

June 8, 2021



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

First Quarter 2021

Executive Summary

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Market Environment

Continued Surge in Global Equity Markets in 1Q21

Small cap leads in both U.S. and global ex-U.S. markets

Global equities continued to surge in 1Q

- Year-over-year returns from the bottom of the pandemic market crash are eye-popping:
 - S&P 500: +56%
 - MSCI World ex-USA: +46%
 - Emerging Markets: +58%
 - U.S. Small Cap: +95% (!)
- The initial recovery was concentrated in a few stocks (FAANG) and U.S. mega cap.
- Market rotation to small cap and value with the change from a “COVID trade” to a “GDP growth trade” in November, with the announcement of vaccines
- As COVID-19 infections surged in the new year, re-openings were reversed in many states and localities, but only temporarily.
- Economic recovery now looking very strong in 2021, into 2022. Fed projects GDP growth of 6.5% in 2021.
- Distribution challenges have kept widespread inoculation from being achieved until mid-year in the U.S.; it could be much later in countries around the globe.

Returns for Periods ended 3/31/21

	1 Quarter	1 Year	5 Years	10 Years	25 Years
U.S. Equity					
Russell 3000	6.35	62.53	16.64	13.79	9.71
S&P 500	6.17	56.35	16.29	13.91	9.59
Russell 2000	12.70	94.85	16.35	11.68	9.36
Global ex-U.S. Equity					
MSCI World ex USA	4.04	45.86	8.92	5.21	5.21
MSCI Emerging Markets	2.29	58.39	12.07	3.65	--
MSCI ACWI ex USA Small Cap	5.53	69.82	10.40	6.32	6.51
Fixed Income					
Bloomberg Barclays Aggregate	-3.37	0.71	3.10	3.44	5.09
90-day T-Bill	0.03	0.12	1.19	0.63	2.22
Bloomberg Barclays Long Gov/Credit	-10.41	-2.05	5.47	6.98	7.22
Bloomberg Barclays Global Agg ex-US	-5.29	7.15	2.13	1.26	3.80
Real Estate					
NCREIF Property	1.15	2.04	5.69	8.76	9.04
FTSE Nareit Equity	8.87	37.78	5.33	8.56	9.92
Alternatives					
CS Hedge Fund	2.85	20.19	5.12	3.88	7.20
Cambridge Private Equity*	10.38	17.87	13.87	13.82	15.05
Bloomberg Commodity	6.92	35.04	2.31	-6.28	0.97
Gold Spot Price	-9.47	7.45	6.78	1.77	6.01
Inflation - CPI-U	1.69	2.62	2.15	1.71	2.15

*Cambridge PE data through 09/30/20

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

Market Environment: 1Q21

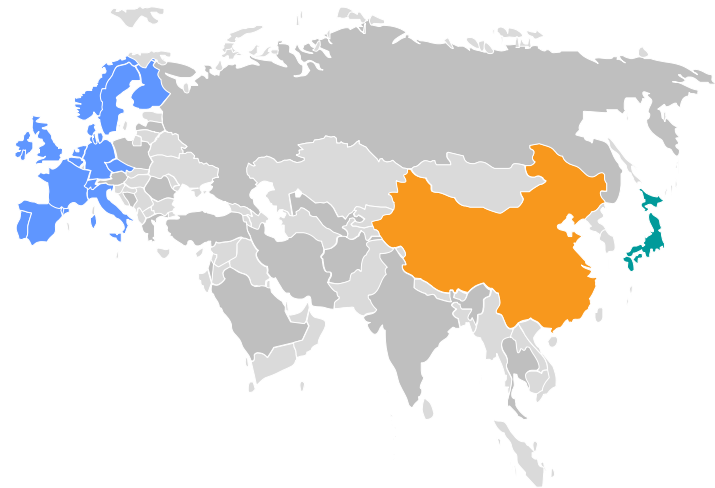
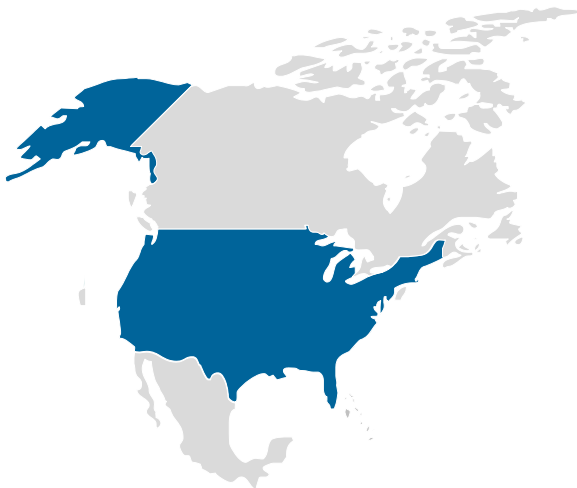
Growth worldwide with uncertainty coming from uneven vaccine rollout

U.S.

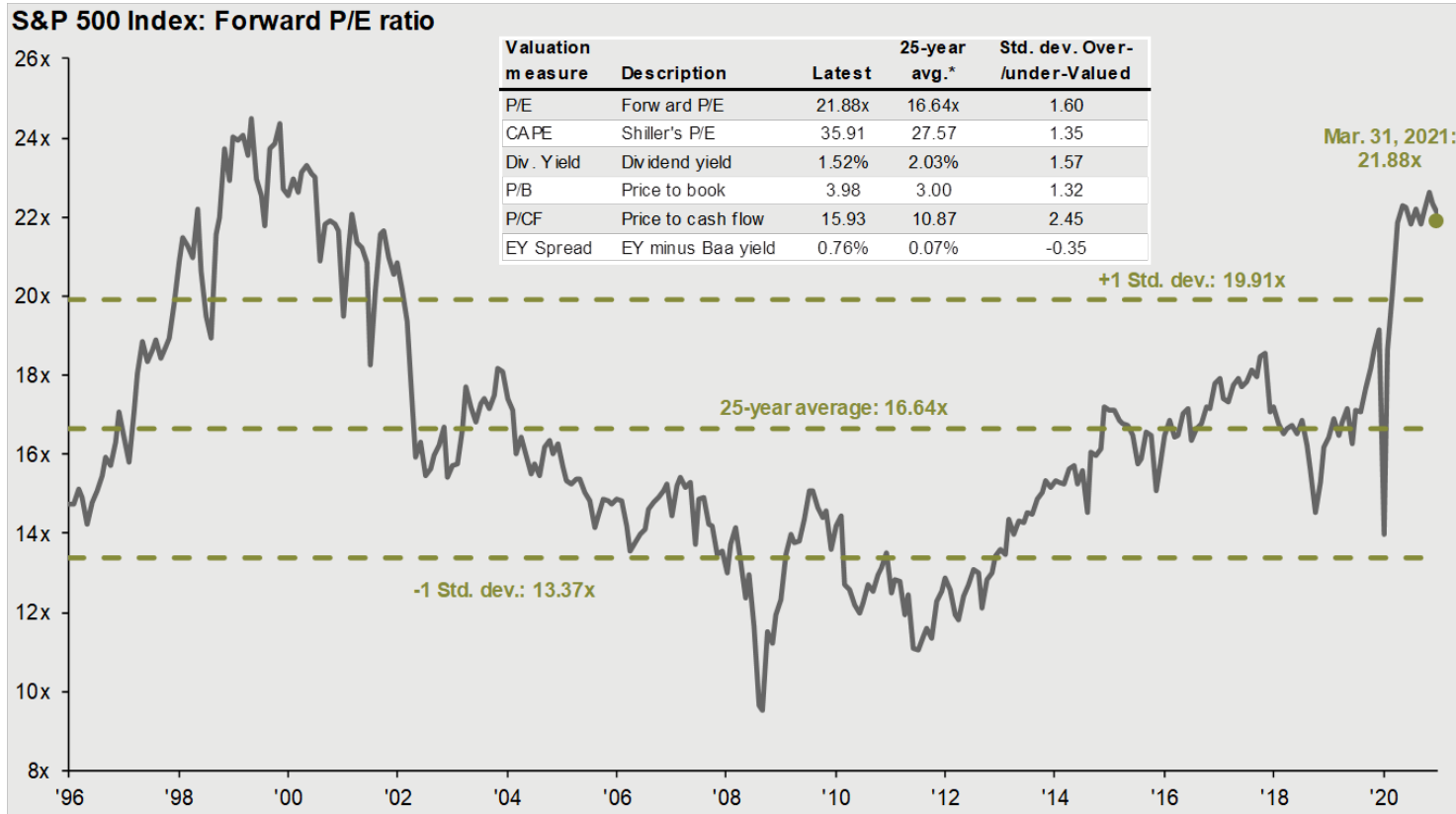
- 2020 GDP loss of 3.5% for the year is the deepest recession in 75 years. Fed expects 6.5% growth in 2021.
- Retail sales, durable goods, and personal spending rebounded late in 2020 and 1Q21 following the vaccine announcement and passage of new stimulus.
- Unemployment dropped to 6.0% in March, with an eye-popping 916,000-job gain.
 - Jobless claims decelerated to less than 1 million per week but are still elevated relative to prior recession peaks.
- Housing benefiting from relatively low mortgage rates
- Fed left rates close to 0% and expects to be on hold until 2023.

Global

- Euro zone GDP contracted 4.9% in 2020, after shrinking by 2.4% in 2019.
- U.K. GDP sank 7.3% in 2020—most ever, struck by the double-whammy of the pandemic and Brexit.
- Japan's economy shrank 4.8% in 2020, continuing a decline that began in 4Q19.
- China's GDP grew 2.3% in 2020, one of the few countries to see positive growth. 1Q21 growth inched up just 0.6%, far below expectations.



U.S. Equity Large Cap Valuations



Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since February 1996, and FactSet for March 31, 2021. Current next 12-months consensus earnings estimates are \$182. Average P/E and standard deviations are calculated using 25 years of IBES history. Shiller's P/E uses trailing 10 years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 25 years for each measure.

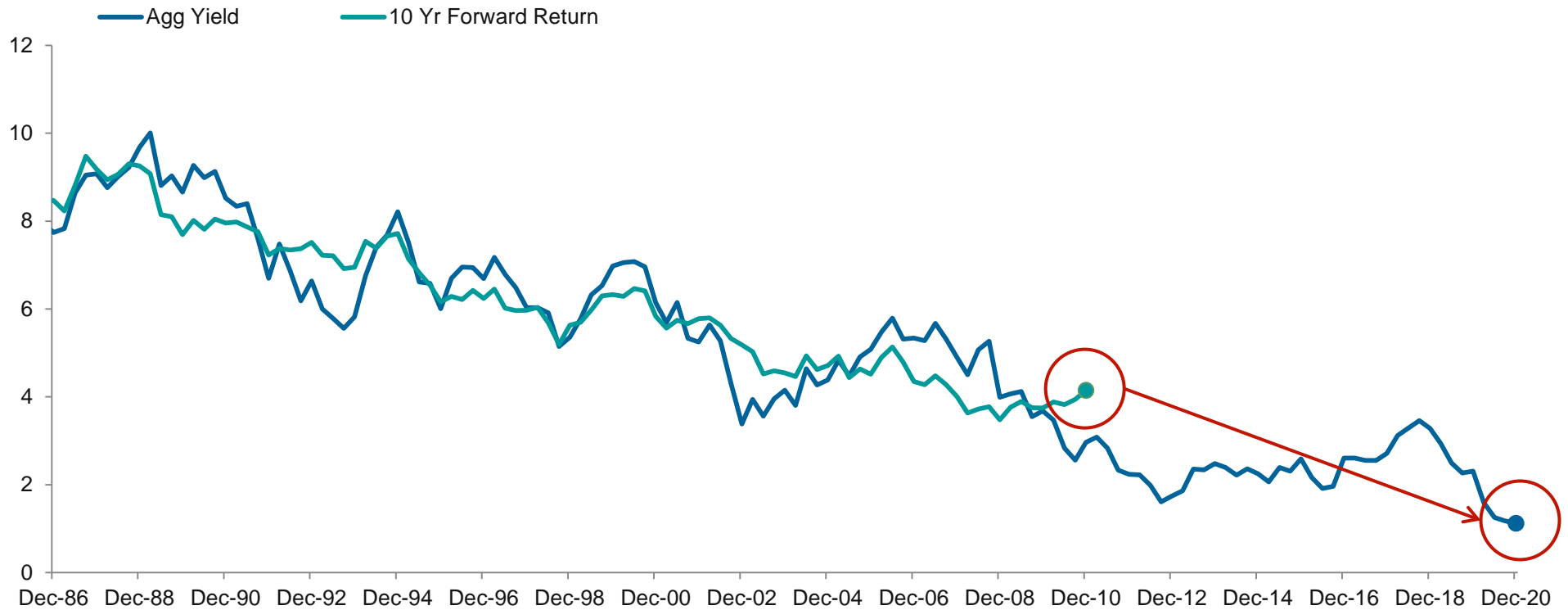
Guide to the Markets – U.S. Data are as of March 31, 2021.

- Valuations are 1.6 standard deviations above the 25-year average based on forecast earnings.
- Longer-term historical valuations are also elevated.
 - *Shiller's cyclically adjusted price earnings (CAPE) ratio is 1.35 standard deviations above average.*
- Stock prices reflect anticipated rather than historical earnings, looking well beyond a one-year timeframe.

Sources: FactSet, FRB, Robert Shiller, S&P Dow Jones Indices, Thomson Reuters, J.P. Morgan Asset Management

Starting Yield Strongly Predicted Returns

Bloomberg Barclays Aggregate Starting Yield vs. 10-Year Forward Return

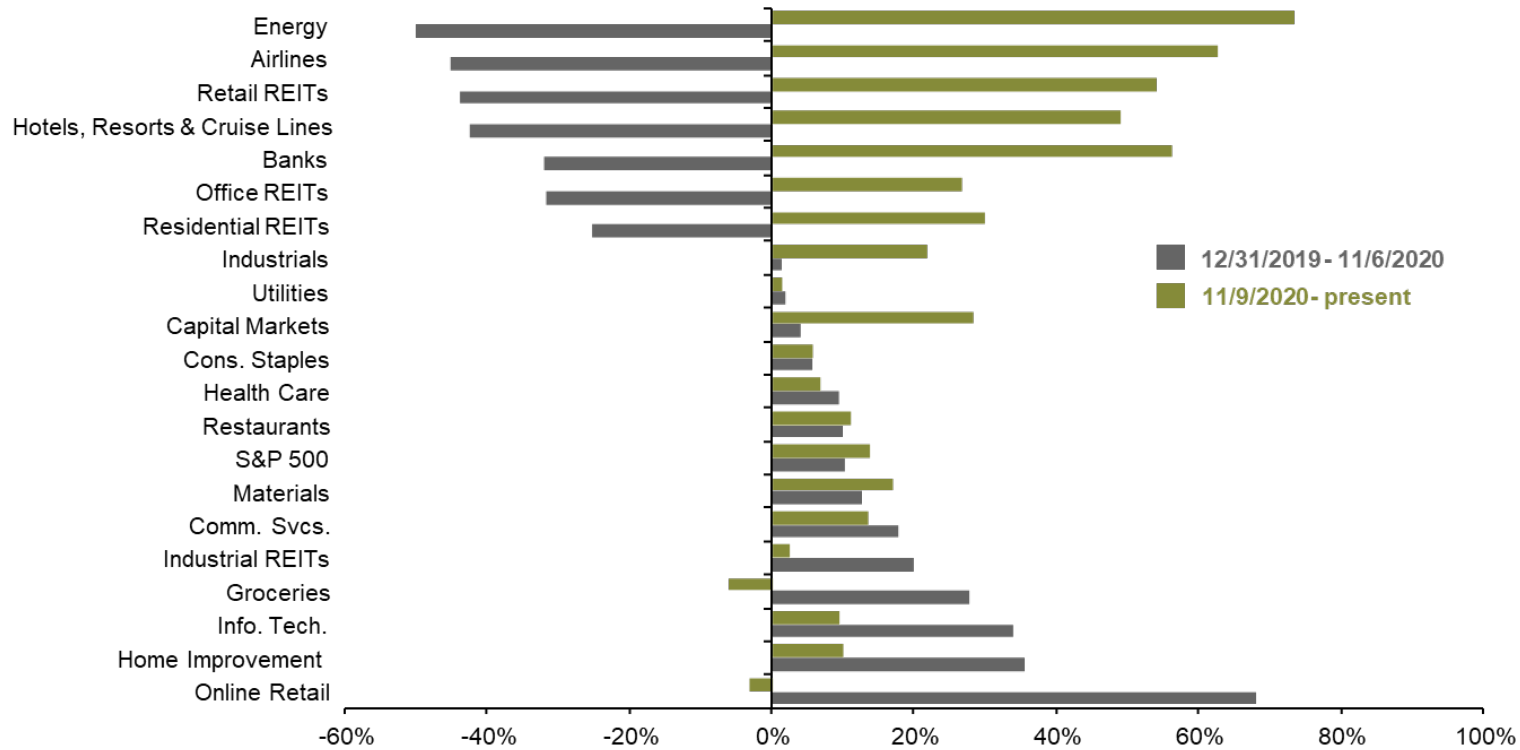


- Strong relationship between starting yields and subsequent 10-year returns

Sources: Bloomberg Barclays, St. Louis FRED

U.S. Stock Market Sector Leadership Through the Pandemic

COVID trade flipped to a 'GDP growth trade' with the announcement of vaccines in November



Best-performing sectors employ far fewer workers than many of the underperforming sectors (health care, capital markets, banks, hospitality, transportation, energy).

Source: FactSet, Standard & Poor's, J.P. Morgan Asset Management. Nov. 6, 2020, chosen as the last business day before vaccine candidate is revealed to have more than 90% efficacy against the COVID-19 virus in global trials.

Guide to the Markets – U.S. Data are as of March 31, 2021.

Diversification Remains Key Risk Control

Periodic Table of Investment Returns

2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	1 Qtr. 2021
Non-U.S. Fixed	Emerging Markets	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	Small Cap
22.37%	55.82%	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%	12.70%
U.S. Fixed	Small Cap	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	Large Cap
10.26%	47.25%	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%	6.17%
Real Estate Funds	Non-U.S. Equity	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	Non-U.S. Equity
4.57%	39.42%	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%	4.04%
Hedge Funds	High Yield	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	Hedge Funds
3.04%	28.97%	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%	2.85%
Cash Equivalent	Large Cap	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	Emerging Markets
1.78%	28.68%	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%	2.29%
High Yield	Non-U.S. Fixed	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	Real Estate Funds
-1.37%	19.36%	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%	1.89%
Emerging Markets	Hedge Funds	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	High Yield
-6.16%	15.44%	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%	0.85%
Non-U.S. Equity	Real Estate Funds	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	Cash Equivalent
-15.80%	8.28%	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%	0.02%
Small Cap	U.S. Fixed	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	U.S. Fixed
-20.48%	4.10%	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%	-3.37%
		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
		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%	-5.29%

- 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

Defined Contribution Industry Developments

Key themes

In March, Marty Walsh confirmed as labor 29th U.S. Secretary of Labor

- Walsh, the former mayor of Boston, will head the Department of Labor (DOL) and be tasked with navigating the agency through key decisions in the current economic and political environment.

DOL announces it won't enforce ESG, proxy-voting rules

- On March 10, the DOL announced it will revisit both rules and will “not enforce either final rule or otherwise pursue enforcement actions against any plan fiduciary based on a failure to comply with those final rules.”
- The DOL noted that the new rules had a “chilling effect” on appropriately integrating material ESG factors into investment decisions.
- Additionally, the DOL said it is conducting stakeholder outreach to determine how to craft future rules regarding ESG and proxy voting.

DOL offers tips on cybersecurity best practices

- On April 14, the DOL issued guidance around cybersecurity best practices for plan sponsors.
- There are two documents for plan sponsors. The first details the steps plan sponsors should follow in order to hire a service provider with strong cybersecurity practices. The second outlines tips for cybersecurity program best practices
- Plan sponsors would benefit by reviewing these tips to ensure that, at a minimum, these recommendations are incorporated into their vendor selection processes and internal governance, as appropriate.

SECURE 2.0 Passes House Ways & Means Committee:

- Gradually increases the RMD age from 72 to 75
- Requires new 401(k) and 403(b) plans to have Auto-enrollment at 3% or higher and auto-escalation to at least 10% (All current 401(k) and 403(b) plans are grandfathered)
- 403(b) plans will be allowed to invest in CITs
- Allows for 403(b) plans to join a MEP or PEP similar to what the first SECURE Act in 2019 did for 401(k) plans.
- Expands the private letter ruling for Abbott Labs to allow participants to pay off their student debt and still receive a company match in their DC Plan.

Callan 2021 DC Survey Key Findings

Top Areas of Focus

- 1 Governance and process
- 2 Investment structure evaluation
- 3 Fund / manager due diligence

See page 6 for details

Planned for 2021

- 1 Review plan fees
- 2 Complete formal fiduciary training
- 3 Implement, update, or review IPS

See page 7 for details

71% of plan sponsors are either somewhat or very likely to conduct a fee study in 2021

See page 12 for details

20% increase in total committee meetings



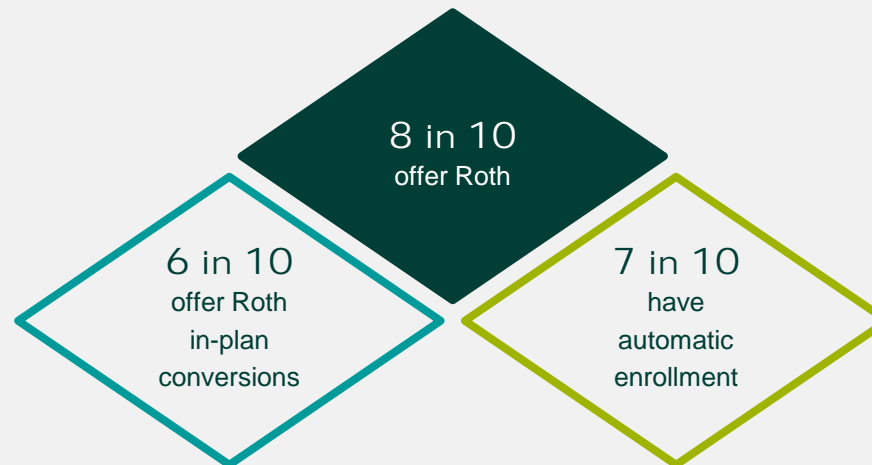
See page 13 for details

49% offer a managed account
87% with > 50k participants

See page 17 for details



7 in 10 completed a plan design evaluation in past 3 years



See pages 16 & 18 for details

83% seek to retain assets of retirees

63% offer a retirement income solution

See pages 21 & 22 for details

2x as many plans suspended or reduced the matching contribution in 2020

86% indicated they would reinstate

See page 19 for details

91% have taken steps to prevent plan leakage

3.5 actions taken, on average, to reduce leakage

See page 20 for details

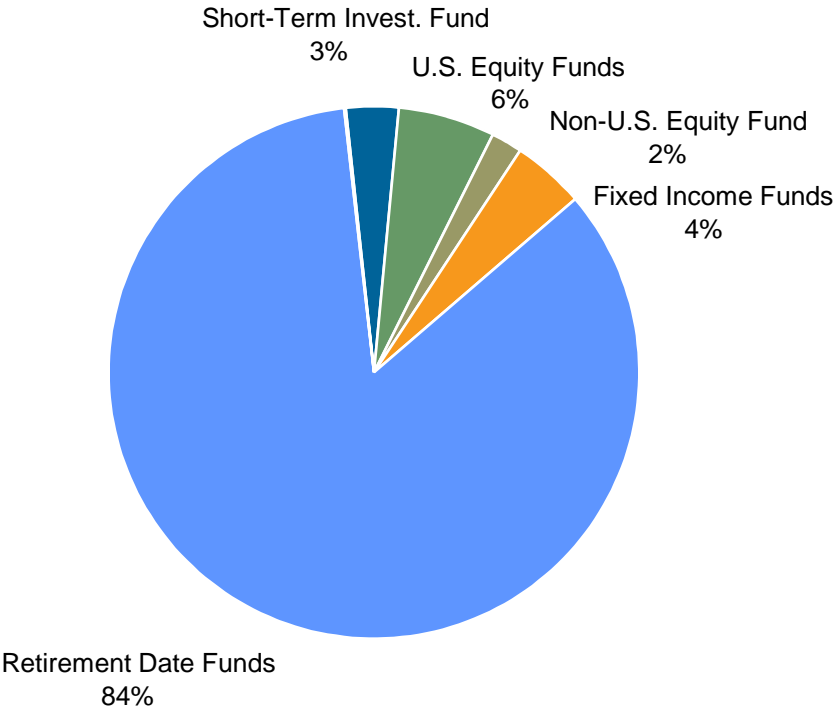
Callan

PA SERS 401(a) Plan Performance Review

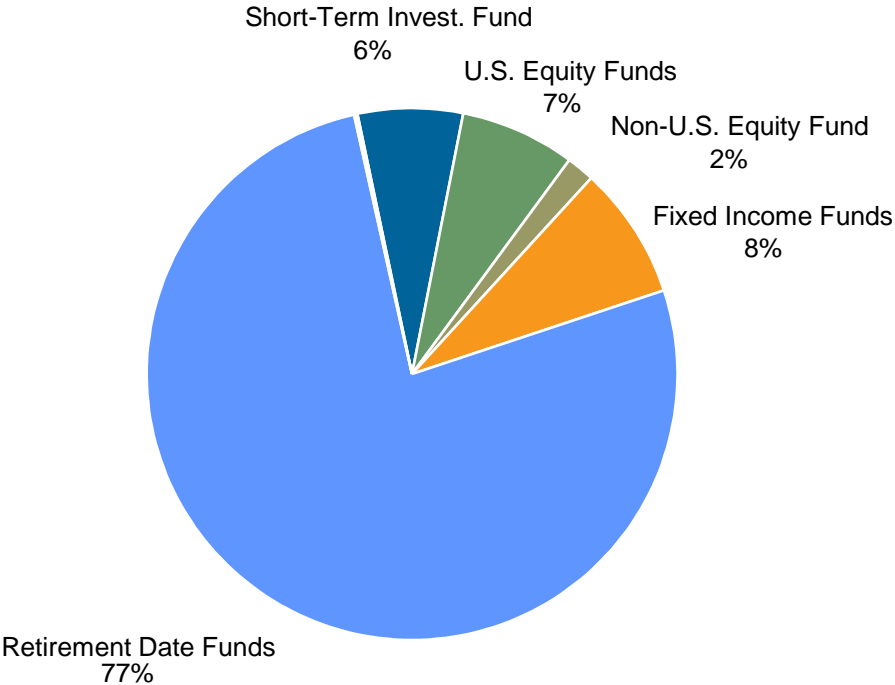
401(a) Plan Asset Allocation & Contributions

As of March 31, 2021

Asset Allocation



Contributions



Asset Allocation

As of March 31, 2021

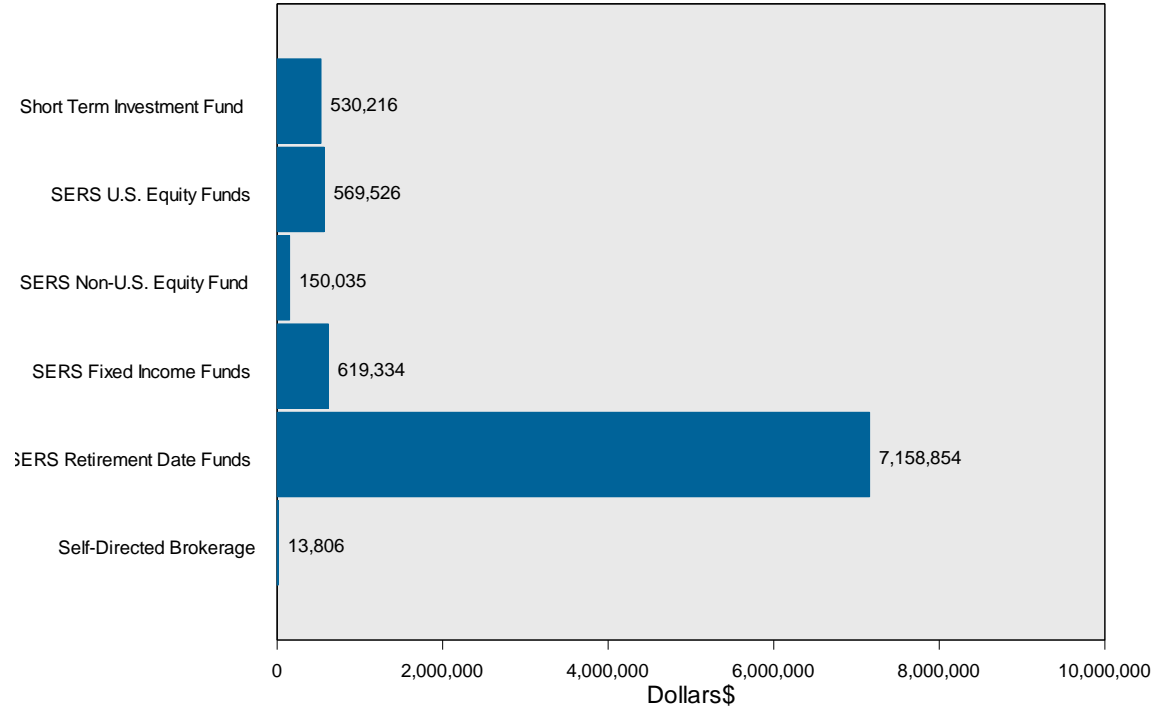
	March 31, 2021			December 31, 2020		
	Market Value	% of Total	Net New Inv.	Inv. Return	Market Value	% of Total
SERS Retirement Date Funds	\$38,603,736	87.28%	\$5,792,266	\$1,366,588	\$31,444,881	88.04%
SERS Post Retirement Fund	684,567	1.55%	119,662	1,742	563,163	1.58%
SERS 2025 Retirement Fund	1,804,071	4.08%	327,570	17,838	1,458,663	4.08%
SERS 2030 Retirement Fund	4,043,672	9.14%	567,244	76,523	3,399,905	9.52%
SERS 2035 Retirement Fund	4,012,900	9.07%	645,933	107,108	3,259,859	9.13%
SERS 2040 Retirement Fund	3,979,091	9.00%	660,372	135,120	3,183,599	8.91%
SERS 2045 Retirement Fund	5,064,220	11.45%	508,431	210,352	4,345,437	12.17%
SERS 2050 Retirement Fund	5,476,107	12.38%	799,819	236,424	4,439,865	12.43%
SERS 2055 Retirement Fund	5,299,495	11.98%	889,649	225,678	4,184,167	11.71%
SERS 2060 Retirement Fund	5,255,900	11.88%	776,613	228,422	4,250,866	11.90%
SERS 2065 Retirement Fund	2,983,712	6.75%	496,974	127,381	2,359,357	6.61%
SERS U.S. Equity	\$2,696,111	6.10%	\$426,776	\$142,750	\$2,126,584	5.95%
SERS U.S. Large Company Idx Fund	1,669,371	3.77%	210,048	88,136	1,371,187	3.84%
SERS U.S. All Company Idx Fund	630,448	1.43%	142,933	30,957	456,557	1.28%
SERS U.S. SMID Company Idx Fund	396,292	0.90%	73,795	23,657	298,840	0.84%
SERS Non-U.S. Equity						
SERS Global Non-U.S. Index Fund	867,518	1.96%	124,927	25,108	717,483	2.01%
SERS Fixed Income	\$2,008,131	4.54%	\$632,267	\$(12,933)	\$1,388,797	3.89%
SERS Short Term Investment Fund	1,469,369	3.32%	529,887	329	939,153	2.63%
SERS U.S. Short Term Bond Idx Fund	56,813	0.13%	4,305	(68)	52,576	0.15%
SERS U.S. TIPS Index Fund	104,197	0.24%	26,095	(1,386)	79,488	0.22%
SERS U.S. Bond Index Fund	377,752	0.85%	71,980	(11,807)	317,580	0.89%
Self-Directed Brokerage						
SERS Self-Directed Brokerage	54,547	0.12%	13,927	(121)	40,741	0.11%
Total Fund	\$44,230,042	100.0%	\$6,990,163	\$1,521,393	\$35,718,486	100.0%

Changes in Market Values and Contributions

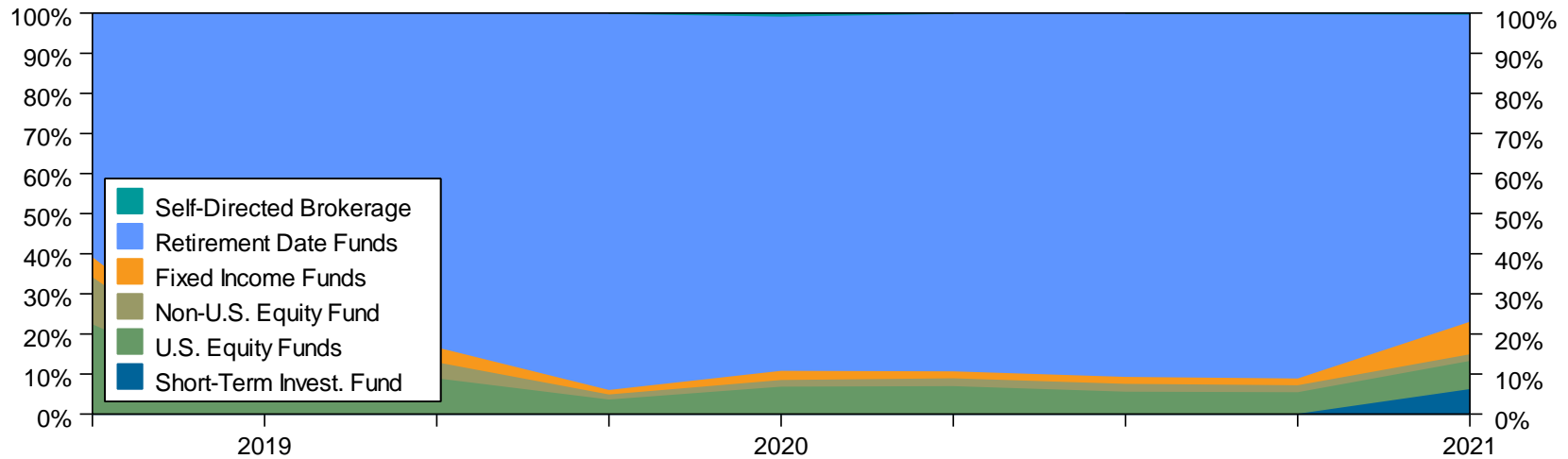
As of March 31, 2021

- 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.



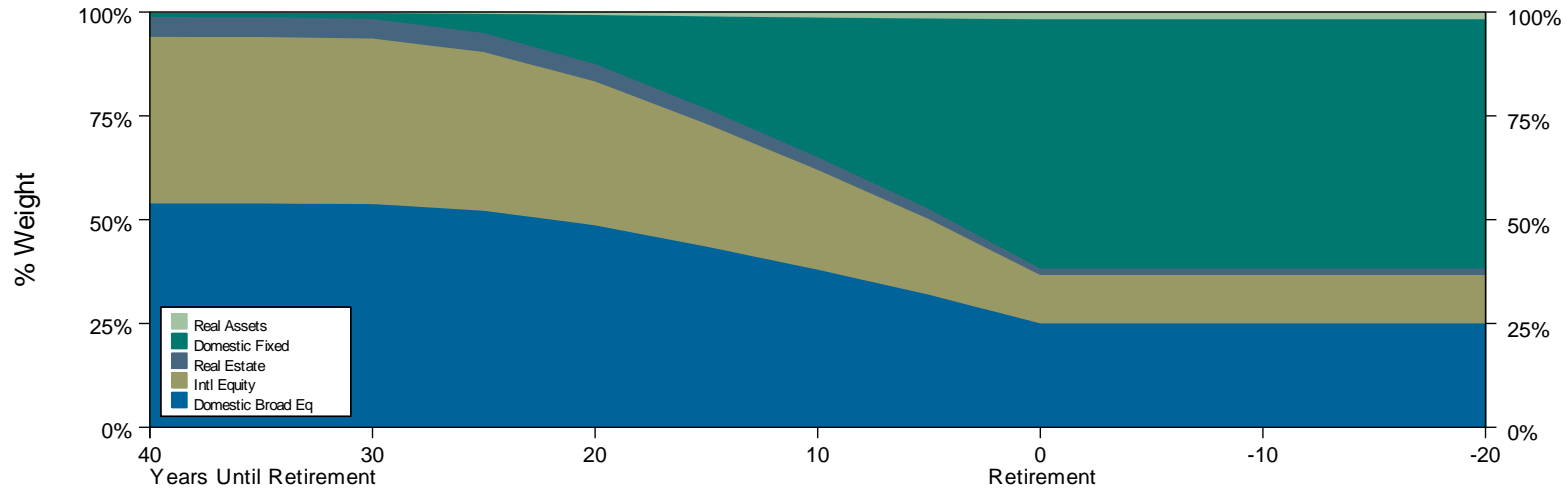
Historical Allocation of Contributions



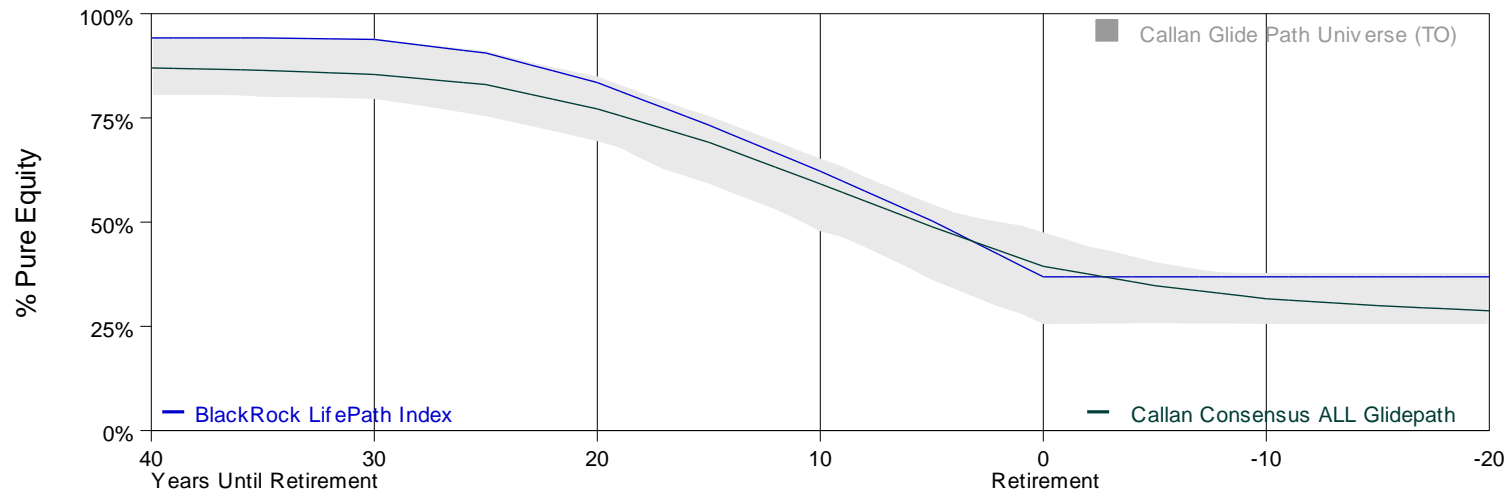
Blackrock Lifepath Retirement Funds

Glidepath and Equity Roll-down Exposure as of March 31, 2021

BlackRock LifePath Retirement Funds Glidepath



BlackRock LifePath Retirement Funds Equity Roll-down Exposure



Cumulative Performance - Net of Fees

As of March 31, 2021

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance				
Target Date Funds				
SERS Post Retirement Fund	0.36%	21.79%	8.21%	7.45%
BlackRock Post Retirement Index	0.37%	21.68%	8.17%	7.40%
Callan Tgt Date 2000-2010	0.59%	20.50%	7.57%	7.32%
SERS 2025 Retirement Fund	1.21%	28.04%	8.99%	8.95%
BlackRock 2025 Index	1.24%	27.95%	8.94%	8.86%
Callan Target Date 2025	1.91%	30.95%	9.16%	9.34%
SERS 2030 Retirement Fund	2.18%	34.68%	9.92%	10.01%
BlackRock 2030 Index	2.20%	34.60%	9.86%	9.91%
Callan Target Date 2030	2.74%	36.29%	9.97%	10.41%
SERS 2035 Retirement Fund	3.14%	41.32%	10.81%	11.05%
BlackRock 2035 Index	3.14%	41.24%	10.74%	10.91%
Callan Target Date 2035	3.64%	42.51%	10.71%	11.25%
SERS 2040 Retirement Fund	3.99%	47.64%	11.59%	11.95%
BlackRock 2040 Index	3.97%	47.49%	11.50%	11.79%
Callan Target Date 2040	4.48%	47.34%	11.19%	11.94%
SERS 2045 Retirement Fund	4.68%	52.70%	12.22%	12.60%
BlackRock 2045 Index	4.65%	52.53%	12.10%	12.41%
Callan Target Date 2045	4.93%	51.54%	11.54%	12.47%
SERS 2050 Retirement Fund	5.04%	55.25%	12.54%	12.88%
BlackRock 2050 Index	5.00%	55.08%	12.43%	12.70%
Callan Target Date 2050	5.13%	52.30%	11.80%	12.57%
SERS 2055 Retirement Fund	5.10%	55.61%	12.61%	12.91%
BlackRock 2055 Index	5.07%	55.54%	12.51%	12.75%
Callan Target Date 2055	5.16%	53.73%	11.87%	12.73%
SERS 2060 Retirement Fund	5.09%	55.58%	12.60%	12.89%
BlackRock 2060 Index	5.07%	55.53%	12.51%	12.75%
Callan Target Date 2060	5.25%	53.76%	12.04%	12.89%
SERS 2065 Retirement Fund	5.06%	55.34%	-	-
BlackRock 2065 Index	5.07%	55.53%	-	-
Callan Target Date 2065	5.19%	54.43%	12.07%	-

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, 2021

	Last 7 Years	Last 10 Years	Last 15 Years	Last 20 Years
Net Performance				
Target Date Funds				
SERS Post Retirement Fund	5.94%	6.02%	5.84%	-
BlackRock Post Retirement Index	5.89%	5.99%	5.81%	5.90%
Callan Tgt Date 2000-2010	5.81%	6.00%	5.02%	5.15%
SERS 2025 Retirement Fund	6.94%	7.11%	-	-
BlackRock 2025 Index	6.86%	7.05%	6.09%	6.11%
Callan Target Date 2025	7.21%	7.59%	6.27%	-
SERS 2030 Retirement Fund	7.66%	7.75%	6.49%	-
BlackRock 2030 Index	7.55%	7.67%	6.42%	6.37%
Callan Target Date 2030	7.95%	8.30%	6.49%	6.52%
SERS 2035 Retirement Fund	8.34%	8.35%	-	-
BlackRock 2035 Index	8.21%	8.24%	6.71%	6.58%
Callan Target Date 2035	8.53%	8.88%	6.94%	-
SERS 2040 Retirement Fund	8.93%	8.87%	7.06%	-
BlackRock 2040 Index	8.78%	8.74%	6.95%	6.75%
Callan Target Date 2040	9.05%	9.24%	7.15%	6.92%
SERS 2045 Retirement Fund	9.36%	9.27%	-	-
BlackRock 2045 Index	9.18%	9.13%	7.12%	6.91%
Callan Target Date 2045	9.29%	9.43%	7.60%	-
SERS 2050 Retirement Fund	9.55%	9.48%	-	-
BlackRock 2050 Index	9.39%	9.35%	7.35%	7.58%
Callan Target Date 2050	9.46%	9.67%	7.26%	-
SERS 2055 Retirement Fund	9.57%	9.64%	-	-
BlackRock 2055 Index	9.42%	9.48%	-	-
Callan Target Date 2055	9.59%	9.74%	-	-

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, 2021

	Last Quarter	Last Year	Last 3 Years	Last 5 Years
Net Performance				
Domestic Equity				
SERS U.S. Large Company Index Fund	6.18%	56.39%	16.80%	16.31%
S&P 500 Index	6.17%	56.35%	16.78%	16.29%
Callan Lg Cap Broad MF	6.52%	58.21%	16.29%	15.88%
SERS U.S. All Company Index Fund	6.32%	62.23%	17.04%	16.58%
Russell 3000 Index	6.35%	62.53%	17.12%	16.64%
Callan Multi Cap Brd MF	6.33%	61.62%	14.84%	14.78%
SERS U.S. SMID Company Idx Fund	7.97%	98.05%	18.28%	18.07%
Dow Jones US Completion	7.73%	97.82%	18.06%	17.85%
Callan SMID Broad MFs	7.76%	82.79%	15.63%	16.35%
International Equity				
SERS Global Non-U.S. Index Fund	3.60%	51.00%	6.77%	10.12%
MSCI ACWI ex US	3.49%	49.41%	6.51%	9.76%
Callan Non US Equity MFs	3.62%	53.39%	6.22%	9.24%
Domestic Fixed Income				
SERS Short Term Investment Fund	0.03%	0.30%	1.56%	1.33%
3-month Treasury Bill	0.02%	0.12%	1.49%	1.19%
Callan Cash Database(1)	0.05%	0.73%	1.75%	1.46%
SERS U.S. Short Term Bond Idx Fund	(0.06%)	1.54%	3.04%	-
Blmbg Gov/Cred 1-3 Yr	(0.04%)	1.57%	3.04%	2.00%
Callan Short US Govt MFs	(0.36%)	0.69%	2.77%	1.65%
SERS U.S. TIPS Index Fund	(1.47%)	7.52%	5.67%	-
Blmbg US TIPS	(1.47%)	7.54%	5.68%	3.86%
Callan TIPS MFs	(1.29%)	9.23%	5.27%	3.79%
SERS U.S. Bond Index Fund	(3.39%)	0.63%	4.66%	3.09%
Blmbg Aggregate	(3.37%)	0.71%	4.65%	3.10%
Callan Core Bond MFs	(3.07%)	3.90%	5.22%	3.69%

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

Cumulative Performance - Net of Fees

As of March 31, 2021

	Last 7 Years	Last 10 Years	Last 15 Years	Last 20 Years
Net Performance				
Domestic Equity				
SERS U.S. Large Company Index Fund	13.61%	13.93%	10.06%	8.51%
S&P 500 Index	13.59%	13.91%	10.02%	8.47%
Callan Lg Cap Broad MF	12.68%	13.10%	9.93%	8.35%
SERS U.S. All Company Index Fund	13.41%	13.77%	-	-
Russell 3000 Index	13.44%	13.79%	10.05%	8.85%
Callan Multi Cap Brd MF	11.44%	12.04%	8.97%	8.62%
SERS U.S. SMID Company Idx Fund	12.67%	13.23%	10.57%	11.12%
Dow Jones US Completion	12.47%	13.01%	10.36%	10.93%
Callan SMID Broad MFs	11.47%	11.77%	9.84%	10.39%
International Equity				
SERS Global Non-U.S. Index Fund	5.52%	5.19%	-	-
MSCI ACWI ex US	5.26%	4.93%	4.48%	6.16%
Callan Non US Equity MFs	5.36%	5.94%	4.86%	6.15%
Domestic Fixed Income				
SERS Short Term Investment Fund	1.01%	0.77%	1.34%	-
3-month Treasury Bill	0.87%	0.63%	1.16%	1.43%
Callan Cash Database(1)	1.16%	0.91%	1.55%	1.78%
Blmbg Gov/Cred 1-3 Yr	1.74%	1.57%	2.53%	2.80%
Callan Short US Govt MFs	1.55%	1.39%	2.46%	2.77%
Blmbg US TIPS	3.42%	3.44%	4.37%	5.08%
Callan TIPS MFs	3.06%	2.98%	4.14%	4.77%
SERS U.S. Bond Index Fund	3.30%	3.40%	4.25%	4.46%
Blmbg Aggregate	3.31%	3.44%	4.29%	4.50%
Callan Core Bond MFs	3.56%	3.76%	4.60%	4.68%

(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, 2021

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									
Target Date Funds									
SERS Post Retirement Fund Callan Tgt Date Ret Inc	0.4 57	21.8 32	8.2 17	7.5 17	5.9 15	6.0 16			0.08 80
BlackRock Post Retirement Index	0.4 57	21.7 35	8.2 17	7.4 18	5.9 15	6.0 17			
SERS 2025 Retirement Fund Callan Target Date 2025	1.2 87	28.0 70	9.0 55	8.9 68	6.9 64	7.1 71			0.08 79
BlackRock 2025 Index	1.2 86	27.9 71	8.9 57	8.9 69	6.9 65	7.0 72			
SERS 2030 Retirement Fund Callan Target Date 2030	2.2 80	34.7 67	9.9 51	10.0 67	7.7 61	7.7 70			0.08 78
BlackRock 2030 Index	2.2 79	34.6 68	9.9 56	9.9 69	7.5 63	7.7 72			
SERS 2035 Retirement Fund Callan Target Date 2035	3.1 74	41.3 63	10.8 42	11.0 60	8.3 58	8.4 66			0.08 79
BlackRock 2035 Index	3.1 74	41.2 64	10.7 48	10.9 72	8.2 71	8.2 71			
SERS 2040 Retirement Fund Callan Target Date 2040	4.0 70	47.6 45	11.6 34	12.0 50	8.9 54	8.9 67			0.08 78
BlackRock 2040 Index	4.0 71	47.5 49	11.5 38	11.8 59	8.8 68	8.7 69			
SERS 2045 Retirement Fund Callan Target Date 2045	4.7 59	52.7 32	12.2 30	12.6 40	9.4 46	9.3 59			0.08 79
BlackRock 2045 Index	4.6 63	52.5 37	12.1 33	12.4 53	9.2 60	9.1 62			
SERS 2050 Retirement Fund Callan Target Date 2050	5.0 55	55.3 23	12.5 30	12.9 39	9.5 43	9.5 54			0.08 78
BlackRock 2050 Index	5.0 58	55.1 25	12.4 33	12.7 47	9.4 57	9.3 65			
SERS 2055 Retirement Fund Callan Target Date 2055	5.1 57	55.6 25	12.6 27	12.9 37	9.6 51	9.6 52			0.08 82
BlackRock 2055 Index	5.1 59	55.5 26	12.5 30	12.7 50	9.4 59	9.5 62			
SERS 2060 Retirement Fund Callan Target Date 2060	5.1 63	55.6 28	12.6 31	12.9 50					0.08 80
BlackRock 2060 Index	5.1 67	55.5 29	12.5 34	12.8 60					

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, 2021

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	5.1 58	55.3 46							0.08 76
BlackRock 2065 Index	5.1 57	55.5 40							
Domestic Equity									
SERS U.S. Large Company Stock Index Fund Callan Lg Cap Broad MF	6.2 52	56.4 64	16.8 49	16.3 47	13.6 45	13.9 44			0.02 99
S&P 500 Index	6.2 52	56.4 64	16.8 49	16.3 47	13.6 45	13.9 44			
SERS U.S. All Company Index Fund Callan Multi Cap Brd MF	6.3 50	62.2 47	17.0 37	16.6 36	13.4 30	13.8 25			0.03 99
Russell 3000 Index	6.3 50	62.5 46	17.1 36	16.6 36	13.4 29	13.8 25			
U.S. Small/Mid Company Stock Index Fund Callan SMID Broad MFs	8.0 50	98.0 19	18.3 34	18.1 37	12.7 40	13.2 35			0.03 100
Dow Jones US Completion	7.7 50	97.8 19	18.1 35	17.9 38	12.5 41	13.0 39			
International Equity									
SERS Global Non-U.S. Index Fund Callan Non US Equity MFs	3.6 51	51.0 54	6.8 42	10.1 37	5.5 46	5.2 69			0.06 99
MSCI ACWI ex US	3.5 53	49.4 64	6.5 45	9.8 42	5.3 51	4.9 70			
Domestic Fixed Income									
SERS Short Term Investment Fund Callan Cash Database	0.0 94	0.3 84	1.6 81	1.3 78	1.0 81	0.8 81			0.00 100
3-month Treasury Bill	0.0 87	0.1 97	1.5 83	1.2 92	0.9 93	0.6 95			
Comments: Callan Cash Database includes STIF, enhanced cash, and money market funds.									
SERS U.S. Short Term Bond Idx Fund Callan Short US Govt MFs	-0.1 21	1.5 23	3.0 26						0.03 99
Blmbg Gov/Cred 1-3 Yr	-0.0 21	1.6 20	3.0 26	2.0 13	1.7 21	1.6 30			
SERS U.S. TIPS Index Fund Callan TIPS MFs	-1.5 60	7.5 76	5.7 37						0.03 99
Blmbg US TIPS	-1.5 60	7.5 76	5.7 36	3.9 48	3.4 28	3.4 23			

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, 2021

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 U.S. Bond Index Fund Callan Core Bond MFs	-3.4 82	0.6 98	4.7 89	3.1 100	3.3 79	3.4 85			0.03 98
Bimbg Aggregate	-3.4 81	0.7 98	4.7 90	3.1 99	3.3 75	3.4 84			

Returns:
 above median
 third quartile
 fourth quartile

Return Consistency:
 above median
 third quartile
 fourth quartile

Risk Quadrant:
 above median, low risk
 third quartile, low risk
 fourth quartile, low risk
 above median, high risk
 third quartile, high risk
 fourth quartile, high 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).

401(a) Plan Investment Structure

Lineup Mapped to Callan's Clean Sheet



Callan

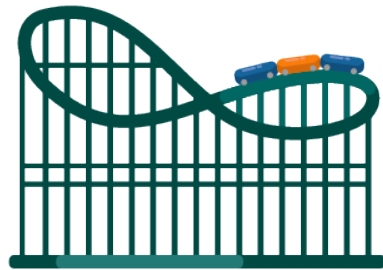
Appendix – Callan Update

Published Research Highlights from 1Q21

2021 Defined Contribution Survey



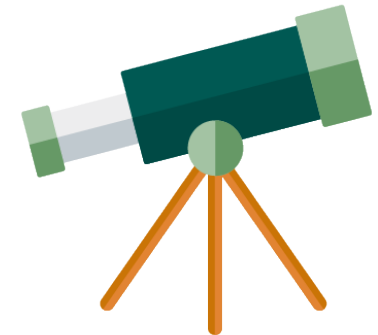
GameStopped—Or Just Getting Started?



Coping with COVID-19: Investment Manager Survey 3rd Edition



Callan's 2021-2030 Capital Markets Assumptions



Recent Blog Posts

Relief Bill Provides Shot in the Arm to Corporate Pensions

William Emmett & Sweta Vaidya

Why the Yield Curve Is Really Curving

Dario Buechi

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 Markets Review quarterly newsletter

Monthly Updates to the Periodic Table

Market Pulse Flipbook quarterly markets update

Callan Institute Events

Upcoming conferences, workshops, and webinars

2021 National Conference

July 19-21, 2021

Salt Lake City, UT

We are excited to announce our confirmed speakers and workshop topics below. We will continue to update you as we finalize our lineup for this event!

Confirmed Conference Speakers:

- Niall Ferguson
- Scott Gottlieb, M.D.

This year's Callan-led workshops will cover the following topics:

- Callan's Fund Sponsor Cost of Doing Business Survey Results
- Defined Contribution: Are Managed Accounts Adding Value?
- How to Navigate Your Corporate DB Plan in This Low-Rate Era
- Real Estate Debt as an Alternative to Traditional Fixed Income in the Hunt for Yield

Callan College

Learn the Fundamentals

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

Join our next virtual session:

Aug. 17, 2021 – Aug. 19, 2021

2-3 hour sessions over 3 days

Join our next LIVE session in Chicago:

Oct. 6, 2021 – Oct. 7, 2021

1.5-day session held in Callan's Chicago office

Webinars

Research Café: Insurance Session

May 19, 2021 – 9:30am (PT)

Inflation and Why Debt Matters

May 25, 2021 – 9:30am (PT)

Callan Updates

Firm updates by the numbers, as of March 31, 2021

Total Associates: 195

Ownership

- 100% employees
- Broadly distributed across 99 shareholders

Leadership Changes

- No changes to leadership this quarter

Total General and Fund Sponsor Consultants: more than 55

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 \$3 trillion

“Dave brings decades of institutional investment experience, depth, and perspective in private markets to Callan. His experience at a major university endowment will add tremendous value to our nonprofit clients. His experience as a private equity fund-of-funds investor will contribute to our team’s ability to source compelling funds and build lasting portfolios for all of our clients invested in private equity.

— Pete Keliuotis on the recent hiring of David Smith, senior vice president, to our Alternatives Consulting group.



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The statements made 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 such that actual results may differ materially from these statements. There is no obligation to update or alter any forward-looking statement, whether as a result of new information, future events or otherwise. Undue reliance should not be placed on forward-looking statements.