contained in this document may include confidential, trade secret and/or proprietary information of Callan and the client. It is incumbent upon the user to maintain such information in strict confidence. Neither this document nor any specific information contained herein is to be used other than by the intended recipient for its intended purpose.

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.

This 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 statements made herein may include forward-looking statement 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 disclaims any responsibility 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 or 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.

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.

Any decision you make on the basis of this document is sole responsibility of the client, as the intended recipient, and it is incumbent upon you 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.