

June 9, 2020



**Pennsylvania State Employees'  
Retirement System – 401(a) Plan**

First Quarter 2020

Executive Summary

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**Thomas H. Shingler**  
Senior Vice President

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Callan

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**Market Environment**

# Sharp Drop in Global Equity Markets in 1Q 2020

## No place to hide

- Equity markets around the globe collapsed starting in late February.
- S&P 500 Index was down 33% from peak (02/19/20) at worst point on 3/23/20; down -19.6% for the quarter. All countries and sectors were impacted.
- Fed cut interest rates to zero, commenced QE, instituted multiple facilities to backstop money markets, credit markets, and the economy.
- Congress passed fiscal stimulus (CARES) to carry the economy through the crisis.
- Fed's role is a backstop/facilitator/lender of last resort, but not a grantor; it expects to get paid back. Programs are designed to keep the Fed from losing money.
- Granting is the province of Congress, and fiscal policy.

### Returns for Periods ended March 31, 2020

	1 Quarter	1 Year	5 Years	10 Years	25 Years
<b>U.S. Equity</b>					
Russell 3000	-20.90	-9.13	5.77	10.15	8.81
S&P 500	-19.60	-6.98	6.73	10.53	8.85
Russell 2000	-30.61	-23.99	-0.25	6.90	7.57
<b>Global ex-U.S. Equity</b>					
MSCI World ex USA	-23.26	-14.89	-0.76	2.43	4.12
MSCI Emerging Markets	-23.60	-17.69	-0.36	0.69	--
MSCI ACWI ex USA Small Cap	-29.01	-21.18	-0.81	2.79	4.57
<b>Fixed Income</b>					
Bloomberg Barclays Aggregate	3.15	8.93	3.36	3.88	5.49
90-day T-Bill	0.57	2.25	1.19	0.64	2.43
Bloomberg Barclays Long Gov/Credit	6.21	19.32	5.99	8.07	7.89
Bloomberg Barclays Global Agg ex-US	-2.68	0.74	2.04	1.39	3.77
<b>Real Estate</b>					
NCREIF Property	0.71	5.28	7.65	10.17	9.28
FTSE Nareit Equity	-27.30	-21.26	-0.35	7.40	9.24
<b>Alternatives</b>					
CS Hedge Fund	-8.98	-4.32	0.24	2.96	7.35
Cambridge Private Equity*	0.90	9.50	12.37	13.75	15.30
Bloomberg Commodity	-23.29	-22.31	-7.76	-6.74	0.56
Gold Spot Price	4.83	22.96	6.18	3.66	5.75
<b>Inflation - CPI-U</b>	0.44	1.54	1.80	1.72	2.15

\*Cambridge PE data through September 30, 2019.  
Source: Callan

# CARES Act

Coronavirus Aid, Relief, and Economic Security Act

## What You Need to Know

The second round of federal stimulus, known as the CARES Act, seeks to address the recent economic tremors stemming from the coronavirus pandemic. The legislation provided alternative forms of financial relief for individuals, including access to retirement savings.

### Limited Access

- Access to liberalized loan and distribution availability is limited certain DC plan participants (i.e., “qualified individuals”)
- Certain provisions are optional while others appear to be mandatory
- A number of provisions need further clarification/guidance

### Increases Access to DC Plan Monies

- Provided access to deferrals while employed by the plan sponsor
- Permitted special distributions up to \$100k for qualified individuals
- Waived minimum required distributions for 2020

### Liberalized Loan Options

- Loan maximums were expanded
- Loan repayments and defaults were delayed

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## COVID-19 Government DC Plans Survey Overview

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The Coronavirus Aid, Relief, and Economic Security (CARES) Act was signed into law on March 27<sup>th</sup>, 2020. The Act, which aims to provide relief to both individuals and businesses negatively impacted by COVID-19, includes several provisions specifically related to retirement plans. For instance, the Act allows qualifying individuals to seek tax-advantaged financial relief through distributions and loans from their retirement savings accounts, including from defined contribution (DC) plans.

In early April, Callan administered a five-question “spot” survey to assess the actions that government plan sponsors have taken or are considering for their DC programs in the current economic environment and in light of recent legislation. Staff members, board members, and other individuals with responsibilities for employee benefit programs were invited to participate in the online survey.

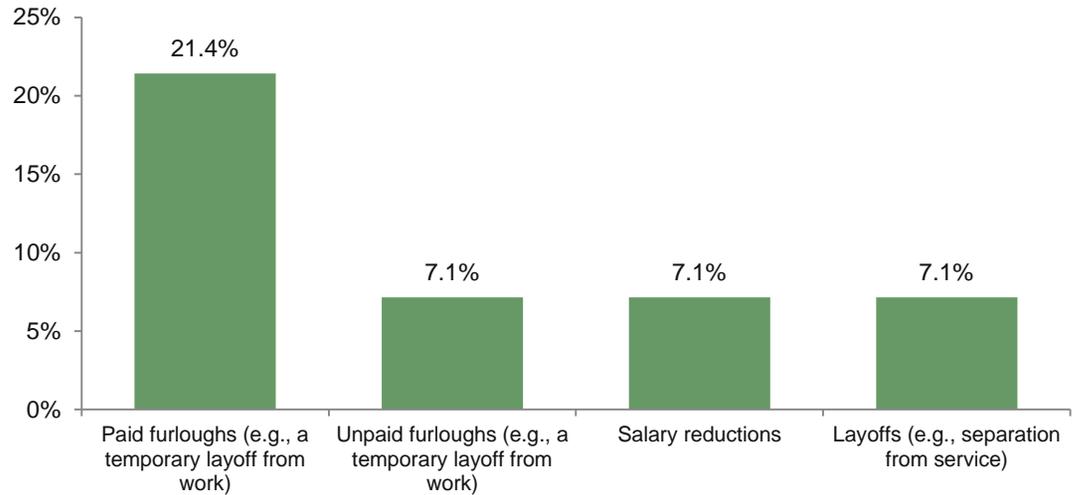
The survey incorporates responses from 15 government DC plan sponsors, collected between April 6 and April 22. Because some of the answers provided may be of a sensitive nature, Callan did not ask for contact information.

The following pages highlight the results of the survey as well as observations that Callan’s DC consultants have collected through working closely with government DC plan sponsors.

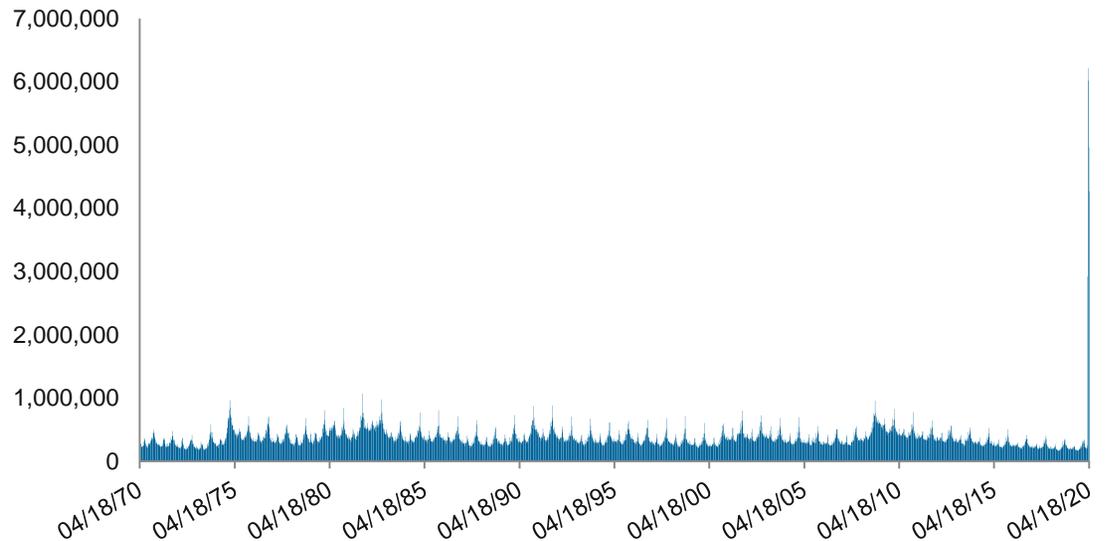
# COVID-19 Government DC Plans Survey - Workforce Actions

- The financial stress induced by the current economic environment has led many employers to pursue cost-cutting measures, including furloughs, salary reductions, and layoffs.
  - Between the weeks ending March 21, 2020, and April 18, 2020, an unprecedented 24 million Americans filed for unemployment insurance.
- Approximately a fifth of respondents indicated that they had furloughed, with pay, at least part of their workforce.
- Other less common measures respondents have taken include unpaid furloughs (7%), salary reductions (7%), and layoffs (7%).

## Workforce Actions Taken in Wake of COVID-19 Pandemic\*



## Initial Weekly Unemployment Claims\*\*



**28.6%** took at least one **action** with respect to their **workforce** in response to the COVID-19 pandemic

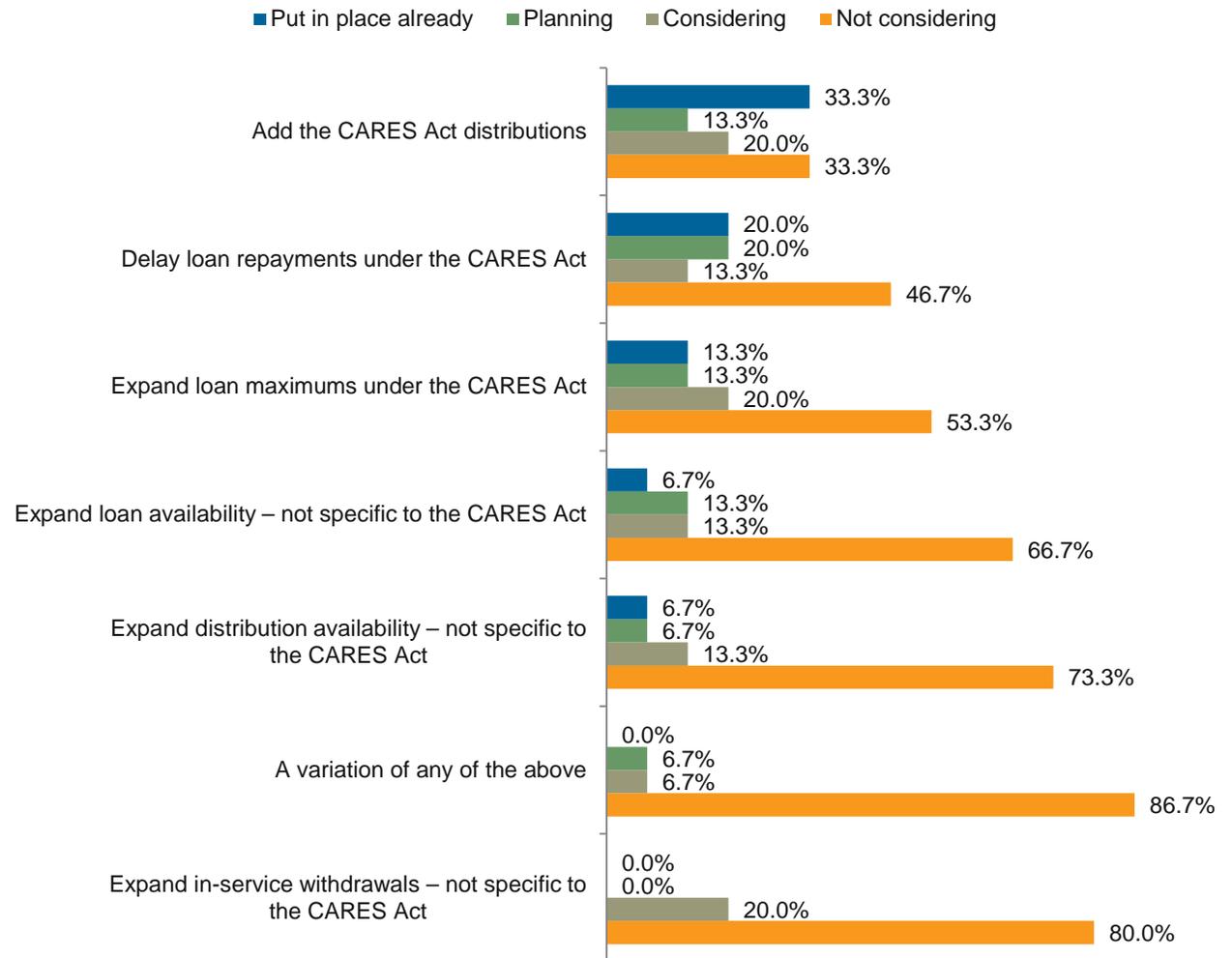
\*Multiple responses were allowed

\*\*Source: U.S. Employment and Training Administration

# COVID-19 Government DC Plans Survey - Plan Actions

- The CARES Act includes several provisions specifically related to retirement plans. Namely, DC plan sponsors have the option to implement certain provisions, including:
  - Distribution provisions: allowing participants to take coronavirus-related distributions (CRD's)
  - Loan provisions: expanding loan maximums and allowing participants to delay loan repayments
- A third of respondents indicated that they had already added the CARES Act distributions, with another third either planning to or considering doing so.
- About half of respondents indicated that they would at least consider delaying loan repayments and expanding loan maximums under the CARES Act.

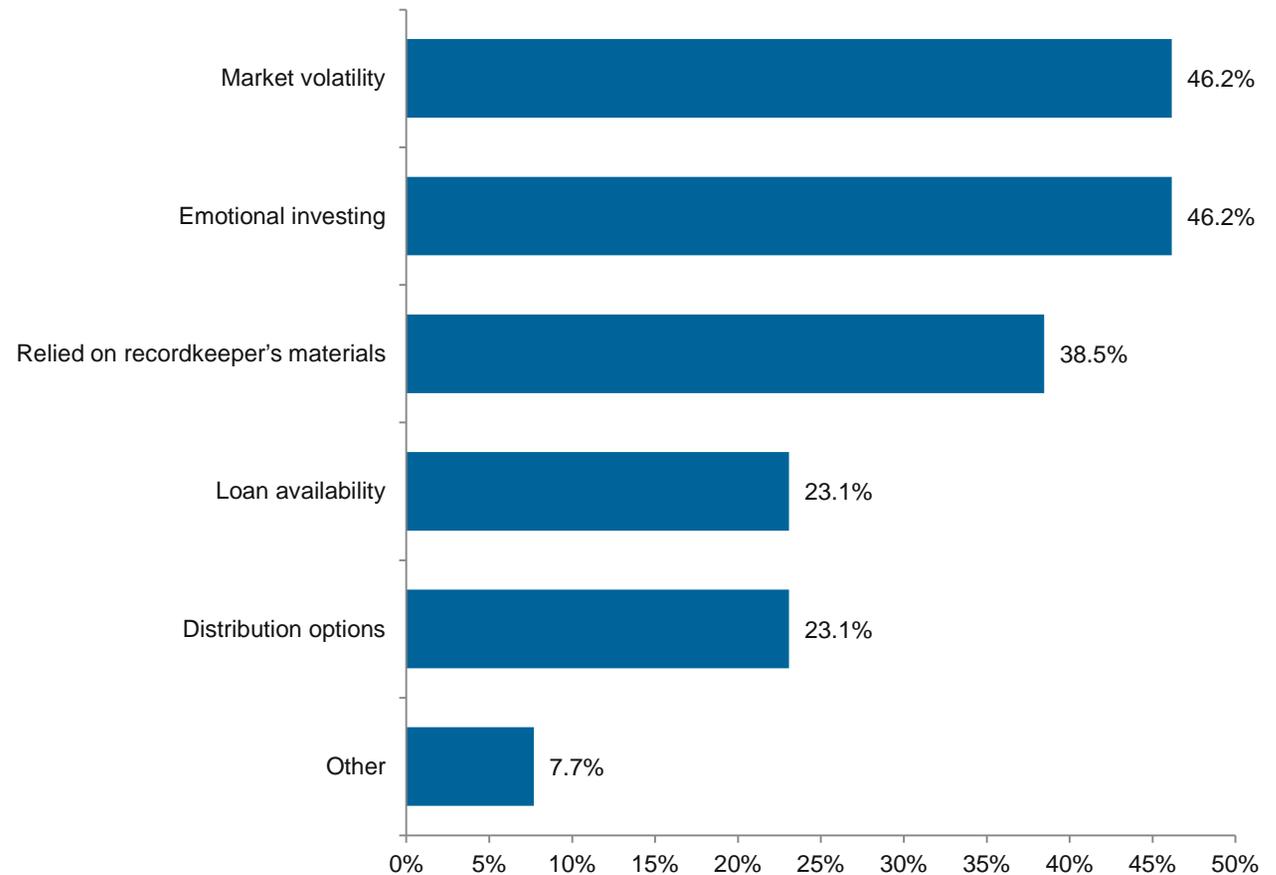
## What actions have you taken or are you considering for your DC plan?



# COVID-19 Government DC Plans Survey - Participant Communication

- Given recent market volatility, plan sponsors and recordkeepers have sought to provide additional communications to participants.
- These communications entail various themes and are often intended to encourage participants to “stay the course”.
- Nearly half of surveyed plan sponsors indicated that they had communicated with participants regarding market volatility (46%) and emotional investing (46%).
- A slightly smaller share (39%) said they had relied on communication materials provided by their recordkeeper or had provided their own communications focused on loan availability (23%) or distribution options (23%).

## What topics have you communicated to your employees?\*



\*Percentages among those plan sponsors who have taken steps to communicate with employees. Multiple responses were allowed.

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## DC Plans and the Coronavirus

### Issues for sponsors to monitor regarding their recordkeepers

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#### DC plan sponsors should examine how the recent market volatility stemming from the pandemic may impact their recordkeepers in the following areas:

- **Internet availability:** High-traffic events have caused issues for participants trying to access information or make transactions; sponsors may want to track participant statistics and document the review.
- **Call center staffing:** Sponsors should understand how recordkeepers will support call center operations in the event they need to quarantine staff or locations.
- **Paper check-cutting and statement production:** Both functions require in-person interaction, so plan sponsors may wish to communicate to participants that they may expect delays and that electronic options may streamline the process.
- **Payroll processing:** If payroll contributions are held up, the timing to fund payroll may become an issue. Sponsors may wish to include extra resources for this task.
- **Participant communications:** Plan sponsors may wish to preemptively identify communication needs and opportunities for participants visiting the website, experiencing longer call volumes, or managing distribution and loan checks.
- **Onsite education or adviser sessions:** In-person, face-to-face outreach may need to be canceled or postponed.
- **Cybersecurity:** Work-from-home arrangements raise novel cybersecurity issues. This may be a time to consider hardening cybersecurity defenses.
- **Service-level guarantees:** Recordkeepers may include service-level guarantees in their agreements. However, these contracts typically include a force majeure provision that limits their responsibility for “acts of god.” Sponsors should monitor call center and online hits to understand how participants may be impacted by constrained resources.

Callan

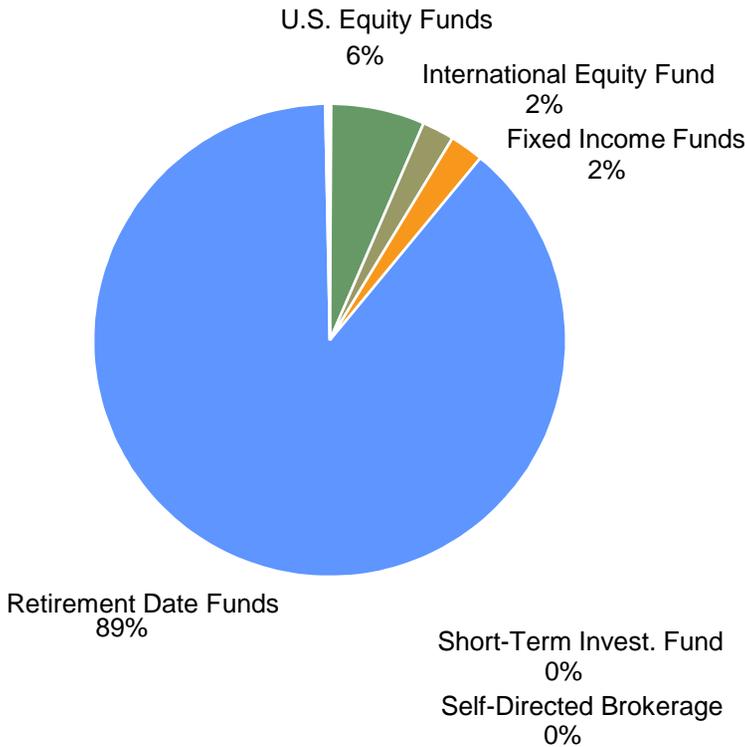
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**PA SERS 457(b) Plan Performance Review**

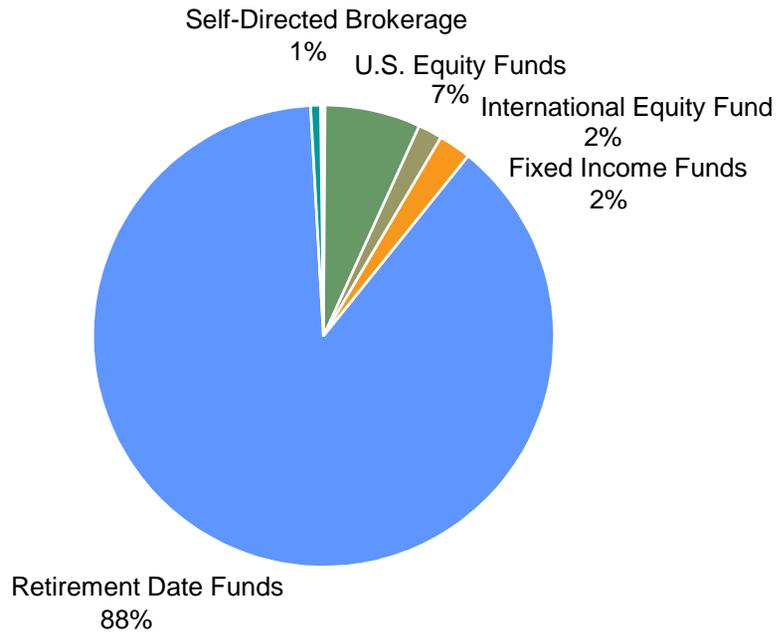
# 457(b) Plan Asset Allocation & Contributions

As of March 31, 2020

### Asset Allocation



### Contributions



# Asset Allocation

As of March 31, 2020

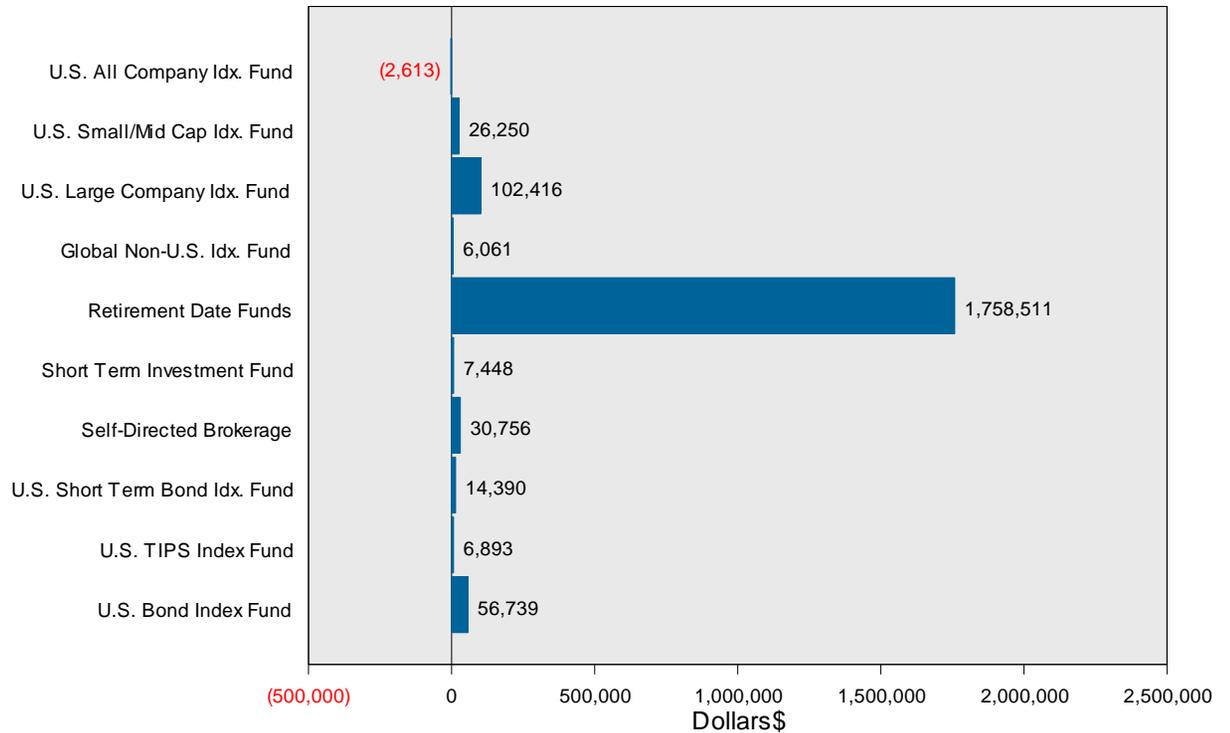
	March 31, 2020		Net New Inv.	Inv. Return	December 31, 2019	
	Market Value	% of Total			Market Value	% of Total
<b>SERS Retirement Date Funds</b>	<b>\$9,746,720</b>	<b>88.88%</b>	<b>\$3,917,593</b>	<b>\$(2,159,082)</b>	<b>\$7,988,209</b>	<b>89.16%</b>
SERS Post Retirement Fund	211,576	1.93%	79,003	(16,420)	148,993	1.66%
SERS 2025 Retirement Fund	500,006	4.56%	181,392	(59,367)	377,981	4.22%
SERS 2030 Retirement Fund	1,133,624	10.34%	314,906	(177,204)	995,922	11.12%
SERS 2035 Retirement Fund	851,824	7.77%	344,854	(157,676)	664,646	7.42%
SERS 2040 Retirement Fund	963,873	8.79%	389,401	(213,337)	787,809	8.79%
SERS 2045 Retirement Fund	1,499,650	13.68%	596,455	(377,450)	1,280,645	14.29%
SERS 2050 Retirement Fund	1,374,651	12.54%	666,914	(348,090)	1,055,827	11.78%
SERS 2055 Retirement Fund	1,236,247	11.27%	533,523	(307,814)	1,010,538	11.28%
SERS 2060 Retirement Fund	1,286,534	11.73%	524,710	(327,783)	1,089,607	12.16%
SERS 2065 Retirement Fund	688,735	6.28%	286,436	(173,940)	576,240	6.43%
<b>SERS U.S. Equity</b>	<b>\$701,962</b>	<b>6.40%</b>	<b>\$283,457</b>	<b>\$(157,404)</b>	<b>\$575,910</b>	<b>6.43%</b>
SERS U.S. Large Company Idx Fund	490,317	4.47%	204,025	(101,609)	387,901	4.33%
SERS U.S. All Company Idx Fund	151,422	1.38%	34,915	(37,528)	154,035	1.72%
SERS U.S. SMD Company Idx Fund	60,223	0.55%	44,517	(18,267)	33,974	0.38%
<b>International Equity</b>						
SERS Global Non-U.S. Index Fund	238,265	2.17%	69,881	(63,819)	232,204	2.59%
<b>SERS Fixed Income</b>	<b>\$248,514</b>	<b>2.27%</b>	<b>\$80,467</b>	<b>\$5,004</b>	<b>\$163,043</b>	<b>1.82%</b>
SERS Short Term Investment Fund	21,289	0.19%	7,386	62	13,841	0.15%
SERS U.S. Short Term Bond Idx Fund	32,531	0.30%	13,948	442	18,141	0.20%
SERS U.S. TIPS Index Fund	28,415	0.26%	6,568	325	21,522	0.24%
SERS U.S. Bond Index Fund	166,278	1.52%	52,565	4,174	109,539	1.22%
<b>Self-Directed Brokerage</b>						
SERS Self-Directed Brokerage	30,756	0.28%	33,600	(2,844)	-	-
<b>Total Fund</b>	<b>\$10,966,218</b>	<b>100.0%</b>	<b>\$4,384,998</b>	<b>\$(2,378,146)</b>	<b>\$8,959,366</b>	<b>100.0%</b>

# Changes in Market Values and Contributions

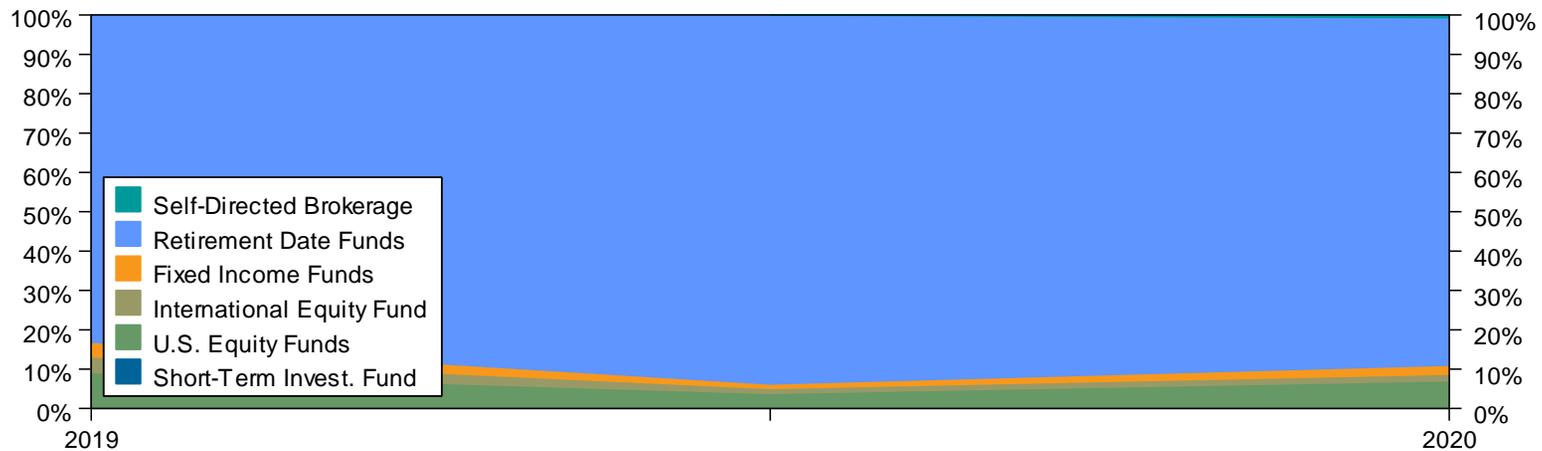
As of March 31, 2020

The chart to the right shows the net change in fund values across the various investment options for the quarter. The change in value for each fund is the result of:

1. Investment returns;
2. Participant contributions, employer match, distributions, withdrawals; and
3. Transfers between funds by participants.



## Historical Allocation of Contributions



## Cumulative Performance - Net of Fees

As of March 31, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
<b>Net Performance</b>					
<b>Target Date Funds</b>					
SERS Post Retirement Fund	(7.73%)	(0.02%)	3.36%	3.20%	3.82%
BlackRock Post Retirement Index	(7.78%)	(0.04%)	3.33%	3.17%	3.79%
Callan Tgt Date 2000-2010	(7.56%)	(0.35%)	2.96%	3.08%	4.04%
SERS 2025 Retirement Fund	(11.32%)	(2.98%)	3.16%	3.38%	4.58%
BlackRock 2025 Index	(11.37%)	(3.02%)	3.08%	3.31%	4.51%
Callan Target Date 2025	(12.44%)	(4.33%)	2.59%	3.12%	4.76%
SERS 2030 Retirement Fund	(14.36%)	(5.53%)	2.68%	3.24%	4.69%
BlackRock 2030 Index	(14.41%)	(5.63%)	2.59%	3.14%	4.59%
Callan Target Date 2030	(14.76%)	(6.17%)	2.36%	3.16%	5.06%
SERS 2035 Retirement Fund	(17.11%)	(7.91%)	2.24%	3.12%	4.78%
BlackRock 2035 Index	(17.16%)	(7.99%)	2.12%	2.99%	4.66%
Callan Target Date 2035	(17.10%)	(8.23%)	1.96%	3.03%	5.14%
SERS 2040 Retirement Fund	(19.61%)	(10.07%)	1.78%	2.95%	4.82%
BlackRock 2040 Index	(19.65%)	(10.16%)	1.66%	2.81%	4.69%
Callan Target Date 2040	(18.86%)	(9.75%)	1.62%	2.92%	5.18%
SERS 2045 Retirement Fund	(21.29%)	(11.58%)	1.42%	2.79%	4.87%
BlackRock 2045 Index	(21.34%)	(11.72%)	1.26%	2.62%	4.72%
Callan Target Date 2045	(20.14%)	(10.81%)	1.40%	2.84%	5.14%
SERS 2050 Retirement Fund	(22.06%)	(12.30%)	1.22%	2.69%	4.90%
BlackRock 2050 Index	(22.09%)	(12.40%)	1.08%	2.53%	4.77%
Callan Target Date 2050	(20.41%)	(11.10%)	1.20%	2.71%	5.16%
SERS 2055 Retirement Fund	(22.11%)	(12.35%)	1.20%	2.66%	4.99%
BlackRock 2055 Index	(22.19%)	(12.48%)	1.05%	2.51%	4.85%
Callan Target Date 2055	(20.64%)	(11.46%)	1.08%	2.75%	5.28%
SERS 2060 Retirement Fund	(22.11%)	(12.35%)	1.18%	2.66%	-
BlackRock 2060 Index	(22.18%)	(12.47%)	1.05%	2.55%	-
Callan Target Date 2060	(20.66%)	(11.35%)	1.24%	3.01%	5.80%
SERS 2065 Retirement Fund	(22.12%)	-	-	-	-
BlackRock 2065 Index	(22.18%)	-	-	-	-

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

# Cumulative Performance - Net of Fees

As of March 31, 2020

	Last 10 Years	Last 15 Years	Last 20 Years
<b>Net Performance</b>			
<b>Target Date Funds</b>			
SERS Post Retirement Fund	4.99%	-	-
BlackRock Post Retirement Index	4.96%	4.94%	5.05%
Callan Tgt Date 2000-2010	5.10%	4.41%	-
SERS 2025 Retirement Fund	5.82%	-	-
BlackRock 2025 Index	5.76%	5.19%	4.00%
Callan Target Date 2025	6.13%	5.16%	-
SERS 2030 Retirement Fund	5.99%	-	-
BlackRock 2030 Index	5.90%	5.22%	3.82%
Callan Target Date 2030	6.45%	5.15%	3.27%
SERS 2035 Retirement Fund	6.14%	-	-
BlackRock 2035 Index	6.02%	5.22%	3.64%
Callan Target Date 2035	6.53%	5.38%	-
SERS 2040 Retirement Fund	6.22%	-	-
BlackRock 2040 Index	6.10%	5.20%	3.43%
Callan Target Date 2040	6.64%	5.32%	2.60%
SERS 2045 Retirement Fund	6.30%	-	-
BlackRock 2045 Index	6.17%	5.18%	3.32%
Callan Target Date 2045	6.51%	5.81%	-
SERS 2050 Retirement Fund	6.40%	-	-
BlackRock 2050 Index	6.26%	5.43%	3.54%
Callan Target Date 2050	6.70%	-	-
Callan Target Date 2055	6.91%	-	-

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.

# Cumulative Performance - Net of Fees

As of March 31, 2020

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 7 Years
<b>Net Performance</b>					
<b>Domestic Equity</b>					
SERS U.S. Large Company Index Fund	(19.59%)	(6.97%)	5.11%	6.74%	9.63%
S&P 500 Index	(19.60%)	(6.98%)	5.10%	6.73%	9.62%
Callan Lg Cap Broad MF	(19.15%)	(7.01%)	4.67%	5.95%	8.96%
SERS U.S. All Company Index Fund	(20.57%)	(9.09%)	3.98%	5.75%	8.96%
Russell 3000 Index	(20.90%)	(9.13%)	4.00%	5.77%	8.96%
Callan Multi Cap Brd MF	(21.16%)	(11.17%)	1.99%	3.44%	7.27%
SERS U.S. SMID Company Idx Fund	(28.02%)	(20.47%)	(1.85%)	1.06%	5.59%
Dow Jones US Completion	(28.01%)	(20.61%)	(2.02%)	0.87%	5.40%
Callan SMID Broad MFs	(25.28%)	(19.07%)	1.00%	2.02%	5.28%
<b>International Equity</b>					
SERS Global Non-U.S. Index Fund	(23.74%)	(16.00%)	(1.90%)	(0.51%)	1.17%
MSCI ACWI ex US	(23.36%)	(15.57%)	(1.96%)	(0.64%)	1.06%
Callan Non US Equity MFs	(22.82%)	(14.66%)	(2.03%)	(0.79%)	1.58%
<b>Domestic Fixed Income</b>					
SERS Short Term Investment Fund	0.40%	2.10%	1.88%	1.32%	0.99%
3-month Treasury Bill	0.57%	2.25%	1.83%	1.19%	0.86%
Callan Cash Database(1)	0.36%	2.16%	1.98%	1.42%	1.11%
SERS U.S. Short Term Bond Idx Fund	1.73%	4.56%	-	-	-
Bimbg Gov/Cred 1-3 Yr	1.69%	4.53%	2.58%	1.90%	1.61%
Callan Short US Govt MFs	2.19%	4.58%	2.39%	1.65%	1.31%
SERS U.S. TIPS Index Fund	1.71%	6.84%	-	-	-
Bimbg US TIPS	1.69%	6.85%	3.46%	2.67%	1.37%
Callan TIPS MFs	0.06%	4.64%	2.70%	1.94%	0.80%
SERS U.S. Bond Index Fund	3.25%	9.02%	4.85%	3.35%	3.16%
Bimbg Aggregate	3.15%	8.93%	4.82%	3.36%	3.19%
Callan Core Bond MFs	1.54%	7.36%	4.27%	3.19%	2.98%

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

# Cumulative Performance - Net of Fees

As of March 31, 2020

	Last 10 Years	Last 15 Years	Last 20 Years
<b>Net Performance</b>			
<b>Domestic Equity</b>			
SERS U.S. Large Company Index Fund	10.55%	7.62%	4.84%
S&P 500 Index	10.53%	7.58%	4.79%
Callan Lg Cap Broad MF	9.61%	7.34%	4.63%
Russell 3000 Index	10.15%	7.50%	4.91%
Callan Multi Cap Brd MF	8.43%	6.51%	5.01%
SERS U.S. SMID Company Idx Fund	8.26%	7.22%	5.26%
Dow Jones US Completion	8.06%	7.02%	4.88%
Callan SMID Broad MFs	7.98%	7.28%	6.26%
<b>International Equity</b>			
SERS Global Non-U.S. Index Fund	2.20%	-	-
MSCI ACWI ex US	2.05%	3.39%	-
Callan Non US Equity MFs	2.87%	3.35%	2.43%
<b>Domestic Fixed Income</b>			
SERS Short Term Investment Fund	0.76%	1.55%	-
3-month Treasury Bill	0.64%	1.39%	1.74%
Callan Cash Database(1)	0.92%	1.76%	2.10%
Blmbg Gov/Cred 1-3 Yr	1.62%	2.59%	3.21%
Callan Short US Govt MFs	1.58%	2.52%	3.15%
Blmbg US TIPS	3.48%	3.92%	5.37%
Callan TIPS MFs	2.82%	3.52%	4.61%
SERS U.S. Bond Index Fund	3.85%	4.37%	5.04%
Blmbg Aggregate	3.88%	4.40%	5.08%
Callan Core Bond MFs	3.93%	4.51%	4.97%

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

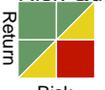
\*Funds not listed do not have longer term history.

# Performance Summary & Expense Ratios as of March 31, 2020

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>Target Date Funds</b>									
<b>SERS Post Retirement Fund</b> Callan Tgt Date Ret Inc	-7.7 59	-0.0 42	3.4 21	3.2 16	3.8 19	5.0 13			0.08 96
BlackRock Post Retirement Index	-7.8 61	-0.0 43	3.3 22	3.2 17	3.8 22	5.0 16			
<b>SERS 2025 Retirement Fund</b> Callan Target Date 2025	-11.3 24	-3.0 22	3.2 23	3.4 29	4.6 61	5.8 61			0.08 96
BlackRock 2025 Index	-11.4 26	-3.0 23	3.1 24	3.3 31	4.5 66	5.8 64			
<b>SERS 2030 Retirement Fund</b> Callan Target Date 2030	-14.4 40	-5.5 34	2.7 31	3.2 41	4.7 69	6.0 64			0.08 97
BlackRock 2030 Index	-14.4 43	-5.6 38	2.6 39	3.1 51	4.6 74	5.9 73			
<b>SERS 2035 Retirement Fund</b> Callan Target Date 2035	-17.1 51	-7.9 43	2.2 32	3.1 43	4.8 68	6.1 68			0.08 97
BlackRock 2035 Index	-17.2 51	-8.0 45	2.1 37	3.0 53	4.7 75	6.0 76			
<b>SERS 2040 Retirement Fund</b> Callan Target Date 2040	-19.6 70	-10.1 57	1.8 36	2.9 47	4.8 75	6.2 65			0.08 97
BlackRock 2040 Index	-19.7 70	-10.2 60	1.7 47	2.8 56	4.7 77	6.1 71			
<b>SERS 2045 Retirement Fund</b> Callan Target Date 2045	-21.3 80	-11.6 67	1.4 46	2.8 51	4.9 68	6.3 59			0.08 97
BlackRock 2045 Index	-21.3 84	-11.7 71	1.3 54	2.6 57	4.7 79	6.2 72			
<b>SERS 2050 Retirement Fund</b> Callan Target Date 2050	-22.1 89	-12.3 78	1.2 49	2.7 50	4.9 69	6.4 60			0.08 97
BlackRock 2050 Index	-22.1 89	-12.4 78	1.1 52	2.5 60	4.8 74	6.3 65			
<b>SERS 2055 Retirement Fund</b> Callan Target Date 2055	-22.1 82	-12.3 73	1.2 44	2.7 53	5.0 66				0.08 97
BlackRock 2055 Index	-22.2 86	-12.5 75	1.1 53	2.5 60	4.8 71				
<b>SERS 2060 Retirement Fund</b> Callan Target Date 2060	-22.1 79	-12.4 74	1.2 51	2.7 65					0.08 96
BlackRock 2060 Index	-22.2 83	-12.5 75	1.1 56	2.5 71					

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 March 31, 2020

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>	-22.1 76								0.08 89
Callan Target Date 2065									
BlackRock 2065 Index	-22.2 78								
<b>Domestic Equity</b>									
<b>SERS U.S. Large Company Stock Index Fund</b>	-19.6 52	-7.0 50	5.1 48	6.7 43	9.6 43	10.5 39			0.02 99
Callan Lg Cap Broad MF									
S&P 500 Index	-19.6 53	-7.0 50	5.1 48	6.7 43	9.6 44	10.5 39			
<b>SERS U.S. All Company Index Fund</b>	-20.6 46	-9.1 40	4.0 39	5.7 29	9.0 30				0.03 99
Callan Multi Cap Brd MF									
Russell 3000 Index	-20.9 48	-9.1 40	4.0 39	5.8 29	9.0 30	10.1 25			
<b>U.S. Small/Mid Company Stock Index Fund</b>	-28.0 55	-20.5 53	-1.8 56	1.1 52	5.6 47	8.3 49			0.03 100
Callan SMID Broad MFs									
Dow Jones US Completion	-28.0 55	-20.6 53	-2.0 56	0.9 52	5.4 49	8.1 50			
<b>International Equity</b>									
<b>SERS Global Non-U.S. Index Fund</b>	-23.7 59	-16.0 59	-1.9 49	-0.5 46	1.2 62	2.2 63			0.06 99
Callan Non US Equity MFs									
MSCI ACWI ex US	-23.4 55	-15.6 55	-2.0 49	-0.6 48	1.1 64	2.1 66			
<b>Domestic Fixed Income</b>									
<b>SERS Short Term Investment Fund</b>	0.4 39	2.1 65	1.9 74	1.3 75	1.0 82	0.8 81			
Callan Cash Database									
3-month Treasury Bill	0.6 4	2.3 34	1.8 77	1.2 92	0.9 92	0.6 95			
<b>Comments:</b> Callan Cash Database includes STIF, enhanced cash, and money market funds.									
<b>SERS U.S. Short Term Bond Idx Fund</b>	1.7 67	4.6 50							0.03 99
Callan Short US Govt MFs									
Blmbg Gov/Cred 1-3 Yr	1.7 67	4.5 51	2.6 38	1.9 20	1.6 19	1.6 43			
<b>SERS U.S. TIPS Index Fund</b>	1.7 16	6.8 17							0.03 97
Callan TIPS MFs									
Blmbg US TIPS	1.7 18	6.8 16	3.5 16	2.7 20	1.4 15	3.5 14			

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 March 31, 2020

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 U.S. Bond Index Fund</b>	3.3 12	9.0 11	4.8 9	3.3 29	3.2 30	3.9 63			0.03 98
Callan Core Bond MFs									
Blmbg Aggregate	3.1 12	8.9 11	4.8 9	3.4 28	3.2 28	3.9 60			

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).

# 401(a) Plan Investment Structure

## Lineup Mapped to Callan's Clean Sheet



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## Defined Contribution and Deferred Compensation Projects for 2020

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- Plan Administration and Investment Management Fee Evaluation Study
- Target Date Fund Suitability Analysis
- Investment Policy Statement Review

Callan

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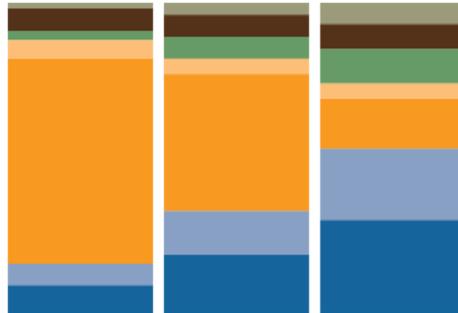
**Appendix – Callan Update**

# Published Research Highlights from 1Q20

## 2020 DC Trends Survey



## Callan's 2020-2029 Capital Market Assumptions



## How DC Plans Can Harness DC Plan Data for Better Outcomes



## An Introduction to Our New Hedge Fund Peer Group



## Recent Blog Posts

**Local Presence for Multinational Managers in China**

Fanglue Zhou

**Trigger Funds: Here's What You Need to Know**

Catherine Beard

Plus our [blog](#) contains a wide array of posts related to the pandemic

## Additional Reading

*Private Equity Trends* quarterly newsletter

Active vs. Passive quarterly charts

*Capital Market Review* quarterly newsletter

Monthly Updates to the Periodic Table

*Market Pulse Flipbook* quarterly markets update

*Real Assets Reporter* quarterly newsletter

# Callan Institute Events

## Upcoming Conferences, Workshops, and Webinars

### Upcoming Webinars

#### Hedge Fund Overview

May 21, 2020

#### China Update

July 8, 2020

Register at [callan.com/callan-institute-events](https://www.callan.com/callan-institute-events)

*“Research, education, and dialogue are more important than ever in these extraordinary times, which is why I’m pleased to announce that we are adding more webinars, and we plan to expand our events to include roundtables and other interactive digital offerings.”*

Barb Gerraty  
Director, Callan Institute



### On-Demand Webinars

Visit our website for On-Demand webinar options at <https://www.callan.com/on-demand-webinars/>

Our most recent webinar covered strategies in alternatives.

### “Callan College”

#### Introduction to Investments for Institutional Investors

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. It lasts one-and-a-half days and is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities.

#### Alternative Investments for Institutional Investors

Alternative investments like private equity, hedge funds, and real estate can play a key role in any portfolio. In this one-day session, Callan experts will provide instruction about the importance of allocations to alternatives, and how to integrate, evaluate, and monitor them.

Program dates and registration can be found at [callan.com/callan-institute-events](https://www.callan.com/callan-institute-events)

## Callan Updates

Firm updates by the numbers, as of March 31, 2020

Total Associates: 193

### Ownership

- 100% employees
- Broadly distributed across more than 95 shareholders

### Leadership Changes

- No executive additions or departures
- No leadership changes this quarter

Total General and Fund Sponsor Consultants: more than 45

Total Specialty and Research Consultants: more than 60

Total CFA/CAIA/FRMs: more than 55

Total Fund Sponsor Clients: more than 400

AUA: more than \$2.5 trillion

**“We’ve been taking precautions to combat the spread of the virus and to safeguard the health of our employees, our clients, and the community at large. Our hearts go out to those directly affected by the virus, and to those whose lives are being disrupted by the downstream social and economic effects.”**

*- CEO & Chief Research Officer Greg Allen on Callan's COVID-19 Response*

