

May 2023



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

First Quarter 2023

Executive Summary

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Callan

Market Environment

Equity and Fixed Income Markets Up Together in 4Q22 and 1Q23

Declines for stocks and bonds in first three quarters of 2022 eased by market rebound

S&P 500 up 7.5% in both 1Q23 and 4Q22.

- Loss through first three quarters of 2022 was 23.8%; rebound in last two quarters reduced the loss to -9.7%. Similar loss reduction across all equity market segments: developed, emerging, small cap

Fixed income recovered as high inflation began to ease, leading to speculation about interest rates

- Bloomberg Aggregate: up 3% in 1Q, after a 1.9% rise in 4Q22, lowering the loss since the start of 2022 to 8.4%
- CPI-U: +5% year-over year for 1Q, down from 6.5% for the year ended Dec. 2022
- ▶ Inflation hit the highest rate (9%) in decades in June.
- ▶ Economic data show growth slowed in 2022; GDP gained only 1.1% in 1Q
 - Job market remains solid, providing support to Fed efforts to fight inflation

Returns for Periods ended 3/31/23

	Quarter	Year to Date	1 Year	5 Years	10 Years	25 Years
U.S. Equity						
Russell 3000	7.18	7.18	-8.58	10.45	11.73	7.45
S&P 500	7.50	7.50	-7.73	11.19	12.24	7.39
Russell 2000	2.74	2.74	-11.61	4.71	8.04	6.84
Global ex-U.S. Equity						
MSCI World ex USA	8.02	8.02	-2.74	3.80	4.91	4.39
MSCI Emerging Markets	3.96	3.96	-10.70	-0.91	2.00	--
MSCI ACWI ex USA Small Cap	4.70	4.70	-10.37	1.67	5.06	6.45
Fixed Income						
Bloomberg Aggregate	2.96	2.96	-4.78	0.91	1.36	4.03
90-day T-Bill	1.07	1.07	2.50	1.41	0.87	1.90
Bloomberg Long Gov/Credit	5.76	5.76	-13.40	0.63	2.35	5.56
Bloomberg Global Agg ex-US	3.06	3.06	-10.72	-3.17	-0.99	2.80
Real Estate						
NCREIF Property	-1.81	-1.81	-1.63	6.71	8.34	8.79
FTSE Nareit Equity	2.68	2.68	-19.22	6.02	5.97	8.01
Alternatives						
CS Hedge Fund Index	0.16	0.16	-0.89	4.18	3.89	5.54
Cambridge Private Equity*	0.80	0.80	-8.16	16.14	15.12	14.10
Bloomberg Commodity	-5.36	-5.36	-12.49	5.36	-1.72	1.80
Gold Spot Price	8.76	8.76	1.65	8.40	2.21	7.81
Inflation - CPI-U	1.70	1.70	4.98	3.88	2.63	2.51

*Cambridge PE data as of 4Q22.

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	1 Qtr. 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	Non-U.S. Equity
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%	8.02%
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	Large Cap
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%	7.50%
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	Emerging Markets
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%	3.96%
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	High Yield
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%	3.57%
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	Non-U.S. Fixed
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%	3.06%
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	U.S. Fixed
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%	2.96%
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	Small Cap
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%	2.74%
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	Cash Equivalent
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%	1.07%
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	Hedge Funds
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%	0.16%
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%	-3.38%

- 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

2023 DC Trends Survey highlights

Overview

- ▶ Nearly three-quarters of the 99 respondents had more than \$1 billion in plan assets. More than two-thirds were corporate organizations.
- ▶ The top areas of fiduciary focus were plan governance and process; investment structure evaluation; and investment management fees.

Continued Pressure on Plan Fees

- ▶ Three-quarters of plan sponsors calculated their all-in administration DC plan fees within the past 12 months. When calculating fees, over half also evaluated sources of indirect revenue.
- ▶ Two-thirds are either somewhat or very likely to conduct a fee study in 2023.
- ▶ Nearly half of sponsors cut fees following their recent fee review. Four in 10 are likely to move to lower-cost investment vehicles in 2023.

Investment Trends

- ▶ Over 90% had a mix of active and passive investment funds. Purely passive (8%) remained rare, and none had a purely active menu.
- ▶ Collective investment trusts (84%) and mutual funds (79%) were the most prevalent investment vehicles.
- ▶ Only 16% of sponsors reported changing the number of funds in 2022. Of those that made changes, more increased the number of funds.
- ▶ 97% of plans used a TDF as their default, an all-time high. Over 8 in 10 used a TDF implementation that was at least partially indexed.

SECURE 2.0

- ▶ There were nearly 100 provisions included in the SECURE 2.0 Act, passed in 2022. The two initiatives of most interest to respondents were increasing the catch-up amount for older individuals and increasing the starting age for required minimum distributions to age 75.

The [full survey](#) contains additional detail about these and other areas as well as an extensive breakdowns of the data we gathered.

ESG and Proxy Voting Rule

President Biden vetoes congressional bill to overturn ESG and proxy voting rule

Summary

On March 20, 2023, President Biden vetoed legislation that would have blocked the enactment of the U.S. Department of Labor (DOL) final rule released on Nov. 22, 2022. Commonly known as the ESG rule, it clarifies fiduciary responsibilities under the Employee Retirement Income Security Act (ERISA) for selecting investments and exercising shareholder rights such as proxy voting.

Background

Congress passed a [joint resolution](#) to overturn the DOL rule, titled "Final Rule on Prudence and Loyalty in Selecting Plan Investments and Exercising Shareholder Rights," which came into effect on Jan. 30, 2023.

The Congressional Review Act allows Congress to overturn a final rule by a federal agency in the first 60 legislative days after the rule comes into effect. The bill to overturn the Final Rule passed largely along party lines, with Republicans supporting the bill and Democrats opposing it in the House 216-204, and Senator Joe Manchin (D-West Virginia) and Senator Jon Tester (D-Montana) joining Republicans to oppose the rule in the Senate. Republicans argued that the rule placed advancing a political agenda ahead of the goal of maximizing risk-return to ensure the retirement savings of American workers.

Bottom Line

In the face of political challenges, the DOL, including Assistant Secretary for Employee Benefits Security Lisa Gomez, has repeatedly stated that the Final Rule does not prescribe that ESG factors must be considered and has the intent of being neutral on ESG consideration and integration in ERISA plan investments. Moreover, the bedrock principles of the duties of prudence and loyalty to plan participants and beneficiaries remain unchanged.

The topic of ESG is increasingly politicized at the federal and state political levels, and legal challenges to the Final Rule remain, including a lawsuit from 25 Republican state attorneys general. Callan will continue to follow emerging guidance on the Final Rule on behalf of our clients.

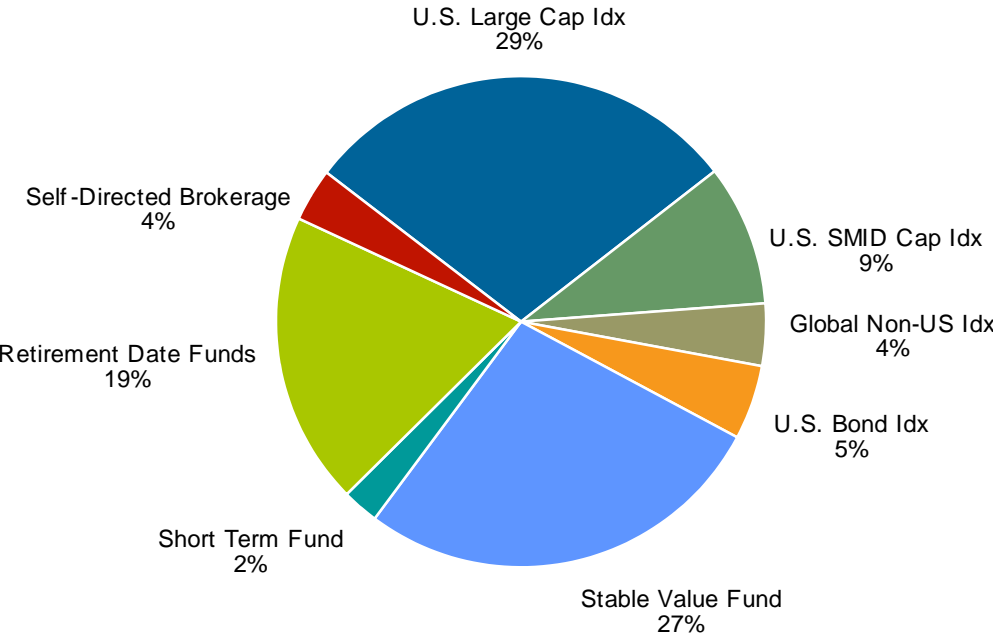
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PA SERS 457(b) Plan Performance Review

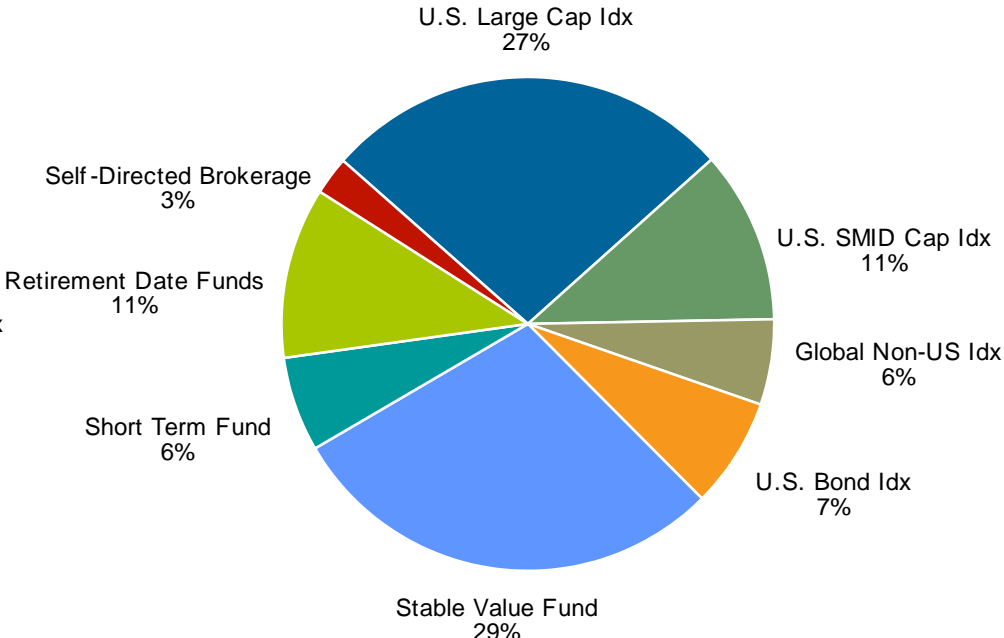
457(b) Plan Asset Allocation & Contributions

As of March 31, 2023

Asset Allocation



Contributions



Asset Allocation

As of March 31, 2023

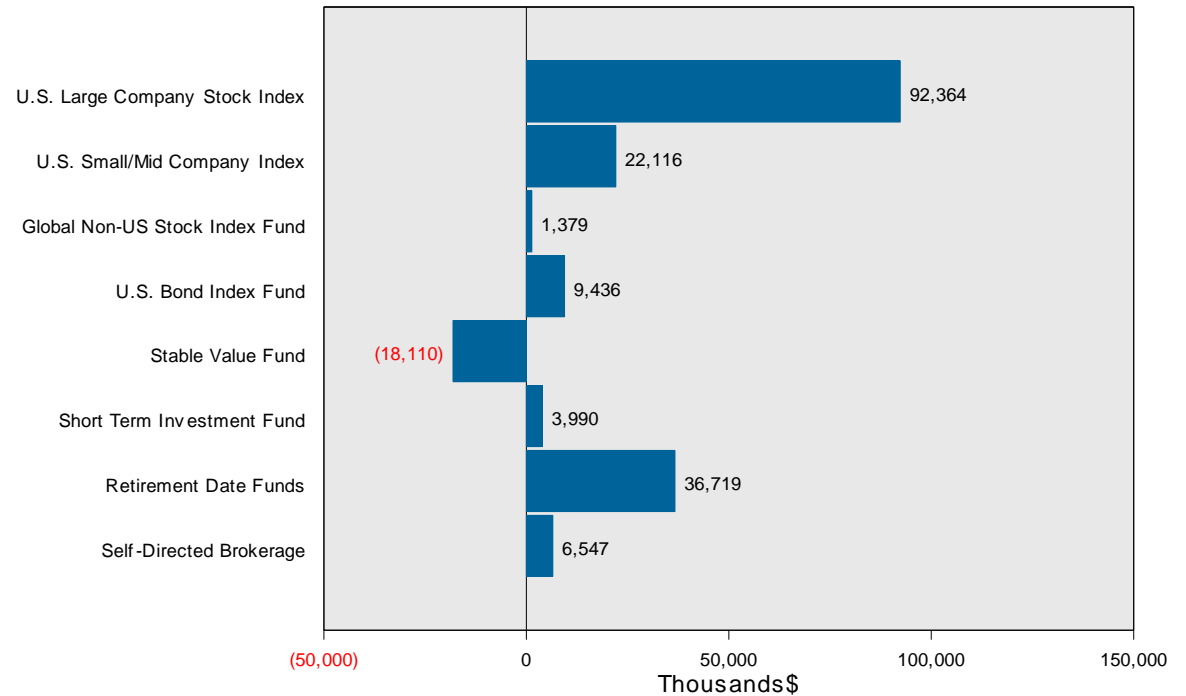
	March 31, 2023			December 31, 2022		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
SERS Retirement Date Funds	\$820,003,509	19.35%	\$(4,576,152)	\$41,294,962	\$783,284,699	19.18%
SERS Post Retirement Fund	216,029,586	5.10%	(3,560,726)	9,173,673	210,416,638	5.15%
SERS 2025 Retirement Fund	138,869,155	3.28%	(2,758,267)	6,289,362	135,338,060	3.31%
SERS 2030 Retirement Fund	135,365,004	3.19%	(438,953)	6,736,405	129,067,552	3.16%
SERS 2035 Retirement Fund	120,507,279	2.84%	(359,710)	6,510,031	114,356,957	2.80%
SERS 2040 Retirement Fund	77,503,027	1.83%	125	4,499,422	73,003,480	1.79%
SERS 2045 Retirement Fund	64,488,486	1.52%	862,574	3,918,984	59,706,928	1.46%
SERS 2050 Retirement Fund	41,695,803	0.98%	1,223,189	2,575,538	37,897,076	0.93%
SERS 2055 Retirement Fund	15,253,787	0.36%	426,606	938,932	13,888,250	0.34%
SERS 2060 Retirement Fund	6,013,889	0.14%	254,100	369,392	5,390,397	0.13%
SERS 2065 Retirement Fund	4,277,493	0.10%	(225,090)	283,223	4,219,359	0.10%
SERS U.S. Equity	\$1,625,135,754	38.35%	\$8,117,355	\$106,362,185	\$1,510,656,214	36.99%
SERS U.S. Large Company Index Fund	1,231,357,586	29.05%	7,457,817	84,906,045	1,138,993,725	27.89%
SERS U.S. SMID Company Index Fund	393,778,168	9.29%	659,539	21,456,140	371,662,489	9.10%
SERS Non-U.S. Equity	\$172,460,715	4.07%	\$(11,066,531)	\$12,445,601	\$171,081,645	4.19%
SERS Global Non-US Index Fund	172,460,715	4.07%	(11,066,531)	12,445,601	171,081,645	4.19%
SERS Fixed Income	\$1,470,731,818	34.70%	\$(18,136,617)	\$13,452,907	\$1,475,415,528	36.13%
SERS Short Term Investment Fund	100,836,592	2.38%	2,983,691	1,006,417	96,846,484	2.37%
SERS Stable Value Fund	1,162,640,326	27.43%	(24,804,153)	6,694,351	1,180,750,128	28.91%
SERS U.S. Bond Index Fund	207,254,900	4.89%	3,683,845	5,752,139	197,818,916	4.84%
Self-Directed Brokerage Account	\$149,732,108	3.53%	\$(852,586)	\$7,399,976	\$143,184,718	3.51%
Total Fund	\$4,238,063,905	100.0%	\$(26,514,530)	\$180,955,631	\$4,083,622,804	100.0%

Changes in Market Values and Contributions

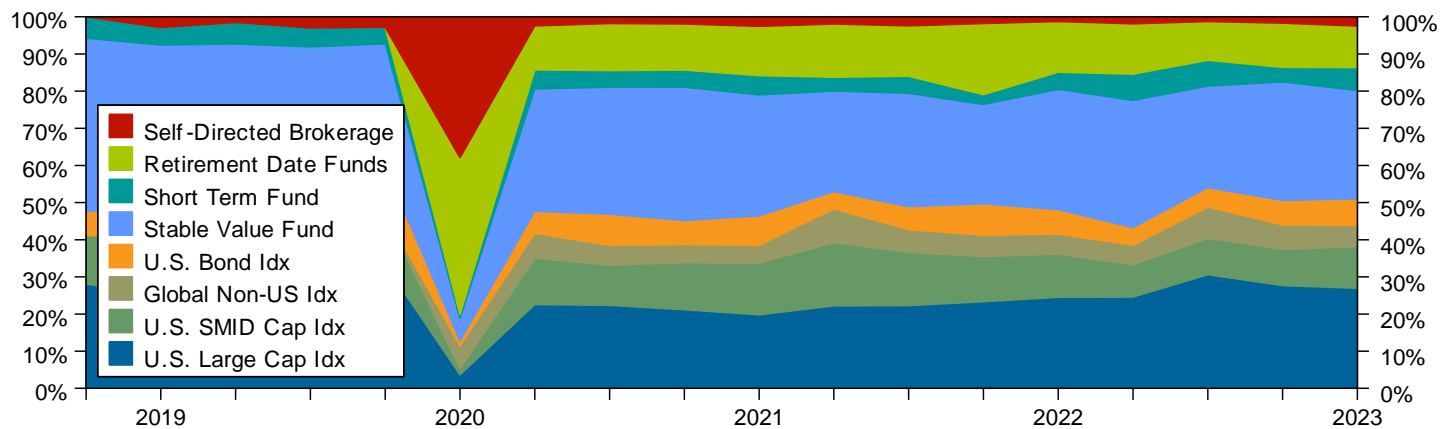
As of March 31, 2023

- The chart to the right shows the change in fund values across the various investment options for the quarter ended March 31, 2023. The change in value for each fund is the result of a combination of 3 factors.

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



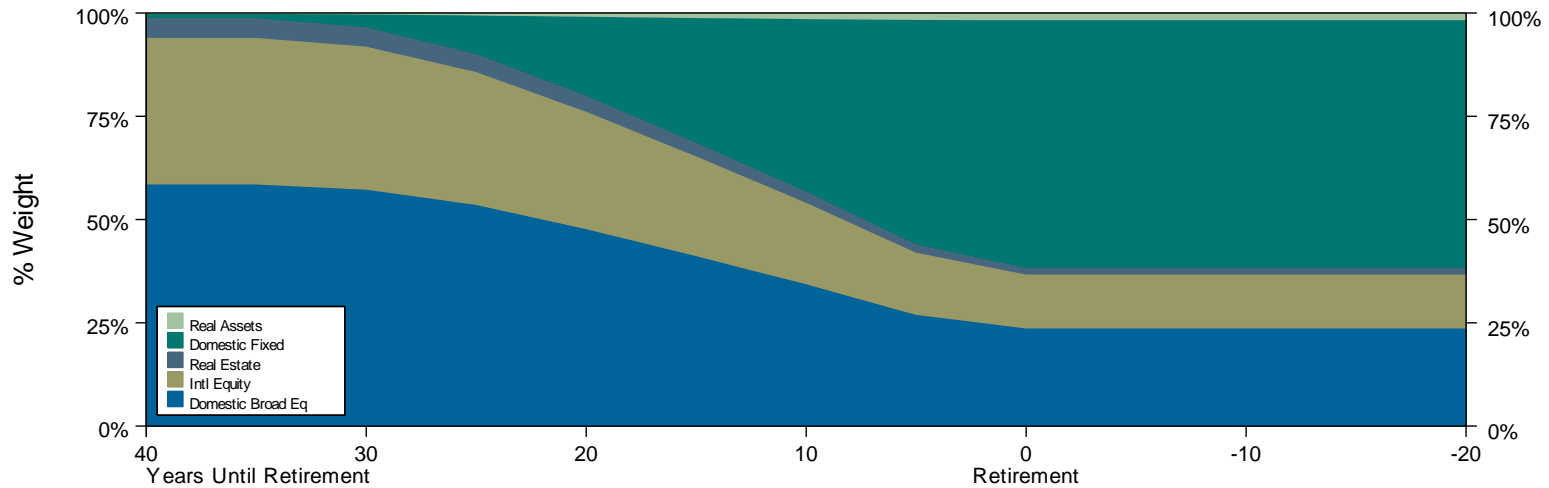
Historical Allocation of Contributions



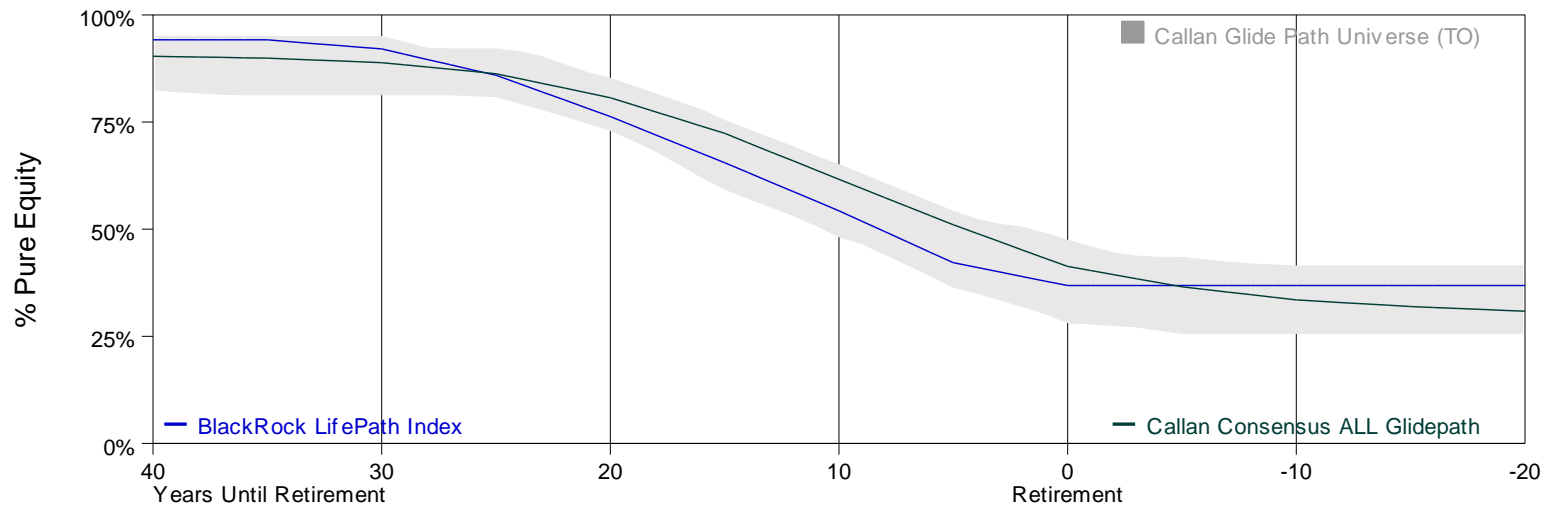
Blackrock LifePath Retirement Funds

Glidepath and Equity Roll-down Exposure as of March 31, 2023

BlackRock LifePath Retirement Funds Glidepath



BlackRock LifePath Retirement Funds Equity Roll-down Exposure



Cumulative Performance - Net of Fees

As of March 31, 2023

	Last Quarter	Last 1 Year	Last 3 Years	Last 5 Years
Net Performance				
Retirement Date Funds				
SERS Post Retirement Fund	4.42%	(6.05%)	4.98%	3.78%
BlackRock Post Retirement Index	4.28%	(6.11%)	4.96%	3.76%
Callan Tgt Date Ret Inc	3.96%	(5.03%)	4.70%	3.25%
SERS 2025 Retirement Fund	4.71%	(6.44%)	6.96%	4.35%
BlackRock 2025 Index	4.57%	(6.58%)	6.93%	4.32%
Callan Target Date 2025	4.72%	(5.82%)	8.00%	4.56%
SERS 2030 Retirement Fund	5.26%	(6.72%)	9.11%	5.08%
BlackRock 2030 Index	5.13%	(6.92%)	9.08%	5.04%
Callan Target Date 2030	5.30%	(6.19%)	9.67%	5.07%
SERS 2035 Retirement Fund	5.74%	(7.01%)	11.18%	5.76%
BlackRock 2035 Index	5.62%	(7.29%)	11.13%	5.70%
Callan Target Date 2035	5.74%	(6.60%)	11.48%	5.65%
SERS 2040 Retirement Fund	6.21%	(7.26%)	13.06%	6.35%
BlackRock 2040 Index	6.10%	(7.64%)	12.98%	6.27%
Callan Target Date 2040	6.10%	(6.71%)	12.84%	6.06%
SERS 2045 Retirement Fund	6.60%	(7.44%)	14.55%	6.83%
BlackRock 2045 Index	6.49%	(7.88%)	14.44%	6.72%
Callan Target Date 2045	6.33%	(6.93%)	14.08%	6.33%
SERS 2050 Retirement Fund	6.80%	(7.53%)	15.28%	7.06%
BlackRock 2050 Index	6.70%	(8.01%)	15.16%	6.96%
Callan Target Date 2050	6.42%	(6.96%)	14.18%	6.43%
SERS 2055 Retirement Fund	6.85%	(7.55%)	15.39%	7.11%
BlackRock 2055 Index	6.75%	(8.04%)	15.29%	7.01%
Callan Target Date 2055	6.49%	(7.09%)	14.34%	6.46%
SERS 2060 Retirement Fund	6.86%	(7.55%)	15.38%	7.10%
BlackRock 2065 Index	6.75%	(8.04%)	15.29%	7.01%
Callan Target Date 2060	6.51%	(7.05%)	14.38%	6.46%
SERS 2065 Retirement Fund	6.89%	(7.53%)	15.32%	-
BlackRock 2065 Index	6.76%	(8.04%)	15.28%	-
Callan Target Date 2065	6.56%	(7.35%)	14.60%	6.68%

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 March 31, 2023

	Last 7 Years	Last 10 Years	Last 15 Years	Last 20 Years
Net Performance				
Retirement Date Funds				
SERS Post Retirement Fund	4.50%	4.17%	4.59%	-
BlackRock Post Retirement Index	4.47%	4.14%	4.57%	5.49%
Callan Tgt Date Ret Inc	3.92%	3.63%	3.99%	4.51%
SERS 2025 Retirement Fund	5.63%	5.29%	5.08%	-
BlackRock 2025 Index	5.57%	5.23%	5.03%	6.67%
Callan Target Date 2025	5.98%	5.79%	5.50%	-
SERS 2030 Retirement Fund	6.50%	5.99%	5.51%	-
BlackRock 2030 Index	6.43%	5.92%	5.45%	7.13%
Callan Target Date 2030	6.78%	6.51%	5.93%	7.44%
SERS 2035 Retirement Fund	7.34%	6.66%	5.92%	-
BlackRock 2035 Index	7.24%	6.56%	5.83%	7.54%
Callan Target Date 2035	7.48%	7.11%	6.36%	-
SERS 2040 Retirement Fund	8.07%	7.23%	6.25%	-
BlackRock 2040 Index	7.94%	7.11%	6.14%	7.89%
Callan Target Date 2040	8.02%	7.50%	6.69%	8.12%
SERS 2045 Retirement Fund	8.60%	7.68%	6.50%	-
BlackRock 2045 Index	8.45%	7.54%	6.37%	8.24%
Callan Target Date 2045	8.37%	7.74%	6.68%	-
SERS 2050 Retirement Fund	8.83%	7.92%	6.73%	-
BlackRock 2050 Index	8.68%	7.78%	6.61%	8.60%
Callan Target Date 2050	8.47%	7.87%	6.87%	-
SERS 2055 Retirement Fund	8.86%	8.01%	-	-
BlackRock 2055 Index	8.72%	7.88%	-	-
Callan Target Date 2055	8.56%	7.96%	7.42%	-

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 March 31, 2023

	Last Quarter	Last 1 Year	Last 3 Years	Last 5 Years
Net Performance				
Domestic Equity				
SERS U.S. Large Company Index	7.50%	(7.74%)	18.61%	11.20%
S&P 500 Index	7.50%	(7.73%)	18.60%	11.19%
Callan Lg Cap Broad MF	6.72%	(8.41%)	17.50%	9.73%
SERS U.S. SMID Company Index	5.84%	(13.90%)	17.43%	6.23%
Dow Jones US Completion	5.82%	(14.26%)	17.04%	5.93%
Callan SMID Broad MFs	5.32%	(8.75%)	19.13%	6.85%
International Equity				
SERS Global Non-US Index	7.37%	(4.28%)	12.41%	2.74%
MSCI ACWI ex US	6.87%	(5.07%)	11.80%	2.47%
Callan Non US Equity MFs	9.42%	(0.60%)	13.23%	3.12%
Domestic Fixed Income				
SERS Short Term Investment Fund	1.10%	2.68%	1.01%	1.48%
3-month Treasury Bill	1.07%	2.50%	0.89%	1.41%
Callan Cash Database(1)	1.16%	2.70%	1.12%	1.58%
SERS Stable Value Fund	0.61%	1.97%	1.89%	2.14%
3-month Treasury Bill	1.07%	2.50%	0.89%	1.41%
Callan Stable Value SA	0.64%	2.19%	2.02%	2.24%
SERS U.S. Bond Index Fund	2.97%	(4.79%)	(2.79%)	0.91%
Blmbg Aggregate	2.96%	(4.78%)	(2.77%)	0.91%
Callan Core Bond MFs	3.29%	(5.02%)	(1.79%)	1.17%

(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 March 31, 2023

	Last 7 Years	Last 10 Years	Last 15 Years	Last 20 Years
Net Performance				
Domestic Equity				
SERS U.S. Large Company Index	12.43%	12.25%	10.09%	10.41%
S&P 500 Index	12.42%	12.24%	10.06%	10.37%
Callan Lg Cap Broad MF	11.66%	11.33%	9.55%	10.11%
SERS U.S. SMID Company Index	9.40%	9.01%	9.07%	10.82%
Dow Jones US Completion	9.13%	8.77%	8.82%	10.61%
Callan SMID Broad MFs	9.91%	8.98%	9.11%	10.46%
International Equity				
SERS Global Non-US Index	6.20%	4.42%	-	-
MSCI ACWI ex US	5.86%	4.17%	2.62%	7.50%
Callan Non US Equity MFs	6.17%	4.98%	3.58%	7.71%
Domestic Fixed Income				
SERS Short Term Investment Fund	1.34%	0.99%	0.88%	-
3-month Treasury Bill	1.21%	0.87%	0.69%	1.31%
Callan Cash Database(1)	1.42%	1.14%	1.17%	1.66%
SERS Stable Value Fund	2.08%	2.14%	2.68%	-
3-month Treasury Bill	1.21%	0.87%	0.69%	1.31%
Callan Stable Value SA	2.22%	2.16%	2.59%	3.14%
SERS U.S. Bond Index Fund	0.87%	1.34%	2.66%	3.14%
Blmbg Aggregate	0.88%	1.36%	2.71%	3.18%
Callan Core Bond MFs	1.17%	1.51%	3.06%	3.39%

(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 March 31, 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	4.4 26	-6.0 82	5.0 39	3.8 25	4.5 19	4.2 20			0.08 74
BlackRock Post Retirement NL Index	4.3 37	-6.1 85	5.0 40	3.8 26	4.5 19	4.1 21			
SERS 2025 Retirement Fund Callan Target Date 2025	4.7 51	-6.4 72	7.0 81	4.4 61	5.6 72	5.3 76			0.08 72
BlackRock 2025 NL Index	4.6 62	-6.6 80	6.9 81	4.3 63	5.6 74	5.2 78			
SERS 2030 Retirement Fund Callan Target Date 2030	5.3 52	-6.7 66	9.1 72	5.1 49	6.5 68	6.0 80			0.08 70
BlackRock 2030 NL Index	5.1 56	-6.9 81	9.1 73	5.0 52	6.4 72	5.9 82			
SERS 2035 Retirement Fund Callan Target Date 2035	5.7 48	-7.0 66	11.2 58	5.8 41	7.3 59	6.7 74			0.08 72
BlackRock 2035 NL Index	5.6 56	-7.3 83	11.1 58	5.7 45	7.2 69	6.6 80			
SERS 2040 Retirement Fund Callan Target Date 2040	6.2 38	-7.3 69	13.1 43	6.3 27	8.1 43	7.2 73			0.08 68
BlackRock 2040 NL Index	6.1 51	-7.6 85	13.0 45	6.3 32	7.9 60	7.1 76			
SERS 2045 Retirement Fund Callan Target Date 2045	6.6 26	-7.4 71	14.5 26	6.8 22	8.6 32	7.7 58			0.08 72
BlackRock 2045 NL Index	6.5 37	-7.9 89	14.4 29	6.7 25	8.4 46	7.6 68			
SERS 2050 Retirement Fund Callan Target Date 2050	6.8 21	-7.5 70	15.3 8	7.1 13	8.8 21	7.9 45			0.08 68
BlackRock 2050 NL Index	6.7 30	-8.0 88	15.2 10	7.0 18	8.7 32	7.8 57			
SERS 2055 Retirement Fund Callan Target Date 2055	6.8 18	-7.6 67	15.4 7	7.1 13	8.9 18	8.0 44			0.08 76
BlackRock 2055 NL Index	6.7 30	-8.0 91	15.3 10	7.0 15	8.7 37	7.9 57			
SERS 2060 Retirement Fund Callan Target Date 2060	6.9 23	-7.5 64	15.4 12	7.1 12	8.8 31				0.08 75
BlackRock 2060 NL Index	6.8 35	-8.0 88	15.3 15	7.0 16	8.7 47				

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).

Performance Summary & Expense Ratios as of March 31, 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	6.9 23	-7.5 55	15.3 17						0.08 56
BlackRock 2065 NL Index	6.8 33	-8.0 84	15.3 18						
Domestic Equity									
SERS U.S. Large Company Index Callan Lg Cap Broad MF	7.5 46	-7.7 46	18.6 30	11.2 27	12.4 37	12.3 36			0.02 100
S&P 500 Index	7.5 46	-7.7 46	18.6 30	11.2 27	12.4 37	12.2 37			
SERS U.S. Small/Mid Company Index Callan SMID Broad MFs	5.8 41	-13.9 82	17.4 57	6.2 61	9.4 57	9.0 49			0.03 98
Dow Jones US Completion	5.8 42	-14.3 85	17.0 59	5.9 72	9.1 59	8.8 56			
International Equity									
SERS Global Non-U.S. Index Fund Callan Non US Equity MFs	7.4 79	-4.3 74	12.4 60	2.7 63	6.2 49	4.4 71			0.05 99
MSCI ACWI ex US	6.9 84	-5.1 77	11.8 69	2.5 67	5.9 54	4.2 78			
Domestic Fixed Income									
SERS Short Term Investment Fund Callan Cash Database	1.1 85	2.7 52	1.0 75	1.5 71	1.3 73	1.0 79			0.00 100
3-month Treasury Bill	1.1 88	2.5 57	0.9 80	1.4 89	1.2 92	0.9 93			
Comments: Callan Cash Database includes STIF, enhanced cash, and money market funds.									
SERS Stable Value Fund Callan Stable Value SA	0.6 80	2.0 78	1.9 72	2.1 63	2.1 68	2.1 62			0.29 40
3-month Treasury Bill	1.1 1	2.5 13	0.9 96	1.4 94	1.2 96	0.9 97			
SERS U.S. Bond Index Fund Callan Core Bond MFs	3.0 78	-4.8 36	-2.8 98	0.9 70	0.9 91	1.3 81			0.02 98
Bimbg Aggregate	3.0 79	-4.8 35	-2.8 98	0.9 71	0.9 91	1.4 75			

Returns:
■ above median
■ third quartile
■ fourth quartile

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

Risk Quadrant:

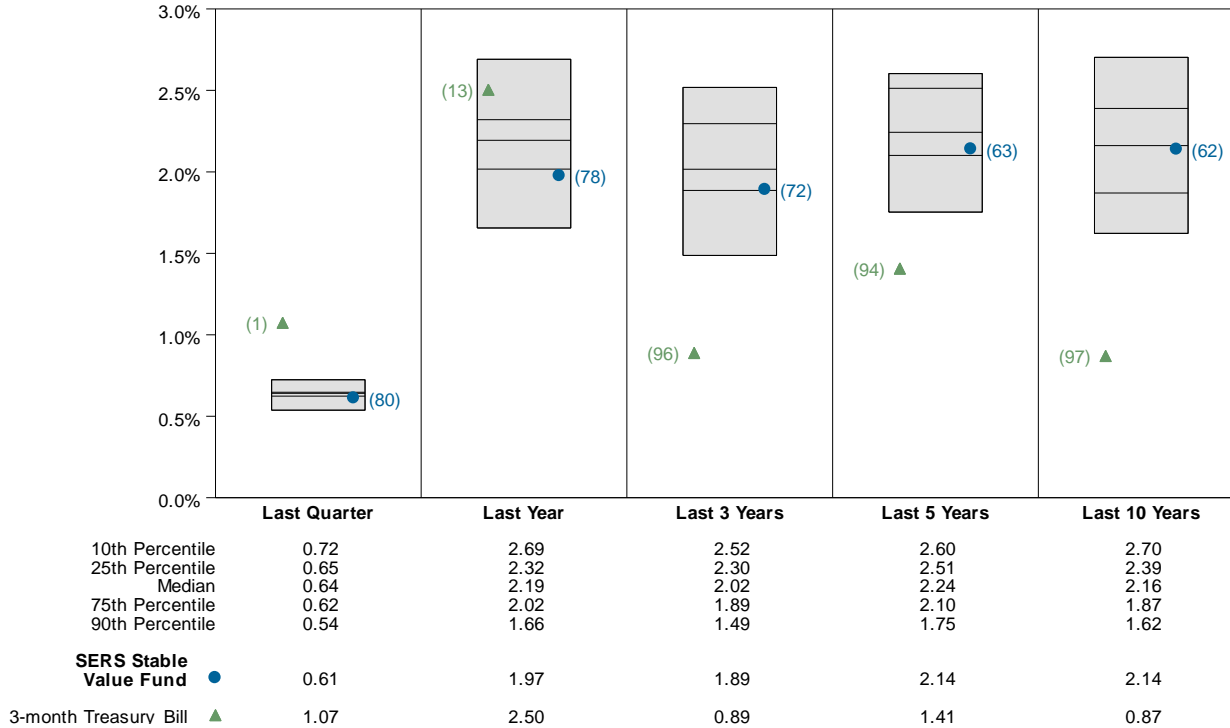
 Return
 Risk

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).

Stable Value Fund as of March 31, 2023

Performance vs Callan Stable Value SA (Gross)



Manager Diversification*

Manager	Portfolio
Barksdale (DWDO Manager)	9.3%
Dodge & Cox	4.1%
Invesco	61.5%
Loomis Sayles	4.1%
PFM	9.2%
Ramirez (DWDO Manager)	9.2%
STIF	2.7%
Total	100%

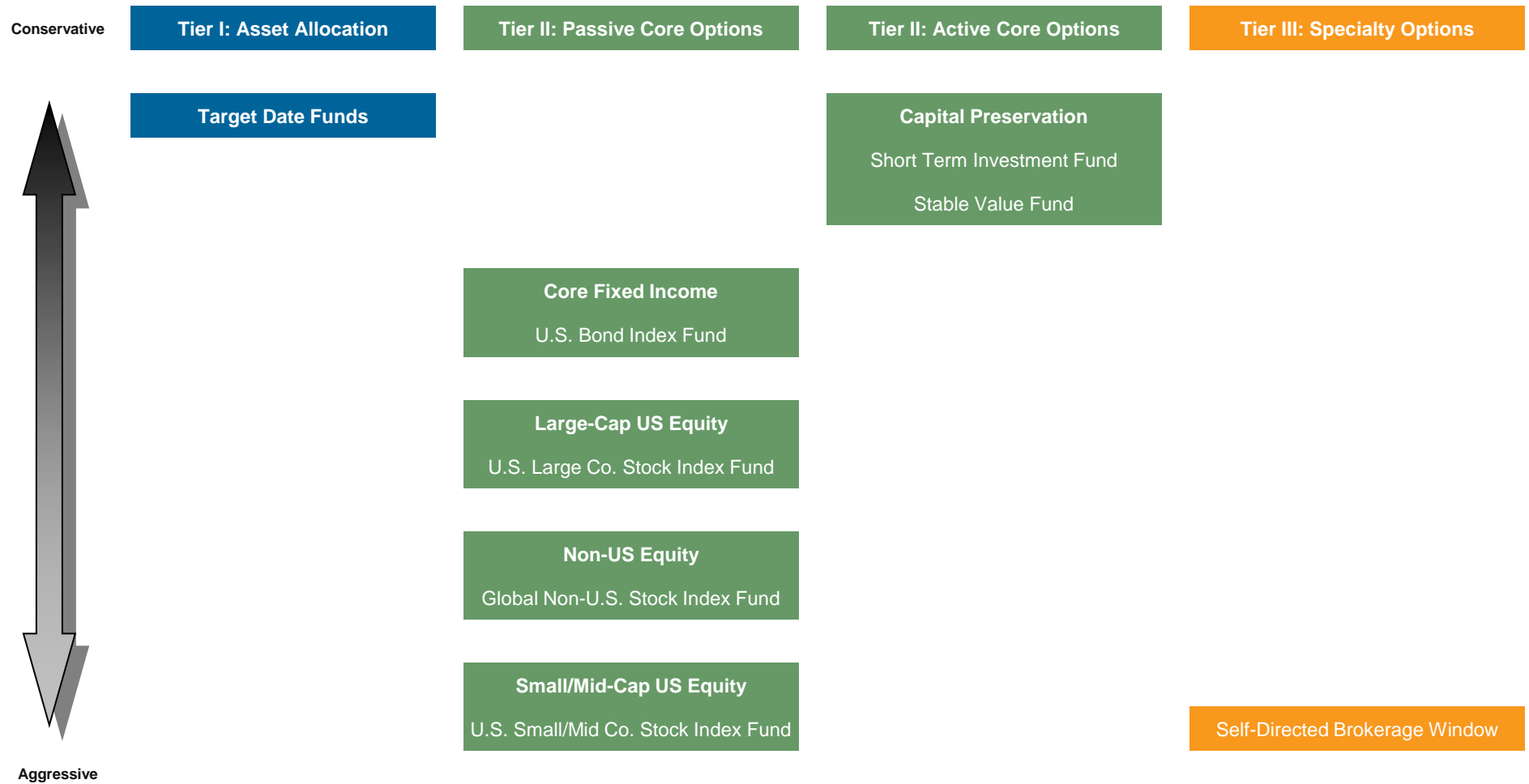
Wrap Provider Exposure*

Contract Issuer	Portfolio	Average Fee	Moody's Rating	S&P Rating	Fitch Rating
Nationwide Life Insurance	20.54%	0.15%	A1	A+	NR
Transamerica	20.43%	0.15%	A1	A+	WD
RGA	15.43%	0.15%	A1	AA-	A
Prudential Insurance Co.	15.42%	0.15%	Aa3	AA-	AA-
State Street Bank	12.83%	0.15%	Aa2	AA-	AA+
Pacific Life Insurance Co.	12.87%	0.15%	Aa3	AA-	AA-
	97.35%	0.15%			

*Source: Invesco

457(b) Plan Investment Structure

Lineup Mapped to Callan's Clean Sheet



Callan

Appendix – Callan Update

Published Research Highlights from 1Q23

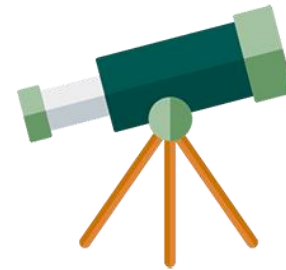
2023 DC Trends Survey and Webinar



Energy Transition Is Having a Moment, but Does It Have Staying Power?



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Research Café: ESG Interview Series Session



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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 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.

– August 23-24, 2023 – Virtual Session via Zoom

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.

- May 23–25, 2023 – Virtual Session via Zoom
- September 26–28, 2023 – Virtual Session via Zoom

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

Mark Your Calendar

2023 Regional Workshops

June 27, 2023 – Denver

June 29, 2023 – San Francisco

October 24, 2023 – New York

October 26, 2023 – Chicago

2024 National Conference

April 8 –10, 2024 – San Francisco

Watch your email for further details and an invitation.

Webinars & Research Café Sessions

Webinar: DC – Managed Accounts

May 11, 2023 – 9:30am (PT)

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