Callan

September 30, 2023
City of Milwaukee Employes'
Retirement System

Investment Measurement Service
Quarterly Review

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U.S. EQUITY

Tough quarter for all indices

- All U.S. equity indices posted negative absolute returns during 3Q23.
- The Russell 2000 Value Index led the pack during the quarter, which was a reversal of the previous two quarters when the Russell 1000 Growth Index led.
- Only 2 of the 11 S&P 500 Index sectors gained in 3Q;
 Energy was up 12% and Communication Services rose 3%.
- On a YTD basis, six sectors generated positive returns, with Information Technology, Communication Services, and Consumer Discretionary substantially leading the group.

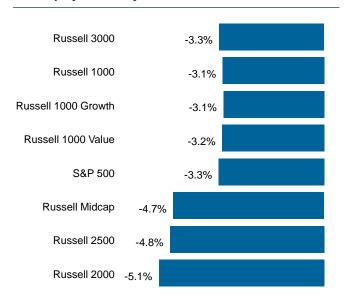
Active management remains challenging for large cap

- Index concentration stayed notable within the Russell 1000 Growth Index; the top 10 issuers comprised 51% of the index and the top 5 issuers comprised 40% of the index.
- YTD, 97% of the S&P 500's return has been driven by the 10 largest weighted stocks.
- The "Magnificent 7" has buoyed large cap index returns and has outperformed the broader market significantly. YTD, the Magnificent 7 alone is up 83%.
- No exposures or significant underweights to top benchmark names have been disadvantageous to absolute and relative performance for managers' portfolios.

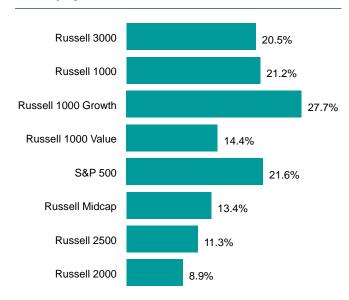
Compelling small cap valuations

- Small cap valuations, on both an absolute and relative (to large cap valuations) basis, continue to look compelling and may point to an attractive entry point for investors.
- What continues to pressure the asset class is the rhetoric around interest rates; as investors anticipate a higher-forlonger interest rate environment, there are concerns about small cap companies' ability to repay and re-finance debt.
- If inflation data continues to improve in 2023, the small cap market could be positioned for a boost to performance.

U.S. Equity: Quarterly Returns

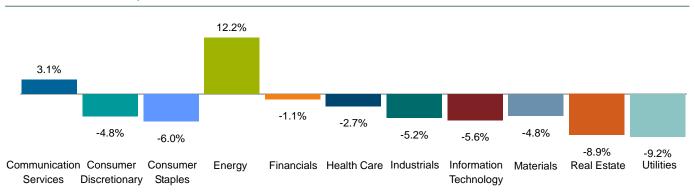


U.S. Equity: One-Year Returns



Sources: FTSE Russell, S&P Dow Jones Indices

S&P Sector Returns, Quarter Ended 9/30/23



Source: S&P Dow Jones Indices



GLOBAL EQUITY

Most global markets were in the red for 3Q23.

Narrow market with India and Japan leading

- Global markets retreated in 3Q23 amid fears of a global recession driven by higher interest rates and slowing growth in regions outside the U.S.
- Emerging markets outperformed developed markets, buoyed by good results from India, whose economy grew nearly 8% on the heels of supportive infrastructure spending.
- Japan was strong again in local currency as it continues to benefit from post-COVID exuberance, easy monetary policy, and a new economic stimulus plan.

Value outpaces growth

 With energy as a strong outperformer on the heels of oil price increases, value outpaced growth by a wide margin in global ex-U.S. markets.

Strong U.S. dollar a headwind

 The stronger U.S. dollar, which gained 3% over the quarter, was a notable headwind for the period.

Market dispersion is low

- Global markets have seen a prolonged period of low dispersion, excluding the 2016-2018 challenges with Brexit and oil price volatility. The global markets have seen high correlations for most of the last 10 years.
- This was in conjunction with a period of universally tight monetary policies, which helped mitigate any volatility.
- With increased dispersion of central bank actions, we expect there to be fewer co-movements across countries, a period that may benefit active management.

China: Danger or opportunity

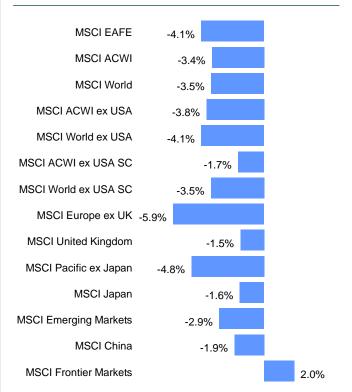
Merits

- Long-term growth potential: China has the second-largest GDP and the world's largest population of consumers.
- Compelling valuation: Forward earnings yield is at a decade high.

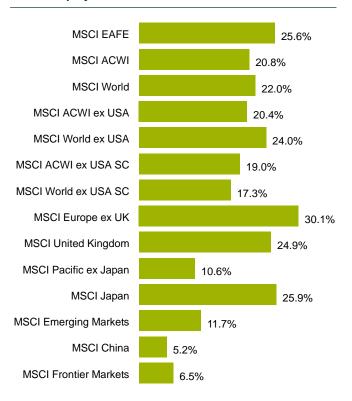
Considerations

- Downside risk: Chinese federal debt has continued to grow aggressively and may become unsustainable.
- Political risk: China is run by an authoritarian regime that may act against investors.
- Old before rich: China currently has 2.26 workers for every retiree—the U.S. has 2.8.

Global Equity: Quarterly Returns



Global Equity: One-Year Returns



Source: MSCI



U.S. FIXED INCOME

U.S. fixed income fell for a second straight quarter

 The Bloomberg Aggregate Index is on track for a third calendar year of negative returns, with the rise in yields continuing to detract from performance.

U.S. Treasury 10-year yield climbed roughly 80 bps

- 10-year ended the quarter at 4.6%, its highest level since '07.
- The yield curve's inversion narrowed as it bear-steepened with long-term rates rising more than short-term rates.

TIPS outperformed nominal Treasuries

- 10-year break-even spreads widened over 10 bps.

Fed policy rate held to 5.25%-5.50%

 The updated dot plot suggested an additional rate hike may be in the cards before year-end.

Lower-quality credit continued to outperform

- High yield spreads were flat, but the sector was buoyed by strong performance in July.
- IG corporate spreads tightened slightly and remain close to their 10-year average.
- Agency RMBS underperformed other securitized sectors as interest rate volatility weighed on the sector.

MUNICIPAL BONDS

Bloomberg Aggregate down sharply in 3Q

- Corporate excess return: +84 bps; YTD +237 bps
- Mortgage excess return: -85 bps; YTD -58 bps
- High yield corporates excess return: +102 bps; YTD +516 bps
- Taxable equivalent yield is 7.3%

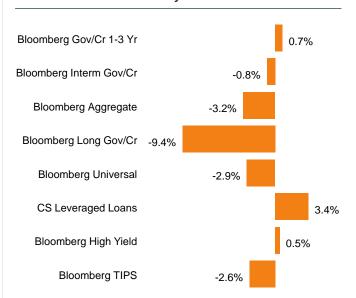
U.S. Treasury yield curve remains inverted

- 106 bps as of 6/30; 44 bps as of 9/30
- 2-year UST: 5.03%; 10-year UST: 4.59%
- Long rates rose more than short rates in a bear-steepening

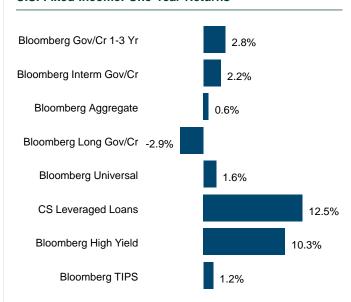
Fed Funds rate expectations

- "Higher for longer" theme prevails
- Median expectation from Fed is 5.5% for year-end 2023
- Market expectations are similar at 5.4%; up sharply from market expectations at the end of 1Q for cuts

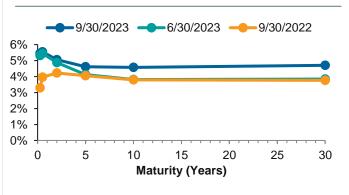
U.S. Fixed Income: Quarterly Returns



U.S. Fixed Income: One-Year Returns



U.S. Treasury Yield Curves



Sources: Bloomberg, Credit Suisse



MUNICIPAL BONDS (continued)

Valuations

- Credit spreads close to historical averages
- Mortgage spreads widened on interest rate volatility and slowing prepayments.

GLOBAL FIXED INCOME

Down on both a hedged and unhedged basis

- Developed market rates sold off as long-term inflation and rate expectations in the U.S. moved higher.
- The ECB continued to tighten monetary policy in September, bringing rates to the highest level since launching the euro.

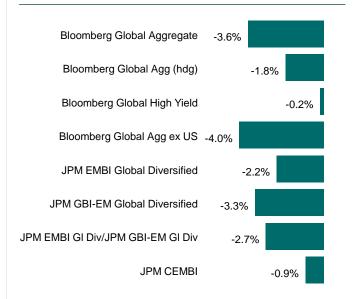
U.S. dollar strength detracted from unhedged returns

 U.S. dollar gained over 3% versus a basket of developed market currencies.

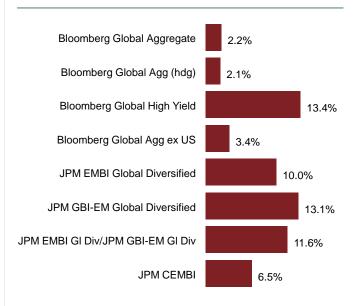
Emerging market debt indices also negative

- EM yield curves steepened; central banks in Latin America and Eastern Europe have begun monetary easing.
- Heightened geopolitical risk, war, commodity price volatility, and an economic slowdown in China remain significant headwinds to the sector.

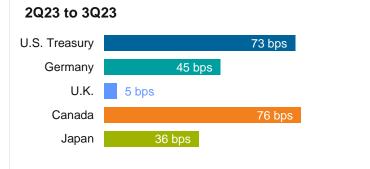
Global Fixed Income: Quarterly Returns



Global Fixed Income: One-Year Returns



Change in 10-Year Global Government Bond Yields



Sources: Bloomberg, JP Morgan



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of September 30, 2023, with the distribution as of June 30, 2023. 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

	September 3	0, 2023			June 30, 2	2023
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Total Domestic Equity	\$905,433,894	16.55%	\$(109,900,000)	\$(27,940,755)	\$1,043,274,649	18.45%
BlackRock Russell 1000 Value	176,041,134	3.22%	(15,300,000)	(5,471,009)	196,812,142	3.48%
DFA Large Cap Value	126,945,970	2.32%	(16,300,000)	(1,884,316)	145,130,285	2.57%
Northern Trust Global	174,293,907	3.19%	(16,100,000)	(5,659,898)	196,053,805	3.47%
Polen Capital Management	105,377,208	1.93%	(18,300,000)	(3,622,543)	127,299,751	2.25%
Earnest Partners LLC	90,522,645	1.65%	(13,300,000)	(4,262,774)	108,085,419	1.91%
DFA Small Cap Value	159,800,243	2.92%	(24,700,000)	195,784	184,304,459	3.26%
CastleArk Management	72,452,787	1.32%	(5,900,000)	(7,236,001)	85,588,788	1.51%
Total Global Equity	\$401,468,004	7.34%	\$(61,100,000)	\$(17,226,661)	\$479,794,665	8.49%
BlackRock Global Alpha Tilts	224,167,523	4.10%	(32,400,000)	(6,607,095)	263,174,618	4.65%
MFS Investment Management	177,300,481	3.24%	(28,700,000)	(10,619,566)	216,620,046	3.83%
Total International Equity	\$733,435,535	13.40%	\$(80,847,071)	\$(12,063,947)	\$826,346,553	14.61%
AQR Emerging Markets	96,602,426	1.77%	(187,986)	(557,139)	97,347,551	1.72%
Brandes Investment Partners	290,760,463	5.31%	(48,400,000)	6,070,021	333,090,442	5.89%
William Blair & Company	197,742,076	3.61%	(18,989,369)	(18,322,986)	235,054,431	4.16%
DFA International Small Cap	148,330,570	2.71%	(13,269,716)	746,157	160,854,130	2.84%
Total Fixed Income	\$1,488,257,994	27.20%	\$192,000,000	\$(46,705,865)	\$1,342,963,859	23.75%
BlackRock US Govt Bond	385,825,084	7.05%	67,000,000	(11,124,006)	329,949,091	5.84%
Reams Asset Management	678,487,609	12.40%	66,000,000	(26,368,345)	638,855,953	11.30%
Loomis, Sayles & Company, L.P.	423,945,301	7.75%	59,000,000	(9,213,515)	374,158,815	6.62%
Total Private Equity	\$768,324,619	14.04%	\$(6,209,880)	\$17,749,702	\$756,784,797	13.38%
Abbott Capital Management 2010	20,604,748	0.38%	0	387,545	20,217,203	0.36%
Abbott Capital Management 2011	40,693,936	0.74%	(1,100,000)	728,905	41,065,031	0.73%
Abbott Capital Management 2012	36,455,081	0.67%	(1,800,000)	582,882	37,672,199	0.67%
Abbott Capital Management 2013	35,058,757	0.64%	(1,925,000)	740,900	36,242,857	0.64%
Abbott Capital Management 2014	39,538,610	0.72%	(1,575,000)	677,329	40,436,281	0.72%
Abbott Capital Management 2015	31,951,577	0.58%	(931,250)	874,060	32,008,767	0.57%
Abbott Capital Management 2016	28,112,573	0.51%	0	679,617	27,432,956	0.49%
Abbott Capital Management 2018	22,805,930	0.42%	0	366,434	22,439,496	0.40%
Abbott Capital Management 2019	19,737,476	0.36%	0	422,742	19,314,734	0.34%
Abbott Capital Management 2020	25,711,367	0.47%	2,070,000	396,800	23,244,567	0.41%
Abbott Capital Management 2021	7,987,337	0.15%	770.750	197,339	7,789,998	0.14%
Abbott Capital Management 2022	9,049,167	0.17%	778,750	88,852	8,181,565	0.14%
Abbott Capital Management 2023	1,950,000	0.04%	1,950,000	0	40.005.042	0.740/
Mesirow V Mesirow VI	40,848,284	0.75% 1.25%	(600,000)	1,353,241 1,351,744	40,095,043	0.71% 1.20%
Mesirow VII	68,265,560 125,349,054	2.29%	(900,000) (1,000,000)	2,160,531	67,813,816 124,188,523	2.20%
Mesirow VIII	57,891,997	1.06%	(1,000,000)	669,161	57,222,836	1.01%
NB Secondary Opp Fund III	7,771,514	0.14%	(134,207)	80,413	7,825,308	0.14%
NB Secondary Opp Fund IV	17,826,663	0.33%	(100,618)	(8,481)	17,935,762	0.14%
NB Secondary Opp Fund V	33,968,956	0.62%	(314,274)	2,876,067	31,407,163	0.56%
Private Advisors VI	20,489,131	0.37%	(1,085,338)	508,828	21,065,641	0.37%
Private Advisors VII	14,169,796	0.26%	(998,242)	413,759	14,754,279	0.26%
Private Advisors VIII	19,141,070	0.35%	0	590,647	18,550,423	0.33%
Private Advisors IX	34,586,173	0.63%	1,455,299	727,317	32,403,557	0.57%
Apogem Capital X	8,359,862	0.15%	0	883,070	7,476,792	0.13%
Absolute Return	\$462,788,614	8.46%	\$(50,000,000)	\$9,181,415	\$503,607,200	8.91%
Aptitude	168,282,969	3.08%	0	2,901,638	165,381,331	2.92%
UBS A & Q	294,505,645	5.38%	(50,000,000)	6,279,777	338,225,868	5.98%
Real Assets	\$163,954,286	3.00%	\$(266,269)	\$(6,517,164)	\$170,737,718	3.02%
Principal DRA	163,954,286	3.00%	(266,269)	(6,517,164)	170,737,718	3.02%
Total Real Estate	\$493,359,709	9.02%	\$(743,802)	\$(10,140,638)	\$504,244,149	8.92%
Real Estate	493,359,709	9.02%	(743,802)	(10,140,638)	504,244,149	8.92%
Total Cash	\$54,767,695	1.00%	\$27,235,670	\$714,380	\$26,817,645	0.47%
Cash	54,767,695	1.00%	27,235,670	714,380	26,817,645	0.47%
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\$5,471,790,350

100.0%

\$(89,831,352)



Total Fund

\$5,654,571,235

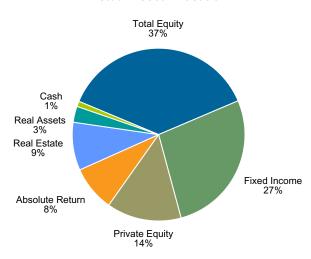
\$(92,949,534)

100.0%

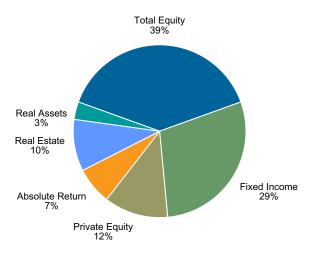
Actual vs Target Asset Allocation As of September 30, 2023

The first chart below shows the Fund's asset allocation as of September 30, 2023. The second chart shows the Fund's target asset allocation as outlined in the investment policy statement.





Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Total Equity	2,040,337	37.3%	39.0%	(1.7%)	(93,661)
Fixed Income	1,488,258	27.2%	29.0%	(1.8%)	(98,561)
Private Equity	768,325	14.0%	12.0%	2.0%	111,710
Absolute Return	462,789	8.5%	7.0%	1.5%	79,763
Real Estate	493,360	9.0%	9.7%	(0.7%)	(37,404)
Real Assets	163,954	3.0%	3.3%	(0.3%)	(16,615)
Cash	54,768	1.0%	0.0%	`1.0%´	`54,768
Total	5.471.790	100.0%	100.0%		

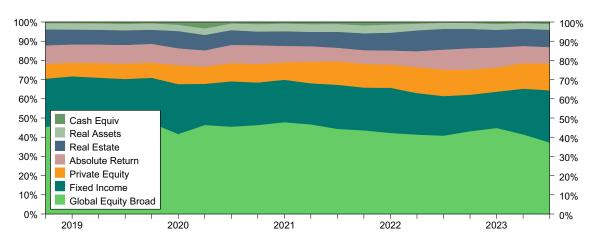
^{*} Current Quarter Target = 39.0% MSCI ACWI IMI, 29.0% Blmbg:Aggregate, 12.0% Russell 3000 Index lagged 3 months+2.0%, 9.7% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 7.0% 3-month Treasury Bill+3.0% and 3.3% Principal DRA Blend Index.



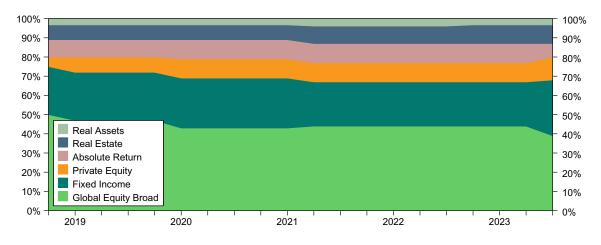
Actual vs Target Historical Asset Allocation

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.

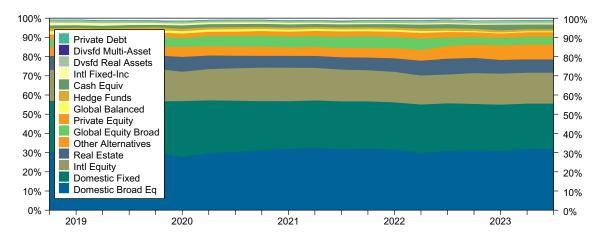
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average Callan Public Fund Sponsor Database Historical Asset Allocation



^{*} Current Quarter Target = 39.0% MSCI ACWI IMI, 29.0% Blmbg:Aggregate, 12.0% Russell 3000 Index lagged 3 months+2.0%, 9.7% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 7.0% 3-month Treasury Bill+3.0% and 3.3% Principal DRA Blend Index.



Total Fund Period Ended September 30, 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 = 39.0% MSCI ACWI IMI, 29.0% Blmbg Aggregate, 12.0% Russell 3000 Index lagged 3 months+2.0%, 7.0% 3-month Treasury Bill+3.0%, 9.7% NCREIF NFI-ODCE Eq Wt Net lagged 3 months and 3.3% Principal Blended Benchmark.

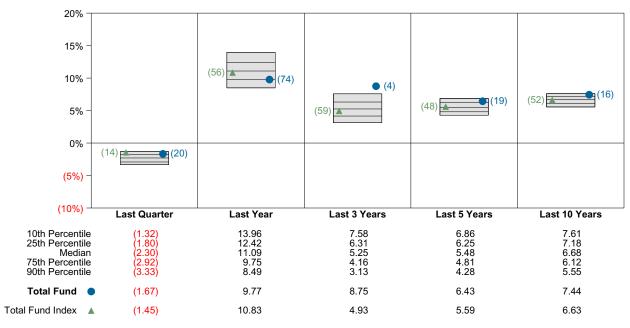
Quarterly Summary and Highlights

- Total Fund's portfolio posted a (1.67)% return for the quarter placing it in the 20 percentile of the Callan Public Fund Sponsor Database group for the quarter and in the 74 percentile for the last year.
- Total Fund's portfolio underperformed the Total Fund Index by 0.22% for the quarter and underperformed the Total Fund Index for the year by 1.06%.

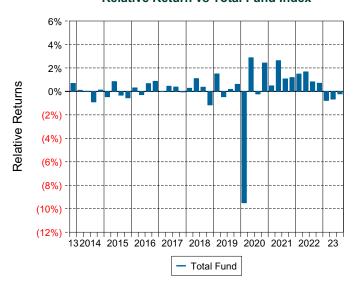
Quarterly Asset Growth

Beginning Market Value	\$5,654,571,235
Net New Investment	\$-89,831,352
Investment Gains/(Losses)	\$-92,949,534
Ending Market Value	\$5,471,790,350

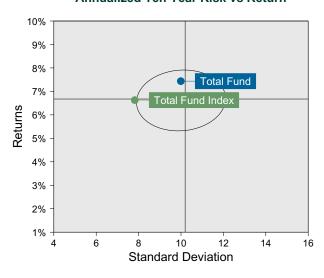
Performance vs Callan Public Fund Sponsor Database (Gross)



Relative Return vs Total Fund Index



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



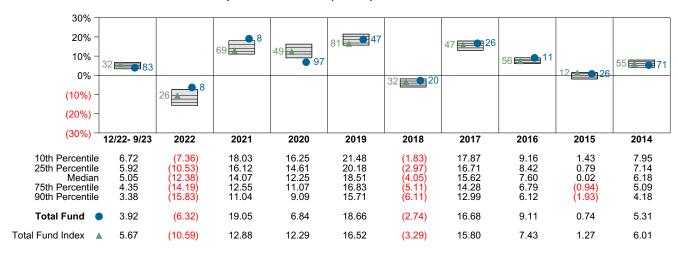


Total Fund Return Analysis Summary

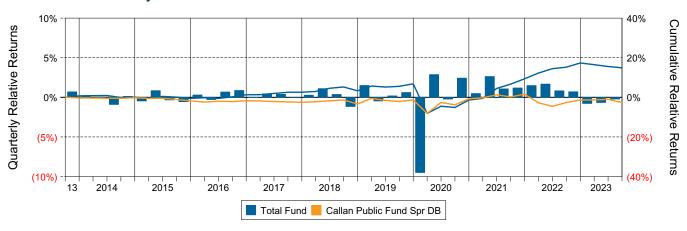
Return Analysis

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.

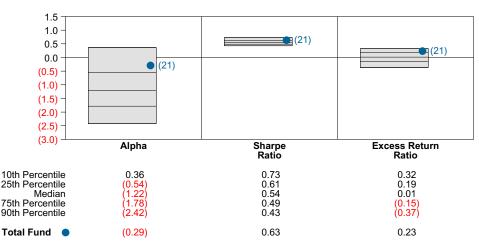
Performance vs Callan Public Fund Sponsor Database (Gross)



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 September 30, 2023



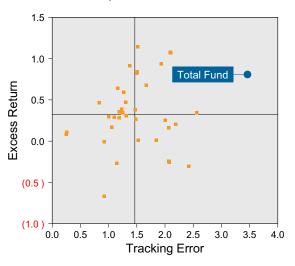


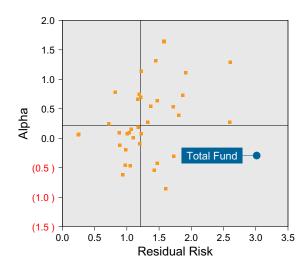
Total Fund Total Fund vs Target Risk Analysis

Risk Analysis

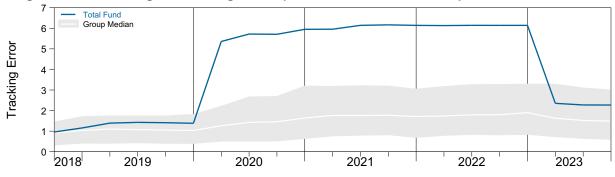
The graphs below analyze the performance and risk of the fund relative to the appropriate target mix. This relative performance is compared to a peer group of funds wherein each member fund is measured against its own target mix. The first scatter chart illustrates the relationship, called Excess Return 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 September 30, 2023

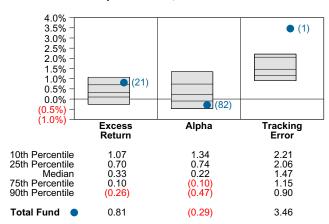


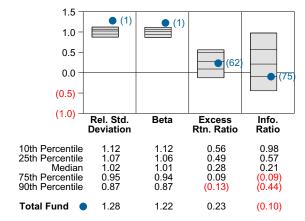


Rolling 12 Quarter Tracking Error vs Targets Compared to Callan Public Fund Sponsor Database



Risk Statistics Rankings vs Targets Rankings Against Callan Public Fund Sponsor Database Ten Years Ended September 30, 2023







The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended September 30, 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 September 30, 2023

	Last		Last		Last 3		Last 5		Since	_
Total Public Equity MSCI ACWI IMI	Quarter (2.80%) (3.40%)		Year 22.34% 20.16%		Years 9.40% 6.88%		Years 6.71% 6.09%		9.30% 8.43%	(1/16) (1/16)
Total Domestic Equity Russell 3000 Index Pub PIn- Dom Equity	(3.04%) (3.25%) (3.41%)	12 30	17.06% 20.46% 19.58%	85 19	11.18% 9.38% 9.94%	8 65	8.10% 9.14% 8.53%	66 18	7.70% 7.50% -	(7/98) (7/98)
BlackRock Russell 1000 Value Russell 1000 Value Index Callan Large Cap Value	(3.16%) (3.16%) (2.07%)	86 86	14.44% 14.44% 16.45%	67 66	11.08% 11.05% 13.95%	83 83	6.39% 6.23% 6.97%	75 78	7.10% 6.95% -	(4/17) (4/17)
DFA Large Cap Value Russell 1000 Value Index Callan Large Cap Value	(1.58%) (3.16%) (2.07%)	35 86	17.61% 14.44% 16.45%	39 66	14.14% 11.05% 13.95%	48 83	5.76% 6.23% 6.97%	91 78	6.59% 6.73% -	(11/17) (11/17)
Northern Trust Global S&P 500 Index Callan Large Cap Core	(3.26%) (3.27%) (2.46%)	85 85	21.63% 21.62% 21.19%	42 42	10.16% 10.15% 10.30%	52 52	9.95% 9.92% 9.80%	45 46	10.53% 10.48% -	(8/88) (8/88)
Polen Capital Management S&P 500 Index Callan Large Cap Growth	(3.50%) (3.27%) (3.42%)	53 40	21.39% 21.62% 26.41%	80 79	1.25% 10.15% 5.97%	87 3	9.05% 9.92% 10.53%	76 61	14.01% 12.89% -	(7/12) (7/12)
Earnest Partners LLC Russell MidCap Index Callan Mid Capitalization	(4.49%) (4.68%) (4.32%)	60 63	12.14% 13.45% 13.88%	63 54	9.67% 8.09% 9.54%	49 58	9.31% 6.38% 6.76%	6 60	10.71% 9.10% -	(5/05) (5/05)
DFA Small Cap Value Russell 2000 Value Index Callan Small Cap Value	0.08% (2.96%) (1.97%)	20 63	20.84% 7.84% 13.45%	17 89	24.97% 13.32% 16.80%	6 85	7.55% 2.59% 5.20%	13 94	11.52% 8.56% -	(11/96) (11/96)
CastleArk Management Russell 2000 Growth Index Callan Small Cap Growth	(9.08%) (7.32%) (6.49%)	84 66	4.34% 9.59% 10.67%	78 60	2.47% 1.09% 2.95%	58 64	3.31% 1.55% 5.00%	72 89	8.97% 7.37% -	(9/13) (9/13)
Total Global Equity MSCI World Callan Global Equity	(4.17%) (3.46%) (3.56%)	60 48	22.09% 21.95% 21.43%	46 46	7.05% 8.08% 7.18%	51 41	7.84% 7.26% 7.10%	30 45	8.75% 8.67% -	(4/10) (4/10)
BlackRock Global Alpha Tilts MSCI ACWI Gross Callan Global Equity	(3.07%) (3.30%) (3.56%)	39 45	23.35% 21.41% 21.43%	34 50	7.52% 7.39% 7.18%	48 50	6.69% 6.99% 7.10%	56 53	10.67% 10.38% -	(3/16) (3/16)
MFS Investment Management MSCI ACWI Gross Callan Global Equity	(5.58%) (3.30%) (3.56%)	82 45	20.40% 21.41% 21.43%	62 50	6.41% 7.39% 7.18%	57 50	9.60% 6.99% 7.10%	7 53	11.38% 9.08% -	(12/12) (12/12)
Total International Equity MSCI EAFE Pub PIn- Intl Equity	(1.73%) (4.11%) (3.70%)	2 83	29.19% 25.65% 22.07%	1 6	8.10% 5.75% 4.27%	2 24	4.23% 3.24% 3.48%	23 59	6.73% 4.42%	(5/96) (5/96)
AQR Emerging Markets MSCI EM Gross Callan Emerging Broad	(0.57%) (2.79%) (3.61%)	13 33	17.76% 12.17% 14.02%	30 62	1.13% (1.34%) (1.21%)	33 52	1.81% 0.94% 2.09%	58 76	4.76% 4.08% -	(8/16) (8/16)
Brandes Investment Partners MSCI EAFE Callan NonUS Eq	1.70% (4.11%) (4.58%)	1 44	43.85% 25.65% 23.96%	1 38	15.57% 5.75% 4.97%	1 43	5.09% 3.24% 3.76%	15 68	7.71% 4.47% -	(2/98) (2/98)
William Blair & Company MSCI ACWIxUS Gross Callan NonUS Eq	(8.45%) (3.68%) (4.58%)	91 36	14.92% 21.02% 23.96%	95 69	(1.21%) 4.24% 4.97%	90 57	3.83% 3.07% 3.76%	47 71	6.89% 6.11% -	(12/03) (12/03)
DFA International Small Cap MSCI EAFE Small Callan Intl Small Cap	0.13% (3.51%) (3.83%)	2 44	28.77% 17.90% 20.07%	10 62	10.94% 1.10% 1.65%	4 57	2.88% 0.76% 1.66%	25 60	4.66% 3.65% -	(5/06) (5/06)



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended September 30, 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 September 30, 2023

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Since Inception	
Total Fixed Income Blmbg Aggregate Pub Pln- Dom Fixed	(3.13%) (3.23%) (2.52%)	76 78	2.30% 0.64% 2.32%	51 95	(1.80%) (5.21%) (3.65%)	15 92	0.31% 0.10% 0.97%	87 94	6.44%	(12/87) (12/87)
BlackRock US Govt Bond Blmbg Government Callan Core Bond FI	(2.99%) (2.99%) (3.13%)	21 21	(0.76%) (0.74%) 1.10%	99 99	(5.73%) (4.75%)	98	(<mark>0.03%)</mark> 0.59%	97	(7.77%) (7.91%)	
Reams Asset Management Blmbg Aggregate Callan Core Plus Fl	(3.80%) (3.23%) (2.88%)	96 82	2.92% 0.64% 1.84%	14 91	(4.01%) (5.21%) (4.13%)	40 96	2.65% 0.10% 0.91%	2 97		(1/01) (1/01)
Loomis, Sayles & Company, L.P. Blmbg Aggregate Callan Core Plus Fl	(2.16%) (3.23%) (2.88%)	8 82	3.61% 0.64% 1.84%	4 91	(1.72%) (5.21%) (4.13%)	6 96	1.65% 0.10% 0.91%	12 97		(12/87) (12/87)
Private Equity Private Equity Benchmark (3) Abbott Capital Management 2010 Abbott Capital Management 2011 Abbott Capital Management 2012 Abbott Capital Management 2012 Abbott Capital Management 2013 Abbott Capital Management 2014 Abbott Capital Management 2016 Abbott Capital Management 2016 Abbott Capital Management 2018 Abbott Capital Management 2019 Abbott Capital Management 2020 Abbott Capital Management 2021 Abbott Capital Management 2021 Abbott Capital Management 2021 Abbott Capital Management 2022 Mesirow VI Mesirow VII Mesirow VIII NB Secondary Opp Fund III NB Secondary Opp Fund IV NB Secondary Opp Fund V Private Advisors VII Private Advisors VIII Private Advisors VIII Private Advisors IX Apogem Capital X	2.36% 8.80% 1.92% 1.80% 1.61% 2.13% 1.73% 2.79% 2.48% 1.63% 2.19% 2.55% 0.99% 3.38% 2.02% 1.74% 1.17% 1.03% (0.05%) 9.25% 2.55% 3.01% 3.18% 2.21% 11.81%		2.68% 21.50% (1.92%) (4.67%) (2.25%) (1.68%) 4.73% 5.05% 3.80% 3.73% (0.17%) 1.99% 0.54% 0.97% 0.98% 4.22% (2.61%) 13.91% 3.62% 5.61% 10.82% 18.50%		23.92% 16.33% 18.24% 19.95% 22.18% 22.28% 25.98% 26.94% 21.69% 24.04% 		20.06% 14.25% 16.44% 18.52% 19.75% 20.23% 20.84% 20.86% 16.26% 16.92% 23.15% 14.30% 11.95% 17.88% - 24.54% 18.51% 20.70%		1.66% 4.93% 12.00% 12.83% 12.34% 13.58% 15.43% 19.26% 21.11% 5.63% (0.56%) 15.00% 14.00% 3.83% (1.49%) 12.29% 20.17% 90.95% 14.11% 15.30% 19.97% 26.40%	(6/10) (6/10) (6/11) (7/12) (5/13) (4/14) (4/15) (3/16) (7/18) (1/20) (1/21) (2/22) (6/10) (7/13) (6/17) (9/20) (1/21/3) (4/17) (3/22) (4/15) (1/17) (8/18) (2/20) (5/23)
Absolute Return 90 Day T-Bill + 3%	1.98% 2.03%		7.08% 7.47%		14.54% 4.70%		6.08% 4.72%			(6/14) (6/14)
Aptitude 1-month LIBOR + 4% Callan Abs Rtn Hedge FoF	1.75% 2.34% 2.04%	65 36	6.09% 8.96% 4.95%	28 13	5.95% 6.43%	72	5.87% 4.47%	20		(9/22) (9/22)
UBS A & Q 1-month LIBOR + 4% Callan Abs Rtn Hedge FoF	2.10% 2.34% 2.04%	47 36	7.43% 8.96% 4.95%	14 13	8.42% 5.95% 6.43%	36 72	8.14% 5.87% 4.47%	3 20		(12/14) (12/14)
Real Assets	(3.82%)		4.44%		6.31%		3.73%		4.72%	(1/16)
Principal DRA Principal DRA Blend Index (1) Callan Alterntive Inv DB	(3.82%) (2.92%) 3.17%	93 91	4.44% 4.87% 2.61%	43 41	6.31% 5.71% 15.97%	83 85	3.73% 3.15% 6.73%	86 88		(1/16) (1/16)
Total Real Estate	(2.01%)		(9.17%)		10.00%		7.50%		6.80%	(7/86)
Real Estate Blended Benchmark (2) Callan Tot Real Est DB	(2.01%) (3.05%) (0.65%)	82 86	(9.17%) (10.51%) (8.51%)	53 59	10.00% 7.59% 6.18%	18 33	7.50% 6.07% 5.31%	18 38	6.80% - -	(7/86)
Total Fund Total Fund Index* Callan Public Fund Spr DB	(1.67%) (1.45%) (2.30%)	20 14	9.77% 10.83% 11.09%	74 56	8.75% 4.93% 5.25%	4 59	6.43% 5.59% 5.48%	19 48	- - -	

^{*} Current Quarter Target = 39.0% MSCI ACWI IMI, 29.0% Blmbg:Aggregate, 12.0% Russell 3000 Index lagged 3 months+2.0%, 9.7% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 7.0% 3-month Treasury Bill+3.0% and 3.3% Principal



months+2.0%, 9.7% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 7.0% 3-month Treasury Bill+3.0% and 3.3% 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.

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- 9/2023		2022		2021		2020		2019	
Total Public Equity MSCI ACWI IMI	8.89% 9.39%		(15.78%) (18.40%)		20.92% 18.22%		14.78% 16.25%		26.90% 26.35%	
Total Domestic Equity Russell 3000 Index Pub Pln- Dom Equity	7.05% 12.39% 10.48%	95 13	(15.68%) (19.21%) (17.91%)	12 80	28.12% 25.66% 25.85%	16 54	16.35% 20.89% 18.58%	72 24	29.24% 31.02% 30.20%	74 25
BlackRock Russell 1000 Value Russell 1000 Value Index Callan Large Cap Value	1.80% 1.79% 2.72%	59 59	(7.54%) (7.54%) (5.04%)	80 79	25.18% 25.16% 28.39%	80 80	3.28% 2.80% 3.04%	47 52	26.79% 26.54% 26.58%	48 51
DFA Large Cap Value Russell 1000 Value Index Callan Large Cap Value	2.91% 1.79% 2.72%	49 59	(4.95%) (7.54%) (5.04%)	49 79	27.52% 25.16% 28.39%	65 80	(1.56%) 2.80% 3.04%	90 52	26.71% 26.54% 26.58%	48 51
Northern Trust Global S&P 500 Index Callan Large Cap Core	13.08% 13.07% 12.38%	46 46	(18.08%) (18.11%) (17.69%)	55 56	28.69% 28.71% 28.98%	53 53	18.42% 18.40% 19.19%	53 53	31.54% 31.49% 30.50%	39 39
Polen Capital Management S&P 500 Index Callan Large Cap Growth	20.84% 13.07% 22.43%	60 88	(37.72%) (18.11%) (30.09%)	89 6	24.84% 28.71% 24.28%	43 20	35.13% 18.40% 35.54%	54 98	38.85% 31.49% 34.49%	11 76
Earnest Partners LLC Russell MidCap Index Callan Mid Capitalization	4.08% 3.91% 5.12%	59 60	(15.13%) (17.32%) (14.34%)	52 58	26.09% 22.58% 25.38%	48 58	21.61% 17.10% 16.17%	41 48	38.38% 30.54% 31.00%	12 52
DFA Small Cap Value Russell 2000 Value Index Callan Small Cap Value	5.54% (0.53%) 1.87%	30 83	(1.69%) (14.48%) (10.51%)	10 84	40.61% 28.27% 31.82%	16 64	3.85% 4.63% 2.88%	45 37	18.79% 22.39% 24.31%	89 64
CastleArk Management Russell 2000 Growth Index Callan Small Cap Growth	0.64% 5.24% 5.78%	84 56	(28.21%) (26.36%) (27.10%)	62 44	12.30% 2.83% 10.91%	42 80	45.10% 34.63% 44.48%	46 73	23.28% 28.48% 30.25%	86 54
Total Global Equity MSCI World Callan Global Equity	9.79% 11.10% 9.53%	45 33	(17.35%) (18.14%) (17.81%)	47 52	19.03% 21.82% 19.46%	54 28	18.78% 15.90% 17.02%	43 55	31.05% 27.67% 27.49%	27 49
BlackRock Global Alpha Tilts MSCI ACWI Gross Callan Global Equity	10.58% 10.49% 9.53%	39 39	(16.80%) (17.96%) (17.81%)	43 51	18.73% 19.04% 19.46%	56 54	16.53% 16.82% 17.02%	52 51	26.86% 27.30% 27.49%	53 51
MFS Investment Management MSCI ACWI Gross Callan Global Equity	8.73% 10.49% 9.53%	56 39	(18.14%) (17.96%) (17.81%)	52 51	19.56% 19.04% 19.46%	49 54	22.42% 16.82% 17.02%	32 51	37.31% 27.30% 27.49%	4 51
Total International Equity MSCI EAFE Pub PIn- Intl Equity	10.56% 7.08% 6.43%	1 32	(15.36%) (14.45%) (16.87%)	23 18	13.08% 11.26% 8.94%	14 23	10.84% 7.82% 12.71%	70 90	21.68% 22.01% 22.89%	71 62
AQR Emerging Markets MSCI EM Gross Callan Emerging Broad	7.60% 2.16% 3.11%	18 60	(20.29%) (19.74%) (22.16%)	38 35	1.23% (2.22%) (0.59%)	36 55	18.26% 18.69% 18.17%	49 44	20.54% 18.90% 22.12%	63 71
Brandes Investment Partners MSCI EAFE Callan NonUS Eq	18.61% 7.08% 7.02%	1 47	(6.79%) (14.45%) (15.29%)	4 43	14.42% 11.26% 11.50%	18 52	(1.30%) 7.82% 11.19%	96 65	15.31% 22.01% 23.78%	98 66
William Blair & Company MSCI ACWIXUS Gross Callan NonUS Eq	2.56% 5.82% 7.02%	93 64	(28.57%) (15.57%) (15.29%)	95 51	13.27% 8.29% 11.50%	30 71	31.44% 11.13% 11.19%	6 50	31.58% 22.13% 23.78%	10 64
DFA International Small Cap MSCI EAFE Small Callan Intl Small Cap	7.84% 1.82% 3.08%	8 63	(9.42%) (21.39%) (20.63%)	5 52	16.47% 10.10% 12.78%	14 72	1.47% 12.34% 11.29%	91 46	21.62% 24.96% 24.99%	83 51



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-	12/2022-								
	9/2023		2022		2021		2020		2019	
Total Fixed Income Blmbg Aggregate Pub Pln- Dom Fixed	(0.33%) (1.21%) 0.16%	66 90	(6.83%) (13.01%) (12.24%)	9 73	(0.36%) (1.54%) (0.57%)	45 91	(<mark>1.82%)</mark> 7.51% 8.53%	98 67	11.82% 8.72% 8.98%	5 58
BlackRock US Govt Bond Blmbg Government Callan Core Bond FI	(1.23%) (1.45%) (0.72%)	86 90	(12.43%) (12.32%) (12.90%)	22 18	(2.28%) (1.04%)	100	- 7.94% 8.71%	85	- 6.83% 9.17%	100
Reams Asset Management Blmbg Aggregate Callan Core Plus Fl	(0.53%) (1.21%) (0.18%)	66 95	(11.39%) (13.01%) (13.27%)	13 41	(1.23%) (1.54%) (0.27%)	91 97	17.28% 7.51% 9.27%	2 93	8.82% 8.72% 10.01%	92 93
Loomis, Sayles & Company, L.P. Blmbg Aggregate Callan Core Plus Fl	0.80% (1.21%) (0.18%)	10 95	(12.12%) (13.01%) (13.27%)	18 41	2.13% (1.54%) (0.27%)	5 97	7.14% 7.51% 9.27%	94 93	14.42% 8.72% 10.01%	1 93
Callan Core Plus FI Total Private Equity Private Equity Benchmark (3) Abbott Capital Management 2010 Abbott Capital Management 2011 Abbott Capital Management 2012 Abbott Capital Management 2013 Abbott Capital Management 2014 Abbott Capital Management 2015 Abbott Capital Management 2016 Abbott Capital Management 2018 Abbott Capital Management 2018 Abbott Capital Management 2019 Abbott Capital Management 2020 Abbott Capital Management 2020 Abbott Capital Management 2021	4.91% 26.12% 1.25% 0.04% 1.63% 2.42% 1.33% 4.98% 5.57% 4.61% 4.06% 1.58% 2.16%		(4.88%) (15.10%) (16.87%) (18.97%) (13.14%) (12.51%) (9.41%) (0.79%) 2.90% 7.44% 7.54% 0.81% 1.72%		67.66% 34.08% 65.55% 76.29% 72.85% 70.21% 75.52% 75.81% 71.04% 47.06% 65.36%		22.14% 17.99% 24.43% 29.13% 29.04% 28.65% 26.51% 16.62% 20.02% 22.73% 10.04%		16.63% 6.65% 16.52% 19.64% 17.91% 21.13% 19.74% 15.14% 9.08% 7.26%	
Abbott Capital Management 2022 Mesirow V Mesirow VI Mesirow VII Mesirow VIII NB Secondary Opp Fund III NB Secondary Opp Fund IV NB Secondary Opp Fund V Private Advisors VI	6.31% 4.83% 4.18% 5.36% 1.60% 15.14% 5.26% 19.75% 3.18%		(19.60%) (13.41%) (0.68%) (2.15%) (2.34%) 0.29%		78.52% 88.26% 60.27% 10.14% 30.34% 48.73%		21.39% 29.10% 16.43% - 4.23% 14.80% - 16.54%		16.29% 22.73% 3.33% - 12.18% 14.76% - 17.98%	
Private Advisors VII Private Advisors VIII Private Advisors IX	5.92% 7.98% 12.26%		21.61% 27.61% 24.00%		52.55% 47.25% 37.25%		3.97% 15.78% -		11.23% (4.08%)	
Absolute Return 90 Day T-Bill + 3%	3.66% 5.81%		26.46% 4.46%		8.87% 3.05%		(14.04%) 3.67%		12.79% 5.28%	
Aptitude 1-month LIBOR + 4% Callan Abs Rtn Hedge FoF	3.11% 6.88% 3.18%	53 2	5.80% 3.34%	21	- 4.11% 6.76%	77	4.63% 4.03%	45	- 6.32% 4.71%	30
UBS A & Q 1-month LIBOR + 4% Callan Abs Rtn Hedge FoF	3.86% 6.88% 3.18%	38 2	8.85% 5.80% 3.34%	13 21	8.08% 4.11% 6.76%	44 77	12.18% 4.63% 4.03%	14 45	9.53% 6.32% 4.71%	4 30
Real Assets	(3.08%)		(5.29%)		18.24%		4.69%		15.39%	
Principal DRA Principal DRA Blend Index (1) Callan Alterntive Inv DB	(3.08%) (3.01%) 1.58%	76 76	(5.29%) (5.07%) 9.46%	84 84	18.24% 15.87% 13.64%	44 47	4.69% 2.08% (0.47%)	23 32	15.39% 14.86% 7.82%	15 16
Total Real Estate	(6.87%)		13.88%		23.85%		0.76%		6.21%	
Real Estate Blended Benchmark (2) Callan Tot Real Est DB	(6.87%) (11.20%) (4.92%)	64 88	13.88% 21.68% 8.23%	26 14	23.85% 14.83% 18.95%	34 58	0.76% 0.89% 1.25%	54 53	6.21% 5.26% 7.70%	65 72
Total Fund Total Fund Index* Callan Public Fund Spr DB	3.92% 5.67% 5.05%	83 32	(6.32%) (10.59%) (12.38%)	8 26	19.05% 12.88% 14.07%	8 69	6.84% 12.29% 12.25%	97 49	18.66% 16.52% 18.51%	47 81



^{*} Current Quarter Target = 39.0% MSCI ACWI IMI, 29.0% Blmbg:Aggregate, 12.0% Russell 3000 Index lagged 3 months+2.0%, 9.7% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 7.0% 3-month Treasury Bill+3.0% and 3.3% Principal

months+2.0%, 9.7% NoREIF NFI-ODGE EQ WENE lagged 3 months, 1.3% 3 months+2.0%, 9.7% NoREIF NFI-ODGE EQ WENE lagged 3 months+3.0% 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.

The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 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 September 30, 2023

	Last	Last	Last 3	Last 5	Last 10
Net of Fee Returns	Quarter	Year	Years	Years	Years
Total Domestic Equity	(3.12%)	16.72%	10.92%	7.84%	10.51%
Russell 3000 Index	(3.25%)	20.46%	9.38%	9.14%	11.28%
BlackRock Russell 1000 Value	(3.16%)	14.42%	11.07%	6.37%	-
Russell 1000 Value Index	(3.16%)	14.44%	11.05%	6.23%	8.45%
DFA Large Cap Value	(1.62%)	17.40%	13.94%	5.55%	_
Russell 1000 Value Index	(3.16%)	14.44%	11.05%	6.23%	8.45%
Northern Trust Global	(3.26%)	21.61%	10.15%	9.94%	11.94%
S&P 500 Index	(3.27%)	21.62%	10.15%	9.92%	11.91%
	, ,				
Polen Capital Management	(3.60%)	21.00%	0.86%	8.61%	13.72%
S&P 500 Index	(3.27%)	21.62%	10.15%	9.92%	11.91%
Earnest Partners LLC	(4.61%)	11.55%	9.14%	8.75%	11.20%
Russell MidCap Index	(4.68%)	13.45%	8.09%	6.38%	8.98%
DFA Small Cap Value	(0.10%)	20.05%	24.50%	7.22%	8.47%
Russell 2000 Value Index	(2.96%)	7.84%	13.32%	2.59%	6.19%
	, , , ,				
CastleArk Management Russell 2000 Growth Index	(9.23%) (7.32%)	3.64% 9.59%	1.84% 1.09%	2.65% 1.55%	7.50% 6.72%
Russell 2000 Glowill Illuex	(1.32%)	9.59%	1.09%	1.55%	0.7270
Total Global Equity	(4.24%)	21.69%	6.78%	7.53%	8.65%
MSCI World	(3.46%)	21.95%	8.08%	7.26%	8.26%
BlackRock Global Alpha Tilts	(3.12%)	23.04%	7.39%	6.52%	_
MSCI ACWI Gross	(3.30%)	21.41%	7.39%	6.99%	8.11%
MES Investment Management	/F 600/\	10.000/	E 06%	9.13%	10 100/
MFS Investment Management MSCI ACWI Gross	(5.68%) (3.30%)	19.90% 21.41%	5.96% 7.39%	9.13% 6.99%	10.10% 8.11%
	(5.5575)			3.33 / 3	311170
Total International Equity	(1.85%)	28.60%	7.60%	3.73%	4.58%
MSCI EAFE Index	(4.11%)	25.65%	5.75%	3.24%	3.82%
AQR Emerging Markets	(0.77%)	16.87%	0.36%	1.04%	-
MSCI EM Gross	(2.79%)	12.17%	(1.34%)	0.94%	2.45%
Brandes Investment Partners	1.60%	43.31%	15.13%	4.68%	4.75%
MSCI EAFE Index	(4.11%)	25.65%	5.75%	3.24%	3.82%
				/	
William Blair & Company MSCI ACWI ex-US Index	(8.56%)	14.38% 21.02%	(1. <mark>66%)</mark> 4.24%	3.36% 3.07%	4.61% 3.83%
MOCI ACMI EX-03 IIIUEX	(3.68%)	Z 1.UZ 70	4.24 70	3.01 70	J.0J %
DFA International Small Cap	0.02%	28.21%	10.41%	2.38%	4.46%
MSCI EAFE Small	(3.51%)	17.90%	1.10%	0.76%	4.30%

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



The table below details the rates of return for the Fund's investment managers over various time periods ended September 30, 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 September 30, 2023

	Last	Last Last	Last 3	Last 5	Last 10
	Quarter	Year	Years	Years	Years
let of Fee Returns					
otal Fixed Income	(3.16%)	2.19%	(1.90%)	0.20%	1.41%
Blmbg Aggregate	(3.23%)	0.64%	(5.21%)	0.10%	1.13%
BlackRock US Govt Bond	(3.00%)	(0.78%)	-	-	-
Blmbg Government	(2.99%)	(0.74%)	(5.73%)	(0.03%)	0.65%
Reams Asset Management	(3.83%)	2.79%	(4.14%)	2.51%	2.36%
Blmbg Aggregate	(3.23%)	0.64%	(5.21%)	0.10%	1.13%
Loomis, Sayles & Company, L.P.	(2.19%)	3.46%	(1.87%)	1.51%	2.96%
Blmbg Aggregate	(3.23%)	0.64%	(5.21%)	0.10%	1.13%
otal Private Equity	2.36%	2.68%	23.92%	20.06%	17.27%
Private Equity Benchmark Abbott Capital Management 2010	8.80% 1.92%	21.50% (1.92%)	16.33% 18.24%	14.25% 16.44%	- 16.04%
Abbott Capital Management 2011	1.80%	(4.67%)	19.95%	18.52%	16.20%
Abbott Capital Management 2012	1.61%	(2.25%)	22.18%	19.75%	15.22%
Abbott Capital Management 2013	2.13%	(1.68%)	22.28%	20.23%	13.87%
Abbott Capital Management 2014	1.73%	(1.58%)	23.83%	20.84%	-
Abbott Capital Management 2015	2.79%	4.73%	25.98%	20.81%	_
Abbott Capital Management 2016	2.48%	5.05%	26.94%	20.66%	_
Abbott Capital Management 2018	1.63%	3.80%	21.69%	16.26%	_
Abbott Capital Management 2019	2.19%	3.73%	24.04%	-	_
Abbott Capital Management 2020	1.66%	(0.17%)	=	_	_
Abbott Capital Management 2021	2.53%	1.99%	_	_	_
Abbott Capital Management 2022	0.99%	0.54%	_	_	_
Mesirow V	3.38%	0.97%	18.76%	16.92%	17.72%
Mesirow IV	2.02%	0.98%	24.70%	23.15%	14.37%
Mesirow VII	1.74%	4.22%	22.38%	14.30%	-
Mesirow VIII	1.17%	(2.61%)	(1.53%)	-	-
NB Secondary Opp Fund III	1.03%	13.91%	19.83%	11.95%	-
NB Secondary Opp Fund IV	(0.05%)	3.62%	19.98%	17.88%	_
NB Secondary Opp Fund V	9.25%	5.61%	-	-	-
Private Advisors VI	2.55%	3.12%	31.60%	24.54%	-
Private Advisors VII	3.01%	6.17%	26.42%	18.51%	-
Private Advisors VIII	3.18%	10.82%	29.96%	20.70%	-
Private Advisors IX	2.21%	18.50%	25.26%	-	-
Apogem Capital X	11.81%	-	-	-	-
bsolute Return	1.98%	7.08%	14.49%	5.97%	-
90 Day T-Bill + 3%	2.03%	7.47%	4.70%	4.72%	4.12%
Aptitude	1.75%	6.09%	-	-	-
1-month LIBOR + 4%	2.34%	8.96%	5.95%	5.87%	5.27%
UBS A & Q	2.10%	7.43%	8.42%	8.14%	-
1-month LIBOR + 4%	2.34%	8.96%	5.95%	5.87%	5.27%
eal Assets	(3.97%)	3.78%	5.64%	3.14%	-
Principal DRA	(3.97%)	3.78%	5.64%	3.14%	-
Principal DRA Blend Index	(2.92%)	4.87%	5.71%	3.15%	-
otal Real Estate	(2.11%)	(9.49%)	9.64%	7.17%	9.26%
Real Estate	(2.11%)	(9.49%)	9.64%	7.17%	9.26%
Blended Benchmark	(3.05%)	(10.51%)	7.59%	6.07%	8.04%
otal Fund	(1.72%)	9.53%	8.52%	6.19%	7.16%
Total Fund Index	(1.45%)	10.83%	4.93%	5.59%	6.63%

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



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- 9/2023	2022	2021	2020	2019
Net of Fee Returns					
Total Domestic Equity Russell 3000 Index	6.82% 12.39%	(15.89%) (19.21%)	27.88% 25.66%	16.09% 20.89%	28.94% 31.02%
BlackRock Russell 1000 Value	1.79%	(7.55%)	25.17%	3.27%	26.77%
Russell 1000 Value Index	1.79%	(7.54%)	25.16%	2.80%	26.54%
DFA Large Cap Value	2.77%	(5.12%)	27.35%	(1. <mark>78%)</mark>	26.42%
Russell 1000 Value Index	1.79%	(7.54%)	25.16%	2.80%	26.54%
Northern Trust Global	13.07%	(18.09%)	28.68%	18.41%	31.53%
S&P 500 Index	13.07%	(18.11%)	28.71%	18.40%	31.49%
Polen Capital Management	20.57%	(37.97%)	24.34%	34.59%	38.27%
S&P 500 Index	13.07%	(18.11%)	28.71%	18.40%	31.49%
Earnest Partners LLC	3.67%	(15.58%)	25.59%	20.96%	37.65%
Russell MidCap Index	3.91%	(17.32%)	22.58%	17.10%	30.54%
DFA Small Cap Value	5.01%	(2.12%)	40.38%	3.74%	18.58%
Russell 2000 Value Index	(0.53%)	(14.48%)	28.27%	4.63%	22.39%
CastleArk Management	0.14%	(28.58%)	11.55%	44.12%	22.47%
Russell 2000 Growth Index	5.24%	(26.36%)	2.83%	34.63%	28.48%
Total Global Equity	9.52%	(17.55%) (18.14%)	18.80%	18.48%	30.55%
MSCI World	11.10%		21.82%	15.90%	27.67%
BlackRock Global Alpha Tilts	10.37%	(16.89%)	18.67%	16.39%	26.48%
MSCI ACWI Gross	10.49%	(17.96%)	19.04%	16.82%	27.30%
MFS Investment Management MSCI ACWI Gross	8.40%	(18.50%)	19.05%	21.88%	36.74%
	10.49%	(17.96%)	19.04%	16.82%	27.30%
Total International Equity MSCI EAFE Index	10.18% 7.08%	(15.75%) (14.45%)	12.57% 11.26%	10.28% 7.82%	21.08% 22.01%
AQR Emerging Markets	7.00%	(20.93%)	0.47%	17.38%	19.64%
MSCI EM Gross	2.16%	(19.74%)	(2.22%)	18.69%	18.90%
Brandes Investment Partners MSCI EAFE Index	18.27%	(7.15%)	14.00%	(1. <mark>69%)</mark>	14.86%
	7.08%	(14.45%)	11.26%	7.82%	22.01%
William Blair & Company	2.20%	(28.91%)	12.77%	30.84%	31.01%
MSCI ACWI ex-US Index	5.82%	(15.57%)	8.29%	11.13%	22.13%
DFA International Small Cap	7.48%	(9.80%)	15.89%	0.81%	21.00%
MSCI EAFE Small	1.82%	(21.39%)	10.10%	12.34%	24.96%

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



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-				
	9/2023	2022	2021	2020	2019
Net of Fee Returns					
Total Fixed Income	(0.41%)	(6.93%)	(0.45%)	(1.91%)	11.68%
Blmbg Aggregate	(1.21%)	(13.01%)	(1.54%)	7.51%	8.72%
BlackRock US Govt Bond	(1.24%)	(12.44%)	-	-	-
Blmbg Government	(1.45%)	(12.32%)	(2.28%)	7.94%	6.83%
Reams Asset Management	(0.62%)	(11.50%)	(1.36%)	17.11%	8.65%
Blmbg Aggregate	(1.21%)	(13.01%)	(1.54%)	7.51%	8.72%
Loomis, Sayles & Company, L.P.	0.70%	(12.26%)	1.98%	6.99%	14.25%
Blmbg Aggregate	(1.21%)	(13.01%)	(1.54%)	7.51%	8.72%
Total Private Equity	4.91%	(4.88%)	67.66%	22.14%	16.63%
Private Equity Benchmark	26.12%	(15.10%)	34.08%	17.99%	6.65%
Abbott Capital Management 2010	1.25%	(16.87%)	65.55%	24.43%	16.52%
Abbott Capital Management 2011	0.04%	(18.97%)	76.29%	29.13%	19.64%
Abbott Capital Management 2012	1.63%	(13.14%)	72.85%	29.04%	17.91%
Abbott Capital Management 2013	2.42%	(12.51%)	70.21%	28.65%	21.13%
Abbott Capital Management 2014	1.33%	(9.41%)	75.52%	26.51%	19.74%
Abbott Capital Management 2015	4.98%	(0.79%)	75.81%	16.62%	15.14%
Abbott Capital Management 2016	5.57%	2.90%	71.04%	20.02%	9.08%
Abbott Capital Management 2018	4.61%	7.44%	47.06%	22.73%	7.26%
Abbott Capital Management 2019	4.06%	7.54%	57.22%	10.04%	-
Abbott Capital Management 2020	1.58%	0.81%	65.36%	-	-
Abbott Capital Management 2021	2.16%	1.72%	-	-	-
Abbott Capital Management 2022	6.31%	-	-	-	-
Mesirow V	4.83%	(19.60%)	78.52%	21.39%	16.29%
Mesirow IV	4.18%	(13.41%)	88.26%	29.10%	22.73%
Mesirow VII	5.36%	(0.68%)	60.27%	16.43%	3.33%
Mesirow VIII	1.60%	(2.15%)	10.14%	-	-
NB Secondary Opp Fund III	15.14%	(2.34%)	30.34%	4.23%	12.18%
NB Secondary Opp Fund IV	5.26%	0.29%	48.73%	14.80%	14.76%
NB Secondary Opp Fund V	19.75%	-	-	-	-
Private Advisors VI	3.18%	9.97%	83.78%	16.54%	17.98%
Private Advisors VII	5.92%	21.61%	52.55%	3.97%	11.23%
Private Advisors VIII	7.98%	27.61%	47.25%	15.78%	(4.08%)
Private Advisors IX	12.26%	24.00%	37.25%	-	-
Absolute Return	3.66%	26.46%	8.77%	(14.21%)	12.52%
90 Day T-Bill + 3%	5.81%	4.46%	3.05%	3.67%	5.28%
Aptitude	3.11%	-	-	-	-
1-month LIBOR + 4%	6.88%	5.80%	4.11%	4.63%	6.32%
UBS A & Q	3.86%	8.85%	8.08%	12.18%	9.53%
1-month LIBOR + 4%	6.88%	5.80%	4.11%	4.63%	6.32%
Real Assets	(3.54%)	(5.91%)	17.51%	4.02%	14.84%
Principal DRA	(3.54%)	(5.91%)	17.51%	4.02%	14.84%
Principal DRA Blend Index	(3.01%)	(5.07%)	15.87%	2.08%	14.86%
Total Real Estate	(7.14%)	13.58%	23.45%	0.39%	5.95%
Real Estate	(7.14%)	13.58%	23.45%	0.39%	5.95%
Blended Benchmark	(11.20%)	21.68%	14.83%	0.89%	5.26%
Total Fund	3.75%	(6.51%)	18.80%	6.59%	18.34%
Total Fund Index	5.67%	(10.59%)	12.88%	12.29%	16.52%

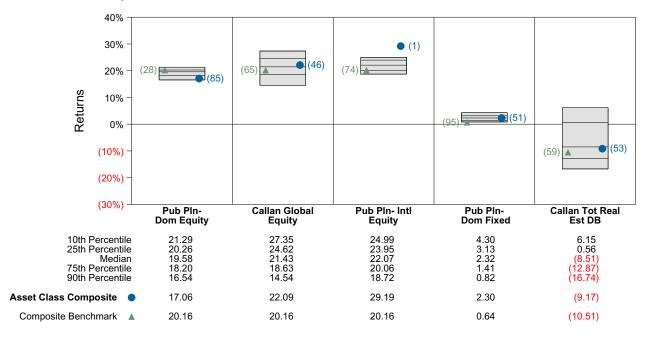
^{*}Net returns are simulated with the use of fee schedules through March 31, 2019. Actual fees paid are used thereafter.



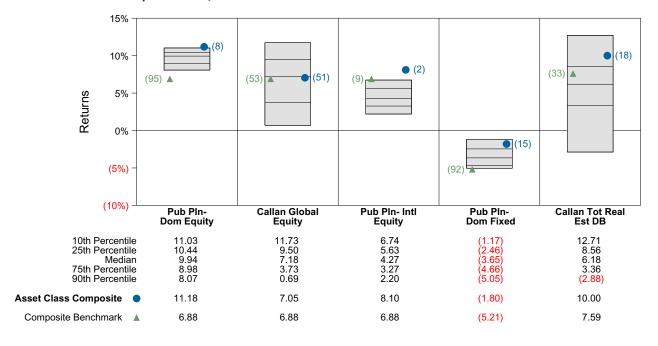
Asset Class Rankings

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 September 30, 2023



Total Asset Class Performance Three Years Ended September 30, 2023



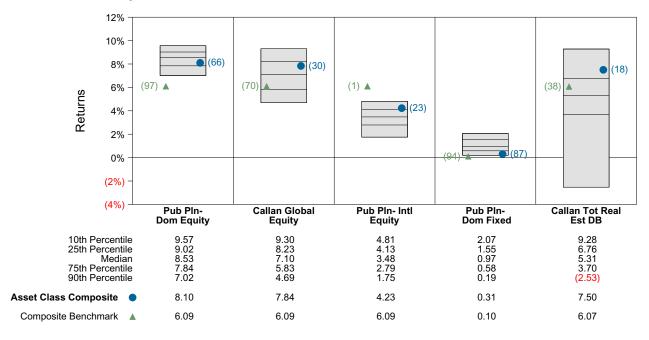
^{*} Current Quarter Target = 39.0% MSCI ACWI IMI, 29.0% Blmbg:Aggregate, 12.0% Russell 3000 Index lagged 3 months+2.0%, 9.7% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 7.0% 3-month Treasury Bill+3.0% and 3.3% Principal DRA Blend Index.



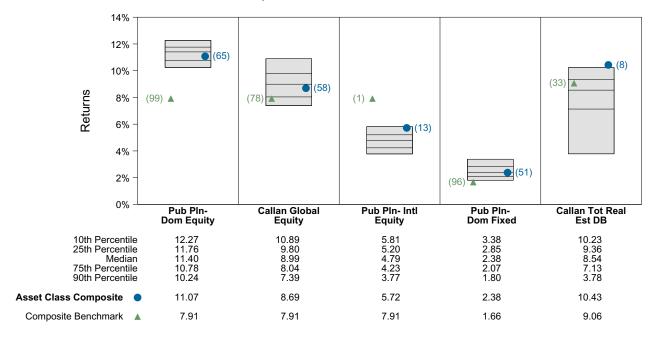
Asset Class Rankings

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 September 30, 2023



Total Asset Class Performance Twelve and Three-Quarter Years Ended September 30, 2023



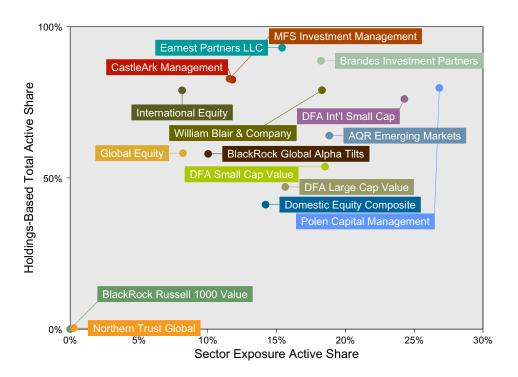
^{*} Current Quarter Target = 39.0% MSCI ACWI IMI, 29.0% Blmbg:Aggregate, 12.0% Russell 3000 Index lagged 3 months+2.0%, 9.7% NCREIF NFI-ODCE Eq Wt Net lagged 3 months, 7.0% 3-month Treasury Bill+3.0% and 3.3% Principal DRA Blend Index.



Active Share Structure Analysis For One Quarter Ended September 30, 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 September 30, 2023



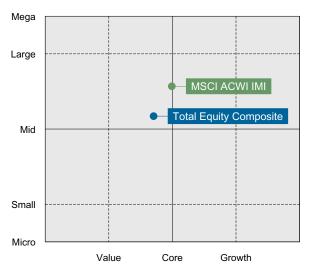
	Index	Total Act Share	Non-Idx Act Share	Sector Act Share	Number Securities	Security Diverse
	IIIUGA	Act Share	Act Share	Act Share	Securities	Diverse
Domestic Equity Composite	Russell 3000	41.17%	0.91%	14.20%	1870	128.50
BlackRock Russell 1000 Value	Russell 1000 Value	0.00%	0.00%	0.00%	845	69.32
DFA Large Cap Value	Russell 1000 Value	47.01%	1.40%	15.63%	295	42.69
Northern Trust Global	S&P 500	0.35%	0.00%	0.26%	501	34.94
Polen Capital Management	S&P 500	79.76%	2.07%	26.82%	24	7.15
Earnest Partners LLC	Russell MidCap	93.04%	10.39%	15.40%	57	23.26
DFA Small Cap Value	Russell 2000 Value	53.75%	14.84%	18.52%	962	120.43
CastleArk Management	Russell 2000 Growth	82.49%	20.56%	11.78%	107	38.44
Global Equity	MSCI World	58.19%	6.65%	8.20%	621	45.74
BlackRock Global Alpha Tilts	MSCI ACWI GD	57.96%	3.71%	10.03%	572	41.30
MFS Investment Management	MSCI ACWI GD	82.78%	2.21%	11.58%	73	20.44
International Equity	MSCI EAFE	78.96%	29.66%	8.13%	2532	84.79
AQR Emerging Markets	MSCI EM GD	63.99%	2.86%	18.83%	353	32.51
Brandes Investment Partners	MSCI EAFE	88.74%	15.90%	18.22%	67	23.25
William Blair & Company	MSCI ACWI xUS GD	79.02%	12.13%	18.30%	272	44.97
DFA Int'l Small Cap	MSCI EAFE Small	76.11%	16.52%	24.28%	1874	153.76



Current Holdings Based Style Analysis Total Equity Composite As of September 30, 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 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.

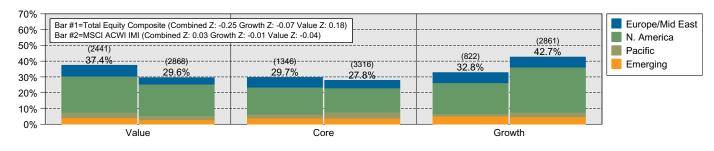
Style Map vs Callan Public Fund Spr DB Holdings as of September 30, 2023



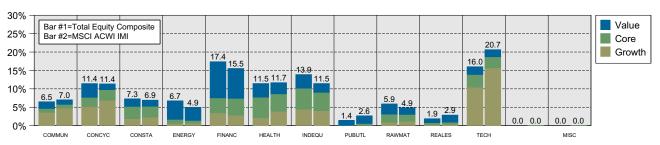
Style Exposure Matrix Holdings as of September 30, 2023

	Value	Core	Growth	Total
	29.6% (2868)	27.8% (3316)	42.7% (2861)	100.0% (9045)
Total				
	37.4% (2441)	29.7% (1346)	32.8% (822)	100.0% (4609)
	2.8% (984)	3.8% (1182)	4.6% (1139)	11.1% (3305)
Emerging				
	4.0% (199)	3.9% (179)	5.1% (213)	13.1% (591)
	2.6% (500)	3.8% (553)	3.0% (483)	9.4% (1536)
Pacific				
	3.4% (821)	2.4% (285)	1.4% (105)	7.2% (1211)
	20.0% (923)	15.3% (1085)	28.6% (730)	64.0% (2738)
N. America				
	23.0% (990)	17.1% (638)	19.7% (354)	59.8% (1982)
Mid East	4.2% (461)	4.8% (496)	6.5% (509)	15.6% (1466)
Europe/	7.0% (431)	6.3% (244)	6.6% (150)	19.9% (825)

Combined Z-Score Style Distribution Holdings as of September 30, 2023



Sector Weights Distribution Holdings as of September 30, 2023

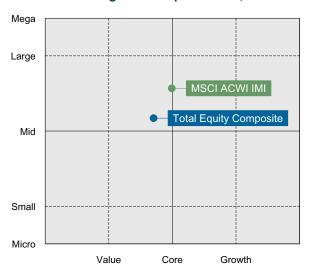




Current Holdings Based Style Analysis Total Equity Composite As of September 30, 2023

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.

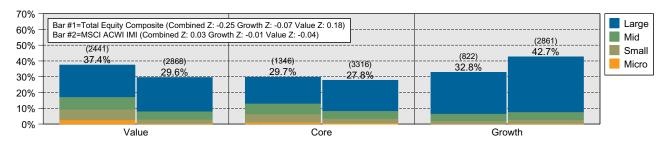
Style Map vs Callan Public Fund Spr DB Holdings as of September 30, 2023



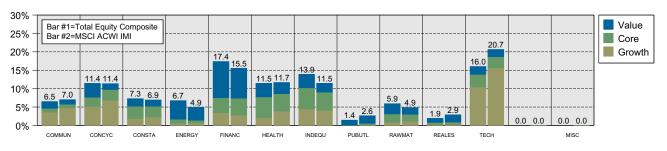
Style Exposure Matrix Holdings as of September 30, 2023

	Value	Core	Growth	Total
Total	29.6% (2868)	27.8% (3316)	42.7% (2861)	100.0% (9045)
Tatal	37.4% (2441)	29.7% (1346)	32.8% (822)	100.0% (4609)
	0.5% (922)	0.6% (1073)	0.4% (719)	1.6% (2714)
Micro		(120)	0.270 (1.00)	(1111)
	2.6% (1376)	1.1% (425)	0.2% (138)	3.9% (1939)
Small	2.4% (1086)	2.8% (1368)	2.3% (1166)	7.5% (3620)
	6.7% (490)	5.3% (426)	1.9% (200)	13.9% (1116)
	5.2% (537)	4.9% (619)	5.0% (652)	15.1% (1808)
Mid				
	7.9% (327)	6.7% (313)	4.5% (265)	19.1% (905)
Large	21.4% (323)	19.4% (256)	35.0% (324)	75.8% (903)
	20.2% (248)	16.6% (182)	26.2% (219)	63.1% (649)

Combined Z-Score Style Distribution Holdings as of September 30, 2023



Sector Weights Distribution Holdings as of September 30, 2023

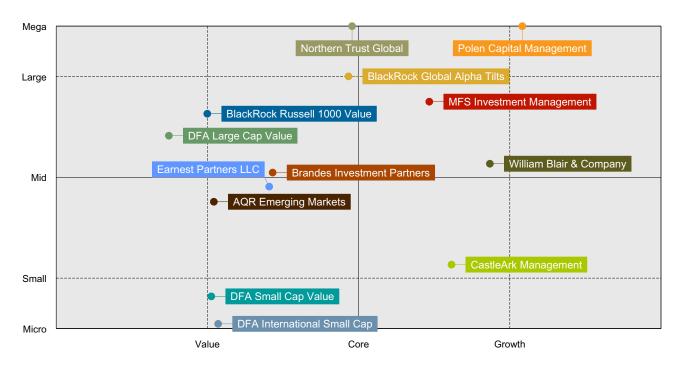




Global Holdings Based Style Analysis For One Quarter Ended September 30, 2023

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 September 30, 2023



	Weight	Wtd Median	Combined	Growth	Value	Number of	Security
	%	Mkt Cap	Z-Score	Z-Score	Z-Score	Securities D	iversification
BlackRock Russell 1000 Value	8.63%	71.80	(0.95)	(0.41)	0.54	845	69.32
DFA Large Cap Value	6.22%	53.47	(1.20)	(0.39)	0.81	295	42.69
Northern Trust Global	8.54%	187.15	(0.01)	(0.02)	(0.01)	501	34.94
Polen Capital Management	5.16%	210.71	1.02	0.41	(0.60)	24	7.15
Earnest Partners LLC	4.44%	17.30	(0.54)	(0.28)	0.26	57	23.26
DFA Small Cap Value	7.83%	2.56	(0.92)	(0.19)	0.73	962	120.43
CastleArk Management	3.55%	5.21	0.59	0.15	(0.44)	107	38.44
MFS Investment Management	8.69%	81.86	0.46	0.03	(0.43)	73	20.44
BlackRock Global Alpha Tilts	10.99%	103.15	(0.03)	0.01	0.04	572	41.30
AQR Emerging Markets	4.73%	14.95	(0.90)	(0.14)	0.76	353	32.51
Brandes Investment Partners	14.25%	22.70	(0.52)	(0.11)	0.41	67	23.25
William Blair & Company	9.69%	30.08	0.82	0.21	(0.61)	272	44.97
DFA International Small Cap	7.27%	1.71	(88.0)	(0.13)	0.74	1874	153.76







3rd Quarter 2023

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

3Q23 Real Assets Reporter: Office-to-Residential Conversions

This paper discusses issues surrounding office-to-residential conversions and the key elements that institutional investors need to understand about these challenging projects.

Real Estate Indicators: Too Hot to Touch or Cool Enough to Handle? 2Q23 | Callan's Real Assets Consulting group identifies seven indicators—based on spreads in real estate and fixed income markets—that, combined with an understanding of prevailing market dynamics, have helped signal when the institutional real estate market is overheated or cooled.

Blog Highlights

Our First Private Credit Fees and Terms Study: What We Found in 2023 | Callan's 2023 Private Credit Fees and Terms Study is our inaugural study in the private credit space. The study is intended to help institutional investors better evaluate private credit funds.

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

Over the summer, the Nasdaq-100 Index implemented a "Special Rebalance" to reduce the influence of a few key stocks, which had grown to have a large effect on the index.

<u>Callan Discount Rate Reporter</u> | These blog posts from our Corporate DB Plan Focus Group are monthly updates about the impact of interest rates on corporate defined benefit (DB) plans, designed to highlight trends in the market.

<u>How Your Public DB Plan's Returns Compare</u> | These blog posts provide context for public defined benefit (DB) plans about their returns over time, from our Public DB Plan Focus Group.

Quarterly Updates

<u>Private Equity Update, 2Q23</u> | A high-level summary of private equity activity in the quarter through all the investment stages

<u>Active vs. Passive Charts, 2Q23</u> | A comparison of active managers alongside relevant benchmarks over the long term

<u>Market Pulse</u>, <u>2Q23</u> | A quarterly market reference guide covering trends in the U.S. economy, developments for institutional investors, and the latest data on the capital markets

<u>Capital Markets Review, 2Q23</u> | Analysis and a broad overview of the economy and public and private markets activity each quarter across a wide range of asset classes

<u>Hedge Fund Update, 2Q23</u> | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Update, 2Q23 | A summary of market activity for real assets and private real estate during the quarter

<u>Private Credit Update, 2Q23</u> | A review of performance and fundraising activity for private credit during the quarter

<u>Callan Target Date Index™, 2Q23</u> | Allows plan sponsors, managers, and participants to track the performance and asset allocation of available target date mutual funds and collective trusts.

<u>Callan DC Index™</u>, <u>2Q23</u> | Provides underlying fund performance, asset allocation, and cash flows of more than 100 large defined contribution plans representing approximately \$400 billion in assets

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:

Webinar: Callan's Retirement Conundrum

Nov. 15, 2023 - Virtual

Webinar: Callan's 2024 Capital Markets Assumptions

Jan. 17, 2024 - Virtual

2024 National Conference

April 8-10, 2024 - San Francisco

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

Education: By the Numbers

50+ Uniqu

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.

Alternative Investments

Feb. 21-22, 2024 - Virtual

Alternative investments like private equity, hedge funds, and real estate can play a key role in any portfolio. In our "Callan College" on Alternatives, you will learn about the importance of allocations to alternatives, and how to consider integrating, evaluating, and monitoring them.

Introduction to Investments March 5-7, 2024 – Virtual

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

Our virtual sessions are held over two to three days with virtual modules of 2.5-3 hours, while in-person sessions run either a full day or one-and-a-half days. 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

Callan

Quarterly List as of September 30, 2023

List of Callan's Investment Manager Clients

Confidential - For Callan Client Use Only

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
abrdn
ABS Global Investments
Acadian Asset Management LLC
Adams Street Partners, LLC
Aegon Asset Management
AllianceBernstein
Allspring Global Investments, LLC
Altrinsic Global Advisors, LLC
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
Axion Investors LLC
Baillie Gifford International, LLC
Baird Advisors
Barings LLC
Baron Capital Management, Inc.
Barrow, Hanley, Mewhinney & Strauss, LLC
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 LLC
Brown Brothers Harriman & Company



Manager Name

Capital Group

CastleArk Management, LLC

CIBC Asset Management Inc.

ClearBridge Investments, LLC

Cohen & Steers Capital Management, Inc.

Columbia Threadneedle Investments NA

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

Eleos Partners, LLC

Fayez Sarofim & Company

Federated Hermes, Inc.

Fidelity Institutional Asset Management

Fiera Capital Corporation

First Eagle Investment Management, LLC

First Hawaiian Bank Wealth Management Division

First Sentier Investors

Fisher Investments

Fort Washington Investment Advisors, Inc.

Franklin Templeton

Fred Alger Management, LLC

GAM (USA) Inc.

GAMCO Investors, Inc.

GlobeFlex Capital, L.P.

GoldenTree Asset Management, LP

Goldman Sachs

Golub Capital

Guggenheim Investments

GW&K Investment Management

Harbor Capital Advisors

Hardman Johnston Global Advisors LLC

Heitman LLC

Hotchkis & Wiley Capital Management, LLC

Impax Asset Management LLC

Manager Name

Income Research + Management

Insight Investment

Intech Investment Management LLC

Intercontinental Real Estate Corporation

Invesco

J.P. Morgan

Janus

Jennison Associates LLC

Jobs Peak Advisors

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

Parametric Portfolio Associates LLC

Partners Group (USA) Inc.



Manager Name

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

Robeco Institutional Asset Management, US Inc.

S&P Dow Jones Indices

Sands Capital Management

Schroder Investment Management North America Inc.

Segall Bryant & Hamill

SLC Management

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

State Street Global Advisors

Manager Name

Strategic Global Advisors, LLC

TD Global Investment Solutions - TD Epoch

T. Rowe Price Associates, Inc.

The TCW Group, Inc.

Thompson, Siegel & Walmsley LLC

Thrivent Investment Management, Inc.

Tri-Star Trust Bank

UBS Asset Management

ULLICO Investment Advisors, Inc.

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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