

Investment Committee Meeting Agenda

Tuesday, August 27, 2024 11:00 A.M.

(or immediately following the Defined Contribution Committee)

- I. <u>Market Update and Performance Review-Callan</u> (Information Only)
- II. Capital Markets Assumptions and Asset Allocation Update
 (Information Only)
- III. <u>Annual PERS Investment Policy Review</u>
 (Intended Outcome Accept Staff Recommendations)
- IV. <u>Domestic Small Cap Managers</u>

(Information Only)

- a. DFA
- b. Riverbridge
- c. Wellington
- V. <u>Miscellaneous Updates</u>

(Information Only)

Callan

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August 27, 2024

Public Employees' Retirement System of Mississippi

Executive Summary

June 2024 Performance Review

John Jackson, CFA Senior Vice President

Alexander FordSenior Vice President

Important Disclosures regarding the use of this document are included at the end of this document. These disclosures are an integral part of this document and should be considered by the user.

Mississippi PERS Executive Summary – 2Q 2024

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- Disclosures



Callan

2Q 2024 Performance Review

PERS of Mississippi Performance Highlights

As of June 30, 2024

- ► PERS Total Fund assets stood at \$33.7 billion at the end of June, an increase of approximately \$118.5 million from the end of 1Q.
 - A positive investment return increased the market value of assets by approximately \$384.7 million, while net outflows reduced assets by \$266.3 million.
- ▶ Overall, the asset allocation was in line with its current target allocation at the end of June.
 - Overweight allocations to Private Equity (+1.7%), Fixed Income (+0.8%), and Global Equity (+0.2%) were offset by underweight allocations to Domestic Equity (-1.5%) and Real Estate (-1.3%).
- ► The PERS Total Fund returned 1.2% (gross of fees) during the second quarter versus the 1.5% return for the Policy Benchmark.
- ► For Fiscal Year 2024, the PERS Total Fund returned 10.8% (gross of fees) versus the 11.3% return for the Policy Benchmark.
- Investments in the underlying asset classes performed as follows:
 - The domestic equity composite returned 2.0% during 2Q (-1.2% vs. benchmark) and 21.6% for the fiscal year (-1.5% vs. benchmark).
 - The international equity composite returned 0.8% during 2Q (-0.1% vs. benchmark) and 12.6% for the fiscal year (+1.0% vs. benchmark).
 - The global equity composite returned 2.3% during 2Q (-0.1% vs. benchmark) and 20.7% for the fiscal year (+2.3% vs. benchmark).
 - The fixed income composite returned 0.4% during 2Q (+0.3% vs. benchmark) and 4.9% for the fiscal year (+2.3% vs. benchmark).
 - The real estate composite returned -0.4% during 2Q (-0.2% vs. benchmark) and -8.4% for the fiscal year (-2.9% vs. benchmark).
 - The private equity composite returned 1.1% during 2Q and 4.6% for the fiscal year.
 - The private credit composite returned 1.8% during 2Q.
- ► The PERS Total Fund has outperformed its benchmark over the trailing three-, five-, seven-, ten-, and fifteen-year periods. Over the trailing time periods, the PERS Total Fund returned 3.0%, 8.4%, 8.3%, 7.7%, and 9.8%, respectively.

Note: The numbers in parenthesis above indicate benchmark relative performance for each asset class over the specified time period. Net of fees returns are included in the appendix.

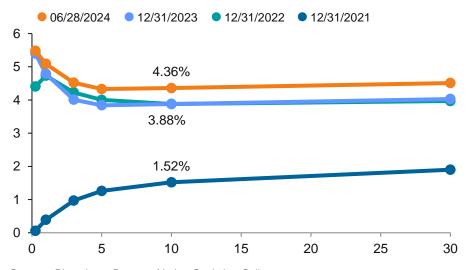


U.S. Economy—Summary

For periods ended 6/30/24

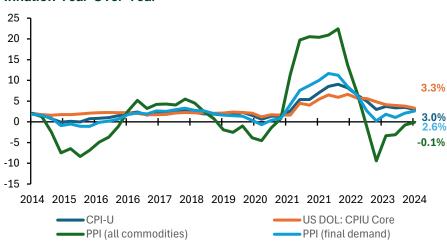
- U.S. real GDP rose 2.8% in 2Q according to the "advance" estimate. The estimate exceeded expectations and was an increase from the 1Q reading of 1.4%.
- Headline CPI increased 3.0% year-over-year in June, while core CPI (ex food and energy) increased 3.3% over the same period.
- The Fed held short-term rates steady at the June FOMC meeting, with a current target range of 5.25-5.50%.
- The unemployment rate was 4.1% in June, a slight increase from the May reading of 4.0%.

U.S. Treasury Yield Curves

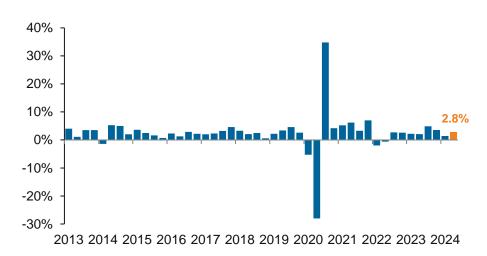


Sources: Bloomberg, Bureau of Labor Statistics, Callan

Inflation Year-Over-Year



Quarterly Real GDP Growth



Contributors to Recent Inflation: Primary Categories

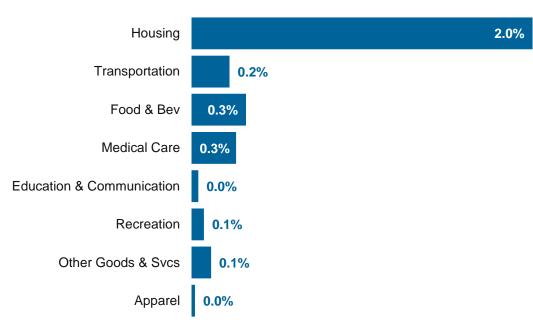
Housing is a broad category that includes Shelter, Fuels and Utilities, and Household Furnishings and Operations as subcomponents.

➤ Shelter makes up 34.7% of the overall index and accounted for over 60% of June's increase in year-over-year headline CPI.

Energy is not shown in this view of CPI because it is a sub-component of other categories.

► Energy makes up 7.0% of the index and is split evenly between Housing (fuel for powering homes) and Transportation (motor fuel).

Contribution to June 2024 Year-Over-Year Inflation



	Primary					Ye	ear-over-Y	ear Chan	ge				
Primary Category	Category - Weight	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	Мау	Jun
All Items	100.0%	3.2%	3.7%	3.7%	3.2%	3.1%	3.4%	3.1%	3.2%	3.5%	3.4%	3.3%	3.0%
Housing	44.5%	6.2%	5.7%	5.6%	5.2%	5.2%	4.8%	4.6%	4.5%	4.7%	4.5%	4.6%	4.4%
Transportation	17.2%	-3.0%	1.4%	2.4%	0.8%	0.9%	2.9%	1.6%	2.7%	4.0%	3.5%	2.9%	1.3%
Food & Bev	14.2%	4.8%	4.2%	3.7%	3.3%	2.9%	2.7%	2.6%	2.2%	2.2%	2.2%	2.1%	2.2%
Medical Care	7.8%	-0.5%	-1.0%	-1.4%	-0.8%	0.2%	0.5%	1.1%	1.4%	2.2%	2.6%	3.1%	3.3%
Education & Communication	5.7%	1.2%	1.0%	1.0%	0.9%	-0.1%	-0.1%	0.0%	0.4%	0.2%	0.4%	0.5%	0.7%
Recreation	5.4%	4.1%	3.5%	3.9%	3.2%	2.5%	2.7%	2.8%	2.1%	1.8%	1.5%	1.3%	1.3%
Other Goods & Svcs	2.7%	6.1%	5.8%	6.0%	6.2%	5.6%	5.5%	5.7%	4.7%	4.7%	4.3%	3.8%	4.2%
Apparel	2.5%	3.2%	3.1%	2.3%	2.6%	1.1%	1.0%	0.1%	0.0%	0.4%	1.3%	0.8%	0.8%

Source: U.S. Bureau of Labor Statistics

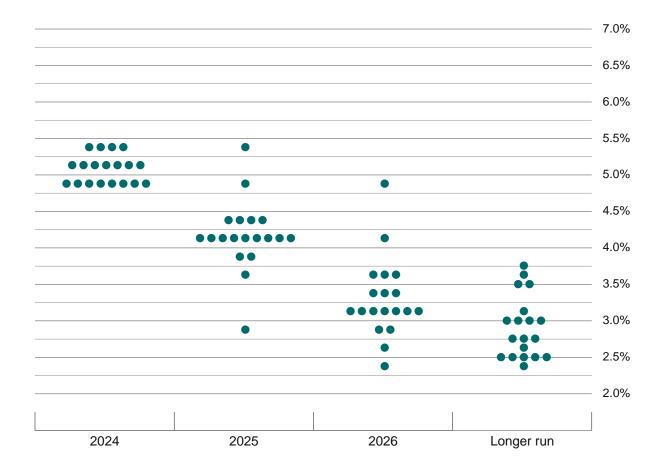


The Fed's 'Dot Plot'

June 12, 2024

Federal Open Market Committee (FOMC) participants' assessments of appropriate monetary policy

- Median year-end in 2024 = 5.1% (up from 4.6% projection at March meeting)
- "Longer run" up 20 basis points to 2.8%
- Dispersion of views widens in 2025 and 2026 but narrows over longer run.
- Market expects more cuts next year based on CME FedWatch as of July. Fed Funds expectations for end of 2024:
 - 48% expect 4.50% to 4.75%
 - 42% expect 4.75% to 5.00%
 - 7% expect 5.00% to 5.25%



Source: Federal Reserve. FOMC participants do not always submit projections for all time periods.

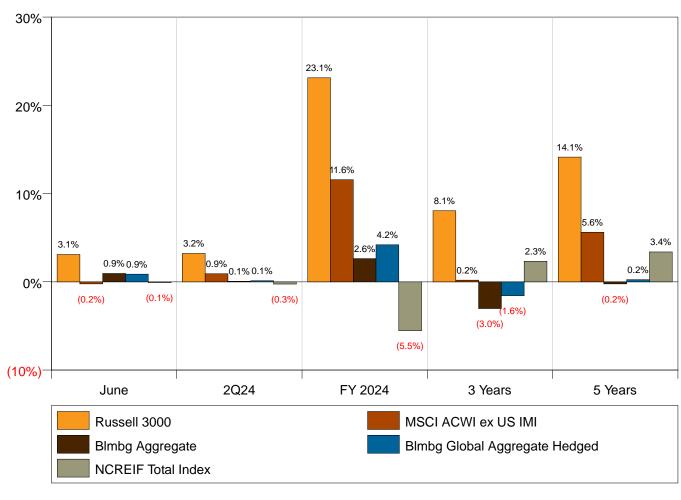


Asset Class Performance

- ► U.S. equities (Russell 3000 Index) returned 3.1% in June and 3.2% for the second quarter. U.S. equities advanced over 23% for the fiscal year.
- ➤ Equities outside of the U.S. finished the second quarter with muted returns (MSCI ACWI xUS IMI +0.9%). Emerging markets outperformed developed markets in June and the during the second quarter. For the fiscal year, global ex-US equities have advanced 11.6%.
- ▶ Bond returns were positive in June given falling yields. The Bloomberg U.S. Aggregate Bond Index advanced 2.6% for the fiscal year and trailed the Hedged Global Aggregate Index (+4.2%).
- ➤ The NCREIF Total Index declined 0.1% in June, bringing the fiscal year return to -5.5%.



Returns for Periods Ended June 30, 2024





Equity and Bond Markets Mixed in 2Q

Concentrated equity returns, while rate uncertainty has led to bond market volatility

S&P 500 climbed 4.3% in 2Q24

 Emerging markets and non-U.S. small cap equities also posted gains but U.S. small cap and developed non-U.S. stocks fell.

Core fixed income eked out a gain

- The Bloomberg Aggregate rose 0.1% despite rates rising over the quarter due to coupon income offsetting price losses.
- Long duration fixed income and non-U.S. bonds fell.
- Interest rates have been volatile as the markets assess when and how swiftly the Fed will begin easing.
- CPI-U came in at 3.0% (year-over-year) in 2Q, falling sharply from last quarter's 3.5%, and improving the prospects for a rate cut later this year.

Economy reignites in second quarter

After a weak 1.4% rise in 1Q24, the initial estimate for 2Q24 GDP came in at a brisk 2.8%, with consumer spending and business investment fueling the climb.

Returns for Periods ended 6/30/24

		Last				
	Quarter	Year	3 Years	5 Years	10 Years	25 Years
U.S. Equity						
Russell 3000	3.22	23.13	8.05	14.14	12.15	7.82
S&P 500	4.28	24.56	10.01	15.05	12.86	7.67
Russell 2000	-3.28	10.06	-2.58	6.94	7.00	7.60
Global ex-U.S. Equity						
MSCI World ex USA	-0.60	11.22	2.82	6.55	4.27	4.63
MSCI Emerging Markets	5.00	12.55	-5.07	3.10	2.79	
MSCI ACWI ex USA Small Cap	0.66	11.26	-1.45	6.13	4.44	6.74
Fixed Income						
Bloomberg Aggregate	0.07	2.63	-3.02	-0.23	1.35	3.88
90-day T-Bill	1.32	5.40	3.03	2.16	1.51	1.91
Bloomberg Long Gov/Credit	-1.73	-1.58	-8.51	-2.22	1.65	5.29
Bloomberg Global Agg ex-US	-2.11	-0.66	-7.48	-3.56	-1.86	2.46
Real Estate						
NCREIF Property	-0.26	-5.53	2.33	3.39	6.07	7.75
FTSE Nareit Equity	0.06	7.79	0.30	3.90	5.90	9.06
NCREIF NFI-ODCE Eq Wt Net	-0.82	-10.32	1.14	2.58	5.80	6.23
Alternatives						
Cambridge Private Equity*	1.17	5.16	7.27	14.58	13.47	13.37
Cambridge Senior Debt*	0.73	7.73	5.58	6.87	6.73	4.25
HFRI Fund Weighted	0.67	9.95	2.92	6.70	4.79	6.00
Bloomberg Commodity	2.89	5.00	5.65	7.25	-1.29	2.69
Inflation - CPI-U	0.59	2.97	4.96	4.17	2.80	2.58

^{*}Cambridge Private Equity and Cambridge Senior Debt data as of 3/31/24.

Returns greater than one year are annualized. Sources: Bloomberg, Callan, Cambridge, FTSE Russell, HFRI, MSCI, NCREIF, S&P Dow Jones Indices



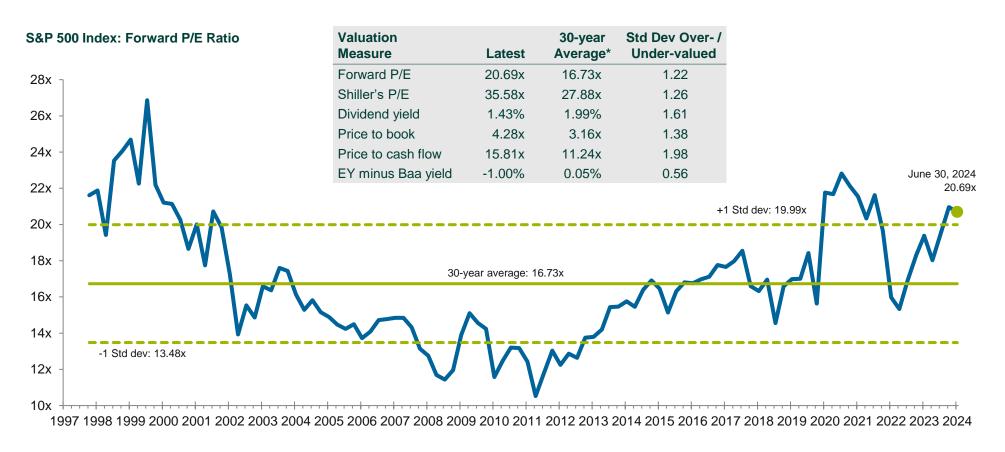
Callan Periodic Table of Investment Returns

			Calendar Y	ear Returns				Fiscal Year
2016	2017	2018	2019	2020	2021	2022	2023	FY 2024
Small Cap Equity	EM Equity	NCREIF ODCE Eq Wt Net	Large Cap Equity	Small Cap Equity	Large Cap Equity	Dev Non-U.S. Equity	Large Cap Equity	Large Cap Equity
21.31%	37.28%	7.30%	31.49%	19.96%	28.71%	17.34%	26.29%	24.56%
High Yield	Dev Non-U.S. Equity	Interm. Fixed Income	Small Cap Equity	Large Cap Equity	Real Estate	EM Equity	Dev Non-U.S. Equity	EM Equity
17.13%	25.03%	0.88%	25.52%	18.40%	26.09%	9.70%	18.24%	12.55%
Large Cap Equity	Large Cap Equity	U.S. Fixed Income	Dev Non-U.S. Equity	EM Equity	NCREIF ODCE Eq Wt Net	Large Cap Equity	Small Cap Equity	Dev Non-U.S. Equit
11.96%	21.83%	0.01%	22.01%	18.31%	21.88%	7.56%	16.93%	11.54%
EM Equity	Small Cap Equity	High Yield	Real Estate	Dev Non-U.S. Equity	Small Cap Equity	Real Estate	High Yield	High Yield
11.19%	14.65%	-2.08%	21.91%	7.82%	14.82%	6.85%	13.44%	10.44%
NCREIF ODCE Eq Wt Net	Real Estate	Large Cap Equity	EM Equity	U.S. Fixed Income	Dev Non-U.S. Equity	Small Cap Equity	EM Equity	Small Cap Equity
8.36%	10.36%	-4.38%	18.44%	7.51%	11.26%	6.23%	9.83%	10.06%
Real Estate	High Yield	Real Estate	High Yield	High Yield	High Yield	High Yield	Real Estate	Real Estate
4.06%	7.50%	-5.63%	14.32%	7.11%	5.28%	4.17%	9.67%	4.52%
U.S. Fixed Income	NCREIF ODCE Eq Wt Net	Small Cap Equity	U.S. Fixed Income	Interm. Fixed Income	Interm. Fixed Income	U.S. Fixed Income	U.S. Fixed Income	Interm. Fixed Income
2.65%	6.92%	-11.01%	8.72%	6.43%	-1.44%	1.87%	5.53%	4.19%
Interm. Fixed Income	U.S. Fixed Income	Dev Non-U.S. Equity	Interm. Fixed Income	NCREIF ODCE Eq Wt Net	U.S. Fixed Income	Interm. Fixed Income	Interm. Fixed Income	U.S. Fixed Income
2.08%	3.54%	-13.79%	6.80%	0.75%	-1.54%	1.54%	5.24%	2.63%
Dev Non-U.S. Equity	Interm. Fixed Income	EM Equity	NCREIF ODCE Eq Wt Net	Real Estate	EM Equity	NCREIF ODCE Eq Wt Net	NCREIF ODCE Eq Wt Net	NCREIF ODCE Eq Wt Net
1.00%	2.14%	-14.57%	5.18%	-9.04%	-2.54%	-5.08%	-13.33%	-10.32%
	500 Russell 20		ŭ	ŭ	0 00	ŭ	erg Corp High Yiel	d



U.S. Equity Market: Key Metrics

S&P 500 valuation measures



Forward P/E (20.69) is more than one standard deviation above its long-term average (16.73).

 $Source: FactSet, FRB, Refinitiv\ Datastream, Robert\ Shiller, S\&P\ Dow\ Jones\ Indices, Thomson\ Reuters,\ J.P.\ Morgan\ Asset\ Management.$

Price-to-earnings is price divided by consensus analyst estimates of earnings per share for the next 12 months as provided by IBES since December 1998 and by FactSet since January 2022. Current next 12-months consensus earnings estimates are \$245. Average P/E and standard deviations are calculated using 30 years of history. Shiller's P/E uses trailing 10-years of inflation-adjusted earnings as reported by companies. Dividend yield is calculated as the next 12-months consensus dividend divided by most recent price. Price-to-book ratio is the price divided by book value per share. Price-to-cash flow is price divided by NTM cash flow. EY minus Baa yield is the forward earnings yield (consensus analyst estimates of EPS over the next 12 months divided by price) minus the Moody's Baa seasoned corporate bond yield. Std. dev. over-/under-valued is calculated using the average and standard deviation over 30 years for each measure.

*Averages and standard deviations for dividend yield and P/CF are since November 1995 due to data availability. Guide to the Markets - U.S. Data are as of March 31, 2024.

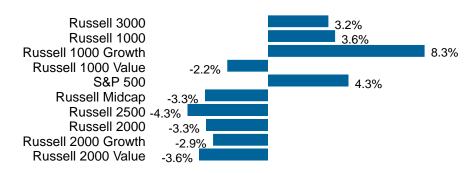


U.S. Equity Performance: 2Q24

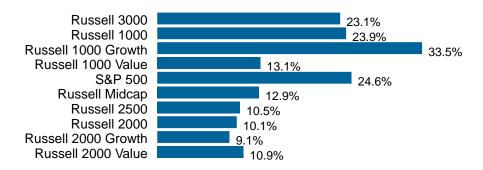
Broad indices exhibited a strong start to the first half of 2024, but performance was uneven

- The U.S. equity markets had an exceptional start with the S&P 500 hitting 31 record highs over the first six months of 2024 and gaining 15.3%.
- Index returns continue to be driven by a handful of stocks, especially the "Magnificent Seven," which comprised 33% of the S&P 500 as of quarter-end. As a group, the cohort gained 33% in the first six months of the year, far exceeding the S&P 493 gain of only 5%.
- 2Q returns for the broad index were modest at 4.3%, but sector performance was quite mixed, ranging from -4.5% (Materials) to +13.8% (Technology), with 6 of the 11 S&P 500 sectors posting negative returns during the period.
- During 2Q, value (R1000V: -2.2%) continued to underperform growth (R1000G: +8.3%) and small cap (R2000: -3.3%) continued to underperform large cap (R1000: +3.6%).
- In the first half of 2024, the 12.5% performance difference in small cap (Russell 2000) versus large cap (Russell 1000) was the widest since 1973.

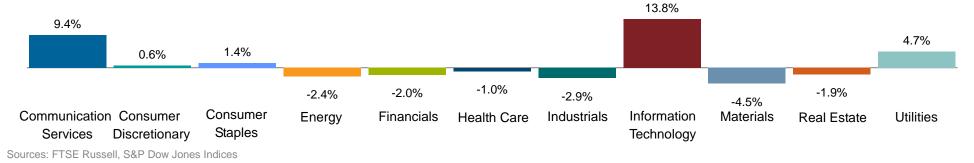
U.S. Equity: Quarter Ended 6/30/24



U.S. Equity: One Year Ended 6/30/24



Industry Sector Quarterly Performance (S&P 500) as of 6/30/24



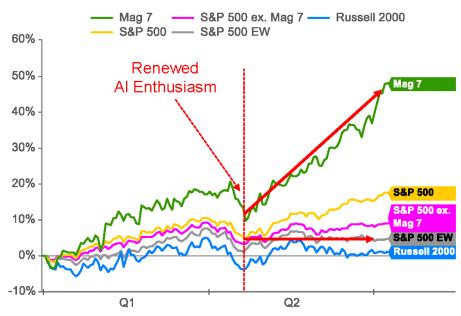


U.S. Equity Key Theme

The 'Magnificent Seven' continues to drive divergence in performance across cap and style

- The "Magnificent Seven" stocks pushed large cap indices to record highs while the rest of the market traded sideways.
 Magnificent Seven stocks accounted for 116% of S&P 500 total return in 2Q24.
- YTD 2024, the bucket of Magnificent Seven stocks handily outperformed the equal weight S&P 500 Index and small cap Russell 2000 Index returns.
- Magnificent Seven returns over the trailing 3.5 years (dating back to 2021) are driving a large contribution to total index returns relative to the remaining ~493 stocks in the S&P 500.

Index Total Returns: YTD 2024



Magnificent Seven Return Contribution (S&P 500): 2021-2Q24

Returns	2021	2022	2023	YTD 2024
Magnificent Seven	40%	-40%	76%	33%
—Share of returns	33%	56%	63%	61%
S&P 500 ex-Mag Seven	17%	-8%	8%	5%
—Share of returns	67%	44%	37%	39%

Magnificent Seven Return Contribution to S&P 500: 2Q24

Stock	2Q Total Return	S&P 500 Contribution
NVIDIA	36.7%	44%
Apple	23.0%	31%
Alphabet	20.8%	19%
Microsoft	6.4%	10%
Amazon.com	7.1%	6%
Tesla	12.6%	3%
Meta Platforms	3.9%	2%
S&P 500	4.3%	

Sources: FactSet, J.P. Morgan, Westfield Capital



U.S. Equity Key Theme

Small cap vs. large cap performance history

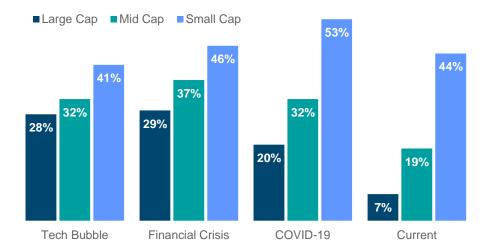
U.S. small cap continued to underperform large cap

Since 2010, small cap has been one of the big three underperforming portfolio strategies alongside value vs. growth and non-U.S. stocks vs. U.S.

Why has small cap underperformed broadly?

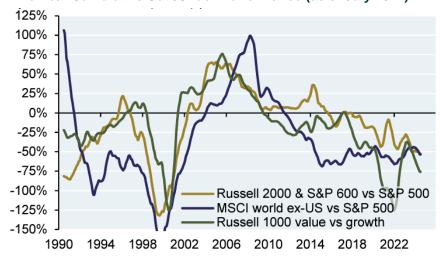
- Lower quality: Small cap (R2000) continues to have a higher proportion of unprofitable companies and lower earnings growth.
- Tech underperformance: Large cap tech stocks have tripled the performance of small cap tech since YE 2010, with most of that excess performance occurring post-2019.
- Non-Tech underperformance: No small cap sector meaningfully outperformed large cap since 2010.

Percent of Unprofitable Companies (as of July 2024)

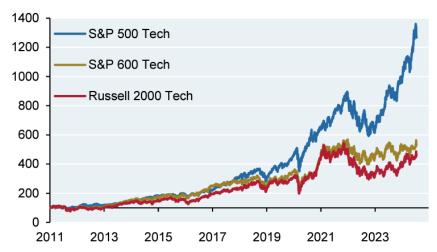


Sources: Bloomberg, J.P. Morgan

Five Year Cumulative Out-/Under-Performance (as of July 2024)



Large Cap vs Small Cap Tech Sector Performance (as of July 2024)



Global/Global ex-U.S. Equity Performance: 2Q24

Reversal as China snaps back and Japan lags; India continues to outperform

Broad market

- The U.S. continued its lead over developed non-U.S. markets resulting in a positive ACWI return.
- Developed non-U.S. markets struggled with growing uncertainty on future economic growth, political instability, and divergent central bank policies.
- Small caps once again trailed large caps in a higher interest rate environment and amid exchange rate volatility.

Emerging markets

- Emerging markets rebounded, snapping a two-quarter losing streak relative to developed markets as both China and India produced strong returns.
- China's GDP growth exceeded expectations with a rebound in industrial production, manufacturing, and exports. Further, the Chinese government implemented several measures to support capital markets.

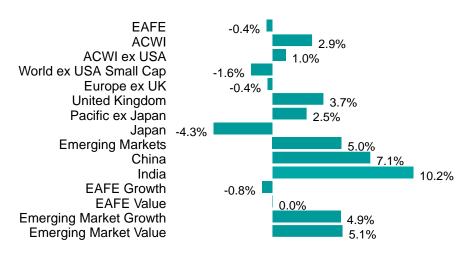
Growth vs. value

 Growth and value saw little difference, as much of the caution was driven around macro concerns about future growth and a growing risk of a recession.

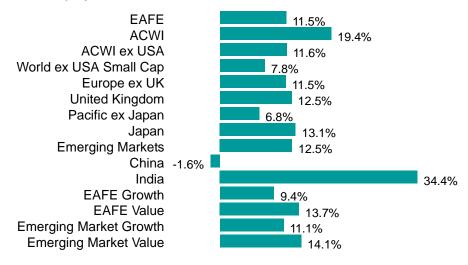
U.S. dollar strength

 The U.S. Dollar Index (DXY), was relatively flat in 2Q due to a balancing act of increased global uncertainty but a more likely 2024 U.S. central bank rate cut.

Global Equity Returns: Quarter Ended 6/30/24



Global Equity Returns: One Year Ended 6/30/24



Source: MSCI

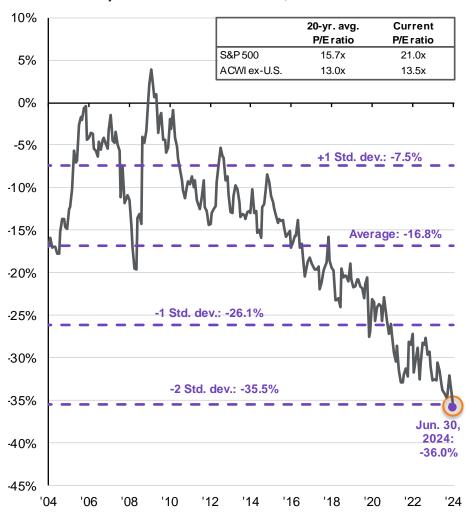


International Equity Valuations and Dividend Yields

Dividend yields of non-U.S. companies continue to rise compared to the U.S.

International: Price-to-earnings discount vs. U.S.

MSCI All Country World ex-U.S. vs. S&P 500, next 12 months



International: Difference in dividend yields vs. U.S.

MSCI All Country World ex-U.S. minus S&P 500, next 12 months



Source: FactSet, MSCI, Standard & Poor's, J.P. Morgan Asset Management. J.P. Morgan *Guide to the Markets* – U.S. Data are as of June 30, 2024.



U.S. Fixed Income Performance: 2Q24

Muted performance across the board

Macro environment

- Fed on hold awaiting more evidence that inflation is under control as economy remained resilient.
- 10-year U.S. Treasury yield up modestly from 4.21% to 4.36%.
- Yield curve remained inverted.

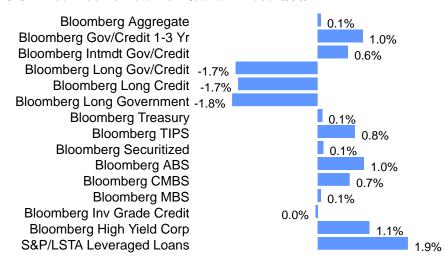
Performance and drivers

- The Bloomberg U.S. Aggregate Index rose 0.1% amid higher rates.
- Corporates and most securitized sectors were roughly flat vs.
 U.S. Treasuries on a duration-adjusted basis.
- Lower quality outperformed, with high yield corporates and leveraged loans posting the best returns.
- Longer maturity underperformed short and intermediate strategies as curve steepened from 5 years out to 30.

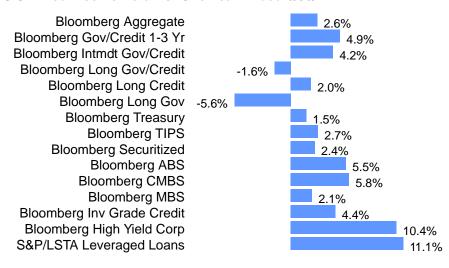
Valuations

- Corporate credit remains rich with spreads near historical tights.
- Default rates, including distressed exchanges, fell to just 1.8% for HY and 3.1% for bank loans.
- IG corporate new issuance slowed from record highs in 1Q but remained robust with \$349 billion in new debt, bringing YTD total to \$886 billion.
- HY new issuance in 2Q nearly matched 1Q with \$83 billion, bringing YTD total to \$172 billion.
- Both were met with strong investor demand.

U.S. Fixed Income Returns: Quarter Ended 6/30/24



U.S. Fixed Income Returns: One Year Ended 6/30/24



Sources: Bloomberg, Callan, S&P Dow Jones Indices



U.S. Private Real Estate Performance: 2Q24

Appreciation returns negative once again

Valuations reflect higher interest rates

- Income returns were positive across sectors and regions.
- All property sectors and regions experienced negative appreciation, except for Hotels.
- Valuations are reflective of higher interest rates, which have put upward pressure on capitalization rate and discount rate assumptions.
- Return dispersion by manager within the ODCE Index was due to the composition of underlying portfolios.

	Last Quarter	Last Year	Last 3 Years	Last 5 Years	Last 10 Years
NCREIF ODCE	-0.7%	-10.0%	1.0%	2.3%	5.5%
Income	0.8%	3.1%	2.8%	2.9%	3.2%
Appreciation	-1.5%	-12.8%	-1.8%	-0.7%	2.2%
NCREIF Property Index	-0.3%	-5.5%	2.3%	3.4%	6.1%
Income	1.2%	4.6%	4.2%	4.3%	4.5%
Appreciation	-1.4%	-9.8%	-1.8%	-0.8%	1.5%

Returns are geometrically linked

NCREIF Property Index Quarterly Returns by Region and Property Type



Source: NCREIF; ODCE return is net



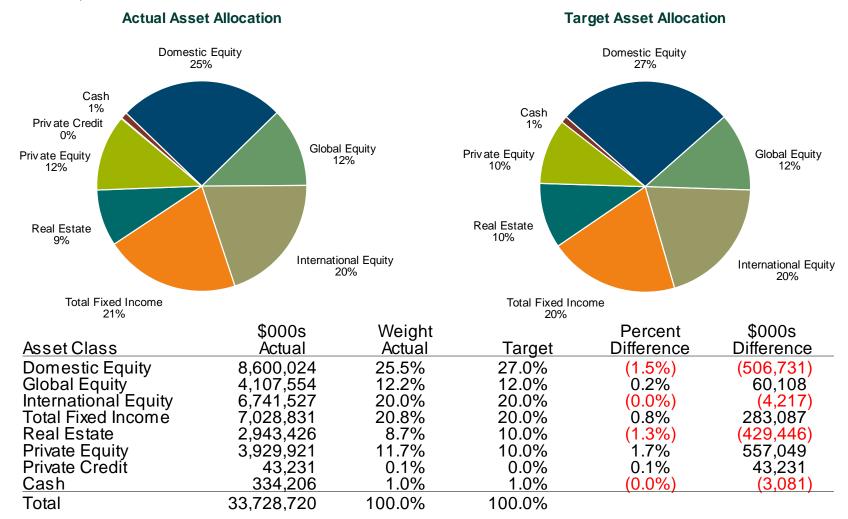
Callan

PERS Portfolio Review

2Q 2024

PERS Asset Allocation Versus Policy Target

As of June 30, 2024



- ▶ Overall, the PERS asset allocation was in line with its strategic target allocation.
 - Overweight allocations to Private Equity (+1.7%), Fixed Income (+0.8%), and Global Equity (+0.2%) was offset by underweight allocations to the System's other asset classes.

Note: The Target Asset Allocation represents the legacy policy target weights. A new long-term strategic asset allocation was approved in 2022; however, the legacy allocation target and Total Fund Benchmark will be maintained until the new complementary strategies have been implemented and funded.



PERS Asset Class Cash Flows

	June 30, 2	.024			March 31,	2024
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight
Domestic Equity	\$8,600,023,563	25.50%	\$(238,810,931)	\$169,678,403	\$8,669,156,092	25.79%
Global Equity	\$4,107,553,825	12.18%	\$(193,992,748)	\$93,104,199	\$4,208,442,374	12.52%
International Equity	\$6,741,527,167	19.99%	\$(175,353,798)	\$58,908,702	\$6,857,972,263	20.40%
Total Fixed Income	\$7,028,831,035	20.84%	\$396,774,820	\$24,990,559	\$6,607,065,657	19.66%
Real Estate	\$2,943,426,286	8.73%	\$33,158,024	\$(12,127,687)	\$2,922,395,950	8.69%
Private Equity	\$3,929,921,211	11.65%	\$(42,568,481)	\$43,909,643	\$3,928,580,049	11.69%
Private Credit	\$43,230,637	0.13%	\$9,796,320	\$718,702	\$32,715,615	0.10%
Cash	\$334,205,958	0.99%	\$(54,802,748)	\$5,085,090	\$383,923,616	1.14%
Total Fund	\$33,728,719,682	100.00%	\$(266,273,670)	\$384,741,735	\$33,610,251,617	100.00%

[►] PERS Total Fund assets stood at \$33.7 billion at the end of June, a decrease of approximately \$118.5 million from the end of 1Q.

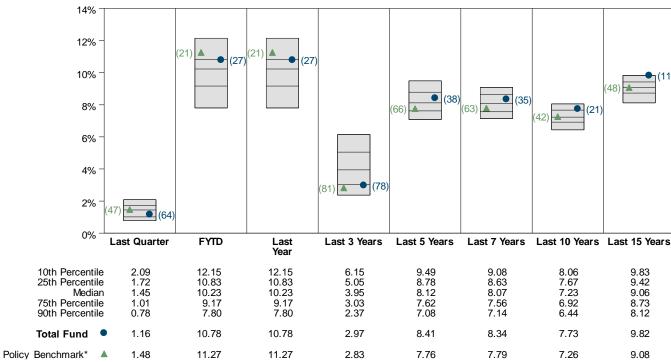
⁻ A positive investment return increased the market value of assets by approximately \$384.7 million.

⁻ Net outflows reduced assets by approximately \$266.3.

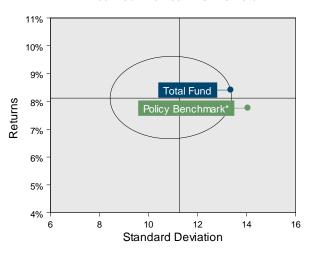
PERS Total Fund Summary Dashboard

As of June 30, 2024

Performance vs Callan Public Fd V Lg DB (Gross)

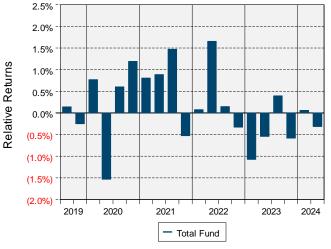


Callan Public Fd V Lg DB (Gross) Annualized Five Year Risk vs Return



- ▶ During the second quarter, the PERS Total Fund returned 1.2% (gross of fees) compared with 1.5% for its Policy Benchmark and ranked in the 64th percentile relative to peers.*
- ► For Fiscal Year 2024, the PERS Total Fund returned 10.8% (gross of fees) versus 11.3% for the Policy Benchmark and ranked in the 27th percentile.
- ▶ The PERS Total Fund outperformed its Policy Benchmark over the trailing three-, five-, seven-, ten-, and fifteen-year periods and ranked above the peer median over periods beyond three years.

Relative Return vs Policy Benchmark*



*Percentile rankings are based on PERS' gross of fees performance relative to a universe of gross of fees peer returns (public defined benefit plans with assets greater than \$10 billion).



PERS Asst Class Performance – Gross of Fees

As of June 30, 2024	Market Value	Ending	Last		Fiscal		Last 3		Last 5	
	\$(000)	Weight	Quarter		Year		Years		Years	
Domestic Equity	\$8,600,024	25.50%	2.01%	60	21.63%	40	7.59%	48	13.83%	29
Domestic Equity Benchmark	-	-	3.22%	12	23.13%	15	8.05%	28	14.14%	21
Pub Pln- Dom Equity	-	-	2.16%		21.15%		7.52%		13.31%	
Global Equity	\$4,107,554	12.18%	2.32%	43	20.73%	40	4.62%	60	10.40%	59
Global Equity Benchmark	-	-	2.38%	43	18.40%	49	4.70%	60	10.36%	59
Callan Global Equity	-	-	1.91%		18.18%		5.22%		11.11%	
International Equity	\$6,741,527	19.99%	0.84%	79	12.57%	52	0.15%	63	6.55%	54
International Equity Benchmark	-	-	0.92%	74	11.57%	73	0.19%	61	5.62%	73
Pub Pln- Intl Equity	-	-	1.62%		12.62%		0.93%		6.63%	
Total Fixed Income	\$7,028,831	20.84%	0.39%	30	4.93%	21	(2.05%)	51	0.77%	55
Total Fixed Income Benchmark	-	-	0.07%	82	2.63%	87	(3.02%)	89	(0.23%)	97
Pub Pln- Dom Fixed	-	-	0.25%		4.02%		(2.04%)		0.86%	
Real Estate	\$2,943,426	8.73%	(0.41%)	42	(8.43%)	60	0.44%	67	3.10%	53
Real Estate Benchmark	-	-	(0.26%)	32	(5.53%)	42	2.33%	49	3.39%	47
Callan Tot Real Est DB	-	-	(0.62%)		(6.40%)		2.01%		3.20%	
Private Equity	\$3,929,921	11.65%	1.12%	66	4.64%	78	8.27%	36	15.82%	4
Private Equity Benchmark	-	-	1.17%	65	5.05%	77	1.45%	84	10.91%	29
Callan Alterntive Inv DB	-	-	1.94%		8.62%		6.45%		8.23%	
Private Credit	\$43,231	0.13%	1.79%		_		-		-	
Private Credit Benchmark	-	-	1.97%		-		-		-	
Cash Composite	\$334,206	0.99%	1.24%	78	5.70%	38	3.34%	15	2.27%	61
Cash Benchmark	-	-	1.35%	39	5.56%	68	3.11%	51	2.15%	81
Callan Cash Database	-	-	1.35%		5.65%		3.13%		2.31%	
Total Fund	\$33,728,720	100.00%	1.16%	64	10.78%	27	2.97%	78	8.41%	38
Total Fund Benchmark	-	-	1.48%	47	11.27%	21	2.83%	81	7.76%	66
Callan Public Fd V Lg DB	-	-	1.45%		10.23%		3.95%		8.12%	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are gross of fees.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index. The Private Equity Benchmark is currently represented by the Cambridge Private Equity, The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index / 50% Bloomberg U.S. High Yield Index, Plus 1%



PERS Asst Class Performance – Gross of Fees (Continued)

As of June 30, 2024	Last		Last		Last	
	7		10		15	
	Years		Years		Years	
Domestic Equity	13.19%	34	11.66%	43	14.41%	27
Domestic Equity Benchmark	13.48%	19	12.15%	23	14.49%	23
Pub Pln- Dom Équity	12.79%		11.54%		14.07%	
Global Equity	10.13%	60	9.13%	58	11.01%	72
Global Equity Benchmark	9.62%	67	8.18%	73	-	
Callan Global Equity	10.75%		9.37%		11.65%	
International Equity	5.75%	67	4.66%	70	7.15%	69
International Equity Benchmark	5.13%	78	3.92%	89	6.29%	97
Pub Pln- Intl Equity	6.15%		4.94%		7.42%	
Total Fixed Income	1.85%	36	2.38%	27	3.87%	30
Total Fixed Income Benchmark	0.86%	97	1.35%	94	2.72%	89
Pub Pln- Dom Fixed	1.70%		1.97%		3.37%	
Real Estate	4.49%	44	6.17%	41	7.96%	29
Real Estate Benchmark	4.37%	45	6.07%	44	7.64%	39
Callan Tot Real Est DB	4.19%		5.98%		7.22%	
Private Equity	15.98%	4	15.73%	1	12.56%	11
Private Equity Benchmark	12.29%	5	12.44%	8	16.13%	7
Callan Alterntive Inv DB	6.08%		4.26%		5.87%	
Cash Composite	2.12%	77	1.60%	78	1.10%	88
Cash Benchmark	2.04%	87	1.48%	91	-	
Callan Cash Database	2.25%		1.77%		1.31%	
Total Fund	8.34%	35	7.73%	21	9.82%	11
Total Fund Benchmark	7.79%	63	7.26%	42	9.08%	48
Callan Public Fd V Lg DB	8.07%		7.23%		9.06%	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are gross of fees.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index. The Private Equity Benchmark is currently represented by the Cambridge Private Equity.

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /





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Appendix: Net of Fee Performance

PERS Asst Class Performance – Net of Fees

As of June 30, 2024	Market	Franks s	1 1		Essal		Last		Last	
	Value \$(000)	Ending Weight	Last Quarter		Fiscal Year		3 Years		5 Years	
Domestic Equity	\$8,600,024	25.50%	1.96%	62	21.40%	45	7.40%	52	13.61%	39
Domestic Equity Benchmark	-	-	3.22%	12	23.13%	15	8.05%	28	14.14%	21
Pub Pln- Dom Equity	-	-	2.16%		21.15%		7.52%		13.31%	
Global Equity	\$4,107,554	12.18%	2.23%	45	20.27%	41	4.24%	65	10.00%	65
Global Equity Benchmark	-	-	2.38%	43	18.40%	49	4.70%	60	10.36%	59
Callan Global Equity	-	-	1.91%		18.18%		5.22%		11.11%	
International Equity	\$6,741,527	19.99%	0.77%	81	12.22%	57	(0.17%)	69	6.23%	63
International Equity Benchmark	-	-	0.92%	74	11.57%	73	0.19%	61	5.62%	73
Pub Pln- Intl Equity	-	-	1.62%		12.62%		0.93%		6.63%	
Total Fixed Income	\$7,028,831	20.84%	0.34%	36	4.72%	24	(2.24%)	58	0.57%	66
Total Fixed Income Benchmark	-	-	0.07%	82	2.63%	87	(3.02%)	89	(0.23%)	97
Pub Pln- Dom Fixed	-	-	0.25%		4.02%		(2.04%)		0.86%	
Real Estate	\$2,943,426	8.73%	(0.60%)	48	(9.18%)	69	(0.34%)	76	2.27%	68
Real Estate Benchmark	-	-	(0.26%)	32	(5.53%)	42	2.33%	49	3.39%	47
Callan Tot Real Est DB	-	-	(0.62%)		(6.40%)		2.01%		3.20%	
Private Equity	\$3,929,921	11.65%	1.03%	68	4.26%	79	7.87%	37	15.32%	4
Private Equity Benchmark	-	-	1.17%	65	5.05%	77	1.45%	84	10.91%	29
Callan Alterntive Inv DB	-	-	1.94%		8.62%		6.45%		8.23%	
Private Credit	\$43,231	0.13%	1.54%		-		-		-	
Private Credit Benchmark	-	-	1.97%		-		-		-	
Cash Composite	\$334,206	0.99%	1.24%	78	5.70%	38	3.34%	15	2.27%	61
Cash Benchmark	-	-	1.35%	39	5.56%	68	3.11%	51	2.15%	81
Callan Cash Database	-	-	1.35%		5.65%		3.13%		2.31%	
Total Fund	\$33,728,720	100.00%	1.08%	71	10.43%	44	2.64%	84	8.06%	58
Total Fund Benchmark	-	-	1.48%	47	11.27%	21	2.83%	81	7.76%	66
Callan Public Fd V Lg DB	-	-	1.45%		10.23%		3.95%		8.12%	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are **net of fees**.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index. The Private Equity Benchmark is currently represented by the Cambridge Private Equity. The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%



PERS Asst Class Performance – Net of Fees (Continued)

As of June 30, 2024	Last		Last		Last	
	7		10		15	
	Years		Years		Years	
Domestic Equity	12.95%	42	11.40%	59	14.14%	46
Domestic Equity Benchmark	13.48%	19	12.15%	23	14.49%	23
Pub Pln- Dom Equity	12.79%		11.54%		14.07%	
Global Equity	9.71%	67	8.68%	64	10.54%	79
Global Equity Benchmark	9.62%	67	8.18%	73	10.21%	84
Callan Global Equity	10.75%		9.37%		11.65%	
International Equity	5.42%	71	4.33%	82	6.82%	86
International Equity Benchmark	5.13%	78	3.92%	89	6.29%	97
Pub Pln- Intl Equity	6.15%		4.94%		7.42%	
Total Fixed Income	1.66%	52	2.18%	38	3.69%	32
Total Fixed Income Benchmark	0.86%	97	1.35%	94	2.72%	89
Pub Pln- Dom Fixed	1.70%		1.97%		3.37%	
Real Estate	3.64%	67	5.35%	66	7.36%	42
Real Estate Benchmark	4.37%	45	6.07%	44	7.64%	39
Callan Tot Real Est DB	4.19%		5.98%		7.22%	
Private Equity	15.41%	4	15.07%	1	12.14%	11
Private Equity Benchmark	12.29%	5	12.44%	8	16.13%	7
Callan Alterntive Inv DB	6.08%		4.26%		5.87%	
Cash Composite	2.12%	77	1.60%	78	1.10%	88
Cash Benchmark	2.04%	87	1.48%	91	1.02%	93
Callan Cash Database	2.25%		1.77%		1.31%	
Total Fund	7.97%	55	7.37%	39	9.49%	20
Total Fund Benchmark	7.79%	63	7.26%	42	9.08%	48
Callan Public Fd V Lg DB	8.07%		7.23%		9.06%	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

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The table above shows periodic rates of return. The returns are net of fees.

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The Private Equity Benchmark is currently represented by the Cambridge Private Equity.

The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index /

50% Bloomberg U.S. High Yield Index, Plus 1%



Periodic Rates of Return - Net of Fees

	Market						Last		Last	
	Value	Ending	Last		Fiscal		3		5	
	\$(Dollars)	Weight	Quarter		Year		Years		Years	
Domestic Equity	\$8,600,023,563	25.50%	1.96%	62	21.40%	45	7.40%	52	13.61%	39
Russell 3000 Index	-	-	3.22%	12	23.13%	15	8.05%	28	14.14%	21
Pub Pln- Dom Equity	-	-	2.16%		21.15%		7.52%		13.31%	
Large Cap Equity	\$6,560,184,909	19.45%	4.35%	38	25.60%	49	9.89%	29	14.88%	43
Russell 1000 Index	<u>-</u>	-	3.57%	46	23.88%	56	8.74%	47	14.61%	46
Callan Large Cap	-	-	2.89%		25.34%		8.54%		14.19%	
Managed Large Cap Equity	\$859,062,783	2.55%	4.64%	38	32.42%	9	9.10%	64	14.51%	63
Callan Large Cap Core	-	-	4.08%		26.57%		10.31%		15.00%	
Eagle Capital	859,062,783	2.55%	4.64%	38	32.42%	9	9.10%	64	14.52%	63
S&P 500 Index	-	-	4.28%	47	24.56%	75	10.01%	55	15.05%	48
Callan Large Cap Core	-	-	4.08%		26.57%		10.31%		15.00%	
Northern Trust S&P 500	\$5,701,122,126	16.90%	4.28%	47	24.51%	75	10.02%	55	15.03%	49
S&P 500 Index	-	-	4.28%	47	24.56%	75	10.01%	55	15.05%	48
Callan Large Cap Core	-	-	4.08%		26.57%		10.31%		15.00%	



	Market Value \$(Dollars)	Ending Weight	Last Quarter		Fiscal Year		Last 3 Years		Last 5 Years	
Mid Cap Equity	\$1,057,339,502	3.13%	(4.76%)	78	10.82%	69	1.05%	76	9.72%	57
Russell MidCap Index	-	-	(3.35%)	38	12.88%	44	2.37%	73	9.46%	74
Callan Mid Cap Core	-	-	(3.84%)		11.45%		4.31%		10.56%	
Artisan Partners	503,323,350	1.49%	(5.57%)	87	10.78%	61	(5.21%)	83	8.56%	64
Russell MidCap Growth Idx	-	-	(3.21%)	28	15.05%	17	(0.08%)	29	9.93%	34
Callan Mid Cap Growth	-	-	(3.67%)		11.00%		(1.25%)		9.31%	
Victory Mid Cap Value	554,003,371	1.64%	(4.07%)	36	11.21%	64	-		_	
Russell MidCap Value Idx	, , , , , , , , , , , , , , , , , , ,	-	(3.40%)	23	11.98%	47	3.65%	83	8.49%	84
Callan Mid Cap Value	-	-	(4.45%)		11.87%		6.10%		10.30%	
Small Cap Equity	\$982,499,152	2.91%	(5.49%)	91	6.75%	86	(0.10%)	74	8.90%	57
Russell 2000 Index		-	(3.28%)	55	10.06%	60	(2.58%)	94	6.94%	88
Callan Small Cap Core	-	-	(3.15%)		11.48%		1.40%		8.99%	
Dimensional Fund Advisors	332,511,488	0.99%	(3.63%)	57	14.52%	36	7.28%	17	13.12%	8
Russell 2000 Value Index	, , , , , , , , , , , , , , , , , , ,	-	(3.64%)	57	10.90%	71	(0.53%)	90	7.07%	89
Callan Small Cap Value	-	-	(3.48%)		13.22%		3.65%		9.38%	
Wellington Small Cap	336,589,772	1.00%	(3.16%)	51	9.13%	65	1.65%	46	8.03%	75
Russell 2000 Index	, , -	-	(3.28%)	55	10.06%	60	(2.58%)	94	6.94%	88
Callan Small Cap Core	-	-	(3.15%)		11.48%		1.40%		8.99%	
Riverbridge Partners	313,397,893	0.93%	(9.68%)	99	(2.96%)	100	(9.43%)	94	4.99%	94
Russell 2000 Growth Index	 -	-	(2.92%)	62	9.14%	58	(4.86%)	66	6.17%	87
Callan Small Cap Growth	-	_	(2.33%)		10.21%		(2.49%)		8.46%	



	Market Value \$(Dollars)	Ending Weight	Last Quarter		Fiscal Year		Last 3 Years		Last 5 Years	
Global Equity	\$4,107,553,825	12.18%	2.23%	45	20.27%	41	4.24%	65	10.00%	65
Global Equity Benchmark (2)	-	-	2.38%	43	18.40%	49	4.70%	60	10.36%	59
Acadian Global Equity	1,047,110,285	3.10%	4.12%	13	28.46%	6	8.86%	11	13.95%	14
Epoch Investments	1,026,189,719	3.04%	2.49%	40	17.83%	53	3.51%	70	8.09%	91
Harding-Loev ner	1,033,224,504	3.06%	2.90%	30	17.70%	53	(0.52%)	90	9.82%	69
LSV Global Value	996,681,696	2.95%	(0.61%)	80	17.00%	56	-		-	
MSCI ACWI Index	-	-	2.87%	31	19.38%	45	5.43%	46	10.76%	55
Callan Global Equity	-	-	1.91%		18.18%		5.22%		11.11%	
International Equity	\$6,741,527,167	19.99%	0.77%	81	12.22%	57	(0.17%)	69	6.23%	63
International Equity Bnmk (3)	-	-	0.92%	74	11.57%	73	0.19%	61	5.62%	73
International Eq Custom Bnmk (4)	-	-	1.14%	70	11.64%	72	(0.10%)	68	5.48%	74
Pub Pln- Intl Equity	-	-	1.62%		12.62%		0.93%		6.63%	
All Country ex US	\$4,613,009,989	13.68%	(0.08%)	57	11.78%	44	0.09%	70	8.05%	31
Arrowstreet Capital	691,803,730	2.05%	1.63%	23	22.59%	4	7.16%	7	12.59%	3
Baillie Gifford	739,729,782	2.19%	(0.76%)	72	2.79%	96	(8.93%)	97	3.72%	92
Marathon Asset Mgmt	849,979,181	2.52%	(0.81%)	72	9.28%	69	0.57%	63	6.21%	65
MSCI ACWI xUS IMI	-	-	0.92%	37	11.57%	49	0.19%	69	5.62%	76
NT MSCI World ex US	2,331,497,296	6.91%	(0.44%)	64	11.60%	48	-		-	
MSCI World xUS	-	-	(0.60%)	69	11.22%	55	2.82%	40	6.55%	59
Non-U.S. Equity Database	-	-	0.22%		11.51%		1.83%		6.97%	



	Market Value \$(Dollars)	Ending Weight	Last Quarter		Fiscal Year		Last 3 Years		Last 5 Years	
Small Cap	\$667,777,216	1.98%	(1.48%)	62	5.73%	71	(4.95%)	69	2.00%	89
Mondrian	2,132,611	0.01%	-		-		-		-	
Principal Sm Cap Intl	346,146,887	1.03%	(2.46%)	80	8.94%	52	(2.53%)	54	3.45%	80
MSCI World Small Cap x US	-	-	(1.56%)	64	7.80%	63	(2.98%)	56	4.69%	66
Callan Intl Small Cap	-	-	(1.20%)		9.11%		(2.26%)		5.59%	
Emerging Markets	\$1,442,997,237	4.28%	4.73%	48	17.01%	21	(2.20%)	30	4.82%	37
Lazard Emerging Markets	741,964,517	2.20%	6.21%	21	18.77%	14	3.50%	6	5.78%	29
Fisher Investments	701,032,720	2.08%	3.22%	69	15.03%	34	(7.68%)	74	3.56%	62
MSCI Emerging Mkts Idx	-	-	5.00%	44	12.55%	49	(5.07%)	51	3.10%	71
Callan Emerging Broad	-	-	4.54%		12.44%		(4.92%)		4.30%	
EAFE Composite (Terminated)	\$17,742,725	0.05%	(0.67%)		(0.56%)		(2.73%)		3.04%	
Total Equity	\$19,449,104,555	57.66%	1.60%	55	17.88%	53	4.07%	65	10.27%	61
MSCI ACWI IMI Index	-	-	2.38%	43	18.40%	49	4.70%	60	10.36%	59
Total Equity Custom Bnmk (5)	-	-	2.24%	45	17.96%	52	4.58%	61	10.33%	60
Callan Global Equity	-	-	1.91%		18.18%		5.22%		11.11%	



As of June 30, 2024	Market Value \$(Dollars)	Ending Weight	Last Quarter		Fiscal Year		Last 3 Years		Last 5 Years	
Domestic Fixed-Income	\$4,791,416,148	14.21%	0.47%	28	3.80%	55	(2.51%)	68	0.57%	66
Blmbg Aggregate Index	-	-	0.07%	82	2.63%	87	(3.02%)	89	(0.23%)	97
Pub Pln- Dom Fixed	-	-	0.25%		4.02%		(2.04%)		0.86%	
Short Duration	\$1,173,194,966	3.48%	1.33%	9	-		-		-	
SIT Short Duration FI	1,173,194,966	3.48%	1.33%	9	-		-		-	
Blmbg Gov/Cred 1-3 Yr	-	-	0.95%	89	4.87%	94	0.55%	83	1.25%	94
Callan Short Fixed Inc	-	-	1.09%		5.63%		1.10%		1.78%	
Core Fixed Income	\$1,327,934,966	3.94%	0.36%	15	3.44%	43	(2.80%)	76	0.01%	89
Blmbg Aggregate Index	-	-	0.07%	93	2.63%	90	(3.02%)	90	(0.23%)	95
Callan Core Bond FI	-	-	0.25%		3.34%		(2.61%)		0.38%	
PIMCO	665,901,093	1.97%	0.36%	15	3.53%	36	(2.76%)	71	0.11%	83
Manulife Asset Management	662,034,012	1.96%	0.36%	16	3.22%	57	(2.97%)	88	0.00%	90
Blmbg Aggregate Index	-	-	0.07%	93	2.63%	90	(3.02%)	90	(0.23%)	95
Callan Core Bond FI	-	-	0.25%		3.34%		(2.61%)		0.38%	
Core Plus	\$2,290,286,216	6.79%	0.21%	83	3.93%	66	(2.33%)	52	1.01%	37
Loomis Sayles	1,130,178,614	3.35%	(0.08%)	97	2.56%	96	(2.43%)	58	0.98%	39
Prudential Core Plus	1,160,107,602	3.44%	0.50%	31	5.29%	17	(2.25%)	44	1.01%	37
Blmbg Aggregate Index	-	-	0.07%	96	2.63%	95	(3.02%)	90	(0.23%)	98
Callan Core Plus FI	-	-	0.42%		4.31%		(2.33%)		0.91%	
Emerging Markets Debt	\$708,865,358	2.10%	0.10%	54	9.57%	43	(2.32%)	82	0.51%	66
Wellington EMD	708,865,358	2.10%	0.10%	54	9.57%	43	(2.32%)	82	0.51%	66
EMBI Global Dvsfd Index	-	-	0.30%	44	9.23%	46	(2.60%)	86	(0.03%)	80
Emerging Debt Database	-	-	0.19%		8.60%		(1.15%)		1.10%	
Global Fixed Income	\$1,528,549,529	4.53%	0.07%	55	4.93%	52	(1.63%)	61	0.44%	88
PIMCO Global	762,499,179	2.26%	0.27%	30	5.04%	48	(1.46%)	56	0.67%	68
AllianceBernstein Global	766,050,350	2.27%	(0.13%)	73	4.81%	63	(1.81%)	63	0.18%	91
Blmbg Global Agg (Hedged)	-	-	0.12%	53	4.20%	75	(1.57%)	61	0.25%	90
Callan Global FI (Hedged)	-	-	0.16%		4.99%		(1.30%)		0.77%	
Total Fixed Income	\$7,028,831,035	20.84%	0.34%	36	4.72%	24	(2.24%)	58	0.57%	66
Blmbg Aggregate Index	-	-	0.07%	82	2.63%	87	(3.02%)	89	(0.23%)	97
Total Fixed Inc Custom Bnmk (6)	-	-	0.10%	76	3.68%	58	(2.59%)	71	(0.05%)	89
Pub Pln- Dom Fixed	-	-	0.25%		4.02%		(2.04%)		0.86%	



	Market Value \$(Dollars)	Ending Weight	Last Quarter		Fiscal Year		Last 3 Years		Last 5 Years	
REIT Composite REIT Comp Custom Bnmk (7) Callan Global REITs	\$313,525,055 - -	0.93% - -	(0.08%) (1.15%) (1.68%)	8 34	7.18% 6.43% 6.58%	40 54	(1.18%) (1.98%) (3.12%)	15 21	3.59% 1.54% 1.97%	11 66
Centersquare FTSE NAREIT Equity Index Callan Real Estate REIT	209,386,702 - -	0.62% - -	0.64% 0.06% (0.17%)	30 46	7.97% 7.79% 7.13%	30 36	0.76% 0.30% (0.15%)	21 33	4.93% 3.90% 4.92%	50 71
Cohen & Steers EPRA/NAREIT Dev REIT Idx Callan Global REITs	104,138,352 - -	0.31% - -	(1.50%) (2.15%) (1.68%)	45 65	5.83% 5.66% 6.58%	65 70	(3.39%) (3.85%) (3.12%)	55 67	2.05% 0.26% 1.97%	44 81
Core Real Estate Principal Capital (Net) UBS Trumbull Property (Net) JPMCB Strategic Property (Net) NFI-ODCE Equal Weight Net NFI-ODCE Value Weight Net Callan OE Core Cmngld RE	\$1,625,560,560 855,667,490 368,879,835 401,013,234 - -	4.82% 2.54% 1.09% 1.19% - -	(0.41%) (0.85%) (1.02%) 1.12% (0.82%) (0.66%) (0.60%)	41 61 73 5 60 54	(10.00%) (8.60%) (8.02%) (14.43%) (10.32%) (9.99%) (8.55%)	64 51 39 88 68 64	0.24% 1.46% (1.03%) (0.98%) 1.14% 1.02% 1.60%	71 52 87 87 59 60	1.51% 2.89% (0.66%) 0.83% 2.58% 2.27% 3.18%	86 52 92 88 61 67
Core Plus Real Estate UBS Trumbull Property G&I (Net) Callan OE Core Cmngld RE	\$222,146,788 222,146,788	0.66% 0.66% -	(2.40%) (2.40%) (0.60%)	99 99	(16.11%) (16.11%) (8.55%)	95 95	(3.26%) (3.26%) 1.60%	94 94	(0.18%) (0.18%) 3.18%	90 90



Non-Core Real Estate	ıne 30, 2024	Market						Last		Last	
AEW Partners VI 750,393 0.00% (0.37%) 44 2.48% 2 1.09% 67 30.89 AEW Partners VII 3,826,651 0.01% 6.74% 1 (1.06%) 21 (1.80%) 83 (3.74 AEW Partners VIII 15,836,173 0.05% 2.63% 1 12,25% 1 19,59% 1 19,50 AEW Partners IX 66,590,408 0.20% (0.42%) 45 6.55% 1 7.72% 26 - Heitman VP III 399,514 0.00% 1.30% 6 0.68% 14 1.62% 66 7.19 Heitman VP IV 34,534,775 0.10% (0.22%) 36 0.80% 13 11,56% 14 12,27 Heitman VP IV 59,825,338 0.18% 1.67% 4 (1.69%) 24 AMM AG Core Plus III 1,146,553 0.00% 0.42% 20 23,46% 1 (7.20%) 90 (8.43 AG Core Plus IIV 17,193,866 0.05% (6.32%) 99 (21,53%) 91 (12,27%) 93 (4.46 AG Realty Fund X 50,319,578 0.15% (2.90%) 88 (8.64%) 60 9,12% 24 AMM AG Realty Fund X 50,319,578 0.15% (2.90%) 88 (8.64%) 60 9,12% 24 AMM AG Core Plus IIV 1,846,730 0.01% (1.83%) 82 (1,71%) 24		Value	•					3			
AEW Partners VII 3,826,651 0.01% 6.74% 1 (1.06%) 21 (1.80%) 83 (3.74 AEW Partners VIII 15,836,173 0.05% 2.63% 1 12.25% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1 19.55% 1	Real Estate	\$743,948,974	2.21%	(0.14%)	33	(9.59%)	62	3.10%	56	6.42%	44
AEW Partners VIII 15,836,173 0.05% 2.63% 1 12.25% 1 19.59% 1 19.59% 1 19.50 AEW Partners IX 66,590,408 0.20% (0.42%) 45 6.55% 1 7.72% 26 - Heitman VP III 399,514 0.00% (1.30% 6 0.68% 14 1.62% 66 7.19 Heitman VP IV 34,534,775 0.10% (0.22%) 36 0.80% 13 11.56% 14 12.27 Heitman VP V 59,825,338 0.18% 1.67% 4 (1.69%) 24 AG Core Plus III 1,146,553 0.00% 0.42% 20 23.46% 1 (7.20%) 90 (8.43 AG Core Plus III 1,146,553 0.00% 0.42% 20 23.46% 1 (7.20%) 90 (8.43 AG Core Plus IIV 17,193.866 0.05% (6.32%) 99 (21.53%) 91 (12.27%) 93 (4.46 AG Realty Fund X 50,319,578 0.15% (2.90%) 88 (8.64%) 60 9.12% 24 9.96 AG Realty Value Fd XI 20,139,289 0.06% (1.83%) 82 (1.71%) 24	Partners VI	750,393	0.00%	(0.37%)	44	2.48%	2	1.09%	67	30.89%	1
AEW Partners IX 66,590,408 0.20% 0.42% 0.45% 0.655% 1 7.72% 26 Heitman VP III 399,514 0.00% 1.30% 6 0.68% 14 1.62% 66 7.19 Heitman VP IV 34,534,775 0.10% 0.22% 36 0.80% 13 11.56% 14 1.227 Heitman VP IV 59,825,338 0.18% 1.67% 4 (1.69%) 24 AG Core Plus III 1,146,553 0.00% 0.42% 20 23.46% 1 (7.20%) 90 (8.43 AG Core Plus IV 17,193,866 0.05% 6.32% 99 (21.53%) 91 (12.27%) 93 (4.46 AG Realty Fund X 50,319,578 0.15% 0.16% 1.83% 82 (1.71%) 24 Invesco US Income Fund 165,202,112 0.49% 0.06% 1.83% 97 (37.00%) 98 (36.83%) 99 (22.51 Invesco VA Fund IV 1,846,730 0.01% 1,438% 97 (37.00%) 98 (36.83%) 99 (22.51 Invesco Real Estate US Fund VI 36,751,396 0.11% 2.80% 1 (11.95%) 74 TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XI 9,535,944 0.28% 0.90% 10 (5.76%) 43 14.21% 5	Partners VII	3,826,651	0.01%	6.74%	1	(1.06%)	21	(1.80%)	83	(3.74%)	90
Heitman VP III 399,514 0.00% 1.30% 6 0.68% 14 1.62% 66 7.19 Heitman VP IV 34,534,775 0.10% (0.22%) 36 0.80% 13 11.56% 14 12.27 Heitman VP V 59,825,338 0.18% 1.67% 4 (1.69%) 24	Partners VIII	15,836,173	0.05%	2.63%	1	12.25%	1	19.59%	1	19.50%	1
Heitman VP IV 34,534,775 0.10% (0.22%) 36 0.80% 13 11.56% 14 12.27 Heitman VP V 59,825,338 0.18% 1.67% 4 (1.69%) 24	Partners IX	66,590,408	0.20%	(0.42%)	45	6.55%	1	7.72%	26	-	
Heitman VP V 59,825,338 0.18% 1.67% 4 (1.69%) 24	an VP III	399,514	0.00%	1.30%	6	0.68%	14	1.62%	66	7.19%	42
AG Core Plus III 1,146,553 0.00% 0.42% 20 23.46% 1 (7.20%) 90 (8.43 AG Core Plus IV 17,193,866 0.05% (6.32%) 99 (21.53%) 91 (12.27%) 93 (4.46 AG Realty Fund X 50,319,578 0.15% (2.90%) 88 (8.64%) 60 9.12% 24 9.96 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 24 1.00% (1.83%) 82 (1.71%) 95 (1.92%) 89 (1.22%) 1.00% (1.83%) 90 (22.51%) 1.00% (1.85%) 69 (29.39%) 95 (5.94%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.70%) 82 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (1.20%) 89 1.22 (an VP IV	34,534,775	0.10%	(0.22%)	36	0.80%	13	11.56%	14	12.27%	19
AG Core Plus IV 17,193,866 0.05% (6.32%) 99 (21.53%) 91 (12.27%) 93 (4.46 AG Realty Fund X 50,319,578 0.15% (2.90%) 88 (8.64%) 60 9.12% 24 9.96 AG Realty Value Fd XI 20,139,289 0.06% (1.83%) 82 (1.71%) 24	an VP V	59,825,338	0.18%	1.67%	4	(1.69%)	24	-		-	
AG Realty Fund X 50,319,578 0.15% (2.90%) 88 (8.64%) 60 9.12% 24 9.96 AG Realty Value Fd XI 20,139,289 0.06% (1.83%) 82 (1.71%) 24	ore Plus III	1,146,553	0.00%	0.42%	20	23.46%	1	(7.20%)	90	(8.43%)	92
AG Realty Value Fd XI 20,139,289 0.06% (1.83%) 82 (1.71%) 24	ore Plus IV	17,193,866	0.05%	(6.32%)	99	(21.53%)	91	(12.27%)	93	(4.46%)	90
Invesco US Income Fund 165,202,112 0.49% (0.45%) 46 (8.80%) 61 - -	ealty Fund X	50,319,578	0.15%	(2.90%)	88	(8.64%)	60	9.12%	24	9.96%	24
Invesco VA Fund IV	ealty Value Fd XI	20,139,289	0.06%	(1.83%)	82	(1.71%)	24	-		-	
Invesco VA Fund V 58,163,367 0.17% (0.95%) 69 (29.39%) 95 (5.94%) 89 1.22	co US Income Fund	165,202,112	0.49%	(0.45%)	46	(8.80%)	61	-		-	
Invesco Real Estate US Fund VI 36,751,396 0.11% 2.80% 1 (11.95%) 74 - - - TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XII 95,235,944 0.28% 0.90% 10 (5.76%) 43 14.21% 5 - TA Associates Realty Fund XIII 36,361,251 0.11% (2.95%) 89 - - - -	co VA Fund IV	1,846,730	0.01%	(4.38%)	97	(37.00%)	98	(36.83%)	99	(22.51%)	97
TA Associates Realty Fund XI 9,406,387 0.03% 2.88% 1 (26.61%) 93 (6.83%) 90 0.85 TA Associates Realty Fund XII 95,235,944 0.28% 0.90% 10 (5.76%) 43 14.21% 5 - TA Associates Realty Fund XIII 36,361,251 0.11% (2.95%) 89	co VA Fund V	58,163,367	0.17%	(0.95%)	69	(29.39%)	95	(5.94%)	89	1.22%	81
TA Associates Realty Fund XII 95,235,944 0.28% 0.90% 10 (5.76%) 43 14.21% 5 - TA Associates Realty Fund XIII 36,361,251 0.11% (2.95%) 89 Westbrook RE Fund X 13,941,600 0.04% (7.84%) 100 (31.71%) 96 (11.24%) 93 (3.77 Westbrook RE Fund XI 55,686,359 0.17% 2.73% 1 2.76% 2 10.43% 22 - NCREIF Total Index (0.26%) 38 (5.53%) 42 2.33% 64 3.39 Callan Real Est Val Add (0.49%) (7.01%) 4.14% 4.82 Timber Composite \$38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 Hancock Timber Portf olio 38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 NCREIF Timberland Index 1.71% 9.84% 10.99% 7.18 Total Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 2.27 Real Estate Benchmark (8) (0.26%) 32 (5.53%) 42 2.33% 49 3.39	co Real Estate US Fund VI	36,751,396	0.11%	2.80%	1	(11.95%)	74	-		-	
TA Associates Realty Fund XIII 36,361,251 0.11% (2.95%) 89	sociates Realty Fund XI	9,406,387	0.03%	2.88%	1	(26.61%)	93	(6.83%)	90	0.85%	82
Westbrook RE Fund X 13,941,600 0.04% (7.84%) 100 (31.71%) 96 (11.24%) 93 (3.77 Westbrook RE Fund XI 55,686,359 0.17% 2.73% 1 2.76% 2 10.43% 22 - NCREIF Total Index - - (0.26%) 38 (5.53%) 42 2.33% 64 3.39 Callan Real Est Val Add - - (0.49%) (7.01%) 4.14% 4.82 Timber Composite \$38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 Hancock Timber Portf olio 38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 NCREIF Timberland Index - - 1.71% 9.84% 10.99% 7.18 Total Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 2.27 Real Estate Benchmark (8) - - (0.26%) 32 (5.53%) 42 2.33% 49 3.39	sociates Realty Fund XII	95,235,944	0.28%	0.90%	10	(5.76%)	43	14.21%	5	-	
Westbrook RE Fund XI 55,686,359 0.17% 2.73% 1 2.76% 2 10.43% 22 - NCREIF Total Index - - (0.26%) 38 (5.53%) 42 2.33% 64 3.39 Callan Real Est Val Add - - (0.49%) (7.01%) 4.14% 4.82 Timber Composite \$38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 Hancock Timber Portf olio 38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 NCREIF Timberland Index - - 1.71% 9.84% 10.99% 7.18 Total Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 2.27 Real Estate Benchmark (8) - - (0.26%) 32 (5.53%) 42 2.33% 49 3.39	sociates Realty Fund XIII	36,361,251	0.11%	(2.95%)	89	-		-		-	
NCREIF Total Index - - (0.26%) 38 (5.53%) 42 2.33% 64 3.39 Callan Real Est Val Add - - (0.49%) (7.01%) 4.14% 4.82 Timber Composite \$38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 Hancock Timber Portf olio 38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 NCREIF Timberland Index - - 1.71% 9.84% 10.99% 7.18 Total Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 (2.27) Real Estate Benchmark (8) - - (0.26%) 32 (5.53%) 42 (2.33%) 49 (3.39)	prook RE Fund X	13,941,600	0.04%	(7.84%)	100	(31.71%)	96	(11.24%)	93	(3.77%)	90
Callan Real Est Val Add (0.49%) (7.01%) 4.14% 4.82 Timber Composite \$38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 Hancock Timber Portf olio 38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 NCREIF Timberland Index - 1.71% 9.84% 10.99% 7.18 Total Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 2.27 Real Estate Benchmark (8) - (0.26%) 32 (5.53%) 42 2.33% 49 3.39	rook RE Fund XI	55,686,359	0.17%	2.73%	1	2.76%	2	10.43%	22	-	
Fimber Composite \$38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 Hancock Timber Portf olio 38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 NCREIF Timberland Index - - 1.71% 9.84% 10.99% 7.18 Total Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 2.27 Real Estate Benchmark (8) - - (0.26%) 32 (5.53%) 42 2.33% 49 3.39	REIF Total Index	-	-	(0.26%)	38	(5.53%)	42	2.33%	64	3.39%	59
Hancock Timber Portf olio 38,244,909 0.11% (9.72%) (12.12%) (2.16%) 3.62 NCREIF Timberland Index - 1.71% 9.84% 10.99% 7.18 Fotal Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 2.27 Real Estate Benchmark (8) - (0.26%) 32 (5.53%) 42 2.33% 49 3.39	Real Est Val Add	-	-	(0.49%)		(7.01%)		4.14%		4.82%	
NCREIF Timberland Index 1.71% 9.84% 10.99% 7.18 Fotal Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 2.27 Real Estate Benchmark (8) - (0.26%) 32 (5.53%) 42 2.33% 49 3.39	omposite	\$38,244,909	0.11%	(9.72%)		(12.12%)		(2.16%)		3.62%	
Total Real Estate \$2,943,426,286 8.73% (0.60%) 48 (9.18%) 69 (0.34%) 76 2.27 Real Estate Benchmark (8) - - (0.26%) 32 (5.53%) 42 2.33% 49 3.39	ock Timber Portfolio	38,244,909	0.11%	(9.72%)		(12.12%)		(2.16%)		3.62%	
Real Estate Benchmark (8) (0.26%) 32 (5.53%) 42 2.33% 49 3.39	REIF Timberland Index	-	-	1.71%		9.84%		10.99%		7.18%	
	Estate	\$2,943,426,286	8.73%	(0.60%)		•		• •	76	2.27%	68
Callan Tot Real Est DR - (0.62%) (6.40%) 2.01% 2.20	l Estate Benchmark (8)	-	-	(0.26%)	32	(5.53%)	42	2.33%	49	3.39%	47
	Tot Real Est DB	-	-	(0.62%)		(6.40%)		2.01%		3.20%	



As of June 30, 2024

	Market Value \$(Dollars)	Ending Weight	Last Quarter		Fiscal Year		Last 3 Years		Last 5 Years	
Private Equity	\$3,929,921,211	11.65%	1.03%	68	4.26%	79	7.87%	37	15.32%	4
Pathway PEF XXIII Series 2008	239,479,710	0.71%	0.51%	79	2.61%	85	(1.06%)	94	10.56%	31
Pathway PEF XXIII Series 2013	674,326,144	2.00%	(0.40%)	92	2.16%	86	3.82%	81	14.91%	5
Pathway PEF XXIII Series 2016	1,353,511,345	4.01%	2.79%	30	7.65%	55	10.46%	30	18.81%	4
Pathway PEF XXIII Series 2021	353,561,625	1.05%	3.46%	16	10.95%	38	3.01%	82	-	
Grosvenor Diversified Partners	152,136,229	0.45%	(2.67%)	96	(20.17%)	99	(3.78%)	96	3.45%	89
Grosvenor Div Partners 2014 Ser	671,114,989	1.99%	(1.45%)	93	1.71%	86	13.18%	25	16.61%	4
Grosvenor Div Partners 2018 Ser	485,791,168	1.44%	1.85%	52	9.63%	46	13.89%	21	12.38%	11
Private Equity Benchmark (9)	-	-	1.17%	65	5.05%	77	1.45%	84	10.91%	29
Callan Alterntive Inv DB	-	-	1.94%		8.62%		6.45%		8.23%	
Private Credit	\$43,230,637	0.13%	1.54%		-		-		-	
Blue Owl Lending Fd Series 20	18,762,153	0.06%	1.12%		-		-		-	
Grosvenor Private Credit Series 2023	24,468,484	0.07%	1.74%		-		-		-	
Private Credit Benchmark (10)	-	-	1.97%		-		-		-	
Cash	\$334,205,958	0.99%	1.24%	78	5.70%	38	3.34%	15	2.27%	61
1mo T-Bill	-	-	1.35%	39	5.56%	68	3.11%	51	2.15%	81
Callan Cash Database		-	1.35%		5.65%		3.13%		2.31%	
Total Fund	\$33,728,719,682	100.00%	1.08%	71	10.43%	44	2.64%	84	8.06%	58
Policy Benchmark*	- -	-	1.48%	47	11.27%	21	2.83%	81	7.76%	66
Callan Public Fd V Lg DB	-	-	1.45%		10.23%		3.95%		8.12%	

Total Fund Benchmark: 27% Russell 3000, 20% MSCI ACWI ex-U.S. IMI, 20% Bloomberg U.S. Aggregate, 12% MSCI ACWI IMI, 10% NCREIF Total, 10% Cambridge Private Equity, 1% FTSE 1-Mo. T-Bill

The Domestic Equity Benchmark is represented by the Russell 3000 Index.

The Global Equity Benchmark is currently represented by the MSCI ACWI IMI Index.

The International Equity Benchmark is represented by the MSCI ACWI ex-U.S. IMI Index.

The table above shows periodic rates of return. The returns are net of fees.

The Total Fixed Income Benchmark is represented by the Bloomberg U.S. Aggregate Index. The Real Estate Benchmark is currently represented by the NCREIF Total Index. The Private Equity Benchmark is currently represented by the Cambridge Private Equity. The Private Credit Benchmark is represented by 50% Morningstar LSTA 100 Index / 50% Bloomberg U.S. High Yield Index, Plus 1%



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Appendix: Benchmark Definitions

Benchmark Definitions

Total Fund Benchmark (Target): Blend of asset class benchmarks at policy weights. The 2Q 2024 Target represents the legacy policy target weights. A new long-term strategic asset allocation was approved in 2022; however, the legacy allocation targets and Total Fund Benchmark will be maintained until the new complementary strategies have been implemented.

Asset Class	Benchmark	2Q 2024 Target	Long-Term Target
U.S. Equity	Russell 3000 Index	27.0%	25.0%
International Equity	MSCI ACWI ex U.S. IMI Index	20.0	20.0
Global Equity	MSCI ACWI IMI Index	12.0	12.0
Private Equity	Cambridge Private Equity	10.0	10.0
Fixed Income	Bloomberg U.S. Aggregate Bond Index	20.0	18.0
Private Credit	See definition below	0.0	2.0
Real Estate	NCREIF Total Index	10.0	10.0
Infrastructure	Infrastructure Benchmark (TBD)	0.0	2.0
Cash	FTSE 1 Month T-Bill	1.0	1.0
	Total PERS Target Benchmark	100%	100%

Asset Class Benchmarks:

- 1) U.S. Equity Benchmark: 65% S&P 500 Index and 35% Russell 2500 Index through 9/30/2015; then Russell 3000 thereafter.
- 2) International Equity Benchmark: MSCI ACWI ex-U.S. through 6/30/2013; then MSCI ACWI ex-U.S. IMI thereafter.
- 3) International Equity Custom Benchmark: MSCI ACWI ex-U.S. through 6/30/13; MSCI ACWI ex-U.S. IMI Index through 9/30/2015; then 35% MSCI EAFE Hedged; 35% MSCI ACWI ex-U.S. IMI; 20% MSCI Emerging Markets; 5% MSCI ACWI ex-U.S. Small Cap; and 5% MSCI World ex-U.S. Small Cap thereafter.
- 4) Global Equity Benchmark: MSCI World Index through 6/30/2012; MSCI ACWI through 9/30/2015; then MSCI ACWI IMI thereafter.
- 5) Total Equity Benchmark: 49% Russell 3000 Index, 36% MSCI ACWI ex-U.S. IMI Index, and 15% MSCI AC World Index through 9/30/2015; then 44% Russell 3000 Index, 36% MSCI ACWI ex U.S. IMI Index, and 20% MSCI ACWI IMI thereafter
- 6) Private Equity Benchmark: S&P 500 Index + 5% per annum through 3/31/13; S&P 500 Index + 3% per annum through 6/30/22; S&P 500 Index + 3% per annum (1 Quarter Lag) with 3Q22 equal to actual Private Equity composite through 6/30/23; then Cambridge Private Equity thereafter.
- 7) Total Fixed Income Benchmark: 55% Barclays Aggregate Index, 25% Barclays Global Aggregate Index Hedged, 10% Barclays US TIPS Index, and 10% EMBI Global Diversified through 9/30/2015; then 65% Barclays Aggregate Index, 25% Barclays Global Aggregate Index Hedged, and 10% EMBI Global Diversified thereafter.
- 8) Private Credit Benchmark: 50% Morningstar LSTA 100 / 50% Bloomberg High Yield, plus 1% per annum.
- 9) REIT Composite Benchmark: 50% US Select REIT Index and 50% EPRA/NAREIT Developed REIT Index.
- 10) Total Real Estate Benchmark: NFI-ODCE Equal Weight Net to 5/31/99; No Benchmark to 9/30/03; 50% NFI-ODCE Equal Weight Net and 50% US Select REIT Index to 6/30/06; 80% NFI-ODCE Equal Weight Net and 20% US Select REIT Index to 6/30/10; 20% NAREIT RE 50 Index, 15% NCREIF Property Index, 10% NCREIF Timberland Index, 55% NFI-ODCE Equal Weight Net to 6/30/12;15% NAREIT RE 50 Index, 15% NCREIF Property Index, 10% NCREIF Timberland Index, and 60% NFI-ODCE Equal Weight Net to 6/30/13; then NCREIF Property Index thereafter.



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Appendix: Callan Updates

Published Research Highlights: 2Q24

Quantifying Sequence-of-Returns Risk



Sector-Specialist Strategies and Large LPs' Portfolios



2024 Asset Manager DEI Study



2024 Defined Contribution Trends Survey



Recent Blog Posts

Commercial Real Estate Capital Markets and Institutional Investors

Christine Mays

A Look at How We Did With Our Capital Markets Assumptions

Greg Allen and Julia Moriarty Is This a Time for Active Managers to Shine?

Tony Lissuzzo

Additional Reading

Active vs. Passive quarterly charts

Capital Markets Review quarterly newsletter

Monthly Updates to the Periodic Table

Market Pulse Flipbook quarterly markets update

Market Intelligence (clients-only)

Real Estate Indicators market outlook



Callan Institute Events

Upcoming conferences, workshops, and webinars

Callan College

Intro to Investments—Learn the Fundamentals

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

September 24-26, 2024 – Virtual Session via Zoom

Please visit our website at <u>callan.com/events-education</u> as we add dates to our 2024 calendar!

Mark Your Calendar

2024 Regional Workshops

October 22, 2024 – Denver

October 23, 2024 - Chicago

Watch your email for further details and an invitation.

2025 National Conference

Mark your calendars for this event in Scottsdale on April 27-29, 2025

Our annual conference will feature mainstage speakers and Callan lead workshops on a variety of topics.

This year we welcome Zanny Minton Beddoes to the stage.

Registration for this event will open in January 2025!



Introducing CODE: Callan On-Demand Education



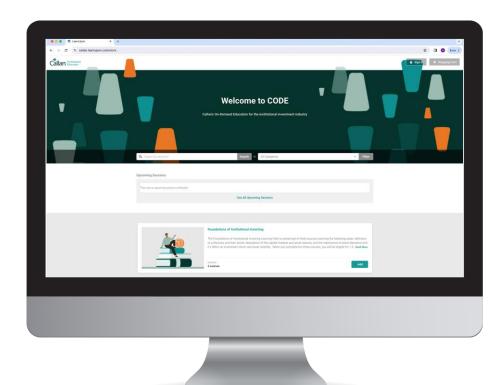
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callan.com/code



3 Reasons to Take CODE Courses

- Become a better fiduciary
- Showcase your skills and knowledge
- **3** Learn from Callan's investment experts

Callan Updates

Firm updates by the numbers, as of June 30, 2024

Total Associates: ~200

Company Ownership:

► 100% employees

► ~70% of employees are equity owners

> ~55% of shareholders identify as women or minority

Total General and Investment Consultants: 50+

Total Specialty and Research Consultants: 65+

Total CFA/CAIA/FRMs: 60+

Total Institutional Investor Clients: 475+

Provides advisory services to institutional investor clients with

assets over \$4+ trillion

OUT NOW: Callan's First Diversity, Equity & Belonging (DEB) Advancement Report

Our inaugural report highlights Callan's commitment to advancing diversity, equity, and belonging (DEB) within the institutional investment community. While we've achieved many milestones in this area since the firm's founding over five decades ago, our recent work is a testament to our steadfast dedication to promoting DEB in all aspects of our business.

"Not only is our DEB initiative critical to Callan's success, but we hope it will ultimately influence our entire industry. Supporting this initiative from the position of CEO is the best way for me to ensure its success. As the executive sponsor, I can make sure our team has the support and resources to effect real change."

— Greg Allen, CEO, Chief Research Officer and the executive sponsor of Callan's DEB program



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Callan undertakes no obligation to update the information contained herein except as specifically requested by the client.

Past performance is no guarantee of future results.



Callan

June 30, 2024

Public Employees Retirement System of Mississippi Defined Benefit Plan Board Report

Investment Measurement Service Quarterly Review

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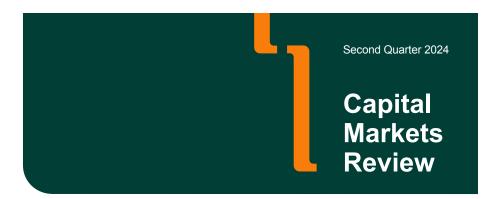
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Will the Fed Be Able to Stick the Landing?

ECONOMY

Here we are, on the verge of something that's never been done before: a soft landing for the U.S. economy, where inflation is brought down while growth gradually subsides, but we avoid a recession. After the devastation of the pandemic, it would be a remarkable achievement.

Solid Gains Over Trailing One Year

INSTITUTIONAL INVESTORS

Continued strong U.S. equity gains helped institutional investors show strong gains over the trailing one year ended 6/30/24, but a lagging bond market and lower global ex-U.S. equity performance held them back from matching a 60% stocks/40% bonds index.

Strong Start to Year in U.S. but Not Globally

EQUITY

The U.S. equity markets had an exceptional start with the S&P 500 hitting 31 record highs over the first six months of 2024 and gaining 15.3%. Developed non-U.S. markets struggled with growing uncertainty on future economic growth. Emerging markets rebounded.

Slight Gain for Bonds; Markets Await Fed

FIXED INCOME

The Bloomberg US and Global Aggregate indices both rose 0.1%. Treasury yields were up modestly, to 4.36%. Municipal yields climbed higher than U.S. Treasury yields. Major currencies' weakness against the dollar hurt unhedged returns.

Income Positive but Appreciation Falls

REAL ESTATE/REAL ASSETS

NPI income returns were positive across sectors and regions but all appreciation returns declined, except for hotels. REITs underperformed equities in the U.S. and globally. ODCE redemption queues have exceeded the levels hit during the Global Financial Crisis.

Signs of Rebound; Challenges Remain

PRIVATE EQUITY

The number of funds raised in 1Q24 dropped 42% vs. 1Q23, but the dollar amount was flat. This year also saw improving buyout conditions. Valuations rose amid mixed signs of recovery for venture capital and growth equity. Short-term returns lag public equity.

Gains Continue to Top Leveraged Loans

PRIVATE CREDIT

Private credit has shown a net IRR of 8.0% over the last 10 years, easily topping a leveraged loan benchmark. Sub-investment grade corporate yields rose sharply at the start of 2022 and peaked in September. Yields continued to drop in 1Q24 and spreads contracted.

Managers Capitalizing on Volatility in 2Q24

HEDGE FUNDS/MACs

The median Callan Institutional Hedge Fund Peer Group manager rose 1.6%. Within the HFRI Indices, the best-performing strategy was relative value, which was up 1.4%. Equity hedge ended the quarter up 1.0%. Macro strategies ended the quarter slightly negative.

DC Index Starts Year with a Big Gain

DEFINED CONTRIBUTION

The Callan DC Index™ gained 6.6% in 1Q24.

Balances rose by 6.6% after a 9.0% increase in 4Q23, driven exclusively by investment gains. Stable value saw large outflows for the sixth straight quarter. U.S. large cap equity saw large percentage increases in allocation.

Broad Market Quarterly Returns

U.S. Equity Russell 3000



Global ex-U.S. Equity MSCI ACWI ex USA



U.S. Fixed Income Bloomberg Agg



0.1%

Global ex-U.S. Fixed Income Bloomberg Global Agg ex US



-2.170

Sources: Bloomberg, FTSE Russell, MSCI

Can the Fed Stick the Landing?

ECONOMY | Jay Kloepfer

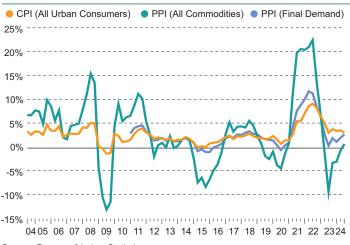
The hunt for signs of the much-anticipated slowdown in the U.S. economy continues to be thwarted. Every data release is scrutinized: Is this the one that is finally the sign of a crack in growth? The economy is clearly set to slow compared to the surprise robust growth in the second half of 2023, but key measures like stubborn inflation, a job market that has yet to sag, and persistent growth in consumption spending have kept surprising to the upside. Inflation eased from the worrisome rise in 1Q24, but still sits at 3.0% compared to a year ago, well above the Fed's target. The job market looked like it finally cracked in April, creating just 108,000 jobs after adding 800,000 in the first three months of the year. Then job growth rebounded to 218,000 in May and 206,000 in June, clearly softer than the average monthly rate of 250,000 in 2023 and the surge in 1Q, but still solid. The unemployment rate remains low at 4.1%, although initial unemployment claims have been rising gradually since the recent low set in January. The labor market is indeed softening, which should reduce pressure on wage inflation at some point.

A softer labor market will likely dampen consumer demand, and therefore provide more relief to inflation pressures. Consumer spending slowed from a robust 3% growth rate in the second half of 2023 to 1.5% in 1Q, another potential crack in the façade. Then spending rebounded to a 2.3% gain in 2Q and drove a surprising 2Q GDP growth rate of 2.8%, about double the rate expected for the quarter. In addition to consumer spending, GDP growth was driven by private inventory investment and business fixed investment, particularly in equipment and intellectual property. 1Q GDP growth came in at just 1.4%, the first sure sign of the anticipated slowdown—or so it seemed.

Interest rates have been higher for a longer period than many expected, including the Fed. There are surprisingly few signs that these higher rates have taken the expected toll on the economy. The economy does appear to be gradually slowing, current contradictory indicators like the strong GDP report aside. The cost of borrowing is sharply higher, and delinquencies in auto loans



Inflation Year-Over-Year



Source: Bureau of Labor Statistics

and credit cards are rising. The real estate market is grappling with much higher mortgage rates, although the market is showing a few unexpected features. The sale of existing homes in 2023 fell by one-third from the peak set in 2021, and the rate of sales in 2024 is holding steady at the 2023 rate. However, home prices are rising around the country. As interest rates rose, homeowners were supposedly reluctant to sell and buy again with much higher mortgage rates. However, the supply of homes for sale is rising, alongside higher prices and high mortgage rates compared to 2021, a puzzling market dynamic.

Inflation cooled in May and June after throwing a scare into both the Fed and the capital markets during the first four months of 2024. CPI had inched up to an annual rate of 3.5% in March from 3.1% in January. Then gasoline prices fell 3.6% in May and 3.8% in June, enough to bring the monthly change in the CPI to zero in May and slightly negative in June. The annual rate eased to 3.0% in June. Broad inflation may now be headed in the right direction for the Fed to act on rates. However, under the hood, inflation weighs heavily on basic items for lower- and middle-income households: shelter, food, motor vehicle insurance, and medical care. The shelter index rose 5.2% from June 2023 to June 2024 and accounted for over 60% of the increase in headline CPI this past year. While the spike in inflation may be past, the impact of prices now "permanently" higher on household budgets is likely to dampen the consumer spending that has driven the economy.

So what to make of all this contrasting economic data? Putting it in context, four years ago U.S. GDP dropped an incredible 28% in one quarter. While it quickly rebounded, the country suffered a pandemic of stunning cost, both economically and, more importantly, in terms of lost lives, severed social connections, missed education, and worsening mental health. And yet here we are, on the verge of something that's never been done before: a soft landing for the U.S. economy, where inflation is brought down while growth gradually subsides, but we avoid a recession. It would be a remarkable achievement.

The Long-Term View

					6/30/24
Index	2Q24	1 Yr	5 Yrs	10 Yrs	25 Yrs
U.S. Equity					
Russell 3000	3.2	23.1	14.1	12.1	7.8
S&P 500	4.3	24.6	15.0	12.9	7.7
Russell 2000	-3.3	10.1	6.9	7.0	7.6
Global ex-U.S. Equity					
MSCI EAFE	-0.4	11.5	6.5	4.3	4.5
MSCI ACWI ex USA	1.0	11.6	5.5	3.8	
MSCI Emerging Markets	5.0	12.5	3.1	2.8	
MSCI ACWI ex USA Small Cap	0.7	11.3	6.1	4.4	6.7
Fixed Income					
Bloomberg Agg	0.1	2.6	-0.2	1.3	3.9
90-Day T-Bill	1.3	5.4	2.2	1.5	1.9
Bloomberg Long G/C	-1.7	-1.6	-2.2	1.6	5.3
Bloomberg GI Agg ex US	-2.1	-0.7	-3.6	-1.9	2.5
Real Estate					
NCREIF Property	-0.3	-5.5	3.4	6.1	7.8
FTSE Nareit Equity	0.1	7.8	3.9	5.9	9.1
Alternatives					
Cambridge PE*	1.2	5.2	14.6	13.5	13.4
Cambridge Senior Debt*	4.2	10.0	6.9	6.9	4.2
HFRI Fund Weighted	0.5	9.8	6.7	4.8	6.0
Bloomberg Commodity	2.9	5.0	7.2	-1.3	2.7
Inflation – CPI-U	0.6	3.0	4.2	2.8	2.6

*Data for most recent period lags. Data as of 1Q24.

Sources: Bloomberg, Bureau of Economic Analysis, FTSE Russell, Hedge Fund Research, MSCI, NCREIF, Refinitiv/Cambridge, S&P Dow Jones Indices

Recent Quarterly Economic Indicators

	2Q24	1Q24	4Q23	3Q23	2Q23	1Q23
Employment Cost: Total Compensation Growth	4.1%	4.2%	4.2%	4.3%	4.5%	4.8%
Nonfarm Business: Productivity Growth	2.3%	0.4%	3.5%	4.6%	3.3%	-0.3%
GDP Growth	2.8%	1.4%	3.4%	4.9%	2.1%	2.2%
Manufacturing Capacity Utilization	77.5%	77.1%	77.6%	78.1%	78.4%	78.7%
Consumer Sentiment Index (1966=100)	71.1	78.4	64.9	69.6	62.3	64.6

Sources: Bureau of Economic Analysis, Bureau of Labor Statistics, Federal Reserve, IHS Economics, Reuters/University of Michigan

Investors Show Gains but Still Lag Benchmark

INSTITUTIONAL INVESTORS

- Continued strong U.S. equity gains helped institutional investors show robust gains over the trailing one year ended 6/30/24, but a lagging bond market and lower global ex-U.S. equity performance held them back from matching a 60% stocks/40% bonds benchmark.
- Still, most investor types showed double-digit gains.
- Corporate plans, with their typically bond-heavy portfolios, were the exception.
- Even over longer periods, the gap between institutional investor returns and the 60%/40% benchmark continued.
- Institutional investors are focused on a handful of major macroeconomic issues:
 - Interest rates and inflation
 - · The U.S. election
 - Geopolitics

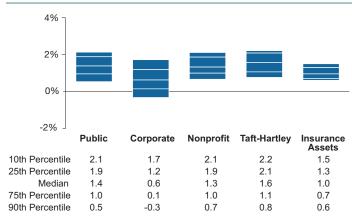
Public defined benefit (DB) plans

- The median discount rate, according to the most recent NASRA survey, is 7.00%.
- A 7.00% return expectation can be achieved with 50% in core fixed income.

- Public DB plans have reviewed their allocations to fixed income and generally either confirmed the amount or made an increase.
- Plans are starting to review their fixed income structures,
 specifically the need for risk in a higher-rate environment.
- Plans are also starting to evaluate their exposure to risk assets, with some wondering why invest in anything besides
 U.S. large cap stocks and others debating whether to take risk off the table.

Quarterly Returns, Callan Database Groups

(6/30/24)



Source: Callan

Callan Database Median and Index Returns* for Periods Ended 6/30/24

Database Group	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
Public Database	1.4	11.1	3.2	7.7	7.0	7.1
Corporate Database	0.6	7.5	-0.7	4.6	5.3	6.5
Nonprofit Database	1.3	11.9	3.1	7.6	6.5	7.0
Taft-Hartley Database	1.6	11.0	3.4	7.5	6.9	6.9
Insurance Assets Database	1.0	7.8	1.0	3.5	3.7	4.5
All Institutional Investors	1.2	10.8	2.8	7.2	6.5	6.9
Large (>\$1 billion)	1.1	9.8	2.9	7.5	6.8	7.1
Medium (\$100mm - \$1bn)	1.2	10.9	2.9	7.3	6.6	7.0
Small (<\$100 million)	1.3	11.6	2.6	7.0	6.2	6.7
60% S&P 500/40% Bloomberg Agg	2.6	15.5	4.8	9.2	8.4	7.7

^{*}Returns less than one year are not annualized.

Source: Callan. Callan's database includes the following groups: public defined benefit (DB) plans, corporate DB plans, nonprofits, insurance assets, and Taft-Hartley plans. Approximately 10% to 15% of the database constituents are Callan's clients. All database group returns presented gross of fees. Past performance is no guarantee of future results. Reference to or inclusion in this report of any product, service, or entity should not be construed as a recommendation, approval, affiliation, or endorsement of such product, service, or entity by Callan.

Corporate DB plans

- Interest rate hedging continues to work.
- Funded status continues to be a major, if not the major, issue. Funded ratios for some corporate DB plans improved as the equity market increased.
- As closed plans' liabilities shorten, intermediate fixed income will continue to attract interest.
- As credit spreads have tightened, it is important to manage or reduce any overweight to credit.

Nonprofits

- Nonprofits indicated that they had noticeable uncertainty about allocations to private markets in general.
- For plans that had increased the risk in their fixed income sleeves to gain a higher yield (in the lower-rate environment), they too are reviewing the need for risk in a higher-rate environment.
- Others are worried about concentration in their growth portfolios.

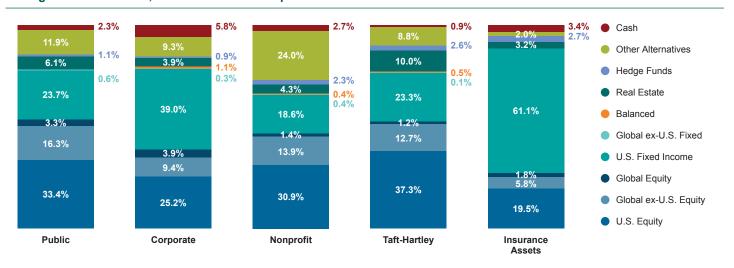
Insurance asset pools

- They are still benefiting from higher yields on short-term fixed income.
- Claims costs are higher from experienced inflation.
- Risk-based capital charges must be considered when investing in alternative investments.

Defined contribution (DC) plans

- The Callan DC Index™ gained 6.6% in 1Q24 due to the strong equity market.
- Turnover (i.e., net transfer activity) increased slightly to 0.44% from the prior quarter's 0.24%. The index's historical average remained at 0.55% and is a good reminder that participants tend to set their allocation and not make many changes.
- Automatic features typically result in target date funds (TDFs) receiving the largest net inflows in the index, as they did in 1Q24, garnering 80% of quarterly net flows. Stable value, money market, and company stock saw the largest outflows during the quarter.
- The gap in returns between money market and stable value funds continues to concern DC plans.
- Discussions are ongoing around how or whether to help participants with retirement income.

Average Asset Allocation, Callan Database Groups



Note: Charts may not sum to 100% due to rounding. Other alternatives include but is not limited to: diversified multi-asset, private credit, private equity, and real assets. Source: Callan

Equity

U.S. Equities

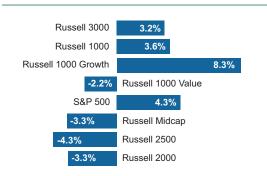
Broad indices exhibit strong start to 2024

- The U.S. equity markets had an exceptional start with the S&P 500 hitting 31 record highs over the first six months of 2024 and gaining 15.3%.
- Index returns continue to be driven by a handful of stocks, especially the "Magnificent Seven," which comprised 33% of the S&P 500 as of quarter-end. As a group, the cohort gained 33% in the first six months of the year, far exceeding the S&P 493 gain of only 5%.
- Performance underlying indices is uneven
- 2Q returns for the broad index were modest at 4.3%, but sector performance was quite mixed, ranging from -4.5% (Materials) to +13.8% (Technology), with 6 of the 11 S&P 500 sectors posting negative returns during the period.
- During 2Q, value (R1000V: -2.2%) continued to underperform growth (R1000G: +8.3%) and small cap (R2000: -3.3%) continued to underperform large cap (R1000: +3.6%).
- The "Magnificent Seven" stocks pushed large cap indices to record highs while the rest of the market traded sideways.
- Magnificent Seven stocks accounted for 116% of S&P 500 total return in 2Q24.
- YTD 2024, the bucket of Magnificent Seven stocks handily outperformed the equal weight S&P 500 Index and small cap Russell 2000 Index returns.
- Magnificent Seven returns over the trailing 3½ years (dating back to 2021) drove a large contribution of total index returns relative to the remaining ~493 stocks in the S&P 500.

- Market concentration has hit its highest level since 1972. The top 10 stocks have broken away from stocks #11-#50 to an even greater degree than in the tech bubble in 2000-01.
- The largest and most successful stocks were generating more earnings, earnings growth, and cash relative to the smaller stocks in the index. Price appreciation for the largest stocks is supported by strong earnings growth and robust economic profits.

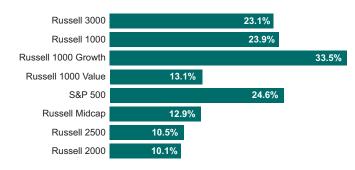
U.S. Equity: Quarterly Returns

(6/30/24)



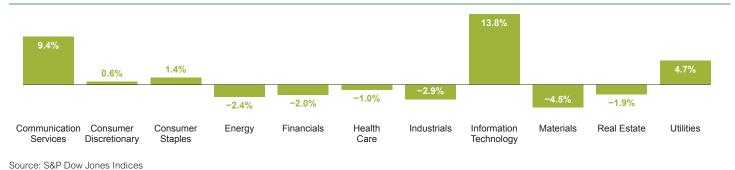
U.S. Equity: One-Year Returns

(6/30/24)



Sources: FTSE Russell and S&P Dow Jones Indices

Quarterly Performance of Industry Sectors (6/30/24)



Global Equities

Broad market

- The U.S. continued its lead over developed non-U.S. markets resulting in a positive ACWI return.
- Developed non-U.S. markets struggled with growing uncertainty on future economic growth, political instability, and divergent central bank policies.
- Small caps once again trailed large caps in a higher interest rate environment and amid exchange rate volatility.

Emerging markets

- Emerging markets rebounded, snapping a two-quarter losing streak relative to developed markets as both China and India produced strong returns.
- China's GDP growth exceeded expectations with a rebound in industrial production, manufacturing, and exports. Further, the Chinese government implemented several measures to support capital markets.

Growth vs. value

Growth and value saw little difference, as much of the caution was driven around macro concerns about future growth and a growing risk of a recession.

U.S. dollar strength

The U.S. Dollar Index (DXY), was relatively flat in 2Q due to a balancing act of increased global uncertainty but a more likely 2024 U.S. central bank rate cut.

China experiences significant decline

Mainland China's allocation within the MSCI EM Index and active EM equity strategies has steadily declined since peaking in 2020. Sluggish growth with weak home sales and deflationary pressures combined with heightened geopolitical risks have been contributors.

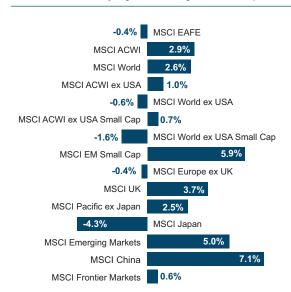
Taiwan increases with Taiwan Semiconductor strength

Despite Taiwan's related geopolitical concerns to mainland China, Taiwan has seen increasing allocations in the index and across managers. The largest stock in the MSCI Taiwan Index, Taiwan Semiconductor, which accounts for ~50% of the index, continues to exhibit robust growth as the global leader in semiconductor manufacturing.

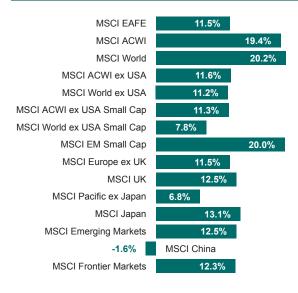
India continues rapid growth

- Benefiting from positive demographics with a large growing working population, India has experienced one of the highest real GDP growth rates globally in recent years when compared to other major countries/regions.
- India's growth within the MSCI EM Index and manager allocations has been nearly the mirror image to China's allocations since 2020.

Global ex-U.S. Equity: Quarterly Returns (U.S. Dollar, 6/30/24)



Global ex-U.S. Equity: One-Year Returns (U.S. Dollar, 6/30/24)



Source: MSCI

Fixed Income

U.S. Fixed Income

Macro environment

- Fed on hold awaiting more evidence that inflation is under control as economy remained resilient
- 10-year U.S. Treasury yield up modestly from 4.21% to 4.36%
- Curve remained inverted

Performance and drivers

- The Bloomberg US Aggregate Index rose 0.1% amid higher rates.
- Corporates and most securitized sectors were roughly flat vs.
 U.S. Treasuries on a duration-adjusted basis.
- Lower quality outperformed, with high yield corporates and leveraged loans posting the best returns.
- Longer maturity underperformed short and intermediate strategies as curve steepened from 5 years out to 30.

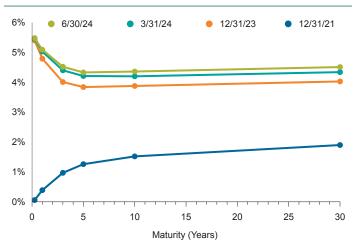
Valuations

- Corporate credit remains rich with spreads near historical tights.
- Default rates fell to just 1.2% for HY and 1.1% for bank loans.
- Corporate bond issuance remained robust
- IG corporate new issuance slowed from record highs in 1Q but remained robust with \$349 billion in new debt, bringing YTD total to \$886 billion.
- HY new issuance in 2Q nearly matched 1Q with \$83 billion, bringing YTD total to \$172 billion.
- Both were met with strong investor demand.

Rate cut expectations

- Strong April jobs reports and sticky inflation readings initially drove intermediate- and long-term rates higher, sending the 10-year Treasury 50 bps higher and reducing the 2s10s inversion to just -24 bps.
- Markets reacted with reduced expectations for Fed rate cuts.
 Entering 2024, Fed Funds futures priced in at least six cuts for the year; that declined to around one as of April.
- However, subsequent data, including easing inflation, brought rates back close to where they started, with the 10-year Treasury ending the quarter 16 bps higher.

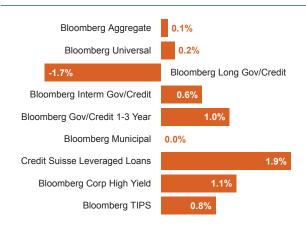
U.S. Treasury Yield Curves



Source: Bloomberg

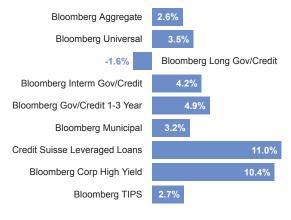
U.S. Fixed Income: Quarterly Returns

(6/30/24)



U.S. Fixed Income: One-Year Returns

(6/30/24)



Sources: Bloomberg and Credit Suisse

FIXED INCOME (Continued)

Municipal Bonds

Higher quality municipal bonds post flat returns in 2Q

- Muni bond yields climbed more than U.S. Treasury yields.
- 10-year AAA municipal bond yield rose 33 bps to 2.84%.
- 10-year U.S. Treasury yield ended 2Q at 4.36% from 4.21%.
- YTD issuance (\$235 billion, up 37% YOY) has been met by strong demand with \$11.4 billion in positive flows to municipal bond funds.

BBB performs best for the quarter and year

AAA: -0.28%

AA: -0.11%

A: +0.22%

BBB: +0.68%

Muni valuations vs. U.S. Treasuries remain rich

- 10-year AAA Muni/10-year U.S. Treasury yield ratio increased to 65%, but remains below the 10-year median
- Fundamentals for state and local governments remain sound as upgrades continue to surpass downgrades.
- The need for increased infrastructure spending could benefit municipal bond issuance in years to come.

Global Fixed Income

Macro environment

- Developed market rates rose further in 2Q.
- In June, the Bank of Canada lowered its overnight rate, and the European Central bank cut rates for the first time in five years as growth and inflation moderated.
- Japan's 10-year government bond yield rose above 1% for the first time since 2013.

U.S. dollar continues to strengthen

- Major currencies generally continued to weaken relative to the U.S. dollar, albeit at a slower pace from 2Q, detracting from unhedged returns.
- Hedged investors were flat for the quarter following the increase in yields.

Emerging market debt is similarly lackluster

India was added to the JPM GBI-EM suite of indices in June.

Change in 10-Year Global Government Bond Yields



Source: Bloomberg

Global Fixed Income: Quarterly Returns

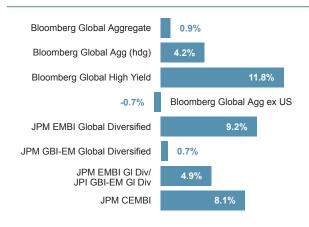
(6/30/24)



Sources: Bloomberg and JPMorgan Chase

Global Fixed Income: One-Year Returns

(6/30/24)



Sources: Bloomberg and JPMorgan Chase

 EM hard currency rose 0.3% while the local currency JPM EMBI Global Diversified Index declined 1.6% as the U.S. dollar generally if modestly strengthened relative to local currencies.

Income Positive but Appreciation Falls

REAL ESTATE/REAL ASSETS | Munir Iman

Valuations reflect higher interest rates

- NCREIF Property Index income returns were positive across sectors and regions.
- All property sectors and regions experienced negative appreciation, except for hotels.
- Valuations are reflective of higher interest rates, which have put upward pressure on capitalization rate and discount rate assumptions.
- Both the NPI and the NCREIF ODCE Index fell in the quarter and have produced negative returns over the last year.

Observations

- Global REITs underperformed in 2Q24, declining 2.4% compared to a 2.6% increase for global equities (MSCI World).
- U.S. REITs gained 0.1% in 2Q24, in contrast with the S&P 500 Index, which rose 4.3%.

Sector Quarterly Returns by Property Type

(6/30/24)



Source: NCREIF

- REITs continue to trade at a discount to NAV (-4.2%) and offer some relative value given this spread.
- Historically, global REITS have traded at a -4.0% discount to NAV.

Redemption queues

- Current ODCE redemption queues are approximately 17.3% of net asset value, with a median queue of 13.9%. This compares to the GFC when queues peaked at approximately 15% of NAV.
- Outstanding redemption requests for most large ODCE funds are approximately 11% to 20% of net asset value.
- For a large proportion of funds, these redemptions are partial redemptions, due to portfolio rebalancing and liquidity needs.
 For a smaller underperforming subset, redemption requests are full redemptions indicative of manager termination.

Transaction activity

- Transaction volume has flattened on a rolling four-quarter basis and remains well below five-year averages.
- In 2Q24, transaction volume increased slightly on a quarterover-quarter basis. Transaction volume remains significantly lower compared to 2022.
- The volatile rise in interest rates is the driving force behind the slowdown in transactions.

Callan Database Median and Index Returns* for Periods Ended 6/30/24

Private Real Assets	Quarter	Year to Date	1 Year	3 Years	5 Years	10 Years	20 Years
Real Estate ODCE Style	-0.4	-2.8	-9.6	1.6	2.8	6.0	5.4
NFI-ODCE (value-weighted, net)	-0.7	-3.2	-10.0	1.0	2.3	5.5	5.8
NCREIF Property	-0.3	-1.2	-5.5	2.3	3.4	6.1	7.3
NCREIF Farmland	-0.2	0.5	2.5	6.8	5.8	6.9	12.1
NCREIF Timberland	1.7	3.9	9.8	11.0	7.2	5.9	7.1
Public Real Estate							
Global Real Estate Style	-1.7	-2.1	6.6	-3.1	2.0	4.5	7.1
FTSE EPRA Nareit Developed	0.5	1.2	2.7	1.8	2.6	4.7	
Global ex-U.S. Real Estate Style	-3.3	-4.9	6.4	-7.5	-0.2	3.0	
FTSE EPRA Nareit Dev ex US	-5.6	-7.6	3.1	-9.6	-4.4	-0.5	
U.S. REIT Style	-0.2	-0.6	7.1	-0.1	4.9	6.6	8.6
FTSE EPRA Nareit Equity REITs	0.1	-0.1	7.8	0.3	3.9	5.9	7.7
FISE EFRA Naiell Equity REITS	0.1	-0.1	7.0	0.3	3.9	5.9	

*Returns less than one year are not annualized. Sources: Callan, FTSE Russell, NCREIF

Some Early Signs of a Rebound, but Challenges Remain

PRIVATE EQUITY | Ashley Kahn

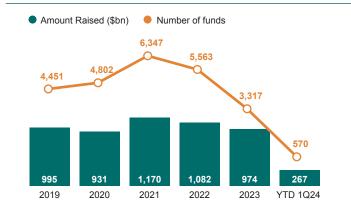
Fundraising The 2023 vintage year experienced the full impact of the denominator effect, with sharp declines in fundraising for the year. The number of funds raised dropped by ~50% from the highs of 2021–22. Heading into 2024, fundraising continues to fall. The number of funds raised in 1Q24 was down by 42% compared to 1Q23, although the dollar amount raised is consistent.

Buyouts ▶ 2023 represented the trough in buyout dealmaking, with early 2024 seeing improved liquidity conditions and higher public markets comps. Buyout activity was up by 7% in 1Q24 compared to 4Q23. Lower valuations, reflecting higher interest rates and a narrowing of the bid-ask spread, have led to greater activity.

Venture Capital and Growth Equity ▶ Venture capital and growth equity have shown mixed signs of recovery but no large snapback, yet. 1Q24 deal activity was down by 9% from 4Q23. While venture capital activity was steady, there was a significant slowdown in growth equity, with no large growth equity deals during the guarter. 1Q24 exhibited a notable recovery in latestage valuations. Similarly, early-stage valuations in 2024 also increased by 21% from the prior year.

Annual Fundraising

(3/31/24)



Source: Pltchbook

Exits ► In 2023, private equity exits declined dramatically by over 50% compared to their all-time record in 2021. Exit activity is up so far in 2024, by 15% compared to early 2023. IPO activity remains depressed, and the public offerings that do occur tend to be smaller in scale.

Returns ▶ Public equity's exceptional start to 2024 (led by the "Magnificent Seven" technology stocks) has left private equity in its wake. Over the long-term, private equity has outperformed public equity by 1%-3%.

Private Equity Performance (%) (Pooled Horizon IRRs through 3/31/24*)

Strategy	Quarter	1 Year	3 Years	5 Years	10 Years	20 Years
All Venture	1.4	-1.5	0.6	16.1	15.3	12.5
Growth Equity	1.0	3.9	3.5	14.2	13.3	13.4
All Buyouts	1.1	7.6	10.8	15.4	13.8	14.1
Mezzanine	1.8	10.4	11.1	11.5	10.9	11.3
Credit Opportunities	1.9	8.2	8.8	8.4	7.3	9.2
Control Distressed	0.8	4.5	12.9	13.8	11.0	11.3
All Private Equity	1.2	5.1	7.3	14.7	13.4	13.2

Note: Private equity returns are net of fees. Sources: LSEG/Cambridge and S&P Dow Jones Indices

Note: Transaction count and dollar volume figures across all private equity measures are preliminary figures and are subject to update in subsequent versions of the Capital Markets Review and other Callan publications.

^{*}Most recent data available at time of publication

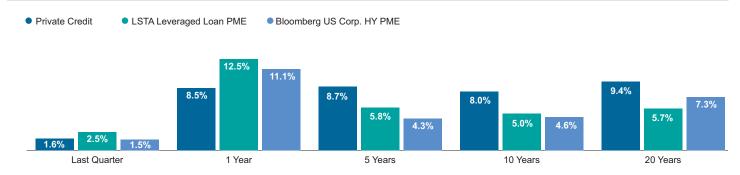
Gains Outpace Leveraged Loans Over Time; Spreads Contract

PRIVATE CREDIT | Cos Braswell and Daniel Brown

- Over the past 10 years private credit has generated a net IRR of 8.0%, outperforming leveraged loans as of 1Q24.
- Higher-risk strategies have performed better than lower-risk strategies.
- U.S. sub-investment grade corporate yields rose dramatically at the beginning of 2022 with yields peaking in September. This was a combination of higher interest rates due to tighter Fed policy and a widening of high yield spreads. Effective yields continued to drop in 1Q24.
- Spreads contracted during 1Q24, a continuation from late 2023, due to stronger credit conditions as the U.S. economic outlook improved.
- Default rates for U.S. corporate bonds and loans in 2024 continued to slightly rise but remained in the historical average of 3% - 4%.

- The Corporate Bond Market Distress Index (CMDI) rose rapidly during 2022, especially for investment grade bonds, but has fallen since then. In 2024, both the investment grade distress and high yield bond indicator continued to fall, a trend that has proceeded since last year.
- Private credit assets under management (AUM) stood at over \$1.5 trillion at the end of 2023, with Preqin forecasting the asset class will grow to over \$2.5 trillion by 2028 at a 11.13% compound annual growth rate from 2023 to 2028.
- Direct lending is expected to grow steadily through 2028 as investors increase their private credit allocations. Distressed exposure should grow a bit more slowly with other strategies such as opportunistic, special situations, and other niche diversifiers growing more quickly.

Private Credit Performance (%) (Pooled Horizon IRRs through 3/31/24*)



Private Credit Performance (%) (Pooled Horizon IRRs by Strategy through 3/31/24*)

Strategy	Quarter	1 Year	5 Years	10 Years	20 Years
Senior Debt	0.7	7.7	7.0	7.0	7.2
Mezzanine	1.8	10.4	11.6	10.9	11.3
Credit Opportunities	1.9	8.2	8.4	7.3	9.2
Total Private Credit	1.6	8.5	8.7	8.0	9.4

Source: LSEG/Cambridge

^{*}Most recent data available at time of publication

Hedge Funds Gain, Capitalizing on Volatility

HEDGE FUNDS/MACs | Sean Lee and Joe McGuane

U.S. equity markets moved higher during 2Q24, driven by a few large technology and Al-related companies along with generally healthy corporate earnings. Interest rates were volatile during the quarter, as signs of sticky inflation drove bond yields sharply higher, but as the quarter wore on, softer macroeconomic data points and lower inflation readings reversed much of the move. The 10-year U.S. Treasury rose from 4.21% to 4.36%, and the 30-year from 4.34% to 4.51%, as Fed minutes indicate an eagerness to cut rates in September, driven primarily by concerns about the employment outlook despite reasonably good current data.

The S&P 500 rose 4.3% during 2Q, as Technology, Communication Services, and Utilities were the best sectors. Materials, Energy, and Real Estate were down on concerns of higher rates for longer and the slowing economy. Highlighting the AI theme during 2Q, the top six technology stocks in the S&P 500 rose 17% on average primarily due to EPS revisions and multiple expansion, while the remaining 494 S&P 500 stocks saw a slight upward earnings-per-share revision and larger multiple compression driving a 1% decline on average.

Hedge Fund Style Group Returns

(6/30/24)



Sources: Callan, Credit Suisse, Federal Reserve

Hedge funds ended 2Q higher, as strategies with a higher correlation and a material beta to equities were successfully able to capitalize on volatility in markets. Equity hedge funds again saw positive performance, as managers that focused on technology saw the biggest gains. Managers with more

Callan Peer Group Median and Index Returns* for Periods Ended 6/30/24

Hedge Fund Universe	Quarter	1 Year	3 Years	5 Years	10 Years	15 Years
Callan Institutional Hedge Fund Peer Group	1.7	10.1	5.7	7.3	6.3	7.4
Callan Fund-of-Funds Peer Group	1.3	9.8	3.8	5.7	4.4	5.4
Callan Absolute Return FOF Style	1.8	8.8	5.1	5.4	4.0	5.1
Callan Core Diversified FOF Style	1.6	10.0	4.2	5.9	4.5	5.6
Callan Long/Short Equity FOF Style	0.5	11.1	0.8	5.6	5.3	5.6
HFRI Fund Weighted Index	0.5	9.8	2.9	6.7	4.8	5.3
HFRI Fixed Convertible Arbitrage	1.2	7.5	4.1	6.6	5.0	6.5
HFRI Distressed/Restructuring	2.1	10.5	2.9	6.5	4.1	6.4
HFRI Emerging Markets	1.8	8.6	-1.3	4.1	3.3	4.2
HFRI Equity Market Neutral	2.0	11.2	5.1	4.2	3.4	3.1
HFRI Event-Driven	0.2	10.5	2.7	6.2	4.5	6.1
HFRI Relative Value	1.4	8.4	3.7	4.6	3.9	5.6
HFRI Macro	-0.8	5.9	4.4	5.7	3.5	2.8
HFRI Equity Hedge	1.0	11.8	1.9	7.8	5.6	6.2
HFRI Multi-Strategy	1.1	11.0	-0.3	5.0	2.9	4.5
HFRI Merger Arbitrage	0.0	8.3	3.4	5.5	4.5	4.4
90-Day T-Bill + 5%	2.5	10.4	8.0	7.2	6.5	6.0

*Net of fees. Sources: Callan, Credit Suisse, Hedge Fund Research

directional equity exposure and those with more of a marketneutral focus also had a solid quarter. Relative value strategies also gained, as credit relative value and merger arbitrage strategies added to that performance. Macro strategies ended the quarter lower, as long positioning in developed market frontend rates detracted from performance, along with shorts in U.S. equities and long Japanese yen exposure.

Serving as a proxy for large, broadly diversified hedge funds with low-beta exposure to equity markets, the median Callan Institutional Hedge Fund Peer Group rose 1.7%. Within this style group of 50 peers, the average hedged credit manager gained 1.6%, driven by interest rate volatility. Meanwhile, the average hedged equity manager added 2.4%, as those focused on the Technology, Energy, and Health Care sectors drove performance. The median Callan Institutional hedged rates manager rose 1.6%, largely driven by relative value fixed income trades.

Within the HFRI Indices, the best-performing strategy was relative value, which was up 1.4%, as managers were positioned to profit off interest rate volatility during the quarter. Equity hedge gained 1.0%, as managers that were focused on tech, media, and telecom drove performance. Macro strategies ended the quarter slightly negative, as rates trading and long U.S. equities drove performance lower.

Across the Callan Hedge FOF database, the median Callan Long-Short Equity FOF ended 0.5% higher, as managers with a focus on the Technology sector drove performance. Meanwhile, the median Callan Core Diversified FOF rose 1.6%, driven by equity and event-driven strategies. The Callan Absolute Return FOF ended up 1.8%; equity beta strategies were behind this move.

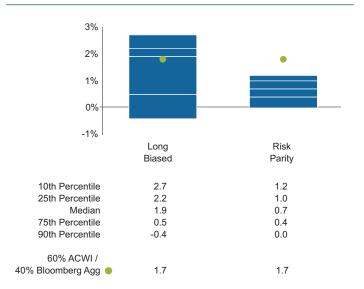
Since the Global Financial Crisis, liquid alternatives to hedge funds have become popular among investors for their attractive risk-adjusted returns that are similarly uncorrelated with traditional stock and bond investments but offered at a lower cost. Much of that interest is focused on rules-based, long-short strategies that isolate known risk premia such as value, momentum, and carry found across the various capital markets. These alternative risk

premia are often embedded, to varying degrees, in hedge funds as well as other actively managed investment products.

Within Callan's database of liquid alternative solutions, the median Callan MAC Long Biased manager rose 1.9%, as the strong equity rally pushed performance higher. The Callan MAC Risk Parity peer group rose 0.7%, as equities and fixed income drove the gains.

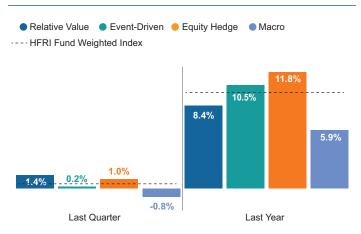
MAC Style Group Returns

(6/30/24)



Sources: Bloomberg, Callan, Eurekahedge, S&P Dow Jones Indices

HFRI Hedge Fund-Weighted Strategy Returns (6/30/24)



Source: HFRI

DC Index Starts Year with a Big Gain

DEFINED CONTRIBUTION | Scotty Lee

Performance: Index kicks off 2024 with a gain

 The Callan DC Index[™] gained 6.6% in 1Q24, which brought the Index's trailing one-year gain to 18.8%.

Growth Sources: Investment gains lead to rise in balances

- Balances within the DC Index rose by 6.6% after a 9.0% increase in the previous quarter.
- Investment gains (6.6%) were the sole driver of the gain, while net flows (0.03%) had a negligible effect.

Turnover: Net transfers increase

- Turnover (i.e., net transfer activity levels within DC plans) in the DC Index increased to 0.44% from the previous guarter's measure of 0.24%.

Net cash flow analysis: Stable value declines sharply

- Automatic features and their appeal to "do-it-for-me" investors typically result in target date funds (TDFs) receiving the largest net inflows in the DC Index, which was the case in 1Q24 as the asset allocation funds garnered 79.5% of quarterly net flows.
- Within equities, investors withdrew assets from U.S. small/ mid-cap equity (-12.7%) and company stock (-15.6%).
- Notably, stable value (-50.9%) saw relatively large outflows for the sixth consecutive quarter.

Equity allocation: Exposure rises

The Index's overall allocation to equity (73.5%) rose slightly from the previous quarter's level (72.5%). The current equity allocation continues to sit above the Index's historical average (68.6%).

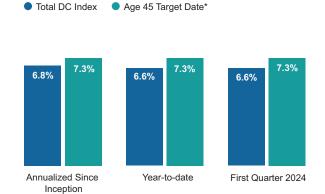
Asset allocation: Fixed income exposure falls

- U.S. large cap equity (27.8%) and target date funds (35.3%) were among the asset classes with the largest percentage increases in allocation.
- Stable value (6.6%) had the largest decrease in allocation from the previous quarter due to net outflows.

Underlying fund performance, asset allocation, and cash flows of more than 100 large defined contribution plans representing approximately \$400 billion in assets are tracked in the Callan DC Index.

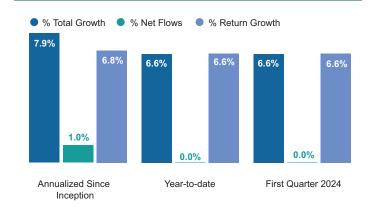
Investment Performance

(3/31/24)



Growth Sources

(3/31/24)



Net Cash Flow Analysis 1Q24)

(Top Two and Bottom Two Asset Gatherers)

Asset Class	Flows as % of Total Net Flows
Target Date Funds	79.5%
U.S. Large Cap	10.5%
Company Stock	-15.6%
Stable Value	-50.9%
Total Turnover**	0.4%

Data provided here is the most recent available at time of publication. Source: Callan DC Index

Note: DC Index inception date is January 2006.

- The Age 45 Fund transitioned from the average 2035 TDF to the 2040 TDF in June 2018.
- ** Total Index "turnover" measures the percentage of total invested assets (transfers only, excluding contributions and withdrawals) that moved between asset classes.

ASSET ALLOCATION AND PERFORMANCE

Asset Allocation and Performance

This section begins with an overview of the fund's asset allocation at the broad asset class level. This is followed by a top down performance attribution analysis which analyzes the fund's performance relative to the performance of the fund's policy target asset allocation. The fund's historical performance is then examined relative to funds with similar objectives. Performance of each asset class is then shown relative to the asset class performance of other funds. Finally, a summary is presented of the holdings of the fund's investment managers, and the returns of those managers over various recent periods.



Actual vs Target Asset Allocation As of June 30, 2024

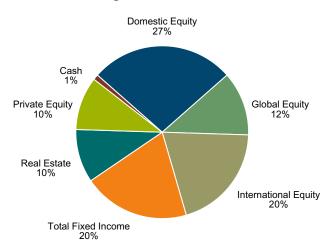
Total Fixed Income

The top left chart shows the Fund's asset allocation as of June 30, 2024. The top right chart shows the Fund's target asset allocation as outlined in the investment policy statement. The bottom chart ranks the fund's asset allocation and the target allocation versus the Callan Public Fund Spons- V Lg DB (>10B).

Private Credit 0% Private Equity 12% Real Estate 9% International Equity 20%

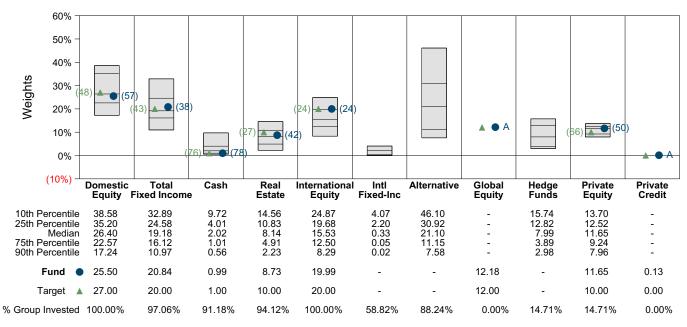
Actual Asset Allocation

Target Asset Allocation



Asset Class	\$000s Actual	Weight Actual	Target	Percent Difference	\$000s Difference
Domestic Equity	8,600,024	25.5%	27.0%	(1.5%)	(506,731)
Global Equity	4,107,554	12.2%	12.0%	0.2%	60,108
International Equity	6,741,527	20.0%	20.0%	(0.0%)	(4,217)
Total Fixed Incomé	7,028,831	20.8%	20.0%	`0.8%	283,087
Real Estate	2,943,426	8.7%	10.0%	(1.3%)	(429,446)
Private Equity	3,929,921	11.7%	10.0%	`1.7%′	`557,049
Private Credit	43,231	0.1%	0.0%	0.1%	43,231
Cash	334,206	1.0%	1.0%	(0.0%)	(3,081)
Total	33,728,720	100.0%	100.0%		, ,

Asset Class Weights vs Callan Public Fund Spons- V Lg DB (>10B)



NOTE: Global Equity and Private Credit do not have enough members in their respective peer groups to populate the peer rankings.

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2024, with the distribution as of March 31, 2024. 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

June 30, 2024 March 31, 2024 **Market Value** Weight Net New Inv. Inv. Return Market Value Weight **Domestic Equity** \$8,600,023,563 25.50% \$(238,810,931) \$169,678,403 \$8,669,156,092 25.79% \$6,560,184,909 19.45% \$277,209,597 \$6,514,557,993 19.38% **Large Cap Equity** \$(231,582,682) **Managed Large Cap Equity** 2.73% \$859.062.783 2.55% \$(101.510.337) \$41,743,090 \$918.830.031 918,830,031 **Eagle Capital** 859,062,783 2.55% (101,510,337)41,743,090 2.73% Northern Trust S&P 500 \$5,701,122,126 16.90% \$(130,072,344) \$235,466,508 \$5,595,727,962 16.65% \$(51,869,656) **Mid Cap Equity** \$1,057,339,502 3.13% \$(5,795,504) \$1,115,004,663 3.32% Northern Trust Russell Mid-Cap 12,781 0.00% (4,512,141)51.724 4.473.197 0.01% (29,072,079) 503,323,350 Artisan Partners 1.49% (603.159)532.998.588 1.59% Victory Mid Cap Value 554,003,371 1.64% (680, 205)(22,849,302)577,532,878 1.72% **Small Cap Equity** \$982,499,152 2.91% \$(1,432,746) \$(55,661,538) \$1,039,593,436 3.09% **Dimensional Fund Advisors** 0.99% (251,469)345,033,585 1.03% 332.511.488 (12.270.628)Wellington Small Cap 336.589.772 1.00% (563.427)(10.432.041)347.585.240 1.03% Riverbridge Partners SCG 313,397,893 0.93% (617,850)(32,958,868)346,974,611 1.03% \$4,107,553,825 12.18% \$(193,992,748) \$93,104,199 \$4,208,442,374 12.52% **Global Equity** Acadian Global Equity 1,047,110,285 3.10% (70,999,572)42,628,175 1,075,481,682 3.20% 1,026,189,719 3.04% (41,098,248) 25,870,889 1,041,417,078 3.10% **Epoch Investments** Harding-Loevner 1.033.224.504 3.06% (41,008,473)29,601,828 1,044,631,149 3.11% Longview 980,896 0.00% n (7,543)988,439 0.00% LSV Global Value 996,681,696 2.95% (40,886,455)(5,031,967)1,042,600,118 3.10% NT Global Equity Index 1,341,247 0.00% Ó (6,257) 1,347,504 0.00% Northern Trust Transition 2,025,478 0.01% 0 49,074 1,976,404 0.01% International Equity \$6,741,527,167 19.99% \$(175,353,798) \$58,908,702 \$6,857,972,263 20.40% All Country ex US \$4,613,009,989 13.68% \$(172,941,527) \$1,413,754 \$4,784,537,762 14.24% 691,803,730 2.05% (170,938,093)22,380,705 840,361,118 2.50% Arrowstreet Capital (690, 294)745,391,555 2.22% Baillie Gifford 739,729,782 2.19% (4,971,480)(1,253,223) Marathon Asset Mgmt 849,979,181 2.52% (5,657,133)856,889,537 2.55% NT MSCI World ex US 2,331,497,296 6.91% (10,338,338)2,341,895,552 6.97% (59.917)\$667,777,216 1.98% \$677,802,246 2.02% **Small Cap** \$(870,245) \$(9,154,785) 322,791,134 Mondrian 0.01% 940,433 0.96% 2,132,611 (321,598,956)Fidelity 141,072 0.00% (740)141,812 0.00% Principal Sm Cap Intl 346,146,887 1.03% (314,460)(8,407,954)354,869,300 1.06% Northern Trust Intl Small Cap 319,356,647 0.95% 321,043,171 (1.686.524)\$1,377,768,464 **Emerging Markets** \$1,442,997,237 4.28% \$(1,540,654) \$66,769,427 4.10% Lazard 741,964,517 2.20% (561,801)43,923,681 698,602,637 2.08% Fisher Investments 701,032,720 2.08% (978,853)22,845,746 679,165,827 2.02% \$17,742,725 0.05% \$17,863,791 0.05% **EAFE Composite** \$(1.372) \$(119,694) BlackRock EAFE Index 1.598.984 0.00% (1,372)(12.156)1.612.512 0.00% Northern Trust EAFE 12,068,833 0.04% n (111,932)12,180,765 0.04% **Dimensional Fund Advisors** 163,903 0.00% 0 (1,249)165,152 0.00% 421,092 0.00% (3,241)424,333 0.00% Jarislowsky Fraser 0 101,764 0.00% 0 (783)102,547 0.00% Lazard Asset-Intl Transition 3,388,148 0.01% 0 9,667 3,378,481 0.01% **Total Equity** \$19,449,104,555 \$19,735,570,730 57.66% \$(608,157,478) \$321,691,303 58.72%

NOTE: Net New Inv. column includes contributions, withdrawals, transfers, and manager fee payments. Inv. Return column does not include manager fees.



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2024, with the distribution as of March 31, 2024. 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

	June 30, 2024				March 31, 2024		
	Market Value	Weight	Net New Inv.	Inv. Return	Market Value	Weight	
Domestic Fixed-Income	\$4,791,416,148	14.21%	\$398,487,882	\$21,466,936	\$4,371,461,331	13.01%	
Short Duration	\$1,173,194,966	3.48%	\$399,861,946	\$10,445,078	\$762,887,941	2.27%	
SIT Short Duration FI	1,173,194,966	3.48%	399,861,946	10,445,078	762,887,941	2.27%	
Core Fixed Income	\$1,327,934,966	3.94%	\$(486,329)	\$5,255,306	\$1,323,165,989	3.94%	
PIMCO	665,901,093	1.97%	(248,805)	2,670,021	663,479,876	1.97%	
Northern Trust BB Agg	-139	(0.00%)	5,868	(10)	-5,997	(0.00%)	
Manulife Asset Management	662,034,012	`1.96%	(243,392)	2,585,295	659,692,110	1.96%	
Core Plus	\$2,290,286,216	6.79%	\$(887,735)	\$5,766,551	\$2,285,407,401	6.80%	
Loomis Sayles	1,130,178,614	3.35%	(499,150)	(387,807)	1,131,065,571	3.37%	
Prudential Core Plus	1,160,107,602	3.44%	(388,585)	6,154,358	1,154,341,830	3.43%	
Emerging Markets Debt	\$708,865,358	2.10%	\$(809,513)	\$1,540,545	\$708,134,327	2.11%	
Wellington EMD	708,865,358	2.10%	(809,513)	1,540,545	708,134,327	2.11%	
Global Fixed Income	\$1,528,549,529	4.53%	\$(903,549)	\$1,983,079	\$1,527,469,999	4.54%	
PIMCO Global	762,499,179	2.26%	(455,223)	2,508,979	760,445,423	2.26%	
AllianceBernstein Global	766,050,350	2.27%	(448,326)	(525,900)	767,024,577	2.28%	
Total Fixed Income	\$7.028.831.035	20.84%	\$396,774.820	\$24.990.559	\$6.607.065.657	19.66%	

NOTE: Net New Inv. column includes contributions, withdrawals, transfers, and manager fee payments. Inv. Return column does not include manager fees.



Investment Manager Asset Allocation

The table below contrasts the distribution of assets across the Fund's investment managers as of June 30, 2024, with the distribution as of March 31, 2024. 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

June 30, 2024 March 31, 2024 **Market Value** Weight Net New Inv. Inv. Return Market Value Weight 0.93% **REIT Composite** \$313,525,055 \$(274,622) \$9.988 \$313,789,689 0.93% Centersquare 209,386,702 0.62% (155,679)1,479,467 208,062,914 0.62% Cohen & Steers 104,138,352 0.31% (118,943)(1,469,479)105,726,774 0.31% **Core Real Estate** \$1,625,560,560 4.82% \$1,632,239,214 4.86% \$(2.734.002) \$(3.944.652) Principal Capital 855 667 490 2 54% (1,547,821)(5,782,764)862 998 076 2 57% (3,352,585)368 879 835 1 09% (446 809) 372 679 229 **UBS Trumbull Property** 1 11% JPMCB Strategic Property 401,013,234 1.19% (739, 372)5.190.697 396,561,909 1.18% Core Plus Real Estate \$222,146,788 0.66% \$(495,913) \$(4,972,775) \$227,615,477 0.68% UBS Trumbull Property G&I 222,146,788 227,615,477 0.66% (495,913)(4,972,775)0.68% \$743,948,974 Non-Core Real Estate 2.21% \$36,804,613 \$753,344 \$706,391,018 2.10% AEW Partners VI 750,393 0.00% 879 752,322 0.00% **AEW Partners VII** 3,826,651 0.01% (120,648)250,541 3,696,758 0.01% **AEW Partners VIII** 96,289) 15,499,295 15,836,173 0.05% 433,167 0.05% **AEW Partners IX** 66,590,408 0.20% 3,591,866 (159,920)63,158,462 0.19% Heitman VP III 399,514 0.00% 394,389 0.00% 5.124 0 Heitman VP IV 62,870 34.534.775 0.10% 34.495.068 0.10% (23.162)Heitman VP V 59,825,338 0.18% 1,010,953 51,429,535 0.15% 7,384,850 AG Core Plus II 818 0.00% 813 0.00% AG Core Plus III 1,146,553 0.00% 20 1,141,756 0.00% 4.777 AG Core Plus IV 0.05% (87,493)(1,071,552)18,352,911 17,193,866 0.05% AG Realty Fund X 50,319,578 0.15% 121,843 (1,314,679)51,512,414 0.15% AG Realty Value Fd XI 0.06% 0.05% 20.139.289 4.479.250 (59.886)15.719.925 Invesco US Income Fund (399,688)165.202.112 0.49% 165 953 238 0.49% (351439)Invesco VA Fund IV 0.01% 52.241 0.01% 1.846.730 (84,798)1.879.287 (132,389)Invesco VA Fund V 58,163,367 0.17% (427.591)58,723,347 0.17% Invesco Real Estate US Fund VI 36,751,396 0.11% (69,686)1,071,956 35,749,126 0.11% TA Associates Realty Fund X 790,473 0.00% 4,379 786,094 0.00% 0 0.03% 279,353 TA Associates Realty Fund XI 9,406,387 (15,746)9,142,780 0.03% TA Associates Realty Fund XII 95,235,944 0.28% 43 462 890,405 94,389,001 0.28% TA Associates Realty Fund XIII 36.361.251 0.11% 22.300.706 (222.153)14.282.698 0.04% (1,132,992) Westbrook RE Fund X 13.941.600 0.04% 15.127.584 0.05% (52.992)Westbrook RE Fund XI 55,686,359 0.17% (219,769)1,701,912 54,204,216 0.16% **Timber Composite** \$38,244,909 0.11% \$(142,052) \$(3,973,592) \$42,360,553 0.13% Hancock Timber Portfolio 38.244.909 0.11% (142,052)(3.973.592)42,360,553 0.13% **Total Real Estate** \$2,943,426,286 \$2,922,395,950 8.73% \$33,158,024 \$(12,127,687) 8.69% \$(42,568,481) **Private Equity** \$3,929,921,211 11.65% \$43,909,643 \$3,928,580,049 11.69% Pathway PEF XXIII 239,479,710 0.71% (227, 259)1,440,304 238,266,665 0.71% Pathway PEF SRS 2013 674,326,144 2.00% (50,359,009)726,999,291 (2.314.138) 2.16% Pathway PEF 2016 1 353 511 345 4 01% 37.657.502 1,316,780,093 (926.250)3 92% Pathway PEF 2021 44.554.701 353.561.625 1 05% 11.432.445 297 574 479 0.89% GCM Grosvenor Private Markets 152.136.229 0.45% 30.517 (3.915.173)156 020 885 0.46% GCM Grosvenor 2014 671,114,989 1.99% (35,641,182)(9,749,656)716,505,826 2.13% 1.44% 9,358,358 476,432,810 GCM Grosvenor 2018 Series 485,791,168 1.42% 0.10% Private Credit \$43,230,637 0.13% \$9.796.320 \$718.702 \$32,715,615 Blue Owl Lending Fd Series 20 18.762.153 0.06% 9.690.310 207.192 8.864.651 0.03% Grosvenor Private Credit Series 2023 24.468.484 0.07% 106.010 511,510 23.850.964 0.07% Cash \$334,205,958 0.99% \$(54,802,748) \$5,085,090 \$383,923,616 1.14% **Total Fund** \$33,728,719,682 100.00% \$384,741,735 \$33,610,251,617 100.00%

NOTE: Net New Inv. column includes contributions, withdrawals, transfers, and manager fee payments. Inv. Return column does not include manager fees.



\$(266,273,670)

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 June 30, 2024. 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 June 30, 2024

	Last	Last Last 3			Last 5		Last 10			
	Quarter		Year		Years		Years		Years	
Domestic Equity	2.01%	60	21.63%	40	7.59%	48	13.83%	29	11.66%	43
Russell 3000 Index	3.22%	12	23.13%	15	8.05%	28	14.14%	21	12.15%	23
Pub Pln- Dom Equity	2.16%		21.15%		7.52%		13.31%		11.54%	
Large Cap Equity	4.37%	38	25.72%	48	10.00%	29	15.00%	42	12.54%	53
Russell 1000 Index	3.57%	46	23.88%	56	8.74%	47	14.61%	46	12.51%	53
Callan Large Cap	2.89%		25.34%		8.54%		14.19%		12.76%	
Managed Large Cap Equity	4.81%	33	33.28%	5	9.81%	56	15.25%	44	12.26%	65
Callan Large Cap Core	4.08%		26.57%		10.31%		15.00%		12.79%	
Eagle Capital**	4.81%	33	33.28%	5	9.81%	56	15.25%	44	13.47%	25
S&P 500 Index	4.28%	47	24.56%	75	10.01%	55	15.05%	48	12.86%	48
Callan Large Cap Core	4.08%		26.57%		10.31%		15.00%		12.79%	
Northern Trust S&P 500	4.28%	47	24.52%	75	10.03%	55	15.03%	48	12.84%	48
S&P 500 Index	4.28%	47	24.56%	75	10.01%	55	15.05%	48	12.86%	48
Callan Large Cap Core	4.08%		26.57%		10.31%		15.00%		12.79%	
Mid Cap Equity	(4.65%)	77	11.33%	54	1.44%	75	10.11%	54	8.75%	60
Russell MidCap Index	(3.35%)	38	12.88%	44	2.37%	73	9.46%	74	9.04%	58
Callan Mid Cap Core	(3.84%)		11.45%		4.31%		10.56%		9.71%	
Artisan Partners	(5.46%)	84	11.28%	45	(4.75%)	78	9.07%	53	10.34%	50
Russell MidCap Growth Idx	(3.21%)	28	15.05%	17	(0.08%)	29	9.93%	34	10.51%	38
Callan Mid Cap Growth	(3.67%)		11.00%		(1.25%)		9.31%		10.34%	
Victory Mid Cap Value	(3.96%)	31	11.73%	57	-		-		-	
Russell MidCap Value Idx	(3.40%)	23	11.98%	47	3.65%	83	8.49%	84	7.60%	73
Callan Mid Cap Value	(4.45%)		11.87%		6.10%		10.30%		8.53%	
Small Cap Equity	(5.36%)	90	7.34%	77	0.45%	68	9.53%	43	9.52%	26
Russell 2000 Index	(3.28%)	55	10.06%	60	(2.58%)	94	6.94%	88	7.00%	90
Callan Small Cap Core	(3.15%)		11.48%		1.40%		8.99%		8.67%	
Dimensional Fund Advisors	(3.56%)	56	14.85%	32	7.60%	15	13.53%	7	8.46%	31
Russell 2000 Value Index	(3.64%)	57	10.90%	71	(0.53%)	90	7.07%	89	6.23%	97
Callan Small Cap Value	(3.48%)		13.22%		3.65%		9.38%		7.86%	
Wellington Small Cap	(3.00%)	47	9.84%	61	2.30%	39	8.71%	66	9.82%	18
Russell 2000 Index	(3.28%)	55	10.06%	60	(2.58%)	94	6.94%	88	7.00%	90
Callan Small Cap Core	(3.15%)		11.48%		1.40%		8.99%		8.67%	
Riverbridge Partners	(9.51%)	99	(2.24%)	100	(8.76%)	89	5.79%	92	9.58%	65
Russell 2000 Growth Index	(2.92%)	62	9.14%	58	(4.86%)	66	6.17%	87	7.39%	99
Callan Small Cap Growth	(2.33%)		10.21%		(2.49%)		8.46%		10.05%	

^{**}Benchmark changed to S&P 500 as of 1Q 2014.



Returns and Rankings for Periods Ended June 30, 2024

	Last		Last		Last 3		Last 5		Last 10	
	Quarter		Year		Years		Years		Years	
Global Equity	2.32%	43	20.73%	40	4.62%	60	10.40%	59	9.13%	58
Global Equity Benchmark (2)	2.38%	43	18.40%	49	4.70%	60	10.36%	59	8.18%	73
Acadian Global Equity	4.21%	11	28.93%	6	9.26%	8	14.37%	10	9.93%	36
Epoch Investments	2.59%	37	18.32%	49	3.96%	65	8.57%	86	8.39%	70
Harding-Loevner	3.00%	29	18.15%	51	(0.12%)	89	10.25%	61	10.01%	35
LSV Global Value	(0.52%)	79	17.44%	53	-		-		-	
MSCI ACWI Index	2.87%	31	19.38%	45	5.43%	46	10.76%	55	8.43%	69
Callan Global Equity	1.91%		18.18%		5.22%		11.11%		9.37%	
International Equity	0.84%	79	12.57%	52	0.15%	63	6.55%	54	4.66%	70
International Equity Benchmark (3)	0.92%	74	11.57%	73	0.19%	61	5.62%	73	3.92%	89
International Eq Custom BM (4)	1.14%	70	11.64%	72	(0.10%)	68	5.48%	74	3.95%	89
Pub Pln- Intl Equity	1.62%		12.62%		0.93%		6.63%		4.94%	
All Country ex US	(0.02%)	55	12.06%	42	0.39%	66	8.41%	26	6.17%	30
Arrowstreet Capital	1.74%	22	23.13%	4	7.64%	6	13.08%	3	8.27%	10
Baillie Gifford	(0.67%)	70	3.17%	95	(8.59%)	96	4.09%	90	-	
Marathon Asset Mgmt	(0.66%)	70	9.92%	64	1.16%	57	6.83%	54	-	
MSCI ACWI xUS IMI	0.92%	37	11.57%	49	0.19%	69	5.62%	76	3.92%	90
NT MSCI World ex US	(0.44%)	64	11.61%	48	-		-		-	
MSCI World xUS	(0.60%)	69	11.22%	55	2.82%	40	6.55%	59	4.27%	81
Non-U.S. Equity Database	0.22%		11.51%		1.83%		6.97%		5.28%	
Small Cap	(1.35%)	53	6.28%	70	(4.44%)	67	2.54%	85	3.39%	95
Principal Sm Cap Intl	(2.37%)	79	9.34%	46	(2.14%)	49	3.90%	77	-	
MSCI World Small Cap x US	(1.56%)	64	7.80%	63	(2.98%)	56	4.69%	66	4.04%	91
Callan Intl Small Cap	(1.20%)		9.11%		(2.26%)		5.59%		5.42%	
Emerging Markets	4.85%	47	17.54%	19	(1.76%)	28	5.27%	34	3.20%	79
Lazard Emerging Markets	6.29%	20	19.15%	13	3.83%	5	6.12%	23	3.51%	74
Fisher Investments	3.37%	68	15.70%	28	(7.14%)	72	4.16%	54	-	
MSCI Emerging Mkts Idx	5.00%	44	12.55%	49	(5.07%)	51	3.10%	71	2.79%	86
Callan Emerging Broad	4.54%		12.44%		(4.92%)		4.30%		4.26%	
Total Equity	1.67%	54	18.21%	50	4.34%	64	10.56%	57	8.72%	64
MSCI ACWI IMI Index	2.38%	43	18.40%	49	4.70%	60	10.36%	59	8.17%	73
Total Equity Custom Benchmark (5)	2.22%	45	17.95%	52	4.57%	61	10.31%	60	8.44%	69
Callan Global Equity	1.91%		18.18%		5.22%		11.11%		9.37%	

⁽⁵⁾ Total Equity Custom Benchmark: 49% Russell 3000 ldx, 36% MSCI ACWI ex US IMI ldx, and 15% MSCI AC World ldx through 9/30/2015; then 44% Russell 3000 ldx, 36% MSCI ACWI xUS IMI ldx, and 20% MSCI ACWI IMI thereafter.



⁽²⁾ Global Eqty Benchmark: MSCI World Idx through 6/30/2012; MSCI ACWI through 9/30/2015; then MSCI ACWI IMI thereafter.

⁽³⁾ International Equity Benchmark: MSCI ACWI exUS through 6/30/2013; then MSCI ACWI exUS IMI thereafter.

⁽⁴⁾ International Eq Custom BM: MSCI ACWI ex US through 6/30/13; MSCI ACWI ex US IMI Index through 9/30/2015; 35% MSCI EAFE Hedged, 35% MSCI ACWI ex US IMI, 20% MSCI Emerging Markets,

^{5%} MSCI ACWI ex US Small Cap, and 5% MSCI World ex US Small Cap through 12/31/17; then

^{35%} MSCI EAFE, 35% MSCI ACWI ex US IMI, 20% MSCI Emerging Markets,

^{5%} MSCI ACWI ex US Small Cap, and 5% MSCI World ex US Small Cap thereafter.

Returns and Rankings for Periods Ended June 30, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Domestic Fixed-Income	0.50%	26	3.95%	52	(2.37%)	65	0.71%	57	2.15%	39
Blmbg Aggregate Index	0.07%	82	2.63%	87	(3.02%)	89	(0.23%)	97	1.35%	94
Pub Pln- Dom Fixed	0.25%		4.02%		(2.04%)		0.86%		1.97%	
Short Duration	1.35%	9	-		-		-		-	
Blmbg Gov/Cred 1-3 Yr	0.95%	89	4.87%	94	0.55%	83	1.25%	94	1.35%	97
Callan Short Fixed Inc	1.09%		5.63%		1.10%		1.78%		1.80%	
SIT Short Duration FI	1.35%	9	-		-		-		-	
Blmbg Gov/Cred 1-3 Yr	0.95%	89	4.87%	94	0.55%	83	1.25%	94	1.35%	97
Callan Short Fixed Inc	1.09%		5.63%		1.10%		1.78%		1.80%	
Core Fixed Income	0.40%	8	3.58%	36	(2.67%)	60	0.13%	83	1.71%	70
Blmbg Aggregate Index	0.07%	93	2.63%	90	(3.02%)	90	(0.23%)	95	1.35%	98
Callan Core Bond FI	0.25%		3.34%		(2.61%)		0.38%		1.82%	
PIMCO	0.40%	8	3.68%	31	(2.61%)	52	0.26%	67	1.81%	51
Manulife Asset Management	0.39%	9	3.38%	46	(2.83%)	79	0.15%	82	-	
Blmbg Aggregate Index	0.07%	93	2.63%	90	(3.02%)	90	(0.23%)	95	1.35%	98
Callan Core Bond FI	0.25%		3.34%		(2.61%)		0.38%		1.82%	
Core Plus	0.25%	78	4.09%	61	(2.18%)	41	1.16%	26	2.50%	23
Loomis Sayles	(0.03%)	96	2.75%	95	(2.26%)	45	1.16%	26	2.24%	52
Prudential Core Plus	0.53%	23	5.43%	15	(2.11%)	35	1.15%	27	2.74%	15
Blmbg Aggregate Index	0.07%	96	2.63%	95	(3.02%)	90	(0.23%)	98	1.35%	100
Callan Core Plus FI	0.42%		4.31%		(2.33%)		0.91%		2.25%	
Emerging Markets Debt	0.22%	47	10.06%	36	(1.87%)	69	0.96%	53	3.46%	22
Wellington EMD	0.22%	47	10.06%	36	(1.87%)	69	0.96%	53	3.46%	22
EMBI Global Dvsfd Index	0.30%	44	9.23%	46	(2.60%)	86	(0.03%)	80	2.60%	51
Emerging Debt Database	0.19%		8.60%		(1.15%)		1.10%		2.61%	
Global Fixed Income	0.13%	53	5.18%	44	(1.40%)	51	0.66%	69	2.47%	47
PIMCO Global	0.33%	28	5.29%	41	(1.22%)	49	0.91%	46	2.66%	34
AllianceBernstein Global	(0.07%)	68	5.06%	48	(1.58%)	61	0.41%	89	2.28%	75
Blmbg Global Agg (Hedged)	0.12%	53	4.20%	75	(1.57%)	61	0.25%	90	2.02%	91
Callan Global FI (Hedged)	0.16%		4.99%		(1.30%)		0.77%		2.40%	
Total Fixed Income	0.39%	30	4.93%	21	(2.05%)	51	0.77%	55	2.38%	27
Blmbg Aggregate Index	0.07%	82	2.63%	87	(3.02%)	89	(0.23%)	97	1.35%	94
Total Fixed Inc Custom Benchmark (6)		78	3.67%	58	(2.59%)	71	(0.04%)	88	1.61%	84
Pub Pln- Dom Fixed	0.25%		4.02%		(2.04%)		0.86%		1.97%	

^{65%} Bloomberg Aggregate Index, 25% Bloomberg Global Aggregate Index Hedged, and 10% EMBI Global Diversified thereafter.



⁽⁶⁾ Total Fixed Inc Custom Benchmark: 55% Bloomberg Aggregate Index, 25% Bloomberg Global Aggregate Index Hedged, 10% Bloomberg US TIPS Index, and 10% EMBI Global Diversified through 9/30/2015; then

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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 June 30, 2024

	Last Quarter	-	Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
REIT Composite REIT Comp Custom Benchmark (7) Callan Global REITs	0.00% (1.15%) (1.68%)	7 34	7.63% 6.43% 6.58%	27 54	(0.70%) (1.98%) (3.12%)	13 21	4.08% 1.54% 1.97%	9 66	6.01% 4.11% 4.48%	9 61
Centersquare FTSE NAREIT Equity Index Callan Real Estate REIT	0.71% 0.06% (0.17%)	29 46	8.40% 7.79% 7.13%	22 36	1.19% 0.30% (0.15%)	9 33	5.36% 3.90% 4.92%	36 71	5.90% 6.58%	72
Cohen & Steers EPRA/NAREIT Dev REIT Idx Callan Global REITs	(1.39%) (2.15%) (1.68%)	40 65	6.31% 5.66% 6.58%	56 70	(2.86%) (3.85%) (3.12%)	44 67	2.62% 0.26% 1.97%	29 81	5.09% 2.99% 4.48%	23 81
Core Real Estate (Net) Principal Capital (Net) UBS Trumbull Property (Net) JPMCB Strategic Property (Net) NFI-ODCE Equal Weight Net NFI-ODCE Value Weight Net Callan OE Core Cmngld RE	(0.41%) (0.85%) (1.02%) 1.12% (0.82%) (0.66%) (0.60%)	41 61 73 5 60 54	(10.00%) (8.60%) (8.02%) (14.43%) (10.32%) (9.99%) (8.55%)	64 51 39 88 68 64	0.24% 1.46% (1.03%) (0.98%) 1.14% 1.02% 1.60%	71 52 87 87 59 60	1.51% 2.89% (0.66%) 0.83% 2.58% 2.27% 3.18%	86 52 92 88 61 67	4.90% 6.39% 2.81% 4.47% 5.80% 5.47% 5.96%	77 30 94 84 61 66
Core Plus Real Estate (Net) UBS Trumbull Property G&I (Net) Callan OE Core Cmngld RE	(2.40%) (2.40%) (0.60%)	99 99	(16.11%) (16.11%) (8.55%)	95 95	(3.26%) (3.26%) 1.60%	94 94	(0.18%) (0.18%) 3.18%	90 90	5.81% 5.81% 5.96%	61 61
Non-Core Real Estate AEW Partners VI AEW Partners VII AEW Partners VIII AEW Partners IX	0.12% (0.37%) 6.83% 2.80% (0.24%)	27 44 1 1 37	(8.44%) 2.45% (4.09%) 12.84% 7.11%	60 2 34 1	4.39% 1.08% (2.62%) 20.33% 10.05%	44 67 86 1 23	7.99% 30.83% (3.88%) 20.39%	33 1 90 1	11.12% 22.89% 5.10% - -	6 1 65
Heitman VP III Heitman VP IV Heitman VP V AG Core Plus III	1.30% (<mark>0.07%)</mark> 1.87% 0.42%	6 30 3 20	0.68% 1.41% (<mark>0.85%)</mark> 24.31%	14 9 20 1	1.63% 12.23% - (6.64%)	66 11 90	7.43% 13.11% - (7.54%)	38 16 92	12.16% - - 0.82%	4 85
AG Core Plus IV AG Realty Fund X AG Realty Value Fd XI Invesco US Income Fund	(5.86%) (2.55%) (0.47%) (0.24%)	99 86 46 37	(19.90%) (7.37%) 7.15% (8.03%)	90 51 1 56	(11.01%) 10.62% - -	93 21	(3.28%) 14.92% - -	90		00
Invesco VA Fund IV Invesco VA Fund V Invesco Real Estate US Fund VI TA Associates Realty Fund XI TA Associates Realty Fund XII	(4.38%) (0.73%) 3.00% 3.06% 0.94%	97 61 1 1	(36.72%) (28.54%) (11.26%) (26.18%) (4.71%)	97 94 73 93 40	(36.31%) (4.92%) - (6.07%) 15.65%	99 88 89 3	(21.72%) 2.50% - 2.14% -	97 71 73	- - - -	
TA Associates Realty Fund XIII Westbrook RE Fund X Westbrook RE Fund XI NCREIF Total Index Callan Real Est Val Add	(1.58%) (7.49%) 3.14% (0.26%) (0.49%)	81 100 1 38	(30.60%) 4.94% (5.53%) (7.01%)	95 1 42	(10.06%) 16.40% 2.33% 4.14%	92 2 64	(2.51%) 3.39% 4.82%	89 59	- - - 6.07% 6.46%	59
Timber Composite Hancock Timber Portfolio NCREIF Timberland Index	(9.38%) (9.38%) 1.71%		(10.88%) (10.88%) 9.84%		(0.99%) (0.99%) 10.99%		4.87% 4.87% 7.18%		5.84% 5.84% 5.89%	
Total Real Estate Real Estate Benchmark (8) Callan Tot Real Est DB	(0.41%) (0.26%) (0.62%)	42 32	(8.43%) (5.53%) (6.40%)	60 42	0.44% 2.33% 2.01%	67 49	3.10% 3.39% 3.20%	53 47	6.17% 6.07% 5.98%	41 44

Callan

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

⁽⁷⁾ REIT Comp Custom Benchmark:s 50% US Select REIT Index and 50% EPRA/NAREIT Developed REIT Index.

⁽⁷⁾ REIT Collin Custom Benchmarks 50% OS Select REIT index and 50% EPRANAREIT Developed REIT index.

(8) RE Bnmk: NFI-ODCE Eql Wgt Net to 5/31/99; No Bench to 9/30/03; 50% NFI-ODCE Eql

Wght Net and 50% US Select REIT Idx to 6/30/16; 80% NFI-ODCE Eql Wght Net and 20% US Select REIT Idx to 6/30/10;

20% NAREIT RE 50 Idx, 15% NCREIF Property Idx, 10% NCREIF Timberland Idx, 55% NFI-ODCE Eql Wgt Net to 6/30/12;

15% NAREIT RE 50 Idx, 15% NCREIF Property Idx, 10% NCREIF Timberland Idx, 60% NFI-ODCE Eql Wgt Net to 6/30/13; then NCREIF Property Idx thereafter.

The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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 June 30, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Private Equity	1.12%	66	4.64%	78	8.27%	36	15.82%	4	15.73%	1
Pathway PEF XXIII	0.60%	78	3.05%	85	(0.62%)	92	11.10%	27	13.69%	1
Pathway PEF SRS 2013	(0.32%)	92	2.49%	86	4.15%	77	15.32%	4	13.75%	1
Pathway PEF 2016	2.86%	28	7.95%	54	10.79%	30	19.31%	4	-	
Pathway PEF 2021	3.63%	14	11.75%	33	3.99%	78	-		-	
GCM Grosvenor Private Markets	(2.51%)	96	(19.67%)	99	(3.23%)	96	3.99%	88	9.03%	17
GCM Grosvenor 2014	(1.39%)	93	1.99%	86	13.52%	22	17.04%	4	11.67%	9
GCM Grosvenor 2018 Series	1.96%	49	10.15%	45	14.60%	21	13.66%	5	-	
Private Equity Benchmark (9)	1.17%	65	5.05%	77	1.45%	84	10.91%	29	12.44%	8
Callan Alterntive Inv DB	1.94%		8.62%		6.45%		8.23%		4.26%	
Private Credit	1.79%		-		-		-		-	
Blue Owl Lending Fd Series 20	1.12%		-		-		-		-	
Grosvenor Private Credit Series 2023	2.14%		-		-		-		-	
Private Credit Benchmark (10)	1.97%		-		-		-		-	
Cash	1.24%	78	5.70%	38	3.34%	15	2.27%	61	1.60%	78
FTSE 1 Mo T-Bill	1.35%	39	5.56%	68	3.11%	51	2.15%	81	1.48%	91
Callan Cash Database	1.35%		5.65%		3.13%		2.31%		1.77%	
Total Fund	1.16%	64	10.78%	27	2.97%	78	8.41%	38	7.73%	21
Policy Benchmark*	1.48%	47	11.27%	21	2.83%	81	7.76%	66	7.26%	42
Callan Public Fd V Lg DB	1.45%	••	10.23%		3.95%		8.12%		7.23%	-

⁽¹⁰⁾ Private Credit Benchmark: 50% Morningstar Leverage Loans, 50% Bloomberg High Yield Corp + 1% (1 Qtr. lag).



^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

⁽⁹⁾ Private Equity Benchmark: S&P 500 Index + 5% through 3/31/13; then S&P 500 Index + 3% through 6/30/2022; then S&P 500 + 3% (1 Qtr Lag) through 6/30/2023; thereafter Cambridge Global Private Equity.

	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Domestic Equity	21.63%	40	19.45%	11	(14.29%)	67	46.83%	22	4.52%	37
Russell 3000 Index	23.13%	15	18.95%	25	(13.87%)	59	44.16%	58	6.53%	14
Pub Pln- Dom Equity	21.15%		18.13%		(13.24%)		44.62%		3.45%	
Large Cap Equity	25.72%	48	20.69%	41	(12.28%)	51	43.28%	47	5.49%	54
Russell 1000 Index	23.88%	56	19.36%	47	(13.04%)	54	43.07%	47	7.48%	49
Callan Large Cap	25.34%		18.63%		(12.13%)		42.72%		7.17%	
Managed Large Cap Equity	33.28%	5	28.20%	3	(22.51%)	98	56.73%	2	(2.03%)	97
Callan Large Cap Core	26.57%		18.09%		(11.09%)		42.50%		6.42%	
Eagle Capital	33.28%	5	28.20%	3	(22.51%)	98	56.73%	2	(2.03%)	97
S&P 500 Index	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72	7.51%	40
Callan Large Cap Core	26.57%		18.09%		(11.09%)		42.50%		6.42%	
Northern Trust S&P 500	24.52%	75	19.57%	30	(10.54%)	44	40.70%	72	7.48%	40
S&P 500 Index	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72	7.51%	40
Callan Large Cap Core	26.57%		18.09%		(11.09%)		42.50%		6.42%	
Mid Cap Equity	11.33%	54	14.69%	43	(18.26%)	90	48.23%	64	4.63%	6
Russell MidCap Index	12.88%	44	14.92%	40	(17.30%)	88	49.80%	55	(2.24%)	45
Callan Mid Cap Core	11.45%		12.79%		(11.43%)		50.84%		(2.39%)	
Artisan Partners	11.28%	45	14.29%	88	(32.06%)	66	42.79%	56	25.12%	11
Russell MidCap Growth Idx	15.05%	17	23.13%	14	(29.57%)	63	43.77%	53	11.91%	53
Callan Mid Cap Growth	11.00%		18.58%		(27.84%)		44.27%		12.56%	
Small Cap Equity	7.34%	77	16.93%	18	(19.24%)	66	60.83%	52	(3.29%)	19
Russell 2000 Index	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44	(6.63%)	34
Callan Small Cap Core	11.48%		14.11%		(17.02%)		61.06%		(9.36%)	
Dimensional Fund Advisors	14.85%	32	16.81%	18	(7.13%)	19	84.61%	13	(18.00%)	50
Russell 2000 Value Index	10.90%	71	6.01%	85	(16.28%)	88	73.28%	40	(17.48%)	41
Callan Small Cap Value	13.22%		10.96%		(10.84%)		70.76%		(17.99%)	
Wellington Small Cap	9.84%	61	15.36%	36	(15.50%)	36	56.77%	70	(9.56%)	51
Russell 2000 Index	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44	(6.63%)	34
Callan Small Cap Core	11.48%		14.11%		(17.02%)		61.06%		(9.36%)	
Riverbridge Partners	(2.24%)	100	18.57%	40	(34.47%)	71	47.41%	72	18.35%	13
Russell 2000 Growth Index	9.14%	58	18.53%	40	(33.43%)	68	51.36%	64	3.48%	73
Callan Small Cap Growth	10.21%		17.21%		(30.39%)		53.86%		9.32%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Global Equity	20.73%	40	16.71%	59	(18.73%)	65	39.03%	60	3.02%	49
Global Equity Benchmark (2)	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43	1.17%	57
Acadian Global Equity	28.93%	6	18.61%	39	(14.72%)	43	44.25%	26	3.99%	47
Epoch Investments	18.32%	49	12.30%	89	(15.44%)	46	37.17%	68	(2.10%)	74
Harding-Loevner	18.15%	51	17.04%	56	(27.96%)	90	40.41%	47	16.44%	9
LSV Global Value	17.44%	53	-		-		-		-	
MSCI ACWI Index	19.38%	45	16.53%	60	(15.75%)	49	39.26%	58	2.11%	54
Callan Global Equity	18.18%		17.88%		(16.05%)		40.20%		2.87%	
International Equity	12.57%	52	14.77%	46	(22.24%)	74	40.42%	32	(2.64%)	40
International Equity Benchmark (3)	11.57%	73	12.47%	73	(19.86%)	40	37.18%	62	(4.74%)	71
International Eq Custom BM (4)	11.64%	72	12.31%	75	(20.49%)	44	37.07%	63	(4.43%)	67
Pub Pln- Intl Equity	12.62%		14.52%		(20.78%)		38.81%		(3.40%)	
All Country ex US	12.06%	42	17.02%	46	(22.85%)	71	45.49%	19	1.74%	29
Arrowstreet Capital	23.13%	4	17.10%	45	(13.51%)	17	49.25%	11	(0.65%)	39
Baillie Gifford	3.17%	95	14.51%	62	(35.34%)	97	41.81%	31	12.82%	6
Marathon Asset Mgmt	9.92%	64	16.77%	48	(19.34%)	53	45.22%	20	(7.47%)	76
MSCI ACWI xUS IMI	11.57%	49	12.47%	76	(19.86%)	57	37.18%	52	(4.74%)	61
NT MSCI World ex US	11.61%	48	17.89%	38	-		-		-	
MSCI World xUS	11.22%	55	17.41%	42	(16.76%)	32	33.60%	72	(5.42%)	67
Non-U.S. Equity Database	11.51%		16.52%		(19.13%)		37.43%		(2.87%)	
Small Cap	6.28%	70	9.75%	76	(25.18%)	56	39.42%	78	(6.83%)	70
Principal Sm Cap Intl	9.34%	46	12.51%	46	(23.83%)	43	38.43%	80	(6.64%)	67
MSCI World Small Cap x US	7.80%	63	10.05%	75	(23.02%)	41	42.28%	56	(3.20%)	48
Callan Intl Small Cap	9.11%		12.32%		(24.35%)		43.28%		(3.90%)	
Emerging Markets	17.54%	19	10.02%	22	(26.68%)	48	44.11%	50	(5.38%)	66
Lazard Emerging Markets	19.15%	13	13.69%	4	(17.37%)	9	42.41%	64	(15.56%)	95
Fisher Investments	15.70%	28	6.07%	43	(34.76%)	92	45.48%	38	5.24%	14
MSCI Emerging Mkts Idx	12.55%	49	1.75%	79	(25.28%)	41	40.90%	75	(3.39%)	50
Callan Emerging Broad	12.44%		4.66%		(27.16%)		44.29%		(3.32%)	
Total Equity	18.21%	50	17.29%	55	(18.07%)	62	43.04%	32	1.68%	55
MSCI ACWI IMI	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43	1.17%	57
Total Equity Custom Benchmark (5)	17.95%	52	16.14%	62	(16.54%)	55	41.00%	42	1.32%	56
Callan Global Equity	18.18%		17.88%		(16.05%)		40.20%		2.87%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Domestic Fixed-Income	3.95%	52	0.26%	53	(10.70%)	72	2.09%	52	9.04%	26
Blmbg Aggregate Index	2.63%	87	(0.94%)	87	(10.29%)	65	(0.33%)	96	8.74%	33
Pub Pln- Dom Fixed	4.02%		0.46%		(9.49%)		2.33%		7.81%	
Core Fixed Income	3.58%	36	(0.80%)	77	(10.28%)	51	0.25%	81	8.89%	68
Blmbg Aggregate Index	2.63%	90	(0.94%)	82	(10.29%)	53	(0.33%)	94	8.74%	76
Callan Core Bond FI	3.34%		(0.34%)		(10.27%)		1.14%		9.23%	
PIMCO	3.68%	31	(0.56%)	64	(10.42%)	61	0.22%	81	9.44%	41
Manulife Asset Management	3.38%	46	(1.15%)	91	(10.22%)	44	0.83%	62	8.92%	67
Blmbg Aggregate Index	2.63%	90	(0.94%)	82	(10.29%)	53	(0.33%)	94	8.74%	76
Callan Core Bond FI	3.34%		(0.34%)		(10.27%)		1.14%		9.23%	
Core Plus	4.09%	61	1.11%	33	(11.06%)	59	3.70%	36	9.15%	30
Loomis Sayles	2.75%	95	1.40%	21	(10.37%)	32	3.41%	44	9.70%	17
Prudential Core Plus	5.43%	15	0.83%	44	(11.77%)	81	3.98%	31	8.57%	49
Blmbg Aggregate Index	2.63%	95	(0.94%)	88	(10.29%)	30	(0.33%)	99	8.74%	43
Callan Core Plus FI	4.31%		0.42%		(10.87%)		3.33%		8.50%	
Emerging Markets Debt	10.06%	36	8.80%	58	(21.10%)	73	8.86%	64	1.98%	26
Wellington EMD	10.06%	36	8.80%	58	(21.10%)	73	8.86%	64	1.98%	26
EMBI Global Dvsfd Index	9.23%	46	7.39%	71	(21.22%)	73	7.53%	81	0.49%	35
Emerging Debt Database	8.60%		9.39%		(18.64%)		9.89%		(0.73%)	
Global Fixed Income	5.18%	44	0.66%	62	(9.45%)	44	2.51%	69	5.18%	58
PIMCO Global	5.29%	41	0.43%	67	(8.86%)	35	2.65%	62	5.79%	48
AllianceBernstein Global	5.06%	48	0.87%	54	(10.04%)	63	2.36%	70	4.58%	74
Blmbg Global Agg (Hedged)	4.20%	75	0.52%	65	(8.94%)	36	0.08%	91	6.07%	35
Callan Global FI (Hedged)	4.99%		0.95%		(9.66%)		3.28%		5.72%	
Total Fixed Income	4.93%	21	1.19%	32	(11.49%)	91	2.87%	44	7.45%	58
Blmbg Aggregate Index	2.63%	87	(0.94%)	87	(10.29%)	65	(0.33%)	96	8.74%	33
Total Fixed Inc Custom Benchmark (6)		58	0.25%	54	(11.09%)	81	0.55%	75	7.39%	58
Pub Pln- Dom Fixed	4.02%		0.46%		(9.49%)		2.33%		7.81%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
REIT Composite REIT Comp Custom Benchmark (7) Callan Global REITs	7.63% 6.43% 6.58%	27 54	(0.78%) (2.12%) (3.07%)	14 27	(8.31%) (9.60%) (12.24%)	4 13	38.88% 37.41% 34.28%	10 25	(10.20%) (16.58%) (10.75%)	44 88
Centersquare FTSE NAREIT Equity Index Callan Real Estate REIT	8.40% 7.79% 7.13%	22 36	0.22% (0.13%) (0.71%)	37 43	(4.62%) (6.27%) (6.26%)	29 51	38.56% 38.02% 36.73%	35 39	(9.56%) (13.04%) (7.04%)	73 84
Cohen & Steers EPRA/NAREIT Dev REIT ldx Callan Global REITs	6.31% 5.66% 6.58%	56 70	(1.99%) (3.59%) (3.07%)	25 64	(12.02%) (12.75%) (12.24%)	48 63	39.21% 34.83% 34.28%	6 48	(10.83%) (15.46%) (10.75%)	51 85
Core Real Estate (Net) Principal Capital (Net) UBS Trumbull Property (Net) JPMCB Strategic Property (Net) NFI-ODCE Equal Weight Net NFI-ODCE Value Weight Net Callan OE Core Cmngld RE	(10.00%) (8.60%) (8.02%) (14.43%) (10.32%) (9.99%) (8.55%)	64 51 39 88 68 64	(11.61%) (10.41%) (15.01%) (10.92%) (10.51%) (10.73%) (9.20%)	75 62 89 67 65 66	26.63% 27.55% 24.01% 27.40% 28.90% 28.31% 28.14%	59 57 68 58 47 49	6.04% 8.22% 1.53% 6.00% 7.97% 7.09% 8.44%	82 52 97 82 55 72	0.89% 2.03% (1.69%) 1.26% 1.70% 1.33% 2.57%	73 61 92 70 67 70
Core Plus Rea Estate (Net) UBS Trumbull Property G&I (Net) Callan OE Core Cmngld RE	(16.11%) (16.11%) (8.55%)	95 95	(17.11%) (17.11%) (9.20%)	96 96	30.22% 30.22% 28.14%	41 41	11.00% 11.00% 8.44%	23 23	(1.39%) (1.39%) 2.57%	92 92
Non-Core Real Estate AEW Partners VI AEW Partners VII AEW Partners VIII AEW Partners IX	(8.44%) 2.45% (4.09%) 12.84% 7.11%	60 2 34 1 1	(5.91%) 2.05% (5.56%) 6.18% 9.76%	49 25 48 15 13	32.05% (1.23%) 1.94% 45.41% 13.38%	42 91 90 25 79	16.03% 29.35% (11.07%) 25.48%	43 28 94 32	11.25% 187.00% (0.05%) 15.70%	15 2 64 10
Heitman VP III Heitman VP IV	0.68% 1.41%	14 9	1.56% (1.39%)	27 35	2.65% 41.38%	90 26	21.98% 24.73%	35 34	11.76% 4.98%	13 39
Heitman VP V AG Core Plus III AG Core Plus IV AG Realty Fund X AG Realty Value Fd XI	(0.85%) 24.31% (19.90%) (7.37%) 7.15%	20 1 90 51 1	(1.10%) (32.44%) (18.93%) (1.07%)	31 89 71 31	(3.11%) 8.52% 47.73%	92 83 24	(11.34%) 13.15% 32.03%	94 46 26	(6.36%) 6.14% 12.14%	80 33 13
Invesco US Income Fund Invesco VA Fund IV Invesco VA Fund V	(8.03%) (36.72%) (28.54%)	56 97 94	(63.21%) (7.70%)	100 52	- 10.98% 30.32%	81 47	- 0.51% 14.83%	82 44	- 13.22% 14.60%	12 11
Invesco Real Estate US Fund VI TA Associates Realty Fund XI TA Associates Realty Fund XII Westbrook RE Fund X Westbrook RE Fund XI	(11.26%) (26.18%) (4.71%) (30.60%) 4.94%	73 93 40 95 1	(28.66%) (4.37%) (5.98%) 14.37%	83 45 49 13	- 57.37% 69.76% 11.51% 31.40%	13 9 80 45	21.69% 28.12% 11.95%	35 30 47	10.23% - 8.12%	19 24
NCREIF Total Index Callan Real Est Val Add	(5.53%) (7.01%)	42	(6.60%) (6.62%)	50	21.45% 29.97%	71	7.37% 10.86%	69	2.69% 2.98%	52
Timber Composite Hancock Timber Portfolio NCREIF Timberland Index	(10.88%) (10.88%) 9.84%		(10.82%) (10.82%) 11.13%		22.11% 22.11% 12.01%		20.32% 20.32% 3.10%		8.65% 8.65% 0.34%	
Total Real Estate Real Estate Benchmark (8) Callan Tot Real Est DB	(8.43%) (5.53%) (6.40%)	60 42	(9.90%) (6.60%) (1.50%)	73 62	22.82% 21.45% 22.33%	48 52	13.62% 7.37% 9.86%	38 69	1.17% 2.69% 2.55%	56 49
Private Equity Pathway PEF XXIII Pathway PEF SRS 2013 Pathway PEF 2016 Pathway PEF 2021	4.64% 3.05% 2.49% 7.95% 11.75%	78 85 86 54 33	(3.76%) (16.04%) (7.12%) (3.46%) (2.45%)	53 97 71 53 53	26.03% 13.47% 18.67% 30.48% 3.16%	15 48 36 8 67	58.87% 81.56% 66.84% 63.16%	3 2 2 3	3.35% (5.01%) 8.20% 8.98%	23 52 16 15
GCM Grosvenor Private Markets GCM Grosvenor 2014 GCM Grosvenor 2018 Series Private Equity Benchmark (9) Callan Alterntive Inv DB	(19.67%) 1.99% 10.15% 5.05% 8.62%	99 86 45 77	(1.27%) 1.02% 5.89% 6.93% (1.14%)	50 46 29 27	14.26% 41.96% 29.03% (7.04%) 9.29%	47 4 9 88	41.43% 43.88% 16.63% 44.13% 20.17%	33 30 56 30	(5.11%) 4.35% 8.09% 11.54% (4.83%)	52 20 16 11
Cash FTSE 1 Mo T-Bill Callan Cash Database	5.70% 5.56% 5.65%	38 68	4.10% 3.70% 3.86%	19 58	0.31% 0.15% (0.09%)	23 40	0.07% 0.06% 0.35%	95 96	1.29% 1.37% 1.98%	95 93
Total Fund Policy Benchmark* Callan Public Fd V Lg DB	10.78% 11.27% 10.23%	27 21	7.76% 9.72% 7.51%	46 14	(8.54%) (10.94%) (5.13%)	80 97	32.71% 28.17% 27.92%	7 45	3.35% 4.27% 2.58%	36 24

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private



	1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023		1/4 Year Ended 9/2023	
Domestic Equity	2.01%	60	9.86%	34	11.59%	75	(2.74%)	11
Russell 3000 Index	3.22%	12	10.02%	27	12.07%	38	(3.25%)	34
Pub Pln- Dom Equity	2.16%		9.55%		11.88%		(3.37%)	
Large Cap Equity	4.37%	38	10.83%	59	11.53%	59	(2.55%)	44
Russell 1000 Index	3.57%	46	10.30%	64	11.96%	53	(3.15%)	65
Callan Large Cap	2.89%		11.50%		12.11%		(2.72%)	
Managed Large Cap Equity	4.81%	33	12.88%	27	10.51%	85	1.93%	2
Callan Large Cap Core	4.08%		11.78%		11.88%		(2.39%)	
Eagle Capital	4.81%	33	12.88%	27	10.51%	85	1.93%	2
S&P 500 Index	4.28%	47	10.56%	71	11.69%	58	(3.27%)	85
Callan Large Cap Core	4.08%		11.78%		11.88%		(2.39%)	
Northern Trust S&P 500	4.28%	47	10.52%	72	11.68%	59	(3.25%)	85
S&P 500 Index	4.28%	47	10.56%	71	11.69%	58	(3.27%)	85
Callan Large Cap Core	4.08%		11.78%		11.88%		(2.39%)	
Mid Cap Equity	(4.65%)	77	9.75%	45	9.99%	82	(3.27%)	28
Russell MidCap Index	(3.35%)	38	8.60%	57	12.82%	25	(4.68%)	74
Callan Mid Cap Core	(3.84%)		9.56%		11.87%		(3.84%)	
Artisan Partners	(5.46%)	84	10.63%	33	9.21%	91	(2.58%)	3
Russell MidCap Growth Idx	(3.21%)	28	9.50%	50	14.55%	17	(5.22%)	42
Callan Mid Cap Growth	(3.67%)		9.50%		11.98%		(5.99%)	
Victory Mid Cap Value	(3.96%)	31	9.32%	40	10.67%	60	(3.84%)	51
Russell MidCap Value Idx	(3.40%)	23	8.23%	66	12.11%	35	(4.46%)	80
Callan Mid Cap Value	(4.45%)		8.70%		11.47%		(3.82%)	
Small Cap Equity	(5.36%)	90	3.84%	85	13.20%	42	(3.51%)	33
Russell 2000 Index	(3.28%)	55	5.18%	65	14.03%	19	(5.13%)	78
Callan Small Cap Core	(3.15%)		5.77%		12.78%		(3.95%)	
Dimensional Fund Advisors	(3.56%)	56	3.18%	86	15.52%	17	(0.10%)	21
Russell 2000 Value Index	(3.64%)	57	2.90%	91	15.26%	20	(2.96%)	63
Callan Small Cap Value	(3.48%)		5.00%		13.54%		(1.98%)	
Wellington Small Cap	(3.00%)	47	4.49%	77	13.64%	30	(4.63%)	64
Russell 2000 Index	(3.28%)	55	5.18%	65	14.03%	19	(5.13%)	78
Callan Small Cap Core	(3.15%)		5.77%		12.78%		(3.95%)	
Riverbridge Partners	(9.51%)	99	4.11%	89	10.18%	66	(5.82%)	34
Russell 2000 Growth Index	(2.92%)	62	7.58%	50	12.75%	27	(7.32%)	67
Callan Small Cap Growth	(2.33%)		7.48%		11.13%		(6.53%)	



	1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023		1/4 Year Ended 9/2023	
Global Equity	2.32%	43	8.98%	45	11.01%	55	(2.47%)	25
Global Equity Benchmark (2)	2.38%	43	7.72%	57	11.14%	52	(3.40%)	48
Acadian Global Equity	4.21%	11	13.05%	8	10.24%	73	(0.73%)	5
Epoch Investments	2.59%	37	6.92%	67	11.04%	54	(2.85%)	34
Harding-Loevner	3.00%	29	6.93%	67	13.15%	19	(5.19%)	77
LSV Global Value	(0.52%)	79	8.97%	45	9.63%	81	(1.18%)	7
MSCI ACWI Index	2.87%	31	8.20%	54	11.03%	54	(3.40%)	48
Callan Global Equity	1.91%		8.48%		11.29%		(3.52%)	
International Equity	0.84%	79	4.98%	43	10.17%	43	(3.47%)	33
International Equity Benchmark (3)	0.92%	74	4.33%	66	9.81%	56	(3.49%)	33
International Eq Custom BM (4)	1.14%	70	4.27%	69	9.69%	57	(3.49%)	33
Pub Pln- Intl Equity	1.62%		4.76%		9.98%		(3.95%)	
All Country ex US	(0.02%)	55	6.06%	35	9.98%	55	(3.91%)	48
Arrowstreet Capital	1.74%	22	10.37%	6	7.72%	85	1.80%	4
Baillie Gifford	(0.67%)	70	3.46%	75	11.47%	27	(9.93%)	95
Marathon Asset Mgmt	(0.66%)	70	5.31%	49	9.37%	68	(3.93%)	49
MSCI ACWI xUS IMI	0.92%	37	4.33%	64	9.81%	59	(3.49%)	41
NT MSCI World ex US	(0.44%)	64	5.68%	43	10.52%	44	(4.01%)	50
MSCI World xUS	(0.60%)	69	5.59%	45	10.51%	44	(4.10%)	53
Non-U.S. Equity Database	0.22%		5.27%		10.24%		(4.01%)	
Small Cap	(1.35%)	53	2.18%	69	10.32%	61	(4.43%)	56
Principal Sm Cap Intl	(2.37%)	79	5.37%	39	9.86%	77	(3.25%)	41
MSCI World Small Cap x US	(1.56%)	64	2.58%	67	10.60%	56	(3.48%)	46
Callan Intl Small Cap	(1.20%)		4.59%		10.88%		(3.82%)	
Emerging Markets	4.85%	47	2.72%	60	10.89%	8	(1.59%)	22
Lazard Emerging Markets	6.29%	20	2.65%	61	9.67%	17	(0.42%)	13
Fisher Investments	3.37%	68	2.80%	60	12.18%	5	(2.94%)	35
MSCI Emerging Mkts Idx	5.00%	44	2.37%	68	7.86%	58	(2.93%)	34
Callan Emerging Broad	4.54%		3.41%		8.11%		(3.62%)	
Total Equity	1.67%	54	7.95%	56	10.96%	57	(2.94%)	36
MSCI ACWI IMI	2.38%	43	7.72%	57	11.14%	52	(3.40%)	48
Total Equity Custom Benchmark (5)	2.22%	45	7.51%	59	11.07%	53	(3.37%)	48
Callan Global Equity	1.91%		8.48%		11.29%		(3.52%)	



	1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023		1/4 Year Ended 9/2023	
Domestic Fixed-Income	0.50%	26	(0.24%)	52	7.17%	25	(3.25%)	80
Blmbg Aggregate Index	0.07%	82	(0.78%)	89	6.82%	38	(3.23%)	79
Pub Pln- Dom Fixed	0.25%		(0.20%)		6.48%		(2.66%)	
Short Duration	1.35%	9	0.76%	43	2.45%	86	-	
Blmbg Gov/Cred 1-3 Yr	0.95%	89	0.42%	87	2.69%	79	0.73%	62
Callan Short Fixed Inc	1.09%		0.73%		2.93%		0.83%	
SIT Short Duration FI	1.35%	9	0.76%	43	2.45%	86	-	
Blmbg Gov/Cred 1-3 Yr	0.95%	89	0.42%	87	2.69%	79	0.73%	62
Callan Short Fixed Inc	1.09%		0.73%		2.93%		0.83%	
Core Fixed Income	0.40%	8	(0.42%)	42	7.06%	31	(3.23%)	70
Blmbg Aggregate Index	0.07%	93	(0.78%)	93	6.82%	66	(3.23%)	70
Callan Core Bond FI	0.25%		(0.45%)		6.95%		(3.12%)	
PIMCO	0.40%	8	(0.32%)	33	7.06%	31	(3.24%)	72
Manulife Asset Management	0.39%	9	(0.53%)	55	7.00%	40	(3.26%)	75
Blmbg Aggregate Index	0.07%	93	(0.78%)	93	6.82%	66	(3.23%)	70
Callan Core Bond FI	0.25%		(0.45%)		6.95%		(3.12%)	
Core Plus	0.25%	78	(0.05%)	43	7.46%	20	(3.33%)	86
Loomis Sayles	(0.03%)	96	(0.26%)	67	7.53%	16	(4.17%)	98
Prudential Core Plus	0.53%	23	0.14%	20	7.39%	27	(2.49%)	18
Blmbg Aggregate Index	0.07%	96	(0.78%)	94	6.82%	81	(3.23%)	81
Callan Core Plus FI	0.42%		(0.11%)		7.17%		(2.87%)	
Emerging Markets Debt	0.22%	47	2.18%	44	9.70%	37	(2.02%)	48
Wellington EMD	0.22%	47	2.18%	44	9.70%	37	(2.02%)	48
EMBI Global Dvsfd Index	0.30%	44	2.04%	48	9.16%	53	(2.23%)	54
Emerging Debt Database	0.19%		1.93%		9.27%		(2.13%)	
Global Fixed Income	0.13%	53	0.25%	45	6.49%	70	(1.61%)	48
PIMCO Global	0.33%	28	0.29%	42	6.22%	75	(1.48%)	44
AllianceBernstein Global	(0.07%)	68	0.21%	51	6.76%	41	(1.73%)	54
Blmbg Global Agg (Hedged)	0.12%	53	0.01%	70	5.99%	81	(1.82%)	60
Callan Global FI (Hedged)	0.16%		0.23%		6.73%		(1.64%)	
Total Fixed Income	0.39%	30	0.15%	27	7.28%	19	(2.72%)	52
Blmbg Aggregate Index	0.07%	82	(0.78%)	89	6.82%	38	(3.23%)	79
Total Fixed Inc Custom Benchmark (6)	0.10%	78	(0.30%)	55	6.84%	37	(2.78%)	54
Pub Pln- Dom Fixed	0.25%		(0.20%)		6.48%		(2.66%)	



	1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023		1/4 Year Ended 9/2023	
REIT Composite	0.00%	7	(0.27%)	34	15.63%	43	(6.67%)	91
REIT Comp Custom Benchmark (7)	(1.15%)	34	(0.71%)	52	15.97%	34	(6.50%)	86
Callan Global REITs	(1.68%)		(0.64%)		15.41%		(5.43%)	
Centersquare	0.71%	29	(0.34%)	30	16.36%	54	(7.18%)	37
FTSE NAREIT Equity Index	0.06%	46	(0.20%)	22	16.22%	59	(7.13%)	36
Callan Real Estate REIT	(0.17%)		(0.89%)		16.45%		(7.41%)	
Cohen & Steers	(1.39%)	40	(0.01%)	26	14.74%	61	(6.04%)	76
EPRA/NAREIT Dev REIT Idx	(2.15%)	65	(1.05%)	69	15.59%	45	(5.59%)	57
Callan Global REITs	(1.68%)		(0.64%)		15.41%		(5.43%)	
Core Real Estate (Net)	(0.41%)	41	(2.81%)	75	(3.99%)	45	(3.16%)	72
Principal Capital (Net)	(0.85%)	61	(1.93%)	65	(2.24%)	30	(3.85%)	87
UBS Trumbull Property (Net)	(1.02%)	73	(1.79%)	60	(3.95%)	45	(1.49%)	47
JPMCB Strategic Property (Net)	1.12%	5	(5.55%)	93	(7.40%)	81	(3.25%)	73
NFI-ODCE Equal Weight Net	(0.82%)	60	(2.38%)	68	(5.37%)	64	(2.12%)	64
NFI-ODCE Value Weight Net	(0.66%)	54	(2.58%)	73	(5.00%)	59	(2.10%)	64
Callan OE Core Cmngld RE	(0.60%)		(1.57%)		(4.28%)		(1.60%)	
Core Plus Real Estate (Net)	(2.40%)	99	(2.77%)	75	(7.68%)	82	(4.25%)	92
UBS Trumbull Property G&I (Net)	(2.40%)	99	(2.77%)	75	(7.68%)	82	(4.25%)	92
Callan OE Core Cmngld RE	(0.60%)		(1.57%)		(4.28%)		(1.60%)	
Non-Core Real Estate	0.12%	27	(4.20%)	81	(4.31%)	67	(0.24%)	38
AEW Partners VI	(0.37%)	44	1.38%	10	(0.10%)	22	1.54%	21
AEW Partners VII	6.83%	1	(0.17%)	36	(6.01%)	77	(4.31%)	70
AEW Partners VIII	2.80%	1	6.93%	5	0.09%	21	2.56%	20
AEW Partners IX	(0.24%)	37	4.15%	6	2.21%	14	0.85%	26
Heitman VP III	1.30%	6	(9.15%)	95	11.32%	3	(1.72%)	47
Heitman VP IV	(0.07%)	30	0.04%	29	(0.18%)	22	1.62%	21
Heitman VP V	1.87%	3	(1.76%)	57	(1.52%)	41	0.60%	31
AG Core Plus III	0.42%	20	5.56%	5	2.57%	13	14.33%	6
AG Core Plus IV	(5.86%)	99	(1.52%)	54	(5.30%)	72	(8.77%)	86
AG Realty Fund X	(2.55%)	86	(1.13%)	50	(2.55%)	54	(1.34%)	45
AG Realty Value Fd XI	(0.47%)	46	(2.65%)	71	2.80%	13	7.57%	15
Invesco US Income Fund	(0.24%)	37	(1.78%)	57	(7.05%)	79	0.98%	23
Invesco VA Fund IV	(4.38%)	97	(12.93%)	97	(23.71%)	100	(0.36%)	40
Invesco VA Fund V	(0.73%)	61	(23.73%)	99	(3.60%)	63	(2.09%)	56
Invesco Real Estate US Fund VI	3.00%	1	(13.44%)	97	0.03%	22	(0.49%)	41
TA Associates Realty Fund XI	3.06%	1	0.56%	21	(27.87%)	100	(1.25%)	45
TA Associates Realty Fund XII	0.94%	10	(1.44%)	53	(3.17%)	60	(1.09%)	44
TA Associates Realty Fund XIII	(1.58%)	81	(6.79%)	87	-		-	
Westbrook RE Fund X	(7.49%)	100	(17.03%)	98	(8.79%)	85	(0.88%)	44
Westbrook RE Fund XI	3.14%	1	(1.16%)	50	2.91%	12	0.03%	33
NCREIF Total Index	(0.26%)	38	(0.98%)	49	(3.02%)	57	(1.37%)	45
Callan Real Est Val Add	(0.49%)		(1.15%)		(1.86%)		(1.85%)	
Timber Composite	(9.38%)		(3.74%)		4.71%		(2.43%)	
Hancock Timber Portfolio	(9.38%)		(3.74%)		4.71%		(2.43%)	
NCREIF Timberland Index	1.71%		2.12%		4.34%		1.37%	
Total Real Estate	(0.41%)	42	(2.76%)	81	(2.86%)	68	(2.66%)	73
Real Estate Benchmark (8)	(0.26%)	32	(0.98%)	56	(3.02%)	69	(1.37%)	61
Callan Tot Real Est DB	(0.62%)		(0.66%)		(1.15%)		(0.26%)	



	1/4 Year Ended 6/2024		1/4 Year Ended 3/2024		1/4 Year Ended 12/2023		1/4 Year Ended 9/2023	
Private Equity	1.12%	66	1.47%	81	0.04%	50	1.93%	64
Pathway PEF XXIII	0.60%	78	0.01%	93	(0.57%)	53	3.00%	57
Pathway PEF SRS 2013	(0.32%)	92	1.71%	79	0.52%	48	0.57%	76
Pathway PEF 2016	2.86%	28	0.86%	91	1.17%	43	2.85%	57
Pathway PEF 2021	3.63%	14	2.16%	74	1.50%	38	4.00%	44
GCM Grosvenor Private Markets	(2.51%)	96	(4.22%)	97	(10.89%)	94	(3.45%)	95
GCM Grosvenor 2014	(1.39%)	93	3.00%	63	(1.42%)	55	1.86%	64
GCM Grosvenor 2018 Series	1.96%	49	2.92%	63	2.49%	33	2.41%	59
Private Equity Benchmark (9)	1.17%	65	2.61%	67	(0.39%)	52	1.60%	66
Callan Alterntive Inv DB	1.94%		3.97%		0.00%		3.86%	
Private Credit	1.79%		-		-		-	
Blue Owl Lending Fd Series 20	1.12%		-		-		-	
Grosvenor Private Credit Series 2023	2.14%		-		-		-	
Private Credit Benchmark (10)	1.97%		-		-		-	
Cash	1.24%	78	1.36%	38	1.35%	93	1.63%	6
FTSE 1 Mo T-Bill	1.35%	39	1.36%	40	1.38%	79	1.36%	44
Callan Cash Database	1.35%		1.35%		1.56%		1.35%	
Total Fund	1.16%	64	4.57%	25	7.16%	38	(2.28%)	69
Policy Benchmark*	1.48%	47	4.51%	28	7.78%	14	(2.66%)	85
Callan Public Fd V Lg DB	1.45%	-	3.83%	-	6.89%		(1.85%)	

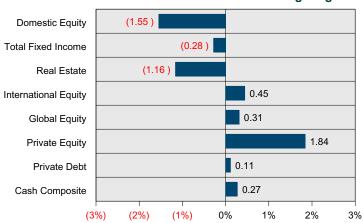
^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



Quarterly Total Fund Relative Attribution - June 30, 2024

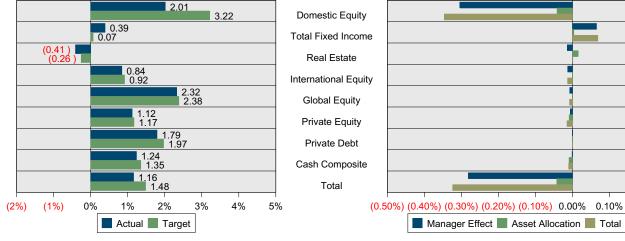
The following analysis approaches Total Fund Attribution from the perspective of relative return. Relative return attribution separates and quantifies the sources of total fund excess return relative to its target. This excess return is separated into two relative attribution effects: Asset Allocation Effect and Manager Selection Effect. The Asset Allocation Effect represents the excess return due to the actual total fund asset allocation differing from the target asset allocation. Manager Selection Effect represents the total fund impact of the individual managers excess returns relative to their benchmarks.





Actual vs Target Returns

Relative Attribution by Asset Class



Relative Attribution Effects for Quarter ended June 30, 2024

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity Total Fixed Income	25% 20% 9%	27% 20% 10%	2.01% 0.39% (0.41%)	3.22% 0.07%	(0.30%) 0.06% (0.01%)	(0.04%) 0.00% 0.02%	(0.35%) 0.07% 0.00%
Real Estate International Equity Global Equity	20% 12%	20% 12%	0.84% 2.32%	(<mark>0.26%)</mark> 0.92% 2.38%	(0.01%) (0.01%)	(0.00%) (0.00%)	(0.01%) (0.01%)
Private Equity Private Debt Cash Composite	12% 0% 1%	10% 0% 1%	1.12% 1.79% 1.24%	1.17% 1.97% 1.35%	(0.01%) (0.00%) (0.00%)	(0.01%) 0.00% (0.01%)	(0.01%) 0.00% (0.01%)
Total	170	. 70	1.16% =		+ (0.28%) +	(0.04%)	(0.32%)

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.

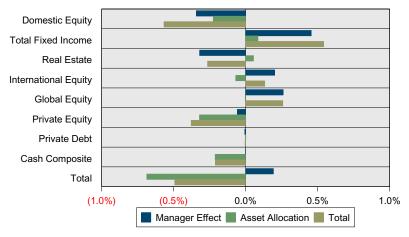


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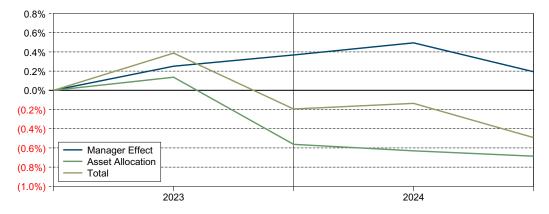
Cumulative Total Fund Relative Attribution - June 30, 2024

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

One Year Relative Attribution Effects



Cumulative Relative Attribution Effects



One Year Relative Attribution Effects

Asset Class Domestic Equity Total Fixed Income Real Estate International Equity Global Equity	Effective Actual Weight 26% 19% 9% 20% 12%	Effective Target Weight 27% 20% 10% 21%	Actual Return 21.63% 4.93% (8.43%) 12.57% 20.73%	Target Return 23.13% 2.63% (5.53%) 11.57% 18.40%	Manager Effect (0.34%) 0.46% (0.32%) 0.20% 0.26%	Asset Allocation (0.22%) 0.09% 0.06% (0.07%) (0.00%)	Total Relative Return (0.57%) 0.54% (0.26%) 0.13% 0.26%
Private Equity Private Debt Cash Composite	12% 0% 1%	8% 0% 1%	4.64% - 5.70%	5.05% - 5.56%	(0.06%) (0.01%) 0.00%	(0.32%) 0.00% (0.21%)	(0.38%) (0.00%) (0.21%)
Total			10.78% =	11.27%	+ 0.19% +	(0.69%)	(0.49%)

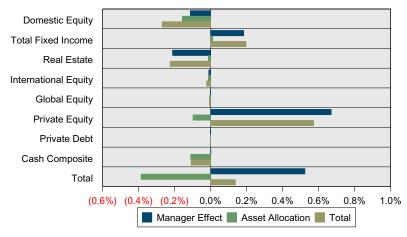
^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



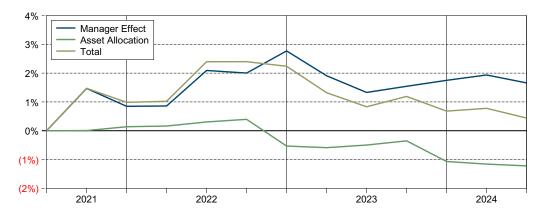
Cumulative Total Fund Relative Attribution - June 30, 2024

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Three Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Three Year Annualized Relative Attribution Effects

Asset Class	Effective Actual Weight	Effective Target Weight	Actual Return	Target Return	Manager Effect	Asset Allocation	Total Relative Return
Domestic Equity	26%	27%	7.59%	8.05%	(0.11%)	(0.16%)	(0.27%)
Total Fixed Income	19%	20%	(2.05%)	(3.02%)	0.18%	0.01%	0.20%
Real Estate	10%	10%	0.44%	2.33%	(0.21%)	(0.01%)	(0.23%)
International Equity	20%	22%	0.15%	0.19%	(0.01%)	(0.01%)	(0.02%)
Global Equity	12%	12%	4.62%	4.70%	(0.00%)	(0.01%)	(0.01%)
Private Equity	12%	8%	8.27%	1.45%	0.67%	(0.10%)	0.57%
Private Debt	0%	0%	-	-	(0.00%)	0.00%	(0.00%)
Cash Composite	1%	1%	3.34%	3.11%	`0.00%	(0.11%)	_(0.11%)
Total			2.97% =	2.83% -	+ 0.52% +	(0.39%)	0.14%

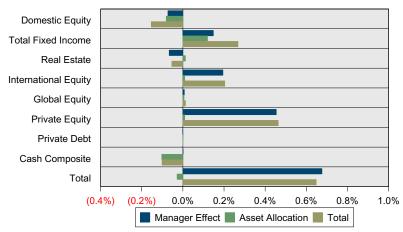
^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



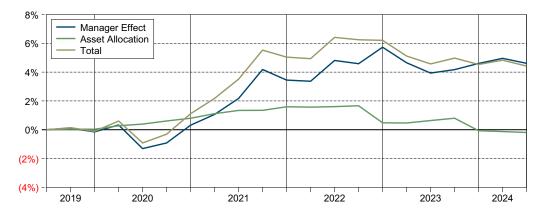
Cumulative Total Fund Relative Attribution - June 30, 2024

The charts below accumulate the Total Fund Attribution Analysis (shown earlier) over multiple periods to examine the cumulative sources of excess total fund performance relative to target. These cumulative results quantify the longer-term sources of total fund excess return relative to target by asset class. These relative attribution effects separate the cumulative sources of total fund excess return into Asset Allocation Effect and Manager Selection Effect.

Five Year Annualized Relative Attribution Effects



Cumulative Relative Attribution Effects



Five Year Annualized Relative Attribution Effects

Asset Class Domestic Equity Total Fixed Income Real Estate International Equity Global Equity	Effective Actual Weight 26% 19% 10% 20% 12%	Effective Target Weight 27% 20% 10% 22% 12%	Actual Return 13.83% 0.77% 3.10% 6.55% 10.40%	Target Return 14.14% (0.23%) 3.39% 5.62% 10.36%	Manager Effect (0.07%) 0.15% (0.07%) 0.19% 0.01%	Asset Allocation (0.08%) 0.12% 0.01% 0.01% 0.01%	Total Relative Return (0.15%) 0.27% (0.05%) 0.20% 0.01%
Private Equify Private Debt Cash Composite	11% 0% 1%	8% 0% 1%	15.82% - 2.27%	10.91% - 2.15%	0.45% (<mark>0.00%)</mark> 0.00%	0.01% 0.00% (0.10%)	0.46% (0.00%) (0.10%)
Total			8.41% =	7.76% +	- 0.68% +	(0.03%)	0.65%

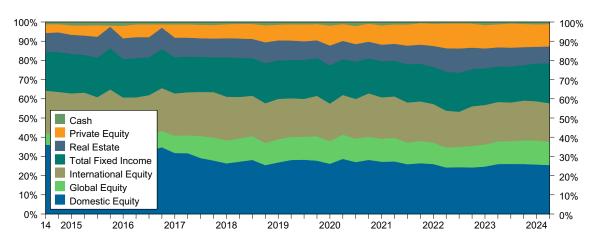
^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



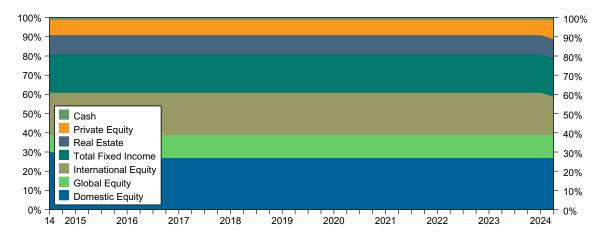
Actual vs Target Historical Asset Allocation

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 Spons- V Lg DB (>10B).

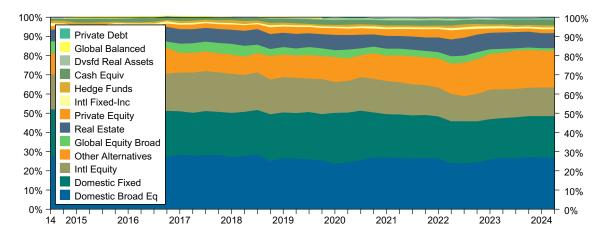
Actual Historical Asset Allocation



Target Historical Asset Allocation



Average Callan Public Fund Spons- V Lg DB (>10B) Historical Asset Allocation

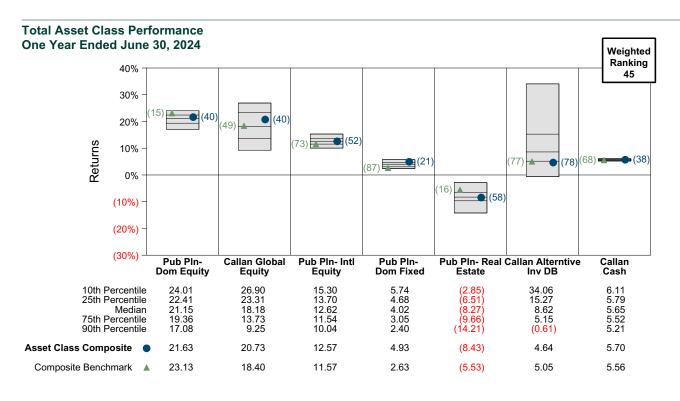


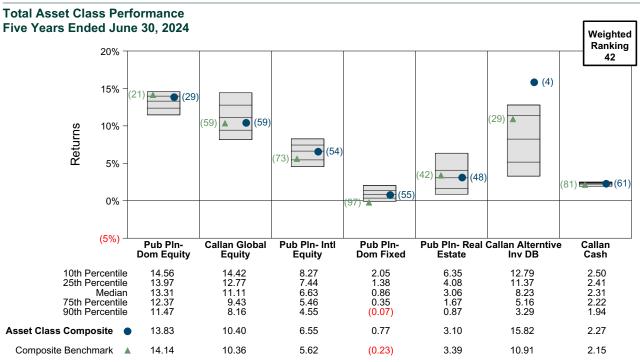
^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



Asset Class Rankings

The charts below show the rankings of each asset class component of the Total Fund relative to appropriate comparative databases. In the upper right corner of each graph is the weighted average of the rankings across the different asset classes. The weights of the fund's actual asset allocation are used to make this calculation. The weighted average ranking can be viewed as a measure of the fund's overall success in picking managers and structuring asset classes.





^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



Total Fund Period Ended June 30, 2024

Investment Philosophy

*Current Total Fund Target is 27.0% Russell 3000 Index, 22.0% MSCI ACWI ex US IMI, 20.0% Blmbg Aggregate Index, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 8.0% Cambridge Global PE, 1.0% FTSE 1 Mo T-Bill, and 0.0% Private Credit Benchmark.

Quarterly Summary and Highlights

Total Fund's portfolio posted a 1.16% return for the quarter placing it in the 64 percentile of the Callan Public Fd V Lg DB group for the quarter and in the 27 percentile for the last year.

 Total Fund's portfolio underperformed the Policy Benchmark* by 0.32% for the quarter and underperformed the Policy Benchmark* for the year by 0.49%.

Quarterly Asset Growth

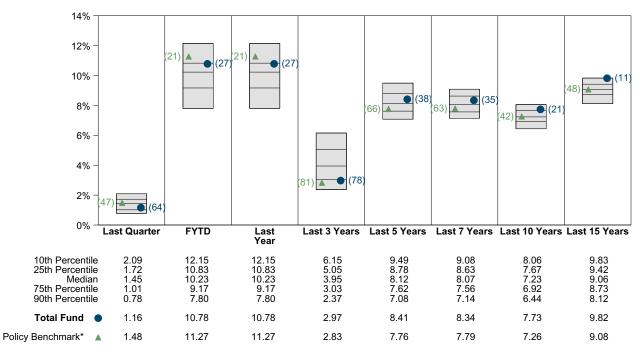
 Beginning Market Value
 \$33,610,251,617

 Net New Investment
 \$-266,273,670

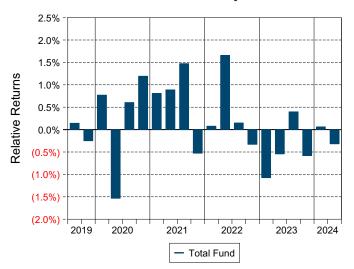
 Investment Gains/(Losses)
 \$384,741,735

Ending Market Value \$33,728,719,682

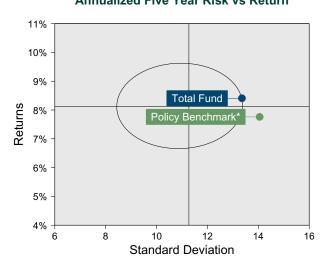
Performance vs Callan Public Fd V Lg DB (Gross)



Relative Return vs Policy Benchmark*



Callan Public Fd V Lg DB (Gross) Annualized Five Year Risk vs Return





Total Fund Return Analysis Summary

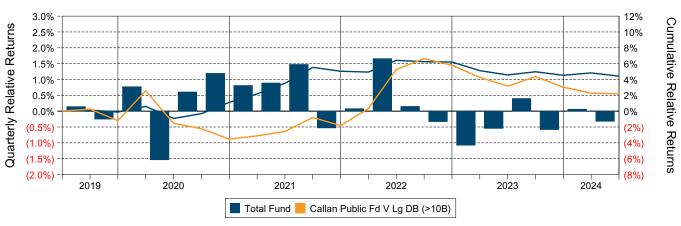
Return Analysis

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.

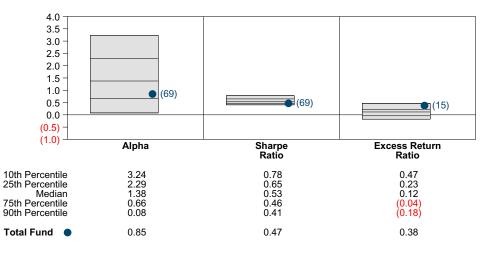
Performance vs Callan Public Fd V Lg DB (>10B) (Gross)



Cumulative and Quarterly Relative Returns vs Policy Benchmark*



Risk Adjusted Return Measures vs Policy Benchmark* Rankings Against Callan Public Fd V Lg DB (>10B) (Gross) Five Years Ended June 30, 2024





Total Equity Period Ended June 30, 2024

Quarterly Summary and Highlights

- Total Equity's portfolio posted a 1.67% return for the quarter placing it in the 54 percentile of the Callan Global Equity group for the quarter and in the 50 percentile for the last year.
- Total Equity's portfolio underperformed the MSCI ACWI IMI by 0.71% for the quarter and underperformed the MSCI ACWI IMI for the year by 0.19%.

Quarterly Asset Growth

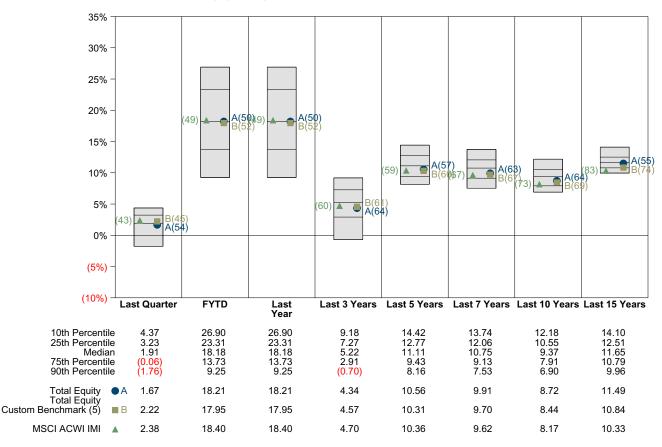
 Beginning Market Value
 \$19,735,570,730

 Net New Investment
 \$-608,157,478

 Investment Gains/(Losses)
 \$321,691,303

Ending Market Value \$19,449,104,555

Performance vs Callan Global Equity (Gross)



Relative Return vs MSCI ACWI IMI



Callan Global Equity (Gross) Annualized Five Year Risk vs Return



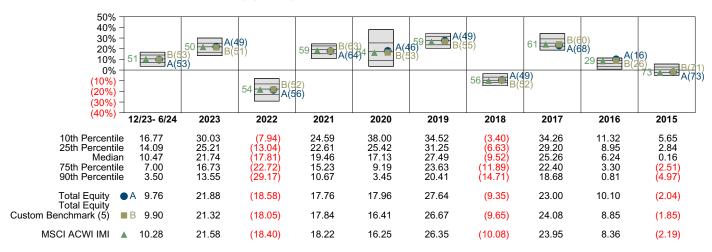


Total Equity Return Analysis Summary

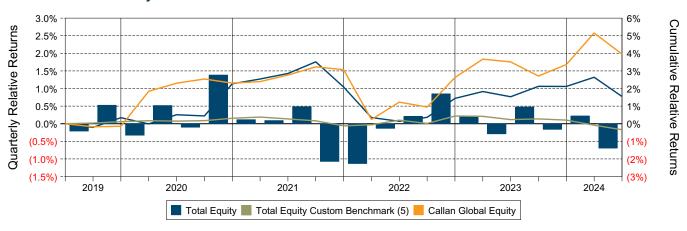
Return Analysis

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.

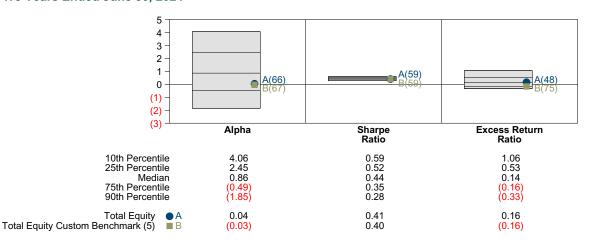
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI IMI



Risk Adjusted Return Measures vs MSCI ACWI IMI Rankings Against Callan Global Equity (Gross) Five Years Ended June 30, 2024





Domestic Equity Period Ended June 30, 2024

Quarterly Summary and Highlights

- Domestic Equity's portfolio posted a 2.01% return for the quarter placing it in the 60 percentile of the Public Fund -Domestic Equity group for the quarter and in the 40 percentile for the last year.
- Domestic Equity's portfolio underperformed the Russell 3000 Index by 1.20% for the quarter and underperformed the Russell 3000 Index for the year by 1.50%.

Quarterly Asset Growth

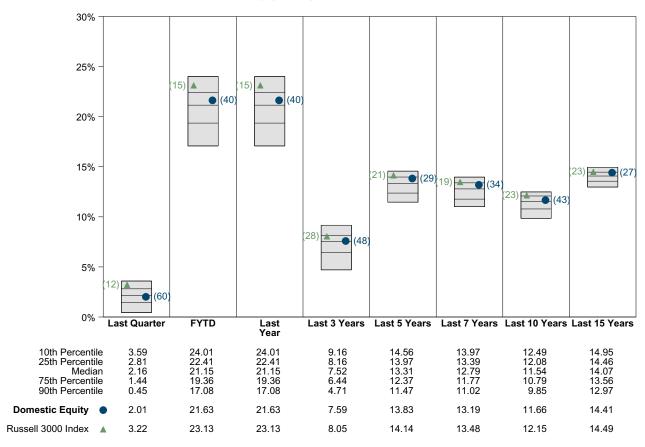
 Beginning Market Value
 \$8,669,156,092

 Net New Investment
 \$-238,810,931

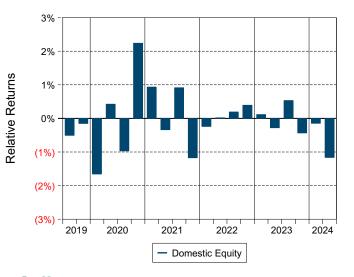
 Investment Gains/(Losses)
 \$169,678,403

 Ending Market Value
 \$8,600,023,563

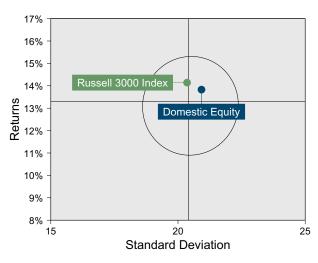
Performance vs Public Fund - Domestic Equity (Gross)



Relative Return vs Russell 3000 Index



Public Fund - Domestic Equity (Gross) Annualized Five Year Risk vs Return



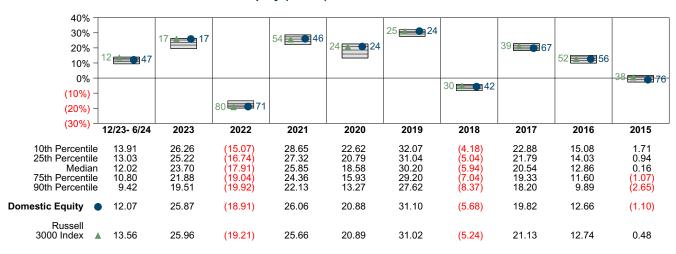


Domestic Equity Return Analysis Summary

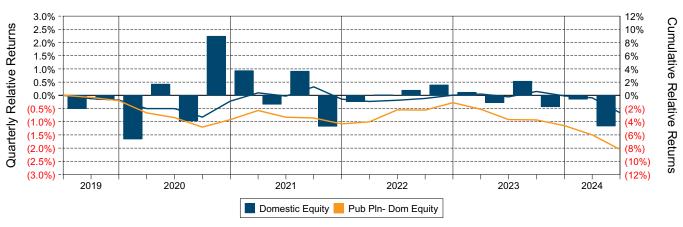
Return Analysis

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.

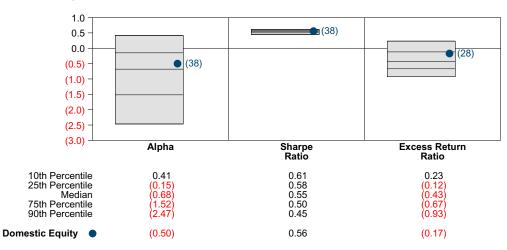
Performance vs Public Fund - Domestic Equity (Gross)



Cumulative and Quarterly Relative Returns vs Russell 3000 Index



Risk Adjusted Return Measures vs Russell 3000 Index Rankings Against Public Fund - Domestic Equity (Gross) Five Years Ended June 30, 2024





Eagle Capital Period Ended June 30, 2024

Investment Philosophy

Eagle believes that a team driven process adds value via stock selection. The team emphasizes undervalued growth stocks, focusing on companies that are expected to grow for at least five years at rates well above those implicit in the current stock price. The Fund's inception date is January 2005. *Benchmark was changed to S&P 500 in 1Q 2014.

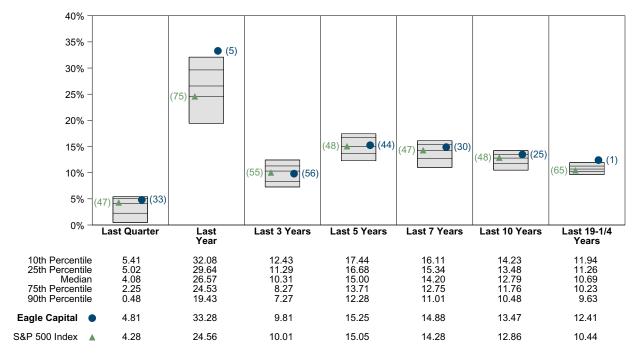
Quarterly Summary and Highlights

- Eagle Capital's portfolio posted a 4.81% return for the quarter placing it in the 33 percentile of the Callan Large Cap Core group for the quarter and in the 5 percentile for the last year.
- Eagle Capital's portfolio outperformed the S&P 500 Index by 0.53% for the quarter and outperformed the S&P 500 Index for the year by 8.72%.

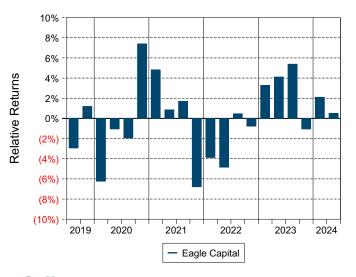
Quarterly Asset Growth

Beginning Market Value	\$918,830,031
Net New Investment	\$-101,510,337
Investment Gains/(Losses)	\$41,743,090
Ending Market Value	\$859,062,783

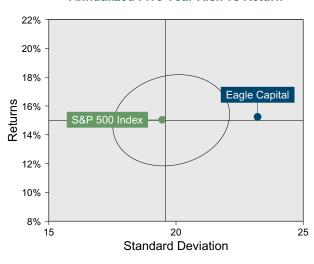
Performance vs Callan Large Cap Core (Gross)



Relative Return vs S&P 500 Index



Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return



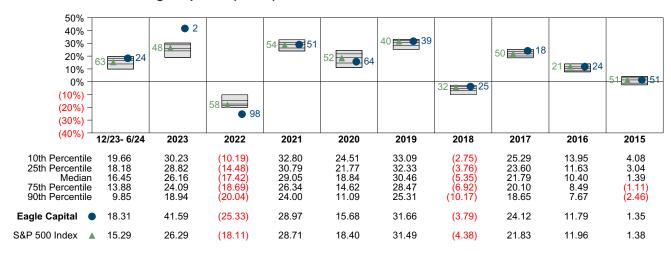


Eagle Capital Return Analysis Summary

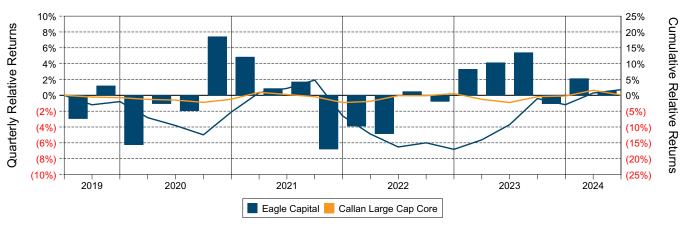
Return Analysis

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.

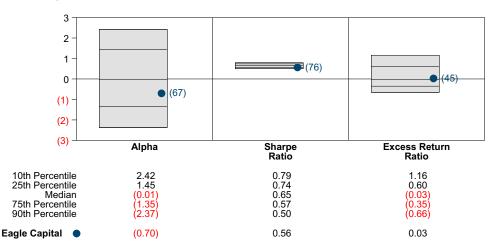
Performance vs Callan Large Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index Rankings Against Callan Large Cap Core (Gross) Five Years Ended June 30, 2024



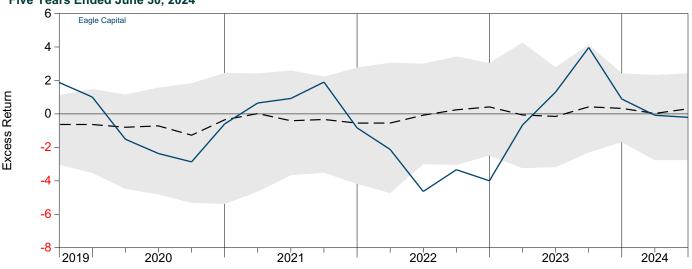


Eagle Capital Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

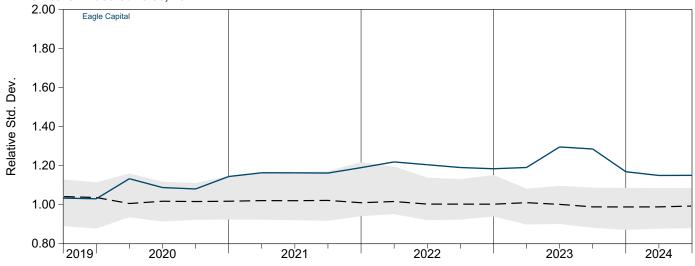
The first chart below illustrates the consistency of excess return over rolling three year periods versus the S&P 500 Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Large Cap Core. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to S&P 500 Index Five Years Ended June 30, 2024



Median	Portfolio
(0.24)	(0.53)
35%	40%
50	52
	(0.24) 35%

Rolling Three Year Relative Std. Dev. Relative to S&P 500 Index Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.01%	1.16%
% Positive Periods	100%	100%
Average Ranking	50	12

Northern Trust S&P 500 Period Ended June 30, 2024

Investment Philosophy

Northern Trust seeks to replicate the risk and returns of the S&P 500 equity index and believes that a passive approach to portfolio management will provide index-like returns with minimal transaction costs. The Fund's inception date is June 1985.

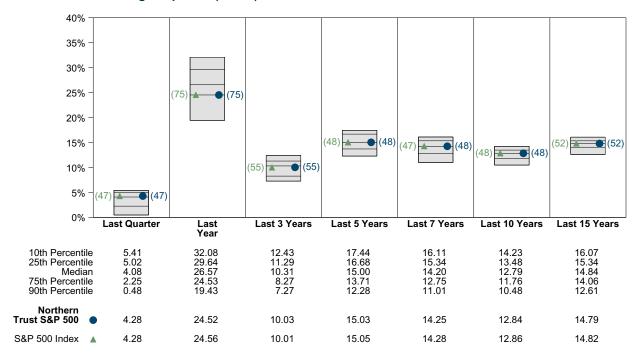
Quarterly Summary and Highlights

- Northern Trust S&P 500's portfolio posted a 4.28% return for the quarter placing it in the 47 percentile of the Callan Large Cap Core group for the quarter and in the 75 percentile for the last year.
- Northern Trust S&P 500's portfolio underperformed the S&P 500 Index by 0.01% for the quarter and underperformed the S&P 500 Index for the year by 0.03%.

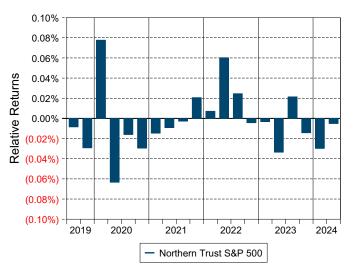
Quarterly Asset Growth

Beginning Market Value	\$5,595,727,962
Net New Investment	\$-130,072,344
Investment Gains/(Losses)	\$235,466,508
Ending Market Value	\$5,701,122,126

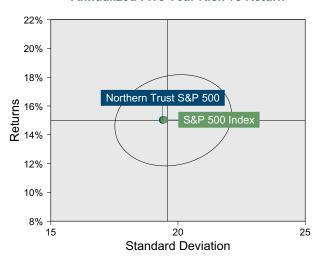
Performance vs Callan Large Cap Core (Gross)



Relative Return vs S&P 500 Index



Callan Large Cap Core (Gross) Annualized Five Year Risk vs Return



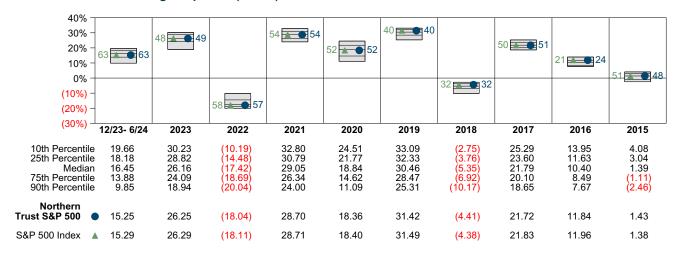


Northern Trust S&P 500 Return Analysis Summary

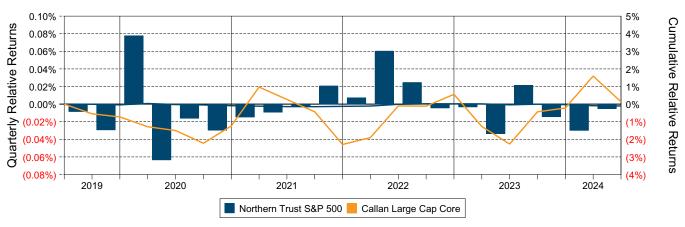
Return Analysis

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.

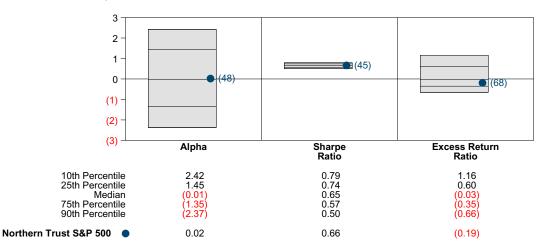
Performance vs Callan Large Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs S&P 500 Index



Risk Adjusted Return Measures vs S&P 500 Index Rankings Against Callan Large Cap Core (Gross) Five Years Ended June 30, 2024





Artisan Partners Period Ended June 30, 2024

Investment Philosophy

The Artisan U.S. Mid Cap Growth strategy employs a fundamental investment process to construct a diversified portfolio of U.S. mid cap growth companies. The Fund aims to buy companies at attractive valuations, entering an accelerating profit cycle, and exhibit at least one of the following characteristics: a dominant market share, a low cost producer, possession of a proprietary technology or process, or a strong brand name. The overall portfolio contains between 60-75 positions and has consistently invested in higher cap stocks relative to its peer group. The Fund's inception date is September 2002.

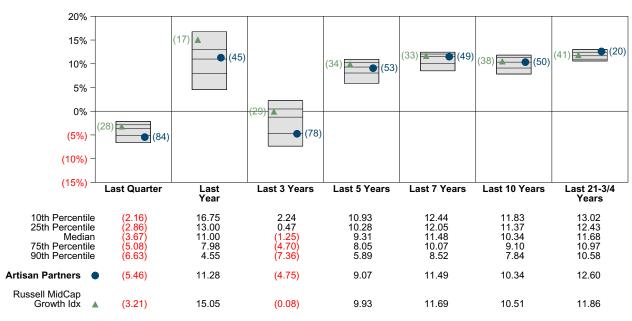
Quarterly Summary and Highlights

- Artisan Partners's portfolio posted a (5.46)% return for the quarter placing it in the 84 percentile of the Callan Mid Cap Growth group for the quarter and in the 45 percentile for the last year.
- Artisan Partners's portfolio underperformed the Russell MidCap Growth Idx by 2.24% for the quarter and underperformed the Russell MidCap Growth Idx for the year by 3.77%.

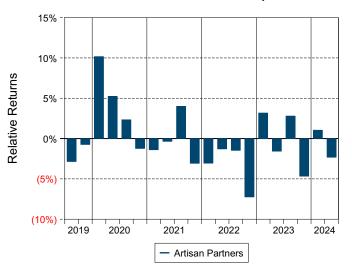
Quarterly Asset Growth

Beginning Market Value	\$532,998,588
Net New Investment	\$-603,159
Investment Gains/(Losses)	\$-29,072,079
Ending Market Value	\$503 323 350

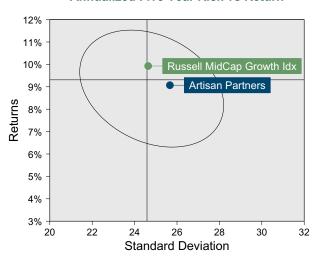
Performance vs Callan Mid Cap Growth (Gross)



Relative Return vs Russell MidCap Growth Idx



Callan Mid Cap Growth (Gross) Annualized Five Year Risk vs Return



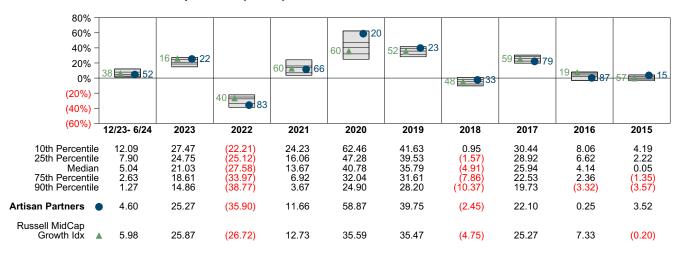


Artisan Partners Return Analysis Summary

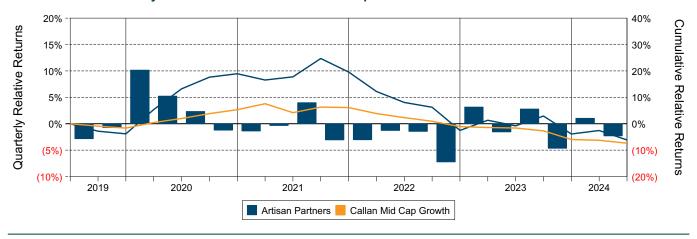
Return Analysis

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.

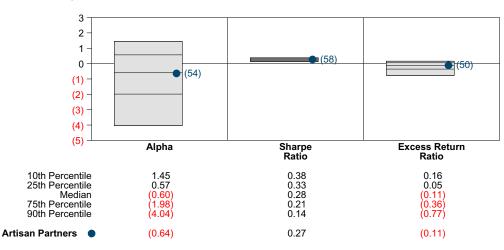
Performance vs Callan Mid Cap Growth (Gross)



Cumulative and Quarterly Relative Returns vs Russell MidCap Growth Idx



Risk Adjusted Return Measures vs Russell MidCap Growth Idx Rankings Against Callan Mid Cap Growth (Gross) Five Years Ended June 30, 2024



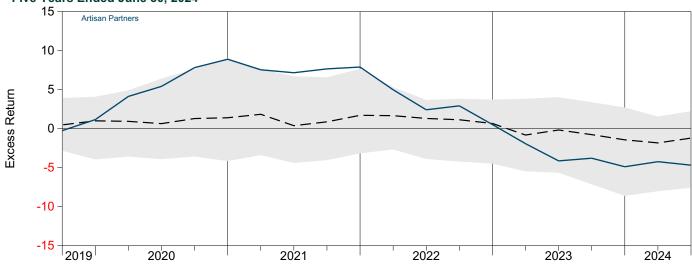


Artisan Partners Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

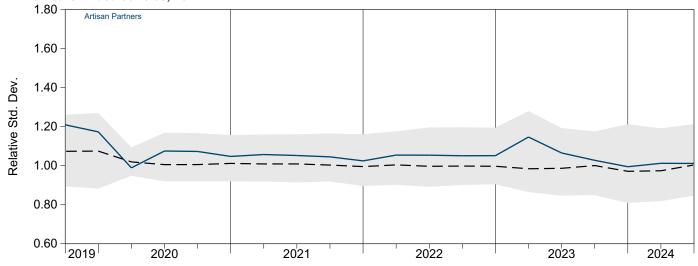
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell MidCap Growth Idx. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Mid Cap Growth. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Russell MidCap Growth Idx Five Years Ended June 30, 2024



Median	Portfolio
0.45%	2.23%
70%	65%
50	37
	0.45% 70%

Rolling Three Year Relative Std. Dev. Relative to Russell MidCap Growth Idx Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.01%	1.06%
% Positive Periods	100%	100%
Average Ranking	50	35

Victory Mid Cap Value Period Ended June 30, 2024

Investment Philosophy

The Sycamore Mid Cap Value Equity investment approach focuses on companies with market capitalizations between \$2.5 and \$15 billion that are believed offer above-average total return potential with limited risk. The Mid Cap Value Equity investment process seeks to identify high quality, low expectation mid cap companies that appear poised for continued or improved earnings. Portfolios typically hold 60 - 80 stocks with average annual portfolio turnover of 40%. The team will begin to sell when a company's market capitalization exceed their estimate of intrinsic value or reaches the higher end of the index range. The Fund's inception date is September 2022.

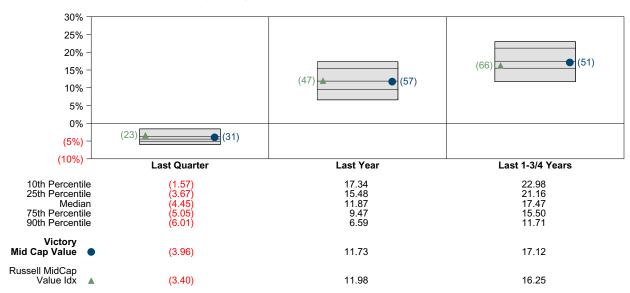
Quarterly Summary and Highlights

- Victory Mid Cap Value's portfolio posted a (3.96)% return for the quarter placing it in the 31 percentile of the Callan Mid Cap Value group for the quarter and in the 57 percentile for the last year.
- Victory Mid Cap Value's portfolio underperformed the Russell MidCap Value Idx by 0.56% for the quarter and underperformed the Russell MidCap Value Idx for the year by 0.25%.

Quarterly Asset Growth

Beginning Market Value	\$577,532,878
Net New Investment	\$-680,205
Investment Gains/(Losses)	\$-22,849,302
Ending Market Value	\$554,003,371

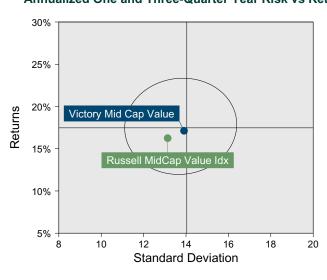
Performance vs Callan Mid Cap Value (Gross)



Relative Return vs Russell MidCap Value Idx



Callan Mid Cap Value (Gross) Annualized One and Three-Quarter Year Risk vs Return



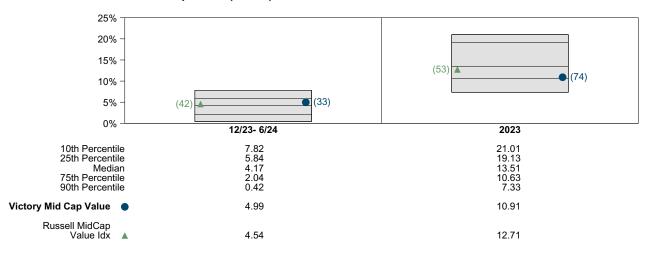


Victory Mid Cap Value Return Analysis Summary

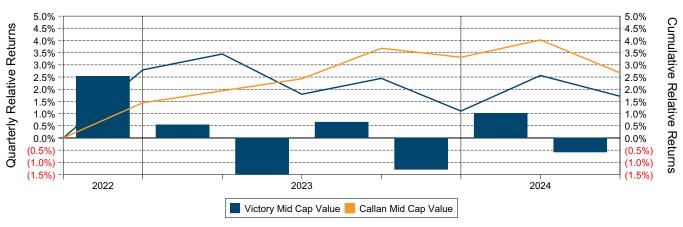
Return Analysis

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.

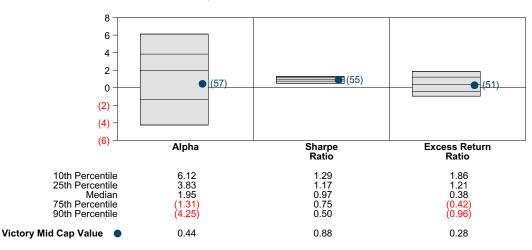
Performance vs Callan Mid Cap Value (Gross)



Cumulative and Quarterly Relative Returns vs Russell MidCap Value Idx



Risk Adjusted Return Measures vs Russell MidCap Value Idx Rankings Against Callan Mid Cap Value (Gross) One and Three-Quarter Years Ended June 30, 2024





Dimensional Fund Advisors Period Ended June 30, 2024

Investment Philosophy

DFA's investment philosophy stems from academic research conducted by Professors Eugene Fama and Kenneth French that finds that high book/market value stocks have higher expected returns than growth stocks. DFA's quantitative investment strategy in highly diversified portfolios of small companies with "deep" value characteristics is designed to capture the returns of small value stocks The Fund's inception date is July 2002.

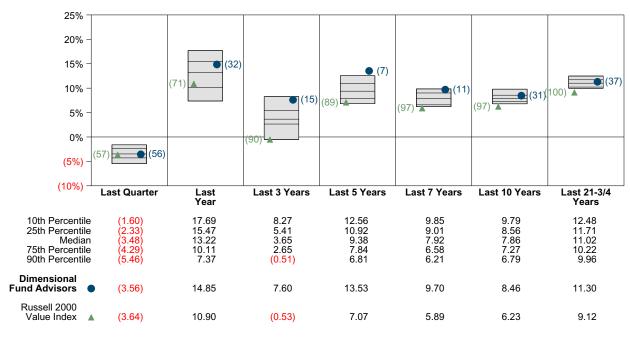
Quarterly Summary and Highlights

- Dimensional Fund Advisors's portfolio posted a (3.56)% return for the quarter placing it in the 56 percentile of the Callan Small Cap Value group for the quarter and in the 32 percentile for the last year.
- Dimensional Fund Advisors's portfolio outperformed the Russell 2000 Value Index by 0.09% for the quarter and outperformed the Russell 2000 Value Index for the year by 3.95%.

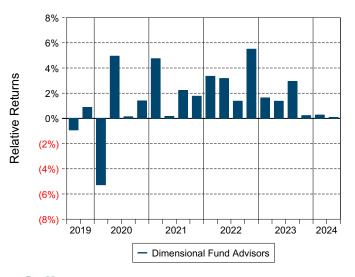
Quarterly Asset Growth

Beginning Market Value	\$345,033,585
Net New Investment	\$-251,469
Investment Gains/(Losses)	\$-12,270,628
Ending Market Value	\$332.511.488

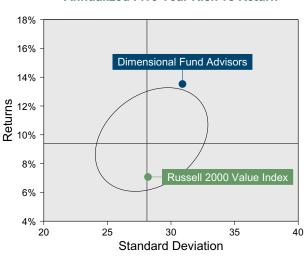
Performance vs Callan Small Cap Value (Gross)



Relative Return vs Russell 2000 Value Index



Callan Small Cap Value (Gross) Annualized Five Year Risk vs Return



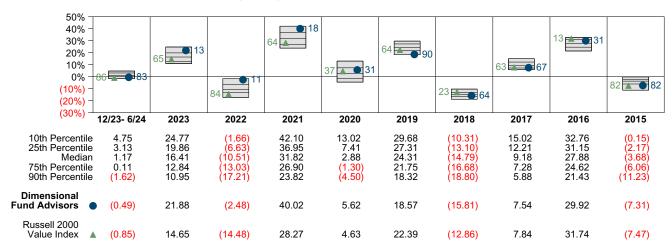


Dimensional Fund Advisors Return Analysis Summary

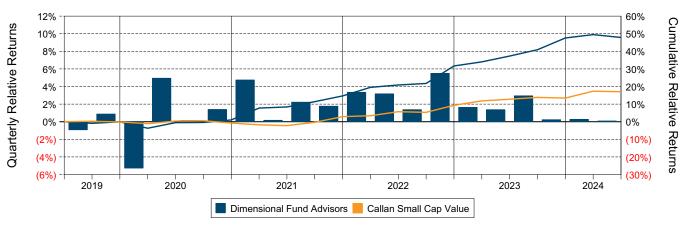
Return Analysis

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.

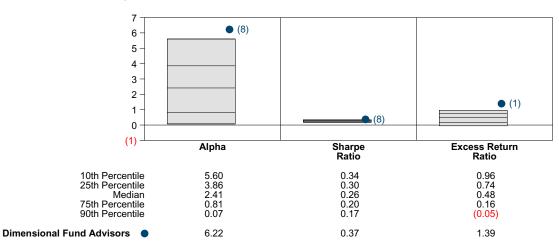
Performance vs Callan Small Cap Value (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Value Index



Risk Adjusted Return Measures vs Russell 2000 Value Index Rankings Against Callan Small Cap Value (Gross) Five Years Ended June 30, 2024



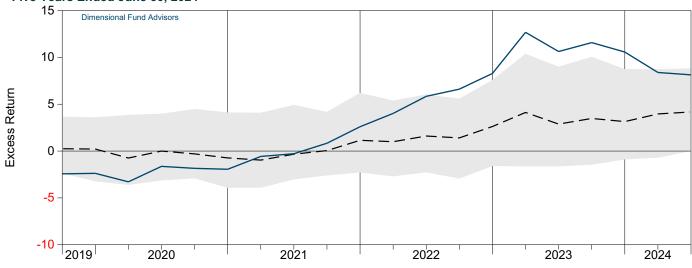


Dimensional Fund Advisors Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

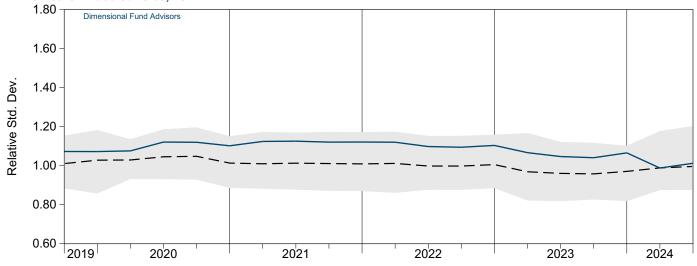
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell 2000 Value Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Value. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Russell 2000 Value Index Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.35%	3.79%
% Positive Periods	70%	60%
Average Ranking	50	38

Rolling Three Year Relative Std. Dev. Relative to Russell 2000 Value Index Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.00%	1.08%
% Positive Periods	100%	100%
Average Ranking	50	24



Wellington Small Cap Period Ended June 30, 2024

Investment Philosophy

Wellington Management Company is a 100% employee-owned company headquartered in Boston, Massachusetts. The Small Cap 2000 strategy employs a bottom-up fundamental process that relies heavily on Wellington's pool of centralized Global Industry Analysts. The portfolio managers, Mary Pryshlak and Jonathan White, provide strategy oversight from an implementation and risk perspective. The portfolio is diversified from both a stock and sector perspective and aims to neutralize industry and factor exposures. The portfolio has a range between 200-250 holdings with a max position size of 5%. Wellington Small Cap 2000 is appropriate for both standalone, as well as multi-manager structures. The Fund's inception date is July 2002.

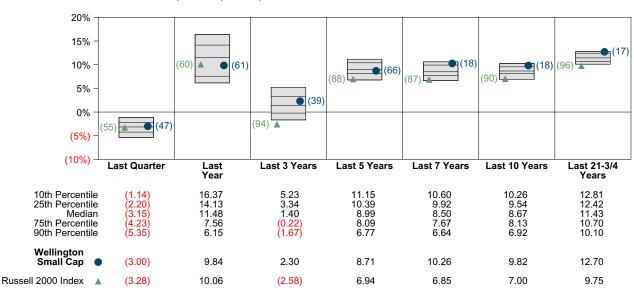
Quarterly Summary and Highlights

- Wellington Small Cap's portfolio posted a (3.00)% return for the quarter placing it in the 47 percentile of the Callan Small Cap Core group for the quarter and in the 61 percentile for the last year.
- Wellington Small Cap's portfolio outperformed the Russell 2000 Index by 0.27% for the quarter and underperformed the Russell 2000 Index for the year by 0.22%.

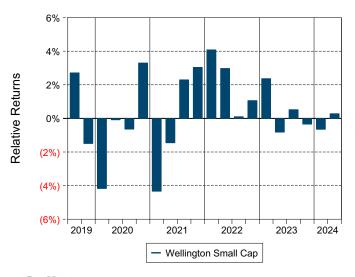
Quarterly Asset Growth

Beginning Market Value	\$347,585,240
Net New Investment	\$-563,427
Investment Gains/(Losses)	\$-10,432,041
Ending Market Value	\$336,589,772

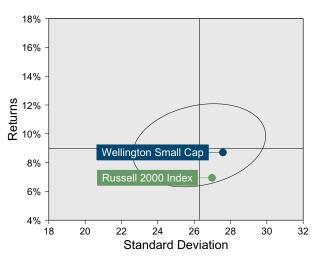
Performance vs Callan Small Cap Core (Gross)



Relative Return vs Russell 2000 Index



Callan Small Cap Core (Gross) Annualized Five Year Risk vs Return



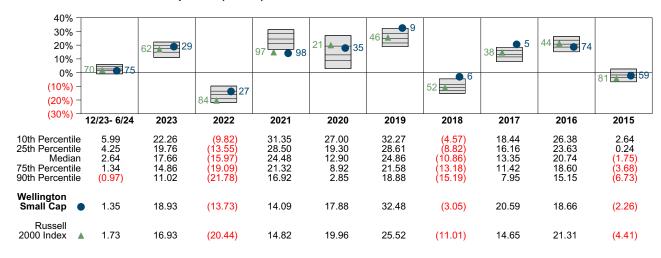


Wellington Small Cap Return Analysis Summary

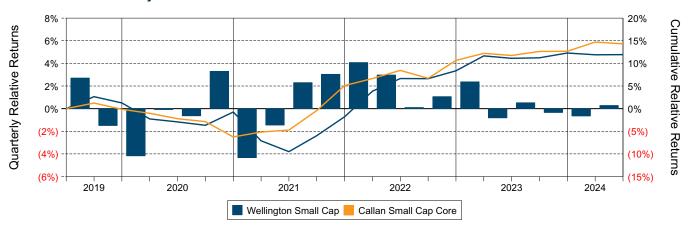
Return Analysis

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.

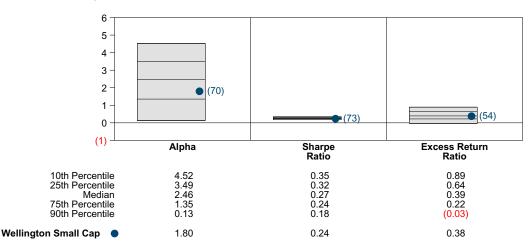
Performance vs Callan Small Cap Core (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Index



Risk Adjusted Return Measures vs Russell 2000 Index Rankings Against Callan Small Cap Core (Gross) Five Years Ended June 30, 2024



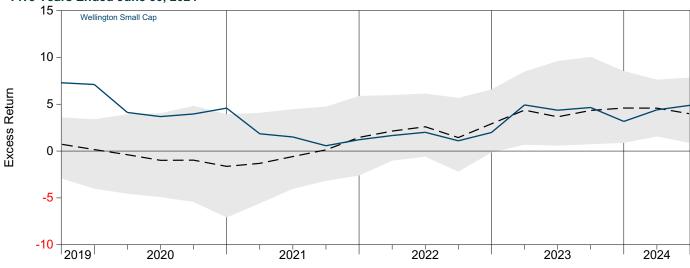


Wellington Small Cap Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

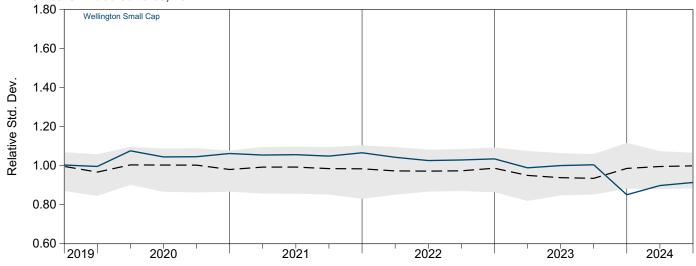
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Russell 2000 Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Core. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Russell 2000 Index Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.56%	3.45%
% Positive Periods	70%	100%
Average Ranking	50	35

Rolling Three Year Relative Std. Dev. Relative to Russell 2000 Index Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	0.98%	1.01%
% Positive Periods	100%	100%
Average Ranking	50	35

Riverbridge Partners Period Ended June 30, 2024

Investment Philosophy

Riverbridge believes earnings power determines the value of a franchise. They focus on companies that are building earnings power and intrinsic value of the company over long periods of time. They also look for high-quality growth companies that demonstrate the ability to sustain strong secular earnings growth, regardless of overall economic conditions. The Fund's inception date is December 2013.

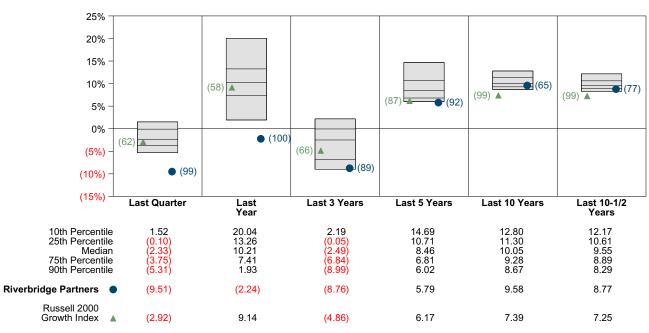
Quarterly Summary and Highlights

- Riverbridge Partners's portfolio posted a (9.51)% return for the quarter placing it in the 99 percentile of the Callan Small Cap Growth group for the quarter and in the 100 percentile for the last year.
- Riverbridge Partners's portfolio underperformed the Russell 2000 Growth Index by 6.59% for the quarter and underperformed the Russell 2000 Growth Index for the year by 11.37%.

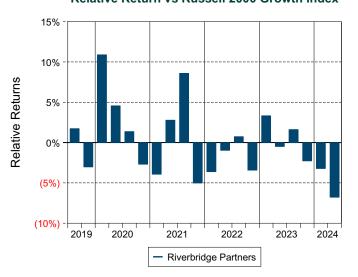
Quarterly Asset Growth

Beginning Market Value	\$346,974,611
Net New Investment	\$-617,850
Investment Gains/(Losses)	\$-32,958,868
Ending Market Value	\$313,397,893

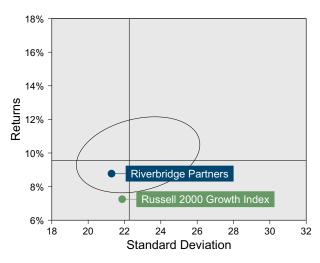
Performance vs Callan Small Cap Growth (Gross)



Relative Return vs Russell 2000 Growth Index



Callan Small Cap Growth (Gross) Annualized Ten and One-Half Year Risk vs Return



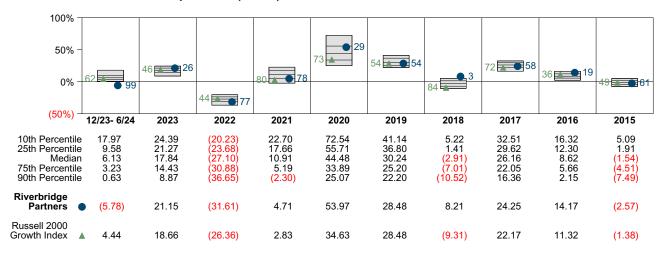


Riverbridge Partners Return Analysis Summary

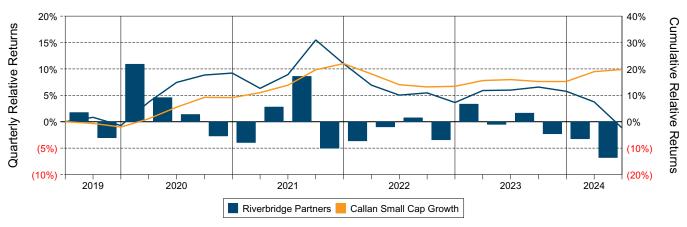
Return Analysis

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.

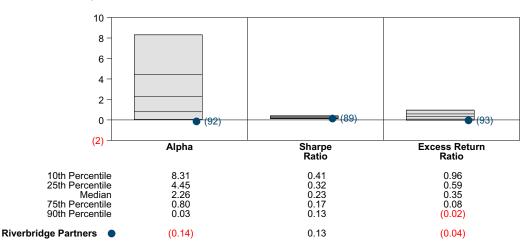
Performance vs Callan Small Cap Growth (Gross)



Cumulative and Quarterly Relative Returns vs Russell 2000 Growth Index



Risk Adjusted Return Measures vs Russell 2000 Growth Index Rankings Against Callan Small Cap Growth (Gross) Five Years Ended June 30, 2024



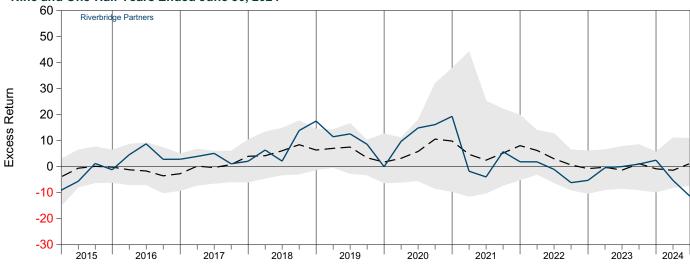


Riverbridge Partners Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

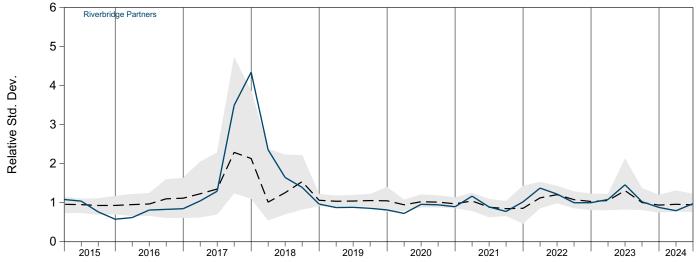
The first chart below illustrates the consistency of excess return over rolling one year periods versus the Russell 2000 Growth Index. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Small Cap Growth. The second chart below illustrates the consistency of relative std. dev. over rolling one year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling One Year Excess Return Relative to Russell 2000 Growth Index Nine and One-Half Years Ended June 30, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Excess Return	2.47%	3.35%
% Positive Periods	66%	68%
Average Ranking	50	45

Rolling One Year Relative Std. Dev. Relative to Russell 2000 Growth Index Nine and One-Half Years Ended June 30, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.11%	1.18%
% Positive Periods	100%	100%
Average Ranking	50	59

Global Equity Period Ended June 30, 2024

Quarterly Summary and Highlights

- Global Equity's portfolio posted a 2.32% return for the quarter placing it in the 43 percentile of the Callan Global Equity group for the quarter and in the 40 percentile for the last year.
- Global Equity's portfolio underperformed the Global Equity Benchmark (2) by 0.06% for the quarter and outperformed the Global Equity Benchmark (2) for the year by 2.33%.

Quarterly Asset Growth

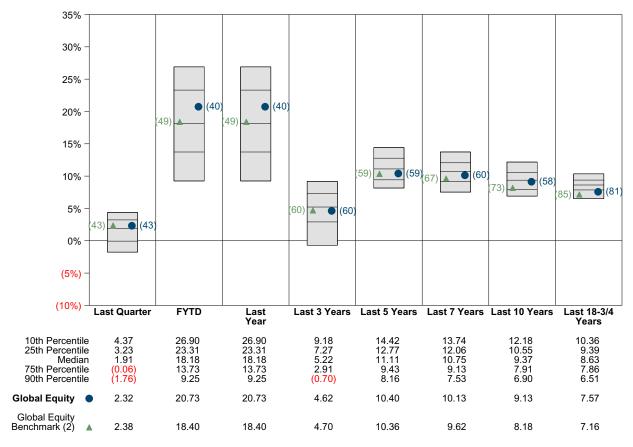
 Beginning Market Value
 \$4,208,442,374

 Net New Investment
 \$-193,992,748

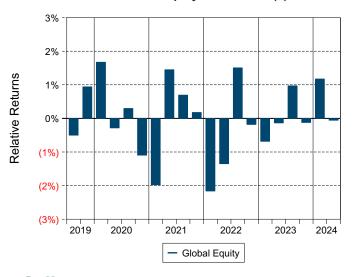
 Investment Gains/(Losses)
 \$93,104,199

 Ending Market Value
 \$4,107,553,825

Performance vs Callan Global Equity (Gross)



Relative Returns vs Global Equity Benchmark (2)



Callan Global Equity (Gross) Annualized Five Year Risk vs Return



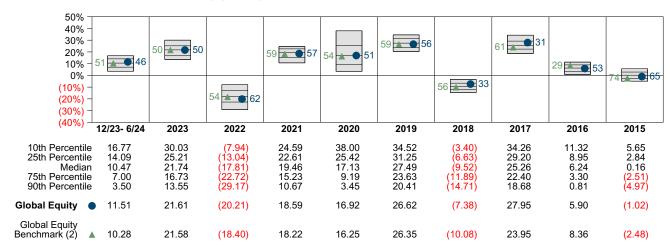


Global Equity Return Analysis Summary

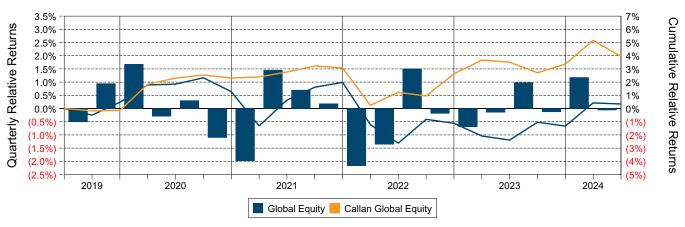
Return Analysis

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.

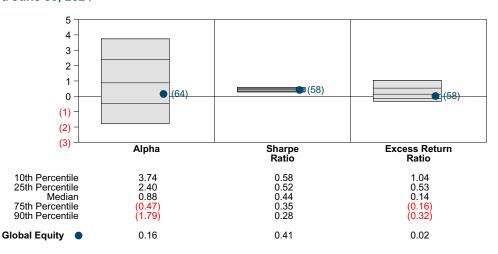
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs Global Equity Benchmark (2)



Risk Adjusted Return Measures vs Global Equity Benchmark (2) Rankings Against Callan Global Equity (Gross) Five Years Ended June 30, 2024





Acadian Global Equity Period Ended June 30, 2024

Investment Philosophy

Acadian's Global Equity Strategy uses a disciplined, multi-factor approach to uncover attractively valued stocks with strong earnings prospects in both the US and non-US markets.

Quarterly Summary and Highlights

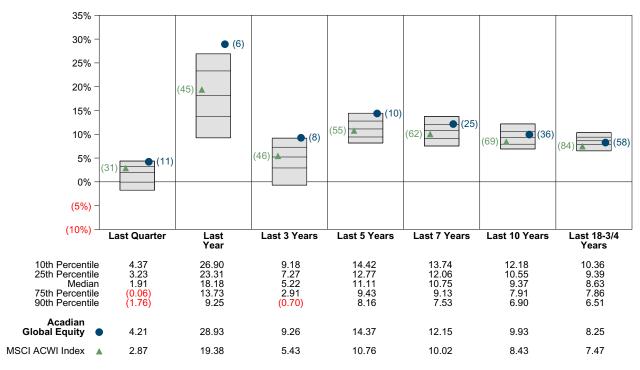
- Acadian Global Equity's portfolio posted a 4.21% return for the quarter placing it in the 11 percentile of the Callan Global Equity group for the quarter and in the 6 percentile for the last year.
- Acadian Global Equity's portfolio outperformed the MSCI ACWI Index by 1.34% for the quarter and outperformed the MSCI ACWI Index for the year by 9.55%.

Quarterly Asset Growth

Beginning Market Value	\$1,075,481,682
Net New Investment	\$-70,999,572
Investment Gains/(Losses)	\$42,628,175

Ending Market Value \$1,047,110,285

Performance vs Callan Global Equity (Gross)



Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross) Annualized Five Year Risk vs Return



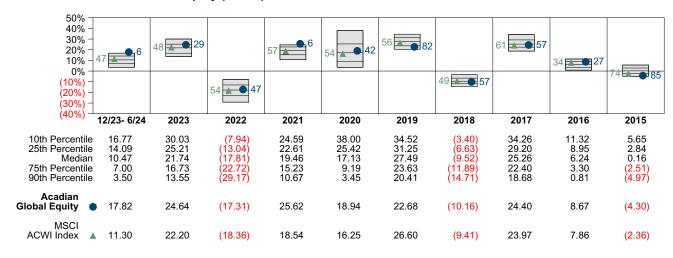


Acadian Global Equity Return Analysis Summary

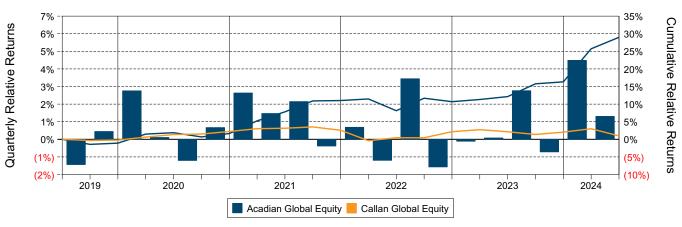
Return Analysis

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.

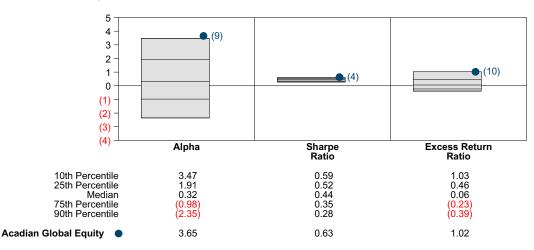
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI Index



Risk Adjusted Return Measures vs MSCI ACWI Index Rankings Against Callan Global Equity (Gross) Five Years Ended June 30, 2024



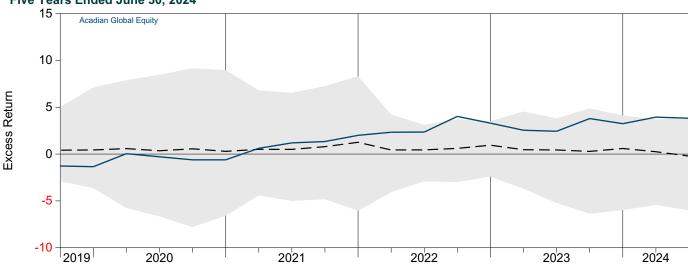


Acadian Global Equity Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

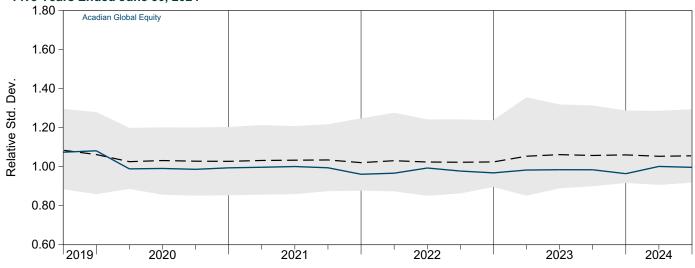
The first chart below illustrates the consistency of excess return over rolling three year periods versus the MSCI ACWI. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Global Equity. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to MSCI ACWI Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.50%	1.64%
% Positive Periods	95%	75%
Average Ranking	50	36

Rolling Three Year Relative Std. Dev. Relative to MSCI ACWI Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.04%	0.99%
% Positive Periods	100%	100%
Average Ranking	50	67



Epoch Investments Period Ended June 30, 2024

Investment Philosophy

Epoch seeks to produce superior risk adjusted returns by building portfolios of businesses with outstanding risk/reward profiles without running a high degree of capital risk. They analyze businesses in the same manner private investors would in looking to purchase the entire company. The strategy only invests in businesses that are understood and where they have confidence in the financial statements. They seek businesses that generate "free cash flow" and securities that have unrecognized potential yet possess a combination of above average yield, above average free cash flow growth, and/or below average valuation. Global Choice is a "best ideas" portfolio at Epoch with every stock held in other strategies managed by the firm.

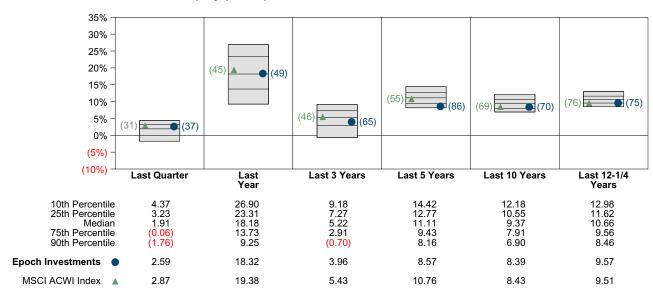
Quarterly Summary and Highlights

- Epoch Investments's portfolio posted a 2.59% return for the quarter placing it in the 37 percentile of the Callan Global Equity group for the quarter and in the 49 percentile for the last year.
- Epoch Investments's portfolio underperformed the MSCI ACWI Index by 0.28% for the quarter and underperformed the MSCI ACWI Index for the year by 1.05%.

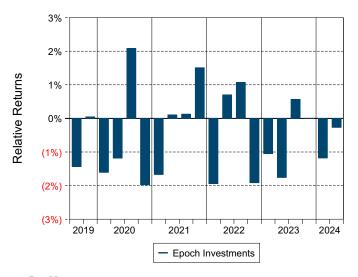
Quarterly Asset Growth

Beginning Market Value	\$1,041,417,078
Net New Investment	\$-41,098,248
Investment Gains/(Losses)	\$25,870,889
Ending Market Value	\$1,026,189,719

Performance vs Callan Global Equity (Gross)



Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross) Annualized Five Year Risk vs Return



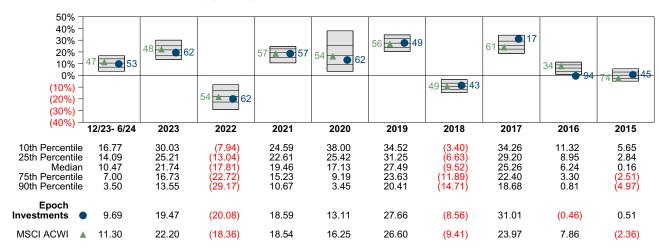


Epoch Investments Return Analysis Summary

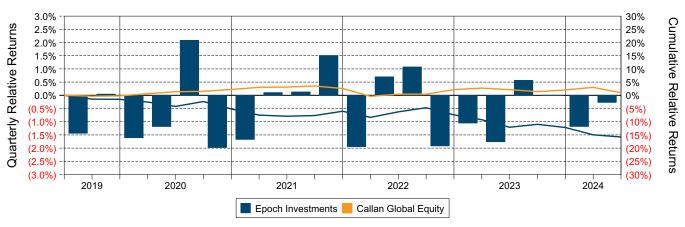
Return Analysis

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.

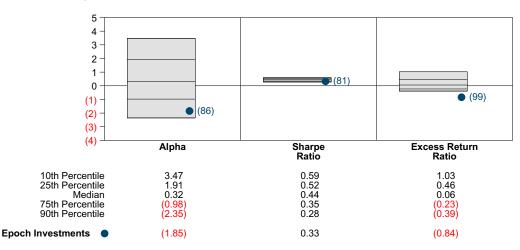
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI



Risk Adjusted Return Measures vs MSCI ACWI Rankings Against Callan Global Equity (Gross) Five Years Ended June 30, 2024



Harding-Loevner Period Ended June 30, 2024

Investment Philosophy

Harding Loevner is a global equity manager based in Bridgewater, New Jersey. A consistent high quality, growth-oriented investment philosophy and process is employed across all strategies managed by the firm, and analysts and portfolio managers are given considerable latitude to recommend and select securities as they see fit in portfolios. Historically, this approach has led to a favorable upside/downside capture ratio for the Global Equity strategy, as well as a portfolio that tends to be more diversified by sector than growth-oriented peers. The Fund's inception date is February 2012.

Quarterly Summary and Highlights

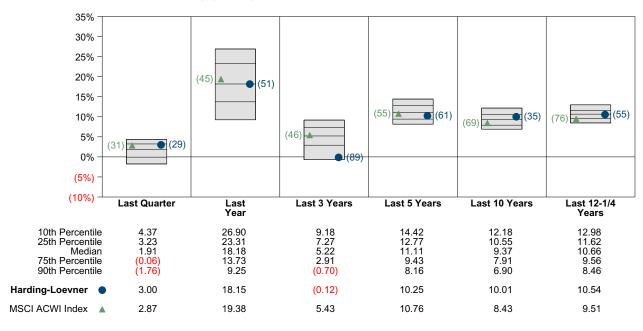
- Harding-Loevner's portfolio posted a 3.00% return for the quarter placing it in the 29 percentile of the Callan Global Equity group for the quarter and in the 51 percentile for the last year.
- Harding-Loevner's portfolio outperformed the MSCI ACWI Index by 0.13% for the quarter and underperformed the MSCI ACWI Index for the year by 1.22%.

Quarterly Asset Growth

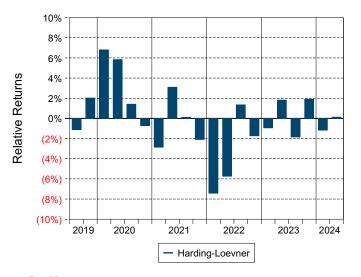
Beginning Market Value	\$1,044,631,149
Net New Investment	\$-41,008,473
Investment Gains/(Losses)	\$29,601,828

Ending Market Value \$1,033,224,504

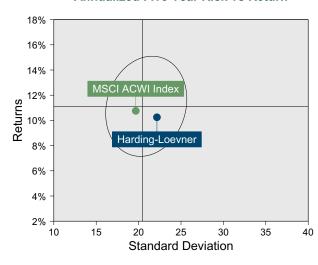
Performance vs Callan Global Equity (Gross)



Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross) Annualized Five Year Risk vs Return



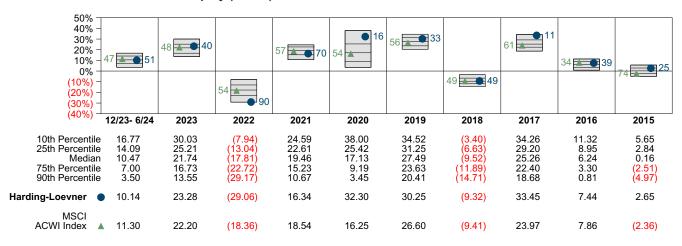


Harding-Loevner Return Analysis Summary

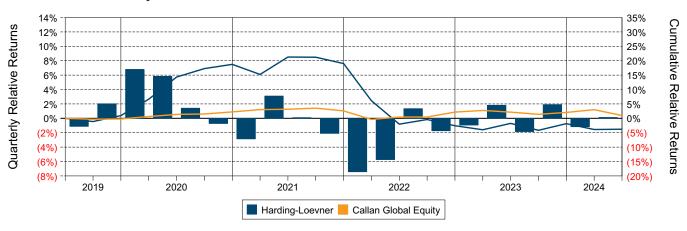
Return Analysis

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.

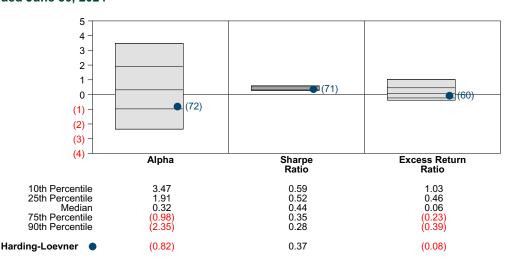
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI Index



Risk Adjusted Return Measures vs MSCI ACWI Index Rankings Against Callan Global Equity (Gross) Five Years Ended June 30, 2024





LSV Global Value Period Ended June 30, 2024

Investment Philosophy

The Global Value Equity (ACWI) strategy is managed by LSV Asset Management, a quantitative global equity firm based in Chicago. The strategy is managed using quantitative techniques to select individual securities in a risk-controlled and bottom-up approach. The team believes that value factors and security selection drive returns more than sector and country allocations, resulting in a consistent deep value exposure with alpha expected to be generated by stock selection. Sector and country deviations from the index will generally be modest, but the strategy can have a zero weight in smaller benchmark countries. The portfolio typically holds 200-275 securities with annual turnover of ~25%. The Fund's inception date is August 2022.

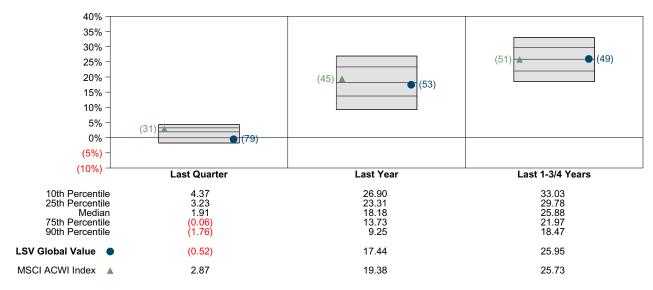
Quarterly Summary and Highlights

- LSV Global Value's portfolio posted a (0.52)% return for the quarter placing it in the 79 percentile of the Callan Global Equity group for the quarter and in the 53 percentile for the last year.
- LSV Global Value's portfolio underperformed the MSCI ACWI Index by 3.39% for the quarter and underperformed the MSCI ACWI Index for the year by 1.94%.

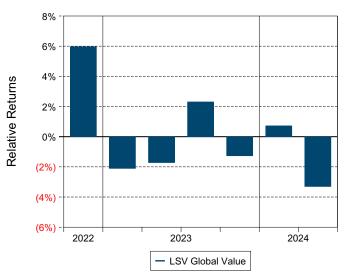
Quarterly Asset Growth

Beginning Market Value	\$1,042,600,118	
Net New Investment	\$-40,886,455	
Investment Gains/(Losses)	\$-5,031,967	
Ending Market Value	\$996,681,696	

Performance vs Callan Global Equity (Gross)



Relative Return vs MSCI ACWI Index



Callan Global Equity (Gross) Annualized One and Three-Quarter Year Risk vs Return



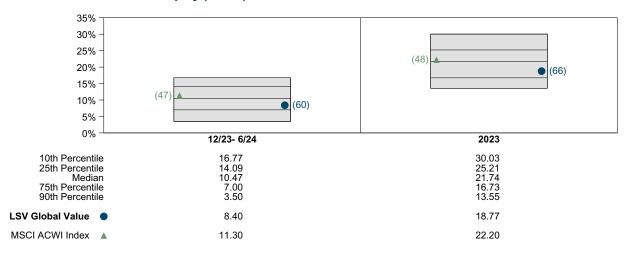


LSV Global Value Return Analysis Summary

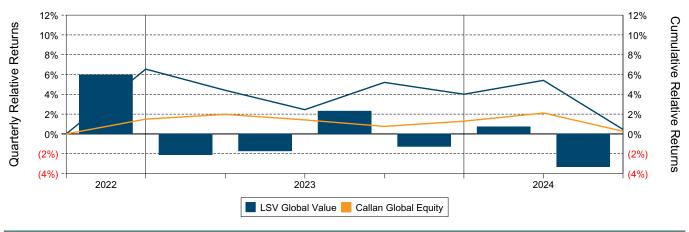
Return Analysis

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.

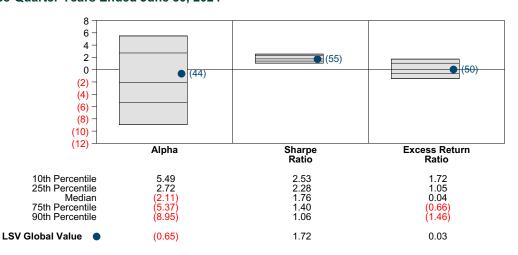
Performance vs Callan Global Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI Index



Risk Adjusted Return Measures vs MSCI ACWI Index Rankings Against Callan Global Equity (Gross) One and Three-Quarter Years Ended June 30, 2024





International Equity Period Ended June 30, 2024

Quarterly Summary and Highlights

- International Equity's portfolio posted a 0.84% return for the quarter placing it in the 79 percentile of the Public Fund -International Equity group for the quarter and in the 52 percentile for the last year.
- International Equity's portfolio underperformed the International Equity Benchmark (3) by 0.07% for the quarter and outperformed the International Equity Benchmark (3) for the year by 1.00%.

Quarterly Asset Growth

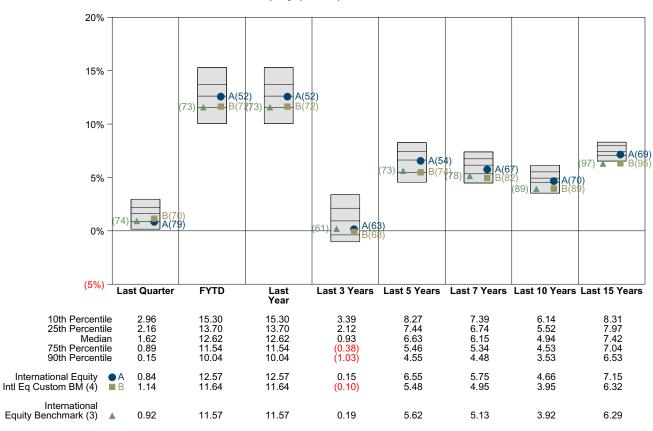
 Beginning Market Value
 \$6,857,972,263

 Net New Investment
 \$-175,353,798

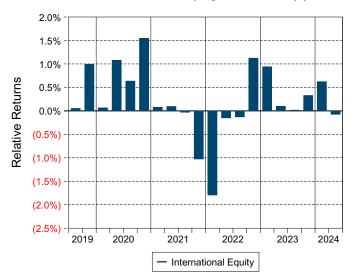
 Investment Gains/(Losses)
 \$58,908,702

Ending Market Value \$6,741,527,167

Performance vs Public Fund - International Equity (Gross)



Relative Returns vs International Equity Benchmark (3)



Public Fund - International Equity (Gross) Annualized Five Year Risk vs Return



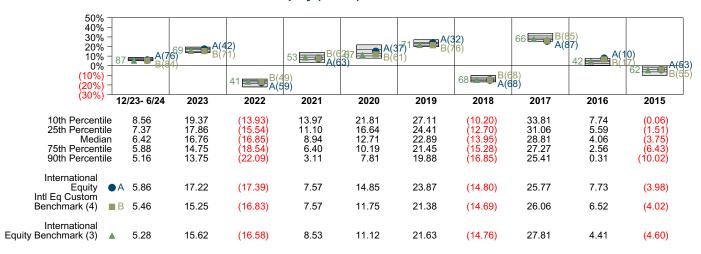


International Equity Return Analysis Summary

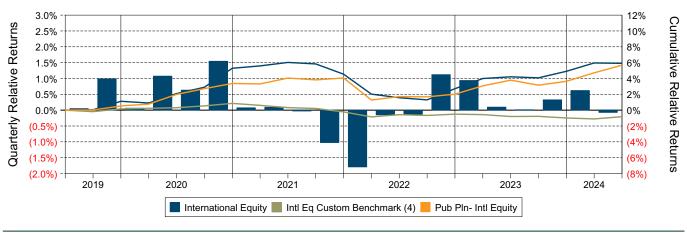
Return Analysis

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.

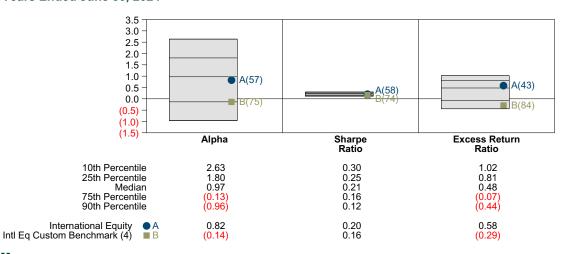
Performance vs Public Fund - International Equity (Gross)



Cumulative and Quarterly Relative Returns vs International Equity Benchmark (3)



Risk Adjusted Return Measures vs International Equity Benchmark (3) Rankings Against Public Fund - International Equity (Gross) Five Years Ended June 30, 2024





Principal Sm Cap Intl Period Ended June 30, 2024

Investment Philosophy

Principal believes that markets are not perfectly efficient and that investors are inherently change and risk averse. Through focused stock selection centered on the early identification of fundamental change and strategic portfolio construction that embraces rewarded risks and minimizing unnecessary systematic biases, they seek to consistently capitalize on persistent biases, anomalies and inefficiencies. They believe bottom-up stock selection, based on fundamental and earnings-based characteristics, is the most reliable and repeatable source of long-term, consistent performance. They believe fundamental research is most effective when it is focused on exploiting anomalies and inefficiencies and that the integration of traditional and quantitative fundamental research is superior to either in isolation. They believe three key characteristics consistently distinguish superior stocks: positive and sustainable fundamental change; investor expectation gaps; and attractive relative valuation. The Fund's inception date is October 2018.

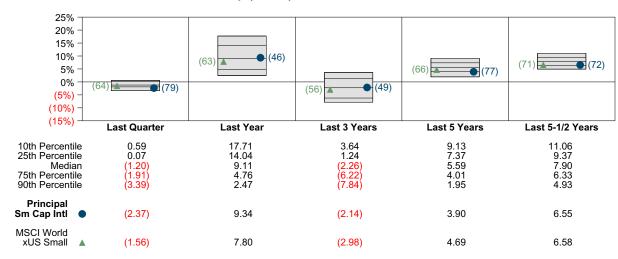
Quarterly Summary and Highlights

- Principal Sm Cap Intl's portfolio posted a (2.37)% return for the quarter placing it in the 79 percentile of the Callan International Small Cap group for the quarter and in the 46 percentile for the last year.
- Principal Sm Cap Intl's portfolio underperformed the MSCI World xUS Small by 0.82% for the quarter and outperformed the MSCI World xUS Small for the year by 1.54%.

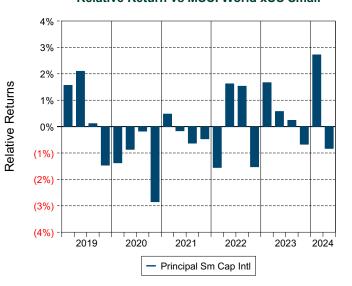
Quarterly Asset Growth

Beginning Market Value	\$354,869,300
Net New Investment	\$-314,460
Investment Gains/(Losses)	\$-8,407,954
Ending Market Value	\$346,146,887

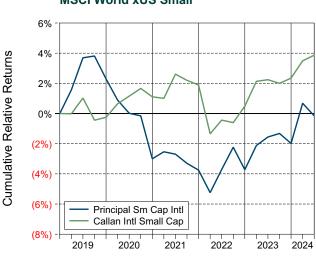
Performance vs Callan International Small Cap (Gross)



Relative Return vs MSCI World xUS Small



Cumulative Returns vs MSCI World xUS Small



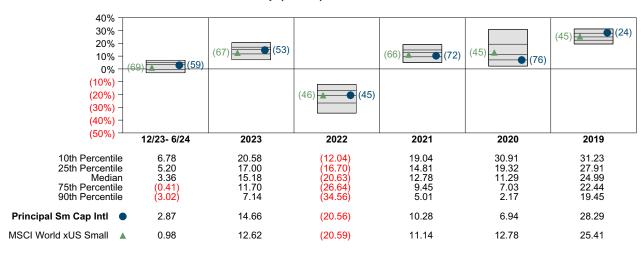


Principal Sm Cap Intl Return Analysis Summary

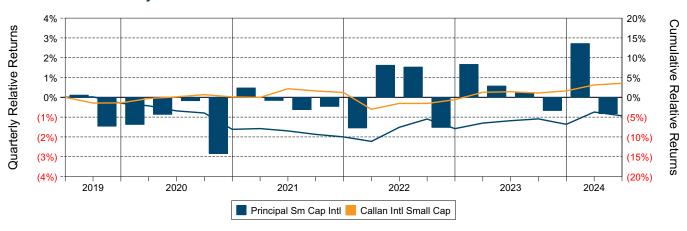
Return Analysis

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.

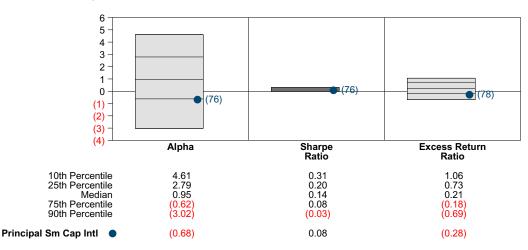
Performance vs Callan International Small Cap (Gross)



Cumulative and Quarterly Relative Returns vs MSCI World xUS Small



Risk Adjusted Return Measures vs MSCI World xUS Small Rankings Against Callan International Small Cap (Gross) Five Years Ended June 30, 2024





Arrowstreet Capital Period Ended June 30, 2024

Investment Philosophy

Arrowstreet is a 100% employed-owned firm whose strategies are team-managed by a deep and experienced group of individuals. The firm employs a quantitative process that identifies direct and indirect relationships to forecast stock price returns. The investment approach seeks to provide a risk controlled, core exposure to Non-US developed and emerging countries. The portfolio is diversified with 150 to 775 holdings (typically 300-475) across countries and sectors. The firm's dedication to research has led to a model that has adapted to multiple market environments and provided consistent results over time. The Fund's inception date is June 2013.

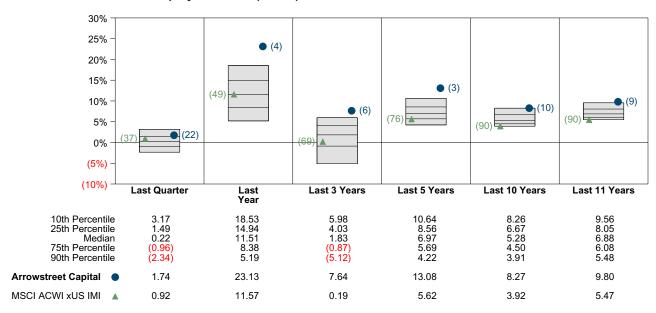
Quarterly Summary and Highlights

- Arrowstreet Capital's portfolio posted a 1.74% return for the quarter placing it in the 22 percentile of the Non-U.S. Equity Database group for the quarter and in the 4 percentile for the last year.
- Arrowstreet Capital's portfolio outperformed the MSCI ACWI xUS IMI by 0.82% for the quarter and outperformed the MSCI ACWI xUS IMI for the year by 11.56%.

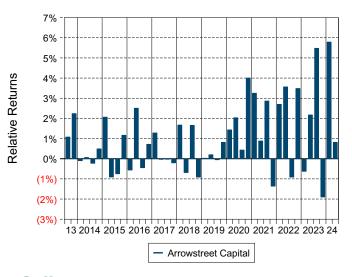
Quarterly Asset Growth

Beginning Market Value	\$840,361,118
Net New Investment	\$-170,938,093
Investment Gains/(Losses)	\$22,380,705
Ending Market Value	\$691,803,730

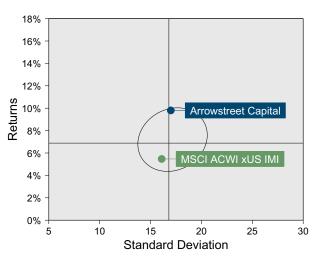
Performance vs Non-U.S. Equity Database (Gross)



Relative Return vs MSCI ACWI xUS IMI



Non-U.S. Equity Database (Gross) Annualized Eleven Year Risk vs Return



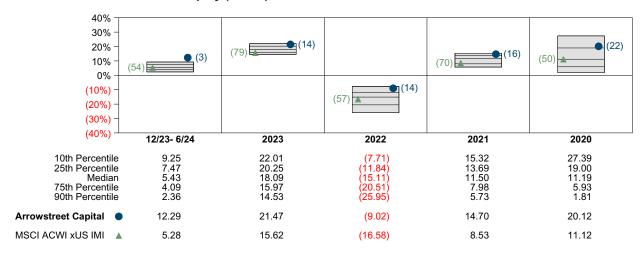


Arrowstreet Capital Return Analysis Summary

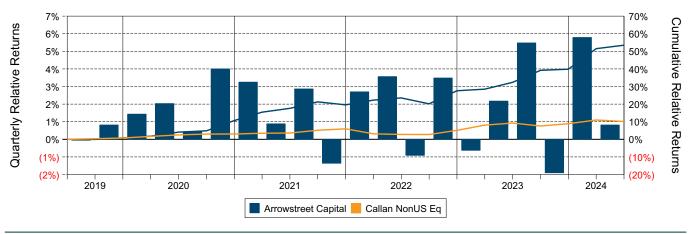
Return Analysis

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.

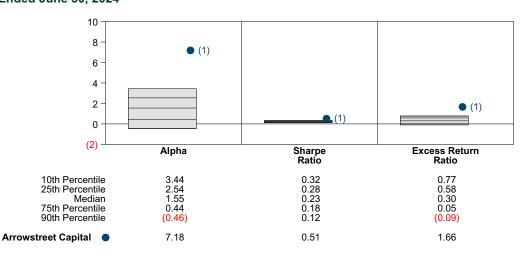
Performance vs Callan Non-US Equity (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI xUS IMI



Risk Adjusted Return Measures vs MSCI ACWI xUS IMI Rankings Against Callan Non-US Equity (Gross) Five Years Ended June 30, 2024





Baillie Gifford Period Ended June 30, 2024

Investment Philosophy

Baillie Gifford is a 100% employee-owned investment manager based in Edinburgh, Scotland. As of March 31, 2022, the firm managed \$365 billion in assets, primarily across growth-oriented equity strategies. The ACWI ex US All Cap strategy seeks to exploit inefficiencies through bottom-up stock selection with a focus on companies with superior profit growth that can be held for the long term. The portfolio typically holds 60-90 companies and has historically exhibited a turnover rate of less than 20% over rolling 12-month periods. Both short- and long-term performance has been very strong relative to the MSCI ACWI ex-US Index. The Fund's inception date is September 2014.

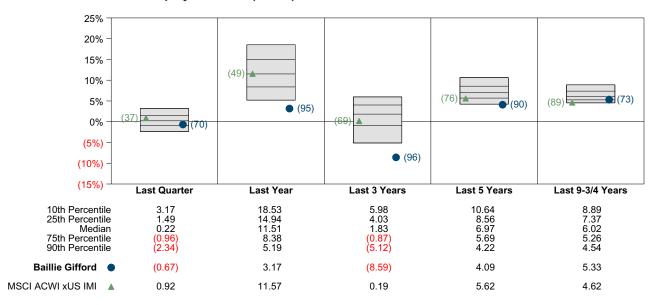
Quarterly Summary and Highlights

- Baillie Gifford's portfolio posted a (0.67)% return for the quarter placing it in the 70 percentile of the Non-U.S. Equity Database group for the quarter and in the 95 percentile for the last year.
- Baillie Gifford's portfolio underperformed the MSCI ACWI xUS IMI by 1.58% for the quarter and underperformed the MSCI ACWI xUS IMI for the year by 8.41%.

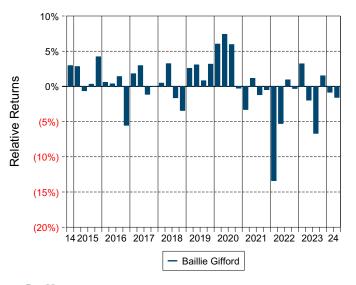
Quarterly Asset Growth

Beginning Market Value	\$745,391,555
Net New Investment	\$-690,294
Investment Gains/(Losses)	\$-4,971,480
Ending Market Value	\$739,729,782

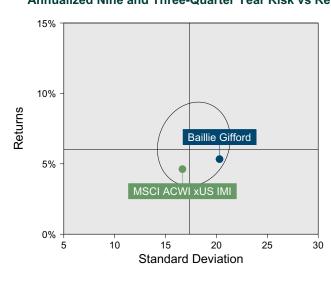
Performance vs Non-U.S. Equity Database (Gross)



Relative Return vs MSCI ACWI xUS IMI



Non-U.S. Equity Database (Gross) Annualized Nine and Three-Quarter Year Risk vs Return



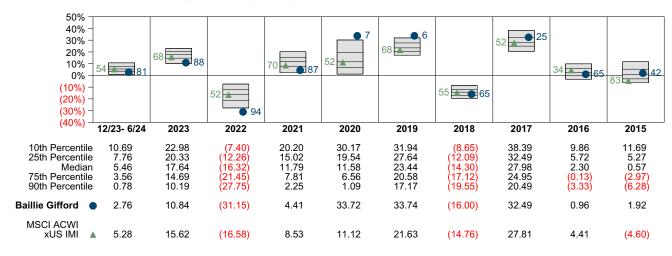


Baillie Gifford Return Analysis Summary

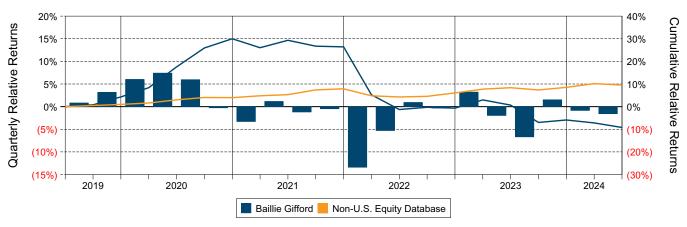
Return Analysis

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.

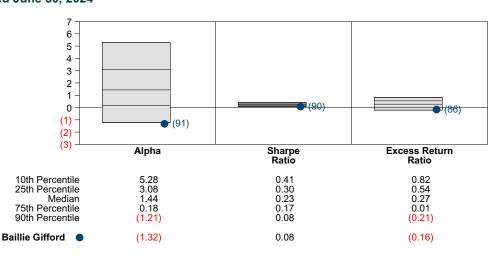
Performance vs Non-U.S. Equity Database (Gross)



Cumulative and Quarterly Relative Returns vs MSCI ACWI xUS IMI



Risk Adjusted Return Measures vs MSCI ACWI xUS IMI Rankings Against Non-U.S. Equity Database (Gross) Five Years Ended June 30, 2024





Marathon Asset Mgmt Period Ended June 30, 2024

Investment Philosophy

At the heart of Marathon's investment philosophy is the "capital cycle" approach to investment. This is based on the idea that the prospect of high returns will attract excessive capital (and hence competition), and vice versa. In addition, the assessment of how management responds to the forces of the capital cycle - particularly whether they curtail investment when returns have been poor - and how they are incentivized are critical to the investment outcome. Given the contrarian and long-term nature of the capital cycle, the investment philosophy results in strong views versus the market and long holding periods (5 years plus). The attractiveness of an individual security, therefore, should be evaluated within this timeframe. The Fund's inception date is May 2016.

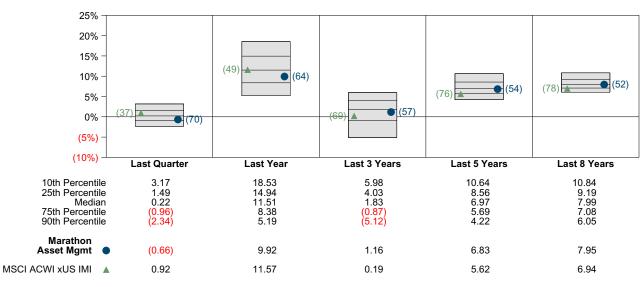
Quarterly Summary and Highlights

- Marathon Asset Mgmt's portfolio posted a (0.66)% return for the quarter placing it in the 70 percentile of the Non-U.S. Equity Database group for the quarter and in the 64 percentile for the last year.
- Marathon Asset Mgmt's portfolio underperformed the MSCI ACWI xUS IMI by 1.58% for the quarter and underperformed the MSCI ACWI xUS IMI for the year by 1.65%.

Quarterly Asset Growth

Beginning Market Value	\$856,889,537
Net New Investment	\$-1,253,223
Investment Gains/(Losses)	\$-5,657,133
Ending Market Value	\$849,979,181

Performance vs Non-U.S. Equity Database (Gross)



Relative Return vs MSCI ACWI xUS IMI



Non-U.S. Equity Database (Gross) Annualized Eight Year Risk vs Return



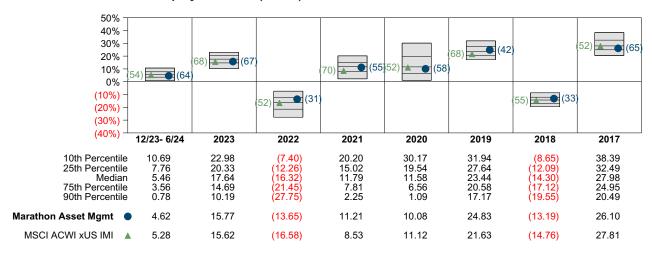


Marathon Asset Mgmt Return Analysis Summary

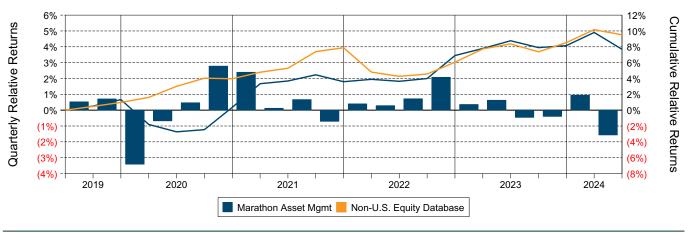
Return Analysis

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 two charts illustrate the manager's ranking relative to their style using various risk-adjusted return measures and returns for rising/declining periods.

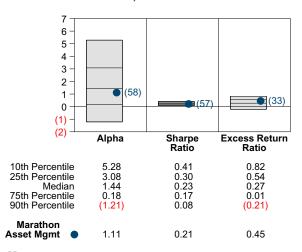
Performance vs Non-U.S. Equity Database (Gross)



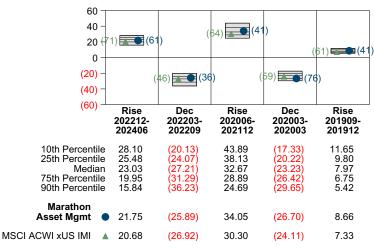
Cumulative and Quarterly Relative Returns vs MSCI ACWI xUS IMI



Risk Adjusted Return Measures vs MSCI ACWI xUS IMI Rankings Against Non-U.S. Equity Database (Gross) Five Years Ended June 30, 2024



Returns for International Equity Rising/Declining Periods Five Years Ended June 30, 2024



NT MSCI World ex US Period Ended June 30, 2024

Investment Philosophy

Northern Trust believes that providing low cost market exposure is vital to investors in order to maximize investment returns over the long term. The core objective is to replicate the benchmark characteristics while minimizing transaction costs and preserving wealth throughout the process. Northern Trust core principles: 1) Discipline portfolio construction of portfolios using full replication and optimization where it allows for risk reduction, increased liquidity, and lower costs. 2) Minimizing costs such as commissions, bid/ask spread, and market impact by utilizing sophisticated trading techniques Multi-dimensional risk controls and careful oversight throughout the investment process. The Fund's inception date is April 2022.

Quarterly Summary and Highlights

- NT MSCI World ex US's portfolio posted a (0.44)% return for the quarter placing it in the 69 percentile of the Callan Non-US Equity group for the quarter and in the 44 percentile for the last year.
- NT MSCI World ex US's portfolio outperformed the MSCI World xUS by 0.16% for the quarter and outperformed the MSCI World xUS for the year by 0.39%.

Quarterly Asset Growth

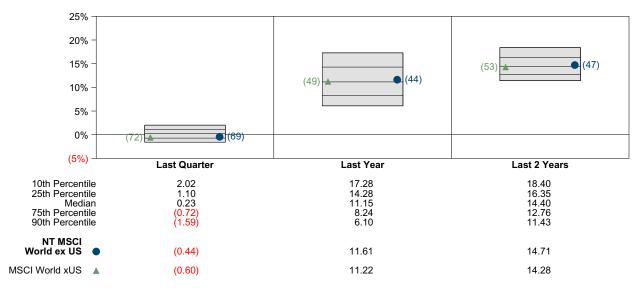
 Beginning Market Value
 \$2,341,895,552

 Net New Investment
 \$-59,917

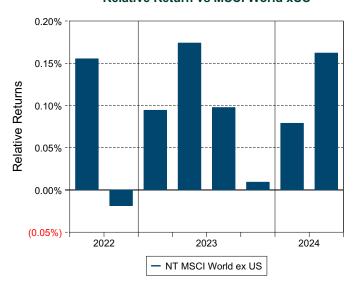
 Investment Gains/(Losses)
 \$-10,338,338

 Ending Market Value
 \$2,331,497,296

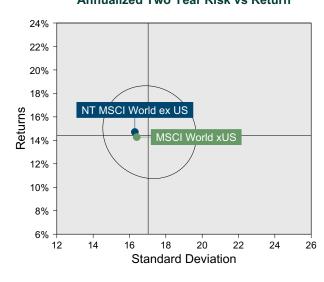
Performance vs Callan Non-US Equity (Gross)



Relative Return vs MSCI World xUS



Callan Non-US Equity (Gross) Annualized Two Year Risk vs Return





Lazard Emerging Markets Period Ended June 30, 2024

Investment Philosophy

Similar to its developed market-only products, Lazard employs a bottom-up stock selection process focusing on companies which are financially productive yet inexpensively priced. The firm utilizes quantitative and qualitative factors in its stock selection process, incorporating three levels of investment research. Lazard begins with a universe of 2,000 companies to screen for stocks with high return-on-equity and return-on-assets, and yet are attractively priced (low price/book and price/cash flow). After the initial screening, 250 issues undergo further analysis of their financial statistics and business value to uncover any hidden opportunities. Once the companies have passed the "health check" the focus is on the future outlook. This team has been one of the more stable and longest tenured teams at Lazard, with the lead PM, James Donald, on the product since 1996. The Fund's inception date is April 1998.

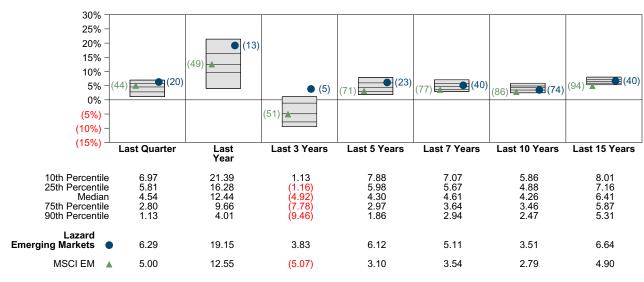
Quarterly Summary and Highlights

- Lazard Emerging Markets's portfolio posted a 6.29% return for the quarter placing it in the 20 percentile of the Callan Emerging Broad group for the quarter and in the 13 percentile for the last year.
- Lazard Emerging Markets's portfolio outperformed the MSCI EM by 1.29% for the quarter and outperformed the MSCI EM for the year by 6.60%.

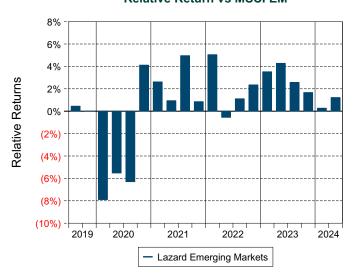
Quarterly Asset Growth

Beginning Market Value	\$698,602,637
Net New Investment	\$-561,801
Investment Gains/(Losses)	\$43,923,681
Ending Market Value	\$741,964,517

Performance vs Callan Emerging Broad (Gross)



Relative Return vs MSCI EM



Callan Emerging Broad (Gross) Annualized Five Year Risk vs Return



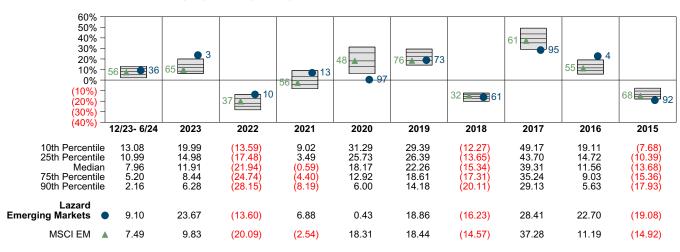


Lazard Emerging Markets Return Analysis Summary

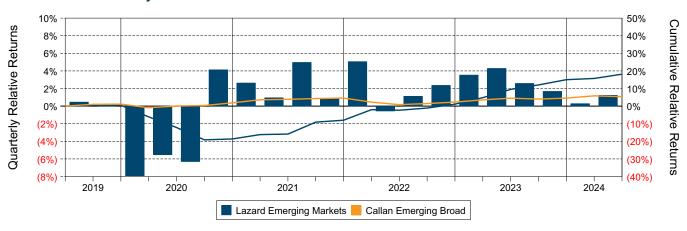
Return Analysis

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.

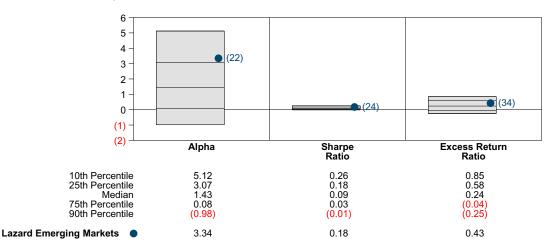
Performance vs Callan Emerging Broad (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EM



Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Broad (Gross) Five Years Ended June 30, 2024



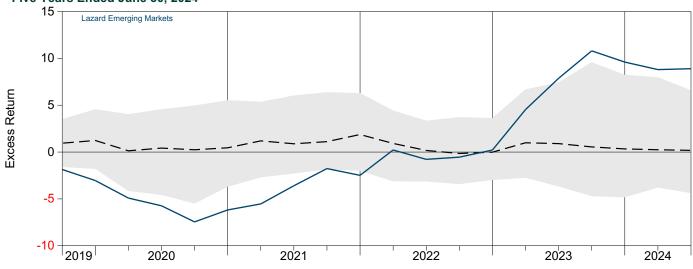


Lazard Emerging Markets Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

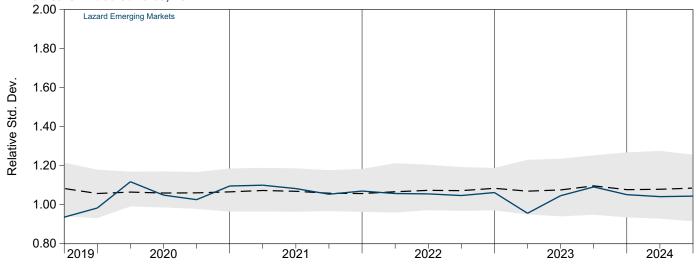
The first chart below illustrates the consistency of excess return over rolling three year periods versus the MSCI EM. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Emerging Broad. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to MSCI EM Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.63%	0.35%
% Positive Periods	90%	40%
Average Ranking	50	62

Rolling Three Year Relative Std. Dev. Relative to MSCI EM Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.07%	1.05%
% Positive Periods	100%	100%
Average Ranking	50	59



Fisher Investments Period Ended June 30, 2024

Investment Philosophy

Founded by Ken Fisher in 1979, Fisher Investments (FI) manages global, U.S., non-U.S., and emerging markets portfolios for a broad client base. The Emerging Markets strategy, as well as all FI strategies, are managed by a five-person portfolio construction group (PCG) including Ken Fisher, Jeff Silk, Aaron Anderson, William Glaser, and Michael Hanson. The PCG is supported by a large research team focused on both security and macroeconomic analysis. The investment process is top-down and bottom-up but the thematic drivers are responsible for two-thirds of the strategy's performance. From the bottom up FI seeks companies with underappreciated competitive advantages, strong management teams, and good valuations. Portfolios hold between 50 and 100 holdings with low turnover. The Fund's inception date is April 2016.

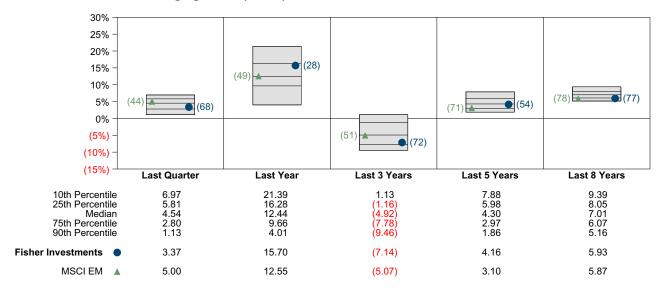
Quarterly Summary and Highlights

- Fisher Investments's portfolio posted a 3.37% return for the quarter placing it in the 68 percentile of the Callan Emerging Broad group for the quarter and in the 28 percentile for the last year.
- Fisher Investments's portfolio underperformed the MSCI EM by 1.63% for the quarter and outperformed the MSCI EM for the year by 3.15%.

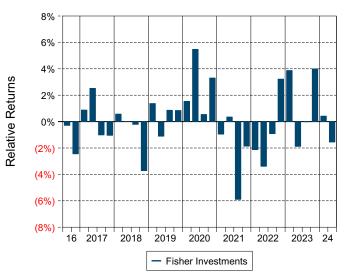
Quarterly Asset Growth

Beginning Market Value	\$679,165,827
Net New Investment	\$-978,853
Investment Gains/(Losses)	\$22,845,746
Ending Market Value	\$701,032,720

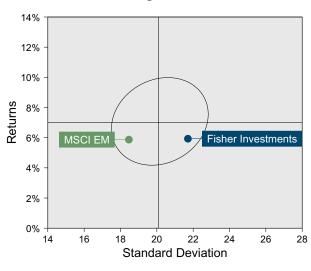
Performance vs Callan Emerging Broad (Gross)



Relative Return vs MSCI EM



Callan Emerging Broad (Gross) Annualized Eight Year Risk vs Return



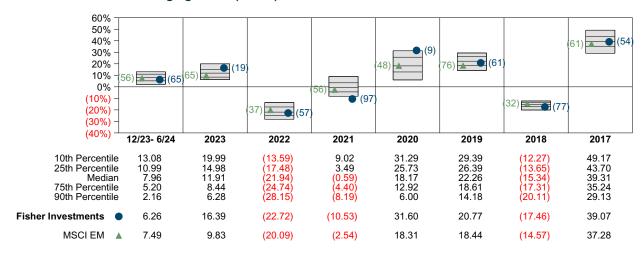


Fisher Investments Return Analysis Summary

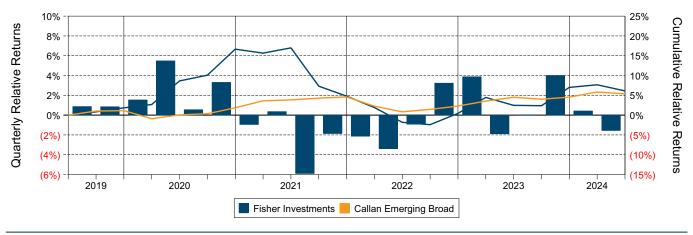
Return Analysis

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.

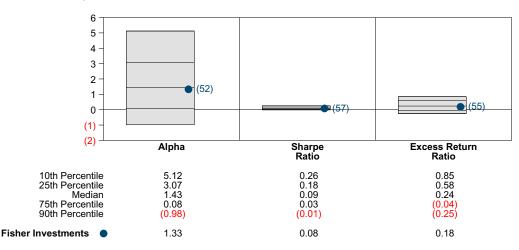
Performance vs Callan Emerging Broad (Gross)



Cumulative and Quarterly Relative Returns vs MSCI EM



Risk Adjusted Return Measures vs MSCI EM Rankings Against Callan Emerging Broad (Gross) Five Years Ended June 30, 2024





Total Fixed Income Period Ended June 30, 2024

Quarterly Summary and Highlights

- Total Fixed Income's portfolio posted a 0.39% return for the quarter placing it in the 30 percentile of the Public Fund -Domestic Fixed group for the quarter and in the 21 percentile for the last year.
- Total Fixed Income's portfolio outperformed the Blmbg:Aggregate by 0.32% for the quarter and outperformed the Blmbg:Aggregate for the year by 2.30%.

Quarterly Asset Growth

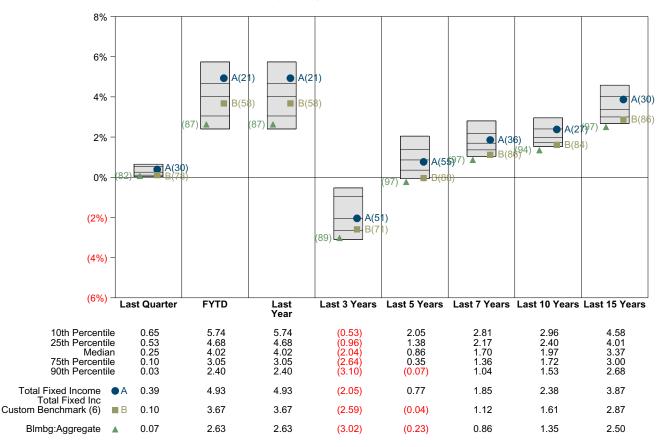
 Beginning Market Value
 \$6,607,065,657

 Net New Investment
 \$396,774,820

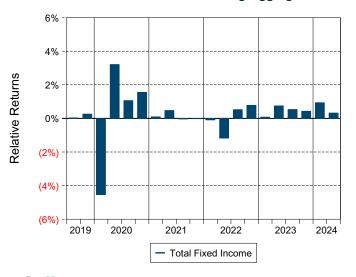
 Investment Gains/(Losses)
 \$24,990,559

Ending Market Value \$7,028,831,035

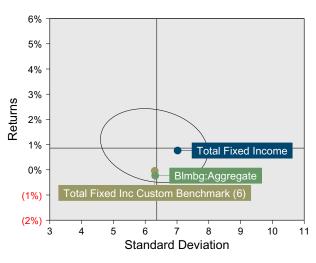
Performance vs Public Fund - Domestic Fixed (Gross)



Relative Return vs Blmbg:Aggregate



Public Fund - Domestic Fixed (Gross) Annualized Five Year Risk vs Return



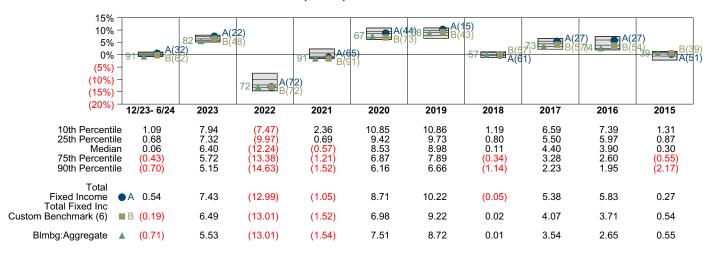


Total Fixed Income Return Analysis Summary

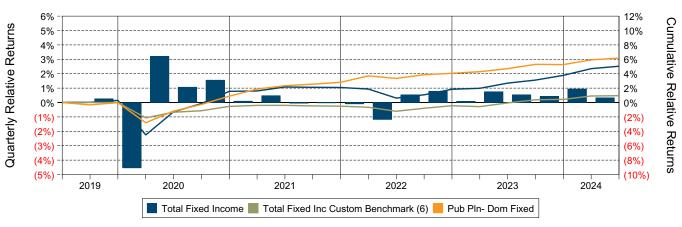
Return Analysis

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.

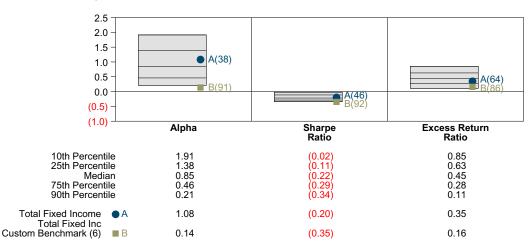
Performance vs Public Fund - Domestic Fixed (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Public Fund - Domestic Fixed (Gross) Five Years Ended June 30, 2024





Domestic Fixed Income Period Ended June 30, 2024

Quarterly Summary and Highlights

- Domestic Fixed Income's portfolio posted a 0.50% return for the quarter placing it in the 26 percentile of the Public Fund -Domestic Fixed group for the quarter and in the 52 percentile for the last year.
- Domestic Fixed Income's portfolio outperformed the Blmbg:Aggregate by 0.44% for the quarter outperformed the Blmbg:Aggregate for the year by 1.32%.

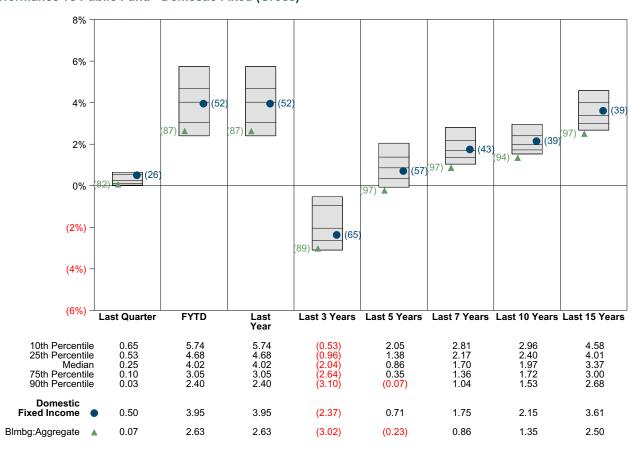
Quarterly Asset Growth

Beginning Market Value \$4,371,461,331 Net New Investment \$398,487,882 Investment Gains/(Losses) \$21,466,936

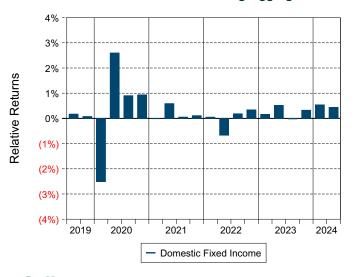
\$4,791,416,148

Ending Market Value

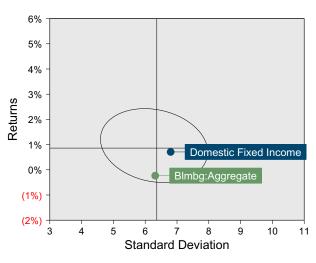
Performance vs Public Fund - Domestic Fixed (Gross)



Relative Return vs Blmbg:Aggregate



Public Fund - Domestic Fixed (Gross) Annualized Five Year Risk vs Return



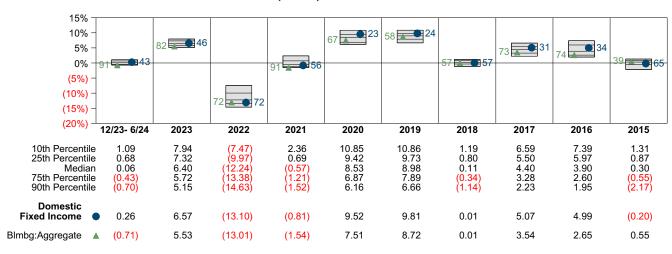


Domestic Fixed Income Return Analysis Summary

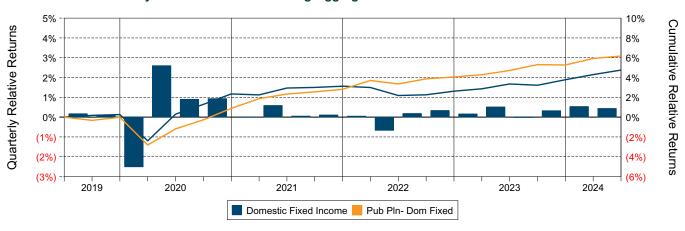
Return Analysis

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.

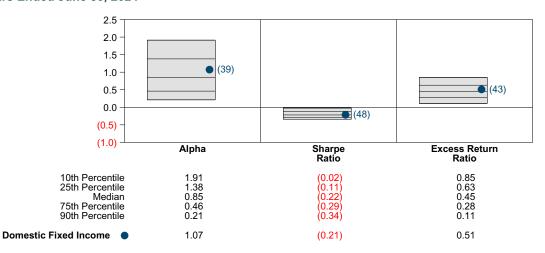
Performance vs Public Fund - Domestic Fixed (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Public Fund - Domestic Fixed (Gross) Five Years Ended June 30, 2024





SIT Short Duration FI Period Ended June 30, 2024

Investment Philosophy

The firm believes the consistent attainment of superior risk-adjusted returns is achievable using a conservative investment management approach with: 1) investment grade securities; 2) special emphasis on interest income; and, 3) significant stability of principal value. To this end, they utilize an active sector rotation strategy which looks for market sectors with strong risk/reward potential. Although they do place a great deal of emphasis on interest rate projection and interest rate movement, they are not duration managers -- as stated above. The Fund's inception date is September 2023.

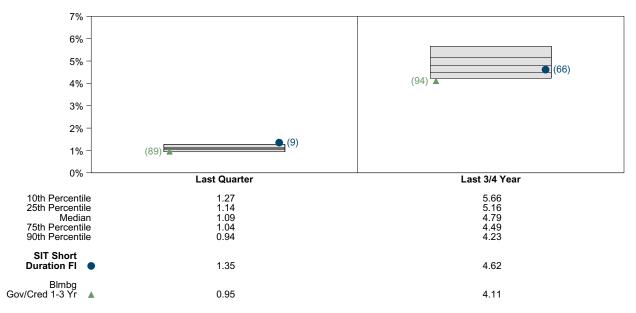
Quarterly Summary and Highlights

- SIT Short Duration FI's portfolio posted a 1.35% return for the quarter placing it in the 9 percentile of the Callan Short Term Fixed Income group for the quarter and in the 66 percentile for the last three-quarter year.
- SIT Short Duration FI's portfolio outperformed the Blmbq Gov/Cred 1-3 Yr by 0.40% for the guarter and outperformed the Blmbg Gov/Cred 1-3 Yr for the three-quarter year by 0.51%.

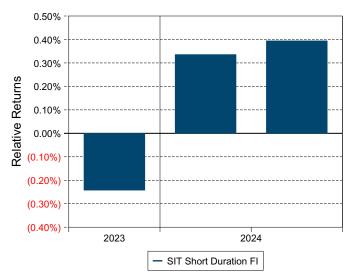
Quarterly Asset Growth

Beginning Market Value	\$762,887,941
Net New Investment	\$399,861,946
Investment Gains/(Losses)	\$10,445,078
Ending Market Value	\$1,173,194,966

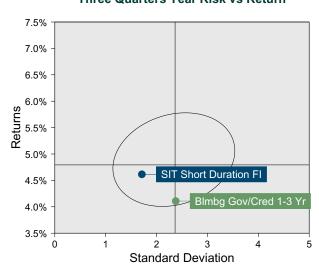
Performance vs Callan Short Term Fixed Income (Gross)



Relative Return vs Blmbg Gov/Cred 1-3 Yr



Callan Short Term Fixed Income (Gross) Three Quarters Year Risk vs Return





PIMCO Period Ended June 30, 2024

Investment Philosophy

The Total Return Fund II Fund is a constrained version of the Total Return Fund. The Fund can only invest in fixed income investment grade securities of US issuers and, unlike the larger Total Return Fund, may purchase only investment grade issues. Both funds are co-managed by a team of senior portfolio managers. PIMCO is well-known for its macroeconomic forecasts, which contribute to the top down elements of its investment process while sector teams and analysts help drive the bottom-up security selection choices. Duration is generally maintained within a band of 2 years around the Bloomberg Aggregate benchmark. There are no limitations on the use of derivatives. The Fund's inception date is July 1983.

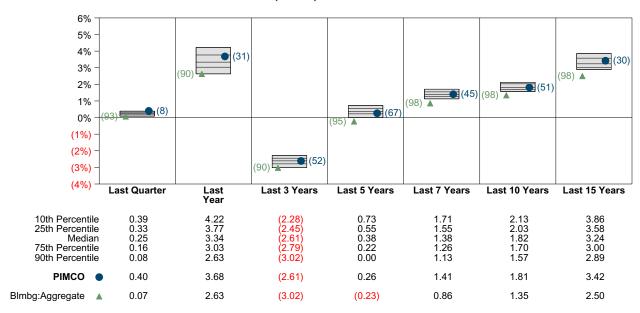
Quarterly Summary and Highlights

- PIMCO's portfolio posted a 0.40% return for the quarter placing it in the 8 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 31 percentile for the last year.
- PIMCO's portfolio outperformed the Blmbg:Aggregate by the quarter and outperformed Blmbg:Aggregate for the year by 1.05%.

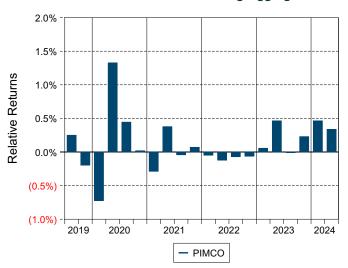
Quarterly Asset Growth

Beginning Market Value	\$663,479,876
Net New Investment	\$-248,805
Investment Gains/(Losses)	\$2,670,021
Ending Market Value	\$665.901.093

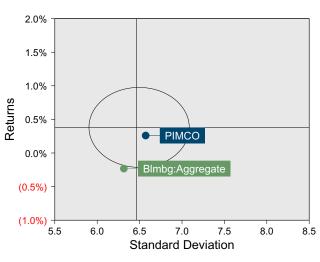
Performance vs Callan Core Bond Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



Callan Core Bond Fixed Income (Gross) Annualized Five Year Risk vs Return



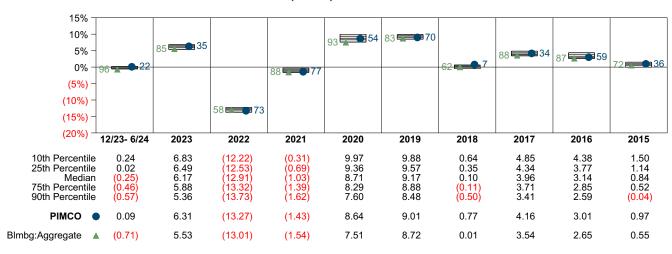


PIMCO Return Analysis Summary

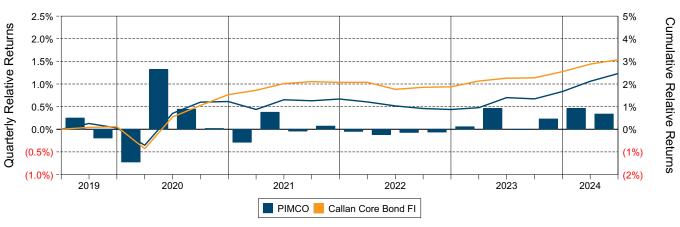
Return Analysis

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.

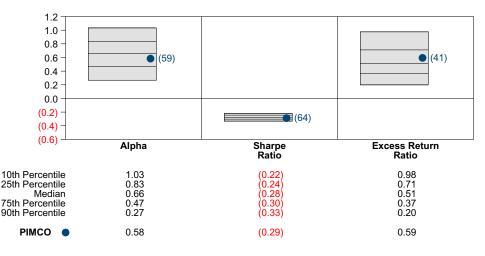
Performance vs Callan Core Bond Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended June 30, 2024





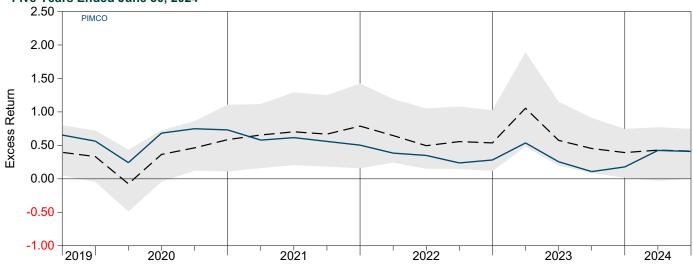
PIMCO

Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

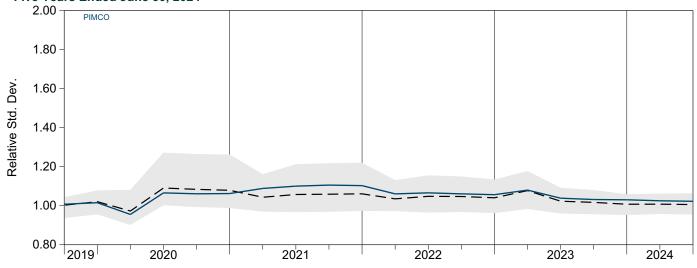
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Bond FI. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Blmbg:Aggregate Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.52%	0.45%
% Positive Periods	95%	100%
Average Ranking	50	57

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.04%	1.05%
% Positive Periods	100%	100%
Average Ranking	50	42



Manulife Asset Management Period Ended June 30, 2024

Investment Philosophy

Manulife believes strong performance can be generated through bottom-up active management of sector allocation, issue selection and yield curve positioning. The team's disciplined investment process seeks to add value by: following a relative value approach to sector allocation and issue selection, engaging in intensive fundamental credit research and identifying points on the yield curve with the greatest return potential. Additionally the team seeks to maintain a yield that is above the benchmark yield in order to reduce portfolio volatility. The Fund's inception date is March 2017.

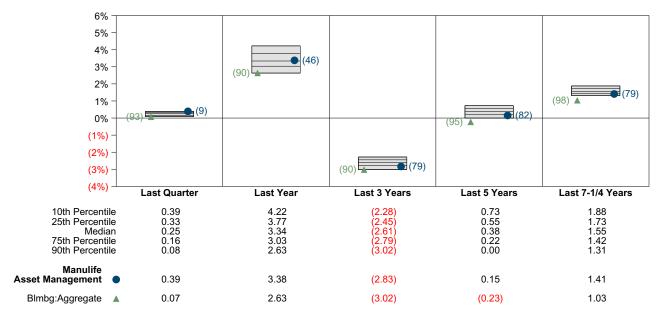
Quarterly Summary and Highlights

- Manulife Asset Management's portfolio posted a 0.39% return for the quarter placing it in the 9 percentile of the Callan Core Bond Fixed Income group for the quarter and in the 46 percentile for the last year.
- Manulife Asset Management's portfolio outperformed the Blmbg:Aggregate by 0.33% for the quarter and outperformed the Blmbg:Aggregate for the year by 0.74%.

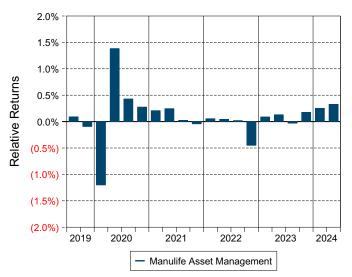
Quarterly Asset Growth

Beginning Market Value	\$659,692,110
Net New Investment	\$-243,392
Investment Gains/(Losses)	\$2,585,295
Ending Market Value	\$662 034 012

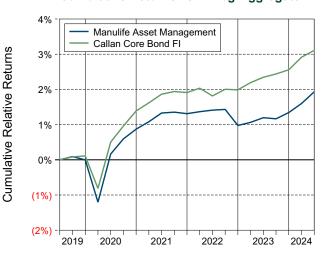
Performance vs Callan Core Bond Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



Cumulative Returns vs Blmbg:Aggregate



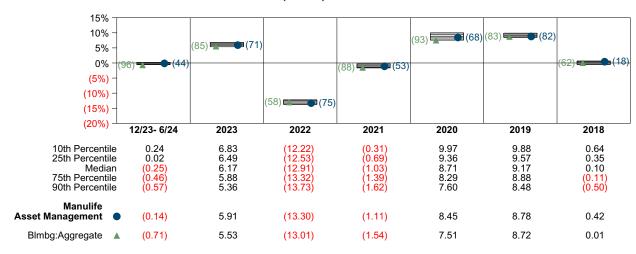


Manulife Asset Management Return Analysis Summary

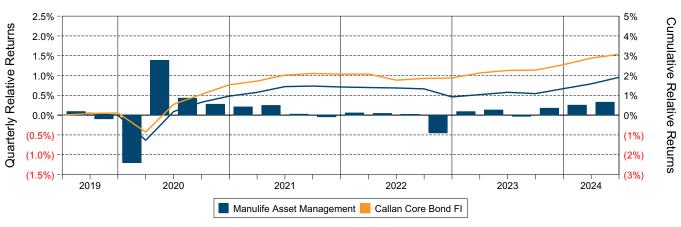
Return Analysis

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.

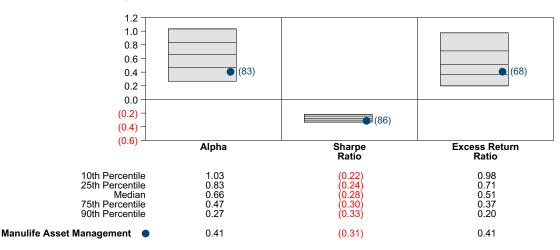
Performance vs Callan Core Bond Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Callan Core Bond Fixed Income (Gross) Five Years Ended June 30, 2024





Loomis Sayles Period Ended June 30, 2024

Investment Philosophy

This Loomis Core Plus strategy strives to outperform the Bloomberg Aggregate by 100 to 175 bps over a market cycle. The strategy incorporates both top-down and bottom-up elements and adds value through active sector rotation, security selection, curve positioning and duration. The Fund can purchase up to 20% in non-investment grade securities and up to 10% in non-dollar securities, including local currency emerging markets debt. Duration is generally within two years of the benchmark. The Fund's inception date is September 2009.

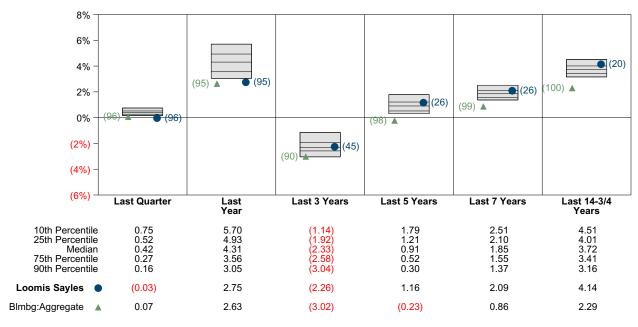
Quarterly Summary and Highlights

- Loomis Sayles's portfolio posted a (0.03)% return for the quarter placing it in the 96 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 95 percentile for the last year.
- Loomis Sayles's portfolio underperformed the Blmbg:Aggregate by 0.10% the quarter for outperformed the Blmbg:Aggregate for the year by 0.11%.

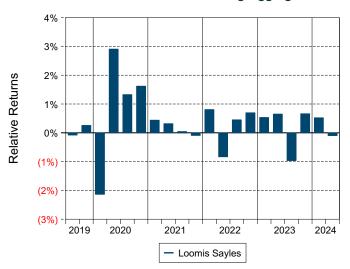
Quarterly Asset Growth

Beginning Market Value	\$1,131,065,571
Net New Investment	\$-499,150
Investment Gains/(Losses)	\$-387,807
Ending Market Value	\$1,130,178,614

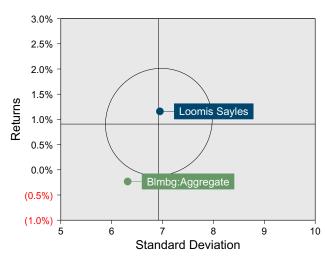
Performance vs Callan Core Plus Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



Callan Core Plus Fixed Income (Gross) Annualized Five Year Risk vs Return



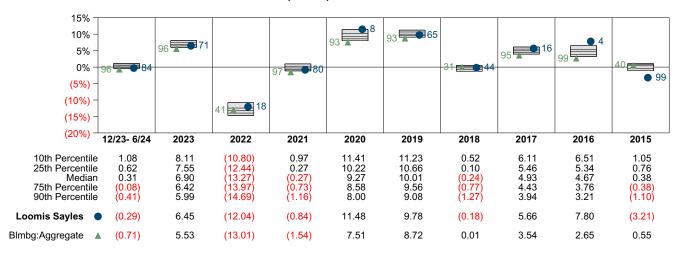


Loomis Sayles Return Analysis Summary

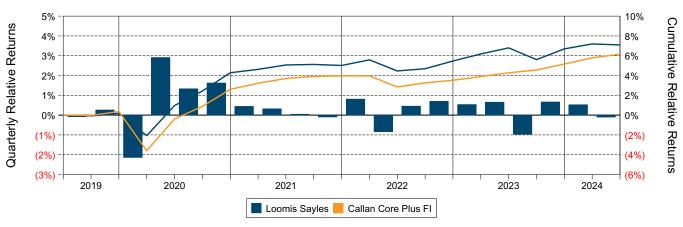
Return Analysis

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 Core Plus Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Callan Core Plus Fixed Income (Gross) Five Years Ended June 30, 2024



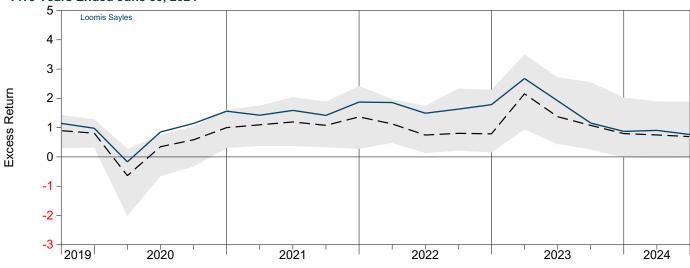


Loomis Sayles Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

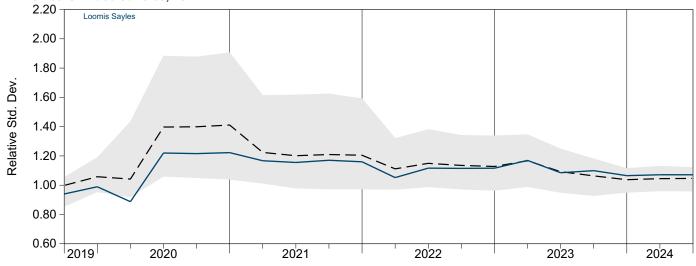
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Plus FI. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Blmbg:Aggregate Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	0.90%	1.34%
% Positive Periods	95%	95%
Average Ranking	50	25

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate Five Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.16%	1.10%
% Positive Periods	100%	100%
Average Ranking	50	59

Prudential Core Plus Period Ended June 30, 2024

Investment Philosophy

The PGIM Core Plus strategy is an actively managed strategy that seeks +150 bps over the Bloomberg Aggregate Index. Portfolio duration is kept within +/- 20% of its benchmark. The lead portfolio managers are Mike Collins, Rich Piccirillo and Greg Peters. (Please note Collins is set to retire in April 2024). The Fund's inception date is January 2012.

Quarterly Summary and Highlights

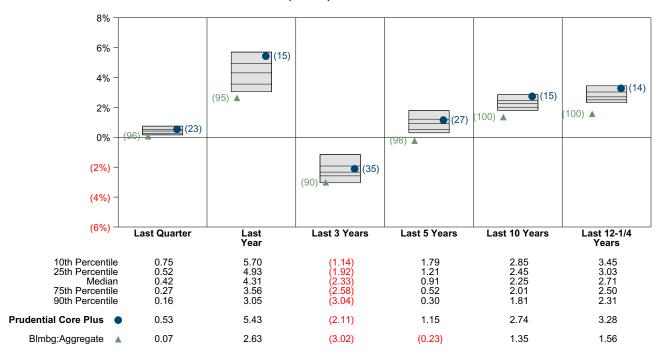
- Prudential Core Plus's portfolio posted a 0.53% return for the quarter placing it in the 23 percentile of the Callan Core Plus Fixed Income group for the quarter and in the 15 percentile for the last year.
- Prudential Core Plus's portfolio outperformed the Blmbg:Aggregate by 0.47% for the quarter and outperformed the Blmbg:Aggregate for the year by 2.80%.

Quarterly Asset Growth

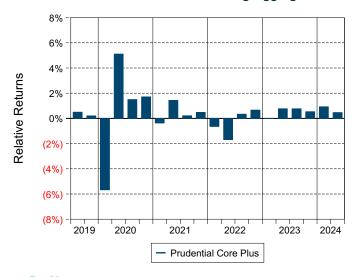
Beginning Market Value\$1,154,341,830Net New Investment\$-388,585Investment Gains/(Losses)\$6,154,358

Ending Market Value \$1,160,107,602

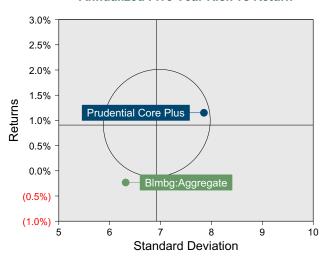
Performance vs Callan Core Plus Fixed Income (Gross)



Relative Return vs Blmbg:Aggregate



Callan Core Plus Fixed Income (Gross) Annualized Five Year Risk vs Return



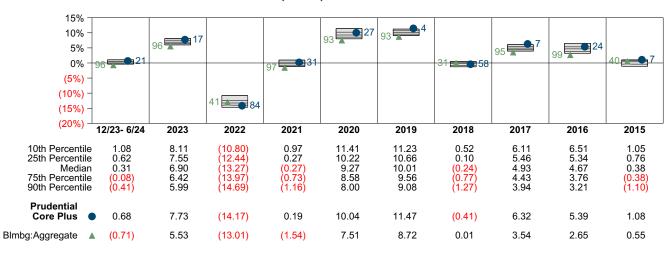


Prudential Core Plus Return Analysis Summary

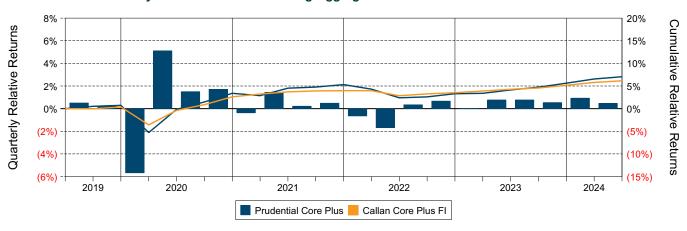
Return Analysis

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.

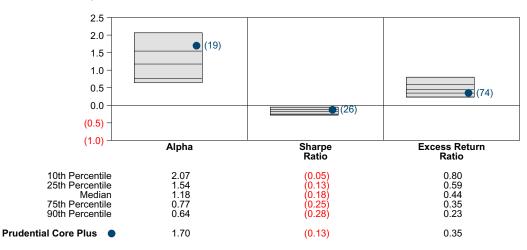
Performance vs Callan Core Plus Fixed Income (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg:Aggregate



Risk Adjusted Return Measures vs Blmbg:Aggregate Rankings Against Callan Core Plus Fixed Income (Gross) Five Years Ended June 30, 2024



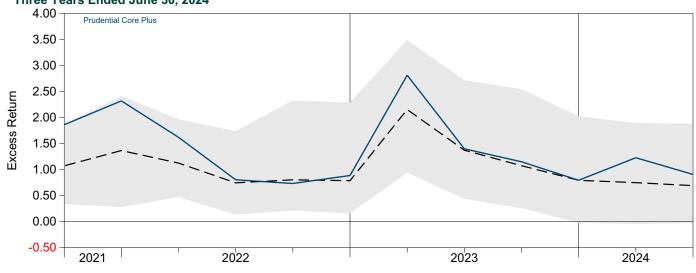


Prudential Core Plus Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

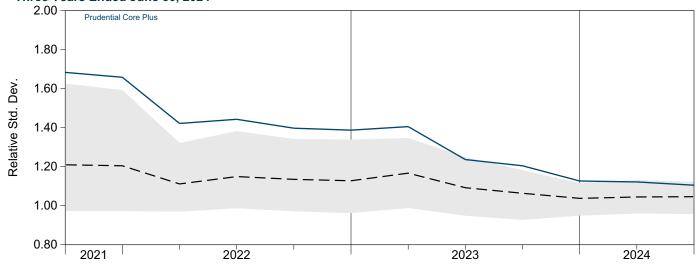
The first chart below illustrates the consistency of excess return over rolling three year periods versus the Blmbg:Aggregate. The gray area represents the range of excess return for the 10th through 90th percentile for the Callan Core Plus FI. The second chart below illustrates the consistency of relative std. dev. over rolling three year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling Three Year Excess Return Relative to Blmbg:Aggregate Three Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.06%	1.38%
% Positive Periods	100%	100%
Average Ranking	50	34

Rolling Three Year Relative Std. Dev. Relative to Blmbg:Aggregate Three Years Ended June 30, 2024



Rolling Three Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.12%	1.35%
% Positive Periods	100%	100%
Average Ranking	50	8

Wellington EMD Period Ended June 30, 2024

Investment Philosophy

Wellington is stable, experienced and deeply resourced at the portfolio management and research levels. Its research-intensive approach is a key element that has contributed to the success of this strategy. It is a solid option for exposure to primarily U.S. dollar-denominated, sovereign, emerging markets debt. The Fund's inception date is May 2010.

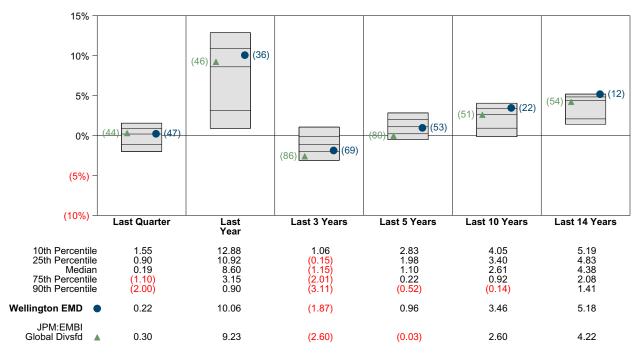
Quarterly Summary and Highlights

- Wellington EMD's portfolio posted a 0.22% return for the quarter placing it in the 47 percentile of the Emerging Debt Database group for the guarter and in the 36 percentile for the last year.
- Wellington EMD's portfolio underperformed the JPM:EMBI Global Divsfd by 0.09% for the guarter and outperformed the JPM:EMBI Global Divsfd for the year by 0.83%.

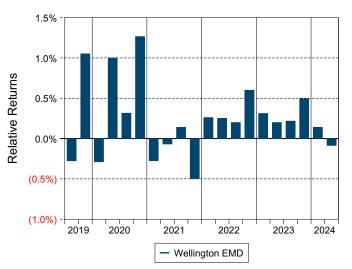
Quarterly Asset Growth

Beginning Market Value	\$708,134,327
Net New Investment	\$-809,513
Investment Gains/(Losses)	\$1,540,545
Ending Market Value	\$708,865,358

Performance vs Emerging Debt Database (Gross)



Relative Return vs JPM:EMBI Global Divsfd



Emerging Debt Database (Gross) Annualized Five Year Risk vs Return



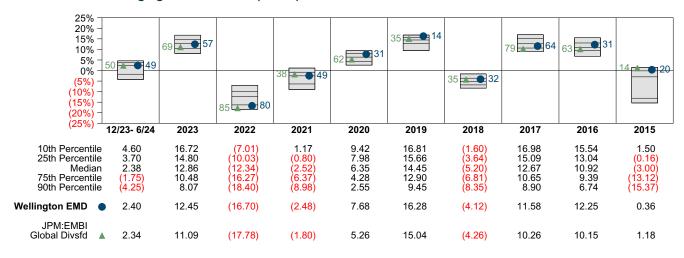


Wellington EMD Return Analysis Summary

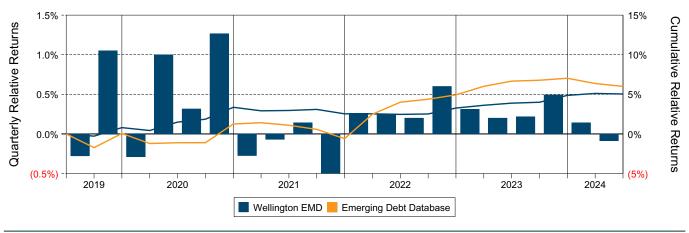
Return Analysis

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.

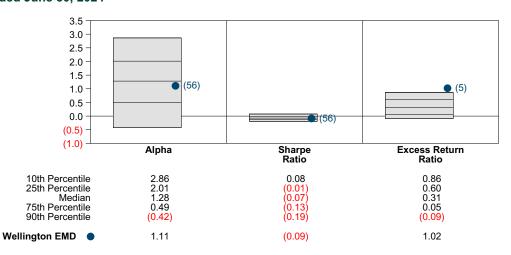
Performance vs Emerging Debt Database (Gross)



Cumulative and Quarterly Relative Returns vs JPM:EMBI Global Divsfd



Risk Adjusted Return Measures vs JPM:EMBI Global Divsfd Rankings Against Emerging Debt Database (Gross) Five Years Ended June 30, 2024



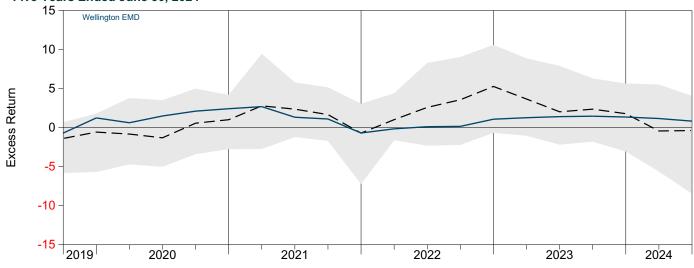


Wellington EMD Historical Consistency Analysis

Consistency of Excess Return and Relative Std. Dev.

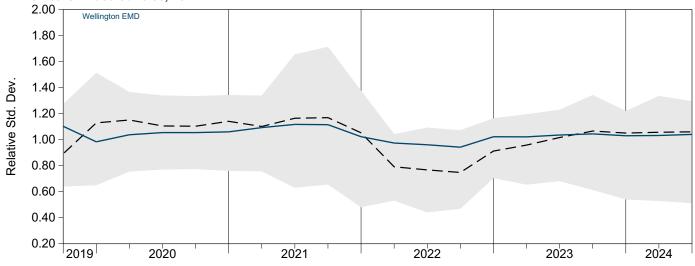
The first chart below illustrates the consistency of excess return over rolling one year periods versus the JPM:EMBI Global Divsfd. The gray area represents the range of excess return for the 10th through 90th percentile for the Emerging Debt Database. The second chart below illustrates the consistency of relative std. dev. over rolling one year periods. The tables provide summary statistics for the median manager of the group and the portfolio.

Rolling One Year Excess Return Relative to JPM:EMBI Global Divsfd Five Years Ended June 30, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Excess Return	1.26%	1.02%
% Positive Periods	65%	85%
Average Ranking	50	50

Rolling One Year Relative Std. Dev. Relative to JPM:EMBI Global Divsfd Five Years Ended June 30, 2024



Rolling One Year Period Analysis	Median	Portfolio
Average Annual Relative Std. Dev.	1.02%	1.04%
% Positive Periods	100%	100%
Average Ranking	50	49

Global Fixed Income Period Ended June 30, 2024

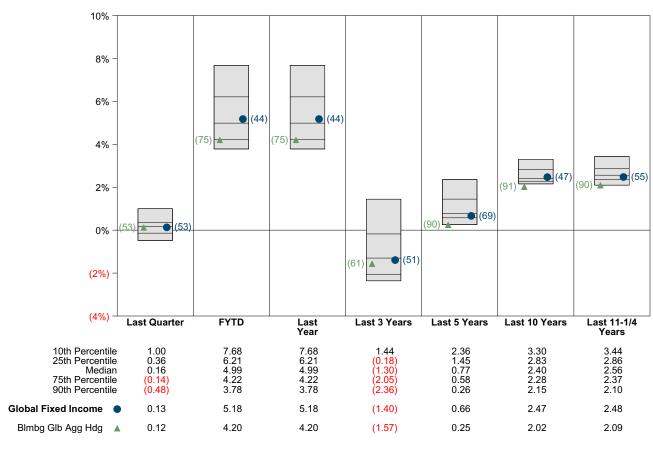
Quarterly Summary and Highlights

- Global Fixed Income's portfolio posted a 0.13% return for the quarter placing it in the 53 percentile of the Callan Global Fixed Income (Hedged) group for the quarter and in the 44 percentile for the last year.
- Global Fixed Income's portfolio outperformed the Blmbg Glb Agg Hdg by 0.01% for the quarter and outperformed the Blmbg Glb Agg Hdg for the year by 0.97%.

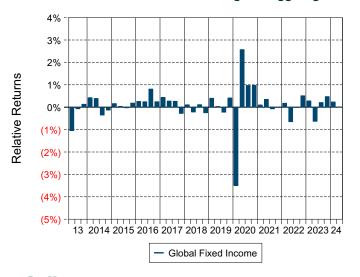
Quarterly Asset Growth

\$1,527,469,999 Beginning Market Value Net New Investment \$-903,549 Investment Gains/(Losses) \$1,983,079 **Ending Market Value** \$1,528,549,529

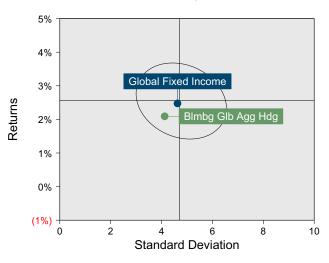
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Relative Return vs Blmbg Glb Agg Hdg



Callan Global Fixed Income (Hedged) (Gross) Annualized Eleven and One-Quarter Year Risk vs Return



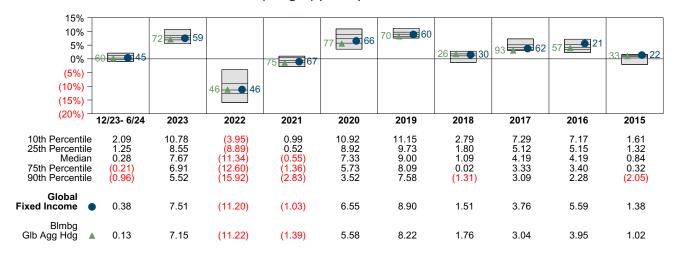


Global Fixed Income Return Analysis Summary

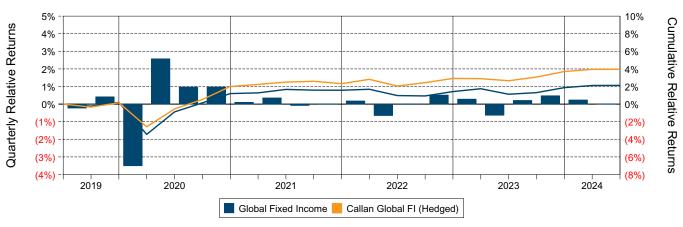
Return Analysis

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.

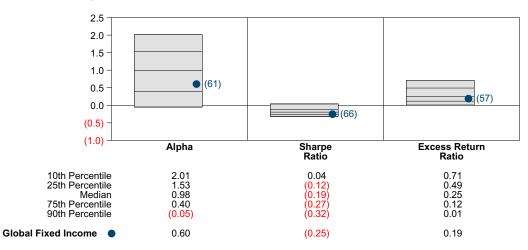
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg Glb Agg Hdg



Risk Adjusted Return Measures vs Blmbg Glb Agg Hdg Rankings Against Callan Global Fixed Income (Hedged) (Gross) Five Years Ended June 30, 2024





PIMCO Global Period Ended June 30, 2024

Investment Philosophy

The Fund's inception date is February 2013.

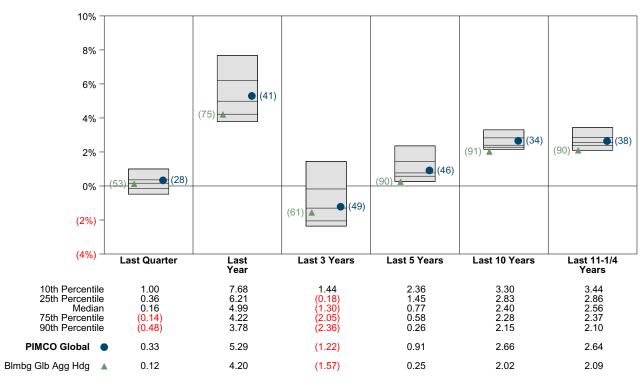
Quarterly Summary and Highlights

- PIMCO Global's portfolio posted a 0.33% return for the quarter placing it in the 28 percentile of the Callan Global Fixed Income (Hedged) group for the quarter and in the 41 percentile for the last year.
- PIMCO Global's portfolio outperformed the Blmbg Glb Agg Hdg by 0.21% for the quarter and outperformed the Blmbg Glb Agg Hdg for the year by 1.09%.

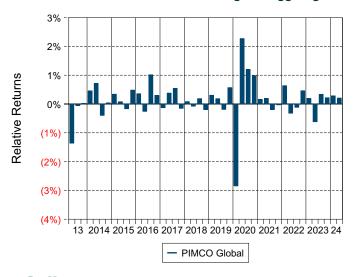
Quarterly Asset Growth

Beginning Market Value	\$760,445,423
Net New Investment	\$-455,223
Investment Gains/(Losses)	\$2,508,979
Ending Market Value	\$762,499,179

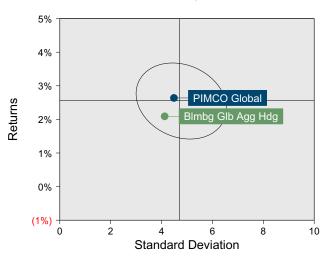
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Relative Return vs Blmbg Glb Agg Hdg



Callan Global Fixed Income (Hedged) (Gross) Annualized Eleven and One-Quarter Year Risk vs Return



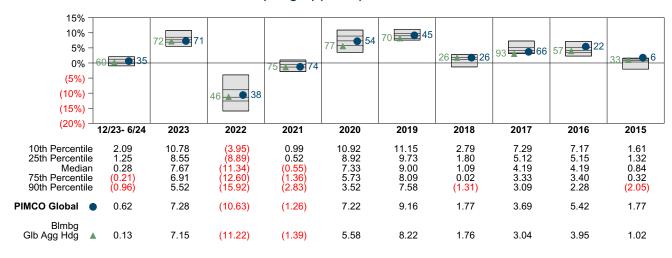


PIMCO Global Return Analysis Summary

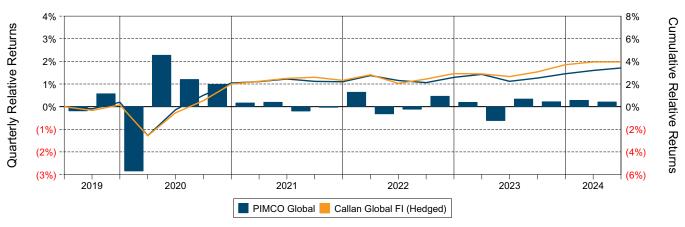
Return Analysis

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.

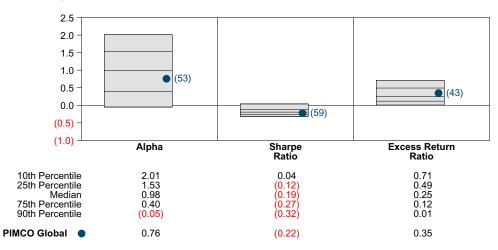
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg Glb Agg Hdg



Risk Adjusted Return Measures vs Blmbg Glb Agg Hdg Rankings Against Callan Global Fixed Income (Hedged) (Gross) Five Years Ended June 30, 2024





AllianceBernstein Global Period Ended June 30, 2024

Investment Philosophy

AB utitlizes a combination of both Quantitative and Fundamental (Economic, Credit and Securitized) Research to identify and exploit Global Debt Market inefficiencies. The Fund's inception date is February 2013.

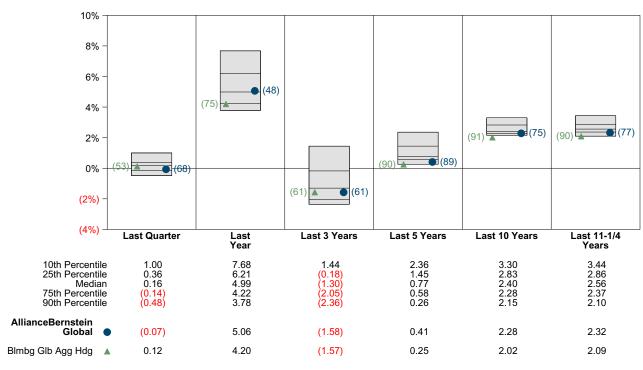
Quarterly Summary and Highlights

- AllianceBernstein Global's portfolio posted a (0.07)% return for the quarter placing it in the 68 percentile of the Callan Global Fixed Income (Hedged) group for the quarter and in the 48 percentile for the last year.
- AllianceBernstein Global's portfolio underperformed the Blmbg Glb Agg Hdg by 0.19% for the quarter and outperformed the Blmbg Glb Agg Hdg for the year by 0.86%.

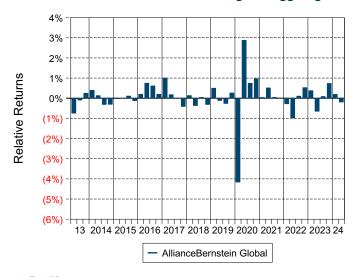
Quarterly Asset Growth

Beginning Market Value	\$767,024,577
Net New Investment	\$-448,326
Investment Gains/(Losses)	\$-525,900
Ending Market Value	\$766,050,350

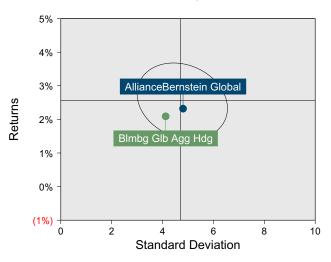
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Relative Return vs Blmbg Glb Agg Hdg



Callan Global Fixed Income (Hedged) (Gross) Annualized Eleven and One-Quarter Year Risk vs Return



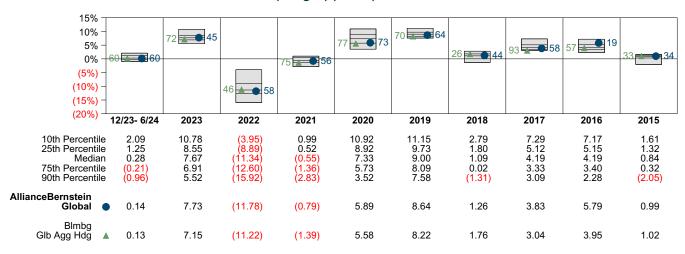


AllianceBernstein Global **Return Analysis Summary**

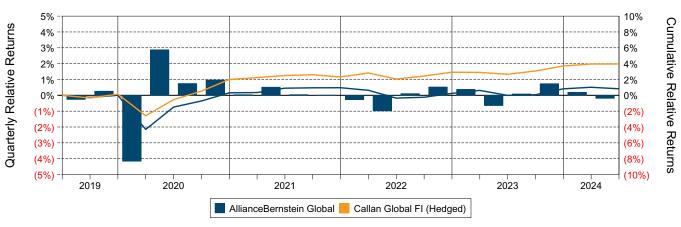
Return Analysis

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.

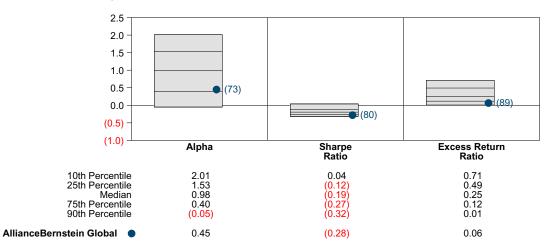
Performance vs Callan Global Fixed Income (Hedged) (Gross)



Cumulative and Quarterly Relative Returns vs Blmbg Glb Agg Hdg



Risk Adjusted Return Measures vs Blmbg Glb Agg Hdg Rankings Against Callan Global Fixed Income (Hedged) (Gross) Five Years Ended June 30, 2024





REIT Composite Period Ended June 30, 2024

Investment Philosophy

The Real Estate Investment Trust managers invest in companies that own, operate and dispose of commercial real estate properties. These companies provide high current yields and the potential for capital appreciation through increases in property values.

Quarterly Summary and Highlights

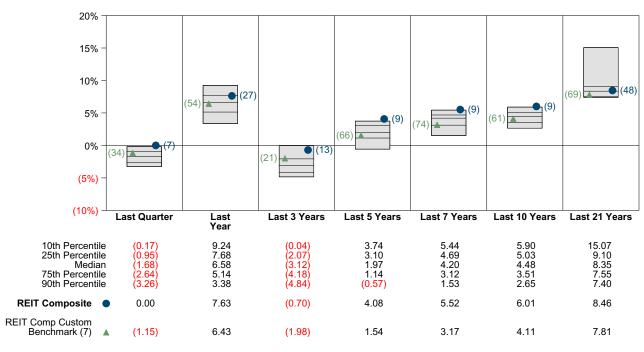
- REIT Composite's portfolio posted a 0.00% return for the quarter placing it in the 7 percentile of the Callan Real Estate Global REIT group for the quarter and in the 27 percentile for the last year.
- REIT Composite's portfolio outperformed the REIT Comp Custom Benchmark (7) by 1.15% for the quarter and outperformed the REIT Comp Custom Benchmark (7) for the year by 1.20%.

Quarterly Asset Growth

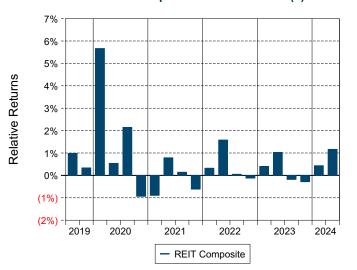
Beginning Market Value\$313,789,689Net New Investment\$-274,622Investment Gains/(Losses)\$9,988

Ending Market Value \$313,525,055

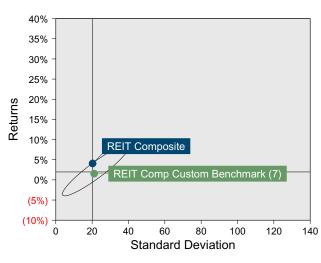
Performance vs Callan Real Estate Global REIT (Gross)



Relative Returns vs REIT Comp Custom Benchmark (7)



Callan Real Estate Global REIT (Gross) Annualized Five Year Risk vs Return



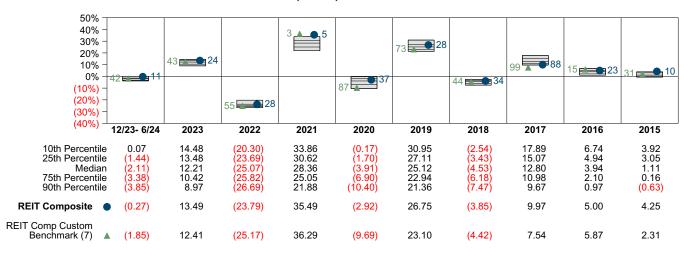


REIT Composite Return Analysis Summary

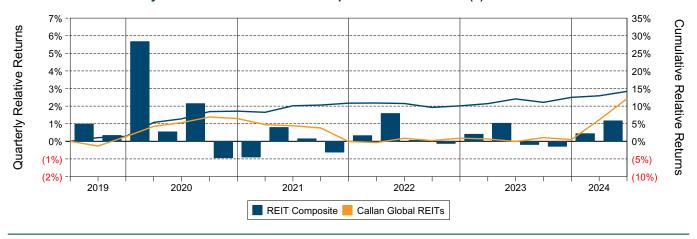
Return Analysis

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 Real Estate Global REIT (Gross)



Cumulative and Quarterly Relative Returns vs REIT Comp Custom Benchmark (7)



Risk Adjusted Return Measures vs REIT Comp Custom Benchmark (7) Rankings Against Callan Real Estate Global REIT (Gross) Five Years Ended June 30, 2024





Core Real Estate (Net) Period Ended June 30, 2024

Quarterly Summary and Highlights

- Core Real Estate (Net)'s portfolio posted a (0.41)% return for the quarter placing it in the 41 percentile of the Callan Open End Core Cmmingled Real Est group for the quarter and in the 64 percentile for the last year.
- Core Real Estate (Net)'s portfolio outperformed the NCREIF NFI-ODCE Eq Wt Net by 0.41% for the quarter and outperformed the NCREIF NFI-ODCE Eq Wt Net for the year by 0.31%.

Quarterly Asset Growth

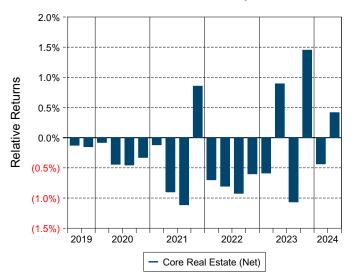
Beginning Market Value \$1,632,239,214 Net New Investment \$-2,734,002 Investment Gains/(Losses) \$-3,944,652

Ending Market Value \$1,625,560,560

Performance vs Callan Open End Core Cmmingled Real Est (Net)



Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



Callan Open End Core Cmmingled Real Est (Net) **Annualized Five Year Risk vs Return**



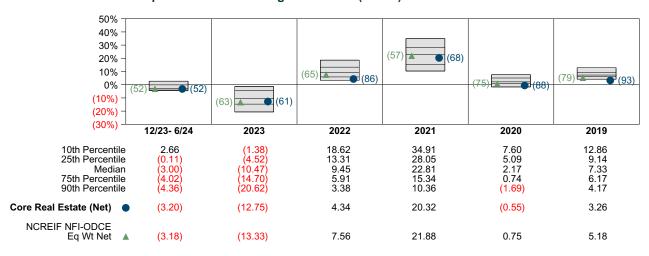


Core Real Estate (Net) Return Analysis Summary

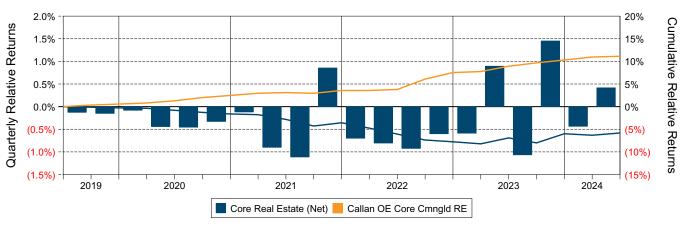
Return Analysis

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.

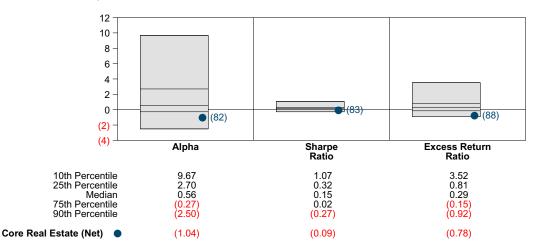
Performance vs Callan Open End Core Cmmingled Real Est (Gross)



Cumulative and Quarterly Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



Risk Adjusted Return Measures vs NCREIF NFI-ODCE Eq Wt Net Rankings Against Callan Open End Core Cmmingled Real Est (Gross) Five Years Ended June 30, 2024





Core Plus Real Estate (Net) Period Ended June 30, 2024

Quarterly Summary and Highlights

- Core Plus Real Estate (Net)'s portfolio posted a (2.40)% return for the guarter placing it in the 99 percentile of the Callan Open End Core Cmmingled Real Est group for the quarter and in the 95 percentile for the last year.
- Core Plus Real Estate (Net)'s portfolio underperformed the NCREIF NFI-ODCE Eq Wt Net by 1.58% for the guarter and underperformed the NCREIF NFI-ODCE Eq Wt Net for the year by 5.80%.

Quarterly Asset Growth

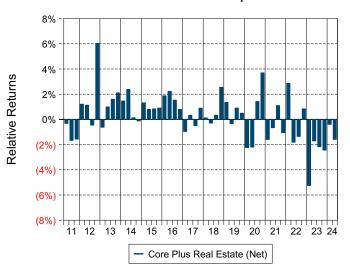
\$227,615,477 Beginning Market Value Net New Investment \$-495,913 Investment Gains/(Losses) \$-4,972,775

Ending Market Value \$222,146,788

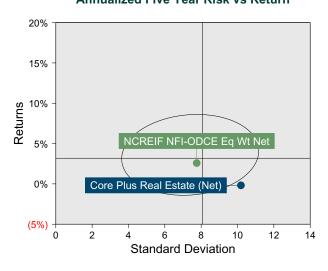
Performance vs Callan Open End Core Cmmingled Real Est (Net)



Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



Callan Open End Core Cmmingled Real Est (Net) Annualized Five Year Risk vs Return

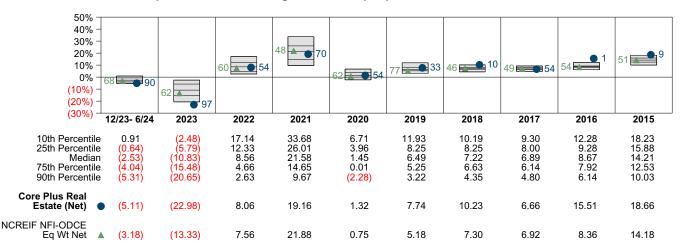




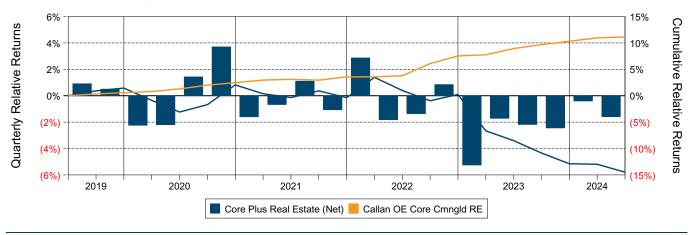
Core Plus Real Estate (Net) Return Analysis Summary

Return Analysis

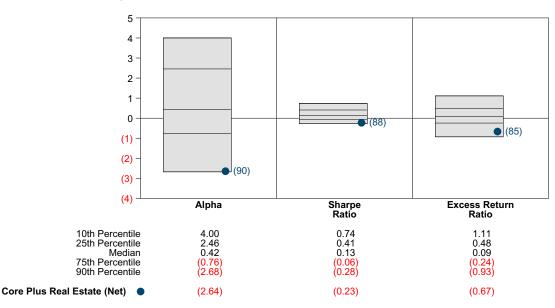
Performance vs Callan Open End Core Cmmingled Real Est (Net)



Cumulative and Quarterly Relative Returns vs NCREIF NFI-ODCE Eq Wt Net



Risk Adjusted Return Measures vs NCREIF NFI-ODCE Eq Wt Net Rankings Against Callan Open End Core Cmmingled Real Est (Net) Five Years Ended June 30, 2024





Non-Core Real Estate (Net) Period Ended June 30, 2024

Quarterly Summary and Highlights

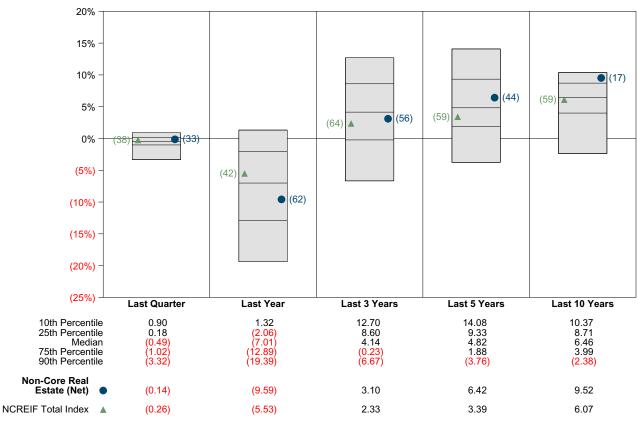
- Non-Core Real Estate (Net)'s portfolio posted a (0.14)% return for the quarter placing it in the 33 percentile of the Callan Real Estate Value Added group for the quarter and in the 62 percentile for the last year.
- Non-Core Real Estate (Net)'s portfolio outperformed the NCREIF Total Index by 0.12% for the quarter and underperformed the NCREIF Total Index for the year by 4.05%.

Quarterly Asset Growth

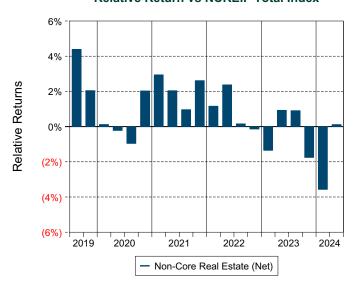
Beginning Market Value \$706,391,018 Net New Investment \$36,804,613 Investment Gains/(Losses) \$753,344

Ending Market Value \$743,948,974

Performance vs Callan Real Estate Value Added (Net)



Relative Return vs NCREIF Total Index



Callan Real Estate Value Added (Net) **Annualized Five Year Risk vs Return**



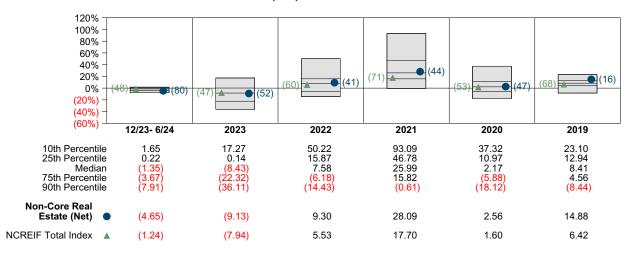


Non-Core Real Estate (Net) Return Analysis Summary

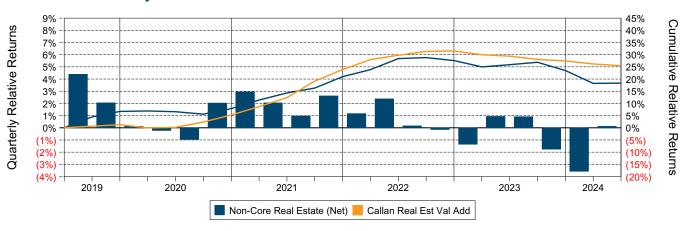
Return Analysis

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.

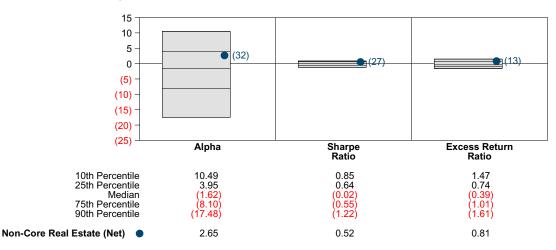
Performance vs Callan Real Estate Value Added (Net)



Cumulative and Quarterly Relative Returns vs NCREIF Total Index



Risk Adjusted Return Measures vs NCREIF Total Index Rankings Against Callan Real Estate Value Added (Net) Five Years Ended June 30, 2024





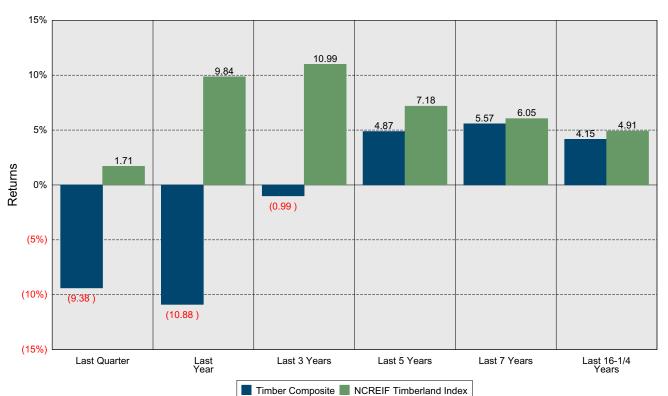
Timber Composite Period Ended June 30, 2024

Quarterly Summary and Highlights

• Timber Composite's portfolio underperformed the NCREIF Timberland Index by 11.09% for the quarter and underperformed the NCREIF Timberland Index for the year by 20.73%.

Quarterly Asset Growth

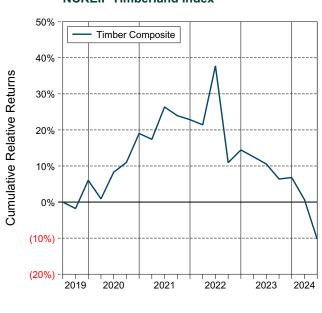
Beginning Market Value	\$42,360,553
Net New Investment	\$-142,052
Investment Gains/(Losses)	\$-3,973,592
Ending Market Value	\$38,244,909



Relative Return vs NCREIF Timberland Index

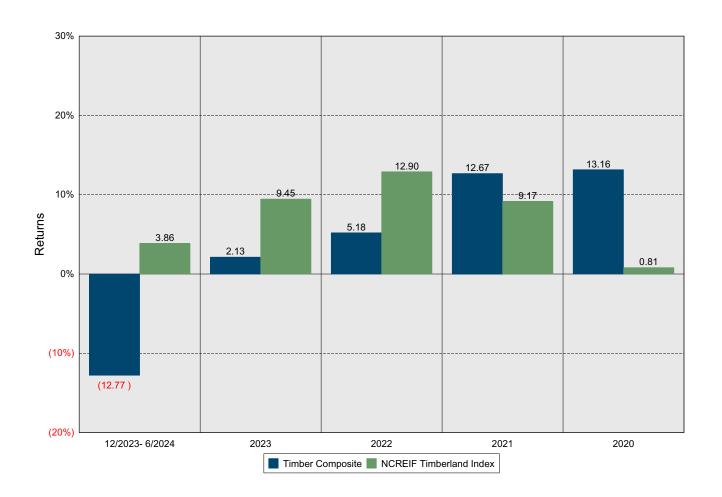
20% 15% 10% Relative Returns 0% (5%) (10%) (15%)(20%)(25%)2019 2020 2021 2022 2023 2024 **Timber Composite**

Cumulative Returns vs **NCREIF Timberland Index**





Timber Composite Period Ended June 30, 2024





Private Equity Period Ended June 30, 2024

Quarterly Summary and Highlights

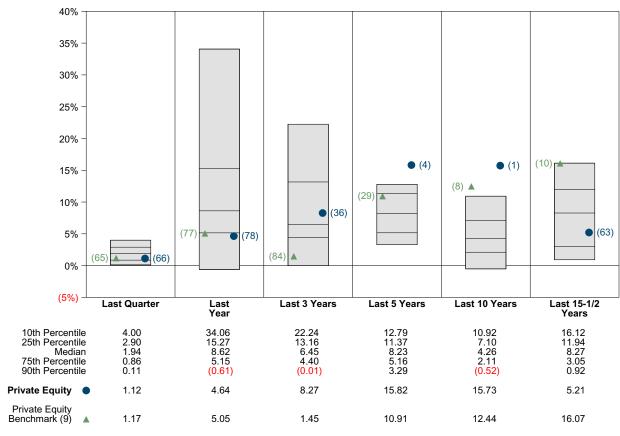
- Private Equity's portfolio posted a 1.12% return for the quarter placing it in the 66 percentile of the Callan Alternative Investments DB group for the quarter and in the 78 percentile for the last year.
- Private Equity's portfolio underperformed the Private Equity Benchmark (9) by 0.05% for the quarter and underperformed the Private Equity Benchmark (9) for the year by 0.41%.

Quarterly Asset Growth

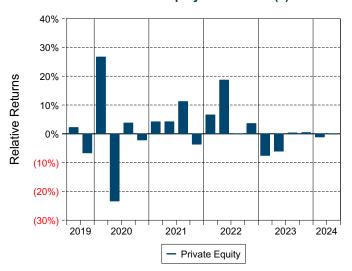
\$3,928,580,049 Beginning Market Value Net New Investment \$-42,568,481 Investment Gains/(Losses) \$43,909,643

Ending Market Value \$3,929,921,211

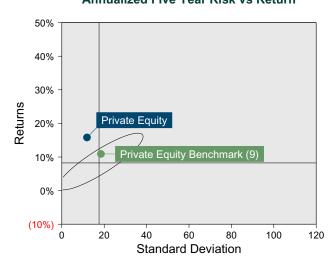
Performance vs Callan Alternative Investments DB (Gross)



Relative Returns vs **Private Equity Benchmark (9)**



Callan Alternative Investments DB (Gross) Annualized Five Year Risk vs Return



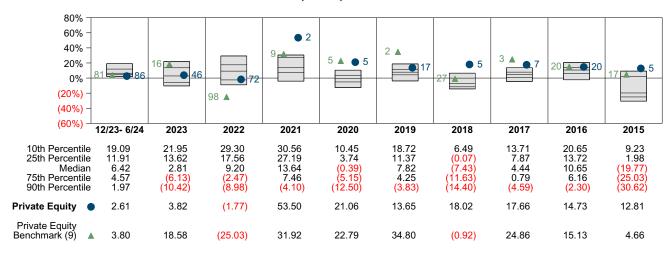


Private Equity Return Analysis Summary

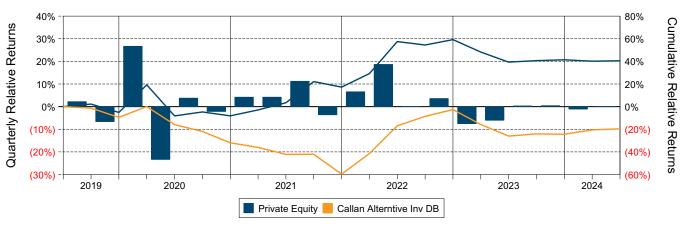
Return Analysis

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.

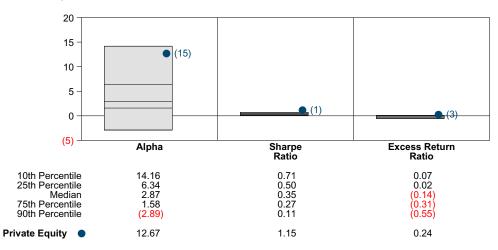
Performance vs Callan Alternative Investments DB (Gross)



Cumulative and Quarterly Relative Returns vs Private Equity Benchmark (9)



Risk Adjusted Return Measures vs Private Equity Benchmark (9) Rankings Against Callan Alternative Investments DB (Gross) Five Years Ended June 30, 2024



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Domestic Equity	21.63%	40	19.45%	11	(14.29%)	67	46.83%	22	4.52%	37
Russell 3000 Index	23.13%	15	18.95%	25	(13.87%)	59	44.16%	58	6.53%	14
Pub Pln- Dom Equity	21.15%		18.13%		(13.24%)		44.62%		3.45%	
Large Cap Equity	25.72%	48	20.69%	41	(12.28%)	51	43.28%	47	5.49%	54
Russell 1000 Index	23.88%	56	19.36%	47	(13.04%)	54	43.07%	47	7.48%	49
Callan Large Cap	25.34%		18.63%		(12.13%)		42.72%		7.17%	
Eagle Capital	33.28%		28.20%		(22.51%)		56.73%		(2.03%)	
S&P 500 Index	24.56%		19.59%		(10.62%)		40.79%		7.51%	
Northern Trust S&P 500	24.52%	75	19.57%	30	(10.54%)	44	40.70%	72	7.48%	40
S&P 500 Index	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72	7.51%	40
Callan Large Cap Core	26.57%		18.09%		(11.09%)		42.50%		6.42%	
Mid Cap Equity	11.33%	54	14.69%	43	(18.26%)	90	48.23%	64	4.63%	6
Russell MidCap Index	12.88%	44	14.92%	40	(17.30%)	88	49.80%	55	(2.24%)	45
Callan Mid Cap Core	11.45%		12.79%		(11.43%)		50.84%		(2.39%)	
Artisan Partners	11.28%	45	14.29%	88	(32.06%)	66	42.79%	56	25.12%	11
Russell MidCap Growth Idx	15.05%	17	23.13%	14	(29.57%)	63	43.77%	53	11.91%	53
Callan Mid Cap Growth	11.00%		18.58%		(27.84%)		44.27%		12.56%	
Small Cap Equity	7.34%	77	16.93%	18	(19.24%)	66	60.83%	52	(3.29%)	19
Russell 2000 Index	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44	(6.63%)	34
Callan Small Cap Core	11.48%		14.11%		(17.02%)		61.06%		(9.36%)	
Dimensional Fund Advisors	14.85%	32	16.81%	18	(7.13%)	19	84.61%	13	(18.00%)	50
Russell 2000 Value Index	10.90%	71	6.01%	85	(16.28%)	88	73.28%	40	(17.48%)	41
Callan Small Cap Value	13.22%		10.96%		(10.84%)		70.76%		(17.99%)	
Wellington Small Cap	9.84%	61	15.36%	36	(15.50%)	36	56.77%	70	(9.56%)	51
Russell 2000 Index	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44	(6.63%)	34
Callan Small Cap Core	11.48%		14.11%		(17.02%)		61.06%		(9.36%)	
Riverbridge Partners SCG	(2.24%)	100	18.57%	40	(34.47%)	71	47.41%	72	18.35%	13
Russell 2000 Growth Index	9.14%	58	18.53%	40	(33.43%)	68	51.36%	64	3.48%	73
Callan Small Cap Growth	10.21%		17.21%		(30.39%)		53.86%		9.32%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Global Equity	20.73%	40	16.71%	59	(18.73%)	65	39.03%	60	3.02%	49
Global Equity Benchmark (2)	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43	1.17%	57
Acadian Global Equity	28.93%	6	18.61%	39	(14.72%)	43	44.25%	26	3.99%	47
Epoch Investments	18.32%	49	12.30%	89	(15.44%)	46	37.17%	68	(2.10%)	74
Harding-Loevner	18.15%	51	17.04%	56	(27.96%)	90	40.41%	47	16.44%	9
LSV Global Value	17.44%	53	-		-		-		-	
MSCI ACWI Index	19.38%	45	16.53%	60	(15.75%)	49	39.26%	58	2.11%	54
Callan Global Equity	18.18%		17.88%		(16.05%)		40.20%		2.87%	
International Equity	12.57%	52	14.77%	46	(22.24%)	74	40.42%	32	(2.64%)	40
International Equity Benchmark (3)	11.57%	73	12.47%	73	(19.86%)	40	37.18%	62	(4.74%)	71
Pub Pln- Intl Equity	12.62%		14.52%		(20.78%)		38.81%		(3.40%)	
All Country ex US	12.06%	42	17.02%	46	(22.85%)	71	45.49%	19	1.74%	29
Arrowstreet Capital	23.13%	4	17.10%	45	(13.51%)	17	49.25%	11	(0.65%)	39
Baillie Gifford	3.17%	95	14.51%	62	(35.34%)	97	41.81%	31	12.82%	6
Marathon Asset Mgmt	9.92%	64	16.77%	48	(19.34%)	53	45.22%	20	(7.47%)	76
MSCI ACWI xUS IMI	11.57%	49	12.47%	76	(19.86%)	57	37.18%	52	(4.74%)	61
NT MSCI World ex US	11.61%	48	17.89%	38	-		-		-	
MSCI World xUS	11.22%	55	17.41%	42	(16.76%)	32	33.60%	72	(5.42%)	67
Non-U.S. Equity Database	11.51%		16.52%		(19.13%)		37.43%		(2.87%)	
Small Cap	6.28%	70	9.75%	76	(25.18%)	56	39.42%	78	(6.83%)	70
Principal Sm Cap Intl	9.34%	46	12.51%	46	(23.83%)	43	38.43%	80	(6.64%)	67
MSCI World Small Cap x US	7.80%	63	10.05%	75	(23.02%)	41	42.28%	56	(3.20%)	48
Callan Intl Small Cap	9.11%		12.32%		(24.35%)		43.28%		(3.90%)	
Emerging Markets	17.54%	19	10.02%	22	(26.68%)	48	44.11%	50	(5.38%)	66
Lazard Emerging Markets	19.15%	13	13.69%	4	(17.37%)	9	42.41%	64	(15.56%)	95
Fisher Investments	15.70%	28	6.07%	43	(34.76%)	92	45.48%	38	5.24%	14
MSCI Emerging Mkts Idx	12.55%	49	1.75%	79	(25.28%)	41	40.90%	75	(3.39%)	50
Callan Emerging Broad	12.44%		4.66%		(27.16%)		44.29%		(3.32%)	
Total Equity	18.21%	50	17.29%	55	(18.07%)	62	43.04%	32	1.68%	55
MSCI ACWI IMI	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43	1.17%	57
Total Equity Custom Benchmark (5)	17.95%	52	16.14%	62	(16.54%)	55	41.00%	42	1.32%	56
Callan Global Equity	18.18%		17.88%		(16.05%)		40.20%		2.87%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Domestic Fixed-Income	3.95%	52	0.26%	53	(10.70%)	72	2.09%	52	9.04%	26
Blmbg Aggregate Index	2.63%	87	(0.94%)	87	(10.29%)	65	(0.33%)	96	8.74%	33
Pub Pln- Dom Fixed	4.02%		0.46%		(9.49%)		2.33%		7.81%	
Core Fixed Income	3.58%	36	(0.80%)	77	(10.28%)	51	0.25%	81	8.89%	68
Blmbg Aggregate Index	2.63%	90	(0.94%)	82	(10.29%)	53	(0.33%)	94	8.74%	76
Callan Core Bond FI	3.34%		(0.34%)		(10.27%)		1.14%		9.23%	
PIMCO	3.68%	31	(0.56%)	64	(10.42%)	61	0.22%	81	9.44%	41
Manulife Asset Management	3.38%	46	(1.15%)	91	(10.22%)	44	0.83%	62	8.92%	67
Blmbg Aggregate Index	2.63%	90	(0.94%)	82	(10.29%)	53	(0.33%)	94	8.74%	76
Callan Core Bond FI	3.34%		(0.34%)		(10.27%)		1.14%		9.23%	
Core Plus	4.09%	61	1.11%	33	(11.06%)	59	3.70%	36	9.15%	30
Loomis Sayles	2.75%	95	1.40%	21	(10.37%)	32	3.41%	44	9.70%	17
Prudential Core Plus	5.43%	15	0.83%	44	(11.77%)	81	3.98%	31	8.57%	49
Blmbg Aggregate Index	2.63%	95	(0.94%)	88	(10.29%)	30	(0.33%)	99	8.74%	43
Callan Core Plus FI	4.31%		0.42%		(10.87%)		3.33%		8.50%	
Emerging Markets Debt	10.06%	36	8.80%	58	(21.10%)	73	8.86%	64	1.98%	26
Wellington EMD	10.06%	36	8.80%	58	(21.10%)	73	8.86%	64	1.98%	26
EMBI Global Dvsfd Index	9.23%	46	7.39%	71	(21.22%)	73	7.53%	81	0.49%	35
Emerging Debt Database	8.60%		9.39%		(18.64%)		9.89%		(0.73%)	
Global Fixed Income	5.18%	44	0.66%	62	(9.45%)	44	2.51%	69	5.18%	58
PIMCO Global	5.29%	41	0.43%	67	(8.86%)	35	2.65%	62	5.79%	48
AllianceBernstein Global	5.06%	48	0.87%	54	(10.04%)	63	2.36%	70	4.58%	74
Blmbg Global Agg (Hedged)	4.20%	75	0.52%	65	(8.94%)	36	0.08%	91	6.07%	35
Callan Global FI (Hedged)	4.99%		0.95%		(9.66%)		3.28%		5.72%	
Total Fixed Income	4.93%	21	1.19%	32	(11.49%)	91	2.87%	44	7.45%	58
Blmbg Aggregate Index	2.63%	87	(0.94%)	87	(10.29%)	65	(0.33%)	96	8.74%	33
Total Fixed Inc Custom Benchmark (6)	3.67%	58	0.25%	54	(11.09%)	81	0.55%	75	7.39%	58
Pub Pln- Dom Fixed	4.02%		0.46%		(9.49%)		2.33%		7.81%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
REIT Composite REIT Comp Custom Benchmark (7) Callan Global REITs	7.63% 6.43% 6.58%	27 54	(0.78%) (2.12%) (3.07%)	14 27	(8.31%) (9.60%) (12.24%)	4 13	38.88% 37.41% 34.28%	10 25	(10.20%) (16.58%) (10.75%)	44 88
Centersquare FTSE NAREIT Equity Index Callan Real Estate REIT	8.40% 7.79% 7.13%	22 36	0.22% (0.13%) (0.71%)	37 43	(4.62%) (6.27%) (6.26%)	29 51	38.56% 38.02% 36.73%	35 39	(9.56%) (13.04%) (7.04%)	73 84
Cohen & Steers EPRA/NAREIT Dev REIT Idx Callan Global REITs	6.31% 5.66% 6.58%	56 70	(1.99%) (3.59%) (3.07%)	25 64	(12.02%) (12.75%) (12.24%)	48 63	39.21% 34.83% 34.28%	6 48	(10.83%) (15.46%) (10.75%)	51 85
Core Real Estate Principal Capital (Net) UBS Trumbull Property (Net) UBS Trumbull Property G&I (Net) JPMCB Strategic Property (Net) NFI-ODCE Equal Weight Net Callan OE Core Cmngld RE	(10.80%) (8.60%) (8.02%) (16.11%) (14.43%) (10.32%) (8.55%)	71 51 39 95 88 68	(12.37%) (10.41%) (15.01%) (17.11%) (10.92%) (10.51%) (9.20%)	79 62 89 96 67 65	27.15% 27.55% 24.01% 30.22% 27.40% 28.90% 28.14%	58 57 68 41 58 47	6.59% 8.22% 1.53% 11.00% 6.00% 7.97% 8.44%	77 52 97 23 82 55	0.63% 2.03% (1.69%) (1.39%) 1.26% 1.70% 2.57%	77 61 92 92 70 67
Non-Core Real Estate AEW Partners VI AEW Partners VII AEW Partners VIII	(8.44%) 2.45% (4.09%) 12.84% 7.11%	60 2 34 1	(5.91%) 2.05% (5.56%) 6.18%	49 25 48 15	32.05% (1.23%) 1.94% 45.41%	42 91 90 25 79	16.03% 29.35% (11.07%) 25.48%	43 28 94 32	11.25% 187.00% (0.05%) 15.70%	15 2 64 10
AEW Partners IX Heitman VP III Heitman VP IV	0.68% 1.41%	1 14 9	9.76% 1.56% (1.39%)	13 27 35	13.38% 2.65% 41.38%	90 26	21.98% 24.73%	35 34	11.76% 4.98%	13 39
Heitman VP V AG Core Plus III AG Core Plus IV AG Realty Fund X AG Realty Value Fd XI	(0.85%) 24.31% (19.90%) (7.37%) 7.15%	20 1 90 51 1	(1.10%) (32.44%) (18.93%) (1.07%)	31 89 71 31	(3.11%) 8.52% 47.73%	92 83 24	(11.34%) 13.15% 32.03%	94 46 26	(6.36%) 6.14% 12.14%	80 33 13
Invesco ÚS Income Fund Invesco VA Fund IV Invesco VA Fund V	(8.03%) (36.72%) (28.54%)	56 97 94	(63.21%) (7.70%)	100 52	- 10.98% 30.32%	81 47	- 0.51% 14.83%	82 44	13.22% 14.60%	12 11
Invesco Real Estate US Fund VI TA Associates Realty Fund XI TA Associates Realty Fund XII Westbrook RE Fund XI Westbrook RE Fund XI	(11.26%) (26.18%) (4.71%) (30.60%)	73 93 40 95	(28.66%) (4.37%) (5.98%)	83 45 49	57.37% 69.76% 11.51%	13 9 80	21.69% 28.12% 11.95%	35 30 47	10.23% - 8.12%	19 24
Westbrook RE Fund XI NCREIF Total Index Callan Real Est Val Add	4.94% (5.53%) (7.01%)	1 42	14.37% (6.60%) (6.62%)	13 50	31.40% 21.45% 29.97%	45 71	7.37% 10.86%	69	2.69% 2.98%	52
Timber Composite Hancock Timber Portfolio NCREIF Timberland Index	(10.88%) (10.88%) 9.84%		(10.82%) (10.82%) 11.13%		22.11% 22.11% 12.01%		20.32% 20.32% 3.10%		8.65% 8.65% 0.34%	
Total Real Estate Real Estate Benchmark (8) Callan Tot Real Est DB	(8.43%) (5.53%) (6.40%)	60 42	(9.90%) (6.60%) (1.50%)	73 62	22.82% 21.45% 22.33%	48 52	13.62% 7.37% 9.86%	38 69	1.17% 2.69% 2.55%	56 49
Private Equity Pathway PEF XXIII Pathway PEF SRS 2013 Pathway PEF 2016 Pathway PEF 2021	4.64% 3.05% 2.49% 7.95%	78 85 86 54 33	(3.76%) (16.04%) (7.12%) (3.46%)	53 97 71 53 53	26.03% 13.47% 18.67% 30.48%	15 48 36 8	58.87% 81.56% 66.84% 63.16%	3 2 2 3	3.35% (5.01%) 8.20% 8.98%	23 52 16 15
GCM Grosvenor Private Markets GCM Grosvenor Div. Partners LP 2014-1 GCM Grosvenor 2018 Series Private Equity Benchmark (9) Callan Alterntive Inv DB	11.75% (19.67%) 1.99% 10.15% 5.05% 8.62%	99 86 45 77	(2.45%) (1.27%) 1.02% 5.89% 6.93% (1.14%)	50 46 29 27	3.16% 14.26% 41.96% 29.03% (7.04%) 9.29%	67 47 4 9 88	41.43% 43.88% 16.63% 44.13% 20.17%	33 30 56 30	(5.11%) 4.35% 8.09% 11.54% (4.83%)	52 20 16 11
Cash 1mo T-Bill Callan Cash Database	5.70% 5.56% 5.65%	38 68	4.10% 3.70% 3.86%	19 58	0.31% 0.15% (0.09%)	23 40	0.07% 0.06% 0.35%	95 96	1.29% 1.37% 1.98%	95 93
Total Fund Policy Benchmark* Callan Public Fd V Lg DB	10.78% 11.27% 10.23%	27 21	7.76% 9.72% 7.51%	46 14	(8.54%) (10.94%) (5.13%)	80 97	32.71% 28.17% 27.92%	7 45	3.35% 4.27% 2.58%	36 24

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private



	FY 2019		FY 2018		FY 2017		FY 2016		FY 2015	
Domestic Equity	8.49%	35	14.84%	48	19.08%	42	(0.37%)	67	6.71%	69
Russell 3000 Index	8.98%	28	14.78%	52	18.51%	59	2.14%	28	7.29%	51
Pub Pln- Dom Equity	7.83%		14.81%		18.76%		0.73%		7.33%	
Managed Large Cap Equity										
Eagle Capital	11.41%	24	16.58%	19	25.72%	3	(2.74%)	80	9.63%	26
S&P 500 Index	10.42%	35	14.37%	47	17.90%	57	3.99%	20	7.42%	58
Callan Large Cap Core	8.78%		14.22%		18.66%		0.34%		7.84%	
Northern Trust S&P 500	10.44%	34	14.23%	48	17.76%	58	4.03%	19	7.48%	57
S&P 500 Index	10.42%	35	14.37%	47	17.90%	57	3.99%	20	7.42%	58
Callan Large Cap Core	8.78%		14.22%		18.66%		0.34%		7.84%	
Mid Cap Equity	5.47%	42	12.86%	58	18.11%	72	(5.35%)	81	7.43%	48
Russell MidCap Index	7.83%	26	12.33%	69	16.48%	85	0.56%	32	6.63%	60
Callan Mid Cap Core	4.22%		13.93%		20.09%		(0.91%)		7.31%	
Wellington Mid Cap	(0.15%)	72	11.01%	37	16.05%	68	(3.15%)	69	6.05%	34
Russell MidCap Value Idx	3.68%	30	7.60%	73	15.93%	71	3.25%	21	3.67%	62
Callan Mid Cap Value	1.30%		9.59%		17.36%		(0.25%)		4.46%	
Artisan Partners	21.70%	5	13.98%	82	18.25%	48	(4.21%)	36	10.33%	54
Russell MidCap Growth Idx	13.94%	51	18.52%	40	17.05%	61	(2.14%)	18	9.45%	62
Callan Mid Cap Growth	14.14%		17.97%		18.03%		(5.70%)		10.82%	
Small Cap Equity	2.72%	21	20.37%	18	27.04%	14	(5.44%)	57	6.04%	71
Russell 2000 Index	(3.31%)	57	17.57%	32	24.60%	27	(6.73%)	76	6.49%	69
Callan Small Cap Core	(2.54%)		16.22%		22.07%		(4.59%)		8.16%	
Dimensional Fund Advisors	(12.11%)	95	15.33%	25	22.79%	62	(5.73%)	83	1.84%	77
Russell 2000 Value Index	(6.24%)	55	13.10%	42	24.86%	37	(2.58%)	50	0.78%	83
Callan Small Cap Value	(5.26%)		12.52%		24.12%		(2.58%)		4.36%	
Wellington Small Cap	7.32%	9	21.61%	11	28.63%	8	(8.50%)	87	9.43%	30
Russell 2000 Index	(3.31%)	57	17.57%	32	24.60%	27	(6.73%)	76	6.49%	69
Callan Small Cap Core	(2.54%)		16.22%		22.07%		(4.59%)		8.16%	
Riverbridge Partners SCG	12.11%	18	24.00%	71	29.52%	13	(1.97%)	12	6.71%	82
Russell 2000 Growth Index	(0.49%)	85	21.86%	82	24.40%	47	(10.75%)	45	12.34%	45
Callan Small Cap Growth	7.04%		28.00%		24.05%		(12.40%)		11.75%	



	FY 2019		FY 2018		FY 2017		FY 2016		FY 2015	
Global Equity	5.67%	48	13.34%	35	20.25%	49	(3.31%)	40	4.88%	28
Global Equity Benchmark (2)	4.56%	59	11.14%	54	19.01%	63	(3.59%)	42	1.23%	71
Acadian Global Equity	3.40%	70	10.27%	64	19.67%	57	(5.04%)	59	1.68%	64
Epoch Investments	7.55%	34	14.56%	27	17.67%	73	(5.80%)	64	8.66%	8
Harding-Loevner	3.39%	70	17.36%	17	24.09%	21	1.13%	14	4.66%	29
MSCI ACWI Index	5.74%	48	10.73%	59	18.78%	65	(3.73%)	45	0.71%	74
Callan Global Equity	5.44%		11.68%		20.16%		(4.50%)		3.13%	
International Equity	0.64%	46	6.99%	77	22.30%	32	(7.99%)	36	(5.27%)	84
International Equity Benchmark (3)	0.26%	54	7.75%	61	20.43%	55	(9.61%)	60	(4.97%)	80
Pub Pln- Intl Equity	0.43%		8.38%		20.69%		(8.86%)		(3.52%)	
All Country ex US	1.37%	41	8.87%	47	21.46%	43	(6.40%)	38	(3.16%)	61
Arrowstreet Capital	1.22%	43	8.54%	50	22.26%	38	(7.49%)	46	(3.63%)	65
Baillie Gifford	0.70%	47	10.52%	36	20.93%	47	(4.61%)	27	-	
Marathon Asset Mgmt	2.33%	30	7.10%	70	20.96%	47	- ′		-	
MSCI ACWI xUS IMI	0.26%	52	7.75%	58	20.43%	55	(9.61%)	64	(4.97%)	77
MSCI World xUS	1.29%	42	7.04%	70	19.49%	65	(9.84%)	66	(5.28%)	82
Non-U.S. Equity Database	0.45%		8.50%		20.75%		(7.98%)		(1.83%)	
Small Cap	(4.03%)	16	11.95%	52	19.05%	72	(2.93%)	42	(0.87%)	72
Mondrian	(1.65%)	7	13.45%	38	19.30%	69	(2.55%)	38	(1.75%)	77
MSCI World Small Cap x US	(6.17%)	43	11.87%	54	21.26%	60	(3.35%)	45	(3.96%)	86
Fidelity	-		10.33%	70	18.78%	73	(3.34%)	45	0.09%	65
MSCI ACWI Sm Cap ex US	(5.94%)	36	10.57%	69	20.32%	65	(5.46%)	65	(3.07%)	82
Callan Intl Small Cap	(6.64%)		12.33%		22.96%		(3.64%)		0.90%	
Emerging Markets	0.49%	70	4.09%	79	22.63%	78	(7.68%)	40	(10.52%)	91
Lazard Emerging Markets	3.83%	35	1.44%	93	21.64%	80	(6.82%)	27	(12.16%)	95
MSCI Emerging Mkts Idx	1.22%	62	8.20%	51	23.75%	70	(12.05%)	77	(5.12%)	53
Callan Emerging Broad	2.81%		8.34%		25.73%		(8.82%)		(4.43%)	
Total Equity	5.12%	53	11.58%	51	20.45%	47	(3.31%)	40	2.21%	61
MSCI ACWI IMI	4.56%	59	11.14%	54	19.01%	63	(3.87%)	46	0.81%	74
Total Equity Custom Benchmark (5)	4.95%	55	11.53%	51	19.36%	60	(3.24%)	40	1.86%	62
Callan Global Equity	5.44%		11.68%		20.16%		(4.50%)		3.13%	



	FY 2019		FY 2018		FY 2017		FY 2016		FY 2015	
Domestic Fixed-Income	8.35%	15	0.57%	33	1.85%	45	5.93%	23	1.52%	57
Blmbg Aggregate Index	7.87%	33	(0.40%)	90	(0.31%)	87	6.00%	21	1.86%	38
Pub Pln- Dom Fixed	7.50%		0.26%		1.37%		4.97%		1.68%	
Core Fixed Income	8.08%	56	0.03%	39	0.39%	51	6.13%	54	2.24%	29
Blmbg Aggregate Index	7.87%	80	(0.40%)	86	(0.31%)	90	6.00%	63	1.86%	69
Callan Core Bond FI	8.12%		(0.05%)		0.39%		6.20%		2.07%	
PIMCO	8.47%	16	0.34%	15	0.27%	60	5.97%	63	2.17%	37
Manulife Asset Management	7.90%	79	0.19%	24	-		-		-	
Blmbg Aggregate Index	7.87%	80	(0.40%)	86	(0.31%)	90	6.00%	63	1.86%	69
Callan Core Bond FI	8.12%		(0.05%)		0.39%		6.20%		2.07%	
Core Plus	8.58%	26	1.02%	12	3.14%	18	5.80%	39	0.90%	89
Loomis Sayles	7.79%	83	1.22%	6	3.61%	11	4.34%	89	(0.07%)	97
Prudential Core Plus	9.38%	5	0.82%	18	2.69%	29	7.24%	3	1.89%	50
Blmbg Aggregate Index	7.87%	79	(0.40%)	85	(0.31%)	99	6.00%	29	1.86%	51
Callan Core Plus FI	8.31%		0.28%		2.32%		5.59%		1.89%	
Emerging Markets Debt	11.92%	25	(0.01%)	21	8.63%	41	9.69%	14	0.46%	18
Wellington Emerging Market Debt	11.92%	25	(0.01%)	21	8.63%	41	9.69%	14	0.46%	18
EMBI Global Dvsfd	12.45%	11	(1.60%)	55	6.04%	83	9.79%	14	0.51%	18
Emerging Debt Database	10.63%		(1.35%)		8.00%		4.65%		(4.28%)	
Global Fixed Income	8.12%	40	1.53%	40	1.37%	35	8.08%	13	2.67%	56
PIMCO Global	8.32%	39	2.06%	26	1.15%	39	7.82%	22	3.02%	53
AllianceBernstein Global	7.92%	51	1.00%	77	1.58%	30	8.38%	12	2.31%	72
Blmbg Glob Agg Hedged	7.80%	54	1.66%	38	(0.41%)	81	7.37%	31	2.96%	53
Callan Global FI (Hedged)	7.94%		1.36%		1.04%		6.96%		3.09%	
Total Fixed Income	8.65%	9	0.75%	27	2.39%	36	6.84%	7	1.70%	48
Blmbg Aggregate Index	7.87%	33	(0.40%)	90	(0.31%)	87	6.00%	21	1.86%	38
Total Fixed Inc Custom Benchmark (6	8.31%	16	(0.00%)	62	0.29%	65	6.48%	10	1.64%	52
Pub Pln- Dom Fixed	7.50%		0.26%		1.37%		4.97%		1.68%	



	FY 2019		FY 2018		FY 2017		FY 2016		FY 2015	
REIT Composite	12.17%	20	6.35%	80	0.87%	67	17.57%	7	3.74%	17
REIT Comp Custom Benchmark (7)	9.22%	67	5.51%	90	(0.64%)	87	17.65%	7	2.86%	38
Callan Global REITs	9.95%		7.56%		1.60%		10.92%		2.21%	
Cohen & Steers	12.24%	18	6.82%	68	5.95%	6	11.16%	47	2.29%	49
EPRA/NAREIT Dev REIT Idx	8.64%	78	6.70%	69	1.14%	58	12.57%	32	0.41%	81
Callan Global REITs	9.95%		7.56%		1.60%		10.92%		2.21%	
Core Real Estate	5.86%	82	8.48%	23	7.90%	33	11.83%	32	13.51%	51
Principal Capital (Net)	7.10%	38	8.48%	24	8.88%	24	11.52%	43	14.19%	40
UBS Trumbull Property (Net)	(0.59%)	97	6.92%	58	4.67%	87	9.73%	84	11.70%	76
UBS Trumbull Property G&I (Net)	10.17%	7	7.92%	32	9.05%	23	17.90%	5	16.07%	19
JPMCB Strategic Property (Net)	4.50%	89	7.04%	57	7.13%	56	10.16%	73	12.55%	69
NFI-ODCE Equal Weight Net	5.99%	78	7.68%	42	7.23%	55	11.24%	54	13.64%	50
Callan OE Core Cmngld RE	6.62%		7.36%		7.43%		11.35%		13.59%	
Non-Core Real Estate	14.26%	15	14.27%	23	10.68%	37	17.22%	35	15.41%	48
AEW Partners VI	17.73%	15	9.24%	55	21.79%	11	15.56%	43	13.24%	64
AG Core Plus II	2.40%	80	(18.70%)	96	(13.26%)	91	24.93%	15	4.97%	84
AG Core Plus III	(11.69%)	99	3.72%	81	5.83%	66	31.08%	8	26.43%	22
TA Associates Realty Fund X	21.19%	12	18.44%	12	11.23%	35	15.32%	43	12.39%	67
NCREIF Total Index	6.51%	56	7.19%	67	6.97%	59	10.64%	68	12.98%	65
Callan Real Est Val Add	7.56%		9.86%		9.06%		13.68%		15.09%	
Timber Composite	0.70%		14.43%		11.60%		7.42%		0.63%	
Hancock Timber Portfolio	0.70%		14.43%		11.60%		7.42%		0.63%	
NCREIF Timberland Index	2.95%		3.57%		3.35%		3.39%		10.02%	
Total Real Estate	7.22%	51	8.92%	49	6.76%	62	13.31%	36	10.56%	67
Real Estate Benchmark (8)	6.51%	61	7.19%	63	6.97%	61	10.64%	59	12.98%	54
Callan Tot Real Est DB	7.25%		8.79%		8.13%		11.52%		13.56%	
Private Equity	16.13%	5	16.66%	8	20.12%	3	10.62%	15	14.87%	6
Pathway PEF XXIII	15.75%	5	17.39%	6	25.37%	1	9.78%	17	13.94%	7
Pathway PEF SRS 2013	22.60%	3	23.05%	3	17.13%	4	8.68%	19	(7.39%)	42
GCM Grosvenor Private Markets	9.90%	10	11.66%	14	18.69%	4	13.00%	10	18.58%	4
Private Equity Benchmark (9)	14.15%	7	17.50%	6	20.95%	3	7.32%	22	10.55%	9
Callan Alterntive Inv DB	0.45%		4.76%		(0.66%)		(3.53%)		(16.29%)	
Cash	2.13%	95	1.37%	64	0.52%	93	0.19%	96	0.46%	48
1mo T-Bill	2.28%	90	1.27%	75	0.42%	94	0.11%	97	0.02%	97
Callan Cash Database	2.60%		1.47%		0.85%		0.77%		0.42%	
Total Fund	6.87%	38	9.48%	30	14.96%	12	1.15%	49	3.40%	60
Policy Benchmark*	6.73%	41	9.05%	47	13.88%	32	0.98%	51	3.66%	49
Callan Public Fd V Lg DB	6.47%		8.96%		12.70%		1.03%		3.65%	

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 22.0% MSCI ACWI xUS IMI, 20.0% Blmbg:Aggregate, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 8.0% S&P 500 Index+3.0% and 1.0% FTSE 1 Mo T-Bill.



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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.

	Last 15 Years		Last 20 Years		Last 25 Years		Last 30 Years	
Domestic Equity	14.41%	27	10.18%	33	8.02%	54	10.78%	31
Russell 3000 Index	14.49%	23	10.17%	36	7.82%	65	10.67%	39
Pub Pln- Dom Equity	14.07%		9.99%		8.12%		10.48%	
Northern Trust S&P 500	14.79%	52	10.28%	71	7.69%	86	10.84%	66
S&P 500 Index	14.82%	52	10.29%	71	7.67%	86	10.80%	70
Callan Large Cap Core	14.84%		10.69%		8.64%		11.25%	
Mid Cap Equity	13.39%	55	10.34%	57	8.58%	92	-	
Artisan Partners	14.39%	38	11.29%	19	-		-	
Russell MidCap Growth Idx	13.95%	52	10.17%	61	8.16%	94	10.41%	76
Callan Mid Cap Core	14.24%		10.63%		10.69%		12.10%	
Small Cap Equity	13.58%	31	9.28%	65	8.90%	95	-	
Dimensional Fund Advisors	13.33%	41	8.73%	83	-		-	
Russell 2000 Value Index	10.59%	97	7.23%	98	8.32%	99	9.41%	99
Wellington Small Cap	14.47%	10	10.70%	17	-		-	
Russell 2000 Index	11.24%	96	7.85%	97	7.60%	99	8.87%	100
Callan Small Cap Core	12.99%		9.59%		10.60%		11.69%	



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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.

	Last 15 Years		Last 20 Years		Last 25 Years		Last 30 Years	
Global Equity	11.01%	72	-		-		-	
Global Equity Benchmark (2)	10.21%	84	7.57%	86	5.65%	97	7.43%	92
Acadian Global Equity	11.88%	45	-		-		-	
MSCI ACWI Index	10.35%	82	7.95%	84	-		-	
Callan Global Equity	11.65%		9.09%		7.57%		9.43%	
International Equity	7.15%	69	6.25%	70	4.79%	87	5.87%	77
International Equity Benchmark (3)	6.29%	97	5.84%	93	4.75%	90	5.15%	93
Pub Pln- Intl Equity	7.42%		6.46%		5.58%		6.37%	
Emerging Markets	5.90%	75	8.88%	41	8.04%	53	-	
Lazard Emerging Markets	6.64%	40	9.46%	20	8.49%	43	-	
MSCI Emerging Mkts Idx	4.90%	94	7.27%	95	-		-	
Callan Emerging Broad	6.41%		8.66%		8.16%		7.08%	
Total Equity	11.49%	55	8.44%	73	6.61%	90	9.21%	53
MSCI ACWI IMI	10.33%	83	7.99%	84	6.26%	92	7.48%	92
Total Equity Custom Benchmark (5)	10.84%	74	8.29%	77	-		-	
Callan Global Equity	11.65%		9.09%		7.57%		9.43%	



Returns and Rankings for Periods Ended June 30, 2024

	Last 15 Years		Last 20 Years		Last 25 Years		Last 30 Years	
Domestic Fixed-Income	3.61%	39	3.84%	43	4.49%	50	5.05%	56
Blmbg Aggregate Index	2.50%	97	3.12%	93	3.88%	99	4.53%	92
Pub Pln- Dom Fixed	3.37%		3.74%		4.50%		5.18%	
Core Fixed Income	3.15%	60	3.49%	80	4.22%	81	4.88%	67
Blmbg Aggregate Index	2.50%	98	3.12%	96	3.88%	97	4.53%	96
Callan Core Bond FI	3.24%		3.70%		4.43%		4.97%	
PIMCO	3.42%	30	3.97%	20	4.66%	19	5.30%	11
Blmbg Aggregate Index	2.50%	98	3.12%	96	3.88%	97	4.53%	96
Callan Core Bond FI	3.24%		3.70%		4.43%		4.97%	
Total Fixed Income	3.87%	30	4.03%	29	4.65%	33	5.25%	43
Blmbg Aggregate Index	2.50%	97	3.12%	93	3.88%	99	4.53%	92
Total Fixed Inc Custom Benchmark (6)	2.87%	86	3.48%	71	4.30%	68	-	
Pub Pln- Dom Fixed	3.37%		3.74%		4.50%		5.18%	
REIT Composite	10.80%	11	7.44%	40	-		-	
REIT Comp Custom Benchmark (7)	9.35%	32	6.74%	67	8.03%	59	8.11%	
Callan Global REITs	8.83%		7.09%		9.06%		-	
Core Real Estate	6.88%	49	6.18%	31	-		-	
NCREIF NFI-ODCE Val Wt Nt	6.62%	55	5.81%	51	6.31%	63	7.06%	49
NCREIF NFI-ODCE Eq Wt Net	6.69%	53	5.78%	51	6.23%	67	6.94%	64
Callan OE Core Cmngld RE	6.82%		5.86%		6.50%		7.02%	
Real Estate	7.96%	29	6.71%	24	-		-	
Real Estate Benchmark (8)	7.64%	39	6.68%	24	-		-	
Callan Tot Real Est DB	7.22%		5.98%		6.44%		7.02%	
Cash	1.10%	88	1.70%	85	2.12%	76	2.72%	84
Citi 1 Mo T-Bill	1.00%	93	1.47%	96	1.76%	97	2.26%	99
Callan Cash Database	1.31%		1.92%		2.25%		3.00%	
Total Fund	9.82%	11	7.64%	26	6.53%	60	8.12%	55
Policy Benchmark*	9.08%	48	7.25%	70	6.10%	90	7.82%	74
Callan Public Fd V Lg DB	9.06%		7.43%		6.71%		8.20%	

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



	12/2023-						2024			
	6/2024		2023		2022		2021		2020	
Domestic Equity	12.07%	47	25.87%	17	(18.91%)	71	26.06%	46	20.88%	24
Russell 3000 Index	13.56%	12	25.96%	17	(19.21%)	80	25.66%	54	20.89%	24
Pub Pln- Dom Equity	12.02%		23.70%		(17.91%)		25.85%		18.58%	
Large Cap Equity	15.67%	45	28.24%	45	(19.06%)	56	28.85%	36	17.67%	54
Russell 1000 Index	14.24%	51	26.53%	50	(19.13%)	56	26.45%	55	20.96%	47
Callan Large Cap	14.83%		26.53%		(18.33%)		27.05%		19.61%	
Eagle Capital	18.31%	24	41.59%	2	(25.33%)	98	28.97%	51	15.68%	64
S&P 500 Index	15.29%	63	26.29%	48	(18.11%)	58	28.71%	54	18.40%	52
Callan Large Cap Core	16.45%		26.16%		(17.42%)		29.05%		18.84%	
Northern Trust S&P 500	45 250/		26 259/	40	(40.040/)		20 700/	- 4	18.36%	
S&P 500 Index	15.25%	63	26.25% 26.29%	49	(18.04%)	57	28.70%	54	18.40%	52
	15.29%	63		48	(18.11%)	58	28.71%	54		52
Callan Large Cap Core	16.45%		26.16%		(17.42%)		29.05%		18.84%	
Mid Cap Equity	4.64%	54	16.67%	41	(19.70%)	81	21.05%	72	26.89%	10
Russell MidCap Index	4.96%	52	17.23%	39	(17.32%)	78	22.58%	70	17.10%	38
Callan Mid Cap Core	5.14%		15.29%		(12.70%)		26.00%		15.11%	
Artisan Partners	4.60%	52	25.27%	22	(35.90%)	83	11.66%	66	58.87%	20
Russell MidCap Growth Idx	5.98%	38	25.87%	16	(26.72%)	40	12.73%	60	35.59%	60
Callan Mid Cap Growth	5.04%		21.03%		(27.58%)		13.67%		40.78%	
Small Cap Equity	(1.72%)	94	20.36%	20	(15.84%)	49	17.75%	89	25.30%	13
Russell 2000 Index	1.73%	70	16.93%	62	(20.44%)	84	14.82%	97	19.96%	21
Callan Small Cap Core	2.64%		17.66%		(15.97%)		24.48%		12.90%	
Dimensional Fund Advisors	(0.49%)	83	21.88%	13	(2.48%)	11	40.02%	18	5.62%	31
Russell 2000 Value Index	(0.85%)	86	14.65%	65	(14.48%)	84	28.27%	64	4.63%	37
Callan Small Cap Value	1.17%		16.41%		(10.51%)		31.82%		2.88%	
Wellington Small Cap	1.35%	75	18.93%	29	(13.73%)	27	14.09%	98	17.88%	35
Russell 2000 Index	1.73%	70	16.93%	62	(20.44%)	84	14.82%	97	19.96%	21
Callan Small Cap Core	2.64%		17.66%		(15.97%)		24.48%		12.90%	
Riverbridge Partners SCG	(5.78%)	99	21.15%	26	(31.61%)	77	4.71%	78	53.97%	29
Russell 2000 Growth Index	4.44%	62	18.66%	46	(26.36%)	44	2.83%	80	34.63%	73
Callan Small Cap Growth	6.13%		17.84%		(27.10%)		10.91%		44.48%	



	12/2023- 6/2024		2023		2022		2021		2020	
Global Equity	11.51%	46	21.61%	50	(20.21%)	62	18.59%	57	16.92%	51
Global Equity Benchmark (2)	10.28%	5 1	21.58%	50	(18.40%)	54	18.22%	59	16.25%	54
Acadian Global Equity	17.82%	6	24.64%	29	(17.31%)	47	25.62%	6	18.94%	42
Epoch Investments	9.69%	53	19.47%	62	(20.08%)	62	18.59%	57	13.11%	62
Harding-Loevner	10.14%	51	23.28%	40	(29.06%)	90	16.34%	70	32.30%	16
LSV Global Value	8.40%	60	18.77%	66	-		-		-	
MSCI ACWI Index	11.30%	47	22.20%	48	(18.36%)	54	18.54%	57	16.25%	54
Callan Global Equity	10.47%		21.74%		(17.81%)		19.46%		17.13%	
International Equity	5.86%	76	17.22%	42	(17.39%)	59	7.57%	63	14.85%	37
International Equity Benchmark (3)	5.28%	87	15.62%	69	(16.58%)	41	8.53%	53	11.12%	67
Pub Pln- Intl Equity	6.42%		16.76%		(16.85%)		8.94%		12.71%	
All Country ex US	6.04%	41	17.31%	53	(17.82%)	59	10.00%	63	21.61%	20
Arrowstreet Capital	12.29%	5	21.47%	18	(9.02%)	15	14.70%	27	20.12%	24
Baillie Gifford	2.76%	81	10.84%	88	(31.15%)	94	4.41%	87	33.72%	7
Marathon Asset Mgmt	4.62%	64	15.77%	67	(13.65%)	31	11.21%	55	10.08%	58
MSCI ACWI xUS IMI	5.28%	54	15.62%	68	(16.58%)	52	8.53%	70	11.12%	52
NT MSCI World ex US	5.21%	56	18.38%	42	-		-		-	
MSCI World xUS	4.96%	60	17.94%	47	(14.29%)	36	12.62%	43	7.59%	71
Non-U.S. Equity Database	5.46%		17.64%		(16.32%)		11.79%		11.58%	
Small Cap	0.80%	70	11.08%	78	(21.01%)	51	7.72%	81	8.64%	66
Principal Sm Cap Intl	2.87%	59	14.66%	53	(20.56%)	45	10.28%	72	6.94%	76
MSCI World Small Cap x US	0.98%	69	12.62%	67	(20.59%)	46	11.14%	66	12.78%	45
Callan Intl Small Cap	3.36%		15.18%		(20.63%)		12.78%		11.29%	
Emerging Markets	7.70%	54	20.26%	9	(18.16%)	27	(2.67%)	56	15.79%	66
Lazard	9.10%	36	23.67%	3	(13.60%)	10	6.88%	13	0.43%	97
Fisher Investments	6.26%	65	16.39%	19	(22.72%)	57	(10.53%)	97	31.60%	9
MSCI Emerging Mkts Idx	7.49%	56	9.83%	65	(20.09%)	37	(2.54%)	56	18.31%	48
Callan Emerging Broad	7.96%		11.91%		(21.94%)		(0.59%)		18.17%	
Total Equity	9.76%	53	21.88%	49	(18.58%)	56	17.76%	64	17.96%	46
MSCI ACWI IMI	10.28%	51	21.58%	50	(18.40%)	54	18.22%	59	16.25%	54
Total Equity Custom Benchmark (5)	9.90%	53	21.32%	51	(18.05%)	52	17.84%	63	16.41%	53
Callan Global Equity	10.47%		21.74%		(17.81%)		19.46%		17.13%	



	12/2023-									
	6/2024		2023		2022		2021		2020	
Domestic Fixed-Income	0.26%	43	6.57%	46	(13.10%)	72	(0.81%)	56	9.52%	23
Blmbg Aggregate Index	(0.71%)	91	5.53%	82	(13.01%)	72	(1.54%)	91	7.51%	67
Pub Pln- Dom Fixed	0.06%		6.40%		(12.24%)		(0.57%)		8.53%	
Short Duration	2.12%	21	-		-		-		-	
SIT Short Duration FI	2.12%	21	-		-		-		-	
Blmbg Gov/Cred 1-3 Yr	1.38%	87	4.61%	94	(3.69%)	63	(0.47%)	79	3.33%	80
Callan Short Fixed Inc	1.83%		5.39%		(3.34%)		(0.22%)		3.98%	
Core Fixed Income	(0.02%)	29	6.07%	63	(13.09%)	64	(1.39%)	75	8.05%	83
PIMCO	0.09%	22	6.31%	35	(13.27%)	73	(1.43%)	77	8.64%	54
Manulife Asset Management	(0.14%)	44	5.91%	71	(13.30%)	75	(1.11%)	53	8.45%	68
Blmbg Aggregate Index	(0.71%)	96	5.53%	85	(13.01%)	58	(1.54%)	88	7.51%	93
Callan Core Bond FI	(0.25%)		6.17%		(12.91%)		(1.03%)		8.71%	
Core Plus	0.20%	64	7.09%	41	(13.11%)	44	(0.32%)	53	10.77%	20
Loomis Sayles	(0.29%)	84	6.45%	71	(12.04%)	18	(0.84%)	80	11.48%	8
Prudential Core Plus	0.68%	21	7.73%	17	(14.17%)	84	0.19%	31	10.04%	27
Blmbg Aggregate Index	(0.71%)	96	5.53%	96	(13.01%)	41	(1.54%)	97	7.51%	93
Callan Core Plus Fl	0.31%		6.90%		(13.27%)		(0.27%)		9.27%	
Emerging Markets Debt	2.40%	49	12.45%	57	(16.70%)	80	(2.48%)	49	7.68%	31
Wellington EMD	2.40%	49	12.45%	57	(16.70%)	80	(2.48%)	49	7.68%	31
EMBI Global Dvsfd Index	2.34%	50	11.09%	69	(17.78%)	85	(1.80%)	38	5.26%	62
Emerging Debt Database	2.38%		12.86%		(12.34%)		(2.52%)		6.35%	
Global Fixed Income	0.38%	45	7.51%	59	(11.20%)	46	(1.03%)	67	6.55%	66
PIMCO Global	0.62%	35	7.28%	71	(10.63%)	38	(1.26%)	74	7.22%	54
AllianceBernstein Global	0.14%	60	7.73%	45	(11.78%)	58	(0.79%)	56	5.89%	73
Blmbg Global Agg (Hedged)	0.13%	60	7.15%	72	(11.22%)	46	(1.39%)	75	5.58%	77
Callan Global FI (Hedged)	0.28%		7.67%		(11.34%)		(0.55%)		7.33%	
Total Fixed Income	0.54%	32	7.43%	22	(12.99%)	72	(1.05%)	65	8.71%	44
Blmbg Aggregate Index	(0.71%)	91	5.53%	82	(13.01%)	72	(1.54%)	91	7.51%	67
Total Fixed Inc Custom Benchmark (6) (0.19%)	62	6.49%	48	(13.01%)	72	(1.52%)	91	6.98%	73
Pub Pln- Dom Fixed	0.06%		6.40%		(12.24%)		(0.57%)		8.53%	



	12/2023-									
	6/2024		2023		2022		2021		2020	
REIT Composite REIT Comp Custom Benchmark (7) Callan Global REITs	(0.27%) (1.85%) (2.11%)	11 42	13.49% 12.41% 12.21%	24 43	(23.79%) (25.17%) (25.07%)	28 55	35.49% 36.29% 28.36%	5 3	(2.92%) (9.69%) (3.91%)	37 87
Cohen & Steers EPRA/NAREIT Dev REIT Idx Centersquare FTSE NAREIT Equity Index Callan Global REITs	(1.40%) (3.17%) 0.37% (0.13%) (2.11%)	24 64 9 11	11.99% 10.85% 14.73% 13.73% 12.21%	53 72 8 22	(24.39%) (24.42%) (23.23%) (24.37%) (25.07%)	36 36 17 36	28.22% 27.21% 43.03% 43.24% 28.36%	54 61 1 1	(1.62%) (8.18%) (4.23%) (8.00%) (3.91%)	25 82 59 81
Core Real Estate Principal Capital (Net) UBS Trumbull Property (Net) UBS Trumbull Property G&I (Net) JPMCB Strategic Property (Net) NFI-ODCE Equal Weight Net Callan OE Core Cmngld RE	(3.10%) (2.76%) (2.79%) (5.11%) (4.49%) (3.18%) (2.53%)	63 54 55 90 83 68	(13.61%) (10.65%) (15.10%) (22.98%) (14.69%) (13.33%) (10.83%)	63 43 70 97 69 62	5.59% 3.96% 5.50% 8.06% 3.97% 7.56% 8.56%	70 80 71 54 80 60	21.02% 22.86% 15.71% 19.16% 19.70% 21.88% 21.58%	53 41 72 70 66 48	0.50% 0.83% (4.57%) 1.32% 0.57% 0.75% 1.45%	67 61 95 54 65 62
Non-Core Real Estate AEW Partners VI AEW Partners VII AEW Partners VIII AEW Partners IX	(4.08%) 1.00% 6.65% 9.92% 3.90%	78 18 2 1 5	(7.94%) 2.24% (18.46%) 5.53% 5.75%	47 18 72 16 16	10.42% 0.30% 6.67% 15.43% 13.15%	40 65 53 25 31	30.44% 21.57% (2.93%) 57.16%	43 61 91 16	4.31% 58.66% (12.40%) 4.13%	44 5 85 44
Heitman VP III Heitman VP IV Heitman VP V	(7.97%) (0.03%) 0.07%	90 34 32	10.65% 2.32% (1.69%)	12 18 30	0.54% 13.59% 22.31%	65 31 15	20.06% 37.08%	63 35	6.84% 4.86%	35 41
AG Core Plus III AG Core Plus IV AG Realty Fund X AG Realty Value Fd XI	6.00% (7.29%) (3.66%) (3.11%)	2 88 75 64	5.55% (22.12%) (5.93%)	16 74 39	(24.59%) (11.47%) 18.00%	94 83 22	(3.98%) 17.64% 41.45%	91 72 30	(17.37%) 5.78% 20.39%	88 36 16
Invesco US Income Fund Invesco VA Fund IV Invesco VA Fund V Invesco Real Estate US Fund VI	(2.02%) (16.74%) (24.29%)	59 99 99 95	(9.57%) (46.11%) (13.99%) 1.28%	53 93 65 21	(46.86%) 11.79%	100 37	16.72% 41.55%	74 30	(1.40%) 2.82%	71 46
TA Associates Realty Fund XI TA Associates Realty Fund XII TA Associates Realty Fund XIII	(10.85%) 3.64% (0.51%) (8.26%)	5 37 91	(39.20%) (7.30%)	91 45	2.98% 32.04%	62 13	44.82% 43.57%	29 30	8.84% -	31
Westbrook RE Fund X Westbrook RE Fund XI NCREIF Total Index Callan Real Est Val Add	(23.24%) 1.94% (1.24%) (1.35%)	99 8 48	(16.35%) 8.94% (7.94%) (8.43%)	71 12 47	6.37% 22.76% 5.53% 7.58%	55 15 60	12.60% 81.18% 17.70% 25.99%	81 12 71	5.13% - 1.60% 2.17%	39 53
Timber Composite Hancock Timber Portfolio NCREIF Timberland Index	(12.77%) (12.77%) 3.86%		2.13% 2.13% 9.45%		5.18% 5.18% 12.90%		12.67% 12.67% 9.17%		13.16% 13.16% 0.81%	
Total Real Estate Real Estate Benchmark (8) Callan Tot Real Est DB	(3.16%) (1.24%) (1.82%)	68 41	(10.35%) (7.94%) (3.50%)	71 63	1.94% 5.53% 8.21%	77 63	24.54% 17.70% 19.51%	36 55	1.25% 1.60% 1.43%	52 48
Private Equity Pathway PEF XXIII Series 2008 Pathway PEF XXIII Series 2013 Pathway PEF XXIII Series 2016 Pathway PEF XXIII Series 2021	2.61% 0.62% 1.38% 3.75% 5.87%	86 95 94 81 53	3.82% 0.20% 2.12% 5.46% 7.03%	46 60 57 42 39	(1.77%) (14.93%) (8.82%) (0.83%) 5.35%	72 95 89 70 60	53.50% 56.66% 57.01% 59.48%	2 1 1 1	21.06% 22.15% 25.73% 29.38%	5 5 4 4
GCM Grosvenor Private Markets GCM Grosvenor Div. Partners LP 2014-1 GCM Grosvenor 2018 Series Private Equity Benchmark (9) Callan Alterntive Inv DB	(6.63%) 1.57% 4.94% 3.80% 6.42%	99 94 73 81	(12.33%) 4.73% 8.89% 18.58% 2.81%	94 44 32 16	(1.75%) 7.38% 13.74% (25.03%) 9.20%	72 56 39 98	32.28% 53.59% 27.11% 31.92% 13.64%	8 2 27 9	7.70% 15.50% 13.09% 22.79% (0.39%)	15 9 9 5
Cash 1mo T-Bill Callan Cash Database	2.62% 2.73% 2.71%	62 38	5.50% 5.13% 5.31%	26 85	1.90% 1.48% 1.16%	3 36	0.07% 0.04% 0.13%	71 78	0.43% 0.45% 1.06%	95 95
Total Fund Policy Benchmark* Callan Public Fd V Lg DB	5.79% 6.06% 5.40%	33 23	12.66% 14.72% 11.70%	38 8	(13.62%) (14.94%) (10.32%)	95 97	17.70% 14.66% 16.69%	35 76	15.32% 14.16% 12.06%	13 22

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private



	2019		2018		2017		2016		2015	
Domestic Equity	31.10%	24	(5.68%)	42	19.82%	67	12.66%	56	(1.10%)	76
Russell 3000 Index	31.02%	25	(5.24%)	30	21.13%	39	12.74%	52	0.48%	38
Pub Pln- Dom Equity	30.20%		(5.94%)		20.54%		12.86%		0.16%	
Managed Large Cap Equity										
Eagle Capital	31.66%	39	(3.79%)	25	24.12%	18	11.79%	24	1.35%	51
S&P 500 Index	31.49%	40	(4.38%)	32	21.83%	50	11.96%	21	1.38%	51
Callan Large Cap Core	30.46%		(5.35%)		21.79%		10.40%		1.39%	
Northern Trust S&P 500	31.42%	40	(4.41%)	32	21.72%	51	11.84%	24	1.43%	48
S&P 500 Index	31.49%	40	(4.38%)	32	21.83%	50	11.96%	21	1.38%	51
Callan Large Cap Core	30.46%		(5.35%)		21.79%		10.40%		1.39%	
Mid Cap Equity	32.44%	36	(11.17%)	54	17.34%	68	10.61%	79	(2.22%)	71
Russell MidCap Index	30.54%	40	(9.06%)	31	18.52%	48	13.80%	51	(2.44%)	72
Callan Mid Cap Core	29.00%		(10.83%)		18.42%		14.04%		0.36%	
Wellington Mid Cap	31.49%	16	(13.84%)	59	13.83%	61	14.18%	79	(0.62%)	26
Russell MidCap Value Idx	27.06%	68	(12.29%)	38	13.34%	69	20.00%	40	(4.78%)	66
Callan Mid Cap Value	29.02%		(13.44%)		14.43%		17.48%		(2.74%)	
Artisan Partners	39.75%	23	(2.45%)	33	22.10%	79	0.25%	87	3.52%	15
Russell MidCap Growth Idx	35.47%	52	(4.75%)	48	25.27%	59	7.33%	19	(0.20%)	57
Callan Mid Cap Growth	35.79%		(4.91%)		25.94%		4.14%		0.05%	
Small Cap Equity	27.06%	37	(3.82%)	7	17.61%	13	20.73%	50	(4.03%)	78
Russell 2000 Index	25.52%	46	(11.01%)	52	14.65%	38	21.31%	44	(4.41%)	81
Callan Small Cap Core	24.86%		(10.86%)		13.35%		20.74%		(1.75%)	
Dimensional Fund Advisors	18.57%	90	(15.81%)	64	7.54%	67	29.92%	31	(7.31%)	82
Russell 2000 Value Index	22.39%	64	(12.86%)	23	7.84%	63	31.74%	13	(7.47%)	82
Callan Small Cap Value	24.31%		(14.79%)		9.18%		27.88%		(3.68%)	
Wellington Small Cap	32.48%	9	(3.05%)	6	20.59%	5	18.66%	74	(2.26%)	59
Russell 2000 Index	25.52%	46	(11.01%)	52	14.65%	38	21.31%	44	(4.41%)	81
Callan Small Cap Core	24.86%		(10.86%)		13.35%		20.74%		(1.75%)	
Riverbridge Partners SCG	28.48%	54	8.21%	3	24.25%	58	14.17%	19	(2.57%)	61
Russell 2000 Growth Index	28.48%	54	(9.31%)	84	22.17%	72	11.32%	36	(1.38%)	49
Callan Small Cap Growth	30.24%		(2.91%)		26.16%		8.62%		(1.54%)	



	2019		2018		2017		2016		2015	
Global Equity	26.62%	56	(7.38%)	33	27.95%	31	5.90%	53	(1.02%)	65
Acadian Global Equity	22.68%	82	(10.16%)	57	24.40%	57	8.67%	27	(4.30%)	85
Global Equity Benchmark (2)	26.35%	59	(10.08%)	56	23.95%	61	8.36%	29	(2.06%)	73
Epoch Investments	27.66%	49	(8.56%)	43	31.01%	17	(0.46%)	94	0.51%	45
Harding-Loevner	30.25%	33	(9.32%)	49	33.45%	11	7.44%	39	2.65%	25
MSCI ACWI Index	26.60%	56	(9.41%)	49	23.97%	61	7.86%	34	(2.36%)	74
Callan Global Equity	27.49%		(9.52%)		25.26%		6.24%		0.16%	
International Equity	23.87%	32	(14.80%)	68	25.77%	87	7.73%	10	(3.98%)	53
International Equity Benchmark (3)	21.63%	71	(14.76%)	68	27.81%	66	4.41%	42	(4.60%)	62
Pub Pln- Intl Equity	22.89%		(13.95%)		28.81%		4.06%		(3.75%)	
Developed Markets	23.24%		(14.24%)		20.24%		6.24%		0.70%	
MSCI EAFE Index	22.01%		(13.79%)		25.03%		1.00%		(0.81%)	
EAFE Composite	22.15%		(13.29%)		17.42%		7.79%		0.06%	
MSCI EAFE Index	22.01%		(13.79%)		25.03%		1.00%		(0.81%)	
Small Cap	26.93%	30	(17.51%)	24	32.23%	81	1.70%	35	4.37%	85
Fidelity	-		(13.60%)	5	30.92%	87	2.32%	30	4.95%	84
MSCI ACWI ex US Small Cap	22.42%	75	(18.20%)	33	31.65%	84	3.91%	24	2.60%	93
Mondrian	25.96%	33	(13.83%)	5	33.46%	69	1.13%	36	3.84%	86
MSCI World ex US Sm Cap	25.41%	45	(18.07%)	32	31.04%	86	4.32%	23	5.46%	81
Callan Intl Small Cap	24.99%		(19.66%)		35.26%		(0.03%)		10.09%	
All Country ex US	27.12%	28	(14.17%)	48	29.77%	37	3.80%	38	(0.62%)	60
Arrowstreet Capital	22.84%	54	(13.30%)	36	29.10%	42	6.70%	19	(3.12%)	76
MSCI ACWI ex US IMI	21.63%	68	(14.76%)	55	27.81%	52	4.41%	34	(4.60%)	83
Non-U.S. Equity Database	23.44%		(14.30%)		27.98%		2.30%		0.57%	
Emerging Markets	19.70%	66	(16.83%)	70	32.03%	85	17.06%	14	(17.05%)	88
Lazard Emerging Markets	18.86%	73	(16.23%)	61	28.41%	95	22.70%	4	(19.08%)	92
MSCI Emerging Mkts Idx	18.44%	76	(14.57%)	32	37.28%	61	11.19%	55	(14.92%)	68
Callan Emerging Broad	22.26%		(15.34%)		39.31%		11.56%		(13.68%)	
Total Equity	27.64%	49	(9.35%)	49	23.00%	68	10.10%	16	(2.04%)	73
MSCI ACWI IMI	26.35%	59	(10.08%)	56	23.95%	61	8.36%	29	(2.19%)	73
Total Equity Custom Benchmark (5)	26.67%	55	(9.65%)	52	24.08%	60	8.85%	26	(1.85%)	71
Callan Global Equity	27.49%		(9.52%)		25.26%		6.24%		0.16%	



	2019		2018		2017		2016		2015	
Domestic Fixed-Income	9.81%	24	0.01%	57	5.07%	31	4.99%	34	(0.20%)	65
Blmbg Aggregate Index	8.72%	58	0.01%	57	3.54%	73	2.65%	74	0.55%	39
Pub Pln- Dom Fixed	8.98%		0.11%		4.40%		3.90%		0.30%	
Core Fixed Income	8.86%	76	0.37%	22	3.98%	48	3.27%	44	0.82%	56
Blmbg Aggregate Index	8.72%	83	0.01%	62	3.54%	88	2.65%	87	0.55%	72
Callan Core Bond FI	9.17%		0.10%		3.96%		3.14%		0.84%	
PIMCO	9.01%	70	0.77%	7	4.16%	34	3.01%	59	0.97%	36
Blmbg Aggregate Index	8.72%	83	0.01%	62	3.54%	88	2.65%	87	0.55%	72
Callan Core Bond FI	9.17%		0.10%		3.96%		3.14%		0.84%	
Core Plus	10.63%	28	(0.30%)	55	5.99%	11	6.57%	10	(1.06%)	90
Loomis Sayles	9.78%	65	(0.18%)	44	5.66%	16	7.80%	4	(3.21%)	99
Prudential Core Plus	11.47%	4	(0.41%)	58	6.32%	7	5.39%	24	1.08%	7
Blmbg Aggregate Index	8.72%	93	0.01%	31	3.54%	95	2.65%	99	0.55%	40
Callan Core Plus FI	10.01%		(0.24%)		4.93%		4.67%		0.38%	
Emerging Markets Debt	16.28%	14	(4.12%)	32	11.58%	64	12.25%	31	0.36%	20
Wellington Emerging Market Debt	16.28%	14	(4.12%)	32	11.58%	64	12.25%	31	0.36%	20
EMBI Global Dvsfd	15.04%	35	(4.26%)	35	10.26%	79	10.15%	63	1.18%	14
Emerging Debt Database	14.45%		(5.20%)		12.67%		10.92%		(3.00%)	
Global Fixed Income	8.90%	60	1.51%	30	3.76%	62	5.59%	21	1.38%	22
Blmbg Global FI (Hedged)	8.22%	70	1.76%	26	3.04%	93	3.95%	57	1.02%	33
Callan Global FI (Hedged)	9.00%		1.09%		4.19%		4.19%		0.84%	
PIMCO Global	9.16%	45	1.77%	26	3.69%	66	5.42%	22	1.77%	6
AllianceBernstein Global	8.64%	64	1.26%	44	3.83%	58	5.79%	19	0.99%	34
Blmbg Global FI (Hedged)	8.22%	70	1.76%	26	3.04%	93	3.95%	57	1.02%	33
Callan Global FI (Hedged)	9.00%		1.09%		4.19%		4.19%		0.84%	
Total Fixed Income	10.22%	15	(0.05%)	61	5.38%	27	5.83%	27	0.27%	51
Blmbg Aggregate Index	8.72%	58	0.01%	57	3.54%	73	2.65%	74	0.55%	39
Total Fixed Inc Custom Benchmark (6)	9.22%	43	0.02%	57	4.07%	57	3.71%	54	0.54%	39
Pub Pln- Dom Fixed	8.98%		0.11%		4.40%		3.90%		0.30%	



	2019		2018		2017		2016		2015	
REIT Composite	26.75%	28	(3.85%)	34	9.97%	88	5.00%	23	4.25%	10
REIT Comp Custom Benchmark (7)	23.10%	73	(4.42%)	44	7.54%	99	5.87%	15	2.31%	31
Callan Global REITs	25.12%		(4.53%)		12.80%		3.94%		1.11%	
Cohen & Steers	26.14%	39	(3.19%)	18	14.15%	37	4.84%	27	3.60%	11
EPRA/NAREIT Dev REIT Idx	23.06%	73	(4.74%)	51	11.42%	69	4.99%	23	0.05%	78
Callan Global REITs	25.12%		(4.53%)		12.80%		3.94%		1.11%	
Core Real Estate	4.47%	79	8.60%	18	7.51%	40	9.11%	36	14.09%	54
Principal Capital (Net)	6.24%	58	8.33%	23	8.22%	20	9.14%	35	13.77%	61
UBS Trumbull Property (Net)	(2.73%)	97	6.23%	80	5.46%	87	6.28%	89	11.95%	78
JPMCB Strategic Property	3.42%	87	7.17%	59	6.42%	61	7.46%	79	14.27%	48
UBS Trumbull Property G&I (Net)	7.74%	33	10.23%	10	6.66%	54	15.51%	1	18.66%	9
NFI-ODCE Equal Weight Net	5.18%	77	7.30%	46	6.92%	49	8.36%	54	14.18%	51
Callan OE Core Cmngld RE	6.49%		7.22%		6.89%		8.67%		14.21%	
Non-Core Real Estate	16.74%	15	14.33%	27	12.87%	26	12.13%	36	19.40%	31
AEW Partners V	(1.60%)	88	8.27%	57	309.55%	1	18.86%	14	25.58%	12
AEW Partners VI	90.93%	1	21.97%	12	10.89%	33	17.18%	17	19.76%	30
Heitman VP II	4.58%	75	20.19%	12	17.13%	14	7.22%	58	15.97%	54
AG Core Plus II	(22.13%)	94	(0.92%)	95	(18.08%)	95	(1.71%)	83	16.25%	52
AG Core Plus III	2.07%	80	(7.31%)	99	0.28%	82	12.11%	36	41.41%	5
TA Associates Realty Fund X	29.27%	8	16.80%	19	16.03%	15	12.81%	36	15.53%	57
NCREIF Total Index	6.42%	68	6.72%	67	6.96%	60	7.97%	55	13.33%	70
Callan Real Est Val Add	8.41%		9.12%		8.14%		9.19%		16.69%	
Timber Composite	13.37%		3.68%		13.74%		5.64%		2.70%	
Hancock Timber Portfolio	13.37%		3.68%		13.74%		5.64%		2.70%	
NCREIF Timberland Index	1.30%		3.21%		3.63%		2.59%		4.97%	
Total Real Estate	8.68%	41	7.25%	56	8.65%	44	8.37%	54	11.45%	63
Real Estate Benchmark (8)	6.42%	63	6.72%	63	6.96%	60	7.97%	58	13.33%	54
Callan Tot Real Est DB	7.74%		7.92%		7.93%		8.80%		14.11%	
Private Equity	13.65%	17	18.02%	5	17.66%	7	14.73%	20	12.81%	5
Pathway PEF XXIII	6.83%	61	19.11%	5	26.04%	3	13.73%	25	13.07%	5
Pathway PEF SRS 2013	18.04%	11	26.40%	3	20.23%	5	10.93%	49	3.35%	23
GCM Grosvenor Private Markets	13.19%	18	9.96%	6	9.57%	20	18.53%	12	14.87%	5
Private Equity Benchmark (9)	34.80%	2	(0.92%)	27	24.86%	3	15.13%	20	4.66%	17
Callan Alterntive Inv DB	7.82%		(7.43%)		4.44%		10.65%		(19.77%)	
Cash	2.04%	93	1.78%	90	0.91%	84	0.34%	96	0.37%	55
1mo T-Bill	2.20%	90	1.82%	84	0.80%	91	0.21%	97	0.02%	97
Callan Cash Database	2.59%		2.00%		1.16%		0.88%		0.39%	
Total Fund	20.36%	18	(3.71%)	73	17.40%	22	9.24%	14	0.57%	51
Policy Benchmark*	21.35%	6	(5.22%)	91	17.77%	14	8.07%	45	0.81%	47
Callan Public Fd V Lg DB	17.64%	-	(2.78%)		16.21%		8.02%		0.57%	
			(=::=:0)							

 $^{^{\}star}$ Current Quarter Target = 27.0% Russell 3000 Index, 22.0% MSCI ACWI xUS IMI, 20.0% Blmbg:Aggregate, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 8.0% S&P 500 Index+3.0% and 1.0% FTSE 1 Mo T-Bill.



Investment Manager Returns

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

	FY 2024	FY 2023	
Net IRR			
Total Fund - IRR	10.37%	7.36%	

The Total Fund/Plan IRR Calculation is based upon best available data.



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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.

					Last		Last		Last	
	Last		Last		3		5		10	
	Quarter		Year		Years		Years		Years	
Net Returns and Rankings										
Domestic Equity	1.96%	62	21.40%	45	7.40%	52	13.61%	39	11.40%	59
Russell 3000 Index	3.22%	12	23.13%	15	8.05%	28	14.14%	21	12.15%	23
Pub Pln- Dom Equity	2.16%		21.15%		7.52%		13.31%		11.54%	
Large Cap Equity	4.35%	38	25.60%	49	9.89%	29	14.88%	43	12.40%	54
Russell 1000 Index	3.57%	46	23.88%	56	8.74%	47	14.61%	46	12.51%	53
Callan Large Cap	2.89%		25.34%		8.54%		14.19%		12.76%	
Eagle Capital	4.64%	38	32.42%	9	9.10%	64	14.52%	63	12.76%	52
S&P 500 Index	4.28%	47	24.56%	75	10.01%	55	15.05%	48	12.86%	48
Callan Large Cap Core	4.08%		26.57%		10.31%		15.00%		12.79%	
Northern Trust S&P 500	4.28%	47	24.51%	75	10.02%	55	15.03%	49	12.83%	48
S&P 500 Index	4.28%	47	24.56%	75	10.01%	55	15.05%	48	12.86%	48
Callan Large Cap Core	4.08%		26.57%		10.31%		15.00%		12.79%	
Mid Cap Equity	(4.76%)	78	10.82%	69	1.05%	76	9.72%	57	8.30%	75
Russell MidCap Index	(3.35%)	38	12.88%	44	2.37%	73	9.46%	74	9.04%	58
Callan Mid Cap Core	(3.84%)		11.45%		4.31%		10.56%		9.71%	
Artisan Partners	(5.57%)	87	10.78%	61	(5.21%)	83	8.56%	64	9.82%	64
Russell MidCap Growth Idx	(3.21%)	28	15.05%	17	(0.08%)	29	9.93%	34	10.51%	38
Callan Mid Cap Growth	(3.67%)		11.00%		(1.25%)		9.31%		10.34%	
Victory Mid Cap Value	(4.07%)	36	11.21%	64	-		-		-	
Russell MidCap Value Idx	(3.40%)	23	11.98%	47	3.65%	83	8.49%	84	7.60%	73
Callan Mid Cap Value	(4.45%)		11.87%		6.10%		10.30%		8.53%	
Small Cap Equity	(5.49%)	91	6.75%	86	(0.10%)	74	8.90%	57	8.83%	39
Russell 2000 Index	(3.28%)	55	10.06%	60	(2.58%)	94	6.94%	88	7.00%	90
Callan Small Cap Core	(3.15%)		11.48%		1.40%		8.99%		8.67%	
Dimensional Fund Advisors	(3.63%)	57	14.52%	36	7.28%	17	13.12%	8	8.00%	48
Russell 2000 Value Index	(3.64%)	57	10.90%	71	(0.53%)	90	7.07%	89	6.23%	97
Callan Small Cap Value	(3.48%)		13.22%		3.65%		9.38%		7.86%	
Wellington Small Cap	(3.16%)	51	9.13%	65	1.65%	46	8.03%	75	9.13%	31
Russell 2000 Index	(3.28%)	55	10.06%	60	(2.58%)	94	6.94%	88	7.00%	90
Callan Small Cap Core	(3.15%)		11.48%		1.40%		8.99%		8.67%	
Riverbridge Partners	(9.68%)	99	(2.96%)	100	(9.43%)	94	4.99%	94	8.66%	90
Russell 2000 Growth Index	(2.92%)	62	9.14%	58	(4.86%)	66	6.17%	87	7.39%	99
Callan Small Cap Growth	(2.33%)		10.21%		(2.49%)		8.46%		10.05%	



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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.

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Net Returns and Rankings	Quartor									
Global Equity	2.23%	45	20.27%	41	4.24%	65	10.00%	65	8.68%	64
Global Equity Benchmark (2)	2.38%	43	18.40%	49	4.70%	60	10.36%	59	8.18%	73
Acadian Global Equity	4.12%	13	28.46%	6	8.86%	11	13.95%	14	9.51%	48
Epoch Investments	2.49%	40	17.83%	53	3.51%	70	8.09%	91	7.87%	75
Harding-Loevner	2.90%	30	17.70%	53	(0.52%)	90	9.82%	69	9.57%	46
LSV Global Value	(0.61%)	80	17.00%	56	-		-		-	
MSCI ACWI index	2.87%	31	19.38%	45	5.43%	46	10.76%	55	8.43%	69
Callan Global Equity	1.91%		18.18%		5.22%		11.11%		9.37%	
International Equity	0.77%	81	12.22%	57	(0.17%)	69	6.23%	63	4.33%	82
International Equity Benchmark (3)	0.92%	74	11.57%	73	0.19%	61	5.62%	73	3.92%	89
International Eq Custom BM (4)	1.14%	70	11.64%	72	(0.10%)	68	5.48%	74	3.95%	89
Pub Pln- Intl Equity	1.62%		12.62%		0.93%		6.63%		4.94%	
All Country ex US	(0.08%)	57	11.78%	44	0.09%	70	8.05%	31	5.77%	38
Arrowstreet Capital	1.63%	23	22.59%	4	7.16%	7	12.59%	3	7.80%	13
Baillie Gifford	(0.76%)	72	2.79%	96	(8.93%)	97	3.72%	92	-	
Marathon Asset Mgmt	(0.81%)	72	9.28%	69	0.57%	63	6.21%	65	-	
MSCI ACWI xUS IMI	0.92%	37	11.57%	49	0.19%	69	5.62%	76	3.92%	90
NT MSCI World ex US	(0.44%)	64	11.60%	48	-		-		-	
MSCI World xUS	(0.60%)	69	11.22%	55	2.82%	40	6.55%	59	4.27%	81
Non-U.S. Equity Database	0.22%		11.51%		1.83%		6.97%		5.28%	
Small Cap	(1.48%)	62	5.73%	71	(4.95%)	69	2.00%	89	2.76%	98
Principal Sm Cap Intl	(2.46%)	80	8.94%	52	(2.53%)	54	3.45%	80	-	
MSCI World Small Cap x US	(1.56%)	64	7.80%	63	(2.98%)	56	4.69%	66	4.04%	91
Callan Intl Small Cap	(1.20%)		9.11%		(2.26%)		5.59%		5.42%	
Emerging Markets	4.73%	48	17.01%	21	(2.20%)	30	4.82%	37	2.76%	88
Lazard Emerging Markets	6.21%	21	18.77%	14	3.50%	6	5.78%	29	3.17%	79
Fisher Investments	3.22%	69	15.03%	34	(7.68%)	74	3.56%	62	-	
MSCI Emerging Mkts Idx	5.00%	44	12.55%	49	(5.07%)	51	3.10%	71	2.79%	86
Callan Emerging Broad	4.54%		12.44%		(4.92%)		4.30%		4.26%	
Total Equity	1.60%	55	17.88%	53	4.07%	65	10.27%	61	8.40%	69
MSCI ACWI IMI Index	2.38%	43	18.40%	49	4.70%	60	10.36%	59	8.17%	73
Total Equity Custom Benchmark (5)	2.22%	45	17.95%	52	4.57%	61	10.31%	60	8.44%	69
Callan Global Equity	1.91%		18.18%		5.22%		11.11%		9.37%	



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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.

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Net Returns and Rankings										
Domestic Fixed-Income	0.47%	28	3.80%	55	(2.51%)	68	0.57%	66	2.01%	47
Blmbg Aggregate Index	0.07%	82	2.63%	87	(3.02%)	89	(0.23%)	97	1.35%	94
Pub Pln- Dom Fixed	0.25%		4.02%		(2.04%)		0.86%		1.97%	
Short Duration	1.33%	9	-		-		-		-	
Blmbg Gov/Cred 1-3 Yr	0.95%	89	4.87%	94	0.55%	83	1.25%	94	1.35%	97
Callan Short Fixed Inc	1.09%		5.63%		1.10%		1.78%		1.80%	
SIT Short Duration FI	1.33%	9	-		_		-		-	
Blmbg Gov/Cred 1-3 Yr	0.95%	89	4.87%	94	0.55%	83	1.25%	94	1.35%	97
Callan Short Fixed Inc	1.09%		5.63%		1.10%		1.78%		1.80%	
Core Fixed Income	0.36%	15	3.44%	43	(2.80%)	76	0.01%	89	1.60%	86
Blmbg Aggregate Index	0.07%	93	2.63%	90	(3.02%)	90	(0.23%)	95	1.35%	98
Callan Core Bond FI	0.25%		3.34%		(2.61%)		0.38%		1.82%	
PIMCO	0.36%	15	3.53%	36	(2.76%)	71	0.11%	83	1.66%	77
Manulife Asset Management	0.36%	16	3.22%	57	(2.97%)	88	0.00%	90	-	
Blmbg Aggregate Index	0.07%	93	2.63%	90	(3.02%)	90	(0.23%)	95	1.35%	98
Callan Core Bond FI	0.25%		3.34%		(2.61%)		0.38%		1.82%	
Core Plus	0.21%	83	3.93%	66	(2.33%)	52	1.01%	37	2.33%	40
Loomis Sayles	(0.08%)	97	2.56%	96	(2.43%)	58	0.98%	39	2.06%	70
Prudential Core Plus	0.50%	31	5.29%	17	(2.25%)	44	1.01%	37	2.60%	22
Blmbg Aggregate Index	0.07%	96	2.63%	95	(3.02%)	90	(0.23%)	98	1.35%	100
Callan Core Plus Fl	0.42%		4.31%		(2.33%)		0.91%		2.25%	
Emerging Markets Debt	0.10%	54	9.57%	43	(2.32%)	82	0.51%	66	2.99%	39
Wellington EMD	0.10%	54	9.57%	43	(2.32%)	82	0.51%	66	2.99%	39
EMBI Global Dvsfd Index	0.30%	44	9.23%	46	(2.60%)	86	(0.03%)	80	2.60%	51
Emerging Debt Database	0.19%		8.60%		(1.15%)		1.10%		2.61%	
Global Fixed Income	0.07%	55	4.93%	52	(1.63%)	61	0.44%	88	2.23%	78
PIMCO Global	0.27%	30	5.04%	48	(1.46%)	56	0.67%	68	2.41%	49
AllianceBernstein Global	(0.13%)	73	4.81%	63	(1.81%)	63	0.18%	91	2.04%	91
Blmbg Global Agg (Hedged)	0.12%	53	4.20%	75	(1.57%)	61	0.25%	90	2.02%	91
Callan Global FI (Hedged)	0.16%		4.99%		(1.30%)		0.77%		2.40%	
Total Fixed Income	0.34%	36	4.72%	24	(2.24%)	58	0.57%	66	2.18%	38
Blmbg Aggregate Index	0.07%	82	2.63%	87	(3.02%)	89	(0.23%)	97	1.35%	94
Total Fixed Inc Custom Benchmark (6)		78	3.67%	58	(2.59%)	71	(0.04%)	88	1.61%	84
Pub Pln- Dom Fixed	0.25%		4.02%		(2.04%)		0.86%		1.97%	



Returns and Rankings for Periods Ended June 30, 2024

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Net Returns and Rankings	Quarter		ı cui		icuis		Tours		1 Cui 3	
REIT Composite	(0.08%)	8	7.18%	40	(1.18%)	15	3.59%	11	5.50%	16
REIT Comp Custom Benchmark (7) Callan Global REITs	(1.15%) (1.68%)	34	6.43% 6.58%	54	(1.98%) (3.12%)	21	1.54% 1.97%	66	4.11% 4.48%	61
Gallari Giobal NETTS	,								4.4070	
Centersquare FTSE NAREIT Equity Index	0.64% 0.06%	30 46	7.97% 7.79%	30 36	0.76% 0.30%	21 33	4.93% 3.90%	50 71	- 5.90%	72
Callan Real Estate REIT	(0.17%)	40	7.13%	30	(0.15%)	33	4.92%	7 1	6.58%	12
Cohen & Steers	(1.50%)	45	5.83%	65	(3.39%)	55	2.05%	44	4.49%	50
EPRA/NAREIT Dev REIT Idx	(2.15%)	65	5.66%	70	(3.85%)	67	0.26%	81	2.99%	81
Callan Global REITs	(1.68%)		6.58%		(3.12%)		1.97%		4.48%	
Core Real Estate (Net)	(0.41%)	41	(10.00%)	64	0.24%	71	1.51%	86	4.90%	77
Principal Capital (Net)	(0.85%)	61	(8.60%)	51	1.46%	52	2.89%	52	6.39%	30
UBS Trumbull Property (Net)	(1.02%)	73 5	(8.02%)	39 88	(1.03%)	87 87	(0.66%)	92 88	2.81% 4.47%	94 84
JPMCB Strategic Property (Net) NFI-ODCE Equal Weight Net	1.12% (0.82%)	60	(14.43%) (10.32%)	68	(0.98%) 1.14%	59	0.83% 2.58%	61	5.80%	61
NFI-ODCE Value Weight Net	(0.66%)	54	(9.99%)	64	1.02%	60	2.27%	67	5.47%	66
Callan OE Core Cmngld RE	(0.60%)	-	(8.55%)		1.60%		3.18%		5.96%	
Core Plus Real Estate (Net)	(2.40%)	99	(16.11%)	95	(3.26%)	94	(0.18%)	90	5.81%	61
UBS Trumbull Property G&I (Net)	(2.40%)	99	(16.11%)	95	(3.26%)	94	(0.18%)	90	5.81%	61
Callan OE Core Cmngld RE	(0.60%)		(8.55%)		1.60%		3.18%		5.96%	
Non-Core Real Estate	(0.14%)	33	(9.59%)	62	3.10%	56	6.42%	44	9.52%	17
AEW Partners VI	(0.37%)	44	2.48%	2	1.09%	67	30.89%	1	22.36%	1
AEW Partners VII	6.74%	1	(1.06%)	21	(1.80%)	83	(3.74%)	90	4.50%	68
AEW Partners IX	(0.42%) 2.63%	45	6.55% 12.25%	1 1	7.72% 19.59%	26 1	10.500/	1	-	
AEW Partners VIII Heitman VP III	1.30%	1 6	0.68%	14	1.62%	66	19.50% 7.19%	42	- 11.40%	5
Heitman VP IV	(0.22%)	36	0.80%	13	11.56%	14	12.27%	19	-	J
Heitman VP V	1.67%	4	(1.69%)	24	-		-		-	
AG Core Plus III	0.42%	20	23.46%	1	(7.20%)	90	(8.43%)	92	(0.24%)	87
AG Core Plus IV	(6.32%)	99	(21.53%)	91	(12.27%)	93	(4.46%)	90	-	
AG Realty Fund X	(2.90%)	88	(8.64%)	60	9.12%	24	9.96%	24	-	
AG Realty Value Fd XI	(1.83%)	82	(1.71%)	24	-		-		-	
Invesco US Income Fund Invesco VA Fund IV	(0.45%) (4.38%)	46 97	(8.80%) (37.00%)	61 98	(36.83%)	99	(22.51%)	97	-	
Invesco VA Fund V	(0.95%)	69	(29.39%)	95	(5.94%)	89	1.22%	81	-	
Invesco Real Estate US Fund VI	2.80%	1	(11.95%)	74	-	00	-	٠.	-	
TA Associates Realty Fund XI	2.88%	1	(26.61%)	93	(6.83%)	90	0.85%	82	-	
TA Associates Realty Fund XII	0.90%	10	(5.76%)	43	14.21%	5	-		-	
TA Associates Realty Fund XIII	(2.95%)	89	-		-		=		-	
Westbrook RE Fund X	(7.84%)	100	(31.71%)	96	(11.24%)	93	(3.77%)	90	-	
Westbrook RE Fund XI NCREIF Total Index	2.73%	1	2.76%	2	10.43%	22	2 200/	E0.	- 6.079/	59
Callan Real Est Val Add	(0.26%) (0.49%)	38	(5.53%) (7.01%)	42	2.33% 4.14%	64	3.39% 4.82%	59	6.07% 6.46%	59
Timber Composite	(9.72%)		(12.12%)		(2.16%)		3.62%		4.60%	
Hancock Timber Portfolio	(9.72%)		(12.12%)		(2.16%)		3.62%		4.60%	
NCREIF Timberland Index	1.71%		9.84%		10.99%		7.18%		5.89%	
Total Real Estate	(0.60%)	48	(9.18%)	69	(0.34%)	76	2.27%	68	5.35%	66
Real Estate Benchmark (8)	(0.26%)	32	(5.53%)	42	2.33%	49	3.39%	47	6.07%	44
Callan Tot Real Est DB	(0.62%)		(6.40%)		2.01%		3.20%		5.98%	



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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.

	Last Quarter		Last Year		Last 3 Years		Last 5 Years		Last 10 Years	
Net Returns and Rankings										
Private Equity	1.03%	68	4.26%	79	7.87%	37	15.32%	4	15.07%	1
Pathway PEF XXIII Series 2008	0.51%	79	2.61%	85	(1.06%)	94	10.56%	31	13.05%	6
Pathway PEF XXIII Series 2013	(0.40%)	92	2.16%	86	3.82%	81	14.91%	5	12.62%	8
Pathway PEF XXIII Series 2016	2.79%	30	7.65%	55	10.46%	30	18.81%	4	-	
Pathway PEF XXIII Series 2021	3.46%	16	10.95%	38	3.01%	82	-		-	
GCM Grosvenor Private Markets	(2.67%)	96	(20.17%)	99	(3.78%)	96	3.45%	89	8.51%	18
GCM Grosvenor 2014	(1.45%)	93	1.71%	86	13.18%	25	16.61%	4	10.20%	11
GCM Grosvenor 2018 Series	1.85%	52	9.63%	46	13.89%	21	12.38%	11	-	
Private Equity Benchmark (9)	1.17%	65	5.05%	77	1.45%	84	10.91%	29	12.44%	8
Callan Alterntive Inv DB	1.94%		8.62%		6.45%		8.23%		4.26%	
Private Credit	1.54%		-		-		-		-	
Blue Owl Lending Fd Series 20	1.12%		-		-		-		-	
Grosvenor Private Credit Series 2023	1.74%		-		-		-		-	
Private Credit Benchmark (10)	1.97%		-		-		-		-	
Cash	1.24%	78	5.70%	38	3.34%	15	2.27%	61	1.60%	78
1mo T-Bill	1.35%	39	5.56%	68	3.11%	51	2.15%	81	1.48%	91
Callan Cash Database	1.35%		5.65%		3.13%		2.31%		1.77%	
Total Fund	1.08%	71	10.43%	44	2.64%	84	8.06%	58	7.37%	39
Policy Benchmark*	1.48%	47	11.27%	21	2.83%	81	7.76%	66	7.26%	42
Callan Public Fd V Lg DB	1.45%		10.23%		3.95%		8.12%		7.23%	

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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 June 30, 2024

	•				•			
	Last 15		Last 20		Last 25		Last 30	
	Years		Years		Years		Years	
Net Returns and Rankings								
Domestic Equity	14.14%	46	9.92%	54	7.78%	66	-	
Russell 3000 Index	14.49%	23	10.17%	36	7.82%	65	10.67%	39
Pub Pln- Dom Equity	14.07%		9.99%		8.12%		10.48%	
Eagle Capital	15.68%	16	-		-		-	
S&P 500 Index	14.82%	52	10.29%	71	7.67%	86	10.80%	70
Callan Large Cap Core	14.84%		10.69%		8.64%		11.25%	
Northern Trust S&P 500	14.79%	52	10.28%	71	7.68%	86	10.22%	92
S&P 500 Index	14.82%	52	10.29%	71	7.67%	86	10.80%	70
Callan Large Cap Core	14.84%		10.69%		8.64%		11.25%	
Mid Cap Equity	12.88%	65	9.82%	82	7.97%	94	-	
Artisan Partners	13.85%	52	10.75%	46	-		-	
Russell MidCap Growth Idx	13.95%	52	10.17%	61	8.16%	94	10.41%	76
Callan Mid Cap Core	14.24%		10.63%		10.69%		12.10%	
Small Cap Equity	12.88%	57	8.60%	87	8.87%	95	-	
Dimensional Fund Advisors	12.82%	58	8.23%	96	-		-	
Russell 2000 Value Index	10.59%	97	7.23%	98	8.32%	99	9.41%	99
Wellington Small Cap	13.74%	29	9.98%	41	-		-	
Russell 2000 Index	11.24%	96	7.85%	97	7.60%	99	8.87%	100
Callan Small Cap Core	12.99%		9.59%		10.60%		11.69%	
Russell 2000 Index Callan Small Cap Core		96		97		99		100



The table below details the rates of return and peer group rankings for the Fund's investment managers over various time periods ended June 30, 2024. 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 June 30, 2024

	1							
	Last		Last		Last		Last	
	15		20		25		30	
	Years		Years		Years		Years	
Net Returns and Rankings								
Global Equity	10.54%	79	-		-		-	
Global Equity Benchmark (2)	10.21%	84	7.57%	86	5.65%	97	7.43%	92
Acadian Global Equity	11.42%	57	-		-		-	
MSCI ACWI Index	10.35%	82	7.95%	84	-		-	
Callan Global Equity	11.65%		9.09%		7.57%		9.43%	
International Equity	6.82%	86	5.93%	88	4.48%	91	-	
International Equity Benchmark (3)	6.29%	97	5.84%	93	4.75%	90	5.15%	93
Pub Pln- Intl Equity	7.42%		6.46%		5.58%		6.37%	
Emerging Markets	5.46%	86	8.53%	56	7.68%	69	-	
Lazard Emerging Markets	6.31%	55	9.18%	29	8.20%	47	-	
MSCI Emerging Mkts Idx	4.90%	94	7.27%	95	-		-	
Callan Emerging Broad	6.41%		8.66%		8.16%		7.08%	
Total Equity	11.18%	68	8.13%	83	6.33%	91	-	
MSCI ACWI IMI	10.33%	83	7.99%	84	6.26%	92	7.48%	92
Total Equity Custom Benchmark (5)	10.84%	74	8.29%	77	_		_	
Callan Global Equity	11.65%		9.09%		7.57%		9.43%	
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Returns and Rankings for Periods Ended June 30, 2024

	Last		Last		Last		Last	
	15 Years		20 Years		25 Years		30 Years	
Net Returns and Rankings								
Domestic Fixed-Income	3.48%	45	3.72%	57	4.38%	59	-	
Blmbg Aggregate Index	2.50%	97	3.12%	93	3.88%	99	4.53%	92
Pub Pln- Dom Fixed	3.37%		3.74%		4.50%		5.18%	
Core Fixed Income	3.04%	71	3.39%	89	4.12%	88	-	
Blmbg Aggregate Index	2.50%	98	3.12%	96	3.88%	97	4.53%	96
Callan Core Bond FI	3.24%		3.70%		4.43%		4.97%	
PIMCO	3.27%	44	3.81%	41	4.50%	38	5.21%	15
Blmbg Aggregate Index	2.50%	98	3.12%	96	3.88%	97	4.53%	96
Callan Core Bond FI	3.24%		3.70%		4.43%		4.97%	
Total Fixed Income	3.69%	32	3.88%	35	4.51%	47	-	
Blmbg Aggregate Index	2.50%	97	3.12%	93	3.88%	99	4.53%	92
Total Fixed Inc Custom Benchmark (6)	2.87%	86	3.48%	71	4.30%	68	-	
Pub Pln- Dom Fixed	3.37%		3.74%		4.50%		5.18%	
REIT Composite	10.26%	14	6.90%	60	-		-	
REIT Comp Custom Benchmark (7)	9.35%	32	6.74%	67	8.03%	59	8.11%	
Callan Global REITs	8.83%		7.09%		9.06%		-	
Core Real Estate	6.39%	60	5.82%	51	-		-	
Principal Capital	7.38%	36	6.19%	30	-		-	
UBS Trumbull Property Fund	4.67%	92	4.83%	90	-		-	
NCREIF NFI-ODCE Eq Wt Net	6.69%	53	5.78%	51	6.23%	67	6.94%	64
Callan OE Core Cmngld RE	6.82%		5.86%		6.50%		7.02%	
Real Estate	7.36%	42	6.22%	38	-		-	
Real Estate Benchmark (8)	7.64%	39	6.68%	24	-		-	
Callan Tot Real Est DB	7.22%		5.98%		6.44%		7.02%	
Private Equity	12.14%	11	-		-		-	
Pathway PEF XXIII Series 2008	10.64%	21	-		-		-	
Callan Alterntive Inv DB	5.87%		9.45%		11.78%		-	
Cash	1.10%	88	1.70%	85	2.12%	76	2.72%	84
1mo T-Bill	1.00%	93	1.47%	96	1.76%	97	2.26%	99
Callan Cash Database	1.31%		1.92%		2.25%		3.00%	
Total Fund	9.49%	20	7.33%	57	6.26%	82	-	
Policy Benchmark*	9.08%	48	7.25%	70	6.10%	90	7.82%	74
Callan Public Fd V Lg DB	9.06%		7.43%		6.71%		8.20%	

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Net Returns and Rankings										
Domestic Equity	21.40%	45	19.31%	13	(14.46%)	69	46.51%	27	4.29%	40
Russell 3000 Index	23.13%	15	18.95%	25	(13.87%)	59	44.16%	58	6.53%	14
Pub Pln- Dom Equity	21.15%		18.13%		(13.24%)		44.62%		3.45%	
Large Cap Equity	25.60%	49	20.58%	42	(12.37%)	52	43.12%	47	5.35%	54
Russell 1000 Index	23.88%	56	19.36%	47	(13.04%)	54	43.07%	47	7.48%	49
Callan Large Cap	25.34%		18.63%		(12.13%)		42.72%		7.17%	
Eagle Capital	32.42%	9	27.40%	3	(23.03%)	98	55.73%	4	(2.61%)	97
S&P 500 Index	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72	7.51%	40
Callan Large Cap Core	26.57%		18.09%		(11.09%)		42.50%		6.42%	
Northern Trust S&P 500	24.51%	75	19.57%	30	(10.55%)	44	40.69%	72	7.47%	40
S&P 500 Index	24.56%	75	19.59%	30	(10.62%)	44	40.79%	72	7.51%	40
Callan Large Cap Core	26.57%		18.09%		(11.09%)		42.50%		6.42%	
Mid Cap Equity	10.82%	69	14.27%	44	(18.52%)	91	47.76%	65	4.30%	6
Russell MidCap Index	12.88%	44	14.92%	40	(17.30%)	88	49.80%	55	(2.24%)	45
Callan Mid Cap Core	11.45%		12.79%		(11.43%)		50.84%		(2.39%)	
Artisan Partners	10.78%	61	13.78%	90	(32.42%)	68	42.10%	63	24.58%	12
Russell MidCap Growth Idx	15.05%	17	23.13%	14	(29.57%)	63	43.77%	53	11.91%	53
Callan Mid Cap Growth	11.00%		18.58%		(27.84%)		44.27%		12.56%	
Small Cap Equity	6.75%	86	16.32%	23	(19.72%)	70	59.82%	57	(3.89%)	20
Russell 2000 Index	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44	(6.63%)	34
Callan Small Cap Core	11.48%		14.11%		(17.02%)		61.06%		(9.36%)	
Dimensional Fund Advisors	14.52%	36	16.50%	19	(7.46%)	22	83.87%	16	(18.39%)	57
Russell 2000 Value Index	10.90%	71	6.01%	85	(16.28%)	88	73.28%	40	(17.48%)	41
Callan Small Cap Value	13.22%		10.96%		(10.84%)		70.76%		(17.99%)	
Wellington Small Cap	9.13%	65	14.64%	43	(16.04%)	39	55.77%	73	(10.07%)	58
Russell 2000 Index	10.06%	60	12.31%	68	(25.20%)	96	62.03%	44	(6.63%)	34
Callan Small Cap Core	11.48%		14.11%		(17.02%)		61.06%		(9.36%)	
Riverbridge Partners SCG	(2.96%)	100	17.72%	47	(34.98%)	74	46.25%	78	17.43%	15
Russell 2000 Growth Index	9.14%	58	18.53%	40	(33.43%)	68	51.36%	64	3.48%	73
Callan Small Cap Growth	10.21%		17.21%		(30.39%)		53.86%		9.32%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Net Returns and Rankings										
Global Equity	20.27%	41	16.30%	61	(19.02%)	67	38.63%	61	2.58%	53
Global Equity Benchmark (2)	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43	1.17%	57
Acadian Global Equity	28.46%	6	18.19%	46	(15.04%)	44	43.73%	29	3.62%	47
Epoch Investments	17.83%	53	11.84%	89	(15.84%)	49	36.52%	72	(2.57%)	76
Harding-Loevner	17.70%	53	16.59%	60	(28.25%)	90	39.88%	53	15.99%	9
LSV Global Value	17.00%	56	-		-		-		-	
MSCI ACWI Idx	19.38%	45	16.53%	60	(15.75%)	49	39.26%	58	2.11%	54
Callan Global Equity	18.18%		17.88%		(16.05%)		40.20%		2.87%	
International Equity	12.22%	57	14.41%	52	(22.50%)	78	40.09%	34	(2.96%)	44
International Equity Benchmark (3)	11.57%	73	12.47%	73	(19.86%)	40	37.18%	62	(4.74%)	71
Pub Pln- Intl Equity	12.62%		14.52%		(20.78%)		38.81%		(3.40%)	
All Country ex US	11.78%	44	16.75%	48	(23.17%)	72	45.00%	20	1.28%	31
Arrowstreet Capital	22.59%	4	16.57%	50	(13.89%)	18	48.62%	11	(1.08%)	41
Baillie Gifford	2.79%	96	14.10%	64	(35.59%)	97	41.32%	33	12.42%	6
Marathon Asset Mgmt	9.28%	69	16.12%	53	(19.83%)	57	44.39%	22	(8.01%)	79
MSCI ACWI xUS IMI	11.57%	49	12.47%	76	(19.86%)	57	37.18%	52	(4.74%)	61
NT MSCI World ex US	11.60%	48	17.88%	38	-		-		-	
MSCI World xUS	11.22%	55	17.41%	42	(16.76%)	32	33.60%	72	(5.42%)	67
Non-U.S. Equity Database	11.51%		16.52%		(19.13%)		37.43%		(2.87%)	
Small Cap	5.73%	71	9.21%	81	(25.62%)	57	38.83%	79	(7.38%)	72
Principal Sm Cap Intl	8.94%	52	12.12%	54	(24.19%)	45	37.74%	84	(7.10%)	71
MSCI World Small Cap x US	7.80%	63	10.05%	75	(23.02%)	41	42.28%	56	(3.20%)	48
Callan Intl Small Cap	9.11%		12.32%		(24.35%)		43.28%		(3.90%)	
Emerging Markets	17.01%	21	9.52%	25	(27.01%)	49	43.63%	53	(5.82%)	69
Lazard Emerging Markets	18.77%	14	13.33%	5	(17.63%)	9	41.94%	68	(15.85%)	96
Fisher Investments Emerging Mkts	15.03%	34	5.48%	46	(35.15%)	93	44.70%	48	4.63%	15
MSCI Emerging Mkts Idx	12.55%	49	1.75%	79	(25.28%)	41	40.90%	75	(3.39%)	50
Callan Emerging Broad	12.44%		4.66%		(27.16%)		44.29%		(3.32%)	
Total Equity	17.88%	53	17.02%	57	(18.29%)	64	42.69%	33	1.38%	56
MSCI ACWI IMI	18.40%	49	16.14%	62	(16.52%)	54	40.94%	43	1.17%	57
Total Equity Custom Benchmark (5)	17.95%	52	16.14%	62	(16.54%)	55	41.00%	42	1.32%	56
Callan Global Equity	18.18%		17.88%		(16.05%)		40.20%		2.87%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Net Returns and Rankings										
Domestic Fixed-Income	3.80%	55	0.10%	61	(10.82%)	72	1.99%	54	8.87%	29
Blmbg Aggregate Index	2.63%	87	(0.94%)	87	(10.29%)	65	(0.33%)	96	8.74%	33
Pub Pln- Dom Fixed	4.02%		0.46%		(9.49%)		2.33%		7.81%	
Core Fixed Income	3.44%	43	(0.93%)	81	(10.37%)	59	0.17%	85	8.77%	75
Blmbg Aggregate Index	2.63%	90	(0.94%)	82	(10.29%)	53	(0.33%)	94	8.74%	76
Callan Core Bond FI	3.34%		(0.34%)		(10.27%)		1.14%		9.23%	
PIMCO	3.53%	36	(0.70%)	71	(10.55%)	70	0.07%	90	9.27%	49
Manulife Asset Management	3.22%	57	(1.29%)	93	(10.35%)	57	0.69%	69	8.75%	76
Blmbg Aggregate Index	2.63%	90	(0.94%)	82	(10.29%)	53	(0.33%)	94	8.74%	76
Callan Core Bond FI	3.34%		(0.34%)		(10.27%)		1.14%		9.23%	
Core Plus	3.93%	66	0.95%	37	(11.20%)	62	3.58%	39	8.95%	32
Loomis Sayles	2.56%	96	1.22%	32	(10.52%)	34	3.28%	53	9.45%	20
Prudential Core Plus	5.29%	17	0.69%	47	(11.88%)	82	3.84%	32	8.42%	51
Blmbg Aggregate Index	2.63%	95	(0.94%)	88	(10.29%)	30	(0.33%)	99	8.74%	43
Callan Core Plus FI	4.31%		0.42%		(10.87%)		3.33%		8.50%	
Emerging Markets Debt	9.57%	43	8.32%	62	(21.46%)	76	8.39%	73	1.52%	29
Wellington EMD	9.57%	43	8.32%	62	(21.46%)	76	8.39%	73	1.52%	29
EMBI Global Dvsfd Index	9.23%	46	7.39%	71	(21.22%)	73	7.53%	81	0.49%	35
Emerging Debt Database	8.60%		9.39%		(18.64%)		9.89%		(0.73%)	
Global Fixed Income	4.93%	52	0.42%	68	(9.66%)	50	2.33%	70	4.93%	67
PIMCO Global	5.04%	48	0.18%	73	(9.07%)	36	2.41%	70	5.53%	53
AllianceBernstein Global	4.81%	63	0.63%	63	(10.24%)	64	2.13%	72	4.33%	76
Blmbg Global Agg (Hedged)	4.20%	75	0.52%	65	(8.94%)	36	0.08%	91	6.07%	35
Callan Global FI (Hedged)	4.99%		0.95%		(9.66%)		3.28%		5.72%	
Total Fixed Income	4.72%	24	0.98%	36	(11.65%)	92	2.73%	46	7.23%	61
Blmbg Aggregate Index	2.63%	87	(0.94%)	87	(10.29%)	65	(0.33%)	96	8.74%	33
Total Fixed Inc Custom Benchmark (6)	3.67%	58	0.25%	54	(11.09%)	81	0.55%	75	7.39%	58
Pub Pln- Dom Fixed	4.02%		0.46%		(9.49%)		2.33%		7.81%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Net Returns and Rankings										
REIT Composite	7.18%	40	(1.33%)	17	(8.74%)	4	38.34%	16	(10.65%)	49
REIT Comp Custom Benchmark (7)	6.43%	54	(2.12%)	27	(9.60%)	13	37.41%	25	(16.58%)	88
Callan Global REITs	6.58%		(3.07%)		(12.24%)		34.28%		(10.75%)	
Centersquare	7.97%	30	(0.28%)	44	(4.99%)	32	38.04%	38	(9.92%)	75
FTSE NAREIT Equity Index	7.79%	36	(0.13%)	43	(6.27%)	51	38.02%	39	(13.04%)	84
Callan Real Estate REIT	7.13%		(0.71%)		(6.26%)		36.73%		(7.04%)	
Cohen & Steers	5.83%	65	(2.60%)	37	(12.52%)	60	38.45%	13	(11.37%)	59
EPRA/NAREIT Dev REIT Idx	5.66%	70	(3.59%)	64	(12.75%)	63	34.83%	48	(15.46%)	85
Callan Global REITs	6.58%		(3.07%)		(12.24%)		34.28%		(10.75%)	
Core Real Estate	(10.80%)	71	(12.37%)	79	27.15%	58	6.59%	77	0.63%	77
Principal Capital (Net)	(8.60%)	51	(10.41%)	62	27.55%	57	8.22%	52	2.03%	61
UBS Trumbull Property (Net)	(8.02%)	39	(15.01%)	89	24.01%	68	1.53%	97	(1.69%)	92
UBS Trumbull Property G&I (Net)	(16.11%)	95	(17.11%)	96	30.22%	41	11.00%	23	(1.39%)	92
JPMCB Strategic Property (Net)	(14.43%)	88	(10.92%)	67	27.40%	58	6.00%	82	1.26%	70
NFI-ODCE Equal Weight Net	(10.32%)	68	(10.51%)	65	28.90%	47	7.97%	55	1.70%	67
Callan OE Core Cmngld RE	(8.55%)		(9.20%)		28.14%		8.44%		2.57%	
Non-Core Real Estate	(9.59%)	62	(6.99%)	51	30.31%	47	13.97%	45	9.28%	20
AEW Partners VI	2.48%	2	2.05%	25	(1.23%)	91	29.42%	28	187.30%	2
AEW Partners VII	(1.06%)	21	(5.27%)	47	1.03%	91	(12.02%)	95	(0.79%)	65
AEW Partners VIII	12.25%	1	5.35%	15	44.64%	25	24.48%	34	14.45%	11
AEW Partners IX	6.55%	1	8.62%	14	7.99%	83	-		-	
Heitman VP III	0.68%	14	1.56%	27	2.64%	90	21.38%	35	11.08%	16
Heitman VP IV	0.80%	13	(1.96%)	36	40.50%	26	23.60%	34	3.95%	43
Heitman VP V	(1.69%)	24	(1.93%)	36	-		-		-	
AG Core Plus III	23.46%	1	(32.84%)	90	(3.63%)	92	(13.04%)	96	(7.35%)	81
AG Core Plus IV	(21.53%)	91	(20.00%)	72	7.56%	85	11.77%	47	5.45%	37
AG Realty Fund X	(8.64%)	60	(1.77%)	36	44.78%	25	28.66%	29	(3.84%)	73
AG Realty Value Fd XI	(1.71%)	24	-		-		-		-	
Invesco US Income Fund	(8.80%)	61			-		-		-	
Invesco VA Fund IV	(37.00%)	98	(63.75%)	100	10.39%	81	(0.85%)	82	11.80%	13
Invesco VA Fund V	(29.39%)	95	(8.64%)	54	29.02%	52	13.29%	46	12.71%	12
Invesco Real Estate US Fund VI	(11.95%)	74	-		-		-		-	
TA Associates Realty Fund XI	(26.61%)	93	(29.13%)	84	55.49%	15	19.39%	37	8.02%	24
TA Associates Realty Fund XII	(5.76%)	43	(5.68%)	49	67.58%	10	22.19%	35	-	
Westbrook RE Fund X	(31.71%)	96	(6.97%)	50	10.07%	81	10.68%	52	6.60%	30
Westbrook RE Fund XI	2.76%	2	11.63%	13	17.39%	75	-	00	-	50
NCREIF Total Index Callan Real Est Val Add	(5.53%) (7.01%)	42	(6.60%) (6.62%)	50	21.45% 29.97%	71	7.37% 10.86%	69	2.69% 2.98%	52
			, ,							
Timber Composite	(12.12%)		(11.92%)		21.01%		18.79%		7.34%	
Hancock Timber Portfolio	(12.12%)		(11.92%)		21.01%		18.79%		7.34%	
NCREIF Timberland Index	9.84%		11.13%		12.01%		3.10%		0.34%	
Total Real Estate	(9.18%)	69	(10.60%)	77	21.93%	51	12.70%	39	0.27%	63
Real Estate Benchmark (8)	(5.53%)	42	(6.60%)	62	21.45%	52	7.37%	69	2.69%	49
Callan Tot Real Est DB	(6.40%)		(1.50%)		22.33%		9.86%		2.55%	



	FYTD		FY 2023		FY 2022		FY 2021		FY 2020	
Net Returns and Rankings										
Private Equity	4.26%	79	(4.13%)	58	25.57%	18	58.12%	4	2.76%	26
Pathway PEF XXIII Series 2008	2.61%	85	(16.46%)	97	12.98%	49	80.64%	2	(5.60%)	54
Pathway PEF XXIII Series 2013	2.16%	86	(7.42%)	72	18.32%	37	66.23%	2	7.70%	16
Pathway PEF XXIII Series 2016	7.65%	55	(3.74%)	53	30.09%	8	62.35%	3	8.15%	16
Pathway PEF XXIII Series 2021	10.95%	38	(3.27%)	53	1.84%	71	-		-	
GCM Grosvenor Private Markets	(20.17%)	99	(1.83%)	52	13.67%	48	40.74%	35	(5.51%)	54
GCM Grosvenor Div. Partners LP 2014	4-1 1.71%	86	0.73%	46	41.52%	4	43.27%	31	3.81%	22
GCM Grosvenor 2018 Series	9.63%	46	5.27%	30	28.01%	9	14.80%	58	5.70%	19
Private Equity Benchmark (9)	5.05%	77	6.93%	27	(7.04%)	88	44.13%	30	11.54%	11
Callan Alterntive Inv DB	8.62%		(1.14%)		9.29%		20.17%		(4.83%)	
Cash	5.70%	38	4.10%	19	0.31%	23	0.07%	95	1.29%	95
1mo T-Bill	5.56%	68	3.70%	58	0.15%	40	0.06%	96	1.37%	93
Callan Cash Database	5.65%		3.86%		(0.09%)		0.35%		1.98%	
Total Fund	10.43%	44	7.41%	54	(8.83%)	82	32.32%	8	2.97%	46
Policy Benchmark*	11.27%	21	9.72%	14	(10.94%)	97	28.17%	45	4.27%	24
Callan Public Fd V Lg DB	10.23%		7.51%		(5.13%)		27.92%		2.58%	

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



	FY 2019		FY 2018		FY 2017		FY 2016		FY 2015	
Net Returns and Rankings										
Domestic Equity	8.19%	44	14.50%	58	18.76%	50	(0.65%)	69	6.42%	75
Russell 3000 Index	8.98%	28	14.78%	52	18.51%	59	2.14%	28	7.29%	51
Pub Pln- Dom Equity	7.83%		14.81%		18.76%		0.73%		7.33%	
Large Cap Equity	10.21%	43	14.19%	53	17.87%	61	1.64%	37	6.66%	61
Russell 1000 Index	10.02%	44	14.54%	51	18.03%	60	2.93%	22	7.37%	55
Callan Large Cap	9.43%		14.58%		19.14%		0.04%		7.84%	
Managed Large Cap Equity	10.00%	39	14.17%	51	18.24%	55	(2.20%)	79	5.76%	83
Eagle Capital	10.74%	32	15.85%	25	24.94%	3	(3.39%)	83	8.93%	37
S&P 500 Index	10.42%	35	14.37%	47	17.90%	57	3.99%	20	7.42%	58
Callan Large Cap Core	8.78%		14.22%		18.66%		0.34%		7.84%	
Northern Trust S&P 500	10.43%	34	14.22%	50	17.75%	58	4.02%	20	7.47%	57
S&P 500 Index	10.42%	35	14.37%	47	17.90%	57	3.99%	20	7.42%	58
Callan Large Cap Core	8.78%		14.22%		18.66%		0.34%		7.84%	
Mid Cap Equity	4.98%	47	12.30%	69	17.55%	81	(5.83%)	81	6.91%	57
Russell MidCap Index	7.83%	26	12.33%	69	16.48%	85	0.56%	32	6.63%	60
Callan Mid Cap Core	4.22%		13.93%		20.09%		(0.91%)		7.31%	
Boston Company	(5.21%)	97	13.00%	57	18.76%	62	(9.35%)	87	5.43%	80
Russell MidCap Index	7.83%	26	12.33%	69	16.48%	85	0.56%	32	6.63%	60
Callan Mid Cap Core	4.22%		13.93%		20.09%		(0.91%)		7.31%	
Wellington Mid Cap	(0.58%)	76	10.48%	42	15.52%	74	(3.62%)	74	5.55%	36
Russell MidCap Value Idx	3.68%	30	7.60%	73	15.93%	71	3.25%	21	3.67%	62
Callan Mid Cap Value	1.30%		9.59%		17.36%		(0.25%)		4.46%	
Artisan Partners	21.14%	9	13.42%	91	17.71%	53	(4.68%)	41	9.81%	57
Russell MidCap Growth Idx	13.94%	51	18.52%	40	17.05%	61	(2.14%)	18	9.45%	62
Callan Mid Cap Growth	14.14%		17.97%		18.03%		(5.70%)		10.82%	
Small Cap Equity	2.03%	25	19.54%	20	26.23%	15	(6.10%)	70	5.30%	78
Russell 2000 Index	(3.31%)	57	17.57%	32	24.60%	27	(6.73%)	76	6.49%	69
Callan Small Cap Core	(2.54%)		16.22%		22.07%		(4.59%)		8.16%	
Dimensional Fund Advisors	(12.55%)	97	14.71%	31	22.22%	64	(6.21%)	84	1.32%	79
Russell 2000 Value Index	(6.24%)	55	13.10%	42	24.86%	37	(2.58%)	50	0.78%	83
Callan Small Cap Value	(5.26%)		12.52%		24.12%		(2.58%)		4.36%	
Wellington Small Cap	6.61%	9	20.90%	16	27.85%	9	(9.09%)	91	8.68%	42
Russell 2000 Index	(3.31%)	57	17.57%	32	24.60%	27	(6.73%)	76	6.49%	69
Callan Small Cap Core	(2.54%)		16.22%		22.07%		(4.59%)		8.16%	
Riverbridge Partners SCG	12.11%	18	24.00%	71	29.52%	13	(1.97%)	12	6.71%	82
Russell 2000 Growth Index	(0.49%)	85	21.86%	82	24.40%	47	(10.75%)	45	12.34%	45
Callan Small Cap Growth	7.04%		28.00%		24.05%		(12.40%)		11.75%	



	FY 2019		FY 2018		FY 2017		FY 2016		FY 2015	
Net Returns and Rankings										
Global Equity	5.20%	53	12.86%	39	19.68%	57	(3.77%)	45	4.41%	32
Global Equity Benchmark 92)	4.56%	59	11.14%	54	19.01%	63	(3.72%)	45	0.71%	74
Acadian Global Equity	3.02%	71	9.86%	66	19.15%	62	(5.47%)	62	1.24%	71
Epoch Investments	7.02%	40	14.00%	30	17.05%	77	(6.32%)	68	8.10%	9
Harding-Loevner	2.97%	72	16.90%	18	23.57%	25	0.68%	15	4.21%	33
MSCI ACWI Idx	5.74%	48	10.73%	59	18.78%	65	(3.73%)	45	0.71%	74
Callan Global Equity	5.44%		11.68%		20.16%		(4.50%)		3.13%	
International Equity	0.32%	53	6.64%	81	21.93%	36	(8.30%)	40	(5.56%)	87
International Equity Benchmark (3)	0.26%	54	7.75%	61	20.43%	55	(9.61%)	60	(4.97%)	80
Pub Pln- Intl Equity	0.43%		8.38%		20.69%		(8.86%)		(3.52%)	
Developed Markets	(0.01%)		6.70%		22.47%		(9.65%)		(3.75%)	
MSCI EAFE Index	1.08%		6.84%		20.27%		(10.16%)		(4.22%)	
EAFE Composite	1.38%		5.50%		23.59%		(10.64%)		(4.12%)	
MSCI EAFE Index	1.08%		6.84%		20.27%		(10.16%)		(4.22%)	
Small Cap	(4.66%)	24	11.18%	61	18.21%	77	(3.64%)	50	(1.57%)	77
Mondrian	(2.33%)	8	12.68%	48	18.49%	75	(3.24%)	44	(2.44%)	80
MSCI World Small Cap x US	(6.17%)	43	11.87%	54	21.26%	60	(3.35%)	45	(3.96%)	86
Fidelity	-		9.55%	76	17.92%	78	(4.07%)	54	(0.64%)	71
MSCI ACWI Sm Cap ex US	(5.94%)	36	10.57%	69	20.32%	65	(5.46%)	65	(3.07%)	82
Callan Intl Small Cap	(6.64%)		12.33%		22.96%		(3.64%)		0.90%	
All Country ex US	0.90%	45	8.39%	51	20.94%	47	(6.76%)	40	(3.54%)	64
Arrowstreet Capital	0.78%	46	8.07%	55	21.73%	42	(7.89%)	50	(4.08%)	69
MSCI ACWI ex US IMI	0.26%	52	7.75%	58	20.43%	55	(9.61%)	64	(4.97%)	77
Non-U.S. Equity Database	0.45%		8.50%		20.75%		(7.98%)		(1.83%)	
Emerging Markets	0.08%	75	3.63%	82	22.16%	79	(8.07%)	44	(10.88%)	91
Lazard Emerging Markets	3.47%	41	1.09%	93	21.28%	84	(7.11%)	31	(12.41%)	97
MSCI Emerging Mkts Idx	1.22%	62	8.20%	51	23.75%	70	(12.05%)	77	(5.12%)	53
Callan Emerging Broad	2.81%		8.34%		25.73%		(8.82%)		(4.43%)	
Total Equity	4.78%	56	11.21%	54	20.09%	51	(3.62%)	42	1.90%	62
MSCI ACWI IMI	4.56%	59	11.14%	54	19.01%	63	(3.87%)	46	0.81%	74
Total Equity Custom Benchmark (5)	4.95%	55	11.53%	51	19.36%	60	(3.24%)	40	1.86%	62
Callan Global Equity	5.44%		11.68%		20.16%		(4.50%)		3.13%	



	FY 2019		FY 2018		FY 2017		FY 2016		FY 2015	
Net Returns and Rankings										
Domestic Fixed-Income	8.20%	19	0.43%	40	1.71%	47	5.78%	26	1.38%	65
Blmbg Aggregate Index	7.87%	33	(0.40%)	90	(0.31%)	87	6.00%	21	1.86%	38
Pub Pln- Dom Fixed	7.50%		0.26%		1.37%		4.97%		1.68%	
Core Fixed Income	7.96%	74	(0.07%)	54	0.27%	60	6.01%	62	2.13%	43
Blmbg Aggregate Index	7.87%	80	(0.40%)	86	(0.31%)	90	6.00%	63	1.86%	69
Callan Core Bond FI	8.12%		(0.05%)		0.39%		6.20%		2.07%	
PIMCO	8.30%	28	0.20%	24	0.12%	70	5.81%	79	2.02%	57
Manulife Asset Management	7.74%	85	0.05%	37	-		-		-	
Blmbg Aggregate Index	7.87%	80	(0.40%)	86	(0.31%)	90	6.00%	63	1.86%	69
Callan Core Bond FI	8.12%		(0.05%)		0.39%		6.20%		2.07%	
Core Plus	8.41%	39	0.86%	17	2.97%	19	5.62%	49	0.74%	90
Loomis Sayles	7.59%	88	1.04%	11	3.41%	15	4.14%	92	(0.26%)	97
Prudential Core Plus	9.23%	5	0.68%	23	2.54%	35	7.08%	3	1.74%	61
Blmbg Aggregate Index	7.87%	79	(0.40%)	85	(0.31%)	99	6.00%	29	1.86%	51
Callan Core Plus FI	8.31%		0.28%		2.32%		5.59%		1.89%	
Emerging Markets Debt	11.40%	37	(0.47%)	33	8.11%	49	9.18%	16	(0.00%)	21
Wellington EMD	11.40%	37	(0.47%)	33	8.11%	49	9.18%	16	(0.00%)	21
EMBI Global Dvsfd Index	12.45%	11	(1.60%)	55	6.04%	83	9.79%	14	0.51%	18
Emerging Debt Database	10.63%		(1.35%)		8.00%		4.65%		(4.28%)	
Global Fixed Income	7.86%	53	1.29%	56	1.12%	40	7.82%	22	2.43%	67
PIMCO Global	8.05%	41	1.82%	35	0.90%	53	7.55%	27	2.78%	55
AllianceBernstein Global	7.67%	57	0.77%	85	1.34%	35	8.12%	13	2.08%	80
Blmbg Glob Agg Hedged	7.80%	54	1.66%	38	(0.41%)	81	7.37%	31	2.96%	53
Callan Global FI (Hedged)	7.94%		1.36%		1.04%		6.96%		3.09%	
Total Fixed Income	8.44%	11	0.56%	34	2.19%	38	6.63%	9	1.50%	59
Blmbg Aggregate Index	7.87%	33	(0.40%)	90	(0.31%)	87	6.00%	21	1.86%	38
Total Fixed Inc Custom Benchmark (6	8.31%	16	(0.00%)	62	0.29%	65	6.48%	10	1.64%	52
Pub Pln- Dom Fixed	7.50%		0.26%		1.37%		4.97%		1.68%	



	FY 2019		FY 2018		FY 2017		FY 2016		FY 2015	
Net Returns and Rankings										
REIT Composite REIT Comp Custom Benchmark (7) Callan Global REITs	11.58% 9.22% 9.95%	27 67	5.86% 5.51% 7.56%	87 90	0.30% (0.64%) 1.60%	76 87	17.02% 17.65% 10.92%	10 7	3.27% 2.86% 2.21%	29 38
Cohen & Steers EPRA/NAREIT Dev REIT Idx Callan Global REITs	11.55% 8.64% 9.95%	27 78	6.18% 6.70% 7.56%	82 69	5.26% 1.14% 1.60%	9 58	10.51% 12.57% 10.92%	53 32	1.78% 0.41% 2.21%	62 81
Core Real Estate (Net) Principal Capital (Net) UBS Trumbull Property (Net) JPMCB Strategic Property (Net) NFI-ODCE Equal Weight Net Callan OE Core Cmngld RE	4.51% 7.10% (0.59%) 4.50% 5.99% 6.62%	89 38 97 89 78	7.56% 8.48% 6.92% 7.04% 7.68% 7.36%	44 24 58 57 42	6.87% 8.88% 4.67% 7.13% 7.23% 7.43%	66 24 87 56 55	10.50% 11.52% 9.73% 10.16% 11.24% 11.35%	71 43 84 73 54	12.82% 14.19% 11.70% 12.55% 13.64% 13.59%	60 40 76 69 50
Core Plus Real Estate (Net) UBS Trumbull Property G&I (Net) Callan OE Core Cmngld RE	10.17% 10.17% 6.62%	7 7	7.92% 7.92% 7.36%	32 32	9.05% 9.05% 7.43%	23 23	17.90% 17.90% 11.35%	5 5	16.07% 16.07% 13.59%	19 19
Non-Core Real Estate AEW Partners VI AEW Partners VII AEW Partners VIII	12.66% 16.76% 17.58% 18.65%	24 15 15 14	11.94% 8.29% 19.10% (4.66%)	36 60 11 93	8.80% 20.66% 7.89%	52 12 54	15.77% 14.33% 10.93%	42 48 68	14.51% 12.33% 12.17%	57 67 68
Heitman VP III Heitman VP IV	13.13% 4.31%	22 74	15.20%	19	16.00%	20	17.68%	33	16.92%	45
AG Core Plus II AG Core Plus III AG Core Plus IV	4.31% 2.34% (12.89%) 9.11%	81 99 40	(20.05%) 1.89% 10.95%	96 83 42	(14.35%) 4.92% 7.91%	92 68 54	23.09% 30.08%	19 9	4.34% 25.15%	84 23
Invesco VA Fund IV TA Associates Realty Fund X TA Associates Realty Fund XI	14.91% 18.90% 11.92%	15 14 26	12.44% 15.12% 7.46%	30 20 66	4.82% 9.00% 2.04%	68 51 72	12.76% 13.71% -	54 50	- 11.77% -	69
Westbrook RE Fund X NCREIF Total Index Callan Real Est Val Add	11.18% 6.51% 7.56%	26 56	15.16% 7.19% 9.86%	20 67	6.66% 6.97% 9.06%	61 59	10.64% 13.68%	68	12.98% 15.09%	65
Timber Composite Hancock Timber Portfolio NCREIF Timberland Index	(0.49%) (0.49%) 2.95%		13.17% 13.17% 3.57%		10.30% 10.30% 3.35%		6.06% 6.06% 3.39%		(0.31%) (0.31%) 10.02%	
Total Real Estate Real Estate Benchmark (8) Callan Tot Real Est DB	6.35% 6.51% 7.25%	64 61	7.95% 7.19% 8.79%	56 63	5.87% 6.97% 8.13%	67 61	12.56% 10.64% 11.52%	41 59	10.06% 12.98% 13.56%	69 54
Private Equity Pathway PEF XXIII Pathway PEF SRS 2013 GCM Grosvenor Private Markets Grosvenor Div Partners 2014 Series Private Equity Benchmark (9) Callan Alterntive Inv DB	15.45% 15.06% 21.98% 9.47% 14.17% 14.15% 0.45%	5 7 3 10 7 7	15.85% 16.67% 22.24% 11.14% 16.12% 17.50% 4.76%	8 8 3 15 8 6	19.28% 24.54% 15.87% 18.27% 6.44% 20.95% (0.66%)	4 2 5 4 26 3	9.74% 8.98% 6.47% 12.54% 0.93% 7.32% (3.53%)	17 19 23 10 37 22	14.00% 13.26% (10.90%) 17.98% (3.58%) 10.55% (16.29%)	7 7 48 4 33 9
Cash 1mo T-Bill Callan Cash Database	2.13% 2.28% 2.60%	95 90	1.37% 1.27% 1.47%	64 75	0.52% 0.42% 0.85%	93 94	0.19% 0.11% 0.77%	96 97	0.46% 0.02% 0.42%	48 97
Total Fund Policy Benchmark* Callan Public Fd V Lg DB	6.47% 6.73% 6.47%	50 41	9.06% 9.05% 8.96%	46 47	14.54% 13.88% 12.70%	17 32	0.79% 0.98% 1.03%	58 51	3.08% 3.66% 3.65%	71 49

 $^{^{\}star}$ Current Quarter Target = 27.0% Russell 3000 Index, 22.0% MSCI ACWI xUS IMI, 20.0% Blmbg:Aggregate, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 8.0% S&P 500 Index+3.0% and 1.0% FTSE 1 Mo T-Bill.



	12/2023- 6/2024		2023		2022		2021		2020	
Net Returns and Rankings	7/2021									
Domestic Equity	11.96%	51	25.67%	19	(19.05%)	76	25.81%	50	20.63%	26
Russell 3000 Index	13.56%	12	25.96%	17	(19.21%)	80	25.66%	54	20.89%	24
Pub Pln- Dom Equity	12.02%		23.70%		(17.91%)		25.85%		18.58%	
Large Cap Equity	15.62%	45	28.12%	45	(19.13%)	56	28.72%	37	17.53%	54
Russell 1000 Index	14.24%	51	26.53%	50	(19.13%)	56	26.45%	55	20.96%	47
Callan Large Cap	14.83%		26.53%		(18.33%)		27.05%		19.61%	
Eagle Capital	17.94%	27	40.69%	2	(25.83%)	98	28.15%	60	14.97%	74
S&P 500 Index	15.29%	63	26.29%	48	(18.11%)	58	28.71%	54	18.40%	52
Callan Large Cap Core	16.45%		26.16%		(17.42%)		29.05%		18.84%	
Northern Trust S&P 500	15.25%	63	26.24%	49	(18.04%)	57	28.69%	54	18.36%	52
S&P 500 Index	15.29%	63	26.29%	48	(18.11%)	58	28.71%	54	18.40%	52
Callan Large Cap Core	16.45%		26.16%		(17.42%)		29.05%		18.84%	
Mid Cap Equity	4.41%	56	16.14%	42	(19.95%)	82	20.66%	72	26.52%	10
Russell MidCap Index	4.96%	52	17.23%	39	(17.32%)	78	22.58%	70	17.10%	38
Callan Mid Cap Core	5.14%		15.29%		(12.70%)		26.00%		15.11%	
Artisan Partners	4.36%	55	24.69%	26	(36.22%)	86	11.09%	66	58.22%	20
Russell MidCap Growth Idx	5.98%	38	25.87%	16	(26.72%)	40	12.73%	60	35.59%	60
Callan Mid Cap Growth	5.04%		21.03%		(27.58%)		13.67%		40.78%	
Victory Mid Cap Value	4.74%	38	10.40%	76	-		-		-	
Russell MidCap Value Idx	4.54%	42	12.71%	53	(12.03%)	82	28.34%	70	4.96%	49
Callan Mid Cap Value	4.17%		13.51%		(8.09%)		30.80%		4.08%	
Small Cap Equity	(1.99%)	94	19.70%	25	(16.31%)	54	17.03%	90	24.57%	14
Russell 2000 Index	1.73%	70	16.93%	62	(20.44%)	84	14.82%	97	19.96%	21
Callan Small Cap Core	2.64%		17.66%		(15.97%)		24.48%		12.90%	
Dimensional Fund Advisors	(0.63%)	84	21.54%	16	(2.78%)	11	39.49%	19	5.18%	34
Russell 2000 Value Index	(0.85%)	86	14.65%	65	(14.48%)	84	28.27%	64	4.63%	37
Callan Small Cap Value	1.17%		16.41%		(10.51%)		31.82%		2.88%	
Wellington Small Cap	1.02%	81	18.16%	43	(14.27%)	31	13.31%	98	17.26%	36
Russell 2000 Index	1.73%	70	16.93%	62	(20.44%)	84	14.82%	97	19.96%	21
Callan Small Cap Core	2.64%		17.66%		(15.97%)		24.48%		12.90%	
Riverbridge Partners	(6.13%)	100	20.26%	31	(32.15%)	79	3.92%	79	52.85%	31
Russell 2000 Growth Index	4.44%	62	18.66%	46	(26.36%)	44	2.83%	80	34.63%	73
Callan Small Cap Growth	6.13%		17.84%		(27.10%)		10.91%		44.48%	



	12/2023- 6/2024		2023		2022		2021		2020	
Net Returns and Rankings										
Global Equity	11.30%	47	21.13%	52	(20.48%)	63	18.18%	60	16.53%	52
Global Equity Benchmark (2)	10.28%	51	21.58%	50	(18.40%)	54	18.22%	59	16.25%	54
Acadian Global Equity	17.61%	7	24.19%	33	(17.61%)	49	25.17%	8	18.51%	45
Epoch Investments	9.46%	54	18.97%	66	(20.43%)	63	18.03%	61	12.57%	63
Harding-Loevner	9.93%	53	22.80%	43	(29.35%)	90	15.90%	73	31.80%	16
LSV Global Value	8.21%	62	18.31%	68	-		-		-	
MSCI ACWI Index	11.30%	47	22.20%	48	(18.36%)	54	18.54%	57	16.25%	54
Callan Global Equity	10.47%		21.74%		(17.81%)		19.46%		17.13%	
International Equity	5.70%	81	16.85%	47	(17.66%)	67	7.21%	65	14.57%	40
International Equity Benchmark (3)	5.28%	87	15.62%	69	(16.58%)	41	8.53%	53	11.12%	67
Pub Pln- Intl Equity	6.42%		16.76%		(16.85%)		8.94%		12.71%	
All Country ex US	5.91%	42	17.03%	55	(18.08%)	61	9.50%	65	21.22%	21
Arrowstreet Capital	12.05%	6	20.90%	21	(9.41%)	16	14.19%	30	19.64%	25
Baillie Gifford	2.58%	82	10.43%	89	(31.41%)	95	4.03%	88	33.27%	7
Marathon Asset Mgmt	4.31%	67	15.10%	73	(14.15%)	35	10.57%	59	9.45%	61
NT MSCI World ex US	5.20%	56	18.37%	42	-		-		-	
MSCI ACWI ex US IMI	5.28%	54	15.62%	68	(16.58%)	52	8.53%	70	11.12%	52
Non-U.S. Equity Database	5.46%		17.64%		(16.32%)		11.79%		11.58%	
Small Cap	0.54%	71	10.51%	80	(21.43%)	52	7.09%	85	8.17%	68
Principal Sm Cap Intl	2.68%	60	14.25%	58	(20.88%)	51	9.74%	74	6.42%	79
MSCI World Small Cap x US	0.98%	69	12.62%	67	(20.59%)	46	11.14%	66	12.78%	45
Callan Intl Small Cap	3.36%		15.18%		(20.63%)		12.78%		11.29%	
Emerging Markets	7.46%	56	19.70%	11	(18.53%)	27	(3.11%)	58	15.39%	70
Lazard Emerging Markets	8.94%	39	23.26%	4	(13.87%)	11	6.54%	14	0.08%	97
Fisher Investments Emerging Mkts	5.95%	69	15.72%	22	(23.17%)	58	(11.04%)	99	30.89%	12
MSCI Emerging Mkts Idx	7.49%	56	9.83%	65	(20.09%)	37	(2.54%)	56	18.31%	48
Callan Emerging Broad	7.96%		11.91%		(21.94%)		(0.59%)		18.17%	
Total Equity	9.61%	53	21.57%	50	(18.79%)	56	17.44%	65	17.68%	47
MSCI ACWI IMI	10.28%	51	21.58%	50	(18.40%)	54	18.22%	59	16.25%	54
Total Equity Custom Benchmark (5)	9.90%	53	21.32%	51	(18.05%)	52	17.84%	63	16.41%	53
Callan Global Equity	10.47%		21.74%		(17.81%)		19.46%		17.13%	



	12/2023-									
	6/2024		2023		2022		2021		2020	
Net Returns and Rankings										
Domestic Fixed-Income	0.19%	45	6.42%	49	(13.23%)	73	(0.94%)	62	9.39%	26
Blmbg Aggregate Index	(0.71%)	91	5.53%	82	(13.01%)	72	(1.54%)	91	7.51%	67
Pub Pln- Dom Fixed	0.06%		6.40%		(12.24%)		(0.57%)		8.53%	
Short Duration	2.07%	22	-		-		-		-	
SIT Short Duration FI	2.07%	22	-		-		-		-	
Blmbg Gov/Cred 1-3 Yr	1.38%	87	4.61%	94	(3.69%)	63	(0.47%)	79	3.33%	80
Callan Short Fixed Inc	1.83%		5.39%		(3.34%)		(0.22%)		3.98%	
Core Fixed Income	(0.10%)	43	5.94%	68	(13.21%)	70	(1.48%)	83	7.97%	85
Blmbg Aggregate Index	(0.71%)	96	5.53%	85	(13.01%)	58	(1.54%)	88	7.51%	93
Callan Core Bond FI	(0.25%)		6.17%		(12.91%)		(1.03%)		8.71%	
PIMCO	0.01%	26	6.15%	53	(13.40%)	78	(1.57%)	89	8.48%	68
Manulife Asset Management	(0.21%)	47	5.76%	81	(13.43%)	78	(1.25%)	62	8.29%	75
Blmbg Aggregate Index	(0.71%)	96	5.53%	85	(13.01%)	58	(1.54%)	88	7.51%	93
Callan Core Bond FI	(0.25%)		6.17%		(12.91%)		(1.03%)		8.71%	
Core Plus	0.12%	66	6.92%	47	(13.25%)	48	(0.47%)	60	10.61%	21
Loomis Sayles	(0.38%)	89	6.26%	83	(12.19%)	19	(1.01%)	87	11.28%	15
Prudential Core Plus	0.61%	26	7.58%	23	(14.29%)	87	0.06%	39	9.88%	34
Blmbg Aggregate Index	(0.71%)	96	5.53%	96	(13.01%)	41	(1.54%)	97	7.51%	93
Callan Core Plus FI	0.31%		6.90%		(13.27%)		(0.27%)		9.27%	
Emerging Markets Debt	2.17%	53	11.94%	63	(17.09%)	83	(2.90%)	55	7.21%	37
Wellington EMD	2.17%	53	11.94%	63	(17.09%)	83	(2.90%)	55	7.21%	37
EMBI Global Dvsfd Index	2.34%	50	11.09%	69	(17.78%)	85	(1.80%)	38	5.26%	62
Emerging Debt Database	2.38%		12.86%		(12.34%)		(2.52%)		6.35%	
Global Fixed Income	0.26%	52	7.25%	71	(11.41%)	51	(1.25%)	74	6.36%	67
PIMCO Global	0.50%	38	7.02%	74	(10.86%)	39	(1.48%)	77	6.96%	57
AllianceBernstein Global	0.02%	64	7.47%	60	(11.99%)	60	(1.01%)	67	5.64%	76
Blmbg Global Agg (Hedged)	0.13%	60	7.15%	72	(11.22%)	46	(1.39%)	75	5.58%	77
Callan Global FI (Hedged)	0.28%		7.67%		(11.34%)		(0.55%)		7.33%	
Total Fixed Income	0.44%	36	7.22%	27	(13.17%)	73	(1.22%)	76	8.54%	49
Blmbg Aggregate Index	(0.71%)	91	5.53%	82	(13.01%)	72	(1.54%)	91	7.51%	67
Total Fixed Inc Custom Benchmark (, ,	62	6.49%	48	(13.01%)	72	(1.52%)	91	6.98%	73
Pub Pln- Dom Fixed	0.06%		6.40%		(12.24%)		(0.57%)		8.53%	



	12/2023- 6/2024		2023		2022		2021		2020	
Net Returns and Rankings										
REIT Composite	(0.47%)	12	12.95%	35	(24.21%)	31	34.88%	7	(3.33%)	44
REIT Comp Custom Benchmark (7)	(1.85%)	42	12.41%	43	(25.17%)	55	36.29%	3	(9.69%)	87
Callan Global REITs	(2.11%)		12.21%		(25.07%)		28.36%		(3.91%)	
Centersquare	0.18%	27	14.17%	48	(23.56%)	27	42.51%	50	(4.60%)	60
FTSE NAREIT Equity Index	(0.13%)	32	13.73%	55	(24.37%)	40	43.24%	37	(8.00%)	82
Callan Real Estate REIT	(0.60%)		13.92%		(24.82%)		42.36%		(3.68%)	
Cohen & Steers	(1.63%)	30	11.46%	62	(24.89%)	46	27.54%	58	(2.19%)	28
EPRA/NAREIT Dev REIT Idx	(3.17%)	64	10.85%	72	(24.42%)	36	27.21%	61	(8.18%)	82
Callan Global REITs	(2.11%)		12.21%		(25.07%)		28.36%		(3.91%)	
Core Real Estate (Net)	(3.20%)	68	(12.75%)	61	4.34%	78	20.32%	59	(0.55%)	82
Principal Capital (Net)	(2.76%)	54	(10.65%)	43	3.96%	80	22.86%	41	0.83%	61
UBS Trumbull Property (Net)	(2.79%)	55	(15.10%)	70	5.50%	71	15.71%	72	(4.57%)	95
JPMCB Strategic Property (Net) NFI-ODCE Equal Weight Net	(4.49%) (3.18%)	83 68	(14.69%) (13.33%)	69 62	3.97% 7.56%	80 60	19.70% 21.88%	66 48	0.57% 0.75%	65 62
Callan OE Core Cmngld RE	(2.53%)	00	(10.83%)	02	8.56%	60	21.58%	40	1.45%	62
Core Plus Real Estate (Net)	(5.11%)	90	(22.98%)	97	8.06%	54	19.16%	70	1.32%	54
UBS Trumbull Property G&I (Net)	(5.11%)	90	(22.98%)	97	8.06%	54	19.16%	70	1.32%	54
Callan OE Core Cmngld RE	(2.53%)		(10.83%)		8.56%		21.58%		1.45%	
Non-Core Real Estate	(4.65%)	80	(9.13%)	52	9.30%	41	28.09%	44	2.56%	47
AEW Partners VI	1.00%	18	2.27%	18	0.30%	65	21.59%	61	58.89%	5
AEW Partners VII	6.45%	2	(15.29%)	70	5.97%	59	(3.91%)	91	(13.19%)	86
AEW Partners VIII	9.56%	1	4.92%	17	14.70%	26	56.14%	17	3.27%	45
AEW Partners IX	3.54%	5	5.05%	17	11.38%	37	-	00	-	0.5
Heitman VP III Heitman VP IV	(7.97%)	90	10.65%	12 21	0.54% 12.93%	65 34	19.87%	63	6.16% 3.81%	35 45
Heitman VP V	(0.34%) (0.56%)	36 37	1.73% (2.45%)	30	21.39%	3 4 16	36.07%	36	3.01%	45
AG Core Plus III	6.00%	2	4.94%	17	(25.20%)	95	(5.42%)	92	(18.35%)	91
AG Core Plus IV	(8.22%)	91	(23.65%)	78	(12.16%)	83	16.36%	74	5.11%	39
AG Realty Fund X	(4.34%)	79	(6.78%)	43	16.64%	24	37.92%	33	16.53%	17
AG Realty Value Fd XI	(6.10%)	86	- '		-		-		-	
Invesco US Income Fund	(2.43%)	60	(10.33%)	54	-		-		-	
Invesco VA Fund IV	(16.74%)	99	(46.58%)	93	(47.49%)	100	15.55%	75	(2.69%)	73
Invesco VA Fund V	(24.75%)	99	(14.94%)	69	10.63%	39	39.96%	31	1.25%	55
Invesco Real Estate US Fund VI	(11.35%)	96	0.71%	23	-	00	-	00	-	0.5
TA Associates Realty Fund XI	3.35%	6	(39.58%)	92 51	2.12% 30.30%	63 13	42.42% 41.06%	30 31	6.66%	35
TA Associates Realty Fund XII TA Associates Realty Fund XIII	(0.90%) (10.54%)	38 95	(8.60%)	51	30.30%	13	41.00%	31	-	
Westbrook RE Fund X	(23.79%)	99	(17.53%)	71	5.23%	60	- 11.18%	81	3.80%	45
Westbrook RE Fund XI	1.13%	17	6.40%	16	18.88%	21	42.22%	30	-	
NCREIF Total Index	(1.24%)	48	(7.94%)	47	5.53%	60	17.70%	71	1.60%	53
Callan Real Est Val Add	(1.35%)		(8.43%)		7.58%		25.99%		2.17%	
Timber Composite	(13.41%)		0.83%		4.20%		11.31%		11.75%	
Hancock Timber Portfolio	(13.41%)		0.83%		4.20%		11.31%		11.75%	
NCREIF Timberland Index	3.86%		9.45%		12.90%		9.17%		0.81%	
Total Real Estate	(3.55%)	75	(11.09%)	75	1.21%	78	23.50%	39	0.35%	59
Real Estate Benchmark (8)	(1.24%)	41	(7.94%)	63	5.53%	63	17.70%	55	1.60%	48
Callan Tot Real Est DB	(1.82%)		(3.50%)		8.21%		19.51%		1.43%	



1	12/2023- 6/2024		2023		2022		2021		2020	
Net Returns and Rankings					-		-			
Private Equity	2.42%	87	3.43%	47	(2.14%)	73	52.89%	2	20.39%	6
Pathway PEF XXIII Series 2008	0.43%	95	(0.27%)	61	(15.33%)	95	55.97%	1	21.44%	5
Pathway PEF XXIII Series 2013	1.22%	94	1.79%	57	(9.11%)	91	56.53%	1	25.19%	4
Pathway PEF XXIII Series 2016	3.60%	82	5.15%	43	(1.11%)	71	58.91%	1	28.53%	4
Pathway PEF XXIII Series 2021	5.52%	59	6.22%	41	4.44%	62	-		-	
GCM Grosvenor Private Markets	(6.93%)	99	(12.85%)	94	(2.30%)	73	31.66%	9	7.19%	16
GCM Grosvenor Div. Partners LP 2014-	1 1.43%	94	4.43%	44	7.06%	57	53.05%	2	14.95%	9
GCM Grosvenor 2018 Series	4.71%	74	8.31%	34	13.03%	39	25.76%	31	10.68%	10
Private Equity Benchmark (9)	3.80%	81	18.58%	16	(25.03%)	98	31.92%	9	22.79%	5
Callan Alterntive Inv DB	6.42%		2.81%		9.20%		13.64%		(0.39%)	
Cash	2.62%	62	5.50%	26	1.90%	3	0.07%	71	0.43%	95
1mo T-Bill	2.73%	38	5.13%	85	1.48%	36	0.04%	78	0.45%	95
Callan Cash Database	2.71%		5.31%		1.16%		0.13%		1.06%	
Total Fund	5.62%	40	12.29%	43	(13.90%)	97	17.33%	41	14.96%	15
Policy Benchmark*	6.06%	23	14.72%	8	(14.94%)	97	14.66%	76	14.16%	22
Callan Public Fd V Lg DB	5.40%		11.70%		(10.32%)		16.69%		12.06%	

^{*} Current Quarter Target = 27.0% Russell 3000 Index, 20.0% Blmbg:Aggregate, 20.0% MSCI ACWI xUS IMI, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 10.0% Cambridge Global Private Equity, 1.0% FTSE 1 Mo T-Bill and 0.0% Private Credit Benchmark.



	2019		2018		2017		2016		2015	
Net Returns and Rankings										
Domestic Equity	30.78%	31	(5.96%)	50	19.48%	72	12.36%	66	(1.37%)	80
Russell 3000 Index	31.02%	25	(5.24%)	30	21.13%	39	12.74%	52	0.48%	38
Pub Pln- Dom Equity	30.20%		(5.94%)		20.54%		12.86%		0.16%	
Eagle Capital	30.87%	46	(4.39%)	32	23.36%	26	11.06%	30	0.69%	58
S&P 500 Index	31.49%	40	(4.38%)	32	21.83%	50	11.96%	21	1.38%	51
Callan Large Cap Core	30.46%		(5.35%)		21.79%		10.40%		1.39%	
Northern Trust S&P 500	31.41%	40	(4.42%)	32	21.71%	51	11.83%	24	1.42%	49
S&P 500 Index	31.49%	40	(4.38%)	32	21.83%	50	11.96%	21	1.38%	51
Callan Large Cap Core	30.46%		(5.35%)		21.79%		10.40%		1.39%	
Mid Cap Equity	31.91%	37	(11.61%)	61	16.78%	79	10.07%	83	(2.70%)	74
Russell MidCap Index	30.54%	40	(9.06%)	31	18.52%	48	13.80%	51	(2.44%)	72
Callan Mid Cap Core	29.00%		(10.83%)		18.42%		14.04%		0.36%	
Boston Company	-		(17.21%)	94	15.36%	93	17.15%	27	(9.85%)	97
Russell MidCap Index	30.54%	40	(9.06%)	31	18.52%	48	13.80%	51	(2.44%)	72
Callan Mid Cap Core	29.00%		(10.83%)		18.42%		14.04%		0.36%	
Artisan Partners	39.13%	29	(2.92%)	36	21.53%	83	(0.24%)	89	3.03%	19
Russell MidCap Growth Idx	35.47%	52	(4.75%)	48	25.27%	59	7.33%	19	(0.20%)	57
Callan Mid Cap Growth	35.79%		(4.91%)		25.94%		4.14%		0.05%	
Small Cap Equity	26.21%	42	(4.47%)	9	16.82%	18	19.93%	58	(4.70%)	83
Russell 2000 Index	25.52%	46	(11.01%)	52	14.65%	38	21.31%	44	(4.41%)	81
Callan Small Cap Core	24.86%		(10.86%)		13.35%		20.74%		(1.75%)	
Dimensional Fund Advisors	17.98%	90	(16.24%)	71	6.98%	77	29.29%	32	(7.78%)	84
Russell 2000 Value Index	22.39%	64	(12.86%)	23	7.84%	63	31.74%	13	(7.47%)	82
Callan Small Cap Value	24.31%		(14.79%)		9.18%		27.88%		(3.68%)	
Wellington Small Cap	31.65%	14	(3.69%)	7	19.89%	9	17.92%	85	(2.89%)	67
Russell 2000 Index	25.52%	46	(11.01%)	52	14.65%	38	21.31%	44	(4.41%)	81
Callan Small Cap Core	24.86%		(10.86%)		13.35%		20.74%		(1.75%)	
Riverbridge Partners SCG	27.37%	66	7.26%	4	23.06%	68	13.14%	22	(3.46%)	67
Russell 2000 Growth Index	28.48%	54	(9.31%)	84	22.17%	72	11.32%	36	(1.38%)	49
Callan Small Cap Growth	30.24%		(2.91%)		26.16%		8.62%		(1.54%)	



	2019		2018		2017		2016		2015	
Net Returns and Rankings										
Global Equity	26.07%	62	(7.79%)	36	27.41%	35	5.37%	57	(1.46%)	68
Global Equity Benchmark (2)	26.35%	59	(10.08%)	56	23.95%	61	8.36%	29	(2.06%)	73
Acadian Global Equity	22.23%	83	(10.50%)	60	23.91%	62	8.19%	31	(4.73%)	88
Epoch Investments	27.05%	52	(9.04%)	47	30.38%	20	(1.02%)	96	(0.03%)	54
Harding-Loevner	29.74%	36	(9.69%)	52	32.92%	13	6.96%	44	2.23%	30
Longview	25.28%	68	(1.79%)	6	21.66%	78	8.93%	25	-	
MSCI ACWI Index	26.60%	56	(9.41%)	49	23.97%	61	7.86%	34	(2.36%)	74
Callan Global Equity	27.49%		(9.52%)		25.26%		6.24%		0.16%	
International Equity	23.49%	36	(15.12%)	73	25.42%	90	7.38%	12	(4.28%)	59
International Equity Benchmark (3)	21.63%	71	(14.76%)	68	27.81%	66	4.41%	42	(4.60%)	62
Pub Pln- Intl Equity	22.89%		(13.95%)		28.81%		4.06%		(3.75%)	
Developed Markets	23.06%		(14.41%)		20.06%		5.98%		0.44%	
MSCI EAFE Index	22.01%		(13.79%)		25.03%		1.00%		(0.81%)	
Small Cap	26.20%	31	(18.18%)	32	31.44%	85	0.96%	37	3.64%	89
Mondrian	25.12%	47	(14.44%)	8	32.58%	76	0.41%	45	3.13%	91
MSCI World Small Cap x US	25.41%	45	(18.07%)	32	31.04%	86	4.32%	23	5.46%	81
Fidelity	-		(16.96%)	17	30.23%	89	1.55%	35	4.18%	85
MSCI ACWI Sm Cap ex US	22.42%	75	(18.20%)	33	31.65%	84	3.91%	24	2.60%	93
Callan Intl Small Cap	24.99%		(19.66%)		35.26%		(0.03%)		10.09%	
All Country ex US	26.55%	31	(14.58%)	53	29.24%	41	3.41%	40	(1.04%)	64
Arrowstreet Capital	22.31%	59	(13.69%)	41	28.56%	45	6.26%	22	(3.56%)	79
Baillie Gifford	33.26%	7	(16.32%)	69	32.01%	28	0.59%	69	1.52%	43
Marathon Asset Mgmt	24.11%	46	(13.71%)	41	25.44%	71	-		-	
MSCI ACWI xUS IMI	21.63%	68	(14.76%)	55	27.81%	52	4.41%	34	(4.60%)	83
Non-U.S. Equity Database	23.44%		(14.30%)		27.98%		2.30%		0.57%	
Emerging Markets	19.22%	68	(17.27%)	75	31.57%	85	16.59%	15	(17.40%)	89
Lazard Emerging Markets	18.46%	76	(16.59%)	65	28.11%	96	22.32%	5	(19.32%)	93
Fisher Investments Emerging Mkts	20.06%	65	(17.95%)	80	38.37%	57	-		-	
MSCI Emerging Mkts Idx	18.44%	76	(14.57%)	32	37.28%	61	11.19%	55	(14.92%)	68
Callan Emerging Broad	22.26%		(15.34%)		39.31%		11.56%		(13.68%)	
Total Equity	27.24%	51	(9.67%)	52	22.62%	72	9.76%	18	(2.34%)	74
MSCI ACWI IMI	26.35%	59	(10.08%)	56	23.95%	61	8.36%	29	(2.19%)	73
Total Equity Custom Benchmark (5)	26.67%	55	(9.65%)	52	24.08%	60	8.85%	26	(1.85%)	71
Callan Global Equity	27.49%		(9.52%)		25.26%		6.24%		0.16%	



	2019		2018		2017		2016		2015	
Net Returns and Rankings										
Domestic Fixed-Income	9.66%	28	(0.12%)	63	4.92%	34	4.84%	36	(0.34%)	70
Blmbg Aggregate Index	8.72%	58	0.01%	57	3.54%	73	2.65%	74	0.55%	39
Pub Pln- Dom Fixed	8.98%		0.11%		4.40%		3.90%		0.30%	
Core Fixed Income	8.74%	83	0.26%	31	3.87%	61	3.15%	49	0.71%	65
Blmbg Aggregate Index	8.72%	83	0.01%	62	3.54%	88	2.65%	87	0.55%	72
Callan Core Bond FI	9.17%		0.10%		3.96%		3.14%		0.84%	
PIMCO	8.84%	78	0.62%	10	4.01%	47	2.85%	75	0.82%	56
Manulife Asset Management	8.62%	84	0.28%	30	-		-		-	
Blmbg Aggregate Index	8.72%	83	0.01%	62	3.54%	88	2.65%	87	0.55%	72
Callan Core Bond FI	9.17%		0.10%		3.96%		3.14%		0.84%	
Core Plus	10.45%	32	(0.46%)	60	5.82%	12	6.39%	11	(1.23%)	91
Loomis Sayles	9.58%	73	(0.36%)	57	5.47%	25	7.60%	5	(3.39%)	99
Prudential Core Plus	11.31%	6	(0.55%)	69	6.17%	9	5.23%	33	0.93%	18
Blmbg Aggregate Index	8.72%	93	0.01%	31	3.54%	95	2.65%	99	0.55%	40
Callan Core Plus FI	10.01%		(0.24%)		4.93%		4.67%		0.38%	
Emerging Markets Debt	15.75%	23	(4.56%)	38	11.07%	72	11.70%	40	(0.11%)	25
Wellington EMD	15.75%	23	(4.56%)	38	11.07%	72	11.70%	40	(0.11%)	25
EMBI Global Dvsfd Index	15.04%	35	(4.26%)	35	10.26%	79	10.15%	63	1.18%	14
Emerging Debt Database	14.45%		(5.20%)		12.67%		10.92%		(3.00%)	
Global Fixed Income	8.64%	64	1.27%	44	3.51%	71	5.32%	23	1.14%	29
PIMCO Global	8.89%	60	1.53%	30	3.44%	72	5.15%	25	1.52%	15
AllianceBernstein Global	8.38%	68	1.02%	55	3.58%	70	5.53%	21	0.75%	54
Callan Global FI (Hedged)	9.00%		1.09%		4.19%		4.19%		0.84%	
Total Fixed Income	10.00%	20	(0.24%)	70	5.18%	30	5.62%	28	0.07%	58
Blmbg Aggregate Index	8.72%	58	0.01%	57	3.54%	73	2.65%	74	0.55%	39
Total Fixed Inc Custom Benchmark (6)	9.22%	43	0.02%	57	4.07%	57	3.71%	54	0.54%	39
Pub Pln- Dom Fixed	8.98%		0.11%		4.40%		3.90%		0.30%	



	2019		2018		2017		2016		2015	
Net Returns and Rankings										
REIT Composite REIT Comp Custom Benchmark (7)	26.10% 23.10%	39 73	(4.38%) (4.42%)	44 44	9.47% 7.54%	92 99	4.45% 5.87%	36 15	3.80% 2.31%	10 31
Centersquare Callan Global REITs	26.87% 25.12%	27	(5.00%) (4.53%)	54	12.80%		3.94%		- 1.11%	
Cohen & Steers EPRA/NAREIT Dev REIT ldx	25.35% 23.06%	49 73	(3.77%) (4.74%)	30 51	13.45% 11.42%	45 69	4.16% 4.99%	46 23	3.06% 0.05%	24 78
Callan Global REITs	25.12%		(4.53%)		12.80%		3.94%		1.11%	
Core Real Estate (Net)	3.26%	89	7.43%	44	6.71%	53	7.63%	78 25	13.16%	72
Principal Capital (Net) UBS Trumbull Property (Net)	6.24% (2.73%)	58 97	8.33% 6.23%	23 80	8.22% 5.46%	20 87	9.14% 6.28%	35 89	13.77% 11.95%	61 78
JPMCB Strategic Property (Net)	3.42%	87	7.17%	59	6.42%	61	7.46%	79	14.27%	48
NFI-ODCE Equal Weight Net	5.18%	77	7.30%	46	6.92%	49	8.36%	54	14.18%	51
Callan OE Core Cmngld RE	6.49%		7.22%		6.89%		8.67%		14.21%	
Core Plus Real Estate (Net)	7.74%	33	10.23%	10	6.66%	54	15.51%	1	18.66%	9
UBS Trumbull Property G&I (Net) Callan OE Core Cmngld RE	7.74% 6.49%	33	10.23% 7.22%	10	6.66% 6.89%	54	15.51% 8.67%	1	18.66% 14.21%	9
ŭ										
Non-Core Real Estate	14.88%	16	12.55%	33	10.52%	34	10.37%	43	18.30%	42
AEW Partners VI AEW Partners VII	90.18% 6.77%	1 63	20.88% 18.24%	12 14	9.98%	41 13	15.98%	18 46	18.57%	40 82
AEW Partners VIII	21.08%	10	9.60%	47	18.03%	13	9.76%	40	6.82%	02
Heitman VP III	12.16%	30	16.45%	20	15.20%	18	17.53%	17	11.42%	73
Heitman VP IV	19.03%	14	-		-		-	•••	-	. 0
AG Core Plus II	(22.09%)	94	(1.77%)	95	(19.31%)	95	(3.13%)	88	14.94%	62
AG Core Plus III	0.62%	86	(8.57%)	99	(1.25%)	88	11.27%	38	40.16%	5
AG Core Plus IV	9.05%	48	12.28%	34	10.32%	38	2.46%	71	-	
Invesco VA Fund IV TA Associates Realty Fund XI	16.50%	15	10.11% 8.68%	44 52	9.22% 6.80%	45	5.70%	64	-	
Westbrook RE Fund X	13.76% 13.93%	18 17	14.30%	27	8.16%	61 50	_		-	
NCREIF Total Index	6.42%	68	6.72%	67	6.96%	60	7.97%	55	13.33%	70
Callan Real Est Val Add	8.41%		9.12%	٥.	8.14%	00	9.19%		16.69%	
Timber Composite	12.02%		2.51%		12.49%		4.31%		1.71%	
Hancock Timber Portfolio	12.02%		2.51%		12.49%		4.31%		1.71%	
NCREIF Timberland Index	1.30%		3.21%		3.63%		2.59%		4.97%	
Total Real Estate	7.80%	50	6.31%	64	7.72%	53	7.53%	62	10.91%	64
Real Estate Benchmark (8)	6.42%	63	6.72%	63	6.96%	60	7.97%	58	13.33%	54
Callan Tot Real Est DB	7.74%		7.92%		7.93%		8.80%		14.11%	
Private Equity	12.99%	18	17.29%	5	16.76%	7	13.95%	25	11.86%	6
Pathway PEF XXIII	6.17%	66	18.41%	5	25.25%	3	12.93%	31	12.21%	6
Pathway PEF SRS 2013	17.49%	11	25.68%	3 6	19.25%	6	9.27%	55	0.38%	28
Pathway PEF 2016 GCM Grosvenor Private Markets	13.93% 12.74%	17 20	12.29% 9.56%	6	8.96%	21	- 18.19%	12	14.36%	5
GCM Grosvenor Div. Partners LP 2014-1	13.82%	17	12.82%	6	12.75%	12	0.76%	84	(4.49%)	35
Private Equity Benchmark (9)	34.80%	2	(0.92%)	27	24.86%	3	15.13%	20	4.66%	17
Callan Alterntive Inv DB	7.82%		(7.43%)		4.44%		10.65%		(19.77%)	
Cash	2.04%	93	1.78%	90	0.91%	84	0.34%	96	0.37%	55
1mo T-Bill	2.20%	90	1.82%	84	0.80%	91	0.21%	97	0.02%	97
Callan Cash Database	2.59%		2.00%		1.16%		0.88%		0.39%	
Total Fund	19.93%	25	(4.09%)	81	16.97%	33	8.84%	16	0.23%	63
Policy Benchmark*	21.35%	6	(5.22%)	91	17.77%	14	8.07%	45	0.81%	47
Callan Public Fd V Lg DB	17.64%		(2.78%)		16.21%		8.02%		0.57%	

 $^{^{\}star}$ Current Quarter Target = 27.0% Russell 3000 Index, 22.0% MSCI ACWI xUS IMI, 20.0% Blmbg:Aggregate, 12.0% MSCI ACWI IMI, 10.0% NCREIF Total Index, 8.0% S&P 500 Index+3.0% and 1.0% FTSE 1 Mo T-Bill.



Custom Benchmark Definitions

- 1) Domestic Equity Benchmark: Russell 3000 Index.
- 2) Global Equity Benchmark: MSCI World Index through 6/30/2012; MSCI ACWI through 9/30/2015; then MSCI ACWI IMI thereafter.
- 3) International Equity Benchmark: MSCI ACWI ex US through 6/30/2013; then MSCI ACWI ex US IMI thereafter.
- 4) International Equity Custom Benchmark: MSCI ACWI ex US through 6/30/13; MSCI ACWI ex US IMI Index through 9/30/2015; then 35% MSCI EAFE Hedged; 35% MSCI ACWI ex US IMI; 20% MSCI Emerging Markets; 5% MSCI ACWI ex US Small Cap; and 5% MSCI World ex US Small Cap through 12/31/2017; then 35% MSCI EAFE, 35% MSCI ACWI ex US IMI, 20% MSCI Emerging Markets, 5% MSCI ACWI ex US Small Cap, and 5% MSCI World ex US Small Cap thereafter.
- 5) Total Equity Custom Benchmark: 49% Russell 3000 Index, 36% MSCI ACWI ex US IMI Index, and 15% MSCI AC World Index through 9/30/2015; then 44% Russell 3000 Index, 36% MSCI ACWI ex US IMI Index, and 20% MSCI ACWI IMI thereafter
- 6) Total Fixed Income Custom Benchmark: 55% Barclays Aggregate Index, 25% Barclays Global Aggregate Index Hedged, 10% Barclays US TIPS Index, and 10% EMBI Global Diversified through 9/30/2015; then 65% Barclays Aggregate Index, 25% Barclays Global Aggregate Index Hedged, and 10% EMBI Global Diversified thereafter.
- 7) REIT Composite Custom Benchmark: 50% US Select REIT Index and 50% EPRA/NAREIT Developed REIT Index.
- 8) Real Estate Benchmark: NFI-ODCE Equal Weight Net to 5/31/99; No Benchmark to 9/30/03; 50% NFI-ODCE Equal Weight Net and 50% US Select REIT Index to 6/30/06; 80% NFI-ODCE Equal Weight Net and 20% US Select REIT Index to 6/30/10; 20% NAREIT RE 50 Index, 15% NCREIF Property Index, 10% NCREIF Timberland Index, 55% NFI-ODCE Equal Weight Net to 6/30/12;15% NAREIT RE 50 Index, 15% NCREIF Property Index, 10% NCREIF Timberland Index, and 60% NFI-ODCE Equal Weight Net to 6/30/13; then NCREIF Property Index thereafter.
- 9) Private Equity Benchmark: S&P 500 Index + 5% through 3/31/13; then S&P 500 Index + 3% through 6/30/2022; then the S&P 500 + 3% (1 Qtr Lag) through 6/30/23; thereafter Cambridge Global Private Equity.
- **10) Private Credit Benchmark:** 50% Morningstar Leverage Loans, 50% Bloomberg High Yield Corp, + 1% (1 Qtr Lag).



Equity Market Indicators

The market indicators included in this report are regarded as measures of equity or fixed income performance results. The returns shown reflect both income and capital appreciation.

Russell 1000 Index Measures the performance of the large-cap segment of the US equity universe. It is a subset of the Russell 3000 Index and includes approximately 1,000 of the largest securities based on a combination of their market cap and current index membership. The Russell 1000 represents approximately 93% of the Russell 3000 Index, as of the most recent reconstitution. The Russell 1000 Index is constructed to provide a comprehensive and unbiased barometer for the large-cap segment and is completely reconstituted annually to ensure new and growing equities are included.

Russell 2000 Growth Index Measures the performance of the small-cap growth segment of the US equity universe. It includes those Russell 2000 companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell 2000 Growth Index is constructed to provide a comprehensive and unbiased barometer for the small-cap growth segment. The index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect growth characteristics.

Russell 2000 Index Measures the performance of the small-cap segment of the US equity universe. The Russell 2000 Index is a subset of the Russell 3000 Index representing approximately 7% of the total market capitalization of that index, as of the most recent reconsitution. It includes approximately 2,000 of the smallest securities based on a combination of their market cap and current index membership. The Russell 2000 is constructed to provide a comprehensive and unbiased small-cap barometer and is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true small-cap opportunity set.

Russell 2000 Value Index Measures the performance of the small-cap value segment of the US equity universe. It includes those Russell 2000 companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years). The Russell 2000 Value Index is constructed to provide a comprehensive and unbiased barometer for the small-cap value segment. The index is completely reconstituted annually to ensure new and growing equities are included and that the represented companies continue to reflect value characteristics

Russell 3000 Index Measures the performance of the largest 3,000 US companies representing approximately 96% of the investable US equity market, as of the most recent reconstitution. The Russell 3000 Index is constructed to provide a comprehensive, unbiased and stable barometer of the broad market and is completely reconstituted annually to ensure new and growing equities are included.

Russell MidCap Growth Idx Measures the performance of the mid-cap growth segment of the US equity universe. It includes those Russell Midcap Index companies with relatively higher price-to-book ratios, higher I/B/E/S forecast medium term (2 year) growth and higher sales per share historical growth (5 years). The Russell Midcap Growth Index is constructed to provide a comprehensive and unbiased barometer of the mid-cap growth market. The index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true mid-cap growth market.

Russell Midcap Value Index Measures the performance of the mid-cap value segment of the US equity universe. It includes those Russell Midcap Index companies with relatively lower price-to-book ratios, lower I/B/E/S forecast medium term (2 year) growth and lower sales per share historical growth (5 years). The Russell Midcap Value Index is constructed to provide a comprehensive and unbiased barometer of the mid-cap value market. The index is completely reconstituted annually to ensure larger stocks do not distort the performance and characteristics of the true mid-cap value market.

S&P 500 Index Measures performance of top 500 companies in leading industries of U.S. economy. The index covers approximately 80% of available market capitalization.



Fixed Income Market Indicators

Bloomberg Aggregate Represents securities that are SEC-registered, taxable, and dollar denominated. The index covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.

Bloomberg Gov/Credit 1-3 Yr Is a broad-based benchmark that measures the non-securitized component of the US Aggregate Index. It includes investment grade, US dollar-denominated, fixed-rate Treasuries, government-related and corporate securities with 1 to 3 years to maturity.

FTSE 1 Month Treasury Bill Is a market value-weighted index of public obligations of the U.S. Treasury with maturities of one month

International Equity Market Indicators

MSCI EAFE (Net) Is composed of approximately 1000 equity securities representing the stock exchanges of Europe, Australia, New Zealand and the Far East. The index is capitalization-weighted and is expressed in terms of U.S. dollars.

Real Estate Market Indicators

NCREIF NFI-ODCE Equal Weight Net Is an equally-weighted, net of fee, time-weighted return index with an inception date of December 31, 1977. Equally-weighting the funds shows what the results would be if all funds were treated equally, regardless of size. Open-end Funds are generally defined as infinite-life vehicles consisting of multiple investors who have the ability to enter or exit the fund on a periodic basis, subject to contribution and/or redemption requests, thereby providing a degree of potential investment liquidity. The term Diversified Core Equity style typically reflects lower risk investment strategies utilizing low leverage and generally represented by equity ownership positions in stable U.S. operating properties.

NCREIF Property Index Is an index composed of existing, investment grade, wholly owned and joint venture investments that is limited to non-agricultural, income-producing properties including apartments, hotels, office, retail, R&D, and warehouses. The current quarter's index returns are subject to revision and therefore are considered preliminary until next quarter's returns are released.

Callan Databases

In order to provide comparative investment results for use in evaluating a fund's performance, Callan gathers rate of return data from investment managers. These data are then grouped by type of assets managed and by the type of investment manager. Except for mutual funds, the results are for tax-exempt fund assets. The databases, excluding mutual funds, represent investment managers who handle over 80% of all tax-exempt fund assets.

Equity Funds

Equity funds concentrate their investments in common stocks and convertible securities. The funds included maintain well-diversified portfolios.

Core Equity - Managers whose portfolio holdings and characteristics are similar to that of the broader market as represented by the Standard & Poor's 500 Index, with the objective of adding value over and above the index, typically from sector or issue selection. The core portfolio exhibits similar risk characteristics to the broad market as measured by low residual risk with Beta and R-Squared values close to 1.00 and combined growth and value z-score values close to 0.00.

International Equity - Non-U.S. - The Non-U.S. International Equity Database consists of separate account international equity products that do not generally invest in U.S. equities.

Middle Capitalization (Growth) - Managers who invest primarily in mid-range companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. The average market capitalization is approximately \$7 billion with market capitalizations between core equity companies and small capitalization companies. Invests in companies with P/E ratios, Price-to-Book values, and Growth-in-Earnings values above the broader market as well as the middle capitalization market segment. Invests in securities with greater volatility than the broader market and the middle capitalization segment as measured by the risk statistics Beta and Standard Deviation.

Middle Capitalization (Value) - Managers who invest primarily in mid-range companies believed to be currently undervalued in the general market. Valuation issues take precedence over near-term earnings prospects in the stock selection process. The average market capitalization is approximately \$7 billion with market capitalizations between core equity companies and small capitalization companies. Invests in companies with P/E ratios, Return-on-Equity values, and Price-to-Book value below the broader market and the middle capitalization segment. Invests in securities with risk/reward profiles in the lower risk range of the medium capitalization market.

Non-U.S. Equity A broad array of active managers who employ various strategies to invest assets in a well-diversified portfolio of non-U.S. equity securities. This group consists of all Core, Core Plus, Growth, and Value international products, as well as products using various mixtures of these strategies. Region-specific, index, emerging market, or small cap products are excluded.

Small Capitalization Generally benchmarked to an international small cap index (like MSCI EAFE Small or MSCI ACWI ex-US Small or S&P/Citigroup EMI), International Small Cap managers focus on selecting smaller capitalization stocks. They may pursue any combination of Growth, Value, or Core, or "Plus" strategies. Portfolios are diversified across countries, and may have significant exposure to emerging markets.



Callan Databases

Small Capitalization (Growth) - Managers who invest mainly in small companies that are expected to have above average prospects for long-term growth in earnings and profitability. Future growth prospects take precedence over valuation levels in the stock selection process. The Small Cap Growth Style invests in companies with P/E ratios, Price-to Book values, and Growth-in Earnings values above the broader market, in addition to the small capitalization market segment. The companies typically have zero dividends or dividend yields below the broader market. The securities exhibit greater volatility than the broader market as well as the small capitalization market segment as measured by the risk statistics values Beta and Standard Deviation. Portfolios have high growth z-scores and low value z-scores.

Small Capitalization (Value) - Managers who invest in small capitalization companies that are believed to be currently undervalued in the general market. Valuation issues take precedence over near-term earnings prospects in the stock selection process. The companies are expected to have a near-term earnings rebound and eventual realization of expected value. The Small Cap Value Style invests in companies with P/E ratios, Return-on-Equity values, and Price-to-Book values below the broader market in addition to the small capitalization market segment. This style invests in securities with dividend yields in the high range for the small capitalization market. The Small Cap Value Style invests in securities with risk/reward profiles in the lower risk range of the small capitalization market. Portfolios have low growth z-scores and high value z-scores.

Special Equity (Small Capitalization) - Managers who hold portfolios with characteristics similar to that of the broader market as represented by the Standard & Poor's 600 or the Russell 2000 indices. Their objective is to add value over and above the index, typically from sector or issue selection.

Fixed Income Funds

Fixed Income funds concentrate their investments in bonds, preferred stocks, and money market securities. The funds included maintain well-diversified portfolios.

Core Bond - Managers who construct portfolios to approximate the investment results of the Bloomberg Barclays Capital Government/Credit Bond Index or the Bloomberg Barclays Capital Aggregate Bond Index with a modest amount of variability in duration around the index. The objective is to achieve value added from sector and/or issue selection.

Core Plus Bond - Active managers whose objective is to add value by tactically allocating significant portions of their portfolios among non-benchmark sectors (e.g. high yield corporate, non-US\$ bonds, etc.) while maintaining majority exposure similar to the broad market.

Defensive - Managers whose objective is to minimize interest rate risk by investing predominantly in short to intermediate term securities. The average portfolio duration is similar to the duration of the Merrill Lynch 1-3 Year Bond Index.

International Emerging Markets Fixed Income - The International Emerging Market Fixed-Income Database consists of all separate account international fixed-income products that concentrate on newly emerging second and third world countries in the regions of the Far East, Africa, Europe, and Central and South America.

Callan Databases

Real Estate Funds

Real estate funds consist of open or closed-end commingled funds. The returns are net of fees and represent the overall performance of commingled institutional capital invested in real estate properties.

Real Estate Open-End Commingled Funds - The Open-End Funds Database consists of all open-end commingled real estate funds.

Other Funds

CAI Alternative Investments DB Database group representing managers within the alternative investments asset class. This includes, but is not limited to, commodities and private equity.



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Education



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Quarterly Highlights

The Callan Institute provides research to update clients on the latest industry trends, carefully structured educational programs to enhance the knowledge of industry professionals, and events to enhance dialogue among investing 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

Quantifying Sequence-of-Returns Risk for Institutional Investors | This paper shows institutional investors how to quantify sequence-of-returns risk in a single number. The metric is flexible enough to apply to strategic asset-allocation decisions across a variety of investor types.

Sector-Specialist Strategies on the Rise: Do They Make Sense for Large LPs' Portfolios? | To distinguish themselves in a competitive market, more private equity general partners are offering sector-specialist strategies, which focus on investing in a specific industry.

2024 Asset Manager DEI Study | The study offers a high-level assessment of the degree to which asset management organizations have established diversity, equity, and inclusion (DEI) policies and procedures.

2024 DC Trends Survey | This survey provides extensive information for DC plan sponsors to use in improving and benchmarking their plans.

Webinar Replays

Research Café: ESG Interview Series | This session features Mark Wood, Callan ESG team member, interviewing Nicole Wubbena, fellow ESG and Global Manager Research group member. Their discussion focuses on impact investing in public equity.

Blog Highlights

<u>Commercial</u> Real <u>Estate</u> <u>Capital</u> <u>Markets</u> <u>and</u> <u>Institutional</u> <u>Investors</u> | A blog post from Christine Mays on the state of the commercial real estate capital markets.

Is This a Time for Active Managers to Shine? | Tony Lissuzzo of Callan's Nonprofit Group writes on how dispersion affects active management.

Quarterly Updates

<u>Private Equity Update, 1Q24</u> | A high-level summary of private equity activity in the quarter through all the investment stages

Active vs. Passive Charts, 1Q24 | A comparison of active managers alongside relevant benchmarks over the long term

<u>Market Pulse</u>, <u>1Q24</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, 1Q24</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</u>, <u>1Q24</u> | Commentary on developments for hedge funds and multi-asset class (MAC) strategies

Real Assets Update, 1Q24 | A summary of market activity for real assets and private real estate during the quarter

<u>Private Credit Update</u>, <u>1Q24</u> | A review of performance and fundraising activity for private credit during the quarter

Callan Target Date Index™, 1Q24 | Tracks the performance and asset allocation of available target date mutual funds and CITs

<u>Callan DC Index™, 1Q24</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:

October Regional Workshops

October 22, 2024 – Denver October 23, 2024 – Chicago

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

Education: By the Numbers

Unique pieces of research the Institute generates each year

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

4,845 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 September 24-26, 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





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Quarterly List as of June 30, 2024

List of Callan's Investment Manager Clients

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Aegon Asset Management
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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
ARGA Investment Management, LP
Ariel Investments, LLC
Aristotle Capital Management, LLC

Manager Name
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Audax Private Debt
AXA Investment Managers
Baillie Gifford International, LLC
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Blackstone Group (The)
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Brandes Investment Partners, L.P.
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Manulife | CQS Investment Management

Marathon Asset Management, L.P.

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Past performance is no guarantee of future results.

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August 27, 2024

Mississippi Public Employees' Retirement System

2024 Capital Market Projections

John Jackson, CFA Investment Consulting

Alexander Ford Investment Consulting

Adam Lozinski, CFA Capital Markets Research

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Agenda

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2024 Capital Market Expectations

- Process Overview
- Market Conditions
- Fixed Income Forecasts
- Equity Forecasts
- Private Markets Forecasts

Detailed 2024 Expectations

- Forecast parameters
 - Returns
 - Risk
- MSPERS projections

Appendix



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Process Overview

How Are Capital Markets Projections Constructed?

Guiding objectives and process

Cornerstone of a prudent process is a long-term strategic investment plan

- Capital market projections are key elements set reasonable return and risk expectations for the appropriate time horizon
- Projections represent our best thinking regarding the long-term (10-year) outlook, recognizing our median projections represent the midpoint of a range, rather than a specific number
- Develop results that are readily defensible both for individual asset classes and for total portfolios
- Be conscious of the level of change suggested in strategic allocations for long-term investors: DB plan sponsors, foundations, endowments, trusts, DC participants, families and individuals
- Reflect common sense and recent market developments, within reason

Underlying beliefs guide the development of the projections:

- An initial bias toward long-run averages
- A conservative bias
- An awareness of risk premiums
- A presumption that markets are ultimately clear and rational

Reflect our beliefs that long-term equilibrium relationships between the capital markets and lasting trends in global economic growth are key drivers to setting capital markets expectations

Long-term compensated risk premiums represent "beta"—exposure to each broad market, whether traditional or "exotic," with limited dependence on successful realization of alpha

The projection process is built around several key building blocks:

- Advanced modeling at the individual asset class level (e.g., a detailed bond model, an equity model)
- A path for interest rates and inflation
- A cohesive economic outlook
- A framework that encompasses Callan beliefs about the long-term operation and efficiencies of the capital markets



Callan's Capital Markets Assumptions: 10 Years (2024–2033)

Key changes from 2023

Summary of important changes for 2024 Capital Markets Assumptions

- Cash return raised to 3.0% from 2.75% (+25 bps)
- Core fixed income return up 100 bps, from 4.25% to 5.25%
- Public equity returns up 20–30 bps; equity risk premium over both cash and fixed income narrowed substantially
- Inflation held at 2.5%
- Private markets returns raised commensurate with public equity, including real estate; hedge funds reflect higher starting cash return

Allocations within equity reflect neutral weights to the broad markets

- Efficient SMID cap weight set to 15% of broad U.S. equity
- Efficient emerging markets equity weight set to 30% of global ex-U.S. equity
- Efficient U.S. / global ex-U.S. equity split to 60/40 neutral weight (not a change, but the market has now caught up to us!)

Broadened set of diversifying asset classes to consider

- Private credit
- Private infrastructure
- Inflation-sensitive equity REITs, natural resources, global listed infrastructure

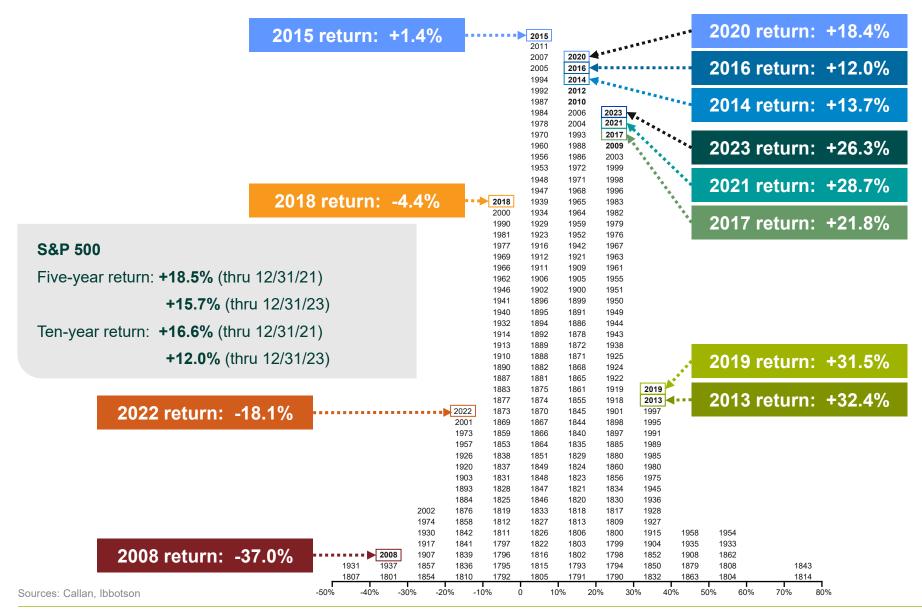


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Market Conditions

Stock Market Returns by Calendar Year

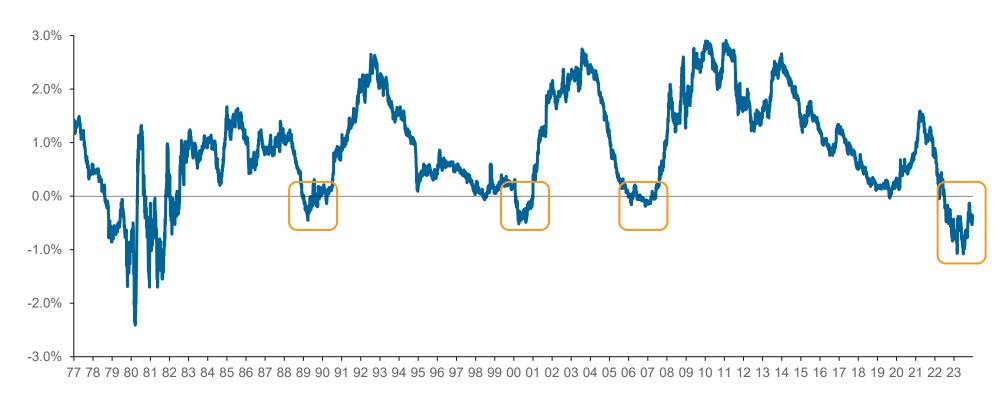
Performance in perspective: History of the U.S. stock market (233 years of returns)





The Bond Market Has Been Expecting a Recession Since July 2022

10-Year Treasury vs. 2-Year Treasury Spread



Inversion in the 10-year to 2-year Treasury yields does not always forecast a recession, but most recessions are preceded by a yield curve inversion.

 Yield curve inversion means investors expect a recession will occur and interest rates will be cut, and therefore increase their demand for securities with longer duration with higher potential for capital gain when rates fall.

Bond investors beginning to anticipate "higher for longer" rate regime?

- Inversion started in July 2022, bottomed at -1.08% in July 2023, and ended December 2023 at -0.35%.

Source: Federal Reserve Bank of St. Louis

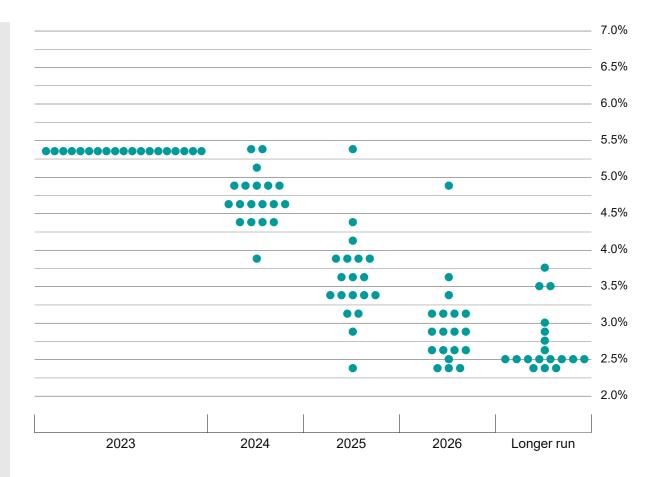


The Fed's 'Dot Plot'

December 13, 2023

Federal Open Market Committee (FOMC) participants' assessments of appropriate monetary policy

- Median year-end in 2024 = 4.6% (down from 5.1% projection at September meeting)
- "Longer-run" unchanged at 2.5%
- Dispersion of views wider in 2025 but narrower over longer run
- Market expects more cuts next year based on CME FedWatch as of December 2023. Fed Funds expectations for end of 2024:
- -27% expect 4.00% to 4.25%
- 37% expect 3.75% to 4.00%
- -21% expect 3.50% to 3.75%



Source: Federal Reserve (One participant did not submit longer-run projections for the federal funds rate.)

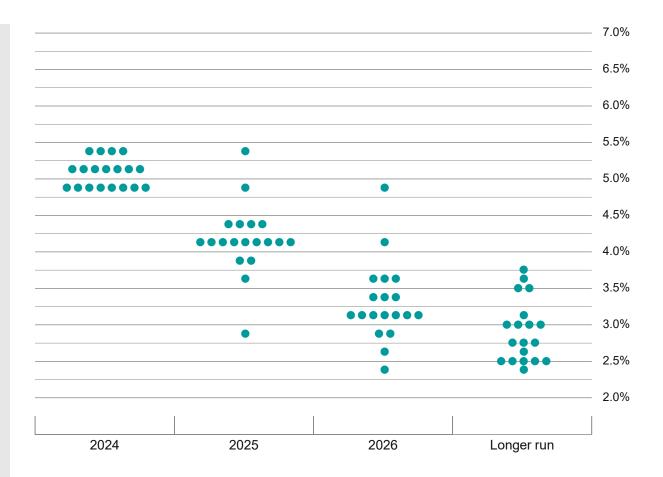


The Fed's 'Dot Plot'

June 12, 2024

Federal Open Market Committee (FOMC) participants' assessments of appropriate monetary policy

- Median year-end in 2024 = 5.1% (up from 4.6% projection at March meeting)
- "Longer run" up 20 basis points to 2.8%
- Dispersion of views widens in 2025 and 2026 but narrows over longer run
- Market expects more cuts next year based on CME FedWatch as of July.
 Fed Funds expectations for end of 2024:
 - 48% expect 4.50% to 4.75%
 - 42% expect 4.75% to 5.00%
 - 7% expect 5.00% to 5.25%

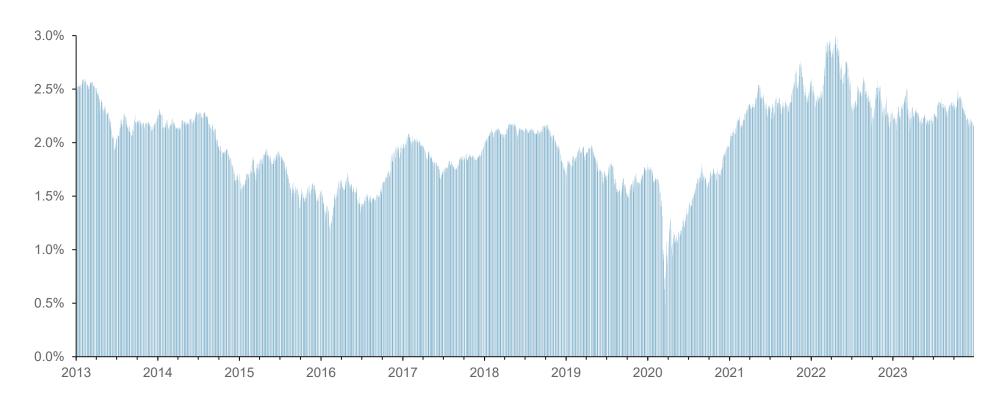


Source: Federal Reserve. FOMC participants do not always submit projections for all time periods.



10-Year Breakeven Rate: Bond Market Forecast of Inflation

10-Year Breakeven Inflation Rate

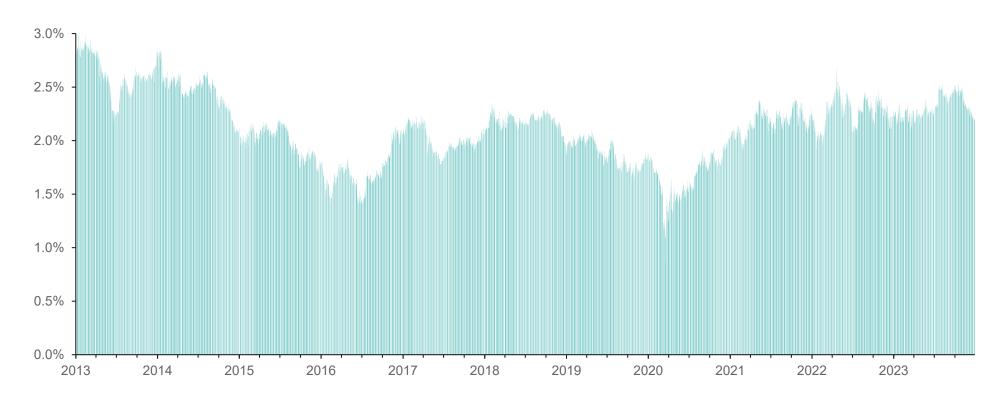


- 10-year breakeven inflation rate is the difference in yield between the nominal 10-year Treasury and the 10-year Treasury Inflation-Protected Security (TIPS).
 - Includes current higher levels of inflation
 - Extra yield nominal Treasury would have to earn to maintain the same purchasing power as a TIPS investment.
- Values of implied inflation reached 3% in April 2022 but have since declined to around 2.25%.

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5-Year, 5-Year Forward Rate: Bond Market Forecast of Inflation

5-Year, 5-Year Forward Inflation Expectation Rate



- The 5-year, 5-year forward rate is the bond market's estimate of the 5-year inflation rate 5 years from now.
 - Excludes current high levels of inflation
- The market inflation expectation for the years 2029 through 2033 is around 2.25% after peaking at 2.7% in April 2022.

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Fixed Income Forecasts

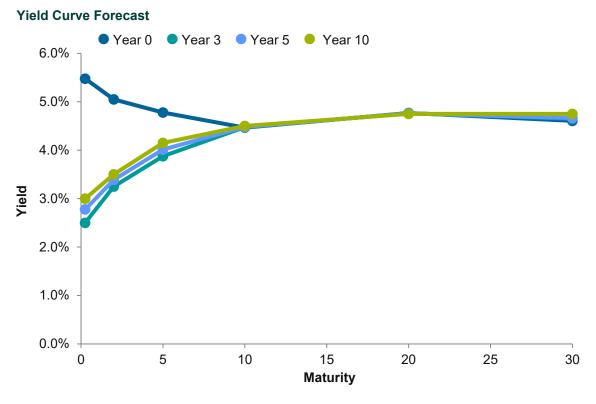
Projected Fixed Income Returns

10-year projections

	Income Return	Capital + Gain/Loss +	Credit Default	+	Roll Return =	2024 Expected Return	2023 Expected Return	Change vs. 2023	2022 Expected Return	Change vs. 2022
Cash	3.00%	0.00%	0.00%		0.00%	3.00%	2.75%	0.25%	1.20%	1.80%
1-3 Year Gov/Credit	3.70%	0.40%	-0.10%		0.25%	4.25%	3.80%	0.45%	1.50%	2.75%
1-3 Year Government	3.50%	0.40%	0.00%		0.25%	4.15%	3.60%			
1-3 Year Credit	4.20%	0.40%	-0.20%		0.25%	4.65%	4.00%			
Intermediate Gov/Credit	4.30%	0.30%	-0.10%		0.25%	4.75%	4.10%	0.65%	1.70%	3.05%
Intermediate Gov	3.90%	0.30%	0.00%		0.25%	4.45%	4.00%			
Intermediate Credit	4.90%	0.40%	-0.30%		0.25%	5.25%	4.25%			
Aggregate	4.70%	0.40%	-0.10%		0.25%	5.25%	4.25%	1.00%	1.75%	3.50%
Government	4.20%	0.40%	0.00%		0.25%	4.85%	3.95%			
Securitized	4.50%	0.60%	0.00%		0.25%	5.35%	4.25%			
Credit	5.55%	0.20%	-0.40%		0.25%	5.60%	4.70%			
Long Duration Gov/Credit	5.70%	-0.10%	-0.20%		0.60%	6.00%	4.65%	1.35%	1.80%	4.20%
Long Government	4.80%	0.00%	0.00%		0.60%	5.40%	3.70%			
Long Credit	6.20%	-0.20%	-0.30%		0.60%	6.30%	5.20%			
TIPS	4.30%	0.50%	0.00%		0.25%	5.05%	4.00%	1.05%	1.25%	3.80%
Global ex-U.S. Fixed	2.70%	0.30%	-0.10%		0.25%	3.15%	2.25%	0.90%	0.80%	2.35%
High Yield	8.45%	0.20%	-2.10%		0.25%	6.80%	6.25%	0.55%	3.90%	2.90%
Emerging Markets Debt	7.70%	0.30%	-1.90%		0.25%	6.35%	5.85%	0.50%	3.60%	2.75%
Bank Loans	8.15%	0.00%	-1.60%		0.00%	6.55%	6.10%	0.45%	4.60%	1.95%



Shape of Yield Curve at Different Points in Forecast Horizon



	3 Month	2 Year	5 Year	10 Year	20 Year	30 Year
Forecast Year 0	5.48	5.05	4.78	4.47	4.77	4.61
Forecast Year 3	2.50	3.25	3.88	4.48	4.76	4.65
Forecast Year 5	2.78	3.39	4.01	4.48	4.76	4.66
Forecast Year 10 (Equilibrium Reached)	3.00	3.50	4.15	4.50	4.75	4.75

Our fixed income projections assume the yield curve returns to upward-sloping pattern within the next few years

- Short rates fall below Callan's equilibrium during an assumed overcorrection in Fed policy.
- Short rates are then projected to return to long-term equilibrium by year 10 of our forecast.



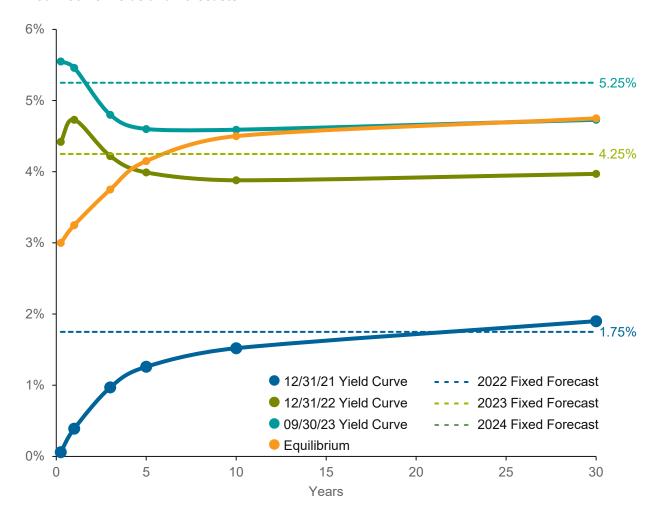
Core Fixed Income Assumptions Follow Yields

Our fixed income assumptions have risen meaningfully in the last few years along with an equally large upward move for the yield curve

2024 projection benefits further from expectation for capital gains

 Capital gains boost the return expectation above what would be expected from income alone

Fixed Income Yields and Forecasts



Source: Bloomberg



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Equity Forecasts

Equity Forecasts

Building block model

Index	Forecasted Dividend Yield	Net Buyback Yield	Inflation	Real Earnings Growth	Valuation Adjustment	Total Expected Return
S&P 500	2.00%	0.50%	2.50%	2.50%	0.00%	7.50%
Russell 2500	1.75%	0.00%	2.50%	3.45%	0.00%	7.70%
MSCI World ex USA	3.75%	0.00%	2.00%	1.75%	0.00%	7.50%
MSCI Emerging Markets	3.55%	-2.90%	3.25%	3.80%	0.00%	7.70%

Our return expectations for US large cap (S&P 500) and non-US Developed markets (MSCI World ex-US) are the same, but the paths to those returns are different

U.S. companies tend to deliver more return from earnings growth than from return of capital via dividends or buybacks

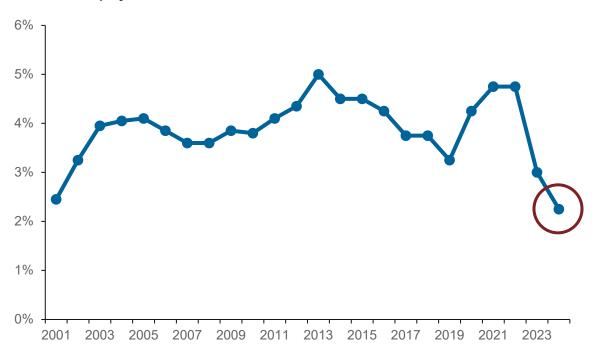
- Non-U.S. developed companies have the opposite relationship
- Emerging market companies tend to deliver strong earnings growth, which is somewhat offset by net issuance of shares as these companies issue stock to support growth



Callan's Equity Risk Premia Forecasts Over Time

S&P 500 forecast minus Bloomberg Aggregate forecast

Forecasted Equity Risk Premium vs. Bonds



Callan's forecasted return spread between the S&P 500 and the Bloomberg Aggregate (2.25%) is the narrowest since 2001.

Forecasts are annualized over 10 years.



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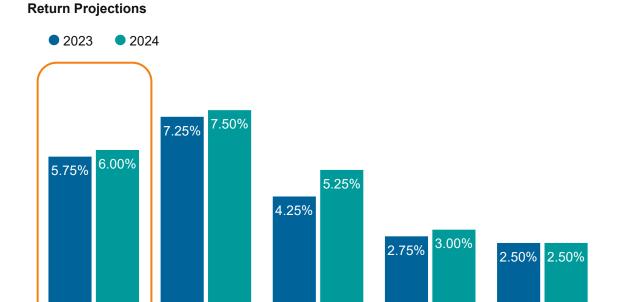
Private Markets Forecasts

Core Real Estate

Background

- Real estate has characteristics of equity (ownership and appreciation) and bonds (income from rents). Real estate returned -8.4% for the year ended September 30, 2023, on an unlevered property basis
- While real estate, especially within offices, is expected to continue facing headwinds in the short-term, recent price declines could make more attractive entry points available for long-term investors
- Slight increase in real estate returns compared to last year.

2024 real estate return projection: 6% (up 25 bps)



Aggregate

Large Cap

Source: Callan, NCRIEF NPI index



Cash

Inflation

Real Estate

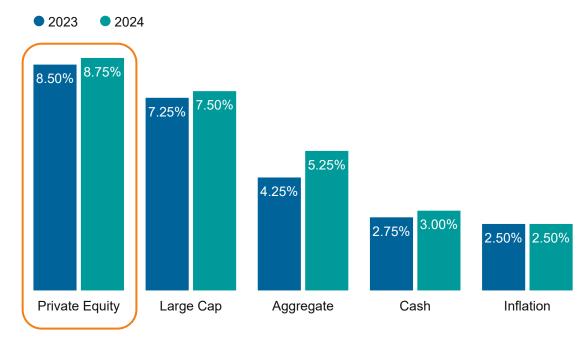
Private Equity

Background

- The private equity market in aggregate is driven by many of the same economic factors as public equity markets. However, we expect private equity to experience some write-downs that have not yet been reflected in performance.
- Private equity performance expectations rose in line with public equity expectations.
- We see tremendous disparity between the best- and worst-performing private equity managers.
- The ability to select skillful managers could result in realized returns significantly greater than projected here.

2024 private equity return projection: 8.75% (up 25 bps)

Return Projections







Private Credit

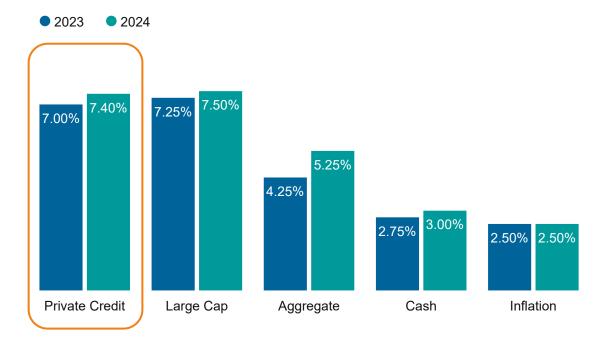
Background

- Return projection is anchored on middle market direct lending where yields have risen along with public fixed income yields.
- While banks are no longer major investors in this market, there is strong appetite from institutional and retail investors.

2024 private credit return projection: 7.4% (up 40 bps)

Unlevered Yield	9.5%
Leverage	0.85x
Levered Yield	12.9%
Loss Ratio	2.4%
Net Arithmetic	8.5%
Net Compound Return	7.4%

Return Projections



Source: Callan

Return calculation assumes 5.5% cost of leverage and 1.3% unlevered loss ratio



Detailed 2024 Expectations and Resulting Portfolio Returns and Risk



2024 vs. 2023 Risk and Returns Assumptions

Summary of Callan's Long-Term Capital Markets Assumptions (2024–2033)

		Pı	rojected Retur	n	Projected Risk		2023–2032				
Asset Class	Index	1-Year Arithmetic	10-Year Geometric*	Real	Standard Deviation	Projected Yield**	1-Year Arithmetic	10-Year Geometric*	Standard Deviation		
Equities											
Broad U.S. Equity	Russell 3000	8.85%	7.65%	5.15%	17.40%	1.95%	8.75%	7.35%	18.05%		
Large Cap U.S. Equity	S&P 500	8.70%	7.50%	5.00%	17.00%	2.00%	8.60%	7.25%	17.75%		
Smid Cap U.S. Equity	Russell 2500	9.80%	7.70%	5.20%	22.00%	1.75%	9.60%	7.45%	22.15%		
Global ex-U.S. Equity	MSCI ACWI ex USA	9.65%	7.65%	5.15%	21.40%	3.70%	9.45%	7.45%	21.25%		
Developed ex-U.S. Equity	MSCI World ex USA	9.25%	7.50%	5.00%	20.15%	3.75%	9.00%	7.25%	20.15%		
Emerging Markets Equity	MSCI Emerging Markets	10.65%	7.70%	5.20%	25.60%	3.55%	10.45%	7.45%	25.70%		
Fixed Income											
Short Duration Gov/Credit	Bloomberg 1-3 Year Gov/Credit	4.25%	4.25%	1.75%	2.40%	3.70%	3.75%	3.80%	2.30%		
Core U.S. Fixed	Bloomberg Aggregate	5.25%	5.25%	2.75%	4.25%	4.70%	4.25%	4.25%	4.10%		
Long Government	Bloomberg Long Gov	6.20%	5.40%	2.90%	13.75%	4.80%	4.55%	3.70%	13.50%		
Long Credit	Bloomberg Long Credit	6.85%	6.30%	3.80%	11.90%	6.20%	5.75%	5.20%	11.75%		
Long Government/Credit	Bloomberg Long Gov/Credit	6.55%	6.00%	3.50%	11.70%	5.55%	5.20%	4.65%	11.40%		
TIPS	Bloomberg TIPS	5.10%	5.05%	2.55%	5.40%	4.30%	4.10%	4.00%	5.30%		
High Yield	Bloomberg High Yield	7.30%	6.80%	4.30%	11.75%	8.45%	6.75%	6.25%	11.75%		
Global ex-U.S. Fixed	Bloomberg Global Agg ex US	3.60%	3.15%	0.65%	9.80%	2.70%	2.70%	2.25%	9.80%		
Emerging Markets Sov Debt	EMBI Global Diversified	6.75%	6.35%	3.85%	10.65%	7.70%	6.25%	5.85%	10.65%		
Alternatives											
Core Real Estate	NCREIF ODCE	6.85%	6.00%	3.50%	14.00%	4.00%	6.60%	5.75%	14.20%		
Private Infrastructure	MSCI GI Infra/FTSE Dev Core 50/50	7.30%	6.35%	3.85%	15.20%	4.80%	7.15%	6.15%	15.45%		
Private Equity	Cambridge Private Equity	12.15%	8.75%	6.25%	27.60%	0.00%	11.95%	8.50%	27.60%		
Private Credit	Cambridge Senior Debt Index	8.40%	7.40%	4.90%	15.70%	7.40%	8.00%	7.00%	15.50%		
Hedge Funds	Callan Hedge FOF Database	6.25%	6.05%	3.55%	8.20%	0.00%	5.80%	5.55%	8.45%		
Commodities	Bloomberg Commodity	5.45%	3.90%	1.40%	18.05%	3.00%	5.05%	3.50%	18.00%		
Cash Equivalents	90-Day T-Bill	3.00%	3.00%	0.50%	0.90%	3.00%	2.75%	2.75%	0.90%		
Inflation	CPI-U		2.50%		1.60%			2.50%	1.60%		

 $[^]st$ Geometric returns are derived from arithmetic returns and the associated risk (standard deviation).

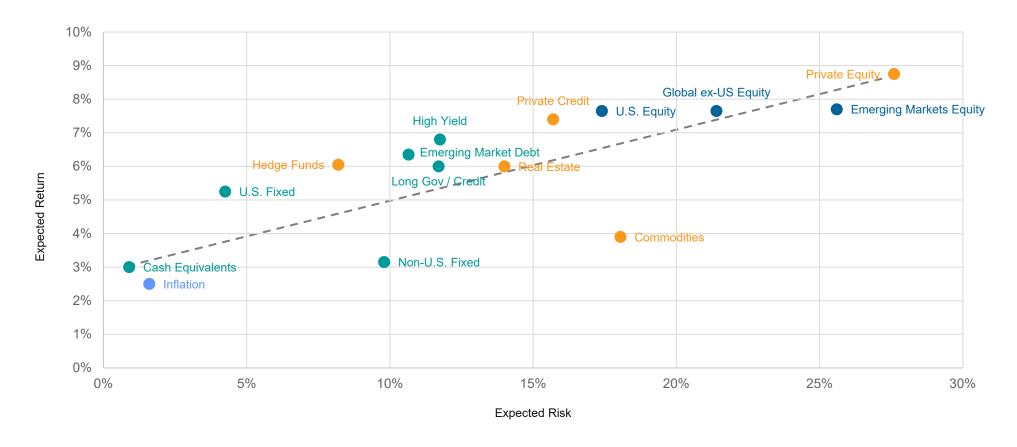
Source: Callan



^{**} Projected Yields represent the expected 10-year average yield

Risk Aversion

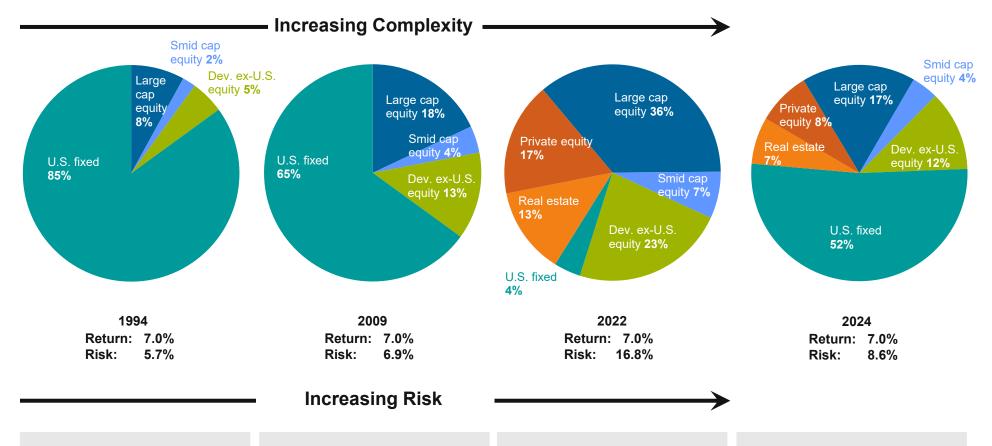
Visualizing Callan's 2024–2033 Capital Market Assumptions



Source: Callan 2024–2033 return-risk capital markets assumptions



7% Expected Returns Over Past 30 Years



In 1994, our return expectation for broad U.S. fixed income was 6.2%.

Just 15% in return-seeking assets was required to earn a 7% projected return.

15 years later, an institutional investor would have needed an additional 20% of the portfolio in public equities for a total of 35% to achieve a 7% projected return.

In 2022 an investor was required to include 96% in return-seeking assets (including 30% in private markets investments) to earn a 7% projected return at almost 3x the volatility compared to 1994.

Today's 7% expected return portfolio is much more reasonable than it was just two years ago. The allocation to fixed income jumps to 52%, while risk is essentially cut in half. Private markets investments are also cut in half.



2024 Asset Allocation Modeling – MSPERS Outlook

	MSPERS Target
U.S. Equities	25%
Non-U.S. Equity	20%
Global Equity	12%
Fixed Income	18%
Private Equity	10%
Real Estate	10%
Infrastruture	2%
Private Credit	2%
Cash	1%
Total Portfolio	100%

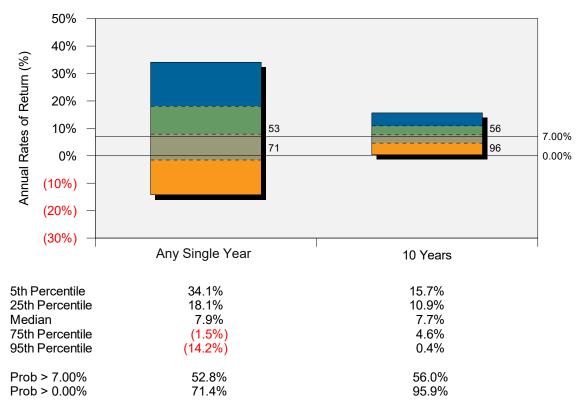
Projections with 2024 Assumptions

Projected 10 Yr. Geometric Return	7.7%
Projected Standard Deviation	13.9%

Projections with 2023 Assumptions

Projections with 2023 Assumptions	
Projected 10 Yr. Geometric Return	7.4%
Projected Standard Deviation	14.2%
Difference	
Projected 10 Yr. Geometric Return	0.3%
Projected Standard Deviation	-0.3%

Range of Projected Rates of Return



- ► The MSPERS Target includes Infrastructure and Private Credit which are still in the process of being funded.
- ➤ The projected return for the Target is up 0.3% from last year and the projected risk is down 0.3%.
- ➤ The Target has a 56% probability of achieving the 7% discount rate and a low probability of suffering a negative return over a 10-year horizon.

Note: Based on Callan's 2024-2033 Capital Market Assumptions.

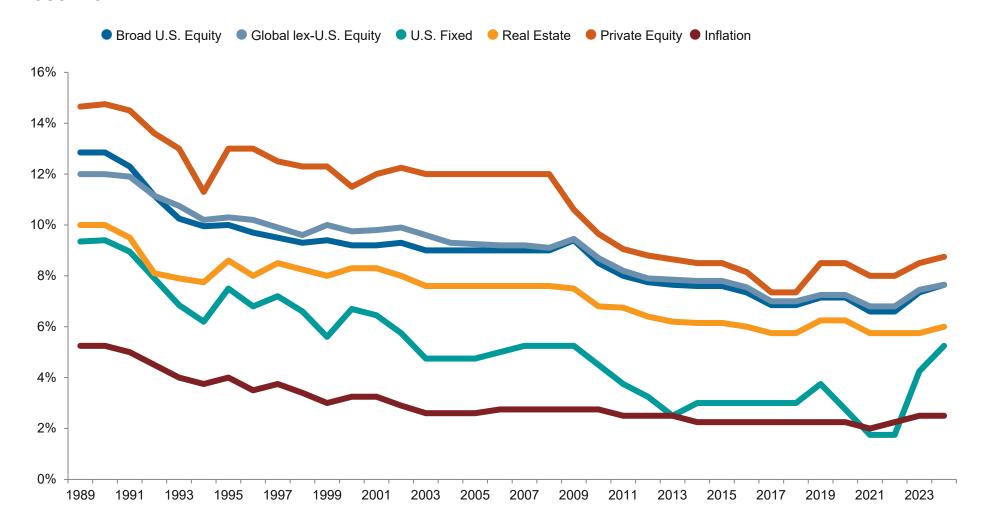


Appendix



Return Projections: Major Asset Classes

1989-2024





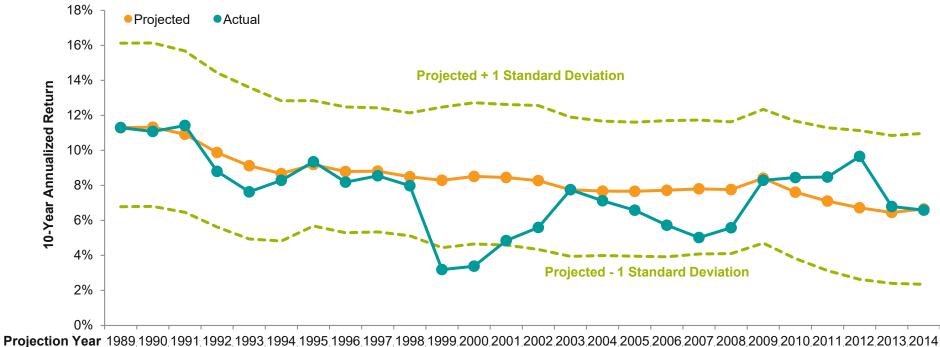


Actual Returns vs. Callan Projections

Projection Years 1989–2014

Historical Comparison: Actual Returns vs. Callan Capital Markets Projections

Portfolio (60% Equity, 30% Fixed, 10% Real Estate)



- Performance 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023 Year End
- Our projections are generally within one standard deviation of the actual return experienced
- The notable exceptions are the 10-year periods ended in 2008 and 2009 which contained not one but two major collapses in the equity market: the Dot-Com Bubble in 2001-02 and the Global Financial Crisis in 2008





2024–2033 Callan Capital Markets Assumptions Correlations

Large Cap U.S. Equity	1.00																			
Smid Cap U.S. Equity	0.87	1.00																		
Dev ex-U.S. Equity	0.70	0.81	1.00																	
Em Market Equity	0.81	0.88	0.92	1.00																
Short Dur Gov/Credit	0.05	0.01	0.04	-0.01	1.00															
Core U.S. Fixed	0.09	0.03	0.06	0.00	0.78	1.00														
Long Government	0.01	0.00	0.03	0.00	0.65	0.82	1.00													
Long Credit	0.40	0.35	0.35	0.35	0.62	0.80	0.69	1.00												
TIPS	-0.02	-0.05	-0.04	-0.07	0.55	0.70	0.54	0.52	1.00											
High Yield	0.74	0.74	0.71	0.74	0.13	0.15	0.02	0.45	0.06	1.00										
Global ex-U.S. Fixed	0.12	0.11	0.14	0.10	0.50	0.50	0.42	0.53	0.40	0.16	1.00									
EM Sovereign Debt	0.59	0.60	0.61	0.65	0.17	0.23	0.11	0.47	0.11	0.62	0.17	1.00		_						
Core Real Estate	0.33	0.33	0.33	0.33	0.17	0.22	0.08	0.31	0.12	0.30	0.14	0.22	1.00							
Private Infrastructure	0.47	0.47	0.45	0.47	0.14	0.18	0.10	0.33	0.08	0.34	0.18	0.32	0.65	1.00						
Private Equity	0.79	0.77	0.76	0.76	-0.04	-0.04	-0.08	0.27	-0.12	0.55	0.07	0.44	0.46	0.52	1.00					
Private Credit	0.67	0.67	0.64	0.68	0.04	0.06	-0.02	0.32	-0.05	0.55	0.11	0.47	0.26	0.27	0.65	1.00				
Hedge Funds	0.60	0.50	0.50	0.50	0.28	0.39	0.25	0.52	0.23	0.50	0.24	0.47	0.24	0.31	0.34	0.47	1.00			
Commodities	0.20	0.20	0.20	0.20	-0.04	-0.05	-0.10	0.04	0.00	0.18	0.05	0.15	0.16	0.15	0.16	0.14	0.17	1.00		
Cash Equivalents	-0.02	-0.07	-0.08	-0.08	0.27	0.16	0.12	0.04	0.14	-0.03	0.10	-0.02	0.02	-0.04	-0.04	-0.04	0.00	-0.02	1.00	
Inflation	0.00	0.02	0.00	0.02	-0.20	-0.22	-0.30	-0.20	0.25	-0.03	-0.12	-0.04	0.20	0.10	0.04	-0.04	-0.01	0.35	0.02	1.00
	Large Cap	Smid Cap	Dev	Em Mkts	Short Dur	Core Fixed	Long Gov	Long Credit	TIPS	High Yield	Global ex-US Fixed	EM	Core Real Estate	Private Infra	Private Equity	Private Credit	Hedge Funds	Comm	Cash Equiv	Inflation





Important Disclosures

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Callan undertakes no obligation to update the information contained herein except as specifically requested by the client.

Past performance is no guarantee of future results.



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Callan was founded as an employee-owned investment consulting firm in 1973. Ever since, we have empowered institutional investor with creative, customized investment solutions backed by proprietary research, exclusive data, and ongoing education. Today, Callan provides advisory services to institutional investor clients with more than \$3 trillion in total assets, which makes it among the largest independently owned investment consulting firms in the U.S. Callan uses a client-focused consulting model to serve pension and defined contribution plan sponsors, endowments, foundations, independent investment advisers, investment managers, and other asset owners. Callan has six offices throughout the U.S. For more information, please visit www.callan.com.

Callan	Corporate Headquarters	Regional Offices	
	One Bush Street	Atlanta	_
	Suite 800	Chicago	in Callan
	San Francisco, CA 94104	Denver	
		New Jersey	
	www.callan.com	Portland	





Investment Policy Statement

Defined Benefit Plan

Revised & Adopted 8.21.20234

I. Statement of Investment Policy

A. Purpose

The purpose of this document is to define the investment objectives of The Public Employees' Retirement System of Mississippi (PERS) to assist the Board and Investment Staff in effectively managing PERS assets. This statement establishes the policies and describes the organization and objectives of the PERS' investment program in accordance with Section 25-11-121 of the Mississippi Code, Annotated (1972, as amended). In addition, it establishes a framework for monitoring investment performance, and promoting effective communication between the Board, Investment Staff, Investment Consultants and the external Investment Managers. This policy provides a framework which allows sufficient flexibility to take advantage of investment opportunities, while setting reasonable parameters to ensure prudence and care in the execution of the investment program.

B. Background

The Public Employees' Retirement System of Mississippi was established by the State legislature for the purpose of providing retirement benefits to all employees of public entities in Mississippi. The System also administers the Mississippi Highway Safety Patrol Retirement System, the Supplemental Legislative Retirement Plan, the Municipal Retirement Systems of Mississippi, the Governmental Employees' Deferred Compensation Plan & Trust and the Optional Retirement Plan. This responsibility includes the investment of plan assets and the selection of investment options offered within the defined contribution plans administered.

The Public Employees' Retirement System of Mississippi is committed to ensuring secure retirement benefits are available for its current and future retirees through the prudent investment of its assets.

C. Investment Objectives

The primary objective of the investment program is to ensure that PERS meets its financial responsibilities to provide stable benefits for its members. As such the investment program strives to:

- Achieve an annual rate of return as outlined in the Board of Trustees current funding policy.
- b) Protect the investment portfolio from severe extended declines in asset value during periods of adverse market conditions, by prudent diversification of assets.
- Ensure adequate liquidity is available to meet all benefit payments and other cash requirements.
- Ensure total portfolio risk is controlled through diversification by asset class, investment approach and by individual investments within each asset class.

D. Investment Constraints

 Laws and Regulations – The specific types of investments in which the System is authorized to invest are enumerated in Section 25-11-121 of the Mississippi Code, Annotated (1972, as amended).

- b) <u>Time Horizon</u> Acknowledging the impact of annual investment returns on the actuarial evaluation, PERS views the appropriate investment time horizon for a public pension plan to be thirty (30) years.
- <u>Liquidity Requirements</u> Annual liquidity requirements must be considered when designing the portfolio structure.

E. Risk Controls

PERS' greatest risk is that plan assets will not support liabilities over the long term. To help mitigate this concern the PERS Board conducts annual actuarial valuations to evaluate the funded status of the System. Additionally, at least every five years, an independent external audit of the actuary is conducted to ensure the assumptions and calculation methods used are appropriate for properly computing the liabilities of the System.

F. Strategic Objective

The objective of PERS is to seek to provide financial security for our members, retirees and beneficiaries. The Board's strategic investment objectives are to maximize total return on assets, preserve principal and to attain competitive investment results. By achieving the strategic objectives, the Board seeks to be able to provide adequate benefits and maintain stable contribution rates.

G. Implementation

The strategic asset allocation is the primary tool for reaching the investment objectives. The asset allocation decision is based on an evaluation of both expected returns and risk levels for the allowable asset classes. In making the asset allocation decision the Board must strike a balance between the desired level of risk and return. The result of the asset allocation decision should be a well-diversified portfolio which reflects both the Board's desired level of return as well as the Board's risk tolerance level for the portfolio.

II. Roles and Responsibilities

A. Board of Trustees

PERS' investment activities are governed by a ten-member Board of Trustees which is responsible for directing the investment program in accordance with the laws of the State of Mississippi. As fiduciaries of a public pension fund the PERS trustees rely heavily on internal staff, consultants, actuaries and other contracted service providers to assist them in this process.

The Board is responsible for:

- Approval of long-term risk tolerance and asset allocation decisions.
- Approval of all formal investment policies.
- Approval of the investment structure within the asset allocation policy structure.
- Selection, retention and termination of external managers, investment consultants and custodial banks.
- Periodically approving the PERS Investment Policy Statement.

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Information and recommendations related to all investment program activities and policies are provided to the Board of Trustees by the Investment Staff and Consultant to aide in the decision-making process.

B. Executive Director

The Board employs the Executive Director who is responsible for broad oversight of the investment program and for ensuring PERS has in place the appropriate resources, training opportunities, and compensation structures to attract and retain a competent and qualified Investment Staff.

C. Investment Staff

The Chief Investment Officer (CIO), as head of the Investment Staff, is charged with maintaining the integrity of the investment program. This responsibility includes working directly with the Executive Director and Board on the development of investment policy, asset allocation decisions, portfolio structure, Investment Manager/Consultant selection and termination, and custodian selection. The CIO is charged with providing advice and recommendations to the Board on all related investment matters. It is the responsibility of the CIO to make all necessary information available to the Board members to assist them in making prudent, informed investment decisions.

The Investment Staff is responsible for ensuring the Board's investment policies are implemented, and for oversight of the external Investment Managers. Staff is charged with discharging their investment duties solely in the interest of the members and benefit recipients of PERS.

The Staff will ensure appropriate performance reporting schedules are in place in order to facilitate the Board's monitoring of the investment program. The Staff's primary responsibilities include:

- Monitoring Investment Manager's compliance to the guidelines established in their Investment Management Agreements (IMA) with PERS
- Meeting and/or communicating with external managers regularly to review investment strategies and results
- Managing the short-term account assets to ensure monthly benefit payrolls are funded
- · Recommending investment program enhancements
- Implement the adopted rebalancing policy

D. Investment Consultant

The Investment Consultant is charged with assisting the Investment Staff in providing advice and recommendations to the Board on all investment matters, and to discharge their investment duties solely in the interest of the PERS members and benefit recipients. The Consultant's responsibility is to work with the Board, Executive Director, and Staff to assist in the prudent management of the investment process.

The Consultant will attend all investment related meetings of the Board and will provide an independent prospective on PERS' investment goals, structure performance and managers. The Consultant will review asset allocation, manager structure and performance and make recommendations to the Board as appropriate. The Consultant assists in the manager search process. The Consultant will also assist in keeping the Board informed as to changes within the pension and investment communities that could affect PERS.

E. Investment Managers

External Investment Managers are retained because of their skill and expertise within a specialized part of the PERS portfolio. Investment managers are charged with managing the assets and the allocation of the assets within his/her control in compliance with the policies, guidelines and objectives included in their Investment Management Agreement with PERS.

Investment Managers will construct and manage investment portfolios which are consistent with the investment philosophy and disciplines for which they were hired. All Investment Managers provide periodic reporting as directed by the Investment Staff.

Each Investment Manager will act as a fiduciary to PERS. Further, each will be responsible for achieving best execution in all trades including foreign exchange transactions. Trades must meet the test of best execution as defined under Section 28(e) of the Securities and Exchange Act of 1934.

F. Custodial Bank

The custodial bank is responsible for settling all security trades as authorized by the Investment Managers. The bank will also maintain accurate records of all transactions related to investment activity. The custodial bank will serve as trustee of all assets within its control. It will also be responsible for capturing and recording all monies due to PERS from investment activities and investment income. The custodial bank also is responsible for all PERS securities lending activities, income collection and record keeping.

III. Portfolio Review and Evaluation

Periodically the Board reviews and evaluates reports on the investment performance of the PERS' portfolio. These reviews will be conducted for each Investment Manager portfolio, as well ass.ass at the total fund level. Performance reports will be generated by the Investment Consultant and will include performance data, asset allocation and peer group comparison information. The Board will place greater emphasis on long-term rather than short-term results.

The Board recognizes that though its investments are subject to short-term volatility, it is critical that a long-term investment focus be maintained. This prevents ad hoc revisions to its philosophy and policies in reaction to either speculation or short-term market fluctuations. In order to preserve this long-term view, the Board utilizes the following formal review schedule:

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A. Schedules

Formal Review Agenda Item

Total Fund Performance Broad Asset Allocation Manager Structure Investment Policy

Review Schedule

Quarterly At least every five years At least every three years Periodically

B. Strategic Objective

The objective of PERS is to seek to provide financial security for our members, retirees and beneficiaries. The Board's strategic investment objectives are to maximize total return on assets, preserve principal and to attain competitive investment results. By achieving the strategic objectives, the Board seeks to be able to provide adequate benefits and maintain stable contribution rates.

C. Implementation

The strategic asset allocation is the primary tool for reaching the investment objectives. The asset allocation decision is based on an evaluation of both expected returns and risk levels for the allowable asset classes. In making the asset allocation decision the Board must strike a balance between the desired level of risk and return. The result of the asset allocation decision should be a well-diversified portfolio which reflects both the Board's desired level of return as well as the Board's risk tolerance level for the portfolio.

D. Rebalancing

The Board will adopt a rebalancing policy at the time a strategic asset allocation policy is adopted. Staff will be responsible for implementing the rebalancing activity as contained in the policy.

IV. Miscellaneous

A. Standard of Care

The standard of care which governs members of the Board of Trustees is the prudent person standard. This standard requires fiduciaries to discharge their duties solely in the interests of participants and their beneficiaries with such care, skill, prudence, and diligence as a person acting in like circumstances would exercise in the conduct of an enterprise of similar character and with similar aims.

B. Ethics and Conflicts of Interest

As it pertains to ethics and conflicts of interest, it is understood that:

 All Board members are fund fiduciaries with a duty of loyalty to PERS and responsibility to observe the exclusive benefit rule.

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- All members of the Board, Executive Director and Investment Staff will disclose any
 conflict of interest related to PERS investments.
- All Investment Managers, Consultants and custodial banks shall be required to disclose all third-party relationships, which in any way involve payment of fees, shared fees or any "soft dollar" exchanges not otherwise disclosed.
- Upon request, each Investment Manager and Consultant will disclose its ethics policy to the Board.

C. Investment Management Fees

Investment management fees are closely monitored by the PERS Investment Staff for reasonableness. Comparative fee information is obtained from various sources including the Investment Consultant and other annual fee surveys in which PERS participates. Fees paid to each external investment management firm are presented to the Board of Trustees periodically.

D. Proxy Voting

The PERS' Board charged its Investment Managers with the responsibility of voting proxies on PERS' behalf and in PERS' best interest. It is the intent of the Board to have proxies voted in a manner solely to protect the interest of its participants. As a rule, proxies should be voted in such a manner as to avoid activity which would:

- Be detrimental to the long-term interests of the company
- Excessively insulate present management from take-over or stockholder rejection
- Reduce investment liquidity
- Reduce shareholder interests.

Proxies are to be voted and submitted in adequate time for the proxy to be received by the appropriate corporate official. A record of the proxy voting positions taken by each manager should be reported to the PERS the 30th calendar day following quarter-end.

E. Securities Lending

Lending securities to qualified borrowers enables PERS to realize incremental income on assets currently in the portfolio. This represents an opportunity to increase the return on the fund by reinvesting the income generated.

The custodial bank, as lending agent for PERS, is responsible for the lending and collateral reinvestment activities. All loans will have an initial collateral margin of 102% for U.S. securities and 105% for non-U.S. securities. At no time will the collateral margin be less than 100% of the current market value. Loaned securities will be marked –to–market daily to ensure collateral is maintained at the minimum required levels. All collateral reinvestments will be done within the guidelines mandated in the Securities Lending Agreement and Guaranty.

F. Manager Watch List or Termination Guidelines

Managers may be placed on a Watch List for either qualitative or quantitative factors.

1) Qualitative Factors

Qualitative factors that may be grounds for being placed on a Watch List or terminated include, but are not limited to the following:

- Violation of investment guidelines
- Deviation from stated investment style
- Turnover of key personnel
- Change in ownership
- Litigation
- Failure to disclose significant information including potential conflicts of interest, regulatory
 agency investigations and/or sanctions, or any other such pertinent occurrences

The Board can place a manager on the Watch List at any time based on qualitative factors. Watch List status, based on qualitative factors, mandates closer monitoring of the manager's organization. The Board will notify the manager of its decision to place the firm on a Watch List. At the end of six months the Board will reevaluate and decide what action, if any, to take.

2) Quantitative Factors

Quantitative factors pertain primarily to performance. The performance of the Plan's Investment Managers is reviewed by the Board on a continuing basis. Below are some of the factors to be considered in determining the appropriateness of placing an Investment Manager on a Watch List.

PERFORMANCE TEST	BENCHMARK	FAIL CRITERIA
Test 1 – Performance	Annualized performance	Managers fail if they underperform
relative to market index,	relative to the agreed upon	their index or benchmark over 4
for 4 consecutive quarters	market index or appropriate	quarters of rolling 3-year periods.
of rolling 3-year period	benchmark	
returns		
Test 2 – Performance	Performance compared to	Managers fail if their performance is
relative to a peer group for	that of an appropriate peer	below the 50% percentile over 4
4 consecutive quarters of	group	quarters of rolling 3-year periods
rolling 3-year periods		
returns		

The Board will notify a manager of its decision to place them on a Watch List. The Investment Manager will be informed that failure to show steady improvement in performance could result in termination, or a reduction of the assets managed for PERS. The Board, at its discretion, can place an Investment Manager on the Watch List, or terminate a manager at any time with 30 days' notice.

Appendix A

PERS of Mississippi

Strategic Asset Allocation Policy

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Strategic Asset Allocation Policy

Adopted June 2022

The primary method utilized in achieving the return objectives for PERS is the allocation of assets. The Board adopts an asset allocation policy as the framework to ensure the assets are invested in a prudently managed and well diversified portfolio designed to meet the established return targets. The strategic target allocation below is intended to accomplish the Board's objectives over time. In addition to the target allocations the Board has established target ranges for each asset class. These ranges provide the Board and Investment Staff the latitude to exercise management discretion in a tactical manner as appropriate.

Strategic Asset Allocation	Policy Target	Rebalancing Ranges
Public Equities	57%	±5%
Private Equity	10%	±5%
Real Estate	10%	±5%
Private Infrastructure*	2%	$\pm 2\%$
Fixed Income	18%	±5%
Private Credit**	2%	$\pm 2\%$
Cash Equivalents***	1%	±1%

^{*}The Domestic Equity asset class and Private Infrastructure policy weights are adjusted each month such that the Private Infrastructure weight is set equal to the invested capital, up to the Long Term Target of 2%. The uninvested capital is allocated to Domestic Equity. This process reflects the practical implementation of non-publicly traded investments.

The Total Fund Benchmark is detailed in the table below:

Asset Class	Policy Target	Benchmark	
U.S. Equity	25%	Russell 3000 Index	
Non-U.S. Equity	20%	MSCI ACWI ex US IMI	
Global Equity	12%	MSCI ACWI IMI	
Fixed income	18%	Blmbg Aggregate	
Private Credit	2%	50% Morningstar Leverage Loans, 50% Bl	oomberg High
		Yield Corp, + 1%S&P LSTA 100/Bloom	oerg High 2%
		Yield 50/50 + 1%	Commented [CN3]: Reason for change: Morningstar acquired
Real Estate	10%	NCREIF Total Index	the index from S&P. No change in the index, just a name change.
Private Infrastructure	2%	FTSE Developed Core Developed 50/50 I	ndex
Private equity	10%	Cambridge Global Private Equity S&P 500	
		Index+3.0% (1 Quarter Lagged)	Meeting
Cash Equivalents	1%	FTSE 1 Mo T-Bill	

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^{**}The Fixed Income asset class y and Private Credit policy weights are adjusted each month such that the Private Credit weight is set equal to the invested capital, up to the Long Term Target of 2%. The uninvested capital is allocated to Fixed Income. This process reflects the practical implementation of non-publicly traded investments.

^{***} Cash equivalents will consist of the assets in the Short-Term account used for benefit payments. Target may exceed the max when necessary to meet the current obligations of the system for a period of ninety (90) days as enumerated in Section 25-11-121 of the Mississippi Code, Annotated (1972, as amended).

Total 100%

The current long-term performance measurement for each asset class is as follows:

Asset Class	Benchmark

44% Russell 3000 Index, 36% MSCI ACWI ex US **Public Equities**

IMI Index, and 20% MSCI ACWI IMI

Cambridge Global Private EquityS&P 500 + 3% (1 Private Equity

Quarter Lagged) *

Fixed Income Bloomberg Barclays Aggregate Index

50% Morningstar Leverage Loans, 50% Bloomberg

High Yield Corp, + 1%S&P LSTA 100/Bloomberg

High Yield 50/50 + 1%

Real Estate NCREIF Property Index

Private Infrastructure FTSE Developed Core 50/50 Index

Cash Equivalents

Private Credit

30-day U.S. T-bills

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^{*} S&P 500 Index +5% through 3/31/13; then S&P 500 Index +3% through 6/30/2022; thereafter S&P 500 Index +5% through 3/31/13; then S&P 500 Index +3% through 6/30/2022; then the S&P 500 + 3% (1 Qtr Lag) through 6/30/2023; thereafter Cambridge Global Private Equity the S&P 500 + 3% (1 Qtr Lag) with 3Q2022 equal to actual Private Equity returns.

Appendix B

PERS of Mississippi

Investment Strategy for Public Equities

Investment Strategy Statement for Public Equities

Strategic Objective of Investing in Public Equities

The strategic objective of investing in publicly traded equities is to maximize the long term, total return of the PERS portfolio.

Implementation:

The strategic objective will be met by investing in a mix of the following:

- U.S. Large, Mid, and Small Cap portfolios
- Non-US Large Cap developed market, emerging markets, and Small Cap portfolios
- Global portfolios
- Both active and passive strategies can be utilized

The current public equity target allocations are as follows:

	<u>Total Portfolio</u>	Asset Class	Benchmark Index
Total US	25%	44%	Russell 3000
Total Non-US	20%	36%	MSCI ACWI ex-US IMI
Global	<u>12%</u>	<u>20%</u>	MSCI ACWI IMI
	57%	100%	

The performance goal of the public equity portfolio is to exceed the return, while emulating the characteristics of the public equity benchmark. The portfolio will be structured so that no one factor will dominate over other factors relative to the benchmark. Factors include investment style (e.g., growth and value), capitalization, industry sector, individual security and region.

^{*}Public Equity structure reviewed and adopted in 12.2021 for Global and 2.2022 for US and Non-US

Appendix C

PERS of Mississippi

Investment Strategy for Private Equity

Investment Strategy Statement for Private Equity

Strategic Objective of Investing in Private Equity

The strategic objective of investing in private equity is to generate returns significantly in excess of those provided by publicly traded equities.

Implementation:

The portfolio when fully implemented will consist of U.S and non-U.S. private equity investments. Private equity investments are long term in nature, illiquid and are expected to outperform public equity investments over long periods of time.

Investments in the private equity portfolio may include:

- Venture Capital / Growth Equity
- Buyouts large, mid, & small
- Special Situations
 - o Mezzanine
 - o Distressed Opportunity
 - o Other niche strategies

The Board invests indirectly in these investments using two fully discretionary investment advisors.

The current private equity target allocation ranges are as follows:

Strategy Subsector	Asset Class	Benchmark		
Buyout	55% - 80%			
Venture Capital/Growth Equity	10% - 30%			
Special Situations	<u>5% - 30%</u>	<u> </u>	-	
Total Private Equity	100%	Cambridge	Global	Private
EquityS&P 500 +3% (1 Quarter Lagged)				

^{*}Private Equity structure reviewed and adopted 08.2022

Appendix D

PERS of Mississippi

Investment Strategy for Fixed Income

Investment Strategy Statement for Fixed Income

Strategic Objective of Investing in Fixed Income

The strategic objective of investing in fixed income is to diversify the portfolio and to generate income at levels of investment risk and return that fall between cash equivalents and equities.

Implementation:

Portfolios of primarily high-quality fixed income securities will be managed to exceed the returns of the Bloomberg Barclays Aggregate Index. The overall portfolio will be broadly diversified by sector, quality and maturity across the range of permitted fixed income investments. The portfolio will include both passive and actively managed accounts.

The current PERS fixed income portfolio includes U.S. Core, Core-Plus and global bond portfolios, Emerging Market Debt, and Short Duration.

The long-term fixed income portfolio target structure is as follows:

Sub Class	Total Portfolio	Asset Class	Benchmark Index
Emerging Markets Deb	ot 1.8%	10%	EMBI Global Diversified
Core-Plus	8%	45%	BB Aggregate
U.S. Core	3.6%	20%	BB Aggregate
Global	3.6%	20%	BB Global Aggregate (hedged)
Short Duration	<u>1%</u>	5%	BB Gov/Credit 1-3 Year
	18%	100%	

^{*}Fixed Income structure reviewed and adopted 12.2022

Commented [CN5]: Done to include the benchmark for Short Duration

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Appendix E

PERS of Mississippi

Investment Strategy for Private Credit

Investment Strategy Statement for Private Credit

Strategic Objective of Investing in Private Credit

The strategic objective of investing in private credit is to generate a complementary source of total returns, income, and diversification compared to those provided by public fixed income.

Implementation:

The portfolio when fully implemented will consist of non-bank issued credit through illiquid vehicles. Private credit investments are long term in nature, illiquid and are expected to outperform their public counterparts while offering a range of potential benefits such as:

- · Additional yield
- · Contractual income
- Security private credit tends to offer higher recovery values than public market credit
- Diversification
- · Inflation protection

Investments in the private credit portfolio may include:

- Direct Lending (Non-Syndicated), Mezzanine
- Real Asset Lending
- Structured Credit (CLO, ABS)
- Distressed/Special Situations
- Specialty Finance (Consumer Lending, Franchise Lending, etc.)
- Asset-Based Lending (Auto, Aircraft, Rail Cars, Shipping)
- Multi-Strategy
- Other Niche (Insurance-Linked, Royalties)

Strategy Subsector	Asset Class	Benchmark
Direct Lending	60%-40%	
Strategic Lending	60%-40%	
Total Private Credit	100%	50% Morningstar Leverage Loans,
		50% Bloomberg High Yield Corp, + 1%

The benchmark for private credit will be a blend of 50% S&P/LSTA 100 / 50% Bloomberg Hig Yield Index Plus 1%.

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^{*}Private Credit addition to the portfolio approved in June 2022

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Appendix F

PERS of Mississippi

Investment Strategy for Real Estate

Investment Strategy Statement for Real Estate

Strategic Objectives of Investing in Real Estate

The strategic objective of PERS' investment in real estate is to enhance the investment portfolio return through long-term capital appreciation and income. These investments enhance diversification of the PERS overall investments portfolio due to real estate's low correlation with stocks and bonds, while providing a hedge against inflation. The real estate asset class includes investments in both private and public real estate assets, and other real asset investments, including timberland.

All real estate investments will be made in a manner consistent with the fiduciary standards of the prudent person rule. The selection of Investment Managers/Funds and the development of investment policy will be designed to enhance diversification within the real estate program's portfolio, thereby limiting exposure to any one investment, organization, real estate property type or geographic region.

Consistent with the current investment philosophy, the Real Estate Investment Program will utilize: (1) discretionary commingled fund and limited partnership investment vehicles that are sponsored by real estate/timber Investment Managers, and (2) publicly traded real estate securities portfolios managed by Investment Managers.

*Real Estate structure reviewed and adopted 12.2019

Implementation:

The PERS allocation to real estate will remain within the limits authorized by statute, with a current target allocation up to 10% of the PERS total portfolio market value. The real estate program will be comprised of three different, but complementary components – Core and Non-Core funds, and REITS.

- 1. <u>Core Portfolio</u> Core investments include existing, substantially leased incomeproducing properties, held within a portfolio that exhibits reasonable economic diversification. Core properties within the designated Core commingled funds; therefore, should have most of the following characteristics: existing properties that demonstrate predictable income flows with a high proportion of anticipated total return arising from current income and cash flow; total portfolio debt will be limited to fifty percent (50%).
- 2. <u>Non-Core Portfolio</u> Non-Core investments represent those properties and/or investment strategies that require specialized acquisition and management expertise or skill to mitigate the business and leasing risk that may be associated with individual investments. These investments have greater associated volatility compared to Core investments and as such provide expected higher yields through appreciation than those

associated with Core investments. Typically, properties will involve significant appreciation, development, lease-up, development and/or re-development risks. Total portfolio debt is limited to seventy percent (70%).

• 3. <u>Public Real Estate Securities</u> – Public real estate securities include both public Real Estate Investment Trusts (REITs) and public Real Estate Operating Companies (REOCs). A REIT is a corporation or business trust that combines the capital of many investors to acquire income producing real estate. A REIT is generally not required to pay corporate tax if it distributes at least 90% of its taxable income to shareholders each year.

A REOC is also a public company whose primary business is the ownership and/or operation of commercial real estate properties but has elected not to be taxed as a REIT. REOCs are subject to corporate taxation and are not required to pay dividends. The System's objective for its real estate portfolio is income generation; therefore, investments in public real estate securities will be comprised primarily of REITs.

The Long-Term Real Estate portfolio structure will be as follows:

Strategy	Total Portfolio	Asset Class	Benchmark
Core	7%	70%	NFI-ODCE Equal Weight
Value-Added	1.5%	15%	NCREIF Total Index
REITS (US/Global)	1.5%	15%	US Select REIT/NAREIT
,	10%	100%	

^{*}Real Estate structure reviewed and adopted 12.2019



PERS of Mississippi

Investment Strategy for Infrastructure

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Investment Strategy Statement for Infrastructure

Strategic Objectives for Investing in Infrastructure

By investing in private infrastructure, PERS of MS looks to benefit from the long-term capital appreciation and income, with a low correlation to public equities and fixed income, with broader economic cycles. An expected benefit will be lower volatility of the total portfolio, considering real asset investments traditionally exhibit lower volatility than equity asset classes.

Infrastructure assets are real assets with an extended-use life, which provide essential economic and social services that facilitate the movement of people, goods, and ideas. These services traditionally have higher barriers to entry or highly regulated markets with stable demand and defensive income streams. Infrastructure is also considered an inflation hedge due to the protection of long-term contracts, essential services provided, and ability to pass increased cost along to the end user.

Infrastructure investments are typically long-term in nature; therefore, are highly illiquid. PERS of MS will measure the performance of the strategy by benchmarking the total net returns to FTSE Developed Core 50/50 Index as the primary benchmark.

Infrastructure investments by sector can include but are not limited to utilities, traditional energy, renewable energy/energy transition, transportation, digital, water/waste, and social.

Infrastructure is a global asset class and managers generally target investments in Organization for Economic Cooperation and Development ("OECD") countries. This typically results in significant investment activity in North America and Western Europe. Investments outside of OECD countries should be limited.

Implementation:

The infrastructure allocation of 2% was approved in June 2022. Portfolio construction will take several years to reach 2% of plan NAV due to the deployment timing of infrastructure managers.

Infrastructure can be accessed with open-end (perpetual) structures, similar to core real estate funds, and closed-end structures that are similar to value-added real estate. Open-end funds should provide returns with lower volatility and higher share of return from income. Closed-end funds will target returns that come from a mix of income and capital appreciation.

The portfolio should maintain suitable diversification across investment managers, sector exposure, and investment structure. The infrastructure portfolio should target:

- Open-end structures initially: with a target of no less 75% of NAV over the longer term;
- Majority of investments in OECD countries: with a target of 75% in OECD markets;
- Sector-diversified portfolio: with a target of no more than 30% in a single sector;
- Utilities, traditional energy, renewable energy/energy transition, transportation, digital infrastructure, water/waste, and social.

^{*} Infrastructure addition to the portfolio approved in June 2022

Appendix H

PERS of Mississippi

Investment Strategy for Cash Equivalents

Investment Strategy Statement for Cash Equivalents

Strategic Objective of Investing in Cash Equivalents

The strategic objective of investing in cash equivalents is to ensure at least a minimal degree of yield is achieved on cash waiting to be invested in longer term assets or to be paid out as benefits.

Implementation:

Cash remaining in any PERS account is automatically swept into the custodial bank Government Short-Term Investment Fund (GSTIF) account at the close of each business day. While managers are encouraged to remain fully invested at all times, frictional cash is often part of their portfolios. Additionally, the PERS Short-Term account used for funding payrolls is 100% invested in cash equivalent vehicles.

The Board guidelines for cash equivalent investments are as follows:

- 1. The highest yielding instruments commensurate within appropriate risks, maturity, and liquidity considerations will be selected.
- 2. Commercial paper investments short-term obligations must be of corporations with either no long-term debt or with long-term debt of A or better by Standard and Poor's Corporation or Moody's Investment Service and whose short-term obligations are of A-2 or P-2 or better ratings by Standard and Poor's and Moody's Investment Service respectively. Issues of bank holding companies and Savings and Loan Associations are not approved investments;
- Funds may be deposited in federally insured institutions domiciled in the State of Mississippi or at the System's custodial bank.
- 4. Repurchase Agreements must be adequately collateralized by obligations of the U. S. Government or its agencies that are purchasable by the System under state statutes. The market value of collateral must be equal to or greater than one hundred and two percent (102%) of the funds sold in any repurchase agreements. The market value of the collateral must be monitored daily to ensure this ratio is maintained.

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Appendix G

PERS of Mississippi

Other Investment Related Policies

Other Investment Related Policies

PERS Board of Trustees Divestment Policy Position Statement Adopted 6.21.05

As fiduciaries with the duty to act solely in the interests of the members and beneficiaries of the Public Employees Retirement System of Mississippi and all other systems whose assets are invested within the omnibus PERS portfolio, the PERS Board acknowledges and declares its investment decisions will be governed by the responsibilities of loyalty and care.

Loyalty is defined as the duty to act solely in the best interest of those whose interests are at stake, while care is defined as adherence to the Prudent Investor Rule which requires trustees to owe a duty to the System to invest and manage the funds of the trust as a prudent investor would, in light of the purposes, terms, distribution requirements, and other circumstances of the trust.

This standard requires the exercise of reasonable care, skill, and caution, and is to be applied to investments not in isolation but in the context of the trust portfolio and as a part of an overall investment strategy, which should incorporate risk and return objectives reasonably suitable to the trust. In making and implementing investment decisions, the trustee has a duty to diversify the investments of the trust unless, under the circumstances, it is prudent not to do so. In addition, the trustee must:

- 1. Conform to fundamental fiduciary duties of loyalty and impartiality
- 2. Act with prudence in deciding whether and how to delegate authority and in the selection and supervision of agents
- 3. Incur only costs that are reasonable in amount and appropriate to the investment responsibilities of the trusteeship.

Though as individuals, board members may have personal opinions or concerns regarding the potential political, environmental, social, or governance impact of companies in which PERS invests, when acting in its official capacity, the PERS Board will not approve any investment prohibition or divestment mandate that would violate the fiduciary standards of loyalty and care.

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Investment Policy Statement

Defined Benefit Plan

Revised & Adopted 8.2024

I. Statement of Investment Policy

A. Purpose

The purpose of this document is to define the investment objectives of The Public Employees' Retirement System of Mississippi (PERS) to assist the Board and Investment Staff in effectively managing PERS assets. This statement establishes the policies and describes the organization and objectives of the PERS' investment program in accordance with Section 25-11-121 of the Mississippi Code, Annotated (1972, as amended). In addition, it establishes a framework for monitoring investment performance, and promoting effective communication between the Board, Investment Staff, Investment Consultants and the external Investment Managers. This policy provides a framework which allows sufficient flexibility to take advantage of investment opportunities, while setting reasonable parameters to ensure prudence and care in the execution of the investment program.

B. Background

The Public Employees' Retirement System of Mississippi was established by the State legislature for the purpose of providing retirement benefits to all employees of public entities in Mississippi. The System also administers the Mississippi Highway Safety Patrol Retirement System, the Supplemental Legislative Retirement Plan, the Municipal Retirement Systems of Mississippi, the Governmental Employees' Deferred Compensation Plan & Trust and the Optional Retirement Plan. This responsibility includes the investment of plan assets and the selection of investment options offered within the defined contribution plans administered.

The Public Employees' Retirement System of Mississippi is committed to ensuring secure retirement benefits are available for its current and future retirees through the prudent investment of its assets.

C. Investment Objectives

The primary objective of the investment program is to ensure that PERS meets its financial responsibilities to provide stable benefits for its members. As such the investment program strives to:

- a) Achieve an annual rate of return as outlined in the Board of Trustees current funding policy.
- b) Protect the investment portfolio from severe extended declines in asset value during periods of adverse market conditions, by prudent diversification of assets.
- c) Ensure adequate liquidity is available to meet all benefit payments and other cash requirements.
- d) Ensure total portfolio risk is controlled through diversification by asset class, investment approach and by individual investments within each asset class.

D. Investment Constraints

a) <u>Laws and Regulations</u> – The specific types of investments in which the System is authorized to invest are enumerated in Section 25-11-121 of the Mississippi Code, Annotated (1972, as amended).

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- b) <u>Time Horizon</u> Acknowledging the impact of annual investment returns on the actuarial evaluation, PERS views the appropriate investment time horizon for a public pension plan to be thirty (30) years.
- c) <u>Liquidity Requirements</u> Annual liquidity requirements must be considered when designing the portfolio structure.

E. Risk Controls

PERS' greatest risk is that plan assets will not support liabilities over the long term. To help mitigate this concern the PERS Board conducts annual actuarial valuations to evaluate the funded status of the System. Additionally, at least every five years, an independent external audit of the actuary is conducted to ensure the assumptions and calculation methods used are appropriate for properly computing the liabilities of the System.

F. Strategic Objective

The objective of PERS is to seek to provide financial security for our members, retirees and beneficiaries. The Board's strategic investment objectives are to maximize total return on assets, preserve principal and to attain competitive investment results. By achieving the strategic objectives, the Board seeks to be able to provide adequate benefits and maintain stable contribution rates.

G. Implementation

The strategic asset allocation is the primary tool for reaching the investment objectives. The asset allocation decision is based on an evaluation of both expected returns and risk levels for the allowable asset classes. In making the asset allocation decision the Board must strike a balance between the desired level of risk and return. The result of the asset allocation decision should be a well-diversified portfolio which reflects both the Board's desired level of return as well as the Board's risk tolerance level for the portfolio.

II. Roles and Responsibilities

A. Board of Trustees

PERS' investment activities are governed by a ten-member Board of Trustees which is responsible for directing the investment program in accordance with the laws of the State of Mississippi. As fiduciaries of a public pension fund the PERS trustees rely heavily on internal staff, consultants, actuaries and other contracted service providers to assist them in this process.

The Board is responsible for:

- Approval of long-term risk tolerance and asset allocation decisions.
- Approval of all formal investment policies.
- Approval of the investment structure within the asset allocation policy structure.
- Selection, retention and termination of external managers, investment consultants and custodial banks.
- Periodically approving the PERS Investment Policy Statement.

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Information and recommendations related to all investment program activities and policies are provided to the Board of Trustees by the Investment Staff and Consultant to aide in the decision-making process.

B. Executive Director

The Board employs the Executive Director who is responsible for broad oversight of the investment program and for ensuring PERS has in place the appropriate resources, training opportunities, and compensation structures to attract and retain a competent and qualified Investment Staff.

C. Investment Staff

The Chief Investment Officer (CIO), as head of the Investment Staff, is charged with maintaining the integrity of the investment program. This responsibility includes working directly with the Executive Director and Board on the development of investment policy, asset allocation decisions, portfolio structure, Investment Manager/Consultant selection and termination, and custodian selection. The CIO is charged with providing advice and recommendations to the Board on all related investment matters. It is the responsibility of the CIO to make all necessary information available to the Board members to assist them in making prudent, informed investment decisions.

The Investment Staff is responsible for ensuring the Board's investment policies are implemented, and for oversight of the external Investment Managers. Staff is charged with discharging their investment duties solely in the interest of the members and benefit recipients of PERS.

The Staff will ensure appropriate performance reporting schedules are in place in order to facilitate the Board's monitoring of the investment program. The Staff's primary responsibilities include:

- Monitoring Investment Manager's compliance to the guidelines established in their Investment Management Agreements (IMA) with PERS
- Meeting and/or communicating with external managers regularly to review investment strategies and results
- Managing the short-term account assets to ensure monthly benefit payrolls are funded
- Recommending investment program enhancements
- Implement the adopted rebalancing policy

D. Investment Consultant

The Investment Consultant is charged with assisting the Investment Staff in providing advice and recommendations to the Board on all investment matters, and to discharge their investment duties solely in the interest of the PERS members and benefit recipients. The Consultant's responsibility is to work with the Board, Executive Director, and Staff to assist in the prudent management of the investment process.

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The Consultant will attend all investment related meetings of the Board and will provide an independent prospective on PERS' investment goals, structure performance and managers. The Consultant will review asset allocation, manager structure and performance and make recommendations to the Board as appropriate. The Consultant assists in the manager search process. The Consultant will also assist in keeping the Board informed as to changes within the pension and investment communities that could affect PERS.

E. Investment Managers

External Investment Managers are retained because of their skill and expertise within a specialized part of the PERS portfolio. Investment managers are charged with managing the assets and the allocation of the assets within his/her control in compliance with the policies, guidelines and objectives included in their Investment Management Agreement with PERS.

Investment Managers will construct and manage investment portfolios which are consistent with the investment philosophy and disciplines for which they were hired. All Investment Managers provide periodic reporting as directed by the Investment Staff.

Each Investment Manager will act as a fiduciary to PERS. Further, each will be responsible for achieving best execution in all trades including foreign exchange transactions. Trades must meet the test of best execution as defined under Section 28(e) of the Securities and Exchange Act of 1934.

F. Custodial Bank

The custodial bank is responsible for settling all security trades as authorized by the Investment Managers. The bank will also maintain accurate records of all transactions related to investment activity. The custodial bank will serve as trustee of all assets within its control. It will also be responsible for capturing and recording all monies due to PERS from investment activities and investment income. The custodial bank also is responsible for all PERS securities lending activities, income collection and record keeping.

III. Portfolio Review and Evaluation

Periodically the Board reviews and evaluates reports on the investment performance of the PERS' portfolio. These reviews will be conducted for each Investment Manager portfolio, as well as at the total fund level. Performance reports will be generated by the Investment Consultant and will include performance data, asset allocation and peer group comparison information. The Board will place greater emphasis on long-term rather than short-term results.

The Board recognizes that though its investments are subject to short-term volatility, it is critical that a long-term investment focus be maintained. This prevents ad hoc revisions to its philosophy and policies in reaction to either speculation or short-term market fluctuations. In order to preserve this long-term view, the Board utilizes the following formal review schedule:

A. Schedules

Formal Review Agenda Item

Total Fund Performance
Broad Asset Allocation
Manager Structure
Investment Policy

Review Schedule

Quarterly
At least every five years
At least every three years
Periodically

B. Strategic Objective

The objective of PERS is to seek to provide financial security for our members, retirees and beneficiaries. The Board's strategic investment objectives are to maximize total return on assets, preserve principal and to attain competitive investment results. By achieving the strategic objectives, the Board seeks to be able to provide adequate benefits and maintain stable contribution rates.

C. Implementation

The strategic asset allocation is the primary tool for reaching the investment objectives. The asset allocation decision is based on an evaluation of both expected returns and risk levels for the allowable asset classes. In making the asset allocation decision the Board must strike a balance between the desired level of risk and return. The result of the asset allocation decision should be a well-diversified portfolio which reflects both the Board's desired level of return as well as the Board's risk tolerance level for the portfolio.

D. Rebalancing

The Board will adopt a rebalancing policy at the time a strategic asset allocation policy is adopted. Staff will be responsible for implementing the rebalancing activity as contained in the policy.

IV. Miscellaneous

A. Standard of Care

The standard of care which governs members of the Board of Trustees is the prudent person standard. This standard requires fiduciaries to discharge their duties solely in the interests of participants and their beneficiaries with such care, skill, prudence, and diligence as a person acting in like circumstances would exercise in the conduct of an enterprise of similar character and with similar aims.

B. Ethics and Conflicts of Interest

As it pertains to ethics and conflicts of interest, it is understood that:

• All Board members are fund fiduciaries with a duty of loyalty to PERS and responsibility to observe the exclusive benefit rule.

- All members of the Board, Executive Director and Investment Staff will disclose any conflict of interest related to PERS investments.
- All Investment Managers, Consultants and custodial banks shall be required to disclose all third-party relationships, which in any way involve payment of fees, shared fees or any "soft dollar" exchanges not otherwise disclosed.
- Upon request, each Investment Manager and Consultant will disclose its ethics policy to the Board.

C. Investment Management Fees

Investment management fees are closely monitored by the PERS Investment Staff for reasonableness. Comparative fee information is obtained from various sources including the Investment Consultant and other annual fee surveys in which PERS participates. Fees paid to each external investment management firm are presented to the Board of Trustees periodically.

D. Proxy Voting

The PERS' Board charged its Investment Managers with the responsibility of voting proxies on PERS' behalf and in PERS' best interest. It is the intent of the Board to have proxies voted in a manner solely to protect the interest of its participants. As a rule, proxies should be voted in such a manner as to avoid activity which would:

- Be detrimental to the long-term interests of the company
- Excessively insulate present management from take-over or stockholder rejection
- Reduce investment liquidity
- Reduce shareholder interests.

Proxies are to be voted and submitted in adequate time for the proxy to be received by the appropriate corporate official. A record of the proxy voting positions taken by each manager should be reported to the PERS the 30th calendar day following quarter-end.

E. Securities Lending

Lending securities to qualified borrowers enables PERS to realize incremental income on assets currently in the portfolio. This represents an opportunity to increase the return on the fund by reinvesting the income generated.

The custodial bank, as lending agent for PERS, is responsible for the lending and collateral reinvestment activities. All loans will have an initial collateral margin of 102% for U.S. securities and 105% for non-U.S. securities. At no time will the collateral margin be less than 100% of the current market value. Loaned securities will be marked –to–market daily to ensure collateral is maintained at the minimum required levels. All collateral reinvestments will be done within the guidelines mandated in the Securities Lending Agreement and Guaranty.

F. Manager Watch List or Termination Guidelines

Managers may be placed on a Watch List for either qualitative or quantitative factors.

1) Qualitative Factors

Qualitative factors that may be grounds for being placed on a Watch List or terminated include, but are not limited to the following:

- Violation of investment guidelines
- Deviation from stated investment style
- Turnover of key personnel
- Change in ownership
- Litigation
- Failure to disclose significant information including potential conflicts of interest, regulatory agency investigations and/or sanctions, or any other such pertinent occurrences

The Board can place a manager on the Watch List at any time based on qualitative factors. Watch List status, based on qualitative factors, mandates closer monitoring of the manager's organization. The Board will notify the manager of its decision to place the firm on a Watch List. At the end of six months the Board will reevaluate and decide what action, if any, to take.

2) **Quantitative Factors**

Quantitative factors pertain primarily to performance. The performance of the Plan's Investment Managers is reviewed by the Board on a continuing basis. Below are some of the factors to be considered in determining the appropriateness of placing an Investment Manager on a Watch List.

PERFORMANCE TEST	BENCHMARK	FAIL CRITERIA
Test 1 – Performance	Annualized performance	Managers fail if they underperform
relative to market index,	relative to the agreed upon	their index or benchmark over 4
for 4 consecutive quarters	market index or appropriate	quarters of rolling 3-year periods.
of rolling 3-year period	benchmark	
returns		
Test 2 – Performance	Performance compared to	Managers fail if their performance is
relative to a peer group for	that of an appropriate peer	below the 50% percentile over 4
4 consecutive quarters of	group	quarters of rolling 3-year periods
rolling 3-year periods		
returns		

The Board will notify a manager of its decision to place them on a Watch List. The Investment Manager will be informed that failure to show steady improvement in performance could result in termination, or a reduction of the assets managed for PERS. The Board, at its discretion, can place an Investment Manager on the Watch List, or terminate a manager at any time with 30 days' notice.

Appendix A

PERS of Mississippi

Strategic Asset Allocation Policy

Strategic Asset Allocation Policy

Adopted June 2022

The primary method utilized in achieving the return objectives for PERS is the allocation of assets. The Board adopts an asset allocation policy as the framework to ensure the assets are invested in a prudently managed and well diversified portfolio designed to meet the established return targets. The strategic target allocation below is intended to accomplish the Board's objectives over time. In addition to the target allocations the Board has established target ranges for each asset class. These ranges provide the Board and Investment Staff the latitude to exercise management discretion in a tactical manner as appropriate.

Strategic Asset Allocation	Policy Target	Rebalancing Ranges
Public Equities	57%	±5%
Private Equity	10%	$\pm 5\%$
Real Estate	10%	$\pm 5\%$
Private Infrastructure*	2%	$\pm 2\%$
Fixed Income	18%	$\pm 5\%$
Private Credit**	2%	$\pm 2\%$
Cash Equivalents***	1%	$\pm 1\%$

^{*}The Domestic Equity asset class and Private Infrastructure policy weights are adjusted each month such that the Private Infrastructure weight is set equal to the invested capital, up to the Long Term Target of 2%. The uninvested capital is allocated to Domestic Equity. This process reflects the practical implementation of non-publicly traded investments.

The Total Fund Benchmark is detailed in the table below:

Asset Class	Policy Target	Benchmark
U.S. Equity	25%	Russell 3000 Index
Non-U.S. Equity	20%	MSCI ACWI ex US IMI
Global Equity	12%	MSCI ACWI IMI
Fixed income	18%	Blmbg Aggregate
Private Credit	2%	50% Morningstar Leverage Loans, 50% Bloomberg Hig
		Yield Corp, + 1%
Real Estate	10%	NCREIF Total Index
Private Infrastructure	2%	FTSE Developed Core Developed 50/50 Index
Private equity	10%	Cambridge Global Private Equity
Cash Equivalents	1%	FTSE 1 Mo T-Bill
Total	100%	

^{**}The Fixed Income asset class y and Private Credit policy weights are adjusted each month such that the Private Credit weight is set equal to the invested capital, up to the Long Term Target of 2%. The uninvested capital is allocated to Fixed Income. This process reflects the practical implementation of non-publicly traded investments.

^{***} Cash equivalents will consist of the assets in the Short-Term account used for benefit payments. Target may exceed the max when necessary to meet the current obligations of the system for a period of ninety (90) days as enumerated in Section 25-11-121 of the Mississippi Code, Annotated (1972, as amended).

The current long-term performance measurement for each asset class is as follows:

Asset Class Benchmark

Public Equities 44% Russell 3000 Index, 36% MSCI ACWI ex US

IMI Index, and 20% MSCI ACWI IMI

Private Equity Cambridge Global Private Equity*

Fixed Income Bloomberg Barclays Aggregate Index

Private Credit 50% Morningstar Leverage Loans, 50% Bloomberg

High Yield Corp, + 1%

Real Estate NCREIF Property Index

Private Infrastructure FTSE Developed Core 50/50 Index

Cash Equivalents

30-day U.S. T-bills

^{*} S&P 500 Index +5% through 3/31/13; then S&P 500 Index +3% through 6/30/2022; S&P 500 Index +5% through 3/31/13; then S&P 500 Index +3% through 6/30/2022; then the S&P 500 + 3% (1 Qtr Lag) through 6/30/2023; thereafter Cambridge Global Private Equity .

Appendix B

PERS of Mississippi

Investment Strategy for Public Equities

Investment Strategy Statement for Public Equities

Strategic Objective of Investing in Public Equities

The strategic objective of investing in publicly traded equities is to maximize the long term, total return of the PERS portfolio.

Implementation:

The strategic objective will be met by investing in a mix of the following:

- U.S. Large, Mid, and Small Cap portfolios
- Non-US Large Cap developed market, emerging markets, and Small Cap portfolios
- Global portfolios
- Both active and passive strategies can be utilized

The current public equity target allocations are as follows:

	<u>Total Portfolio</u>	Asset Class	Benchmark Index
Total US	25%	44%	Russell 3000
Total Non-US	20%	36%	MSCI ACWI ex-US IMI
Global	<u>12%</u>	<u>20%</u>	MSCI ACWI IMI
	57%	100%	

The performance goal of the public equity portfolio is to exceed the return, while emulating the characteristics of the public equity benchmark. The portfolio will be structured so that no one factor will dominate over other factors relative to the benchmark. Factors include investment style (e.g., growth and value), capitalization, industry sector, individual security and region.

^{*}Public Equity structure reviewed and adopted in 12.2021 for Global and 2.2022 for US and Non-US

Appendix C

PERS of Mississippi

Investment Strategy for Private Equity

Investment Strategy Statement for Private Equity

Strategic Objective of Investing in Private Equity

The strategic objective of investing in private equity is to generate returns significantly in excess of those provided by publicly traded equities.

Implementation:

The portfolio when fully implemented will consist of U.S and non-U.S. private equity investments. Private equity investments are long term in nature, illiquid and are expected to outperform public equity investments over long periods of time.

Investments in the private equity portfolio may include:

- Venture Capital / Growth Equity
- Buyouts large, mid, & small
- Special Situations
 - o Mezzanine
 - o Distressed Opportunity
 - o Other niche strategies

The Board invests indirectly in these investments using two fully discretionary investment advisors.

The current private equity target allocation ranges are as follows:

Strategy Subsector	Asset Class	Benchmark
Buyout	55% - 80%	
Venture Capital/Growth Equity	10% - 30%	
Special Situations	<u>5% - 30%</u>	
Total Private Equity	100%	Cambridge Global Private Equity

^{*}Private Equity structure reviewed and adopted 08.2022

Appendix D

PERS of Mississippi

Investment Strategy for Fixed Income

Investment Strategy Statement for Fixed Income

Strategic Objective of Investing in Fixed Income

The strategic objective of investing in fixed income is to diversify the portfolio and to generate income at levels of investment risk and return that fall between cash equivalents and equities.

Implementation:

Portfolios of primarily high-quality fixed income securities will be managed to exceed the returns of the Bloomberg Barclays Aggregate Index. The overall portfolio will be broadly diversified by sector, quality and maturity across the range of permitted fixed income investments. The portfolio will include both passive and actively managed accounts.

The current PERS fixed income portfolio includes U.S. Core, Core-Plus and global bond portfolios, Emerging Market Debt, and Short Duration.

The long-term fixed income portfolio target structure is as follows:

Sub Class	Total Portfolio	Asset Class	Benchmark Index
Emerging Markets De	bt 1.8%	10%	EMBI Global Diversified
Core-Plus	8%	45%	BB Aggregate
U.S. Core	3.6%	20%	BB Aggregate
Global	3.6%	20%	BB Global Aggregate (hedged)
Short Duration	<u>1%</u>	5%	BB Gov/Credit 1-3 Year
	18%	100%	

^{*}Fixed Income structure reviewed and adopted 12.2022

Appendix E

PERS of Mississippi

Investment Strategy for Private Credit

Investment Strategy Statement for Private Credit

Strategic Objective of Investing in Private Credit

The strategic objective of investing in private credit is to generate a complementary source of total returns, income, and diversification compared to those provided by public fixed income.

Implementation:

The portfolio when fully implemented will consist of non-bank issued credit through illiquid vehicles. Private credit investments are long term in nature, illiquid and are expected to outperform their public counterparts while offering a range of potential benefits such as:

- Additional yield
- Contractual income
- Security private credit tends to offer higher recovery values than public market credit
- Diversification
- Inflation protection

Investments in the private credit portfolio may include:

- Direct Lending (Non-Syndicated), Mezzanine
- Real Asset Lending
- Structured Credit (CLO, ABS)
- Distressed/Special Situations
- Specialty Finance (Consumer Lending, Franchise Lending, etc.)
- Asset-Based Lending (Auto, Aircraft, Rail Cars, Shipping)
- Multi-Strategy
- Other Niche (Insurance-Linked, Royalties)

Strategy Subsector	Asset Class	Benchmark
Direct Lending	60%-40%	
Strategic Lending	<u>60%-40%</u>	
Total Private Credit	100%	50% Morningstar Leverage Loans,
		50% Bloomberg High Yield Corp, + 1%

^{*}Private Credit addition to the portfolio approved in June 2022

Appendix F

PERS of Mississippi

Investment Strategy for Real Estate

Investment Strategy Statement for Real Estate

Strategic Objectives of Investing in Real Estate

The strategic objective of PERS' investment in real estate is to enhance the investment portfolio return through long-term capital appreciation and income. These investments enhance diversification of the PERS overall investments portfolio due to real estate's low correlation with stocks and bonds, while providing a hedge against inflation. The real estate asset class includes investments in both private and public real estate assets, and other real asset investments, including timberland.

All real estate investments will be made in a manner consistent with the fiduciary standards of the prudent person rule. The selection of Investment Managers/Funds and the development of investment policy will be designed to enhance diversification within the real estate program's portfolio, thereby limiting exposure to any one investment, organization, real estate property type or geographic region.

Consistent with the current investment philosophy, the Real Estate Investment Program will utilize: (1) discretionary commingled fund and limited partnership investment vehicles that are sponsored by real estate/timber Investment Managers, and (2) publicly traded real estate securities portfolios managed by Investment Managers.

*Real Estate structure reviewed and adopted 12.2019

Implementation:

The PERS allocation to real estate will remain within the limits authorized by statute, with a current target allocation up to 10% of the PERS total portfolio market value. The real estate program will be comprised of three different, but complementary components – Core and Non-Core funds, and REITS.

- 1. <u>Core Portfolio</u> Core investments include existing, substantially leased incomeproducing properties, held within a portfolio that exhibits reasonable economic diversification. Core properties within the designated Core commingled funds; therefore, should have most of the following characteristics: existing properties that demonstrate predictable income flows with a high proportion of anticipated total return arising from current income and cash flow; total portfolio debt will be limited to fifty percent (50%).
- 2. <u>Non-Core Portfolio</u> Non-Core investments represent those properties and/or investment strategies that require specialized acquisition and management expertise or skill to mitigate the business and leasing risk that may be associated with individual investments. These investments have greater associated volatility compared to Core investments and as such provide expected higher yields through appreciation than those

associated with Core investments. Typically, properties will involve significant appreciation, development, lease-up, development and/or re-development risks. Total portfolio debt is limited to seventy percent (70%).

• 3. Public Real Estate Securities – Public real estate securities include both public Real Estate Investment Trusts (REITs) and public Real Estate Operating Companies (REOCs). A REIT is a corporation or business trust that combines the capital of many investors to acquire income producing real estate. A REIT is generally not required to pay corporate tax if it distributes at least 90% of its taxable income to shareholders each year.

A REOC is also a public company whose primary business is the ownership and/or operation of commercial real estate properties but has elected not to be taxed as a REIT. REOCs are subject to corporate taxation and are not required to pay dividends. The System's objective for its real estate portfolio is income generation; therefore, investments in public real estate securities will be comprised primarily of REITs.

The Long-Term Real Estate portfolio structure will be as follows:

Strategy	Total Portfolio	Asset Class	Benchmark
Core	7%	70%	NFI-ODCE Equal Weight
Value-Added	1.5%	15%	NCREIF Total Index
REITS (US/Global)	1.5%	15%	US Select REIT/NAREIT
, , , , , , , , , , , , , , , , , , ,	10%	100%	

^{*}Real Estate structure reviewed and adopted 12.2019

Appendix G

PERS of Mississippi

Investment Strategy for Infrastructure

Investment Strategy Statement for Infrastructure

Strategic Objectives for Investing in Infrastructure

By investing in private infrastructure, PERS of MS looks to benefit from the long-term capital appreciation and income, with a low correlation to public equities and fixed income, with broader economic cycles. An expected benefit will be lower volatility of the total portfolio, considering real asset investments traditionally exhibit lower volatility than equity asset classes.

Infrastructure assets are real assets with an extended-use life, which provide essential economic and social services that facilitate the movement of people, goods, and ideas. These services traditionally have higher barriers to entry or highly regulated markets with stable demand and defensive income streams. Infrastructure is also considered an inflation hedge due to the protection of long-term contracts, essential services provided, and ability to pass increased cost along to the end user.

Infrastructure investments are typically long-term in nature; therefore, are highly illiquid. PERS of MS will measure the performance of the strategy by benchmarking the total net returns to FTSE Developed Core 50/50 Index as the primary benchmark.

Infrastructure investments by sector can include but are not limited to utilities, traditional energy, renewable energy/energy transition, transportation, digital, water/waste, and social.

Infrastructure is a global asset class and managers generally target investments in Organization for Economic Cooperation and Development ("OECD") countries. This typically results in significant investment activity in North America and Western Europe. Investments outside of OECD countries should be limited.

Implementation:

The infrastructure allocation of 2% was approved in June 2022. Portfolio construction will take several years to reach 2% of plan NAV due to the deployment timing of infrastructure managers.

Infrastructure can be accessed with open-end (perpetual) structures, similar to core real estate funds, and closed-end structures that are similar to value-added real estate. Open-end funds should provide returns with lower volatility and higher share of return from income. Closed-end funds will target returns that come from a mix of income and capital appreciation.

The portfolio should maintain suitable diversification across investment managers, sector exposure, and investment structure. The infrastructure portfolio should target:

- Open-end structures initially: with a target of no less 75% of NAV over the longer term;
- Majority of investments in OECD countries: with a target of 75% in OECD markets;
- Sector-diversified portfolio: with a target of no more than 30% in a single sector;
- Utilities, traditional energy, renewable energy/energy transition, transportation, digital infrastructure, water/waste, and social.

^{*} Infrastructure addition to the portfolio approved in June 2022

Appendix H

PERS of Mississippi

Investment Strategy for Cash Equivalents

Investment Strategy Statement for Cash Equivalents

Strategic Objective of Investing in Cash Equivalents

The strategic objective of investing in cash equivalents is to ensure at least a minimal degree of yield is achieved on cash waiting to be invested in longer term assets or to be paid out as benefits.

Implementation:

Cash remaining in any PERS account is automatically swept into the custodial bank Government Short-Term Investment Fund (GSTIF) account at the close of each business day. While managers are encouraged to remain fully invested at all times, frictional cash is often part of their portfolios. Additionally, the PERS Short-Term account used for funding payrolls is 100% invested in cash equivalent vehicles.

The Board guidelines for cash equivalent investments are as follows:

- 1. The highest yielding instruments commensurate within appropriate risks, maturity, and liquidity considerations will be selected.
- 2. Commercial paper investments short-term obligations must be of corporations with either no long-term debt or with long-term debt of A or better by Standard and Poor's Corporation or Moody's Investment Service and whose short-term obligations are of A-2 or P-2 or better ratings by Standard and Poor's and Moody's Investment Service respectively. Issues of bank holding companies and Savings and Loan Associations are not approved investments;
- 3. Funds may be deposited in federally insured institutions domiciled in the State of Mississippi or at the System's custodial bank.
- 4. Repurchase Agreements must be adequately collateralized by obligations of the U. S. Government or its agencies that are purchasable by the System under state statutes. The market value of collateral must be equal to or greater than one hundred and two percent (102%) of the funds sold in any repurchase agreements. The market value of the collateral must be monitored daily to ensure this ratio is maintained.

Appendix G

PERS of Mississippi

Other Investment Related Policies

Other Investment Related Policies

PERS Board of Trustees Divestment Policy Position Statement Adopted 6.21.05

As fiduciaries with the duty to act solely in the interests of the members and beneficiaries of the Public Employees Retirement System of Mississippi and all other systems whose assets are invested within the omnibus PERS portfolio, the PERS Board acknowledges and declares its investment decisions will be governed by the responsibilities of loyalty and care.

Loyalty is defined as the duty to act solely in the best interest of those whose interests are at stake, while care is defined as adherence to the Prudent Investor Rule which requires trustees to owe a duty to the System to invest and manage the funds of the trust as a prudent investor would, in light of the purposes, terms, distribution requirements, and other circumstances of the trust.

This standard requires the exercise of reasonable care, skill, and caution, and is to be applied to investments not in isolation but in the context of the trust portfolio and as a part of an overall investment strategy, which should incorporate risk and return objectives reasonably suitable to the trust. In making and implementing investment decisions, the trustee has a duty to diversify the investments of the trust unless, under the circumstances, it is prudent not to do so. In addition, the trustee must:

- 1. Conform to fundamental fiduciary duties of loyalty and impartiality
- 2. Act with prudence in deciding whether and how to delegate authority and in the selection and supervision of agents
- 3. Incur only costs that are reasonable in amount and appropriate to the investment responsibilities of the trusteeship.

Though as individuals, board members may have personal opinions or concerns regarding the potential political, environmental, social, or governance impact of companies in which PERS invests, when acting in its official capacity, the PERS Board will not approve any investment prohibition or divestment mandate that would violate the fiduciary standards of loyalty and care.



Public Equity Manager Preview

Domestic Small Cap

- Dimensional Fund Advisors Small Cap Value
- Riverbridge Partners Small Cap Growth
- Wellington Small Cap Core

Strategy	MS PERS Assets	Strategy Assets	MS PERS Inception
Small Cap Value Equity	\$332 million	\$19.7 billion	July 2002

Key Comments:

- Dimensional Fund Advisors' (DFA) investment philosophy stems from academic research conducted by Professors Eugene Fama and Kenneth French that finds that high book/market value stocks have higher expected returns than growth stocks.
 DFA's quantitative investment strategy in highly diversified portfolios of small companies with "deep" value characteristics is designed to capture the returns of small value stocks.
- For the 1-year period ending June 30, 2024 the DFA Small Cap Value portfolio returned 14.85%, outperforming its benchmark, the Russell 2000 Small Value index by approximately 397 basis points. For the 3-year period DFA returned 7.60% compared to -0.53% for the benchmark.
- DFA's 5-year return of 13.53% outperformed the benchmark by approximately 646 basis points. Since inception, DFA has outperformed its benchmark by approximately 218 basis points annually.



Strategy	MS PERS Assets	Strategy Assets	MS PERS Inception
Small Cap Growth Equity	\$313 million	\$2.6 billion	December 2013

Key Comments:

- Riverbridge believes earnings power determines the value of a franchise. They focus
 on companies that are building earnings power and intrinsic value of the company
 over long periods of time. They also look for high-quality growth companies that
 demonstrate the ability to sustain strong secular earnings growth, regardless of overall
 economic conditions.
- For the 1-year period ending June 30, 2024, the Riverbridge Small Cap Growth portfolio returned -2.24% underperforming its benchmark, the Russell 2000 Growth Index's return of 9.14%. For the 3-year period Riverbridge underperformed by approximately 390 basis points.
- For the 10-year period, Riverbridge outperformed by approximately 219 basis points and since inception Riverbridge has rturned 8.77% on an annualized basis, outperforming the benchmark return of 7.25%.



Strategy	MS PERS Assets	Strategy Assets	MS PERS Inception
Small Cap Core Equity	\$336 million	\$4.1 billion	July 2002

Key Comments:

- Wellington's strategy is bottom-up and fundamentally driven. The approach to portfolio construction is opportunistic, focusing on industry specific characteristics and global demographic trends.
- For the 1-year period ending June 30, 2024, the Wellington Small Cap Portfolio returned 9.84%, underperforming its benchmark, the Russell 2000 Small Stock Index, by approximately 22 basis points.
- Wellington's 3-year return of 2.30% outperformed the benchmark by approximately 488 basis points.
- Wellington's 5-year and 10-year returns have both beaten the benchmark and since inception Wellington has returned 12.70% outperforming the benchmark 295 basis points.





Mississippi Public Employees' Retirement System

US Small Cap Value Account Review

August 27, 2024

Lukas Smart, CFA, Senior Investment Director & Vice President Rob Cleary, Regional Director, Institutional Southeast

Dimensional Fund Advisors

Dimensional Place, 6300 Bee Cave Road, Building One Austin, TX 78746

This information is provided for Mississippi Public Employees' Retirement System, an institutional investor, at its specific request and is not intended for public use. Dimensional Fund Advisors LP is an investment advisor registered with the Securities and Exchange Commission.

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Agenda

- Firm Overview
- Market Landscape
- Mississippi PERS Small Cap Value Portfolio
- Appendix



Firm Overview



Firm Update

As of June 30, 2024

Organizational Updates

- More than 1,500 employees globally.
- \$740 billion in assets under management as of June 30, 2024.

Upcoming Events

Go to mydimensional.com/dimensional-events for the current schedule

Recently Published

RESEARCH

Adding Value in Large Caps

Since the US large cap market typically represents about 90% of the US stock market, many investors limit their US large cap exposure to index funds. But this approach could leave returns on the table. This paper shows that strategies designed to systematically pursue the size, value, and profitability premiums in US large caps can improve outcomes over the long term.

RESEARCH

The Case for Systematic Investing in Fixed Income

This paper shows that systematic fixed income portfolios targeting bonds with higher forward rates across different durations, credit qualities, and currencies can outperform benchmarks by over 1% per year, on average, and meet many investor goals and risk preferences, including inflation protection and a sustainability focus.

RESEARCH

Not Your Typical Capital Market Assumptions

Capital market assumptions (CMAs) can be useful for setting risk and return expectations and for long-term financial planning. While most CMAs likely fall within the wide range of reasonable estimates, they are inherently imprecise. Rather than relying on a single CMA estimate, investors should use a range of possible values to evaluate potential investment outcomes.



Dimensional at a Glance

As of June 30, 2024



Assets in US dollars.

"Dimensional" refers to the Dimensional separate but affiliated entities generally, rather than to one particular entity. These entities are Dimensional Fund Advisors LP, Dimensional Fund Advisors Ltd., Dimensional Ireland Limited, DFA Australia Limited, Dimensional Fund Advisors Canada ULC, Dimensional Fund Advisors Pte. Ltd., Dimensional Japan Ltd., and Dimensional Hong Kong Limited. Dimensional Hong Kong Limited is licensed by the Securities and Futures Commission to conduct Type 1 (dealing in securities) regulated activities only and does not provide asset management services.



A Heritage of Leading Research

The bar for research at Dimensional has been set by the best in the field



Eugene FamaUniversity of Chicago

Dimensional Director and Consultant, Dimensional,¹ 1981–present April 20

Kenneth French
Dartmouth College

Consultant, Dimensional,¹ 1986–present

Dimensional Director, 2006–present

NOBEL LAUREATE, 1997

Robert Merton

Director, Dimensional US Mutual Funds, 2003–2009

Resident Scientist, Dimensional Holdings Inc., 2009–present



Robert Novy-Marx University of Rochester

Consultant, Dimensional¹ 2014–present



Independent Director, Dimensional US Mutual Funds, 2017–2021

Lead Independent Director, Dimensional US Mutual Funds and ETF Trust, 2022–present Independent Director, Dimensional US Mutual Funds, 1981–2000 Independent Director, Dimensional US Mutual Funds, 1981–2012

Lead Independent Director, Dimensional US Mutual Funds, 2013–2021

"At Dimensional, we don't jump on every new idea that comes along. We're looking for what will stand up over a long period of time."

Eugene Fama Nobel laureate, 2013

^{1.} Dimensional Fund Advisors LP.



Implementation Requires Expertise

Adding value over benchmarks and peers through cost-efficient portfolio management, design, and trading



GERARD K. O'REILLY, PhD Co-Chief Executive Officer and Co-Chief Investment Officer

Research



SAVINA RIZOVA, PhD Co-Chief Investment Officer and Global Head of Research



PETE DILLARD Chief Data Officer and Head of Investment Analytics and Data

Investment Solutions



MARLENA LEE, PhD Global Head of Investment Solutions

Trading



RYAN WII FY Global Head of Equity Trading



JASON LAPPING Head of International Equity Trading



DAVID LaRUSSO Head of Fixed Income Trading



Portfolio Management



JED FOGDALL Global Head of Portfolio Management of Fixed Income



DAVE PLECHA Global Head



PAUL FOLEY Head of EMEA Portfolio Management



BHANU SINGH Chief Executive Officer, Australia and Senior Investment Director



MARY PHILLIPS Deputy Head of Portfolio Management, North America



ALLEN PU, PhD Deputy Head of Portfolio Management, North America



JOEL SCHNEIDER Deputy Head of Portfolio Management, North America



JIM WHITTINGTON Head of Responsible Investment and Senior Portfolio Manager



LACEY HUEBEL Head of Responsible Investment, North America and Senior Portfolio Manager



NICOLE HUNTER Head of Capital Markets



Dimensional Global Investment Solutions

Global AUM (billions) as of June 30, 2024



US Equity	41.3%
All Cap Core	\$128.4
All Cap Value	\$10.4
Growth	\$4.7
Large Cap	\$45.6
Large Cap Value	\$33.5
SMID Cap Value	\$27.4
Small Cap	\$29.0
Small Cap Value	\$19.7
Micro Cap	\$7.1
	\$305.7

Developed ex US Equity	17.7%
All Cap Core	\$61.4
All Cap Value	\$1.1
Growth	\$1.1
Large Cap	\$14.6
Large Cap Value	\$21.0
Small Cap	\$17.9
Small Cap Value	\$13.7
	\$130.7

Fixed Income	15.7%
US Taxable	\$58.6
US Tax-Exempt	\$9.0
Non-US and Global	\$40.4
Inflation-Protected	\$7.9
	\$115.8

Emerging Markets	9.7%
All Cap Core	\$42.2
Value	\$17.8
Large Cap	\$7.4
Small Cap	\$4.3
	\$71.7
Global Equity	9.8%
All Cap/Large Cap	\$61.3
Value	\$8.8
Small/SMID Cap	\$2.5
	\$72.5
REITs and Commodities	2.9%
Real Estate	\$20.1
Commodities	\$1.3
	\$21.4
Global Allocation and Target Date	2.9%
Global Allocation	\$20.1
Target Date	\$1.5

\$21.6

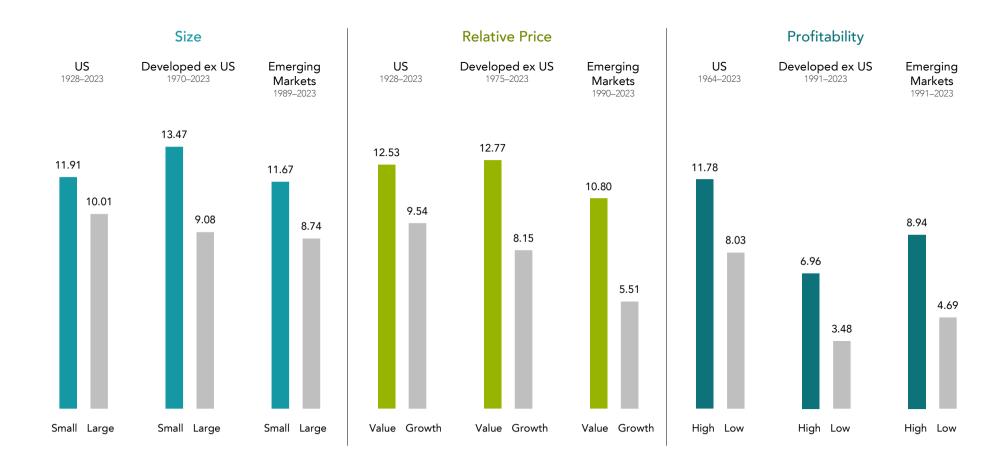
[&]quot;Dimensional" refers to the Dimensional separate but affiliated entities generally, rather than to one particular entity. These entities are Dimensional Fund Advisors LP, Dimensional Fund Advisors Ltd., Dimensional Ireland Limited, DFA Australia Limited, Dimensional Fund Advisors Canada ULC, Dimensional Fund Advisors Pte. Ltd., Dimensional Japan Ltd., and Dimensional Hong Kong Limited. Dimensional Hong Kong Limited is licensed by the Securities and Futures Commission to conduct Type 1 (dealing in securities) regulated activities only and does not provide asset management services.

All assets in US dollars. Numbers may not total 100% due to rounding.



Dimensions of Expected Returns

Illustrative index performance: annualized compound returns (%) in US dollars



Past performance is no guarantee of future results. Actual returns may be lower. Indices are not available for direct investment; therefore, their performance does not reflect the expenses associated with the management of an actual portfolio. In USD. Bars are represented by the following indices, in order: Dimensional US Small Cap Index, S&P 500 Index, Dimensional International Small Cap Index, MSCI World ex USA Index (gross div.), Dimensional Emerging Markets Small Index, MSCI Emerging Markets Index (gross div.), Fama/French US Value Research Index, Fama/French US Growth Research Index, Fama/French US High Profitability Index, Fama/French US Low Profitability Index, Fama/French US High Profitability Index, Fama/French US Low Profitability Index, Fama/French International High Profitability Index, Fama/French Emerging Markets High Profitability Index, Fama/French Emerging Markets Low Profitability Index. S&P data © 2024 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved. MSCI data © MSCI 2023, all rights reserved. The Dimensional and Fama/French Indices represent academic concepts that may be used in portfolio construction and are not available for direct investment or for use as a benchmark. See "Index Descriptions" in the appendix for descriptions of Dimensional and Fama/French index data.



Adding Value in All Aspects of Implementation

RESEARCH

Understand what drives expected returns

Implementation

PORTFOLIO DESIGN

Increase expected returns

Manage risks

Control costs

PORTFOLIO MANAGEMENT

Use up-to-date information to pursue premiums every day

Maximize the value of our holdings

TRADING

Use flexibility to reduce trading costs



Many Inputs Inform How We Design and Manage Portfolios

Long-term

Company Size

Relative Price

Profitability

Short-term

Investment

Momentum and Reversals

Securities Lending

Intra-day

Liquidity

Cash Flows

Current Holdings



Market Landscape



Global Size, Relative Price, and Profitability Returns

Returns (%), 2nd Quarter 2024



Past performance is no guarantee of future results.

Market segment (index representation) as follows: US Stock Market (Russell 3000 Index), Developed ex US Stocks (MSCI World ex USA IMI Index [net div.]), Emerging Markets (MSCI Emerging Markets IMI Index [net div.]). Market Returns are computed from index published security weights, Dimensional computed security returns and Dimensional classification of securities based on size, value, and profitability parameters. Within the US, Large Cap is defined as approximately the largest 87.5% of market capitalization in each country or region; Small Cap is approximately the smallest 10%. Within emerging markets, Large Cap is defined as approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as approximately the largest 85% of market capitalization in each country or region; Small Cap is approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as approximately the largest 85% of market capitalization in each country or region; Small Cap is approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as approximately the largest 85% of market capitalization in each country or region; Small Cap is approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as the 50% of market capitalization in each country or region; Small Cap is approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as the 50% of market capitalization in each country or region; Small Cap is approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as the 50% of market capitalization in each country or region; Small Cap is approximately the smallest 12.5%. Within emerging markets, Large Cap is defined as the 50% of market capitalization in each country or region; Small Cap is approximately the smallest 12.5%. Within emerging markets in each cap is approximately



Equity Market Overview

US Market Returns (USD), 1 Year as of June 30, 2024

SIZE		RELATIVE PRICE			PROFITABILITY		
		VALUE	GROWTH		HIGH PROF	LOW PROF	
Large	26.4%	20.7%	32.1%		32.5%	20.4%	
Small	10.4%	11.3%	9.3%		13.9%	6.5%	
	Small caps underperformed large caps	Value stocks underperformed growth stocks within large caps and outperformed within small caps			High profitabilit outperformed lo stocks within bo small caps	ow profitability	

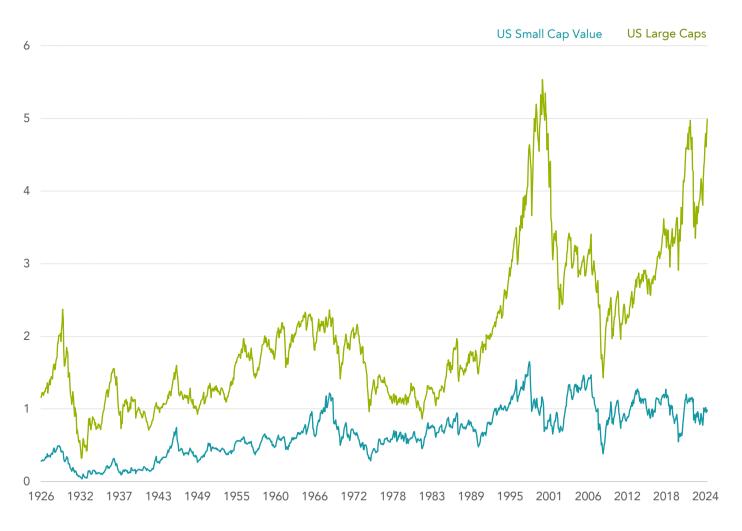
Past performance is no guarantee of future results.

Market returns are computed from Russell 3000 Index published security weights, Dimensional computed security returns and Dimensional classification of securities based on size, value, and profitability parameters. Within the US, Large Cap is defined as approximately the largest 90% of market capitalization in each country or region; Small Cap is approximately the smallest 10%. Within the non-US developed markets, Large Cap is defined as approximately the largest 85% of market capitalization in each country or region; Small Cap is approximately the smallest 15%. Designations between value and growth are based on price to book ratios. Value is defined as the 50% of market cap with the lowest price to book ratios by size category and growth is the highest 50%. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. High profitability is defined as the 50% of market cap with the highest profitability by size category and low profitability is the lowest 50%. REITs and utilities, identified by GICS code, and stocks without size, relative price, or profitability metrics are excluded from this analysis. GICS was developed by and is the exclusive property of MSCI and S&P Dow Jones Indices LLC, a division of S&P Global. Countries not in the Dimensional investable universe are excluded from the analysis. Indices are not available for direct investment. Their performance does not reflect the expenses associated with the management of an actual portfolio. Frank Russell Company is the source and owner of the trademarks, service marks, and copyrights related to the Russell Indexes.



Historical Valuations: US Market

Price-to-book ratio, June 1926-June 2024



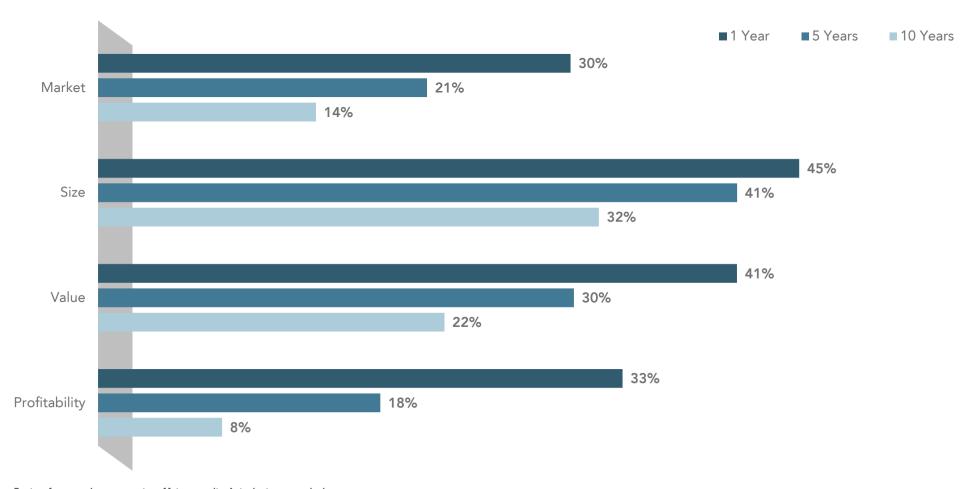
Valuations on US large cap stocks continue to surpass historical averages, while US small value stocks remain near the long-term average.

In USD. The Fama/French Indices represent academic concepts that may be used in portfolio construction and are not available for direct investment or for use as a benchmark. Source: CRSP and Compustat data calculated by Dimensional. Fama/French data provided by Fama/French. Value stocks represented by the Fama/French US Small Value Research Index. Large cap stocks represented by the Fama/French US Large Index. Monthly aggregate price-to-book ratios are computed as the inverse of the weighted average book-to-market value as of month-end, where book equity used from July of year t through June of year t+1 is the book equity for the last fiscal year end in t-1, and market equity is as of month-end for each month. Firms with negative book value are excluded. Eugene Fama and Ken French are members of the Board of Directors of the general partner of, and provide consulting services to, Dimensional Fund Advisors LP. See "Index Descriptions" in the appendix for descriptions of Fama/French index data.



How Often Have Premiums Been Negative?

Percentage of 1-, 5-, and 10-year periods with negative premiums US equity market through December 31, 2023



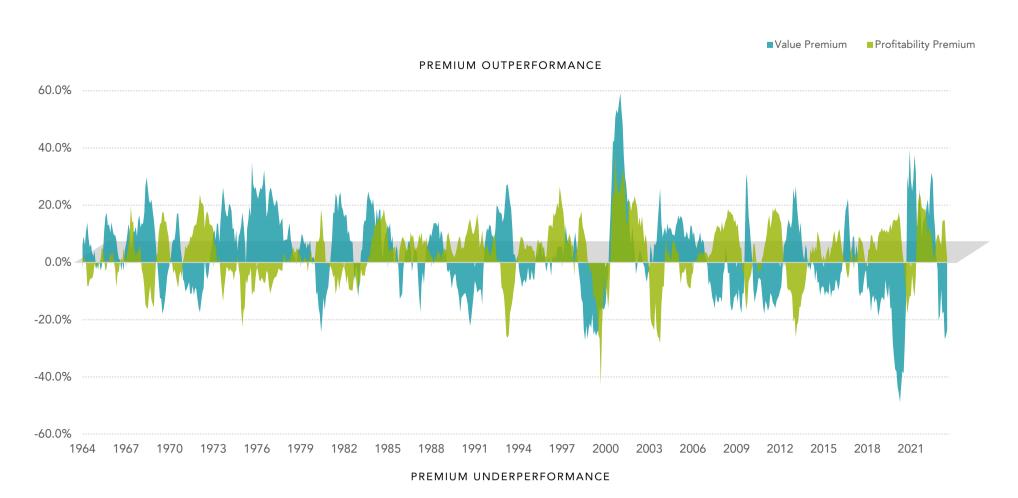
Past performance is no guarantee of future results. Actual returns may be lower.

Percentage of rolling 1-, 5-, and 10-year periods with negative premiums is calculated using monthly return data from June 1926 to December 2023 for market and value, from May 1927 to December 2023 for size, and from July 1963 to December 2023 for profitability. Market: Fama/French Total US Market Research Index minus the One-Month US Treasury Bill. Size: Dimensional US Small Cap Index minus the S&P 500 Index. Value: Fama/French US Value Research Index minus the Fama/French US Growth Research Index. Profitability: Fama/French US High Profitability Index minus the Fama/French US Low Profitability Index. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. One-Month US Treasury Bills is the IA SBBI US 30 Day TBill TR USD provided by lbbotson Associates via Morningstar Direct. Dimensional indices use CRSP and Compustat data. The Dimensional and Fama/French Indices represent academic concepts that may be used in portfolio construction and are not available for direct investment or for use as a benchmark. Index returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. See "Index Descriptions" in the appendix for descriptions of Dimensional and Fama/French index data. S&P data © 2024 S&P Dow Jones Indices LLC, a division of S&P Global. All rights reserved.



Profitability Acts as Complement to Value

Rolling 12-month value and profitability premiums in the US



Rolling 12-month returns are from July 1, 1964-December 31, 2023.

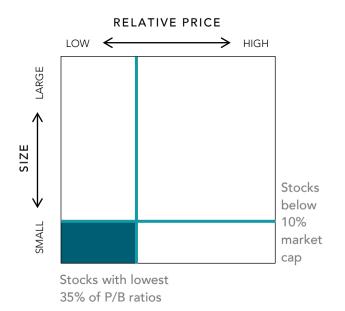
Past performance is no guarantee of future results. Actual returns may be lower. In USD. The Fama/French Indices represent academic concepts that may be used in portfolio construction and are not available for direct investment or for use as a benchmark. Annual value premium in the US is the return difference between the Fama/French US Value Research Index and the Fama/French US Growth Research Index. Annual profitability premium in US is the return difference between the Fama/French US Low Profitability Index. Indices are not available for direct investment. Index returns are not representative of actual portfolios and do not reflect costs and fees associated with an actual investment. Source: CRSP and Compustat data calculated by Dimensional. Fama/French data provided by Fama/French. Eugene Fama and Ken French are members of the Board of Directors of the general partner of, and provide consulting services to, Dimensional Fund Advisors LP. See "Index Descriptions" in the appendix for descriptions of Fama/French index data.

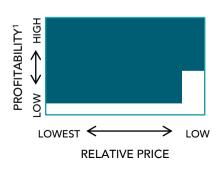




Portfolio Construction: Security Selection

Mississippi PERS Small Cap Value Portfolio





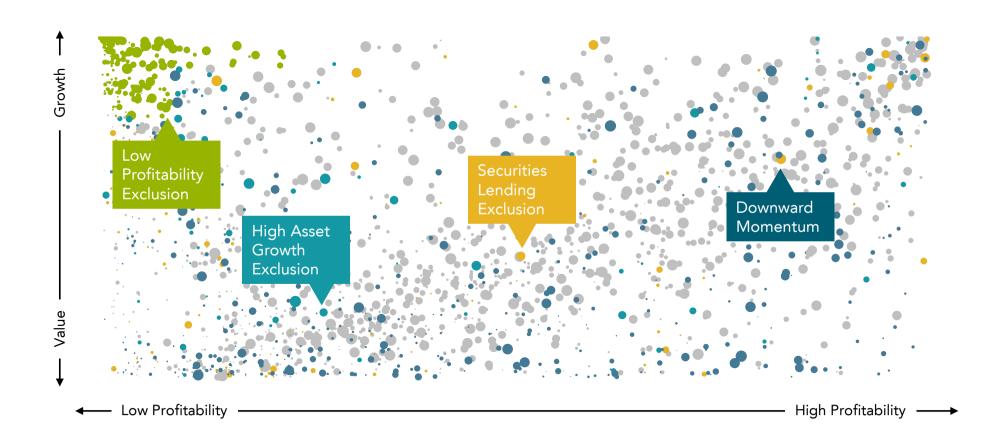
- Focus on value securities within the small cap universe
- Exclude companies with lowest profitability and high asset growth

As of 6/30/2024	Weighted Average Market Cap (millions)	Aggregate Price-to-Book	Weighted Average Profitability
Mississippi PERS Small Cap Value Portfolio	\$3,609	1.10	0.18
Russell 2000 Value Index	\$3.075	1.30	0.14



Small Cap Universe

US Market

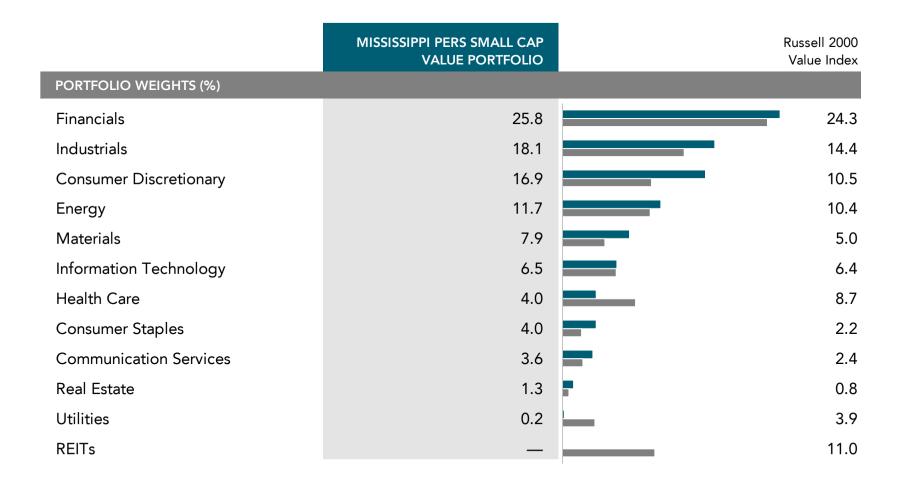


For illustrative purposes only.

Companies are plotted on price-to-book (vertical axis) and profitability (horizontal axis), and the size of the dots is proportional to companies' market capitalization. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Low Profitability Exclusion refers to companies with the lowest profitability and highest price-to-book. High Asset Growth Exclusion refers to companies with high asset growth. Securities Lending Exclusion refers to companies with high securities lending fees. Downward Momentum refers to companies exhibiting downward momentum, which is the tendency of companies with recent relative underperformance to continue to underperform over the short term. Companies identified as belonging to multiple groups are included on the chart in the first applicable group shown.



Sector Allocations





Since 8/02

Performance

As of June 30, 2024

Annualized Returns ¹ (%)	2nd Quarter 2024	Year to Date	1 Year	3 Years	5 Years	10 Years	1st Full Month
MISSISSIPPI PERS SMALL CAP VALUE PORTFOLIO (gross of fees)	-3.56	-0.49	14.84	7.73	13.57	8.52	10.65
Russell 2000 Value Index	-3.64	-0.85	10.90	-0.53	7.07	6.23	8.65

Calendar Year Returns (%)	MISSISSIPPI PERS SMALL CAP VALUE PORTFOLIO (gross of fees)	Russell 2000 Value Index
2014	3.91	4.22
2015	-7.32	-7.47
2016	29.92	31.74
2017	7.69	7.84
2018	-15.66	-12.86
2019	18.54	22.39
2020	5.69	4.63
2021	39.72	28.27
2022	-2.29	-14.48
2023	22.07	14.65

Account Value

MISSISSIPPI PERS SMALL CAP VALUE PORTFOLIO

\$332,509,626

Performance data shown represents past performance and is no guarantee of future results. Performance is presented gross of fees. Gross returns include the reinvestment of dividends and other earnings, and include the deduction of all trading expenses, but do not reflect the deduction of investment advisory fees or any other expenses that will be incurred in the management of the account. A client's investment return will be reduced by the advisory fees and other expenses it will incur in the management of the advisory account.

^{1.} Returns for periods shorter than one year are not annualized.



Characteristics

	MISSISSIPPI PERS SMALL CAP VALUE PORTFOLIO	Russell 2000 Value Index
MARKET CHARACTERISTICS		
Total Value of Eligible Universe (millions)	\$1,151,845	\$1,252,366
Number of Holdings	931	1,402
SIZE CHARACTERISTICS		
Wtd. Average Market Cap (millions)	\$3,609	\$3,075
Median Market Cap (millions)	\$857	\$779
VALUATION CHARACTERISTICS		
Aggregate Price-to-Book	1.10	1.30
Wtd. Average Dividend-to-Price	1.80%	2.31%
PROFITABILITY CHARACTERISTICS		
Wtd. Average Profitability ¹	0.18	0.14



Appendix



Presenters' Biographies



Lukas Smart, CFA
Senior Investment Director & Vice President

Lukas (Luke) Smart is a Senior Investment Director in Dimensional's Investment Solutions Group (ISG). He focuses on business development, client engagement, thought leadership, analysis, and education on a wide range of investment-related topics, partnering with teams across the firm to fulfill his responsibilities. Luke previously served as a Senior Portfolio Manager and head of Dimensional's US Large Cap Portfolio Management team. In that role, he led an experienced team responsible for around a quarter of Dimensional's global assets.

Prior to rejoining Dimensional in 2023, Luke was a managing director and head of US iShares factors and sustainable product segments for BlackRock. In this role, he was responsible for product development, data and analytics, distribution strategy, and thought leadership for both priority segments. He also shared marketing responsibilities.

Luke earned a bachelor of business economics degree from the University of San Diego and an MBA from the University of Chicago Booth School of Business, where he focused on analytic finance, economics, and accounting. He is a CFA charterholder and a member of the CFA Society of Austin.



Rob Cleary
Regional Director

Rob Cleary is a Regional Director in Dimensional's Institutional Services group. Based in the Charlotte office, Rob develops and maintains relationships with institutional prospects and clients in the Southeast US.

Before joining Dimensional, Rob was a Director at Legg Mason, where he worked in institutional sales and consultant relations. He earned an MBA from Emory University's Goizueta Business School and a BSBA from the University of Richmond.



Since 8/02

Performance

As of July 31, 2024

		Year to					Account 1st Full
Annualized Returns ¹ (%)	1 Month	Date	1 Year	3 Years	5 Years	10 Years	Month
MISSISSIPPI PERS SMALL CAP VALUE PORTFOLIO (gross of fees)	10.33	9.79	17.83	12.26	15.68	10.23	11.10
Russell 2000 Value Index	12.19	11.23	15.68	4.62	9.53	8.13	9.19

Calendar Year Returns (%)	MISSISSIPPI PERS SMALL CAP VALUE PORTFOLIO (gross of fees)	Russell 2000 Value Index
2014	3.91	4.22
2015	-7.32	-7.47
2016	29.92	31.74
2017	7.69	7.84
2018	-15.66	-12.86
2019	18.54	22.39
2020	5.69	4.63
2021	39.72	28.27
2022	-2.29	-14.48
2023	22.07	14.65

Account Value

MISSISSIPPI PERS SMALL CAP VALUE PORTFOLIO

\$366,857,419

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Fama/French Total US Market Research Index: July 1926–present: Fama/French Total US Market Research Factor + One-Month US Treasury Bills. Source: Ken French Website.

Fama/French US Value Research Index: Provided by Fama/French from CRSP securities data. Includes the lower 30% in price-to-book of NYSE securities (plus NYSE Amex equivalents since July 1962 and Nasdaq equivalents since 1973).

Fama/French US Growth Research Index: Provided by Fama/French from CRSP securities data. Includes the higher 30% in price-to-book of NYSE securities (plus NYSE Amex equivalents since July 1962 and Nasdaq equivalents since 1973).

Fama/French US Small Value Research Index: Provided by Fama/French from CRSP securities data. Includes the lower 30% in price-to-book of NYSE securities (plus NYSE Amex equivalents since July 1962 and Nasdaq equivalents since 1973) that have smaller market capitalization than the median NYSE company.

Fama/French US Large Growth Research Index: Provided by Fama/French from CRSP securities data. Includes the higher 30% in price-to-book of NYSE securities (plus NYSE Amex equivalents since July 1962 and Nasdaq equivalents since 1973) that have larger market capitalization than the median NYSE company.

Fama/French US High Profitability Index: July 1963–present: Fama/French US High Profitability Index. Courtesy of Fama/French from CRSP and Compustat securities data. Includes all stocks in the upper 30% operating profitability range of NYSE eligible firms; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Fama/French US Low Profitability Index: July 1963–present: Fama/French US Low Profitability Index. Courtesy of Fama/French from CRSP and Compustat securities data. Includes all stocks in the lower 30% operating profitability range of NYSE eligible firms; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Fama/French International Market Index: January 1975–present: Fama/French International Market Index. Source: Ken French website. Simulated from MSCI and Bloomberg data.

Fama/French International Value Index: January 1975–present: Fama/French International Value Index. Simulated strategy of international developed countries with securities in the lower 30% price-to-book range. Source: Ken French website. Simulated from MSCI and Bloomberg data.

Fama/French International Growth Index: January 1975–present: Fama/French International Growth Index. Simulated strategy of international developed countries with securities in the higher 30% price-to-book range. Source: Ken French website. Simulated from MSCI and Bloomberg data.

Fama/French International High Profitability Index: July 1990–present: Fama/French International High Profitability Index. Courtesy of Fama/French from Bloomberg securities data. Includes stocks in the upper 30% operating profitability range in each region; companies weighted by float-adjusted market cap; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Fama/French International Low Profitability Index: July 1990–present: Courtesy of Fama/French from Bloomberg securities data. Includes stocks in the lower 30% operating profitability range in each region; companies weighted by float-adjusted market cap; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Results shown during periods prior to each index's index inception date do not represent actual returns of the respective index. Other periods selected may have different results, including losses. Backtested index performance is hypothetical and is provided for informational purposes only to indicate historical performance had the index been calculated over the relevant time periods. Backtested performance results assume the reinvestment of dividends and capital gains.

Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Eugene Fama and Ken French are members of the Board of Directors of the general partner of, and provide consulting services to Dimensional Fund Advisors I.P.



Fama/French Total US Market Research Index: July 1926–present: Fama/French Total US Market Research Factor + One-Month US Treasury Bills. Source: Ken French Website.

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Fama/French US Growth Research Index: Provided by Fama/French from CRSP securities data. Includes the higher 30% in price-to-book of NYSE securities (plus NYSE Amex equivalents since July 1962 and Nasdag equivalents since 1973).

Fama/French US High Profitability Index: July 1963–present: Courtesy of Fama/French from CRSP and Compustat securities data. Includes all stocks in the upper 30% operating profitability range of NYSE eligible firms; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Fama/French US Low Profitability Index: July 1963–present: Courtesy of Fama/French from CRSP and Compustat securities data. Includes all stocks in the lower 30% operating profitability range of NYSE eligible firms; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Fama/French International Market Index: January 1975–present: Fama/French International Market Index. Source: Ken French website. Simulated from MSCI and Bloomberg data.

Fama/French International Value Index: 2008–present: Provided by Fama/French from Bloomberg securities data. Simulated strategy of MSCI EAFE + Canada countries in the lower 30% price-to-book range. 1975–2007: Provided by Fama/French from MSCI securities data.

Fama/French International Growth Index: 2008–present: Provided by Fama/French from Bloomberg securities data. Simulated strategy of MSCI EAFE + Canada countries in the higher 30% price-to-book range. 1975–2007: Provided by Fama/French from MSCI securities data.

Fama/French International High Profitability Index: July 1990–present: Courtesy of Fama/French from Bloomberg securities data. Includes stocks in the upper 30% operating profitability range in each region; companies weighted by float-adjusted market cap; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Fama/French International Low Profitability Index: July 1990–present: Courtesy of Fama/French from Bloomberg securities data. Includes stocks in the lower 30% operating profitability range in each region; companies weighted by float-adjusted market cap; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

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Fama/French Emerging Markets Index: July 1989–present: Fama/French Emerging Markets Index. Courtesy of Fama/French from Bloomberg and IFC securities data. Companies weighted by float-adjusted market cap; rebalanced annually in June. Fama/French and multifactor data provided by Fama/French.

Fama/French Emerging Markets Value Index: July 1989–present: Fama/French Emerging Markets Value Index. Courtesy of Fama/French from Bloomberg and IFC securities data. Includes stocks in the upper 30% book-to-market range in each country; companies weighted by float-adjusted market cap; rebalanced annually in June. Fama/French and multifactor data provided by Fama/French.

Fama/French Emerging Markets Growth Index: July 1989–present: Fama/French Emerging Markets Growth Index. Courtesy of Fama/French from Bloomberg and IFC securities data. Includes stocks in the bottom 30% book-to-market range in each country; companies weighted by float-adjusted market cap; rebalanced annually in June. Fama/French and multifactor data provided by Fama/French.

Fama/French Emerging Markets High Profitability Index: July 1991–present: Fama/French Emerging Markets High Profitability Index. Courtesy of Fama/French from Bloomberg and IFC securities data. Includes stocks in the upper 30% operating profitability range in each country; companies weighted by float-adjusted market cap; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Fama/French Emerging Markets Low Profitability Index: July 1991–present: Fama/French Emerging Markets Low Profitability Index. Courtesy of Fama/French from Bloomberg and IFC securities data. Includes stocks in the lower 30% operating profitability range in each country; companies weighted by float-adjusted market cap; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

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Fama/French US Large Cap Research Index: July 1926–present: Provided by Fama/French from CRSP securities data. Includes NYSE securities (plus AMEX equivalents since July 1962 and NASDAQ equivalents since 1973) with larger market equity than the median NYSE company.

Fama/French US Large Value Research Index: Provided by Fama/French from CRSP securities data. Includes the lower 30% in price-to-book of NYSE securities (plus NYSE Amex equivalents since July 1962 and Nasdaq equivalents since 1973) that have larger market capitalization than the median NYSE company.

Fama/French US Large Growth Research Index: Provided by Fama/French from CRSP securities data. Includes the higher 30% in price-to-book of NYSE securities (plus NYSE Amex equivalents since July 1962 and Nasdaq equivalents since 1973) that have larger market capitalization than the median NYSE company.

Fama/French US Large High Profitability Index: July 1963–present: Fama/French US High Profitability Index. Courtesy of Fama/French from CRSP and Compustat securities data. Includes all stocks in the upper 30% operating profitability range of NYSE eligible firms that have larger market capitalization than the median NYSE company; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Fama/French US Large Low Profitability Index: July 1963–present: Fama/French US Low Profitability Index. Courtesy of Fama/French from CRSP and Compustat securities data. Includes all stocks in the lower 30% operating profitability range of NYSE eligible firms that have larger market capitalization than the median NYSE company; rebalanced annually in June. OP for June of year t is annual revenues minus cost of goods sold, interest expense, and selling, general, and administrative expenses divided by book equity for the last fiscal year end in t-1. Fama/French and multifactor data provided by Fama/French.

Results shown during periods prior to each index's index inception date do not represent actual returns of the respective index. Other periods selected may have different results, including losses. Backtested index performance is hypothetical and is provided for informational purposes only to indicate historical performance had the index been calculated over the relevant time periods. Backtested performance results assume the reinvestment of dividends and capital gains.

Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Eugene Fama and Ken French are members of the Board of Directors of the general partner of, and provide consulting services to Dimensional Fund Advisors LP



Dimensional US Small Cap Index was created by Dimensional in March 2007 and is compiled by Dimensional. It represents a market-capitalization-weighted index of securities of the smallest US companies whose market capitalization falls in the lowest 8% of the total market capitalization of the eligible market. The eligible market is composed of securities of US companies traded on the NYSE, NYSE MKT (formerly AMEX), and Nasdag Global Market, Exclusions; non-US companies, REITs. UITs, and investment companies. From January 1975 to the present, the index excludes companies with the lowest profitability and highest relative price within the small cap universe. The index also excludes those companies with the highest asset growth within the small cap universe. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Asset growth is defined as change in total assets from the prior fiscal year to current fiscal year. Source: CRSP and Compustat. The index monthly returns are computed as the simple average of the monthly returns of 12 subindices, each one reconstituted once a year at the end of a different month of the year. The calculation methodology for the Dimensional US Small Cap Index was amended on January 1, 2014, to include profitability as a factor in selecting securities for inclusion in the index. The calculation methodology for the index was amended in December 2019 to include asset growth as a factor in selecting securities for inclusion in the index.

Dimensional International Small Cap Index was created by Dimensional in April 2008 and is compiled by Dimensional. July 1981-December 1993: It Includes non-US developed securities in the bottom 10% of market capitalization in each eligible country. All securities are market capitalization weighted. Each country is capped at 50%, Rebalanced semiannually, January 1994-present: Market-capitalizationweighted index of small company securities in the eligible markets, excluding those with the lowest profitability and highest relative price within their country's small cap universe. The index also excludes those companies with the highest asset growth within their country's small cap universe. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Asset growth is defined as change in total assets from the prior fiscal year to current fiscal year. The index monthly returns are computed as the simple average of the monthly returns of four subindices, each one reconstituted once a year at the end of a different guarter of the year. Prior to July 1981, the index is 50% UK and 50% Japan. The calculation methodology for the Dimensional International Small Cap Index was amended on January 1, 2014, to include

profitability as a factor in selecting securities for inclusion in the index. The calculation methodology for the index was amended in December 2019 to include asset growth as a factor in selecting securities for inclusion in the index.

Dimensional International Market Index is compiled by Dimensional from Bloomberg data. Market capitalization-weighted index of all securities in the eligible markets. The index monthly returns are computed as the simple average of the monthly returns of four sub-indices, each one reconstituted once a year at the end of each quarter of the year. Maximum index weight of any one company is capped at 5%. Countries currently included are Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Hong Kong, Ireland, Israel, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Singapore, Spain, Sweden, Switzerland, and United Kingdom. Exclusions: REITs and Investment Companies. The index has been retrospectively calculated by Dimensional Fund Advisors and did not exist prior to April 2008.

Dimensional Emerging Markets Small Index was created by Dimensional in April 2008 and is compiled by Dimensional, January 1989–December 1993: Fama/French Emerging Markets Small Cap Index. January 1994–present: Dimensional Emerging Markets Small Cap Index composition: Market-capitalization-weighted index of small company securities in the eligible markets, excluding those with the lowest profitability and highest relative price within their country's small cap universe. The index also excludes those companies with the highest asset growth within their country's small cap universe. Profitability is measured as operating income before depreciation and amortization minus interest expense scaled by book. Asset growth is defined as change in total assets from the prior fiscal year to current fiscal year. The index monthly returns are computed as the simple average of the monthly returns of four subindices, each one reconstituted once a year at the end of a different quarter of the year. Source: Bloomberg. The calculation methodology for the Dimensional Emerging Markets Small Cap Index was amended on January 1, 2014, to include profitability as a factor in selecting securities for inclusion in the index. The calculation methodology for the index was amended in December 2019 to include asset growth as a factor in selecting securities for inclusion in the index.

The Dimensional Indices have been retrospectively calculated by Dimensional Fund Advisors LP and did not exist prior to their index inception dates. Accordingly, results shown during the periods prior to each index's inception date do not represent actual returns of the index. Other periods selected may have different results, including losses. Backtested index performance is hypothetical and is provided for informational purposes only to indicate historical performance had the index been calculated over the relevant time periods. Backtested performance results assume the reinvestment of dividends and capital gains.



Portfolio Holdings



United States Steel Corp Amkor Technology Inc Taylor Morrison Home Corp Murphy Oil Corp Pvh Corp Borgwarner Inc O.94 Southwestern En Sanmina Corp Macy'S Inc Scorpio Tankers O.69 Cleveland-Cliffs Inc O.69 Acceptable	0.48 0.48 nc 0.47 nc 0.47	Frontier Communications Pare Valley National Bancorp Graham Holdings Co-Class B Wintrust Financial Corp Abm Industries Inc Dht Holdings Inc Matador Resources Co	0.38 0.37 0.37 0.37 0.37
Taylor Morrison Home Corp Murphy Oil Corp Pvh Corp Borgwarner Inc 0.81 Sanmina Corp Macy'S Inc Post Oil Corp 0.69 Scorpio Tankers Cleveland-Cliffs Inc	0.48 0.48 nc 0.47 nc 0.47	Graham Holdings Co-Class B Wintrust Financial Corp Abm Industries Inc Dht Holdings Inc	0.37 0.37 0.37 0.37
Murphy Oil Corp 0.71 Macy'S Inc Pvh Corp 0.69 Scorpio Tankers Borgwarner Inc 0.69 Cleveland-Cliffs In	0.48 nc 0.47 nc 0.47 0.47	Wintrust Financial Corp Abm Industries Inc Dht Holdings Inc	0.37 0.37 0.37
Pvh Corp 0.69 Scorpio Tankers Borgwarner Inc 0.69 Cleveland-Cliffs In	0.47 nc 0.47 0.47	Abm Industries Inc Dht Holdings Inc	0.37 0.37
Borgwarner Inc 0.69 Cleveland-Cliffs In	0.47 0.47	Dht Holdings Inc	0.37
3	0.47	· ·	
Viete Com		Matador Resources Co	0.07
Kirby Corp 0.68 Arcosa Inc	s Inc 0.46		0.37
Element Solutions Inc 0.65 Mohawk Industrie		Goodyear Tire & Rubber Co	0.37
Mgic Investment Corp 0.63 White Mountains	nsurance Gp 0.44	Century Communities Inc	0.36
Air Lease Corp 0.63 Post Holdings Inc	0.44	Nelnet Inc-Cl A	0.36
Pbf Energy Inc-Class A 0.62 Matson Inc	0.44	Cadence Bank	0.36
Jackson Financial Inc-A 0.62 Urban Outfitters In	c 0.44	Ameris Bancorp	0.35
Avnet Inc 0.62 Transocean Ltd	0.43	Genworth Financial Inc	0.35
Fnb Corp 0.61 United Bankshare	es Inc 0.43	Helmerich & Payne	0.35
Assured Guaranty Ltd 0.60 Ingredion Inc	0.43	Wesco International Inc	0.35
Cnx Resources Corp 0.57 Boise Cascade C	o 0.43	Berry Global Group Inc	0.35
Group 1 Automotive Inc 0.55 Radian Group Inc	0.42	Us Cellular Corp	0.35
Meritage Homes Corp 0.54 Gates Industrial C	orp Plc 0.42	Howard Hughes Holdings Inc	0.35
Old National Bancorp 0.53 Lithia Motors Inc	0.41	Consol Energy Inc	0.35
Dt Midstream Inc 0.52 Arrow Electronics	Inc 0.41	Huntsman Corp	0.34
Tri Pointe Homes Inc 0.52 Oshkosh Corp	0.40	Ashland Inc	0.34
Skywest Inc 0.52 Alaska Air Group	nc 0.40	Alight Inc - Class A	0.34
Thor Industries Inc 0.51 Janus Henderson	Group Plc 0.40	Alcoa Corp	0.33
Kb Home 0.51 Sm Energy Co	0.39	Gxo Logistics Inc	0.33
Gatx Corp 0.51 Associated Banc-	Corp 0.38	Atlantic Union Bankshares Co	0.33
Popular Inc 0.51 Adtalem Global E	ducation Inc 0.38	Darling Ingredients Inc	0.33
Commercial Metals Co 0.49 Perrigo Co Plc	0.38	Caesars Entertainment Inc	0.33



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
Texas Capital Bancshares Inc	0.33	Strategic Education Inc	0.27	First Financial Bancorp	0.24
Hancock Whitney Corp	0.33	Chord Energy Corp	0.27	Primoris Services Corp	0.24
Lear Corp	0.33	Webster Financial Corp	0.27	Andersons Inc/The	0.24
Jazz Pharmaceuticals Plc	0.32	Telephone And Data Systems	0.27	First Horizon Corp	0.24
Seaboard Corp	0.32	Rush Enterprises Inc-Cl A	0.27	Simmons First Natl Corp-Cl A	0.23
Peabody Energy Corp	0.32	Integer Holdings Corp	0.27	Forestar Group Inc	0.23
Fulton Financial Corp	0.32	Azenta Inc	0.26	Pilgrim'S Pride Corp	0.23
Harley-Davidson Inc	0.31	National Western Life Grou-A	0.26	Antero Resources Corp	0.23
Agco Corp	0.31	Brighthouse Financial Inc	0.26	Bill Holdings Inc	0.23
Axis Capital Holdings Ltd	0.31	Tegna Inc	0.26	Weis Markets Inc	0.23
Enovis Corp	0.31	NovInc	0.26	Dentsply Sirona Inc	0.23
International Seaways Inc	0.31	Invesco Ltd	0.26	Helix Energy Solutions Group	0.23
Minerals Technologies Inc	0.31	Zions Bancorp Na	0.26	Barnes Group Inc	0.23
WI Homes Inc	0.31	Bread Financial Holdings Inc	0.26	Provident Financial Services	0.23
Western Alliance Bancorp	0.30	Arcbest Corp	0.26	Navient Corp	0.22
Prosperity Bancshares Inc	0.30	Enstar Group Ltd	0.25	Pacific Premier Bancorp Inc	0.22
Sensata Technologies Holding	0.30	Dun & Bradstreet Holdings In	0.25	Greenbrier Companies Inc	0.22
Aar Corp	0.29	Hub Group Inc-Cl A	0.25	Adient Plc	0.22
Resideo Technologies Inc	0.29	Patrick Industries Inc	0.25	Wesbanco Inc	0.22
Ttm Technologies	0.29	Dorian Lpg Ltd	0.25	Edgewell Personal Care Co	0.22
Stride Inc	0.29	Foot Locker Inc	0.25	Liberty Broadband-C	0.22
Mdu Resources Group Inc	0.29	Liberty Energy Inc	0.25	Odp Corp/The	0.21
Wafd Inc	0.28	Warrior Met Coal Inc	0.24	Bankunited Inc	0.21
Vishay Intertechnology Inc	0.28	Hecla Mining Co	0.24	Cushman & Wakefield Plc	0.21
Topgolf Callaway Brands Corp	0.28	Dxc Technology Co	0.24	Teekay Tankers Ltd-Class A	0.21
Tronox Holdings Plc	0.28	Essent Group Ltd	0.24	Pc Connection Inc	0.21
Synovus Financial Corp	0.28	Kohls Corp	0.24	Jetblue Airways Corp	0.21



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
National Healthcare Corp	0.21	California Resources Corp	0.18	First Interstate Bancsys-A	0.15
Treehouse Foods Inc	0.21	Xerox Holdings Corp	0.18	Scansource Inc	0.15
Trinity Industries Inc	0.21	Stewart Information Services	0.18	Fresh Del Monte Produce Inc	0.14
Sfl Corp Ltd	0.20	Stericycle Inc	0.18	Cvb Financial Corp	0.14
Costamare Inc	0.20	Green Brick Partners Inc	0.18	G-lii Apparel Group Ltd	0.14
Customers Bancorp Inc	0.20	American Eagle Outfitters	0.18	Marriott Vacations World	0.14
Openlane Inc	0.20	Manpowergroup Inc	0.17	Rush Enterprises Inc - CI B	0.14
Benchmark Electronics Inc	0.20	Netscout Systems Inc	0.17	Columbia Banking System Inc	0.14
Dana Inc	0.20	Perdoceo Education Corp	0.17	Delek Us Holdings Inc	0.14
Renasant Corp	0.20	Korn Ferry	0.17	Hope Bancorp Inc	0.14
Pinnacle Financial Partners	0.19	Heartland Financial Usa Inc	0.17	Gibraltar Industries Inc	0.14
Envista Holdings Corp	0.19	American Woodmark Corp	0.17	Universal Corp/Va	0.14
Independent Bank Group Inc	0.19	Liberty Latin Americ-CI C	0.17	Lgi Homes Inc	0.14
Asbury Automotive Group	0.19	Talos Energy Inc	0.17	First Busey Corp	0.14
Comerica Inc	0.19	Banner Corporation	0.17	S & T Bancorp Inc	0.14
Wsfs Financial Corp	0.19	Alpha Metallurgical Resource	0.16	Alpha & Omega Semiconductor	0.14
Skechers Usa Inc-Cl A	0.19	Middleby Corp	0.16	Masterbrand Inc	0.13
Photronics Inc	0.19	Southstate Corp	0.16	Carpenter Technology	0.13
Avient Corp	0.18	Ziff Davis Inc	0.16	Towne Bank	0.13
Trustmark Corp	0.18	Gms Inc	0.16	Adt Inc	0.13
Knight-Swift Transportation	0.18	Scholastic Corp	0.15	Magnite Inc	0.13
La-Z-Boy Inc	0.18	Werner Enterprises Inc	0.15	Winnebago Industries	0.13
Granite Construction Inc	0.18	First Merchants Corp	0.15	Encore Capital Group Inc	0.13
Premier Inc-Class A	0.18	Plexus Corp	0.15	Noble Corp Plc	0.13
World Kinect Corp	0.18	Ingles Markets Inc-Class A	0.15	New Jersey Resources Corp	0.13
Civitas Resources Inc	0.18	Penn Entertainment Inc	0.15	Clarivate Plc	0.13
Comstock Resources Inc	0.18	Hilltop Holdings Inc	0.15	Metallus Inc	0.13



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
Mativ Holdings Inc	0.13	Mr Cooper Group Inc	0.11	Kennedy-Wilson Holdings Inc	0.10
Northwest Bancshares Inc	0.13	Ardmore Shipping Corp	0.11	Byline Bancorp Inc	0.10
Knowles Corp	0.13	Nmi Holdings Inc	0.11	Miller Industries Inc/Tenn	0.10
Sonic Automotive Inc-Class A	0.12	Air Transport Services Group	0.11	Playa Hotels & Resorts Nv	0.10
Brightview Holdings Inc	0.12	Schneider National Inc-CI B	0.11	Clearwater Paper Corp	0.10
Wiley (John) & Sons-Class A	0.12	Ormat Technologies Inc	0.11	Cal-Maine Foods Inc	0.10
Select Water Solutions Inc	0.12	Bristow Group Inc	0.11	Pactiv Evergreen Inc	0.10
Bok Financial Corporation	0.12	Jones Lang Lasalle Inc	0.11	Newpark Resources Inc	0.09
Enova International Inc	0.12	Millerknoll Inc	0.11	Bluelinx Holdings Inc	0.09
Genco Shipping & Trading Ltd	0.12	Range Resources Corp	0.11	Daktronics Inc	0.09
Tutor Perini Corp	0.12	Dxp Enterprises Inc	0.11	Sphere Entertainment Co	0.09
Rex American Resources Corp	0.12	Laureate Education Inc	0.11	Berkshire Hills Bancorp Inc	0.09
O-I Glass Inc	0.12	Columbus Mckinnon Corp/Ny	0.10	Bel Fuse Inc-Cl B	0.09
Sandy Spring Bancorp Inc	0.12	Arch Resources Inc	0.10	Ryder System Inc	0.09
Propetro Holding Corp	0.12	Beazer Homes Usa Inc	0.10	lpg Photonics Corp	0.09
Cable One Inc	0.12	Cohu Inc	0.10	Esco Technologies Inc	0.09
Avanos Medical Inc	0.12	Ducommun Inc	0.10	Rpc Inc	0.09
Employers Holdings Inc	0.12	Greif Inc-CI A	0.10	Cathay General Bancorp	0.09
Steelcase Inc-CI A	0.12	Kelly Services Inc -A	0.10	Premier Financial Corp	0.09
Central Garden And Pet Co-A	0.12	Life Time Group Holdings Inc	0.10	Univest Financial Corp	0.09
Newmark Group Inc-Class A	0.12	Signet Jewelers Ltd	0.10	Koppers Holdings Inc	0.09
Marten Transport Ltd	0.12	Azz Inc	0.10	Independent Bank Corp/Ma	0.09
Oceanfirst Financial Corp	0.11	Liberty Global Ltd-A	0.10	Spartannash Co	0.09
Peoples Bancorp Inc	0.11	Teekay Corp	0.10	H.B. Fuller Co.	0.09
Suncoke Energy Inc	0.11	Liberty Global Ltd-C	0.10	Republic Bancorp Inc-Class A	0.09
Enersys	0.11	Shoe Carnival Inc	0.10	Capitol Federal Financial In	0.09
Unifirst Corp/Ma	0.11	Vital Energy Inc	0.10	Rogers Corp	0.09



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
	0.09		0.08		0.07
Connectone Bancorp Inc		Academy Sports & Outdoors In Mercer International Inc		Fulgent Genetics Inc	
Asgn Inc	0.09		0.08	1St Source Corp	0.07
Seadrill Limited	0.09	Whirlpool Corp	0.08	Mirion Technologies Inc	0.07
Gannett Co Inc	0.09	Proassurance Corp	0.08	Ambac Financial Group Inc	0.07
Deluxe Corp	0.09	Dnow Inc	0.08	Midland States Bancorp Inc	0.07
Brookline Bancorp Inc	0.09	Innoviva Inc	0.08	Thermon Group Holdings Inc	0.07
Haynes International Inc	0.09	Eplus Inc	0.08	International Bancshares Crp	0.07
Quidelortho Corp	0.09	Ezcorp Inc-Cl A	0.08	Acco Brands Corp	0.07
Dime Community Bancshares In	0.09	Willis Lease Finance Corp	0.08	Diodes Inc	0.07
Mercury Systems Inc	0.09	Kennametal Inc	0.08	Ecovyst Inc	0.07
American Axle & Mfg Holdings	0.09	Hni Corp	0.08	Harborone Bancorp Inc	0.07
Newell Brands Inc	0.09	Solarwinds Corp	0.08	Orion Group Holdings Inc	0.07
United Natural Foods Inc	0.08	Ryerson Holding Corp	0.08	Heritage Financial Corp	0.07
Home Bancshares Inc	0.08	Digi International Inc	0.08	Berry Corp	0.07
Enviri Corp	0.08	Olympic Steel Inc	0.08	Rev Group Inc	0.06
Covenant Logistics Group Inc	0.08	Trimas Corp	0.07	Elanco Animal Health Inc	0.06
Dril-Quip Inc	0.08	Owens & Minor Inc	0.07	Oppenheimer Holdings-Cl A	0.06
Preformed Line Products Co	0.08	Seacoast Banking Corp/Fl	0.07	Flushing Financial Corp	0.06
Prestige Consumer Healthcare	0.08	Jeld-Wen Holding Inc	0.07	Northfield Bancorp Inc	0.06
Under Armour Inc-Class C	0.08	Heritage Commerce Corp	0.07	Tejon Ranch Co	0.06
Sunrun Inc	0.08	Kronos Worldwide Inc	0.07	Siriuspoint Ltd	0.06
Gulfport Energy Corp	0.08	Under Armour Inc-Class A	0.07	Kearny Financial Corp/Md	0.06
Kimball Electronics Inc	0.08	Vse Corp	0.07	First Commonwealth Finl Corp	0.06
Nexstar Media Group Inc	0.08	Horizon Bancorp Inc/In	0.07	Radius Recycling Inc	0.06
First Hawaiian Inc	0.08	Madison Square Garden Entert	0.07	Expro Group Holdings Nv	0.06
Advansix Inc	0.08	Marinemax Inc	0.07	Lendingclub Corp	0.06
Astec Industries Inc	0.08	Hillenbrand Inc	0.07	Lincoln Educational Services	0.06



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
Hometrust Bancshares Inc	0.06	Interface Inc	0.06	Hillman Solutions Corp	0.05
Greif Inc-CI B	0.06	Enterprise Financial Service	0.05	Northwest Pipe Co	0.05
Varex Imaging Corp	0.06	Us Silica Holdings Inc	0.05	First Financial Corp/Indiana	0.05
Pediatrix Medical Group Inc	0.06	Crossfirst Bankshares Inc	0.05	Home Bancorp Inc	0.05
Kaiser Aluminum Corp	0.06	Pricesmart Inc	0.05	First Business Financial Ser	0.05
Trustco Bank Corp Ny	0.06	Trico Bancshares	0.05	Trueblue Inc	0.05
Sun Country Airlines Holding	0.06	Midwestone Financial Group I	0.05	Green Plains Inc	0.05
Pacira Biosciences Inc	0.06	Conduent Inc	0.05	Rocky Brands Inc	0.05
Standard Motor Prods	0.06	Movado Group Inc	0.05	Sandridge Energy Inc	0.05
Quanex Building Products	0.06	Seacor Marine Holdings Inc	0.05	Green Dot Corp-Class A	0.05
Helen Of Troy Ltd	0.06	First Bancorp/Nc	0.05	Natural Gas Services Group	0.05
Stepan Co	0.06	Oil-Dri Corp Of America	0.05	Banc Of California Inc	0.05
Helios Technologies Inc	0.06	Allegiant Travel Co	0.05	Genesco Inc	0.05
Integra Lifesciences Holding	0.06	Northrim Bancorp Inc	0.05	Manitowoc Company Inc	0.05
Gray Television Inc	0.06	Rbb Bancorp	0.05	Ennis Inc	0.05
El Pollo Loco Holdings Inc	0.06	Atn International Inc	0.05	Financial Institutions Inc	0.05
Catalent Inc	0.06	Malibu Boats Inc - A	0.05	Supernus Pharmaceuticals Inc	0.05
Peapack Gladstone Finl Corp	0.06	Crescent Energy Inc-A	0.05	Central Pacific Financial Co	0.05
Frp Holdings Inc	0.06	Cnb Financial Corp/Pa	0.05	Seneca Foods Corp - Cl A	0.05
Rayonier Advanced Materials	0.06	Heartland Express Inc	0.05	Boston Omaha Corp-Cl A	0.05
Mercantile Bank Corp	0.06	Pangaea Logistics Solutions	0.05	Qcr Holdings Inc	0.05
Biglari Holdings Inc-B	0.06	lcu Medical Inc	0.05	Village Super Market-Class A	0.05
Park-Ohio Holdings Corp	0.06	Universal Stainless & Alloy	0.05	First Mid Bancshares Inc	0.05
United Fire Group Inc	0.06	Shenandoah Telecommunication	0.05	Worthington Steel Inc	0.05
Sierra Bancorp	0.06	Titan Machinery Inc	0.05	Regional Management Corp	0.05
Zumiez Inc	0.06	Donegal Group Inc-Cl A	0.05	Vanda Pharmaceuticals Inc	0.05
Hanmi Financial Corporation	0.06	Greenlight Capital Re Ltd-A	0.05	Encore Wire Corp	0.05



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
Enact Holdings Inc	0.05	Waterstone Financial Inc	0.04	Johnson Outdoors Inc-A	0.04
Surgery Partners Inc	0.04	Pra Group Inc	0.04	Resources Connection Inc	0.04
Heidrick & Struggles Intl	0.04	United Community Banks/Ga	0.04	Sterling Check Corp	0.04
Ethan Allen Interiors Inc	0.04	Vishay Precision Group	0.04	Matthews Intl Corp-Class A	0.04
Aaron'S Co Inc/The	0.04	Liberty Latin Americ-Cl A	0.04	Spok Holdings Inc	0.04
Marcus Corporation	0.04	Hallador Energy Co	0.04	Stellar Bancorp Inc	0.04
Usana Health Sciences Inc	0.04	Intrepid Potash Inc	0.04	Shore Bancshares Inc	0.04
V2X Inc	0.04	Bandwidth Inc-Class A	0.04	Veritex Holdings Inc	0.04
Community Trust Bancorp Inc	0.04	First Internet Bancorp	0.04	Fs Bancorp Inc	0.04
Amc Networks Inc-A	0.04	Liberty Broadband-A	0.04	Civista Bancshares Inc	0.04
Smartfinancial Inc	0.04	Caci International Inc -Cl A	0.04	Cooper-Standard Holding	0.04
Mistras Group Inc	0.04	American Vanguard Corp	0.04	Orrstown Finl Services Inc	0.04
Baycom Corp	0.04	1-800-Flowers.Com Inc-Cl A	0.04	Hilton Grand Vacations Inc	0.04
Ultralife Corp	0.04	Bumble Inc-A	0.04	Carter Bankshares Inc	0.04
Legacy Housing Corp	0.04	Orasure Technologies Inc	0.04	Gap Inc/The	0.04
Nordic American Tankers Ltd	0.04	First Bancshares Inc/Ms	0.04	Ranger Energy Services Inc	0.04
Civeo Corp	0.04	E2Open Parent Holdings Inc	0.04	Copa Holdings Sa-Class A	0.04
Lsb Industries Inc	0.04	Business First Bancshares	0.04	Custom Truck One Source Inc	0.04
Primis Financial Corp	0.04	Echostar Corp-A	0.04	Zimvie Inc	0.03
Eagle Bancorp Inc	0.04	Dmc Global Inc	0.04	Metropolitan Bank Holding Co	0.03
Foster (Lb) Co-A	0.04	Superior Group Of Cos Inc	0.04	First Financial Northwest	0.03
Nexa Resources Sa	0.04	Lifetime Brands Inc	0.04	Smith & Wesson Brands Inc	0.03
Phibro Animal Health Corp-A	0.04	Vista Outdoor Inc	0.04	P.A.M. Transportation Svcs	0.03
Great Lakes Dredge & Dock Co	0.04	Mrc Global Inc	0.04	Central Garden & Pet Co	0.03
Brookfield Asset Mgmt-A	0.04	Timken Co	0.04	Mid Penn Bancorp Inc	0.03
Bar Harbor Bankshares	0.04	Eastern Bankshares Inc	0.04	Futurefuel Corp	0.03
Clean Energy Fuels Corp	0.04	Oil States International Inc	0.04	Lci Industries	0.03



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
Blue Foundry Bancorp	0.03	C & F Financial Corp	0.03	Hovnanian Enterprises-A	0.03
First Foundation Inc	0.03	Natural Grocers By Vitamin C	0.03	Parke Bancorp Inc	0.03
Solaris Oilfield Infrast-A	0.03	Vera Bradley Inc	0.03	NI Industries	0.03
Iteos Therapeutics Inc	0.03	Stratus Properties Inc	0.03	Vitesse Energy Inc	0.03
Tompkins Financial Corp	0.03	Monro Inc	0.03	Haverty Furniture	0.03
Quad Graphics Inc	0.03	Hmn Financial Inc	0.03	Caleres Inc	0.03
Gencor Industries Inc	0.03	Bankwell Financial Group Inc	0.03	National Presto Inds Inc	0.03
Mueller Industries Inc	0.03	Ew Scripps Co/The-A	0.03	Landsea Homes Corp	0.03
Virco Mfg Corporation	0.03	Advance Auto Parts Inc	0.03	Titan International Inc	0.03
Lakeland Industries Inc	0.03	Princeton Bancorp Inc	0.03	Bank Of Marin Bancorp/Ca	0.03
Bally'S Corp	0.03	Equity Bancshares Inc - CI A	0.03	Universal Logistics Holdings	0.03
Phinia Inc	0.03	Timberland Bancorp Inc	0.03	Bankfinancial Corp	0.03
Flexsteel Inds	0.03	Amerant Bancorp Inc	0.03	Consolidated Communications	0.03
Netgear Inc	0.03	First Bank/Hamilton Nj	0.03	Veracyte Inc	0.03
Ribbon Communications Inc	0.03	Pcb Bancorp	0.03	Tile Shop Hldgs Inc	0.03
Mayville Engineering Co Inc	0.03	Burke & Herbert Financial Se	0.03	Bellring Brands Inc	0.03
N B T Bancorp Inc	0.03	American Public Education	0.03	Asure Software Inc	0.03
Ponce Financial Group Inc	0.03	Western New England Bancorp	0.03	Northeast Bank	0.03
Amplify Energy Corp	0.03	Nacco Industries-CI A	0.03	Essa Bancorp Inc	0.03
Amalgamated Financial Corp	0.03	Paysafe Ltd	0.03	Innospec Inc	0.02
Heritage Insurance Holdings	0.03	Lsi Industries Inc	0.03	Hayward Holdings Inc	0.02
Angiodynamics Inc	0.03	Worthington Enterprises Inc	0.03	Orthofix Medical Inc	0.02
Bcb Bancorp Inc	0.03	Par Pacific Holdings Inc	0.03	First Of Long Island Corp	0.02
Weyco Group Inc	0.03	Homestreet Inc	0.03	Ofg Bancorp	0.02
Colony Bankcorp	0.03	Hooker Furnishings Corp	0.03	Re/Max Holdings Inc-Cl A	0.02
Cross Country Healthcare Inc	0.03	Lovesac Co/The	0.03	Penns Woods Bancorp Inc	0.02
Adapthealth Corp	0.03	Concentrix Corp	0.03	Investar Holding Corp	0.02



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
Lcnb Corporation	0.02	Ufp Industries Inc	0.02	Ranpak Holdings Corp	0.02
Alamo Group Inc	0.02	National Bank Hold-Cl A	0.02	Arc Document Solutions Inc	0.02
Core Molding Technologies In	0.02	Overseas Shipholding Group-A	0.02	Nn Inc	0.02
Great Southern Bancorp Inc	0.02	Old Second Bancorp Inc	0.02	Cato Corp-Class A	0.02
Strattec Security Corp	0.02	Mission Produce Inc	0.02	Mastercraft Boat Holdings In	0.02
Leggett & Platt Inc	0.02	Immersion Corporation	0.02	Codorus Valley Bancorp Inc	0.02
Astronova Inc	0.02	Radiant Logistics Inc	0.02	First Northwest Bancorp	0.02
Omnicell Inc	0.02	Friedman Industries	0.02	Richardson Elec Ltd	0.02
Opko Health Inc	0.02	Washington Trust Bancorp	0.02	Mammoth Energy Services Inc	0.02
Insteel Industries Inc	0.02	Bel Fuse Inc-Cl A	0.02	Aci Worldwide Inc	0.02
Bridgewater Bancshares Inc	0.02	Gopro Inc-Class A	0.02	Nicolet Bankshares Inc	0.02
National Vision Holdings Inc	0.02	Fonar Corp	0.02	Resolute Forest Prod Inc Com-Rts	0.02
Destination XI Group Inc	0.02	Op Bancorp	0.02	Southern First Bancshares	0.02
Duckhorn Portfolio Inc/The	0.02	Phx Minerals Inc	0.02	Ftai Infrastructure Inc	0.02
Whole Earth Brands Inc	0.02	Xperi Inc	0.02	Hurco Companies Inc	0.02
Cullinan Therapeutics Inc	0.02	Luxfer Holdings Plc	0.02	Peoples Bancorp Of Nc	0.02
Bassett Furniture Inds	0.02	Forum Energy Technologies In	0.02	Entravision Communications-A	0.02
Citi Trends Inc	0.02	Unifi Inc	0.02	Richmond Mutual Bancorporati	0.02
Camden National Corp	0.02	Stoneridge Inc	0.02	Saga Communications Inc-Cl A	0.02
Onity Group Inc	0.02	Petco Health And Wellness Co	0.02	Primeenergy Resources Corp	0.02
Lands' End Inc	0.02	Universal Electronics Inc	0.02	Five Point Holdings Llc-Cl A	0.02
Petiq Inc	0.02	American Outdoor Brands Inc	0.02	Aviat Networks Inc	0.02
Alico Inc	0.02	Arq Inc	0.02	Bio-Rad Laboratories-A	0.02
Landmark Bancorp Inc	0.02	Onewater Marine Inc-Cl A	0.02	Healthstream Inc	0.02
Proto Labs Inc	0.02	Latham Group Inc	0.02	Magnachip Semiconductor Corp	0.02
Motorcar Parts Of America In	0.02	Wideopenwest Inc	0.02	Cadeler A/S-Adr	0.02
Peoples Financial Services	0.02	First Advantage Corp	0.02	Riverview Bancorp Inc	0.02



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
Concrete Pumping Holdings In	0.02	Commercial Vehicle Group Inc	0.01	Evans Bancorp Inc	0.01
Allient Inc	0.02	Territorial Bancorp Inc	0.01	Guaranty Bancshares Inc	0.01
Chemung Financial Corp	0.02	B&G Foods Inc	0.01	Trubridge Inc	0.01
Anywhere Real Estate Inc	0.02	Adams Resources & Energy Inc	0.01	BgsfInc	0.01
Epsilon Energy Ltd	0.02	Matrix Service Co	0.01	First United Corp	0.01
Escalade Inc	0.02	Tilly'S Inc-Class A Shrs	0.01	Ferroglobe Plc	0.01
Jakks Pacific Inc	0.02	Patterson Cos Inc	0.01	Southern Missouri Bancorp	0.01
Bj'S Restaurants Inc	0.02	Eastman Kodak Co	0.01	Citizens Community Bancorp I	0.01
Acnb Corp	0.02	Sportsman'S Warehouse Holdin	0.01	Capital City Bank Group Inc	0.01
Methode Electronics Inc	0.02	Distribution Solutions Group	0.01	Cambridge Bancorp	0.01
Geospace Technologies Corp	0.02	Evolution Petroleum Corp	0.01	Stratasys Ltd	0.01
Consumer Portfolio Services	0.02	Intevac Inc	0.01	Key Tronic Corp	0.01
Merchants Bancorp/In	0.02	Associated Capital Group - A	0.01	Hamilton Beach Brand-A	0.01
Acme United Corp	0.02	Duluth Holdings Inc - CI B	0.01	Provident Financial Hldgs	0.01
Hain Celestial Group Inc	0.02	Chuy'S Holdings Inc	0.01	Dhi Group Inc	0.01
Natures Sunshine Prods Inc	0.02	Comtech Telecommunications	0.01	Vir Biotechnology Inc	0.01
Kvh Industries Inc	0.02	Aersale Corp	0.01	First Savings Financial Grp	0.01
Ames National Corp	0.02	South Plains Financial Inc	0.01	Fb Financial Corp	0.01
Vimeo Inc	0.02	Utah Medical Products Inc	0.01	Douglas Elliman Inc	0.01
Third Coast Bancshares Inc	0.02	James River Group Holdings L	0.01	Taskus Inc-A	0.01
Emergent Biosolutions Inc	0.01	Mosaic Co/The	0.01	Arcadium Lithium Plc	0.01
Unity Bancorp Inc	0.01	Faro Technologies Inc	0.01	America'S Car-Mart Inc	0.01
Dole Plc	0.01	Sinclair Inc	0.01	Olo Inc - Class A	0.01
Ameriserv Financial Inc	0.01	Mgp Ingredients Inc	0.01	Secureworks Corp - A	0.01
Ramaco Resources Inc-A	0.01	Integral Ad Science Holding	0.01	Hertz Global Hldgs Inc	0.01
Neogen Corp	0.01	Tredegar Corp	0.01	Northern Oil And Gas Inc	0.01
Amtech Systems Inc	0.01	Enhabit Inc	0.01	Urban One Inc	0.01



SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT	SECURITY NAME	WEIGHT
Frequency Electronics Inc	0.01	Aris Water Solutions Inc-A	0.01	Thoughtworks Holding Inc	0.00
Compass Minerals Internation	0.01	Eagle Bancorp Montana Inc	0.01	Big 5 Sporting Goods Corp	0.00
Arrow Financial Corp	0.01	Glatfelter Corp	0.01	First Community Bankshares	0.00
Designer Brands Inc-Class A	0.01	Nu Skin Enterprises Inc - A	0.01	Choiceone Financial Svcs Inc	0.00
California Bancorp Inc	0.01	Northeast Community Bancorp	0.01	Conn'S Inc	0.00
Pdl Biopharma Inc	0.01	Alto Ingredients Inc	0.01	Perimeter Solutions Sa	0.00
Reservoir Media Inc	0.01	Cumulus Media Inc-CI A	0.01	Enterprise Bancorp Inc	0.00
Inogen Inc	0.01	Solo Brands Inc - Class A	0.01	Alerus Financial Corp	0.00
Orthopediatrics Corp	0.01	Upland Software Inc	0.01	Organogenesis Holdings Inc	0.00
DIh Holdings Corp	0.01	Perma-Pipe International Hol	0.01	Capital Bancorp Inc/Md	0.00
Caledonia Mining Corp Plc	0.01	Origin Bancorp Inc	0.01	Holley Inc	0.00
Voxx International Corp	0.01	Healthcare Services Group	0.01	Nabors Industries Ltd	0.00
Chegg Inc	0.01	Advantage Solutions Inc	0.01	Silverbow Resources Inc	0.00
Eastern Co/The	0.01	California First Leasing Cor	0.01	Willdan Group Inc	0.00
Spirit Airlines Inc	0.01	Horace Mann Educators	0.01	lbex Ltd	0.00
Guess? Inc	0.01	Fvcbankcorp Inc	0.01	Atlanticus Holdings Corp	0.00
Century Casinos Inc	0.01	Haverty Furniture Cos-Cl A	0.01	Farmers & Merchants Banco/Oh	0.00
Angi Inc	0.01	Seneca Foods Corp - CI B	0.01	Twin Disc Inc	0.00
Intest Corp	0.01	Compx International Inc	0.01	Fortitude Gold Corp	0.00
Forrester Research Inc	0.01	Addus Homecare Corp	0.01	Red River Bancshares Inc	0.00
Ascent Industries Co	0.01	Axt Inc	0.01	Willamette Valley Vineyards	0.00
New York Community Bancorp	0.01	Atlantic American Corp	0.00	Lazydays Holdings Inc	0.00
Natural Alternatives Intl	0.01	Independent Bank Corp - Mich	0.00	Oportun Financial Corp	0.00
Aware Inc/Mass	0.01	Paramount Global-Class A	0.00	Digital Turbine Inc	0.00
Riley Exploration Permian In	0.01	Viasat Inc	0.00	Information Services Group	0.00
Umb Financial Corp	0.01	Big Lots Inc	0.00	Definitive Healthcare Corp	0.00
Sterling Bancorp Inc/Mi	0.01	LI Flooring Holdings Inc	0.00	Gorman-Rupp Co	0.00



SECURITY NAME	WEIGHT
Mainstreet Bancshares Inc	0.00
Broadwind Inc	0.00
Ammo Inc	0.00
Live Ventures Inc	0.00
Ampco-Pittsburgh Corp	0.00
Playstudios Inc	0.00
Cerence Inc	0.00
Rf Industries Ltd	0.00
Security Natl Finl Corp-Cl A	0.00
Smart Sand Inc	0.00
Magyar Bancorp Inc	0.00
Blue Ridge Bankshares Inc	0.00
Xbiotech Inc	0.00
Urban One Inc	0.00
Fossil Group Inc	0.00
Hf Foods Group Inc	0.00
Sunnova Energy International	0.00
Community Health Systems Inc	0.00
Cryoport Inc	0.00
Citizens & Northern Corp	0.00
Fundamental Global Inc	0.00
Carparts.Com Inc	0.00
Protara Therapeutic Inc	0.00
Delta Apparel Inc	0.00
Reading International Inc-A	0.00
Contra Communications Shs	0.00
United Bancshares Inc/Ohio	0.00

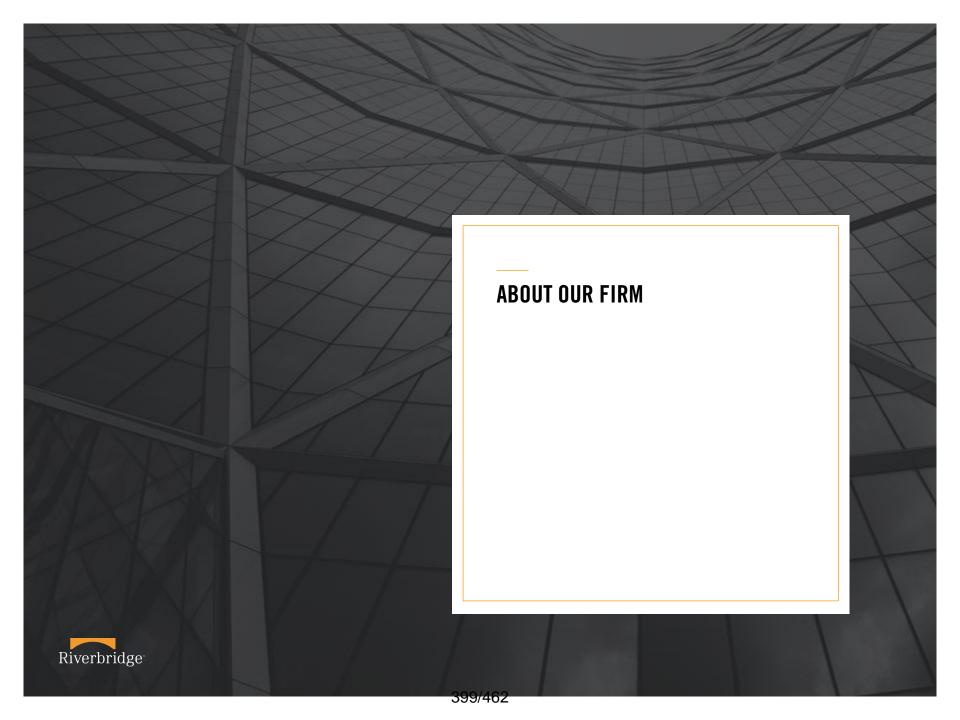
SECURITY NAME	WEIGHT
Patriot National Bancorp Inc	0.00
Orleans Homebuilders Inc	0.00
Oca Inc	0.00
Concord Camera Escow Shs	0.00
California Coastal Comm Inc	0.00
Delta Financial Corp	0.00
Curative Health Services Inc	0.00
Bank Of Florida Corp	0.00
Amcore Financial Inc	0.00
Ata Holdings Corp	0.00
Fresenius Kabi Pharma-Cvr	0.00
Friedman'S Inc-Cl A	0.00
Medical Staffing Network Hol	0.00
Midwest Banc Holdings Inc	0.00
Mcsi Inc	0.00

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Riverbridge

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WHO WE ARE

Our mission is to invest with endurance in ways that build true value over time.

Our work each day is grounded in a mindset of endurance. Our investment strategy - which has not wavered since 1987 - identifies companies with the fundamentals positioned for enduring growth. We help our clients persist in these investments so they can achieve their goals, and we provide clients with insights and trusted guidance to outlast market cycles. Our mission is to invest with endurance in ways that build true value over time.

AT A GLANCE

- HEADQUARTERED IN MINNEAPOLIS, MN

- 35+ YEAR TRACK RECORD

- TIME-TESTED INVESTMENT APPROACH

- LONG-TENURED INVESTMENT TEAM — 10+ YEARS WORKING TOGETHER

- MAJORITY EMPLOYEE OWNED

- INVESTMENT CENTRIC CULTURE

INVESTMENT PHILOSOPHY

We believe earnings power determines the value of a franchise.

We focus on companies that are building their earnings power and intrinsic value over long periods of time. We invest in high-quality growth companies that demonstrate the ability to sustain strong secular earnings growth, regardless of overall economic conditions.

OUR INVESTMENT STRATEGY

We look to identify and invest only in companies that meet all aspects of our investment criteria.

We build portfolios by identifying and buying well-managed companies that are diversified in their sources of earnings and have a sustainable competitive differentiation, which will earn them a high return on invested capital and superior growth in business value. We analyze each company's unit growth, market position, accounting practices, and ability to finance growth. We spend significant face-to-face time meeting with management and employees, and because we are committed to forming a holistic perspective on the effectiveness of management, we also spend time with industry peers, customers, suppliers, and others who may offer an experienced perspective on the company and its management.

HUMAN INSIGHT + DATA ANALYSIS

Our investment strategy bridges human insight with data analysis to identify enduring businesses that demonstrate the ability to produce a sustainable high return on invested capital. We seek to invest in companies that possess all five building blocks of our philosophy:

- SOUND CULTURE & MANAGEMENT
- STRONG UNIT GROWTH
- STRATEGIC MARKET POSITION
- ✓ CONSERVATIVE ACCOUNTING
- ✓ INTERNALLY FINANCED GROWTH

INVESTMENT PROCESS

DISCOVERY

Riverbridge looks for companies that stand out in their markets and demonstrate potential long-term earnings power. Our idea generation sources include:

DUE DILIGENCE

After identifying a potential investment, we evaluate the company through face-to-face meetings with stakeholders and fundamental data analysis.

BOTTOM-UP, FUNDAMENTAL RESEARCH

COMPETITORS, CUSTOMERS, SUPPLIERS, & PARTNERS OF CURRENT HOLDINGS

INDUSTRY EVENTS. CONFERENCES. TRADE SHOWS, ETC.

RESEARCH UNIVERSE OF POTENTIAL We are continually conducting COMPANIES research to identify investment candidates.

MEETINGS WITH MANAGEMENT TEAM

360° PEER REVIEW

FUNDAMENTAL ANALYSIS

INVESTMENT TEAM SOCIALIZATION



Our differentiated, 360° peer review process looks

If a company meets our criteria, it is added to our portfolio at a 1.5% maximum weighting

CONTINUAL REVIEW

We continue to review a company's fundamentals relative to our investment disciplines to ensure they remain sound over time.

CHAMPION / DEVIL'S ADVOCATE PROCESS

ONGOING ENGAGEMENT

EVALUATION BASED ON SELL DISCIPLINES

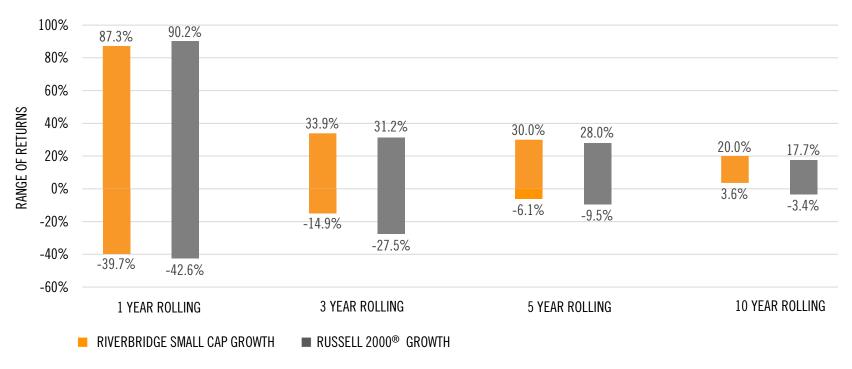
- Fund new/better opportunities
- Portfolio diversification
- Deterioration of fundamentals

COMPANY HOLDING DEVIL'S CHAMPION ADVOCATE

Each holding has a "Champion" and "Devil's Advocate" to prevent biases that could cloud judgement. Both parties must agree in order to increase the weighting beyond its initial position.

ROLLING RANGE OF RETURNS

Small Cap Growth Portfolio vs. Russell 2000® Growth Index



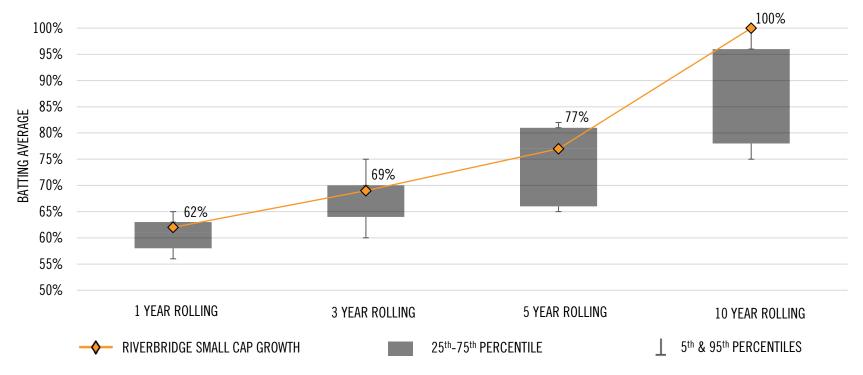
Sources: Riverbridge Partners, Russell Data shown as of June 30, 2024.

The above chart illustrates the range of returns, or the best and worst return of the Riverbridge Small Cap Growth strategy and its benchmark, the Russell 2000 ® Growth Index, for all rolling 1, 3, 5, and 10-year periods since the inception of the Riverbridge Small Cap Growth strategy, June 30, 1988. Performance related information in this chart is presented net of fees and the range of returns is calculated monthly.

Information included is supplemental to the GIPS Performance Report.

ROLLING BATTING AVERAGE

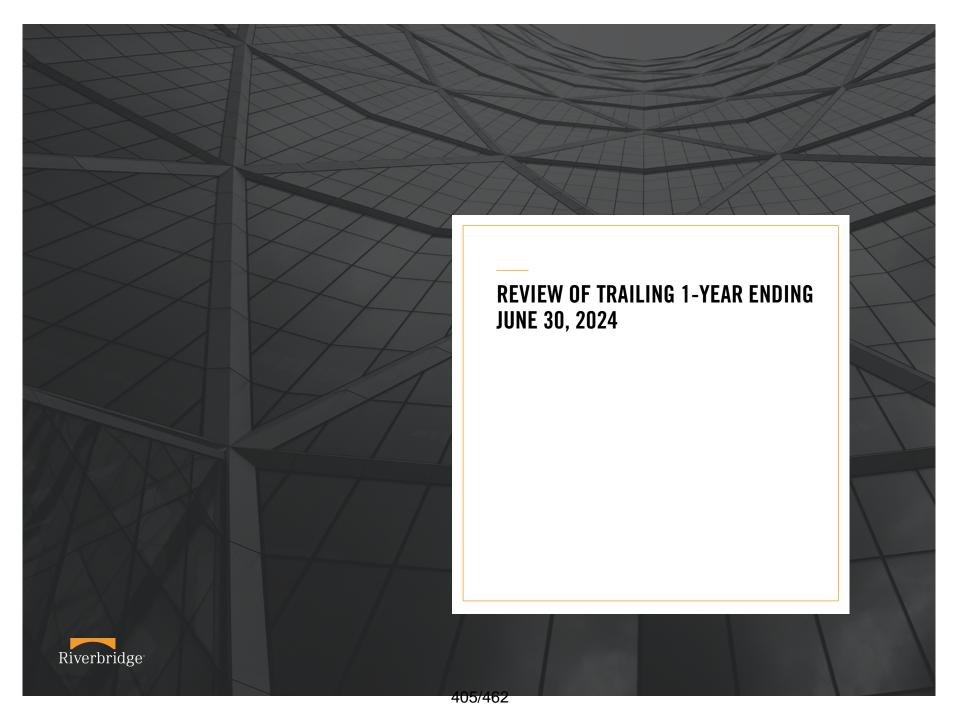
Small Cap Growth Portfolio vs. Russell 2000® Growth Index & eVestment™ US Small Cap Growth Universe (9 Constituents)



Sources: Riverbridge Partners, eVestment™ Data shown as of June 30, 2024.

The above chart illustrates the batting average, or percentage of time that the Riverbridge Small Cap Growth strategy has outperformed its benchmark, the Russell 2000® Growth Index, for all rolling 1, 3, 5, and 10-year periods since its inception, June 30, 1988. Performance related information provided in this chart is presented net of fees and batting average is calculated monthly.

Information included is supplemental to the GIPS Performance Report.



PORTFOLIO FACTS (AS OF 06/30/2024)

PORTFOLIO CHARACTERISTICS

	PERS of Mississippi	Russell 2000® Growth
Number of Holdings	49	1,054
Market Cap (wgt. Average)	\$6.1 billion	\$6.0 billion
Price/Book	4.6x	3.9x
Active Share	95.0%	N/A
1-Year Turnover	17.4%	N/A
Net Debt/Total Capital	11.9%	22.7%
ROE	11.6%	10.9%

SOURCE: FACTSET (07/02/2024)

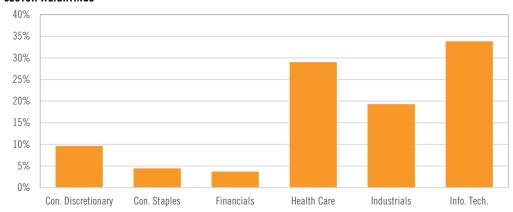
PERFORMANCE HISTORY (AS OF 06/30/2024)

	Q2 2024	YTD 2024	1 Year	3 Year	5 Year	10 Year	Inception
PERS of Mississippi (Gross)	-9.51%	-5.74%	-2.19%	-8.74%	5.82%	9.56%	8.90%
PERS of Mississippi (Net)	-9.69%	-6.10%	-2.93%	-9.43%	5.01%	8.65%	8.01%
Russell 2000® Growth	-2.92%	4.44%	9.14%	-4.86%	6.17%	7.39%	7.51%

Periods greater than one year are annualized. Inception Date: 12/02/2013

		0.10	0.00/
Medpace Holdings, Inc.	4.9%	Globant S.A.	3.8%
SPS Commerce, Inc.	4.8%	Ensign Group, Inc.	3.2%
Freshpet, Inc.	4.3%	Five Below, Inc.	3.2%
Grand Canyon Education, Inc.	4.2%	Descartes Systems Group, Inc.	2.9%
RB Global, Inc.	3.8%	Kadant, Inc.	2.8%

SECTOR WEIGHTINGS



PORTFOLIO HOLDINGS (AS OF 06/30/2024)

Company	Market Value	% of Assets	Ticker
Medpace Holdings, Inc.	\$15,265,632.10	4.87%	MEDP
SPS Commerce, Inc.	\$14,938,022.40	4.77%	SPSC
Freshpet, Inc.	\$13,457,206.95	4.29%	FRPT
Grand Canyon Education, Inc.	\$13,027,020.10	4.16%	LOPE
RB Global, Inc.	\$11,799,834.44	3.77%	RBA
Globant S.A.	\$11,769,616.50	3.76%	GLOB
Ensign Group, Inc.	\$10,075,663.71	3.22%	ENSG
Five Below, Inc.	\$9,914,199.57	3.16%	FIVE
Descartes Systems Group, Inc.	\$9,094,922.28	2.90%	DSGX
Kadant, Inc.	\$8,638,894.68	2.76%	KAI
Glaukos Corporation	\$8,524,277.10	2.72%	GKOS
Kinsale Capital Group, Inc.	\$8,395,251.20	2.68%	KNSL
Workiva, Inc.	\$8,257,723.65	2.64%	WK
Paylocity Holding Corporation	\$7,408,519.65	2.36%	PCTY
CCC Intelligent Solutions Holdings, Inc.	\$7,091,557.44	2.26%	CCCS
Alarm.com Holdings, Inc.	\$6,951,657.24	2.22%	ALRM
Chemed Corporation	\$6,923,863.38	2.21%	CHE
Exponent, Inc.	\$6,918,362.96	2.21%	EXP0
Repligen Corporation	\$6,603,274.92	2.11%	RGEN
WillScot Mobile Mini Holdings Corporation	\$6,344,861.88	2.02%	WSC
Guidewire Software, Inc.	\$6,224,768.27	1.99%	GWRE
Floor & Decor Holdings, Inc.	\$6,215,510.84	1.98%	FND
Power Integrations, Inc.	\$5,947,760.22	1.90%	POWI
Cognex Corporation	\$5,926,970.28	1.89%	CGNX
BlackLine, Inc.	\$5,882,169.15	1.88%	BL
ACV Auctions, Inc.	\$5,677,721.00	1.81%	ACVA

PORTFOLIO HOLDINGS (AS OF 06/30/2024)

Company	Market Value	% of Assets	Ticker
Doximity, Inc.	\$5,422,739.69	1.73%	DOCS
DoubleVerify Holdings, Inc.	\$4,978,537.41	1.59%	DV
Privia Health Group, Inc.	\$4,845,995.88	1.55%	PRVA
Powerschool Holdings, Inc.	\$4,658,463.40	1.49%	PWSC
U.S. Physical Therapy, Inc.	\$4,531,075.34	1.45%	USPH
Paycor HCM, Inc.	\$4,396,562.20	1.40%	PYCR
Progyny, Inc.	\$4,389,803.96	1.40%	PGNY
Option Care Health, Inc.	\$4,352,168.60	1.39%	OPCH
Jamf Holdings Corporation	\$4,095,696.00	1.31%	JAMF
Pennant Group, Inc.	\$3,862,294.50	1.23%	PNTG
Transcat, Inc.	\$3,512,009.60	1.12%	TRNS
Stevanato Group SpA	\$3,195,139.78	1.02%	STVN
Five9, Inc.	\$2,871,659.70	0.92%	FIVN
Goosehead Insurance, Inc.	\$2,859,535.52	0.91%	GSHD
Certara, Inc.	\$2,716,068.10	0.87%	CERT
Grid Dynamics Holdings, Inc.	\$2,588,549.94	0.83%	GDYN
Phreesia, Inc.	\$2,411,288.00	0.77%	PHR
Kornit Digital Ltd.	\$2,330,483.04	0.74%	KRNT
Neogen Corporation	\$2,188,496.97	0.70%	NEOG
OrthoPediatrics Corporation	\$1,927,897.84	0.62%	KIDS
Hillman Solutions Corporation	\$1,227,052.50	0.39%	HLMN
Alkami Technology, Inc.	\$974,129.92	0.31%	ALKT
AMN Healthcare Services, Inc.	\$516,603.32	0.16%	AMN
Cash	\$11,239,369.34	3.59%	
Total	\$313,366,882.46	100.00%	

TRAILING 1-YEAR ANALYSIS (AS OF 06/30/2024)

TRIBUTION (Trailing 1-Year) AVERAGE WEIGHT ATTRIBUTION ANALYSIS					'SIS	
Sector	PERS of Mississippi %	Russell 2000® Growth %	Variation %	Sector Selection %	Stock Selection %	Active Contribution %
Communication Services	0.00	2.06	-2.06	0.15	0.00	0.15
Consumer Discretionary	10.81	10.74	0.07	0.04	-0.81	-0.77
Consumer Staples	2.90	4.42	-1.52	-0.19	1.44	1.26
Energy	0.00	4.72	-4.72	-0.44	0.00	-0.44
Financials	4.54	6.18	-1.64	0.04	-0.78	-0.74
Health Care	27.15	21.29	5.86	-0.36	0.05	-0.32
Industrials	17.54	19.65	-2.10	0.01	-3.18	-3.17
Information Technology	35.60	22.31	13.29	1.39	-8.52	-7.13
Materials	0.00	4.01	-4.01	0.38	0.00	0.38
Real Estate	0.00	1.58	-1.58	0.14	0.00	0.14
Utilities	0.00	1.48	-1.48	0.36	0.00	0.36
Other	0.00	1.58	-1.58	-0.71	0.00	-0.71
Cash	1.46	0.00	1.46	-0.11	0.00	-0.11
TOTAL				0.68%	-11.80%	-11.12%

Contributors (Trailing 1-Year)

Security	
Medpace Holdings, Inc.	
Freshpet, Inc.	
Grand Canyon Education, Inc.	
Glaukos Corporation	
RB Global, Inc.	

Detractors (Trailing 1-Year)

Security	
Five Below, Inc.	
DoubleVerify Holdings, Inc.	
Paylocity Holding Corporation	
Workiva, Inc.	
AMN Healthcare Services, Inc.	

The Attribution Analysis section, provided upon specific request only, includes information relative to a specific subset of investments, including sector weights and attribution characteristics contained in the Portfolio. Sector allocations are determined by Riverbridge and may differ from sector allocations used in the comparative index. The subsets pertain to each of the industry sectors which comprise our portfolio. Attribution analysis is not intended to be interpreted as return information for the portfolio. Please refer to our performance information contained herein for additional information on total portfolio performance for the same period. Furthermore, attribution information is for investment professional use only, and is not intended for further distribution.

SOURCE: FACTSET (07/02/2024)

PURCHASES - TRAILING 1-YEAR (AS OF 06/30/2024)

PURCHASES

Security	Date	Rationale
Alkami Technology, Inc.	2024 Q2	Leading provider of cloud-based digital banking solutions for banks and credit unions in the United States. Digital capabilities are critical to financial institutions and how they interact with their customers, and Alkami provides comprehensive platforms that includes online and mobile banking, bill payment and money transfer, financial management tools, and workflow integrations to various other banking systems to ensure the seamless flow of information.
Doximity, Inc.	2024 Q2	A comprehensive digital platform tailored for medical professionals; facilitating connections within the medical community, providing access to pertinent literature and industry updates, and offering job alerts. The company is also building out tailored efficiency tools such as telehealth services, shared calendars, and mobile fax capabilities to increase engagement with the platform.
Hillman Solutions Corporation	2024 Q2	Leading provider of hardware products and merchandising services to home improvement retailers in the United States and Canada. They are known for their industry-leading management of difficult aisles and categories in retail stores and offer optimized inventory levels, worry free ordering, and supply chain execution. They are also a leader in kiosk and kiosk service including duplicate key cutting, engraving, and knife sharpening.
Jamf Holdings Corporation	2024 Q2	Provides mobile device management and security solutions specially designed for Apple devices, both iOS and MAC. Jamf is unique in the industry in that it is designed with an Apple-First, Apple-Only mentality, working closely with Apple to understand future products updates so that its device management programs can be offered without downtime and without substantially limiting device functionality.
Transcat, Inc.	2024 Q2	Provides calibration services, rental equipment, and distribution sales for measurement and control instrumentation. Two thirds of the company's revenues are derived from services, in which production equipment or test instruments are calibrated to ensure they are accurately measuring things like flow, temperature, electricity, or pressure. They also maintain inventory for customers to rent or purchase equipment, and deliver it calibrated and ready for use.
Option Care Health, Inc.	2023 Q3	Provides home and alternative site infusion therapy services. They have developed nationwide capabilities to treat both chronic and acute patients in more convenient and less costly care settings than a hospital. Payers find value in their services as a lower cost alternative that also improves patient satisfaction. Patients find value in being able to return home sooner post-surgery, or in the case of chronic patients, be treated at home or in outpatient settings as opposed to a hospital.
Powerschool Holdings, Inc.	2023 Q3	Provides software and services to K-12 school districts, focusing primarily on core systems of record, talent management, and in-classroom modules. School districts have a wide variety of information technology needs but often rely on outdated technology lacking support and modernization. PowerSchool's solutions allow districts to operate more efficiently, hire more efficiently, and deliver better educational outcomes to students.
Repligen Corporation	2023 Q3	Global life sciences company that provides bioprocessing technologies to researchers, pharmaceutical and biotech companies. They provide their customers with highly innovative technologies that improve quality, improve yields, reduce costs, and shorten development timelines for therapies including monoclonal antibodies, vaccines, and cell and gene therapies. Approximately two thirds of their revenues are from clinical trials and one third of revenues come from commercial therapies.
Stevanato Group SpA	2023 Q3	Provides packaging components and drug delivery systems to pharmaceutical and biologics customers. They focus on glass materials, providing vials, syringes, and cartridges to customers to create the optimal design for their particular molecule. They differentiate their products on quality, safety, and manufacturing reliability.

SALES - TRAILING 1-YEAR (AS OF 06/30/2024)

SALES

Security	Date	Rationale
AMN Healthcare Services, Inc.	2024 Q2	Leading provider of workforce solutions for the healthcare industry. Expectation of increase in market share did not transpire as more aggressive Private Equity backed companies have taken market share and pressured industry-wide margins.
Definitive Healthcare Corporation	2024 Q2	Provides commercial data intelligence on the healthcare industry. Business proved to be less mission critical to its customers than expected, resulting in growth opportunities being more economically sensitive than we prefer.
International Money Express, Inc.	2024 Q2	Money remittance services company focused on facilitating remittances from the United States to Latin America. Macro sensitivities and exchange rate uncertainty outweigh strong operating model, growth, and market share capture.
Model N, Inc.	2024 Q2	Cloud-based, SaaS solution that helps manufacturers in the pharmaceuticals and high-tech industries manage their channel spend. Acquired by Vista Equity Partners.
Squarespace, Inc.	2024 Q2	Digital platform that enables small to medium sized businesses to create a professional online presence. Announced to be acquired by Permira Holdings Limited.
Amedisys, Inc.	2023 Q3	Leading healthcare services company focused on providing in home care. Source of funds following acquisition offer from Optum, a division of UnitedHealth Group, Inc.
Healthcare Services Group, Inc.	2023 Q3	Provides housekeeping and dining services to the skilled long-term care facilities, mainly nursing homes. Business lacked consistent organic growth opportunities and we were unsatisfied with lower-quality accounting changes.
National Vision Holdings, Inc.	2023 Q3	Leading value-focused optical retailer in the United States providing eye exams, eyeglasses, and contact lenses. Failure to differentiate brands and gain market share; labor challenges appear to be long-term.
Ollie's Bargain Outlet Holdings, Inc.	2023 Q3	Extreme value retailer where loyal customers find "Good Stuff Cheap." Source of funds for more consistent business models after a sharp rise in valuation.



PRESENTATION #1

AS OF JUNE 30, 2024

Time Period	PERS of Mississippi (Gross of Fees)	PERS of Mississippi (Net of Fees)	Russell 2000 Growth
Q2 2024	-9.51%	-9.69%	-2.92%
Q1 2024	4.16%	3.97%	7.58%
Q4 2023	10.17%	9.96%	12.75%
Q3 2023	-5.81%	-5.98%	-7.32%
Last 12 Months	-2.19%	-2.93%	9.14%
Last 2 Years (Annualized)	7.69%	6.89%	13.74%
Last 3 Years (Annualized)	-8.74%	-9.43%	-4.86%
Last 4 Years (Annualized)	2.90%	2.12%	6.85%
Since Inception (Annualized)	8.90%	8.01%	7.51%

PERS of Mississippi Account Inception Date: 12/02/2013

INVESTMENT PHILOSOPHY AND STRATEGY SUMMARY

PRESENTATION #2

I. What changes took place in the account since the last report:

STOCK PURCHASES

Q2 2024	Q1 2024	Q4 2023	Q3 2023	Q2 2023	Q1 2023	Q4 2022	Q3 2022
Alkami Technology, Inc. Doximity, Inc. Hillman Solutions Corporation Jamf Holdings Corporation Transcat. Inc.			 Option Care Health, Inc. Powerschool Holdings, Inc. Repligen Corporation Stevanato Group SpA 	ACV Auctions, Inc.	 DoubleVerify Holdings, Inc. Guidewire Software, Inc. International Money Express, Inc. 	 CCC Intelligent Solutions Holdings, Inc. Kinsale Capital Group, Inc. 	Cognex Corporation

STOCK SALES

Q2 2024	Q1 2024	Q4 2023	Q3 2023	Q2 2023	Q1 2023	Q4 2022	Q3 2022
Definitive Healthcare Corporation International Money Express, Inc. Model N, Inc. Squarespace, Inc.			 Amedisys, Inc. Healthcare Services Group, Inc. National Vision Holdings, Inc. Ollie's Bargain Outlet Holdings, Inc. 	Heska Corporation National Instruments Corporation PRA Group, Inc.	 Oak Street Health, Inc. Pegasystems, Inc. Pros Holdings, Inc. 	 Fiverr International LTD Porch Group, Inc. Proto Labs, Inc. ThredUp, Inc. 	Avalara, Inc.Gentex CorporationVimeo, Inc.

CASH EQUIVALENTS

No Changes - Riverbridge remains fully invested at all times. Any cash in the portfolio is a residual of our investment and trading process.

II. Deviations from previous outlined strategy:

None — The time-tested Riverbridge investment style, process, and policy have been in place since the inception of the firm. Under no circumstances would we deviate from the disciplines associated with this philosophy. Riverbridge has never deviated from its stated investment philosophy of buying differentiated, well-managed growth companies. Furthermore, our clients can be assured that we will not abandon our style when it is merely out-of-favor.

INVESTMENT PHILOSOPHY AND STRATEGY SUMMARY

PRESENTATION #2

III. Factors affecting investments over the next 6 to 12 months:

- 1) The Economy: Will the Federal Reserve achieve a soft landing? An increasing number of investors are fearing a recession and believe the Fed is late to shift to a more accommodative policy. A soft landing would mean the Fed charted a path with its interest rate policy that tamed inflation without triggering an economic downturn. Recent economic data has been mixed and investors will continue to monitor for signs of a slowdown and possible recession.
- 2) Elevated Generative Al Expectations: Like the dot comperiod, market participants today are optimistic about an emerging technology platform and are trading into hardware and equipment companies amidst the frenzy to build out the necessary infrastructure to support generative Al applications. As we look ahead, Al spending will be scrutinized in a more meaningful way, and investors will be more demanding of a return on massive Al investments.
- 3) **Debt:** Consumer and Fiscal debt levels are elevated and could inhibit growth prospects.

INVESTMENT PHILOSOPHY AND STRATEGY SUMMARY PRESENTATION #2 - IV. STRATEGY

INVESTMENT PHILOSOPHY

We believe earnings power determines the value of a franchise.

We focus on companies that are building their earnings power and intrinsic value over long periods of time. We invest in high-quality growth companies that demonstrate the ability to sustain strong secular earnings growth, regardless of overall economic conditions.

OUR INVESTMENT STRATEGY

We look to identify and invest only in companies that meet all aspects of our investment criteria.

We build portfolios by identifying and buying well-managed companies that are diversified in their sources of earnings and have a sustainable competitive differentiation, which will earn them a high return on invested capital and superior growth in business value. We analyze each company's unit growth, market position, accounting practices, and ability to finance growth. We spend significant face-to-face time meeting with management and employees, and because we are committed to forming a holistic perspective on the effectiveness of management, we also spend time with industry peers, customers, suppliers, and others who may offer an experienced perspective on the company and its management.

HUMAN INSIGHT + DATA ANALYSIS

Our investment strategy bridges human insight with data analysis to identify enduring businesses that demonstrate the ability to produce a sustainable high return on invested capital. We seek to invest in companies that possess all five building blocks of our philosophy:

- SOUND CULTURE & MANAGEMENT
- ✓ STRONG UNIT GROWTH
- STRATEGIC MARKET POSITION
- CONSERVATIVE ACCOUNTING
- INTERNALLY FINANCED GROWTH

VOLATILITY INDEX

PRESENTATION #3

Standard Deviation PERS of Mississippi

AS OF JUNE 30, 2024

Time Period	PERS of Mississippi	Russell 2000 Growth
Since Inception	19.07%	20.42%
PERS of Mississippi Account Inception Date: 12/02/2013		

Standard Deviation Small Cap Growth Composite

ENDURING TRACK RECORD RIVERBRIDGE ANNUALIZED RETURNS* (GROSS OF FEES)

HISTORICALLY LOWER RISK

RIVERBRIDGE ANNUALIZED STANDARD DEVIATIONS*

Riverbridge Small Cap Growth Since Strategy Inception 06/30/1988	11.29%	19.13
Russell 2000® Growth	7.89%	21.75
+ / - Benchmark	3.40%	-2.62

Performance related information, including but not limited to market capitalization information, portfolio risk measures, sector weightings, and representative holdings provided in this document, is presented as supplemental information to the GIPS Composite Report found in the Disclosure section.

STATEMENT OF ASSETS

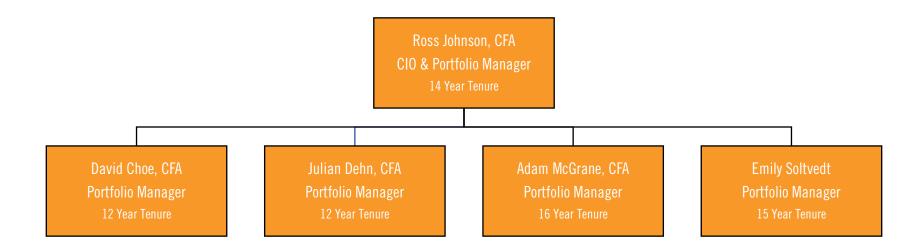
PRESENTATION #4 — PORTFOLIO HOLDINGS (AS OF 06/30/2024)

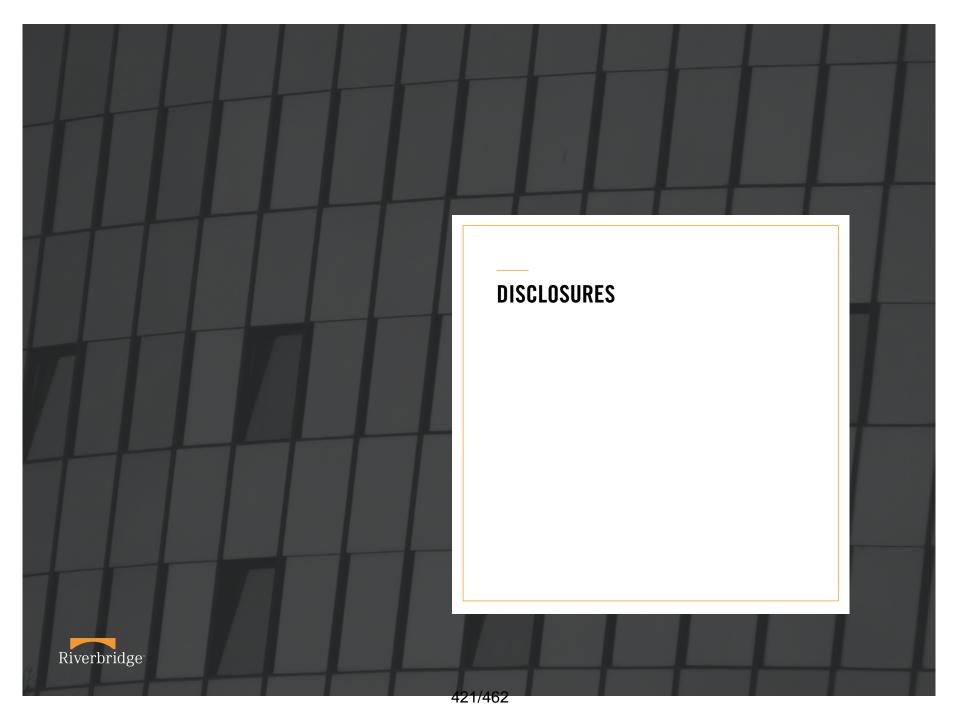
Company	Market Value	% of Assets	Ticker	
Medpace Holdings, Inc.	\$15,265,632.10	4.87%	MEDP	
SPS Commerce, Inc.	\$14,938,022.40	4.77%	SPSC	
Freshpet, Inc.	\$13,457,206.95	4.29%	FRPT	
Grand Canyon Education, Inc.	\$13,027,020.10	4.16%	LOPE	
RB Global, Inc.	\$11,799,834.44	3.77%	RBA	
Globant S.A.	\$11,769,616.50	3.76%	GLOB	
Ensign Group, Inc.	\$10,075,663.71	3.22%	ENSG	
Five Below, Inc.	\$9,914,199.57	3.16%	FIVE	
Descartes Systems Group, Inc.	\$9,094,922.28	2.90%	DSGX	
Kadant, Inc.	\$8,638,894.68	2.76%	KAI	
Glaukos Corporation	\$8,524,277.10	2.72%	GKOS	
Kinsale Capital Group, Inc.	\$8,395,251.20	2.68%	KNSL	
Workiva, Inc.	\$8,257,723.65	2.64%	WK	
Paylocity Holding Corporation	\$7,408,519.65	2.36%	PCTY	
CCC Intelligent Solutions Holdings, Inc.	\$7,091,557.44	2.26%	CCCS	
Alarm.com Holdings, Inc.	\$6,951,657.24	2.22%	ALRM	
Chemed Corporation	\$6,923,863.38	2.21%	CHE	
Exponent, Inc.	\$6,918,362.96	2.21%	EXP0	
Repligen Corporation	\$6,603,274.92	2.11%	RGEN	
WillScot Mobile Mini Holdings Corporation	\$6,344,861.88	2.02%	WSC	
Guidewire Software, Inc.	\$6,224,768.27	1.99%	GWRE	
Floor & Decor Holdings, Inc.	\$6,215,510.84	1.98%	FND	
Power Integrations, Inc.	\$5,947,760.22	1.90%	POWI	
Cognex Corporation	\$5,926,970.28	1.89%	CGNX	
BlackLine, Inc.	\$5,882,169.15	1.88%	BL	
ACV Auctions, Inc.	\$5,677,721.00	1.81%	ACVA	

STATEMENT OF ASSETS

PRESENTATION #4 — PORTFOLIO HOLDINGS (AS OF 06/30/2024)

Company	Market Value	% of Assets	Ticker
Doximity, Inc.	\$5,422,739.69	1.73%	DOCS
DoubleVerify Holdings, Inc.	\$4,978,537.41	1.59%	DV
Privia Health Group, Inc.	\$4,845,995.88	1.55%	PRVA
Powerschool Holdings, Inc.	\$4,658,463.40	1.49%	PWSC
U.S. Physical Therapy, Inc.	\$4,531,075.34	1.45%	USPH
Paycor HCM, Inc.	\$4,396,562.20	1.40%	PYCR
Progyny, Inc.	\$4,389,803.96	1.40%	PGNY
Option Care Health, Inc.	\$4,352,168.60	1.39%	OPCH
Jamf Holdings Corporation	\$4,095,696.00	1.31%	JAMF
Pennant Group, Inc.	\$3,862,294.50	1.23%	PNTG
Transcat, Inc.	\$3,512,009.60	1.12%	TRNS
Stevanato Group SpA	\$3,195,139.78	1.02%	STVN
Five9, Inc.	\$2,871,659.70	0.92%	FIVN
Goosehead Insurance, Inc.	\$2,859,535.52	0.91%	GSHD
Certara, Inc.	\$2,716,068.10	0.87%	CERT
Grid Dynamics Holdings, Inc.	\$2,588,549.94	0.83%	GDYN
Phreesia, Inc.	\$2,411,288.00	0.77%	PHR
Kornit Digital Ltd.	\$2,330,483.04	0.74%	KRNT
Neogen Corporation	\$2,188,496.97	0.70%	NEOG
OrthoPediatrics Corporation	\$1,927,897.84	0.62%	KIDS
Hillman Solutions Corporation	\$1,227,052.50	0.39%	HLMN
Alkami Technology, Inc.	\$974,129.92	0.31%	ALKT
AMN Healthcare Services, Inc.	\$516,603.32	0.16%	AMN
Cash	\$11,239,369.34	3.59%	
Total	\$313,366,882.46	100.00%	





PERFORMANCE DISCLOSURES

- Where presented, gross-of-fee performance figures do not reflect the deduction of investment advisory fees. A client's returns will be reduced by the advisory fee and other expenses incurred in the management of its account. For example, the deduction of a 1% advisory fee over a 10-year period would reduce a 10% gross return to an 8.9% net return. A description of Riverbridge's advisory fees are disclosed on Part 2 of its Form ADV, a copy of which is available upon request.
- Past performance does not guarantee future results.
- Performance results do not reflect the impact of taxes.
- It should not be assumed that account holdings will correspond directly to any such comparative benchmark index.
- Comparative indices may be more or less volatile than Riverbridge portfolios.
- Riverbridge performance results reflect the reinvestment of dividends and other account earnings, and are net of applicable account transaction charges.
- Information in this document is not intended to be used as investment advice.
- Mention of companies/stocks herein is for illustrative purposes only and should not be interpreted as investment advice.
- The holdings included in this document are for illustrative purposes only and should not be considered a recommendation to purchase or sell any particular security. There is no guarantee that the same or similar holdings will be purchased or held in accounts in the future.
- The information herein has not been based on a consideration of any individual investor circumstances and is not investment advice, nor should it be construed in any way as tax, accounting, legal or regulatory advice. To that end, investors should seek independent legal and financial advice, including advice as to tax consequences, before making any investment decision.
- The Attribution Analysis section, provided upon specific request only, includes information relative to a specific subset of investments, including sector weights and attribution characteristics contained in the Portfolio. Sector allocations are determined by Riverbridge and may differ from sector allocations used in the comparative index. The subsets pertain to each of the industry sectors which comprise our portfolio. Attribution analysis is not intended to be interpreted as return information for the portfolio. Please refer to our performance information contained herein for additional information on total portfolio performance for the same period. Furthermore, attribution information is for investment professional use only, and is not intended for further distribution.

SMALL CAP GROWTH COMPOSITE

Year	Gross-of-Fee Return (%)	Net-of-Fee Return (%)	Russell 2000® Growth Return (%)	Portfolios	Dispersion (%)	Composite 3-Year Ex-Post Std. Dev.	Russell 2000® Growth 3-Year Ex-Post Std. Dev.	Composite Assets (\$ Millions)	TTL Firm Assets (\$ Millions)	Advisory Only (\$Millions)	Ttl Firm Assets & Advisory Only (\$Millions)
2023	21.21	20.26	18.66	101	0.36	20.30	21.79	2,099.7	7,429.2	4,432.2	11,861.5
2022	-31.79	-32.34	-26.36	104	0.30	24.40	26.20	1,897.0	6,279.5	3,892.8	10,172.3
2021	4.58	3.82	2.83	105	0.30	21.25	23.07	2,456.5	9,408.0	6,149.6	15,557.6
2020	55.10	53.89	34.63	97	0.84	22.70	25.10	2,402.9	8,478.1	4,896.5	13,374.6
2019	28.32	27.32	28.48	97	0.27	15.31	16.37	1,396.4	5,378.3	2,633.2	8,011.5
2018	8.14	7.32	-9.31	104	0.47	15.47	16.46	1,372.9	4,737.1	1,842.0	6,579.1
2017	24.09	23.18	22.17	107	0.60	12.99	14.59	1,408.0	5,047.9	1,791.1	6,839.0
2016	14.23	13.37	11.32	111	0.75	15.29	16.67	1,566.9	4,686.7	1,546.6	6,233.3
2015	-2.56	-3.22	-1.38	133	0.43	14.19	14.95	1,633.3	5,030.8	1,202.4	6,233.2
2014	-0.34	-1.03	5.60	155	0.50	13.28	13.82	1,938.4	5,523.2	1,215.6	6,738.8

Firm Information: Riverbridge Partners, LLC is a Minnesota based investment advisor registered with the Securities and Exchange Commission under the Investment Advisors Act of 1940. The firm provides investment management services to institutional and individual investors. The company offers growth and income oriented investment services which it believes will provide high returns over the long term. The firm's standard fee schedule is an annual 1%.

Composite Characteristics: The Small Cap Growth Composite was created in July 1988 and its inception date was 06/30/1988. It is a diversified growth stock portfolio invested in small capitalization growth companies. The general market capitalization guideline can be redefined due to market appreciation or depreciation. A complete list and description of all firm composites, including broad and limited distribution pooled funds, is available upon request. The composite benchmark is the Russell 2000® Growth Index. The Russell 2000® Growth Index includes the segment of securities within the Russell 2000® Index with higher price-to-book ratios and higher forecasted growth values. The Russell 2000® Index is an unmanaged index measuring the performance of the small-cap U.S. equity universe. The benchmark returns are gross of all fees and taxes. The composite minimum value is \$100,000.

Material risks of the strategy include stock market, business and economic development, liquidity, and foreign security risk. Leverage, derivatives, short positions and illiquid investments are not used in the strategy. As with any investment, an investor may lose money, and the strategy can underperform its benchmark. Investment in strategies is not insured by the FDIC or any other government agency.

Calculation Methodology: Individual portfolios are revalued daily starting 1/1/2009. Prior to that, individual portfolios were revalued monthly and intra-month when large cash flows (defined at 10%) occurred. Gross-of-fee returns are calculated net of transaction costs and gross of management fees. Until 12/31/2007, net performance was calculated by applying the maximum annual management fee of 1% to gross performance on a monthly basis. Starting 1/1/2008, net-of-fee returns are calculated net of actual investment management fees. Both gross-of-fee and net-of-fee returns are calculated gross of all withholding taxes on foreign dividends. Accruals are included in calculations. The dispersion measure is the equal-weighted standard deviation of accounts in the composite for the entire year. Dispersion and Ex-Post standard deviation is calculated using gross-of-fees returns. Policies for valuing investments, calculating performance, and preparing GIPS® Reports are available upon request.

Compliance Statement: Riverbridge claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS® standards. Riverbridge has been independently verified for the period 12/31/1989 – 12/31/2023. A firm that claims compliance with the GIPS® standards must establish policies and procedures for complying with all the applicable requirements of the GIPS® standards. Verification provides assurance on whether the firm's policies and procedures related to composite and pooled fund maintenance, as well as the calculation, presentation, and distribution of performance, have been designed in compliance with the GIPS® standards and have been implemented on a firm-wide basis. The Small Cap Growth Composite has had a performance examination for the periods 07/01/1988 – 12/31/2023. The verification and performance examination reports are available upon request.

Composite Benchmark: The benchmark returns are not covered by the report of the independent verifiers. Any indices and other financial benchmarks shown are provided for illustrative purposes only. Information about indices is provided to allow for comparison of the performance of the Adviser to that of certain well-known and widely recognized indices. There is no representation that such index is an appropriate benchmark for such comparison. You cannot invest directly in an index, which also does not take into account trading commissions and costs. The volatility of indices may be materially different from the performance of the Adviser. In addition, the Adviser's recommendations may differ significantly from the securities that comprise the indices.

Past performance does not guarantee future results. This performance report should not be construed as a recommendation to purchase or sell any particular securities held in composite accounts. Market conditions can vary widely over time and can result in a loss of portfolio value.

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Small Cap Opportunities Portfolio Review

27 August 2024

Public Employees' Retirement System of Mississippi

Wellington Management Company LLP 280 CONGRESS STREET, BOSTON, MA 02210

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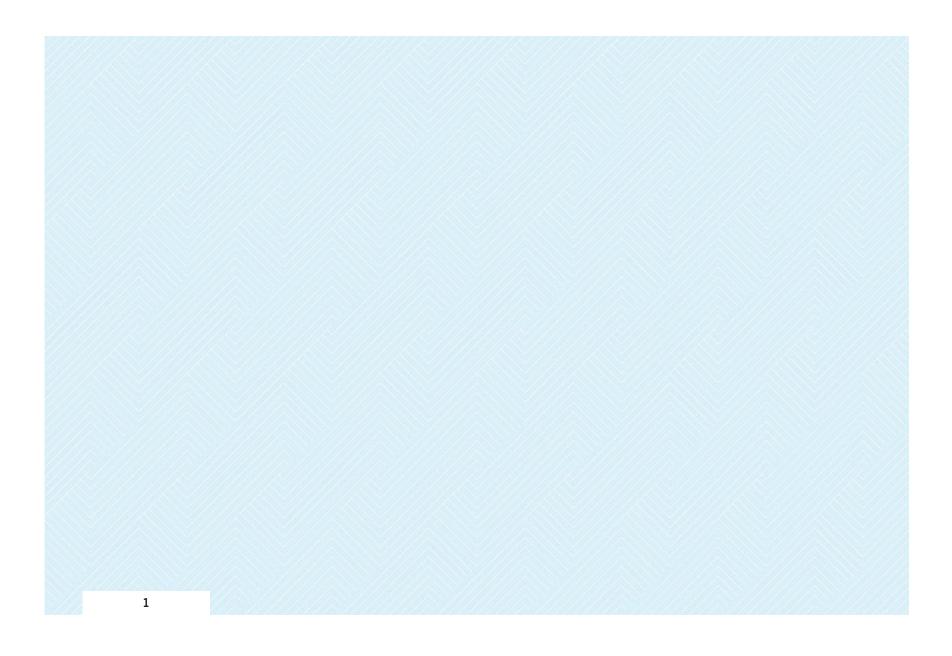


Agenda

Section One Wellington Management Company LLP Overview

Section Two Small Cap Opportunities Portfolio Review

Section Three Appendix



WELLINGTON MANAGEMENT®

BY THE NUMBERS

Business

USD 1,251 billion of client assets under management

3,029 clients

64 countries in which clients are based

People and portfolios

893 investment professionals

17 years of experience, on average

193 partners all active at the firm

Heritage: key dates

1928	Wellington Fund – the first US balanced fund
1979	Establishment of our private partnership
1994	Our first long – short strategy
2014	Our first dedicated private equity strategy
2015	Global Impact: Our first diversified impact investing strategy in public equities

As of 30 June 2024

Wellington Management today

A trusted advisor and strategic partner to clients worldwide



0





OWNERSHIP MODEL

Long-term perspective of a private partnership structure

Attract and retain investment talent

Independent: No public shareholders, no outside capital

Interests aligned with clients

BUSINESS MODEL

Singular focus on investment management

Diversification by asset class, geography, and client type

Research for client benefit only

Commitment to bringing the right resources to each client

INVESTMENT MODEL

Comprehensive capabilities

Rigorous proprietary research

Career analysts

Global resources

Empowered portfolio teams

CULTURE

Open, collaborative

Performance driven

Professional/collegial

High standards, ethics, and integrity

Global diversity and inclusion



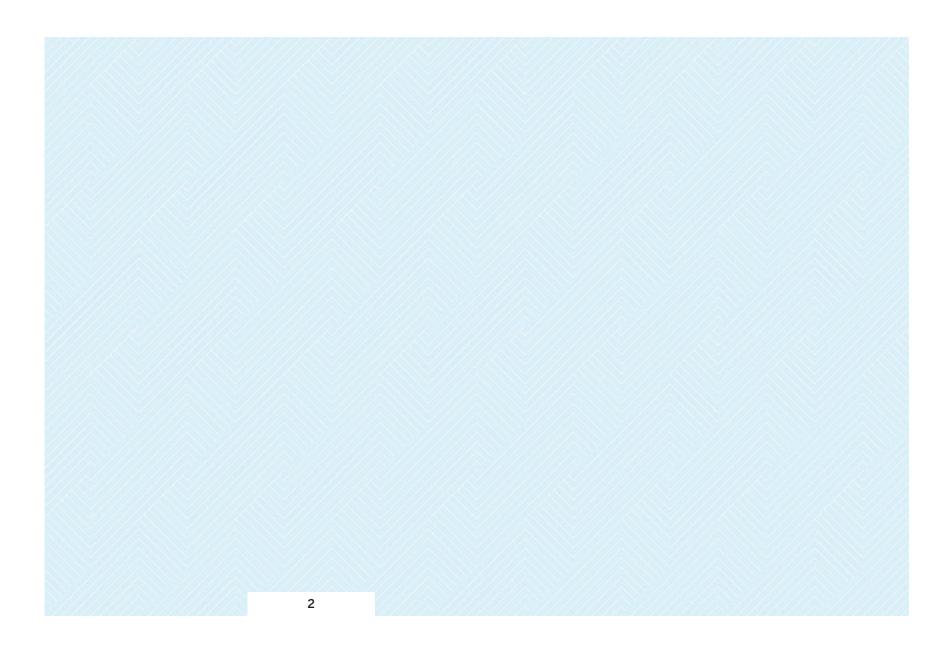
CURRENT LEADERSHIP INITIATIVES

Our strategy is to grow with our clients in institutional and wealth channels by delivering excellent results in researchdriven active strategies

To execute on this strategy, we will seek to

- Perpetuate a magnetic culture that attracts, retains, and motivates the best talent around the globe
- · Deliver excellent investment outcomes
- · Be a top partner of choice for clients
- Innovate and drive growth in strategies that continue to diversify our business
- Leverage technology to drive insights, alpha, and scale

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Small Cap Opportunities

Investment team and resources

WELLINGTON MANAGEMENT*



Daniel J. Fitzpatrick, CFA Senior Managing Director

Equity Portfolio Manager Boston College 1996, BS 27 years of professional experience 26 years with Wellington Management



Paul Elia, CFA Managing Director

Equity Research Analyst
Carnegie Mellon University
2003, BS
21 years of professional experience
8 years with Wellington Management



Jessica Lebo Costello Vice President

Equity Research Analyst
Cornell University
2009, BS
15 years of professional experience
2 years with Wellington Management



Matthew McKenna Managing Director



Lucy Schiller Assistant Vice President

Investment Specialist Bowdoin College 2017, BA

Investment Director

Bentley University

2010, MBA

7 years of professional experience5 years with Wellington Management

20 years of professional experience

10 years with Wellington Management

52 Global Industry Analysts

Fundamental Research

19 years average professional experience

11 years average with Wellington Management

As of 30 June 2024



Small Cap Opportunities

Team resources

Small Cap Opportunities Portfolio DJ Fitzpatrick Equity Portfolio Manager

DJ FitzpatrickConsumer, information technology, financials, health care

Paul Elia Materials, industrials, energy, utilities

Jessica Lebo Costello Consumer **Global Industry Analysts** 52 members

29 other equity teams

Macro Strategists 14 members

Global Equity Traders 18 members

As of 30 June 2024



Small Cap Opportunities

Investment philosophy

We believe

An opportunistic investment approach can result in differentiated sources of alpha, making it less dependent on market environment

Markets, industries, and companies run in cycles. Anticipating fundamental improvements, cyclical rebounds, or short-term mispricings can create opportunities.

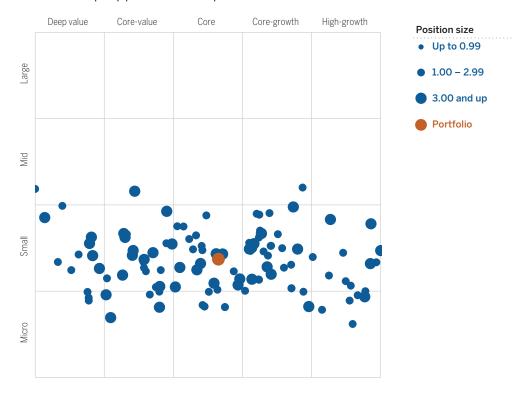
Superior management teams are often not valued consistently by the market

WELLINGTON MANAGEMENT®

Small Cap Opportunities

Opportunistic approach across style spectrum Representative account

Small Cap Opportunities representative account as of 31 December 2023



Source: Morningstar | Chart data is updated annually. | The blue dots represent the style and size of individual positions, while the orange square reflects the aggregate style and size profile of the portfolio. | The data shown is limited by Morningstar style methodology and does not cover all securities. For the time period shown, 2.5% of the portfolio is excluded due to these limitations. |The data shown is of a representative account, is for informational purposes only, is subject to change, and is not indicative of future portfolio characteristics or returns. Please refer to the Important Disclosures page for additional information.

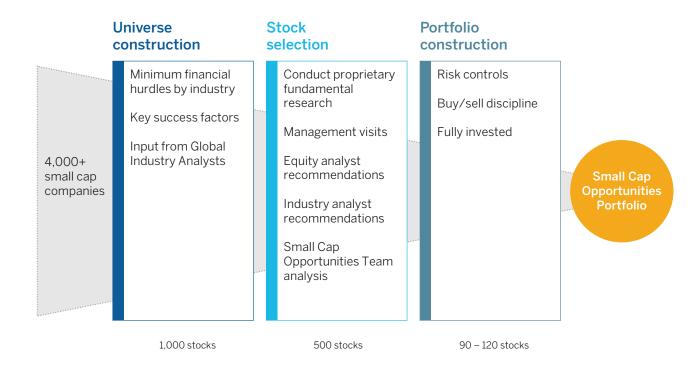


Identifying superior management

	Rising stars	Agents of change	Proven leaders
Characteristics	Limited public company experience	Transformation/change oriented leaders	Strong track record of shareholder value creation
Strategic vision			
Experience/execution			
Allocation of capital			
Alignment of interests			
Examples			
Company			
	Food and beverage company	Engineering and construction company	Insurance company



Investment process



The characteristics presented are sought during the portfolio management process. Actual experience may not reflect all of these characteristics, or may be outside of stated ranges.

Small Cap Opportunities

Portfolio construction and risk oversight

Portfolio construction

Market cap

Typically companies between USD 300 million and the greater of USD 3 billion, or the top end of the Russell 2000 Index

Sector weights

Attempt to be represented in each broad sector

Typically within ±5% of the benchmark weight, and no more than 2x benchmark weight

Position size

Typically 0.8 - 2.0%

Number of holdings

Typically 90 – 120

Cash

Typically less than 3%

Derivatives

To equitize cash, occasionally used to hedge currency exposure

IPOs

Allowed

Risk oversight

Portfolio management

Conduct in-depth fundamental research

Balance company-specific conviction and risk

Assess portfolio-level diversification

Product management

Independent portfolio analysis

Style consistency/factor risks/stress testing

Capacity/business risks

Investments and risk management

Research and insights on risk and market trends

Risk Advisory Council

Develop new analytics/tools

Line management and senior management review groups

Philosophy/process/performance/characteristics

Resource assessment

Compliance

Active pre- and post-trade compliance monitoring

The characteristics presented are sought during the portfolio management process. Actual experience may not reflect all of these characteristics, or may be outside of stated ranges.

Small Cap Opportunities

Investment returns

	As of 3	1 July 2024	(%, USD)			
	1 yr	3 yrs	5 yrs	10 yrs	SI	
Mississippi PERS Small Cap Opportunities (gross)	15.7	5.4	10.5	11.6	12.7	
Russell 2000	14.3	1.9	8.9	8.7	9.7	
Active return (gross vs benchmark)	1.4	3.5	1.6	2.9	3.0	

	YTD	2023	2022	2021	2020	2019
Mississippi PERS Small Cap Opportunities (gross)	10.2	18.9	-13.7	14.4	19.3	32.5
Russell 2000	12.1	16.9	-20.4	14.8	20.0	25.5
Active return (gross vs benchmark)	-1.9	2.0	6.7	-0.4	-0.7	7.0

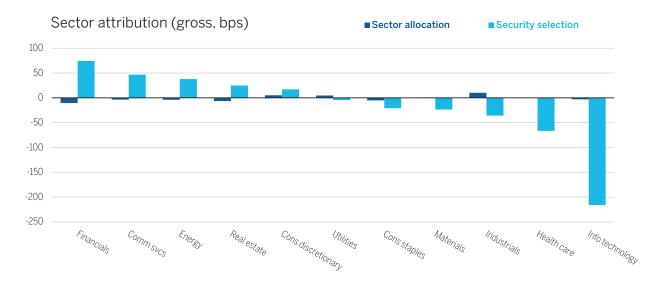
	2018	2017	2016	2015	2014
Mississippi PERS Small Cap Opportunities (gross)	-3.0	20.6	18.6	-2.2	8.3
Russell 2000	-11.0	14.6	21.3	-4.4	4.9
Active return (gross vs benchmark)	8.0	6.0	-2.7	2.2	3.4

Inception date: 31 July 2002. | Sums may not total due to rounding. | Performance returns for periods one year or less are not annualized. | PAST PERFORMANCE DOES NOT PREDICT FUTURE RETURNS. AN INVESTMENT CAN LOSE VALUE.



Performance review (USD): Year to date as of 31 July 2024

Portfolio: 10.2%; Benchmark: 12.1%



Top relative contributors

Company	Sector	Relative impact (gross, bps)	weight (%)
Kirby	Industrials	50	1.6
Modine Mfg	Cons discretionary	46	0.8
Boot Barn Holdings	Cons discretionary	43	0.7
Cinemark Holdings	Comm svcs	40	1.1
StepStone Group	Financials	39	0.8

Top relative detractors

Company	Sector	Relative impact (gross, bps)	End weight (%)
Super Micro Computer*	Info technology	-103	0.0
Shoals Tech	Industrials	-64	0.5
DoubleVerify Holdings	Info technology	-46	0.0
Sprout Social	Info technology	-44	0.7
Papa John's Intl	Cons discretionary	-40	0.0

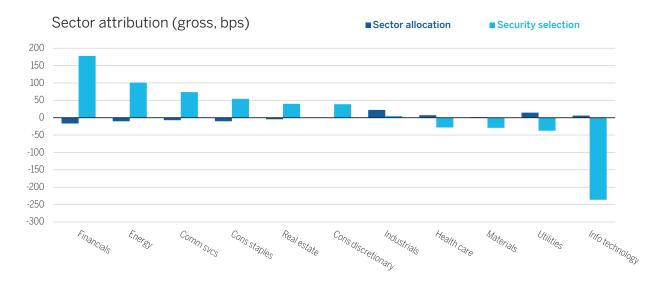
Benchmark used in the calculation of attribution data: Russell 2000. | *Represents securities not held in the portfolio during the period. | PAST PERFORMANCE DOES NOT PREDICT FUTURE RETURNS. AN INVESTMENT CAN LOSE VALUE.

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Performance review (USD): One year as of 31 July 2024

Portfolio: 15.7%; Benchmark: 14.3%



Top relative contributors

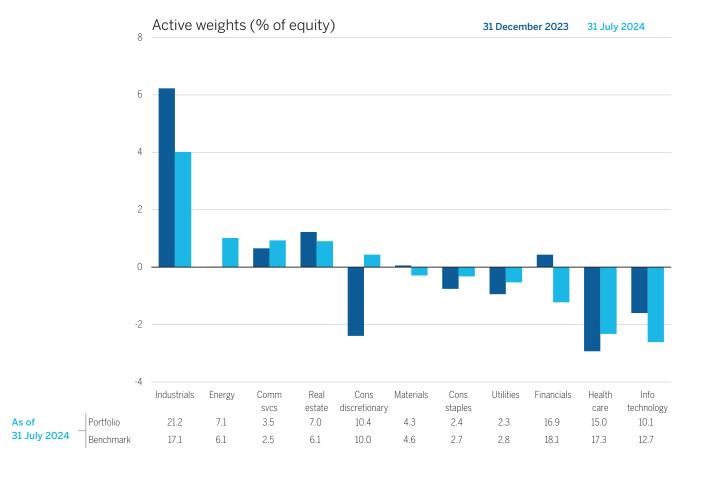
Top relative detractors

Company	Sector	Relative impact (gross, bps)	End weight (%)	Company	Sector	Relative impact (gross, bps)	End weight (%)
Viper Energy	Energy	58	1.6	Shoals Tech	Industrials	-112	0.5
StepStone Group	Financials	55	0.8	Super Micro Computer*	Info technology	-96	0.0
Cytokinetics	Health care	49	0.5	DoubleVerify Holdings	Info technology	-61	0.0
Crinetics Pharm	Health care	47	0.5	Arcadium Lithium	Materials	-57	0.3
Leonardo DRS	Industrials	46	1.1	Maxeon Solar Technologies	Info technology	-56	0.0

Benchmark used in the calculation of attribution data: Russell 2000. | *Represents securities not held in the portfolio during the period. | PAST PERFORMANCE DOES NOT PREDICT FUTURE RETURNS. AN INVESTMENT CAN LOSE VALUE.

Small Cap Opportunities

Sector positioning



Benchmark: Russell 2000



Small Cap Opportunities Top ten holdings

As of 31 July 2024

Company	Industry Group	% of equities
Fluor	Capital goods	1.8
Viper Energy	Energy	1.6
Kirby	Transport	1.6
Rush Enterprises	Capital goods	1.5
Cabot	Materials	1.5
Ameris Bancorp	Banks	1.4
Cadence Bank	Banks	1.4
Hancock Whitney	Banks	1.4
National Bank Hldgs	Banks	1.3
Flowserve	Capital goods	1.3
Total		14.8

Number of equity names: 111

Sums may not total due to rounding.

Benchmark: Russell 2000 | Historical returns based risk characteristics are calculated versus the benchmark(s) used for performance comparison purposes, which may be different than the benchmark(s) displayed on this page. Please see the investment returns page for additional information. | Sums may not total due to rounding. | If access products are held by the portfolio they may not be included in the calculation of characteristic data. Access products are instruments used to gain access to equity markets not otherwise available and may include (but are not limited to) instruments such as warrants, total return swaps, p-notes, or zero strike options. | Please refer to the Important Disclosures page for additional information.

Small Cap Opportunities

Portfolio characteristics

As of 31 July 2024

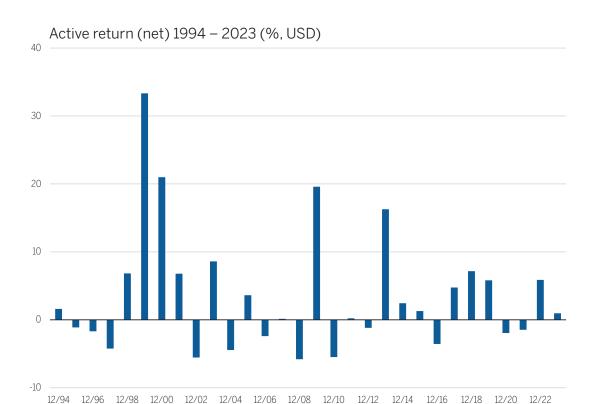
-	Portfolio	Benchmark
Size		
Asset-weighted market cap (USD, bil)	4.5	3.4
Median market cap (USD, bil)	4.0	1.0
Over USD 5 bil (%)	35	22
USD 2 - 5 bil (%)	57	48
USD 1 - 2 bil (%)	7	17
USD 500 mil – 1 bil (%)	0	8
Under USD 500 mil (%)	0	5
Financial metrics		
Projected EPS growth (5-yr, %)	17.9	12.5
Projected P/E (x)	18.1	21.4
Price/book (x)	2.2	2.1
Yield (%)	1.3	1.3
Risk (holdings based)		
Asset turnover (1-yr, %)	43	
Risk (returns based)		
Historical beta (3-yr, USD)	0.89	
Historical R ² (3-yr, USD)	0.97	
Historical tracking risk (3-yr, USD, %)	4.19	

The inception date of the Small Cap Opportunities Composite is 28 February 1994. | PAST PERFORMANCE DOES NOT PREDICT FUTURE RETURNS. AN INVESTMENT CAN LOSE VALUE.

Gross performance results are net of commissions and other direct expenses, but before (gross of) advisory fees, custody charges, withholding taxes, and other indirect expenses, and include reinvestment of dividends and other earnings. If all expenses were reflected, the performance shown would be lower. Actual fees will vary depending on, among other things, the applicable fee schedule and account size. Composite returns have the potential to be adjusted until reviewed and finalized 30 days following each calendar quarter end period. Please refer to the Important Disclosures page for additional information.

Small Cap Opportunities Composite

Yearly active returns (net) vs Russell 2000 Index



Performance displayed since 28 February 1994 represents the inception date of the composite. | Returns and assets numbers reported in currencies other than are calculated by converting the monthly return and assets using the appropriate exchange rates (Official 4 pm London closing spot rates, or the exchange rate of the benchmark if a composite's benchmark does not use the 4 pm London closing spot rates). In periods of high market volatility, actual results may vary significantly from converted results. Converted results do not imply a change in management with respect to currency risk. | PAST

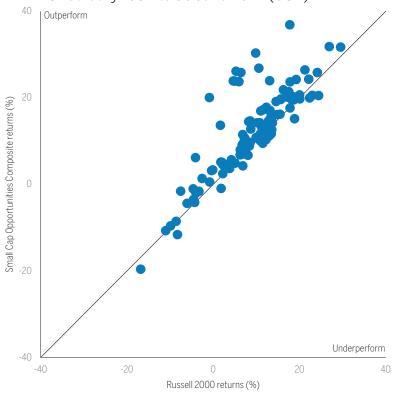
PERFORMANCE DOES NOT PREDICT FUTURE RETURNS. AN INVESTMENT CAN LOSE VALUE.

Net performance results are based on the highest published US advisory fee for this product, include reinvestment of dividends and other earnings, and are net of advisory fees, commissions, and other direct expenses, but before custody charges, withholding taxes, and other indirect expenses. Composite returns have the potential to be adjusted until reviewed and finalized 30 days following each calendar quarter end period. Please refer to the Important Disclosures page for additional information.

Small Cap Opportunities

Consistent historical performance

3-year annualized net returns, rolling quarterly, 28 February 1994 to 30 June 2024 (USD)



Source: eVestment Alliance. Constituent observations are as of 19 July 2024. The inception of the Global Innovation Composite (the "Adviser") was 28 February 1994. The US Small Cap Core Equity universe as defined by eVestment includes Equity products that invest primarily in small capitalization stocks. The expected benchmarks for this universe would include the Russell 2000 Index. Managers in this category will typically indicate a "Primary Capitalization Emphasis" equal to Small Cap. The Adviser did not pay a fee to obtain or use the rankings. The peer group comparison represents percentile rankings, which reflect where those returns or given metric fall within the indicated eVestment universe. Data is that of a third party, while data is believed to be reliable, no assurance is being provided as to its accuracy or completeness.

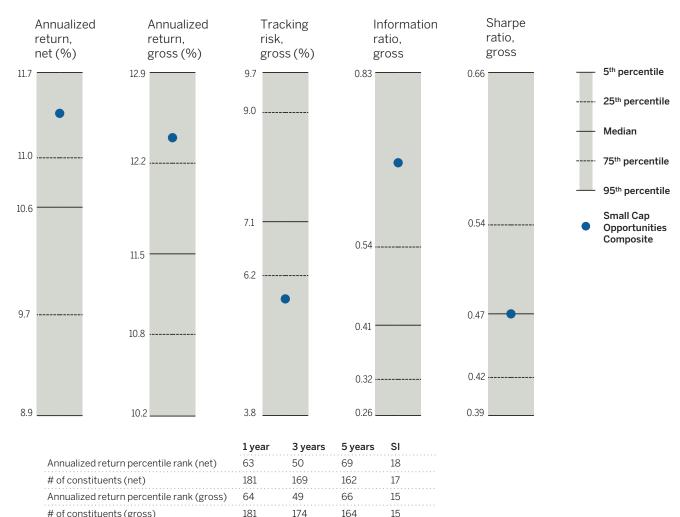
PAST PERFORMANCE DOES NOT PREDICT FUTURE RETURNS. AN INVESTMENT CAN LOSE VALUE.

Gross performance results are net of commissions and other direct expenses, but before (gross of) advisory fees, custody charges, withholding taxes, and other indirect expenses, and include reinvestment of dividends and other earnings. Net performance results are based on the highest published US advisory fee for this product, include reinvestment of dividends and other earnings, and are net of advisory fees, commissions, and other direct expenses, but before custody charges, withholding taxes, and other indirect expenses. If all expenses were reflected, the performance shown would be lower. Actual fees will vary depending on, among other things, the applicable fee schedule and account size. This information complements the required net of fee returns included elsewhere in these materials. This information complements the GIPS® Composite Report included at the end of the materials.

Small Cap Opportunities Composite

Risk comparison

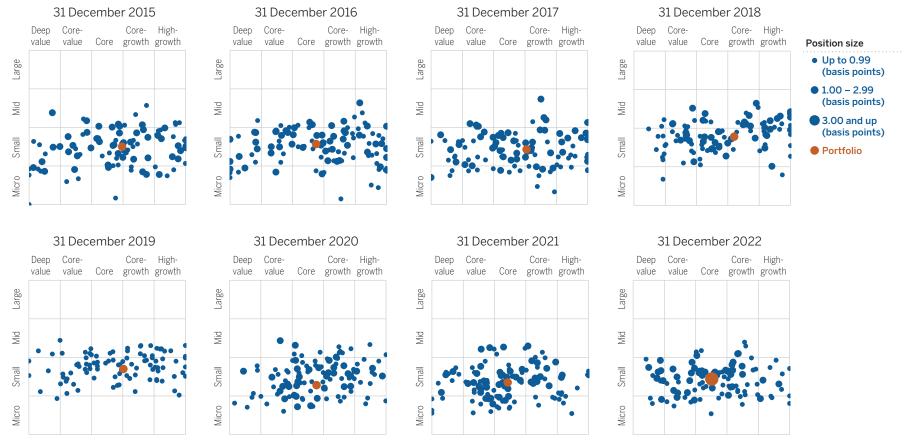
Since inception as of 30 June 2024 (USD)



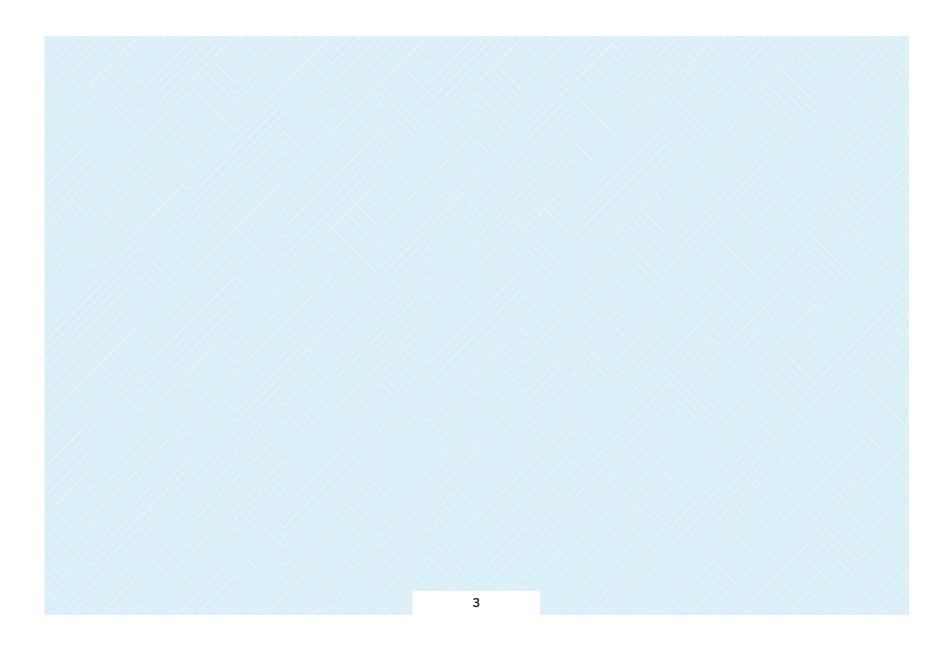
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Opportunistic approach across style spectrum Representative account



Source: Morningstar | The blue dots represent the style and size of individual positions, while the orange square reflects the aggregate style and size profile of the portfolio. | The data shown is of a representative account, is for informational purposes only, is subject to change, and is not indicative of future portfolio characteristics or returns. Please refer to the Important Disclosures page for additional information.





Important disclosures

Additional performance information

PAST INDEX OR THIRD PARTY PERFORMANCE DOES NOT PREDICT FUTURE RETURNS. There can be no assurance nor should it be assumed that future investment performance of any strategy will conform to any performance examples set forth in this material or that the portfolio's underlying investments will be able to avoid losses. The investment results and any portfolio compositions set forth in this material are provided for illustrative purposes only and may not be indicative of the future investment results or future portfolio composition. The composition, size of, and risks associated with an investment in the strategy may differ substantially from the examples set forth in this material. An investment can lose value.

Impact of fees

Illustration of impact of fees: If USD100,000 was invested and experienced a 10% annual return compounded monthly for ten years, its ending value, without giving effect to the deduction of advisory fees, would be USD270,704 with an annualized compounded return of 10.47%. If an advisory fee of 0.95% of average net assets per year were deducted monthly for the ten-year period, the annualized compounded return would be 9.43% and the ending USD value would be USD246,355. Information regarding the firm's advisory fees is available upon request.

Selection of representative account

The current representative account became effective on 1 March 2003 because it was the least restrictive account at the time of selection. For data shown prior to the current representative account effective date, data of the representative account(s) deemed appropriate for the time period was used. Further information regarding former representative accounts can be provided upon request. Each client account is individually managed; individual holdings will vary for each account and there is no guarantee that a particular account will have the same characteristics as described. Actual results may vary for each client due to specific client guidelines, holdings, and other factors. In limited circumstances, the designated representative account may have changed over time, for reasons including, but not limited to, account termination, imposition of significant investment restrictions, or material asset size fluctuations.

Access products

If access products are held by the portfolio they may not be included in the calculation of characteristic data. Access products are instruments used to gain access to equity markets not otherwise available and may include (but are not limited to) instruments such as warrants, total return swaps, p-notes, or zero strike options.

Global Industry Classification Standard (GICS) changes

S&P Dow Jones Indices and MSCI have broadened and renamed the Telecommunication Services Sector as Communication Services to include companies that facilitate communication and offer related content and information through various media. These changes to Global Industry Classification Standard (GICS) are effective as of 1 October 2018 in the data shown. The new sector name applies retroactively and therefore Communication Services will replace Telecommunications Services for all periods. Wellington Management data reflects changes in line with the official GICS update; however, MSCI and S&P have elected to update their official index structures with different timing. Therefore, index data shown may differ from data obtained directly from the index vendors.

Additional disclosures

Securities indices are unmanaged and are not subject to fees and expenses typically associated with managed accounts or investment funds. Investments cannot be made directly into an index.

Benchmark definition

Russell 2000: The Index measures the performance of the small-cap segment of the U.S. equity universe. The Russell 2000 is a subset of the Russell 3000 Index.

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Data last updated on: AUG-06-2024

Fitzpatrick

Portfolio Manager:

Mississippi PERS Small Cap Opportunities

Holdings Detail by Sector-Equity July 31, 2024



Security	Country	Shares or Par Value	Unit Cost	Unit Price	Cost	Market Value	Pct Asset Class	Pct Total	Yiel
Cash and Cash Equivalents									
Cash									
US Dollar	United States	177,680	1.000		177,680	177,680	1.88	0.05	5.3
Total Cash					177,680	177,680	1.88	0.05	5.3
Short-Term Cash Equivalents									
COLL US GOV STIF 7BP 5.1800%	United States	9,241,482	100.000		9,241,482	9,263,319	98.12	2.53	5.1
Total Short-Term Cash Equivalents					9,241,482	9,263,319	98.12	2.53	5.18
Total Cash and Cash Equivalents					9,419,161	9,440,998	100.00	2.58	5.18
Equities									
Energy									
Energy									
Chord Energy Corp	United States	19,888	94.879	171.660	1,886,953	3,413,974	0.96	0.93	2.9
Gulfport Energy Corp	United States	27,774	107.487	147.210	2,985,349	4,088,611	1.15	1.12	
Magnolia Oil & Gas	United States	152,159	21.500	27.240	3,271,418	4,144,811	1.16	1.13	1.8
Seadrill Ltd	Norway	66,919	39.323	55.010	2,631,474	3,681,214	1.03	1.01	
Sitio Royalties Corp	United States	145,330	20.772	24.350	3,018,789	3,538,785	0.99	0.97	7.43
Viper Energy Inc	United States	135,981	24.482	42.670	3,329,150	5,802,309	1.63	1.58	2.53
Total Energy					17,123,133	24,669,705	6.91	6.74	3.47
Total Energy					17,123,133	24,669,705	6.91	6.74	3.47
Materials									
RMHLDETSCEQ		Wellington Man	agement Com	npany LLP			Pag	e 1 of	9

Mississippi PERS Small Cap Opportunities Account ID: 6865

Reporting Currency Code: Holdings Detail by Sector-Equity USD Portfolio Manager: July 31, 2024 Fitzpatrick



Shares or Pct Par Value Market Value Asset Class Pct Total Security Country Unit Cost Unit Price Cost Yield Materials 8.471 Arcadium Lithium PLC United States 3.180 2,821,855 1,059,261 333,101 0.30 0.29 Cabot Corp United States 52.391 66.948 100.290 3.507.456 5.254.293 1.47 1.43 1.72 Graphic Pkg Hldg Co **United States** 146,988 12.252 30.100 1,800,870 4,424,339 1.24 1.21 1.33 Methanex Corp Canada 85,428 37.195 48.590 3,177,487 4,150,947 1.16 1.13 1.52 **Total Materials** 11,307,668 14,888,840 4.17 4.07 1.53 **Total Materials** 4.07 1.53 11,307,668 4.17 14,888,840 Industrials **Capital Goods United States** 88,557 35.224 49.620 3,119,321 4,394,198 1.23 1.20 1.69 Air Lease Corp **United States** 61,789 30.840 0.52 0.65 Atmus Filtration 24.612 1,520,761 1,905,573 0.53 AZEK Co Inc/The United States 65,512 28.364 44.890 1,858,185 2,940,834 0.82 0.80 Boise Cascade Co **United States** 99.100 142.090 3,087,465 4,426,814 31,155 1.24 1.21 0.56 Enpro Inc United States 24,966 125.870 170.940 3,142,466 4,267,688 1.20 1.17 0.70 Flowserve Corp United States 92.701 34.501 50.550 3.198.268 4.686.036 1.31 1.28 1.66 United States 132,310 Fluor Corp 21.045 48.100 2,784,436 6,364,111 1.78 1.74 **United States** 26,450 82.309 139.500 2,177,066 3,689,775 1.03 1.66 **GATX Corp** 1.01 **United States** 41,215 52.368 45.950 2,158,351 1,893,829 0.52 Helios Tech Inc 0.53 0.78 United States 94,201 27.055 26.140 2,548,616 2,462,414 0.69 0.67 3.06 Kennametal Inc Leonardo DRS Inc **United States** 142,973 15.049 28.200 2,151,590 4,031,839 1.13 1.10 McGrath RentCorp United States 29,913 69.963 109.830 2,092,811 3,285,345 0.92 0.90 1.73 Rush Enterprises Inc **United States** 104,367 18.985 51.010 1.981.407 5.323.761 1.49 1.45 1.33 United States 272.040 4,433,263 Shoals Tech Grp Inc 16.296 6.500 1,768,260 0.50 0.48 **United States** 108,672 20.755 32.460 2,255,527 3,527,493 0.99 Zurn Elkay Wtr Soln 0.99 0.96 **Total Capital Goods** 38,509,532 54,967,969 15.41 15.01 1.34

Data last updated on: AUG-06-2024

RMHLDETSCEQ

Wellington Management Company LLP

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Account ID: 6865 Reporting Currency Code: USD

Mississippi PERS Small Cap Opportunities

WELLINGTON ® MANAGEMENT

Reporting Currency Code: USD
Portfolio Manager: Fitzpatrick

Holdings Detail by Sector-Equity July 31, 2024

Ortiolio Mariager.	ritzpatrick	July	7 3 1, 2024						
Security	Country	Shares or Par Value	Unit Cost	Unit Price	Cost	Market Value	Pct Asset Class	Pct Total	Yie
Commercial & Professional Ser	rvices								
ManpowerGroup Inc	United States	38,422	72.405	76.580	2,781,950	2,942,357	0.82	0.80	4.0
Verra Mobility Corp	United States	59,415	28.397	30.130	1,687,195	1,790,174	0.50	0.49	
Total Commercial & Profession	nal Services				4,469,145	4,732,531	1.33	1.29	4.0
Transportation									
Kirby Corp	United States	46,233	63.031	122.880	2,914,114	5,681,111	1.59	1.55	
RXO Inc	United States	124,161	16.879	31.710	2,095,723	3,937,145	1.10	1.08	
Ryder System Inc	United States	31,528	103.295	140.160	3,256,682	4,418,964	1.24	1.21	2.
Total Transportation					8,266,519	14,037,221	3.93	3.83	2.
otal Industrials					51,245,196	73,737,721	20.67	20.14	1.
Consumer Discretionary Automobiles & Components									
Goodyear Tire	United States	275,137	12.206	11.700	3,358,214	3,219,103	0.90	0.88	
Modine Mfg Co	United States	26,176	62.288	117.660	1,630,455	3,079,868	0.86		
Patrick Ind Inc	United States	24,856	78.173	128.060	1,943,077	3,183,059	0.89		1.7
Total Automobiles & Compone	nts				6,931,745	9,482,030	2.66	2.59	1.7
Consumer Durables & Apparel									
Acushnet Hldgs Corp	United States	38,012	32.141	72.580	1,221,751	2,758,911	0.77	0.75	1.1
Carter's Inc	United States	34,606	80.052	60.550	2,770,273	2,095,393	0.59	0.57	5.2
Century Comnty Inc	United States	29,764	55.987	104.710	1,666,384	3,116,588	0.87	0.85	0.9
Skyline Champ Corp	United States	48,212	34.396	81.510	1,658,284	3,929,760	1.10	1.07	
Steven Madden Ltd	United States	82,140	40.613	45.340	3,335,936	3,724,228	1.04	1.02	1.8
RMHLDETSCEQ		Wellington Man	agement Con	npany LLP			Pag	ie 3 of	9

Mississippi PERS Small Cap Opportunities

Reporting Currency Code: USD Portfolio Manager:

Data last updated on: AUG-06-2024

Fitzpatrick

Holdings Detail by Sector-Equity July 31, 2024



•			·						
Security	Country	Shares or Par Value	Unit Cost	Unit Price	Cost	Market Value	Pct Asset Class	Pct Total	Yield
YETI Holdings Inc	United States	54,717	31.539	41.350	1,725,713	2,262,548	0.63	0.62	
Total Consumer Durables & Apparel					12,378,340	17,887,428	5.01	4.88	2.08
Consumer Services									
Shake Shack Inc	United States	36,020	88.503	87.620	3,187,884	3,156,072	0.88	0.86	
Total Consumer Services					3,187,884	3,156,072	0.88	0.86	0.00
Consumer Discretionary Dst & Retail									
Amer Eagle Outfitter	United States	146,137	23.829	22.050	3,482,292	3,222,321	0.90	0.88	2.27
Boot Barn Hldgs Inc	United States	18,611	78.682	133.480	1,464,359	2,484,196	0.70	0.68	
Total Consumer Discretionary Dst & Reta	il				4,946,652	5,706,517	1.60	1.56	2.27
Total Consumer Discretionary					27,444,621	36,232,048	10.16	9.89	2.05
Consumer Staples									
Food Beverage & Tobacco									
Freshpet Inc	United States	29,772	58.154	121.700	1,731,352	3,623,252	1.02	0.99	
Simply Good Fds	United States	95,290	39.780	33.920	3,790,607	3,232,237	0.91	0.88	
Total Food Beverage & Tobacco					5,521,959	6,855,489	1.92	1.87	0.00
Household & Personal Products									
BellRing Brands Inc	United States	29,971	21.100	51.280	632,375	1,536,913	0.43	0.42	
Total Household & Personal Products					632,375	1,536,913	0.43	0.42	0.00
Total Consumer Staples					6,154,334	8,392,402	2.35	2.29	0.00
RMHLDETSCEQ		Wellington Mana	agement Cor	npany LLP			Pag	ge 4 of	9

Mississippi PERS Small Cap Opportunities

Reporting Currency Code: USD Portfolio Manager:

Fitzpatrick

Holdings Detail by Sector-Equity July 31, 2024



d States d States d States d States d States	48,618 109,657 60,880 41,357 113,412	52.685 26.979 42.281 71.242 27.135	04.850 23.320 71.960 90.050 30.360	2,561,460 2,958,402 2,574,066 2,946,339 3,077,422 14,117,689	3,152,877 2,557,201 4,380,925 3,724,198 3,443,188 17,258,390	0.88 0.72 1.23 1.04 0.97	0.86 0.70 1.20 1.02 0.94	Yie
d States d States d States	109,657 60,880 41,357	26.979 42.281 71.242	23.320 71.960 90.050	2,958,402 2,574,066 2,946,339 3,077,422	2,557,201 4,380,925 3,724,198 3,443,188	0.72 1.23 1.04 0.97	0.70 1.20 1.02 0.94	
d States d States d States	109,657 60,880 41,357	26.979 42.281 71.242	23.320 71.960 90.050	2,958,402 2,574,066 2,946,339 3,077,422	2,557,201 4,380,925 3,724,198 3,443,188	0.72 1.23 1.04 0.97	0.70 1.20 1.02 0.94	
d States d States d States	109,657 60,880 41,357	26.979 42.281 71.242	23.320 71.960 90.050	2,958,402 2,574,066 2,946,339 3,077,422	2,557,201 4,380,925 3,724,198 3,443,188	0.72 1.23 1.04 0.97	0.70 1.20 1.02 0.94	
d States d States	60,880 41,357	42.281 71.242	71.960 90.050	2,574,066 2,946,339 3,077,422	4,380,925 3,724,198 3,443,188	1.23 1.04 0.97	1.20 1.02 0.94	
d States	41,357	71.242	90.050	2,946,339 3,077,422	3,724,198 3,443,188	1.04 0.97	1.02 0.94	
				3,077,422	3,443,188	0.97	0.94	
d States	113,412	27.135	30.360					_
				14,117,689	17,258,390	4.84	4.71	_
								0.
d States	56,238	21.259	26.730	1,195,541	1,503,242	0.42	0.41	
d States	33,866	41.202	39.600	1,395,340	1,341,094	0.38	0.37	
d States	29,816	41.524	48.700	1,238,093	1,452,039	0.41	0.40	
d States	41,858	38.834	45.580	1,625,496	1,907,888	0.53	0.52	
d States	19,717	79.890	87.310	1,575,194	1,721,491	0.48	0.47	
d States	34,965	20.310	53.120	710,136	1,857,341	0.52	0.51	
d States	29,023	44.255	59.010	1,284,399	1,712,647	0.48	0.47	
d States	26,991	58.385	43.160	1,575,860	1,164,932	0.33	0.32	
nany	119,682	12.141	12.020	1,453,014	1,438,578	0.40	0.39	
d States	32,118	33.033	46.200	1,060,943	1,483,852	0.42	0.41	
d States	31,089	55.413	53.040	1,722,728	1,648,961	0.46	0.45	
d States	139,908	25.054	27.970	3,505,204	3,913,227	1.10	1.07	
d States	65,363	16.203	21.880	1,059,071	1,430,142	0.40	0.39	
d States	39,075	25.838	45.640	1,009,638	1,783,383	0.50	0.49	
d States	56,758	27.416	24.200	1,556,059	1,373,544	0.38	0.38	
d States	42,340	24.658	27.500	1,044,004	1,164,350	0.33	0.32	
	22,151	44.773	37.390	991,758	828,226	0.23	0.23	
d d d	States States States States	States 139,908 States 65,363 States 39,075 States 56,758 States 42,340 States 22,151	States 139,908 25.054 States 65,363 16.203 States 39,075 25.838 States 56,758 27.416 States 42,340 24.658 States 22,151 44.773	States 139,908 25.054 27.970 States 65,363 16.203 21.880 States 39,075 25.838 45.640 States 56,758 27.416 24.200 States 42,340 24.658 27.500 States 22,151 44.773 37.390	States 139,908 25.054 27.970 3,505,204 States 65,363 16.203 21.880 1,059,071 States 39,075 25.838 45.640 1,009,638 States 56,758 27.416 24.200 1,556,059 States 42,340 24.658 27.500 1,044,004	States 139,908 25.054 27.970 3,505,204 3,913,227 States 65,363 16.203 21.880 1,059,071 1,430,142 States 39,075 25.838 45.640 1,009,638 1,783,383 States 56,758 27.416 24.200 1,556,059 1,373,544 States 42,340 24.658 27.500 1,044,004 1,164,350 States 22,151 44.773 37.390 991,758 828,226	States 139,908 25.054 27.970 3,505,204 3,913,227 1.10 States 65,363 16.203 21.880 1,059,071 1,430,142 0.40 States 39,075 25.838 45.640 1,009,638 1,783,383 0.50 States 56,758 27.416 24.200 1,556,059 1,373,544 0.38 States 42,340 24.658 27.500 1,044,004 1,164,350 0.33 States 22,151 44.773 37.390 991,758 828,226 0.23	States 139,908 25.054 27.970 3,505,204 3,913,227 1.10 1.07 States 65,363 16.203 21.880 1,059,071 1,430,142 0.40 0.39 States 39,075 25.838 45.640 1,009,638 1,783,383 0.50 0.49 States 56,758 27.416 24.200 1,556,059 1,373,544 0.38 0.38 States 42,340 24.658 27.500 1,044,004 1,164,350 0.33 0.32 States 22,151 44.773 37.390 991,758 828,226 0.23 0.23

Mississippi PERS Small Cap Opportunities

Reporting Currency Code: USD
Portfolio Manager: Fitzpatrick

Holdings Detail by Sector-Equity July 31, 2024



Security	Country	Shares or Par Value	Unit Cost	Unit Price	Cost	Market Value	Pct Asset Class	Pct Total	Yield
Twist Bio Corp	United States	31,791	57.550	55.810	1,829,580	1,774,256	0.50	0.48	
Ultragenyx Pharm Inc	United States	41,931	40.796	45.020	1,710,612	1,887,734	0.53	0.52	
Veracyte Inc	United States	76,240	25.406	24.000	1,936,930	1,829,760	0.51	0.50	
Xenon Pharm Inc	United States	39,865	38.870	43.130	1,549,548	1,719,377	0.48	0.47	
Total Pharma, Biotech & Life Science	es				31,029,149	34,936,061	9.79	9.54	0.00
Total Health Care					45,146,837	52,194,451	14.63	14.25	0.00
Financials									
Banks									
Ameris Bancorp	United States	82,260	35.490	60.890	2,919,396	5,008,811	1.40	1.37	0.99
Banner Corp	United States	66,670	46.997	59.220	3,133,297	3,948,197	1.11	1.08	3.24
Cadence Bank	United States	148,592	24.444	32.870	3,632,205	4,884,219	1.37	1.33	3.04
Hancock Whitney Corp	United States	88,690	38.077	54.730	3,377,047	4,854,004	1.36	1.33	2.92
Natl Bk Hldgs Corp	United States	114,762	33.064	41.880	3,794,470	4,806,233	1.35	1.31	2.67
Seacoast Banking	United States	151,082	26.102	27.840	3,943,561	4,206,123	1.18	1.15	2.59
UMB Financial Corp	United States	40,632	75.169	102.020	3,054,277	4,145,277	1.16	1.13	1.53
Total Banks					23,854,253	31,852,864	8.93	8.70	2.41
Financial Services									
HA Sustainable Infra	United States	130,261	26.449	32.770	3,445,272	4,268,653	1.20	1.17	5.07
MGIC Investment Corp	United States	132,875	11.742	24.840	1,560,279	3,300,615	0.93	0.90	2.09
PJT Partners Inc	United States	26,260	69.074	132.940	1,813,896	3,491,004	0.98	0.95	0.75
PRA Group Inc	United States	158,667	25.864	26.650	4,103,799	4,228,476	1.19	1.15	
StepStone Group Inc	United States	58,953	28.788	50.260	1,697,112	2,962,978	0.83	0.81	1.67
Total Financial Services					12,620,359	18,251,726	5.12	4.98	2.57
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Wellington Management Company LLP

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Account ID: 6865
Reporting Currency Code: USD

Fitzpatrick

Portfolio Manager:

Mississippi PERS Small Cap Opportunities

Holdings Detail by Sector-Equity July 31, 2024



Security	Country	Shares or Par Value	Unit Cost	Unit Price	Cost	Market Value	Pct Asset Class	Pct Total	Yield
Insurance									
Assured Guaranty Ltd	United States	49,747	29.760	82.370	1,480,491	4,097,660	1.15	1.12	1.51
Kemper Corp	United States	46,057	53.753	64.060	2,475,717	2,950,411	0.83	0.81	1.94
Selective Ins Grp	United States	20,328	59.644	90.320	1,212,434	1,836,025	0.51	0.50	1.55
Total Insurance					5,168,642	8,884,097	2.49	2.43	1.66
Total Financials					41,643,254	58,988,686	16.53	16.11	2.33
Information Technology									
Software & Services									
Jamf Holding Corp	United States	180,275	27.578	18.310	4,971,694	3,300,835	0.93	0.90	
JFrog Ltd	United States	81,864	33.792	38.560	2,766,376	3,156,676	0.88	0.86	
Sprout Social Inc	United States	69,614	46.262	39.070	3,220,474	2,719,819	0.76	0.74	
Squarespace Inc	United States	95,321	25.407	44.190	2,421,781	4,212,235	1.18	1.15	
Total Software & Services					13,380,325	13,389,565	3.75	3.66	0.00
Technology Hardware & Equipment									
Belden Inc	United States	39,272	83.057	92.690	3,261,818	3,640,122	1.02	0.99	0.22
Crane NXT Co	United States	64,300	55.150	62.880	3,546,114	4,043,184	1.13	1.10	1.02
Viavi Solutions Inc	United States	321,078	14.113	8.040	4,531,495	2,581,467	0.72	0.70	
Total Technology Hardware & Equipment	i				11,339,427	10,264,773	2.88	2.80	0.64
Semiconductors,Semiconductor Eqpmt									
Cirrus Logic Inc	United States	28,856	84.961	130.480	2,451,643	3,765,131	1.06	1.03	
FormFactor Inc	United States	44,345	29.974	53.560	1,329,218	2,375,118	0.67	0.65	
Pwr Integrations Inc	United States	40,072	71.834	73.040	2,878,530	2,926,859	0.82	0.80	1.10
RMHLDETSCEQ		Wellington Man	agement Com	npany LLP			Pag	e 7 of	9

Mississippi PERS Small Cap Opportunities

Reporting Currency Code: USD Portfolio Manager:

Fitzpatrick

Holdings Detail by Sector-Equity July 31, 2024



Security	Country	Shares or Par Value	Unit Cost	Unit Price	Cost	Market Value	Pct Asset Class	Pct Total	Yield
Rambus Inc	United States	47,975	54.792	51.440	2,628,627	2,467,834	0.69	0.67	
Total Semiconductors, Semiconducto	or Eqpmt				9,288,018	11,534,942	3.23	3.15	1.10
Total Information Technology					34,007,770	35,189,280	9.86	9.61	0.76
Communication Services									
Media & Entertainment									
Cargurus Inc	United States	143,160	28.968	24.820	4,147,109	3,553,231	1.00	0.97	
Cinemark Hldgs Inc	United States	165,296	20.820	23.580	3,441,497	3,897,680	1.09	1.06	
New York Times	United States	86,799	29.140	53.590	2,529,309	4,651,558	1.30	1.27	0.97
Total Media & Entertainment					10,117,915	12,102,469	3.39	3.30	0.97
Total Communication Services					10,117,915	12,102,469	3.39	3.30	0.97
Utilities									
Utilities									
IDACORP Inc	United States	41,915	95.279	97.750	3,993,613	4,097,191	1.15	1.12	3.40
ONE Gas Inc	United States	54,262	79.407	69.630	4,308,772	3,778,263	1.06	1.03	3.79
Total Utilities					8,302,385	7,875,454	2.21	2.15	3.59
Total Utilities					8,302,385	7,875,454	2.21	2.15	3.59
Pooled Vehicle									
Vanguard Russell	United States	90,800	84.729	90.550	7,693,401	8,221,940	2.30	2.25	1.32
Total Pooled Vehicle					7,693,401	8,221,940	2.30	2.25	1.32
RMHLDETSCEQ		Wellington Man	agement Com	npany LLP			Pag	e 8 of	9

Mississippi PERS Small Cap Opportunities

Reporting Currency Code: USD Holdings Detail by Sector-Equity
Portfolio Manager: Fitzpatrick July 31, 2024



		Shares or					Pct		
Security	Country	Par Value	Unit Cost	Unit Price	Cost	Market Value	Asset Class	Pct Total	Yie
Real Estate									
Equity Real Estate Invest Trusts									
Acadia Realty Trust	United States	82,500	16.705	21.640	1,378,167	1,785,300	0.50	0.49	3.5
Amer Hithcare REIT	United States	227,552	12.849	15.940	2,923,759	3,627,179	1.02	0.99	6.2
Douglas Emmett Inc	United States	197,822	21.678	16.090	4,288,289	3,182,956	0.89	0.87	4.7
Essential Prop	United States	120,995	20.772	29.590	2,513,280	3,580,242	1.00	0.98	3.9
Independence Realty	United States	153,125	17.781	18.650	2,722,734	2,855,781	0.80	0.78	3.4
Phillips Edison & Co	United States	93,915	29.081	35.100	2,731,143	3,296,417	0.92	0.90	3.3
Terreno Realty Corp	United States	56,911	62.059	68.410	3,531,861	3,893,282	1.09	1.06	2.6
Xenia Htls & Resorts	United States	147,816	15.948	13.880	2,357,325	2,051,686	0.58	0.56	3.1
Total Equity Real Estate Invest Tr	usts				22,446,558	24,272,842	6.80	6.63	3.9
Total Real Estate					22,446,558	24,272,842	6.80	6.63	3.9
Total Equities					282,633,072	356,765,838	100.00	97.42	2.2
Total Assets					292,052,233	366,206,837		100.00	2.3

Market Value for Fixed Income and Cash Equivalents includes estimated Accrued Interest.

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Wellington Management Company LLP

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Yield number represents Dividend Yield for Equity Securities and Yield to Maturity for Fixed Income Securities.

Yield totals are market value weighted averages.

^{*} Indicates a non-zero value that rounds to zero.

The prices that are provided are indicative prices based on best available market information. All prices are provided in accordance with our Pricing Policy and should not be considered transaction prices to which a security could necessarily be entered into or liquidated. Clients and Custodian banks should independently price these securities and use WMC's recommended prices for informational and/or reconciliation purposes only.

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Investment Committee Meeting Miscellaneous Updates

August 27, 2024

Jason Clark

From: J.P. Morgan Asset Management <jpmam.info@gim.jpmorgan.com>

Sent: Tuesday, May 21, 2024 3:01 PM

To: Jason Clark

Subject: [EXTERNAL] Fee Credit Program

Follow Up Flag: Follow up Flag Status: Flagged

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J.P.Morgan ASSET MANAGEMENT

Fee Credit Program

JPMCB Strategic Property Fund ("SPF") and JPMCB Special Situation Property Fund ("SSPF" and together with SPF, the "Funds")

To our valued clients and consultants,

We sincerely thank you for your patience, commitment, and trust as we've navigated a challenging real estate market environment. We assure you that delivering on performance expectations and improving liquidity continue to be our highest priorities. We are pleased to announce a **new Fee Credit Program** to investors in SPF and SSPF.

Beginning with the third quarter 2024 fees, direct investors in these Funds who pay standard management fees will receive an automatic 30% fee credit on their entire investment management fee, provided that they have no more than 20% of their NAV requested for redemption during the credit period. We understand that investors have liquidity management needs for regular rebalancing and constituent payments, and so we have set the redemption request threshold of 20% of NAV for fee credit eligibility to

accommodate routine disbursements.

The program is temporary and will run for the 18-month period beginning July 1, 2024 and ending December 31, 2025. The credit is earned for the 2024 credit period (July 1 – December 31, 2024) and the 2025 credit period (January 1 – December 31, 2025) and will be paid via wire for each credit period, issued sometime before June 30th contingent upon an investor's billing cycle. We will review market conditions to determine whether to extend or discontinue the program following the initial period ending on December 31, 2025. The program is applicable to investors with less than 20% of their NAV requested for redemption and no further action will be necessary.

For investors with greater than 20% of their current NAV requested for redemption, you must amend your request such that it is under the 20% threshold, before the August 31st Withdrawal Request Deadline Date, allowing you to benefit from the 30% credit on your full position in the 3Q24 billing cycle. If you do not meet the August 31st deadline you can still revise your request to become eligible for future periods. Outstanding withdrawal requests can be revised or cancelled directly via Morgan Institutional at millipmorgan.com. Please coordinate through your J.P. Morgan representative.

We have strong conviction in the Funds' future performance. Real estate fundamentals, particularly for the types of in demand, high quality assets we invest in on your behalf, have exhibited greater resiliency than the capital markets. Our portfolios remain well positioned to drive outsized future growth and navigate the current market environment. We are optimistic the coming months and years will also provide a very attractive opportunity to acquire assets and the properties best positioned to thrive in the new economy. We are laser focused on driving performance and have the full support of J.P. Morgan Asset Management.

Thank you again for your support and confidence.

Real Estate Americas J.P. Morgan Asset Management

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Ryan Holliday

From: Loukas, Giuliana T. <GTLoukas@wellington.com>

Sent: Tuesday, July 9, 2024 9:48 AM

To: Charles Nielsen; David DeGuire; Ryan Holliday

'jackson@callan.com'; Williams, Gregory L.; Phelan, Masmin; Saunders, Julia Ann

Subject: [EXTERNAL] Wellington: Update

EXTERNAL EMAIL WARNING!: Use caution with links or attachments. DO NOT provide your credentials!

Dear Charles, David, and Ryan,

I hope all is well and you're all having a great start to your summers.

I am reaching out to share with you that I have been asked to take on a new role at Wellington, leading our Family Office effort.

My colleague Greg Williams will be the lead on your Wellington Relationship Team going forward. As you may recall, Greg is a Partner of the firm, Associate Director of the Americas Institutional Group, and Head of our Chicago office. He partners with our largest, strategic clients in the Midwest and looks forward to continuing the relationship with you.

Additionally, as we try to be thoughtful about local resources in order to best service our clients, Masmin will be transitioning her responsibilities to Julia Saunders, who is a Relationship Manager based in our Chicago office and works closely with Greg on their shared institutional clients.

We value our relationship with you and the Public Employees' Retirement System of Mississippi, and we will ensure that all goes smoothly with the transition. Please feel free to reach out to me and Masmin for anything you may need, and Greg, Masmin, Julia and I will be closely coordinated on our side as well.

My apologies for not being able to reach you via phone this morning, but please feel free to call me back to discuss further. It has been a pleasure working with you, and I'm sorry we weren't able to work together longer. I hope we have the opportunity to cross paths again in the future.

If you have any questions, please let me know.

All my best, Giuliana

Giuliana Loukas, CAIA

Vice President, Client Group
T: +1-617-263-4069 | C: +1-617-645-9086
GTLoukas@wellington.com

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Ryan Holliday

From: Christopher Huckle <Christopher.Huckle@bailliegifford.com>

Sent: Wednesday, August 14, 2024 9:10 AM

To: Ryan Holliday
Cc: Tom Wright

Subject: [EXTERNAL] Baillie Gifford - Partnership Update

EXTERNAL EMAIL WARNING!: Use caution with links or attachments. DO NOT provide your credentials!

Dear Ryan,

I am writing to share the news that one of our three managing partners, Andrew Telfer, will retire on 31 March 2025 after almost 33 years with the firm, including 13 as a managing partner. Andrew's successor will be Tim Campbell, who has been with the firm for 25 years and a partner for 12.

Andrew joined Baillie Gifford in 1992 as an investment trainee, becoming an investment manager before moving to the Clients Department in 2006. He was head of the Clients Department between 2009 and 2011 and became a managing partner and chief executive in 2012. As a managing partner, Andrew has been at the heart of the firm's focus on investment and our strive for excellence in all areas, always putting our clients first.

Our independent partnership structure fosters stability and enables us to prioritise our clients' interests through long-term succession planning while preserving our distinctive culture. Tim's appointment is the culmination of a diligent leadership transition plan that has been in motion for some time.

Tim began his career at Baillie Gifford in 1999 as an investment trainee, becoming an investment manager in the Emerging Markets Team. In 2007, he moved to the Clients Department, overseeing relationships with clients invested in Emerging Markets strategies. Tim was made a partner in 2012 and currently chairs the firm's Management Committee and Group Risk Committee. Tim will join Amy Atack and Malcolm MacColl as managing partners on 1 April 2025.

While Andrew's retirement is still some months away, I want to share the news of this smooth and planned transition at an early stage. Please let me know if you wish to discuss this in more detail.

Regards,

Chris.

Chris Huckle
Client Relationship Director

.

+44 (0)131 275 2771

Baillie Gifford & Co.

Calton Square 1 Greenside Row Edinburgh EH1 3AN

Baillie Gifford



