


March 31, 2023



City of Milwaukee Employees' Retirement System

Investment Measurement Service
Quarterly Review

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March 31, 2023

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U.S. EQUITY

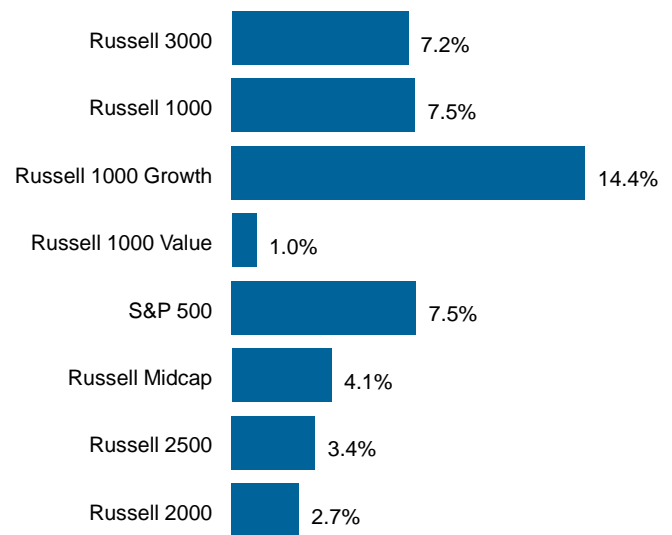
Markets gain, with exception of small cap value

- The S&P 500 posted a second straight quarter of positive performance, gaining 7.5% in 1Q23; large cap growth led all style and cap indices higher, advancing 14.4%.
- Russell 2000 Value was a notable exception and experienced a slight decline of 0.7% due to greater exposure to Financials, specifically banks.
- During the quarter, three sectors comprising 44% of the S&P 500 (and 63% of the Russell 1000 Growth Index) drove performance: Technology (+21.8%), Communication Services (+20.5%), and Consumer Discretionary (+16.1%).
- Financials, Energy, and Health Care posted negative returns for the quarter but had only a modest impact on total returns given smaller weights in respective benchmarks.
- Small caps (Russell 2000) underperformed large caps (Russell 1000) and growth outperformed value during the quarter, a reversal from 2022. Greater exposure to banks in Russell 2000 (8.3%) versus Russell 1000 (3.3%) was one differentiator for returns; strong returns for mega-cap Technology also increased divergence.

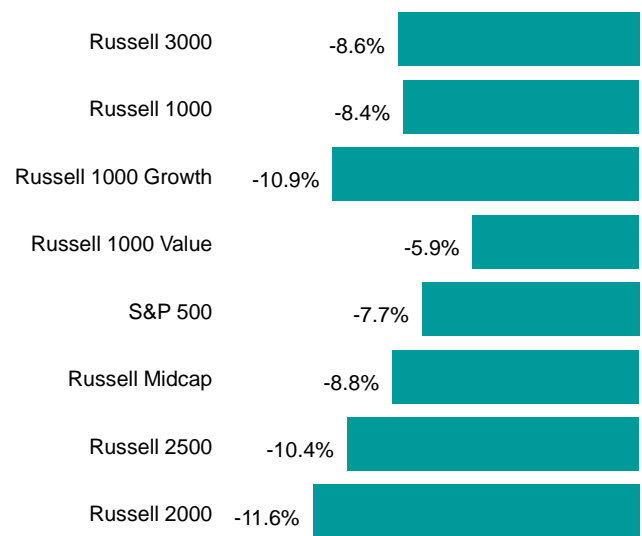
Large cap growth outperformance drivers

- The large cap growth outperformance was driven by increased valuations as interest rates declined and expectations of a more dovish Fed emerged.
- Asset managers may take a more cautious approach in equity markets into coming quarters as earnings estimates decline; expect a focus on quality, cash flow, defensive value names, and profitable growth stocks.
- Price multiples continue to be important as elevated valuations may compress if markets anticipate that monetary easing is not on the near-term horizon.
- Analyst estimates for future earnings are diverging, typically a sign of elevated economic turbulence.
- Investors “bought the dip” as stock performance reversed from the prior year; the worst-performing stocks for 2022 became best-performing stocks during 1Q23.

U.S. Equity: Quarterly Returns

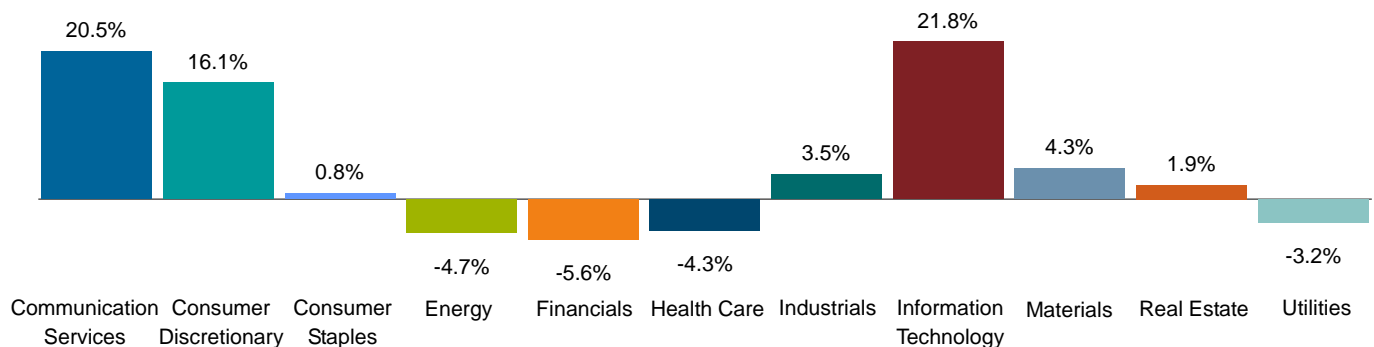


U.S. Equity: One-Year Returns



Sources: FTSE Russell, S&P Dow Jones Indices

S&P Sector Returns, Quarter Ended 3/31/23



Source: S&P Dow Jones Indices

GLOBAL EQUITY

1Q23 brought global equity markets back to black

- Positive results despite hiccups
- 1Q23 was marked by the collapse of Silicon Valley Bank and Credit Suisse, which sent fears of a banking crisis across global markets.
- Despite a Fed hike during the period, investors began to price in lower rate expectations.
- Europe outperformed other regions, making up ground lost in 2022 as inflation eased and recession fears lessened.

Growth vs. value

- Growth outpaced value across developed and emerging markets.
- In a reversal from 2022, investors preferred growth alongside a drawdown in banks; Information Technology was the largest outperformer.

U.S. dollar vs. other currencies

- After some strength early in the quarter, the U.S. dollar declined 1% as interest rate differentials narrowed globally.

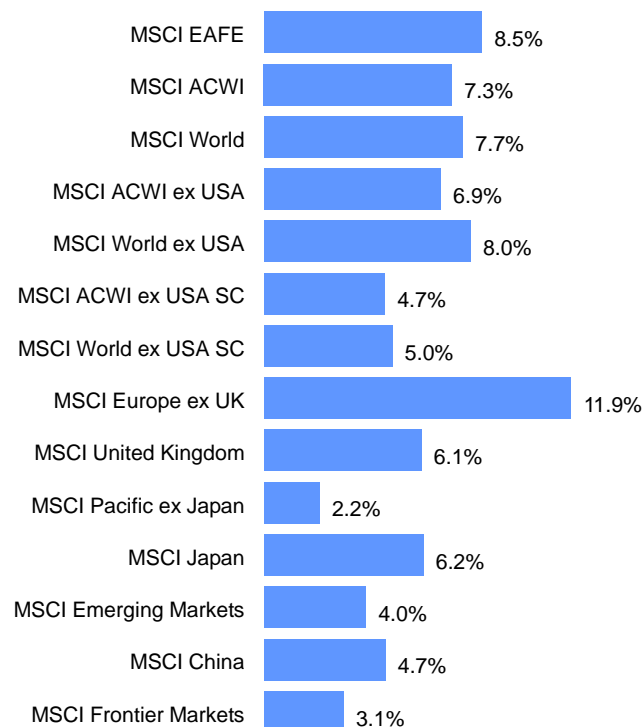
Developed markets outpace U.S.

- Outperformance of developed markets over the past year has been driven by Europe.
- Europe beat U.S. as the worst fears in the wake of the Russia-Ukraine War were not realized.
- Europe benefited from falling gas prices and China reopening.
- Value-growth dispersion was impacted less in developed markets relative to U.S. given the composition of the markets.
- EAFE Value outperformed Growth by 2.5 percentage points.
- S&P 500 Value outperformed Growth by 15.2 percentage points.
- Weak dollar in recent quarters helped global ex-U.S. equities.
- Since DXY Index reached a 20-year high in September 2022, it has fallen by 10%.

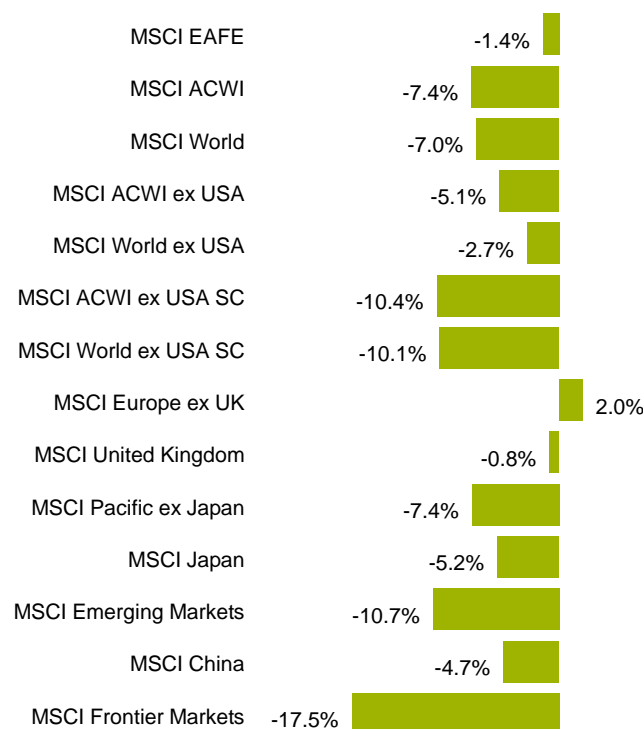
Will Europe continue to be a source of return?

- EPS growth expectations have fallen for both S&P 500 (-7%) and Europe (-9%).
- However, euro zone provides valuation support relative to the U.S.
- Euro zone trades at a 30% discount vs. the U.S.

Global Equity: Quarterly Returns



Global Equity: One-Year Returns



Source: MSCI

U.S. FIXED INCOME

Bloomberg Aggregate was positive in 1Q but mixed

- January: +3.1%
- February: -2.6%
- March: +2.5%

U.S. Treasury volatility was pronounced

- 2-year U.S. Treasury yield high was 5.08% on 3/8 and low was 3.77% on 3/24
- MOVE Index highest since 2008

Yield curve remained inverted but also volatile

- 2yr/10yr | 3/31: -58 bps; max 3/8: -109; min 3/23: -38
- 1yr/10yr | 3/31: -116 bps

Fed raised rates, bringing target to 4.75%–5.00%

- Median expectation from Fed is 5.1% for year-end 2023; market pricing in Fed cuts by year-end
- Inflation moderated but still high and job market tight

Sector performance mixed

- Corporate Industrials excess return: +58 bps
- Corporate Financials excess return: -39 bps
- RMBS excess return: -50 bps
- CMBS excess return: -74 bps
- High yield excess return: +123 bps

Valuations fair

- Credit spreads have not widened materially and are close to historical averages

MUNICIPAL BONDS

Indices gained in 1Q23

- Lower quality outperformed (AAA: +2.5%; AA: +2.7%; A: +3.0%; BBB: +3.7%)

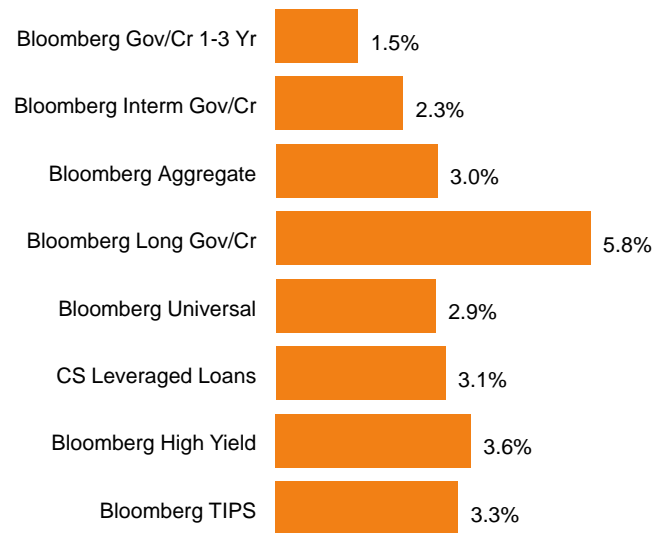
Muni curve inverted but less so than U.S. Treasuries

- 2-year AAA yield: 2.41%; 10-year AAA yield: 2.28%

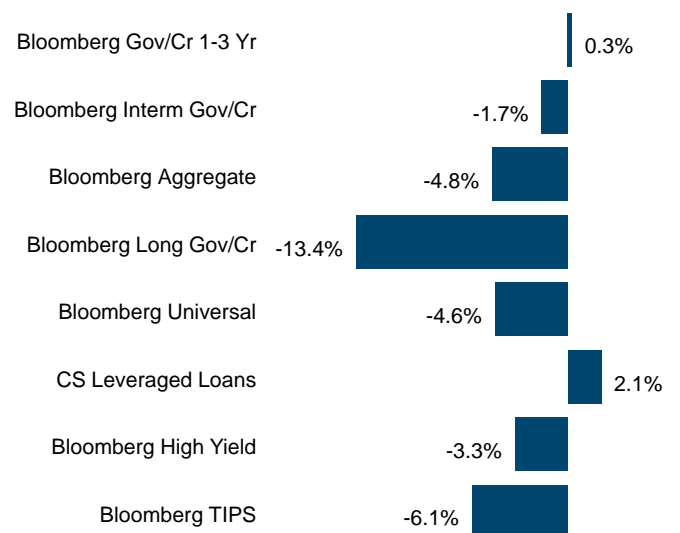
Valuations relative to U.S. Treasuries are rich

- 10-year AAA Muni/10-year U.S. Treasury yield ratio 65%; below 10-year average of 88%
- Over the last 10 years, 10-year ratio was richer 4% of the time
- After-tax yield of Muni Bond Index = 5.5%; Bloomberg IG Corporate = 5.2% (Source: Eaton Vance)

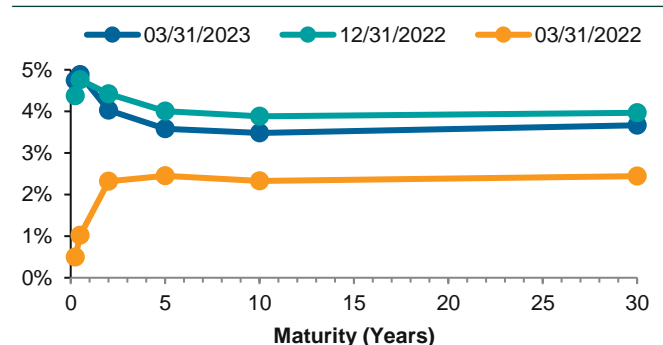
U.S. Fixed Income: Quarterly Returns



U.S. Fixed Income: One-Year Returns



U.S. Treasury Yield Curves



Sources: Bloomberg, Credit Suisse

MUNICIPAL BONDS (continued)

Supply/demand

- Outflows nearly \$2 billion but lower than the \$22 billion in 1Q22
- Supply about 25% lower year-over-year
- Munis not immune to turmoil in banking, but fundamentals remain sound
- Banks are third largest holder of munis (about 15%) but thus far have not been sellers
- Municipals could be affected by tighter lending standards but likely result would be more public issuance
- “Rainy Day” fund balances and state tax revenues robust

GLOBAL FIXED INCOME

Global Aggregate was positive in 1Q but mixed

- January: +3.3%
- February: -3.3%
- March: +3.2%
- ECB and UK hiked rates; Japan held steady

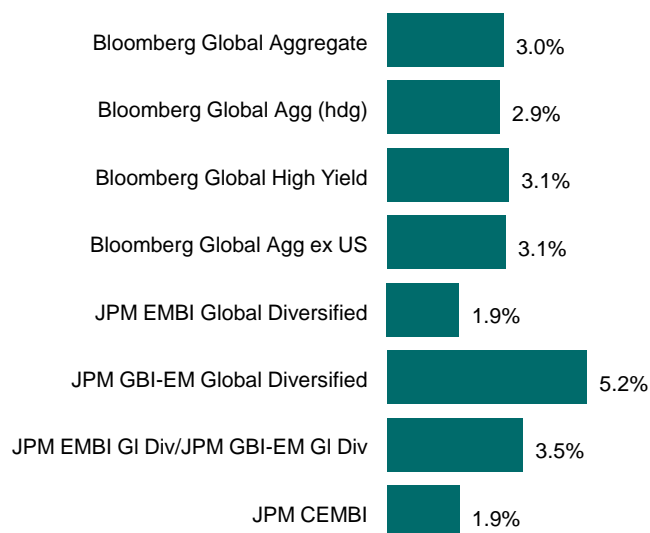
U.S. dollar was mixed but mostly lower

- Euro: +2% vs dollar
- British pound: +3% vs dollar
- Japanese yen: -1% vs dollar
- Australian dollar: -1% vs dollar
- Mexican peso: +8% vs dollar
- Brazilian real: +4% vs dollar

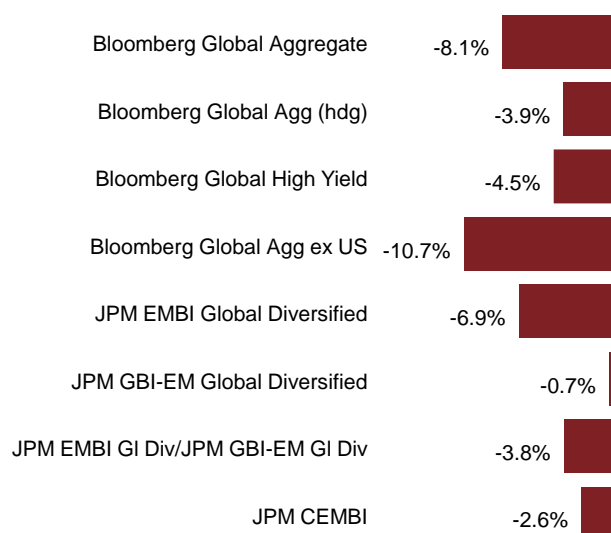
Emerging market debt delivered solid results

- EM currencies did well versus U.S. dollar, especially in Latin America; Latin America local currency return: +4.1%; unhedged in \$US: +9.8%

Global Fixed Income: Quarterly Returns

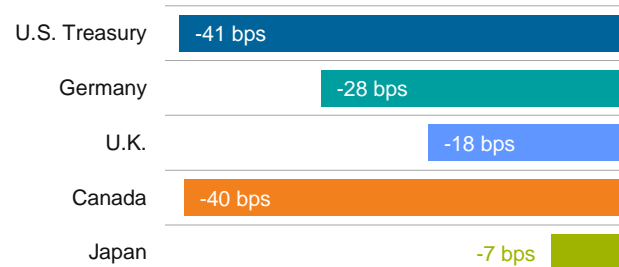


Global Fixed Income: One-Year Returns



Change in 10-Year Global Government Bond Yields

4Q22 to 1Q23



Sources: Bloomberg, JP Morgan

Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of March 31, 2023, with the distribution as of December 31, 2022. The change in asset distribution is broken down into the dollar change due to Net New Investment and the dollar change due to Investment Return.

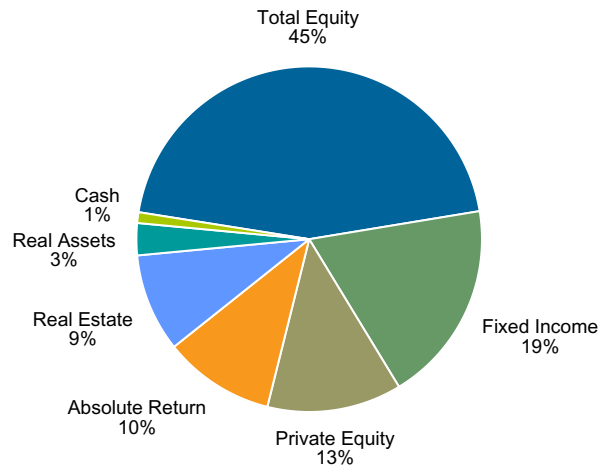
Asset Distribution Across Investment Managers

	March 31, 2023			December 31, 2022		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Domestic Equity	\$1,102,921,412	19.54%	\$(4,000,000)	\$46,905,761	\$1,060,015,651	19.38%
BlackRock Russell 1000 Value	209,399,266	3.71%	0	2,123,856	207,275,410	3.79%
DFA Large Cap Value	153,892,289	2.73%	0	1,718,744	152,173,545	2.78%
Northern Trust Global	222,589,968	3.94%	0	15,524,895	207,065,072	3.79%
Polen Capital Management	132,758,045	2.35%	(4,000,000)	16,839,794	119,918,251	2.19%
Earnest Partners LLC	110,365,766	1.96%	0	4,940,732	105,425,034	1.93%
DFA Small Cap Value	187,581,822	3.32%	0	1,540,845	186,040,977	3.40%
CastleArk Management	86,334,257	1.53%	0	4,216,895	82,117,362	1.50%
Total Global Equity	\$515,029,268	9.12%	\$36,000,000	\$37,985,911	\$441,043,357	8.06%
BlackRock Global Alpha Tilts	281,270,819	4.98%	0	19,779,106	261,491,713	4.78%
MFS Investment Management	233,758,449	4.14%	36,000,000	18,206,805	179,551,644	3.28%
Total International Equity	\$913,793,812	16.19%	\$(21,994,124)	\$76,185,302	\$859,602,635	15.72%
AQR Emerging Markets	95,582,490	1.69%	(172,999)	5,473,947	90,281,542	1.65%
Brandes Investment Partners	363,981,705	6.45%	(12,500,000)	37,552,891	338,928,814	6.20%
William Blair & Company	261,015,812	4.62%	(9,116,565)	21,110,761	249,021,617	4.55%
DFA International Small Cap	193,213,805	3.42%	(204,560)	12,047,703	181,370,662	3.32%
Total Fixed Income	\$1,065,709,488	18.88%	\$(12,100,000)	\$37,482,821	\$1,040,326,666	19.02%
BlackRock US Govt Bond	225,261,284	3.99%	0	6,967,546	218,293,738	3.99%
Reams Asset Management	500,647,435	8.87%	(7,000,000)	19,603,818	488,043,618	8.92%
Loomis, Sayles & Company, L.P.	339,800,768	6.02%	(5,100,000)	10,911,458	333,989,311	6.11%
Total Private Equity	\$712,792,085	12.63%	\$358,341	\$(855,140)	\$713,288,884	13.04%
Abbott Capital Management 2010	20,882,945	0.37%	(875,000)	0	21,757,945	0.40%
Abbott Capital Management 2011	43,201,290	0.77%	(1,100,000)	0	44,301,290	0.81%
Abbott Capital Management 2012	38,671,968	0.69%	(1,000,000)	0	39,671,968	0.73%
Abbott Capital Management 2013	37,717,485	0.67%	(875,000)	0	38,592,485	0.71%
Abbott Capital Management 2014	41,301,577	0.73%	(1,225,000)	0	42,526,577	0.78%
Abbott Capital Management 2015	33,053,989	0.59%	0	0	33,053,989	0.60%
Abbott Capital Management 2016	27,797,060	0.49%	0	0	27,797,060	0.51%
Abbott Capital Management 2018	21,015,376	0.37%	0	0	21,015,376	0.38%
Abbott Capital Management 2019	17,540,326	0.31%	0	0	17,540,326	0.32%
Abbott Capital Management 2020	20,292,024	0.36%	0	0	20,292,024	0.37%
Abbott Capital Management 2021	6,691,140	0.12%	0	0	6,691,140	0.12%
Abbott Capital Management 2022	7,746,068	0.14%	1,894,375	(21,875)	5,873,568	0.11%
Mesirow V	41,722,229	0.74%	(2,625,000)	0	44,347,229	0.81%
Mesirow VI	68,553,975	1.21%	(1,800,000)	0	70,353,975	1.29%
Mesirow VII	119,928,011	2.12%	0	0	119,928,011	2.19%
Mesirow VIII	42,644,326	0.76%	0	0	42,644,326	0.78%
NB Secondary Opp Fund III	6,892,236	0.12%	(480,096)	(126,062)	7,498,394	0.14%
NB Secondary Opp Fund IV	17,022,014	0.30%	(581,076)	(151,578)	17,754,668	0.32%
NB Secondary Opp Fund V	19,220,436	0.34%	7,300,000	(550,000)	12,470,436	0.23%
Private Advisors VI	21,328,797	0.38%	0	0	21,328,797	0.39%
Private Advisors VII	14,770,032	0.26%	0	0	14,770,032	0.27%
Private Advisors VIII	17,548,148	0.31%	545,573	7,500	16,995,075	0.31%
Private Advisors IX	27,250,633	0.48%	1,179,565	(13,125)	26,084,193	0.48%
Absolute Return	\$587,202,949	10.40%	\$(28,000,000)	\$4,238,764	\$610,964,186	11.17%
Aptitude	157,305,473	2.79%	0	289,425	157,016,049	2.87%
UBS A & Q	429,897,476	7.62%	(28,000,000)	3,949,339	453,948,137	8.30%
Real Assets	\$172,145,601	3.05%	\$(263,301)	\$2,439,119	\$169,969,783	3.11%
Principal DRA	172,145,601	3.05%	(263,301)	2,439,119	169,969,783	3.11%
Total Real Estate	\$518,900,332	9.19%	\$(14,805,717)	\$(16,612,530)	\$550,318,579	10.06%
Real Estate	518,900,332	9.19%	(14,805,717)	(16,612,530)	550,318,579	10.06%
Total Cash	\$55,762,110	0.99%	\$31,103,572	\$816,063	\$23,842,475	0.44%
Cash	55,762,110	0.99%	31,103,572	816,063	23,842,475	0.44%
Total Fund	\$5,644,257,058	100.0%	\$(13,701,229)	\$188,586,071	\$5,469,372,216	100.0%

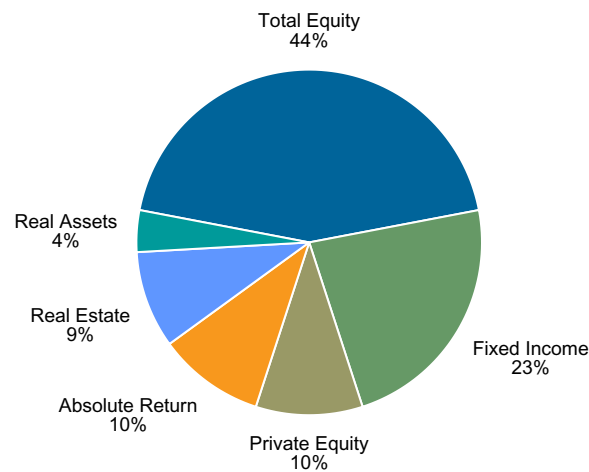
Actual vs Target Asset Allocation As of March 31, 2023

The first chart below shows the Fund's asset allocation as of March 31, 2023. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.

Actual Asset Allocation



Target Asset Allocation



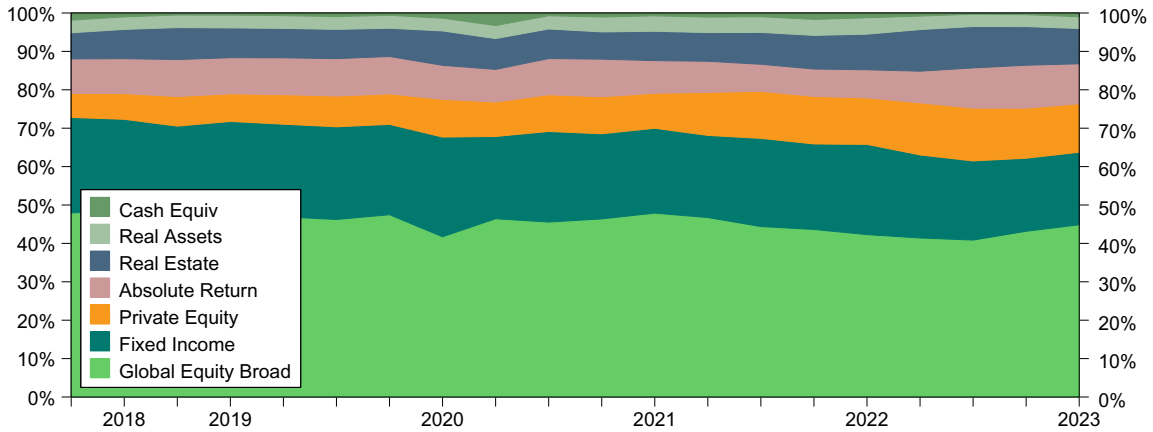
Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Total Equity	2,531,744	44.9%	44.0%	0.9%	48,271
Fixed Income	1,065,709	18.9%	23.0%	(4.1%)	(232,470)
Private Equity	712,792	12.6%	10.0%	2.6%	148,366
Absolute Return	587,203	10.4%	10.0%	0.4%	22,777
Real Estate	518,900	9.2%	9.1%	0.1%	5,273
Real Assets	172,146	3.0%	3.9%	(0.9%)	(47,980)
Cash	55,762	1.0%	0.0%	1.0%	55,762
Total	5,644,257	100.0%	100.0%		

* Current Quarter Target = 44.0% MSCI ACWI IMI, 23.0% Blmbg Aggregate, 10.0% Russell 3000 Index lagged 3 months+2.0%, 10.0% 3-month Treasury Bill+3.0%, 9.1% NCREIF NFI-ODCE Eq Wt Net lagged 3 months and 3.9% Principal DRA Blend Index.

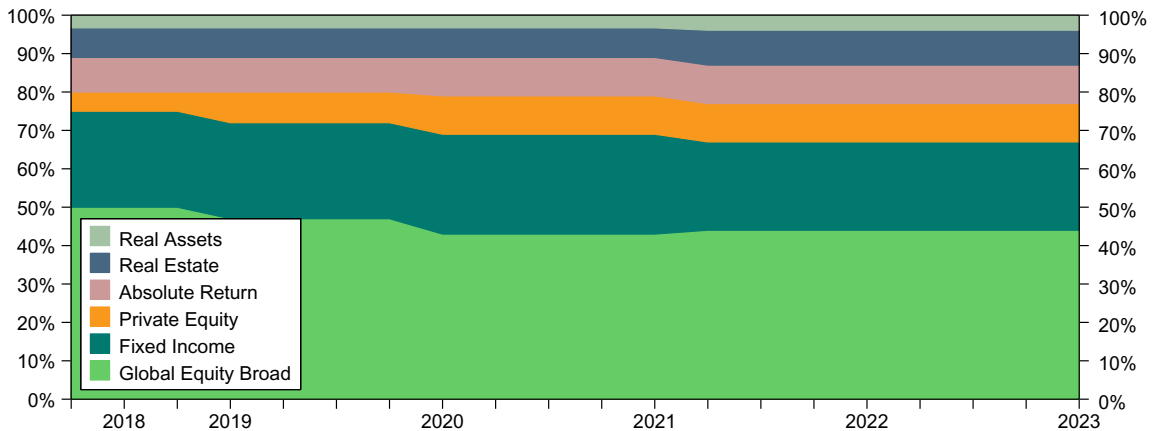
Actual vs Target Historical Asset Allocation

The Historical asset allocation for a fund is by far the largest factor explaining its performance. The charts below show the fund's historical actual asset allocation, the fund's historical target asset allocation, and the historical asset allocation of the average fund in the Callan Public Fund Sponsor Database.

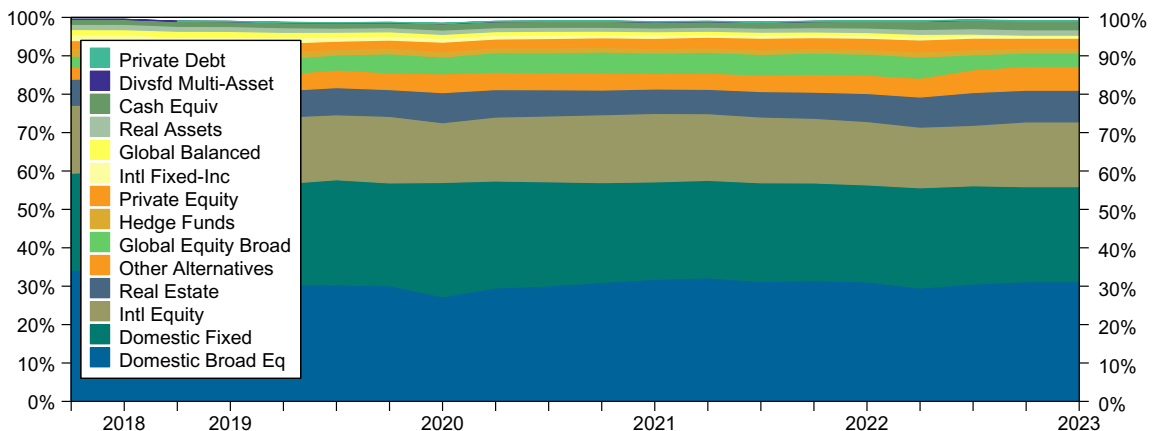
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average Callan Public Fund Sponsor Database Historical Asset Allocation



* Current Quarter Target = 44.0% MSCI ACWI IMI, 23.0% Blmbg Aggregate, 10.0% Russell 3000 Index lagged 3 months+2.0%, 10.0% 3-month Treasury Bill+3.0%, 9.1% NCREIF NFI-ODCE Eq Wt Net lagged 3 months and 3.9% Principal DRA Blend Index.

Total Fund

Period Ended March 31, 2023

Investment Philosophy

The Public Fund Sponsor Database consists of public employee pension total funds including both Callan Associates client and surveyed non-client funds. Current Quarter Target = 44.0% MSCI ACWI IMI, 23.0% Blmbg Aggregate, 10.0% Russell 3000 Index lagged 3 months+2.0%, 10.0% 3-month Treasury Bill+3.0%, 9.1% NCREIF NFI-ODCE Eq Wt Net lagged 3 months and 3.9% Principal Blended Benchmark.

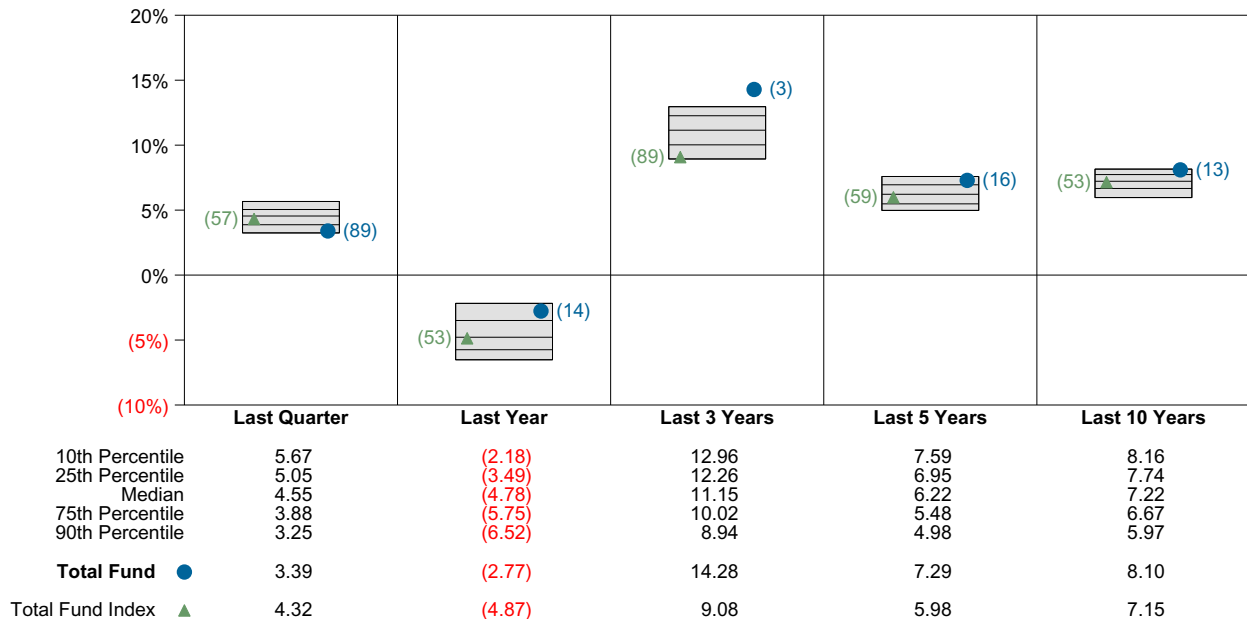
Quarterly Summary and Highlights

- Total Fund's portfolio posted a 3.39% return for the quarter placing it in the 89 percentile of the Callan Public Fund Sponsor Database group for the quarter and in the 14 percentile for the last year.
- Total Fund's portfolio underperformed the Total Fund Index by 0.93% for the quarter and outperformed the Total Fund Index for the year by 2.10%.

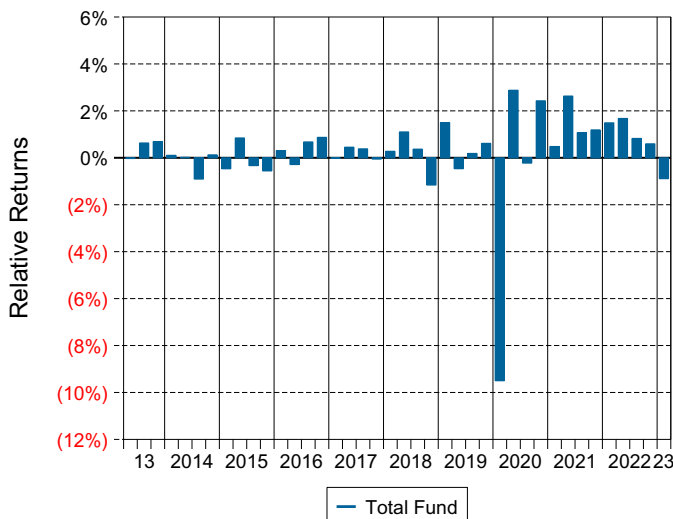
Quarterly Asset Growth

Beginning Market Value	\$5,469,372,216
Net New Investment	\$-13,701,229
Investment Gains/(Losses)	\$188,586,071
Ending Market Value	\$5,644,257,058

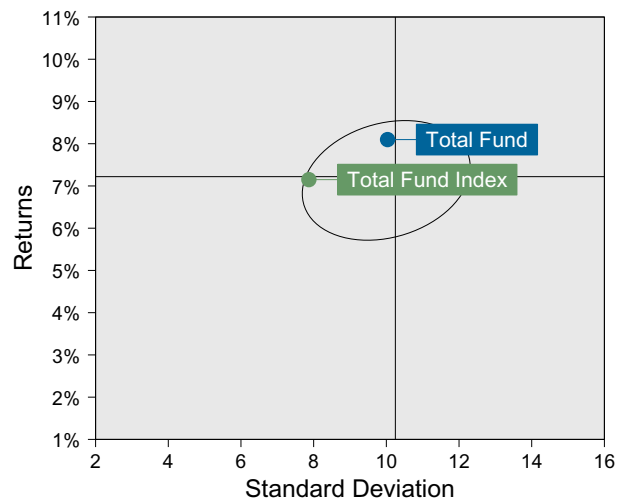
Performance vs Callan Public Fund Sponsor Database (Gross)



Relative Return vs Total Fund Index



Callan Public Fund Sponsor Database (Gross) Annualized Ten Year Risk vs Return

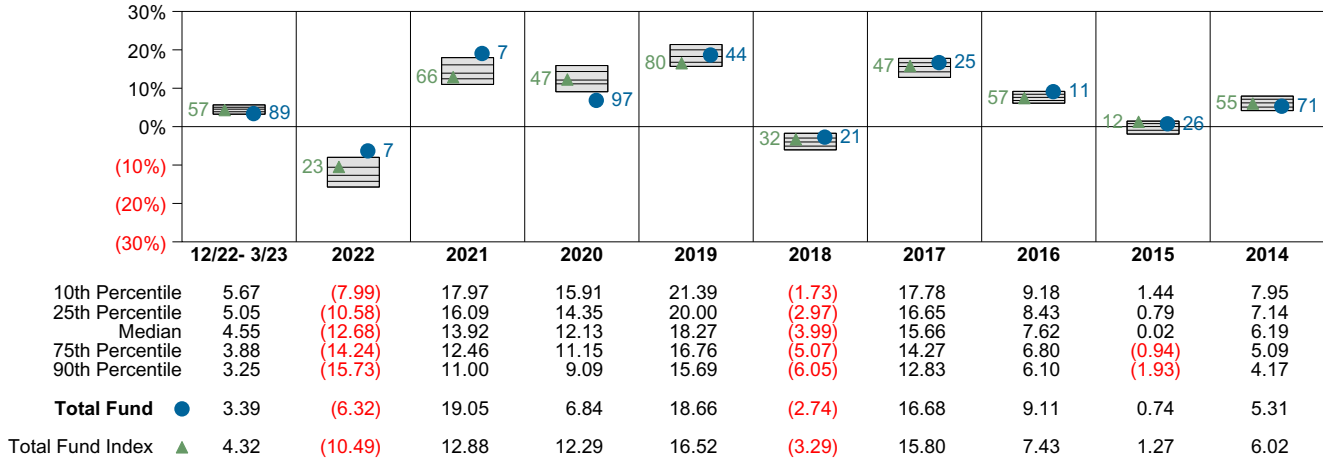


Total Fund Return Analysis Summary

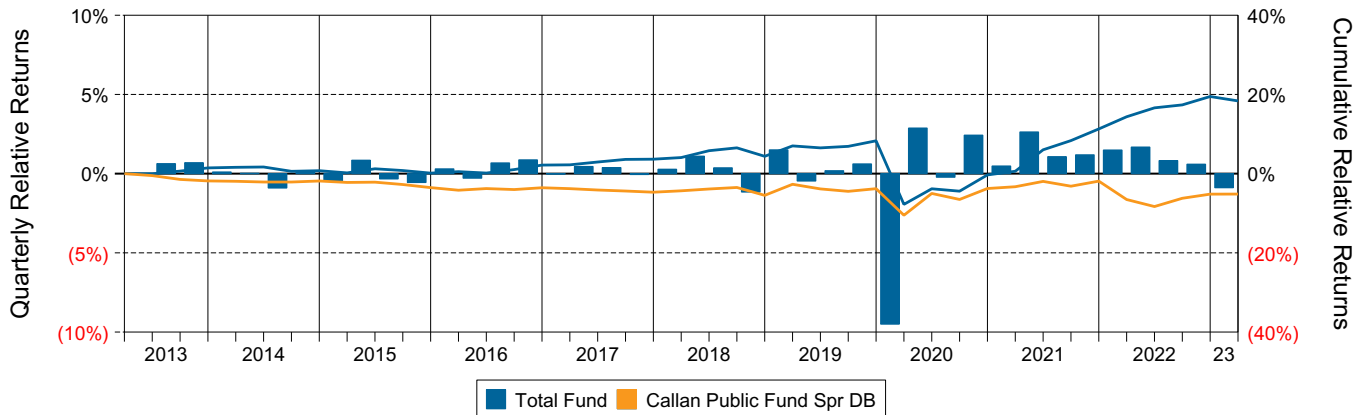
Return Analysis

The graphs below analyze the manager's return on both a risk-adjusted and unadjusted basis. The first chart illustrates the manager's ranking over different periods versus the appropriate style group. The second chart shows the historical quarterly and cumulative manager returns versus the appropriate market benchmark. The last chart illustrates the manager's ranking relative to their style using various risk-adjusted return measures.

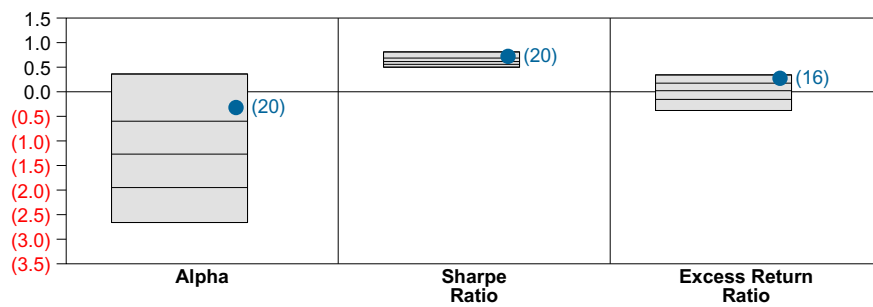
Performance vs Callan Public Fund Sponsor Database (Gross)



Cumulative and Quarterly Relative Returns vs Total Fund Index



Risk Adjusted Return Measures vs Total Fund Index Rankings Against Callan Public Fund Sponsor Database (Gross) Ten Years Ended March 31, 2023



	Alpha	Sharpe Ratio	Excess Return Ratio
10th Percentile	0.36	0.81	0.34
25th Percentile	(0.60)	0.69	0.17
Median	(1.27)	0.61	0.02
75th Percentile	(1.95)	0.56	(0.16)
90th Percentile	(2.66)	0.50	(0.38)
Total Fund ●	(0.32)	0.72	0.27

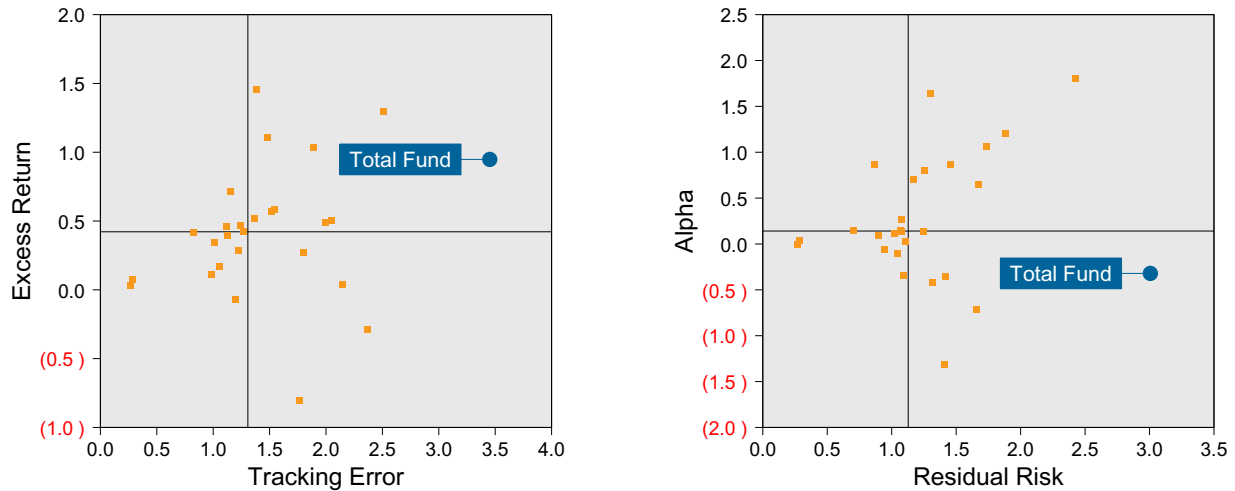
Total Fund

Total Fund vs Target Risk Analysis

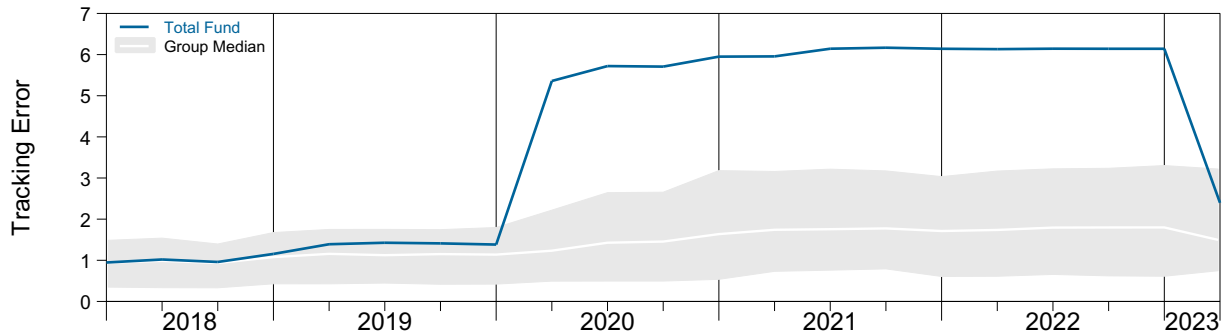
Risk Analysis

The graphs below analyze the performance and risk of the fund relative to the appropriate target mix. This relative performance is compared to a peer group of funds wherein each member fund is measured against its own target mix. The first scatter chart illustrates the relationship, called Excess Return Ratio, between excess return and tracking error relative to the target. The second scatter chart displays the relationship, sometimes called Information Ratio, between alpha (market-risk or "beta" adjusted return) and residual risk (non-market or "unsystematic" risk). The third chart shows tracking error patterns over time compared to the range of tracking error patterns for the peer group. The last two charts show the ranking of the fund's risk statistics versus the peer group.

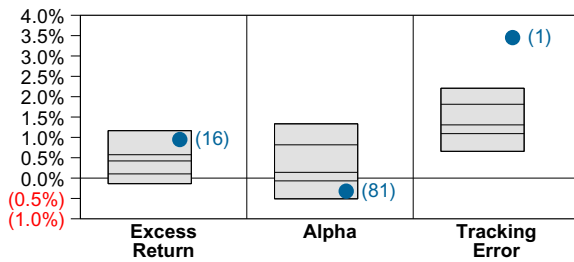
Risk Analysis vs Callan Public Fund Sponsor Database Ten Years Ended March 31, 2023



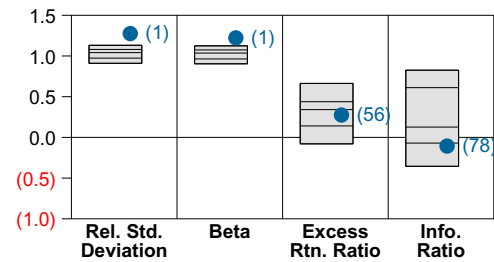
Rolling 12 Quarter Tracking Error vs Targets Compared to Callan Public Fund Sponsor Database



Risk Statistics Rankings vs Targets Rankings Against Callan Public Fund Sponsor Database Ten Years Ended March 31, 2023



	Excess Return	Alpha	Tracking Error
10th Percentile	1.17	1.33	2.21
25th Percentile	0.57	0.82	1.81
Median	0.42	0.14	1.31
75th Percentile	0.10	(0.07)	1.09
90th Percentile	(0.14)	(0.51)	0.66
Total Fund	● 0.95	(0.32)	3.45



	Rel. Std. Deviation	Beta	Excess Rtn. Ratio	Info. Ratio
10th Percentile	1.13	1.12	0.66	0.83
25th Percentile	1.08	1.07	0.44	0.61
Median	1.04	1.04	0.34	0.13
75th Percentile	0.97	0.96	0.14	(0.07)
90th Percentile	0.91	0.90	(0.08)	(0.35)
Total Fund	● 1.28	1.22	0.27	(0.11)

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended March 31, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns and Rankings for Periods Ended March 31, 2023

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
Total Public Equity	6.75%		(4.90%)		18.66%		7.40%		9.67%	(1/16)
MSCI ACWI IMI	6.95%		(7.68%)		15.64%		6.58%		8.69%	(1/16)
Total Domestic Equity	4.43%	100	(7.68%)	35	20.88%	3	9.94%	47	7.75%	(7/98)
Russell 3000 Index	7.18%	19	(8.58%)	70	18.48%	66	10.45%	21	7.45%	(7/98)
Pub Pln- Dom Equity	6.52%		(8.00%)		18.81%		9.90%		-	
BlackRock Russell 1000 Value	1.02%	37	(5.88%)	73	17.99%	82	7.68%	64	7.58%	(4/17)
Russell 1000 Value Index	1.01%	37	(5.91%)	74	17.93%	84	7.50%	70	7.41%	(4/17)
Callan Large Cap Value	0.42%		(4.52%)		20.57%		8.28%		-	
DFA Large Cap Value	1.13%	36	(4.18%)	42	21.26%	45	6.57%	92	6.87%	(11/17)
Russell 1000 Value Index	1.01%	37	(5.91%)	74	17.93%	84	7.50%	70	7.22%	(11/17)
Callan Large Cap Value	0.42%		(4.52%)		20.57%		8.28%		-	
Northern Trust Global	7.50%	23	(7.70%)	47	18.62%	45	11.22%	38	10.53%	(8/88)
S&P 500 Index	7.50%	23	(7.73%)	47	18.60%	45	11.19%	40	10.48%	(8/88)
Callan Large Cap Core	6.73%		(7.85%)		18.47%		10.62%		-	
Polen Capital Management	14.12%	32	(17.51%)	90	11.27%	89	11.95%	44	14.10%	(7/12)
S&P 500 Index	7.50%	88	(7.73%)	17	18.60%	20	11.19%	63	13.00%	(7/12)
Callan Large Cap Growth	13.09%		(11.85%)		15.62%		11.62%		-	
Earnest Partners LLC	4.69%	44	(5.99%)	38	21.22%	37	11.20%	8	11.06%	(5/05)
Russell MidCap Index	4.06%	51	(8.78%)	67	19.20%	56	8.05%	56	9.37%	(5/05)
Callan Mid Capitalization	4.21%		(7.32%)		20.15%		8.41%		-	
DFA Small Cap Value	0.83%	63	(1.84%)	15	33.50%	5	8.40%	19	11.56%	(11/96)
Russell 2000 Value Index	(0.66%)	84	(12.96%)	87	21.01%	80	4.55%	84	8.72%	(11/96)
Callan Small Cap Value	1.18%		(6.40%)		25.13%		6.17%		-	
CastleArk Management	5.14%	72	(10.58%)	47	20.44%	22	8.57%	54	9.96%	(9/13)
Russell 2000 Growth Index	6.07%	67	(10.60%)	48	13.36%	84	4.26%	94	7.86%	(9/13)
Callan Small Cap Growth	7.16%		(10.81%)		16.93%		8.98%		-	
Total Global Equity	7.98%	34	(4.95%)	45	16.77%	38	8.62%	32	8.96%	(4/10)
MSCI World	7.73%	37	(7.02%)	70	16.40%	44	8.01%	45	8.76%	(4/10)
Callan Global Equity	7.34%		(5.30%)		15.83%		7.75%		-	
BlackRock Global Alpha Tilts	7.56%	43	(5.57%)	55	16.68%	40	6.90%	63	11.03%	(3/16)
MSCI ACWI Gross	7.44%	47	(6.96%)	70	15.90%	50	7.46%	55	10.72%	(3/16)
Callan Global Equity	7.34%		(5.30%)		15.83%		7.75%		-	
MFS Investment Management	8.48%	31	(4.09%)	35	16.91%	37	11.16%	7	11.94%	(12/12)
MSCI ACWI Gross	7.44%	47	(6.96%)	70	15.90%	50	7.46%	55	9.25%	(12/12)
Callan Global Equity	7.34%		(5.30%)		15.83%		7.75%		-	
Total International Equity	8.95%	10	(1.55%)	8	16.60%	3	3.46%	44	6.81%	(5/96)
MSCI EAFE	8.47%	13	(1.38%)	7	12.99%	49	3.52%	43	4.56%	(5/96)
Pub Pln- Intl Equity	7.42%		(3.71%)		12.96%		3.14%		-	
AQR Emerging Markets	6.06%	24	(12.41%)	81	10.03%	33	(0.59%)	53	4.90%	(8/16)
MSCI EM Gross	4.02%	74	(10.30%)	59	8.23%	61	(0.53%)	51	4.67%	(8/16)
Callan Emerging Broad	5.08%		(9.62%)		9.05%		(0.42%)		-	
Brandes Investment Partners	11.22%	12	6.48%	3	18.76%	7	3.79%	54	7.60%	(2/98)
MSCI EAFE	8.47%	59	(1.38%)	47	12.99%	59	3.52%	58	4.62%	(2/98)
Callan NonUS Eq	8.76%		(1.87%)		13.77%		3.99%		-	
William Blair & Company	8.61%	54	(9.03%)	97	12.84%	64	4.81%	27	7.40%	(12/03)
MSCI ACWIxUS Gross	7.00%	86	(4.57%)	79	12.32%	74	2.97%	74	6.33%	(12/03)
Callan NonUS Eq	8.76%		(1.87%)		13.77%		3.99%		-	
DFA International Small Cap	6.64%	46	(0.93%)	14	19.79%	10	1.73%	40	4.73%	(5/06)
MSCI EAFE Small	4.92%	84	(9.83%)	82	12.07%	71	0.87%	66	3.95%	(5/06)
Callan Intl Small Cap	6.62%		(6.89%)		14.88%		1.51%		-	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended March 31, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns and Rankings for Periods Ended March 31, 2023

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
Total Fixed Income	3.61%	6	(3.19%)	29	2.08%	4	1.28%	73	6.65%	(12/87)
Bimbg Aggregate	2.96%	62	(4.78%)	72	(2.77%)	96	0.91%	91	5.51%	(12/87)
Pub Pln- Dom Fixed	3.06%		(4.30%)		(0.74%)		1.52%		-	
BlackRock US Govt Bond	3.19%	45	(4.46%)	38	-		-		(7.53%)	(12/21)
Bimbg Government	2.98%	78	(4.42%)	36	(4.12%)	100	0.76%	100	(7.72%)	(12/21)
Callan Core Bond FI	3.16%		(4.57%)		(1.72%)		1.37%		-	
Reams Asset Management	4.02%	2	(2.43%)	8	0.91%	8	3.63%	1	5.07%	(1/01)
Bimbg Aggregate	2.96%	83	(4.78%)	48	(2.77%)	99	0.91%	96	3.75%	(1/01)
Callan Core Plus FI	3.31%		(4.79%)		(0.64%)		1.63%		-	
Loomis, Sayles & Company, L.P.	3.27%	54	(3.69%)	15	2.64%	4	2.35%	11	8.14%	(12/87)
Bimbg Aggregate	2.96%	83	(4.78%)	48	(2.77%)	99	0.91%	96	5.51%	(12/87)
Callan Core Plus FI	3.31%		(4.79%)		(0.64%)		1.63%		-	
Total Private Equity	(0.12%)		(4.94%)		24.86%		22.51%		13.19%	(6/10)
Private Equity Benchmark (3)	7.71%		(16.64%)		9.73%		11.73%		-	
Abbott Capital Management 2010	0.00%		(16.87%)		19.64%		20.42%		1.63%	(6/10)
Abbott Capital Management 2011	0.00%		(18.97%)		22.64%		22.64%		5.14%	(6/11)
Abbott Capital Management 2012	0.00%		(13.14%)		24.67%		23.23%		12.43%	(7/12)
Abbott Capital Management 2013	0.00%		(12.51%)		24.20%		23.77%		13.25%	(5/13)
Abbott Capital Management 2014	0.00%		(9.41%)		26.24%		24.18%		12.90%	(4/14)
Abbott Capital Management 2015	0.00%		(0.79%)		26.70%		21.61%		14.72%	(4/15)
Abbott Capital Management 2016	0.00%		3.00%		28.40%		20.46%		13.74%	(3/16)
Abbott Capital Management 2018	0.00%		7.59%		24.85%		-		16.08%	(7/18)
Abbott Capital Management 2019	0.00%		7.54%		22.99%		-		21.05%	(1/20)
Abbott Capital Management 2020	0.00%		0.81%		-		-		25.50%	(1/21)
Abbott Capital Management 2021	0.00%		2.01%		-		-		5.92%	(2/21)
Abbott Capital Management 2022	(0.33%)		(7.12%)		-		-		(6.14%)	(2/22)
Mesirow V	0.00%		(19.60%)		20.33%		19.08%		15.21%	(6/10)
Mesirow VI	0.00%		(13.41%)		28.15%		26.39%		14.28%	(7/13)
Mesirow VII	0.00%		(0.66%)		23.03%		12.19%		3.24%	(6/17)
Mesirow VIII	0.00%		(2.15%)		-		-		(2.37%)	(9/20)
NB Secondary Opp Fund III	(1.71%)		(2.60%)		9.25%		11.42%		11.09%	(12/13)
NB Secondary Opp Fund IV	(0.86%)		0.72%		19.29%		26.80%		20.81%	(4/17)
NB Secondary Opp Fund V	(3.07%)		125.41%		-		-		111.75%	(3/22)
Private Advisors VI	0.00%		9.95%		33.04%		26.37%		14.60%	(4/15)
Private Advisors VII	0.00%		21.61%		24.48%		21.08%		15.55%	(1/17)
Private Advisors VIII	0.04%		27.66%		29.56%		-		20.35%	(8/18)
Private Advisors IX	(0.05%)		23.63%		28.10%		-		26.44%	(2/20)
Absolute Return	0.68%		7.86%		17.49%		6.45%		5.84%	(6/14)
90 Day T-Bill + 3%	1.79%		5.50%		3.89%		4.40%		3.97%	(6/14)
Aptitude	0.18%	61	-		-		-		3.08%	(9/22)
1-month LIBOR + 4%	2.13%	3	6.96%	12	5.10%	89	5.53%	23	4.68%	(9/22)
Callan Abs Rtn Hedge FoF	0.82%		2.35%		8.84%		4.11%		-	
UBS A & Q	0.86%	49	8.21%	11	10.84%	35	7.88%	1	6.29%	(12/14)
1-month LIBOR + 4%	2.13%	3	6.96%	12	5.10%	89	5.53%	23	5.18%	(12/14)
Callan Abs Rtn Hedge FoF	0.82%		2.35%		8.84%		4.11%		-	
Real Assets	1.44%		(9.35%)		13.59%		5.15%		5.72%	(1/16)
Principal DRA	1.44%	33	(9.35%)	74	13.59%	49	5.15%	46	5.72%	(1/16)
Principal DRA Blend Index (1)	1.11%	36	(10.15%)	76	11.86%	53	4.35%	69	5.01%	(1/16)
Callan Alternative Inv DB	(1.51%)		(4.89%)		13.50%		4.78%		-	
Total Real Estate	(3.03%)		2.65%		10.57%		9.29%		7.01%	(7/86)
Real Estate	(3.03%)	85	2.65%	24	10.57%	14	9.29%	13	7.01%	(7/86)
Blended Benchmark (2)	(5.08%)	95	7.56%	2	9.72%	20	8.31%	19	-	
Callan Tot Real Est DB	(1.41%)		(0.87%)		7.61%		7.16%		-	
Total Fund	3.39%	89	(2.77%)	14	14.28%	3	7.29%	16	-	
Total Fund Index*	4.32%	57	(4.87%)	53	9.08%	89	5.98%	59	-	
Callan Public Fund Spr DB	4.55%		(4.78%)		11.15%		6.22%		-	

* Current Quarter Target = 44.0% MSCI ACWI IMI, 23.0% Bimbg Aggregate, 10.0% Russell 3000 Index lagged 3 months+2.0%, 10.0% 3-month Treasury Bill+3.0%, 9.1% NCREIF NFI-ODCE Eq Wt Net lagged 3 months and 3.9% Principal DRA Blend Index.

(1) Current Principal DRA Blend Index = 15% Bloomberg US TIPS Idx, 15% Bloomberg Commodity Idx, 30% S&P Global Infrastructure Idx, 15% S&P Global Natural Resources Idx and 25% FTSE EPRA/NAREIT Developed Market Idx.

(2) Blended Benchmark = NCREIF (NPI) through 6/30/06, NCREIF (NPI 1 Qtr Arrears) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.

(3) Private Equity Benchmark = Russell 3000 Index lagged 3 months+3.0% through 12/31/19, Russell 3000 Index lagged 3 months+2.0% thereafter.

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	12/2022- 3/2023		2022		2021		2020		2019	
Total Public Equity	6.75%		(15.78%)		20.92%		14.78%		26.90%	
MSCI ACWI IMI	6.95%		(18.40%)		18.22%		16.25%		26.35%	
Total Domestic Equity	4.43%	100	(15.68%)	10	28.12%	14	16.35%	74	29.24%	75
Russell 3000 Index	7.18%	19	(19.21%)	74	25.66%	54	20.89%	26	31.02%	26
Pub Pln- Dom Equity	6.52%		(18.27%)		25.82%		18.63%		30.20%	
BlackRock Russell 1000 Value	1.02%	37	(7.54%)	80	25.18%	80	3.28%	47	26.79%	46
Russell 1000 Value Index	1.01%	37	(7.54%)	80	25.16%	80	2.80%	53	26.54%	49
Callan Large Cap Value	0.42%		(5.15%)		28.43%		3.04%		26.47%	
DFA Large Cap Value	1.13%	36	(4.95%)	49	27.52%	65	(1.56%)	90	26.71%	46
Russell 1000 Value Index	1.01%	37	(7.54%)	80	25.16%	80	2.80%	53	26.54%	49
Callan Large Cap Value	0.42%		(5.15%)		28.43%		3.04%		26.47%	
Northern Trust Global	7.50%	23	(18.08%)	55	28.69%	53	18.42%	53	31.54%	39
S&P 500 Index	7.50%	23	(18.11%)	56	28.71%	53	18.40%	53	31.49%	39
Callan Large Cap Core	6.73%		(17.69%)		28.98%		19.19%		30.50%	
Polen Capital Management	14.12%	32	(37.72%)	89	24.84%	43	35.13%	55	38.85%	11
S&P 500 Index	7.50%	88	(18.11%)	6	28.71%	20	18.40%	98	31.49%	76
Callan Large Cap Growth	13.09%		(29.99%)		24.26%		35.57%		34.55%	
Earnest Partners LLC	4.69%	44	(15.13%)	52	26.09%	48	21.61%	41	38.38%	12
Russell MidCap Index	4.06%	51	(17.32%)	58	22.58%	58	17.10%	48	30.54%	52
Callan Mid Capitalization	4.21%		(14.34%)		25.38%		16.17%		31.00%	
DFA Small Cap Value	0.83%	63	(1.69%)	10	40.61%	16	3.85%	45	18.79%	89
Russell 2000 Value Index	(0.66%)	84	(14.48%)	84	28.27%	64	4.63%	37	22.39%	64
Callan Small Cap Value	1.18%		(10.51%)		31.82%		2.88%		24.31%	
CastleArk Management	5.14%	72	(28.21%)	62	12.30%	42	45.10%	46	23.28%	86
Russell 2000 Growth Index	6.07%	67	(26.36%)	43	2.83%	80	34.63%	73	28.48%	54
Callan Small Cap Growth	7.16%		(27.20%)		10.91%		44.48%		30.25%	
Total Global Equity	7.98%	34	(17.35%)	47	19.03%	54	18.78%	43	31.05%	27
MSCI World	7.73%	37	(18.14%)	52	21.82%	28	15.90%	55	27.67%	49
Callan Global Equity	7.34%		(17.81%)		19.50%		17.13%		27.49%	
BlackRock Global Alpha Tilts	7.56%	43	(16.80%)	43	18.73%	57	16.53%	52	26.86%	53
MSCI ACWI Gross	7.44%	47	(17.96%)	51	19.04%	54	16.82%	51	27.30%	51
Callan Global Equity	7.34%		(17.81%)		19.50%		17.13%		27.49%	
MFS Investment Management	8.48%	31	(18.14%)	52	19.56%	50	22.42%	32	37.31%	4
MSCI ACWI Gross	7.44%	47	(17.96%)	51	19.04%	54	16.82%	51	27.30%	51
Callan Global Equity	7.34%		(17.81%)		19.50%		17.13%		27.49%	
Total International Equity	8.95%	10	(15.36%)	21	13.08%	13	10.84%	71	21.68%	72
MSCI EAFE	8.47%	13	(14.45%)	16	11.26%	23	7.82%	90	22.01%	63
Pub Pln- Intl Equity	7.42%		(17.01%)		8.41%		12.74%		22.89%	
AQR Emerging Markets	6.06%	24	(20.29%)	38	1.23%	37	18.26%	49	20.54%	63
MSCI EM Gross	4.02%	74	(19.74%)	35	(2.22%)	56	18.69%	44	18.90%	71
Callan Emerging Broad	5.08%		(22.16%)		(0.57%)		18.17%		22.12%	
Brandes Investment Partners	11.22%	12	(6.79%)	4	14.42%	18	(1.30%)	96	15.31%	98
MSCI EAFE	8.47%	59	(14.45%)	43	11.26%	52	7.82%	65	22.01%	66
Callan NonUS Eq	8.76%		(15.29%)		11.50%		11.19%		23.78%	
William Blair & Company	8.61%	54	(28.57%)	95	13.27%	30	31.44%	6	31.58%	10
MSCI ACWIxUS Gross	7.00%	86	(15.57%)	51	8.29%	71	11.13%	50	22.13%	64
Callan NonUS Eq	8.76%		(15.29%)		11.50%		11.19%		23.78%	
DFA International Small Cap	6.64%	46	(9.42%)	5	16.47%	14	1.47%	89	21.62%	81
MSCI EAFE Small	4.92%	84	(21.39%)	52	10.10%	72	12.34%	45	24.96%	50
Callan Intl Small Cap	6.62%		(20.65%)		12.78%		11.08%		24.96%	

Investment Manager Returns and Peer Group Rankings

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	12/2022- 3/2023		2022		2021		2020		2019	
Total Fixed Income	3.61%	6	(6.83%)	8	(0.36%)	40	(1.82%)	98	11.82%	5
Blmbg Aggregate	2.96%	62	(13.01%)	67	(1.54%)	90	7.51%	66	8.72%	58
Pub Plin- Dom Fixed	3.06%		(12.30%)		(0.80%)		8.37%		8.98%	
BlackRock US Govt Bond	3.19%	45	(12.43%)	23	-	-	-	-	-	-
Blmbg Government	2.98%	78	(12.32%)	19	(2.28%)	100	7.94%	85	6.83%	100
Callan Core Bond FI	3.16%		(12.91%)		(1.04%)		8.69%		9.17%	
Reams Asset Management	4.02%	2	(11.39%)	13	(1.23%)	91	17.28%	2	8.82%	92
Blmbg Aggregate	2.96%	83	(13.01%)	42	(1.54%)	97	7.51%	93	8.72%	93
Callan Core Plus FI	3.31%		(13.27%)		(0.25%)		9.27%		10.01%	
Loomis, Sayles & Company, L.P.	3.27%	54	(12.12%)	18	2.13%	5	7.14%	94	14.42%	1
Blmbg Aggregate	2.96%	83	(13.01%)	42	(1.54%)	97	7.51%	93	8.72%	93
Callan Core Plus FI	3.31%		(13.27%)		(0.25%)		9.27%		10.01%	
Total Private Equity	(0.12%)		(4.88%)		67.66%		22.14%		16.63%	
Private Equity Benchmark (3)	7.71%		(15.10%)		34.08%		17.99%		6.65%	
Abbott Capital Management 2010	0.00%		(16.87%)		65.55%		24.43%		16.52%	
Abbott Capital Management 2011	0.00%		(18.97%)		76.29%		29.13%		19.64%	
Abbott Capital Management 2012	0.00%		(13.14%)		72.85%		29.04%		17.91%	
Abbott Capital Management 2013	0.00%		(12.51%)		70.21%		28.65%		21.13%	
Abbott Capital Management 2014	0.00%		(9.41%)		75.52%		26.51%		19.74%	
Abbott Capital Management 2015	0.00%		(0.79%)		75.81%		16.62%		15.14%	
Abbott Capital Management 2016	0.00%		2.90%		71.04%		20.02%		9.08%	
Abbott Capital Management 2018	0.00%		7.44%		47.06%		22.73%		7.26%	
Abbott Capital Management 2019	0.00%		7.54%		57.22%		10.04%		-	
Abbott Capital Management 2020	0.00%		0.81%		65.36%		-		-	
Abbott Capital Management 2021	0.00%		1.72%		-		-		-	
Abbott Capital Management 2022	(0.33%)		-		-		-		-	
Mesirov V	0.00%		(19.60%)		78.52%		21.39%		16.29%	
Mesirov VI	0.00%		(13.41%)		88.26%		29.10%		22.73%	
Mesirov VII	0.00%		(0.68%)		60.27%		16.43%		3.33%	
Mesirov VIII	0.00%		(2.15%)		10.14%		-		-	
NB Secondary Opp Fund III	(1.71%)		(2.34%)		30.34%		4.23%		12.18%	
NB Secondary Opp Fund IV	(0.86%)		0.29%		48.73%		14.80%		14.76%	
NB Secondary Opp Fund V	(3.07%)		-		-		-		-	
Private Advisors VI	0.00%		9.97%		83.78%		16.54%		17.98%	
Private Advisors VII	0.00%		21.61%		52.55%		3.97%		11.23%	
Private Advisors VIII	0.04%		27.61%		47.25%		15.78%		(4.08%)	
Private Advisors IX	(0.05%)		24.00%		37.25%		-		-	
Absolute Return	0.68%		26.46%		8.87%		(14.04%)		12.79%	
90 Day T-Bill + 3%	1.79%		4.46%		3.05%		3.67%		5.28%	
Aptitude	0.18%	61	-		-		-		-	
1-month LIBOR + 4%	2.13%	3	5.80%	21	4.11%	77	4.63%	45	6.32%	30
Callan Abs Rtn Hedge FoF	0.82%		3.34%		6.76%		4.03%		4.71%	
UBS A & Q	0.86%	49	8.85%	13	8.08%	44	12.18%	14	9.53%	4
1-month LIBOR + 4%	2.13%	3	5.80%	21	4.11%	77	4.63%	45	6.32%	30
Callan Abs Rtn Hedge FoF	0.82%		3.34%		6.76%		4.03%		4.71%	
Real Assets	1.44%		(5.29%)		18.24%		4.69%		15.39%	
Principal DRA	1.44%	33	(5.29%)	84	18.24%	43	4.69%	23	15.39%	16
Principal DRA Blend Index (1)	1.11%	36	(5.07%)	84	15.87%	46	2.08%	32	14.86%	17
Callan Alternative Inv DB	(1.51%)		9.37%		13.64%		(0.43%)		7.84%	
Total Real Estate	(3.03%)		13.88%		23.85%		0.76%		6.21%	
Real Estate	(3.03%)	85	13.88%	26	23.85%	34	0.76%	53	6.21%	65
Blended Benchmark (2)	(5.08%)	95	21.68%	12	14.83%	58	0.89%	52	5.26%	73
Callan Tot Real Est DB	(1.41%)		8.23%		19.13%		1.14%		7.71%	
Total Fund	3.39%	89	(6.32%)	7	19.05%	7	6.84%	97	18.66%	44
Total Fund Index*	4.32%	57	(10.49%)	23	12.88%	66	12.29%	47	16.52%	80
Callan Public Fund Spr DB	4.55%		(12.68%)		13.92%		12.13%		18.27%	

* Current Quarter Target = 44.0% MSCI ACWI IMI, 23.0% Blmbg Aggregate, 10.0% Russell 3000 Index lagged 3 months+2.0%, 10.0% 3-month Treasury Bill+3.0%, 9.1% NCREIF NFI-ODCE Eq Wt Net lagged 3 months and 3.9% Principal DRA Blend Index.

(1) Current Principal DRA Blend Index = 15% Bloomberg US TIPS Idx, 15% Bloomberg Commodity Idx, 30% S&P Global Infrastructure Idx, 15% S&P Global Natural Resources Idx and 25% FTSE EPRA/NAREIT Developed Market Idx.

(2) Blended Benchmark = NCREIF (NPI) through 6/30/06, NCREIF (NPI) through 12/31/13 and NFI-ODCE (1 Qtr Arrears) thereafter.

(3) Private Equity Benchmark = Russell 3000 Index lagged 3 months+3.0% through 12/31/19, Russell 3000 Index lagged 3 months+2.0% thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended March 31, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Net of Fee Returns					
Total Domestic Equity	4.35%	(7.91%)	20.61%	9.67%	11.21%
Russell 3000 Index	7.18%	(8.58%)	18.48%	10.45%	11.73%
BlackRock Russell 1000 Value	1.02%	(5.89%)	17.98%	7.67%	-
Russell 1000 Value Index	1.01%	(5.91%)	17.93%	7.50%	9.13%
DFA Large Cap Value	1.08%	(4.35%)	21.05%	6.36%	-
Russell 1000 Value Index	1.01%	(5.91%)	17.93%	7.50%	9.13%
Northern Trust Global	7.49%	(7.71%)	18.60%	11.20%	12.26%
S&P 500 Index	7.50%	(7.73%)	18.60%	11.19%	12.24%
Polen Capital Management	14.01%	(17.84%)	10.82%	11.48%	13.54%
S&P 500 Index	7.50%	(7.73%)	18.60%	11.19%	12.24%
Earnest Partners LLC	4.55%	(6.49%)	20.63%	10.64%	12.10%
Russell MidCap Index	4.06%	(8.78%)	19.20%	8.05%	10.05%
DFA Small Cap Value	0.67%	(2.32%)	33.13%	8.09%	9.25%
Russell 2000 Value Index	(0.66%)	(12.96%)	21.01%	4.55%	7.22%
CastleArk Management	4.96%	(11.04%)	19.71%	7.88%	-
Russell 2000 Growth Index	6.07%	(10.60%)	13.36%	4.26%	8.49%
Total Global Equity	7.88%	(5.22%)	16.49%	8.30%	9.46%
MSCI World	7.73%	(7.02%)	16.40%	8.01%	8.85%
BlackRock Global Alpha Tilts	7.47%	(5.75%)	16.55%	6.75%	-
MSCI ACWI Gross	7.44%	(6.96%)	15.90%	7.46%	8.62%
MFS Investment Management	8.37%	(4.50%)	16.41%	10.69%	10.94%
MSCI ACWI Gross	7.44%	(6.96%)	15.90%	7.46%	8.62%
Total International Equity	8.83%	(2.01%)	16.05%	2.96%	5.61%
MSCI EAFE Index	8.47%	(1.38%)	12.99%	3.52%	5.00%
AQR Emerging Markets	5.87%	(13.11%)	9.20%	(1.34%)	-
MSCI EM Gross	4.02%	(10.30%)	8.23%	(0.53%)	2.37%
Brandes Investment Partners	11.12%	6.07%	18.31%	3.38%	5.70%
MSCI EAFE Index	8.47%	(1.38%)	12.99%	3.52%	5.00%
William Blair & Company	8.49%	(9.46%)	12.33%	4.35%	5.97%
MSCI ACWI ex-US Index	7.00%	(4.57%)	12.32%	2.97%	4.65%
DFA International Small Cap	6.53%	(1.34%)	19.19%	1.28%	5.73%
MSCI EAFE Small	4.92%	(9.83%)	12.07%	0.87%	5.86%

*Net returns are simulated with the use of fee schedules through March 31, 2019. Actual fees paid are used thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods ended March 31, 2023. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

Returns for Periods Ended March 31, 2023

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
Net of Fee Returns					
Total Fixed Income	3.58%	(3.29%)	1.97%	1.17%	1.66%
Blmbg Aggregate	2.96%	(4.78%)	(2.77%)	0.91%	1.36%
BlackRock US Govt Bond	3.19%	(4.48%)	-	-	-
Blmbg Government	2.98%	(4.42%)	(4.12%)	0.76%	0.92%
Reams Asset Management	3.99%	(2.56%)	0.77%	3.48%	2.67%
Blmbg Aggregate	2.96%	(4.78%)	(2.77%)	0.91%	1.36%
Loomis, Sayles & Company, L.P.	3.23%	(3.84%)	2.49%	2.20%	3.03%
Blmbg Aggregate	2.96%	(4.78%)	(2.77%)	0.91%	1.36%
Total Private Equity	(0.12%)	(4.94%)	24.86%	22.51%	17.39%
Private Equity Benchmark	7.71%	(16.64%)	9.73%	11.73%	-
Abbott Capital Management 2010	0.00%	(16.87%)	19.64%	20.42%	16.41%
Abbott Capital Management 2011	0.00%	(18.97%)	22.64%	22.64%	16.08%
Abbott Capital Management 2012	0.00%	(13.14%)	24.67%	23.23%	14.42%
Abbott Capital Management 2013	0.00%	(12.51%)	24.20%	23.77%	-
Abbott Capital Management 2014	0.00%	(9.41%)	26.24%	24.18%	-
Abbott Capital Management 2015	0.00%	(0.79%)	26.70%	21.61%	-
Abbott Capital Management 2016	0.00%	3.00%	28.40%	20.46%	-
Abbott Capital Management 2018	0.00%	7.59%	24.85%	-	-
Abbott Capital Management 2019	0.00%	7.54%	22.99%	-	-
Abbott Capital Management 2020	0.00%	0.81%	-	-	-
Abbott Capital Management 2021	0.00%	2.01%	-	-	-
Abbott Capital Management 2022	(0.33%)	(7.12%)	-	-	-
Mesirow V	0.00%	(19.60%)	20.33%	19.08%	18.26%
Mesirow IV	0.00%	(13.41%)	28.15%	26.39%	-
Mesirow VII	0.00%	(0.66%)	23.03%	12.19%	-
Mesirow VIII	0.00%	(2.15%)	-	-	-
NB Secondary Opp Fund III	(1.71%)	(2.60%)	9.25%	11.42%	-
NB Secondary Opp Fund IV	(0.86%)	0.72%	19.29%	26.80%	-
NB Secondary Opp Fund V	(3.07%)	125.41%	-	-	-
Private Advisors VI	0.00%	9.95%	33.04%	26.37%	-
Private Advisors VII	0.00%	21.61%	24.48%	21.08%	-
Private Advisors VIII	0.04%	27.66%	29.56%	-	-
Private Advisors IX	(0.05%)	23.63%	28.10%	-	-
Absolute Return	0.68%	7.86%	17.40%	6.34%	-
90 Day T-Bill + 3%	1.79%	5.50%	3.89%	4.40%	3.87%
Aptitude	0.18%	-	-	-	-
1-month LIBOR + 4%	2.13%	6.96%	5.10%	5.53%	5.01%
UBS A & Q	0.86%	8.21%	10.84%	7.88%	-
1-month LIBOR + 4%	2.13%	6.96%	5.10%	5.53%	5.01%
Real Assets	1.28%	(9.95%)	12.87%	4.61%	-
Principal DRA	1.28%	(9.95%)	12.87%	4.61%	-
Principal DRA Blend Index	1.11%	(10.15%)	11.86%	4.35%	-
Total Real Estate	(3.13%)	2.37%	10.22%	8.97%	10.41%
Real Estate	(3.13%)	2.37%	10.22%	8.97%	10.41%
Blended Benchmark	(5.08%)	7.56%	9.72%	8.31%	9.34%
Total Fund	3.33%	(2.98%)	14.04%	7.03%	7.82%
Total Fund Index	4.32%	(4.87%)	9.08%	5.98%	7.15%

*Net returns are simulated with the use of fee schedules through March 31, 2019. Actual fees paid are used thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

	12/2022- 3/2023	2022	2021	2020	2019
Net of Fee Returns					
Total Domestic Equity	4.35%	(15.89%)	27.88%	16.09%	28.94%
Russell 3000 Index	7.18%	(19.21%)	25.66%	20.89%	31.02%
BlackRock Russell 1000 Value Russell 1000 Value Index	1.02% 1.01%	(7.55%) (7.54%)	25.17% 25.16%	3.27% 2.80%	26.77% 26.54%
DFA Large Cap Value Russell 1000 Value Index	1.08% 1.01%	(5.12%) (7.54%)	27.35% 25.16%	(1.78%) 2.80%	26.42% 26.54%
Northern Trust Global S&P 500 Index	7.49% 7.50%	(18.09%) (18.11%)	28.68% 28.71%	18.41% 18.40%	31.53% 31.49%
Polen Capital Management S&P 500 Index	14.01% 7.50%	(37.97%) (18.11%)	24.34% 28.71%	34.59% 18.40%	38.27% 31.49%
Earnest Partners LLC Russell MidCap Index	4.55% 4.06%	(15.58%) (17.32%)	25.59% 22.58%	20.96% 17.10%	37.65% 30.54%
DFA Small Cap Value Russell 2000 Value Index	0.67% (0.66%)	(2.12%) (14.48%)	40.38% 28.27%	3.74% 4.63%	18.58% 22.39%
CastleArk Management Russell 2000 Growth Index	4.96% 6.07%	(28.58%) (26.36%)	11.55% 2.83%	44.12% 34.63%	22.47% 28.48%
Total Global Equity	7.88%	(17.55%)	18.80%	18.48%	30.55%
MSCI World	7.73%	(18.14%)	21.82%	15.90%	27.67%
BlackRock Global Alpha Tilts MSCI ACWI Gross	7.47% 7.44%	(16.89%) (17.96%)	18.67% 19.04%	16.39% 16.82%	26.48% 27.30%
MFS Investment Management MSCI ACWI Gross	8.37% 7.44%	(18.50%) (17.96%)	19.05% 19.04%	21.88% 16.82%	36.74% 27.30%
Total International Equity	8.83%	(15.75%)	12.57%	10.28%	21.08%
MSCI EAFE Index	8.47%	(14.45%)	11.26%	7.82%	22.01%
AQR Emerging Markets MSCI EM Gross	5.87% 4.02%	(20.93%) (19.74%)	0.47% (2.22%)	17.38% 18.69%	19.64% 18.90%
Brandes Investment Partners MSCI EAFE Index	11.12% 8.47%	(7.15%) (14.45%)	14.00% 11.26%	(1.69%) 7.82%	14.86% 22.01%
William Blair & Company MSCI ACWI ex-US Index	8.49% 7.00%	(28.91%) (15.57%)	12.77% 8.29%	30.84% 11.13%	31.01% 22.13%
DFA International Small Cap MSCI EAFE Small	6.53% 4.92%	(9.80%) (21.39%)	15.89% 10.10%	0.81% 12.34%	21.00% 24.96%

*Net returns are simulated with the use of fee schedules through March 31, 2019. Actual fees paid are used thereafter.

Investment Manager Returns

The table below details the rates of return for the Fund's investment managers over various time periods. Negative returns are shown in red, positive returns in black. Returns for one year or greater are annualized. The first set of returns for each asset class represents the composite returns for all the fund's accounts for that asset class.

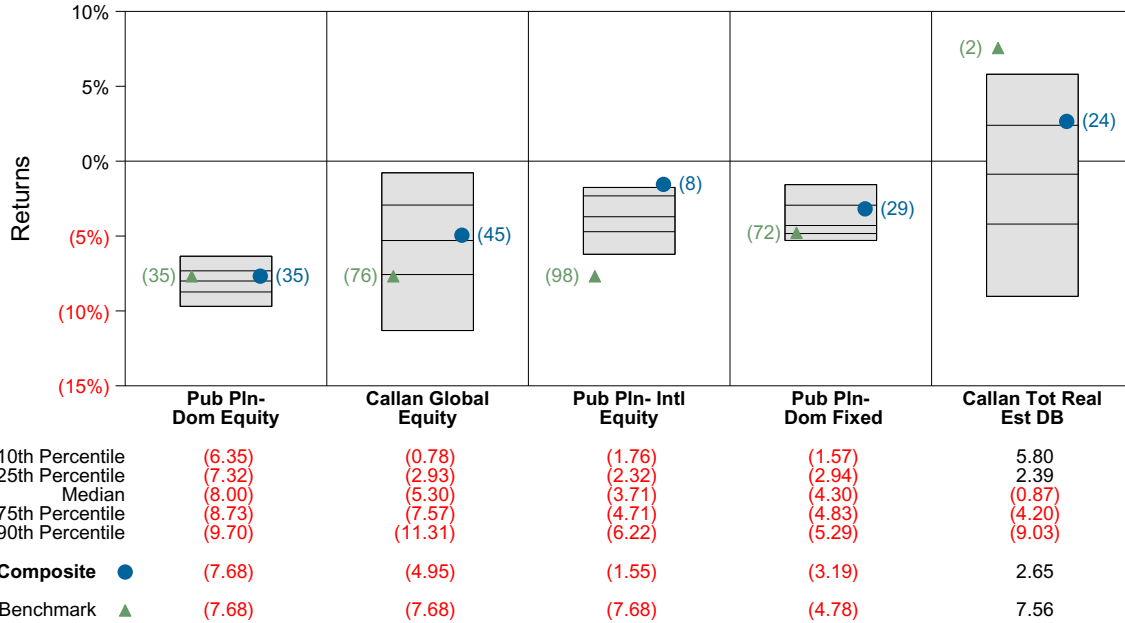
	12/2022- 3/2023	2022	2021	2020	2019
Net of Fee Returns					
Total Fixed Income	3.58%	(6.93%)	(0.45%)	(1.91%)	11.68%
Blmbg Aggregate	2.96%	(13.01%)	(1.54%)	7.51%	8.72%
BlackRock US Govt Bond Blmbg Government	3.19% 2.98%	(12.44%) (12.32%)	- (2.28%)	- 7.94%	- 6.83%
Reams Asset Management Blmbg Aggregate	3.99% 2.96%	(11.50%) (13.01%)	(1.36%) (1.54%)	17.11% 7.51%	8.65% 8.72%
Loomis, Sayles & Company, L.P. Blmbg Aggregate	3.23% 2.96%	(12.26%) (13.01%)	1.98% (1.54%)	6.99% 7.51%	14.25% 8.72%
Total Private Equity	(0.12%)	(4.88%)	67.66%	22.14%	16.63%
Private Equity Benchmark	7.71%	(15.10%)	34.08%	17.99%	6.65%
Abbott Capital Management 2010	0.00%	(16.87%)	65.55%	24.43%	16.52%
Abbott Capital Management 2011	0.00%	(18.97%)	76.29%	29.13%	19.64%
Abbott Capital Management 2012	0.00%	(13.14%)	72.85%	29.04%	17.91%
Abbott Capital Management 2013	0.00%	(12.51%)	70.21%	28.65%	21.13%
Abbott Capital Management 2014	0.00%	(9.41%)	75.52%	26.51%	19.74%
Abbott Capital Management 2015	0.00%	(0.79%)	75.81%	16.62%	15.14%
Abbott Capital Management 2016	0.00%	2.90%	71.04%	20.02%	9.08%
Abbott Capital Management 2018	0.00%	7.44%	47.06%	22.73%	7.26%
Abbott Capital Management 2019	0.00%	7.54%	57.22%	10.04%	-
Abbott Capital Management 2020	0.00%	0.81%	65.36%	-	-
Abbott Capital Management 2021	0.00%	1.72%	-	-	-
Abbott Capital Management 2022	(0.33%)	-	-	-	-
Mesirow V	0.00%	(19.60%)	78.52%	21.39%	16.29%
Mesirow IV	0.00%	(13.41%)	88.26%	29.10%	22.73%
Mesirow VII	0.00%	(0.68%)	60.27%	16.43%	3.33%
Mesirow VIII	0.00%	(2.15%)	10.14%	-	-
NB Secondary Opp Fund III	(1.71%)	(2.34%)	30.34%	4.23%	12.18%
NB Secondary Opp Fund IV	(0.86%)	0.29%	48.73%	14.80%	14.76%
NB Secondary Opp Fund V	(3.07%)	-	-	-	-
Private Advisors VI	0.00%	9.97%	83.78%	16.54%	17.98%
Private Advisors VII	0.00%	21.61%	52.55%	3.97%	11.23%
Private Advisors VIII	0.04%	27.61%	47.25%	15.78%	(4.08%)
Private Advisors IX	(0.05%)	24.00%	37.25%	-	-
Absolute Return	0.68%	26.46%	8.77%	(14.21%)	12.52%
90 Day T-Bill + 3%	1.79%	4.46%	3.05%	3.67%	5.28%
Aptitude	0.18%	-	-	-	-
1-month LIBOR + 4%	2.13%	5.80%	4.11%	4.63%	6.32%
UBS A & Q	0.86%	8.85%	8.08%	12.18%	9.53%
1-month LIBOR + 4%	2.13%	5.80%	4.11%	4.63%	6.32%
Real Assets	1.28%	(5.91%)	17.51%	4.02%	14.84%
Principal DRA	1.28%	(5.91%)	17.51%	4.02%	14.84%
Principal DRA Blend Index	1.11%	(5.07%)	15.87%	2.08%	14.86%
Total Real Estate	(3.13%)	13.58%	23.45%	0.39%	5.95%
Real Estate	(3.13%)	13.58%	23.45%	0.39%	5.95%
Blended Benchmark	(5.08%)	21.68%	14.83%	0.89%	5.26%
Total Fund	3.33%	(6.51%)	18.80%	6.59%	18.34%
Total Fund Index	4.32%	(10.49%)	12.88%	12.29%	16.52%

*Net returns are simulated with the use of fee schedules through March 31, 2019. Actual fees paid are used thereafter.

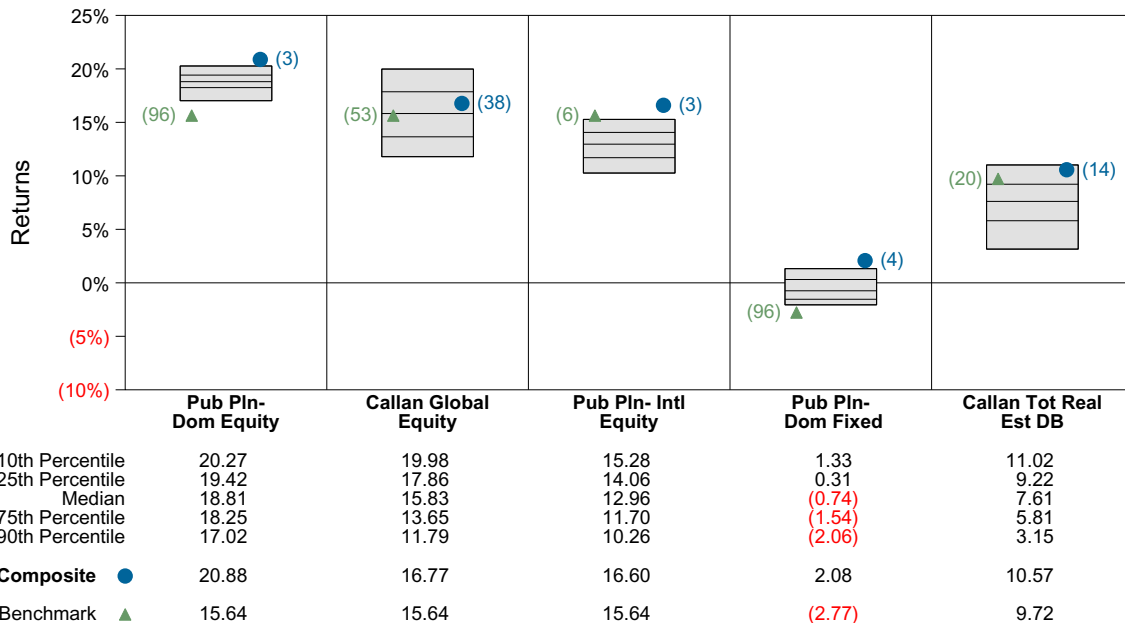
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases.

Total Asset Class Performance One Year Ended March 31, 2023



Total Asset Class Performance Three Years Ended March 31, 2023

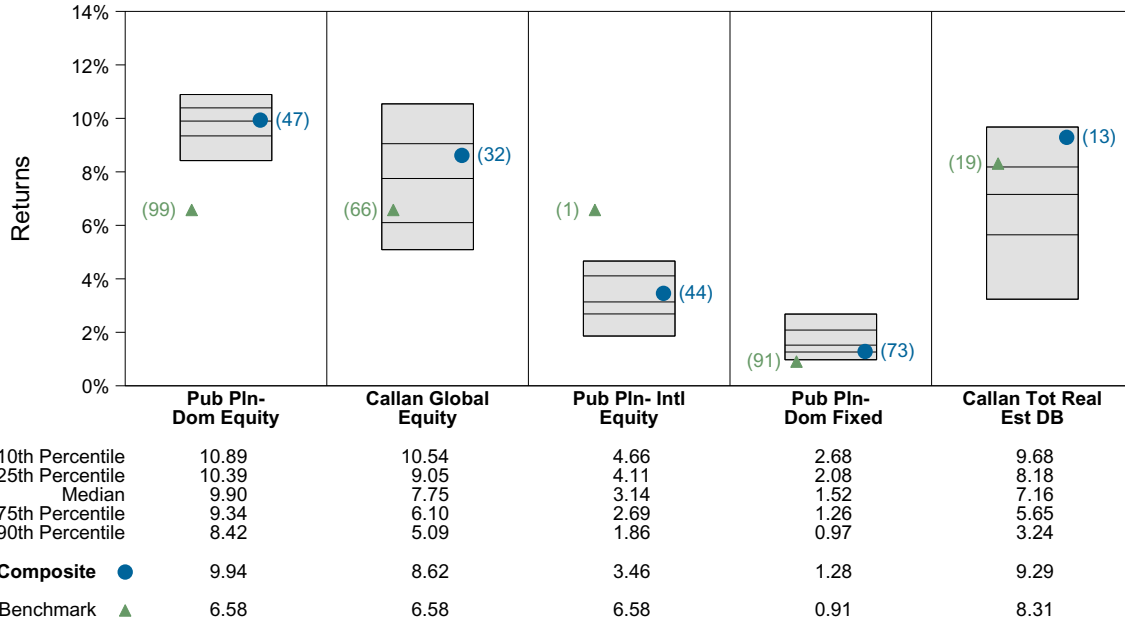


* Current Quarter Target = 44.0% MSCI ACWI IMI, 23.0% Blmbg Aggregate, 10.0% Russell 3000 Index lagged 3 months+2.0%, 10.0% 3-month Treasury Bill+3.0%, 9.1% NCREIF NFI-ODCE Eq Wt Net lagged 3 months and 3.9% Principal DRA Blend Index.

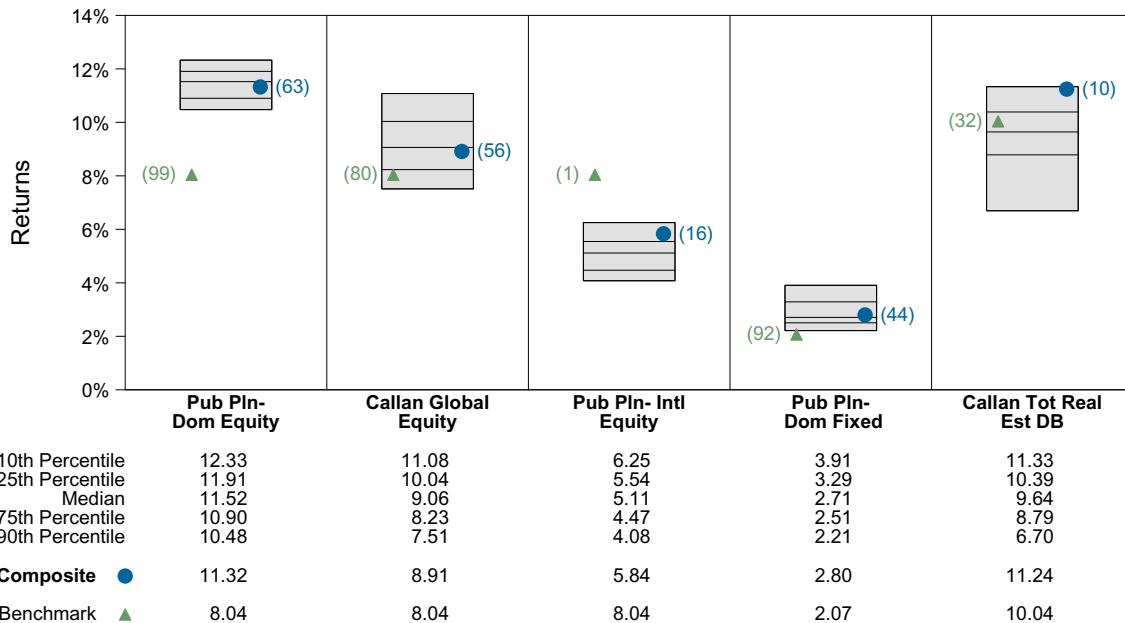
Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases.

Total Asset Class Performance Five Years Ended March 31, 2023



Total Asset Class Performance Twelve and One-Quarter Years Ended March 31, 2023

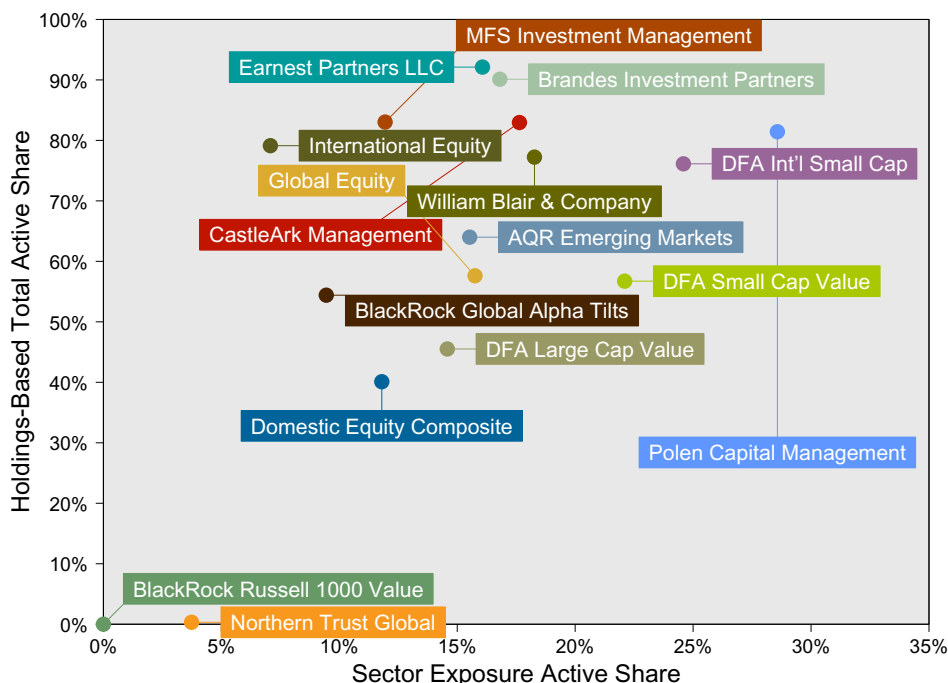


* Current Quarter Target = 44.0% MSCI ACWI IMI, 23.0% Blmbg Aggregate, 10.0% Russell 3000 Index lagged 3 months+2.0%, 10.0% 3-month Treasury Bill+3.0%, 9.1% NCREIF NFI-ODCE Eq Wt Net lagged 3 months and 3.9% Principal DRA Blend Index.

Active Share Structure Analysis For One Quarter Ended March 31, 2023

This analysis compares multiple portfolios and composites in an active share context, illustrating the varying degrees of active risk taken by individual portfolios, and how they combine into active risk profiles for composites and the equity structure. Two sources of active share (active risk) are shown: 1) Total Holdings-Based Active Share based on individual position comparisons to the index (and the subcomponent from holding non-index securities), and 2) Sector Exposure Active Share that quantifies the more macro-level sector differences from the index.

Active Share Analysis Ended March 31, 2023



	Index	Total Act Share	Non-Idx Act Share	Sector Act Share	Number Securities	Security Diverse
Domestic Equity Composite	Russell 3000	40.10%	0.74%	11.80%	1883	121.48
BlackRock Russell 1000 Value	Russell 1000 Value	0.00%	0.00%	0.00%	849	62.68
DFA Large Cap Value	Russell 1000 Value	45.51%	0.63%	14.58%	322	40.99
Northern Trust Global	S&P 500	0.32%	0.00%	3.74%	502	41.27
Polen Capital Management	S&P 500	81.43%	2.97%	28.57%	22	7.33
Earnest Partners LLC	Russell MidCap	92.12%	9.70%	16.07%	60	23.93
DFA Small Cap Value	Russell 2000 Value	56.72%	15.80%	22.10%	962	121.62
CastleArk Management	Russell 2000 Growth	82.95%	22.41%	17.64%	110	38.58
Global Equity	MSCI World	57.61%	6.04%	15.75%	742	47.12
BlackRock Global Alpha Tilts	MSCI ACWI GD	54.40%	3.30%	9.45%	704	48.31
MFS Investment Management	MSCI ACWI GD	83.03%	2.62%	11.94%	73	21.17
*International Equity	MSCI EAFE	79.13%	29.37%	7.08%	2543	80.18
AQR Emerging Markets	MSCI EM GD	64.00%	2.95%	15.53%	343	29.83
Brandes Investment Partners	MSCI EAFE	90.11%	16.11%	16.81%	65	21.83
William Blair & Company	MSCI ACWI xUS GD	77.24%	10.84%	18.27%	275	43.29
DFA Int'l Small Cap	MSCI EAFE Small	76.13%	16.06%	24.59%	1897	160.13

*3/31/23 portfolio characteristics generated using most recently available holdings (2/28/23) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

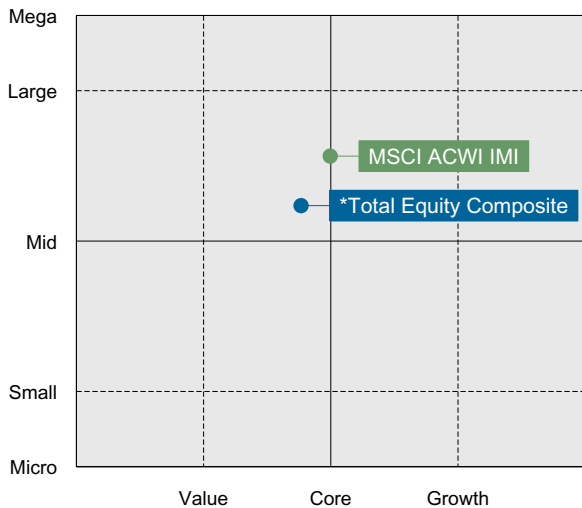
Current Holdings Based Style Analysis

Total Equity Composite

As of March 31, 2023

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left chart map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each region/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

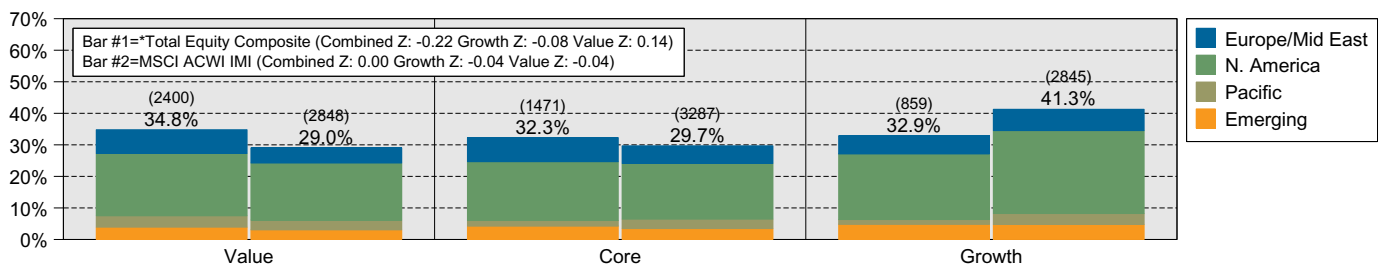
Style Map vs Callan Public Fund Spr DB Holdings as of March 31, 2023



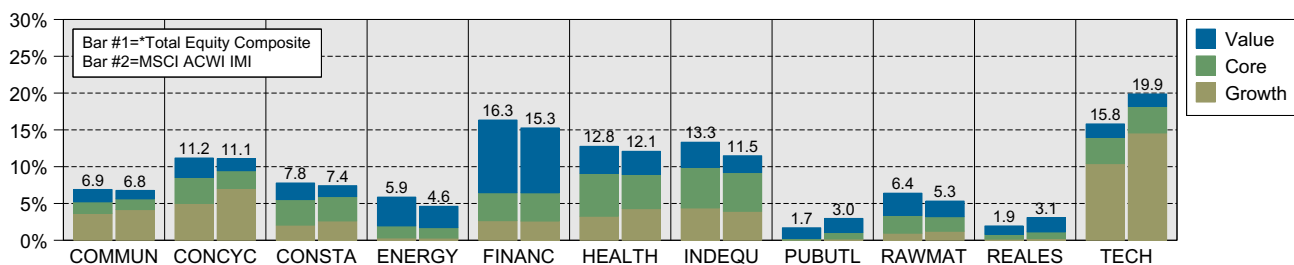
Style Exposure Matrix Holdings as of March 31, 2023

	Value	Core	Growth	Total
Europe/ Mid East	7.5% (442)	7.6% (302)	5.8% (155)	20.9% (899)
	4.8% (475)	5.5% (533)	6.8% (487)	17.1% (1495)
N. America	19.8% (965)	18.7% (681)	20.8% (374)	59.2% (2020)
	18.1% (897)	17.7% (1135)	26.3% (765)	62.1% (2797)
Pacific	3.6% (808)	1.8% (302)	1.5% (109)	6.9% (1219)
	3.1% (470)	3.0% (555)	3.5% (522)	9.6% (1547)
Emerging	3.9% (185)	4.2% (186)	4.8% (221)	12.9% (592)
	3.0% (1006)	3.5% (1064)	4.8% (1071)	11.3% (3141)
Total	34.8% (2400)	32.3% (1471)	32.9% (859)	100.0% (4730)
	29.0% (2848)	29.7% (3287)	41.3% (2845)	100.0% (8980)

Combined Z-Score Style Distribution Holdings as of March 31, 2023



Sector Weights Distribution Holdings as of March 31, 2023



*3/31/23 portfolio characteristics generated using most recently available holdings (2/28/23) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

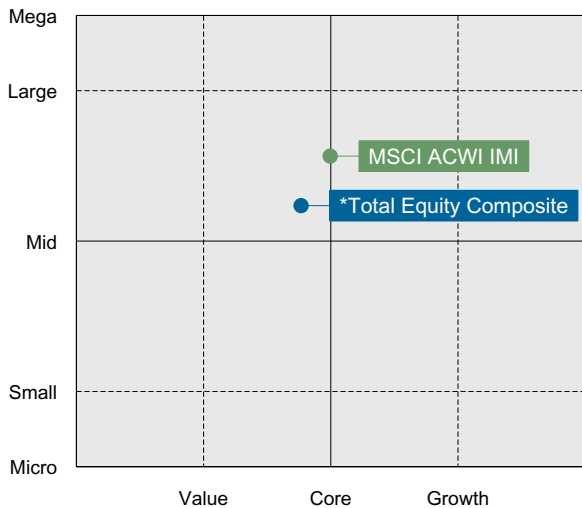
Current Holdings Based Style Analysis

Total Equity Composite

As of March 31, 2023

This page analyzes the current investment style of a portfolio utilizing a detailed holdings-based style analysis to determine actual exposures to various regional and style segments of the international/global equity market. The market is segmented quarterly by region and style. The style segments are determined using the "Combined Z Score", based on the eight fundamental factors used in the MSCI stock style scoring system. The upper-left style map illustrates the current market capitalization and style score of the portfolio relative to indices and/or peers. The upper-right style exposure matrix displays the current portfolio and index weights and stock counts (in parentheses) in each capitalization/style segment of the market. The middle chart illustrates the total exposures and stock counts in the three style segments, with a legend showing the total growth, value, and "combined Z" (growth - value) scores. The bottom chart exhibits the sector weights as well as the style weights within each sector.

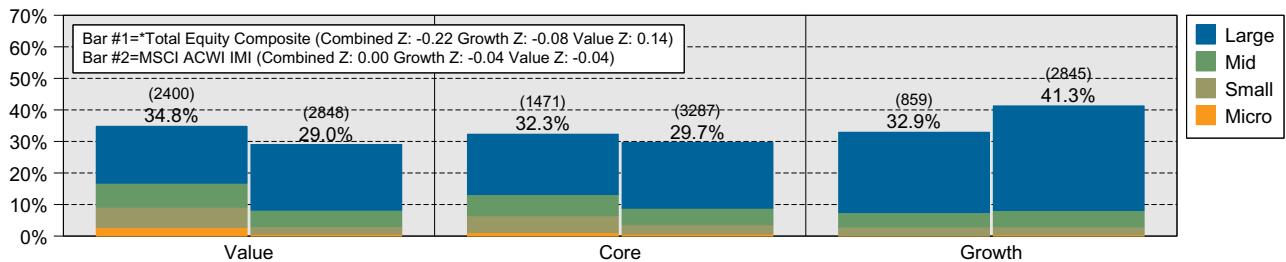
Style Map vs Callan Public Fund Spr DB Holdings as of March 31, 2023



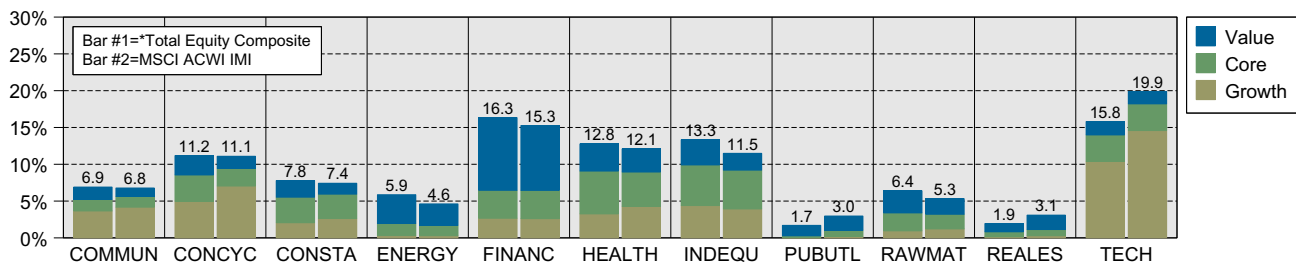
Style Exposure Matrix Holdings as of March 31, 2023

	Value	Core	Growth	Total
Large	18.0% (237)	19.1% (196)	25.4% (228)	62.6% (661)
	20.8% (322)	20.9% (259)	33.1% (317)	74.8% (898)
Mid	7.6% (296)	6.7% (342)	4.6% (285)	18.9% (923)
	5.2% (536)	5.3% (608)	5.3% (652)	15.7% (1796)
Small	6.4% (481)	5.3% (455)	2.7% (226)	14.5% (1162)
	2.5% (1057)	2.9% (1374)	2.5% (1161)	8.0% (3592)
Micro	2.7% (1386)	1.1% (478)	0.2% (120)	4.0% (1984)
	0.5% (933)	0.6% (1046)	0.4% (715)	1.6% (2694)
Total	34.8% (2400)	32.3% (1471)	32.9% (859)	100.0% (4730)
	29.0% (2848)	29.7% (3287)	41.3% (2845)	100.0% (8980)

Combined Z-Score Style Distribution Holdings as of March 31, 2023



Sector Weights Distribution Holdings as of March 31, 2023



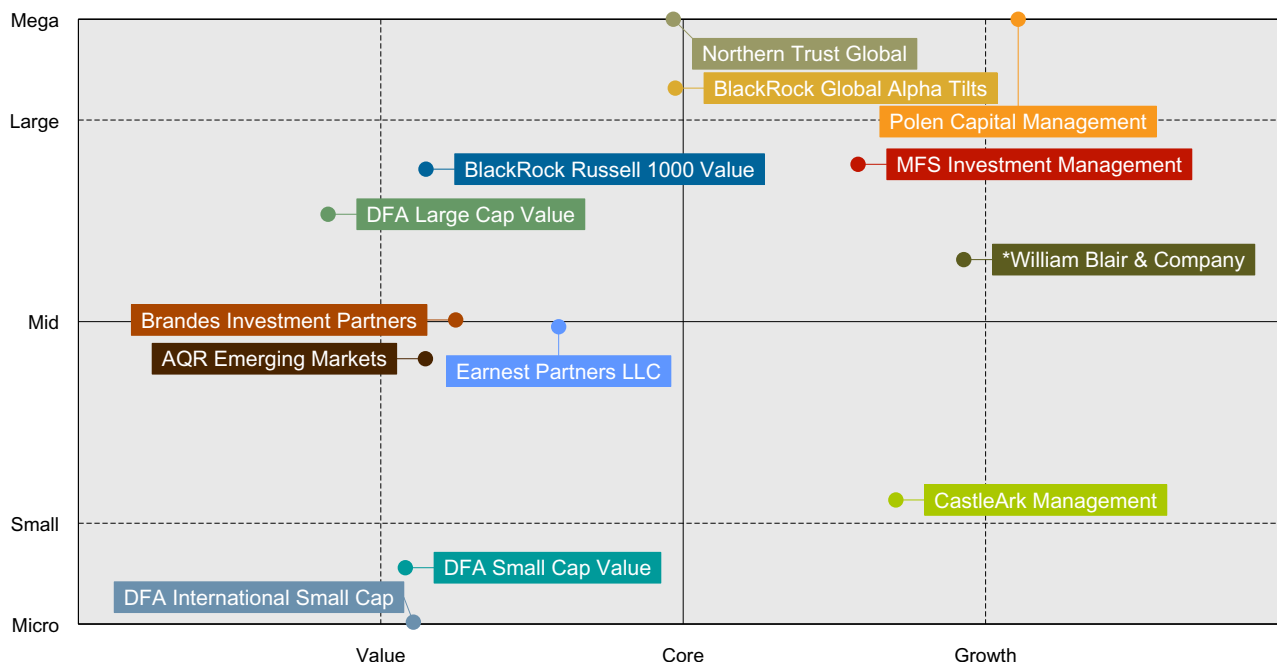
*3/31/23 portfolio characteristics generated using most recently available holdings (2/28/23) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

Global Holdings Based Style Analysis For One Quarter Ended March 31, 2023

This page analyzes and compares the investment styles of multiple portfolios using a detailed holdings-based style analysis methodology. The size component of style is measured by the weighted median market capitalization of the holdings. The value/core/growth style dimension is captured by the "Combined Z-Score" of the portfolio. This score is based on eight fundamental factors used in the MSCI stock style scoring system. The table below gives a more detailed breakdown of several relevant style metrics on the portfolios.

Style Map

Holdings for One Quarter Ended March 31, 2023



	Weight %	Wtd Median Mkt Cap	Combined Z-Score	Growth Z-Score	Value Z-Score	Number of Securities	Security Diversification
BlackRock Russell 1000 Value	8.27%	75.88	(0.81)	(0.35)	0.45	849	62.68
DFA Large Cap Value	6.08%	59.08	(1.12)	(0.36)	0.76	322	40.99
Northern Trust Global	8.79%	159.74	(0.03)	(0.04)	(0.01)	502	41.27
Polen Capital Management	5.24%	193.75	1.00	0.36	(0.64)	22	7.33
Earnest Partners LLC	4.36%	18.69	(0.39)	(0.22)	0.17	60	23.93
DFA Small Cap Value	7.41%	2.48	(0.87)	(0.20)	0.68	962	121.62
CastleArk Management	3.41%	5.02	0.64	0.17	(0.47)	110	38.58
MFS Investment Management	9.23%	77.68	0.52	0.05	(0.47)	73	21.17
BlackRock Global Alpha Tilts	11.11%	114.69	(0.02)	(0.03)	(0.01)	704	48.31
AQR Emerging Markets	3.78%	16.16	(0.81)	(0.05)	0.76	343	29.83
Brandes Investment Partners	14.38%	19.71	(0.71)	(0.24)	0.48	65	21.83
*William Blair & Company	10.31%	42.19	0.84	0.22	(0.62)	275	43.29
DFA International Small Cap	7.63%	1.62	(0.85)	(0.16)	0.69	1897	160.13

*3/31/23 portfolio characteristics generated using most recently available holdings (2/28/23) modified based on a "buy-and-hold" assumption (repriced and adjusted for corporate actions). Analysis is then done using current market and company financial data.

Quarterly Highlights

The Callan Institute provides research to update clients on the latest industry trends and carefully structured educational programs to enhance the knowledge of industry professionals. Visit www.callan.com/research-library to see all of our publications, and www.callan.com/blog to view our blog. For more information contact Barb Gerraty at 415-274-3093 / institute@callan.com.

New Research from Callan's Experts

[2023 DC Trends Survey](#) | Callan's 16th annual DC Trends Survey now covers SECURE 2.0 (pre-passage) and diversity topics, along with the key tenets of DC plan management, governance, and financial wellness.

[2023-2032 Capital Markets Assumptions](#) | A white paper detailing the process involved in creating our 2023-2032 capital markets assumptions and the reasoning behind them.

[1Q23 Real Assets Reporter: Energy Transition](#) | Jan Mende describes energy-transition investments and the role they can play in institutional portfolios.

[The Periodic Table of Investment Returns](#) | A visual representation of annual returns for key asset classes, ranked from best to worst performance for each calendar year.

Blog Highlights

[The PRT Decision: What Plan Sponsors Need to Know](#) | Despite the turbulence of 2022, many corporate defined benefit (DB) plan sponsors are considering pension risk transfers (PRTs).

[Can Institutional Investors Target 'Food Deserts' for Investment?](#) | While food desert investments have not been prevalent in institutional real estate portfolios, increasing government incentives and additional sources of financing may help support these opportunities in the future.

[Putting 2022 Public DB Plan Performance into Perspective](#) | While 2022 was indeed challenging, viewing plan returns over the long-term shows results that are favorable when stacked up against actuarial discount rates.

Webinar Replays

[Callan's 2023 DC Survey Results Webinar](#) | This webinar focuses on the results of Callan's 2023 DC Trends Survey, including fiduciary positioning, investments, retirement solutions, fees, and more.

[Research Cafe: ESG Interview Series](#) | During this interview, Tom Shingler of Callan discusses with Richard Ashley, partner and co-chair of US Employee Benefits and Executive Compensation practice at DLA Piper, key features of the new ESG and proxy voting rule.

Quarterly Periodicals

[Private Equity Update, 4Q22](#) | A high-level summary of private equity activity in the quarter through all the investment stages

[Active vs. Passive Charts, 4Q22](#) | A comparison of active managers alongside relevant benchmarks over the long term

[Market Pulse, 4Q22](#) | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

[Capital Markets Review, 4Q22](#) | Analysis and a broad overview of the economy and public and private markets activity each quarter across a wide range of asset classes

[Hedge Fund Update, 4Q22](#) | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

[Real Assets Update, 4Q22](#) | A summary of market activity for real assets and private real estate during the quarter

[Private Credit Update, 4Q22](#) | A review of performance and fundraising activity for private credit during the quarter

Events

A complete list of all upcoming events can be found on our website: callan.com/events-education.

Please mark your calendar and look forward to upcoming invitations:

2023 June Workshops

June 27, 2023 – New York

June 29, 2023 – Chicago

For more information about events, please contact Barb Gerraty: 415-274-3093 / gerraty@callan.com

Education: By the Numbers

50+

Unique pieces of research the Institute generates each year

525

Attendees (on average) of the Institute's annual National Conference

3,700

Total attendees of the "Callan College" since 1994

Education

Founded in 1994, the "Callan College" offers educational sessions for industry professionals involved in the investment decision-making process.

Introduction to Investments

May 23-25 – Virtual

This program familiarizes institutional investor trustees and staff and asset management advisers with basic investment theory, terminology, and practices. Our virtual session is held over three days with virtual modules of 2.5-3 hours, while the in-person session lasts one-and-a-half days. This course is designed for individuals with less than two years of experience with asset-management oversight and/or support responsibilities. Virtual tuition is \$950 per person and includes instruction and digital materials. In-person tuition is \$2,350 per person and includes instruction, all materials, breakfast and lunch on each day, and dinner on the first evening with the instructors.

Additional information including registration can be found at: callan.com/events-education



"Research is the foundation of all we do at Callan, and sharing our best thinking with the investment community is our way of helping to foster dialogue to raise the bar across the industry."

Greg Allen, CEO and Chief Research Officer

List of Callan's Investment Manager Clients

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Callan takes its fiduciary and disclosure responsibilities to clients very seriously. We recognize that there are numerous potential conflicts of interest encountered in the investment consulting industry, and that it is our responsibility to manage those conflicts effectively and in the best interest of our clients. At Callan, we employ a robust process to identify, manage, monitor, and disclose potential conflicts on an ongoing basis.

The list below is an important component of our conflicts management and disclosure process. It identifies those investment managers that pay Callan fees for educational, consulting, software, database, or reporting products and services. We update the list quarterly because we believe that our fund sponsor clients should know the investment managers that do business with Callan, particularly those investment manager clients that the fund sponsor clients may be using or considering using. Please note that if an investment manager receives a product or service on a complimentary basis (e.g., attending an educational event), they are not included in the list below. Callan is committed to ensuring that we do not consider an investment manager's business relationship with Callan, or lack thereof, in performing evaluations for or making suggestions or recommendations to its other clients. Please refer to Callan's ADV Part 2A for a more detailed description of the services and products that Callan makes available to investment manager clients through our Institutional Consulting Group, Independent Adviser Group, and Fund Sponsor Consulting Group. Due to the complex corporate and organizational ownership structures of many investment management firms, parent and affiliate firm relationships are not indicated on our list.

Fund sponsor clients may request a copy of the most currently available list at any time. Fund sponsor clients may also request specific information regarding the fees paid to Callan by particular fund manager clients. Per company policy, information requests regarding fees are handled exclusively by Callan's Compliance department.

Manager Name

abrdrn (Aberdeen Standard Investments)

ABS Global Investments

Acadian Asset Management LLC

Adams Street Partners, LLC

AEGON USA Investment Management Inc.

AllianceBernstein

Allspring Global Investments, LLC

Altrinsic Global Advisors, LC

American Century Investments

Amundi US, Inc.

Antares Capital LP

Apollo Global Management, Inc.

AQR Capital Management

Ares Management LLC

Ariel Investments, LLC

Aristotle Capital Management, LLC

Atlanta Capital Management Co., LLC

AXA Investment Managers

Manager Name

Axiom Investors LLC

Baillie Gifford International, LLC

Baird Advisors

Barings LLC

Baron Capital Management, Inc.

Barrow, Hanley, Mewhinney & Strauss, LLC

Belle Haven Investments

BentallGreenOak

Beutel, Goodman & Company Ltd.

BlackRock

Blackstone Group (The)

Blue Owl Capital, Inc.

BNY Mellon Asset Management

Boston Partners

Brandes Investment Partners, L.P.

Brandywine Global Investment Management, LLC

Brookfield Asset Management Inc.

Brookfield Public Securities Group

Manager Name

Brown Brothers Harriman & Company
Burgundy Asset Management Ltd.
Capital Group
CastleArk Management, LLC
CIBC Asset Management Inc.
ClearBridge Investments, LLC
Cohen & Steers Capital Management, Inc.
Columbia Threadneedle Investments North America
Comvest Partners
CQS
Credit Suisse Asset Management, LLC
D.E. Shaw Investment Management, LLC
DePrince, Race & Zollo, Inc.
Dimensional Fund Advisors L.P.
Doubleline
DWS
EARNEST Partners, LLC
Epoch Investment Partners, Inc.
Fayez Sarofim & Company
Federated Hermes, Inc.
Fidelity Institutional Asset Management
Fiera Capital Corporation
First Hawaiian Bank Wealth Management Division
First Eagle Investment Management, LLC
First Sentier Investors
Fisher Investments
Franklin Templeton
Fred Alger Management, LLC
GAM (USA) Inc.
GlobeFlex Capital, L.P.
GoldenTree Asset Management, LP
Goldman Sachs
Golub Capital
Guggenheim Investments
GW&K Investment Management
Harbor Capital Advisors
Harding Loevner LP
Hardman Johnston Global Advisors LLC
Heitman LLC
Hotchkis & Wiley Capital Management, LLC

Manager Name

Impax Asset Management LLC
Income Research + Management
Insight Investment
Intech Investment Management LLC
Intercontinental Real Estate Corporation
Invesco
J.P. Morgan
Janus
Jennison Associates LLC
Jobs Peak Advisors
Kayne Anderson Rudnick Investment Management, LLC
KeyCorp
Kohlberg Kravis Roberts & Co. (KKR)
Lazard Asset Management
LGIM America
Lincoln National Corporation
Longview Partners
Loomis, Sayles & Company, L.P.
Lord Abbett & Company
LSV Asset Management
MacKay Shields LLC
Macquarie Asset Management (MAM)
Manulife Investment Management
Marathon Asset Management, L.P.
MetLife Investment Management
MFS Investment Management
MidFirst Bank
Mondrian Investment Partners Limited
Montag & Caldwell, LLC
Morgan Stanley Investment Management
MUFG Union Bank, N.A.
Natixis Investment Managers
Neuberger Berman
Newton Investment Management
Northern Trust Asset Management
Nuveen
Oaktree Capital Management, L.P.
P/E Investments
Pacific Investment Management Company
Pantheon Ventures

Manager Name

Parametric Portfolio Associates LLC

Partners Group (USA) Inc.

Pathway Capital Management, LP

PFM Asset Management LLC

PGIM DC Solutions

PGIM Fixed Income

PGIM Quantitative Solutions LLC

Pictet Asset Management

PineBridge Investments

Polen Capital Management, LLC

Pretium Partners, LLC

Principal Asset Management

Putnam Investments, LLC

Raymond James Investment Management

RBC Global Asset Management

Regions Financial Corporation

Riverbridge Partners LLC

Robeco Institutional Asset Management, US Inc.

S&P Dow Jones Indices

Sands Capital Management

Schroder Investment Management North America Inc.

Segall Bryant & Hamill

Manager Name

SLC Management

Smith Graham & Co. Investment Advisors, L.P.

State Street Global Advisors

Strategic Global Advisors, LLC

T. Rowe Price Associates, Inc.

The TCW Group, Inc.

Thompson, Siegel & Walmsley LLC

Tri-Star Trust Bank

UBS Asset Management

VanEck

Versus Capital Group

Victory Capital Management Inc.

Virtus Investment Partners, Inc.

Vontobel Asset Management

Voya

Walter Scott & Partners Limited

WCM Investment Management

Wellington Management Company, LLP

Western Asset Management Company LLC

Westfield Capital Management Company, LP

William Blair & Company LLC

Xponance, Inc.

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