Operating Engineers Local No. 77
Pension & Trust Funds

Master Consulting Services Report

Period Ended
December 31, 2023

TABLE OF CONTENTS

Market Discussion 4Q | 2023

Financial Market Performance

Periods Ending December 31, 2023

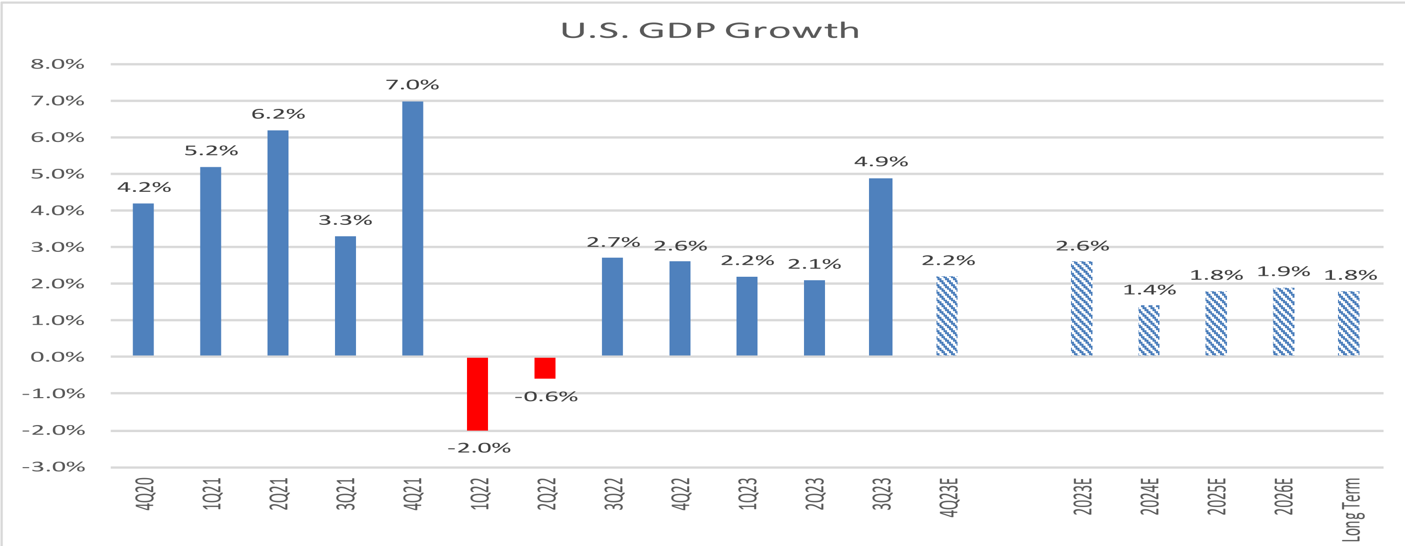
Strategy	Sector	Index	QTR	YTD	2022	2021	2020	2019	2018	2017	1-Yr	3-Yr	5-Yr	10-Yr	20-Yr
Stocks	US Large Cap	S&P 500	11.7%	26.3%	-18.1%	28.7%	18.4%	31.5%	-4.4%	21.8%	26.3%	10.0%	15.7%	12.0%	9.7%
	US Small Cap	Russell 2000	14.0%	16.9%	-20.5%	14.8%	19.9%	25.5%	-11.0%	14.6%	16.9%	2.2%	9.9%	7.1%	8.1%
	All Country	MSCI All Country World (net)	11.0%	22.2%	-18.4%	18.5%	16.3%	26.6%	-9.4%	24.0%	22.2%	5.7%	11.7%	7.9%	7.5%
	Non-US Developed	MSCI EAFE (net)	10.4%	18.2%	-14.5%	11.3%	7.8%	22.0%	-13.8%	25.0%	18.2%	4.0%	8.2%	4.3%	5.6%
	Emerging Markets	MSCI EM (net)	7.9%	9.8%	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	9.8%	-5.1%	3.7%	2.7%	6.8%
	Int'l Small Cap	MSCI EAFE Small Cap (net)	11.1%	13.2%	-21.4%	10.1%	12.3%	25.0%	-17.9%	33.0%	13.2%	-0.7%	6.6%	4.8%	7.1%
Bonds	Treasury	Bloomberg US Govt	5.6%	4.1%	-12.3%	-2.3%	7.9%	6.8%	0.9%	2.3%	4.1%	-3.7%	0.6%	1.3%	2.7%
	Broad Market	Bloomberg Aggregate	6.8%	5.5%	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	5.5%	-3.3%	1.1%	1.8%	3.2%
	Intermediate	Bloomberg Gov/Credit Int.	4.6%	5.2%	-8.2%	-1.4%	6.4%	6.8%	0.9%	2.1%	5.2%	-1.6%	1.6%	1.7%	2.9%
	High Yield	Bloomberg HY BaB 2% IC	7.2%	12.6%	-10.6%	4.6%	7.7%	15.2%	-1.9%	6.9%	12.6%	1.7%	5.5%	4.6%	6.2%
	Short Duration HY	ICE BofA 1-3 Yrs BB US Cash Pay HY	4.0%	8.9%	-3.1%	3.2%	5.4%	8.7%	1.3%	3.6%	8.9%	2.9%	4.5%	3.9%	5.4%
	Global Bonds	FTSE WGBI	8.1%	5.2%	-18.3%	-7.0%	10.1%	5.9%	-0.8%	7.5%	5.2%	-7.2%	-1.4%	-0.3%	1.9%
GTAA	Unconstrained	65% MSCI World /35% FTSE WGBI	10.3%	17.0%	-18.1%	11.0%	14.6%	19.9%	-5.8%	17.0%	17.0%	2.2%	7.9%	5.6%	6.0%
Real Estate	Core	NCREIF ODCE Equal Weighted (net)	-5.4%	-13.4%	7.6%	21.9%	0.8%	5.2%	7.3%	6.9%	-13.4%	4.3%	3.8%	6.7%	6.2%
Hedge Fund of Funds	Diversified FOFs	HFRI FOF Composite	3.6%	6.6%	-5.3%	6.2%	10.9%	8.4%	-4.0%	7.8%	6.6%	2.3%	5.2%	3.3%	3.3%
	Equity Long-Short	HFRI Equity Hedge	5.6%	10.5%	-10.1%	11.7%	17.9%	13.7%	-7.1%	13.3%	10.5%	3.5%	8.3%	5.2%	5.2%
Commodities	Commodities	Goldman Sachs Commodity	-10.7%	-4.3%	26.0%	40.4%	-23.7%	17.6%	-13.8%	5.8%	-4.3%	19.2%	8.7%	-3.6%	-1.5%

Asset Class Performance "Quilt"

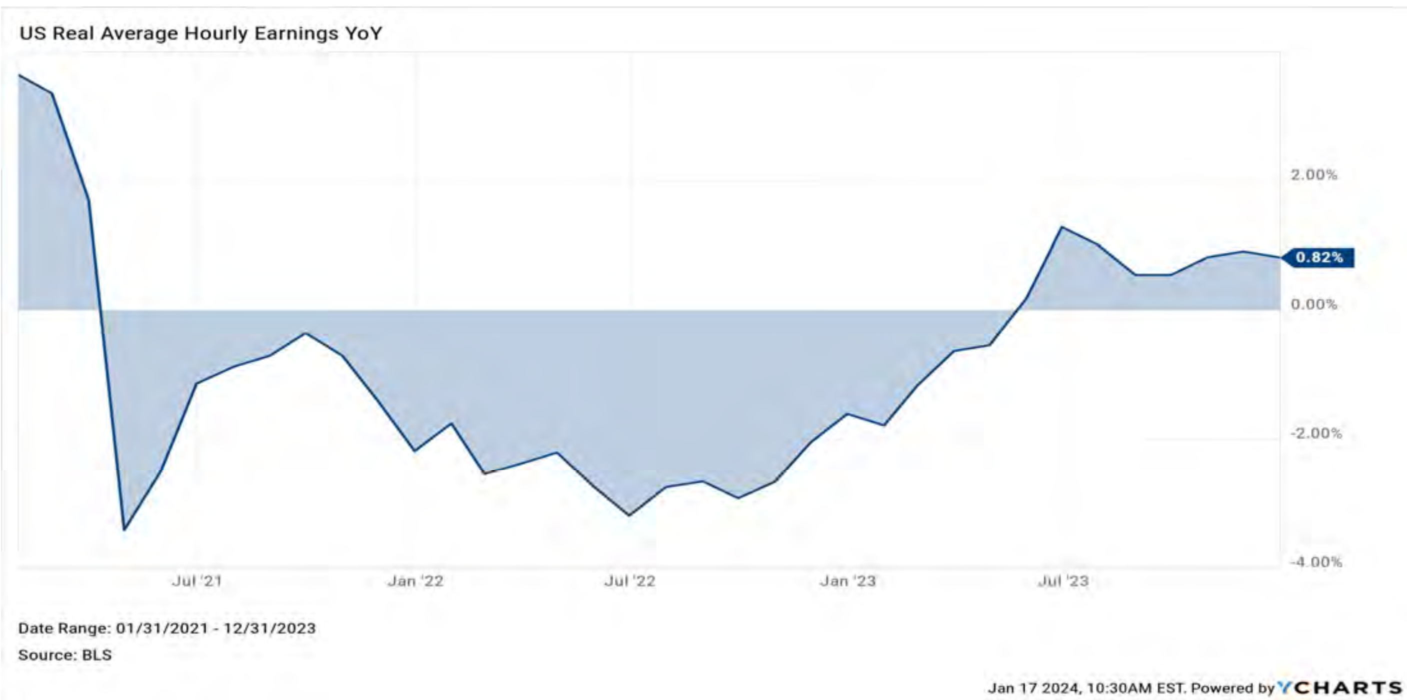
2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
EM Equity 78.5%	Small Cap 26.9%	RE 15.0%	EM Equity 18.2%	Small Cap 38.8%	Large Cap 13.7%	RE 14.2%	Small Cap 21.3%	EM Equity 37.3%	RE 7.3%	Large Cap 31.5%	Small Cap 20.0%	Large Cap 28.7%	RE 7.6%	Large Cap 26.3%
HY 57.5%	Mid Cap 25.5%	Fx Inc 7.8%	Int'l 17.3%	Mid Cap 34.8%	Mid Cap 13.2%	Large Cap 1.4%	HY 17.5%	Int'l 25.0%	SD HY 1.4%	Mid Cap 30.5%	Large Cap 18.4%	Mid Cap 22.6%	SD HY -3.1%	Int'l 18.2%
Mid Cap 40.5%	EM Equity 18.9%	HY 4.4%	Mid Cap 17.3%	Large Cap 32.4%	RE 11.4%	SD HY 1.2%	Mid Cap 13.8%	Large Cap 21.8%	Fx Inc 0.0%	Small Cap 25.5%	EM Equity 18.3%	RE 21.9%	HFoF -5.2%	Mid Cap 17.2%
SD HY 36.1%	HY 15.2%	SD HY 4.4%	Small Cap 16.3%	Int'l 22.8%	Fx Inc 6.0%	Fx Inc 0.6%	Large Cap 12.0%	Mid Cap 18.5%	HY -2.3%	Int'l 22.0%	Mid Cap 17.1%	Small Cap 14.8%	HY -11.2%	GTAA 17.0%
Int'l 31.8%	RE 15.1%	Large Cap 2.1%	Large Cap 16.1%	GTAA 15.3%	Small Cap 4.9%	HFoF -0.3%	EM Equity 11.2%	GTAA 17.0%	HFoF -4.0%	GTAA 19.8%	GTAA 15.2%	Int'l 11.3%	Fx Inc -13.0%	Small Cap 16.9%
Small Cap 27.2%	Large Cap 15.1%	GTAA -0.9%	HY 15.6%	RE 12.4%	HFoF 3.4%	Int'l -0.8%	SD HY 8.5%	Small Cap 14.7%	Large Cap -4.4%	EM Equity 18.4%	HFoF 10.3%	GTAA 11.1%	Int'l -14.5%	HY 13.5%
Large Cap 26.5%	SD HY 11.7%	Mid Cap -1.6%	GTAA 10.9%	HFoF 9.0%	GTAA 3.0%	GTAA -1.6%	RE 8.4%	HFoF 7.8%	GTAA -5.7%	HY 14.4%	Int'l 7.8%	HFoF 6.0%	Mid Cap -17.3%	EM Equity 9.8%
GTAA 20.1%	GTAA 9.8%	Small Cap -4.2%	SD HY 10.2%	HY 7.4%	HY 2.5%	Mid Cap -2.4%	GTAA 5.6%	HY 7.5%	Mid Cap -9.1%	Fx Inc 8.7%	Fx Inc 7.5%	HY 5.4%	GTAA -18.1%	SD HY 8.9%
HFoF 11.5%	Int'l 7.8%	HFoF -5.7%	RE 9.9%	SD HY 5.6%	SD HY 1.9%	Small Cap -4.4%	Fx Inc 2.7%	RE 6.9%	Small Cap -11.0%	SD HY 8.7%	HY 6.2%	SD HY 4.3%	Large Cap -18.1%	HFoF 6.6%
Fx Inc 5.9%	Fx Inc 6.5%	Int'l -12.1%	HFoF 4.8%	Fx Inc -2.0%	EM Equity -2.2%	HY -4.6%	Int'l 1.0%	SD HY 3.6%	Int'l -13.8%	HFoF 8.4%	SD HY 5.4%	Fx Inc -1.5%	EM Equity -20.1%	Fx Inc 5.5%
RE -31.3%	HFoF 5.7%	EM Equity -18.4%	Fx Inc 4.2%	EM Equity -2.6%	Int'l -4.9%	EM Equity -14.9%	HFoF 0.5%	Fx Inc 3.5%	EM Equity -14.6%	RE 5.2%	RE 0.8%	EM Equity -2.5%	Small Cap -20.5%	RE -13.4%

Source: NCREIF, Bloomberg, Wilshire. Large Cap Equity: S&P 500 Index, Mid Cap Equity: Russell Midcap Index, Small Cap Equity: Russell 2000 Index, International Equity: MSCI EAFE Index, Emerging Markets: MSCI EM Index, Fixed Income: Bloomberg Aggregate Index, High Yield Fixed Income: ICE BofA US High Yield Index, Short Duration High Yield Fixed Income: ICE BofA High Yield Cash Pay 1-3 Yr BB Index, Real Estate: NCREIF ODCE Equal Weighted Index, Hedge Fund of Funds: HFRI FOF Index, Global Tactical Asset Allocation: 65%MSCI World Equity/35% FTSE World Gov't Bond Index. Past performance is not indicative of future returns.

U.S. Economy



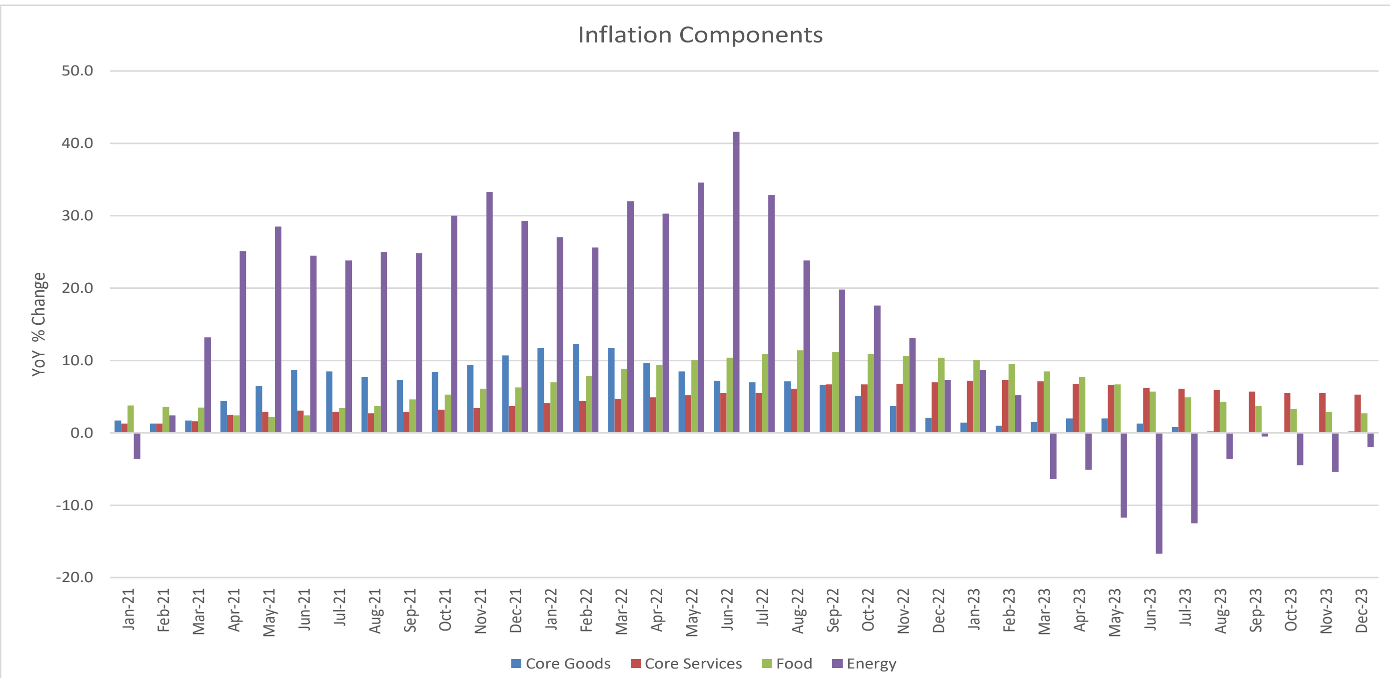
Sources: U.S. Bureau of Economic Analysis, Federal Reserve, Atlanta Federal Reserve



U.S Economic Growth Exceeds Expectations

- Despite widespread predictions at the start of 2023 that a recession was imminent, U.S. economic growth has remained positive, with GDP increasing by over 2.0% in each of the first three quarters of 2023.
- Economic growth accelerated in Q3 2023 to 4.9%, the highest level since Q4 2021.
- In their most recent projections, the U.S. Federal Reserve increased projected growth for 2023 from 2.1% to 2.6% and reduced 2024 from 1.5% to 1.4%.
- Rising inflation resulted in 25 consecutive months of negative real wage growth for U.S. workers through early 2023. Beginning in 2Q 2023, higher earnings and slowing inflation have more recently resulted in eight consecutive months of real earnings growth, which has helped fuel stronger than expected economic growth.

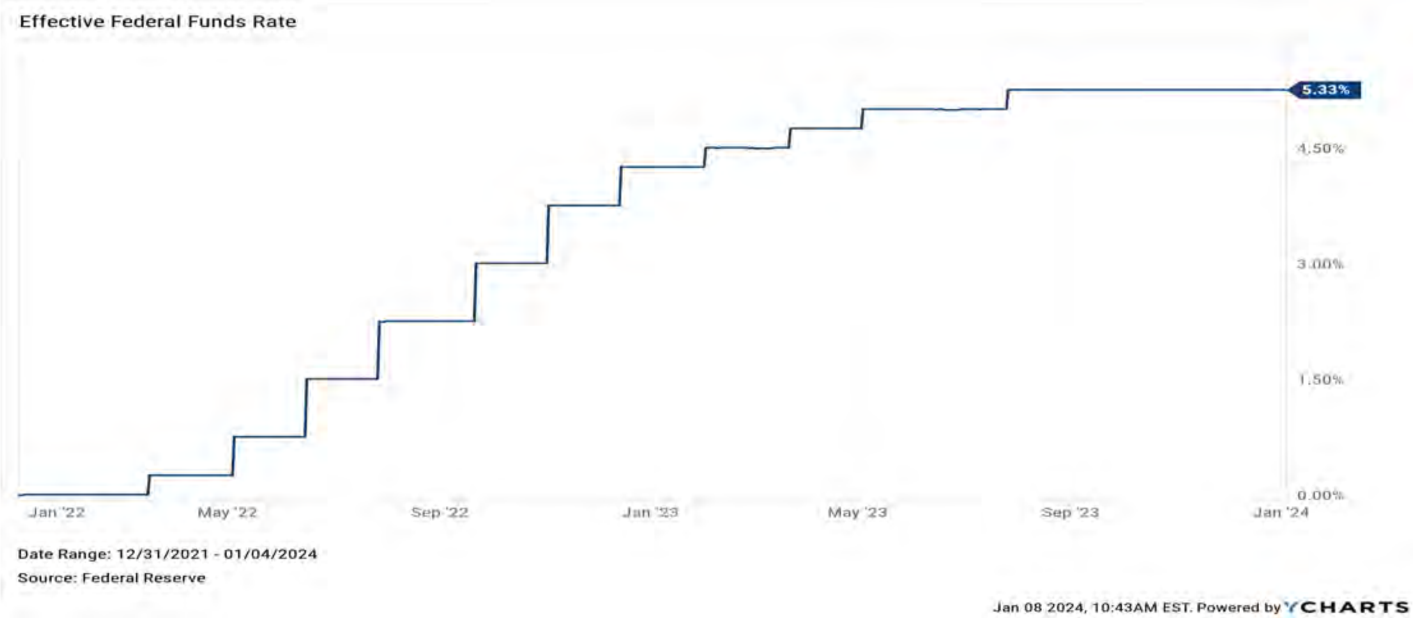
U.S. Economy

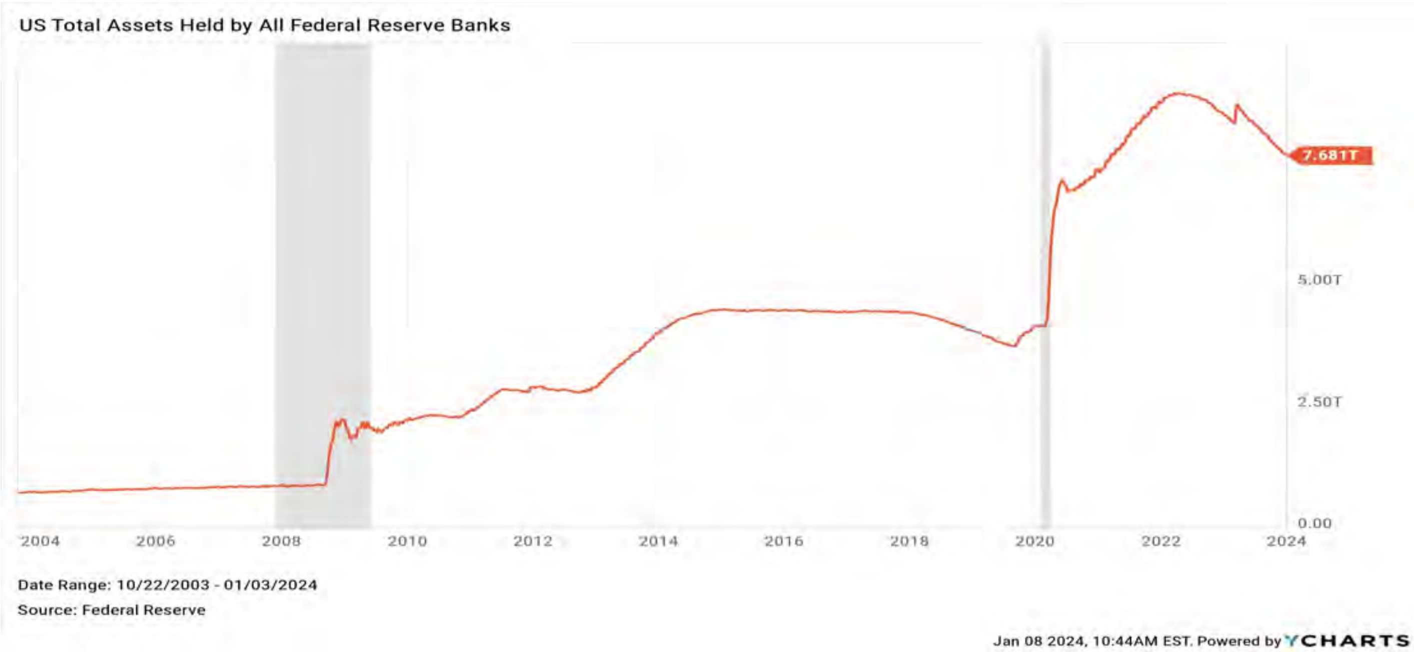


Inflation Continues Downward Trend but Remains Above Target

- Inflation continues to trend downward with year-over-year CPI of 3.4% in December, down from the peak of 9.1% in June 2022.
- Excluding food and energy, core inflation increased by 3.9% vs. a year ago, the lowest level of increase since May 2021.
- Falling energy prices are the primary driver of the dispersion between headline and core inflation.
- Year-over-year core goods inflation has been below 1% for six consecutive months driven by lower used car prices.
- Service inflation remains elevated, driven by the shelter component, which tends to lag real time prices.
- Personal Consumption Expenditures (PCE), the Fed’s preferred inflation measure, increased by 3.2% over the last year through November, the lowest level since March of 2021.

U.S. Economy

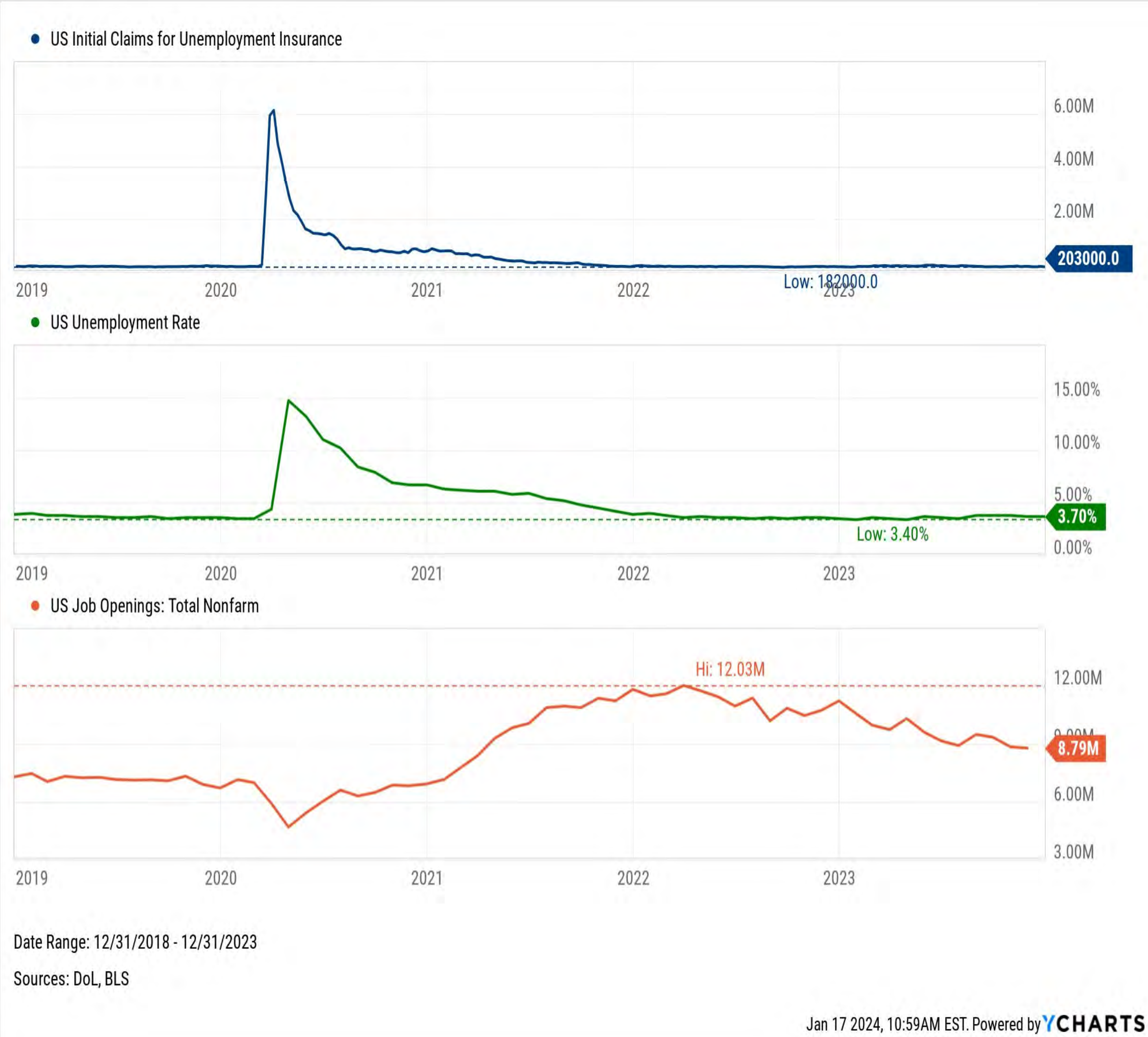




Fed Remains on Hold; Rate Cuts Forecasted for 2024

- The U.S. Federal Reserve raised rates from 0.0% to 5.25% since the beginning of 2022, with the most recent 0.25% increase occurring at the July meeting, leaving the effective Fed Funds Rate at 5.33%, the highest level since 2007.
- The Fed left rates unchanged at each of the final three meetings of 2023.
- Forward guidance from the Fed at the December meeting suggests three 0.25% cuts in 2024.
- The reduction in the size of the Fed's balance sheet that began in 2022 was briefly interrupted in March 2023 when the Fed provided a liquidity injection to banks following three of the four largest bank failures in history.
- By the end of Q2 2023, the increase was reversed by resuming the quantitative tightening program with the balance sheet at the lowest level since March 2021.

U.S. Economy



Employment Remains Resilient

- Despite significant increases in the Fed Funds rate, various measures suggest the labor market remains strong.
- Weekly unemployment claims averaged 214,000 in Q4 2023, compared to 226,000 in Q3 2023 and an average of 225,000 for calendar year 2023.
- The U.S. labor market added 216,000 jobs in December. In total, 2.7 million jobs were added in 2023 while the unemployment rate increased from 3.5% at the start of the year to 3.7% at year end.
- U.S. job openings declined to the lowest level since May 2021, but remain elevated by historical standards at 8.8 million. There are approximately 1.4 openings for every unemployed person.

U.S. Equity Market

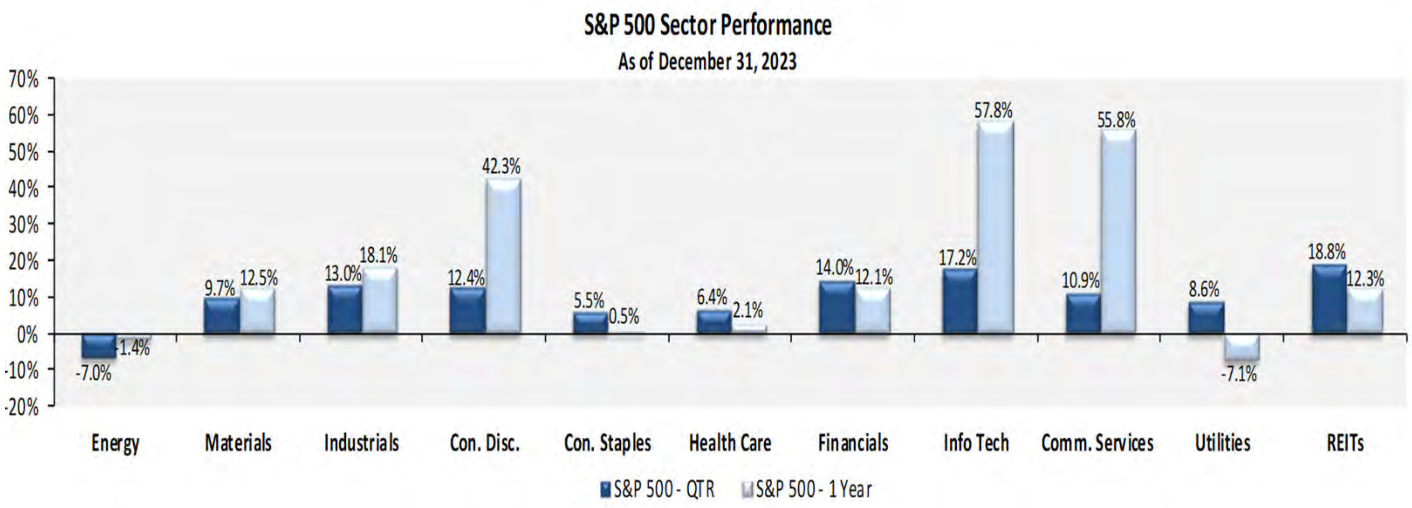
Sector	Index	4Q23	YTD	2022	2021	2020	2019	2018	2017	1-Year	3-Year	5-Year	10-Year
Large Cap	S&P 500	11.7%	26.3%	-18.1%	28.7%	18.4%	31.5%	-4.4%	21.8%	26.3%	10.0%	15.7%	12.0%
	Russell 1000	12.0%	26.5%	-19.1%	26.4%	21.0%	31.4%	-4.8%	21.7%	26.5%	9.0%	15.5%	11.8%
	Russell 1000 Value	9.5%	11.4%	-7.6%	25.1%	2.8%	26.5%	-8.3%	13.6%	11.4%	8.8%	10.9%	8.4%
	Russell 1000 Growth	14.2%	42.7%	-29.1%	27.6%	38.5%	36.4%	-1.5%	30.2%	42.7%	8.9%	19.5%	14.9%
Mid Cap	Russell Mid-Cap	12.8%	17.2%	-17.3%	22.6%	17.1%	30.5%	-9.1%	18.5%	17.2%	5.9%	12.7%	9.4%
	Russell Mid-Cap Value	12.1%	12.7%	-12.1%	28.3%	5.0%	27.0%	-12.3%	13.3%	12.7%	8.3%	11.1%	8.2%
	Russell Mid-Cap Growth	14.5%	25.9%	-26.7%	12.7%	35.6%	35.5%	-4.8%	25.3%	25.9%	1.3%	13.8%	10.6%
Small Cap	Russell 2000	14.0%	16.9%	-20.5%	14.8%	19.9%	25.5%	-11.0%	14.6%	16.9%	2.2%	9.9%	7.1%
	Russell 2000 Value	15.2%	14.6%	-14.5%	28.2%	4.6%	22.4%	-12.9%	7.8%	14.6%	7.9%	10.0%	6.7%
	Russell 2000 Growth	12.7%	18.6%	-26.4%	2.8%	34.6%	28.4%	-9.3%	22.1%	18.6%	-3.5%	9.2%	7.1%
Total Market	Wilshire 5000	12.1%	26.1%	-19.0%	26.7%	20.8%	31.0%	-5.3%	21.0%	26.1%	9.0%	15.4%	11.7%
	Russell 3000	12.1%	25.9%	-19.2%	25.6%	20.9%	31.0%	-5.2%	21.1%	25.9%	8.5%	15.1%	11.5%

Major Index Total Return as of December 31, 2023

Asset Class	Name	2023 YTD	% off Low	% Off All Time High
U.S. Large Cap	S&P 500	26.3%	36.1%	-0.3%
U.S. Mid Cap	Russell Midcap	17.2%	28.1%	-5.3%
U.S. Smid Cap	Russell 2500	17.4%	26.6%	-9.1%
U.S. Small Cap	Russell 2000	16.9%	24.7%	-14.3%
International Large Cap	MSCI EAFE	18.2%	39.9%	-1.3%
International Small Cap	MSCI EAFE Small Cap (gross)	13.7%	34.0%	-15.0%
Emerging Markets	MSCI Emerging Markets	9.8%	25.2%	-23.7%
Global Equity	MSCI World (gross)	24.4%	37.3%	-0.3%

- The S&P 500 concluded 2023 with a nine-week winning streak, matching a feat last achieved two decades ago and finishing just below its all-time high.
- Additionally, the late 2023 interest rate reversal helped significantly broaden market breadth, prompting a shift toward previously lagging sectors in the equity market. Starting in early November, small-cap stocks outpaced their larger counterparts and the equal-weight S&P 500 index outperformed the cap-weighted version.
- While the "Magnificent Seven" significantly influenced the S&P 500 returns due to their substantial index weighting, it is important to highlight that in 2023, 322 stocks within the S&P 500 registered positive gains.

U.S. Equity Market



Mag 7 Propels Tech, Comms & Consumer; Defensive Sectors Lag Behind

- Technology (+57.8%), communications (+55.8%), and consumer discretionary (+42.3%) significantly outperformed in 2023, driven largely by the robust gains and substantial weighting of the "Magnificent Seven." The Bloomberg Magnificent Seven Index achieved an impressive 107% return in 2023.

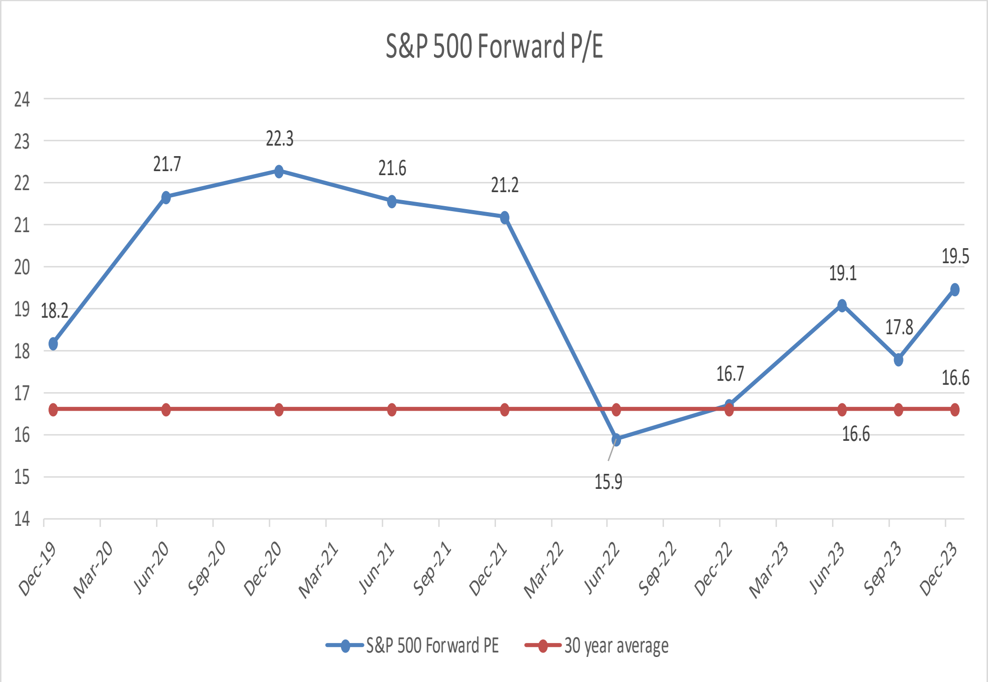
- Defensive sectors such as utilities (-7.1%), staples (+0.5%), and healthcare (+2.1%) lagged due to diminishing appeal in "high-dividend" stocks amidst money markets yielding over 5%. The underperformance is attributed to the heightened sensitivity of these sectors to short-term Federal Funds rates.

- In 2023, energy declined -1.4%, reversing its standout +59% gain in 2022, which made it the sole S&P 500 sector to register growth that year. Despite this setback, energy ended the two-year period with a gain of over 50%.

Earnings Growth Streak?

- The S&P 500 is expected to post 1.4% year-over-year earnings growth for Q4 2023. This would mark its second consecutive quarter of year-over year earnings growth.

- The S&P 500's forward P/E ratio rose last quarter due to increased stock prices and modest growth in earnings expectations. Currently, it sits at 19.5x forward earnings, surpassing its 30-year average.



Source: J.P. Morgan Asset Management

U.S. Equity Market

2023's Standouts: The Magnificent Seven

- The Magnificent Seven—Alphabet (Google), Amazon, Apple, Meta (formerly Facebook), Microsoft, NVIDIA, and Tesla—garnered praise from the financial press for their remarkable 105% average total return last year. As a cohort, they constituted over 60% of the S&P 500's 26.3% total return in 2023, offsetting the previous year's -45% average loss for this closely monitored group of stocks.

- Despite the positive trend in 2023, Amazon and Tesla, remain in the red since year-end 2021. Examining returns over two years, the Magnificent Seven has a relatively subdued impact. Over this period, the S&P 500 achieved a 3.42% total return, with the Magnificent Seven contributing 2.05%, resulting in a 1.37% gain for the index without their influence.

Magnificent Seven-Led Rally Cooled in Second Half of 2023

Ratio Between Mag 7 and S&P 500 Index Has Stabilized Since June

Source: Bloomberg, DoubleLine

Securities discussed are not recommendations and are presented as examples of issue selection or portfolio management processes. They have been picked for comparison or illustration purposes only. No security presented within is either offered for sale or purchase. Please see the Appendix for index definitions. Magnificent Seven refers to Apple, Microsoft, Alphabet, Amazon, Nividia, Tesla and Meta. You cannot invest directly in an index.

Perceived AI Victors: Mega-Caps

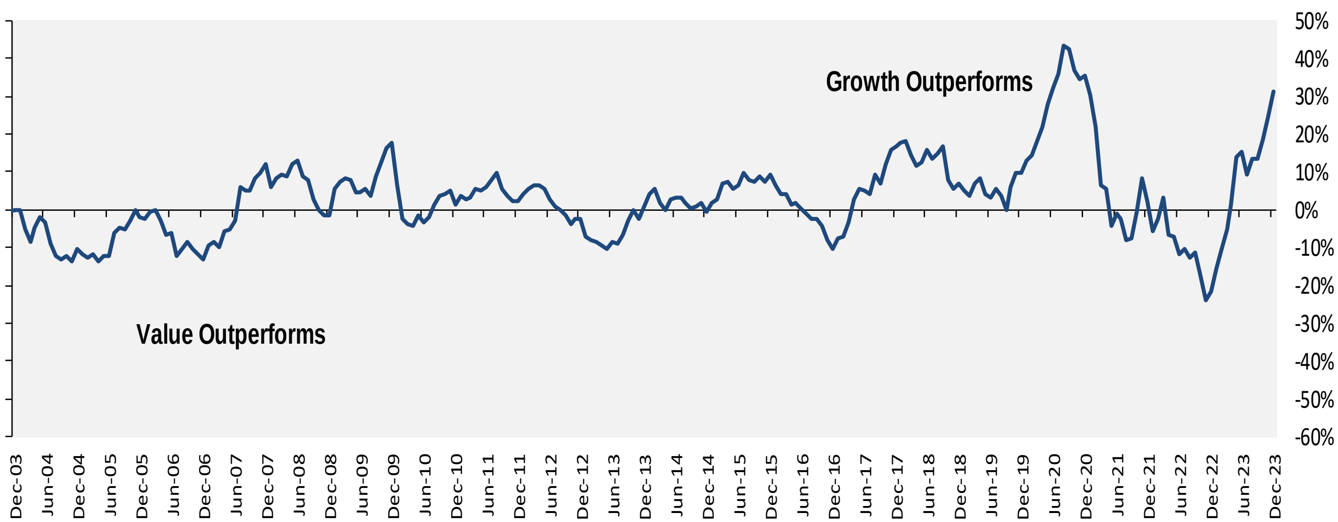
- Artificial Intelligence's (AI) potential steered asset flows primarily toward the Magnificent Seven. The market anticipated these companies to be the primary beneficiaries of substantial capital allocated for AI initiatives.

- Additionally, these mega-cap stocks capitalized on pandemic-induced low interest rates by securing long-term fixed-rate bonds. As interest rates rose in 2023, this astute move played a pivotal role in fortifying cash reserves, reflecting positively on the bottom line of the income statement.

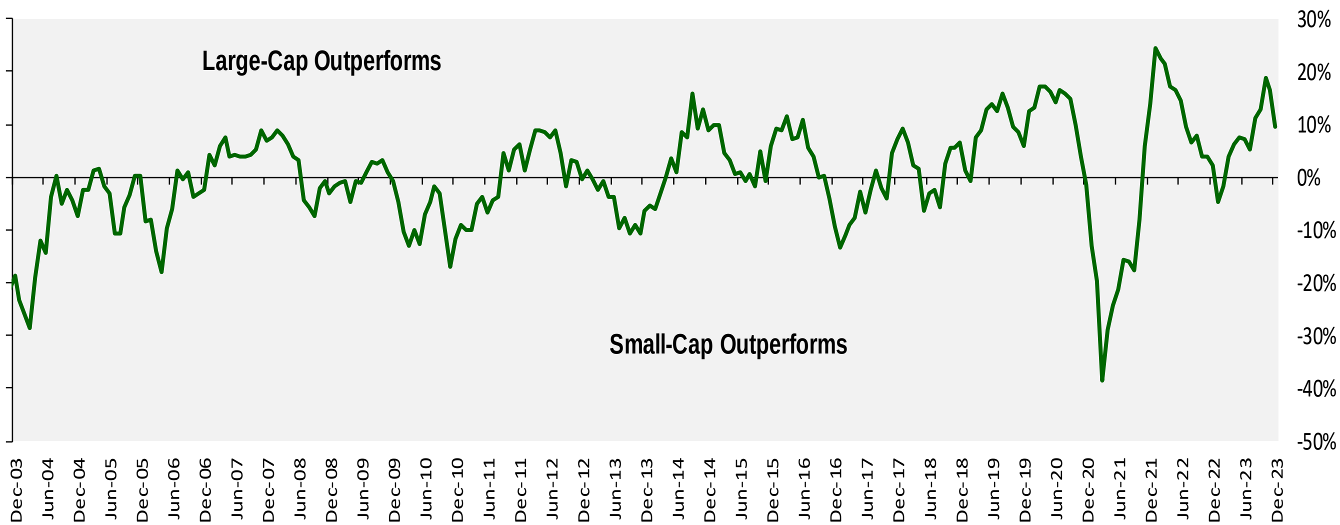
- While a concentrated percentage (28%) of stocks outperformed the S&P 500 this year, it extended beyond seven stocks. Despite media focus on the Magnificent Seven, a broader set of 141 companies achieved this feat within the S&P 500.

U.S. Equity Market

Russell 1000 Growth vs. Russell 1000 Value
Rolling One-Year Returns



S&P 500 vs. Russell 2000
Rolling One-Year Returns



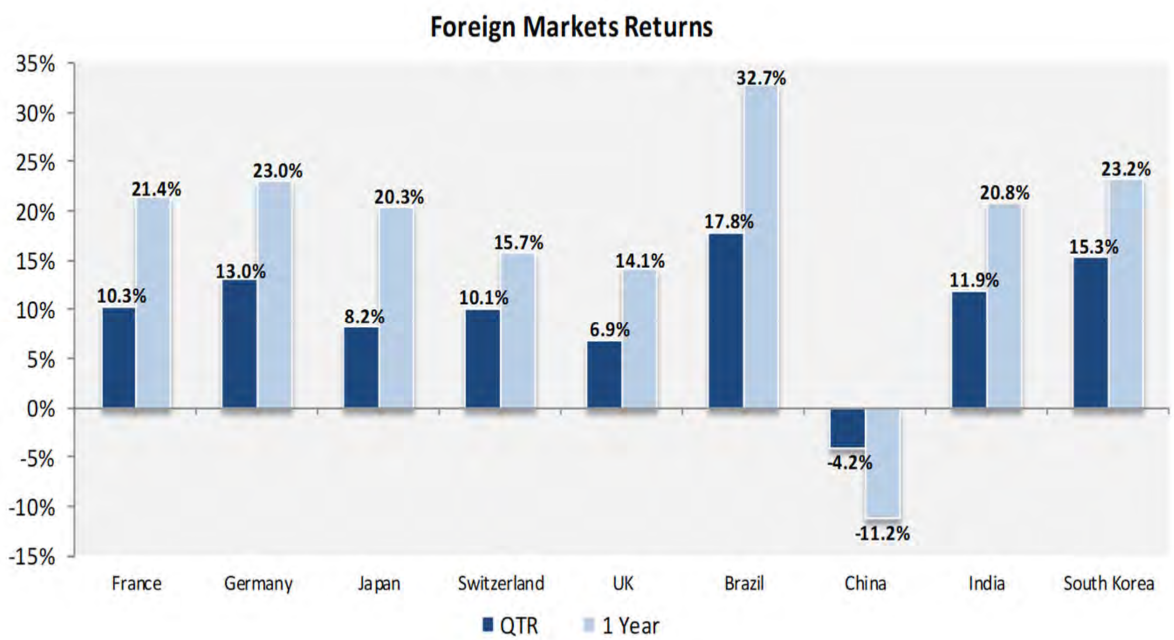
Yearly Reversals: Growth vs. Value Flip-Flop

- The Russell 1000 Growth index made a strong comeback, outperforming the Russell Value index by over 31% in 2023, the second-highest margin since its 35% outperformance in 2020. This reversal follows 2022, where the value shined, outperforming growth by over 21%, its second-best performance since 1978. The growth to value ratio (RLG / RLV) hit a low in January 2023, before expanding significantly through mid-November, almost matching the widest spreads recorded in August 2020 and December 2021.

- Despite the Russell 2000/small-cap index rebounding from bear market status by the close of 2023, it remains significantly below its November 2021 peak. The Russell 2000 experienced its current cycle low over 18 months ago, marking the third-longest period without recovering the previous peak on record.

International Equity Market

Sector	Index	4Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Global	MSCI AC World Index (net)	11.0%	22.2%	-18.4%	18.5%	16.3%	26.6%	-9.4%	22.2%	5.7%	11.7%	7.9%
	MSCI World Small Cap (net)	12.5%	15.8%	-18.8%	15.8%	16.0%	26.2%	-13.9%	15.8%	2.9%	9.8%	6.8%
	MSCI World ex US (net)	10.5%	17.9%	-14.3%	12.6%	7.6%	22.5%	-14.1%	17.9%	4.4%	8.4%	4.3%
	MSCI World ex US Small Cap (net)	10.6%	12.6%	-20.6%	11.1%	12.8%	25.4%	-18.1%	12.6%	-0.2%	7.0%	4.6%
Developed ex US	MSCI EAFE (net)	10.4%	18.2%	-14.5%	11.3%	7.8%	22.0%	-13.8%	18.2%	4.0%	8.2%	4.3%
	MSCI EAFE Value (net)	8.2%	19.0%	-5.6%	10.9%	-2.6%	16.1%	-14.8%	19.0%	7.6%	7.1%	3.2%
	MSCI EAFE Growth (net)	12.7%	17.6%	-22.9%	11.3%	18.3%	27.9%	-12.8%	17.6%	0.3%	8.8%	5.1%
	MSCI EAFE Small Cap (net)	11.1%	13.2%	-21.4%	10.1%	12.3%	25.0%	-17.9%	13.2%	-0.7%	6.6%	4.8%
Emerging Markets	MSCI Emerging Markets (net)	7.9%	9.8%	-20.1%	-2.5%	18.3%	18.4%	-14.6%	9.8%	-5.1%	3.7%	2.7%



- Foreign stocks gained momentum in Q4 2023 as subdued inflation figures in both Europe and the U.S. fueled optimism, suggesting that not only have interest rates likely peaked, but there is anticipation of potential cuts in 2024.

- The Tokyo Stock Exchange's recent corporate governance reforms have spurred listed companies to demonstrate efficient capital utilization under the threat of delisting. This marks a notable shift, as Japan's corporate governance appears to be making progress after being perceived as a “value trap” for years, prompting a positive response in Japanese stocks.

- Doubts continue to linger over the Chinese government's ability to boost growth in the second-largest global economy. The persistent real estate crisis, regulatory uncertainties, and a lack of new foreign direct investment have intensified negative sentiment toward Chinese equities.

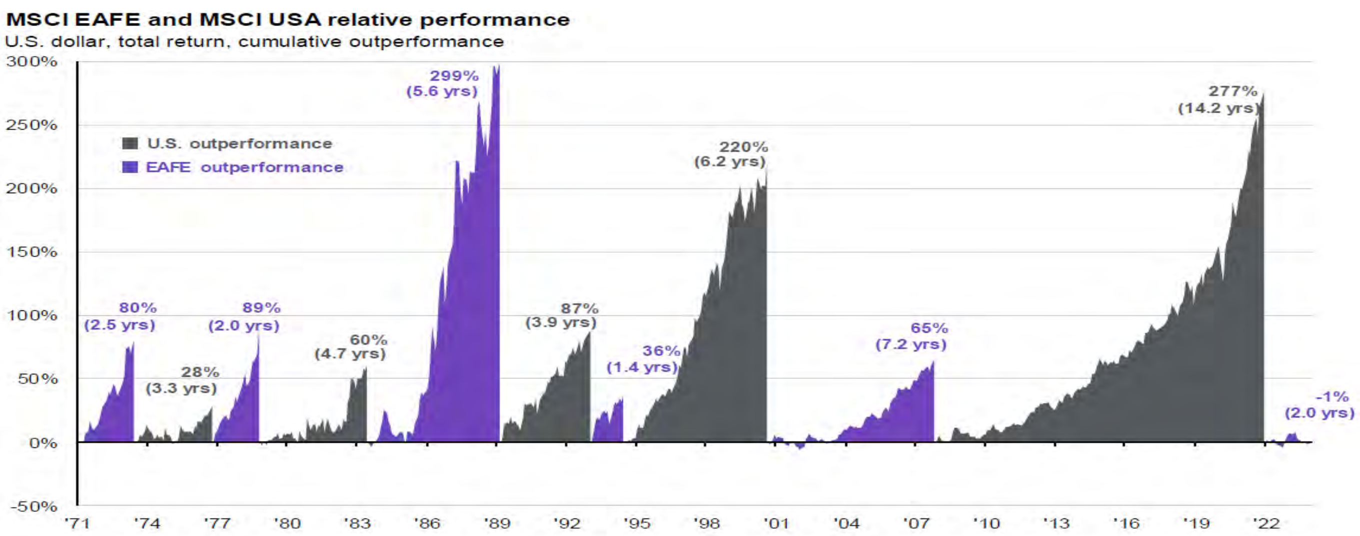
International Equity Market

Dollar's Dovish Descent

- After a steady rise against other currencies in 3Q 2023, the U.S. Dollar encountered a setback in Q4 due to dovish remarks from multiple Fed officials.
- November saw a prominent 3.0% drop in the U.S. Dollar Index (DXY), wiping out all yearly gains and marking its most substantial monthly decline in a year. The Fed is currently perceived as more dovish in comparison to other major central banks.

Two-Year Stalemate: U.S. and Developed International Markets

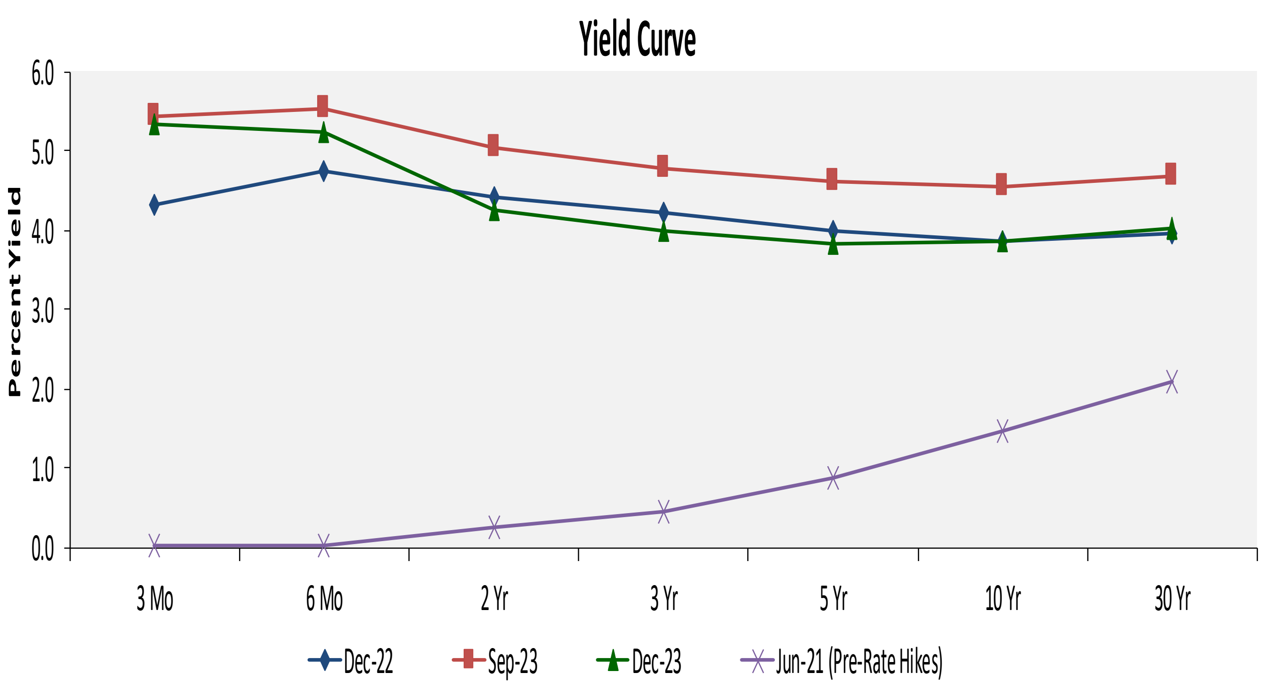
- U.S. equity markets outperformed international markets by 277% over 14.2 years, marking the longest duration of outperformance in 50 years; however, this trend may have ended by the close of 2021.
- Over the last two years, U.S. and international developed markets have exhibited a sawtooth pattern, with no clear trend and a minimal spread between them.



Source: J.P. Morgan Asset Management

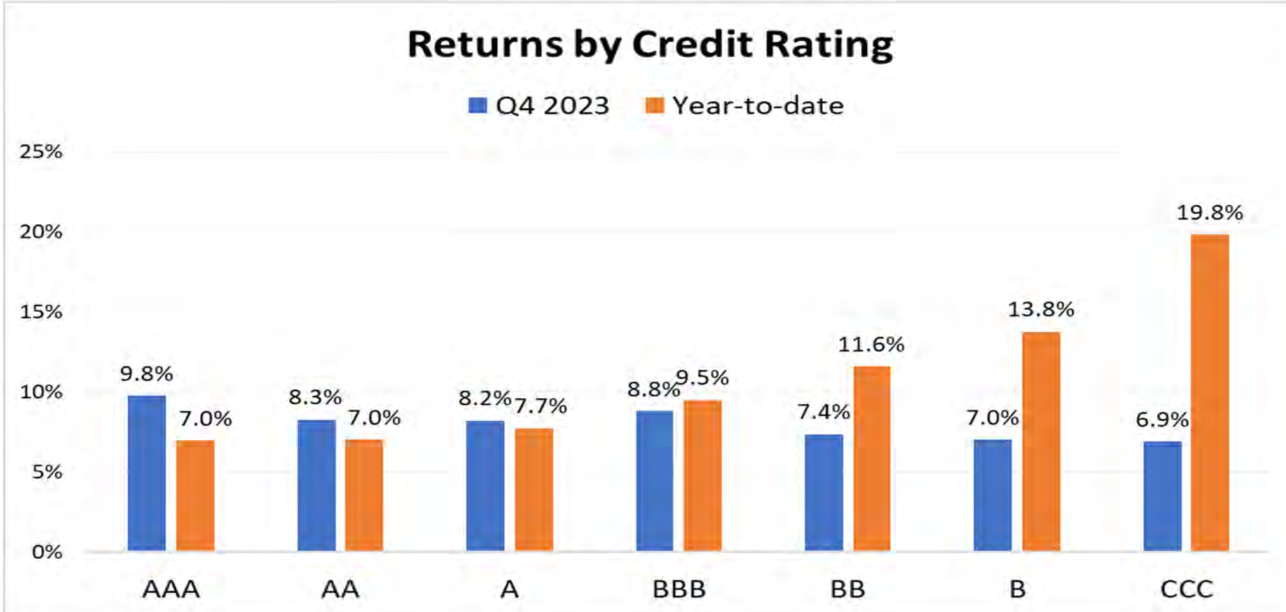
Bond Market

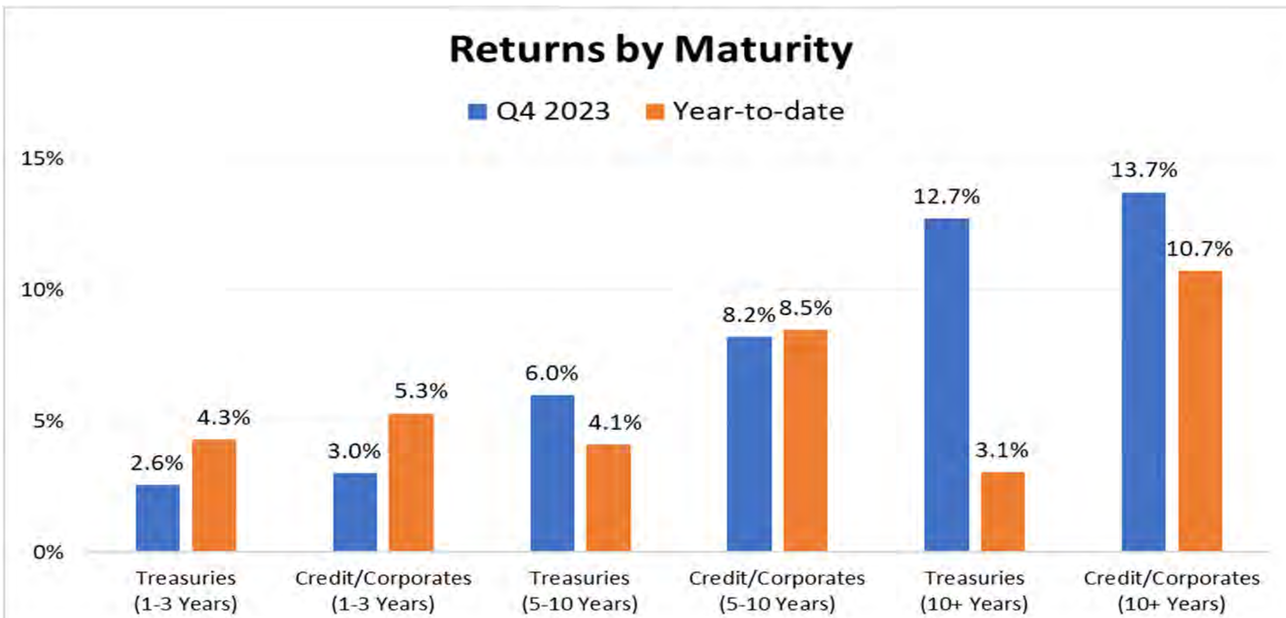
Index	Duration (years)	Yield	4Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Bloomberg Aggregate	6.3	4.53%	6.8%	5.5%	-13.0%	-1.5%	7.5%	8.7%	0.0%	5.5%	-3.3%	1.1%	1.8%
Bloomberg Govt/Credit	6.6	4.45%	6.6%	5.7%	-13.6%	-1.7%	8.9%	9.7%	-0.4%	5.7%	-3.5%	1.4%	2.0%
Bloomberg Int Agg	4.5	4.49%	5.5%	5.2%	-9.5%	-1.3%	5.6%	6.7%	0.9%	5.2%	-2.1%	1.1%	1.6%
Bloomberg Int Govt/Credit	3.9	4.37%	4.6%	5.2%	-8.2%	-1.4%	6.4%	6.8%	0.9%	5.2%	-1.6%	1.6%	1.7%
Bloomberg U.S. Corporate	7.3	5.06%	8.5%	8.5%	-15.8%	-1.0%	9.9%	14.5%	-2.5%	8.5%	-3.3%	2.6%	3.0%
Bloomberg HY Ba/B 2% IC	3.8	6.90%	7.2%	12.6%	-10.6%	4.6%	7.7%	15.2%	-1.9%	12.6%	1.7%	5.5%	4.6%
ICE BofA 1-3 Yrs BB US Cash Pay HY	1.8	6.21%	4.0%	8.9%	-3.1%	3.2%	5.4%	8.7%	1.3%	8.9%	2.9%	4.5%	3.9%
Bloomberg Mortgage	5.7	4.68%	7.5%	5.0%	-11.8%	-1.0%	3.9%	6.4%	1.0%	5.0%	-2.9%	0.3%	1.4%
Bloomberg Treasury	6.3	4.08%	5.7%	4.1%	-12.5%	-2.3%	8.0%	6.9%	0.9%	4.1%	-3.8%	0.5%	1.3%
Bloomberg US TIPS	6.7	4.24%	4.7%	3.9%	-11.8%	6.0%	11.0%	8.4%	-1.3%	3.9%	-1.0%	3.2%	2.4%
BofA ML 91 day T-Bills	0.2	5.28%	1.4%	5.2%	1.5%	0.0%	0.7%	2.3%	1.9%	5.2%	2.2%	1.9%	1.3%



- The U.S. treasury yield curve shifted downward in Q4 2023 with treasury yields falling approximately 75 bps across the curve.
- The yield curve remains heavily inverted, reflecting a view that future economic growth and/or inflation will be lower and the Federal Reserve may begin cutting short-term rates in upcoming years.
- Returns for the U.S. bond market were positive in Q4 2023. The shift down in yields led to a large outperformance in long duration bonds in Q4, bringing year-to-date performance well into positive territory. Lower quality, higher yielding credit generally led markets for calendar year 2023.

Bond Market

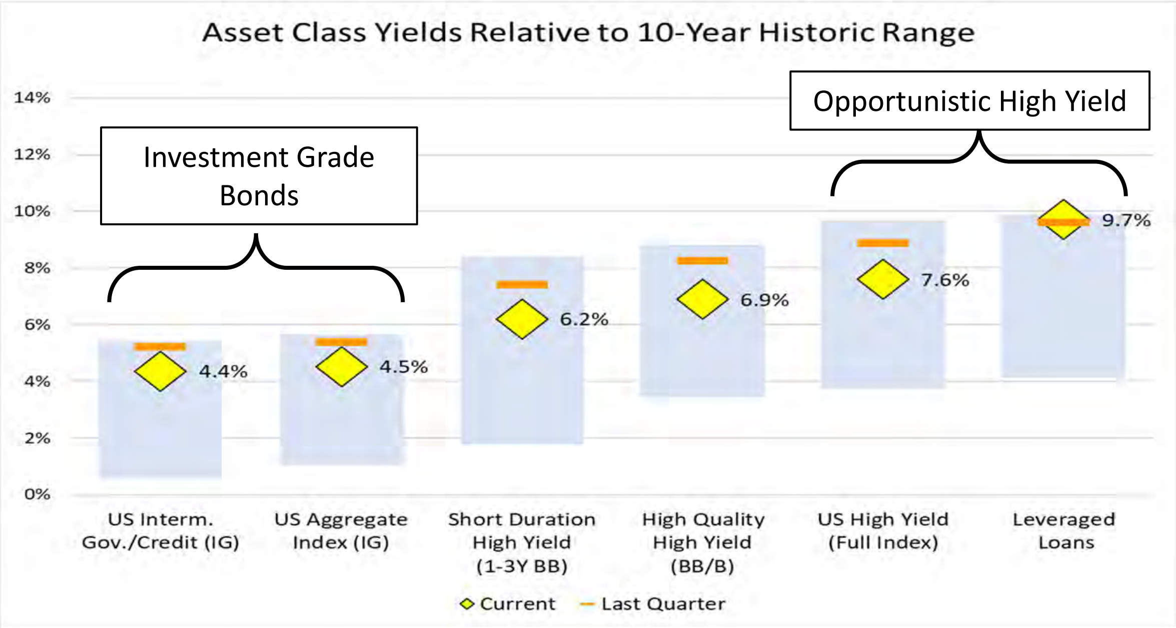


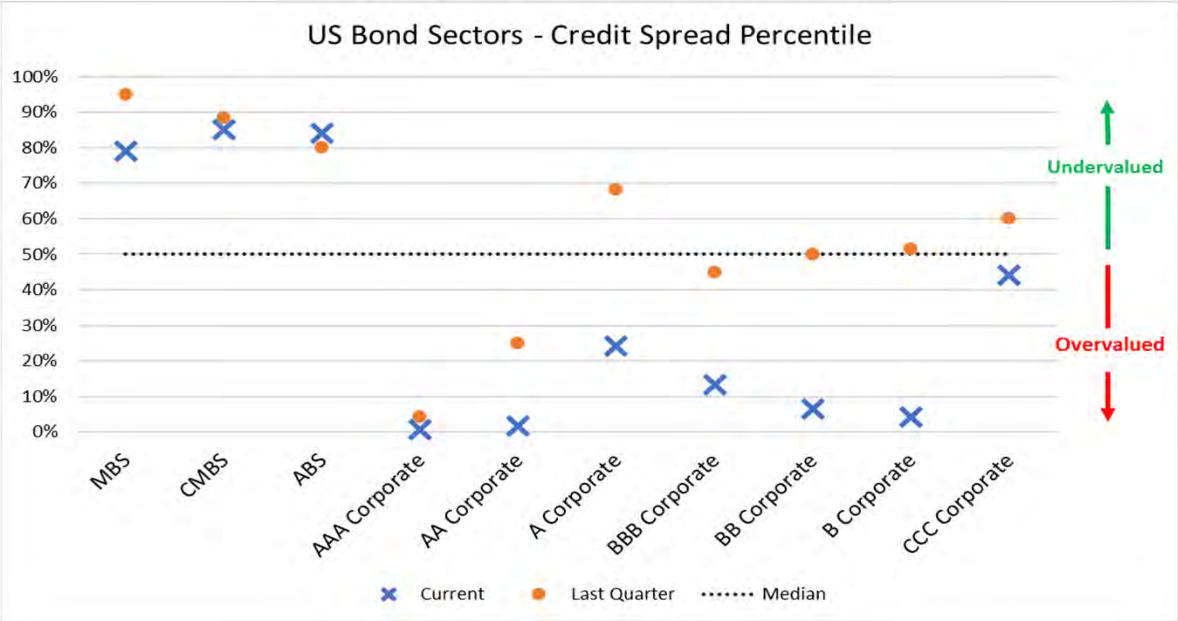


Falling interest rates in Q4 2023 led to outperformance in long duration bonds.

- The decline in treasury yields was the largest driver of bond returns in Q4 2023, with tightening credit spread adding additional gains.
- Longer maturity bonds experienced the largest outperformance in Q4 2023, bringing their year-to-date returns well into positive territory.
- High yield bonds saw gains of ~7% in Q4 2023 due to a combination of falling interest rates and credit spread compression. Investment grade bonds outperformed high yield bonds due to longer their duration.
- For calendar year 2023, lower quality credit outperformed higher quality credit due to higher levels of interest income and relatively low levels of defaults.
- The large decline in interest rates in Q4 caused longer maturity/duration credit to outperform shorter maturity/duration credit in 2023. Shorter duration credit outperformed longer duration credit for the majority of 2023 with significantly less volatility.

Bond Market





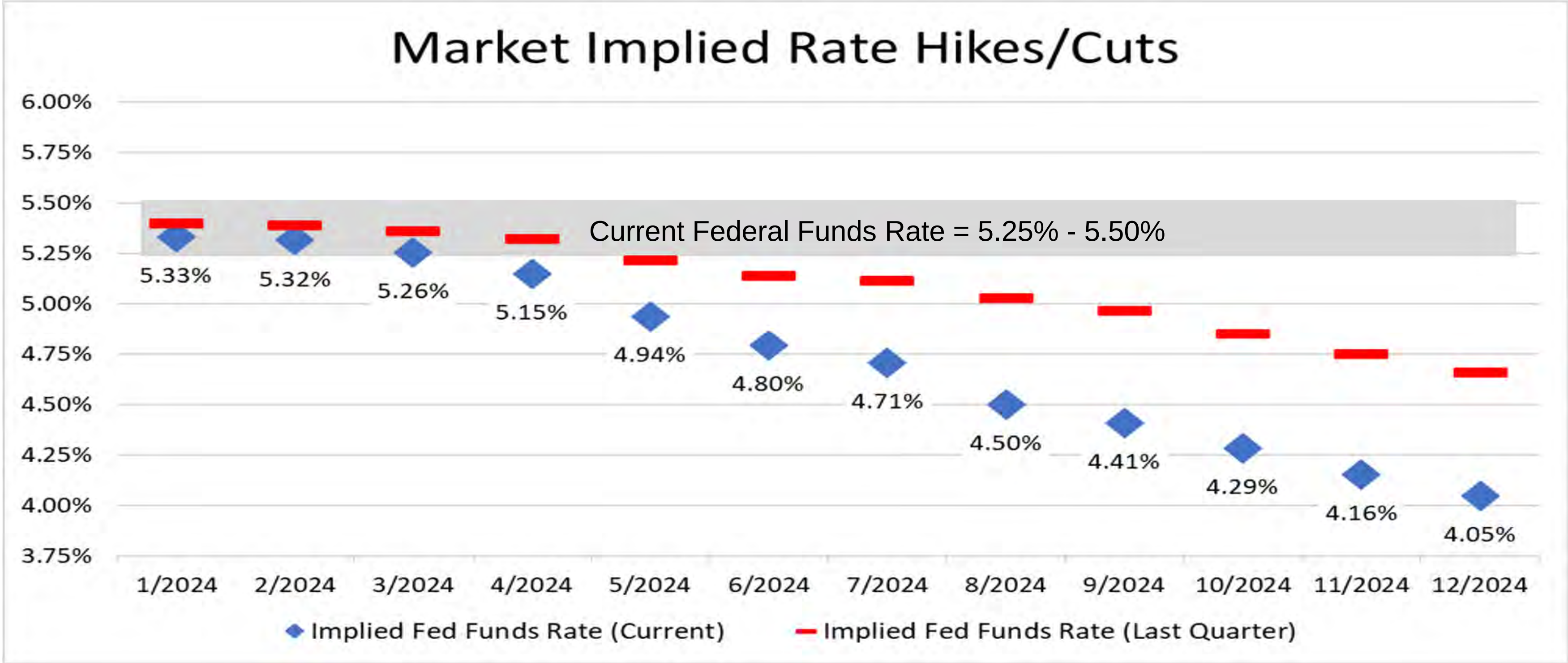
Bond Yields

- Due to a combination of falling treasury rates and spread tightening, yields across bond sectors moved lower in Q4 2023.
- Bonds across maturities and credit quality have rallied in 2023, lowering yields off their recent highs.
- Investment grade bonds are currently yielding 4.5-5.5% while yields for high yield range between 6-8% with CCC-rated bonds yielding ~13%.
- Leveraged Loans offer a current yield of ~10%; however, this is largely driven by the current 5.4% SOFR rate. Future rate cuts would reduce this yield as SOFR should mirror the Fed Funds rate.

Credit Spreads/Valuations

- Spreads on corporate bonds tightened in Q4 2023. High yield bonds experienced the largest spread compression during the quarter as sentiment appears to have shifted materially with positive economic data and increased expectations of future rate cuts by the Fed.
- Most corporate bond spreads are tight relative to their 10-year histories.
- Spreads in structured credit (MBS, CMBS, ABS) remain elevated. MBS are trading at the widest spreads experienced in the past decade.

Bond Market

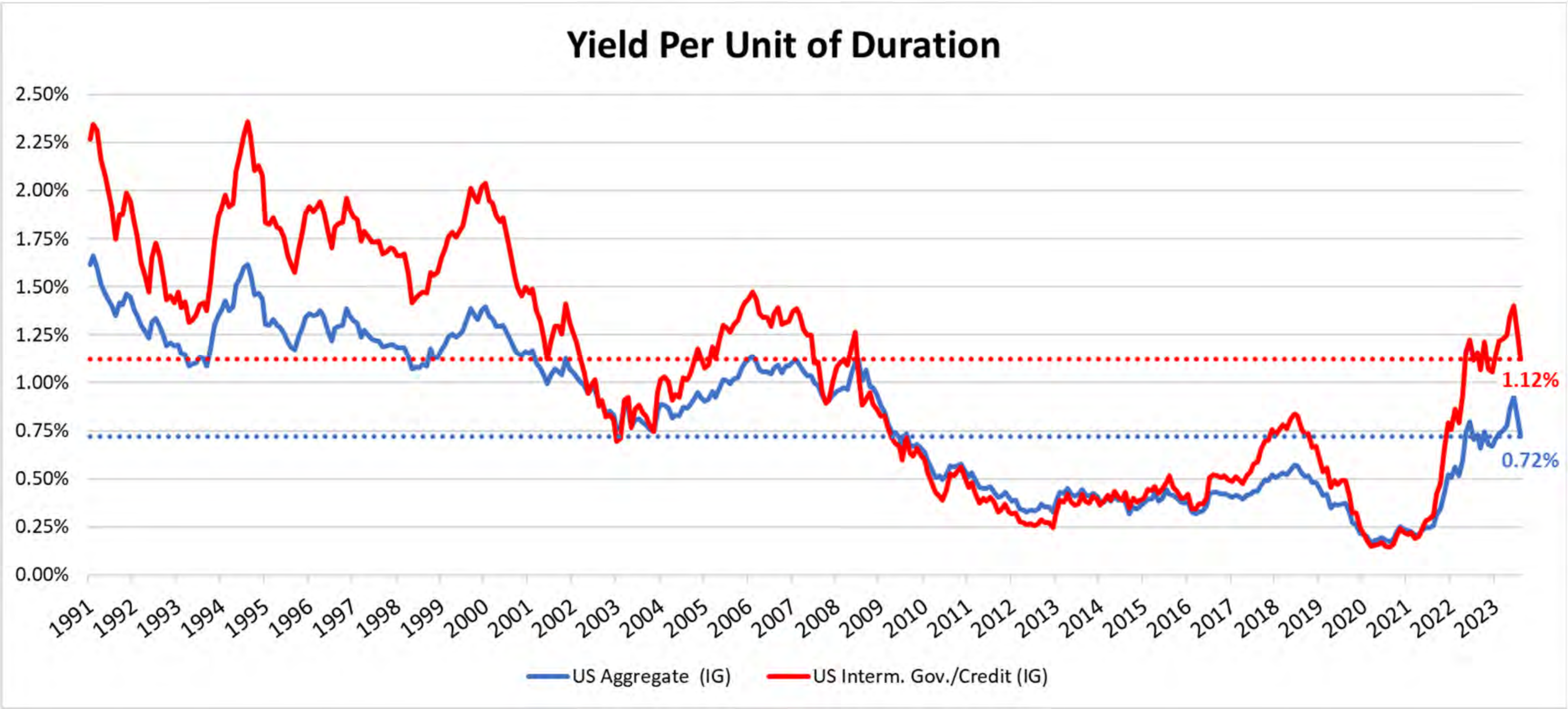


As of 1/8/23

- The FOMC held the Fed Funds rate at its current level for both their October and December meetings. The current target Federal Funds rate remains at 5.25-5.50%, up from 4.25-4.50% in Q4 2022.
- Pricing in the Fed Funds rate futures market implies an expectation that the Federal Reserve will hold rates constant through Q1 2024, with the expectation of a 50 bps cut by the end of Q2 2024 and a 100 bps cut from the current level by the end of Q3 2024.
- The market implied Fed Funds rate at the end of Q3 2024 would bring the Fed Funds target rate to 4.25-4.50%, back to the level where it started 2023.
- Although the Federal Reserve has not deliberately signaled a plan to cut rates in the near term, the December 2023 Federal Reserve dot plot, which represents each policymaker's projection of the future path of interest rates, shows the majority of individual Fed members are expecting the Fed Funds rate to be between 4.25% and 5% by the end of 2024, with the median expectation placing the Fed Funds rate between 4.5%-4.75%. Based on the dot plot, only 2 out of 19 policymakers expect the Fed Funds rate to stay at its current level by the end of 2024.

Bond Market

Investment Grade Investors Are Now Compensated For Duration Risk



- Investment grade bond returns were susceptible to a rise in interest rates for most of the past decade. With the recent surge higher in bond yields, investment grade bond investors are now being adequately compensated for duration risk.
- Interest rates can now move ~70 bps higher before core bond investors (US Aggregate Index) start to realize negative returns on their portfolio in the near-term while intermediate investment grade investors can withstand a ~110 bps rise in interest rates before realizing losses on their portfolio.
- Given yields are equal for the US Intermediate Gov./Credit Index and the US Aggregate Index, intermediate investment grade bonds (US Interm. Gov/Credit) are seemingly better positioned to limit downside risk in the near-term while core bonds (US Aggregate) can provide more upside if interest rates fall but have less protection in the event interest rates continue to rise.

Bond Market

Interest Rate Sensitivity

12 Month Holding Period - Annualized Returns as of 12/31/2023							
Yield Change (bps)	10 Year Treasury	Bloomberg Aggregate	Bloomberg Int Govt/Credit	ICE BofA Gov/Corp Master	ICE BofA 1-3 yr Gov/Corp	Defensive ICE BofA US HY BB/B ND	Short Duration ICE BofA US HY BB/B 1-3 yr
-300	31.06	26.04	16.96	27.93	10.21	17.72	11.56
-250	26.06	22.10	14.74	23.48	9.25	15.96	10.91
-200	21.25	18.30	12.56	19.24	8.29	14.18	10.22
-150	16.63	14.64	10.44	15.23	7.35	12.38	9.49
-100	12.19	11.13	8.36	11.43	6.42	10.57	8.72
-75	10.05	9.42	7.35	9.62	5.95	9.65	8.33
-50	7.95	7.76	6.34	7.86	5.49	8.73	7.92
-25	5.89	6.13	5.35	6.15	5.03	7.80	7.50
0	3.89	4.53	4.37	4.50	4.58	6.87	7.08
25	1.93	2.97	3.40	2.91	4.12	5.93	6.64
50	0.01	1.45	2.45	1.37	3.67	4.99	6.20
75	-1.85	-0.04	1.51	-0.12	3.22	4.04	5.74
100	-3.67	-1.49	0.58	-1.55	2.78	3.09	5.28
150	-7.17	-4.29	-1.23	-4.25	1.89	1.17	4.33
200	-10.48	-6.94	-3.00	-6.72	1.01	-0.76	3.33
250	-13.60	-9.45	-4.71	-8.98	0.15	-2.72	2.30
300	-16.53	-11.82	-6.38	-11.01	-0.71	-4.70	1.23
Duration	7.93	6.31	3.89	6.49	1.82	3.74	1.72
Convexity	0.75	0.57	0.21	0.88	0.04	-0.08	-0.15

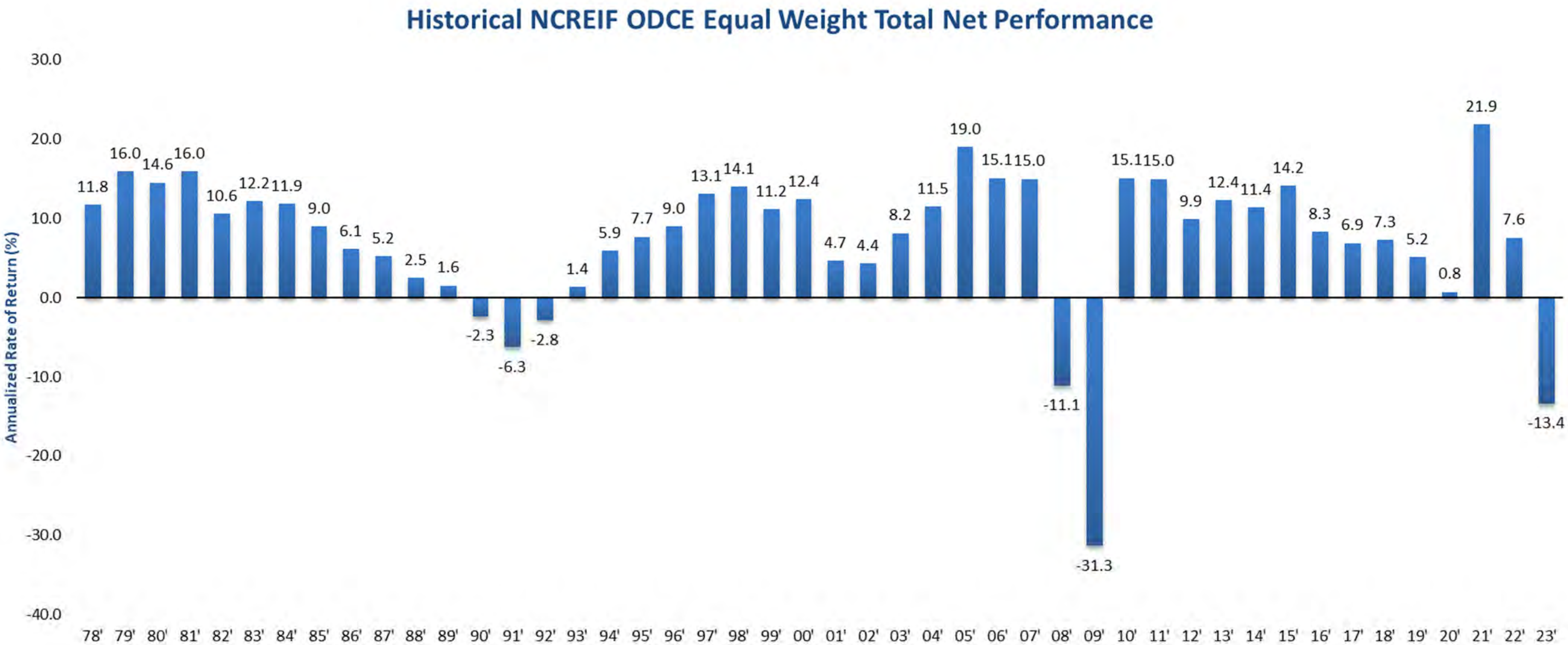
FOR ILLUSTRATIVE PURPOSES ONLY: For each index the current yield to worst as of 12/31/2023 was used as the base case annualized return. The annualized return sensitivity to a uniform increase or decrease in the yield curve was calculated by taking the index's Option-Adjusted Duration as of 12/31/2023 multiplied by the percentage point change in the yield curve (basis point change divided by 100), while adjusting for convexity effects using the index's Option-Adjusted Convexity as of 12/31/2023, and then appropriately adding or subtracting this implied percentage change in the value of the index (due to the shift in the yield curve) to the base case annualized return. This is a rough approximation of the annual return sensitivity to parallel shifts in the yield curve.

Real Estate Market

Sector	Index	4Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
US Private	NCREIF ODCE Equal Weighted (net)	-5.4%	-13.4%	7.6%	21.9%	0.8%	5.2%	7.3%	-13.4%	4.3%	3.8%	6.7%
	NCREIF ODCE EW Income Index	0.9%	3.5%	3.5%	4.1%	3.6%	3.5%	3.5%	3.5%	3.7%	3.7%	3.7%
	NCREIF ODCE EW Appreciation Index	-6.1%	-15.8%	4.8%	18.3%	-2.1%	1.7%	3.7%	-15.8%	1.4%	0.7%	3.1%

- The NCREIF ODCE Equal Weighted Index (net) declined for the fifth quarter in a row, generating a return of -5.4% in Q4 2023 and -13.4% in 2023.

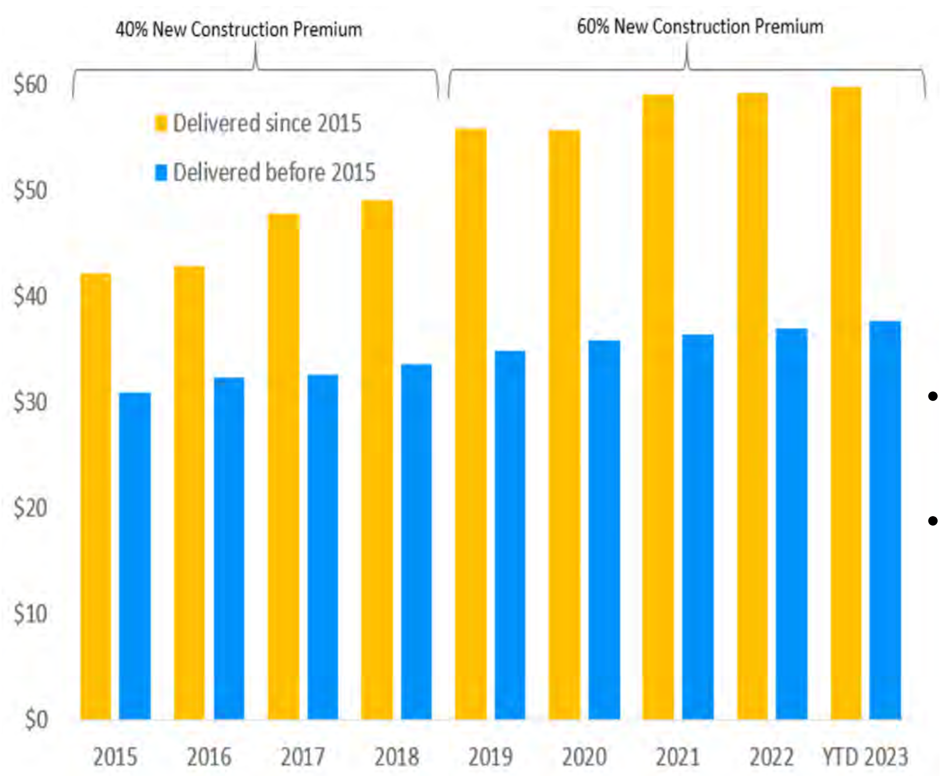
- The post-pandemic headwinds faced by the commercial real estate market have driven the most significant repricing of real estate since the Global Financial Crisis in 2008-2009. 2023 is the sixth negative calendar year for the NCREIF ODCE index since 1978 and first since 2009, when the index declined by more than -31%.



Real Estate Market

- Higher borrowing costs and less access to debt financing continue to weigh on properties across markets and sectors.
- Low levels of demand for office properties due to companies' changing need for office space amid higher levels of remote work continues to weigh on valuations in the sector. An increasing level of transactions on office properties has illustrated significant dispersion between appraisal and transaction values, suggesting further declines on office asset valuations going forward.
- Not all office properties are suffering, however. Newly constructed and/or highly amenitized office assets are drawing a significant premium in rents vs. older stock., as shown in the chart below.

Office Asking Rent by Vintage

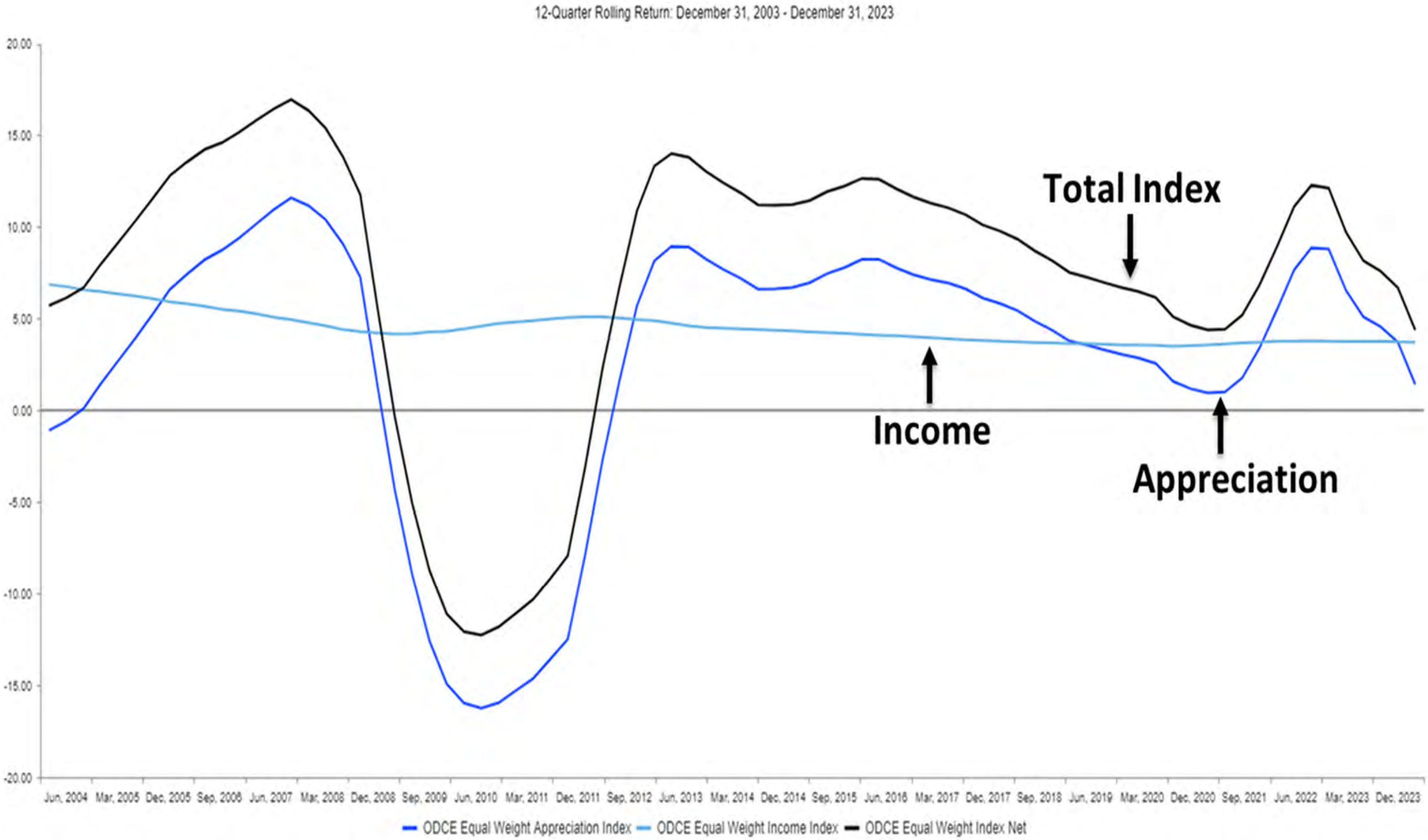


Source: JLL, J.P. Morgan Asset Management; as of 9/30/2023 .

- While lack of demand plagues the office sector, supply dynamics are putting downward pressure on valuations in industrial and multifamily properties, which have been two of the relatively better-performing sectors during the downturn. However, both sectors are experiencing downward pressure on valuations and slowing rent growth in some markets due to oversupply. A substantial amount of construction of industrial and multifamily properties began in the last few years, with those completed buildings coming to market and pressuring rents, occupancy and valuations on existing buildings.
- New construction starts, particularly in the multifamily sector, are limited, which should benefit fundamentals moving forward.
- While declining values present a headwind for existing investments, they do provide an opportunity to acquire assets at attractive prices. Investors are hopeful that declining borrowing costs over the course of 2024 and relatively strong industry fundamentals (outside of the office sector) will drive a recovery in valuations later this year.

Real Estate Market

- The income component of real estate returns continues to remain stable, providing a buffer against the recent periods of negative appreciation. Real estate valuations have been in decline for five consecutive quarters dating to Q4 2022, driving declines in total returns for the NCREIF ODCE Index.



• Quarterly data

Hedge Fund Market

Strategy	Index	4Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Fund of Funds	HFRI FOF Composite	3.6%	6.6%	-5.3%	6.2%	10.9%	8.4%	-4.0%	6.6%	2.3%	5.2%	3.3%
Equity Long-Short	HFRI Equity Hedge	5.6%	10.5%	-10.1%	11.7%	17.9%	13.7%	-7.1%	10.5%	3.5%	8.3%	5.2%
Event Driven	HFRI Event Driven	5.4%	10.4%	-4.8%	12.4%	9.3%	7.5%	-2.1%	10.4%	5.7%	6.8%	4.6%
Global Macro	HFRI Macro Index	-1.1%	-0.6%	9.0%	7.7%	5.4%	6.5%	-4.1%	-0.6%	5.3%	5.5%	3.1%
Relative Value	HFRI Relative Value	2.6%	7.0%	-0.7%	7.6%	3.4%	7.4%	-0.4%	7.0%	4.6%	4.9%	4.0%
Credit	HFRI Credit Index	3.1%	7.8%	-2.6%	7.9%	6.3%	6.5%	-0.0%	7.8%	4.3%	5.1%	4.2%

- Hedge fund strategies were mostly positive in Q4 2023 amidst a backdrop of strongly positive returns across global equity and fixed income markets. The HFRI Fund of Funds Composite generated a 3.6% return in Q4 2023 and closed the year up an estimated 6.6%.
- Gains during the quarter were broad-based, as most sub-strategies, aside from global macro, generated positive performance.
- Equity hedge and event-driven strategies led gains for the quarter, with both the HFRI Equity Hedge and HFRI Event Driven indices up more than 5%, even after posting losses during a volatile month of October. Declines in interest rates and inflation provided a substantial tailwind to equity-oriented strategies in November, with both of the aforementioned indices posting their best-performing month since February 2021. Both indices were strongly positive in December to close the year.
- After starting the quarter with a positive result in October, the HFRI Macro index finished the quarter down -1.1%, driven by lower commodity prices and declining interest rates. Macro strategies are typically utilized as diversifying strategies within hedge fund portfolios and often exhibit low or negative correlations to equity and fixed income indices.

INVESTMENT PERFORMANCE SERVICES, LLC

Operating Engineers Local No. 77 Pension Plan

Master Consulting Services Report

Period Ended

December 31, 2023

Total Fund Growth of Assets

	Fourth Quarter	Fiscal Year-To-Date	Three Years
Beginning Market Value	$185,088,240	$183,835,645	$194,254,900
Net Cash Flow	-$1,968,524	-$7,104,832	-$23,600,248
Net Investment Change	$8,523,301	$14,912,203	$20,988,364
Ending Market Value	$191,643,016	$191,643,016	$191,643,016

Total Fund Growth of Assets

	Five Years	Seven Years	Ten Years
Beginning Market Value	$161,086,129	$161,439,354	$163,825,747
Net Cash Flow	-$39,406,732	-$58,319,124	-$88,734,374
Net Investment Change	$69,963,619	$88,522,786	$116,551,644
Ending Market Value	$191,643,016	$191,643,016	$191,643,016

- The Fund's fiscal year end is December 31st.

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023		
			2023 Q4	Fiscal YTD	3 Yrs
Total Fund	**$191,643,016**	**100.0%**	**4.7%**	**8.7%**	**4.2%**
Total Domestic Large Cap Equity	**$32,850,491**	**17.1%**	**13.0%**	**27.1%**	**6.0%**
Total Domestic Mid Cap Equity	**$10,294,080**	**5.4%**	**13.8%**	**26.2%**	**5.1%**
Total Domestic Small Cap Equity	**$9,225,393**	**4.8%**	**11.9%**	**12.9%**	**5.8%**
Total International Large Cap Equity	**$9,587,364**	**5.0%**	**5.8%**	**6.9%**	**-5.7%**
Total International Small Cap Equity	**$10,137,585**	**5.3%**	**10.0%**	**16.3%**	**1.1%**
Total Investment Grade Fixed Income	**$16,339,002**	**8.5%**	**4.5%**	**5.5%**	**-1.3%**
Total Short Duration High Yield Fixed Income	**$21,195,414**	**11.1%**	**4.2%**	**7.8%**	**2.6%**
Total Mortgages	**$10,070,194**	**5.3%**	**1.9%**	**4.8%**	**2.9%**
Total Real Estate - Core	**$18,309,746**	**9.6%**	**-3.1%**	**-8.9%**	**4.8%**
Total Real Estate - Value Add	**$18,227,261**	**9.5%**	**-1.7%**	**-1.2%**	**--**
Total Opportunistic Strategies	**$21,132,160**	**11.0%**			
Total Private Equity	**$11,051,925**	**5.8%**			
Total Infrastructure - Value Add	**$2,628,178**	**1.4%**			
Total Cash Equivalents	**$594,223**	**0.3%**			

Note: The present assumed actuarial rate as determined by the plan actuary is 7.0%.

Note: Time-weighted returns are not shown for asset classes for which internal rate of return (IRR) is a more appropriate performance measurement. IRRs can be found on the Commitment and Funding of Alternative Investments chart.

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023		
			5 Yrs	7 Yrs	10 Yrs
Total Fund	$191,643,016	100.0%	8.6%	7.8%	7.4%
Total Domestic Large Cap Equity	$32,850,491	17.1%	14.6%	12.8%	11.3%
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Performance Summary (Gross of Fees)

	Fiscal Year Ending December 31st					
	2023	2022	2021	2020	2019	2018
Total Fund	**8.7%**	**-9.7%**	**15.1%**	**13.8%**	**17.1%**	**-2.5%**
Total Fund Benchmark	*9.1%*	*-9.7%*	*14.3%*	*12.8%*	*17.6%*	*-3.7%*

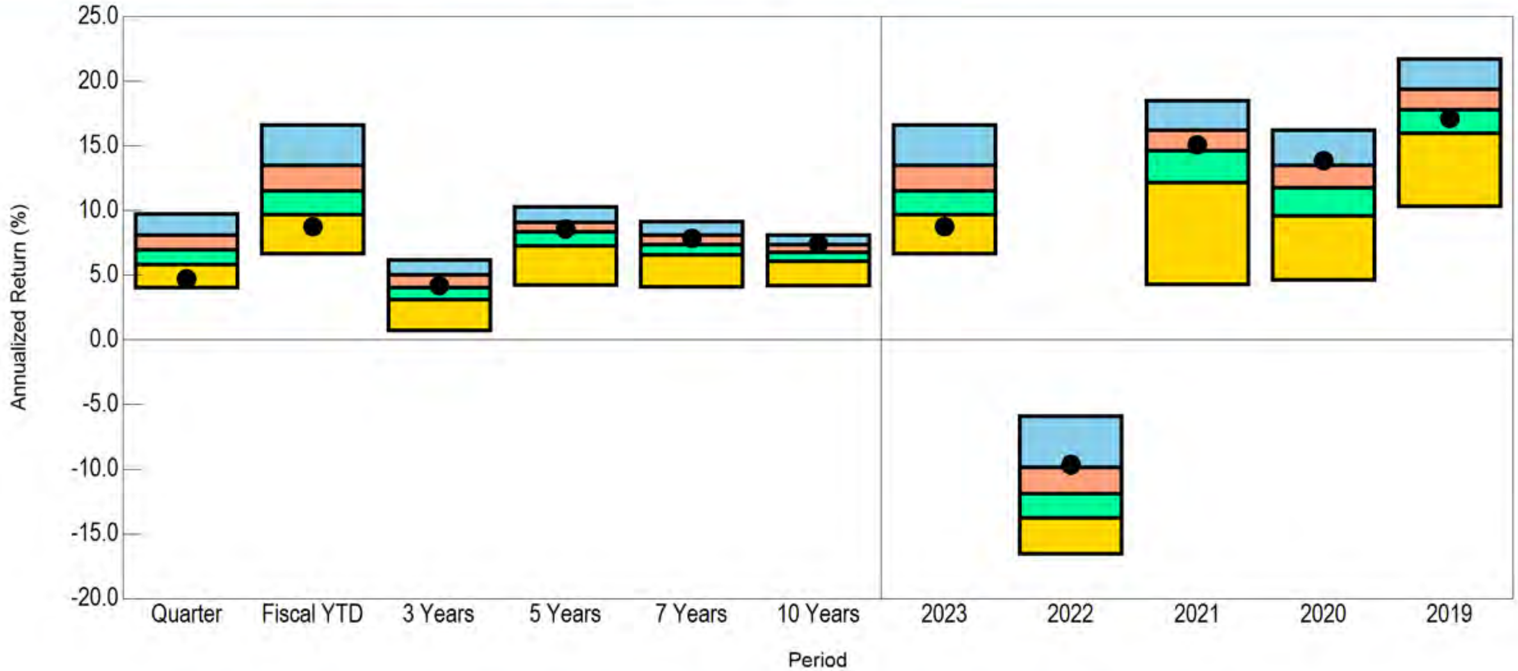
	Fiscal Year Ending December 31st				
	2017	2016	2015	2014	2013
Total Fund	**15.4%**	**7.6%**	**4.0%**	**7.9%**	**21.5%**
Total Fund Benchmark	*11.1%*	*9.5%*	*1.6%*	*7.2%*	*19.7%*

Performance Summary (Net of Fees)

	Fiscal Year Ending December 31st					
	2023	2022	2021	2020	2019	2018
Total Fund	**8.0%**	**-10.4%**	**14.2%**	**13.0%**	**16.2%**	**-3.3%**
Total Fund Benchmark	*9.1%*	*-9.7%*	*14.3%*	*12.8%*	*17.6%*	*-3.7%*

	Fiscal Year Ending December 31st				
	2017	2016	2015	2014	2013
Total Fund	**14.5%**	**6.7%**	**3.3%**	**7.1%**	**20.6%**
Total Fund Benchmark	*11.1%*	*9.5%*	*1.6%*	*7.2%*	*19.7%*

InvMetrics Taft-Hartley DB Gross Return Comparison
Operating Engineers Local No. 77 Pension Plan Ending December 31, 2023



Return (Rank)

	Quarter	Fiscal YTD	3 Years	5 Years	7 Years	10 Years	2023	2022	2021	2020	2019
5th Percentile	9.7	16.6	6.1	10.3	9.1	8.1	16.6	-5.9	18.5	16.2	21.7
25th Percentile	8.1	13.5	5.1	9.1	8.1	7.4	13.5	-9.8	16.2	13.5	19.4
Median	7.0	11.5	4.1	8.3	7.4	6.8	11.5	-11.9	14.6	11.8	17.8
75th Percentile	5.8	9.7	3.1	7.3	6.6	6.1	9.7	-13.8	12.2	9.6	16.0
95th Percentile	4.1	6.7	0.7	4.3	4.1	4.2	6.7	-16.5	4.3	4.6	10.3
# of Portfolios	352	348	337	334	324	304	348	439	417	460	441
● Total Fund	4.7 (91)	8.7 (83)	4.2 (48)	8.6 (42)	7.8 (35)	7.4 (24)	8.7 (83)	-9.7 (23)	15.1 (43)	13.8 (22)	17.1 (62)

Current vs. Policy

	Current	Current	Policy	Policy Range	Difference	Difference
Domestic Large Cap Equity	$32,850,491	17.1%	15.0%	10.0% - 20.0%	2.1%	$4,104,038
Domestic Mid Cap Equity	$10,294,080	5.4%	5.0%	0.0% - 10.0%	0.4%	$711,929
Domestic Small Cap Equity	$9,225,393	4.8%	5.0%	0.0% - 10.0%	-0.2%	-$356,758
International Large Cap Equity	$9,587,364	5.0%	5.0%	0.0% - 10.0%	0.0%	$5,213
International Small Cap Equity	$10,137,585	5.3%	5.0%	0.0% - 10.0%	0.3%	$555,435
Investment Grade Fixed Income	$16,339,002	8.5%	10.0%	5.0% - 15.0%	-1.5%	-$2,825,299
Short Duration High Yield Fixed Income	$21,195,414	11.1%	12.5%	7.5% - 17.5%	-1.4%	-$2,759,963
Mortgages	$10,070,194	5.3%	5.0%	0.0% - 10.0%	0.3%	$488,043
Real Estate - Core	$18,309,746	9.6%	10.0%	5.0% - 15.0%	-0.4%	-$854,556
Real Estate - Value Add	$18,227,261	9.5%	10.0%	5.0% - 15.0%	-0.5%	-$937,041
Opportunistic Strategies	$21,132,160	11.0%	10.0%	5.0% - 15.0%	1.0%	$1,967,858
Private Equity	$11,051,925	5.8%	5.0%	0.0% - 10.0%	0.8%	$1,469,774
Infrastructure - Value Add	$2,628,178	1.4%	2.5%	0.0% - 7.5%	-1.1%	-$2,162,898
Cash Equivalents	$594,223	0.3%	0.0%	0.0% - 0.0%	0.3%	$594,223
Total	**$191,643,016**	**100.0%**	**100.0%**			

- Policy adopted August 2023; October 2023.
- Cash equivalents includes:
  - $92K in distribution-proceeds from real estate - core (Boyd Watterson GSA Fund, LP); received on January 29, 2024.
  - $233K in distribution-proceeds from real estate - value add (Boyd Watterson State Government Fund, LP); received on January 29, 2024.

Operating Engineers Local No. 77 Pension Plan – Asset Allocation

- Asset allocation reviews were presented and discussed with the Trustees at the following meetings: February 9, 2021, February 8, 2022, February 14, 2023, and August 8, 2023.
- A private equity pacing analysis was presented and discussed with the Trustees at the following meetings: May 11, 2021, May 10, 2022, and February 14, 2023.
- At the February 14, 2023, meeting, the Trustees elected to adopt Policy: 15.0% (-5.0%) domestic large cap equity, 5.0% domestic mid cap equity, 5.0% domestic small cap equity, 5.0% (-2.5%) international large cap equity, 5.0% international small cap equity, 10.0% (+5.0%) investment grade fixed income, 5.0% short duration high yield fixed income, 10.0% (+5.0%) mortgages, 2.5% global tactical asset allocation, 10.0% real estate - core, 10.0% real estate – value add, 0.0% (-2.5%) hedge fund of funds – multi strategy, 10.0% opportunistic strategies, 5.0% private equity, 2.5% infrastructure – value add. To rebalance closer to the new Policy, transfer the following: 1) $5.0M to investment grade fixed income (Wedge Capital Management) from domestic large cap equity (Fred Alger Management - $2.5M) and international equity (Hardman Johnston International Equity Group Trust - $2.5M). 2) $5.0M to short duration high yield fixed income (Chartwell Investment Partners SDHY) from domestic large cap equity (Fred Alger Management - $1.25M and Wedge Capital Management – QVM - $3.75M). Status: All transfers completed as of April 6, 2023. Additionally, IPS recommended terminating domestic large cap equity (Fred Alger Management) and retaining domestic large cap equity (Northern Trust Collective Russell 1000 Growth Index Fund) for an estimated fee savings of $39,872. Decision: Approved. Status: Fred Alger Management termination proceeds of $14.0M were transferred to Northern Trust Collective Russell 1000 Growth Index Fund on May 1, 2023.
- At the August 8, 2023, meeting, the Trustees elected to adopt Policy: 15.0% domestic large cap equity, 5.0% domestic mid cap equity, 5.0% domestic small cap equity, 5.0% international large cap equity, 5.0% international small cap equity, 10.0% investment grade fixed income, 12.5% (+7.5%) short duration high yield fixed income, 5.0% (-5.0%) mortgages, 0.0% (-2.5%) global tactical asset allocation, 10.0% real estate - core, 10.0% real estate – value add, 10.0% opportunistic strategies, 5.0% private equity, 2.5% infrastructure – value add. To rebalance closer to the new Policy, transfer $5.5M of cash proceeds from hedge fund of funds (Grosvenor Institutional Partners (PF), Ltd) redemption to investment grade fixed income (Wedge Capital Management - $3.0M) and short duration high yield fixed income (Chartwell Investment Partners SDHY - $2.5M). <u>Status:</u> All transfers completed as of August 16, 2023. Additionally, IPS recommended the following: 1) To increase diversification of international equity allocation, add an international equity large cap value manager. <u>Decision:</u> Approved. <u>Status:</u> The Trustees elected to retain Barrow Hanley Non-U.S. Value CIT – Founder Class for a $4.5M mandate. Barrow Hanley Non-U.S. Value CIT – Founder Class was funded December 8, 2023, with proceeds from international equity (Hardman Johnston International Equity Group Trust). 2) Terminate the global tactical asset allocation manager (Lazard/Wilmington LCAS Global Diversified - CIT). <u>Decision:</u> Approved. <u>Status:</u> Lazard/Wilmington LCAS Global Diversified - CIT termination proceeds of $4.8M were transferred to short duration high yield fixed income (Chartwell Investment Partners SDHY) on September 1, 2023.
- At the November 14, 2023, meeting, IPS recommended the following: 1) Redeem $1.0M from opportunistic strategies (Corbin ERISA Opportunity Fund, LP – Class C Shares); effective March 31, 2024. <u>Decision:</u> Approved. <u>Status:</u> In process. 2) Accept the annual distribution option from opportunistic strategies (GCM Grosvenor Opportunistic Credit Fund, Ltd); $488K distribution for cash needs. <u>Decision:</u> Approved. <u>Status:</u> Effective January 1, 2024.

Recommendations: Adopt new Policy based on Asset Allocation Review.

Real Estate - Core Redemption (In Millions) as of December 31, 2023

Manager	Redemption Type	Effective Date	Withdrawal Queue	Requested $	Received $	Remaining $
Principal U.S. Property Account	Partial	Aug-22	Jul-22	$1.00	$0.10	$0.90
Total				$1.00	$0.10	$0.90

Opportunistic Strategies Redemption (In Millions) as of December 31, 2023

Manager	Redemption Type	Effective Date	Withdrawal Queue	Requested $	Received $	Remaining $
Corbin ERISA Opportunity Fund, LP - Class C Shares	Partial	Mar-24	N/A	$1.00	$0.00	$1.00
Total				$1.00	$0.00	$1.00

Commitment and Funding of Real Estate - Core (In Millions) as of December 31, 2023

Investments		Commitments			Contributions & Distributions		Valuations		Performance	
Account Name	Vintage Year	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Cumulative Distributions	Valuation	Total Value	DPI	TVPI
Principal U.S. Property Account	2001	$33.8	$0.0	1.0	$33.8	$51.0	$6.7	$57.7	1.5	1.7
Multi-Employer Property Trust	2001	$20.0	$0.0	1.0	$20.0	$27.9	$5.3	$33.3	1.4	1.7
Boyd Watterson GSA Fund, LP	2015	$5.0	$0.0	1.0	$5.0	$2.3	$6.2	$8.6	0.5	1.7
Total		**$58.8**	**$0.0**	**1.0**	**$58.8**	**$81.3**	**$18.3**	**$99.6**	**1.4**	**1.7**

Commitment and Funding of Real Estate - Value Add (In Millions) as of December 31, 2023

Investments		Commitments			Contributions & Distributions		Valuations		Performance	
Account Name	Vintage Year	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Cumulative Distributions	Valuation	Total Value	DPI	TVPI
Boyd Watterson State Government Fund, LP	2021	$18.0	$0.0	1.0	$18.0	$0.7	$18.2	$19.0	0.0	1.1
Total		**$18.0**	**$0.0**	**1.0**	**$18.0**	**$0.7**	**$18.2**	**$19.0**	**0.0**	**1.1**

Commitment and Funding of Opportunistic Strategies (In Millions) as of December 31, 2023

Investments		Commitments			Contributions & Distributions		Valuations		Performance		
Account Name	Vintage Year	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Cumulative Distributions	Valuation	Total Value	DPI	TVPI	IRR
Grosvenor Opportunistic Credit Fund III, Ltd	2014	$3.0	$0.0	1.0	$3.0	$3.4	$0.1	$3.5	1.1	1.2	4.6%
Grosvenor Opportunistic Credit Fund IV, Ltd	2015	$3.0	$0.0	1.0	$3.0	$3.2	$0.3	$3.5	1.1	1.2	3.9%
GCM Grosvenor Opportunistic Credit Fund, Ltd	2017	$8.7	$0.0	1.0	$8.7	$0.5	$10.5	$10.9	0.1	1.3	
Total		**$14.7**	**$0.0**	**1.0**	**$14.7**	**$7.1**	**$10.9**	**$18.0**	**0.5**	**1.2**	

Commitment and Funding of Private Equity (In Millions) as of December 31, 2023

Investments		Commitments			Contributions & Distributions		Valuations		Performance		
Account Name	Vintage Year	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Cumulative Distributions	Valuation	Total Value	DPI	TVPI	IRR
[1,2]GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	2018	$10.6	$3.1	0.7	$7.6	$2.9	$7.5	$10.3	0.4	1.4	12.2%
GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	2021	$8.5	$5.6	0.3	$2.9	$0.0	$3.6	$3.6	0.0	1.2	
Total		**$19.1**	**$8.7**	**0.6**	**$10.6**	**$2.9**	**$11.1**	**$13.9**	**0.3**	**1.3**	

[1]Unfunded commitment includes recallable distributions of $162K.

[2]Commitment amount includes $2.1M unfunded commitment adjustment.

Commitment and Funding of Infrastructure - Value Add (In Millions) as of December 31, 2023

Investments		Commitments			Contributions & Distributions		Valuations		Performance	
Account Name	Vintage Year	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Cumulative Distributions	Valuation	Total Value	DPI	TVPI
[1]WaCap - SP Infrastructure Fund IV Feeder	2021	$5.0	$2.6	0.5	$2.6	$0.2	$2.6	$2.8	0.1	1.1
Total		**$5.0**	**$2.6**	**0.5**	**$2.6**	**$0.2**	**$2.6**	**$2.8**	**0.1**	**1.1**

[1]Unfunded commitment includes recallable distributions of $190K.

- Distribution to Paid-In (DPI) – The DPI is the value of all distributions to limited partners divided by the amount limited partners have contributed to the fund. A DPI of 1 indicates the investor has received capital back equal to what they invested while a DPI over 1 indicates an investor has received more capital back than they invested. DPI is most relevant for closed-end fund structures such as private equity.
- Total Value to Paid in Multiple (TVPI) – The TVPI is a measure of return that expresses how much a fund has made relative to how much was contributed. It is calculated by dividing the sum of the amount of capital distributed to investors and the amount of remaining value by the amount of invested capital. A TVPI below 1 indicates the current value of the investment plus the capital returned to the investor is less than the investor contributed. A TVPI greater than 1 indicates the current value of the investment plus the capital returned to the investor is more than the investor contributed. For closed-end funds such as private equity, DPI and TVPI will be the same at the end of the fund's life.
- Internal Rate of Return (IRR) – The discount rate at which the net present value of an investment's cash flows is equal to zero. IRR is commonly used to gauge fund performance.
- Performance data included in the table above may differ from performance data provided by the investment manager due to the availability and timing of data used in the calculations.

Summary of Investment Manager Recommendations

Manager	Recommendation	Initiated	Action Required	Comment/Status
Corbin ERISA Opportunity Fund, LP - Class C Shares	Monitor performance for improvement.	4Q 2023	None.	Corbin underperformed in 2023 for a second consecutive year. Underperformance in 2022 was largely driven by mark-to-market losses in liquid credit, while 2023 underperformance was driven by a series of trades across both public and private credit that resulted in significant losses due to idiosyncratic events.

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023: 2023 Q4	Fiscal YTD	3 Yrs	5 Yrs
Total Fund	**$191,643,016**	**100.0%**	**4.6%**	**8.0%**	**3.4%**	**7.7%**
Total Domestic Large Cap Equity	**$32,850,491**	**17.1%**	**12.9%**	**26.6%**	**5.4%**	**14.0%**
Northern Trust Collective Russell 1000 Growth Index Fund	$16,814,636	8.8%	14.2%	--	--	--
Russell 1000 Growth			*14.2%*	--	--	--
Wedge Capital Management - QVM	$16,035,855	8.4%	11.6%	16.9%	10.6%	13.2%
Russell 1000 Value			*9.5%*	*11.5%*	*8.9%*	*10.9%*
Total Domestic Mid Cap Equity	**$10,294,080**	**5.4%**	**13.5%**	**25.2%**	**4.2%**	**15.5%**
TimesSquare Capital Management	$10,294,080	5.4%	13.5%	25.2%	4.2%	15.5%
Russell MidCap Growth			*14.5%*	*25.9%*	*1.3%*	*13.8%*
Total Domestic Small Cap Equity	**$9,225,393**	**4.8%**	**11.7%**	**12.3%**	**5.2%**	**7.2%**
Eaton Vance Small Cap Collective Investment Trust Fund	$9,225,393	4.8%	11.7%	12.3%	5.2%	--
Russell 2000			*14.0%*	*16.9%*	*2.2%*	--

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023 2023 Q4	Fiscal YTD	3 Yrs	5 Yrs
Total International Large Cap Equity	**$9,587,364**	**5.0%**	**5.7%**	**6.1%**	**-6.4%**	**8.1%**
Hardman Johnston International Equity Group Trust	$4,871,364	2.5%	5.1%	5.5%	-6.6%	8.0%
MSCI EAFE			*10.4%*	*18.2%*	*4.0%*	*8.2%*
MSCI ACWI ex USA Growth			*11.1%*	*14.0%*	*-2.7%*	*7.5%*
Barrow Hanley Non-US Value CIT - Founders Class	$4,716,000	2.5%	--	--	--	--
MSCI EAFE Value			--	--	--	--
Total International Small Cap Equity	**$10,137,585**	**5.3%**	**9.8%**	**15.4%**	**0.2%**	**8.3%**
Victory Trivalent International Small-Cap Collective Fund	$10,137,585	5.3%	9.8%	15.4%	0.2%	8.3%
S&P Developed Ex-U.S. Small Cap (Net)			*10.7%*	*13.5%*	*-0.9%*	*6.7%*
Total Investment Grade Fixed Income	**$16,339,002**	**8.5%**	**4.4%**	**5.2%**	**-1.6%**	**1.7%**
Wedge Capital Management	$16,339,002	8.5%	4.4%	5.2%	-1.6%	1.7%
Wedge Custom Benchmark			*4.6%*	*5.2%*	*-1.6%*	*1.6%*
Total Short Duration High Yield Fixed Income	**$21,195,414**	**11.1%**	**4.1%**	**7.3%**	**2.0%**	**3.5%**
Chartwell Investment Partners SDHY	$21,195,414	11.1%	4.1%	7.3%	2.0%	3.5%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*4.0%*	*8.8%*	*2.9%*	*4.5%*
Bloomberg US Govt/Credit Int TR			*4.6%*	*5.2%*	*-1.6%*	*1.6%*

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs
			Ending December 31, 2023			
Total Mortgages	**$10,070,194**	**5.3%**	**1.8%**	**4.2%**	**2.3%**	**2.9%**
Ullico - J for Jobs	$4,752,494	2.5%	1.7%	4.0%	2.4%	2.6%
Bloomberg US Aggregate TR			*6.8%*	*5.5%*	*-3.3%*	*1.1%*
Washington Capital JMT Mortgage Income Fund	$5,317,700	2.8%	1.9%	4.5%	2.2%	3.3%
Bloomberg US Aggregate TR			*6.8%*	*5.5%*	*-3.3%*	*1.1%*
Total Real Estate - Core	**$18,309,746**	**9.6%**	**-3.3%**	**-9.8%**	**3.7%**	**3.7%**
Principal U.S. Property Account	$6,722,282	3.5%	-2.3%	-11.0%	4.3%	3.8%
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	*4.4%*	*3.8%*
Boyd Watterson GSA Fund, LP	$6,248,555	3.3%	-2.2%	-3.1%	3.1%	4.6%
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	*4.4%*	*3.8%*
Long-Term Income Objective 8%			*1.9%*	*8.0%*	*8.0%*	*8.0%*
Multi-Employer Property Trust	$5,338,909	2.8%	-5.8%	-15.5%	2.9%	2.6%
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	*4.4%*	*3.8%*
Total Real Estate - Value Add	**$18,227,261**	**9.5%**	**-2.0%**	**-2.5%**	**--**	**--**
Boyd Watterson State Government Fund, LP	$18,227,261	9.5%	-2.0%	-2.5%	--	--
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	--	--
Long-Term Income Objective 9%			*2.2%*	*9.0%*	--	--

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs
			Ending December 31, 2023			
Total Opportunistic Strategies	**$21,132,160**	**11.0%**				
Grosvenor Opportunistic Credit Fund III, Ltd	$111,753	0.1%				
Grosvenor Opportunistic Credit Fund IV, Ltd	$311,154	0.2%				
GCM Grosvenor Opportunistic Credit Fund, Ltd	$10,465,885	5.5%	1.2%	7.3%	5.7%	5.3%
HFRI Credit Index			*3.1%*	*7.8%*	*4.3%*	*5.1%*
Corbin ERISA Opportunity Fund, LP - Class C Shares	$10,243,368	5.3%	1.7%	4.1%	3.8%	--
HFRI Credit Index			*3.1%*	*7.8%*	*4.3%*	--
Long-Term Target Return of 8%			*1.9%*	*8.0%*	*8.0%*	--
Total Private Equity	**$11,051,925**	**5.8%**				
GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	$7,454,199	3.9%				
GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	$3,597,726	1.9%				
Total Infrastructure - Value Add	**$2,628,178**	**1.4%**				
WaCap - SP Infrastructure Fund IV Feeder	$2,628,178	1.4%				

Performance Detail (Net of Fees) - Annualized

			Ending December 31, 2023			
	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs
Total Cash Equivalents	**$594,223**	**0.3%**				
Cash Account	$243,515	0.1%				
Cash in Transit - Boyd Watterson GSA Fund, LP Distribution Proceeds	$92,115	0.0%				
Cash in Transit - Boyd Watterson State Government Fund, LP Distribution Proceeds	$232,898	0.1%				
Grosvenor Opportunistic Credit Fund V Escrow	$25,695	0.0%				

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	7 Yrs	10 Yrs	Inception	Inception Date
			Ending December 31, 2023			
Total Fund	**$191,643,016**	**100.0%**	**7.0%**	**6.6%**	**8.6%**	**Apr-88**
Total Domestic Large Cap Equity	**$32,850,491**	**17.1%**	**12.2%**	**10.7%**	**--**	**Jul-01**
Northern Trust Collective Russell 1000 Growth Index Fund	$16,814,636	8.8%	--	--	23.6%	May-23
Russell 1000 Growth			*--*	*--*	*23.5%*	*May-23*
Wedge Capital Management - QVM	$16,035,855	8.4%	10.1%	9.5%	9.4%	Jul-01
Russell 1000 Value			*8.3%*	*8.4%*	*7.3%*	*Jul-01*
Total Domestic Mid Cap Equity	**$10,294,080**	**5.4%**	**13.4%**	**10.8%**	**--**	**Apr-06**
TimesSquare Capital Management	$10,294,080	5.4%	13.4%	10.8%	10.3%	Apr-06
Russell MidCap Growth			*12.5%*	*10.6%*	*9.5%*	*Apr-06*
Total Domestic Small Cap Equity	**$9,225,393**	**4.8%**	**2.9%**	**3.1%**	**--**	**Jul-04**
Eaton Vance Small Cap Collective Investment Trust Fund	$9,225,393	4.8%	--	--	8.1%	Sep-19
Russell 2000			*--*	*--*	*8.7%*	*Sep-19*

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	7 Yrs	10 Yrs	Inception	Inception Date
			Ending December 31, 2023			
Total International Large Cap Equity	**$9,587,364**	**5.0%**	**8.3%**	**5.8%**	**--**	**Apr-97**
Hardman Johnston International Equity Group Trust	$4,871,364	2.5%	8.2%	5.8%	7.3%	Jul-09
MSCI EAFE			*6.9%*	*4.3%*	*6.6%*	*Jul-09*
MSCI ACWI ex USA Growth			*7.1%*	*4.5%*	*6.7%*	*Jul-09*
Barrow Hanley Non-US Value CIT - Founders Class	$4,716,000	2.5%	--	--	4.8%	Dec-23
MSCI EAFE Value			*--*	*--*	*4.9%*	*Dec-23*
Total International Small Cap Equity	**$10,137,585**	**5.3%**	**--**	**--**	**3.1%**	**Mar-18**
Victory Trivalent International Small-Cap Collective Fund	$10,137,585	5.3%	--	--	3.1%	Mar-18
S&P Developed Ex-U.S. Small Cap (Net)			*--*	*--*	*1.9%*	*Mar-18*
Total Investment Grade Fixed Income	**$16,339,002**	**8.5%**	**1.6%**	**1.8%**	**4.3%**	**Jun-95**
Wedge Capital Management	$16,339,002	8.5%	1.6%	1.8%	3.2%	Jan-03
Wedge Custom Benchmark			*1.6%*	*1.7%*	*3.2%*	*Jan-03*
Total Short Duration High Yield Fixed Income	**$21,195,414**	**11.1%**	**3.1%**	**2.9%**	**3.0%**	**Jan-13**
Chartwell Investment Partners SDHY	$21,195,414	11.1%	3.1%	2.9%	3.0%	Jan-13
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*4.0%*	*3.9%*	*4.0%*	*Jan-13*
Bloomberg US Govt/Credit Int TR			*1.6%*	*1.7%*	*1.5%*	*Jan-13*

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023 7 Yrs	10 Yrs	Inception	Inception Date
Total Mortgages	**$10,070,194**	**5.3%**	**3.1%**	**3.4%**	**3.4%**	**Oct-04**
Ullico - J for Jobs	$4,752,494	2.5%	2.8%	2.9%	2.8%	Oct-04
Bloomberg US Aggregate TR			*1.3%*	*1.8%*	*3.1%*	*Oct-04*
Washington Capital JMT Mortgage Income Fund	$5,317,700	2.8%	3.4%	3.9%	4.6%	Oct-04
Bloomberg US Aggregate TR			*1.3%*	*1.8%*	*3.1%*	*Oct-04*
Total Real Estate - Core	**$18,309,746**	**9.6%**	**4.8%**	**6.7%**	**6.0%**	**Jul-01**
Principal U.S. Property Account	$6,722,282	3.5%	5.0%	7.0%	6.4%	Oct-01
NCREIF ODCE Equal Weighted Net			*4.7%*	*6.7%*	*6.1%*	*Oct-01*
Boyd Watterson GSA Fund, LP	$6,248,555	3.3%	5.6%	--	6.4%	Feb-15
NCREIF ODCE Equal Weighted Net			*4.7%*	--	*6.2%*	*Feb-15*
Long-Term Income Objective 8%			*8.0%*	--	*8.0%*	*Feb-15*
Multi-Employer Property Trust	$5,338,909	2.8%	3.7%	5.7%	5.4%	Jul-01
NCREIF ODCE Equal Weighted Net			*4.7%*	*6.7%*	*6.1%*	*Jul-01*
Total Real Estate - Value Add	**$18,227,261**	**9.5%**	**--**	**--**	**2.3%**	**Oct-21**
Boyd Watterson State Government Fund, LP	$18,227,261	9.5%	--	--	2.3%	Oct-21
NCREIF ODCE Equal Weighted Net			--	--	*0.1%*	*Oct-21*
Long-Term Income Objective 9%			--	--	*9.0%*	*Oct-21*

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	7 Yrs	10 Yrs	Inception	Inception Date
			Ending December 31, 2023			
Total Opportunistic Strategies	**$21,132,160**	**11.0%**				
Grosvenor Opportunistic Credit Fund III, Ltd	$111,753	0.1%				
Grosvenor Opportunistic Credit Fund IV, Ltd	$311,154	0.2%				
GCM Grosvenor Opportunistic Credit Fund, Ltd	$10,465,885	5.5%	--	--	4.8%	Feb-17
HFRI Credit Index			--	--	*4.3%*	*Feb-17*
Corbin ERISA Opportunity Fund, LP - Class C Shares	$10,243,368	5.3%	--	--	4.9%	Jan-20
HFRI Credit Index			--	--	*4.7%*	*Jan-20*
Long-Term Target Return of 8%			--	--	*8.0%*	*Jan-20*
Total Private Equity	**$11,051,925**	**5.8%**				
GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	$7,454,199	3.9%				
GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	$3,597,726	1.9%				
Total Infrastructure - Value Add	**$2,628,178**	**1.4%**				
WaCap - SP Infrastructure Fund IV Feeder	$2,628,178	1.4%				

Performance Detail (Net of Fees) - Annualized

			Ending December 31, 2023			
	Market Value	% of Portfolio	7 Yrs	10 Yrs	Inception	Inception Date
Total Cash Equivalents	**$594,223**	**0.3%**				
Cash Account	$243,515	0.1%				
Cash in Transit - Boyd Watterson GSA Fund, LP Distribution Proceeds	$92,115	0.0%				
Cash in Transit - Boyd Watterson State Government Fund, LP Distribution Proceeds	$232,898	0.1%				
Grosvenor Opportunistic Credit Fund V Escrow	$25,695	0.0%				

Account Information	
Account Name	**Northern Trust Collective Russell 1000 Growth Index Fund**
Account Structure	**Commingled Fund**
Investment Style	**Passive**
Inception Date	**5/01/23**
Account Type	**Domestic Large Cap Growth Equity**
Benchmark	**Russell 1000 Growth**
Universe	**eV US Large Cap Growth Equity Net**

Northern Trust Collective Russell 1000 Growth Index Fund
Ending December 31, 2023

	Fourth Quarter	**Inception 5/1/23**
Beginning Market Value	$15,080,308	$0
Net Cash Flow	-$379,529	$13,545,601
Net Investment Change	$2,113,857	$3,269,035
Ending Market Value	$16,814,636	$16,814,636

									Calendar Years											
	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
Northern Trust Collective Russell 1000 Growth Index Fund	14.2%	37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	23.6%	May-23
Russell 1000 Growth	*14.2%*	*38*	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	*23.5%*	*May-23*

Note: Returns are net of fees.

Operating Engineers Local No. 77 Pension Plan - Northern Trust Collective Russell 1000 Growth Index Fund

Manager Summary

Recommendation: None.

Compliance Summary

Manager verified the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or prospectus guidelines.

Items of Interest: Personnel Changes - The manager stated the following personnel changes occurred during 4Q 2023: 1) Garrett Cox was named Chief of Staff for Asset Management. Garrett will be responsible for overseeing all matters as it relates to the Office of the President, including helping drive strategic priorities and initiatives – across the firm – and overseeing engagements with key external and internal stakeholders. 2) James Rippey joined the Asset Management Chief Operating Officer (COO) leadership team as COO of EMEA region (pending regulatory approval). He will continue to serve as International Chief Risk Officer covering EMEA and APAC during this transition period. 3) Jane Karpinski, previously Chief Audit Executive, will serve as Global Head of Regulatory Affairs. In this newly created role, Jane will be responsible for overseeing the enhancement of risk management and controls, remediation of regulatory and audit findings and administration of regulatory affairs. She becomes a member of the Corporation's Management Group. Lauren Allnutt, Corporate Controller, replaces Jane as Chief Audit Executive. **Personnel Departure** - The manager stated Chris Shipley, Chief Investment Strategist for North America, and co-portfolio manager for the Northern Funds Global Tactical Asset Allocation Fund (BBALX), is leaving Northern Trust to pursue other interests. Anwiti Bahuguna, Ph.D., and Daniel B. Ballantine, CFA, have been added to the fund as portfolio managers. **Personnel Additions** - The manager stated the following personnel additions occurred during 4Q 2023: 1) Guido Baltussen joined NTAM as Head of Quantitative Strategies, International. He was previously Head of Equity Factor Investing and Co-head of Quantitative Fixed Income in Robeco. 2) Sunitha Thomas, CFA, rejoined NTAM after spending more than 15 years managing client portfolios for Northern Trust Wealth Management. In this newly created role, Sunitha will co-head the Wealth Client Group. **Form ADV -** The manager stated on December 22, 2023, NTI filed an other than annual amendment to its ADV to add a new Regulatory Action Disclosure in Schedule A related to one of NTI's participating affiliates. **Errors and Omissions -** The manager stated there were no changes to Northern Trust's Errors & Omissions insurance policy over the last quarter. The policy was recently renewed for the period 30 June 2023 – 30 June 2024.

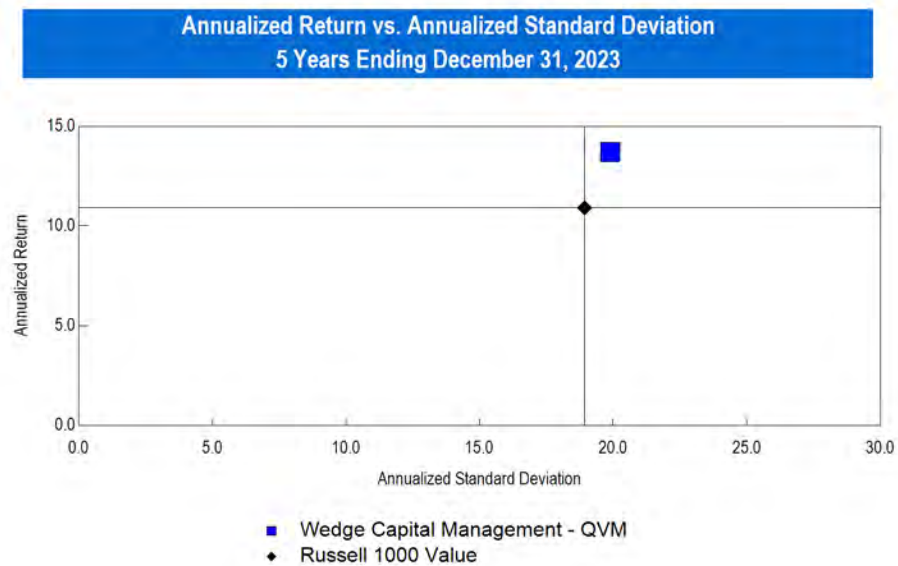
Account Information

Account Name	**Wedge Capital Management - QVM**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**7/01/01**
Account Type	**Domestic Large Cap Value Equity**
Benchmark	**Russell 1000 Value**
Universe	**eV US Large Cap Value Equity Gross**

Wedge Capital Management - QVM

Ending December 31, 2023

	Fourth Quarter	Inception 7/1/01
Beginning Market Value	$14,663,720	$22,264,495
Net Cash Flow	-$328,500	-$52,372,949
Net Investment Change	$1,700,634	$46,144,309
Ending Market Value	$16,035,855	$16,035,855



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management - QVM	11.1%	17.6%	103.1%	94.7%
Russell 1000 Value	8.9%	16.7%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management - QVM	13.7%	19.9%	109.1%	97.1%
Russell 1000 Value	10.9%	18.9%	100.0%	100.0%

									Calendar Years											
	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
Wedge Capital Management - QVM	11.7%	20	17.5%	27	11.1%	38	13.7%	33	17.5%	27	-12.3%	88	33.2%	9	6.8%	38	29.6%	25	10.0%	Jul-01
Russell 1000 Value	*9.5%*	*62*	*11.5%*	*62*	*8.9%*	*80*	*10.9%*	*81*	*11.5%*	*62*	*-7.5%*	*69*	*25.2%*	*72*	*2.8%*	*62*	*26.5%*	*54*	*7.3%*	*Jul-01*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan- Wedge Capital Management - QVM

Correspondence Summary

- Manager presented annual reviews at meetings in February 2015, May 2016, May 2017, February 2018, May 2019, and February 2020.

Manager Summary

- IPS conducted due diligence meetings with Wedge Capital on February 10, 2022 and October 17, 2023.

Recommendation: None.

Compliance Summary

Exceptions: None.

Action to be taken: None.

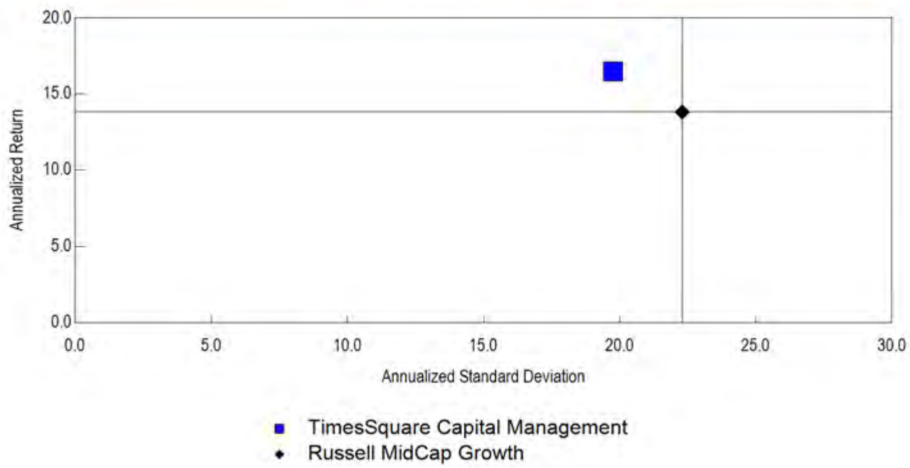
Items of Interest: Personnel Departure - The manager stated effective December 31, 2023, Mike Ritzer, General Partner, is no longer with the firm. His responsibilities are absorbed by other members of the equity analyst team. **Ownership Changes -** The manager stated Mike Ritzer's departure will not have any material impact on company ownership, or operations.

Account Information	
Account Name	**TimesSquare Capital Management**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**4/01/06**
Account Type	**Domestic Mid Cap Growth Equity**
Benchmark	**Russell MidCap Growth**
Universe	**eV US Mid Cap Growth Equity Gross**

TimesSquare Capital Management
Ending December 31, 2023

	Fourth Quarter	Inception 4/1/06
Beginning Market Value	$9,174,186	$11,020,228
Net Cash Flow	-$131,400	-$20,377,735
Net Investment Change	$1,251,294	$19,651,586
Ending Market Value	$10,294,080	$10,294,080

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
TimesSquare Capital Management	5.1%	18.1%	94.2%	88.6%
Russell MidCap Growth	1.3%	21.4%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
TimesSquare Capital Management	16.5%	19.8%	91.5%	91.0%
Russell MidCap Growth	13.8%	22.3%	100.0%	100.0%

	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	Calendar Years 2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
TimesSquare Capital Management	13.8%	36	26.2%	26	5.1%	14	16.5%	19	26.2%	26	-21.5%	13	17.1%	37	34.2%	62	37.6%	37	11.2%	Apr-06
Russell MidCap Growth	*14.5%*	*22*	*25.9%*	*29*	*1.3%*	*44*	*13.8%*	*61*	*25.9%*	*29*	*-26.7%*	*41*	*12.7%*	*65*	*35.6%*	*54*	*35.5%*	*53*	*9.5%*	*Apr-06*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - TimesSquare Capital Management

Correspondence Summary

- Manager presented annual reviews at meetings in February 2015, May 2016, February 2017, November 2018 and August 2019.

Manager Summary

- IPS conducted due diligence meetings with TimesSquare on February 3, 2021, July 14, 2021, October 14, 2021, September 28, 2022 and November 16, 2023.

Recommendation: None.

Compliance Summary

Exceptions: None.

Action to be taken: None.

Items of Interest: None.

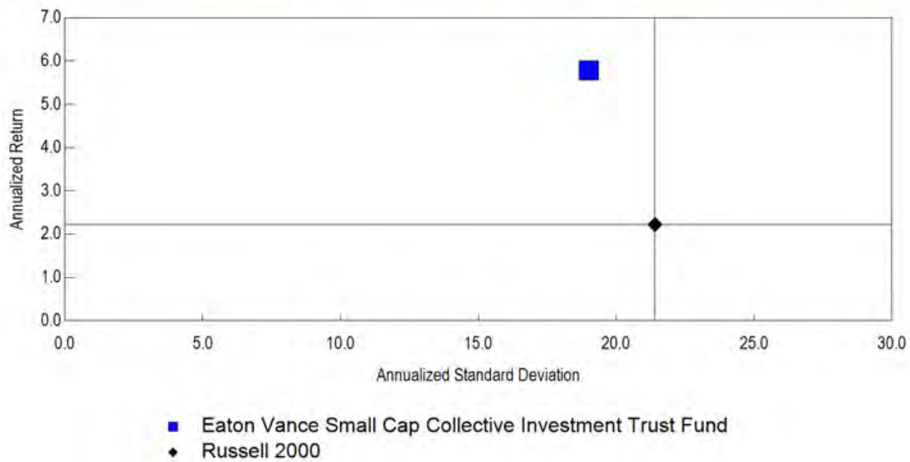
Account Information	
Account Name	**Eaton Vance Small Cap Collective Investment Trust Fund**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**9/01/19**
Account Type	**Domestic Small Cap Core Equity**
Benchmark	**Russell 2000**
Universe	**eV US Small Cap Core Equity Gross**

Eaton Vance Small Cap Collective Investment Trust Fund

Ending December 31, 2023

	Fourth Quarter	Inception 9/1/19
Beginning Market Value	$8,437,917	$0
Net Cash Flow	-$197,100	$6,140,550
Net Investment Change	$984,576	$3,084,843
Ending Market Value	$9,225,393	$9,225,393

Annualized Return vs. Annualized Standard Deviation
3 Years Ending December 31, 2023



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Eaton Vance Small Cap Collective Investment Trust Fund	5.8%	19.0%	88.2%	85.9%
Russell 2000	2.2%	21.4%	100.0%	100.0%

	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	Calendar Years 2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
Eaton Vance Small Cap Collective Investment Trust Fund	11.9%	62	12.9%	83	5.8%	66	--	--	12.9%	83	-14.7%	32	22.9%	62	13.9%	58	--	--	8.7%	Sep-19
Russell 2000	*14.0%*	*24*	*16.9%*	*58*	*2.2%*	*91*	--	--	*16.9%*	*58*	*-20.4%*	*78*	*14.8%*	*94*	*20.0%*	*33*	--	--	*8.7%*	*Sep-19*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Eaton Vance Small Cap Collective Investment Trust Fund

Manager Summary

- IPS conducted due diligence meetingswith Eaton Vance on June 15, 2022 and December 14, 2023.
- On October 8, 2020, Eaton Vance announced they will be acquired by Morgan Stanley. The transaction closed on March 1, 2021.

Recommendation: None.

Compliance Summary

Manager verified that the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under management, the manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: None.

Account Information

Account Name	**Hardman Johnston International Equity Group Trust**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**7/01/09**
Account Type	**International Large Cap Equity**
Benchmark	**MSCI EAFE**
Universe	**eV Non-US Diversified Growth Eq Gross**

Hardman Johnston International Equity Group Trust

Ending December 31, 2023

	Fourth Quarter	Inception 7/1/09
Beginning Market Value	$9,072,016	$6,099,925
Net Cash Flow	-$4,500,000	-$12,935,348
Net Investment Change	$299,348	$11,706,787
Ending Market Value	$4,871,364	$4,871,364

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023

3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Hardman Johnston International Equity Group Trust	-5.9%	19.9%	71.8%	113.6%
MSCI EAFE	4.0%	16.8%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Hardman Johnston International Equity Group Trust	8.8%	21.3%	117.0%	104.6%
MSCI EAFE	8.2%	18.1%	100.0%	100.0%

	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	Calendar Years 2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
Hardman Johnston International Equity Group Trust	5.3%	99	6.4%	93	-5.9%	82	8.8%	60	6.4%	93	-23.1%	39	1.9%	90	36.5%	15	34.3%	18	8.1%	Jul-09
MSCI EAFE	*10.4%*	*76*	*18.2%*	*36*	*4.0%*	*7*	*8.2%*	*72*	*18.2%*	*36*	*-14.5%*	*5*	*11.3%*	*41*	*7.8%*	*99*	*22.0%*	*94*	*6.6%*	*Jul-09*
MSCI ACWI ex USA Growth	*11.1%*	*67*	*14.0%*	*70*	*-2.7%*	*61*	*7.5%*	*80*	*14.0%*	*70*	*-23.1%*	*38*	*5.1%*	*79*	*22.2%*	*60*	*27.3%*	*72*	*6.7%*	*Jul-09*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Hardman Johnston International Equity Group Trust

Correspondence Summary

- Manager presented annual reviews at meetings in August 2016, August 2017, May 2018, and May 2019.

Manager Summary

- IPS conducted due diligence meetings with Hardman Johnston on February 5, 2021, July 19, 2021, January 19, 2022, April 11, 2022, October 13, 2022 and April 5, 2023.

Recommendation: None.

Compliance Summary

Manager verified that the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the firm's commingled investment vehicle investment guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or prospectus guidelines.

Items of Interest: Personnel Departure - The manager stated Richard Johnston, Portfolio Manager and Co-Manager of U.S. Strategies, retired from the firm as of December 31, 2023.

Account Information	
Account Name	**Barrow Hanley Non-US Value CIT - Founders Class**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**12/01/23**
Account Type	**International Large Cap Value Equity**
Benchmark	**MSCI EAFE Value**
Universe	**eV Non-US Diversified Value Eq Gross**

Barrow Hanley Non-US Value CIT - Founders Class
Ending December 31, 2023

	Fourth Quarter	Inception 12/1/23
Beginning Market Value	--	$0
Net Cash Flow	$4,500,000	$4,500,000
Net Investment Change	$216,000	$216,000
Ending Market Value	$4,716,000	$4,716,000

									Calendar Years											
	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
Barrow Hanley Non-US Value CIT - Founders Class	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.8%	Dec-23
MSCI EAFE Value	*8.2%*	*69*	*18.9%*	*54*	*7.6%*	*44*	*7.1%*	*83*	*18.9%*	*54*	*-5.6%*	*17*	*10.9%*	*69*	*-2.6%*	*89*	*16.1%*	*87*	*4.9%*	*Dec-23*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Barrow Hanley Non-US Value CIT - Founders Class

Manager Summary

- IPS conducted due diligence meetings with Barrow Hanley on November 7, 2022 and May 26, 2023.

Recommendation: None.

Compliance Summary

Manager verified the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under investment, the manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or prospectus guidelines.

Items of Interests: Personnel Addition - The manager stated Grant Taber, equity analyst, was hired during the quarter. **Personnel Departure -** The manager stated Chris Hathorn, equity analyst, was terminated during the quarter.

Account Information

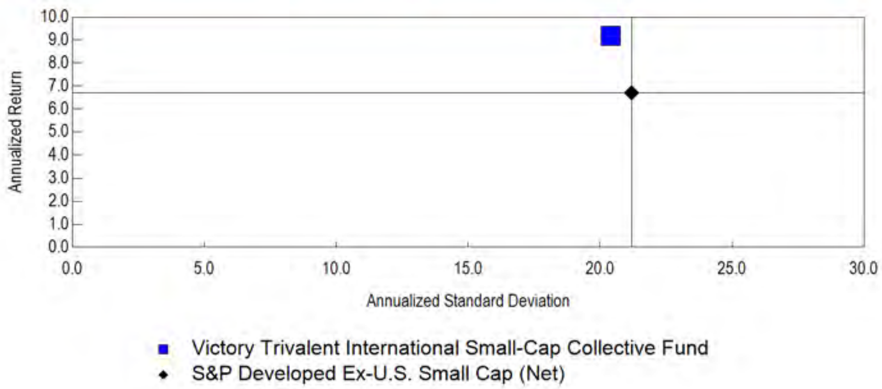
Account Name	**Victory Trivalent International Small-Cap Collective Fund**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**3/01/18**
Account Type	**International Small Cap Equity**
Benchmark	**S&P Developed Ex-U.S. Small Cap (Net)**
Universe	**eV Non-US Diversified Small Cap Eq Gross**

Victory Trivalent International Small-Cap Collective Fund

Ending December 31, 2023

	Fourth Quarter	Inception 3/1/18
Beginning Market Value	$9,215,732	$0
Net Cash Flow	$0	$8,059,128
Net Investment Change	$921,854	$2,078,457
Ending Market Value	$10,137,585	$10,137,585

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Victory Trivalent International Small-Cap Collective Fund	1.1%	18.4%	103.4%	96.7%
S&P Developed Ex-U.S. Small Cap (Net)	-0.9%	19.0%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Victory Trivalent International Small-Cap Collective Fund	9.2%	20.4%	104.5%	96.7%
S&P Developed Ex-U.S. Small Cap (Net)	6.7%	21.2%	100.0%	100.0%

									Calendar Years											
	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
Victory Trivalent International Small-Cap Collective Fund	10.0%	67	16.3%	42	1.1%	53	9.2%	38	16.3%	42	-21.9%	55	13.7%	55	16.4%	36	29.2%	23	3.9%	Mar-18
S&P Developed Ex-U.S. Small Cap (Net)	*10.7%*	*55*	*13.5%*	*69*	*-0.9%*	*64*	*6.7%*	*77*	*13.5%*	*69*	*-21.6%*	*54*	*9.6%*	*78*	*14.3%*	*47*	*24.1%*	*59*	*1.9%*	*Mar-18*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Victory Trivalent International Small-Cap Collective Fund

Correspondence Summary

- Manager presented annual review at meeting in February 2019.

Manager Summary

- IPS conducted due diligence meetings with Victory Capital/Trivalent on April 21, 2021 and June 14, 2022.

Recommendation: None.

Compliance Summary

The manager verified the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under management, the manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment and/or prospectus guidelines.

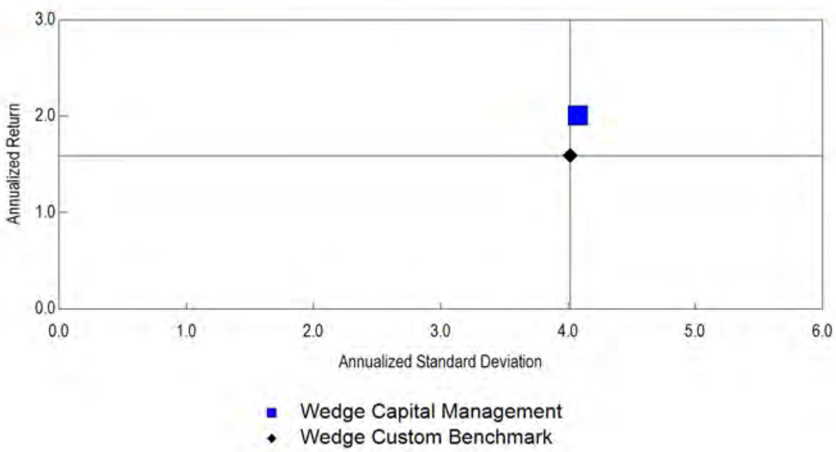
Items of Interest: None.

Account Information	
Account Name	**Wedge Capital Management**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**1/01/03**
Account Type	**Investment Grade Fixed Income**
Benchmark	**Wedge Custom Benchmark**
Universe	

Wedge Capital Management
Ending December 31, 2023

	Fourth Quarter	Inception 1/1/03
Beginning Market Value	$15,766,324	$19,772,647
Net Cash Flow	-$131,400	-$12,604,688
Net Investment Change	$704,078	$9,171,043
Ending Market Value	$16,339,002	$16,339,002

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management	-1.3%	4.7%	99.7%	95.9%
Wedge Custom Benchmark	-1.6%	4.6%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management	2.0%	4.1%	103.2%	95.2%
Wedge Custom Benchmark	1.6%	4.0%	100.0%	100.0%

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Wedge Capital Management	4.5%	5.5%	-1.3%	2.0%	5.5%	-7.9%	-1.1%	7.5%	7.0%	3.6%	Jan-03
Wedge Custom Benchmark	*4.6%*	*5.2%*	*-1.6%*	*1.6%*	*5.2%*	*-8.2%*	*-1.4%*	*6.4%*	*6.8%*	*3.2%*	*Jan-03*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Wedge Capital Management

Correspondence Summary

- Manager presented annual reviews at meetings in February 2015, May 2016, May 2017, February 2018, May 2019, and February 2020.

Manager Summary

- IPS conducted due diligence meetings with Wedge Capital on January 20, 2021 and November 15, 2022.

Recommendation: None.

Compliance Summary

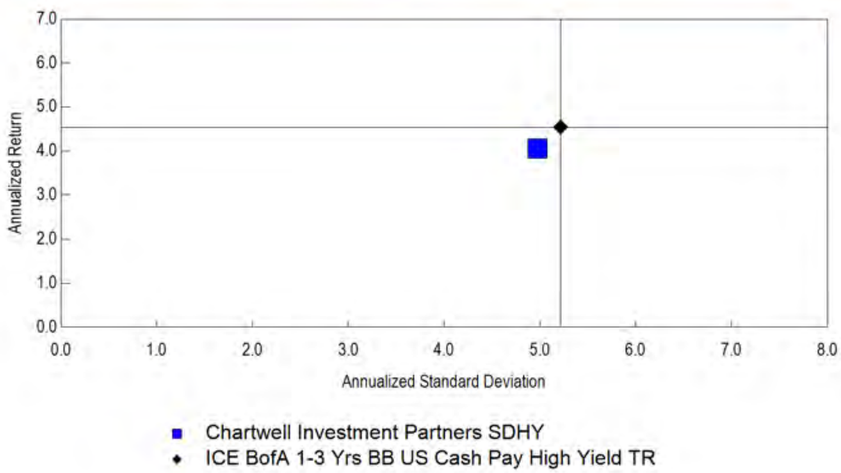
Exceptions: None.

Action to be taken: None.

Items of Interest: Personnel Departure - The manager stated effective December 31, 2023, Mike Ritzer, General Partner, is no longer with the firm. His responsibilities are absorbed by other members of the equity analyst team. **Ownership Changes -** The manager stated Mike Ritzer's departure will not have any material impact on company ownership, or operations.

Account Information	
Account Name	**Chartwell Investment Partners SDHY**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**1/31/13**
Account Type	**Short Duration High Yield Fixed Income**
Benchmark	**ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR**
Universe	

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



Chartwell Investment Partners SDHY
Ending December 31, 2023

	Fourth Quarter	Inception 1/31/13
Beginning Market Value	$20,529,417	$0
Net Cash Flow	-$197,100	$18,299,119
Net Investment Change	$863,097	$2,896,295
Ending Market Value	$21,195,414	$21,195,414

3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners SDHY	2.6%	4.3%	97.1%	103.5%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	2.9%	4.1%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners SDHY	4.1%	5.0%	91.5%	97.0%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	4.5%	5.2%	100.0%	100.0%

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Chartwell Investment Partners SDHY	4.2%	7.8%	2.6%	4.1%	7.8%	-2.7%	2.8%	4.7%	8.0%	3.5%	Jan-13
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	*4.0%*	*8.8%*	*2.9%*	*4.5%*	*8.8%*	*-3.1%*	*3.2%*	*5.4%*	*8.7%*	*4.0%*	*Jan-13*
Bloomberg US Govt/Credit Int TR	*4.6%*	*5.2%*	*-1.6%*	*1.6%*	*5.2%*	*-8.2%*	*-1.4%*	*6.4%*	*6.8%*	*1.5%*	*Jan-13*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Chartwell Investment Partners SDHY

Correspondence Summary

- Manager presented annual reviews at meetings in February 2016, May 2017, August 2018, August 2019, and May 2020.

Manager Summary

- IPS conducted due diligence meetings with Chartwell on January 19, 2021, July 22, 2021, July 19, 2022 and July 18, 2023.
- On October 20, 2021, Chartwell announced that their parent company, TriState Capital Holdings, has agreed to be acquired by Raymond James Financial. Upon closing of the transaction, Chartwell will become an affiliate of Carillon Tower, the asset management subsidiary of Raymond James Financial. Chartwell provided a letter to clients requesting acknowledgment and consent to the ownership change. IPS provided a memo recommending clients consent to the ownership change, subject to counsel review. Consent was provided. The transaction closed on June 1, 2022.

Recommendation: None.

Compliance Summary

Exceptions: None.

Action to be taken: None.

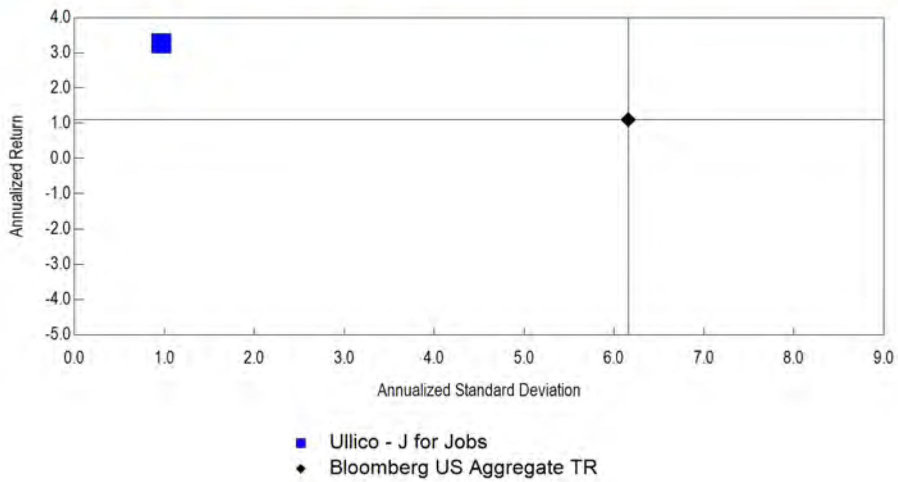
Items of Interest: Personnel Changes - The manager stated Chartwell has eliminated the full time Chief Operating Officer (COO) and Chief Compliance Officer (CCO) roles at the firm effective December 31, 2023. COO duties have been assumed by a management team of Tim Riddle, Chief Executive Officer, and Greg Hagar, Chief Financial Officer. CCO duties have been assumed by a newly appointed Chartwell CCO, Ludmila Chwazik, who works for Raymond James and is also the CCO of the affiliated Carillon Family of Funds.

Account Information	
Account Name	**Ullico - J for Jobs**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**10/01/04**
Account Type	**Mortgages**
Benchmark	**Bloomberg US Aggregate TR**
Universe	

Ullico - J for Jobs
Ending December 31, 2023

	Fourth Quarter	Inception 10/1/04
Beginning Market Value	$4,671,232	$10,000,000
Net Cash Flow	$0	-$8,968,786
Net Investment Change	$81,262	$3,721,280
Ending Market Value	$4,752,494	$4,752,494

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Ullico - J for Jobs	3.0%	1.1%	25.2%	-7.7%
Bloomberg US Aggregate TR	-3.3%	7.2%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Ullico - J for Jobs	3.3%	1.0%	25.2%	-11.7%
Bloomberg US Aggregate TR	1.1%	6.2%	100.0%	100.0%

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Ullico - J for Jobs	1.9%	4.5%	3.0%	3.3%	4.5%	0.9%	3.6%	2.6%	4.7%	3.2%	Oct-04
Bloomberg US Aggregate TR	*6.8%*	*5.5%*	*-3.3%*	*1.1%*	*5.5%*	*-13.0%*	*-1.5%*	*7.5%*	*8.7%*	*3.1%*	*Oct-04*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Ullico - J for Jobs

Correspondence Summary

- Manager presented annual reviews at meetings in August 2016, August 2017, November 2018, and August 2019.

Manager Summary

- IPS conducted due diligence meetings with Ullico on June 2, 2022, January 31, 2023 and May 23, 2023.
- On May 13, 2022, Ullico announced that effective July 1, 2022, the annual investment management fee for J for Jobs will be reduced to 0.55% on all assets under management. For investors with $90 million or more invested, the annual investment management fee will be reduced to 0.50% on all assets under management.

Recommendation: None.

Compliance Summary

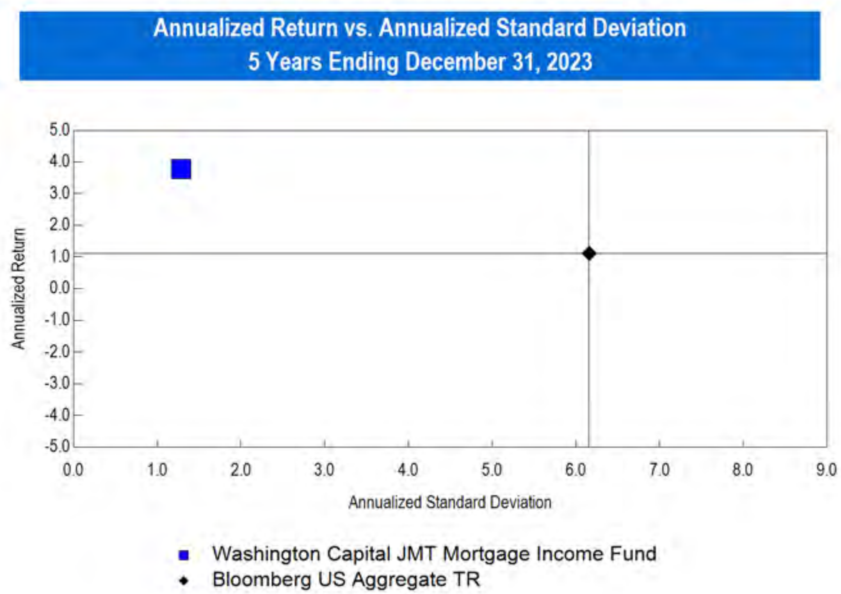
Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Legal - *Litigation Relating to Kleman Plaza LLLP, Borrower -* In July 2019, the Plaza Tower Master Association, Inc. ("Plaza Tower"), filed suit against the Borrower/former developer, and declarant, the successor declarant (300 South Duval Associates, LLC), and various contractors and subcontractors for alleged constructive defects on the property. Plaza Tower alleged claims of negligence, breach of implied warranty, and statutory building code violations in connection with the alleged defects. After many years of litigation, Plaza Tower has settled with all defendants and the settlements are being finalized. ***The Union Labor Life Insurance Company v. J. Brian O'Neill -*** Union Labor Life filed a lawsuit against J. Brian O'Neill, a guarantor on a March 20, 2012 amended and restated loan agreement between Union Labor Life and Carnegie Tower Development Company, Inc. and Carnegie Holdings, LLC, in connection with the development of a property in Portsmouth, Rhode Island. The borrowers defaulted on the loan agreement in October 2013 and on January 7, 2014 Union Labor issued a demand letter to the borrowers for the full payment of the loan. Union Labor Life entered into a forbearance agreement with O'Neill in April 2014. Union Labor Life sued O'Neil to enforce his personal guaranty and for breach of a forbearance agreement. Union Labor Life obtained a final judgment against O'Neill in the amount of $3,942,602.15 on October 29, 2018. A final settlement agreement resolving Union Labor Life's judgment was executed on June 27, 2019. In August 2020, O'Neill fulfilled a portion of the settlement agreement by paying $1,600,000 to Union Labor Life in return for releasing the judgment lien against O'Neill's Hyannis property. The remaining portion of the judgment in the amount of $500,000 will remain in effect until repayment has been made in full under the settlement agreement. ***The Union Labor Life Insurance Company v. 670 6th Retail LLC, et al. -*** On October 11, 2023, Union Labor Life filed a verified foreclosure complaint against, 670 6th Retail LLC (the "Borrower") and Guarantors, Michael Fuchs and Aby J Rosen. On May 15, 2014 Union Labor Life, on behalf of its Separate Account J, made a permanent loan to the Borrower in the original principal amount of $15,000,000 pursuant to a loan agreement, to acquire the retail building known as 670 Avenue of the Americas located in New York, New York. The Borrower defaulted on the loan. This default included, without limitation, the failure to pay interest on the loan due on July 10, 2023 in the amount of $62,500.00, and all subsequent payments, including property taxes and water charges assessed on the property. The Guarantors entered into a guaranty of partial payment and carry costs, pursuant to the May 15, 2014 loan agreement. The Borrower filed an Answer on January 19, 2024. Union Labor Life will move for Summary Judgment seeking a judgment of foreclosure. ***State of Indiana v. Lloyd Commons East, LLC, The Union Labor Life Insurance Company, et al. -*** Condemnation lawsuit filed by the State of Indiana for the taking of a 0.118 acre parcel and easement owned by Borrower, Lloyd Commons East, LLC and subject to a mortgage interest held by Union Labor Life, Separate Accounts J and W1. The parcel of land is part of the property known as East Lloyd Commons, a retail shopping center located in Evansville, Indiana. The condemnation of the easement is for the purpose of a highway improvement project. The State of Indiana has offered $24,000 to the Borrower to acquire the parcel of land. Union Labor Life on behalf of its Separate Accounts is not objecting to the taking or the value of the award for the parcel of land. Union Labor Life is seeking a Dismissal of the action once an Agreed Finding and Judgment is signed by all interested parties and recorded.

Account Information	
Account Name	**Washington Capital JMT Mortgage Income Fund**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**10/01/04**
Account Type	**Mortgages**
Benchmark	**Bloomberg US Aggregate TR**
Universe	

Washington Capital JMT Mortgage Income Fund
Ending December 31, 2023

	Fourth Quarter	Inception 10/1/04
Beginning Market Value	$5,213,046	$5,000,000
Net Cash Flow	$0	-$3,500,000
Net Investment Change	$104,654	$3,817,700
Ending Market Value	$5,317,700	$5,317,700



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Washington Capital JMT Mortgage Income Fund	2.7%	1.3%	27.9%	-2.6%
Bloomberg US Aggregate TR	-3.3%	7.2%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Washington Capital JMT Mortgage Income Fund	3.8%	1.3%	32.3%	-9.0%
Bloomberg US Aggregate TR	1.1%	6.2%	100.0%	100.0%

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Washington Capital JMT Mortgage Income Fund	2.0%	5.0%	2.7%	3.8%	5.0%	0.1%	3.2%	3.3%	7.4%	5.0%	Oct-04
Bloomberg US Aggregate TR	*6.8%*	*5.5%*	*-3.3%*	*1.1%*	*5.5%*	*-13.0%*	*-1.5%*	*7.5%*	*8.7%*	*3.1%*	*Oct-04*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Washington Capital JMT Mortgage Income Fund

Correspondence Summary

- Manager presented annual reviews at meetings in May 2015, February 2017, and May 2018.

Manager Summary

- IPS conducted due diligence meetings with Washington Capital on October 28, 2021, April 14, 2022 and November 2, 2023.

Recommendation: None.

Compliance Summary

Manager certified that the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle guidelines and/or prospectus.

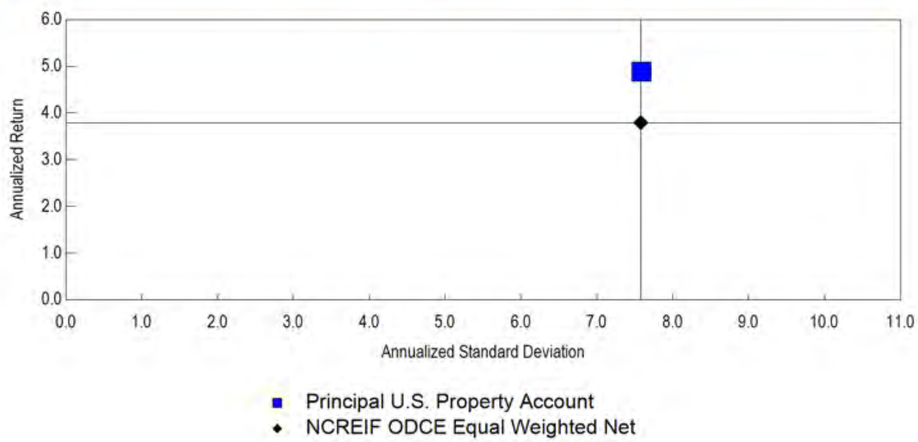
Items of Interest: Ownership Changes - The manager stated there were some percentage ownership changes among shareholders; however, the firm remains 100% employee owned.

Account Information	
Account Name	**Principal U.S. Property Account**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**10/01/01**
Account Type	**Real Estate - Core**
Benchmark	**NCREIF ODCE Equal Weighted Net**
Universe	

Principal U.S. Property Account Ending December 31, 2023	Fourth Quarter	Inception 10/1/01
Beginning Market Value	$6,884,043	$7,999,474
Net Cash Flow	$0	-$25,245,860
Net Investment Change	-$161,761	$23,968,668
Ending Market Value	$6,722,282	$6,722,282

Income is distributed.

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



3 Years Ending December 31, 2023	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Principal U.S. Property Account	5.3%	9.8%	100.2%	87.4%
NCREIF ODCE Equal Weighted Net	4.4%	9.8%	100.0%	100.0%

5 Years Ending December 31, 2023	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Principal U.S. Property Account	4.9%	7.6%	107.2%	87.4%
NCREIF ODCE Equal Weighted Net	3.8%	7.6%	100.0%	100.0%

					Calendar Years						
	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Principal U.S. Property Account	-2.2%	-10.1%	5.3%	4.9%	-10.1%	5.0%	23.8%	1.6%	7.0%	7.4%	Oct-01
NCREIF ODCE Equal Weighted Net	*-5.4%*	*-13.4%*	*4.4%*	*3.8%*	*-13.4%*	*7.6%*	*21.9%*	*0.8%*	*5.2%*	*6.1%*	*Oct-01*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Principal U.S. Property Account

Correspondence Summary

- Manager presented annual reviews at meetings in February 2016, February 2017, May 2018, and August 2019.
- A partial redemption request of $9.6M was submitted on September 21, 2021; proceeds were used for the Boyd Watterson State Government Fund capital call. The partial redemption request was fully satisfied as of September 29, 2021.
- Partial redemption requests for $550K, $450K, $250K, and $825K were submitted on February 22, 2022, March 22, 2022, May 24, 2022, and June 23, 2022 respectively; proceeds were used for ongoing benefit obligations. The partial redemption requests were fully satisfied as of February 24, 2022, March 24, 2022, May 25, 2022, and June 27, 2022.
- A partial redemption request of $1.0M was submitted effective August 31, 2022; pending availability in withdrawal queue, proceeds will be used for rebalancing and cash needs.

Manager Summary

- IPS conducted due diligence meetings with Principal on May 26, 2021 and August 2, 2023.
- USPA attempts to maintain sufficient cash to satisfy withdrawal requests in the ordinary course of business, but the recent concentration and dollar volume of withdrawal requests resulted in the implementation of a withdrawal limitation effective July 1, 2022. Redemption requests may be satisified if sufficient levels of cash are available.
- On June 1, 2023, Principal announced the departure of U.S. Property co-portfolio manager Meighan Phillips, effective June 30, 2023. Co-portfolio manager Darren Kleis, who has been with Principal since 2007, remains in place, and Kyle Elfers, Managing Director - Acquisitions/Dispositions, is being promoted to replace Ms. Phillips. John Berg, Principal's Head of Real Estate, Private Equity, who served as Senior Portfolio Manager for U.S. Property from 2003-2022, is expected to resume a more active role with the team on an interim basis to ensure a smooth transition.

Recommendation: None.

Operating Engineers Local No. 77 Pension Plan - Principal U.S. Property Account

Compliance Summary

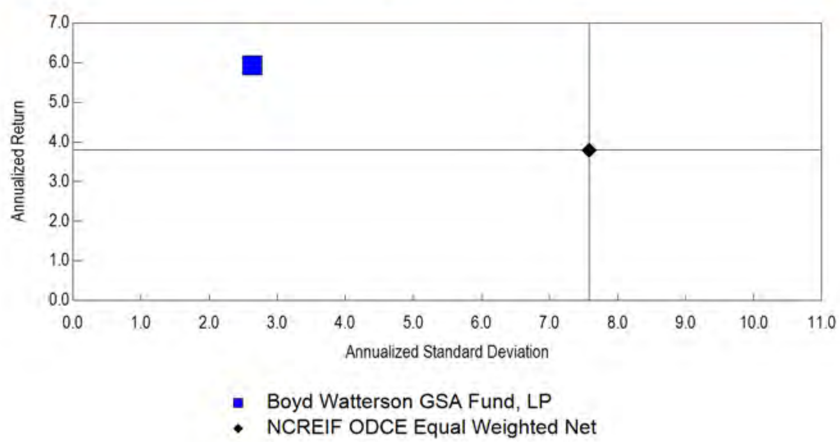
Manager verified the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering documents governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges fiduciary responsibility under ERISA with regard to the selection, monitoring and retention of the portfolio managers for Separate Accounts. Services by Principal Real Estate Investors are provided to the client as an investor in a commingled investment vehicle.

Items of Interest: Compliance - The manager answered N/A to Part A question 5 regarding derivatives and to Part B question 7, regarding the amount of insurance coverage. **Liquidity –** On July 1, 2022, Principal Life Insurance Company ("Principal") determined that it was in the best interest of all investors to implement a withdrawal limitation which delays the payment of withdrawal requests and provides for payment of such requests on a pro-rata basis as cash becomes available for distribution, as determined by Principal. As of December 31, 2023, the withdrawal limitation totaled approximately $1.4 billion. **Personnel Departures -** The manager stated Michelle Fang, Senior Managing Director, Principal Real Estate retired on September 30, 2023. Margie Custis and Erin Kerr assumed Michelle's duties. Indraneel Karlekar, Ph.D., Global Head of Research & Portfolio Strategies, left Principal on December 22, 2023 to pursue opportunities outside of the firm. The manager noted that no members of the Account portfolio management team left during the quarter. On the private equity investment team, the manager stated that Jesse Michael Wedmore, Senior Asset Management Analyst, departed Principal during 4Q 2023.

Account Information	
Account Name	Boyd Watterson GSA Fund, LP
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	2/01/15
Account Type	Real Estate - Core
Benchmark	NCREIF ODCE Equal Weighted Net
Universe	

Income is distributed.

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



Boyd Watterson GSA Fund, LP
Ending December 31, 2023

	Fourth Quarter	Inception 2/1/15
Beginning Market Value	$6,483,002	$0
Net Cash Flow	-$92,115	$2,667,615
Net Investment Change	-$142,332	$3,580,940
Ending Market Value	$6,248,555	$6,248,555

3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Boyd Watterson GSA Fund, LP	4.3%	2.9%	40.1%	8.3%
NCREIF ODCE Equal Weighted Net	4.4%	9.8%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Boyd Watterson GSA Fund, LP	5.9%	2.6%	66.8%	-3.5%
NCREIF ODCE Equal Weighted Net	3.8%	7.6%	100.0%	100.0%

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Boyd Watterson GSA Fund, LP	-1.9%	-1.9%	4.3%	5.9%	-1.9%	5.9%	9.4%	7.2%	9.5%	7.7%	Feb-15
NCREIF ODCE Equal Weighted Net	*-5.4%*	*-13.4%*	*4.4%*	*3.8%*	*-13.4%*	*7.6%*	*21.9%*	*0.8%*	*5.2%*	*6.2%*	*Feb-15*
Long-Term Income Objective 8%	*1.9%*	*8.0%*	*8.0%*	*8.0%*	*8.0%*	*8.0%*	*8.0%*	*8.0%*	*8.0%*	*8.0%*	*Feb-15*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Boyd Watterson GSA Fund, LP

Correspondence Summary

- Manager presented annual reviews at meetings in November 2016, February 2018, and May 2019.
- A partial redemption request of $1.0M was submitted effective December 31, 2022; proceeds will be used for rebalancing and cash needs. The partial redemption request was fully satisfied on its effective date, December 31, 2022. Proceeds were received January 27, 2023.

Manager Summary

- IPS conducted due diligence meetings with Boyd Watterson on May 26, 2021, September 21, 2021, October 17, 2022, July 14, 2023 and November 10, 2023.
- In January 2023, Boyd Watterson requested limited partner consent for several proposed amendments to the Fund's Limited Partnership Agreement (LPA). IPS provided clients with a memo recommending consent to the proposed amendment, subject to counsel review. Boyd Watterson has requested consent be provided by March 31, 2023. In April 2023, Boyd Watterson notified IPS that the amendment received the necessary approval and will take effect on July 1, 2023.

Recommendation: None.

Compliance Summary

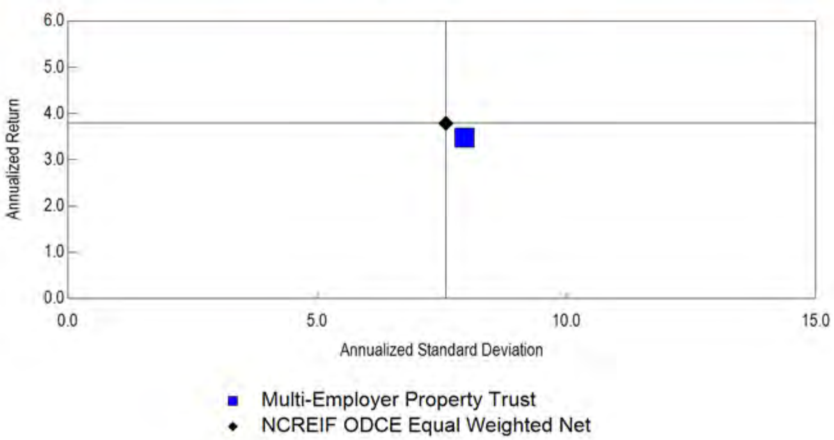
Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines to the extent described in the Fund Documents.

Items of Interests: Derivatives - The manager stated the Fund does not utilize derivatives as an investment vehicle. The manager also stated the Fund does not utilize interest rate swaps to hedge risk related to variable rate loans. **E&O -**The manager stated the investment manager provides bonding for the Fund in accordance with the requirements of Section 412 of ERISA.

Account Information	
Account Name	Multi-Employer Property Trust
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	7/01/01
Account Type	Real Estate - Core
Benchmark	NCREIF ODCE Equal Weighted Net
Universe	

Income is distributed.

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



Multi-Employer Property Trust
Ending December 31, 2023

	Fourth Quarter	Inception 7/1/01
Beginning Market Value	$5,669,759	$0
Net Cash Flow	$0	-$7,931,775
Net Investment Change	-$330,850	$13,270,684
Ending Market Value	$5,338,909	$5,338,909

3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Multi-Employer Property Trust	3.8%	10.2%	103.6%	111.4%
NCREIF ODCE Equal Weighted Net	4.4%	9.8%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Multi-Employer Property Trust	3.5%	8.0%	106.6%	115.3%
NCREIF ODCE Equal Weighted Net	3.8%	7.6%	100.0%	100.0%

					Calendar Years						
	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Multi-Employer Property Trust	-5.6%	-14.8%	3.8%	3.5%	-14.8%	8.7%	20.8%	1.4%	4.6%	6.3%	Jul-01
NCREIF ODCE Equal Weighted Net	*-5.4%*	*-13.4%*	*4.4%*	*3.8%*	*-13.4%*	*7.6%*	*21.9%*	*0.8%*	*5.2%*	*6.1%*	*Jul-01*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Multi-Employer Property Trust

Correspondence Summary

- Manager presented annual reviews at meetings in August 2016, August 2017, and February 2019.
- A partial redemption request of $1.5M was submitted effective June 30, 2020; proceeds were used for rebalancing purposes. The partial redemption request was fully satisfied as of July 2021.
- A partial redemption request of $1.25M was submitted effective March 31, 2022; proceeds were used for ongoing cash needs. The partial redemption request was fully satisfied as of October 2022.

Manager Summary

- IPS conducted due diligence meetings with MEPT on February 25, 2021, September 14, 2021, February 16, 2023 and December 8, 2023.
- MEPT implemented a withdrawal queue effective March 31, 2020, and income distributions are gated pending available liquidity as determined by the manager.

Recommendation: None.

Compliance Summary

Manager verified the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Liquidity – The manager stated it is the Fund's normal practice to provide for contributions and redemptions on the first day of the quarter following a valid request to contribute or redeem an investor's capital. The Fund has implemented a redemption queue and until such time that all redemption requests are satisfied, on a pro-rata basis, excess liquidity is distributed quarterly to clients that have requested redemptions. **Personnel Departure -** The manager stated effective December 31, 2023, Robert B. Edwards retired from his position as President of NewTower Trust Company (NewTower), and Melanie Domres succeeded Mr. Edwards as President of NewTower effective January 1, 2024. Mr. Edwards continues to remain on NewTower's Board of Directors. Ms. Domres was previously appointed Chief Operating Officer of NewTower in June 2023.

Account Information	
Account Name	**Boyd Watterson State Government Fund, LP**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**10/01/21**
Account Type	**Real Estate - Value Add**
Benchmark	**NCREIF ODCE Equal Weighted Net**
Universe	

Boyd Watterson State Government Fund, LP

Ending December 31, 2023

	Fourth Quarter	Inception 10/1/21
Beginning Market Value	$18,832,660	$0
Net Cash Flow	-$232,898	$17,276,090
Net Investment Change	-$372,501	$951,171
Ending Market Value	$18,227,261	$18,227,261

Income is distributed.

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Boyd Watterson State Government Fund, LP	-1.7%	-1.2%	--	--	-1.2%	7.4%	--	--	--	3.6%	Oct-21
NCREIF ODCE Equal Weighted Net	*-5.4%*	*-13.4%*	--	--	*-13.4%*	*7.6%*	--	--	--	*0.1%*	*Oct-21*
Long-Term Income Objective 9%	*2.2%*	*9.0%*	--	--	*9.0%*	*9.0%*	--	--	--	*9.0%*	*Oct-21*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Boyd Watterson State Government Fund, LP

Manager Summary

- IPS conducted due diligence meetings with Boyd Watterson on May 26, 2021, September 21, 2021, October 17, 2022, July 14, 2023 and November 10, 2023.
- IPS clients received discounted annual management fees of 90 basis points (0.90%) through December 31, 2020 and 115 bps (1.15%) for calendar year 2021. Effective January 1, 2022, a tiered management fee structure of 125 basis points (1.25%) on the first $25 million, 115 bps (1.15%) on the next $75 million and 1.05% on invested capital above $100 million will apply.
- In December 2022, Boyd Watterson requested limited partner consent for several proposed amendments to the Fund's Limited Partnership Agreement (LPA). IPS provided clients with a memo recommending consent to the proposed amendment, subject to counsel review. Boyd Watterson has requested consent be provided by March 31, 2023. In April 2023, Boyd Watterson notified IPS that the amendment received the necessary approval and will take effect on July 1, 2023.

Recommendation: None.

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines to the extent described in the Fund Documents.

Items of Interests: Derivatives - The manager stated the Fund does not utilize derivatives as an investment vehicle. The manager also stated the Fund does not utilize interest rate swaps to hedge risk related to variable rate loans. **E&O -**The manager stated the investment manger provides bonding for the Fund in accordance with the requirements of Section 412 of ERISA.

Account Information	
Account Name	**Grosvenor Opportunistic Credit Fund III, Ltd**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**1/01/14**
Account Type	**Opportunistic Strategies**
Benchmark	
Universe	

Grosvenor Opportunistic Credit Fund III, Ltd
Ending December 31, 2023

	Fourth Quarter	**Inception 1/1/14**
Beginning Market Value	$112,024	$0
Net Cash Flow	$0	-$454,525
Net Investment Change	-$271	$566,278
Ending Market Value	$111,753	$111,753

Note: Reported market values were provided by the manager and are preliminary. Market values and returns are subject to change.

Operating Engineers Local No. 77 Pension Plan - Grosvenor Opportunistic Credit Fund III, Ltd

Correspondence Summary

- Manager presented annual reviews at meetings in May 2016, February 2017, and November 2018.

Manager Summary

- IPS conducted due diligence meetings with Grosvenor on January 15, 2021, October 27, 2021, February 7, 2022, April 19, 2022, August 10, 2022, November 28, 2022, March 2, 2023 and September 12, 2023.
- In January 2021, Grosvenor announced that Craig Goldsmith, a Managing Director and one of three portfolio managers for Grosvenor's opportunistic credit strategies, will leave the firm later in the year. Mr. Goldsmith's responsibilities are expected to be absorbed by other members of Grosvenor's investment team.
- Tom Rowland, Grosvenor's Co-Head of Credit, left the firm in October 2022. Mr. Rowland has been with Grosvenor for 16 years. The Co-Head of Credit, Steve McMillan, remains in place and is now the sole Head of Credit. Grosvenor does not expect to replace Mr. Rowland and is comfortable having his responsibilities absorbed by Mr. McMillan and the remainder of the credit team.

Recommendation: The investment is illiquid (closed-end, self-liquidating fund).

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Personnel Changes - In a letter dated December 14, 2023, the manager stated they made the decision to create separate investment committees for their Real Assets and Private Equity activities. The committees began operating before the end of 2023 and will be comprised of the following individuals: **Real Assets Investment Committee -** Jon Levin, Fred Pollock, Peter Braffman, Scott Litman and Ravi Parekh. **Private Equity Investment Committee** - Jon Levin, Fred Pollock, Lee Brashear, Derek Jones, Jason Metakis, Brian Sullivan and Bernard Yancovich. **Form ADV** – The manager stated GCMLP's Form ADV Part 1, which is several hundred pages in length, can be found online at www.adviserinfo.sec.gov and Form ADV Part 2A can be accessed via the SEI Investor Dashboard/Client Web Portal. Any material changes in the Part 2A are listed in Item 2 of the Part 2A. **Communication** – The manager stated they believe the Fund is receiving all reporting it requires or has requested, but as the general partner and a fiduciary to Grosvenor Opportunistic Credit Fund III, Ltd and its investors, the firm cannot be bound by the terms and conditions of the Fund's investment policy statement.

Account Information	
Account Name	**Grosvenor Opportunistic Credit Fund IV, Ltd**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**9/30/15**
Account Type	**Opportunistic Strategies**
Benchmark	
Universe	

Grosvenor Opportunistic Credit Fund IV, Ltd

Ending December 31, 2023

	Fourth Quarter	**Inception 9/30/15**
Beginning Market Value	$349,691	$0
Net Cash Flow	-$25,448	-$208,655
Net Investment Change	-$13,089	$519,809
Ending Market Value	$311,154	$311,154

Note: Reported market values were provided by the manager and are preliminary. Market values and returns are subject to change.

Operating Engineers Local No. 77 Pension Plan - Grosvenor Opportunistic Credit Fund IV, Ltd

Correspondence Summary

- Manager presented annual reviews at meetings in May 2016, February 2017, and November 2018.

Manager Summary

- IPS conducted due diligence meetings with Grosvenor on January 15, 2021, October 27, 2021, February 7, 2022, April 19, 2022, August 10, 2022, November 28, 2022, March 2, 2023 and September 12, 2023.
- In January 2021, Grosvenor announced that Craig Goldsmith, a Managing Director and one of three portfolio managers for Grosvenor's opportunistic credit strategies, will leave the firm later in the year. Mr. Goldsmith's responsibilities are expected to be absorbed by other members of Grosvenor's investment team.
- Tom Rowland, Grosvenor's Co-Head of Credit, left the firm in October 2022. Mr. Rowland has been with Grosvenor for 16 years. The Co-Head of Credit, Steve McMillan, remains in place and is now the sole Head of Credit. Grosvenor does not expect to replace Mr. Rowland and is comfortable having his responsibilities absorbed by Mr. McMillan and the remainder of the credit team.

Recommendation: The investment is illiquid (closed-end, self-liquidating fund).

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Personnel Changes - In a letter dated December 14, 2023, the manager stated they made the decision to create separate investment committees for their Real Assets and Private Equity activities. The committees began operating before the end of 2023 and will be comprised of the following individuals: **Real Assets Investment Committee -** Jon Levin, Fred Pollock, Peter Braffman, Scott Litman and Ravi Parekh. **Private Equity Investment Committee** - Jon Levin, Fred Pollock, Lee Brashear, Derek Jones, Jason Metakis, Brian Sullivan and Bernard Yancovich. **Form ADV** – The manager stated GCMLP's Form ADV Part 1, which is several hundred pages in length, can be found online at www.adviserinfo.sec.gov and Form ADV Part 2A can be accessed via the SEI Investor Dashboard/Client Web Portal. Any material changes in the Part 2A are listed in Item 2 of the Part 2A. **Communication** – The manager stated they believe the Fund is receiving all reporting it requires or has requested, but as the general partner and a fiduciary to Grosvenor Opportunistic Credit Fund IV, Ltd and its investors, the firm cannot be bound by the terms and conditions of the Fund's investment policy statement.

Account Information

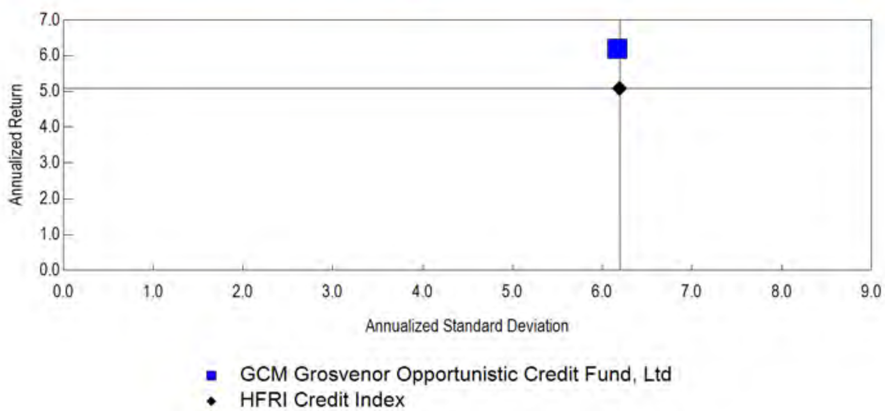
Account Name	GCM Grosvenor Opportunistic Credit Fund, Ltd
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	2/01/17
Account Type	Opportunistic Strategies
Benchmark	HFRI Credit Index
Universe	

GCM Grosvenor Opportunistic Credit Fund, Ltd
Ending December 31, 2023

	Fourth Quarter	Inception 2/1/17
Beginning Market Value	$10,344,218	$0
Net Cash Flow	$0	$8,221,823
Net Investment Change	$121,667	$2,244,062
Ending Market Value	$10,465,885	$10,465,885

Note: Reported market values were provided by the manager and are preliminary. Market values and returns are subject to change.

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
GCM Grosvenor Opportunistic Credit Fund, Ltd	6.7%	2.2%	92.7%	6.4%
HFRI Credit Index	4.3%	3.6%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
GCM Grosvenor Opportunistic Credit Fund, Ltd	6.2%	6.2%	92.1%	63.2%
HFRI Credit Index	5.1%	6.2%	100.0%	100.0%

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
GCM Grosvenor Opportunistic Credit Fund, Ltd	1.4%	8.3%	6.7%	6.2%	8.3%	1.1%	10.9%	1.6%	9.5%	5.6%	Feb-17
HFRI Credit Index	*3.1%*	*7.8%*	*4.3%*	*5.1%*	*7.8%*	*-2.6%*	*7.9%*	*6.3%*	*6.5%*	*4.3%*	*Feb-17*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - GCM Grosvenor Opportunistic Credit Fund, Ltd

Correspondence Summary

- Manager presented annual reviews at meetings in February 2017, and November 2018.

Manager Summary

- IPS conducted due diligence meetings with Grosvenor on January 15, 2021, October 27, 2021, February 7, 2022, April 19, 2022, August 10, 2022, November 28, 2022, March 2, 2023, September 12, 2023 and November 2, 2023.
- In January 2021, Grosvenor announced that Craig Goldsmith, a Managing Director and one of three portfolio managers for Grosvenor's opportunistic credit strategies, will leave the firm later in the year. Mr. Goldsmith's responsibilities are expected to be absorbed by other members of Grosvenor's investment team.
- Tom Rowland, Grosvenor's Co-Head of Credit, left the firm in October 2022. Mr. Rowland has been with Grosvenor for 16 years. The Co-Head of Credit, Steve McMillan, remains in place and is now the sole Head of Credit. Grosvenor does not expect to replace Mr. Rowland and is comfortable having his responsibilities absorbed by Mr. McMillan and the remainder of the credit team.

Recommendation: None.

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Personnel Changes - In a letter dated December 14, 2023, the manager stated they made the decision to create separate investment committees for their Real Assets and Private Equity activities. The committees began operating before the end of 2023 and will be comprised of the following individuals: **Real Assets Investment Committee -** Jon Levin, Fred Pollock, Peter Braffman, Scott Litman and Ravi Parekh. **Private Equity Investment Committee** - Jon Levin, Fred Pollock, Lee Brashear, Derek Jones, Jason Metakis, Brian Sullivan and Bernard Yancovich. **Form ADV** – The manager stated GCMLP's Form ADV Part 1, which is several hundred pages in length, can be found online at www.adviserinfo.sec.gov and Form ADV Part 2A can be accessed via the SEI Investor Dashboard/Client Web Portal. Any material changes in the Part 2A are listed in Item 2 of the Part 2A. **Communication** – The manager stated they believe the Fund is receiving all reporting it requires or has requested, but as the general partner and a fiduciary to Grosvenor Opportunistic Credit Fund V, Ltd. and its investors, the firm cannot be bound by the terms and conditions of the Fund's investment policy statement.

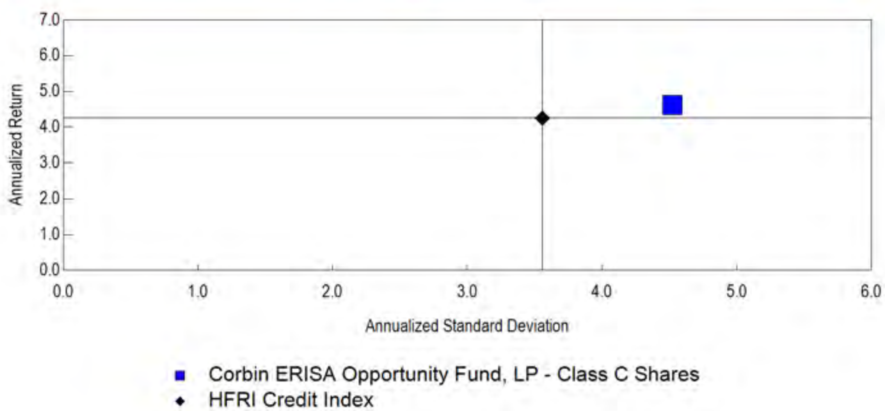
Account Information	
Account Name	Corbin ERISA Opportunity Fund, LP - Class C Shares
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	1/31/20
Account Type	Opportunistic Strategies
Benchmark	HFRI Credit Index
Universe	

Corbin ERISA Opportunity Fund, LP - Class C Shares
Ending December 31, 2023

	Fourth Quarter	Inception 1/31/20
Beginning Market Value	$10,072,435	$0
Net Cash Flow	$0	$8,500,000
Net Investment Change	$170,933	$1,743,368
Ending Market Value	$10,243,368	$10,243,368

Note: Reported market values were provided by the manager and are preliminary. Market values and returns are subject to change.

Annualized Return vs. Annualized Standard Deviation
3 Years Ending December 31, 2023



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Corbin ERISA Opportunity Fund, LP - Class C Shares	4.6%	4.5%	109.5%	107.9%
HFRI Credit Index	4.3%	3.6%	100.0%	100.0%

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Corbin ERISA Opportunity Fund, LP - Class C Shares	1.8%	4.9%	4.6%	--	4.9%	-3.7%	13.3%	--	--	5.8%	Jan-20
HFRI Credit Index	*3.1%*	*7.8%*	*4.3%*	*--*	*7.8%*	*-2.6%*	*7.9%*	*--*	*--*	*4.7%*	*Jan-20*
Long-Term Target Return of 8%	*1.9%*	*8.0%*	*8.0%*	*--*	*8.0%*	*8.0%*	*8.0%*	*--*	*--*	*8.0%*	*Jan-20*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Corbin ERISA Opportunity Fund, LP - Class C Shares

Correspondence Summary

- A partial redemption request of $2.0M was submitted effective December 31, 2022; proceeds were for benefit payments. The partial redemption request was fully satisfied on its effective date, December 31, 2022. Proceeds were received in March 2023.
- A partial redemption request of $1.0M was submitted effective March 31, 2024; proceeds will be used for rebalancing.

Manager Summary

- IPS conducted due diligence meetings with Corbin Capital on January 14, 2021, May 5, 2021, August 12, 2021, February 14, 2022, August 9, 2022, February 2, 2023, August 15, 2023 and November 7, 2023.
- On July 12, 2021, Corbin contacted IPS regarding a planned ownership change that will result in a change in control event. The planned transaction will eliminate the ownership stake of one of the firm's two original co-founders (both of whom are no longer employed by Corbin or involved in the management of the business) and reduce the ownership stake of the other co-founder. Subsequently, Corbin will have a new, passive minority partner and the existing employee partners will increase their ownership stakes to hold a majority interest. None of the existing employee owners are expected to depart as a result of the transaction, which will increase the ownership stake of Corbin's employee partners and does not represent a liquidity event for them, nor is it expected to have an immediate impact on the investment team. The transaction closed on October 1, 2021.

Recommendation: Monitor performance for improvement.

Compliance Summary

The manager verified the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, the manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Personnel Departure - The manager stated Rob Zellner, Deputy Chief Investment Officer, left the firm on October 31, 2023, as noted in their communication dated October 11, 2023. **Legal -** The manager stated in Q2 2023, Corbin together with two funds that it manages were named as defendants in a complaint filed by an underlying manager alleging, among other things, breach of contract. On December 13, 2023, the Supreme Court of the State of New York dismissed two of the three counts. The opposing party filed an amended complaint and Corbin will respond in a timely manner as required by the court.

Account Information	
Account Name	**GCM Grosvenor Secondary Opportunities Feeder Fund II, LP**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**5/31/18**
Account Type	**Private Equity**
Benchmark	
Universe	

GCM Grosvenor Secondary Opportunities Feeder Fund II, LP

Ending December 31, 2023

	Fourth Quarter	**Inception 5/31/18**
Beginning Market Value	$7,454,199	$0
Net Cash Flow	$0	$4,759,697
Net Investment Change	$0	$2,694,502
Ending Market Value	$7,454,199	$7,454,199

Note: Investment is valued as of September 30, 2023, plus or minus any flows.

Operating Engineers Local No. 77 Pension Plan - GCM Grosvenor Secondary Opportunities Feeder Fund II, LP

Correspondence Summary

- Manager presented annual review at meeting in November 2018.

Manager Summary

- IPS conducted due diligence meetings with Grosvenor on March 17, 2021, December 3, 2021, June 28, 2023 and October 31, 2023.

The investment is illiquid (closed-end, self-liquidating fund).

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and /or offering document guidelines.

Items of Interest: Personnel Changes - In a letter dated December 14, 2023, the manager stated they made the decision to create separate investment committees for their Real Assets and Private Equity activities. The committees began operating before the end of 2023 and will be comprised of the following individuals: **Real Assets Investment Committee -** Jon Levin, Fred Pollock, Peter Braffman, Scott Litman and Ravi Parekh. **Private Equity Investment Committee** - Jon Levin, Fred Pollock, Lee Brashear, Derek Jones, Jason Metakis, Brian Sullivan and Bernard Yancovich. **Form ADV** – The manager stated GCMLP's Form ADV Part 1, which is several hundred pages in length, can be found online at www.adviserinfo.sec.gov and Form ADV Part 2A can be accessed via the SEI Investor Dashboard/Client Web Portal. Any material changes in the Part 2A are listed in Item 2 of the Part 2A. **Communication** – The manager stated they believe the Fund is receiving all reporting it requires or has requested, but as the general partner and a fiduciary to GCM Grosvenor Secondary Opportunities Fund II, L.P. and its investors, the firm cannot be bound by the terms and conditions of the Fund's investment policy statement.

Account Information	
Account Name	**GCM Grosvenor Secondary Opportunities Feeder Fund III, LP**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**7/01/21**
Account Type	**Private Equity**
Benchmark	
Universe	

GCM Grosvenor Secondary Opportunities Feeder Fund III, LP
Ending December 31, 2023

	Fourth Quarter	**Inception 7/1/21**
Beginning Market Value	$3,597,726	$0
Net Cash Flow	$0	$2,892,119
Net Investment Change	$0	$705,607
Ending Market Value	$3,597,726	$3,597,726

Note: Investment is valued as of September 30, 2023, plus or minus any flows.

Operating Engineers Local No. 77 Pension Plan - GCM Grosvenor Secondary Opportunities Feeder Fund III, LP

Manager Summary

- IPS conducted due diligence meetings with Grosvenor on March 17, 2021, December 3, 2021, June 28, 2023 and October 31, 2023.

The investment is illiquid (closed-end, self-liquidating fund).

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Personnel Changes - In a letter dated December 14, 2023, the manager stated they made the decision to create separate investment committees for their Real Assets and Private Equity activities. The committees began operating before the end of 2023 and will be comprised of the following individuals: **Real Assets Investment Committee -** Jon Levin, Fred Pollock, Peter Braffman, Scott Litman and Ravi Parekh. **Private Equity Investment Committee** - Jon Levin, Fred Pollock, Lee Brashear, Derek Jones, Jason Metakis, Brian Sullivan and Bernard Yancovich. **Form ADV** – The manager stated GCMLP's Form ADV Part 1, which is several hundred pages in length, can be found online at www.adviserinfo.sec.gov and Form ADV Part 2A can be accessed via the SEI Investor Dashboard/Client Web Portal. Any material changes in the Part 2A are listed in Item 2 of the Part 2A. **Communication** – The manager stated they believe the Fund is receiving all reporting it requires or has requested, but as the general partner and a fiduciary to GCM Grosvenor Secondary Opportunities Fund III, L.P. and its investors, the firm cannot be bound by the terms and conditions of the Fund's investment policy statement.

Account Information	
Account Name	**WaCap - SP Infrastructure Fund IV Feeder**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**7/01/21**
Account Type	**Infrastructure**
Benchmark	
Universe	

WaCap - SP Infrastructure Fund IV Feeder
Ending December 31, 2023

	Fourth Quarter	**Inception 7/1/21**
Beginning Market Value	$2,553,769	$0
Net Cash Flow	$74,409	$2,345,533
Net Investment Change	$0	$282,644
Ending Market Value	$2,628,178	$2,628,178

Note: Investment is valued as of September 30, 2023, plus or minus any flows.

Operating Engineers Local No. 77 Pension Plan - WaCap - SP Infrastructure Fund IV Feeder

Manager Summary

- IPS participated in the Stonepeak mid-year update call on May 26, 2022 and May 11, 2023.

The investment is illiquid (closed-end, self-liquidating fund).

Compliance Summary

Manager certified that the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle guidelines and/or prospectus.

Items of Interest: Ownership Changes - The manager stated there were some percentage ownership changes among shareholders; however, the firm remains 100% employee owned.

Investment Policy Statement

- The current investment policy statement was adopted and signed on August 11, 2015.

Custody Bank

- The current custodian is PNC Bank.
- Separate account market values and flows are derived from the custodial statement.

Commission Recapture Provider

- Cowen and Company, LLC.
- IPS evaluated the benefits of ongoing participation in a commission recapture program and suggested Funds continue to participate in them. To potentially enhance the managers' utilization of the commission recapture program, in November 2022, as a courtesy IPS provided draft notices for the Fund Administrator to consider sending to the investment managers.

Commingled Funds

- Commingled Fund: Due to the commingled fund structure, IPS does not monitor the holdings within the commingled fund for compliance with the client's investment policy statement. The commingled fund is governed by its own investment policy.
- Commingled fund market values and flows are derived from the manager statement.

Operating Engineers Local No. 77 Pension Plan

Appendix

Performance Detail (Gross of Fees) - Annualized

			Ending December 31, 2023							
	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Total Fund	**$191,643,016**	**100.0%**	**4.7%**	**8.7%**	**4.2%**	**8.6%**	**7.8%**	**7.4%**	**9.0%**	**Apr-88**
Total Domestic Large Cap Equity	**$32,850,491**	**17.1%**	**13.0%**	**27.1%**	**6.0%**	**14.6%**	**12.8%**	**11.3%**	**--**	**Jul-01**
Northern Trust Collective Russell 1000 Growth Index Fund	$16,814,636	8.8%	14.2%	--	--	--	--	--	23.6%	May-23
Russell 1000 Growth			*14.2%*	*--*	*--*	*--*	*--*	*--*	*23.5%*	*May-23*
Wedge Capital Management - QVM	$16,035,855	8.4%	11.7%	17.5%	11.1%	13.7%	10.7%	10.1%	10.0%	Jul-01
Russell 1000 Value			*9.5%*	*11.5%*	*8.9%*	*10.9%*	*8.3%*	*8.4%*	*7.3%*	*Jul-01*
Total Domestic Mid Cap Equity	**$10,294,080**	**5.4%**	**13.8%**	**26.2%**	**5.1%**	**16.5%**	**14.3%**	**11.7%**	**--**	**Apr-06**
TimesSquare Capital Management	$10,294,080	5.4%	13.8%	26.2%	5.1%	16.5%	14.3%	11.7%	11.2%	Apr-06
Russell MidCap Growth			*14.5%*	*25.9%*	*1.3%*	*13.8%*	*12.5%*	*10.6%*	*9.5%*	*Apr-06*
Total Domestic Small Cap Equity	**$9,225,393**	**4.8%**	**11.9%**	**12.9%**	**5.8%**	**7.8%**	**3.5%**	**3.8%**	**--**	**Jul-04**
Eaton Vance Small Cap Collective Investment Trust Fund	$9,225,393	4.8%	11.9%	12.9%	5.8%	--	--	--	8.7%	Sep-19
Russell 2000			*14.0%*	*16.9%*	*2.2%*	*--*	*--*	*--*	*8.7%*	*Sep-19*
Total International Large Cap Equity	**$9,587,364**	**5.0%**	**5.8%**	**6.9%**	**-5.7%**	**8.9%**	**9.1%**	**6.6%**	**--**	**Apr-97**
Hardman Johnston International Equity Group Trust	$4,871,364	2.5%	5.3%	6.4%	-5.9%	8.8%	9.0%	6.6%	8.1%	Jul-09
MSCI EAFE			*10.4%*	*18.2%*	*4.0%*	*8.2%*	*6.9%*	*4.3%*	*6.6%*	*Jul-09*
MSCI ACWI ex USA Growth			*11.1%*	*14.0%*	*-2.7%*	*7.5%*	*7.1%*	*4.5%*	*6.7%*	*Jul-09*
Barrow Hanley Non-US Value CIT - Founders Class	$4,716,000	2.5%	--	--	--	--	--	--	4.8%	Dec-23
MSCI EAFE Value			*--*	*--*	*--*	*--*	*--*	*--*	*4.9%*	*Dec-23*
Total International Small Cap Equity	**$10,137,585**	**5.3%**	**10.0%**	**16.3%**	**1.1%**	**9.2%**	**--**	**--**	**3.9%**	**Mar-18**
Victory Trivalent International Small-Cap Collective Fund	$10,137,585	5.3%	10.0%	16.3%	1.1%	9.2%	--	--	3.9%	Mar-18
S&P Developed Ex-U.S. Small Cap (Net)			*10.7%*	*13.5%*	*-0.9%*	*6.7%*	*--*	*--*	*1.9%*	*Mar-18*
Total Investment Grade Fixed Income	**$16,339,002**	**8.5%**	**4.5%**	**5.5%**	**-1.3%**	**2.0%**	**1.9%**	**2.2%**	**4.5%**	**Jun-95**
Wedge Capital Management	$16,339,002	8.5%	4.5%	5.5%	-1.3%	2.0%	1.9%	2.2%	3.6%	Jan-03
Wedge Custom Benchmark			*4.6%*	*5.2%*	*-1.6%*	*1.6%*	*1.6%*	*1.7%*	*3.2%*	*Jan-03*

Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
			Ending December 31, 2023							
Total Short Duration High Yield Fixed Income	**$21,195,414**	**11.1%**	**4.2%**	**7.8%**	**2.6%**	**4.1%**	**3.6%**	**3.4%**	**3.5%**	**Jan-13**
Chartwell Investment Partners SDHY	$21,195,414	11.1%	4.2%	7.8%	2.6%	4.1%	3.6%	3.4%	3.5%	Jan-13
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*4.0%*	*8.8%*	*2.9%*	*4.5%*	*4.0%*	*3.9%*	*4.0%*	*Jan-13*
Bloomberg US Govt/Credit Int TR			*4.6%*	*5.2%*	*-1.6%*	*1.6%*	*1.6%*	*1.7%*	*1.5%*	*Jan-13*
Total Mortgages	**$10,070,194**	**5.3%**	**1.9%**	**4.8%**	**2.9%**	**3.5%**	**3.7%**	**4.0%**	**3.8%**	**Oct-04**
Ullico - J for Jobs	$4,752,494	2.5%	1.9%	4.5%	3.0%	3.3%	3.5%	3.6%	3.2%	Oct-04
Bloomberg US Aggregate TR			*6.8%*	*5.5%*	*-3.3%*	*1.1%*	*1.3%*	*1.8%*	*3.1%*	*Oct-04*
Washington Capital JMT Mortgage Income Fund	$5,317,700	2.8%	2.0%	5.0%	2.7%	3.8%	3.9%	4.4%	5.0%	Oct-04
Bloomberg US Aggregate TR			*6.8%*	*5.5%*	*-3.3%*	*1.1%*	*1.3%*	*1.8%*	*3.1%*	*Oct-04*
Total Real Estate - Core	**$18,309,746**	**9.6%**	**-3.1%**	**-8.9%**	**4.8%**	**4.8%**	**5.9%**	**7.8%**	**6.7%**	**Jul-01**
Principal U.S. Property Account	$6,722,282	3.5%	-2.2%	-10.1%	5.3%	4.9%	6.1%	8.1%	7.4%	Oct-01
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	*4.4%*	*3.8%*	*4.7%*	*6.7%*	*6.1%*	*Oct-01*
Boyd Watterson GSA Fund, LP	$6,248,555	3.3%	-1.9%	-1.9%	4.3%	5.9%	6.9%	--	7.7%	Feb-15
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	*4.4%*	*3.8%*	*4.7%*	--	*6.2%*	*Feb-15*
Long-Term Income Objective 8%			*1.9%*	*8.0%*	*8.0%*	*8.0%*	*8.0%*	--	*8.0%*	*Feb-15*
Multi-Employer Property Trust	$5,338,909	2.8%	-5.6%	-14.8%	3.8%	3.5%	4.6%	6.7%	6.3%	Jul-01
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	*4.4%*	*3.8%*	*4.7%*	*6.7%*	*6.1%*	*Jul-01*
Total Real Estate - Value Add	**$18,227,261**	**9.5%**	**-1.7%**	**-1.2%**	**--**	**--**	**--**	**--**	**3.6%**	**Oct-21**
Boyd Watterson State Government Fund, LP	$18,227,261	9.5%	-1.7%	-1.2%	--	--	--	--	3.6%	Oct-21
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	--	--	--	--	*0.1%*	*Oct-21*
Long-Term Income Objective 9%			*2.2%*	*9.0%*	--	--	--	--	*9.0%*	*Oct-21*

Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
			Ending December 31, 2023							
Total Opportunistic Strategies	**$21,132,160**	**11.0%**								
Grosvenor Opportunistic Credit Fund III, Ltd	$111,753	0.1%								
Grosvenor Opportunistic Credit Fund IV, Ltd	$311,154	0.2%								
GCM Grosvenor Opportunistic Credit Fund, Ltd	$10,465,885	5.5%	1.4%	8.3%	6.7%	6.2%	--	--	5.6%	Feb-17
HFRI Credit Index			*3.1%*	*7.8%*	*4.3%*	*5.1%*	*--*	*--*	*4.3%*	*Feb-17*
Corbin ERISA Opportunity Fund, LP - Class C Shares	$10,243,368	5.3%	1.8%	4.9%	4.6%	--	--	--	5.8%	Jan-20
HFRI Credit Index			*3.1%*	*7.8%*	*4.3%*	*--*	*--*	*--*	*4.7%*	*Jan-20*
Long-Term Target Return of 8%			*1.9%*	*8.0%*	*8.0%*	*--*	*--*	*--*	*8.0%*	*Jan-20*
Total Private Equity	**$11,051,925**	**5.8%**								
GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	$7,454,199	3.9%								
GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	$3,597,726	1.9%								
Total Infrastructure - Value Add	**$2,628,178**	**1.4%**								
WaCap - SP Infrastructure Fund IV Feeder	$2,628,178	1.4%								
Total Cash Equivalents	**$594,223**	**0.3%**								
Cash Account	$243,515	0.1%								
Cash in Transit - Boyd Watterson GSA Fund, LP Distribution Proceeds	$92,115	0.0%								
Cash in Transit - Boyd Watterson State Government Fund, LP Distribution Proceeds	$232,898	0.1%								
Grosvenor Opportunistic Credit Fund V Escrow	$25,695	0.0%								

Account	Fee Schedule	Market Value As of 12/31/2023	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Total Domestic Large Cap Equity	**-**	**$32,850,491**	**17.1%**	**--**	**--**
Northern Trust Collective Russell 1000 Growth Index Fund	0.04% of Assets	$16,814,636	8.8%	$6,726	0.04%
**Wedge Capital Management - QVM	0.50% of Assets	$16,035,855	8.4%	$80,179	0.50%
Total Domestic Mid Cap Equity	**-**	**$10,294,080**	**5.4%**	**--**	**--**
TimesSquare Capital Management	0.80% of First 50.0 Mil, 0.70% of Next 50.0 Mil, 0.60% Thereafter	$10,294,080	5.4%	$82,353	0.80%
Total Domestic Small Cap Equity	**-**	**$9,225,393**	**4.8%**	**--**	**--**
Eaton Vance Small Cap Collective Investment Trust Fund	0.55% of Assets	$9,225,393	4.8%	$50,740	0.55%
Total International Large Cap Equity	**-**	**$9,587,364**	**5.0%**	**--**	**--**
Hardman Johnston International Equity Group Trust	0.75% of First 25.0 Mil, 0.60% of Next 75.0 Mil, 0.50% Thereafter	$4,871,364	2.5%	$36,535	0.75%
Barrow Hanley Non-US Value CIT - Founders Class	0.53% of Assets	$4,716,000	2.5%	$24,995	0.53%
Total International Small Cap Equity	**-**	**$10,137,585**	**5.3%**	**--**	**--**
Victory Trivalent International Small-Cap Collective Fund	0.85% of Assets	$10,137,585	5.3%	$86,169	0.85%
Total Investment Grade Fixed Income	**-**	**$16,339,002**	**8.5%**	**--**	**--**
**Wedge Capital Management	0.33% of Assets	$16,339,002	8.5%	$53,102	0.33%
Total Short Duration High Yield Fixed Income	**-**	**$21,195,414**	**11.1%**	**--**	**--**
Chartwell Investment Partners SDHY	0.50% of Assets	$21,195,414	11.1%	$105,977	0.50%
Total Mortgages	**-**	**$10,070,194**	**5.3%**	**--**	**--**
Ullico - J for Jobs	0.55% of First 90.0 Mil, 0.50% Thereafter	$4,752,494	2.5%	$26,139	0.55%
Washington Capital JMT Mortgage Income Fund	0.50% of Assets	$5,317,700	2.8%	$26,589	0.50%

Account	Fee Schedule	Market Value As of 12/31/2023	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Total Real Estate - Core	**-**	**$18,309,746**	**9.6%**	**--**	**--**
Principal U.S. Property Account	1.10% of Assets	$6,722,282	3.5%	$73,945	1.10%
Boyd Watterson GSA Fund, LP	1.25% of First 25.0 Mil, 1.15% of Next 75.0 Mil, 1.05% Thereafter	$6,248,555	3.3%	$78,107	1.25%
Multi-Employer Property Trust	0.87% of Assets	$5,338,909	2.8%	$46,449	0.87%
Total Real Estate - Value Add	**-**	**$18,227,261**	**9.5%**	**--**	**--**
Boyd Watterson State Government Fund, LP	1.25% of First 25.0 Mil, 1.15% of Next 75.0 Mil, 1.05% Thereafter	$18,227,261	9.5%	$227,841	1.25%
Total Opportunistic Strategies	**-**	**$21,132,160**	**11.0%**	**--**	**--**
Grosvenor Opportunistic Credit Fund III, Ltd	0.80% of Assets	$111,753	0.1%	$894	0.80%
Grosvenor Opportunistic Credit Fund IV, Ltd	0.80% of Assets	$311,154	0.2%	$2,489	0.80%
GCM Grosvenor Opportunistic Credit Fund, Ltd	0.80% of Assets	$10,465,885	5.5%	$83,727	0.80%
Corbin ERISA Opportunity Fund, LP - Class C Shares	0.85% of Assets	$10,243,368	5.3%	$87,069	0.85%
Total Private Equity	**-**	**$11,051,925**	**5.8%**	**--**	**--**
*GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	17,213 Quarterly	$7,454,199	3.9%	$68,852	0.92%
*GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	14,875 Quarterly	$3,597,726	1.9%	$59,500	1.65%
Total Infrastructure - Value Add	**-**	**$2,628,178**	**1.4%**	**--**	**--**
*WaCap - SP Infrastructure Fund IV Feeder	18,750 Quarterly	$2,628,178	1.4%	$75,000	2.85%

Account	Fee Schedule	Market Value As of 12/31/2023	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Total Cash Equivalents	**-**	**$594,223**	**0.3%**	**--**	**--**
Cash Account	-	$243,515	0.1%	--	--
Cash in Transit - Boyd Watterson GSA Fund, LP Distribution Proceeds	-	$92,115	0.0%	--	--
Cash in Transit - Boyd Watterson State Government Fund, LP Distribution Proceeds	-	$232,898	0.1%	--	--
Grosvenor Opportunistic Credit Fund V Escrow	-	$25,695	0.0%	--	--
Investment Management Fee		**$191,643,016**	**100.0%**	**$1,383,375**	**0.72%**

Note: The above fee schedules may not include incentive fees, operating expenses, custodian fees, or other administrative costs.

* The estimated annual fee (%) shown in the above table is calculated based on the investment market value. For investments in which the fee is based on committed capital, the estimated annual fee (%) shown may not be representative of the actual annual fee (%).

**Fee schedule represents the effective rate from the aggregation of assets of related Funds.

Benchmark History

Total Fund		
10/1/2023	Present	Russell 1000 15% / Russell MidCap Growth 5% / Russell 2000 5% / MSCI EAFE 5% / S&P Developed Ex-U.S. Small Cap (Net) 5% / Bloomberg US Govt/Credit Int TR 10% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 12.5% / Bloomberg US Aggregate TR 5% / NCREIF ODCE Equal Weighted Net 20% / HFRI Credit Index 10% / Russell 2000 5% / CPI + 400 Basis Points 2.5%
10/1/2021	9/30/2023	Russell 1000 20% / Russell 2000 5% / Russell MidCap Growth 5% / MSCI EAFE 7.5% / Bloomberg US Govt/Credit Int TR 5% / Bloomberg US Aggregate TR 5% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 5% / NCREIF ODCE Equal Weighted Net 20% / HFRI Fund of Funds Composite Index 2.5% / 65% MSCI World Index/35% FTSE WGBI 2.5% / Russell 2000 5% / S&P Developed Ex-U.S. SmallCap 5% / HFRI Credit Index 10% / CPI + 400 Basis Points 2.5%
11/1/2019	9/30/2021	Russell 1000 Value 10% / Russell 1000 Growth 10% / Russell 2000 5% / Russell MidCap Growth 5% / MSCI EAFE 5% / Bloomberg US Govt/Credit Int TR 5% / Bloomberg US Aggregate TR 5% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 5% / NCREIF ODCE Equal Weighted Net 17.5% / HFRI Fund of Funds Composite Index 5% / 65% MSCI World Index/35% FTSE WGBI 7.5% / Russell 2000 5% / S&P Developed Ex-U.S. SmallCap 5% / HFRI Credit Index 10%
2/2/2018	10/31/2019	Russell 1000 Value 10% / Russell 1000 Growth 10% / Russell 2000 Value 5% / Russell MidCap Growth 5% / MSCI EAFE 5% / Bloomberg US Govt/Credit Int TR 7.5% / Bloomberg US Aggregate TR 5% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 5% / NCREIF ODCE Equal Weighted Net 17.5% / HFRI Fund of Funds Composite Index 5% / 65% MSCI World Index/35% FTSE WGBI 10% / HFRI Credit Index 5% / Russell 2000 Value 5% / S&P Developed Ex-U.S. SmallCap 5%
1/1/2017	2/1/2018	Russell 1000 Value 25% / Russell 2000 Value 5% / Russell MidCap Growth 7.5% / MSCI EAFE 5% / Bloomberg US Govt/Credit Int TR 7.5% / Bloomberg US Aggregate TR 5% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 5% / NCREIF ODCE Equal Weighted Net 20% / HFRI Fund of Funds Composite Index 5% / 65% MSCI World Index/35% FTSE WGBI 10% / HFRI Credit Index 5%
2/1/2015	12/31/2016	MSCI EAFE 5% / HFRI Fund of Funds Composite Index 10% / Russell 1000 Value 25% / Russell 2000 Value 5% / Russell MidCap Growth 7.5% / 65% MSCI World Index/35% FTSE WGBI 10% / Bloomberg US Govt/Credit Int TR 7.5% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 5% / NCREIF ODCE Equal Weighted Net 20% / Bloomberg US Aggregate TR 5%
6/1/2013	1/31/2015	MSCI EAFE 7.5% / HFRI Fund of Funds Composite Index 10% / Russell 1000 Value 12.5% / Russell 2000 Value 7.5% / Russell MidCap Growth 7.5% / Russell 1000 Growth 12.5% / 65% MSCI World Index/35% FTSE WGBI 10% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 5% / Bloomberg US Govt/Credit Int TR 5% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 5% / NCREIF ODCE Equal Weighted Net 17.5%
1/1/2013	5/31/2013	MSCI EAFE 7.5% / Bloomberg US Aggregate TR 5% / Bloomberg US Aggregate TR 5% / HFRI Fund of Funds Composite Index 10% / Russell 1000 Value 12.5% / Russell 2000 Value 7.5% / Russell MidCap Growth 7.5% / Russell 1000 Growth 12.5% / 65% MSCI World Index/35% FTSE WGBI 10% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 5% / NCREIF ODCE Equal Weighted Net 17.5%
7/1/2012	12/31/2012	MSCI EAFE 7.5% / Bloomberg US Aggregate TR 5% / Bloomberg US Aggregate TR 5% / HFRI Fund of Funds Composite Index 15% / Russell 1000 Value 12.5% / Russell 2000 Value 7.5% / Russell MidCap Growth 7.5% / Russell 1000 Growth 12.5% / 65% MSCI World Index/35% FTSE WGBI 10% / NCREIF ODCE Equal Weighted Net 17.5%
1/1/2011	6/30/2012	MSCI EAFE 10% / Bloomberg US Aggregate TR 5% / Bloomberg US Aggregate TR 5% / HFRI Fund of Funds Composite Index 15% / Russell 1000 Value 12.5% / Russell 2000 Value 7.5% / Russell MidCap Growth 7.5% / Russell 1000 Growth 12.5% / 65% MSCI World Index/35% FTSE WGBI 10% / NCREIF ODCE Equal Weighted Net 15%
4/1/2010	12/31/2010	MSCI EAFE 15% / Bloomberg US Aggregate TR 5% / Bloomberg US Aggregate TR 5% / HFRI Fund of Funds Composite Index 15% / Russell 1000 Value 12.5% / Russell 2000 Value 10% / Russell MidCap Growth 10% / Russell 1000 Growth 12.5% / NCREIF ODCE Equal Weighted Net 15%
1/1/2009	3/31/2010	S&P 500 34% / MSCI EAFE 11% / Bloomberg US Aggregate TR 25% / HFRI Fund of Funds Composite Index 10% / NCREIF ODCE Equal Weighted Net 20%
4/1/2007	12/31/2008	S&P 500 34% / MSCI EAFE 11% / Bloomberg US Aggregate TR 25% / HFRI Fund of Funds Composite Index 10% / NCREIF ODCE Equal Weighted Net 20%
10/1/2005	3/31/2007	Bloomberg US Aggregate TR 30% / MSCI EAFE 12% / S&P 500 38% / NCREIF ODCE Equal Weighted Net 20%
10/1/2004	9/30/2005	S&P 500 38% / MSCI EAFE 12% / Bloomberg US Aggregate TR 30% / NCREIF ODCE Equal Weighted Net 20%
10/1/2002	9/30/2004	S&P 500 55% / MSCI EAFE 10% / Bloomberg US Aggregate TR 25% / NCREIF ODCE Equal Weighted Net 10%
7/1/2001	9/30/2002	S&P 500 55% / Bloomberg US Govt/Credit TR 25% / MSCI EAFE 10% / NCREIF ODCE Equal Weighted Net 10%
4/1/1997	6/30/2001	Bloomberg US Govt/Credit TR 35% / MSCI EAFE 10% / S&P 500 55%
1/1/1990	3/31/1997	Bloomberg US Govt/Credit TR 6000% / S&P 500 40%
4/1/1988	12/31/1989	Bloomberg US Govt/Credit TR 45% / S&P 500 55%

Benchmark History

Wedge Capital Management		
6/1/2013	Present	Bloomberg US Govt/Credit Int TR 100%
1/1/2003	5/31/2013	Bloomberg US Aggregate TR 100%

Index Disclosures

- Bloomberg US Govt/Credit Int TR - Index is listed for illustrative purposes.
- HFRI Credit Index - Index is listed for illustrative purposes.
- Long-Term Target Return of 8% - Index is listed for illustrative purposes.
- Long-Term Income Objective 8% -The manager's stated objective of an 8% net income return is listed for illustrative purposes.
- Long-Term Income Objective 9% -The manager's stated objective of an 9% net income return is listed for illustrative purposes.
- MSCI ACWI ex USA Growth - Index is listed for illustrative purposes.
- The NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE) is a non-investable, time-weighted index comprised of the time weighted returns of approximately 40 open-end commingled funds pursuing a core private real estate investment strategy. The constituent funds qualify for inclusion in the NFI-ODCE based on specific criteria regarding their percentage of net assets invested in private equity real estate, geography, property type, life cycle, diversification and use of leverage. Constituent funds must also comply with the NCREIF PREA Reporting Standards, including annual audits, quarterly valuations and time-weighted returns. The NFI-ODCE returns are mainly driven by the underlying property investments in the constituent funds but can also be impacted by each funds use of leverage, cash balances, fund costs, etc. Returns shown are for the NFI-ODCE Equal Weight Index (fund constituents are equally-weighted), net of fees.
- Total Fund Benchmark History - During 4Q 2018, the real estate benchmark was changed from NCREIF ODCE Equal Weighted Index to NCREIF ODCE Equal Weighted Net Index for all historical time periods since inception.
- Total Fund Benchmark History - As of November 1, 2019, the Total Fund Benchmark domestic small cap equity weighting was changed from the Russell 2000 Value Index to the Russell 2000 Index to more accurately represent the underlying investment in the asset class.
- Total Fund Benchmark History - During 4Q 2019, the opportunistic benchmark was changed from HRFI Event Driven Index to HFRI Credit Index for all historical time periods since inception.

- Total Fund Benchmark History - During 4Q 2021, the real estate - value add benchmark was changed from NCREIF ODCE Equal Weighted Net Index to Long-Term Income Objective 9% for all historical time periods since inception.
- Total Fund Benchmark - The Total Fund Benchmark is comprised of the respective market indices for each asset class weighted at the percentage the asset class represents in the Policy. It is important to acknowledge that not all asset classes have a corresponding market index due to the specialized nature of the asset class (i.e. private equity, private debt, infrastructure, hedge funds) and/or the specialized nature of the investment (opportunistic investments, global tactical asset allocation, absolute return strategies). In such cases, a traditional asset class index may be used as a proxy in the Total Fund Benchmark. The Total Fund Benchmark illustrates how an indexed portfolio with a similar allocation to that of the Policy would have performed during a specific period. The Total Fund Benchmark does not account for ongoing changes in the allocation percentages of the Total Fund resulting from market gains/losses, cash flows, and rebalancing during the same period. While a useful tool in examining performance, due to the static nature of the allocation percentages in the Total Fund Benchmark, the fact that not all asset classes have a representative index, and considering that some indices in the Total Fund Benchmark are not investable, the Total Fund Benchmark should not be used as the primary measure of a Total Fund's success or failure.

Footnotes

- Values, flows, and returns for all commingled funds, mutual funds, partnerships, and all other alternative assets are provided by the firm managing the assets and cannot be independently verified by IPS. Separately managed account returns are calculated by IPS using custodian data.
- The net of fees returns in this report are estimated. Fees do not include: The investment consulting fee paid to IPS, custodian fees, or other administrative costs.
- The information contained in this report is proprietary and confidential information. You are hereby notified that any dissemination, distribution, or copying of this document is strictly prohibited.
- Hedge Fund of Funds - Multi Strategy returns are based on the manager provided estimated value.
- Grosvenor OCF III, OCF IV and OCF V – the net of fee returns include the accrual of the incentive fee. The difference between the gross and net returns may vary widely due to this accounting. The information reported by IPS is provided by the manager and subject to change.
- Net of fees calculations began 3Q 2001 and cannot be calculated for prior time periods.
- Total asset class inception returns may not be available if the performance history begins prior to December 2007.

- The following composite returns prior to 1Q 2010 do not include cash in the returns:
  - Total Fund Domestic Equity
  - Total Fund International Equity
  - Total Domestic Fixed Investment Grade
  - Total Fund Mortgage
  - Total Fund Real Estate
  - Total Fund Hedge Fund of Funds
- Prior to the 4Q 2011 report, Principal's returns were reported net of fees.
- Prior to the 4Q 2011 report, Multi-Employer Property Trust's returns were reported net of fees.
- The Total Fund benchmark is comprised of the respective market indices for each asset class weighted at the percentage the asset class represents in the Policy. For real estate, where Boyd Waterson GSA (core real estate) and/or Boyd Waterson State (value add real estate) are the lone real estate investments, the annualized income objective of the respective Boyd Watterson fund (8% for GSA; 9% for State) was previously used as the market index to represent the real estate asset class. For example, if a fund has a 10% Policy for core real estate and Boyd Waterson GSA is the lone core real estate investment, 10% of the Total Fund benchmark was an 8% annualized income objective.
- The dramatic rise in interest rates in 2021 and 2022 made the annualized income objectives for the Boyd Waterson funds an unrealistic baseline for near-term and intermediate-term real estate return expectations. Therefore, the real estate component of the Total Fund benchmark is changed to the NCREIF ODCE Equal Weight Net Index for all real estate allocations, regardless of the specific real estate manager(s). The change has been applied to all historical time periods. We believe this change better represents the opportunity set for the real estate asset class.

- The following managers are valued as of September 30, 2023, plus or minus any flows:
    - GCM Grosvenor Secondary Opportunities Feeder Fund II, LP
    - GCM Grosvenor Secondary Opportunities Feeder Fund III, LP
    - WaCap - SP Infrastructure Fund IV Feeder
- The following managers' values are preliminary and are subject to change:
    - Corbin ERISA Opportunity Fund, LP - Class C Shares
    - Grosvenor Opportunistic Credit Fund III, Ltd
    - Grosvenor Opportunistic Credit Fund IV, Ltd
    - GCM Grosvenor Opportunistic Credit Fund, Ltd

ASSET ALLOCATION REVIEW

Operating Engineers Local No. 77 Pension Plan

February 2024

Asset Allocation Overview

- The asset allocation review is provided to assist the Trustees in identifying portfolios that meet the investment objectives, risk tolerance, and liquidity requirements of the Fund.

- The IPS Investment Committee develops and utilizes capital market assumptions for various asset classes to help determine the optimal mix of assets for an investment portfolio. These assumptions are forward-looking projections of an asset class' expected return and risk as measured by standard deviation or volatility of returns.

- All return assumptions are "net of fee" market or index returns and do not include alpha or excess return expected to be generated through active management. Return assumptions are the average expected return over the next 10 – 20 years and not the expected return in any given year.

- IPS capital market assumptions are compared with various assumptions from other providers and published resources for reasonableness. The IPS Investment Committee reviews the assumptions on a semiannual basis but may adjust at anytime, as needed, based on severe market dislocations, sudden changes in interest rates, or extreme events that impact global markets, economic development, and the business cycle.

- IPS capital market assumptions are not a guarantee of future performance. Actual results may differ from the projections included in this review.

- The asset allocation modeling requires the mathematical construction of an efficient frontier of various portfolios with distinct asset allocations and risk and return characteristics. The modeling process also requires the imposition of constraints, so that the efficient frontier represents a prudently diversified portfolio with adequate consideration of the liquidity needs and investment time horizon. Unconstrained optimization frequently generates allocations that have superior risk/reward characteristics, but the resulting allocations may not be adequately diversified and/or may have inappropriate allocations to illiquid investments.

- The cashflows and liquidity constraints of the fund for which this asset allocation review is being presented were considered when developing the portfolios presented for consideration.

- IPS utilizes the Wilshire Compass system for asset allocation modeling and all returns are based on geometric calculation.

Annualized Expected Returns over 10-20 years

Equity Asset Class	Return	Risk
U.S. Large Cap	6.50%	15.50
U.S. Mid Cap	7.00%	17.50
U.S. Smid Cap	6.88%	19.00
U.S. Small Cap	6.75%	20.50
International Large Cap	7.50%	16.75
International Small Cap	8.00%	19.25
Emerging Markets	8.25%	20.50
Global Equity	7.00%	16.75

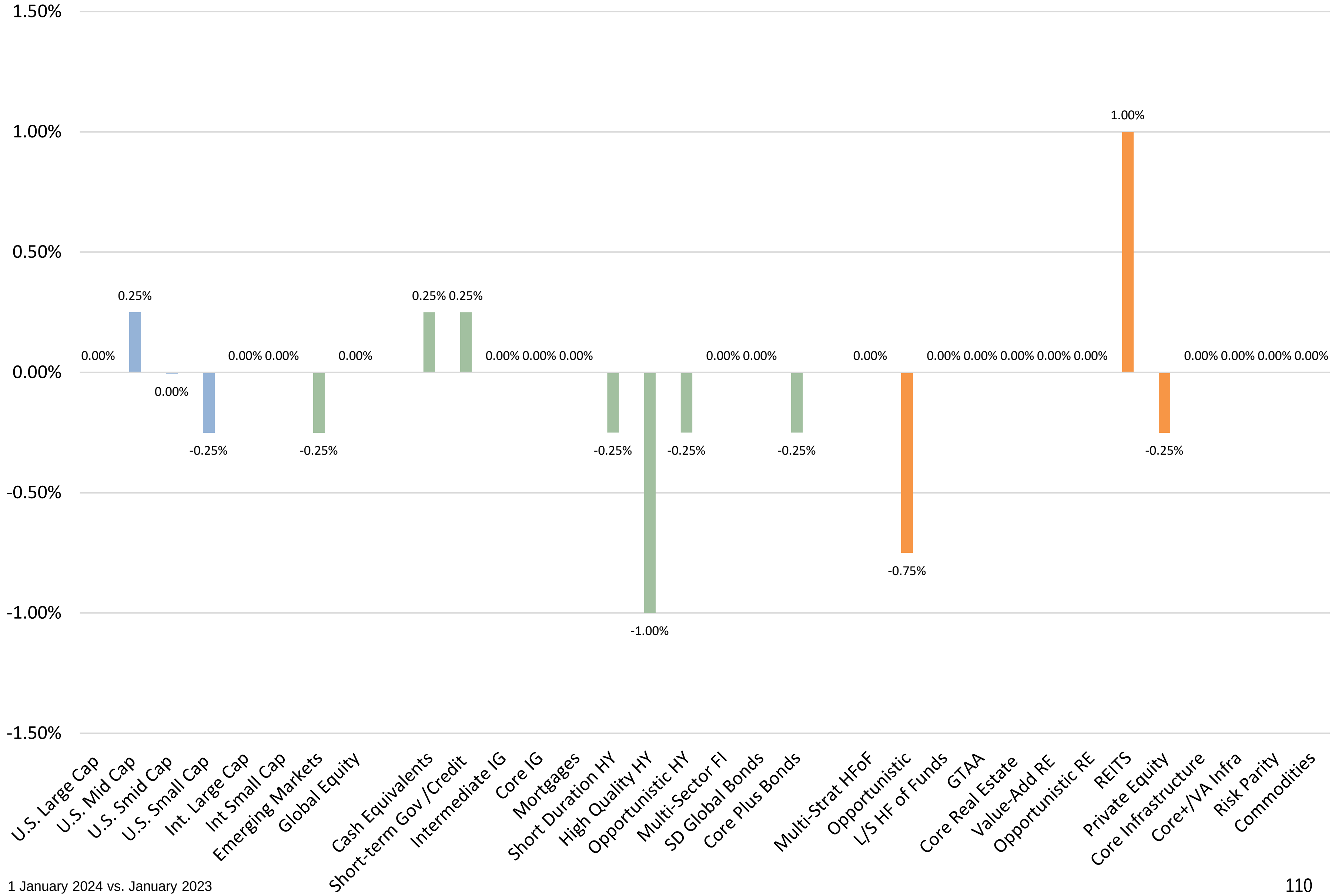
Fixed Income Asset Class	Return	Risk
Cash Equivalents	3.00%	0.50
Short-term Gov /Credit	3.75%	2.00
Intermediate Investment Grade	4.25%	3.50
Core Investment Grade	4.50%	4.00
Mortgages	4.75%	5.00
Short Duration High Yield	6.00%	6.00
High Quality High Yield	6.50%	8.00
Opportunistic High Yield	7.75%	8.50
Multi-Sector Fixed Income	3.50%	6.00
Short Duration Global Bonds	2.50%	5.00
Core Plus Bonds	4.75%	5.25

Alternatives Asset Class	Return	Risk
Multi-Strategy Hedge Fund of Funds	5.00%	6.00
Opportunistic Strategies	7.50%	15.00
L/S Hedge Fund of Funds	5.00%	9.00
Global Tactical Asset Allocation	6.50%	12.00
Core Real Estate	6.00%	9.00
Core Plus Real Estate	6.50%	10.25
Value-Add Real Estate	7.00%	11.50
Opportunistic Real Estate	9.00%	15.00
REITS	6.00%	20.00
Diversified Private Equity	9.75%	21.00
Core Infrastructure	6.25%	11.50
Core+/Value Add Infrastructure	8.25%	15.00
Private Credit	9.00%	13.00
Risk Parity	5.50%	16.00
Commodities	3.75%	17.00

INVESTMENT PERFORMANCE SERVICES, LLC

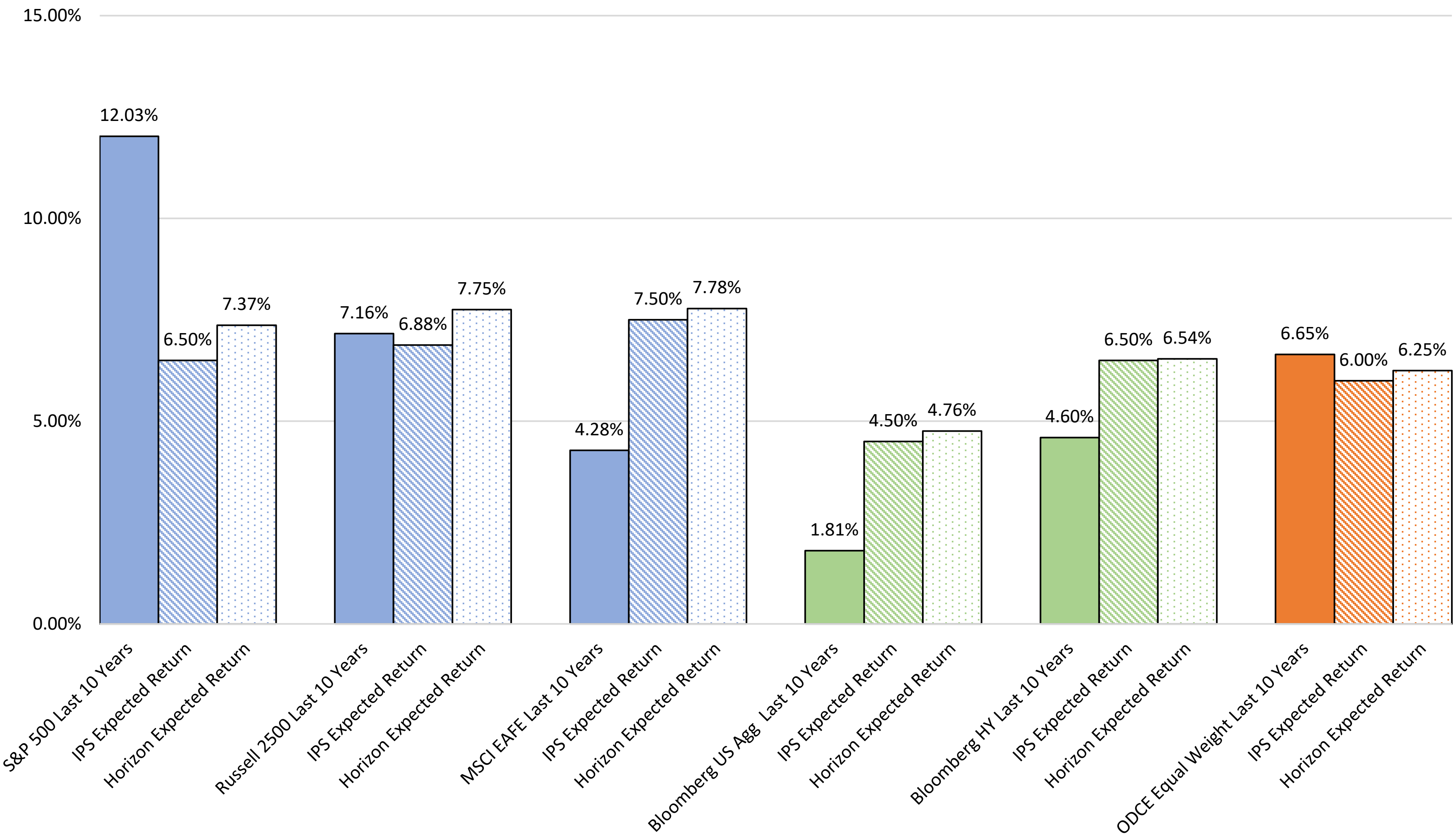
- IPS Investment Committee January 2024.
- Inflation expectation 2.5%.

Change in Expected Returns[1]



1 January 2024 vs. January 2023

Historical Returns vs. Forward Looking Assumptions



- “Last 10 Years” returns are as of 12/31/2023.
- “Horizon Expected Returns” are sourced from the Survey of Capital Market Assumptions (20-year horizon) published by Horizon Actuarial Services, LLC published in the August 2023 edition.

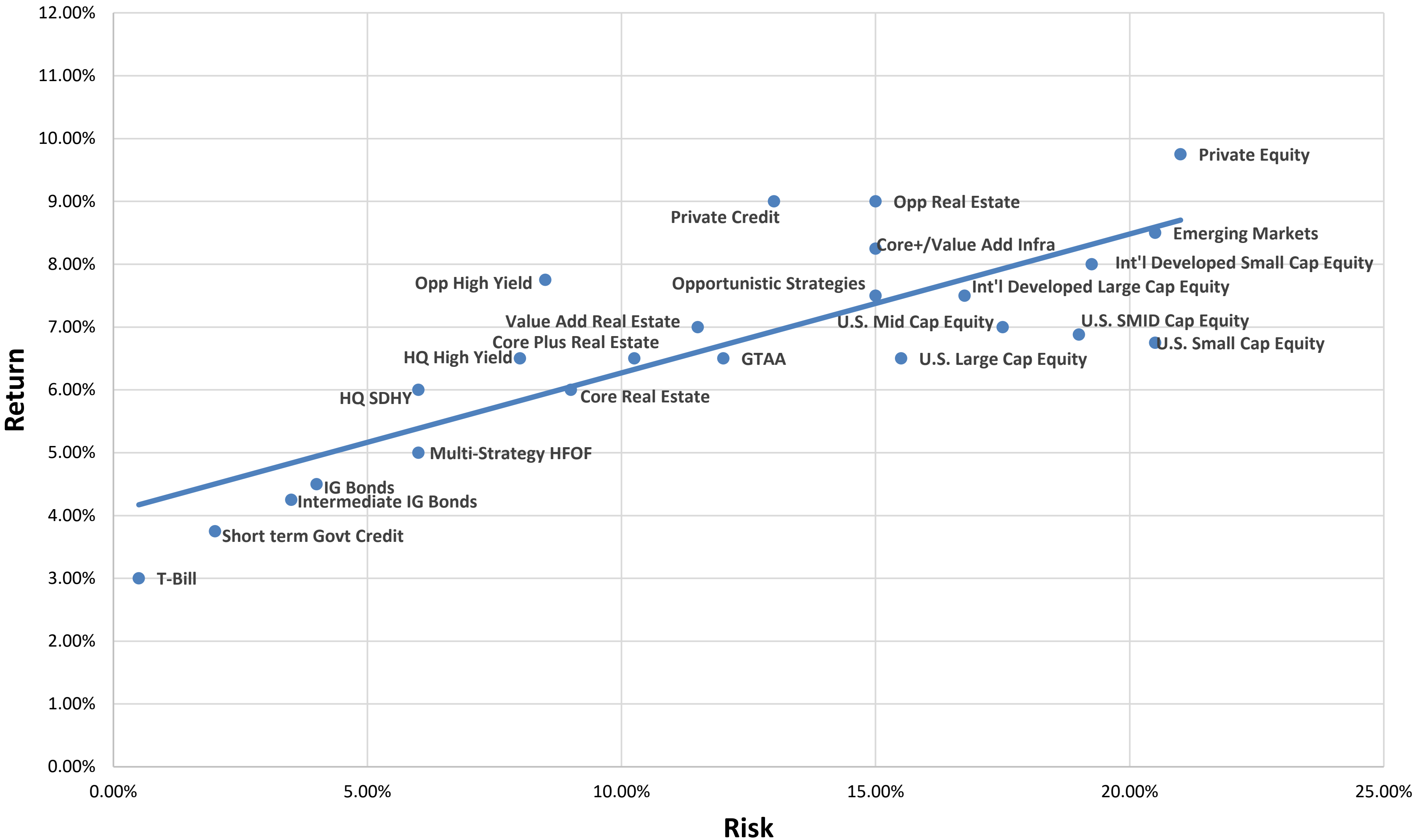
Asset Class Constraints

Total Domestic Equity	60%	Max
Domestic Large Cap Equity	20%	Min
Small, Mid and Smid Cap Equity	20%	Max
International Equity Large Cap	20%	Max
International Small Cap Equity	10%	Max
Cash	5%	Max
Fixed Investment Grade (Includes Short Term & Intermediate)	10%	Min
Opportunistic High Yield	12.5%	Max
High Yield Bonds (Includes Short Duration, High Quality, & Opportunistic)	20%	Max
Real Estate – Core	10%	Max
Real Estate – Core Plus	10%	Max
Real Estate – Value Add	10%	Max
Total Real Estate	20%	Max
Hedge Fund of Funds – Multi Strategy	5%	Max
Opportunistic Strategies	5%	Max
Private Credit	5%	Max
Global Tactical Asset Allocation	10%	Max
Private Equity	5%	Max
Total Alternatives	40%	Max

The constraints shown are used for modeling purposes only. They should not be construed as suggested or recommended allocations, or limits on allocations, to any asset class or investment strategy. Each client fund has different facts, circumstances, time horizon, risk tolerance levels, return objectives, investment preferences, cash flows, and liquidity requirements. As such, each client's investment policy may differ materially from the constraints shown above.

- IPS Investment Committee January 2024.

2024 Capital Market Assumptions



Asset Class Correlations

Assumption table:	US Large Cap Equity	US Mid Cap Equity	US Smid Cap Equity	US Small Cap Equity	Int'l Large Cap Equity	Int'l Small Cap Equity	Emerging Markets Equity	Cash	Short Term Govt / Credit	Interm. Invest. Grade	Core Invest. Grade	Short Duration High Yield	High Yield	Opp High Yield	Real Estate Core	Real Estate Core Plus	Real Estate Value Add	Private Equity	HFoF Multi-Strategy	Private Credit	Opp. Strategies	GTAA	Infrastructure
US Large Cap Equity	1.00																						
US Mid Cap Equity	0.96	1.00																					
US Smid Cap Equity	0.93	0.98	1.00																				
US Small Cap Equity	0.90	0.95	0.99	1.00																			
Int'l Equity	0.87	0.86	0.82	0.78	1.00																		
Int'l Small Cap Equity	0.84	0.87	0.83	0.79	0.95	1.00																	
Emerging Markets Equity	0.74	0.76	0.72	0.69	0.86	0.85	1.00																
Cash	-0.11	-0.13	-0.13	-0.13	-0.03	-0.10	0.00	1.00															
Short Term Govt / Credit	0.05	0.04	0.00	-0.03	0.13	0.13	0.17	0.36	1.00														
Int. Investment Grade	0.18	0.16	0.12	0.07	0.22	0.23	0.25	0.14	0.87	1.00													
Core Investment Grade	0.19	0.17	0.12	0.08	0.22	0.22	0.24	0.10	0.81	0.98	1.00												
Short Duration High Yield	0.65	0.72	0.67	0.62	0.66	0.71	0.65	-0.12	0.25	0.35	0.34	1.00											
High Yield	0.73	0.79	0.75	0.70	0.74	0.76	0.70	-0.12	0.23	0.37	0.37	0.93	1.00										
Opp. High Yield	0.70	0.77	0.73	0.69	0.70	0.73	0.67	-0.14	0.06	0.18	0.18	0.90	0.95	1.00									
Real Estate Core	0.28	0.20	0.20	0.30	0.20	0.12	0.16	0.06	-0.37	-0.33	-0.28	0.28	0.20	0.12	1.00								
Real Estate Core Plus	0.28	0.20	0.20	0.30	0.20	0.12	0.16	0.06	-0.37	-0.33	-0.28	0.28	0.20	0.12	1.00	1.00							
Real Estate Value Add	0.28	0.20	0.20	0.30	0.20	0.12	0.16	0.06	-0.37	-0.33	-0.28	0.28	0.20	0.12	1.00	1.00	1.00						
Private Equity	0.76	0.81	0.86	0.88	0.67	0.69	0.59	-0.15	-0.06	0.03	0.03	0.53	0.60	0.60	0.20	0.20	0.20	1.00					
HFoF Multi-Strategy	0.73	0.78	0.76	0.71	0.78	0.83	0.76	-0.06	0.01	0.07	0.08	0.64	0.67	0.71	0.08	0.08	0.08	0.70	1.00				
Private Credit	0.69	0.75	0.71	0.68	0.65	0.64	0.64	-0.09	-0.28	-0.16	-0.17	0.71	0.74	0.80	0.28	0.28	0.28	0.65	0.76	1.00			
Opportunistic Strategies	0.79	0.85	0.85	0.82	0.81	0.85	0.76	-0.12	-0.02	0.05	0.05	0.72	0.76	0.81	-0.02	-0.02	-0.02	0.82	0.91	0.82	1.00		
GTAA	0.94	0.91	0.87	0.83	0.95	0.92	0.83	-0.04	0.23	0.35	0.35	0.69	0.77	0.70	-0.01	-0.01	-0.01	0.77	0.75	0.62	0.78	1.00	
Infrastructure	0.62	0.60	0.56	0.52	0.67	0.62	0.57	-0.01	0.18	0.31	0.32	0.53	0.59	0.54	0.40	0.40	0.40	0.60	0.63	0.56	0.66	0.68	1.00

A correlation of 1.00 indicates two series move perfectly together while a -1.00 shows they move perfectly opposite one another.

Efficient Frontier Analysis

Efficient Frontier Report										
Asset	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Portfolio 5	Portfolio 6	Portfolio 7	Portfolio 8	Portfolio 9	Portfolio 10
US Large Cap Equity	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
US Mid Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Smid Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Small Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int'l Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	2.24
Int'l Small Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.52	10.00
Emerging Markets	0.00	0.00	0.00	0.00	0.00	0.00	3.64	7.85	10.00	10.00
Cash	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Short Term Govt/Credit	39.81	24.26	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int. Investment Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Core Investment Grade	20.72	31.00	41.28	42.76	38.28	31.53	21.36	15.30	10.00	10.00
Short Duration High Yield	0.00	0.00	0.00	0.00	0.00	0.97	7.50	7.50	0.00	0.00
High Yield	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6.98	0.00
Opportunistic High Yield	3.47	6.13	8.79	12.50	12.50	12.50	12.50	12.50	12.50	12.50
Real Estate – Core	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Real Estate – Core Plus	3.44	5.21	6.97	9.74	10.00	10.00	10.00	10.00	10.00	5.26
Real Estate – Value Add	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Private Equity	0.00	0.00	0.00	0.00	4.22	5.00	5.00	5.00	5.00	5.00
HFoF - Multi Strategy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Private Credit	2.55	3.41	4.26	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Opportunistic Strategies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.85	5.00	5.00
GTAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Infrastructure	0.00	0.00	0.00	0.00	0.00	5.00	5.00	5.00	5.00	5.00
Return	**5.41**	**5.69**	**5.98**	**6.26**	**6.54**	**6.80**	**7.05**	**7.29**	**7.52**	**7.71**
Risk	**4.45**	**4.85**	**5.27**	**5.70**	**6.30**	**6.99**	**7.78**	**8.65**	**9.56**	**10.87**
Return/Risk	**1.21**	**1.17**	**1.14**	**1.10**	**1.04**	**0.97**	**0.91**	**0.84**	**0.79**	**0.71**

Compound annual return.

Asset Allocation Policy History

	2017	2019	2020	2021	2022	2023
U.S. Large Cap	20.0%	20.0%	20.0%	20.0%	20.0%	15.0%
U.S. Mid Cap	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
U.S. Small Cap	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
International Large Cap	5.0%	5.0%	5.0%	7.5%	7.5%	5.0%
International Small Cap	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
GTAA	10.0%	7.5%	5.0%	2.5%	2.5%	2.5%
Intermediate Fixed	7.5%	5.0%	5.0%	5.0%	5.0%	10.0%
Mortgages	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
SD High Yield	5.0%	5.0%	5.0%	5.0%	5.0%	10.0%
Core Real Estate	17.5%	17.5%	10.0%	10.0%	10.0%	10.0%
Value Add Real Estate	--	--	10.0%	10.0%	10.0%	10.0%
Hedge Funds	5.0%	5.0%	5.0%	2.5%	2.5%	0.0%
Opportunistic	5.0%	10.0%	10.0%	10.0%	10.0%	10.0%
Private Equity	5.0%	5.0%	5.0%	5.0%	5.0%	5.0%
Value Add Infrastructure	--	--	--	2.5%	2.5%	2.5%
Expected Return	**7.27%**	**7.07%**	**6.75%**	**6.87%**	**6.83%**	**7.12%**
Expected Risk	**9.79%**	**9.99%**	**9.66%**	**9.87%**	**9.75%**	**9.06%**
Actuarial Assumed Rate	**7.00%**	**7.00%**	**7.00%**	**7.00%**	**7.00%**	**7.00%**

Green	Increase allocation
Red	Decrease allocation
Blue	New asset class

Current Policy Comparison

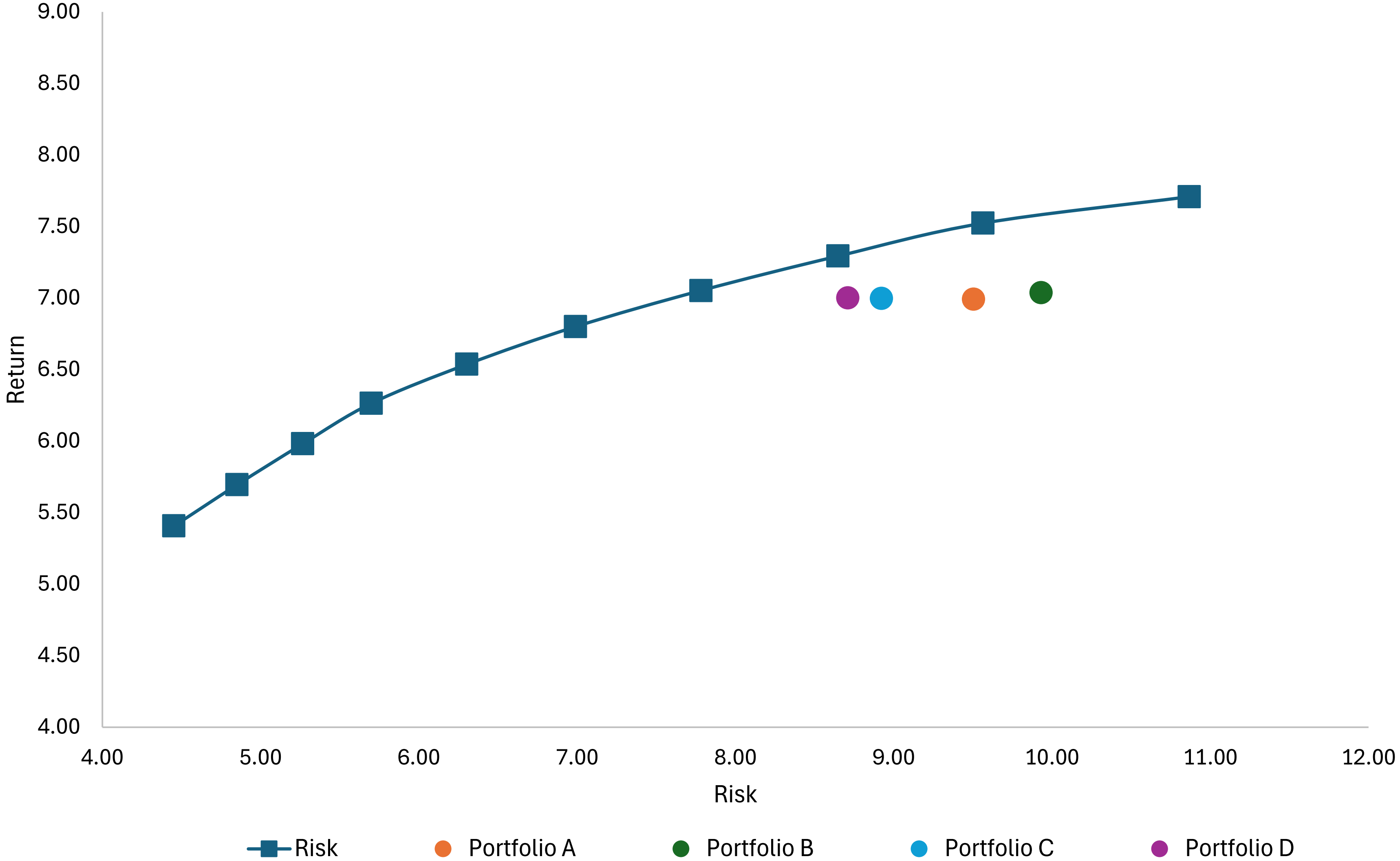
		% Equity Target						% Fixed Income Target				% Alternatives									
		US LC Equity	US MC Equity	US SMID Cap Equity	US SC Equity	Int'l LC Equity	Int'l SC Equity	Fixed Income Interm	SDHY	Mortgages	Opp High Yield	Real Estate Core	Real Estate Value Add	Opp	Private Equity	Infra	Private Credit	Cash	Expected Return (net of fees)	Risk	Comments
1	Operating Engineers Local No. 77 Pension Plan Portfolio A	15.0	5.0	0.0	5.0	5.0	5.0	10.0	12.5	5.0	0.0	10.0	10.0	10.0	5.0	2.5	0.0	0.0	6.99%	9.51	Current Policy
2	Portfolio B	17.1	5.4	0.0	4.8	5.0	5.3	8.5	11.1	5.3	0.0	9.6	9.5	11.0	5.8	1.4	0.0	0.3	7.04%	9.93	Allocation as of December 31, 2023
3	Portfolio C	15.0	5.0	0.0	5.0	5.0	5.0	10.0	12.5	5.0	**10.0**	10.0	10.0	**0.0**	5.0	2.5	0.0	0.0	7.00%	8.92	Reclassify Grosvenor OCF and Corbin as Opp High Yield.
4	Portfolio D	17.5	0.0	7.5	0.0	5.0	2.5	10.0	12.5	5.0	**12.5**	10.0	7.5	**0.0**	5.0	2.5	2.5	0.0	7.00%	8.71	Add Private Credit and SMID; Decrease real estate value add, mid cap and small cap equities, increase large cap.

The Fund's assumption rate as determined by the plan actuary is 7.0%.

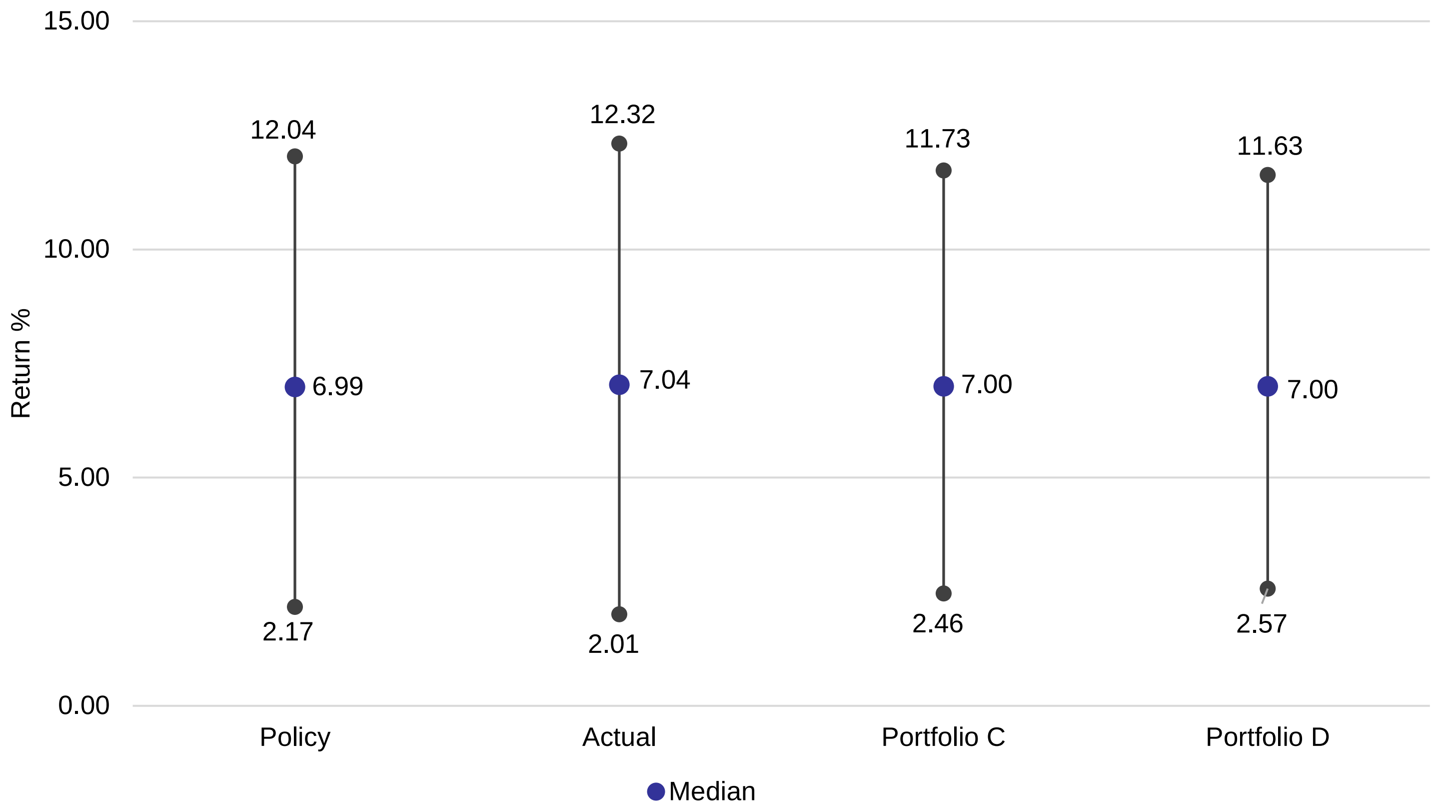
Scenarios are shown for illustrative purposes.

Green	Increase allocation
Red	Decrease allocation
Blue	New asset class

Efficient Frontier Comparison

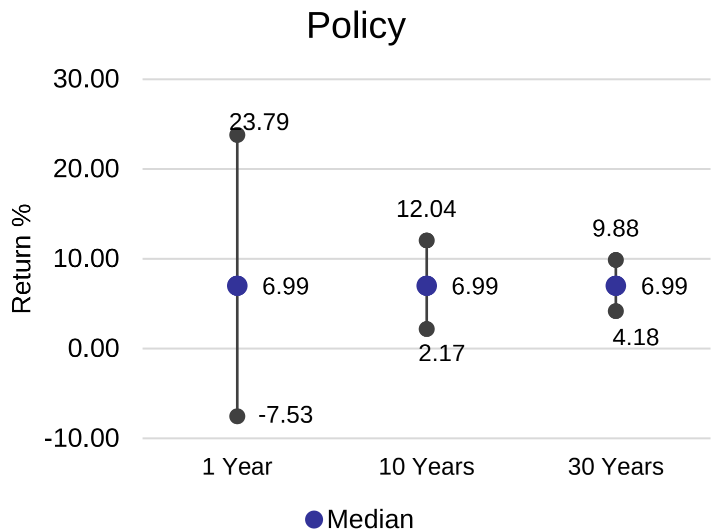


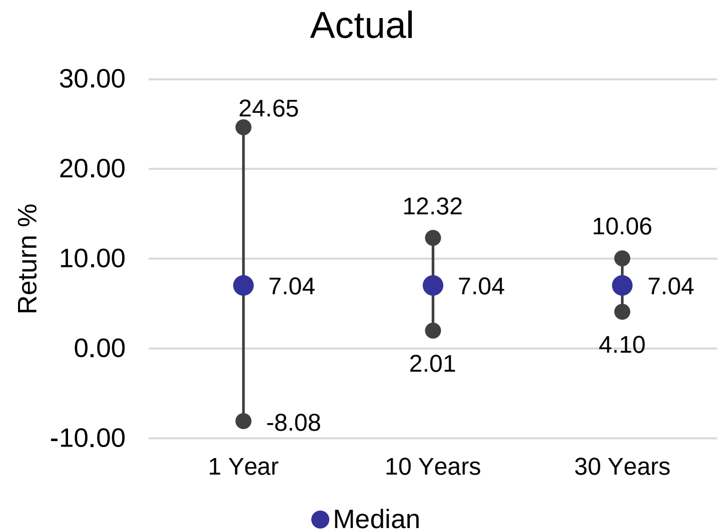
Potential Distribution of Returns – 10 Year Horizon

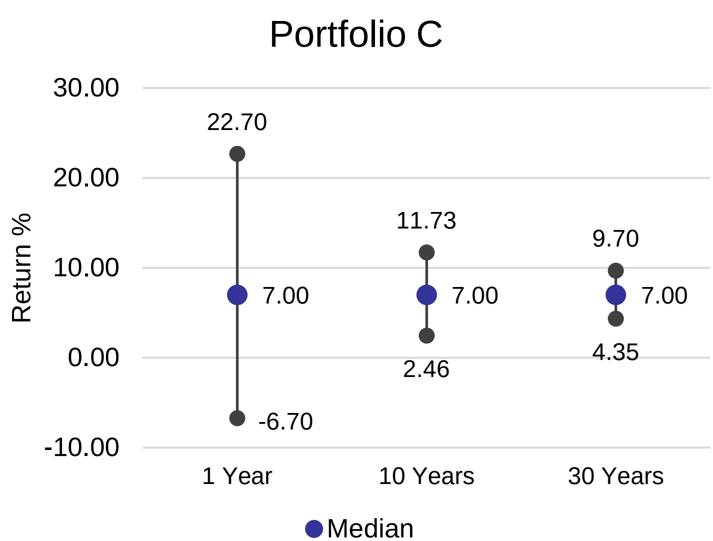


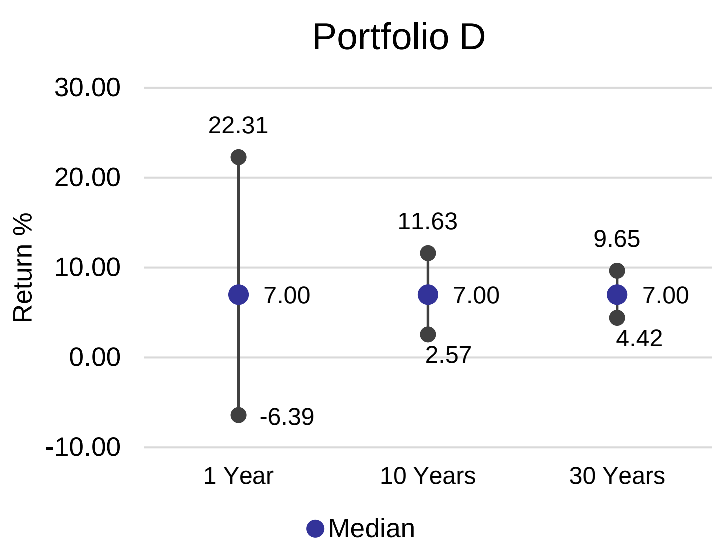
Potential distribution of returns is based on the Parametric Method. Best and worst outcomes are based on the 5th and 95th percentile, respectively.

Potential Distribution of Returns





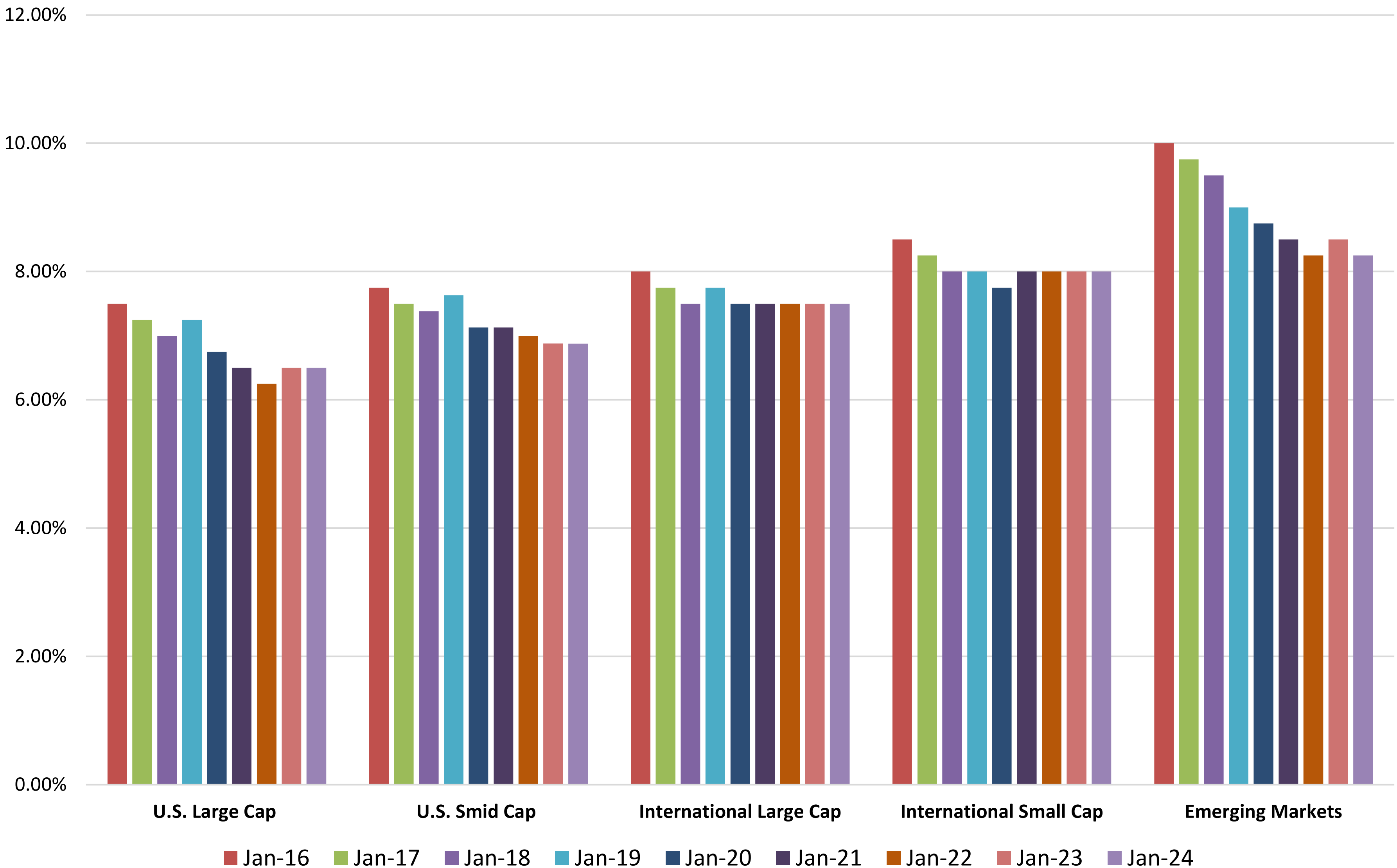




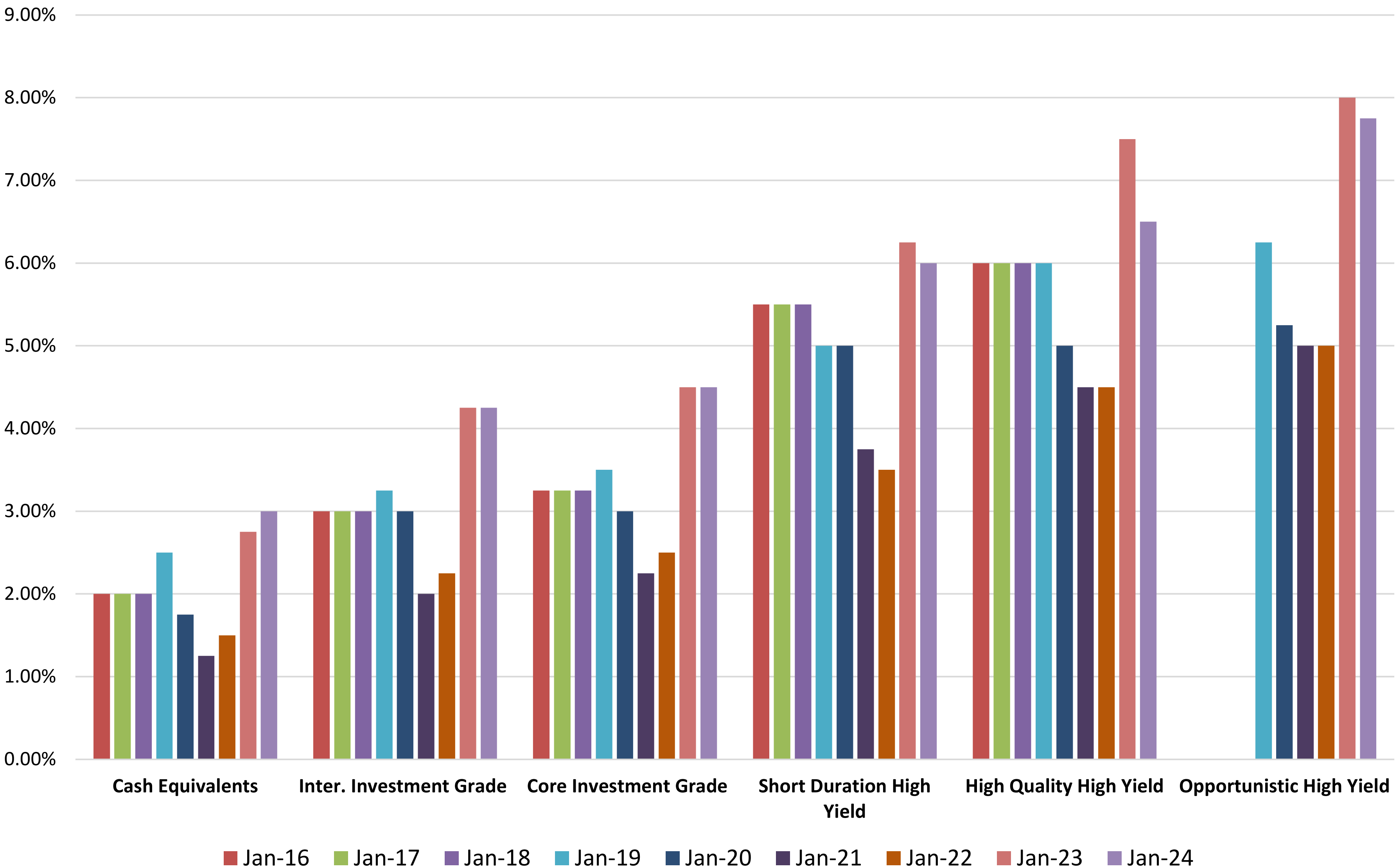
Potential distribution of returns is based on the Parametric Method. Best and worst outcomes are based on the 5th and 95th percentile, respectively.

APPENDIX

Public Equity – IPS Historical Capital Market Assumptions

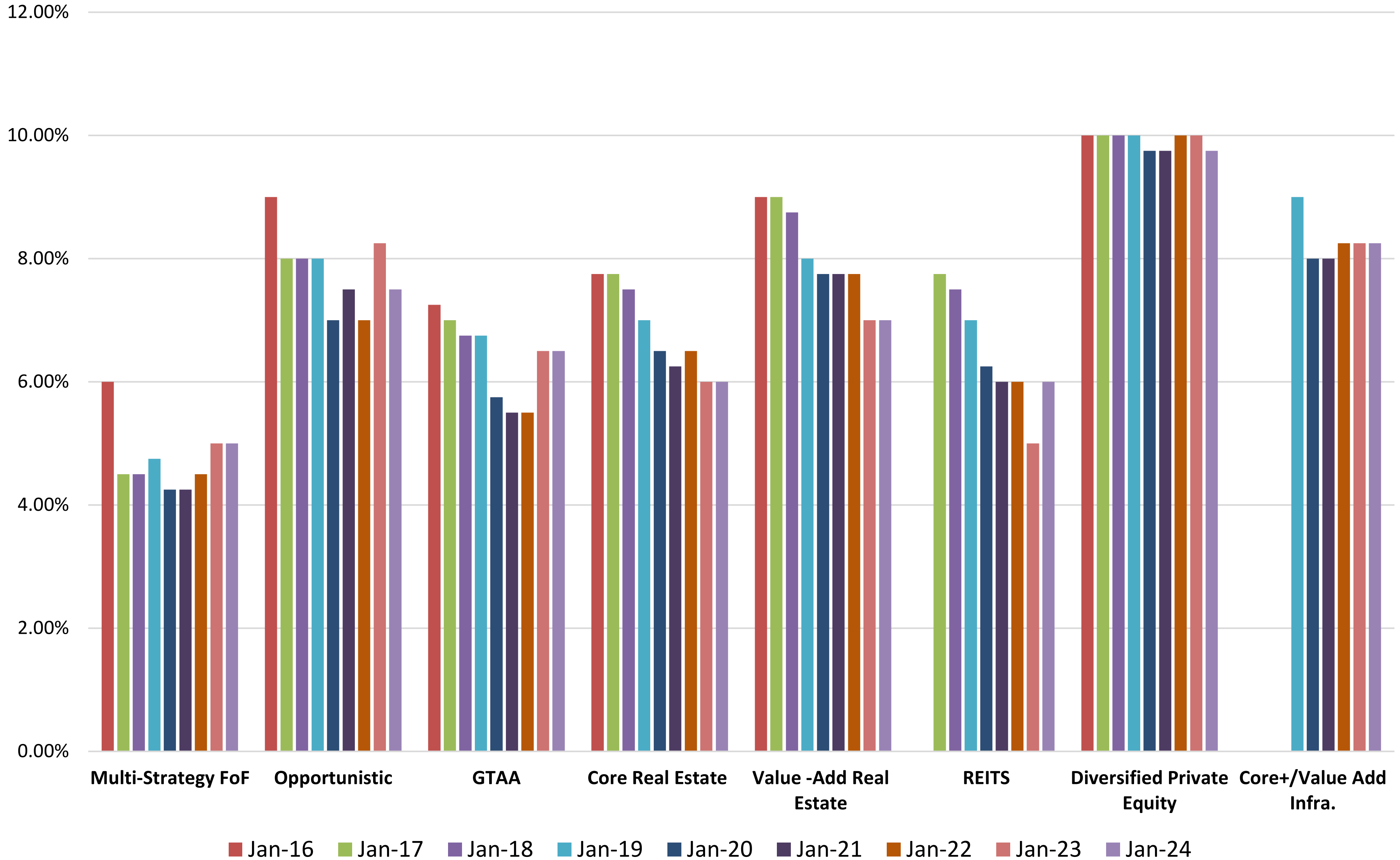


Fixed Income – IPS Historical Capital Market Assumptions



IPS began setting a capital market assumption for Opportunistic High Yield in January 2019.

Alternative Investments – IPS Historical Capital Market Assumptions



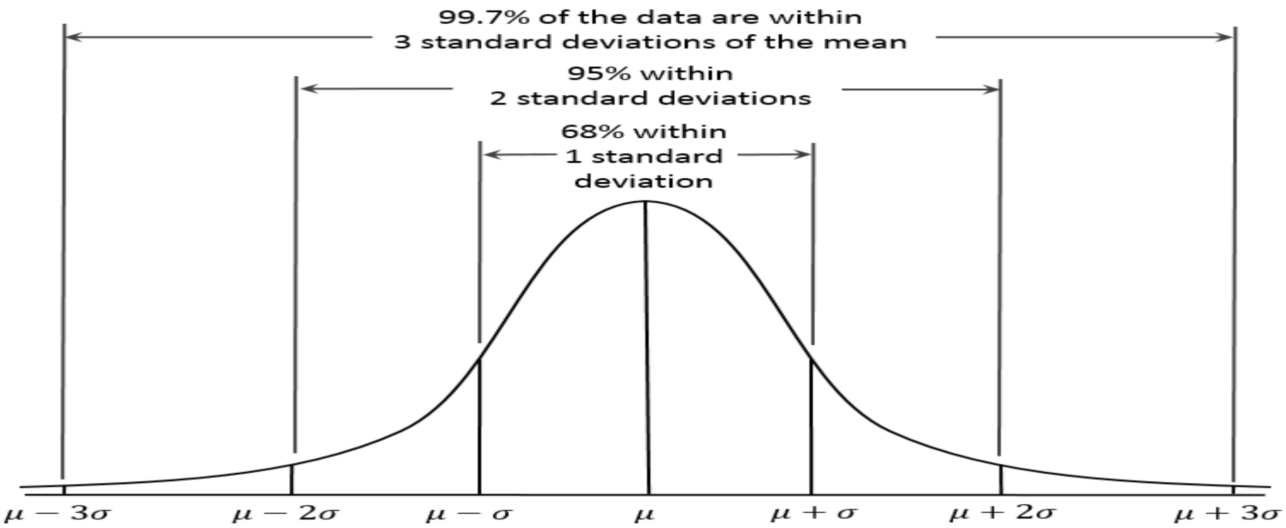
IPS began setting a capital market assumption for Core+/Value Add Infrastructure in January 2019.

Explanation of Methodology

- The analysis in this presentation utilizes the parametric method, also known as the variance-covariance method

- The parametric method assumes a normal distribution of returns, commonly referred to as a bell-shaped curve.
  - For a normal distribution, 68% of the observations are within +/- one standard deviation, 95% are within +/- two standard deviations, and 99.7% are within +/- three standard deviations

- The chart below shows a normal distribution



- In reality, financial returns are not “normal;” they exhibit positive skewness (you get more positive returns above the mean than a normal distribution would predict) and kurtosis (the extreme “tails” of both positive and negative returns occur more often and are more extreme than a normal distribution would predict).

Operating Engineers Local No. 77 Pension Plan
Private Equity Pacing Analysis

As of December 31, 2023

Private Equity Pacing Analysis

- Private equity funds “draw down” committed capital from investors over a period of several years early in a fund’s life. This “investment period” typically expires three to five years from the date of the fund’s first investment
- Distributions on realized (sold) investments generally do not occur until a few years after capital is initially drawn from investors
- Private equity funds typically have lives of 10 to 15 years; however, on average, a private equity fund will invest much of the capital in years one through four and most of the invested capital and gains will be distributed to investors in years four through nine
- Investors typically build a private equity allocation by making commitments to multiple funds over several years period in order to achieve diversification by vintage year
- Pacing analysis allows investors to determine the appropriate amount of private equity commitments to make each year by projecting future cash flows based on the investments made to date
- IPS has developed cash flow models based on specific types of private equity fund investments (secondary funds, primary funds, co-investment funds, diversified fund of funds) in order to advise clients on the appropriate commitment amounts to reach and maintain a policy allocation to private equity
- IPS recommends a pacing analysis be completed no less than annually

Current Private Equity Portfolio

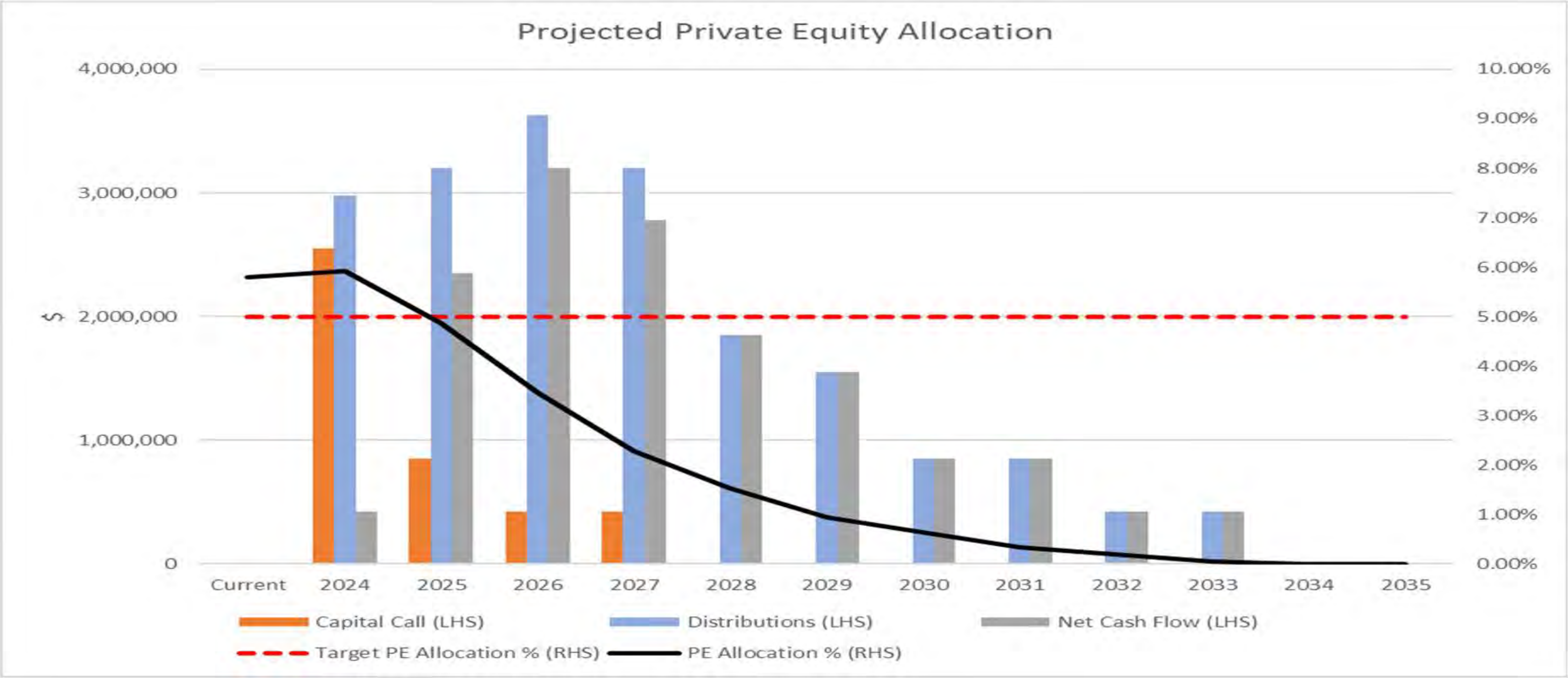
- As of 12/31/23, the Operating Engineers Local No. 77 Pension Plan has a 5.80% allocation to private equity vs. a 5.00% Policy
- The Pension Fund committed a total of $17.0 million to two private equity funds (see table below)
- Approximately $8.7 million of the committed amount remains available for investment

	Vintage Year	Commitment	Market Value	Remaining Commitment
Grosvenor Secondary Fund II	2018	8,500,000	7,454,199	3,100,000
Grosvenor Secondary Fund III	2021	8,500,000	3,597,726	5,600,000
Total		**17,000,000**	**11,051,925**	**8,700,000**

INVESTMENT PERFORMANCE SERVICES, LLC

Private Equity Portfolio Allocations Based on Current Commitments

- The chart below shows the projected cash flows for the Penson Plan's private equity portfolio based on the commitments made to date
- The portfolio is projected to be cash flow positive beginning in 2023 with distributions exceeding contributions, resulting in a declining allocation to private equity
- The private equity allocation is projected to fall below 1% in 2029 and approach 0% in 2032 assuming no further commitments are made

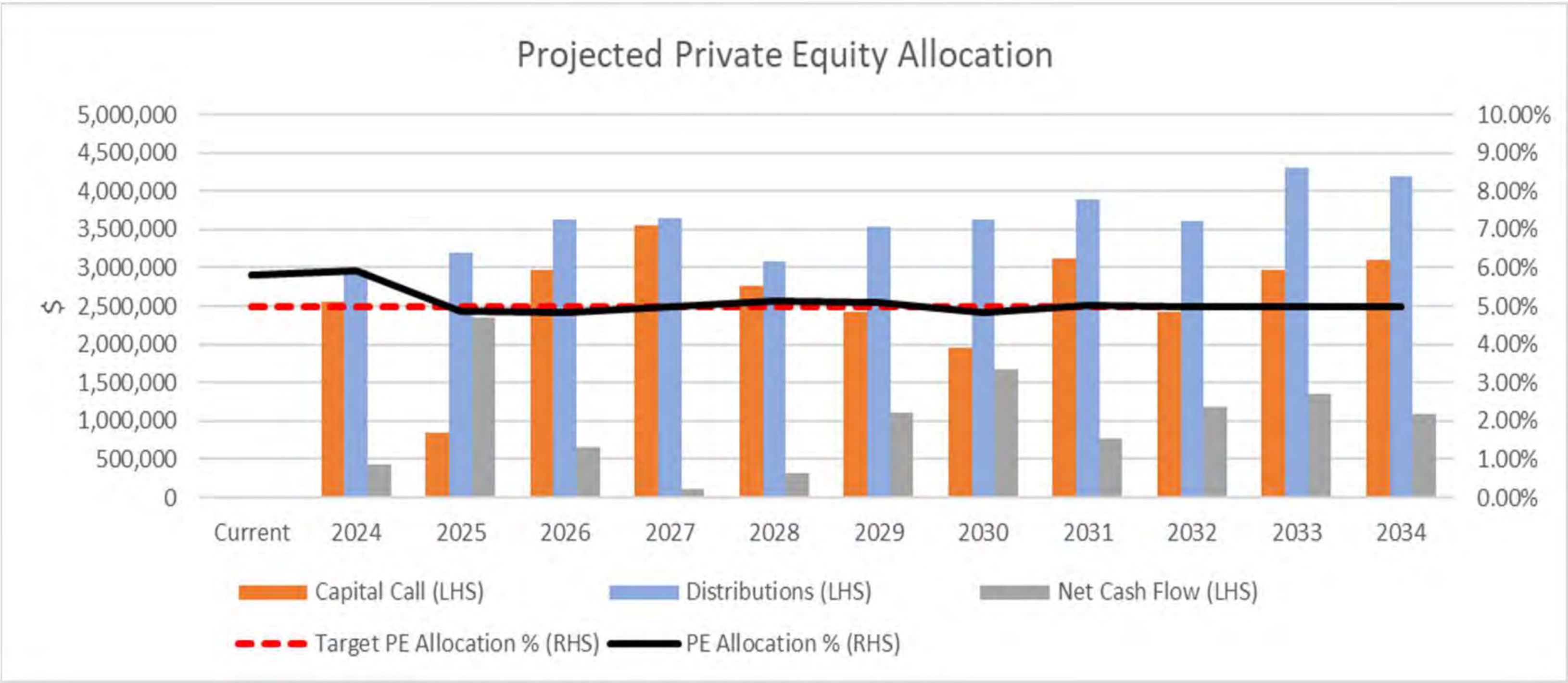


Private Equity Portfolio Allocations Based Future Annual Commitments

- The table below shows the amount of annual private equity commitments needed to reach and maintain the 5.00% Policy to private equity

- The chart shows the projected cash flows of the private equity allocation based on the recommended commitment amount

Calendar Year	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034
Annual Commitment Amount to Reach/Maintain Target Allocation ($)			12,000,000			4,500,000		6,750,000		5,000,000	3,250,000



Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report

Period Ended

December 31, 2023

Total Fund Growth of Assets

	Fourth Quarter	Fiscal Year-To-Date	Three Years
Beginning Market Value	$35,582,190	$33,628,622	$37,035,655
Net Cash Flow	-$384,984	$699,809	-$3,863,556
Net Investment Change	$1,255,523	$2,124,298	$3,280,631
Ending Market Value	$36,452,729	$36,452,729	$36,452,729

Total Fund Growth of Assets

	Five Years	Seven Years	Ten Years
Beginning Market Value	$34,380,714	$38,711,855	$30,320,516
Net Cash Flow	-$6,418,964	-$13,464,642	-$10,125,339
Net Investment Change	$8,490,979	$11,205,516	$16,257,552
Ending Market Value	$36,452,729	$36,452,729	$36,452,729

- The Fund's fiscal year end is December 31st.

Performance Summary (Gross of Fees) - Annualized

			Ending December 31, 2023		
	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs
Total Fund	**$36,452,729**	**100.0%**	**3.5%**	**6.3%**	**3.2%**
Total Domestic Large Cap Equity	**$4,602,621**	**12.6%**	**13.1%**	**30.7%**	**11.1%**
Total Investment Grade Fixed Income	**$11,555,716**	**31.7%**	**4.4%**	**5.6%**	**-1.3%**
Total Short Duration High Yield Fixed Income	**$12,188,969**	**33.4%**	**4.1%**	**8.2%**	**2.8%**
Total Real Estate - Core	**$3,071,050**	**8.4%**	**-6.0%**	**-13.1%**	**5.0%**
Total Real Estate - Value Add	**$3,233,931**	**8.9%**	**-1.7%**	**-1.2%**	**--**
Total Cash Equivalents	**$1,800,442**	**4.9%**			

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023		
			5 Yrs	7 Yrs	10 Yrs
Total Fund	**$36,452,729**	**100.0%**	**4.9%**	**4.6%**	**4.8%**
Total Domestic Large Cap Equity	$4,602,621	12.6%	13.6%	10.6%	10.0%
Total Investment Grade Fixed Income	$11,555,716	31.7%	2.0%	2.0%	2.2%
Total Short Duration High Yield Fixed Income	$12,188,969	33.4%	4.2%	3.7%	3.5%
Total Real Estate - Core	$3,071,050	8.4%	4.6%	5.7%	7.3%
Total Real Estate - Value Add	$3,233,931	8.9%	--	--	--
Total Cash Equivalents	$1,800,442	4.9%			

Performance Summary (Gross of Fees)

	Fiscal Year Ending December 31st					
	2023	2022	2021	2020	2019	2018
Total Fund	**6.3%**	**-5.1%**	**8.9%**	**5.5%**	**9.7%**	**1.0%**
Total Fund Benchmark	*4.8%*	*-5.1%*	*8.6%*	*4.9%*	*9.9%*	*1.0%*

	Fiscal Year Ending December 31st				
	2017	2016	2015	2014	2013
Total Fund	**6.8%**	**6.5%**	**3.3%**	**6.1%**	**9.2%**
Total Fund Benchmark	*5.2%*	*7.5%*	*3.0%*	*5.9%*	*8.3%*

Performance Summary (Net of Fees)

	Fiscal Year Ending December 31st					
	2023	2022	2021	2020	2019	2018
Total Fund	**5.7%**	**-5.6%**	**8.4%**	**4.9%**	**9.1%**	**0.4%**
Total Fund Benchmark	*4.8%*	*-5.1%*	*8.6%*	*4.9%*	*9.9%*	*1.0%*

	Fiscal Year Ending December 31st				
	2017	2016	2015	2014	2013
Total Fund	**6.2%**	**5.9%**	**2.7%**	**5.5%**	**8.6%**
Total Fund Benchmark	*5.2%*	*7.5%*	*3.0%*	*5.9%*	*8.3%*

Current vs. Policy

	Current	Current	Policy	Policy Range	Difference	Difference
Domestic Large Cap Equity	$4,602,621	12.6%	10.0%	5.0% - 15.0%	2.6%	$957,348
Investment Grade Fixed Income	$11,555,716	31.7%	35.0%	30.0% - 40.0%	-3.3%	-$1,202,740
Short Duration High Yield Fixed Income	$12,188,969	33.4%	35.0%	30.0% - 40.0%	-1.6%	-$569,486
Real Estate - Core	$3,071,050	8.4%	10.0%	5.0% - 15.0%	-1.6%	-$574,223
Real Estate - Value Add	$3,233,931	8.9%	10.0%	5.0% - 15.0%	-1.1%	-$411,342
Cash Equivalents	$1,800,442	4.9%	0.0%	0.0% - 0.0%	4.9%	$1,800,442
Total	**$36,452,729**	**100.0%**	**100.0%**			

- Policy adopted February 2023; effective April 2023.
- Cash equivalents allocation includes:
    - $24K in partial-redemption-proceeds from real estate - core (ARA Core Property Fund, LP); received on January 4, 2024.
    - $25K in distribution-proceeds from real estate - core (ARA Core Property Fund, LP); received on January 26, 2024.
    - $41K in distribution-proceeds from real estate - value add (Boyd Watterson State Government Fund, LP); received on January 29, 2024.

Operating Engineers Local No. 77 Trust Fund of Washington DC – Asset Allocation

- Asset allocation reviews were presented and discussed with the Trustees at the following meetings: February 9, 2021, February 8, 2022, and February 14, 2023.
- At the May 10, 2022, meeting, the Trustees elected to redeem $1.0M from real estate - core (ARA Core Property Fund, LP) effective June 30, 2022. Redemption proceeds were used for cash needs. Status: Redemption proceeds received July 5, 2022.
- At the November 8, 2022, meeting, the Trustees elected to redeem $600K from real estate - core (ARA Core Property Fund, LP) effective December 31, 2022, and $600K from real estate - value add (Boyd Watterson State Government Fund, LP) effective March 31, 2023. Redemption proceeds will be used for rebalancing and cash needs, pending availability in withdrawal queue (ARA Core Property Fund, LP). Status: Boyd Watterson State Government Fund, LP redemption was fully satisfied as of March 31, 2023. ARA Core Property Fund, LP in process.
- At the February 14, 2023, meeting, the Trustees elected to adopt Policy: 10.0% (-5.0%) domestic large cap equity, 35.0% investment grade fixed income, 35.0% (+5.0%) short duration high yield fixed income, 10.0% real estate - core, 10.0% real estate - value add. To rebalance closer to the new Policy, transfer $1.0M to short duration high yield fixed income (Chartwell Investment Partners SDHY) from domestic large cap equity (Vanguard Growth Index Fund Admiral Shares - $500K and Wedge Capital Management – QVM - $500K). Status: Transfers completed April 6, 2023.
- At the August 8, 2023, meeting, IPS recommended rebalancing cash to investment grade fixed income allocation; however, administration noted cash was needed for claims and cash needs. Status: No rebalancing occurred.
- At the November 14, 2023, meeting, IPS recommended rebalancing $2.0M of cash to investment grade fixed income allocation. Decision: The Trustees agreed to rebalance based on input from the Fund office. Administration will advise IPS how much cash can be invested. Status: No rebalancing occurred.

Recommendations: None.

Real Estate - Core Redemption (In Millions) as of December 31, 2023						
Manager	Redemption Type	Effective Date	Withdrawal Queue	Requested $	Received $	Remaining $
ARA Core Property Fund, LP	Partial	Dec-22	Sep-22	$0.60	$0.14	$0.46
Total				$0.60	$0.14	$0.46

Commitment and Funding of Real Estate - Core (In Millions) as of December 31, 2023

Investments		Commitments			Contributions & Distributions		Valuations		Performance	
Account Name	Vintage Year	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Cumulative Distributions	Valuation	Total Value	DPI	TVPI
ARA Core Property Fund, LP	2007	$5.2	$0.0	1.0	$5.2	$7.1	$3.1	$10.2	1.4	2.0
Total		**$5.2**	**$0.0**	**1.0**	**$5.2**	**$7.1**	**$3.1**	**$10.2**	**1.4**	**2.0**

Commitment and Funding of Real Estate - Value Add (In Millions) as of December 31, 2023

Investments		Commitments			Contributions & Distributions		Valuations		Performance	
Account Name	Vintage Year	Commitment	Unfunded Commitment	Call Ratio	Cumulative Contributions	Cumulative Distributions	Valuation	Total Value	DPI	TVPI
Boyd Watterson State Government Fund, LP	2021	$3.8	$0.0	1.0	$3.8	$0.7	$3.2	$4.0	0.2	1.1
Total		**$3.8**	**$0.0**	**1.0**	**$3.8**	**$0.7**	**$3.2**	**$4.0**	**0.2**	**1.1**

- Distribution to Paid-In (DPI) – The DPI is the value of all distributions to limited partners divided by the amount limited partners have contributed to the fund. A DPI of 1 indicates the investor has received capital back equal to what they invested while a DPI over 1 indicates an investor has received more capital back than they invested. DPI is most relevant for closed-end fund structures such as private equity.
- Total Value to Paid in Multiple (TVPI) – The TVPI is a measure of return that expresses how much a fund has made relative to how much was contributed. It is calculated by dividing the sum of the amount of capital distributed to investors and the amount of remaining value by the amount of invested capital. A TVPI below 1 indicates the current value of the investment plus the capital returned to the investor is less than the investor contributed. A TVPI greater than 1 indicates the current value of the investment plus the capital returned to the investor is more than the investor contributed. For closed-end funds such as private equity, DPI and TVPI will be the same at the end of the fund’s life.
- Performance data included in the table above may differ from performance data provided by the investment manager due to the availability and timing of data used in the calculations.

Performance Detail (Net of Fees) - Annualized

			Ending December 31, 2023			
	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs
Total Fund	**$36,452,729**	**100.0%**	**3.3%**	**5.7%**	**2.6%**	**4.4%**
Total Domestic Large Cap Equity	**$4,602,621**	**12.6%**	**13.1%**	**30.3%**	**10.8%**	**13.2%**
Vanguard Growth Index Fund Admiral Shares	$2,376,582	6.5%	14.4%	46.8%	--	--
CRSP US Large Cap Growth TR USD			*14.4%*	*46.9%*	*--*	*--*
Wedge Capital Management - QVM	$2,226,039	6.1%	11.7%	16.9%	10.0%	12.7%
Russell 1000 Value			*9.5%*	*11.5%*	*8.9%*	*10.9%*
Total Investment Grade Fixed Income	**$11,555,716**	**31.7%**	**4.3%**	**5.3%**	**-1.6%**	**1.7%**
Wedge Capital Management	$11,555,716	31.7%	4.3%	5.3%	-1.6%	1.7%
Bloomberg US Govt/Credit Int TR			*4.6%*	*5.2%*	*-1.6%*	*1.6%*
Total Short Duration High Yield Fixed Income	**$12,188,969**	**33.4%**	**4.0%**	**7.6%**	**2.3%**	**3.7%**
Chartwell Investment Partners SDHY	$12,188,969	33.4%	4.0%	7.6%	2.3%	3.7%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*4.0%*	*8.8%*	*2.9%*	*4.5%*
Bloomberg US Govt/Credit Int TR			*4.6%*	*5.2%*	*-1.6%*	*1.6%*

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023 2023 Q4	Fiscal YTD	3 Yrs	5 Yrs
Total Real Estate - Core	**$3,071,050**	**8.4%**	**-6.2%**	**-14.0%**	**3.9%**	**3.4%**
ARA Core Property Fund, LP	$3,071,050	8.4%	-6.2%	-14.0%	3.9%	3.4%
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	*4.4%*	*3.8%*
Total Real Estate - Value Add	**$3,233,931**	**8.9%**	**-2.0%**	**-2.5%**	**--**	**--**
Boyd Watterson State Government Fund, LP	$3,233,931	8.9%	-2.0%	-2.5%	--	--
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	--	--
Long-Term Income Objective 9%			*2.2%*	*9.0%*	--	--
Total Cash Equivalents	**$1,800,442**	**4.9%**				
Cash Account	$1,710,405	4.7%				
Cash in Transit - ARA Core Property Fund, LP Redemption Proceeds	$24,043	0.1%				
Cash in Transit - ARA Core Property Fund, LP Distribution Proceeds	$24,673	0.1%				
Cash in Transit - Boyd Watterson State Government Fund, LP Distribution Proceeds	$41,321	0.1%				

Performance Detail (Net of Fees) - Annualized

			Ending December 31, 2023			
	Market Value	% of Portfolio	7 Yrs	10 Yrs	Inception	Inception Date
Total Fund	**$36,452,729**	**100.0%**	**4.1%**	**4.2%**	**4.6%**	**Oct-97**
Total Domestic Large Cap Equity	**$4,602,621**	**12.6%**	**10.1%**	**9.5%**	**5.6%**	**Apr-99**
Vanguard Growth Index Fund Admiral Shares	$2,376,582	6.5%	--	--	7.8%	Mar-21
CRSP US Large Cap Growth TR USD			*--*	*--*	*7.9%*	*Mar-21*
Wedge Capital Management - QVM	$2,226,039	6.1%	9.8%	9.3%	11.5%	Dec-12
Russell 1000 Value			*8.3%*	*8.4%*	*10.5%*	*Dec-12*
Total Investment Grade Fixed Income	**$11,555,716**	**31.7%**	**1.6%**	**1.8%**	**3.7%**	**Jan-99**
Wedge Capital Management	$11,555,716	31.7%	1.6%	1.9%	3.3%	Jan-03
Bloomberg US Govt/Credit Int TR			*1.6%*	*1.7%*	*3.0%*	*Jan-03*
Total Short Duration High Yield Fixed Income	**$12,188,969**	**33.4%**	**3.2%**	**3.0%**	**3.2%**	**Sep-12**
Chartwell Investment Partners SDHY	$12,188,969	33.4%	3.2%	3.0%	3.2%	Sep-12
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*4.0%*	*3.9%*	*4.2%*	*Sep-12*
Bloomberg US Govt/Credit Int TR			*1.6%*	*1.7%*	*1.5%*	*Sep-12*

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023 7 Yrs	10 Yrs	Inception	Inception Date
Total Real Estate - Core	**$3,071,050**	**8.4%**	**4.5%**	**6.1%**	**4.2%**	**Apr-07**
ARA Core Property Fund, LP	$3,071,050	8.4%	4.5%	6.1%	4.2%	Apr-07
NCREIF ODCE Equal Weighted Net			*4.7%*	*6.7%*	*4.5%*	*Apr-07*
Total Real Estate - Value Add	**$3,233,931**	**8.9%**	**--**	**--**	**2.3%**	**Oct-21**
Boyd Watterson State Government Fund, LP	$3,233,931	8.9%	--	--	2.3%	Oct-21
NCREIF ODCE Equal Weighted Net			*--*	*--*	*0.1%*	*Oct-21*
Long-Term Income Objective 9%			*--*	*--*	*9.0%*	*Oct-21*
Total Cash Equivalents	**$1,800,442**	**4.9%**				
Cash Account	$1,710,405	4.7%				
Cash in Transit - ARA Core Property Fund, LP Redemption Proceeds	$24,043	0.1%				
Cash in Transit - ARA Core Property Fund, LP Distribution Proceeds	$24,673	0.1%				
Cash in Transit - Boyd Watterson State Government Fund, LP Distribution Proceeds	$41,321	0.1%				

Account Information	
Account Name	**Vanguard Growth Index Fund Admiral Shares**
Account Structure	**Mutual Fund**
Investment Style	**Passive**
Inception Date	**3/31/21**
Account Type	**Domestic Large Cap Growth Equity**
Benchmark	**CRSP US Large Cap Growth TR USD**
Universe	**Large Growth MStar MF**

Vanguard Growth Index Fund Admiral Shares

Ending December 31, 2023

	Fourth Quarter	**Inception 3/31/21**
Beginning Market Value	$2,077,238	$0
Net Cash Flow	$0	$1,825,000
Net Investment Change	$299,345	$551,582
Ending Market Value	$2,376,582	$2,376,582

	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	Calendar Years 2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
Vanguard Growth Index Fund Admiral Shares	14.4%	37	46.8%	15	--	--	--	--	46.8%	15	-33.1%	69	--	--	--	--	--	--	7.8%	Mar-21
CRSP US Large Cap Growth TR USD	*14.4%*	*37*	*46.9%*	*14*	--	--	--	--	*46.9%*	*14*	*-33.1%*	*68*	--	--	--	--	--	--	*7.9%*	*Mar-21*

Note: Returns are net of fees.

Operating Engineers Local No. 77 Trust Fund of Washington DC - Vanguard Growth Index Fund Admiral Shares

Manager Summary

Recommendation: None.

Compliance Summary

This is an investment in a mutual fund; the underlying holdings of the mutual fund are not monitored for compliance.

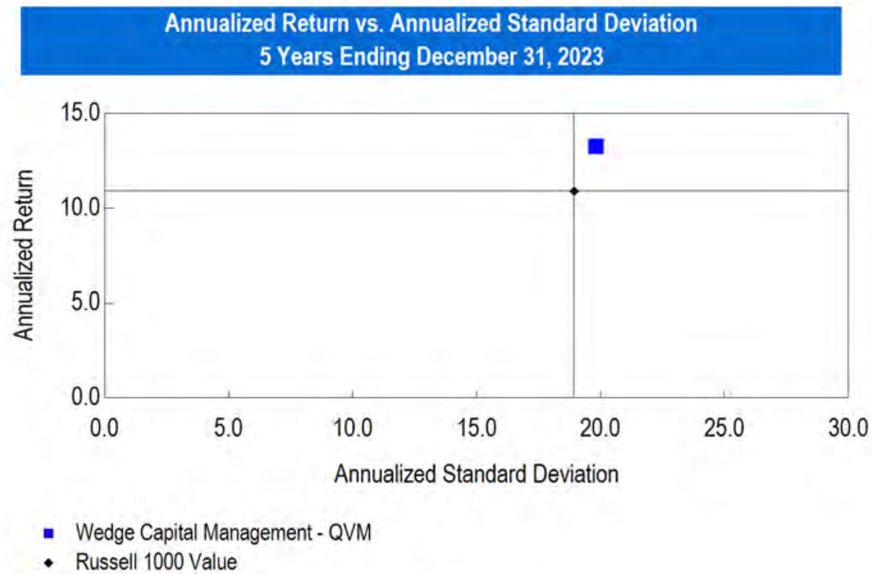
Account Information

Account Name	**Wedge Capital Management - QVM**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**12/01/12**
Account Type	**Domestic Large Cap Value Equity**
Benchmark	**Russell 1000 Value**
Universe	**eV US Large Cap Value Equity Gross**

Wedge Capital Management - QVM

Ending December 31, 2023

	Fourth Quarter	Inception 12/1/12
Beginning Market Value	$1,990,838	$0
Net Cash Flow	$0	-$4,078,444
Net Investment Change	$235,201	$6,304,483
Ending Market Value	$2,226,039	$2,226,039



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management - QVM	10.5%	17.4%	99.8%	94.4%
Russell 1000 Value	8.9%	16.7%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management - QVM	13.3%	19.8%	106.4%	97.0%
Russell 1000 Value	10.9%	18.9%	100.0%	100.0%

	2023 Q4	Rank	Fiscal YTD	Rank	3 Yrs	Rank	5 Yrs	Rank	Calendar Years 2023	Rank	2022	Rank	2021	Rank	2020	Rank	2019	Rank	Inception	Inception Date
Wedge Capital Management - QVM	11.8%	19	17.5%	27	10.5%	52	13.3%	39	17.5%	27	-12.2%	88	30.9%	19	6.5%	40	29.6%	25	12.1%	Dec-12
Russell 1000 Value	*9.5%*	*62*	*11.5%*	*62*	*8.9%*	*80*	*10.9%*	*81*	*11.5%*	*62*	*-7.5%*	*69*	*25.2%*	*72*	*2.8%*	*62*	*26.5%*	*54*	*10.5%*	*Dec-12*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Trust Fund of Washington DC - Wedge Capital Management - QVM

Correspondence Summary

- Manager presented annual reviews at meetings in February 2014, May 2016, May 2017, February 2018, May 2019, and February 2020.

Manager Summary

- IPS conducted due diligence meetings with Wedge Capital on February 10, 2022 and October 17, 2023.

Recommendation: None.

Compliance Summary

Exceptions: None.

Action to be taken: None.

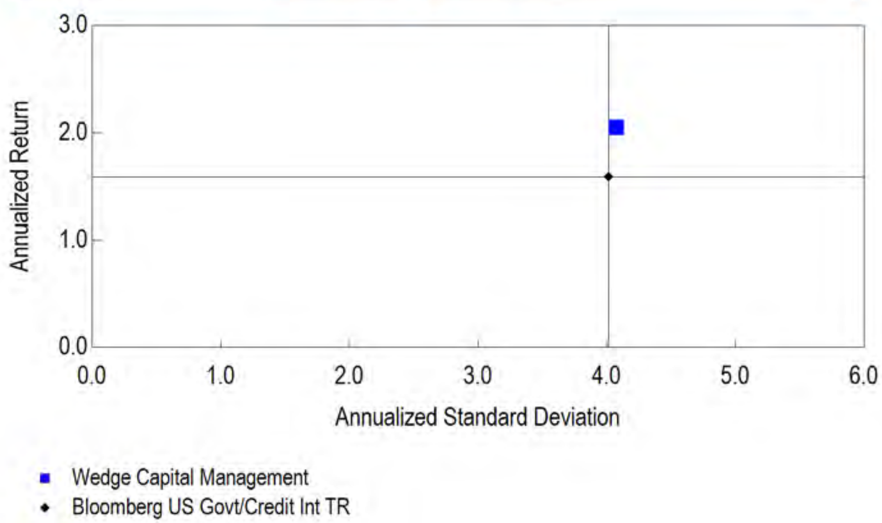
Items of Interest: Personnel Departure - The manager stated effective December 31, 2023, Mike Ritzer, General Partner, is no longer with the firm. His responsibilities are absorbed by other members of the equity analyst team. **Ownership Changes -** The manager stated Mike Ritzer's departure will not have any material impact on company ownership, or operations.

Account Information	
Account Name	**Wedge Capital Management**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**1/01/03**
Account Type	**Investment Grade Fixed Income**
Benchmark	**Bloomberg US Govt/Credit Int TR**
Universe	

Wedge Capital Management
Ending December 31, 2023

	Fourth Quarter	Inception 1/1/03
Beginning Market Value	$11,066,814	$3,769,223
Net Cash Flow	$0	$450,913
Net Investment Change	$488,901	$7,335,580
Ending Market Value	$11,555,716	$11,555,716

Annualized Return vs. Annualized Standard Deviation
5 Years Ending December 31, 2023



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management	-1.3%	4.7%	101.0%	96.2%
Bloomberg US Govt/Credit Int TR	-1.6%	4.6%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management	2.0%	4.1%	103.8%	95.0%
Bloomberg US Govt/Credit Int TR	1.6%	4.0%	100.0%	100.0%

					Calendar Years						
	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
Wedge Capital Management	4.4%	5.6%	-1.3%	2.0%	5.6%	-7.9%	-1.1%	7.6%	6.9%	3.6%	Jan-03
Bloomberg US Govt/Credit Int TR	*4.6%*	*5.2%*	*-1.6%*	*1.6%*	*5.2%*	*-8.2%*	*-1.4%*	*6.4%*	*6.8%*	*3.0%*	*Jan-03*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Trust Fund of Washington DC - Wedge Capital Management

Correspondence Summary

- Manager presented annual reviews at meetings in May 2016, May 2017, February 2018, May 2019, and February 2020.

Manager Summary

- IPS conducted due diligence meetings with Wedge Capital on January 20, 2021 and November 15, 2022.

Recommendation: None.

Compliance Summary

Exceptions: None.

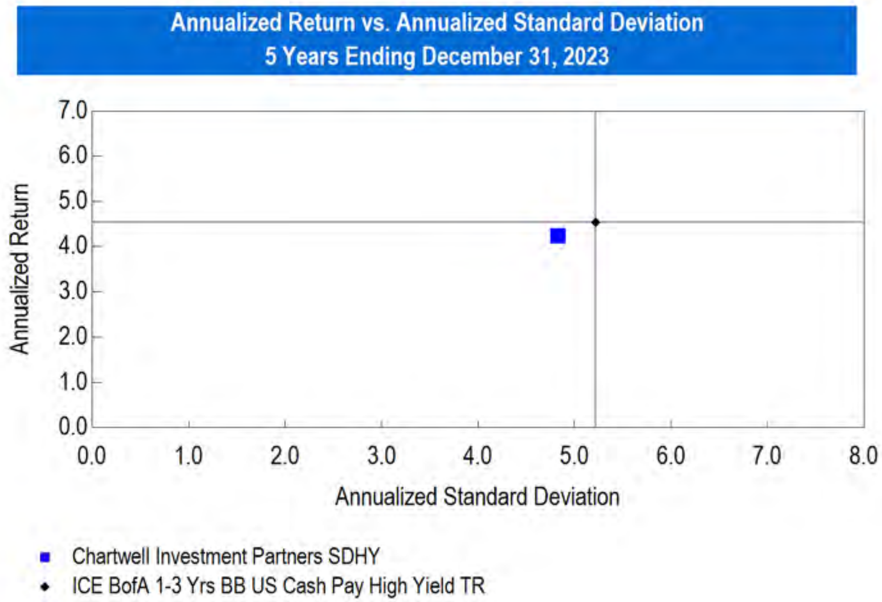
Action to be taken: None.

Items of Interest: Personnel Departure - The manager stated effective December 31, 2023, Mike Ritzer, General Partner, is no longer with the firm. His responsibilities are absorbed by other members of the equity analyst team. **Ownership Changes -** The manager stated Mike Ritzer's departure will not have any material impact on company ownership, or operations.

Account Information	
Account Name	**Chartwell Investment Partners SDHY**
Account Structure	**Separate Account**
Investment Style	**Active**
Inception Date	**9/01/12**
Account Type	**Short Duration High Yield Fixed Income**
Benchmark	**ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR**
Universe	

Chartwell Investment Partners SDHY
Ending December 31, 2023

	Fourth Quarter	Inception 9/1/12
Beginning Market Value	$11,707,167	$0
Net Cash Flow	$0	$7,884,627
Net Investment Change	$481,802	$4,304,343
Ending Market Value	$12,188,969	$12,188,969



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners SDHY	2.8%	4.3%	98.0%	99.7%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	2.9%	4.1%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners SDHY	4.2%	4.8%	91.1%	92.7%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	4.5%	5.2%	100.0%	100.0%

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Chartwell Investment Partners SDHY	4.1%	8.2%	2.8%	4.2%	8.2%	-2.5%	3.0%	5.0%	7.9%	3.7%	Sep-12
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	*4.0%*	*8.8%*	*2.9%*	*4.5%*	*8.8%*	*-3.1%*	*3.2%*	*5.4%*	*8.7%*	*4.2%*	*Sep-12*
Bloomberg US Govt/Credit Int TR	*4.6%*	*5.2%*	*-1.6%*	*1.6%*	*5.2%*	*-8.2%*	*-1.4%*	*6.4%*	*6.8%*	*1.5%*	*Sep-12*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Trust Fund of Washington DC - Chartwell Investment Partners SDHY

Correspondence Summary

- Manager presented annual reviews at meetings in February 2016, May 2017, August 2018 and August 2019.

Manager Summary

- IPS conducted due diligence meetings with Chartwell on January 19, 2021, July 22, 2021, July 19, 2022 and July 18, 2023.
- On October 20, 2021, Chartwell announced that their parent company, TriState Capital Holdings, has agreed to be acquired by Raymond James Financial. Upon closing of the transaction, Chartwell will become an affiliate of Carillon Tower, the asset management subsidiary of Raymond James Financial. Chartwell provided a letter to clients requesting acknowledgment and consent to the ownership change. IPS provided a memo recommending clients consent to the ownership change, subject to counsel review. Consent was provided. The transaction closed on June 1, 2022.

Recommendation: None.

Compliance Summary

Exceptions: None.

Action to be taken: None.

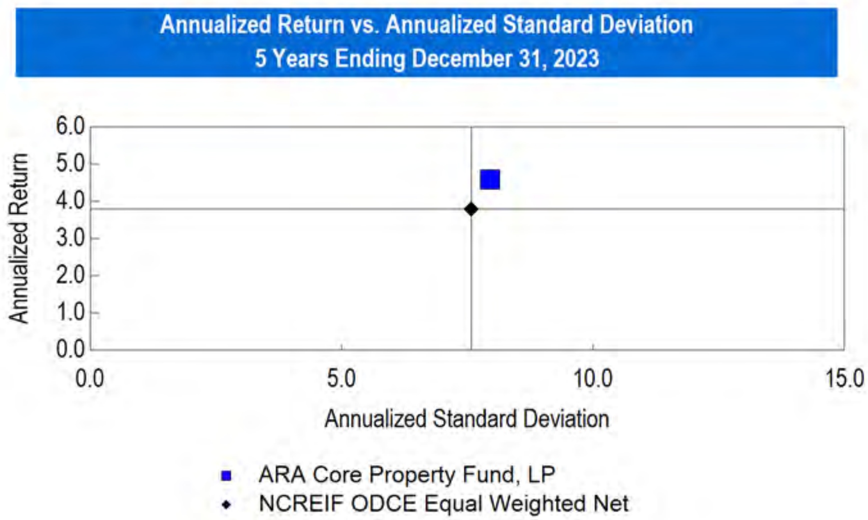
Items of Interest: Personnel Changes - The manager stated Chartwell has eliminated the full time Chief Operating Officer (COO) and Chief Compliance Officer (CCO) roles at the firm effective December 31, 2023. COO duties have been assumed by a management team of Tim Riddle, Chief Executive Officer, and Greg Hagar, Chief Financial Officer. CCO duties have been assumed by a newly appointed Chartwell CCO, Ludmila Chwazik, who works for Raymond James and is also the CCO of the affiliated Carillon Family of Funds.

Account Information	
Account Name	**ARA Core Property Fund, LP**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**4/01/07**
Account Type	**Real Estate - Core**
Benchmark	**NCREIF ODCE Equal Weighted Net**
Universe	

ARA Core Property Fund, LP
Ending December 31, 2023

	Fourth Quarter	Inception 4/1/07
Beginning Market Value	$3,327,559	$0
Net Cash Flow	-$48,715	-$1,963,109
Net Investment Change	-$207,794	$5,034,159
Ending Market Value	$3,071,050	$3,071,050

Income is distributed.



3 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
ARA Core Property Fund, LP	5.0%	10.3%	107.3%	100.2%
NCREIF ODCE Equal Weighted Net	4.4%	9.8%	100.0%	100.0%

5 Years Ending December 31, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
ARA Core Property Fund, LP	4.6%	7.9%	111.3%	99.2%
NCREIF ODCE Equal Weighted Net	3.8%	7.6%	100.0%	100.0%

					Calendar Years						
	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	2023	2022	2021	2020	2019	Inception	Inception Date
ARA Core Property Fund, LP	-6.0%	-13.1%	5.0%	4.6%	-13.1%	9.4%	21.9%	1.6%	6.3%	5.3%	Apr-07
NCREIF ODCE Equal Weighted Net	*-5.4%*	*-13.4%*	*4.4%*	*3.8%*	*-13.4%*	*7.6%*	*21.9%*	*0.8%*	*5.2%*	*4.5%*	*Apr-07*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Trust Fund of Washington DC - ARA Core Property Fund, LP

Correspondence Summary

- Manager presented annual reviews at meetings in February 2015, May 2016, May 2017, August 2018, and February 2020.
- Partial redemption requests were submitted effective June 30, 2020 ($500K) and March 31, 2021 ($3.25M); proceeds were used for rebalancing purposes. Both redemptions were satisfied as of June 30, 2021.
- A partial redemption request was submitted effective June 30, 2022 ($1.0M); proceeds were used for cash needs. Redemption proceeds received July 5, 2022.
- A partial redemption request was submitted effective December 31, 2022 ($600K); pending availability in withdrawal queue, proceeds will be used for rebalancing and cash needs.

Manager Summary

- IPS conducted due diligence meetings with American Realty Advisors on November 16, 2021, August 3, 2022 and June 29, 2023.
- On August 24, 2022, ARA announced the implementation of a withdrawal queue effective September 30, 2022.
- On May 27, 2021, ARA announced that the American Core Realty Fund, LP will be changing its name to the ARA Core Property Fund, LP. No changes are expected in the strategy or objectives of the Fund as a result.

Recommendation: None.

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle investment guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Liquidity - The manager stated that partial redemption payments were made for all requests timely received for the December 31, 2023 redemption date. The number of quarters required to satisfy outstanding redemptions requests is uncertain and depends on market conditions, but ARA anticipates that the Fund will make partial payments for requests that were received timely for the March 31, 2024 redemption date and that a queue may be in place in the second quarter of 2024. **Derivatives -** The manager stated yes to Part A question #5, however ARA does not perform stress testing as the Fund only holds a minimal amount of derivatives for interest rate hedging purposes.

Account Information	
Account Name	**Boyd Watterson State Government Fund, LP**
Account Structure	**Commingled Fund**
Investment Style	**Active**
Inception Date	**10/01/21**
Account Type	**Real Estate - Value Add**
Benchmark	**NCREIF ODCE Equal Weighted Net**
Universe	

Boyd Watterson State Government Fund, LP
Ending December 31, 2023

	Fourth Quarter	**Inception 10/1/21**
Beginning Market Value	$3,341,342	$0
Net Cash Flow	-$41,321	$3,021,562
Net Investment Change	-$66,090	$212,369
Ending Market Value	$3,233,931	$3,233,931

Income is distributed.

	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	Calendar Years 2023	2022	2021	2020	2019	Inception	Inception Date
Boyd Watterson State Government Fund, LP	-1.7%	-1.2%	--	--	-1.2%	7.4%	--	--	--	3.6%	Oct-21
NCREIF ODCE Equal Weighted Net	*-5.4%*	*-13.4%*	--	--	*-13.4%*	*7.6%*	--	--	--	*0.1%*	*Oct-21*
Long-Term Income Objective 9%	*2.2%*	*9.0%*	--	--	*9.0%*	*9.0%*	--	--	--	*9.0%*	*Oct-21*

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Trust Fund of Washington DC - Boyd Watterson State Government Fund, LP

Correspondence Summary

- A partial redemption request was submitted effective March 31, 2023 ($600K); proceeds will be used for rebalancing and cash needs. The partial redemption request was fully satisfied on its effective date, March 31, 2023. Proceeds were received April 28, 2023.

Manager Summary

- IPS conducted due diligence meetings with Boyd Watterson on May 26, 2021, September 21, 2021, October 17, 2022, July 14, 2023 and November 10, 2023.
- IPS clients received discounted annual management fees of 90 basis points (0.90%) through December 31, 2020 and 115 bps (1.15%) for calendar year 2021. Effective January 1, 2022, a tiered management fee structure of 125 basis points (1.25%) on the first $25 million, 115 bps (1.15%) on the next $75 million and 1.05% on invested capital above $100 million will apply.
- In December 2022, Boyd Watterson requested limited partner consent for several proposed amendments to the Fund's Limited Partnership Agreement (LPA). IPS provided clients with a memo recommending consent to the proposed amendment, subject to counsel review. Boyd Watterson has requested consent be provided by March 31, 2023. In April 2023, Boyd Watterson notified IPS that the amendment received the necessary approval and will take effect on July 1, 2023.

Recommendation: None.

Compliance Summary

Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines to the extent described in the Fund Documents.

Items of Interests: Derivatives - The manager stated the Fund does not utilize derivatives as an investment vehicle. The manager also stated the Fund does not utilize interest rate swaps to hedge risk related to variable rate loans. **E&O -**The manager stated the investment manger provides bonding for the Fund in accordance with the requirements of Section 412 of ERISA.

Investment Policy Statement

- The current investment policy statement was adopted and signed on August 11, 2015.

Custody Bank

- The current custodian is PNC Bank.
- Separate account market values and flows are derived from the custodial statement.

Commission Recapture Provider

- Cowen and Company, LLC.
- IPS evaluated the benefits of ongoing participation in a commission recapture program and suggests Funds continue to participate in them. To potentially enhance the manager's utilization of the commission recapture program, in November 2022, as a courtesy IPS provided draft notices for fund Administrator to consider sending to the investment managers.

Commingled Funds

- Commingled Fund: Due to the commingled fund structure, IPS does not monitor the holdings within the commingled fund for compliance with the client's investment policy statement. The commingled fund is governed by its own investment policy.
- Commingled fund market values and flows are derived from the manager statement.

Mutual Funds

- Mutual Fund: Due to the mutual fund structure, IPS does not monitor the holdings within the mutual fund for compliance with the client's investment policy statement. The mutual fund is governed by its own investment policy.
- Mutual fund market values and flows are derived from the manager statement.

Operating Engineers Local No. 77 Trust Fund of Washington DC

Appendix

Performance Detail (Gross of Fees) - Annualized

			Ending December 31, 2023					
	Market Value	% of Portfolio	2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund	**$36,452,729**	**100.0%**	**3.5%**	**6.3%**	**3.2%**	**4.9%**	**4.6%**	**4.8%**
Total Domestic Large Cap Equity	**$4,602,621**	**12.6%**	**13.1%**	**30.7%**	**11.1%**	**13.6%**	**10.6%**	**10.0%**
Vanguard Growth Index Fund Admiral Shares	$2,376,582	6.5%	14.4%	46.8%	--	--	--	--
CRSP US Large Cap Growth TR USD			*14.4%*	*46.9%*	--	--	--	--
Wedge Capital Management - QVM	$2,226,039	6.1%	11.8%	17.5%	10.5%	13.3%	10.3%	9.8%
Russell 1000 Value			*9.5%*	*11.5%*	*8.9%*	*10.9%*	*8.3%*	*8.4%*
Total Investment Grade Fixed Income	**$11,555,716**	**31.7%**	**4.4%**	**5.6%**	**-1.3%**	**2.0%**	**2.0%**	**2.2%**
Wedge Capital Management	$11,555,716	31.7%	4.4%	5.6%	-1.3%	2.0%	2.0%	2.2%
Bloomberg US Govt/Credit Int TR			*4.6%*	*5.2%*	*-1.6%*	*1.6%*	*1.6%*	*1.7%*
Total Short Duration High Yield Fixed Income	**$12,188,969**	**33.4%**	**4.1%**	**8.2%**	**2.8%**	**4.2%**	**3.7%**	**3.5%**
Chartwell Investment Partners SDHY	$12,188,969	33.4%	4.1%	8.2%	2.8%	4.2%	3.7%	3.5%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			*4.0%*	*8.8%*	*2.9%*	*4.5%*	*4.0%*	*3.9%*
Bloomberg US Govt/Credit Int TR			*4.6%*	*5.2%*	*-1.6%*	*1.6%*	*1.6%*	*1.7%*

Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending December 31, 2023 2023 Q4	Fiscal YTD	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Real Estate - Core	**$3,071,050**	**8.4%**	**-6.0%**	**-13.1%**	**5.0%**	**4.6%**	**5.7%**	**7.3%**
ARA Core Property Fund, LP	$3,071,050	8.4%	-6.0%	-13.1%	5.0%	4.6%	5.7%	7.3%
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	*4.4%*	*3.8%*	*4.7%*	*6.7%*
Total Real Estate - Value Add	**$3,233,931**	**8.9%**	**-1.7%**	**-1.2%**	**--**	**--**	**--**	**--**
Boyd Watterson State Government Fund, LP	$3,233,931	8.9%	-1.7%	-1.2%	--	--	--	--
NCREIF ODCE Equal Weighted Net			*-5.4%*	*-13.4%*	--	--	--	--
Long-Term Income Objective 9%			*2.2%*	*9.0%*	--	--	--	--
Total Cash Equivalents	**$1,800,442**	**4.9%**						
Cash Account	$1,710,405	4.7%						
Cash in Transit - ARA Core Property Fund, LP Redemption Proceeds	$24,043	0.1%						
Cash in Transit - ARA Core Property Fund, LP Distribution Proceeds	$24,673	0.1%						
Cash in Transit - Boyd Watterson State Government Fund, LP Distribution Proceeds	$41,321	0.1%						

Account	Fee Schedule	Market Value As of 12/31/2023	% of Portfolio	Estimated Annual Fee ($)	Estimated Annual Fee (%)
Total Domestic Large Cap Equity	**-**	**$4,602,621**	**12.6%**	**--**	**--**
Vanguard Growth Index Fund Admiral Shares	0.05% of Assets	$2,376,582	6.5%	$1,188	0.05%
*Wedge Capital Management - QVM	0.50% of Assets	$2,226,039	6.1%	$11,130	0.50%
Total Investment Grade Fixed Income	**-**	**$11,555,716**	**31.7%**	**--**	**--**
*Wedge Capital Management	0.33% of Assets	$11,555,716	31.7%	$37,556	0.33%
Total Short Duration High Yield Fixed Income	**-**	**$12,188,969**	**33.4%**	**--**	**--**
Chartwell Investment Partners SDHY	0.50% of Assets	$12,188,969	33.4%	$60,945	0.50%
Total Real Estate - Core	**-**	**$3,071,050**	**8.4%**	**--**	**--**
ARA Core Property Fund, LP	1.10% of Assets	$3,071,050	8.4%	$33,782	1.10%
Total Real Estate - Value Add	**-**	**$3,233,931**	**8.9%**	**--**	**--**
Boyd Watterson State Government Fund, LP	1.25% of First 25.0 Mil, 1.15% of Next 75.0 Mil, 1.05% Thereafter	$3,233,931	8.9%	$40,424	1.25%
Total Cash Equivalents	**-**	**$1,800,442**	**4.9%**	**--**	**--**
Cash Account	-	$1,710,405	4.7%	--	--
Cash in Transit - ARA Core Property Fund, LP Redemption Proceeds	-	$24,043	0.1%	--	--
Cash in Transit - ARA Core Property Fund, LP Distribution Proceeds	-	$24,673	0.1%	--	--
Cash in Transit - Boyd Watterson State Government Fund, LP Distribution Proceeds	-	$41,321	0.1%	--	--
Investment Management Fee		**$36,452,729**	**100.0%**	**$185,025**	**0.51%**

Note: The above fee schedules may not include incentive fees, operating expenses, custodian fees, or other administrative costs.

Note: The above information utilizes net expense ratio for any mutual fund investment. Management fee is used for all other investment types.

*Fee schedule represents the effective rate from the aggregation of assets of related Funds.

Benchmark History

Total Fund		
4/1/2023	Present	Russell 1000 10% / Bloomberg US Govt/Credit Int TR 35% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 35% / NCREIF ODCE Equal Weighted Net 20%
10/1/2021	3/31/2023	Russell 1000 15% / Bloomberg US Govt/Credit Int TR 35% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 30% / NCREIF ODCE Equal Weighted Net 20%
12/1/2012	9/30/2021	Russell 1000 Value 15% / Bloomberg US Govt/Credit Int TR 35% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 30% / NCREIF ODCE Equal Weighted Net 20%
7/1/2012	11/30/2012	S&P 500 15% / Bloomberg US Govt/Credit Int TR 35% / ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR 30% / NCREIF ODCE Equal Weighted Net 20%
7/1/2009	6/30/2012	S&P 500 20% / Bloomberg US Govt/Credit Int TR 65% / NCREIF ODCE Equal Weighted Net 15%
4/1/2007	6/30/2009	S&P 500 20% / Bloomberg US Govt/Credit Int TR 60% / NCREIF ODCE Equal Weighted Net 20%
4/1/1999	3/31/2007	S&P 500 20% / Bloomberg US Govt/Credit Int TR 80%
10/1/1997	3/31/1999	91 Day T-Bills 100%

Index Disclosures

- Bloomberg US Govt/Credit Int TR Index is listed for illustrative purposes.
- Long-Term Income Objective 9% - The manager's stated objective of a 9% net income return is listed for illustrative purposes.
- The NCREIF Fund Index - Open End Diversified Core Equity (NFI-ODCE) is a non-investable, time-weighted index comprised of the time weighted returns of approximately 40 open-end commingled funds pursuing a core private real estate investment strategy. The constituent funds qualify for inclusion in the NFI-ODCE based on specific criteria regarding their percentage of net assets invested in private equity real estate, geography, property type, life cycle, diversification and use of leverage. Constituent funds must also comply with the NCREIF PREA Reporting Standards, including annual audits, quarterly valuations and time-weighted returns. The NFI-ODCE returns are mainly driven by the underlying property investments in the constituent funds but can also be impacted by each funds use of leverage, cash balances, fund costs, etc. Returns shown are for the NFI-ODCE Equal Weight Index (fund constituents are equally-weighted), net of fees.
- Total Fund Benchmark History - During 4Q 2018, the real estate benchmark was changed from NCREIF ODCE Equal Weighted Index to NCREIF ODCE Equal Weighted Net Index for all historical time periods since inception.
- Total Fund Benchmark - The Total Fund Benchmark is comprised of the respective market indices for each asset class weighted at the percentage the asset class represents in the Policy. It is important to acknowledge that not all asset classes have a corresponding market index due to the specialized nature of the asset class (i.e. private equity, private debt, infrastructure, hedge funds) and/or the specialized nature of the investment (opportunistic investments, global tactical asset allocation, absolute return strategies). In such cases, a traditional asset class index may be used as a proxy in the Total Fund Benchmark. The Total Fund Benchmark illustrates how an indexed portfolio with a similar allocation to that of the Policy would have performed during a specific period. The Total Fund Benchmark does not account for ongoing changes in the allocation percentages of the Total Fund resulting from market gains/losses, cash flows, and rebalancing during the same period. While a useful tool in examining performance, due to the static nature of the allocation percentages in the Total Fund Benchmark, the fact that not all asset classes have a representative index, and considering that some indices in the Total Fund Benchmark are not investable, the Total Fund Benchmark should not be used as the primary measure of a Total Fund’s success or failure. Real Estate Benchmark - During 4Q2018 the real estate benchmark was changed from NCREIF ODCE Equal Weighted Index to NCREIF ODCE Equal Weighted Net Index for all historical time periods since inception.

Footnotes

- Values, flows, and returns for all commingled funds, mutual funds, partnerships, and all other alternative assets are provided by the firm managing the assets and cannot be independently verified by IPS. Separately managed account returns are calculated by IPS using custodian data.
- The net of fees returns in this report are estimated. Fees do not include: The investment consulting fee paid to IPS, custodian fees, or other administrative costs.
- The information contained in this report is propriety and confidential information. You are hereby notified that any dissemination, distribution, or copying of this document is strictly prohibited.
- Net of fees calculations began 3Q 2001, and cannot be calculated for prior time periods.
- Starting 4Q 2021, mutual fund returns are calculated utilizing the net expense ratio. Prior to 4Q 2021, mutual fund returns were calculated utilizing the fund's management fee.

- The Total Fund benchmark is comprised of the respective market indices for each asset class weighted at the percentage the asset class represents in the Policy. For real estate, where Boyd Waterson GSA (core real estate) and/or Boyd Waterson State (value add real estate) are the lone real estate investments, the annualized income objective of the respective Boyd Watterson fund (8% for GSA; 9% for State) was previously used as the market index to represent the real estate asset class. For example, if a fund has a 10% Policy for core real estate and Boyd Waterson GSA is the lone core real estate investment, 10% of the Total Fund benchmark was an 8% annualized income objective.

- The dramatic rise in interest rates in 2021 and 2022 made the annualized income objectives for the Boyd Waterson funds an unrealistic baseline for near-term and intermediate-term real estate return expectations. Therefore, the real estate component of the Total Fund benchmark is changed to the NCREIF ODCE Equal Weight Net Index for all real estate allocations, regardless of the specific real estate manager(s). The change has been applied to all historical time periods. We believe this change better represents the opportunity set for the real estate asset class.

ASSET ALLOCATION REVIEW

Operating Engineers Local No. 77 Trust Fund of Washington DC

February 2024

Asset Allocation Overview

- The asset allocation review is provided to assist the Trustees in identifying portfolios that meet the investment objectives, risk tolerance, and liquidity requirements of the Fund.

- The IPS Investment Committee develops and utilizes capital market assumptions for various asset classes to help determine the optimal mix of assets for an investment portfolio. These assumptions are forward-looking projections of an asset class' expected return and risk as measured by standard deviation or volatility of returns.

- All return assumptions are "net of fee" market or index returns and do not include alpha or excess return expected to be generated through active management. Return assumptions are the average expected return over the next 10 – 20 years and not the expected return in any given year.

- IPS capital market assumptions are compared with various assumptions from other providers and published resources for reasonableness. The IPS Investment Committee reviews the assumptions on a semiannual basis but may adjust at anytime, as needed, based on severe market dislocations, sudden changes in interest rates, or extreme events that impact global markets, economic development, and the business cycle.

- IPS capital market assumptions are not a guarantee of future performance. Actual results may differ from the projections included in this review.

- The asset allocation modeling requires the mathematical construction of an efficient frontier of various portfolios with distinct asset allocations and risk and return characteristics. The modeling process also requires the imposition of constraints, so that the efficient frontier represents a prudently diversified portfolio with adequate consideration of the liquidity needs and investment time horizon. Unconstrained optimization frequently generates allocations that have superior risk/reward characteristics, but the resulting allocations may not be adequately diversified and/or may have inappropriate allocations to illiquid investments.

- The cashflows and liquidity constraints of the fund for which this asset allocation review is being presented were considered when developing the portfolios presented for consideration.

- IPS utilizes the Wilshire Compass system for asset allocation modeling and all returns are based on geometric calculation.

Annualized Expected Returns over 10-20 years

Equity Asset Class	Return	Risk
U.S. Large Cap	6.50%	15.50
U.S. Mid Cap	7.00%	17.50
U.S. Smid Cap	6.88%	19.00
U.S. Small Cap	6.75%	20.50
International Large Cap	7.50%	16.75
International Small Cap	8.00%	19.25
Emerging Markets	8.25%	20.50
Global Equity	7.00%	16.75

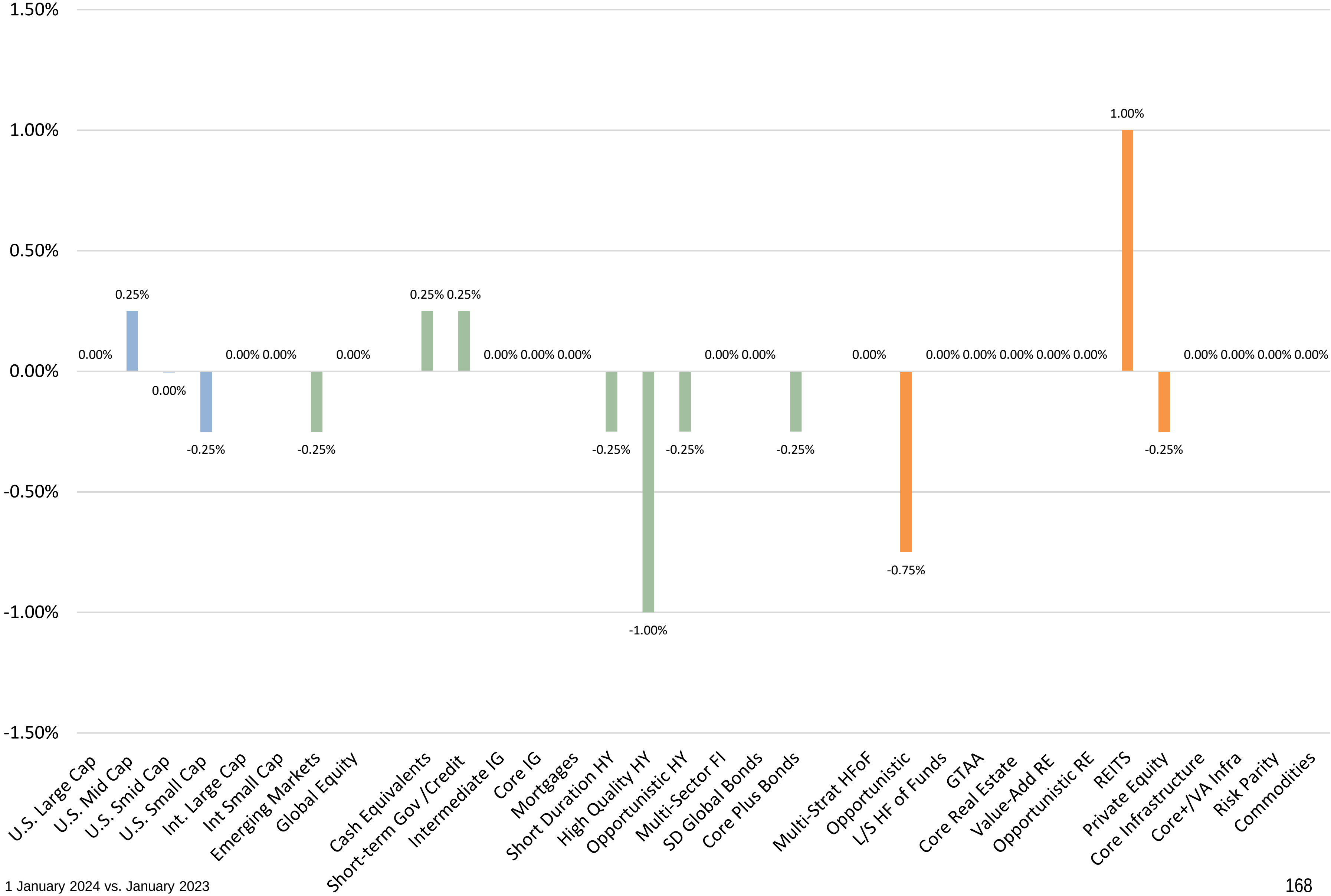
Fixed Income Asset Class	Return	Risk
Cash Equivalents	3.00%	0.50
Short-term Gov /Credit	3.75%	2.00
Intermediate Investment Grade	4.25%	3.50
Core Investment Grade	4.50%	4.00
Mortgages	4.75%	5.00
Short Duration High Yield	6.00%	6.00
High Quality High Yield	6.50%	8.00
Opportunistic High Yield	7.75%	8.50
Multi-Sector Fixed Income	3.50%	6.00
Short Duration Global Bonds	2.50%	5.00
Core Plus Bonds	4.75%	5.25

Alternatives Asset Class	Return	Risk
Multi-Strategy Hedge Fund of Funds	5.00%	6.00
Opportunistic Strategies	7.50%	15.00
L/S Hedge Fund of Funds	5.00%	9.00
Global Tactical Asset Allocation	6.50%	12.00
Core Real Estate	6.00%	9.00
Core Plus Real Estate	6.50%	10.25
Value-Add Real Estate	7.00%	11.50
Opportunistic Real Estate	9.00%	15.00
REITS	6.00%	20.00
Diversified Private Equity	9.75%	21.00
Core Infrastructure	6.25%	11.50
Core+/Value Add Infrastructure	8.25%	15.00
Private Credit	9.00%	13.00
Risk Parity	5.50%	16.00
Commodities	3.75%	17.00

INVESTMENT PERFORMANCE SERVICES, LLC

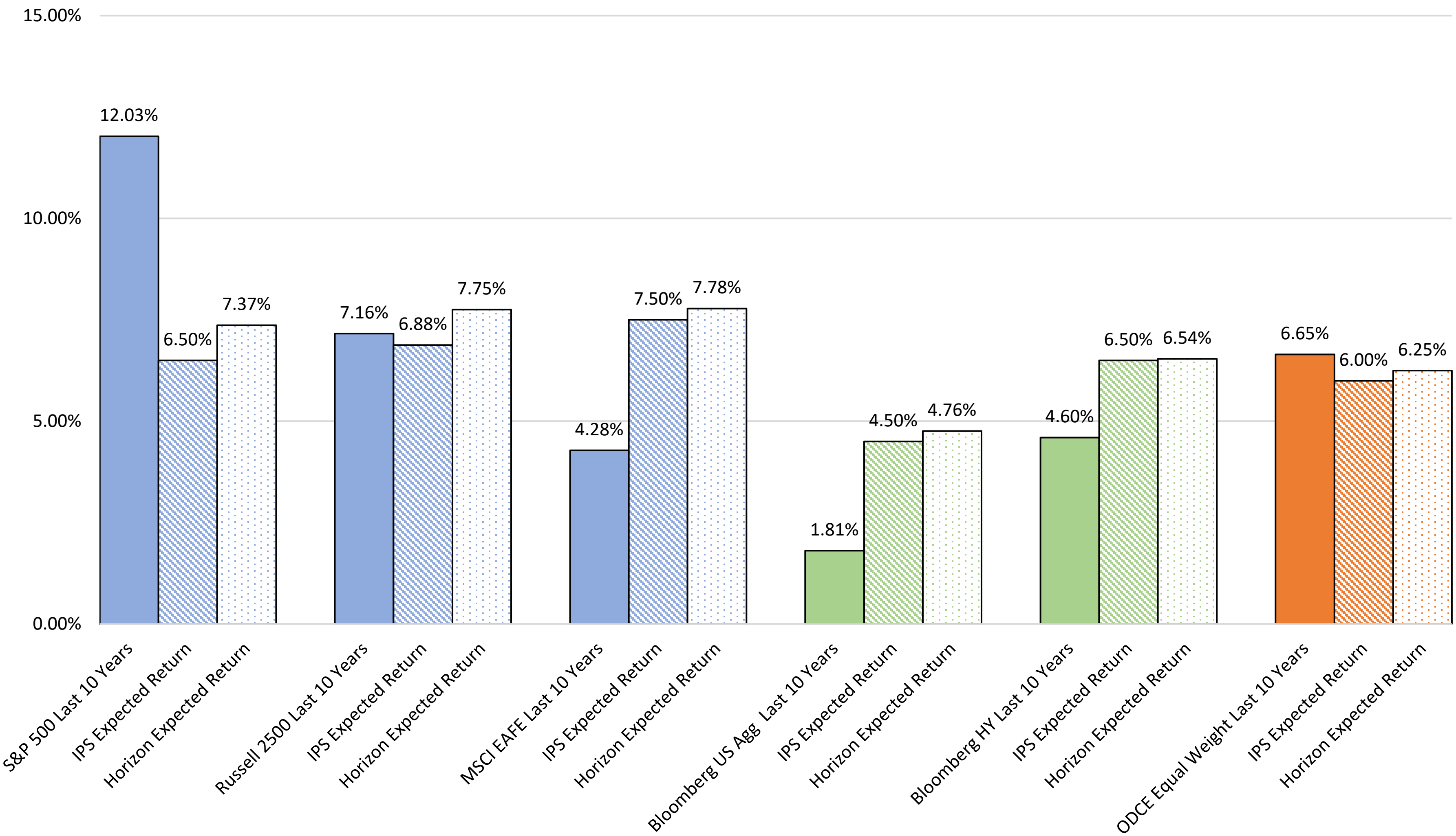
- IPS Investment Committee January 2024.
- Inflation expectation 2.5%.

Change in Expected Returns[1]



1 January 2024 vs. January 2023

Historical Returns vs. Forward Looking Assumptions



- “Last 10 Years” returns are as of 12/31/2023.
- “Horizon Expected Returns” are sourced from the Survey of Capital Market Assumptions (20-year horizon) published by Horizon Actuarial Services, LLC published in the August 2023 edition.

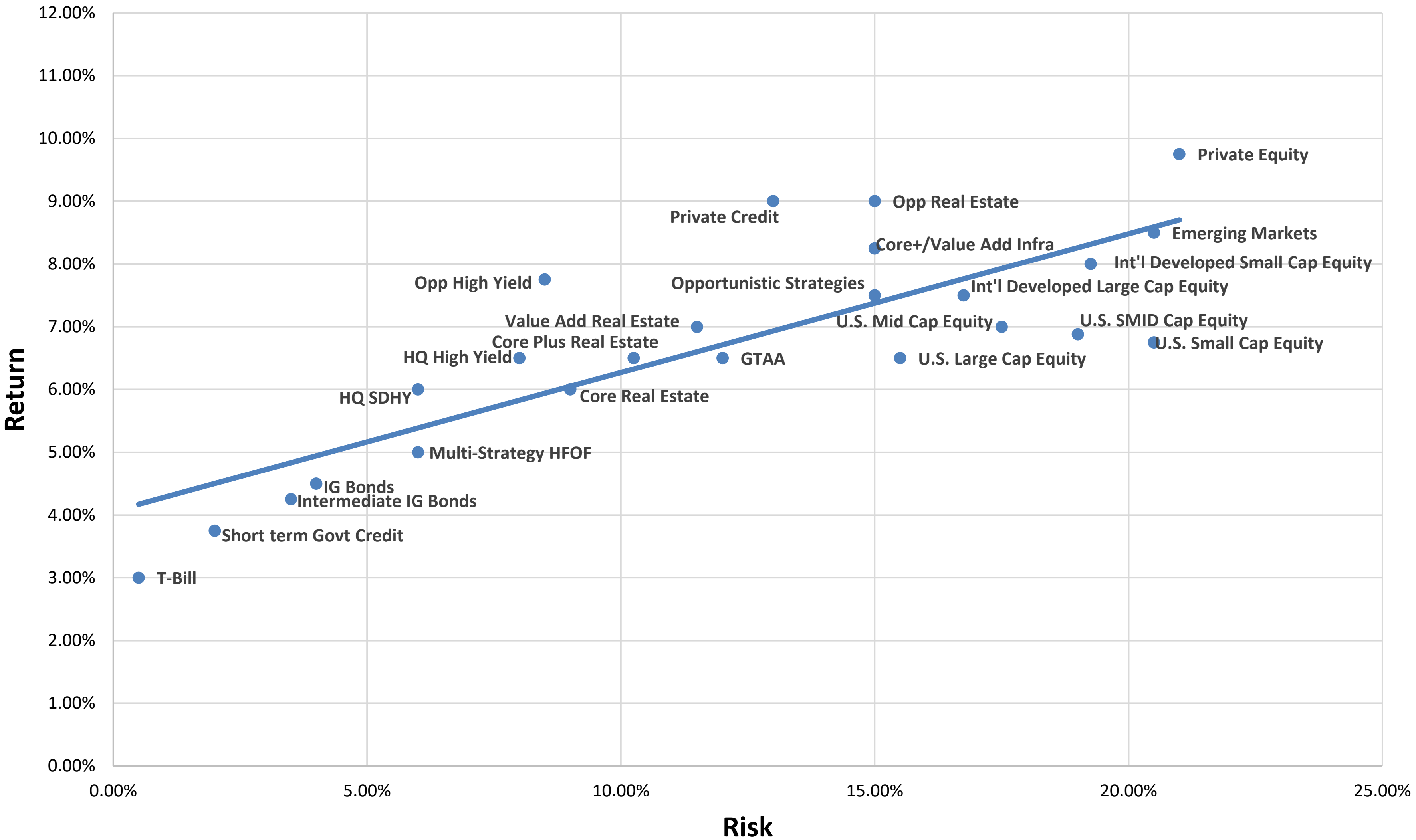
Asset Class Constraints

Total Domestic Equity	**20%**	**Max**
Cash	**5%**	**Max**
Fixed Investment Grade (Includes Short Term & Intermediate)	**20%**	**Min**
High Quality High Yield Bonds (Includes Short Duration)	**30%**	**Max**
Real Estate – Core	**10%**	**Max**
Real Estate – Core Plus	**5%**	**Max**
Real Estate – Value Add	**5%**	**Max**
Total Real Estate	**15%**	**Max**

The Asset Allocation modeling requires the mathematical construction of an efficient frontier of various portfolios with distinct asset allocations and risk and return characteristics. The modeling process also requires the imposition of constraints, so that the efficient frontier represents a prudently diversified portfolio with adequate consideration of the liquidity needs and investment time horizon. Unconstrained optimization frequently generates allocations that have superior risk/reward characteristics, but the resulting allocations may not be adequately diversified and/or may have high allocations to illiquid investments.

The constraints shown are used for modeling purposes only. They should not be construed as suggested or recommended allocations, or limits on allocations, to any asset class or investment strategy. Each client fund has different facts, circumstances, time horizon, risk tolerance levels, return objectives, investment preferences, cash flows, and liquidity requirements. As such, each client's investment policy may differ materially from the constraints shown above.

2024 Capital Market Assumptions



Asset Class Correlations

Assumption table:	US Large Cap Equity	US Mid Cap Equity	US Smid Cap Equity	US Small Cap Equity	Int'l Large Cap Equity	Int'l Small Cap Equity	Emerging Markets Equity	Cash	Short Term Govt / Credit	Interm. Invest. Grade	Core Invest. Grade	Short Duration High Yield	High Yield	Opp High Yield	Real Estate Core	Real Estate Core Plus	Real Estate Value Add	Private Equity	HFoF Multi-Strategy	Private Credit	Opp. Strategies	GTAA	Infrastructure
US Large Cap Equity	1.00																						
US Mid Cap Equity	0.96	1.00																					
US Smid Cap Equity	0.93	0.98	1.00																				
US Small Cap Equity	0.90	0.95	0.99	1.00																			
Int'l Equity	0.87	0.86	0.82	0.78	1.00																		
Int'l Small Cap Equity	0.84	0.87	0.83	0.79	0.95	1.00																	
Emerging Markets Equity	0.74	0.76	0.72	0.69	0.86	0.85	1.00																
Cash	-0.11	-0.13	-0.13	-0.13	-0.03	-0.10	0.00	1.00															
Short Term Govt / Credit	0.05	0.04	0.00	-0.03	0.13	0.13	0.17	0.36	1.00														
Int. Investment Grade	0.18	0.16	0.12	0.07	0.22	0.23	0.25	0.14	0.87	1.00													
Core Investment Grade	0.19	0.17	0.12	0.08	0.22	0.22	0.24	0.10	0.81	0.98	1.00												
Short Duration High Yield	0.65	0.72	0.67	0.62	0.66	0.71	0.65	-0.12	0.25	0.35	0.34	1.00											
High Yield	0.73	0.79	0.75	0.70	0.74	0.76	0.70	-0.12	0.23	0.37	0.37	0.93	1.00										
Opp. High Yield	0.70	0.77	0.73	0.69	0.70	0.73	0.67	-0.14	0.06	0.18	0.18	0.90	0.95	1.00									
Real Estate Core	0.28	0.20	0.20	0.30	0.20	0.12	0.16	0.06	-0.37	-0.33	-0.28	0.28	0.20	0.12	1.00								
Real Estate Core Plus	0.28	0.20	0.20	0.30	0.20	0.12	0.16	0.06	-0.37	-0.33	-0.28	0.28	0.20	0.12	1.00	1.00							
Real Estate Value Add	0.28	0.20	0.20	0.30	0.20	0.12	0.16	0.06	-0.37	-0.33	-0.28	0.28	0.20	0.12	1.00	1.00	1.00						
Private Equity	0.76	0.81	0.86	0.88	0.67	0.69	0.59	-0.15	-0.06	0.03	0.03	0.53	0.60	0.60	0.20	0.20	0.20	1.00					
HFoF Multi-Strategy	0.73	0.78	0.76	0.71	0.78	0.83	0.76	-0.06	0.01	0.07	0.08	0.64	0.67	0.71	0.08	0.08	0.08	0.70	1.00				
Private Credit	0.69	0.75	0.71	0.68	0.65	0.64	0.64	-0.09	-0.28	-0.16	-0.17	0.71	0.74	0.80	0.28	0.28	0.28	0.65	0.76	1.00			
Opportunistic Strategies	0.79	0.85	0.85	0.82	0.81	0.85	0.76	-0.12	-0.02	0.05	0.05	0.72	0.76	0.81	-0.02	-0.02	-0.02	0.82	0.91	0.82	1.00		
GTAA	0.94	0.91	0.87	0.83	0.95	0.92	0.83	-0.04	0.23	0.35	0.35	0.69	0.77	0.70	-0.01	-0.01	-0.01	0.77	0.75	0.62	0.78	1.00	
Infrastructure	0.62	0.60	0.56	0.52	0.67	0.62	0.57	-0.01	0.18	0.31	0.32	0.53	0.59	0.54	0.40	0.40	0.40	0.60	0.63	0.56	0.66	0.68	1.00

A correlation of 1.00 indicates two series move perfectly together while a -1.00 shows they move perfectly opposite one another.

Efficient Frontier Analysis

Efficient Frontier Report Asset	Portfolio 1	Portfolio 2	Portfolio 3	Portfolio 4	Portfolio 5	Portfolio 6	Portfolio 7	Portfolio 8	Portfolio 9	Portfolio 10
US Large Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	1.21	5.50	11.96	20.00
US Mid Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Smid Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
US Small Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int'l Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Int'l Small Cap Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Emerging Markets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Cash	5.00	5.00	2.47	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Short Term Govt / Credit	85.00	78.05	69.27	56.15	38.93	22.17	0.00	0.00	0.00	0.00
Int. Investment Grade	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Core Investment Grade	0.00	0.00	3.70	12.68	22.83	32.83	53.79	49.50	43.04	35.00
Short Duration High Yield	0.00	3.11	7.59	14.82	23.24	30.00	25.64	7.58	0.00	0.00
High Yield	0.00	1.60	2.70	1.35	0.00	0.00	4.36	22.42	30.00	30.00
Real Estate Core	10.00	7.24	9.26	10.00	10.00	10.00	10.00	10.00	10.00	10.00
Real Estate Core Plus	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Real Estate Value Add	0.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00	5.00
Private Equity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
HFoF Multi-Strategy	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Opp. Strategies	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
GTAA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Return	**3.98**	**4.22**	**4.46**	**4.69**	**4.93**	**5.16**	**5.39**	**5.60**	**5.81**	**6.00**
Risk	**1.61**	**1.75**	**2.04**	**2.38**	**2.77**	**3.19**	**3.69**	**4.35**	**5.16**	**6.11**
Return/Risk	**2.47**	**2.41**	**2.19**	**1.97**	**1.78**	**1.61**	**1.46**	**1.29**	**1.13**	**0.98**

Compound annual return.

Asset Allocation Policy History

	2018	2021	2022	2023
U.S. Large Cap	15.0%	15.0%	15.0%	10.0%
Intermediate Fixed	35.0%	35.0%	35.0%	35.0%
SD High Yield	30.0%	30.0%	30.0%	35.0%
Core Real Estate	20.0%	10.0%	10.0%	10.0%
Value Add Real Estate	--	10.0%	10.0%	10.0%
Expected Return	**5.46%**	**4.44%**	**4.44%**	**5.84%**
Expected Risk	**4.46%**	**4.37%**	**4.22%**	**4.21%**

Green	Increase allocation
Red	Decrease allocation
Blue	New asset class

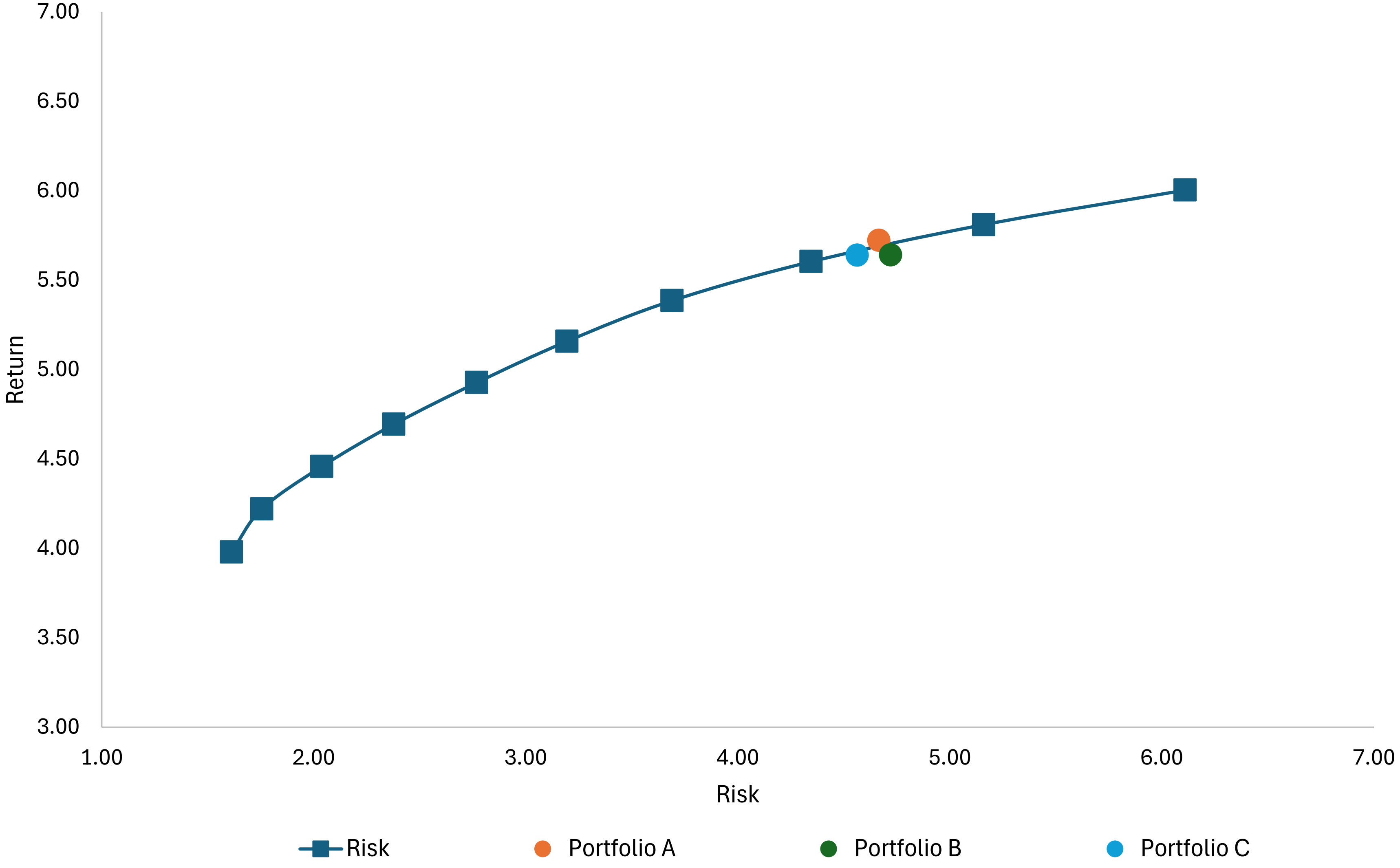
Current Policy Comparison

		% Equity Target	% Fixed Income Target		% Alternatives Target		Cash	Expected Return (net of fees)	Risk	Comments
		US LC Equity	Fixed Income Interm	Short Duration High Yield	Real Estate Core	Real Estate Value Add				
1	Operating Engineers Local No. 77 Trust Fund of Washington DC Portfolio A	10.0	35.0	35.0	10.0	10.0	0.0	5.72%	4.67	Current Policy
2	Portfolio B	12.6	31.7	33.4	8.4	8.9	4.9	5.64%	4.72	Allocation as of December 31, 2023.
3	Portfolio C	10.0	37.5	37.5	7.5	7.5	0.0	5.64%	4.56	Increase investment grade and short duration high yield; decrease real estate core and real estate value add.

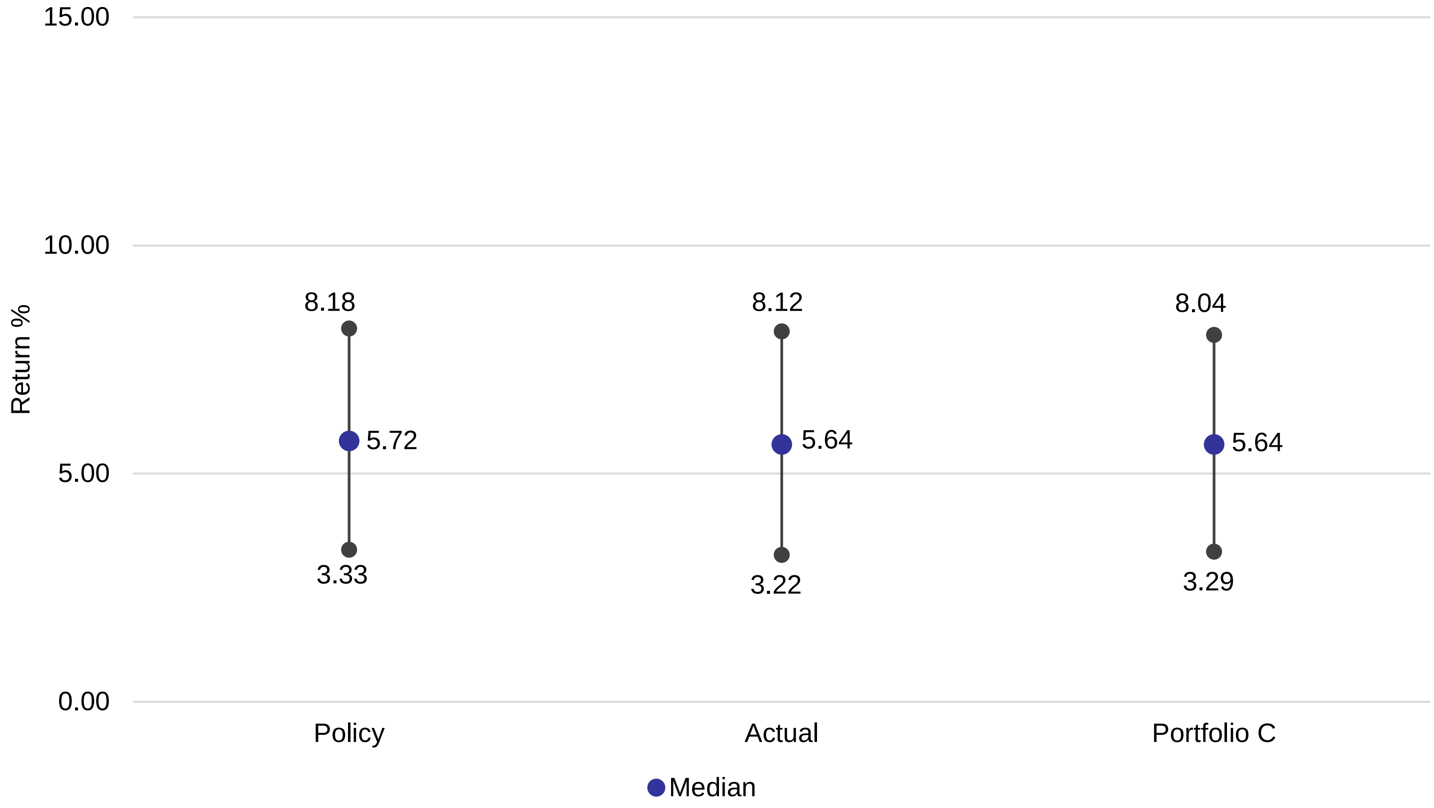
Scenarios are shown for illustrative purposes.

Green	Increase allocation
Red	Decrease allocation
Blue	New asset class

Efficient Frontier Comparison

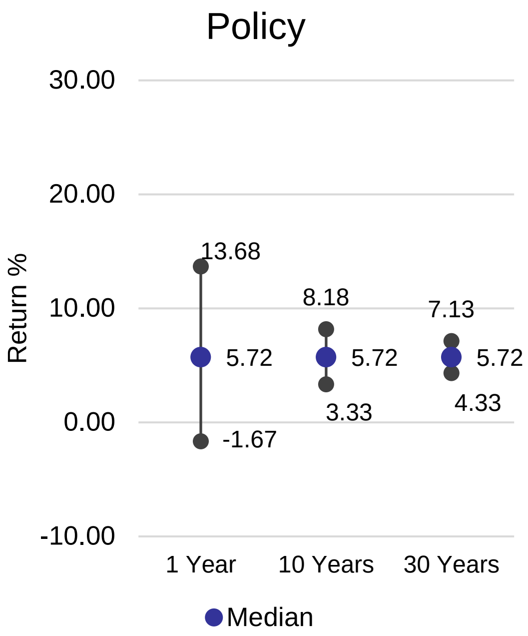


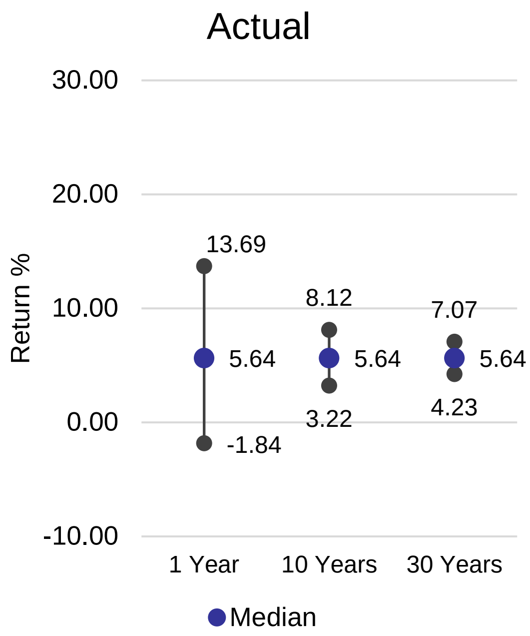
Potential Distribution of Returns – 10 Year Horizon

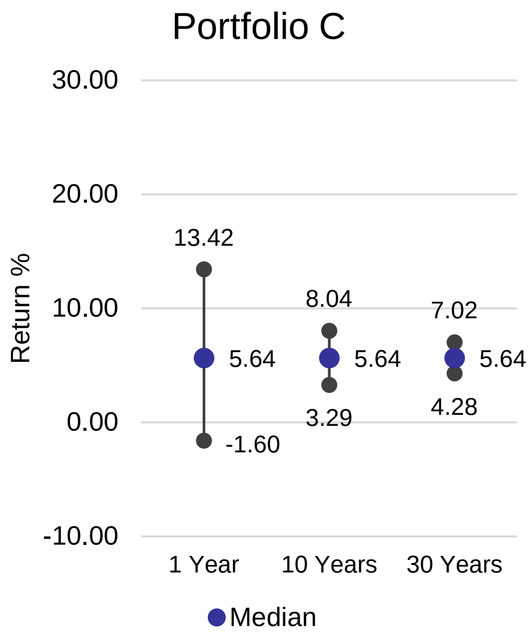


Potential distribution of returns is based on the Parametric Method. Best and worst outcomes are based on the 5th and 95th percentile, respectively.

Potential Distribution of Returns



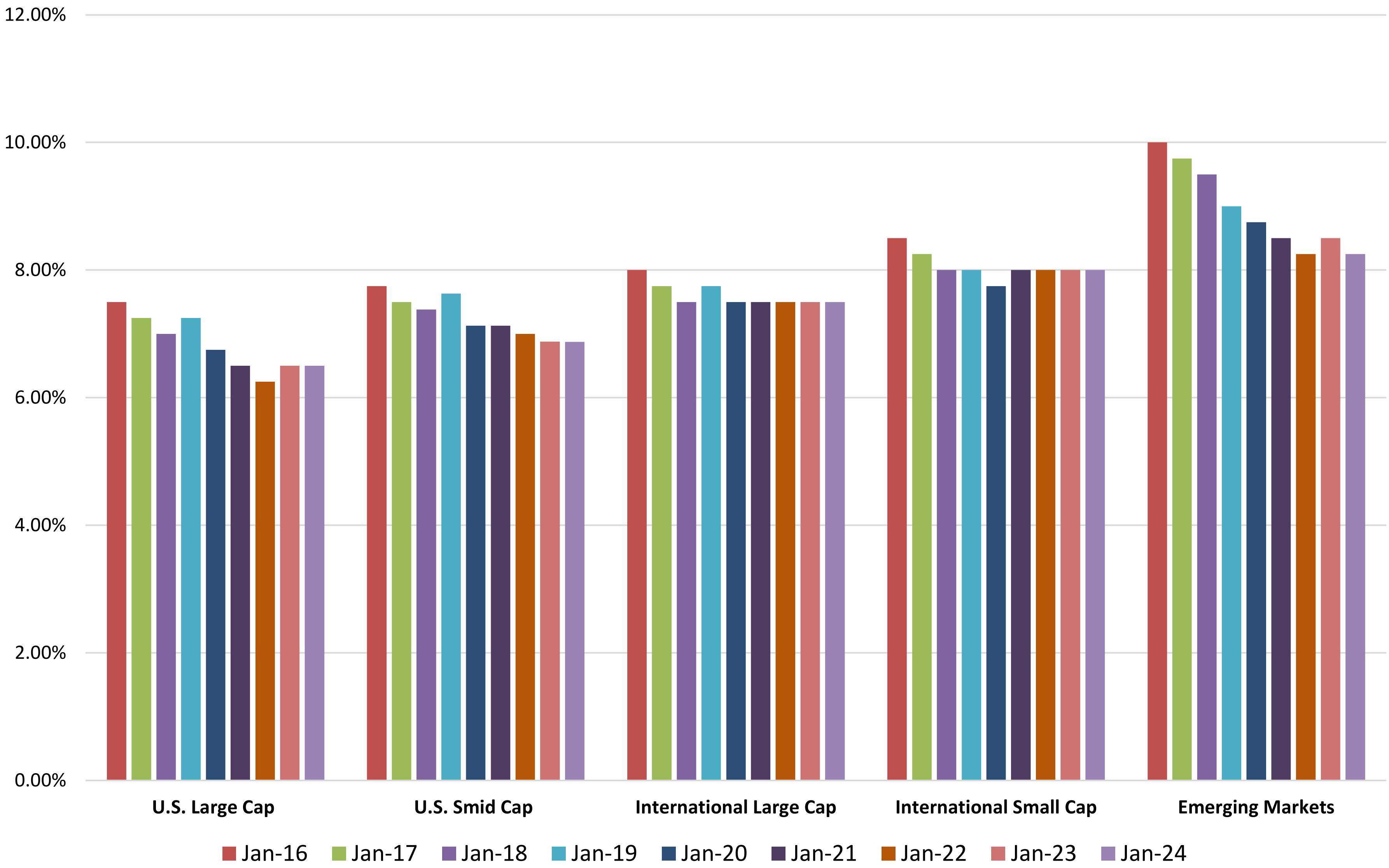




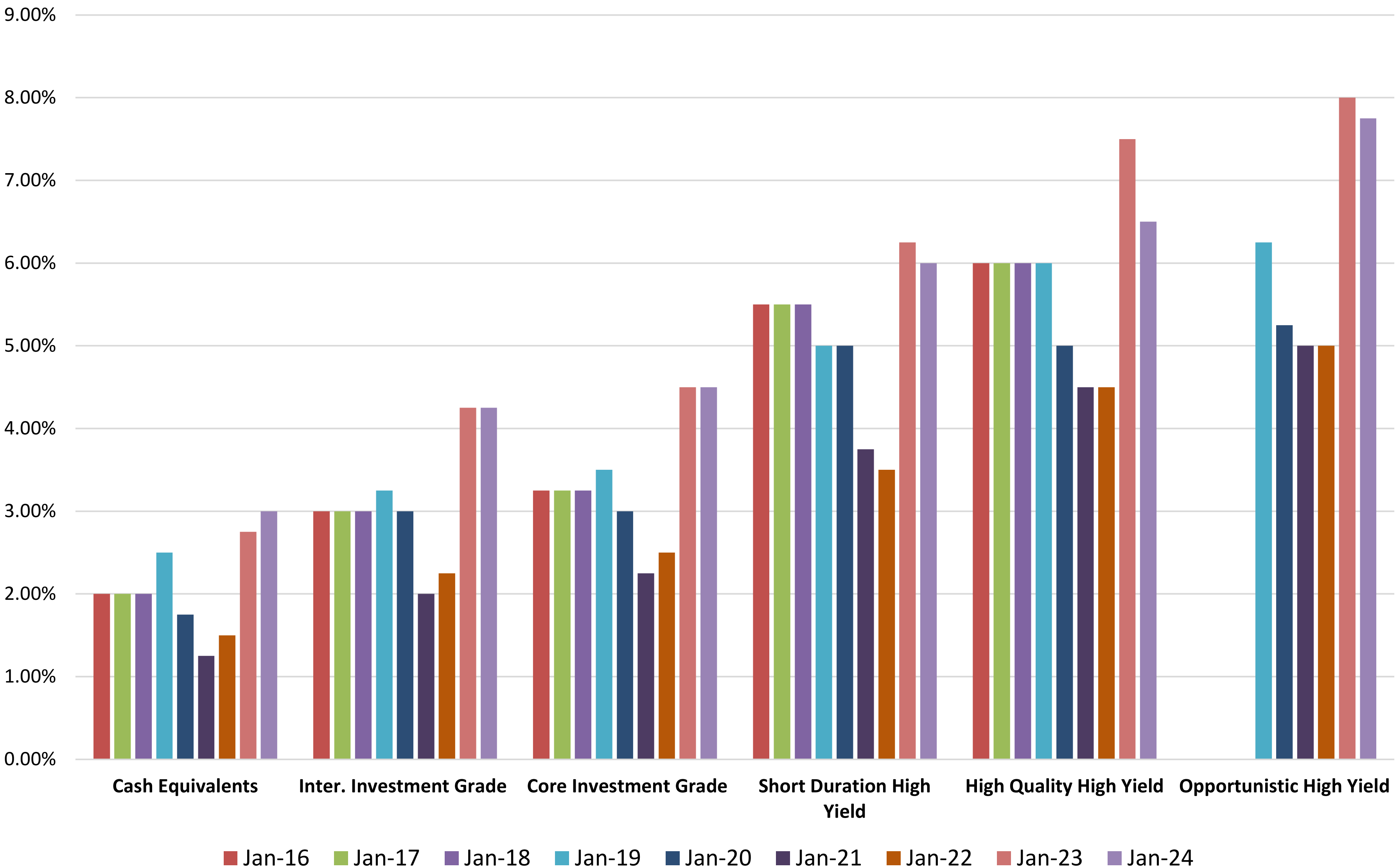
Potential distribution of returns is based on the Parametric Method. Best and worst outcomes are based on the 5th and 95th percentile, respectively.

APPENDIX

Public Equity – IPS Historical Capital Market Assumptions

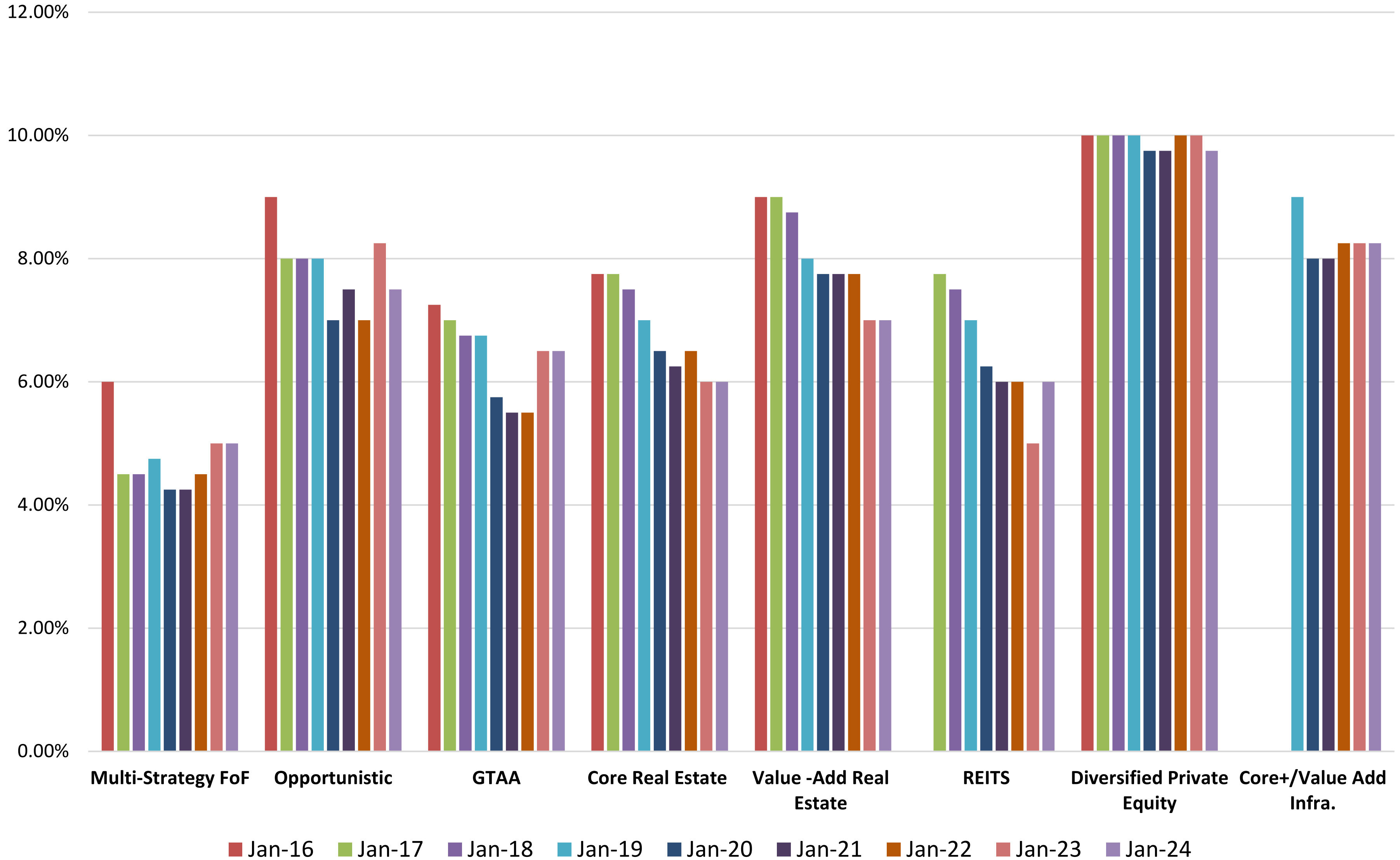


Fixed Income – IPS Historical Capital Market Assumptions



IPS began setting a capital market assumption for Opportunistic High Yield in January 2019.

Alternative Investments – IPS Historical Capital Market Assumptions



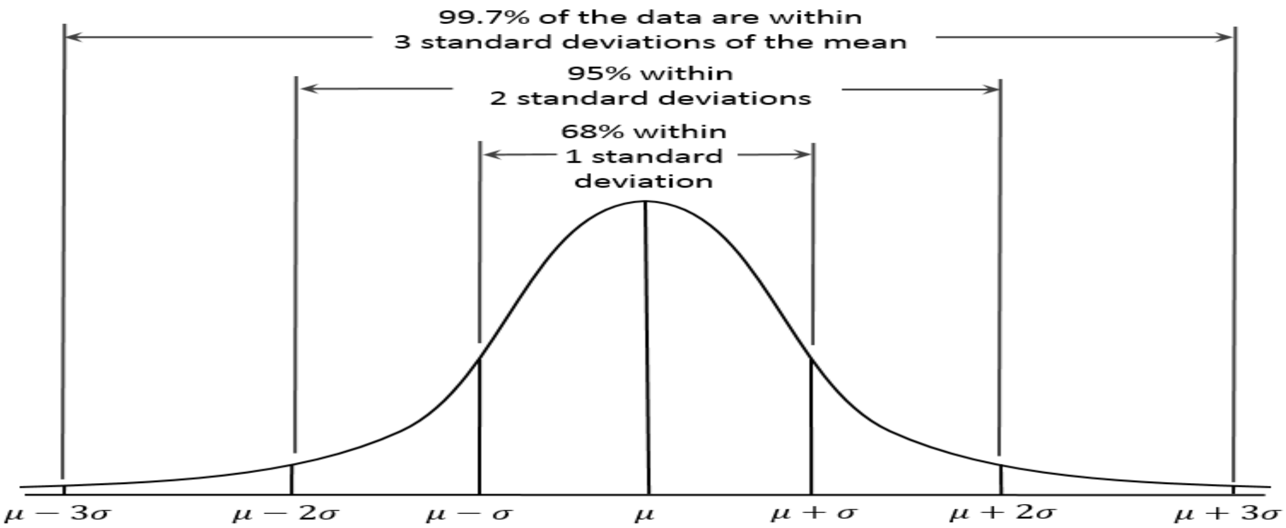
IPS began setting a capital market assumption for Core+/Value Add Infrastructure in January 2019.

Explanation of Methodology

- The analysis in this presentation utilizes the parametric method, also known as the variance-covariance method

- The parametric method assumes a normal distribution of returns, commonly referred to as a bell-shaped curve.
  - For a normal distribution, 68% of the observations are within +/- one standard deviation, 95% are within +/- two standard deviations, and 99.7% are within +/- three standard deviations

- The chart below shows a normal distribution



- In reality, financial returns are not "normal;" they exhibit positive skewness (you get more positive returns above the mean than a normal distribution would predict) and kurtosis (the extreme "tails" of both positive and negative returns occur more often and are more extreme than a normal distribution would predict).

Glossary of Investment Terminology

Total Return	The annual return on an investment including appreciation, depreciation and income (interest, dividends, net operating income).
Alpha	The excess return (positive or negative) generated by active portfolio management and security selection, relative to a benchmark.
Beta	A historical measure of an investment's volatility relative to the market. The beta of the market is 1.0 (as represented by a benchmark such as the S&P 500 Index). A beta of greater than 1.0 indicates an investment with greater volatility than the benchmark. A beta of less than 1.0 indicates less volatility than the benchmark.
Standard Deviation	Standard deviation is a statistical measurement of the dispersion of a set of data from its mean. The more spread apart the data are, the greater the standard deviation.
Risk	For an investment portfolio, risk is typically defined as the volatility of the returns, as measured by calculating the standard deviation. The risk does not necessarily indicate the risk of loss, but does indicate the risk of inconsistent returns.
Capture Ratio	Calculates how well a manager performs in a rising or falling market as a percentage of a benchmark. In a rising market, a percentage of 100 or better is preferred, and indicates the manager exceeded the benchmark (upside capture ratio). In a falling market, a percentage of less than 100 is preferred, indicating that the manager lost less than the benchmark (downside capture ratio).
Correlation	A statistical measure of how two asset classes perform in relation to each other. Asset classes with a correlation of 1.0 have perfect positive correlation (exactly the same). Assets with perfect negative correlation of -1.0 will perform equally but in opposite directions.
Efficient Frontier	A series of portfolios with the maximum expected return for any level of risk, which is calculated based on assumptions of risk, return and correlation. These portfolios are shown graphically on a risk and return chart, and represent the most efficient tradeoff between risk and return.
Market Cap	The dollar value of a corporation, which is calculated by multiplying the share price and the number of outstanding shares.
Large Cap	Stocks which typically have a market capitalization of $10 billion or higher.
Mid Cap	Stocks which typically have a market capitalization of $2 to $10 billion.
Small Cap	Stocks which typically have a market capitalization of $2 billion or less.
Geometric Calculation	Geometric Calculations are used when determining an annualized investment return and tends to dampen the effect of very high or very low values. The result is a number that is smaller than (or equal to) the arithmetic average of the values.
Compound Annual Returns	Compound annual returns show the annual investment return, assuming the investment grew at a constant rate, and reflects the impact of the time in the calculation of an investment return.
Return/Risk Ratio	The return/risk ratio is the expected return of an investment divided by the expected standard deviation (risk). When comparing return/risk ratios a higher value is presumed to be better than a lower value

Disclaimer:

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EPIC

May 3-5, 2023

The following investment managers and providers attended and helped to defray the cost of IPS' annual conference EPIC. EPIC is an educational conference addressing various issues related to employee benefit plans. IPS does not give preferential treatment to investment managers or any other provider that pays to attend EPIC.

Amalgamated Bank of Chicago
American Realty Advisors
Ares Management
Aristotle
ASB Real Estate Investments
Atlanta Capital Management
Barrow Hanley Global Investors
BentallGreenOak
BNY Mellon Asset Management (Mellon)
Boston Partners Global Investors
Boyd Watterson Asset Management
Capital Group
Chartwell Investment Partners
Christenson Investment Partners
Columbia Threadneedle Investments
Constitution Capital Equity Partners
Corbin Capital Partners
Earnest Partners
Empower
EnTrust Global
Fidelity Investments
First Eagle Investment Mgmt.
Foundry Partners
Fred Alger Management
GAMCO Asset Management
GCM Grosvenor
Glouston Capital Partners
GoldenTree Asset Management
Great Lakes Advisors
Hamilton Lane Advisors
Hardman Johnston Global Advisors
HPS Partners
Intercontinental Real Estate Corp.
Invesco Advisers, Inc.
Janus Henderson Investors
John Hancock
JP Morgan Asset Management
Kearney Capital LLC
Kelson Group
Lazard Asset Management
Loomis, Sayles & Company
Lord Abbett & Co.
LSV Asset Management
Lyrical Asset Management
MacKay Shields
McMorgan & Company
Manning & Napier
Manulife
Mesirow Private Equity
National Investment Services
National Real Estate Investors
Neuberger Berman
Northern Trust Asset Management
Nuveen Investment Group
Oaktree Capital Management
Old Glory Asset Management
Partners Group
Patriot Financial Partners
PNC Capital Advisors
Post Advisory Group
Principal Financial Group
Principal Life Insurance
Raymond James Investment Management
Richmond Capital Mgmt
Schroders Investment Management
Segall Bryant & Hamill
Sierra Investment Partners
Smith Graham & Co.
State Street Global Advisors
Stonepeak Partners
Ullico Investment Company
Vanguard
Victory Capital Management
Vista Underwriting
Washington Capital Management
WEDGE Capital Management
Wellington Management Company
Westfield Capital Management
Westport Capital Partners
William Blair & Company
Xponance