



Operating Engineers Local No. 77 Pension & Trust Funds

Master Consulting Services Report

**Period Ended
June 30, 2023**

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Market Discussion

2Q | 2023



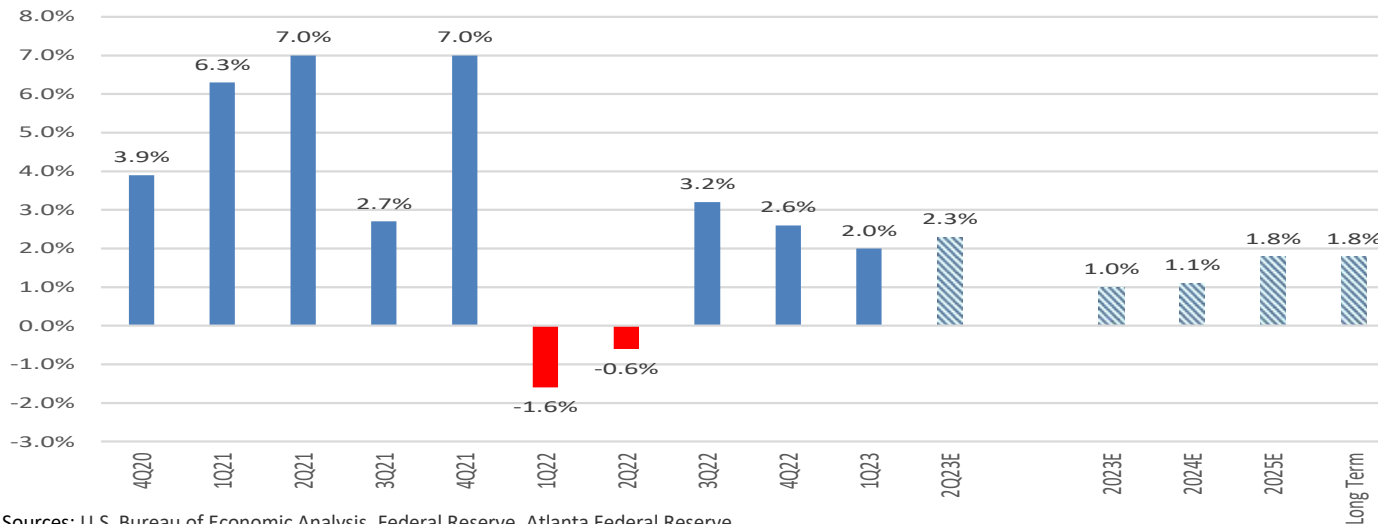
Financial Market Performance

Periods Ending June 30, 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	8.7%	16.9%	-18.1%	28.7%	18.4%	31.5%	-4.4%	21.8%	19.6%	14.6%	12.3%	12.8%	10.0%
	US Small Cap	Russell 2000	5.2%	8.1%	-20.5%	14.8%	19.9%	25.5%	-11.0%	14.6%	12.3%	10.8%	4.2%	8.2%	8.9%
	All Country	MSCI All Country World (net)	6.2%	13.9%	-18.4%	18.5%	16.3%	26.6%	-9.4%	24.0%	16.5%	11.0%	8.1%	8.7%	8.2%
	Non-US Developed	MSCI EAFE (net)	3.0%	11.7%	-14.5%	11.3%	7.8%	22.0%	-13.8%	25.0%	18.8%	8.9%	4.4%	5.4%	6.5%
	Emerging Markets	MSCI EM (net)	0.9%	4.9%	-20.1%	-2.5%	18.3%	18.4%	-14.6%	37.3%	1.7%	2.3%	0.9%	2.9%	8.2%
	Int'l Small Cap	MSCI EAFE Small Cap (net)	0.6%	5.5%	-21.4%	10.1%	12.3%	25.0%	-17.9%	33.0%	10.2%	5.7%	1.3%	6.2%	8.3%
Bonds	Treasury	Bloomberg US Govt	-1.4%	1.6%	-12.3%	-2.3%	7.9%	6.8%	0.9%	2.3%	-2.1%	-4.7%	0.5%	1.0%	2.5%
	Broad Market	Bloomberg Aggregate	-0.8%	2.1%	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.5%	-0.9%	-4.0%	0.8%	1.5%	3.0%
	Intermediate	Bloomberg Gov/Credit Int.	-0.8%	1.5%	-8.2%	-1.4%	6.4%	6.8%	0.9%	2.1%	-0.1%	-2.5%	1.2%	1.4%	2.7%
	High Yield	Bloomberg HY BaB 2% IC	1.4%	4.8%	-10.6%	4.6%	7.7%	15.2%	-1.9%	6.9%	8.9%	2.6%	3.7%	4.5%	6.3%
	Short Duration HY	ICE BofA 1-3 Yrs BB US Cash Pay HY	1.3%	3.6%	-3.1%	3.2%	5.4%	8.7%	1.3%	3.6%	7.1%	3.4%	3.7%	3.9%	5.4%
	Global Bonds	FTSE WGBI	-1.8%	1.7%	-18.3%	-7.0%	10.1%	5.9%	-0.8%	7.5%	-2.5%	-6.5%	-2.0%	-0.5%	2.1%
GTAA	Unconstrained	65% MSCI World /35% FTSE WGBI	3.8%	10.3%	-18.1%	11.0%	14.6%	19.9%	-5.8%	17.0%	10.9%	5.5%	5.4%	6.1%	6.4%
Real Estate	Core	NCREIF ODCE Equal Weighted (net)	-3.0%	-6.4%	7.6%	21.9%	0.8%	5.2%	7.3%	6.9%	-10.5%	7.6%	6.1%	8.1%	6.9%
Hedge Fund of Funds	Diversified FOFs	HFRI FOF Composite	1.4%	2.2%	-5.3%	6.2%	10.9%	8.4%	-4.0%	7.8%	3.6%	5.0%	3.3%	3.4%	3.6%
	Equity Long-Short	HFRI Equity Hedge	2.9%	5.5%	-10.1%	11.7%	17.9%	13.7%	-7.1%	13.3%	7.4%	8.9%	5.4%	5.6%	5.9%
Commodities	Commodities	Goldman Sachs Commodity	-2.7%	-7.5%	26.0%	40.4%	-23.7%	17.6%	-13.8%	5.8%	-14.2%	25.1%	2.8%	-3.5%	-0.9%

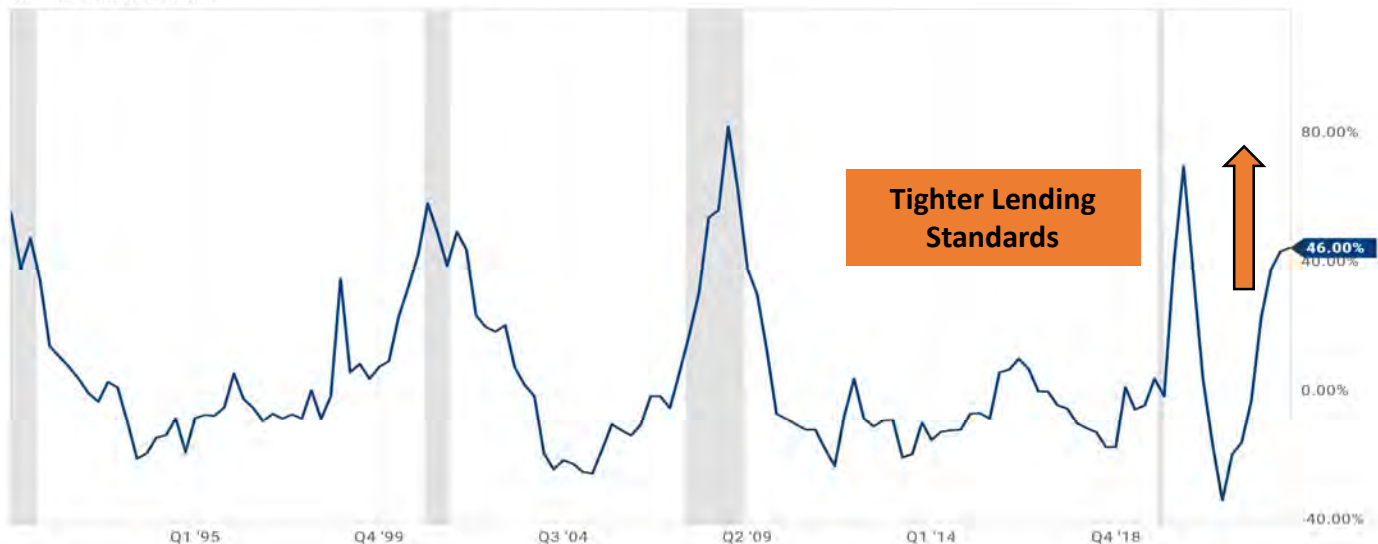
U.S. Economy

U.S. GDP Growth



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

US Net Percentage of Banks Reporting Tightening Standards for C&I Loans to Large and Middle-market Firms



Date Range: 06/30/1990 - 06/30/2023

Source: Federal Reserve

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U.S Economy Remains Resilient

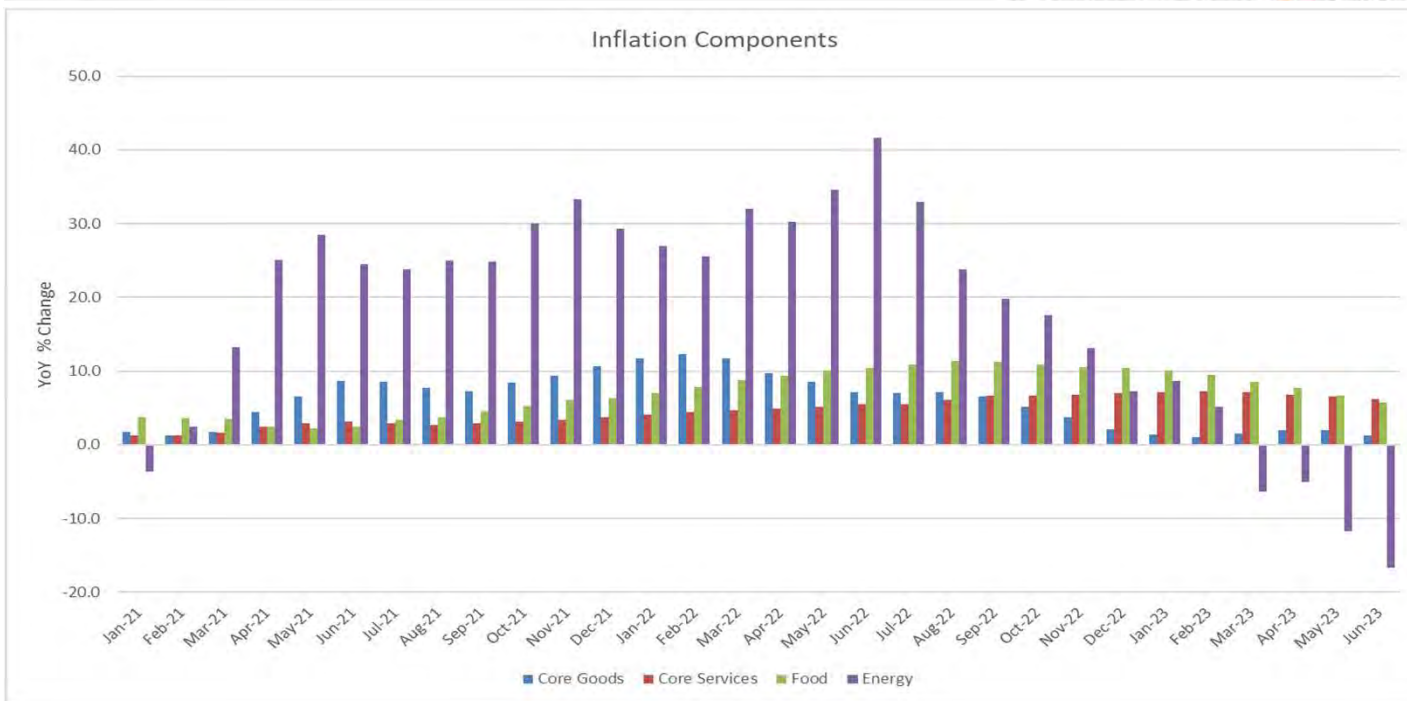
- Despite widespread predictions at the start of the year that a recession was imminent, U.S. economic growth has remained positive, with GDP increasing by 2.0% in Q1 2023.
- As of July 10, 2023, the Atlanta Fed GDPNow model is forecasting 2.3% growth in Q2 2023.
- In their most recent projections, the U.S. Federal Reserve expects economic growth to slow to 1.0% for the full year of 2023, 1.1% in 2024, 1.8% in 2025 and 1.8% over the long-term.
- One of the drivers of the expectation for slowing growth is a reduced availability of credit, as lending standards have tightened since Q2 2023 following the collapse of three U.S. banks. Tighter lending standards will reduce available credit and are likely to negatively impact economic growth.

U.S. Economy



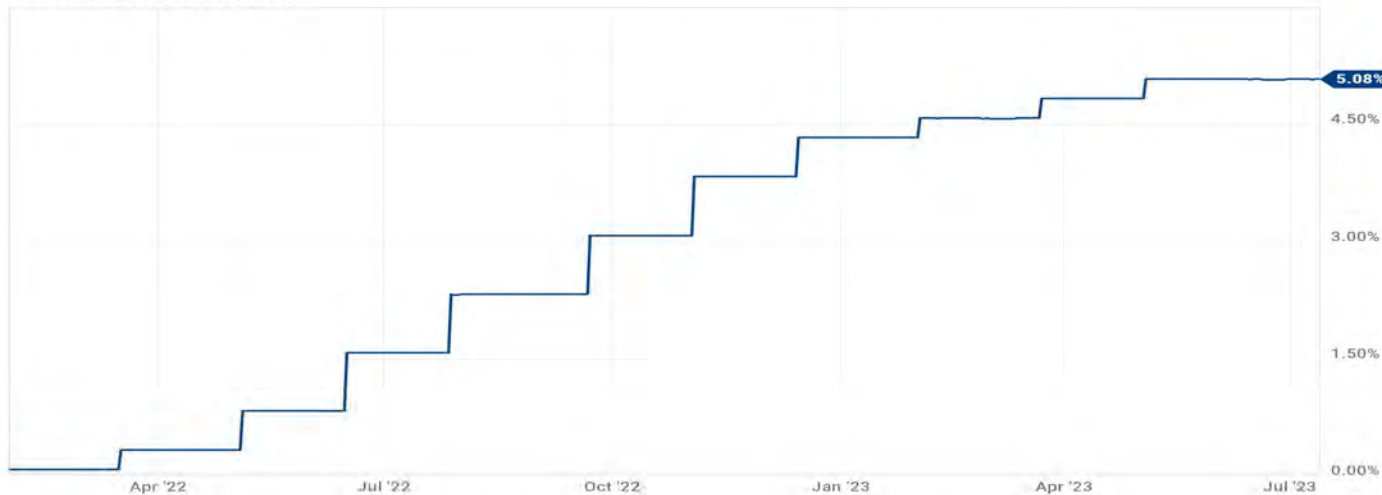
Inflation Continues Downward Trend but Remains Above Target

- Year-over-year CPI was 3.0% in June, the lowest level since March 2021.
- Excluding food and energy, core inflation increased by 4.9% vs. a year ago, the lowest level since October 2021.
- A decline in energy prices vs. one year ago was the largest driver of the recent decline in headline inflation.
- Year-over-year core goods inflation was 1.3% as used car prices declined for eight consecutive quarters.
- Service inflation remains elevated, driven by the shelter component, which tends to lag real time prices.
- PCE, the Fed's preferred inflation measure, increased by 4.6% over the last year through May. PCE has been in a range of 4.6% to 4.7% since December 2022, down from the peak year-over-year growth of 5.4% in February 2022.



U.S. Economy

Effective Federal Funds Rate



Date Range: 01/31/2022 - 07/13/2023

Source: Federal Reserve

Jul 17 2023, 10:00AM EDT. Powered by YCHARTS

Fed Continues Efforts to Combat Inflation

- After increasing interest rates by 500 bps over the course of 2022 and the first three meetings of 2023, the U.S. Federal Reserve paused at the June 2023 meeting, leaving the effective Fed Funds Rate at 5.08%, the highest level since July 2007.
- Forward guidance from Fed officials suggests additional rate hikes in 2023 are likely.
- 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 in the Fed's balance sheet was reversed and the quantitative tightening program resumed.

US Total Assets Held by All Federal Reserve Banks



Date Range: 07/16/2003 - 07/12/2023

Source: Federal Reserve

Jul 17 2023, 10:02AM EDT. Powered by YCHARTS

U.S. Economy

Employment Showing Signs of Slowing Momentum

- While the employment market has remained resilient despite the Federal Reserve's efforts to reduce inflation by raising interest rates, signs have appeared that momentum may be slowing.
- Weekly claims for unemployment averaged 240,000 in Q2 2023, compared to an average of 214,000 for calendar year 2022.
- Despite recent rising claims, the overall employment market remains tight, with 30 consecutive months of job gains and an unemployment rate close to a 50-year low.
- Job openings in the U.S. declined below 10 million for the first time since May 2021; however, they remain elevated by historical standards.

● US Initial Claims for Unemployment Insurance



● US Unemployment Rate



● US Job Openings: Total Nonfarm



Date Range: 07/20/2013 - 07/08/2023

Sources: DoL, BLS

Jul 17 2023, 10:03AM EDT. Powered by **YCHARTS**

U.S. Equity Market

Sector	Index	2Q23	YTD	2022	2021	2020	2019	2018	2017	1-Year	3-Year	5-Year	10-Year
Large Cap	S&P 500	8.7%	16.9%	-18.1%	28.7%	18.4%	31.5%	-4.4%	21.8%	19.6%	14.6%	12.3%	12.8%
	Russell 1000	8.6%	16.7%	-19.1%	26.4%	21.0%	31.4%	-4.8%	21.7%	19.3%	14.1%	11.9%	12.6%
	Russell 1000 Value	4.1%	5.1%	-7.6%	25.1%	2.8%	26.5%	-8.3%	13.6%	11.5%	14.3%	8.1%	9.2%
	Russell 1000 Growth	12.8%	29.0%	-29.1%	27.6%	38.5%	36.4%	-1.5%	30.2%	27.1%	13.7%	15.1%	15.7%
Mid Cap	Russell Mid-Cap	4.8%	9.0%	-17.3%	22.6%	17.1%	30.5%	-9.1%	18.5%	14.9%	12.5%	8.5%	10.3%
	Russell Mid-Cap Value	3.9%	5.2%	-12.1%	28.3%	5.0%	27.0%	-12.3%	13.3%	10.5%	15.0%	6.8%	9.0%
	Russell Mid-Cap Growth	6.2%	15.9%	-26.7%	12.7%	35.6%	35.5%	-4.8%	25.3%	23.1%	7.6%	9.7%	11.5%
Small Cap	Russell 2000	5.2%	8.1%	-20.5%	14.8%	19.9%	25.5%	-11.0%	14.6%	12.3%	10.8%	4.2%	8.2%
	Russell 2000 Value	3.2%	2.5%	-14.5%	28.2%	4.6%	22.4%	-12.9%	7.8%	6.0%	15.4%	3.5%	7.3%
	Russell 2000 Growth	7.0%	13.5%	-26.4%	2.8%	34.6%	28.4%	-9.3%	22.1%	18.5%	6.1%	4.2%	8.8%
Total Market	Wilshire 5000	8.4%	16.3%	-19.0%	26.7%	20.8%	31.0%	-5.3%	21.0%	19.1%	14.2%	11.7%	12.5%
	Russell 3000	8.4%	16.2%	-19.2%	25.6%	20.9%	31.0%	-5.2%	21.1%	18.9%	13.9%	11.4%	12.3%

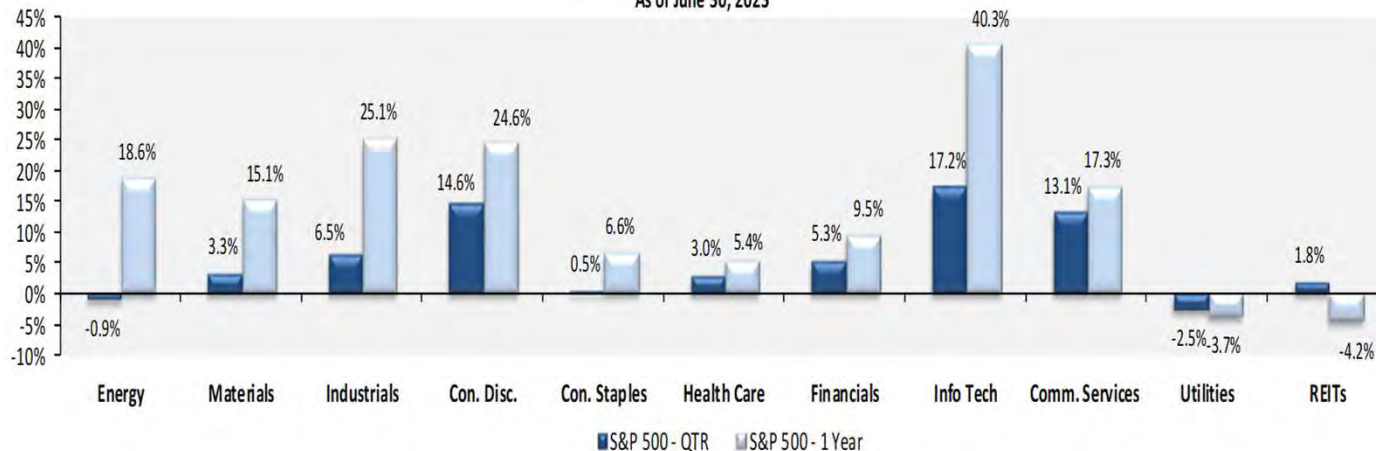
Major Index Total Return as of June 30, 2023

Asset Class	Name	1H 2023	% off Low	% Off All Time High
U.S. Large Cap	S&P 500	16.9%	25.8%	-4.9%
U.S. Mid Cap	Russell Midcap	9.0%	19.1%	-12.0%
U.S. Smid Cap	Russell 2500	8.8%	17.3%	-15.8%
U.S. Small Cap	Russell 2000	8.1%	15.2%	-20.8%
International Large Cap	MSCI EAFE (gross)	12.1%	32.7%	-5.8%
International Small Cap	MSCI EAFE Small Cap (gross)	5.9%	24.8%	-20.8%
Emerging Markets	MSCI Emerging Markets (gross)	5.1%	19.9%	-26.4%
Global Equity	MSCI World (gross)	15.4%	27.4%	-5.5%

- U.S. stock market indices have surged ahead in 2023, overcoming regional bank turmoil, government debt ceiling brinkmanship, and higher interest rates.
- The S&P 500 index increased by 8.7% in Q2 2023 and 16.9% in 1H 2023, while an equal-weighted approach yielded only a 7% gain in the first half of the year. This 10% spread has primarily been driven by large, profitable growth stocks within the S&P 500 index.
- In 1H 2023, growth and high beta factors significantly outperformed dividend-focused factors, mainly due to the strong performance of the information technology (IT) sector. While IT remained dominant in the first five months, June marked a noticeable shift towards cyclicals, suggesting a potential improvement in economic activity.

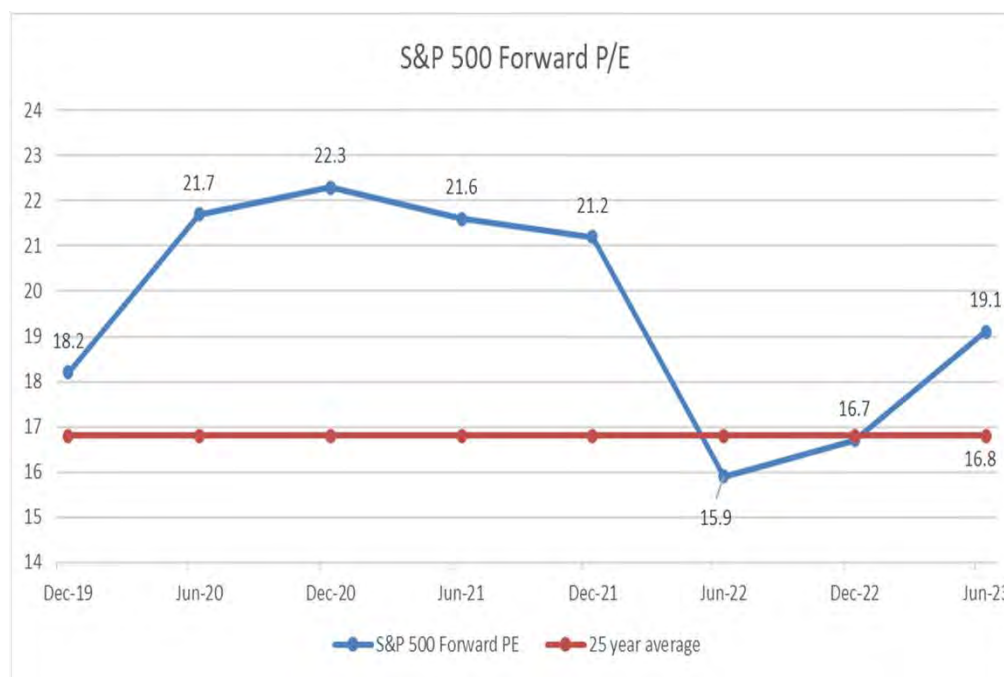
U.S. Equity Market

S&P 500 Sector Performance
As of June 30, 2023



S&P 500 P/E Ratio Expands as Earnings Growth Stalls

- While analysts predict a meager 0.8% growth in S&P 500 earnings for the full year 2023, the index has produced strong gains. As a result, the index's price-to-earnings ratio (P/E) increased to 19.1x as of June 30, 2023. In essence, despite static earnings expectations, the higher S&P 500 index price has driven up the P/E ratio.



Source: J.P. Morgan Asset Management

Information Technology Sector Soars while the S&P 500 Faces Earnings Decline

- The information technology sector achieved a remarkable 42.8% total return in 1H 2023, mainly driven by multiple expansion rather than substantial earnings growth. The information technology sector's strong performance can be attributed to its perceived safe-haven status amidst market uncertainty, potentially also influenced by artificial intelligence euphoria.
- In contrast, certain sectors including staples, financials, healthcare, energy, and utilities have experienced low to negative returns throughout this year. These sectors are categorized as "Low Volatility High Dividend," which has not proven favorable for investors in 2023.
- S&P 500 earnings are expected to decline by -7.2% in Q2 2023, marking the largest decline since Q2 2020. This would also extend the streak to three consecutive quarters with year-over-year decreases in earnings for the index.

U.S. Equity Market

Big Tech's Influence: 'Magnificent Seven' Drive S&P 500 Surge

- The "Magnificent Seven," a term recently coined by investors, comprises high-growth technology giants Alphabet (Google), Amazon, Apple, Meta Platforms (formerly known as Facebook), Microsoft, NVIDIA, and Tesla. Representing over 25% of the S&P 500, this group is responsible for 74% of the S&P 500 index's 16.9% year-to-date gains.

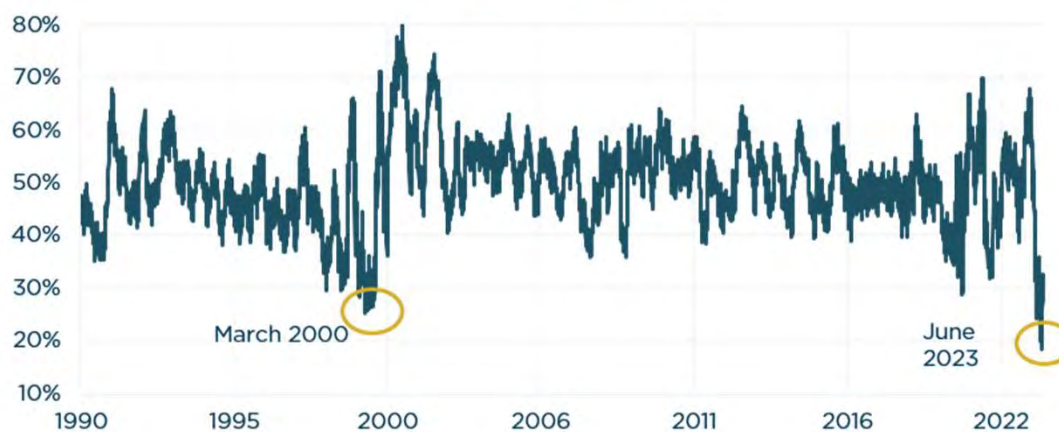
- In H1 2023, over 80% of the S&P 500 index returns can be traced back to only 10 securities, highlighting the narrow market concept. While this concentration of returns among a select group of outperformers is not a new phenomenon, the contribution from the top 10 in 2023 is well above the historical median of 32% of the index's overall returns.

Exhibit 1: 10 stocks typically account for 32% of the S&P 500's return each year
as of June 29, 2023; % contribution



Source: FactSet, Goldman Sachs Global Investment Research

**% Of S&P 500 Stocks Beating S&P 500 Index
Over Trailing 3 Months**



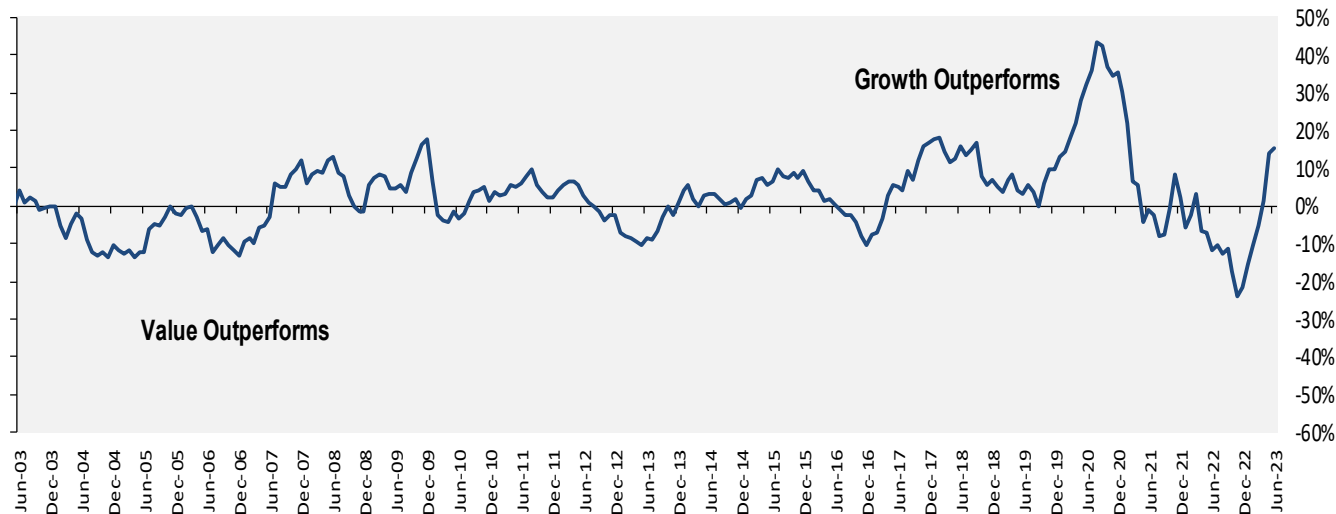
Source: Piper Sandler

S&P 500's Lopsided Performance: AI Tech Stocks Leave Others Behind

- In early June, the S&P 500 witnessed a record-low percentage of stocks outperforming the index over the past three months, signaling considerable underperformance among its constituents. Although larger stocks typically exert greater influence on cap-weighted indexes, the notable extent of underperformance underscores potential concentration risks.
- The concentration in returns is largely driven by the excitement surrounding artificial intelligence (AI) and its transformative potential. Investors are favoring companies directly exposed to this technology, as seen with NVIDIA, whose stock surged 190% year-to-date, leading to a market capitalization surpassing \$1 trillion.

U.S. Equity Market

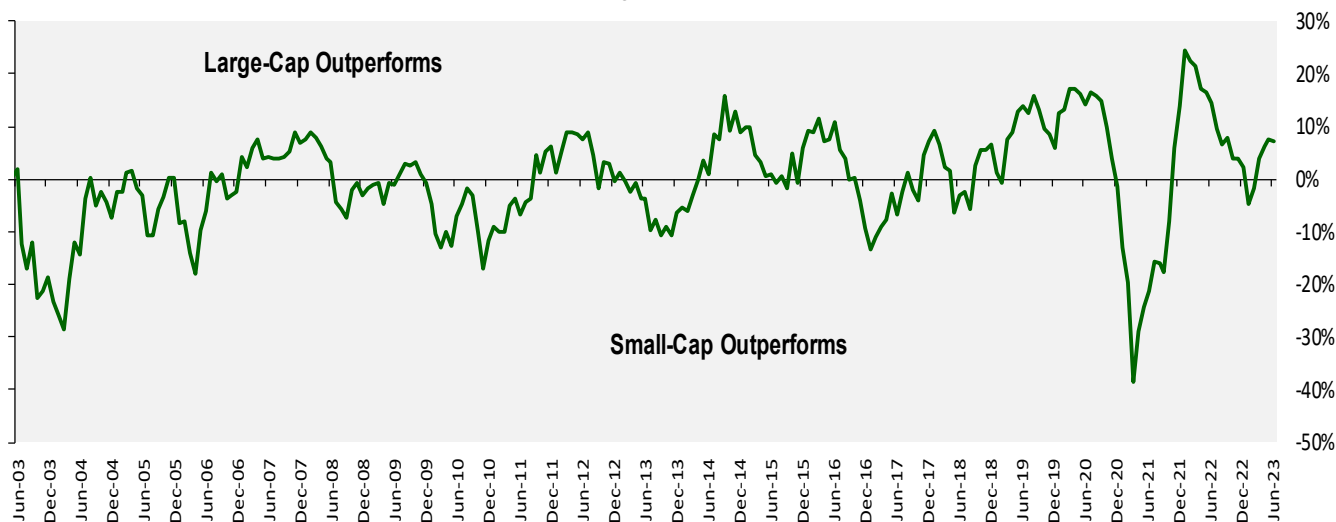
Russell 1000 Growth vs. Russell 1000 Value
Rolling One-Year Returns



Market Divergence Exposed: Russell Index Spread Signals Winners and Losers

- In the past six months, the Russell 1000 Growth Index has notably outperformed the Russell 1000 Value Index. This level of outperformance exceeded all but two rolling six-month periods since 1979. The prior instances occurred in early 2000, marking the end of the dot-com bubble, and in mid 2020, amidst government-mandated Covid-19 shutdowns.
- High beta, growth, and quality factors yielded higher returns, while high dividend and low volatility strategies have underperformed.
- The 2023 banking crisis heavily impacted small caps, particularly smaller regional players. In the Russell 2000, banks were the top-detracting industry for Q2 2023 and the first half of the year. Despite positive returns in Q2 2023 and the first half of 2023, the Russell 2000 index remained in a bear market, down -20.8% from its peak on 11/8/21 to 6/30/23.

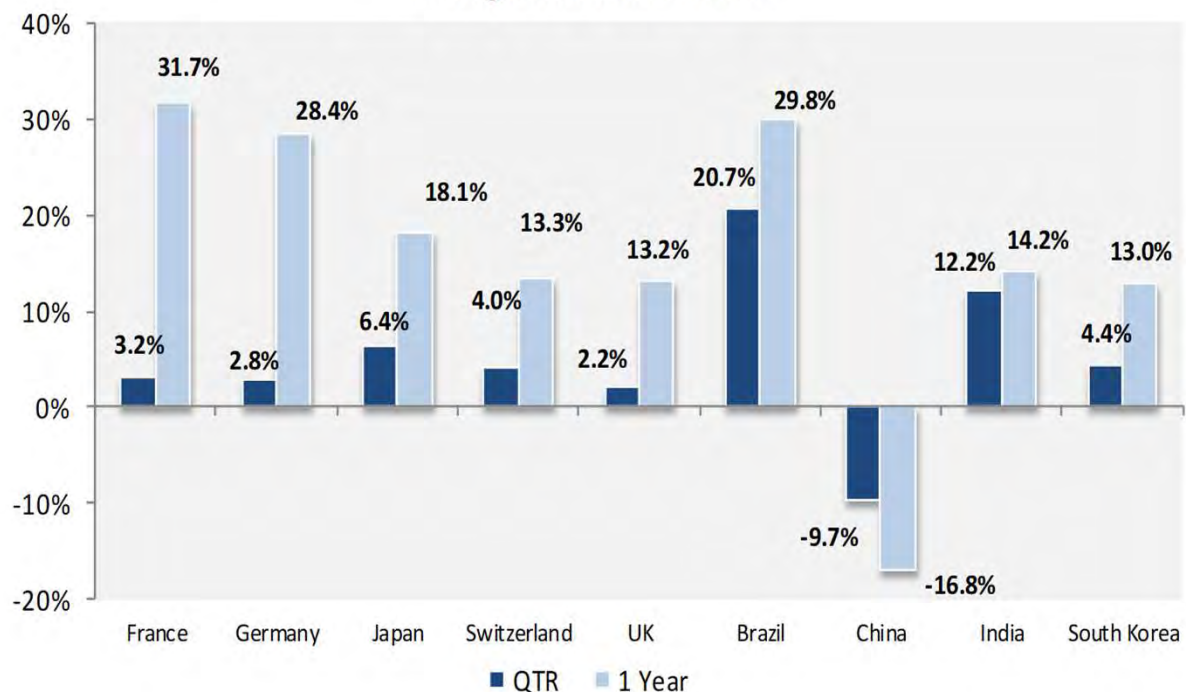
S&P 500 vs. Russell 2000
Rolling One-Year Returns



International Equity Market

Sector	Index	2Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Global	MSCI AC World Index (net)	6.2%	13.9%	-18.4%	18.5%	16.3%	26.6%	-9.4%	16.5%	11.0%	8.1%	8.8%
	MSCI World Small Cap (net)	3.2%	7.6%	-18.8%	15.8%	16.0%	26.2%	-13.9%	12.9%	10.4%	4.4%	7.9%
	MSCI World ex US (net)	3.0%	11.3%	-14.3%	12.6%	7.6%	22.5%	-14.1%	17.4%	9.3%	4.6%	5.4%
	MSCI World ex US Small Cap (net)	0.5%	5.5%	-20.6%	11.1%	12.8%	25.4%	-18.1%	10.0%	6.4%	1.8%	6.0%
Developed ex US	MSCI EAFE (net)	3.0%	11.7%	-14.5%	11.3%	7.8%	22.0%	-13.8%	18.8%	8.9%	4.4%	5.4%
	MSCI EAFE Value (net)	3.2%	9.3%	-5.6%	10.9%	-2.6%	16.1%	-14.8%	17.4%	11.3%	2.9%	4.1%
	MSCI EAFE Growth (net)	2.8%	14.2%	-22.9%	11.3%	18.3%	27.9%	-12.8%	20.2%	6.3%	5.4%	6.4%
	MSCI EAFE Small Cap (net)	0.6%	5.5%	-21.4%	10.1%	12.3%	25.0%	-17.9%	10.2%	5.7%	1.3%	6.2%
Emerging Markets	MSCI Emerging Markets (net)	0.9%	4.9%	-20.1%	-2.5%	18.3%	18.4%	-14.6%	1.8%	2.3%	0.9%	2.9%

Foreign Markets Returns



- European indices mostly rose in Q2 2023, led by financials and IT sectors. Semiconductor stocks fueled IT growth. Banks outperformed as the ECB raised interest rates twice.
- The TOPIX and Nikkei 225 indices in Japan reached their highest levels since 1989 in Q2 2023. Reasons contributing to this resurgence include the delayed reopening of the Japanese economy after the pandemic, providing a cyclical boost, and the Tokyo Stock Exchange's increased focus on sustainable growth and enhanced corporate value which has brought about a needed long-term structural development.
- China's equity market slumped in Q2 2023 as the post-Covid economic rebound weakened. Factors such as reduced consumer spending, lower export demand, and interest rate hikes in the US and Europe impacted factory output and dampened investor sentiment.

International Equity Market

ICE US Dollar Index Level



Date Range: 06/28/2013 - 06/30/2023

Jul 18 2023, 8:47AM EDT. Powered by YCHARTS

Steady Dollar Index Relieves Pressure on International Markets

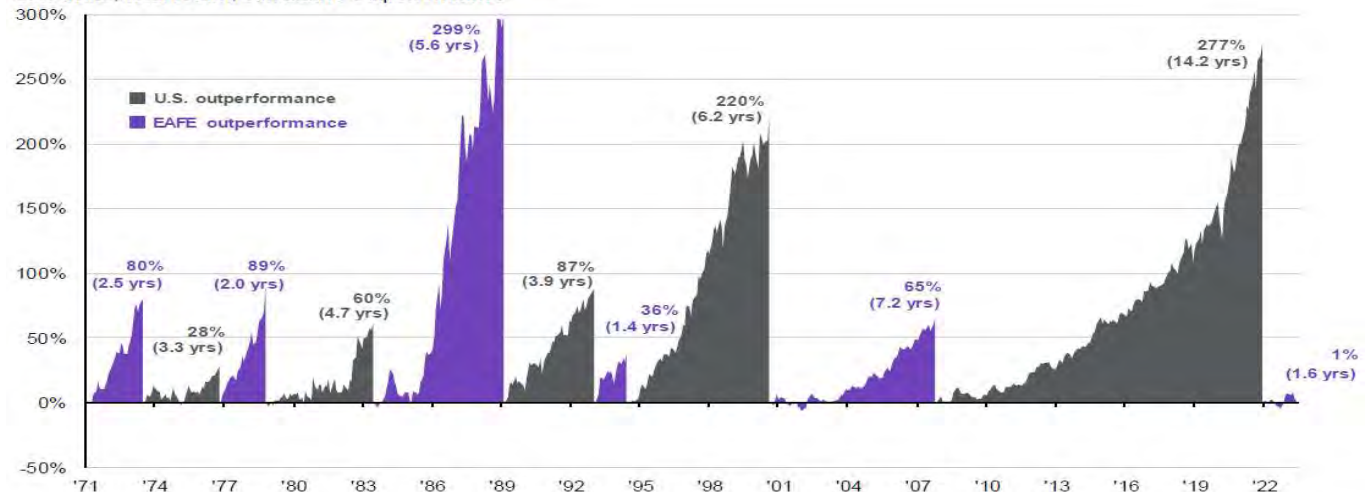
- Gold briefly traded at all-time highs in Q2 2023 on mounting U.S. banking concerns, attracting investors seeking safety. However, attention has shifted elsewhere after the regional banking turmoil in March and April.
- During Q2 2023, the US Dollar Index (DXY) exhibited minimal fluctuations, persistently staying well below its previous high, as numerous foreign central banks worked towards harmonizing their interest rates with the initial measures implemented by the U.S. Federal Reserve.

Regime Change or Just a Pause?

- U.S. equity markets outperformed international markets by 277% in the past 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 past year and a half, international and U.S. markets had similar performance, with neither consistently overtaking the other.

MSCI EAFE and MSCI USA relative performance

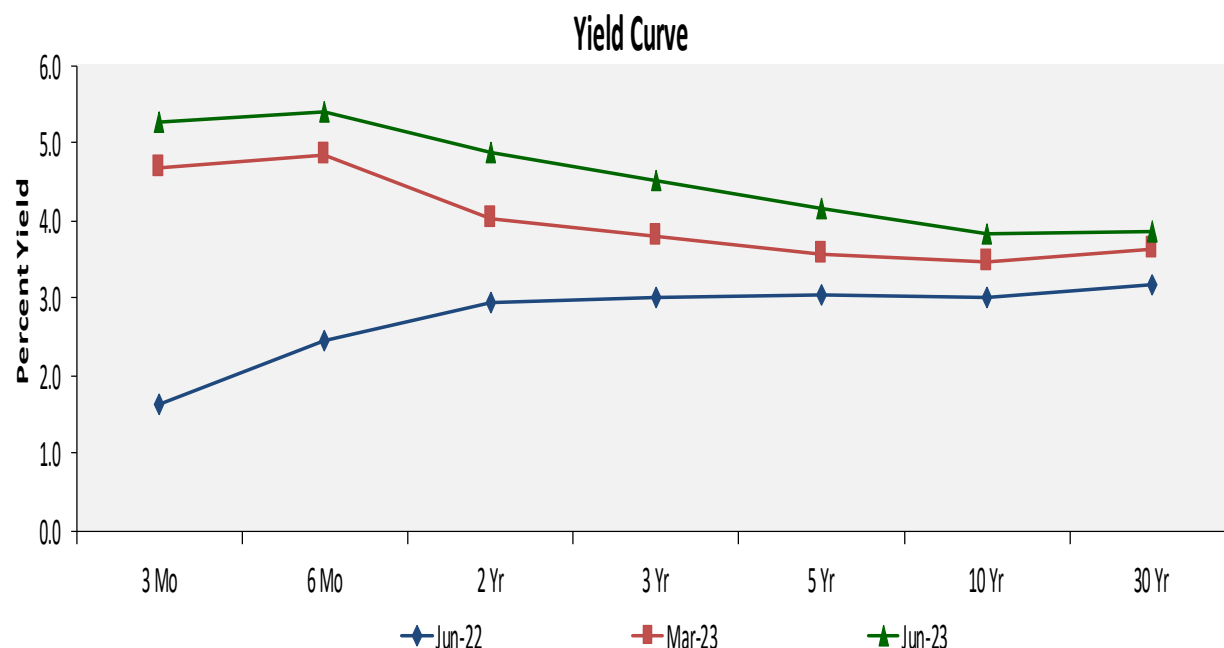
U.S. dollar, total return, cumulative outperformance



Source: J.P. Morgan Asset Management

Bond Market

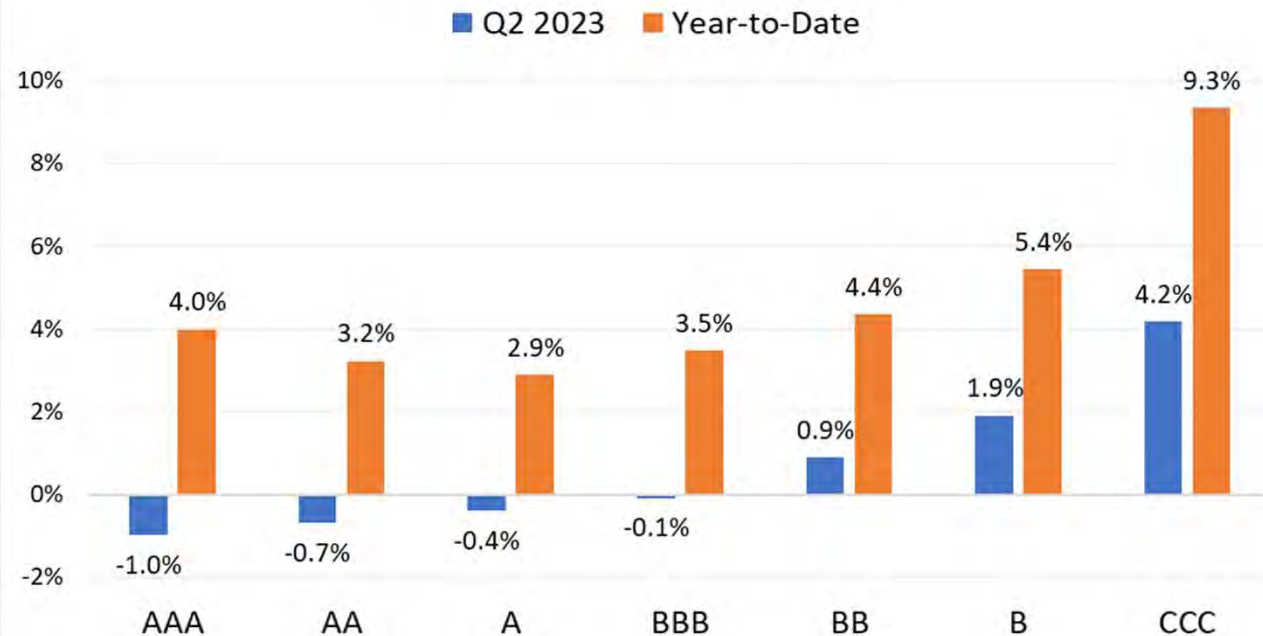
Index	Duration (years)	Yield	2Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Bloomberg Aggregate	6.5	4.81%	-0.8%	2.1%	-13.0%	-1.5%	7.5%	8.7%	0.0%	-0.9%	-4.0%	0.8%	1.5%
Bloomberg Govt/Credit	6.7	4.80%	-0.9%	2.2%	-13.6%	-1.7%	8.9%	9.7%	-0.4%	-0.7%	-4.1%	1.0%	1.7%
Bloomberg Int Agg	4.8	4.82%	-0.7%	1.6%	-9.5%	-1.3%	5.6%	6.7%	0.9%	-0.6%	-2.9%	0.8%	1.3%
Bloomberg Int Govt/Credit	3.9	4.81%	-0.8%	1.5%	-8.2%	-1.4%	6.4%	6.8%	0.9%	-0.1%	-2.5%	1.2%	1.4%
Bloomberg U.S. Corporate	7.4	5.48%	-0.3%	3.2%	-15.8%	-1.0%	9.9%	14.5%	-2.5%	1.5%	-3.4%	1.8%	2.6%
Bloomberg HY Ba/B 2% IC	4.1	7.82%	1.4%	4.8%	-10.6%	4.6%	7.7%	15.2%	-1.9%	8.9%	2.6%	3.7%	4.5%
ICE BofA 1-3 Yrs BB US Cash Pay HY	1.8	7.00%	1.3%	3.6%	-3.1%	3.2%	5.4%	8.7%	1.3%	7.1%	3.4%	3.7%	3.9%
Bloomberg Mortgage	6.4	4.78%	-0.6%	1.9%	-11.8%	-1.0%	3.9%	6.4%	1.0%	-1.5%	-3.7%	0.0%	1.1%
Bloomberg Treasury	6.3	4.37%	-1.4%	1.6%	-12.5%	-2.3%	8.0%	6.9%	0.9%	-2.1%	-4.8%	0.4%	1.0%
Bloomberg US TIPS	6.8	4.60%	-1.4%	1.9%	-11.8%	6.0%	11.0%	8.4%	-1.3%	-1.4%	-0.1%	2.5%	2.1%
BofA ML 91 day T-Bills	0.2	5.30%	1.2%	2.4%	1.5%	0.0%	0.7%	2.3%	1.9%	3.7%	1.3%	1.6%	1.0%



- The U.S. treasury yield curve shifted higher in Q2 2023 as markets accepted the narrative that interest rates would remain higher for longer.
- The yield curve remains heavily inverted, reflecting a view that a slow-down in growth and/or lower levels of inflation will arrive at some point in the next 5-10 years.
- Returns for U.S. bond markets were mixed in Q2 2023. Riskier, higher yielding bonds outperformed while safer, longer duration bonds underperformed.
- Year-to-date, lower-quality credit has outperformed higher-quality credit, providing some evidence that investors are again adding risk back into portfolios.

Bond Market

Returns by Credit Rating



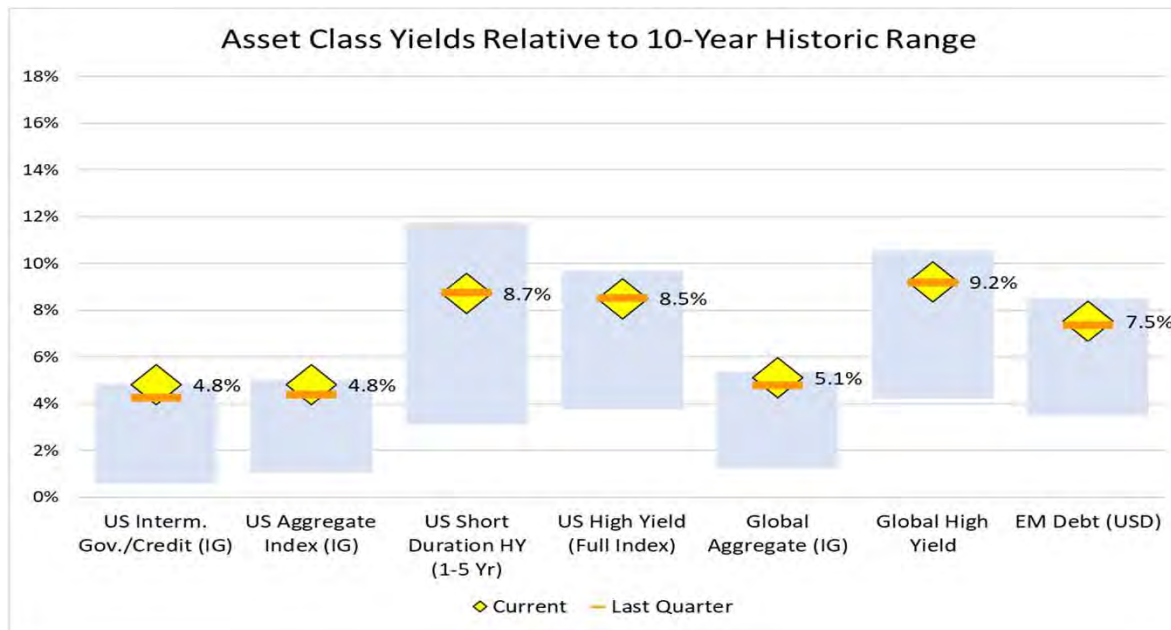
Lower Quality Corporate Bonds Outperform

- High Yield corporate bonds generated positive returns in Q2 2023 while investment grade corporate bonds experienced losses for the quarter.
- Credit spreads tightened (bond prices increased) in Q2 2023 while interest rates rose. This caused longer duration bonds (investment grade) to underperform lower duration bonds (high yield) for the quarter.
- Riskier, lower-quality credit (single-B & CCC-rated) experienced the most spread tightening, providing some evidence that investors are adding more risk to portfolios.
- Year-to-date, CCC-rated bonds are outperforming by a wide margin. This is a reversal of CCC-rated spreads widening (bond prices down) in the 2nd half of 2022 while higher-rated bonds started experiencing spread tightening in Q3 2022.

Bond Ratings

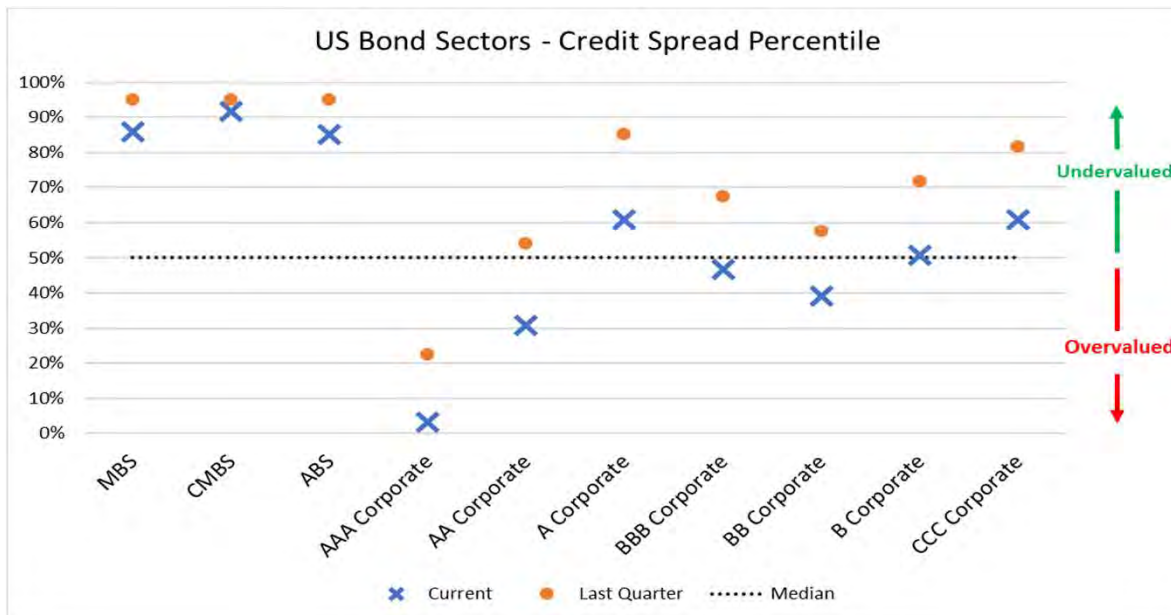
	Standard & Poor's	Moody's
Investment Grade	AAA	Aaa
	AA	Aa
	A	A
	BBB	Baa
High Quality High Yield	BB	Ba
	B	B
Low Quality High Yield	CCC	Caa
	CC	Ca
	C	C

Bond Market



Bond Yields

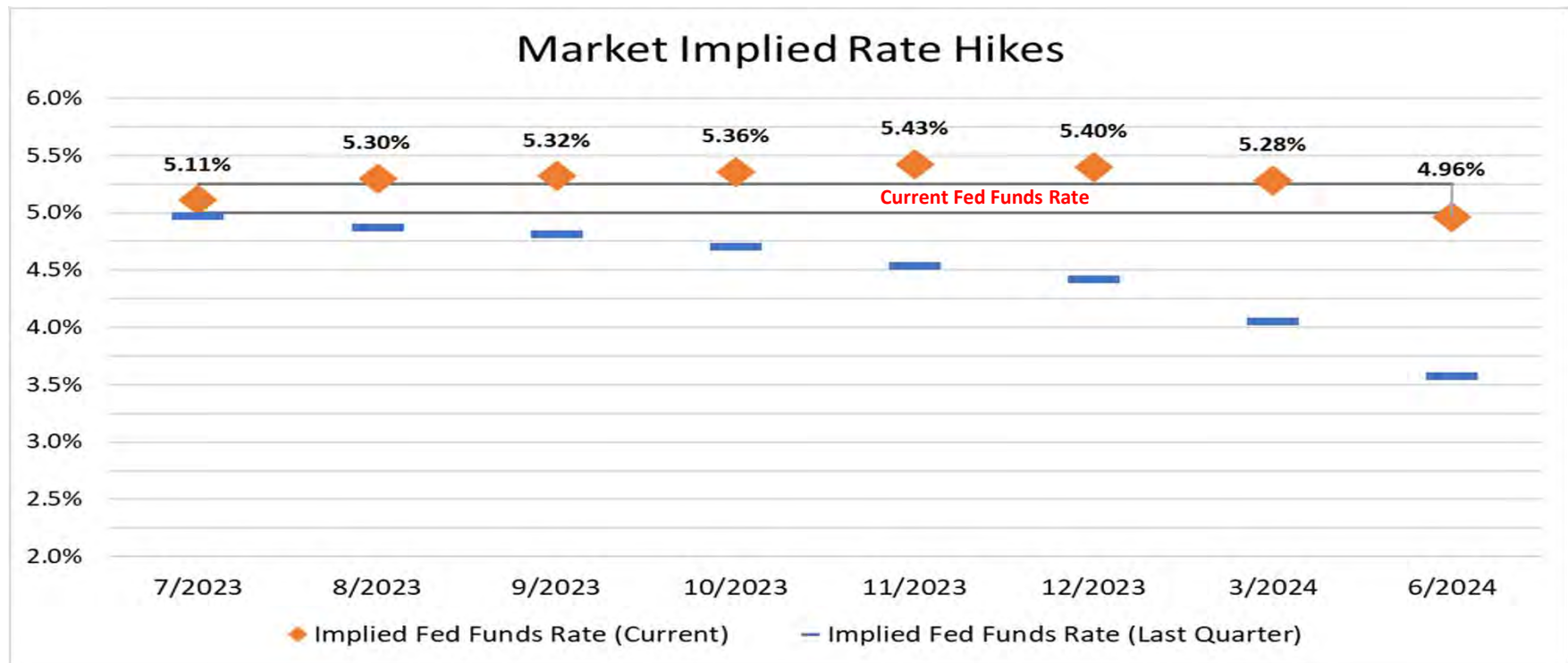
- Yields on investment grade bonds pushed slightly higher in Q2 2023 while yields on high yield bonds stayed flat.
- Investors can earn an additional yield pick-up of 350 to 400 bps in US high yield relative to US investment grade bonds.
- Shorter maturity bonds in high yield are earning a slightly higher yield relative to the full high yield universe.
- Bonds outside of the US are earning a slightly higher yield relative to US credit.



Credit Spreads/Valuations

- Credit spreads pulled tighter (bond prices up) in Q2 2023.
- Riskier corporate bonds experienced the most tightening in the quarter as investors added more risk to portfolios.
- In corporate credit, AAA-rated bonds have almost fully recovered from 2022. BB-rated bonds have recovered most of their recent widening but remain well above pre-2022 levels.
- Spreads in structured credit (MBS, CMBS, ABS) remain well above their pre-2022 lows. CMBS remains just below the widest spreads experienced in the past decade.

Bond Market

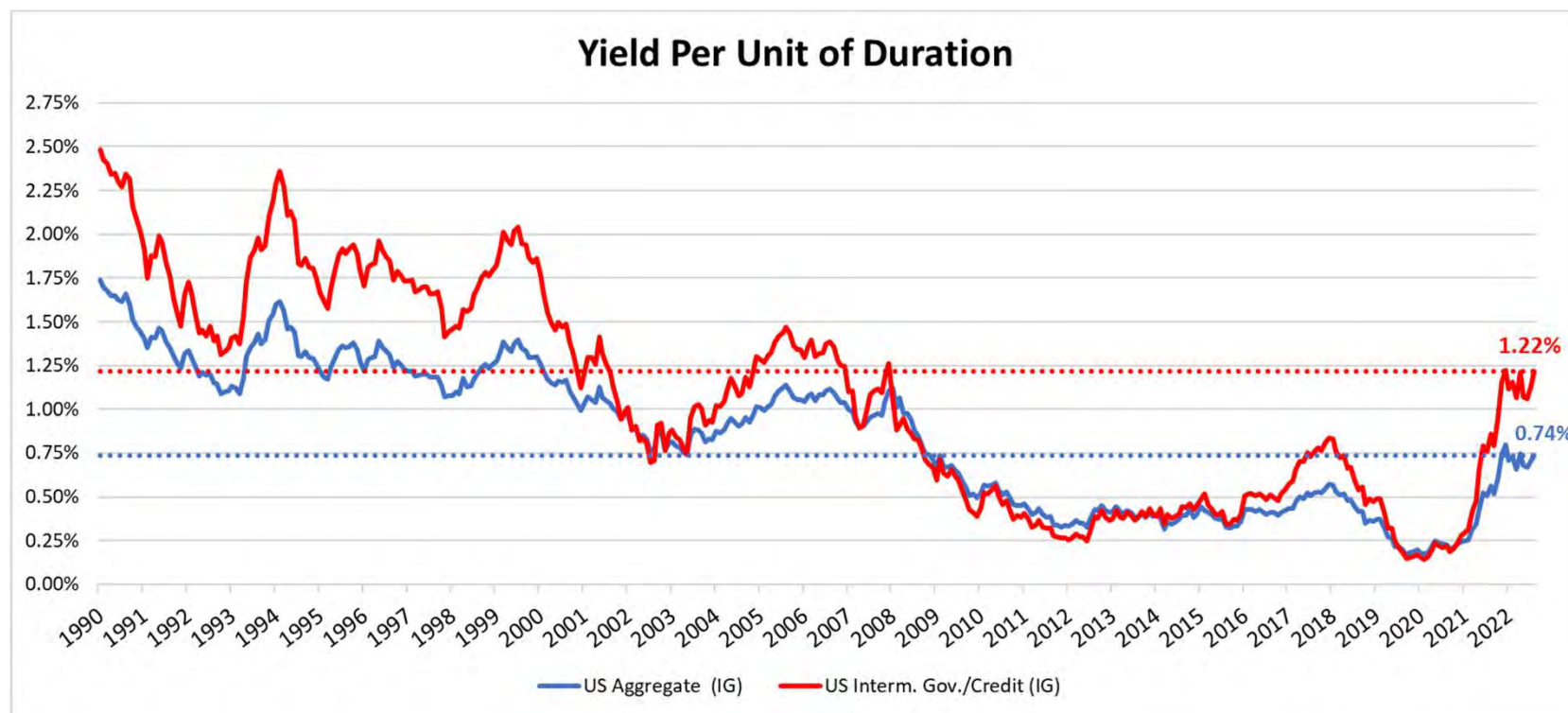


As of 7/7/23

- The FOMC raised interest rates by another 25 bps in early May but elected to pause and not raise rates at their mid-June meeting. The current target federal funds rate is now at 5.00-5.25%, up from 4.75-5.00% at the end of Q1 2023 and up from 4.25-4.50% in Q4 2022.
- Last quarter (end of Q1), the market was predicting a 25 bps increase in May and no rate-hike at the mid-June meeting which proved to be correct. However, following the banking failures in March, the market immediately began to expect the Federal Reserve to begin to cut rates significantly in the 2nd half of 2023.
- In the past two Federal Reserve press conferences, Fed Chairman Jerome Powell has indicated that additional rate increases will be slower going forward, but they are not in a position to begin cutting rates for the foreseeable future due to the potential risk of more inflation. As a result of these comments, market expectations rebounded sharply in late Q2 2023 to reflect an additional 25 bps increase by year-end.
- Current expectations are for the Federal Reserve to hike rates another 25 bps by the end of 2023. Pricing on 2024 futures contracts suggests the Federal Reserve will keep rates unchanged for the next year.

Bond Market

Investment Grade Investors Are Now Compensated For Duration Risk



- Investment grade bonds 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 ~75 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 ~125 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 6/30/2023							
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	28.57	24.39	16.66	24.53	10.74	19.80	13.47
-250	24.44	21.13	14.68	21.24	9.82	17.78	12.53
-200	20.32	17.87	12.71	17.95	8.90	15.75	11.60
-150	16.19	14.60	10.73	14.67	7.97	13.73	10.66
-100	12.06	11.34	8.76	11.38	7.05	11.71	9.73
-75	10.00	9.71	7.77	9.74	6.59	10.70	9.26
-50	7.94	8.07	6.79	8.10	6.13	9.69	8.79
-25	5.87	6.44	5.80	6.45	5.67	8.67	8.32
0	3.81	4.81	4.81	4.81	5.21	7.66	7.85
25	1.75	3.18	3.83	3.17	4.74	6.65	7.39
50	-0.32	1.55	2.84	1.53	4.28	5.64	6.92
75	-2.38	-0.09	1.85	-0.12	3.82	4.63	6.45
100	-4.44	-1.72	0.86	-1.76	3.36	3.62	5.98
150	-8.57	-4.98	-1.11	-5.04	2.44	1.60	5.05
200	-12.70	-8.24	-3.08	-8.33	1.52	-0.43	4.11
250	-16.82	-11.51	-5.06	-11.62	0.59	-2.45	3.17
300	-20.95	-14.77	-7.03	-14.90	-0.33	-4.47	2.24
Duration	8.25	6.53	3.95	6.57	1.85	4.05	1.87

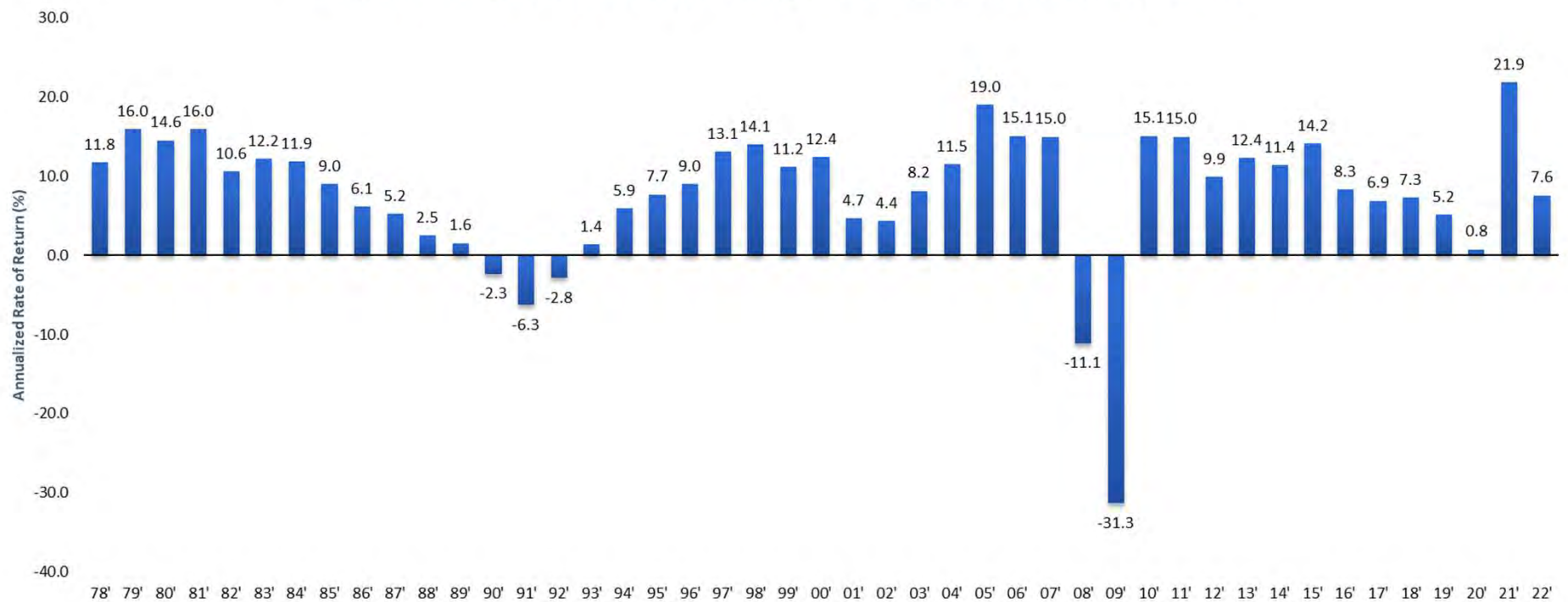
FOR ILLUSTRATIVE PURPOSES ONLY: For each index the current yield to worst as of 6/30/2023 was used as the base case annualized return. The annualized return sensitivity to a uniform increase or decrease in the yield curve was calculated by taking the index's Option-Adjusted Duration as of 6/30/2023 multiplied by the percentage point change in the yield curve (basis point change divided by 100) 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	2Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
US Private	NCREIF ODCE Equal Weighted (net)	-3.0%	-6.4%	7.6%	21.9%	0.8%	5.2%	7.3%	-10.5%	7.6%	6.1%	8.1%
	NCREIF ODCE EW Income Index	0.9%	1.7%	3.5%	4.1%	3.6%	3.5%	3.5%	3.4%	3.8%	3.7%	3.8%
	NCREIF ODCE EW Appreciation Index	-3.7%	-7.7%	4.8%	18.3%	-2.4%	1.7%	3.7%	-12.8%	4.6%	2.9%	4.5%

- The NCREIF ODCE Equal Weighted Index (net) declined for the third quarter in a row, generating a return of -3.0% in Q2 2023. Though the last three quarters have been negative, the trend is improving, as the ODCE index declined -5.1% in Q4 2022 and -3.5% in Q1 2023.
- For the first half of 2023, the NCREIF ODCE Equal Weighted Index (net) declined by -6.4%. If the negative return for the calendar year holds, it will represent just the sixth negative calendar year for the index since 1978 and the first since 2009.

Calendar Year NCREIF ODCE Equal Weight Total Net Performance 1978 - 2022

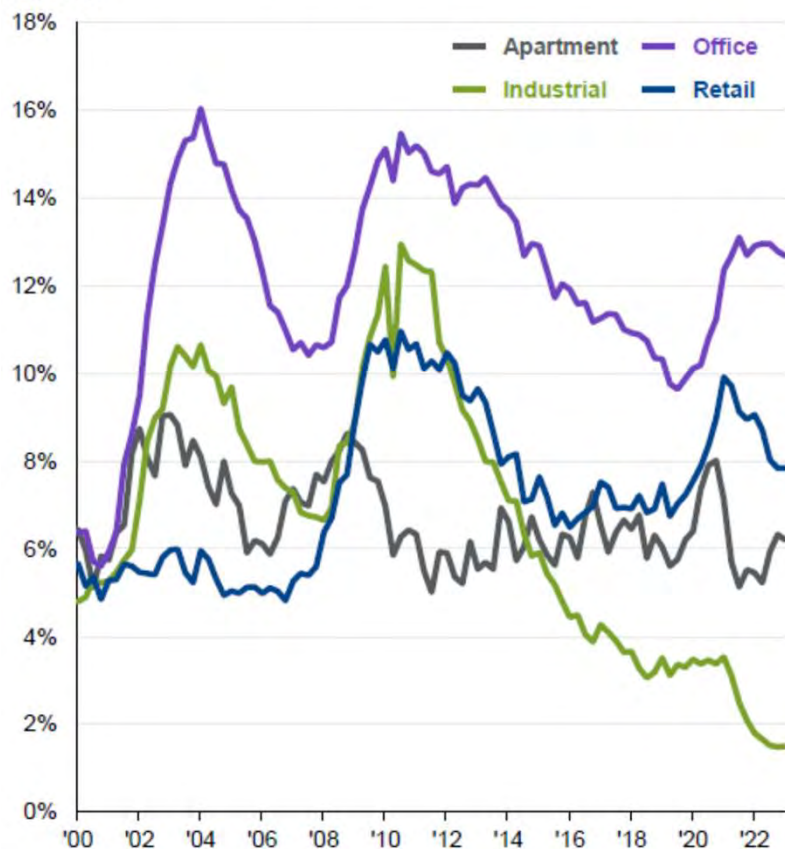


Real Estate Market

- Vacancy rates have largely declined from their early pandemic (2020) peaks in apartment, industrial and retail assets, while remaining elevated in U.S. office assets at approximately 13%. Office properties continue to face high levels of uncertainty moving forward due to companies' changing need for office space amid higher levels of remote work. While still lower than their pandemic peak, apartment vacancies increased in 2022 and stand at just over 6% in the U.S.
- Real estate transaction volumes continue to remain low and are down more than 50% year-over-year, driven by higher borrowing costs and wide bid/ask spreads.

U.S. vacancy rates by property type

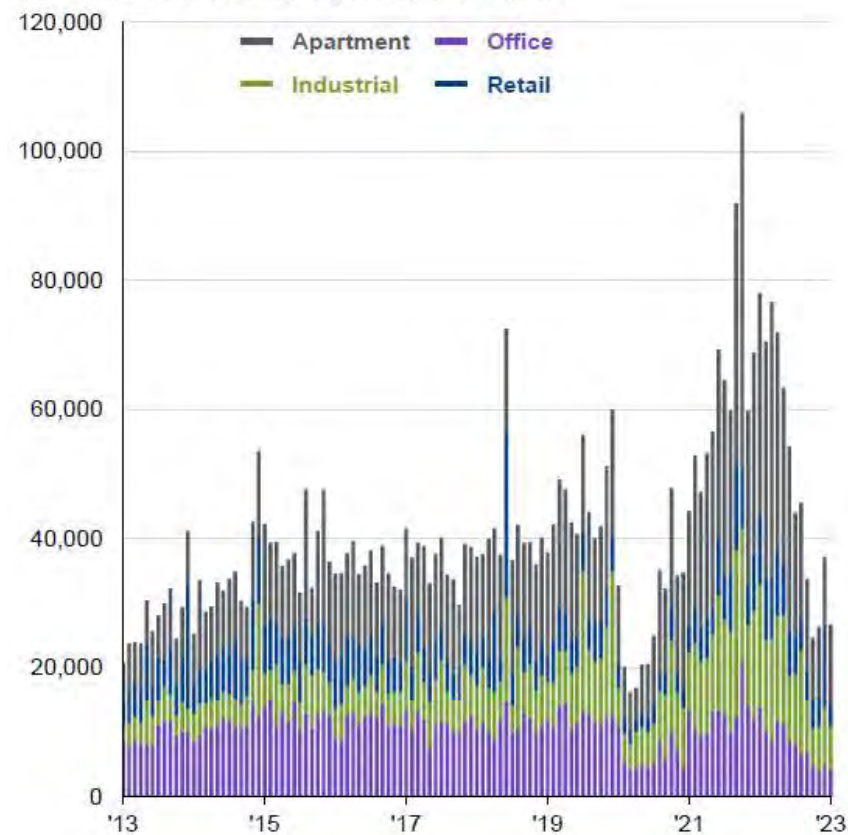
Percent



Source: J.P. Morgan Asset Management, as of 3/31/23.

U.S. real estate transaction volumes

USD millions, seasonally adjusted, last 10 years



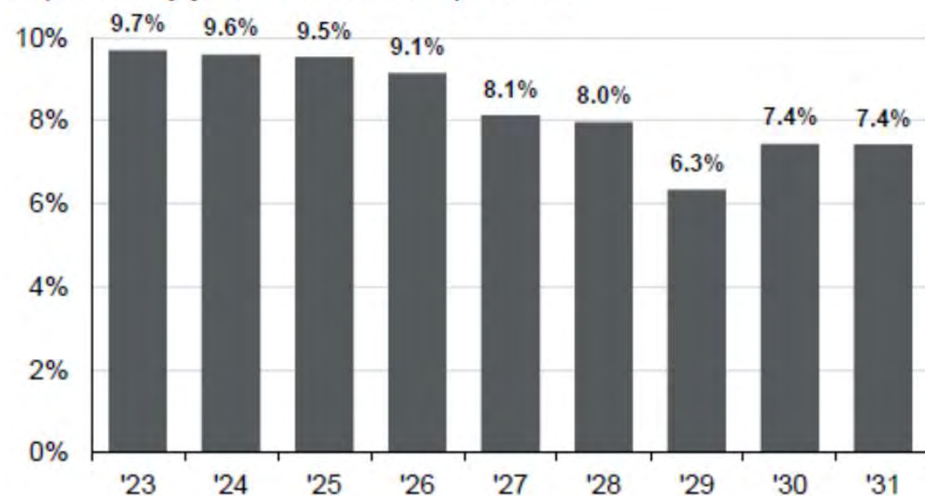
Source: NCREIF, NAREIT Statista via J.P. Morgan Asset Management as of 5/31/23.

Real Estate Market

- The office sector continues to be the poorest-performing sector in commercial real estate, with valuation declines progressing in Q2 2023 amid deteriorating fundamentals and continued high levels of uncertainty around companies' future needs for office space. Write-downs have been worse on office assets with lower occupancy levels and lower weighted-average lease terms, and in large gateway markets with lower percentages of employees returning to in-person work (San Francisco, Chicago, NYC, etc.).
- Approximately 10% of office real estate leases (as a percentage of total square feet) are set to expire in 2023 and in each of the next three years (2024-2026). Debt on office assets maturing in 2023 is relatively low at 3.4% but is expected to increase substantially over the next two years, which may require many office owners to refinance or restructure their debt. Combined with the potential changing needs for office space, debt maturities and lease rolls add to the overall level of uncertainty in the office sector.

Office real estate lease expiration

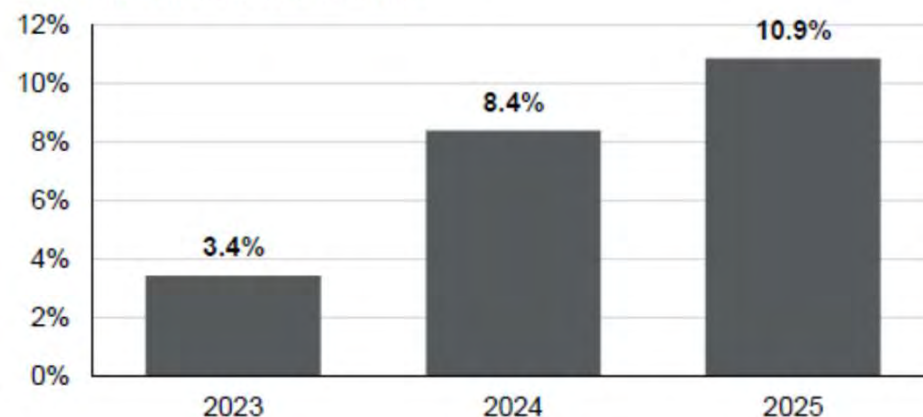
Expiration by year as % of total square feet



Source: J.P. Morgan Asset Management, as of 5/31/23.

Office real estate debt maturity

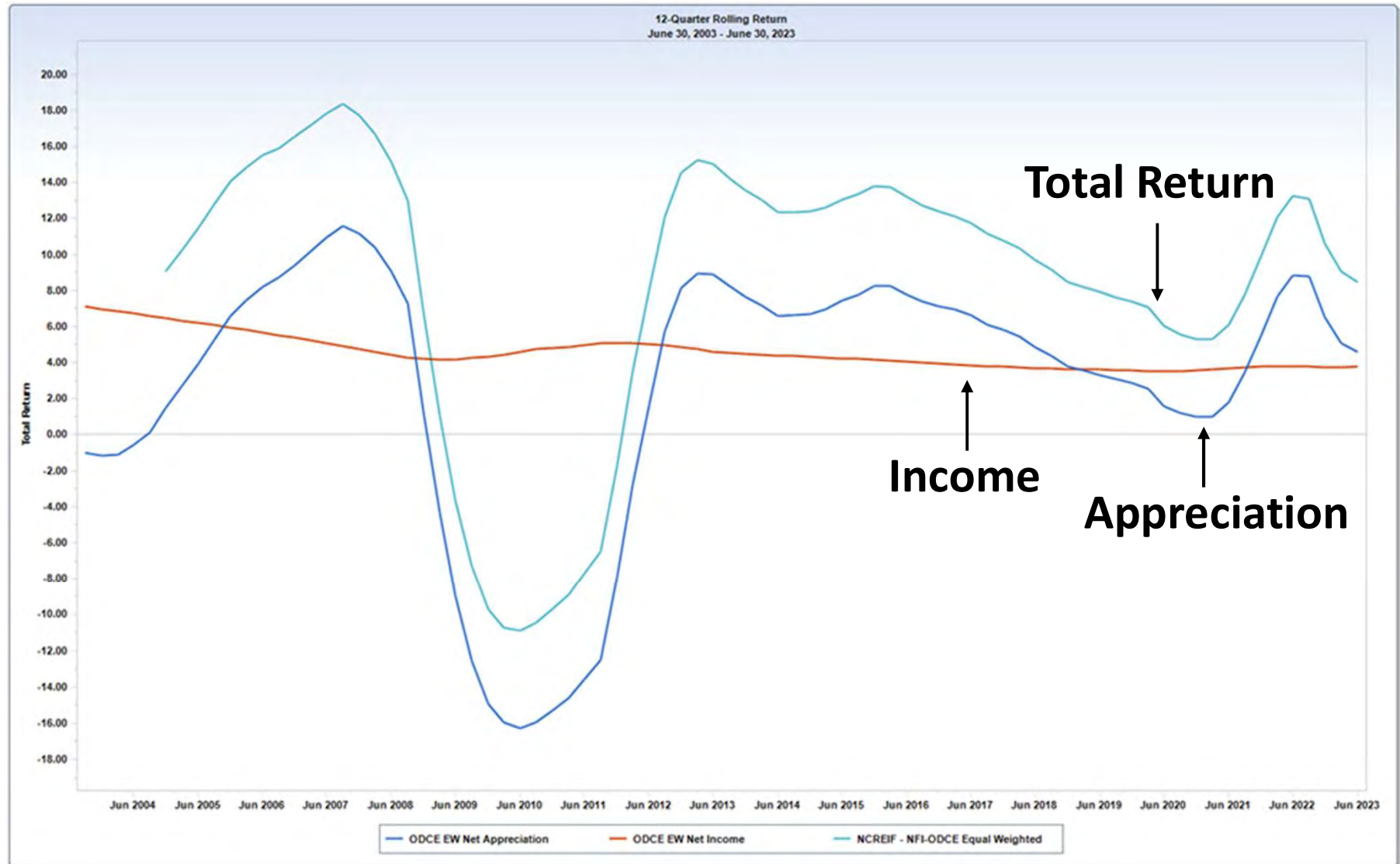
% of current total debt balance



Source: NCREIF, NAREIT Statista via J.P. Morgan Asset Management as of 5/31/23.

Real Estate Market

- The income component of real estate returns continues to remain stable, providing a buffer against the recent periods of negative appreciation. Appreciation was positive in the first half of 2022 and drove the positive calendar year return for the index last year but was flat in Q3 2022 and has been negative since Q4 2022, driving the negative returns for the ODCE index over the last three quarters.



Hedge Fund Market

Strategy	Index	2Q23	YTD	2022	2021	2020	2019	2018	1-Year	3-Year	5-Year	10-Year
Fund of Funds	HFRI FOF Composite	1.4%	2.2%	-5.3%	6.2%	10.9%	8.4%	-4.0%	3.6%	5.0%	3.3%	3.4%
Equity Long-Short	HFRI Equity Hedge	2.9%	5.5%	-10.1%	11.7%	17.9%	13.7%	-7.1%	7.4%	8.9%	5.4%	5.6%
Event Driven	HFRI Event Driven	1.3%	2.7%	-4.8%	12.4%	9.3%	7.5%	-2.1%	5.5%	8.6%	4.4%	4.6%
Global Macro	HFRI Macro Index	1.9%	-0.6%	9.0%	7.7%	5.4%	6.5%	-4.1%	-0.2%	7.4%	5.0%	3.1%
Relative Value	HFRI Relative Value	1.2%	2.6%	-0.7%	7.6%	3.4%	7.4%	-0.4%	4.1%	5.9%	3.6%	4.0%
Credit	HFRI Credit Index	1.3%	2.8%	-2.6%	7.9%	6.3%	6.5%	-0.0%	3.7%	6.0%	3.7%	4.1%

Hedge Fund Strategy Performance



- Hedge fund strategies were modestly positive in Q2 2023 amid broader gains for risk assets during the quarter. The HFRI Fund of Funds Composite generated positive performance in each month during Q2, ending the quarter up 1.4% and up 2.2% YTD.
- Equity Hedge strategies again led broad sector returns in Q2 2023, with nearly all of the Q2 return for the HFRI Equity Hedge Index occurring in June, led by strategies with growth, technology and artificial intelligence exposures. The index was flat in April and May. Directional equity strategies continued to gain during the quarter, as investors continue to be increasingly comfortable with adding risk in portfolios as inflation slows and the Federal Reserve indicated a slowdown in its pace of interest rate hikes.
- The HFRI Macro index was up nearly 2% for the quarter but remains in negative territory YTD. Macro strategies are often less correlated to broader markets, and experienced gains in April when global equity market performance was more mixed, as the turmoil from the regional bank failures and higher volatility extended throughout the month into May. Macro strategies were again positive in June, with gains led by commodity-oriented strategies as prices rose, particularly in energy.
- Relative value and credit strategies advanced during Q2, though more modestly than equity-oriented strategies, as credit spreads tightened during the quarter and interest rates increased. The HFRI Relative Value Index and HFRI Credit Index were up 1.2% and 1.3%, respectively, during the quarter.



Operating Engineers Local No. 77 Pension Plan

Master Consulting Services Report

Period Ended

June 30, 2023

Total Fund Growth of Assets

	Second Quarter	Fiscal Year-To-Date	One Year	Three Years
Beginning Market Value	\$188,024,434	\$183,835,645	\$184,358,763	\$172,205,178
Net Cash Flow	-\$1,672,169	-\$3,459,864	-\$7,072,750	-\$23,901,822
Net Investment Change	\$3,528,804	\$9,505,288	\$12,595,056	\$41,577,712
Ending Market Value	\$189,881,069	\$189,881,069	\$189,881,069	\$189,881,069

Total Fund Growth of Assets

	Five Years	Seven Years	Ten Years
Beginning Market Value	\$174,912,051	\$157,774,280	\$149,919,692
Net Cash Flow	-\$40,399,509	-\$59,300,606	-\$90,351,184
Net Investment Change	\$55,368,527	\$91,407,395	\$130,312,561
Ending Market Value	\$189,881,069	\$189,881,069	\$189,881,069

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

Operating Engineers Local No. 77 Pension Plan

Master Consulting Services Report as of June 30, 2023

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023			
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs
Total Fund	\$189,881,069	100.0%	2.0%	5.4%	7.5%	8.2%
Total Domestic Large Cap Equity	\$30,823,355	16.2%	8.0%	15.8%	17.8%	10.3%
Total Domestic Mid Cap Equity	\$9,580,710	5.0%	7.1%	15.4%	20.5%	11.1%
Total Domestic Small Cap Equity	\$9,214,886	4.9%	2.5%	9.5%	14.1%	13.8%
Total International Large Cap Equity	\$9,661,119	5.1%	-1.6%	7.3%	12.2%	5.2%
Total International Small Cap Equity	\$9,591,176	5.1%	3.0%	10.0%	15.0%	7.7%
Total Global Tactical Asset Allocation	\$4,815,785	2.5%	2.3%	6.5%	7.0%	6.0%
Total Investment Grade Fixed Income	\$12,919,041	6.8%	-0.9%	1.8%	0.0%	-2.0%
Total Short Duration High Yield Fixed Income	\$13,604,898	7.2%	1.1%	2.6%	6.3%	2.7%
Total Mortgages	\$9,815,684	5.2%	0.7%	2.0%	2.8%	2.5%
Total Real Estate - Core	\$19,856,092	10.5%	-1.7%	-3.6%	-5.9%	7.8%
Total Real Estate - Value Add	\$19,436,929	10.2%	0.4%	0.7%	4.0%	--
Total Hedge Fund of Funds - Multi Strategy	\$6,496,318	3.4%	2.5%	4.4%	8.6%	8.0%
Total Opportunistic Strategies	\$20,493,667	10.8%				
Total Private Equity	\$10,648,930	5.6%				
Total Infrastructure - Value Add	\$2,445,527	1.3%				
Total Cash Equivalents	\$476,952	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.

Operating Engineers Local No. 77 Pension Plan

Master Consulting Services Report as of June 30, 2023

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023		
			5 Yrs	7 Yrs	10 Yrs
Total Fund	\$189,881,069	100.0%	6.7%	8.2%	8.4%
Total Domestic Large Cap Equity	\$30,823,355	16.2%	10.1%	12.6%	12.4%
Total Domestic Mid Cap Equity	\$9,580,710	5.0%	12.3%	13.6%	12.6%
Total Domestic Small Cap Equity	\$9,214,886	4.9%	2.4%	5.4%	5.9%
Total International Large Cap Equity	\$9,661,119	5.1%	5.8%	9.9%	8.3%
Total International Small Cap Equity	\$9,591,176	5.1%	3.5%	--	--
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Total Mortgages	\$9,815,684	5.2%	3.4%	3.5%	3.9%
Total Real Estate - Core	\$19,856,092	10.5%	6.9%	7.5%	9.1%
Total Real Estate - Value Add	\$19,436,929	10.2%	--	--	--
Total Hedge Fund of Funds - Multi Strategy	\$6,496,318	3.4%	5.7%	6.5%	5.5%
Total Opportunistic Strategies	\$20,493,667	10.8%			
Total Private Equity	\$10,648,930	5.6%			
Total Infrastructure - Value Add	\$2,445,527	1.3%			
Total Cash Equivalents	\$476,952	0.3%			

Performance Summary (Gross of Fees)

	Fiscal Year Ending December 31st						
	Fiscal YTD	2022	2021	2020	2019	2018	2017
Total Fund	5.4%	-9.7%	15.1%	13.8%	17.1%	-2.5%	15.4%
<i>Total Fund Benchmark</i>	<i>7.0%</i>	<i>-9.6%</i>	<i>13.7%</i>	<i>12.8%</i>	<i>17.6%</i>	<i>-3.7%</i>	<i>11.1%</i>

	Fiscal Year Ending December 31st				
	2016	2015	2014	2013	2012
Total Fund	7.6%	4.0%	7.9%	21.5%	11.9%
<i>Total Fund Benchmark</i>	<i>9.5%</i>	<i>1.6%</i>	<i>7.2%</i>	<i>19.7%</i>	<i>11.9%</i>

Performance Summary (Net of Fees)

	Fiscal Year Ending December 31st						
	Fiscal YTD	2022	2021	2020	2019	2018	2017
Total Fund	5.1%	-10.4%	14.2%	13.0%	16.2%	-3.3%	14.5%
<i>Total Fund Benchmark</i>	<i>7.0%</i>	<i>-9.6%</i>	<i>13.7%</i>	<i>12.8%</i>	<i>17.6%</i>	<i>-3.7%</i>	<i>11.1%</i>

	Fiscal Year Ending December 31st				
	2016	2015	2014	2013	2012
Total Fund	6.7%	3.3%	7.1%	20.6%	11.1%
<i>Total Fund Benchmark</i>	<i>9.5%</i>	<i>1.6%</i>	<i>7.2%</i>	<i>19.7%</i>	<i>11.9%</i>

Operating Engineers Local No. 77 Pension Plan
Master Consulting Services Report as of June 30, 2023

Current vs. Policy						
	Current	Current	Policy	Policy Range	Difference	Difference
Domestic Large Cap Equity	\$30,823,355	16.2%	15.0%	10.0% - 20.0%	1.2%	\$2,341,194
Domestic Mid Cap Equity	\$9,580,710	5.0%	5.0%	0.0% - 10.0%	0.0%	\$86,656
Domestic Small Cap Equity	\$9,214,886	4.9%	5.0%	0.0% - 10.0%	-0.1%	-\$279,167
International Large Cap Equity	\$9,661,119	5.1%	5.0%	0.0% - 10.0%	0.1%	\$167,066
International Small Cap Equity	\$9,591,176	5.1%	5.0%	0.0% - 10.0%	0.1%	\$97,123
Global Tactical Asset Allocation	\$4,815,785	2.5%	2.5%	0.0% - 7.5%	0.0%	\$68,759
Investment Grade Fixed Income	\$12,919,041	6.8%	10.0%	5.0% - 15.0%	-3.2%	-\$6,069,066
Short Duration High Yield Fixed Income	\$13,604,898	7.2%	10.0%	5.0% - 15.0%	-2.8%	-\$5,383,209
Mortgages	\$9,815,684	5.2%	5.0%	0.0% - 10.0%	0.2%	\$321,630
Real Estate - Core	\$19,856,092	10.5%	10.0%	5.0% - 15.0%	0.5%	\$867,985
Real Estate - Value Add	\$19,436,929	10.2%	10.0%	5.0% - 15.0%	0.2%	\$448,822
Hedge Fund of Funds - Multi Strategy	\$6,496,318	3.4%	0.0%	0.0% - 0.0%	3.4%	\$6,496,318
Opportunistic Strategies	\$20,493,667	10.8%	10.0%	5.0% - 15.0%	0.8%	\$1,505,560
Private Equity	\$10,648,930	5.6%	5.0%	0.0% - 10.0%	0.6%	\$1,154,876
Infrastructure - Value Add	\$2,445,527	1.3%	2.5%	0.0% - 7.5%	-1.2%	-\$2,301,500
Cash Equivalents	\$476,952	0.3%	0.0%	0.0% - 0.0%	0.3%	\$476,952
Total	\$189,881,069	100.0%	100.0%			

- Policy adopted February 2023; effective TBD (pending capital calls and redemptions).

Operating Engineers Local No. 77 Pension Plan – Asset Allocation

- Asset allocation reviews were presented and discussed with the Trustees at the following meetings: August 13, 2019, November 10, 2020, February 9, 2021, February 8, 2022, and February 14, 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 8, 2022, meeting, an asset allocation review was presented to show possible Policies which included increasing the infrastructure allocation from 2.5% to 5.0%. At the request of the Trustees, Blackstone presented their Blackstone Infrastructure Partners Fund, but due to a lack of ERISA fiduciary acceptance the Trustees elected not to move forward.
- At the February 8, 2022, meeting, the Trustees elected to redeem \$1.25M from real estate - core (Multi-Employer Property Trust) effective March 31, 2022, for cash needs. Status: Redemption proceeds were received on October 18, 2022. Additionally, the Trustees elected to utilize real estate - core (Principal U.S. Property Account) as a source for cash needs as needed. Status: Principal instituted a withdrawal queue effective July 1, 2022.
- At the August 16, 2022, meeting, IPS made the following recommendations: 1) Redeem \$2.0M from opportunistic strategies (Corbin ERISA Opportunity Fund, LP - Class C Shares), effective December 31, 2022; Decision: Approved. Status: The redemption request was fully satisfied on its effective date. Cash account received proceeds March 2023. 2) Redeem \$2.0M from real estate - core (Boyd Watterson GSA Fund, LP - \$1.0M; effective December 31, 2022, and Principal U.S. Property Account - \$1.0M; effective August 31, 2022); Decision: Approved. Status: The redemption request for Boyd Watterson GSA Fund, LP was fully satisfied on its effective date and cash proceeds were received January 27, 2023. The redemption from Principal U.S. Property Account is in process, subject to withdrawal queue.
- 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.

Recommendation: (1) To rebalance closer to Policy, transfer 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). The balance of proceeds will be used for cash needs and capital calls. (2) To increase diversification of international equity allocation consider adding international equity large cap value manager.

Real Estate - Core Redemption (In Millions) as of June 30, 2023						
Manager	Redemption Type	Effective Date	Withdrawal Queue	Requested \$	Received \$	Remaining \$
Principal U.S. Property Account	Partial	Aug-22	Jul-22	\$1.00	\$0.00	\$1.00
Total				\$1.00	\$0.00	\$1.00

Hedge Fund of Funds - Multi Strategy Redemption (In Millions) as of June 30, 2023						
Manager	Redemption Type	Effective Date	Withdrawal Queue	Requested \$	Received \$	Remaining \$
Grosvenor Institutional Partners (PF), Ltd**	Full*	Jun-23	N/A	\$6.50	\$0.00	\$6.50
Total				\$6.50	\$0.00	\$6.50

*Due to a full redemption being submitted, the requested and remaining values will be equal to the market value of the investment until the full redemption is satisfied.

**Redemption proceeds received as of July 28, 2023 are \$6.2M.

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Commitment and Funding of Real Estate - Core (In Millions) as of June 30, 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	\$50.9	\$7.3	\$58.2	1.5	1.7
Multi-Employer Property Trust	2001	\$20.0	\$0.0	1.0	\$20.0	\$27.9	\$5.9	\$33.8	1.4	1.7
Boyd Watterson GSA Fund, LP	2015	\$5.0	\$0.0	1.0	\$5.0	\$2.1	\$6.7	\$8.8	0.4	1.8
Total		\$58.8	\$0.0	1.0	\$58.8	\$80.9	\$19.9	\$100.8	1.4	1.7

Commitment and Funding of Real Estate - Value Add (In Millions) as of June 30, 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	\$0.0	\$19.4	\$19.4	0.0	1.1
Total		\$18.0	\$0.0	1.0	\$18.0	\$0.0	\$19.4	\$19.4	0.0	1.1

Commitment and Funding of Opportunistic Strategies (In Millions) as of June 30, 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	4.7%
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	4.0%
Grosvenor Opportunistic Credit Fund V, Ltd	2017	\$8.7	\$0.0	1.0	\$8.7	\$0.5	\$10.2	\$10.6	0.1	1.2	
Total		\$14.7	\$0.0	1.0	\$14.7	\$7.1	\$10.6	\$17.7	0.5	1.2	

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Commitment and Funding of Private Equity (In Millions) as of June 30, 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	\$10.3	\$3.2	0.7	\$7.2	\$2.5	\$7.6	\$10.1	0.3	1.4	14.8%
GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	2021	\$8.5	\$6.1	0.3	\$2.4	\$0.0	\$3.0	\$3.0	0.0	1.2	
Total		\$18.8	\$9.3	0.5	\$9.7	\$2.5	\$10.6	\$13.1	0.3	1.4	

¹Unfunded commitment includes recallable distributions of \$138K.

²Commitment amount includes \$1.8M unfunded commitment adjustment.

Commitment and Funding of Infrastructure - Value Add (In Millions) as of June 30, 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	\$2.7	0.5	\$2.5	\$0.2	\$2.4	\$2.6	0.1	1.1	
Total		\$5.0	\$2.7	0.5	\$2.5	\$0.2	\$2.4	\$2.6	0.1	1.1	

¹Unfunded commitment includes recallable distributions of \$185K.

- 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
Lazard/Wilmington LCAS Global Diversified - CIT	Terminate.	2Q 2023	Discuss with Trustees.	The strategy underperformed the blended GTAA benchmark in Q2 2023 for a third consecutive quarter. Despite outperforming in 2022, the strategy continues to trail the benchmark over longer-term annualized periods. Due to the continued underperformance and the strategy's lack of alpha from its tactical allocations, IPS recommends clients terminate the strategy.
Grosvenor Institutional Partners (PF), Ltd	Terminated effective June 30, 2023.	1Q 2023	None.	Status: In process.

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Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023				
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Fund	\$189,881,069	100.0%	1.8%	5.1%	6.7%	7.4%	5.9%
Total Domestic Large Cap Equity	\$30,823,355	16.2%	8.0%	15.5%	17.2%	9.6%	9.5%
Northern Trust Collective Russell 1000 Growth Index Fund	\$15,664,430	8.2%	--	--	--	--	--
<i>Russell 1000 Growth</i>			--	--	--	--	--
Wedge Capital Management - QVM	\$15,158,925	8.0%	6.1%	7.8%	14.8%	14.8%	8.7%
<i>Russell 1000 Value</i>			4.1%	5.1%	11.5%	14.3%	8.1%
Total Domestic Mid Cap Equity	\$9,580,710	5.0%	6.9%	14.9%	19.6%	10.2%	11.4%
TimesSquare Capital Management	\$9,580,710	5.0%	6.9%	14.9%	19.6%	10.2%	11.4%
<i>Russell MidCap Growth</i>			6.2%	15.9%	23.1%	7.6%	9.7%
Total Domestic Small Cap Equity	\$9,214,886	4.9%	2.3%	9.2%	13.5%	13.2%	1.8%
Eaton Vance Small Cap Collective Investment Trust Fund	\$9,214,886	4.9%	2.3%	9.2%	13.5%	13.2%	--
<i>Russell 2000</i>			5.2%	8.1%	12.3%	10.8%	--

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Performance Detail (Net of Fees) - Annualized

			Ending June 30, 2023				
	Market Value	% of Portfolio	2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total International Large Cap Equity	\$9,661,119	5.1%	-1.8%	6.9%	11.3%	4.4%	5.0%
Hardman Johnston International Equity Group Trust	\$9,661,119	5.1%	-1.8%	6.9%	11.3%	4.4%	5.0%
<i>MSCI EAFE</i>			3.0%	11.7%	18.8%	8.9%	4.4%
<i>MSCI ACWI ex USA</i>			2.4%	9.5%	12.7%	7.2%	3.5%
<i>MSCI EAFE Growth</i>			2.8%	14.2%	20.2%	6.3%	5.4%
Total International Small Cap Equity	\$9,591,176	5.1%	2.8%	9.5%	14.0%	6.7%	2.6%
Victory Trivalent International Small-Cap Collective Fund	\$9,591,176	5.1%	2.8%	9.5%	14.0%	6.7%	2.6%
<i>S&P Developed Ex-U.S. Small Cap (Net)</i>			0.1%	6.5%	10.5%	6.1%	1.5%
Total Global Tactical Asset Allocation	\$4,815,785	2.5%	2.2%	6.2%	6.4%	5.4%	4.1%
Lazard/Wilmington LCAS Global Diversified - CIT	\$4,815,785	2.5%	2.2%	6.2%	6.4%	4.2%	3.6%
<i>65% MSCI World Index/35% FTSE WGBI</i>			3.8%	10.3%	10.9%	5.5%	5.4%
Total Investment Grade Fixed Income	\$12,919,041	6.8%	-1.0%	1.6%	-0.3%	-2.3%	1.3%
Wedge Capital Management	\$12,919,041	6.8%	-1.0%	1.6%	-0.3%	-2.3%	1.3%
<i>Wedge Custom Benchmark</i>			-0.8%	1.5%	-0.1%	-2.5%	1.2%

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Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023				
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Short Duration High Yield Fixed Income	\$13,604,898	7.2%	1.0%	2.4%	5.8%	2.2%	2.7%
Chartwell Investment Partners SDHY	\$13,604,898	7.2%	1.0%	2.4%	5.8%	2.2%	2.7%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			1.3%	3.6%	7.1%	3.4%	3.7%
Bloomberg US Govt/Credit Int TR			-0.8%	1.5%	-0.1%	-2.5%	1.2%
Total Mortgages	\$9,815,684	5.2%	0.5%	1.7%	2.3%	1.9%	2.8%
Ullico - J for Jobs	\$4,646,750	2.4%	0.7%	1.7%	2.4%	2.0%	2.5%
Bloomberg US Aggregate TR			-0.8%	2.1%	-0.9%	-4.0%	0.8%
Washington Capital JMT Mortgage Income Fund	\$5,168,933	2.7%	0.4%	1.8%	2.2%	1.9%	3.1%
Bloomberg US Aggregate TR			-0.8%	2.1%	-0.9%	-4.0%	0.8%
Total Real Estate - Core	\$19,856,092	10.5%	-2.0%	-4.1%	-6.9%	6.7%	5.8%
Principal U.S. Property Account	\$7,274,442	3.8%	-1.9%	-5.1%	-10.7%	7.1%	6.0%
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	7.6%	6.1%
Boyd Watterson GSA Fund, LP	\$6,708,603	3.5%	0.5%	-0.1%	1.4%	5.3%	6.0%
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	7.6%	6.1%
Long-Term Income Objective 8%			1.9%	3.9%	8.0%	8.0%	8.0%
Multi-Employer Property Trust	\$5,873,047	3.1%	-4.7%	-7.1%	-11.3%	6.9%	5.4%
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	7.6%	6.1%

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Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023				
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Real Estate - Value Add	\$19,436,929	10.2%	0.1%	0.1%	2.7%	--	--
Boyd Watterson State Government Fund, LP	\$19,436,929	10.2%	0.1%	0.1%	2.7%	--	--
<i>NCREIF ODCE Equal Weighted Net</i>			-3.0%	-6.4%	-10.4%	--	--
<i>Long-Term Income Objective 9%</i>			2.2%	4.4%	9.0%	--	--
Total Hedge Fund of Funds - Multi Strategy	\$6,496,318	3.4%	2.3%	3.9%	7.6%	6.9%	4.7%
Grosvenor Institutional Partners (PF), Ltd	\$6,496,318	3.4%	2.3%	3.9%	7.6%	6.9%	4.7%
<i>HFRI Fund of Funds Composite Index</i>			1.5%	2.3%	3.7%	5.0%	3.3%
<i>T-Bills + 5%</i>			2.4%	4.8%	8.8%	6.3%	6.5%
Total Opportunistic Strategies	\$20,493,667	10.8%					
Grosvenor Opportunistic Credit Fund III, Ltd	\$111,105	0.1%					
Grosvenor Opportunistic Credit Fund IV, Ltd	\$340,828	0.2%					
Grosvenor Opportunistic Credit Fund V, Ltd	\$10,167,966	5.4%	1.9%	4.2%	5.5%	7.1%	4.8%
<i>HFRI Credit Index</i>			1.3%	2.9%	3.8%	6.0%	3.7%
Corbin ERISA Opportunity Fund, LP - Class C Shares	\$9,873,768	5.2%	-0.2%	0.4%	0.6%	7.7%	--
<i>HFRI Credit Index</i>			1.3%	2.9%	3.8%	6.0%	--
<i>Long-Term Target Return of 8%</i>			1.9%	3.9%	8.0%	8.0%	--

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023				
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Private Equity	\$10,648,930	5.6%					
GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	\$7,608,192	4.0%					
GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	\$3,040,738	1.6%					
Total Infrastructure - Value Add	\$2,445,527	1.3%					
WaCap - SP Infrastructure Fund IV Feeder	\$2,445,527	1.3%					
Total Cash Equivalents	\$476,952	0.3%					
Cash Account	\$476,952	0.3%					

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Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023			
			7 Yrs	10 Yrs	Inception	Inception Date
Total Fund	\$189,881,069	100.0%	7.4%	7.6%	8.7%	Apr-88
Total Domestic Large Cap Equity	\$30,823,355	16.2%	11.9%	11.8%	--	Jul-01
Northern Trust Collective Russell 1000 Growth Index Fund	\$15,664,430	8.2%	--	--	11.7%	May-23
<i>Russell 1000 Growth</i>			--	--	11.7%	May-23
Wedge Capital Management - QVM	\$15,158,925	8.0%	10.5%	10.4%	9.2%	Jul-01
<i>Russell 1000 Value</i>			8.9%	9.2%	7.2%	Jul-01
Total Domestic Mid Cap Equity	\$9,580,710	5.0%	12.7%	11.7%	--	Apr-06
TimesSquare Capital Management	\$9,580,710	5.0%	12.7%	11.7%	10.1%	Apr-06
<i>Russell MidCap Growth</i>			12.0%	11.5%	9.2%	Apr-06
Total Domestic Small Cap Equity	\$9,214,886	4.9%	4.7%	5.2%	--	Jul-04
Eaton Vance Small Cap Collective Investment Trust Fund	\$9,214,886	4.9%	--	--	8.4%	Sep-19
<i>Russell 2000</i>			--	--	7.7%	Sep-19

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Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023			
			7 Yrs	10 Yrs	Inception	Inception Date
Total International Large Cap Equity	\$9,661,119	5.1%	9.0%	7.4%	--	Apr-97
Hardman Johnston International Equity Group Trust	\$9,661,119	5.1%	9.0%	7.4%	7.7%	Jul-09
<i>MSCI EAFE</i>			6.9%	5.4%	6.4%	Jul-09
<i>MSCI ACWI ex USA</i>			6.3%	4.7%	5.8%	Jul-09
<i>MSCI EAFE Growth</i>			7.4%	6.4%	7.5%	Jul-09
Total International Small Cap Equity	\$9,591,176	5.1%	--	--	2.4%	Mar-18
Victory Trivalent International Small-Cap Collective Fund	\$9,591,176	5.1%	--	--	2.4%	Mar-18
<i>S&P Developed Ex-U.S. Small Cap (Net)</i>			--	--	0.9%	Mar-18
Total Global Tactical Asset Allocation	\$4,815,785	2.5%	5.4%	5.5%	5.7%	Jan-11
Lazard/Wilmington LCAS Global Diversified - CIT	\$4,815,785	2.5%	5.4%	--	5.0%	Aug-13
<i>65% MSCI World Index/35% FTSE WGBI</i>			6.4%	--	6.0%	Aug-13
Total Investment Grade Fixed Income	\$12,919,041	6.8%	0.8%	1.6%	4.3%	Jun-95
Wedge Capital Management	\$12,919,041	6.8%	0.8%	1.6%	3.1%	Jan-03
<i>Wedge Custom Benchmark</i>			0.8%	1.4%	3.1%	Jan-03

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Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023			
			7 Yrs	10 Yrs	Inception	Inception Date
Total Short Duration High Yield Fixed Income	\$13,604,898	7.2%	2.8%	2.8%	2.7%	Jan-13
Chartwell Investment Partners SDHY	\$13,604,898	7.2%	2.8%	2.8%	2.7%	Jan-13
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			3.7%	3.9%	3.7%	Jan-13
Bloomberg US Govt/Credit Int TR			0.8%	1.4%	1.3%	Jan-13
Total Mortgages	\$9,815,684	5.2%	2.9%	3.3%	3.3%	Oct-04
Ullico - J for Jobs	\$4,646,750	2.4%	2.6%	2.8%	2.7%	Oct-04
Bloomberg US Aggregate TR			0.4%	1.5%	3.0%	Oct-04
Washington Capital JMT Mortgage Income Fund	\$5,168,933	2.7%	3.2%	3.8%	4.6%	Oct-04
Bloomberg US Aggregate TR			0.4%	1.5%	3.0%	Oct-04
Total Real Estate - Core	\$19,856,092	10.5%	6.4%	8.1%	6.4%	Jul-01
Principal U.S. Property Account	\$7,274,442	3.8%	6.7%	8.3%	6.8%	Oct-01
NCREIF ODCE Equal Weighted Net			6.5%	8.1%	6.7%	Oct-01
Boyd Watterson GSA Fund, LP	\$6,708,603	3.5%	6.9%	--	7.2%	Feb-15
NCREIF ODCE Equal Weighted Net			6.5%	--	7.6%	Feb-15
Long-Term Income Objective 8%			8.0%	--	8.0%	Feb-15
Multi-Employer Property Trust	\$5,873,047	3.1%	5.6%	7.4%	6.0%	Jul-01
NCREIF ODCE Equal Weighted Net			6.5%	8.1%	6.6%	Jul-01

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Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023			
			7 Yrs	10 Yrs	Inception	Inception Date
Total Real Estate - Value Add	\$19,436,929	10.2%	--	--	4.5%	Oct-21
Boyd Watterson State Government Fund, LP	\$19,436,929	10.2%	--	--	4.5%	Oct-21
<i>NCREIF ODCE Equal Weighted Net</i>			--	--	4.6%	Oct-21
<i>Long-Term Income Objective 9%</i>			--	--	9.0%	Oct-21
Total Hedge Fund of Funds - Multi Strategy	\$6,496,318	3.4%	5.4%	4.5%	3.2%	Apr-07
Grosvenor Institutional Partners (PF), Ltd	\$6,496,318	3.4%	5.4%	4.6%	3.6%	Apr-07
<i>HFRI Fund of Funds Composite Index</i>			4.0%	3.4%	--	Apr-07
<i>T-Bills + 5%</i>			6.4%	6.0%	5.9%	Apr-07
Total Opportunistic Strategies	\$20,493,667	10.8%				
Grosvenor Opportunistic Credit Fund III, Ltd	\$111,105	0.1%				
Grosvenor Opportunistic Credit Fund IV, Ltd	\$340,828	0.2%				
Grosvenor Opportunistic Credit Fund V, Ltd	\$10,167,966	5.4%	--	--	4.7%	Feb-17
<i>HFRI Credit Index</i>			--	--	3.9%	Feb-17
Corbin ERISA Opportunity Fund, LP - Class C Shares	\$9,873,768	5.2%	--	--	4.5%	Jan-20
<i>HFRI Credit Index</i>			--	--	4.0%	Jan-20
<i>Long-Term Target Return of 8%</i>			--	--	8.0%	Jan-20

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023			
			7 Yrs	10 Yrs	Inception	Inception Date
Total Private Equity	\$10,648,930	5.6%				
GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	\$7,608,192	4.0%				
GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	\$3,040,738	1.6%				
Total Infrastructure - Value Add	\$2,445,527	1.3%				
WaCap - SP Infrastructure Fund IV Feeder	\$2,445,527	1.3%				
Total Cash Equivalents	\$476,952	0.3%				
Cash Account	\$476,952	0.3%				

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 June 30, 2023		
	Second Quarter	Inception 5/1/23
Beginning Market Value	--	\$0
Net Cash Flow	\$14,022,780	\$14,022,780
Net Investment Change	\$1,641,649	\$1,641,649
Ending Market Value	\$15,664,430	\$15,664,430

	Calendar Years														Inception	Inception Date
	2023 Q2 Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	2022 Rank	2021 Rank	2020 Rank	2019 Rank	2018 Rank	2017 Rank	2016 Rank	2015 Rank	2014 Rank		
Northern Trust Collective Russell 1000 Growth Index Fund	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11.7%	May-23
<i>Russell 1000 Growth</i>	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11.7%	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

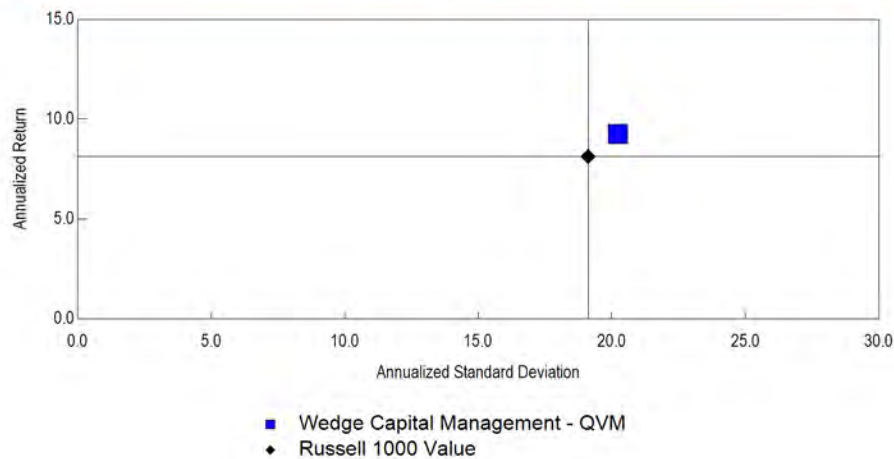
Manager verified the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under management, manager acknowledges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

Items of Interest: Personnel Departures - The manager stated Chris Vella (Head of Multi-Manager Solutions for Northern Trust Asset Management) left the firm, effective May 2023. Additionally, Marie Dzanis and Tom Swaney left the firm, effective June/July 2023. **Personnel Changes** - The manager stated Kelly Finegan, CFA, was promoted to the Head of Multi-Manager Solutions, effective May 2023. Additionally, Sheri Hawkins assumed the newly created role titled Head of Investment Platform Services, Paula Kar (Global Head of Product Strategy) assumed the role of Global Head of Product, replacing Sheri Hawkins, John McCareins became the Head of International Asset Management, and Angelo Manioudakis (Global Chief Investment Officer) will also serve as interim CIO of global fixed income, all effective June/July 2023. **Form ADV - ADV Part 1, Material Changes:** Updated Schedule A to add Chief Information Officer (March 2023 annual amendment) and to reflect leadership changes (April 2023), and removed Michael O' Grady as CEO and replaced with Daniel Gamba. **ADV Part 2, Material Changes:** Added Northern Trust Asset Management Australia Pty Ltd. as a participating affiliate in Item 10 (March 2023 annual amendment). **Legal** - The manager stated as one of the world's largest asset managers, Northern Trust Investments, Inc. ("NTI") is occasionally named as a defendant in asset management-related litigation. In the past 5 years, NTI has not been party to any litigation that has had a material effect on its ability to perform services for its clients. However, they do have one pending litigation case that involves them; Michael J. Iannone, Jr. and Nicole A. James v. AutoZone, Inc. (W.D. Tenn.). In September 2021, plan participants of the AutoZone, Inc. 401(k) Plan sued AutoZone, Inc., its Investment Committee, and Northern Trust Corporation and Northern Trust, Inc. (later described as Northern Trust Investments, Inc.) (collectively, "Defendants") as investment fiduciaries for breach of fiduciary duty in connection with the use of the GoalMaker® asset allocation service furnished by Prudential Insurance Company ("GoalMaker"). The Complaint alleges that the funds that Defendants selected for GoalMaker paid excessive investment management fees to Prudential and its affiliates while consistently underperforming benchmark indices and lower-cost index fund alternatives. **Errors and Omission** - The manager stated there was no change Northern Trust's Errors & Omissions insurance policy over the last quarter, and 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

Annualized Return vs. Annualized Standard Deviation 5 Years Ending June 30, 2023



Wedge Capital Management - QVM

Ending June 30, 2023

	Second Quarter	Inception 7/1/01
Beginning Market Value	\$18,029,801	\$22,264,495
Net Cash Flow	-\$3,750,000	-\$51,946,799
Net Investment Change	\$879,124	\$44,841,230
Ending Market Value	\$15,158,925	\$15,158,925

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management - QVM	15.3%	18.1%	99.4%	95.9%
Russell 1000 Value	14.3%	17.4%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management - QVM	9.2%	20.2%	105.0%	99.3%
Russell 1000 Value	8.1%	19.1%	100.0%	100.0%

Calendar Years

	2023 Q2		Rank		YTD Rank		1 Yr Rank		3 Yrs Rank		5 Yrs Rank		2022 Rank		2021 Rank		2020 Rank		2019 Rank		2018 Rank		Inception		Inception Date	
Wedge Capital Management - QVM	6.3%	16	8.0%	23	15.3%	28	15.3%	55	9.2%	51	-12.3%	88	33.2%	9	6.8%	38	29.6%	25	-12.0%	82		9.8%	Jul-01			
Russell 1000 Value	4.1%	49	5.1%	48	11.5%	57	14.3%	66	8.1%	78	-7.5%	69	25.2%	72	2.8%	62	26.5%	54	-8.3%	50		7.2%	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 a due diligence meeting with Wedge Capital on February 10, 2022.

Recommendation: None.

Compliance Summary

Exceptions: None.

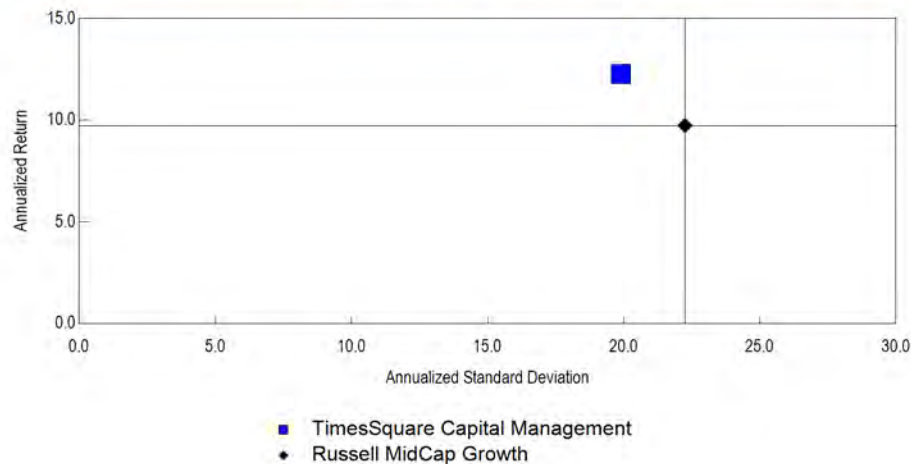
Action to be taken: None.

Items of Interest: Personnel Departures - The manager stated effective June 30, 2023, Bradley S. Fisher, General Partner, retired from the firm, and Jason T. Boles and John M. Carr, both General Partners, departed from the firm. Wesley Stoltz, who shared the Co-Head of Fixed Income responsibilities with Brad Fisher, will assume full responsibility for all fixed income strategies. Jason T. Boles, Equity Analyst and General Partner, will have his responsibilities absorbed by other members of the equity analyst team. John M. Carr, Client Portfolio Manager and General Partner, will have his responsibilities absorbed by other members of the client portfolio management team. **Ownership Changes** - The manager states departures noted above will not have any material impact on company ownership, or operations. **Form ADV** - The manager filed an amended Form ADV in July 2023, reflecting the change in the membership of their partnership. Please see the full compliance report for the Form ADV Part 2A and the list of material changes.

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

Annualized Return vs. Annualized Standard Deviation 5 Years Ending June 30, 2023



TimesSquare Capital Management

Ending June 30, 2023

	Second Quarter	Inception 4/1/06
Beginning Market Value	\$8,947,396	\$11,020,228
Net Cash Flow	\$0	-\$20,207,235
Net Investment Change	\$633,314	\$18,767,717
Ending Market Value	\$9,580,710	\$9,580,710

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
TimesSquare Capital Management	11.1%	18.3%	95.0%	87.8%
Russell MidCap Growth	7.6%	21.2%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
TimesSquare Capital Management	12.3%	19.9%	91.9%	92.1%
Russell MidCap Growth	9.7%	22.3%	100.0%	100.0%

Calendar Years

	2023 Q2	Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	2022 Rank	2021 Rank	2020 Rank	2019 Rank	2018 Rank	Inception	Inception Date									
TimesSquare Capital Management	7.1%	32	15.4%	53	20.5%	48	11.1%	20	12.3%	19	-21.5%	13	17.1%	37	34.2%	62	37.6%	37	-3.1%	44	11.0%	Apr-06
Russell MidCap Growth	6.2%	50	15.9%	46	23.1%	23	7.6%	56	9.7%	65	-26.7%	41	12.7%	65	35.6%	54	35.5%	53	-4.8%	58	9.2%	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 and September 28, 2022.

Recommendation: None.

Compliance Summary

Exceptions: None.

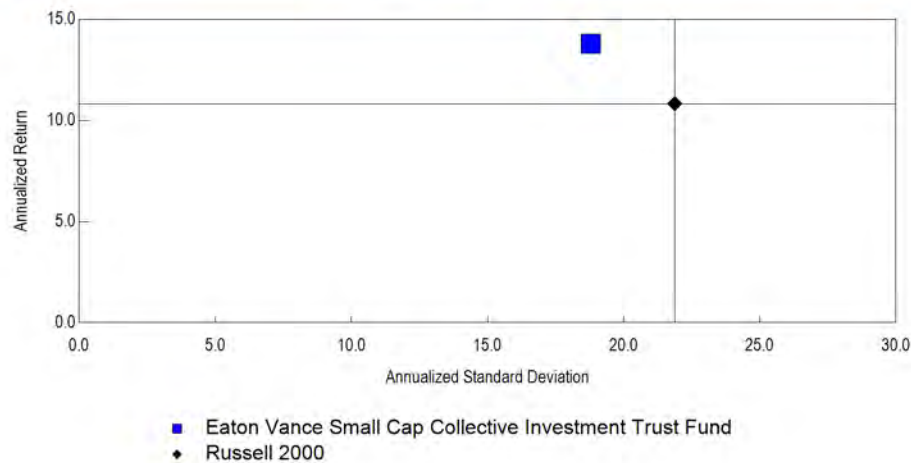
Action to be taken: None.

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

Annualized Return vs. Annualized Standard Deviation 3 Years Ending June 30, 2023



Eaton Vance Small Cap Collective Investment Trust Fund

Ending June 30, 2023

	Second Quarter	Inception 9/1/19
Beginning Market Value	\$8,994,120	\$0
Net Cash Flow	\$0	\$6,396,250
Net Investment Change	\$220,767	\$2,818,636
Ending Market Value	\$9,214,886	\$9,214,886

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Eaton Vance Small Cap Collective Investment Trust Fund	13.8%	18.8%	90.2%	85.2%
Russell 2000	10.8%	21.9%	100.0%	100.0%

Calendar Years

	2023 Q2	Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	2022 Rank	2021 Rank	2020 Rank	2019 Rank	2018 Rank	Inception	Inception Date
Eaton Vance Small Cap Collective Investment Trust Fund	2.5%	86	9.5%	45	14.1%	57	13.8%	64	--	--	--	9.0%	Sep-19
Russell 2000	5.2%	43	8.1%	64	12.3%	72	10.8%	92	--	--	--	7.7%	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 a due diligence meeting with Eaton Vance on June 15, 2022.
- 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

The manager did not return the 2Q2023 Compliance Checklist.

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 All EAFE Equity Gross

Annualized Return vs. Annualized Standard Deviation
5 Years Ending June 30, 2023



Hardman Johnston International Equity Group Trust

Ending June 30, 2023

	Second Quarter	Inception 7/1/09
Beginning Market Value	\$12,341,072	\$6,099,925
Net Cash Flow	-\$2,500,000	-\$8,435,348
Net Investment Change	-\$179,952	\$11,996,542
Ending Market Value	\$9,661,119	\$9,661,119

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Hardman Johnston International Equity Group Trust	5.2%	21.2%	87.2%	103.4%
MSCI EAFE	8.9%	18.1%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Hardman Johnston International Equity Group Trust	5.8%	21.4%	114.2%	101.6%
MSCI EAFE	4.4%	17.8%	100.0%	100.0%

Calendar Years

	2023 Q2	Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank	2022 Rank	2021 Rank	2020 Rank	2019 Rank	2018 Rank	Inception	Inception Date									
Hardman Johnston International Equity Group Trust	-1.6%	97	7.3%	84	12.2%	83	5.2%	87	5.8%	25	-23.1%	86	1.9%	99	36.5%	1	34.3%	3	-13.3%	34	8.5%	Jul-09
MSCI EAFE	3.0%	50	11.7%	45	18.8%	36	8.9%	56	4.4%	56	-14.5%	42	11.3%	68	7.8%	61	22.0%	63	-13.8%	40	6.4%	Jul-09
MSCI ACWI ex USA	2.4%	61	9.5%	72	12.7%	81	7.2%	75	3.5%	73	-16.0%	52	7.8%	84	10.7%	42	21.5%	66	-14.2%	44	5.8%	Jul-09
MSCI EAFE Growth	2.8%	54	14.2%	14	20.2%	22	6.3%	81	5.4%	32	-22.9%	85	11.3%	68	18.3%	19	27.9%	19	-12.8%	28	7.5%	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.

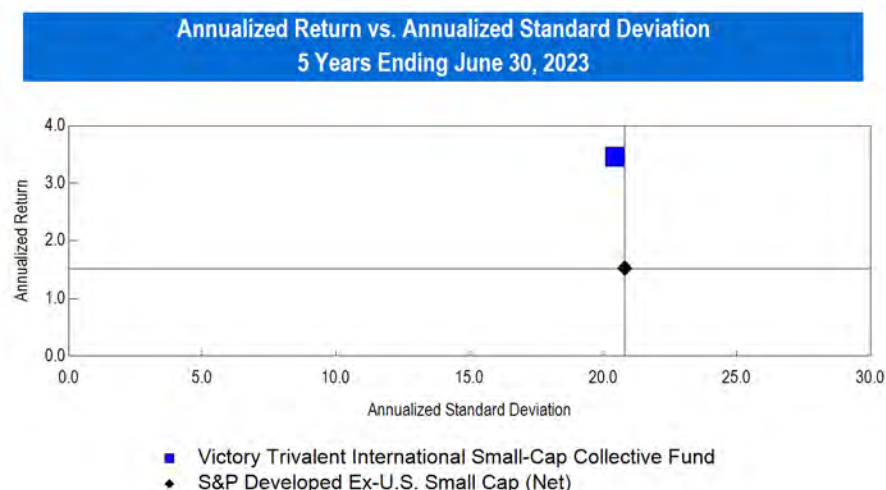
Recommendation: None.

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: None.

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	



Victory Trivalent International Small-Cap Collective Fund		
Ending June 30, 2023		
	Second Quarter	Inception 3/1/18
Beginning Market Value	\$9,311,596	\$0
Net Cash Flow	\$0	\$8,059,128
Net Investment Change	\$279,580	\$1,532,048
Ending Market Value	\$9,591,176	\$9,591,176

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Victory Trivalent International Small-Cap Collective Fund	7.7%	18.8%	102.0%	96.8%
S&P Developed Ex-U.S. Small Cap (Net)	6.1%	19.9%	100.0%	100.0%

5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Victory Trivalent International Small-Cap Collective Fund	3.5%	20.4%	107.6%	98.5%
S&P Developed Ex-U.S. Small Cap (Net)	1.5%	20.8%	100.0%	100.0%

	Calendar Years										Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	
Victory Trivalent International Small-Cap Collective Fund	3.0%	10.0%	15.0%	7.7%	3.5%	-21.9%	13.7%	16.4%	29.2%	--	3.2% Mar-18
S&P Developed Ex-U.S. Small Cap (Net)	0.1%	6.5%	10.5%	6.1%	1.5%	-21.6%	9.6%	14.3%	24.1%	--	0.9% 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

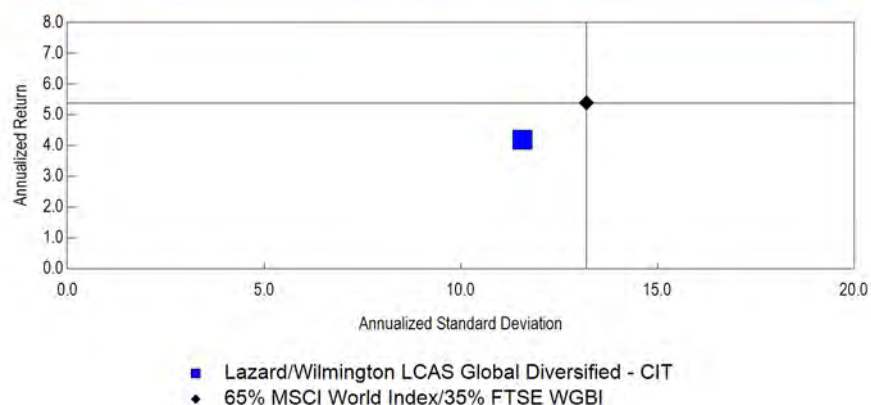
The manager verified the portfolio and individual holdings are currently, and have been during the past quarter, in compliance with the firm's commingled investment vehicle guidelines and/or prospectus governing the management of the investment. With respect to the portfolio(s) under management, the 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	Lazard/Wilmington LCAS Global Diversified - CIT
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	8/31/13
Account Type	Global Tactical Asset Allocation
Benchmark	65% MSCI World Index/35% FTSE WGBI
Universe	

Annualized Return vs. Annualized Standard Deviation 5 Years Ending June 30, 2023



Lazard/Wilmington LCAS Global Diversified - CIT

Ending June 30, 2023

	Second Quarter	Inception 8/31/13
Beginning Market Value	\$4,714,419	\$0
Net Cash Flow	\$0	\$418,155
Net Investment Change	\$101,366	\$4,397,630
Ending Market Value	\$4,815,785	\$4,815,785

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Lazard/Wilmington LCAS Global Diversified - CIT	4.8%	11.5%	79.4%	86.6%
65% MSCI World Index/35% FTSE WGBI	5.5%	13.8%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Lazard/Wilmington LCAS Global Diversified - CIT	4.2%	11.6%	79.1%	92.3%
65% MSCI World Index/35% FTSE WGBI	5.4%	13.2%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Lazard/Wilmington LCAS Global Diversified - CIT	2.3%	6.5%	7.0%	4.8%	4.2%	-14.9%	11.3%	11.8%	17.2%	-7.6%	5.6%	Aug-13
65% MSCI World Index/35% FTSE WGBI	3.8%	10.3%	10.9%	5.5%	5.4%	-18.0%	11.0%	14.6%	19.9%	-5.8%	6.0%	Aug-13

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Lazard/Wilmington LCAS Global Diversified - CIT

Correspondence Summary

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

Manager Summary

- IPS conducted due diligence meetings with Lazard on April 20, 2021, March 28, 2022 and June 20, 2023.

Recommendation: Terminate.

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 accepts fiduciary responsibility for the fund as an investment adviser to the fund.

Items of Interest: Personnel Additions - The manager stated during 2Q 2023 Kurt Livermore (Quantitative Global - Portfolio Manager/Analyst, Director), Christopher Schumacher (Lazard Family Office - Portfolio and Private Wealth, Director), Dilip Kumar (Emerging Markets Debt - Research Analyst, Senior Vice), Nelson Pena (Trading – US - Trader ,Vice President), Katherine Labrador (Portfolio Implementation - Portfolio Implementer, Vice President), Tomasz Bulinski (European Equity - Portfolio Manager/Analyst, Vice President) joined the firm.

Personnel Departures - The manager stated during 2Q 2023 Darrin Sokol (Trading - Global - Global Head of Equity Trading, Managing Director), Charles Suarez-Murias (TMT Market Neutral - Portfolio Manager/Analyst, Director), Thomas Wang (TMT Market Neutral - Portfolio Manager/Analyst, Director), Adam Mitchell (US Fixed Income - Client Portfolio Manager, Director), Rupert Hope (Multi Asset - Portfolio Manager/Analyst, Director), Tin Shan (Michael) Suen (Risk Management - Risk Manager, Director), Daniel Breslin (US Small Cap - Portfolio Manager/Analyst, Director), Jaeyub (Jake) Myung (Korean Equity - Portfolio Manager/Analyst, Senior Vice), Agnese Melbarde (Emerging Markets Debt - Research Analyst, Senior Vice), Giuseppe (Joe) Del (International Equity Select - Research Analyst, Senior Vice), Diane Barlow (US Fixed Income - Research Analyst, Senior Vice), Amit Schechter (Multi Asset - Data Scientist, Senior Vice), William Parry (Global Research – Research Analyst, Vice President), Xenia Bredima (Sustainable Investing - Portfolio Analyst, Vice President), and Tobias Best (Portfolio Implementation - Portfolio Implementation Vice President) departed the firm.

Account Information

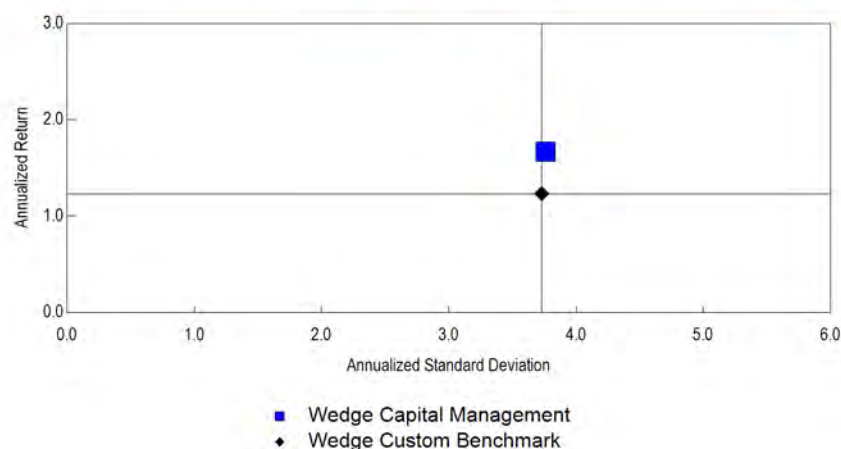
Account Name	Wedge Capital Management
Account Structure	Separate Account
Investment Style	Active
Inception Date	1/01/03
Account Type	Investment Grade Fixed Income
Benchmark	Wedge Custom Benchmark
Universe	

Wedge Capital Management

Ending June 30, 2023

	Second Quarter	Inception 1/1/03
Beginning Market Value	\$8,037,323	\$19,772,647
Net Cash Flow	\$5,000,000	-\$15,434,188
Net Investment Change	-\$118,281	\$8,580,582
Ending Market Value	\$12,919,041	\$12,919,041

Annualized Return vs. Annualized Standard Deviation 5 Years Ending June 30, 2023



3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management	-2.0%	4.1%	99.8%	93.1%
Wedge Custom Benchmark	-2.5%	4.1%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management	1.7%	3.8%	103.1%	94.1%
Wedge Custom Benchmark	1.2%	3.7%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Wedge Capital Management	-0.9%	1.8%	0.0%	-2.0%	1.7%	-7.9%	-1.1%	7.5%	7.0%	1.0%	3.5%	Jan-03
Wedge Custom Benchmark	-0.8%	1.5%	-0.1%	-2.5%	1.2%	-8.2%	-1.4%	6.4%	6.8%	0.9%	3.1%	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.

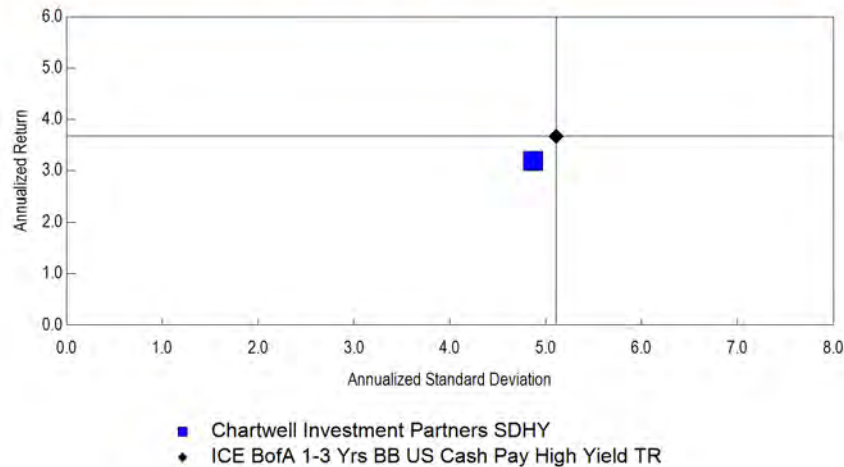
Action to be taken: None.

Items of Interest: Personnel Departures - The manager stated effective June 30, 2023, Bradley S. Fisher, General Partner, retired from the firm, and Jason T. Boles and John M. Carr, both General Partners, departed from the firm. Wesley Stoltz, who shared the Co-Head of Fixed Income responsibilities with Brad Fisher, will assume full responsibility for all fixed income strategies. Jason T. Boles, Equity Analyst and General Partner, will have his responsibilities absorbed by other members of the equity analyst team. John M. Carr, Client Portfolio Manager and General Partner, will have his responsibilities absorbed by other members of the client portfolio management team. **Ownership Changes** - The manager states departures noted above will not have any material impact on company ownership, or operations. **Form ADV** - The manager filed an amended Form ADV in July 2023, reflecting the change in the membership of their partnership. Please see the full compliance report for the Form ADV Part 2A and the list of material changes.

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 June 30, 2023



Chartwell Investment Partners SDHY

Ending June 30, 2023

	Second Quarter	Inception 1/31/13
Beginning Market Value	\$8,455,293	\$0
Net Cash Flow	\$5,000,000	\$11,663,717
Net Investment Change	\$149,605	\$1,941,181
Ending Market Value	\$13,604,898	\$13,604,898

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners SDHY	2.7%	4.4%	93.7%	105.7%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	3.4%	4.3%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners SDHY	3.2%	4.9%	91.8%	98.4%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	3.7%	5.1%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Chartwell Investment Partners SDHY	1.1%	2.6%	6.3%	2.7%	3.2%	-2.7%	2.8%	4.7%	8.0%	1.1%	3.2%	Jan-13
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	1.3%	3.6%	7.1%	3.4%	3.7%	-3.1%	3.2%	5.4%	8.7%	1.4%	3.7%	Jan-13
Bloomberg US Govt/Credit Int TR	-0.8%	1.5%	-0.1%	-2.5%	1.2%	-8.2%	-1.4%	6.4%	6.8%	0.9%	1.3%	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.

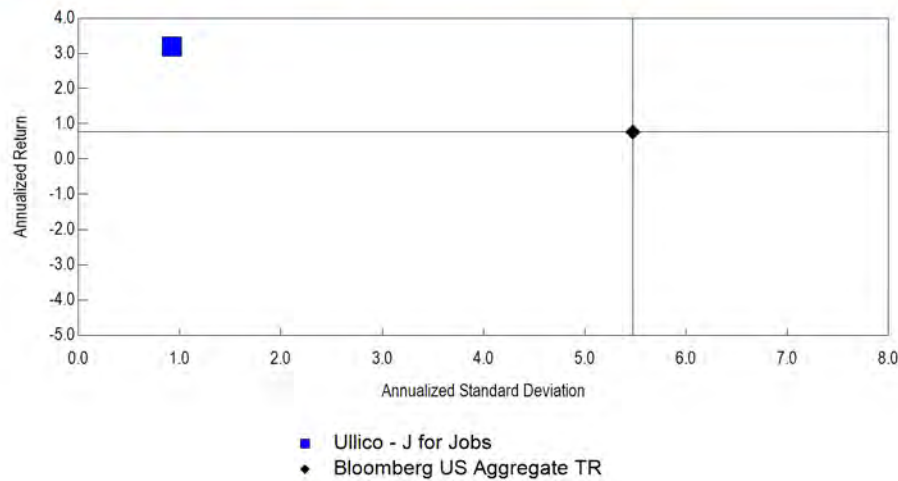
Action to be taken: None.

Items of Interest: None.

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	

Annualized Return vs. Annualized Standard Deviation 5 Years Ending June 30, 2023



Ullico - J for Jobs

Ending June 30, 2023

	Second Quarter	Inception 10/1/04
Beginning Market Value	\$4,614,421	\$10,000,000
Net Cash Flow	\$0	-\$8,968,786
Net Investment Change	\$32,330	\$3,615,536
Ending Market Value	\$4,646,750	\$4,646,750

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Ullico - J for Jobs	2.6%	1.0%	30.2%	-7.0%
Bloomberg US Aggregate TR	-4.0%	6.2%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Ullico - J for Jobs	3.2%	0.9%	29.8%	-10.9%
Bloomberg US Aggregate TR	0.8%	5.5%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Ullico - J for Jobs	0.8%	1.9%	2.9%	2.6%	3.2%	0.9%	3.6%	2.6%	4.7%	3.8%	3.2%	Oct-04
Bloomberg US Aggregate TR	-0.8%	2.1%	-0.9%	-4.0%	0.8%	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.0%	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

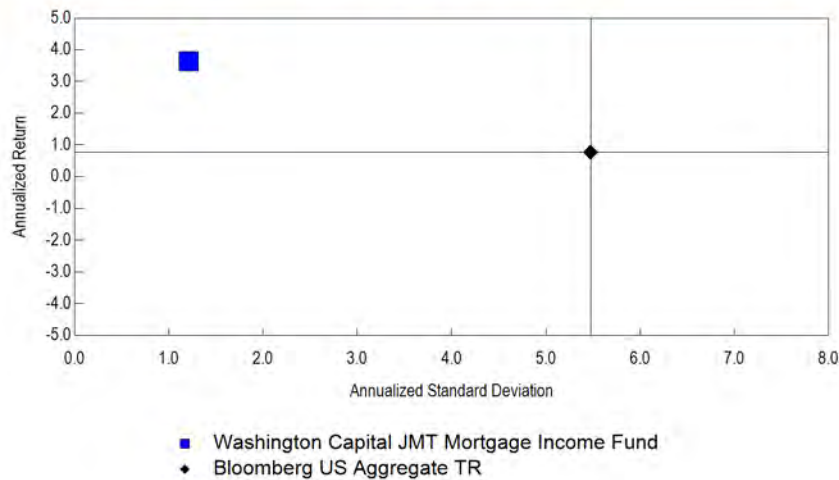
Separate Account J was not in compliance with all of the Account's investment guidelines during the 1st quarter of 2023. See manager's Investment Guideline Update in the full Compliance Report. With respect to the portfolio(s) under management, manager acknowledges sole fiduciary responsibility under ERISA for adherence with the commingled investment vehicle and/or offering document guidelines.

Items of Interest: Personnel Addition - The manager stated in 2Q 2023, Shine Cheng joined the firm as a Senior Portfolio Analyst. **Form ADV** - The manager stated The Union Labor Life Insurance Company is not registered as an investment adviser under the Investment Advisers Act of 1940. **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. On November 8, 2022, Plaza Tower filed a Voluntary Dismissal without Prejudice to dismiss 300 South Duval Associates, LLC from the pending litigation. Both parties entered into a Tolling Agreement through which the 300 Duval Associates, LLC dismissal will become with prejudice upon resolution of the claims against the remaining parties, which are set for trial in August 2023. **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'Neill 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.

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	

Annualized Return vs. Annualized Standard Deviation 5 Years Ending June 30, 2023



Washington Capital JMT Mortgage Income Fund

Ending June 30, 2023

	Second Quarter	Inception 10/1/04
Beginning Market Value	\$5,143,493	\$5,000,000
Net Cash Flow	\$0	-\$3,500,000
Net Investment Change	\$25,440	\$3,668,933
Ending Market Value	\$5,168,933	\$5,168,933

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Washington Capital JMT Mortgage Income Fund	2.4%	1.1%	31.8%	-3.0%
Bloomberg US Aggregate TR	-4.0%	6.2%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Washington Capital JMT Mortgage Income Fund	3.6%	1.2%	37.4%	-7.8%
Bloomberg US Aggregate TR	0.8%	5.5%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Washington Capital JMT Mortgage Income Fund	0.5%	2.1%	2.7%	2.4%	3.6%	0.1%	3.2%	3.3%	7.4%	3.6%	5.0%	Oct-04
Bloomberg US Aggregate TR	-0.8%	2.1%	-0.9%	-4.0%	0.8%	-13.0%	-1.5%	7.5%	8.7%	0.0%	3.0%	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 and April 14, 2022.

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.

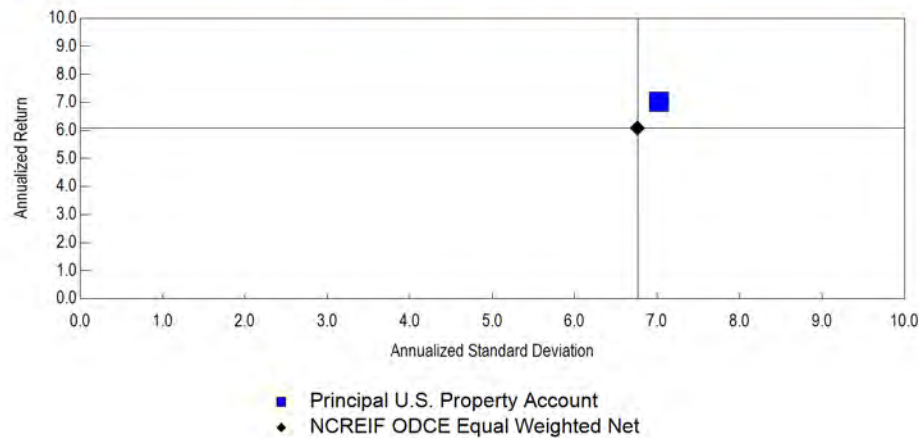
Items of Interest: Ownership Changes - The manager stated there were some percentage ownership changes among shareholders; however, the firm remains 100% employee owned.

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	

Income is distributed.

Annualized Return vs. Annualized Standard Deviation 5 Years Ending June 30, 2023



Principal U.S. Property Account

Ending June 30, 2023

	Second Quarter	Inception 10/1/01
Beginning Market Value	\$7,418,200	\$7,999,474
Net Cash Flow	\$0	-\$25,142,482
Net Investment Change	-\$143,759	\$24,417,449
Ending Market Value	\$7,274,442	\$7,274,442

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Principal U.S. Property Account	8.2%	9.0%	102.5%	92.8%
NCREIF ODCE Equal Weighted Net	7.6%	8.6%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Principal U.S. Property Account	7.0%	7.0%	109.6%	92.0%
NCREIF ODCE Equal Weighted Net	6.1%	6.8%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Principal U.S. Property Account	-1.7%	-4.6%	-9.7%	8.2%	7.0%	5.0%	23.8%	1.6%	7.0%	9.1%	7.9%	Oct-01
NCREIF ODCE Equal Weighted Net	-3.0%	-6.4%	-10.4%	7.6%	6.1%	7.6%	21.9%	0.8%	5.2%	7.3%	6.7%	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 a due diligence meeting with Principal on May 26, 2021.
- 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 satisfied 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.

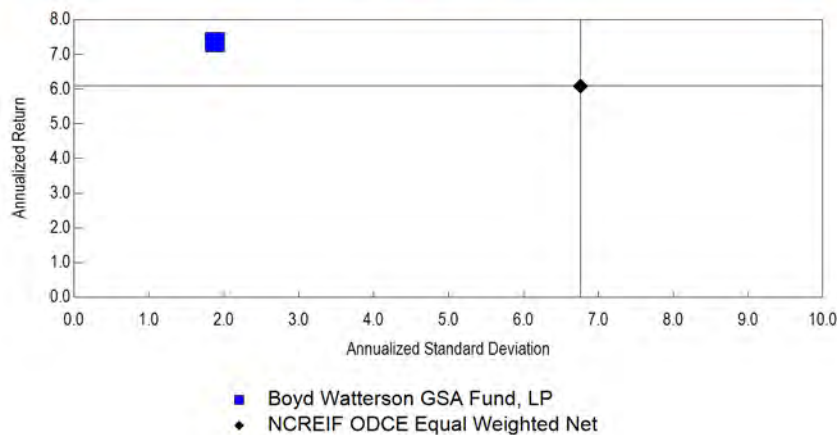
Items of Interest: **Compliance** - The manager answered N/A to Part A question 5 regarding derivatives and to Part B question 7, regarding the amount of insurance coverage. **Liquidity** - On July 1, 2022, Principal Life Insurance Company ("Principal") determined that it was in the best interest of 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 June 30, 2023, the withdrawal limitation totaled approximately \$1.2 billion. **Personnel Departures** - The manager stated during 2Q 2023, Jacob Carlson (Sr. Asset Management Analyst), Austin Jay Martin (Acquisitions Analyst), Mitchell James McFarlane (Investment Analyst), Riley Nicole Miller (CMS Asset Manager), and Meighan E Phillips (Managing Director - Portfolio Management, Co-Portfolio Manager) left the firm. **Personnel Changes** - The manager stated during 2Q 2023, Kyle Elfers (Principal Real Estate - Managing Director - Acquisitions/Dispositions) was named Co-Portfolio Manager due to the departure of Meighan E Phillips. In addition, the manager stated John Berg (Senior Managing Director and head of Private Equity Portfolio Management) will resume a more active role with the team on an interim basis to ensure a smooth transition. **Errors and Omissions** - The manager stated during 2Q 2023, they had one insurance carrier change in their program. The manager added Continental Casualty Company and removed Everest National Insurance Company.

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 June 30, 2023



Boyd Watterson GSA Fund, LP

Ending June 30, 2023

	Second Quarter	Inception 2/1/15
Beginning Market Value	\$6,675,347	\$0
Net Cash Flow	\$0	\$2,928,850
Net Investment Change	\$33,256	\$3,779,753
Ending Market Value	\$6,708,603	\$6,708,603

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Boyd Watterson GSA Fund, LP	6.6%	1.9%	49.9%	-8.8%
NCREIF ODCE Equal Weighted Net	7.6%	8.6%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Boyd Watterson GSA Fund, LP	7.3%	1.9%	71.3%	-25.5%
NCREIF ODCE Equal Weighted Net	6.1%	6.8%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Boyd Watterson GSA Fund, LP	0.8%	0.5%	2.7%	6.6%	7.3%	5.9%	9.4%	7.2%	9.5%	9.6%	8.5%	Feb-15
NCREIF ODCE Equal Weighted Net	-3.0%	-6.4%	-10.4%	7.6%	6.1%	7.6%	21.9%	0.8%	5.2%	7.3%	7.6%	Feb-15
Long-Term Income Objective 8%	1.9%	3.9%	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 and July 14, 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.

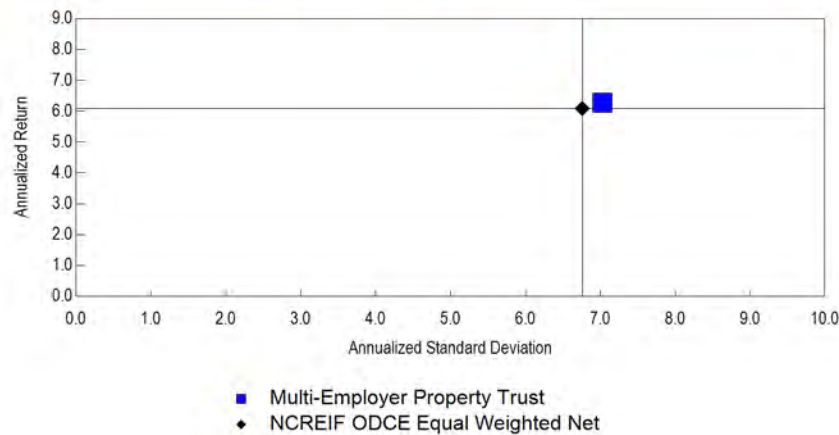
Items of Interests: Derivatives - The manager stated the Fund does not utilize derivatives as an investment vehicle. The manager also stated the Fund does utilize interest rate swaps to hedge risk related to variable rate loans. **E&O** -The manager stated the investment manger provides bonding for the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

Account Information

Account Name	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 June 30, 2023



Multi-Employer Property Trust

Ending June 30, 2023

	Second Quarter	Inception 7/1/01
Beginning Market Value	\$6,172,546	\$0
Net Cash Flow	-\$11,531	-\$7,931,775
Net Investment Change	-\$287,968	\$13,804,823
Ending Market Value	\$5,873,047	\$5,873,047

3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Multi-Employer Property Trust	7.9%	8.8%	106.4%	108.9%
NCREIF ODCE Equal Weighted Net	7.6%	8.6%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Multi-Employer Property Trust	6.3%	7.0%	109.0%	115.8%
NCREIF ODCE Equal Weighted Net	6.1%	6.8%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Multi-Employer Property Trust	-4.5%	-6.6%	-10.5%	7.9%	6.3%	8.7%	20.8%	1.4%	4.6%	8.2%	6.9%	Jul-01
NCREIF ODCE Equal Weighted Net	-3.0%	-6.4%	-10.4%	7.6%	6.1%	7.6%	21.9%	0.8%	5.2%	7.3%	6.6%	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 and February 16, 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 Addition** - The manager stated in 2Q23 Melaine Domres (Chief Operating Officer) joined NewTower Trust Company, effective June 1, 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	

Income is distributed.

Boyd Watterson State Government Fund, LP		
Ending June 30, 2023		
	Second Quarter	Inception 10/1/21
Beginning Market Value	\$19,410,832	\$0
Net Cash Flow	\$0	\$18,000,000
Net Investment Change	\$26,097	\$1,436,929
Ending Market Value	\$19,436,929	\$19,436,929

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Boyd Watterson State Government Fund, LP	0.4%	0.7%	4.0%	--	--	7.4%	--	--	--	--	5.8%	Oct-21
NCREIF ODCE Equal Weighted Net	-3.0%	-6.4%	-10.4%	--	--	7.6%	--	--	--	--	4.6%	Oct-21
Long-Term Income Objective 9%	2.2%	4.4%	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 and July 14, 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 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 Institutional Partners (PF), Ltd
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	4/01/07
Account Type	Hedge Fund of Funds - Multi-Strategy
Benchmark	HFRI Fund of Funds Composite Index
Universe	

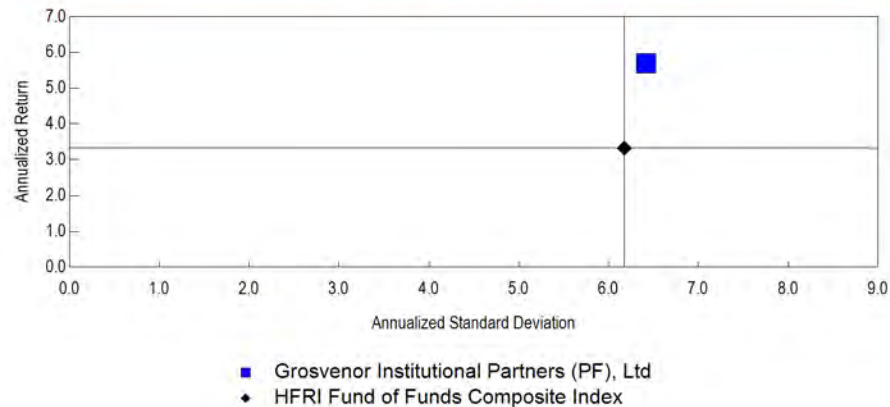
Grosvenor Institutional Partners (PF), Ltd

Ending June 30, 2023

	Second Quarter	Inception 4/1/07
Beginning Market Value	\$6,353,335	\$8,500,000
Net Cash Flow	\$0	-\$8,250,000
Net Investment Change	\$142,983	\$6,246,318
Ending Market Value	\$6,496,318	\$6,496,318

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 June 30, 2023



3 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Grosvenor Institutional Partners (PF), Ltd	7.9%	6.7%	114.8%	66.5%
HFRI Fund of Funds Composite Index	5.0%	5.1%	100.0%	100.0%

5 Years Ending June 30, 2023

	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Grosvenor Institutional Partners (PF), Ltd	5.7%	6.4%	106.0%	72.6%
HFRI Fund of Funds Composite Index	3.3%	6.2%	100.0%	100.0%

Calendar Years

	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	Inception Date
Grosvenor Institutional Partners (PF), Ltd	2.5%	4.4%	8.6%	7.9%	5.7%	-4.9%	8.9%	18.5%	7.2%	-0.4%	4.8%	Apr-07
HFRI Fund of Funds Composite Index	1.5%	2.3%	3.7%	5.0%	3.3%	-5.3%	6.2%	10.9%	8.4%	-4.0%	--	Apr-07
T-Bills + 5%	2.4%	4.8%	8.8%	6.3%	6.5%	6.5%	5.0%	5.5%	7.2%	7.0%	5.9%	Apr-07

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Grosvenor Institutional Partners (PF), Ltd

Correspondence Summary

- Manager presented annual reviews at meetings in November 2014, May 2016, February 2017, and November 2018.
- In an email dated October 13, 2020, the Trustees approved the change from Delaware to Cayman vehicle for an estimated annual management fee savings of \$20,442.

Manager Summary

- IPS conducted due diligence meetings with Grosvenor on February 1, 2021, March 16, 2021, July 28, 2021, February 9, 2022, May 25, 2022, October 27, 2022, February 9, 2023 and March 2, 2023.

Recommendation: Terminated effective June 30, 2023.

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: 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 Institutional Partners (PF), 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 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 June 30, 2023		
	Second Quarter	Inception 1/1/14
Beginning Market Value	\$110,761	\$0
Net Cash Flow	\$0	-\$454,525
Net Investment Change	\$344	\$565,630
Ending Market Value	\$111,105	\$111,105

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 and March 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: 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: 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 June 30, 2023		
	Second Quarter	Inception 9/30/15
Beginning Market Value	\$333,000	\$0
Net Cash Flow	\$0	-\$183,207
Net Investment Change	\$7,828	\$524,035
Ending Market Value	\$340,828	\$340,828

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

Compliance Summary

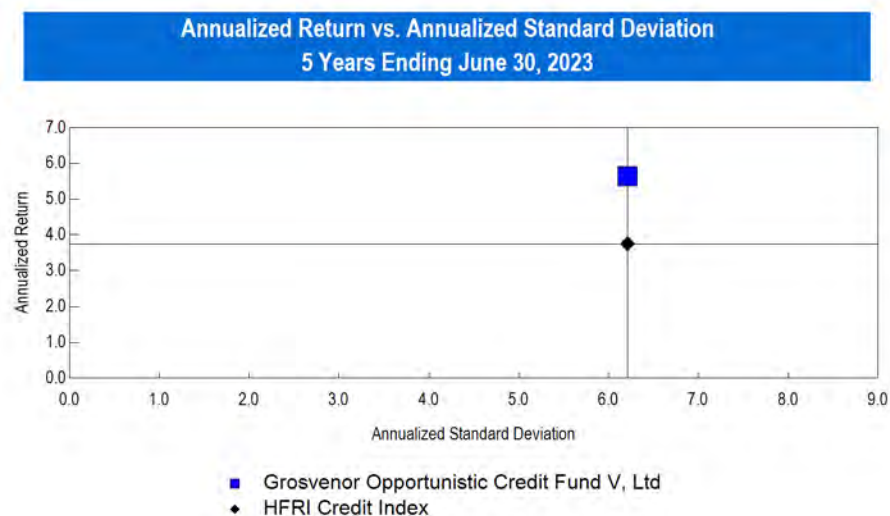
Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio under management, manager acknowledges sole fiduciary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

Items of Interest: 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	Grosvenor Opportunistic Credit Fund V, Ltd
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	2/01/17
Account Type	Opportunistic Strategies
Benchmark	HFRI Credit Index
Universe	

Grosvenor Opportunistic Credit Fund V, Ltd		
Ending June 30, 2023		
	Second Quarter	Inception 2/1/17
Beginning Market Value	\$9,977,967	\$0
Net Cash Flow	\$0	\$8,221,823
Net Investment Change	\$189,999	\$1,946,143
Ending Market Value	\$10,167,966	\$10,167,966

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



3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Grosvenor Opportunistic Credit Fund V, Ltd	8.1%	2.5%	90.4%	6.3%
HFRI Credit Index	6.0%	4.1%	100.0%	100.0%

5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Grosvenor Opportunistic Credit Fund V, Ltd	5.6%	6.2%	97.0%	62.2%
HFRI Credit Index	3.7%	6.2%	100.0%	100.0%

	Calendar Years										Inception	Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018		
Grosvenor Opportunistic Credit Fund V, Ltd	2.2%	4.7%	6.4%	8.1%	5.6%	1.1%	10.9%	1.6%	9.5%	3.0%	5.5%	Feb-17
HFRI Credit Index	1.3%	2.9%	3.8%	6.0%	3.7%	-2.6%	8.0%	6.2%	6.5%	0.0%	3.9%	Feb-17

Note: Returns are gross of fees.

Operating Engineers Local No. 77 Pension Plan - Grosvenor Opportunistic Credit Fund V, 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 and March 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

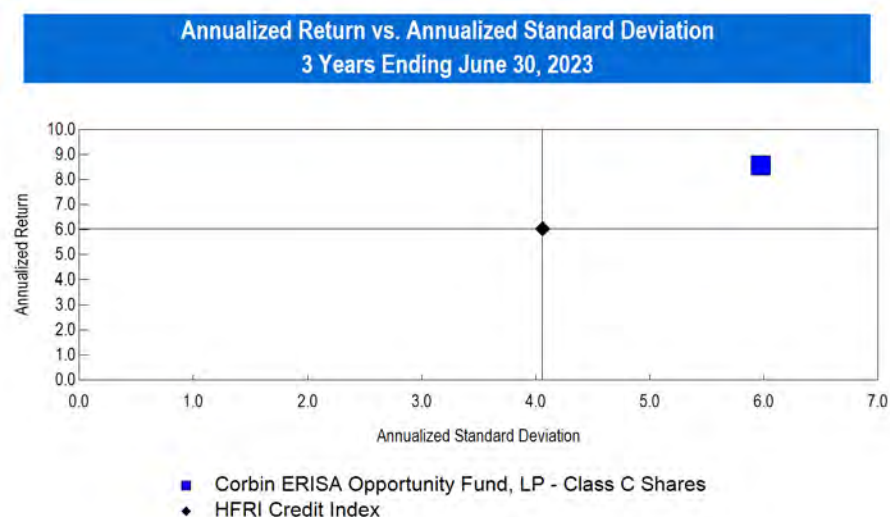
Manager verified that the portfolio is currently, and has been during the past quarter, in compliance with the commingled investment vehicle guidelines and/or offering document governing the management of the investment. With respect to the portfolio under management, manager acknowledges sole fiduciary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

Items of Interest: 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 June 30, 2023		
	Second Quarter	Inception 1/31/20
Beginning Market Value	\$9,897,535	\$0
Net Cash Flow	\$0	\$8,500,000
Net Investment Change	-\$23,767	\$1,373,768
Ending Market Value	\$9,873,768	\$9,873,768

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



3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Corbin ERISA Opportunity Fund, LP - Class C Shares	8.6%	6.0%	136.7%	111.5%
HFRI Credit Index	6.0%	4.1%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Corbin ERISA Opportunity Fund, LP - Class C Shares	0.0%	0.8%	1.4%	8.6%	--	-3.7%	13.3%	--	--	--	5.4%	Jan-20
HFRI Credit Index	1.3%	2.9%	3.8%	6.0%	--	-2.6%	8.0%	--	--	--	4.0%	Jan-20
Long-Term Target Return of 8%	1.9%	3.9%	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 will be used for benefit payments. The partial redemption request was fully satisfied on its effective date, December 31, 2022. Proceeds were received in March 2023.

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 and February 2, 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: 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 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: Legal - The manager stated, as previously disclosed, in October 2020 Corbin was named as one of the defendants in a civil action brought by certain lenders to Boardriders Inc., a company to which one or more funds managed by Corbin has lent money. The defendant lenders, including Redwood and Corbin, filed a motion to dismiss the complaint, asserting that the plaintiffs lacked standing to bring their suit because of their failure to comply with the credit agreement's no-action provision and their failure to state viable claims. A hearing on the motion to dismiss took place September 2021 and the court denied the motion to dismiss in October 2022. In March 2023, another company announced an agreement to purchase Boardriders and its assets; given the anticipated purchase and expected repayment of the loans, the plaintiffs have agreed to a standstill in litigation. On January 10, 2022, Corbin Capital Partners (CCP), together with two Corbin funds which invested in Sun Edison loans, were named as a defendant, along with dozens of other investment managers, in a suit brought by Deutsche Bank in connection with the Sun Edison Bankruptcy. Defendants recently filed a motion to dismiss, Deutsche Bank filed a brief in opposition, and Defendants replied to the brief. The court heard oral arguments on the motion to dismiss on November 1, 2022. As part of a broader settlement, Deutsche Bank agreed to discontinue this action. In 2Q2023, 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. Corbin expects to file a motion to dismiss in the coming weeks.

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 June 30, 2023		
	Second Quarter	Inception 5/31/18
Beginning Market Value	\$7,609,005	\$0
Net Cash Flow	-\$813	\$4,759,697
Net Investment Change	\$0	\$2,848,495
Ending Market Value	\$7,608,192	\$7,608,192

Note: Investment is valued as of March 31, 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 and June 28, 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: 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 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 June 30, 2023		
	Second Quarter	Inception 7/1/21
Beginning Market Value	\$2,501,058	\$0
Net Cash Flow	\$539,680	\$2,410,731
Net Investment Change	\$0	\$630,007
Ending Market Value	\$3,040,738	\$3,040,738

Note: Investment is valued as of March 31, 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 and June 28, 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: 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 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 June 30, 2023		
	Second Quarter	Inception 7/1/21
Beginning Market Value	\$2,399,466	\$0
Net Cash Flow	\$46,061	\$2,261,952
Net Investment Change	\$0	\$183,575
Ending Market Value	\$2,445,527	\$2,445,527

Note: Investment is valued as of March 31, 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

Operating Engineers Local No. 77 Pension Plan

Master Consulting Services Report as of June 30, 2023

Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023								Inception Date
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	
Total Fund	\$189,881,069	100.0%	2.0%	5.4%	7.5%	8.2%	6.7%	8.2%	8.4%	9.0%	Apr-88
Total Domestic Large Cap Equity	\$30,823,355	16.2%	8.0%	15.8%	17.8%	10.3%	10.1%	12.6%	12.4%	--	Jul-01
Northern Trust Collective Russell 1000 Growth Index Fund	\$15,664,430	8.2%	--	--	--	--	--	--	--	11.7%	May-23
Russell 1000 Growth			--	--	--	--	--	--	--	11.7%	May-23
Wedge Capital Management - QVM	\$15,158,925	8.0%	6.3%	8.0%	15.3%	15.3%	9.2%	11.1%	11.0%	9.8%	Jul-01
Russell 1000 Value			4.1%	5.1%	11.5%	14.3%	8.1%	8.9%	9.2%	7.2%	Jul-01
Total Domestic Mid Cap Equity	\$9,580,710	5.0%	7.1%	15.4%	20.5%	11.1%	12.3%	13.6%	12.6%	--	Apr-06
TimesSquare Capital Management	\$9,580,710	5.0%	7.1%	15.4%	20.5%	11.1%	12.3%	13.6%	12.6%	11.0%	Apr-06
Russell MidCap Growth			6.2%	15.9%	23.1%	7.6%	9.7%	12.0%	11.5%	9.2%	Apr-06
Total Domestic Small Cap Equity	\$9,214,886	4.9%	2.5%	9.5%	14.1%	13.8%	2.4%	5.4%	5.9%	--	Jul-04
Eaton Vance Small Cap Collective Investment Trust Fund	\$9,214,886	4.9%	2.5%	9.5%	14.1%	13.8%	--	--	--	9.0%	Sep-19
Russell 2000			5.2%	8.1%	12.3%	10.8%	--	--	--	7.7%	Sep-19
Total International Large Cap Equity	\$9,661,119	5.1%	-1.6%	7.3%	12.2%	5.2%	5.8%	9.9%	8.3%	--	Apr-97
Hardman Johnston International Equity Group Trust	\$9,661,119	5.1%	-1.6%	7.3%	12.2%	5.2%	5.8%	9.9%	8.3%	8.5%	Jul-09
MSCI EAFE			3.0%	11.7%	18.8%	8.9%	4.4%	6.9%	5.4%	6.4%	Jul-09
MSCI ACWI ex USA			2.4%	9.5%	12.7%	7.2%	3.5%	6.3%	4.7%	5.8%	Jul-09
MSCI EAFE Growth			2.8%	14.2%	20.2%	6.3%	5.4%	7.4%	6.4%	7.5%	Jul-09
Total International Small Cap Equity	\$9,591,176	5.1%	3.0%	10.0%	15.0%	7.7%	3.5%	--	--	3.2%	Mar-18
Victory Trivalent International Small-Cap Collective Fund	\$9,591,176	5.1%	3.0%	10.0%	15.0%	7.7%	3.5%	--	--	3.2%	Mar-18
S&P Developed Ex-U.S. Small Cap (Net)			0.1%	6.5%	10.5%	6.1%	1.5%	--	--	0.9%	Mar-18
Total Global Tactical Asset Allocation	\$4,815,785	2.5%	2.3%	6.5%	7.0%	6.0%	4.7%	6.1%	6.2%	6.4%	Jan-11
Lazard/Wilmington LCAS Global Diversified - CIT	\$4,815,785	2.5%	2.3%	6.5%	7.0%	4.8%	4.2%	6.0%	--	5.6%	Aug-13
65% MSCI World Index/35% FTSE WGBI			3.8%	10.3%	10.9%	5.5%	5.4%	6.4%	--	6.0%	Aug-13
Total Investment Grade Fixed Income	\$12,919,041	6.8%	-0.9%	1.8%	0.0%	-2.0%	1.7%	1.1%	1.9%	4.4%	Jun-95
Wedge Capital Management	\$12,919,041	6.8%	-0.9%	1.8%	0.0%	-2.0%	1.7%	1.1%	1.9%	3.5%	Jan-03
Wedge Custom Benchmark			-0.8%	1.5%	-0.1%	-2.5%	1.2%	0.8%	1.4%	3.1%	Jan-03

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Performance Detail (Gross of Fees) - Annualized

			Ending June 30, 2023								
	Market Value	% of Portfolio	2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Total Short Duration High Yield Fixed Income	\$13,604,898	7.2%	1.1%	2.6%	6.3%	2.7%	3.2%	3.4%	3.3%	3.2%	Jan-13
Chartwell Investment Partners SDHY	\$13,604,898	7.2%	1.1%	2.6%	6.3%	2.7%	3.2%	3.4%	3.3%	3.2%	Jan-13
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			1.3%	3.6%	7.1%	3.4%	3.7%	3.7%	3.9%	3.7%	Jan-13
Bloomberg US Govt/Credit Int TR			-0.8%	1.5%	-0.1%	-2.5%	1.2%	0.8%	1.4%	1.3%	Jan-13
Total Mortgages	\$9,815,684	5.2%	0.7%	2.0%	2.8%	2.5%	3.4%	3.5%	3.9%	3.7%	Oct-04
Ullico - J for Jobs	\$4,646,750	2.4%	0.8%	1.9%	2.9%	2.6%	3.2%	3.3%	3.5%	3.2%	Oct-04
Bloomberg US Aggregate TR			-0.8%	2.1%	-0.9%	-4.0%	0.8%	0.4%	1.5%	3.0%	Oct-04
Washington Capital JMT Mortgage Income Fund	\$5,168,933	2.7%	0.5%	2.1%	2.7%	2.4%	3.6%	3.7%	4.3%	5.0%	Oct-04
Bloomberg US Aggregate TR			-0.8%	2.1%	-0.9%	-4.0%	0.8%	0.4%	1.5%	3.0%	Oct-04
Total Real Estate - Core	\$19,856,092	10.5%	-1.7%	-3.6%	-5.9%	7.8%	6.9%	7.5%	9.1%	7.2%	Jul-01
Principal U.S. Property Account	\$7,274,442	3.8%	-1.7%	-4.6%	-9.7%	8.2%	7.0%	7.7%	9.4%	7.9%	Oct-01
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	7.6%	6.1%	6.5%	8.1%	6.7%	Oct-01
Boyd Watterson GSA Fund, LP	\$6,708,603	3.5%	0.8%	0.5%	2.7%	6.6%	7.3%	8.2%	--	8.5%	Feb-15
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	7.6%	6.1%	6.5%	--	7.6%	Feb-15
Long-Term Income Objective 8%			1.9%	3.9%	8.0%	8.0%	8.0%	8.0%	--	8.0%	Feb-15
Multi-Employer Property Trust	\$5,873,047	3.1%	-4.5%	-6.6%	-10.5%	7.9%	6.3%	6.5%	8.4%	6.9%	Jul-01
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	7.6%	6.1%	6.5%	8.1%	6.6%	Jul-01
Total Real Estate - Value Add	\$19,436,929	10.2%	0.4%	0.7%	4.0%	--	--	--	--	5.8%	Oct-21
Boyd Watterson State Government Fund, LP	\$19,436,929	10.2%	0.4%	0.7%	4.0%	--	--	--	--	5.8%	Oct-21
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	--	--	--	--	4.6%	Oct-21
Long-Term Income Objective 9%			2.2%	4.4%	9.0%	--	--	--	--	9.0%	Oct-21
Total Hedge Fund of Funds - Multi Strategy	\$6,496,318	3.4%	2.5%	4.4%	8.6%	8.0%	5.7%	6.5%	5.5%	4.0%	Apr-07
Grosvenor Institutional Partners (PF), Ltd	\$6,496,318	3.4%	2.5%	4.4%	8.6%	7.9%	5.7%	6.5%	5.6%	4.8%	Apr-07
HFRI Fund of Funds Composite Index			1.5%	2.3%	3.7%	5.0%	3.3%	4.0%	3.4%	--	Apr-07
T-Bills + 5%			2.4%	4.8%	8.8%	6.3%	6.5%	6.4%	6.0%	5.9%	Apr-07

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Performance Detail (Gross of Fees) - Annualized

			Ending June 30, 2023								
	Market Value	% of Portfolio	2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs	Inception	Inception Date
Total Opportunistic Strategies	\$20,493,667	10.8%									
Grosvenor Opportunistic Credit Fund III, Ltd	\$111,105	0.1%									
Grosvenor Opportunistic Credit Fund IV, Ltd	\$340,828	0.2%									
Grosvenor Opportunistic Credit Fund V, Ltd	\$10,167,966	5.4%	2.2%	4.7%	6.4%	8.1%	5.6%	--	--	5.5%	Feb-17
HFRI Credit Index			1.3%	2.9%	3.8%	6.0%	3.7%	--	--	3.9%	Feb-17
Corbin ERISA Opportunity Fund, LP - Class C Shares	\$9,873,768	5.2%	0.0%	0.8%	1.4%	8.6%	--	--	--	5.4%	Jan-20
HFRI Credit Index			1.3%	2.9%	3.8%	6.0%	--	--	--	4.0%	Jan-20
Long-Term Target Return of 8%			1.9%	3.9%	8.0%	8.0%	--	--	--	8.0%	Jan-20
Total Private Equity	\$10,648,930	5.6%									
GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	\$7,608,192	4.0%									
GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	\$3,040,738	1.6%									
Total Infrastructure - Value Add	\$2,445,527	1.3%									
WaCap - SP Infrastructure Fund IV Feeder	\$2,445,527	1.3%									
Total Cash Equivalents	\$476,952	0.3%									
Cash Account	\$476,952	0.3%									

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Account	Fee Schedule	Market Value As of 6/30/2023	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Total Domestic Large Cap Equity	-	\$30,823,355	16.2%	--	--
Northern Trust Collective Russell 1000 Growth Index Fund	0.01% of Assets	\$15,664,430	8.2%	\$1,566	0.01%
**Wedge Capital Management - QVM	0.50% of Assets	\$15,158,925	8.0%	\$75,795	0.50%
Total Domestic Mid Cap Equity	-	\$9,580,710	5.0%	--	--
TimesSquare Capital Management	0.80% of First 50.0 Mil, 0.70% of Next 50.0 Mil, 0.60% Thereafter	\$9,580,710	5.0%	\$76,646	0.80%
Total Domestic Small Cap Equity	-	\$9,214,886	4.9%	--	--
Eaton Vance Small Cap Collective Investment Trust Fund	0.55% of Assets	\$9,214,886	4.9%	\$50,682	0.55%
Total International Large Cap Equity	-	\$9,661,119	5.1%	--	--
Hardman Johnston International Equity Group Trust	0.75% of First 25.0 Mil, 0.60% of Next 75.0 Mil, 0.50% Thereafter	\$9,661,119	5.1%	\$72,458	0.75%
Total International Small Cap Equity	-	\$9,591,176	5.1%	--	--
Victory Trivalent International Small-Cap Collective Fund	0.85% of Assets	\$9,591,176	5.1%	\$81,525	0.85%
Total Global Tactical Asset Allocation	-	\$4,815,785	2.5%	--	--
Lazard/Wilmington LCAS Global Diversified - CIT	0.55% of Assets	\$4,815,785	2.5%	\$26,487	0.55%
Total Investment Grade Fixed Income	-	\$12,919,041	6.8%	--	--
**Wedge Capital Management	0.33% of Assets	\$12,919,041	6.8%	\$41,987	0.33%
Total Short Duration High Yield Fixed Income	-	\$13,604,898	7.2%	--	--
Chartwell Investment Partners SDHY	0.50% of Assets	\$13,604,898	7.2%	\$68,024	0.50%
Total Mortgages	-	\$9,815,684	5.2%	--	--
Ullico - J for Jobs	0.55% of Assets	\$4,646,750	2.4%	\$25,557	0.55%
Washington Capital JMT Mortgage Income Fund	0.50% of Assets	\$5,168,933	2.7%	\$25,845	0.50%

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Account	Fee Schedule	Market Value As of 6/30/2023	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Total Real Estate - Core	-	\$19,856,092	10.5%	--	--
Principal U.S. Property Account	1.10% of Assets	\$7,274,442	3.8%	\$80,019	1.10%
Boyd Watterson GSA Fund, LP	1.25% of First 25.0 Mil, 1.15% of Next 75.0 Mil, 1.05% Thereafter	\$6,708,603	3.5%	\$83,858	1.25%
Multi-Employer Property Trust	0.87% of Assets	\$5,873,047	3.1%	\$51,096	0.87%
Total Real Estate - Value Add	-	\$19,436,929	10.2%	--	--
Boyd Watterson State Government Fund, LP	1.25% of First 25.0 Mil, 1.15% of Next 75.0 Mil, 1.05% Thereafter	\$19,436,929	10.2%	\$242,962	1.25%
Total Hedge Fund of Funds - Multi Strategy	-	\$6,496,318	3.4%	--	--
Grosvenor Institutional Partners (PF), Ltd	0.95% of First 25.0 Mil, 0.80% of Next 25.0 Mil, 0.60% of Next 50.0 Mil, 0.40% Thereafter	\$6,496,318	3.4%	\$61,715	0.95%
Total Opportunistic Strategies	-	\$20,493,667	10.8%	--	--
Grosvenor Opportunistic Credit Fund III, Ltd	0.80% of Assets	\$111,105	0.1%	\$889	0.80%
Grosvenor Opportunistic Credit Fund IV, Ltd	0.80% of Assets	\$340,828	0.2%	\$2,727	0.80%
Grosvenor Opportunistic Credit Fund V, Ltd	0.80% of Assets	\$10,167,966	5.4%	\$81,344	0.80%
Corbin ERISA Opportunity Fund, LP - Class C Shares	0.85% of Assets	\$9,873,768	5.2%	\$83,927	0.85%
Total Private Equity	-	\$10,648,930	5.6%	--	--
*GCM Grosvenor Secondary Opportunities Feeder Fund II, LP	19,125 Quarterly	\$7,608,192	4.0%	\$76,500	1.01%
*GCM Grosvenor Secondary Opportunities Feeder Fund III, LP	14,875 Quarterly	\$3,040,738	1.6%	\$59,500	1.96%
Total Infrastructure - Value Add	-	\$2,445,527	1.3%	--	--
*WaCap - SP Infrastructure Fund IV Feeder	18,750 Quarterly	\$2,445,527	1.3%	\$75,000	3.07%

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Account	Fee Schedule	Market Value As of 6/30/2023	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Total Cash Equivalents	-	\$476,952	0.3%	--	--
Cash Account	-	\$476,952	0.3%	--	--
Investment Management Fee		\$189,881,069	100.0%	\$1,446,107	0.76%

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.

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Benchmark History

Total Fund		
10/1/2021	Present	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 10% / Long-Term Income Objective 9% 10% / 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 Fund of Funds Composite Index - 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 - Index is listed for illustrative purposes.
- MSCI EAFE Growth - Index is listed for illustrative purposes.
- T-Bills + 5% - 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 HFRI 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 following managers are valued as of March 31, 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 Institutional Partners (PF), Ltd
 - Grosvenor Opportunistic Credit Fund III, Ltd
 - Grosvenor Opportunistic Credit Fund IV, Ltd
 - Grosvenor Opportunistic Credit Fund V, Ltd



ASSET ALLOCATION REVIEW

Operating Engineers Local No. 77 Pension Plan

August 8, 2023

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.
- 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	6.75%	17.50
U.S. Smid Cap	6.88%	19.00
U.S. Small Cap	7.00%	20.50
International Large Cap	7.50%	16.75
International Small Cap	8.00%	19.50
Emerging Markets	8.50%	20.50
Global Equity	7.00%	17.00

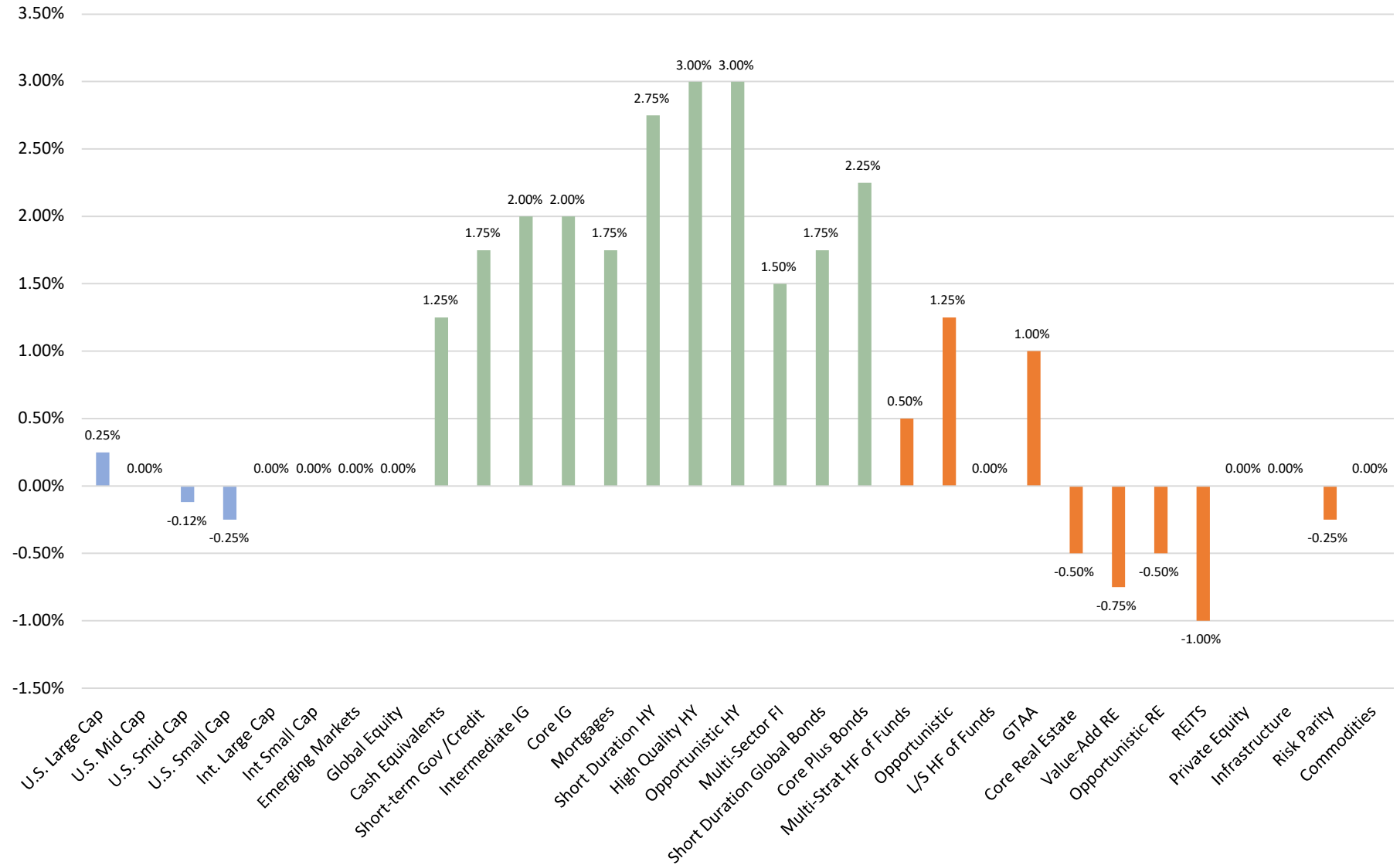
Fixed Income Asset Class	Return	Risk
Cash Equivalents	2.75%	0.50
Short-term Gov / Credit	3.50%	2.00
Intermediate Investment Grade	4.25%	3.50
Core Investment Grade	4.50%	4.25
Mortgages	4.75%	5.25
Short Duration High Quality High Yield	6.25%	6.25
High Quality High Yield	7.50%	8.25
Opportunistic High Yield	8.00%	8.75
Multi-Sector Fixed Income	3.50%	6.25
Short Duration Global Bonds	2.50%	5.00
Core Plus Bonds	5.00%	5.50

Alternatives Asset Class	Return	Risk
Multi-Strategy Hedge Fund of Funds	5.00%	6.25
Opportunistic Strategies	8.25%	11.00
Long Short Equity Hedge Fund of Funds	5.00%	8.50
Global Tactical Asset Allocation	6.50%	12.25
Core Real Estate	6.00%	9.75
Value-Add Real Estate	7.00%	11.50
Opportunistic Real Estate	9.00%	14.25
REITS	5.00%	20.00
Diversified Private Equity	10.00%	20.00
Core Infrastructure	6.25%	11.50
Core+/Value Add Infrastructure	8.25%	15.00
Risk Parity	5.50%	16.00
Commodities	3.75%	17.00



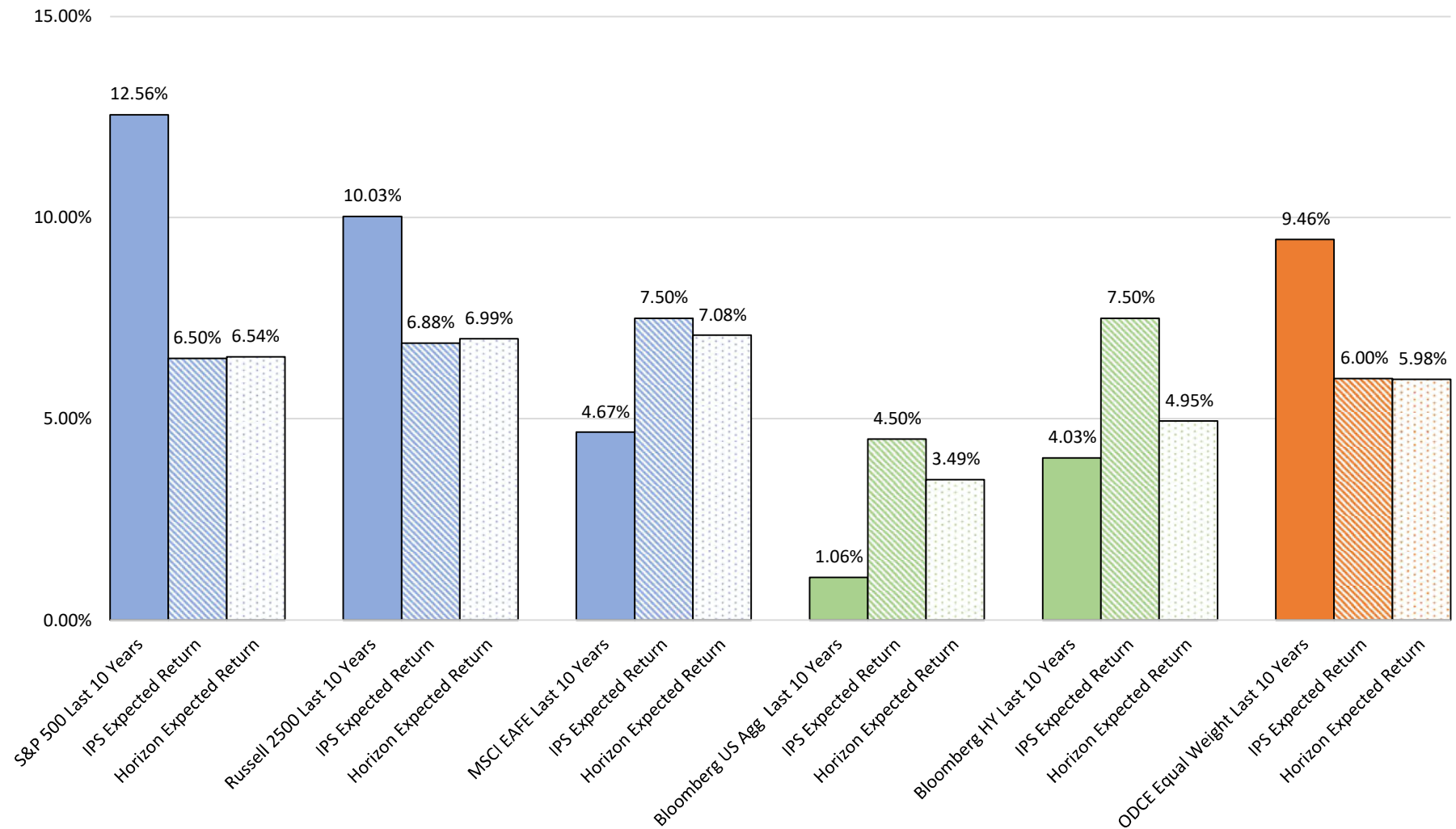
- IPS Investment Committee January 2023.
- Inflation expectation 2.5%.

Change in Expected Returns¹



¹ January 2023 vs. January 2022

Historical Returns vs. Forward Looking Assumptions



- "Last 10 Years" returns are as of 12/31/2022.

- "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 2022 edition.

Asset Class Constraints

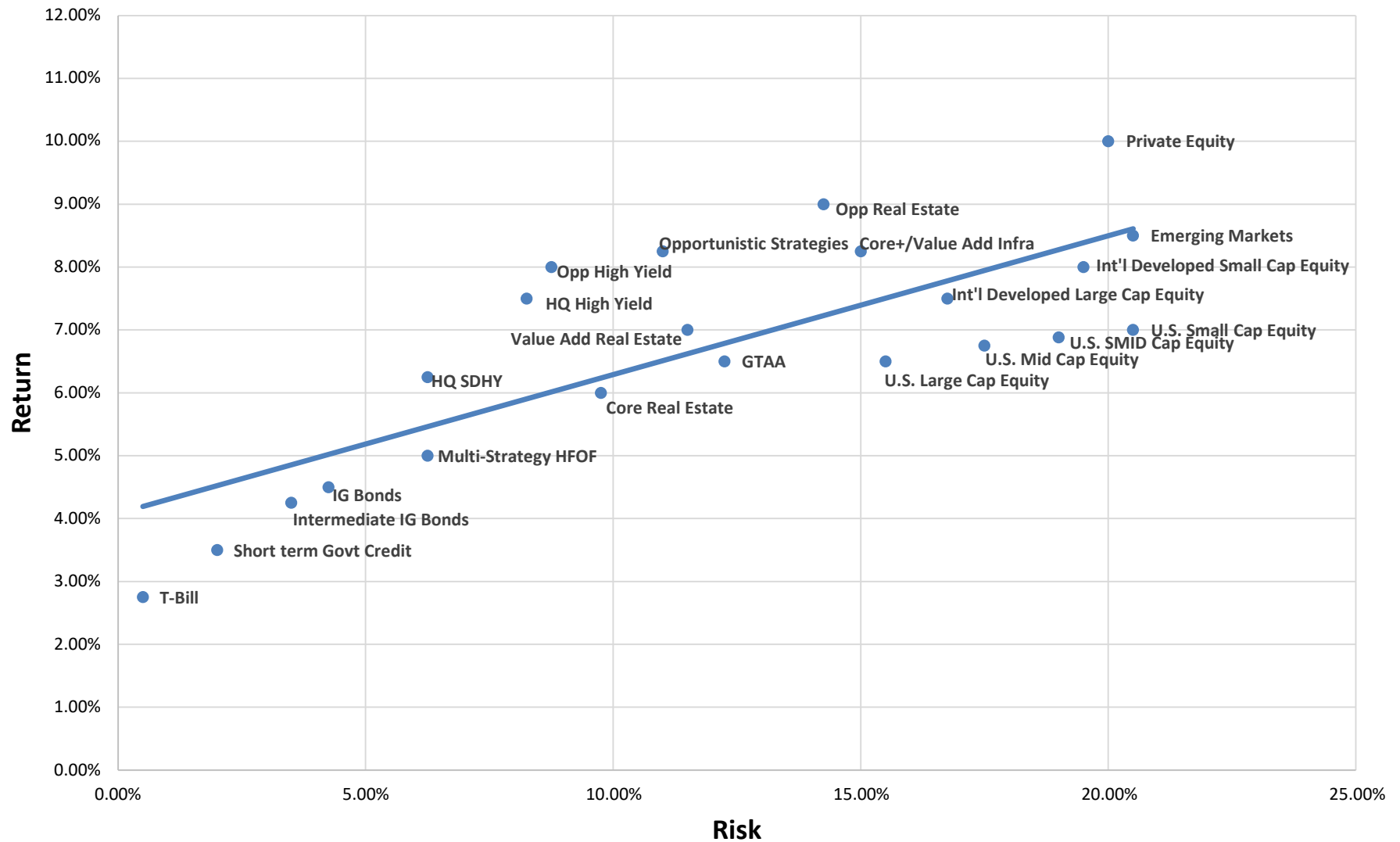


Total Domestic Equity	60%	Max
Domestic Large Cap Equity	20%	Min
Small, Mid and Smid Cap Equity	20%	Max
International Equity Large Cap	20%	Max
International Small Cap Equity	10%	Max
Cash	5%	Max
Fixed Investment Grade (Includes Short Term & Intermediate)	10%	Min
High Quality High Yield Bonds (Includes Short Duration)	20%	Max
Real Estate – Core	10%	Max
Real Estate – Value Add	10%	Max
Hedge Fund of Funds – Multi Strategy	5%	Max
Opportunistic Strategies	10%	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 2023.

2023 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	Real Estate Core	Real Estate Value Add	Private Equity	HFoF Multi-Strategy	Opp. Strategies	GTAA	Infrastructure
US Large Cap Equity	1.00																			
US Mid Cap Equity	0.96	1.00																		
US Smid Cap Equity	0.93	0.97	1.00																	
US Small Cap Equity	0.90	0.95	0.98	1.00																
Int'l Equity	0.87	0.87	0.83	0.79	1.00															
Int'l Small Cap Equity	0.84	0.86	0.83	0.79	0.96	1.00														
Emerging Markets Equity	0.75	0.77	0.74	0.70	0.86	0.85	1.00													
Cash	-0.13	-0.14	-0.14	-0.13	-0.06	-0.12	-0.01	1.00												
Short Term Govt / Credit	-0.09	-0.07	-0.10	-0.12	0.03	0.03	0.09	0.40	1.00											
Int. Investment Grade	0.01	0.03	-0.01	-0.05	0.10	0.11	0.15	0.15	0.85	1.00										
Core Investment Grade	0.03	0.05	0.00	-0.04	0.09	0.10	0.14	0.11	0.77	0.96	1.00									
Short Duration High Yield	0.62	0.70	0.65	0.60	0.66	0.70	0.66	-0.13	0.19	0.31	0.29	1.00								
High Yield	0.70	0.77	0.73	0.69	0.73	0.74	0.71	-0.14	0.13	0.27	0.28	0.93	1.00							
Real Estate Core	0.12	0.09	0.08	0.09	0.07	0.04	0.00	0.21	-0.20	-0.15	-0.12	-0.15	-0.08	1.00						
Real Estate Value Add	0.12	0.09	0.08	0.09	0.07	0.04	0.00	0.21	-0.20	-0.15	-0.12	-0.15	-0.08	0.99	1.00					
Private Equity	0.90	0.95	0.98	0.99	0.79	0.79	0.70	-0.13	-0.12	-0.05	-0.04	0.60	0.69	0.09	0.09	1.00				
HFoF Multi-Strategy	0.75	0.79	0.76	0.72	0.80	0.84	0.77	-0.06	-0.04	0.01	0.03	0.65	0.68	0.14	0.14	0.72	1.00			
Opportunistic Strategies	0.72	0.79	0.75	0.71	0.75	0.76	0.73	-0.15	0.11	0.24	0.24	0.92	0.98	-0.10	-0.10	0.71	0.68	1.00		
GTAA	0.94	0.91	0.87	0.83	0.96	0.93	0.85	-0.07	0.10	0.20	0.21	0.67	0.74	0.07	0.07	0.83	0.77	0.76	1.00	
Infrastructure	0.77	0.75	0.69	0.64	0.83	0.77	0.70	-0.01	0.06	0.19	0.22	0.57	0.64	0.11	0.11	0.64	0.64	0.65	0.85	1.00

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

Figures based on historical data from March 2005 - March 2022.

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	1.33	8.75
Int'l Small Cap Equity	0.00	0.00	0.00	0.00	0.00	0.49	3.86	7.23	10.00	10.00
Emerging Markets	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
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	0.00	0.00	0.00	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	35.79	31.70	28.60	26.19	23.15	19.51	16.14	12.77	10.00	10.00
Short Duration High Yield	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
High Yield	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00	20.00
Real Estate – Core	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00	8.67	1.25
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	1.40	3.81	5.00	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
Opportunistic Strategies	4.21	8.30	10.00	10.00	10.00	10.00	10.00	10.00	10.00	10.00
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	1.85	5.00	5.00	5.00	5.00	5.00
Return	6.35	6.51	6.66	6.81	6.96	7.10	7.24	7.37	7.49	7.57
Risk	5.67	5.97	6.31	6.68	7.07	7.49	8.03	8.58	9.21	10.21
Return/Risk	1.12	1.09	1.05	1.02	0.98	0.95	0.90	0.86	0.81	0.74

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



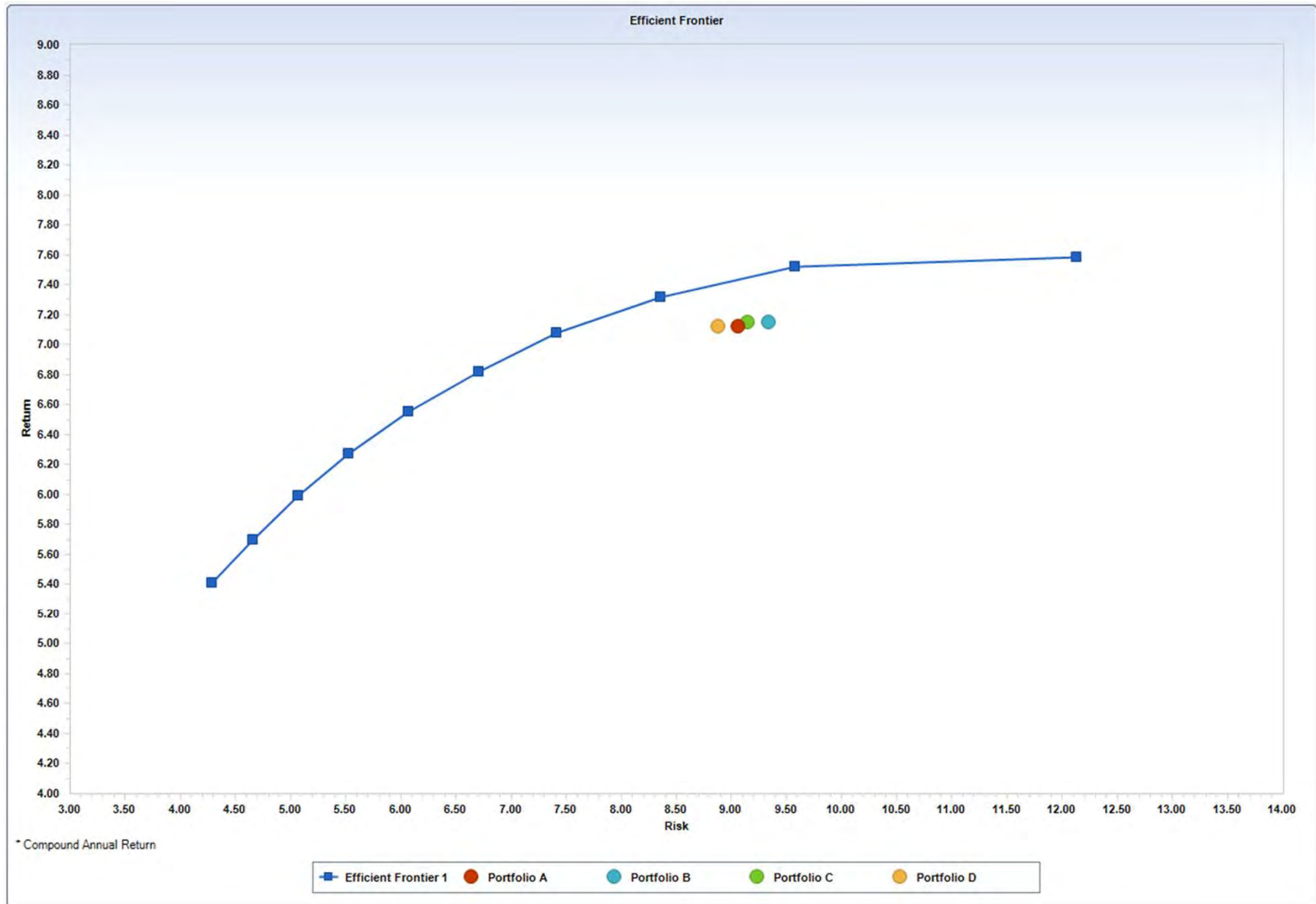
		% Equity Target					% Fixed Income			% Alternatives Target							Cash	Expected Return (net of fees)	Risk	Comments
		US LC Equity	US MC Equity	US SC Equity	Int'l LC Equity	Int'l SC Equity	Fixed Income Interm	Mort	SDHY	GTAA	Real Estate Core	Real Estate Value Add	HFoF Multi-Strategy	Opp	Private Equity	Infra				
1	Operating Engineers Local No. 77 Pension Plan Portfolio A	15.0	5.0	5.0	5.0	5.0	10.0	5.0	10.0	2.5	10.0	10.0	0.0	10.0	5.0	2.5	0.0	7.12%	9.06	Current Policy
2	Portfolio B	16.2	5.0	4.9	5.1	5.1	6.8	5.2	7.2	2.5	10.5	10.2	3.4	10.8	5.6	1.3	0.3	7.15%	9.34	Allocation as of June 30, 2023
3	Portfolio C	15.0	5.0	5.0	7.5	5.0	10.0	5.0	10.0	0.0	10.0	10.0	0.0	10.0	5.0	2.5	0.0	7.15%	9.15	Eliminate GTAA. Increase International LC Equity.
4	Portfolio D	15.0	5.0	5.0	5.0	5.0	10.0	5.0	12.5	0.0	10.0	10.0	0.0	10.0	5.0	2.5	0.0	7.12%	8.88	Eliminate GTAA. Increase SDHY.

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

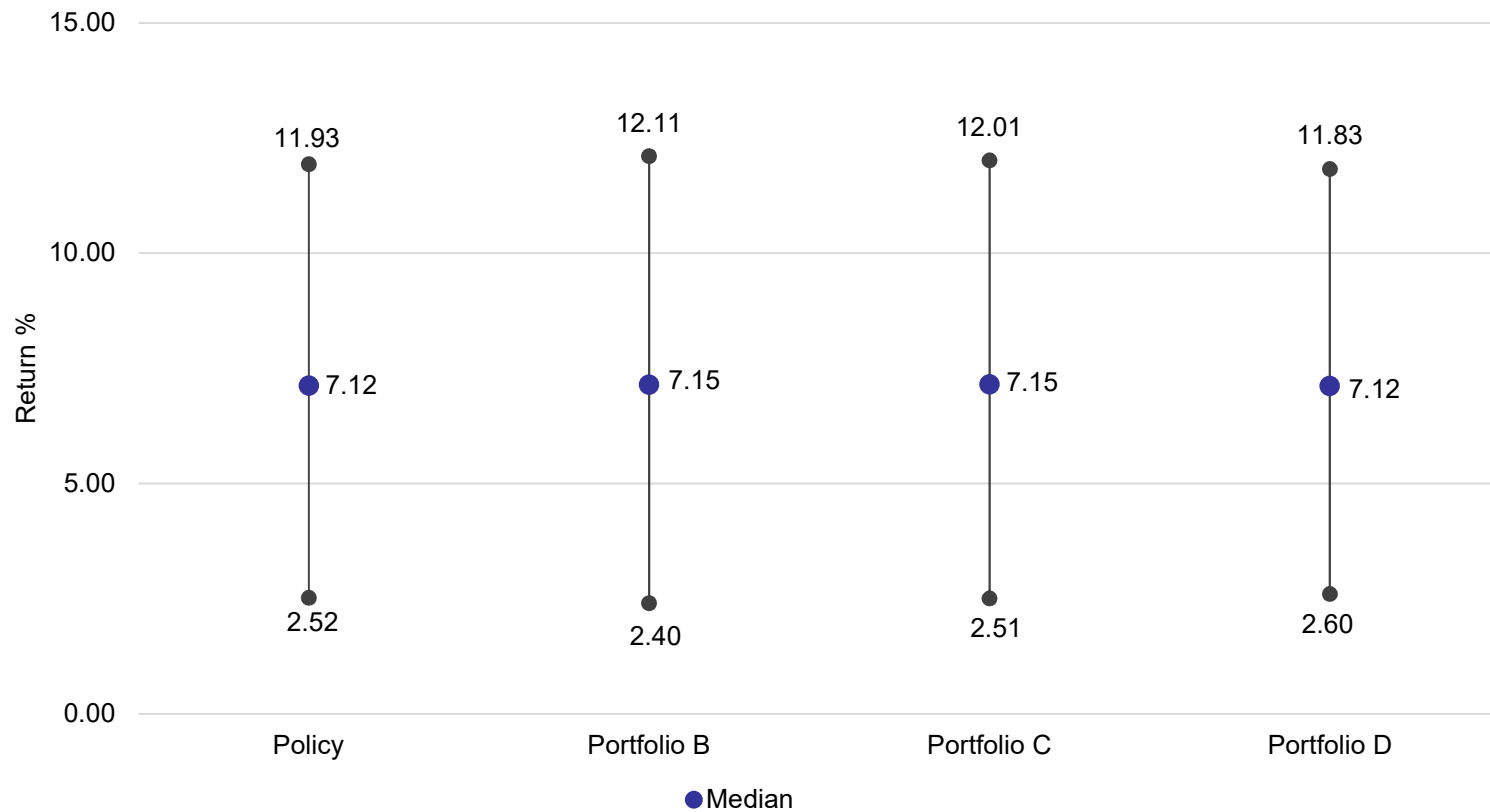
Scenarios are shown for illustrative purposes.

Green	Increase allocation
Red	Decrease allocation
Blue	New asset class

Efficient Frontier Comparison

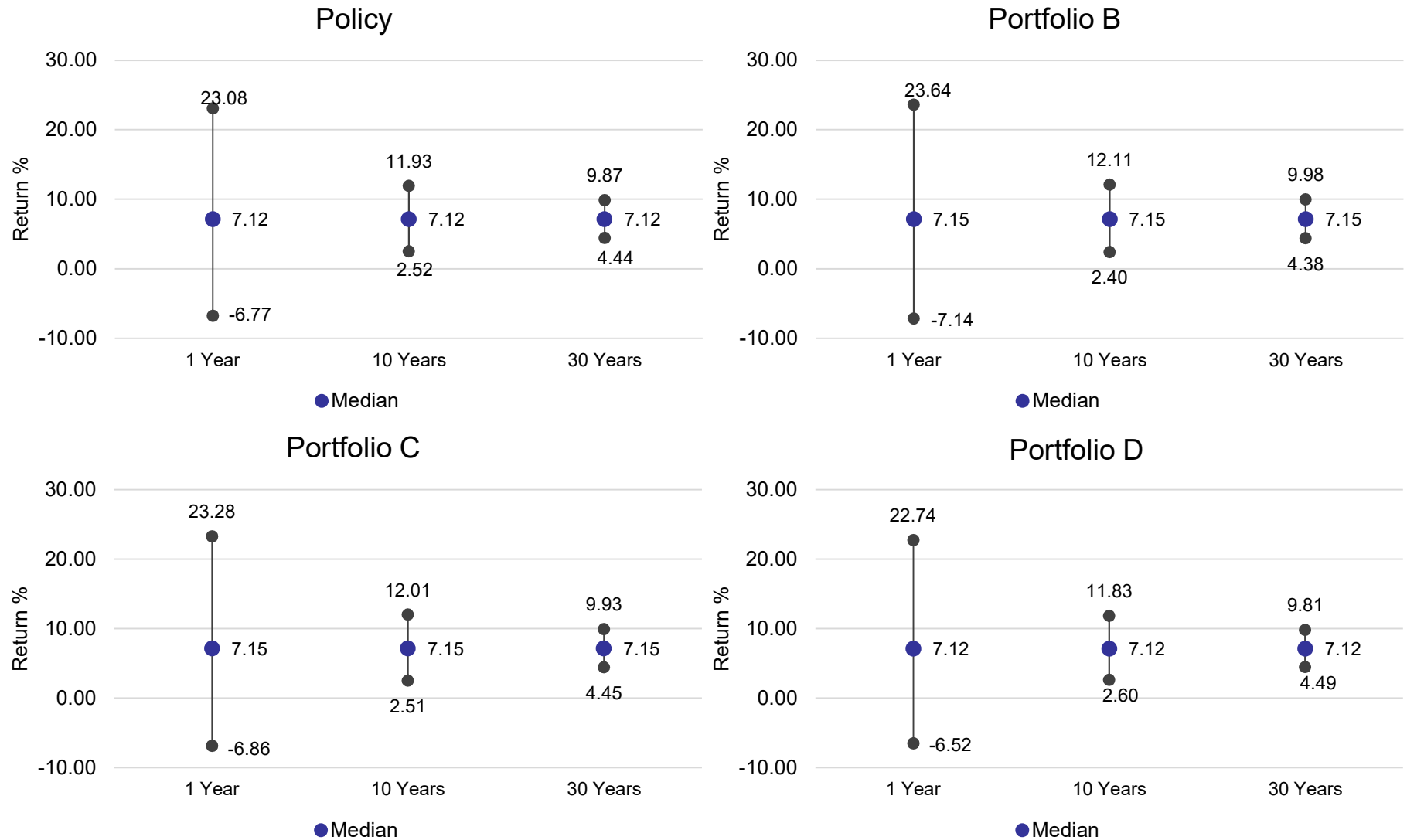


Potential Distribution of Returns – 10 Year Horizon



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.

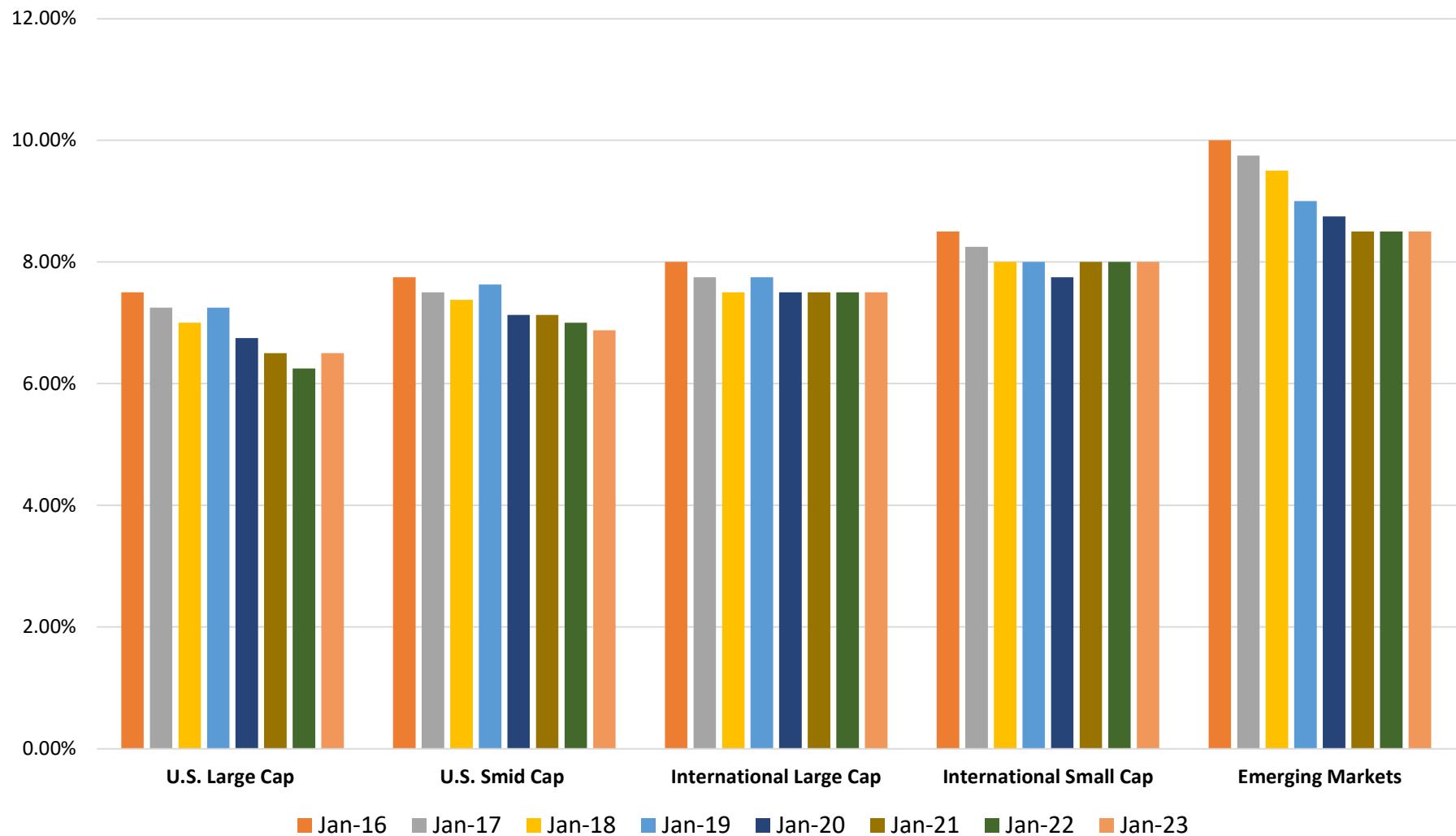
Hurdle Rate Analysis – 10 Year Horizon

	Portfolio A	Portfolio B	Portfolio C	Portfolio D
Expected Return	7.12%	7.15%	7.15%	7.12%
Expected Risk	9.06%	9.34%	9.15%	8.88%
Probability of achieving 6.50%	59.21%	59.28%	59.58%	59.32%
Probability of achieving 6.75%	55.54%	55.72%	55.95%	55.58%
Probability of achieving 7.00%	51.82%	52.12%	52.28%	51.79%
Probability of achieving 7.25%	48.09%	48.50%	48.58%	47.98%

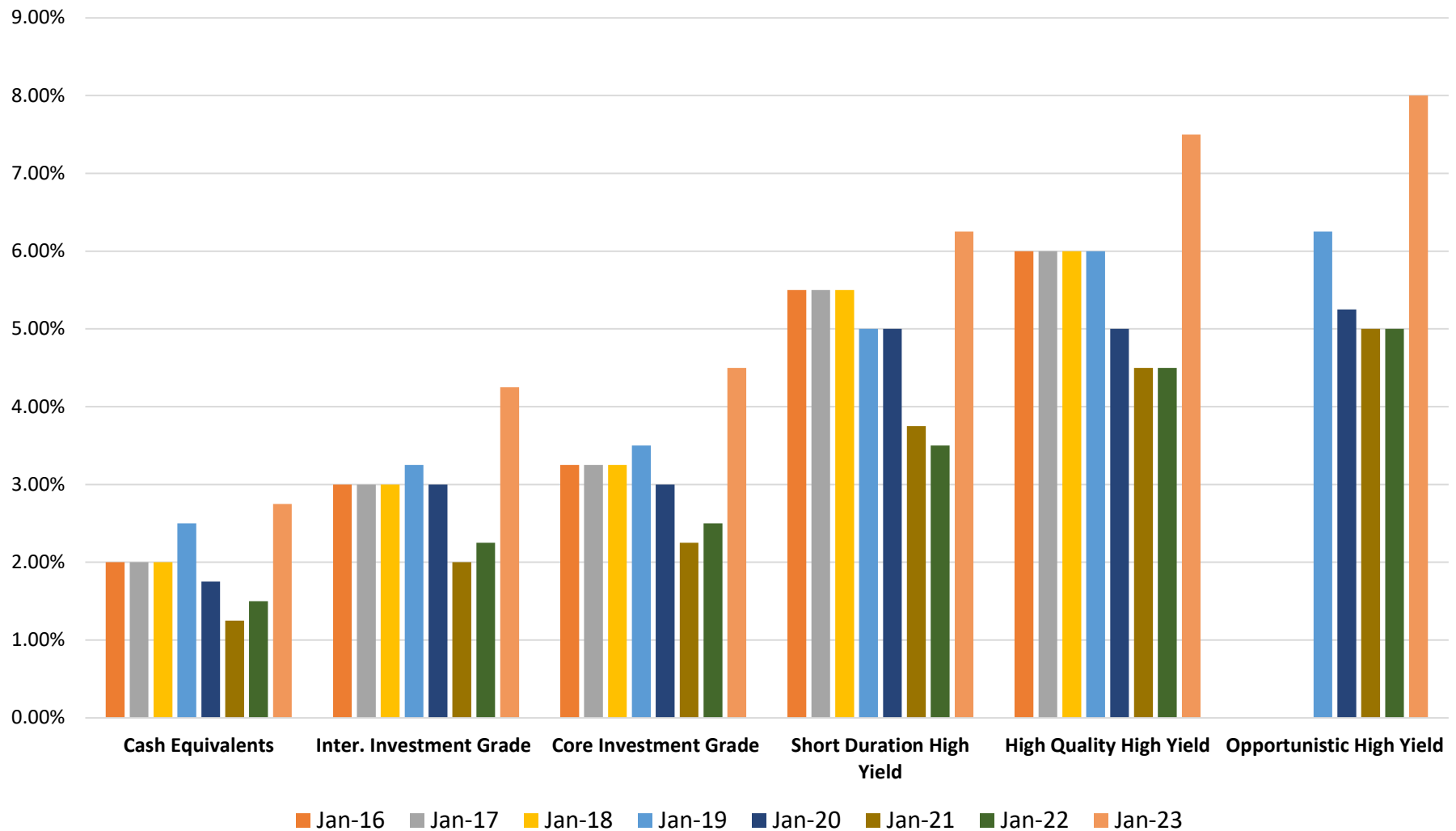
Probability of achieving specific returns is based on the Parametric Method.

APPENDIX

Public Equity – IPS Historical Capital Market Assumptions

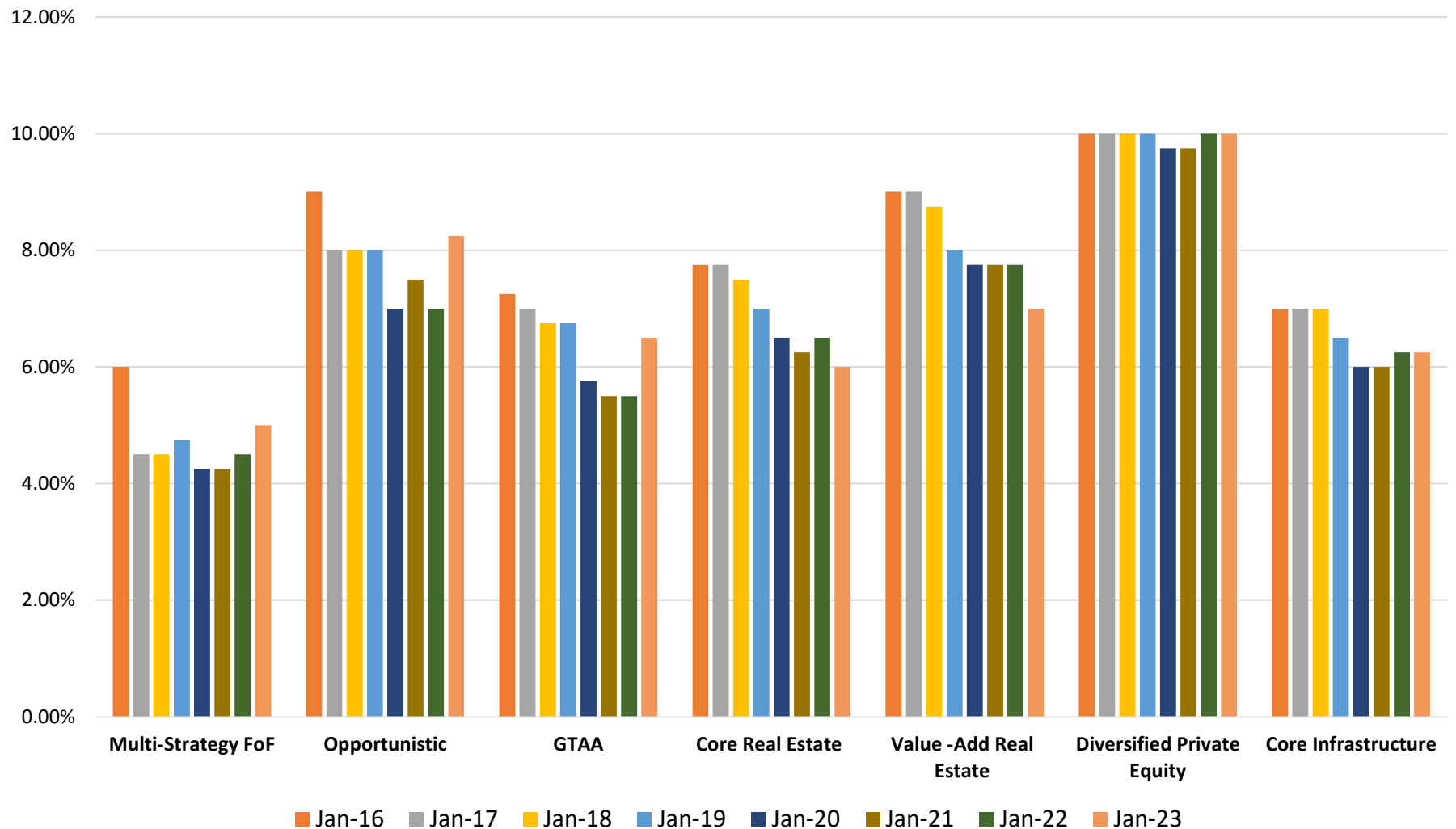


Fixed Income – IPS Historical Capital Market Assumptions



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

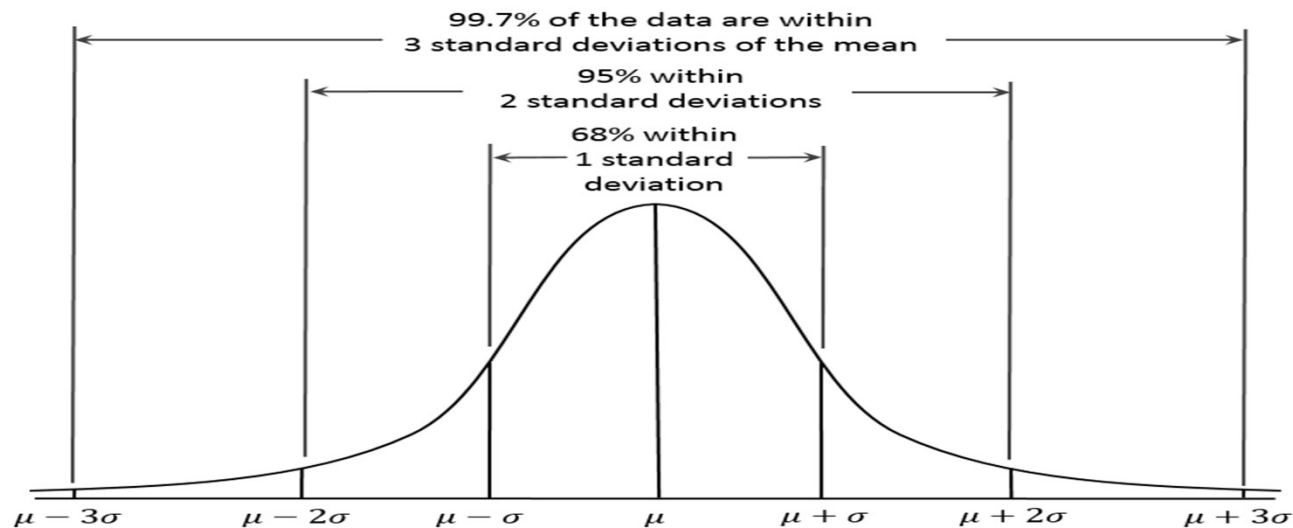
Alternative Investments – IPS Historical Capital Market Assumptions



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
Investment Manager Review
International Value Equity

As of 6/2023
Benchmark: MSCI EAFE Value-ND
Universe: eVestment EAFE Value Equity

Executive Summary

Manager Search Process

- Assist the Trustees in specifying the characteristics of the investment manager that will satisfy the needs of the Fund. This is accomplished within the scope of the Fund's investment policy statement.
- IPS develops a list of qualified candidates for each asset class and investment style. Investment manager candidates are thoroughly researched from various sources, including the eVestment database, Wilshire Compass database, Morningstar mutual fund database, and industry/public information. The purpose of the due diligence discipline is to reduce the immense list of potential candidates to a manageable group of firms with an impartial eye on meeting all selection criteria. That list is further examined to determine an approved list of "best in class" managers.
- Consistency of performance is a key component of the manager search process. IPS is mindful of the mathematics of an investment loss, which requires the achievement of higher rates of positive performance to recover from a loss. Investment managers that outperform or capture a significant amount of market upside when markets are positive, while protecting capital when markets decline, are preferred. IPS believes that managers who can provide this asymmetric return profile of performance and risk will rank well when longer time periods are considered.
- For every investment manager search, as part of the IPS due diligence process, IPS sends a Request for Information (RFI) to each potential candidate, regarding the product characteristics, performance, personnel, investment process and other relevant criteria. A copy of the RFI for each manager may be provided to the Fund's Administrator and additional copies can be provided to the Trustees upon request.
- It is important to note that no fees are paid to IPS by any investment manager to be included in a search or database. The only requirement placed upon the manager is their willingness to submit and maintain data concerning their firm, its investment products, and performance results.
- IPS does not sell products or services to investment managers. However, investment managers may pay IPS to attend and to help 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 and help defray the costs of EPIC.
- If the Trustees so desire, the next step can be a presentation of background information regarding the firms meeting the selection criteria. IPS will assist in the review of these candidates to help the Board of Trustees choose the best candidates to make personal interviews and presentations by their principals and/or managers who will be responsible for managing the fund's assets.

-
- The last meeting, held at the Trustees' discretion, is the personal presentation of the final group of candidates who appear to best meet the needs of the Trustees and their objectives. The manager presentation is a very important step in the Trustee's process of evaluating and comparing the candidates.
 - The conclusion of the search process is the selection of the firm(s) by the Trustees to manage the assets.
 - Importantly, as part of our ongoing performance evaluation reports, we will review the manager transfer as it occurs, and ensure the accurate accounting of the changes made.

Perspective on Performance and Risk Data

The manager search materials include historical performance results. It is important to remember that past performance is not to be construed as a guarantee of future performance. The key to using historical performance data is to develop an expectation of returns during various market environments and to determine which type of return (and thus which type of manager) best suits the client's needs. We use historical data to "look behind" the managers' numbers for consistency of returns and to inspect how they preserve capital over full market cycles and in declining markets.

Included within the manager search materials are the following: firm's history, fund styles, fees, volatility, relative performance, and risk measures. This information is critical when comparing the candidates among each other. The material is presented in a consistent fashion to ensure there is a level playing field.

EPIC

May 3 - 5, 2023

The following investment managers and providers included in this search 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.

Barrow Hanley Global Investors
First Eagle Investment Mgmt.
RBC Global Asset Management



Firm and Strategy Summary

Periods Ending 6/2023

Investment Manager	Founded	City	State	Ownership	E&O Coverage (Millions)	Total AUM (Millions)	Taft-Hartley AUM (Millions)	Taft-Hartley Accounts	Primary Investment Approach	Strategy Inception Date	Strategy AUM (Millions)
Barrow, Hanley, Mewhinney & Strauss, LLC	1979	Dallas	Texas	Private Limited Liability Company	\$80	\$46,054	\$1,436	22	Fundamental	08/01/2006	\$3,314
First Eagle Investment Management, LLC	1864	New York	New York	Private Limited Liability Company	\$70	\$129,631	\$2,424	74	Fundamental	09/01/1993	\$14,396
RBC Global Asset Management	1959	Toronto	Ontario	Private Corporation	\$25	\$418,913	\$12,763	47	Fundamental	07/01/1998	\$564



Strategy and Investment Terms

Commingled Fund

Periods Ending 6/2023

Investment Manager	Minimum Investment	Liquidity Terms	Management Fee	408(b)(2) Provided	Accepts H&W Assets
Barrow, Hanley, Mewhinney & Strauss, LLC	CIT - \$1,000,000	Daily	53 Bps (1)	Yes	No
First Eagle Investment Management, LLC	Limited Partnership - \$5,000,000	Monthly / 5 Days' Notice	79 Bps (2)	Yes	Yes
RBC Global Asset Management	CTF - \$3,000,000	Monthly / 5 Days' Notice	95 Bps	Yes	No

Commingled funds have proprietary investment policies that govern their investment activities. Those policies may differ from those of their separately managed clients.

(1) Founders share class

(2) The management fee is inclusive of an operating expense of 4 Bps.



Strategy Fundamental Characteristics

Periods Ending 6/2023

Investment Manager	Current # of Holdings	Active Share	Wgtd. Avg. Mkt. Cap	Median Mkt. Cap	Annual Turnover - Last 12 Months	Total Emerging Markets
Barrow, Hanley, Mewhinney & Strauss, LLC	51	88.9%	\$30,691.0	\$15,971.9	60.4%	3.6%
First Eagle Investment Management, LLC	104	90.6%	\$58,660.2	\$15,335.9	11.9%	16.4%
RBC Global Asset Management	59	95.4%	\$42,953.8	\$10,328.0	22.4%	19.3%

Active Share – A measure of how different an active manager’s portfolio is positioned relative to a benchmark. It is calculated by subtracting the benchmark’s weights in each security from the manager’s portfolio.

Annual Turnover – Indicates the level of trading activity being conducted over the last 12 months.



Annualized Returns Periods Ending 6/2023

Investment Manager	Strategy	QTD	*	YTD	*	1 Year	*	3 Years	*	5 Years	*	7 Years	*	10 Years	*
Barrow, Hanley, Mewhinney & Strauss, LLC	Non-U.S. Value Equity	2.69	61	13.02	32	16.07	63	18.54	5	7.47	8	9.45	8	6.93	16
First Eagle Investment Management, LLC	International Value Equity	0.94	87	8.05	86	11.29	94	7.22	89	4.96	39	5.36	87	5.76	47
RBC Global Asset Management	RBC Polaris International Equity	1.94	72	11.40	51	15.55	67	11.58	54	3.20	77	7.90	28	6.69	25
MSCI Index	MSCI EAFE Value-ND	3.15	48	9.28	77	17.40	58	11.34	59	2.93	78	6.02	71	4.15	89

The investment policy guidelines of each individual portfolio within the composite results presented above may differ among each other. In addition, the investment policy guidelines of commingled and institutional mutual funds may differ from investment guidelines governing separately managed portfolios. Composite results are reported gross of investment management fees.

*** Universe Rank** - A measure of percentile showing how well a strategy has performed compared to all other strategies in a specific universe. The rank ranges from 1 (best) to 100 (worst). A rank of 50 is the median – the midpoint of all values. Quartiles divide the rankings into four equal segments. A top quartile manager spans from a rank of 1-25 (best). A bottom quartile manager spans from a rank of 75-100 (worst).



Calendar Year Returns

Investment Manager	Strategy	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
Barrow, Hanley, Mewhinney & Strauss, LLC	Non-U.S. Value Equity	-0.74	15.02	4.18	26.74	-17.80	23.88	3.73	-6.60	-1.88	19.95
First Eagle Investment Management, LLC	International Value Equity	-7.00	6.10	8.09	18.92	-9.30	15.38	6.71	3.40	0.21	12.93
RBC Global Asset Management	RBC Polaris International Equity	-14.35	10.96	4.45	21.39	-12.89	27.95	6.74	1.35	-2.93	33.20
MSCI Index	MSCI EAFE Value-ND	-5.58	10.89	-2.63	16.09	-14.78	21.44	5.02	-5.68	-5.39	22.95

The investment policy guidelines of each individual portfolio within the composite results presented above may differ among each other. In addition, the investment policy guidelines of commingled and institutional mutual funds may differ from investment guidelines governing separately managed portfolios. Composite results are reported gross of investment management fees.



5 Year Risk Statistics Periods Ending 6/2023

Investment Manager	Strategy	Beta Ratio	Sharpe Ratio	Tracking Error	Information Ratio	Consistency	Standard Deviation	Upside Market Capture	Downside Market Capture
Barrow, Hanley, Mewhinney & Strauss, LLC	Non-U.S. Value Equity	1.08	0.27	5.45	0.83	58.33%	21.67	121.89	100.55
First Eagle Investment Management, LLC	International Value Equity	0.61	0.26	9.21	0.22	48.33%	13.09	63.22	63.15
RBC Global Asset Management	RBC Polaris International Equity	1.12	0.07	5.33	0.05	46.67%	22.21	111.37	106.48
MSCI Index	MSCI EAFE Value-ND	1.00	0.07	0.00	---	0.00%	19.40	100.00	100.00

Beta Ratio – A measure of an investment’s volatility relative to a market benchmark. The beta of the market is 1.0. A beta above 1.0 indicates higher volatility than the benchmark; a beta below 1.0 indicates less volatility than the benchmark. For example, a portfolio with a beta value of 1.25 in an up market is expected to perform 25% better than the benchmark; a portfolio with a beta of .80 in an up market is expected to perform 20% worse than the benchmark; and a portfolio with a beta of 1.0 is expected to perform in line with the benchmark.

Sharpe Ratio - A measure of return in excess of the risk-free rate (U.S. Treasury Bills) per unit of volatility. The ratio is calculated by subtracting the risk-free rate from the rate of return for a portfolio and dividing the result by the portfolio’s standard deviation. The greater a portfolio’s ratio, the better its risk-adjusted performance.

Tracking Error - A measure of how closely a portfolio’s return follows its benchmark, tracking error is measured by the standard deviation of the difference between the portfolio and index returns. The higher the tracking error, the higher the variability of the portfolio returns around the benchmark. Tracking error is often used as a measurement of consistency of returns against a benchmark over time.

Information Ratio – A measure of a portfolio’s excess returns above (below) a benchmark to the volatility of those excess returns. Information is calculated by subtracting the return of a portfolio by the return of the benchmark and then dividing that by the tracking error of those returns. A positive information ratio implies a manager is rewarded for their active decisions around their benchmark.

Consistency - Defined as the percentage of months the manager outperformed the index (also referred to as “batting average”).

Standard Deviation - A statistical measure of the dispersion of a set of data from its mean, depicting how widely returns varied over a certain period of time. Standard deviation is the most commonly cited measure of the volatility or “risk” in investment returns. An investment manager with a standard deviation in excess of the index historically had volatility greater than the index.

Capture Ratios - A measure an investment manager’s performance relative to their benchmark in a rising (“up market capture”) or falling (“down market capture”) environment. Up and down market capture ratios indicate the percentage of the “market’s” performance captured by an investment manager. For example, a manager with a downside capture of 80% generated a return that was less negative than the market (i.e., S&P -1.0% vs. manager -0.8%); a manager with a downside capture of 120% generated a return that was more negative than the market (i.e., S&P -1.0% vs. manager -1.2%); and a manager with a downside capture of -100% generated a positive return in a negative market environment (i.e. S&P -1.0% vs. manager +1.0%).



10 Year Risk Statistics Periods Ending 6/2023

Investment Manager	Strategy	Beta Ratio	Sharpe Ratio	Tracking Error	Information Ratio	Consistency	Standard Deviation	Upside Market Capture	Downside Market Capture
Barrow, Hanley, Mewhinney & Strauss, LLC	Non-U.S. Value Equity	1.04	0.34	4.41	0.63	58.33%	17.39	111.22	97.82
First Eagle Investment Management, LLC	International Value Equity	0.59	0.44	8.24	0.20	47.50%	10.81	60.66	55.77
RBC Global Asset Management	RBC Polaris International Equity	1.05	0.32	5.21	0.49	54.17%	17.88	108.90	96.97
MSCI Index	MSCI EAFE Value-ND	1.00	0.19	0.00	---	0.00%	16.26	100.00	100.00

Beta Ratio – A measure of an investment’s volatility relative to a market benchmark. The beta of the market is 1.0. A beta above 1.0 indicates higher volatility than the benchmark; a beta below 1.0 indicates less volatility than the benchmark. For example, a portfolio with a beta value of 1.25 in an up market is expected to perform 25% better than the benchmark; a portfolio with a beta of .80 in an up market is expected to perform 20% worse than the benchmark; and a portfolio with a beta of 1.0 is expected to perform in line with the benchmark.

Sharpe Ratio - A measure of return in excess of the risk-free rate (U.S. Treasury Bills) per unit of volatility. The ratio is calculated by subtracting the risk-free rate from the rate of return for a portfolio and dividing the result by the portfolio’s standard deviation. The greater a portfolio’s ratio, the better its risk-adjusted performance.

Tracking Error - A measure of how closely a portfolio’s return follows its benchmark, tracking error is measured by the standard deviation of the difference between the portfolio and index returns. The higher the tracking error, the higher the variability of the portfolio returns around the benchmark. Tracking error is often used as a measurement of consistency of returns against a benchmark over time.

Information Ratio – A measure of a portfolio’s excess returns above (below) a benchmark to the volatility of those excess returns. Information is calculated by subtracting the return of a portfolio by the return of the benchmark and then dividing that by the tracking error of those returns. A positive information ratio implies a manager is rewarded for their active decisions around their benchmark.

Consistency - Defined as the percentage of months the manager outperformed the index (also referred to as “batting average”).

Standard Deviation - A statistical measure of the dispersion of a set of data from its mean, depicting how widely returns varied over a certain period of time. Standard deviation is the most commonly cited measure of the volatility or “risk” in investment returns. An investment manager with a standard deviation in excess of the index historically had volatility greater than the index.

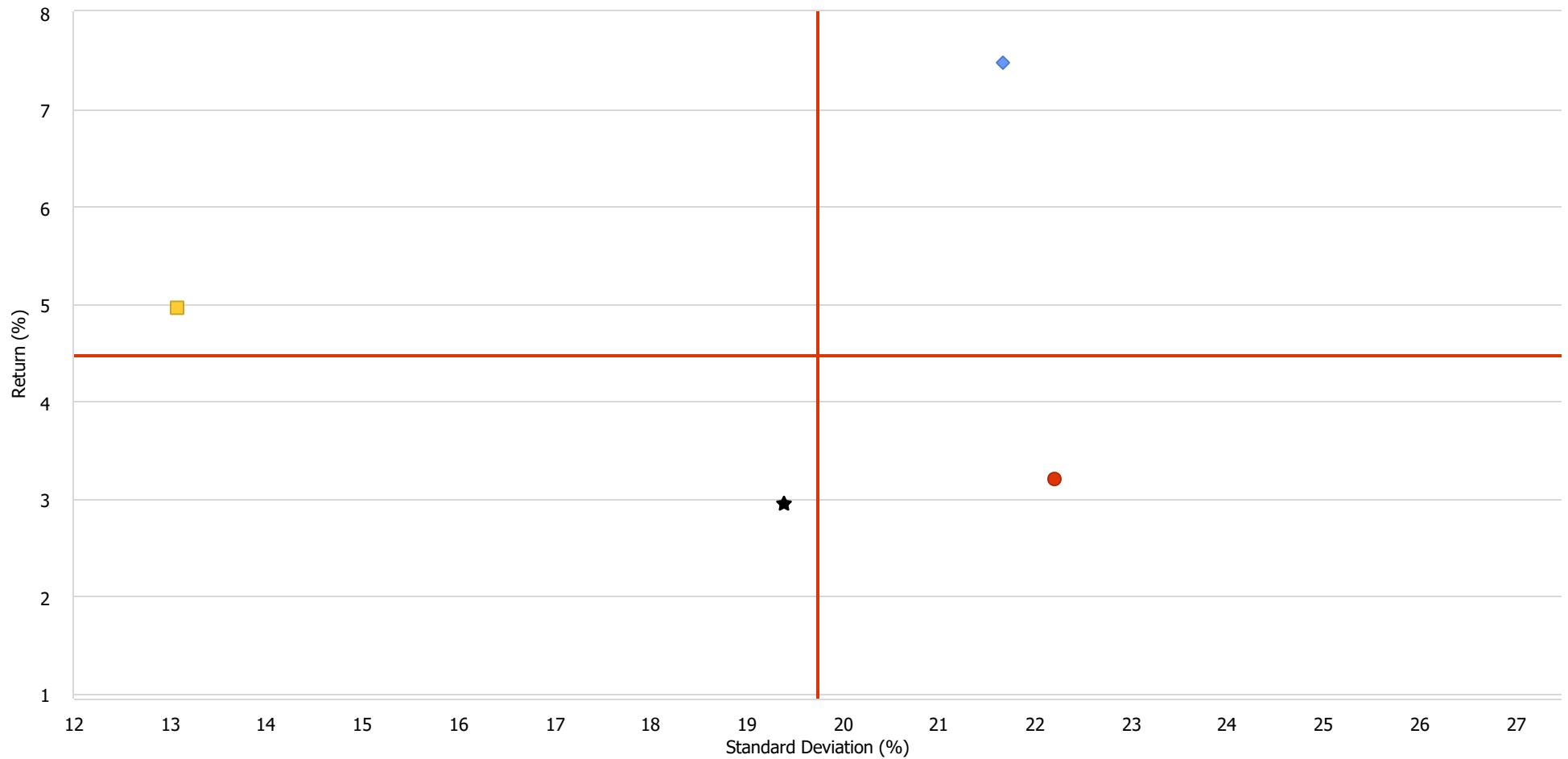
Capture Ratios - A measure an investment manager’s performance relative to their benchmark in a rising (“up market capture”) or falling (“down market capture”) environment. Up and down market capture ratios indicate the percentage of the “market’s” performance captured by an investment manager. For example, a manager with a downside capture of 80% generated a return that was less negative than the market (i.e., S&P -1.0% vs. manager -0.8%); a manager with a downside capture of 120% generated a return that was more negative than the market (i.e., S&P -1.0% vs. manager -1.2%); and a manager with a downside capture of -100% generated a positive return in a negative market environment (i.e. S&P -1.0% vs. manager +1.0%).



Risk vs. Return

Annualized Five Year Returns

Periods Ending 6/2023



◆ Barrow, Hanley, Mewhinney & Strauss, LLC: Non-U.S. Value Equity

■ First Eagle Investment Management, LLC: International Value Equity

● RBC Global Asset Management: RBC Polaris International Equity

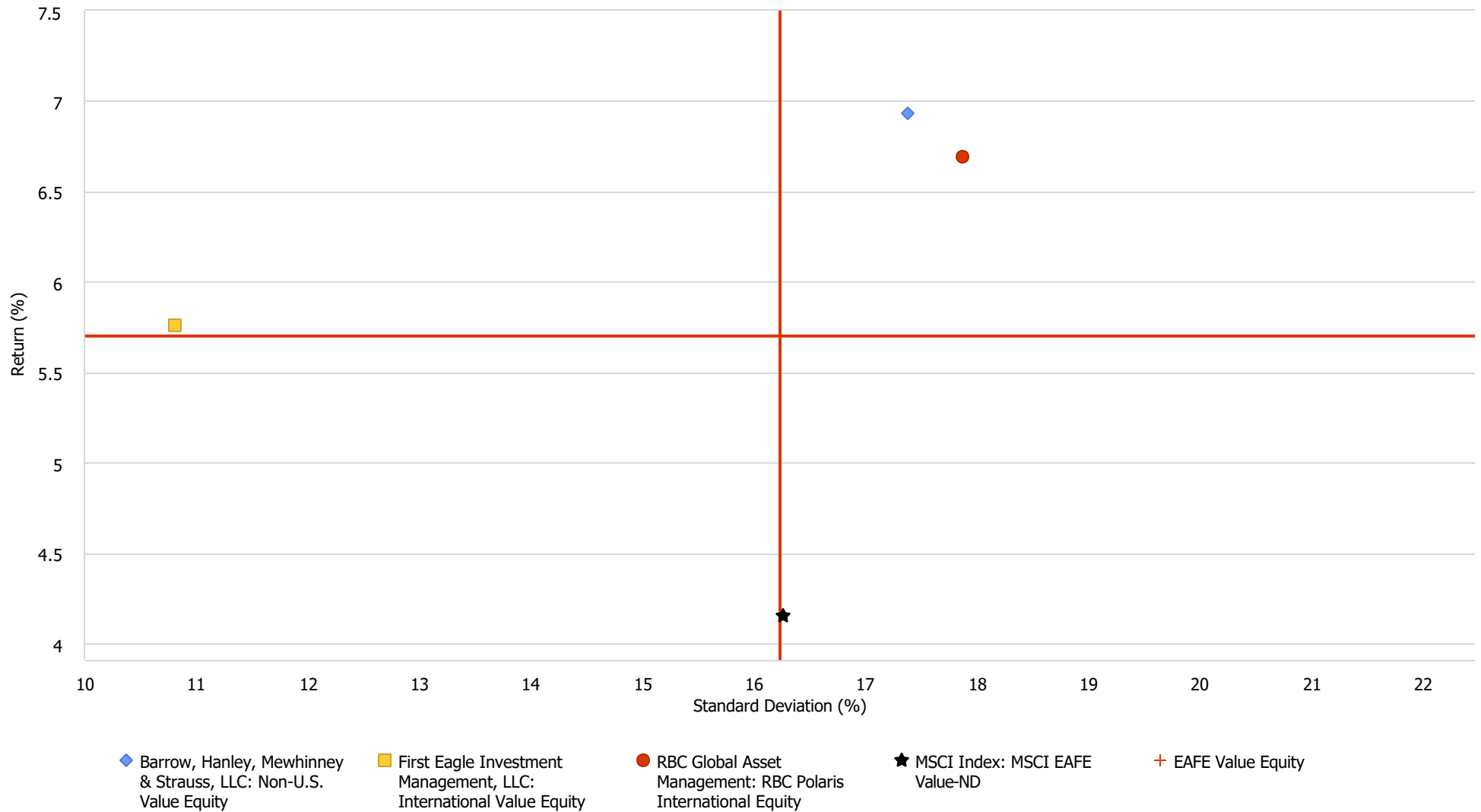
★ MSCI Index: MSCI EAFE Value-ND

+ EAFE Value Equity

Universe: eVestment EAFE Value Equity



Risk vs. Return Annualized Ten Year returns Periods Ending 6/2023

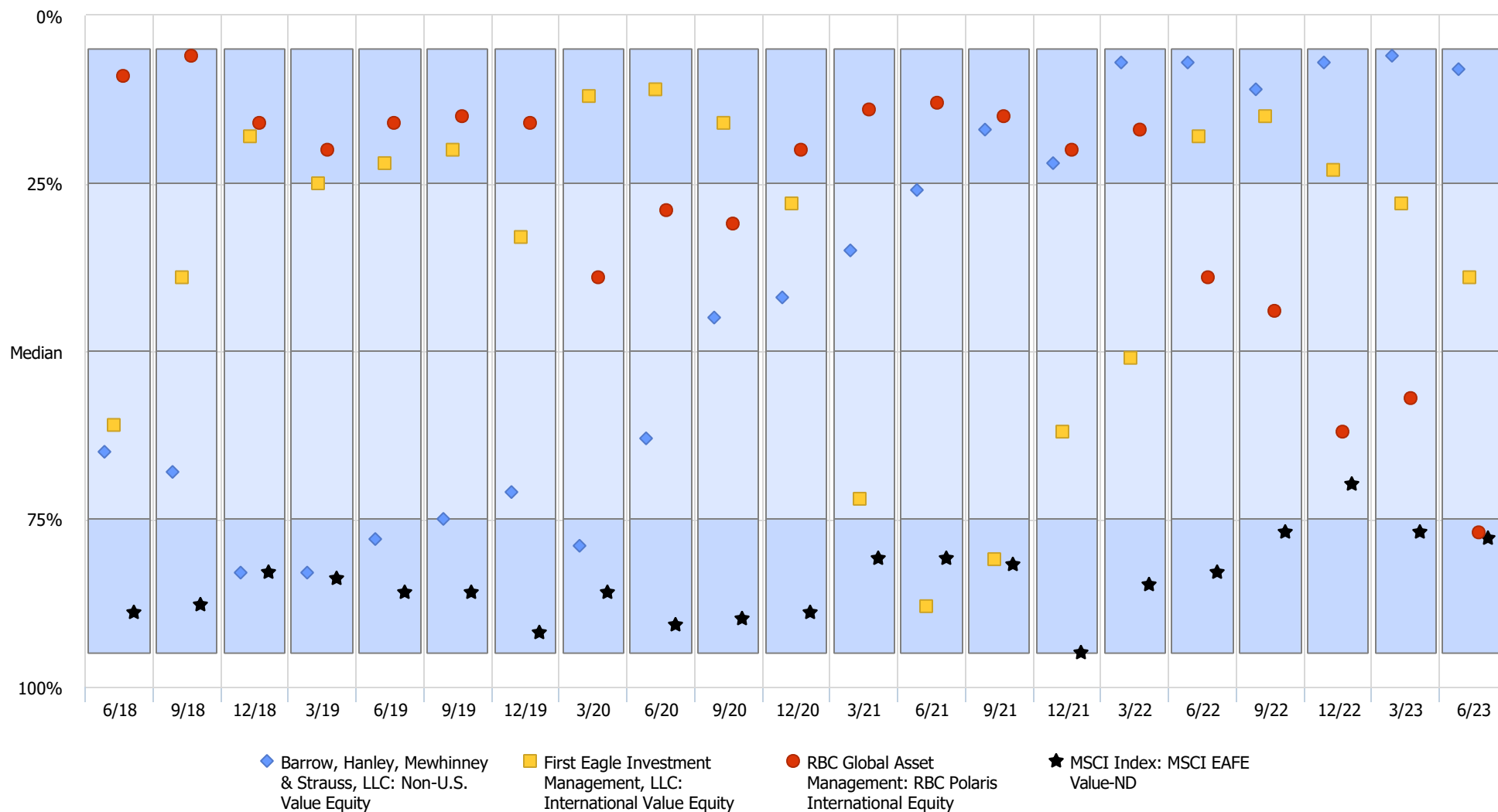


Universe: eVestment EAFE Value Equity



5 Year Rolling Returns with 1 Quarter Rollback - Universe Rankings

Periods Ending 6/2023



Universe: eVestment EAFE Value Equity



5 Year Traditional Returns-Based Style Map using the MSCI Indices

Total Average

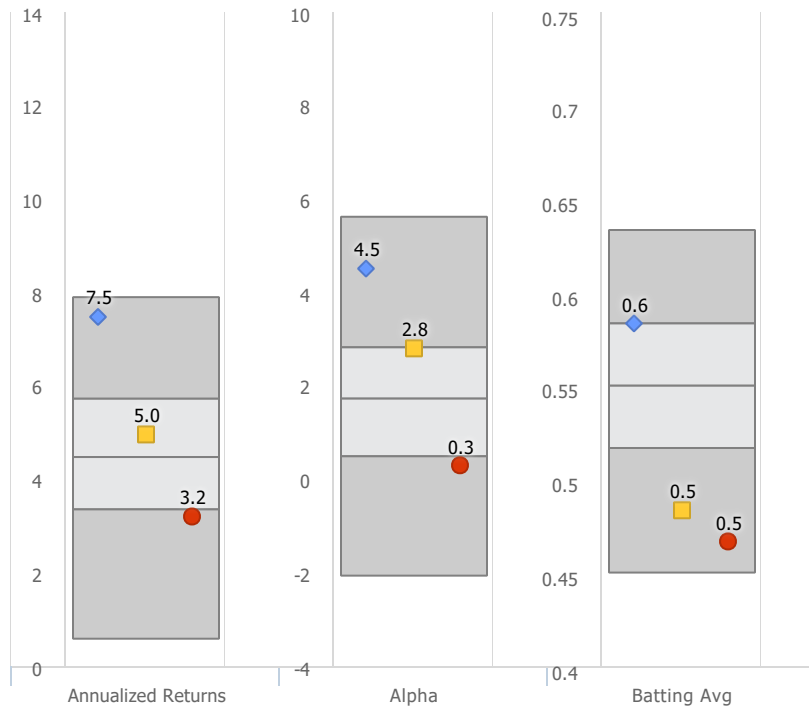
Periods Ending 6/2023





eVestment EAFE Value Equity Returns and Statistics Periods Ending 6/2023

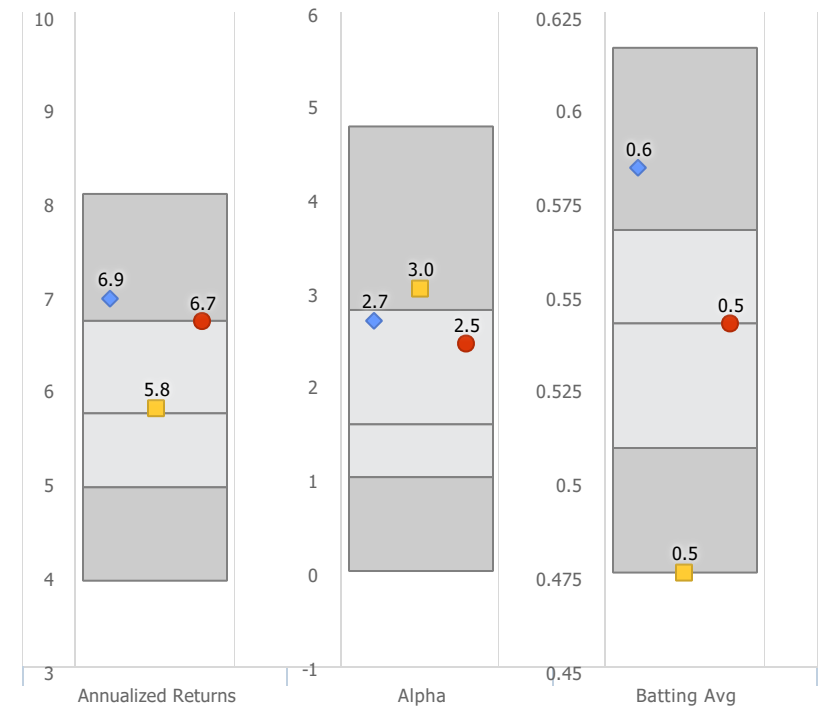
5 Year Statistics



- ◆ Barrow, Hanley, Mewhinney & Strauss, LLC: Non-U.S. Value Equity
- First Eagle Investment Management, LLC: International Value Equity
- RBC Global Asset Management: RBC Polaris International Equity

Universe: eVestment EAFE Value Equity

10 Year Statistics



- ◆ Barrow, Hanley, Mewhinney & Strauss, LLC: Non-U.S. Value Equity
- First Eagle Investment Management, LLC: International Value Equity
- RBC Global Asset Management: RBC Polaris International Equity

Universe: eVestment EAFE Value Equity

Alpha - The amount of an investment's return that is independent of the return of the market. Alpha is generated by active management through security selection and may be positive or negative relative to a given benchmark.

Batting Average - Defined as the percentage of months the manager outperformed the index (also referred to as "consistency").

Firm

Investment Summary

Barrow,
Hanley,
Mewhinney &
Strauss, LLC

Barrow Hanley's Non-USV team seeks to invest in stocks of good companies with a unique combination of cheapness (temporarily undervalued), change, and asymmetric return profiles, with stable to improving operating fundamentals, including strong balance sheets and identifiable catalysts that will return the company to normalized levels of profitability. Portfolio construction is dictated by a fundamentally-driven process of stock selection, with significant awareness to geopolitical and macroeconomic considerations. Barrow Hanley believes that their ability to identify undervalued companies with improving operating fundamentals has, and will continue to be, their greatest strength – and one that the firm believes has proven to be repeatable. Barrow Hanley has applied a highly principled value philosophy across their strategies for more than 40 years, since the firm's founding in 1979.

First Eagle
Investment
Management,
LLC

The International Value Strategy (the "Strategy") seeks to deliver attractive real returns while avoiding the permanent impairment of capital over time. The "Strategy" is an active, bottom-up, fundamental and benchmark-agnostic with historically below average volatility. Investments are typically made for the long-term and span all capitalizations as well as both developed and emerging markets. The Team looks for opportunities in companies that have temporarily disappointed investors, industries in turmoil as well as countries in economic downturns. Additionally, the Team has the flexibility to invest in non-equity securities, including cash and cash equivalents, corporate debt, short-term government bonds and gold.

RBC Global
Asset
Management

The International Equity team believes: • Companies exist to generate cash flow for shareholders • The team can generate superior returns by purchasing the most undervalued streams of free cash flow The investment team believes normal fluctuations in security prices can undervalue a company's cash flow or assets. The team seeks to generate positive alpha by buying only the most undervalued streams of cash flow or assets in the world (excluding the U.S.). Using the Global Cost of Equity, the team discounts extremely conservative estimates of future cash flows to determine the fair value of an investment. If the company's current market price is at or below its fair value and the company has withstood the scrutiny of fundamental analysis, the company is a strong buy candidate.

Firm

Firm Background

Barrow,
Hanley,
Mewhinney &
Strauss, LLC

Barrow Hanley has managed value-oriented assets for institutional clients since 1979. Over four decades, the firm has added a number of U.S. equity, non-U.S. equity, global equity, and U.S. fixed income investment strategies in response to client and prospective investor interest, all of which are based on the same value investment philosophy. In late 2020, BrightSphere Investment Group (NYSE: BSIG) sold its 75.1% holding in Barrow Hanley to Perpetual Limited ("Perpetual"), an Australian financial services company, ASX ticker: PPT. Today, Barrow Hanley remains a majority-owned indirect subsidiary of Perpetual, with the remaining interest in the firm held by key employees. Throughout its history, Barrow Hanley has retained autonomy over its day-to-day business operations and investment processes.

First Eagle
Investment
Management,
LLC

With a heritage dating back to Europe in 1864, our Firm moved its headquarters to New York City in 1937 and became known as Arnhold and S. Bleichroeder Advisers and maintained a worldwide frame of reference that reflects its extensive international business experience. In 2002, First Eagle sold all of its banking related businesses to focus exclusively on asset management. More recently, in 2017 and 2020, respectively, First Eagle opened offices in London and Munich to strengthen its ability to serve its clients outside of the US. 1864 Gebr. Arnhold (Arnhold Brothers) founded in Dresden 1928 Acquired Adler Bank in Switzerland 1931 Gebr. Arnhold combined with S. Bleichröder 1937 All business activities moved to New York City under the name Arnhold and S. Bleichroeder 1967 Launched first offshore fund, First Eagle Fund, N.V. 1979 Creation of Global Value strategy by Jean-Marie Eveillard 1987 Established first U.S.-registered mutual fund, First Eagle Fund of America 1995 FEIM became an SEC-registered investment adviser 1999 Acquired majority share of Société Générale Asset Management Corp., forming what is now our Global Value team 2002 Sold investment banking and global securities businesses to focus exclusively on investment management 2009 Renamed investment adviser, First Eagle Investment Management, LLC and parent company, First Eagle Holdings, Inc. 2011 Introduced high yield credit capability and our expansion into fixed income 2015 Private equity funds managed by Blackstone Capital Partners and Corsair Capital invest in the firm 2017 Acquired NewStar Financial, manager of middle market, direct lending and broadly syndicated loan strategies: expansion into alternative credit 2020 Acquired alternative credit manager, THL Credit (now called First Eagle Alternative Credit), forming Alternative Credit Team 2021 Established the First Eagle Small Cap team 2021 Renamed First Eagle Investments 2022 First Eagle acquired Napier Park

Firm

Firm Background

RBC Global Asset Management

RBC Global Asset Management (RBC GAM) offers a comprehensive range of investment management solutions and services for institutional and individual investors globally. Within institutional markets, RBC GAM operates as RBC GAM in the United States, as RBC GAM and PH&N Institutional in Canada, and as RBC BlueBay Asset Management (RBC BlueBay) across EMEA APAC. With 18 specialist investment teams located in eight cities in Europe, Asia, and North America, RBC GAM manages over US\$418 billion in assets (as at June 30, 2023) across a comprehensive spectrum of asset classes and strategies. In addition to established capabilities in equity, fixed income, liquidity management and alternative strategies, we have considerable expertise in responsible investing (RI) – including environmental, social and governance (ESG) integrated investing, and impact investing – enabling us to respond to a range of RI objectives and requirements. • In Canada, RBC GAM's institutional division, PH&N Institutional, is among the country's most established institutional asset managers. Founded in 1964, PH&N Institutional has a solid reputation for conservative active management and quality service. From offices across the country, we offer customized solutions crafted from the full range of RBC GAM's global investment capabilities. • In the United States, RBC GAM offers a comprehensive range of investment solutions and services for institutions and intermediaries across the country. Drawing on a deep understanding of global macroeconomic trends and investments, our strategies target a broad range of objectives for US institutional investors, including fund-specific requirements and impactful social or environmental goals. • In the EMEA APAC regions, RBC GAM operates as RBC BlueBay, with on-the-ground client coverage from regional offices located across Europe, Japan, and Hong Kong. We offer institutional investors and intermediaries a full range of fixed income, equity, and alternative strategies and solutions based primarily on BlueBay's specialist fixed income platform and RBC's equity investment capabilities. Our affiliation with Royal Bank of Canada (RBC) is an important strength. RBC is one of the largest banks globally, with a purpose-driven, principles-led approach to delivering performance and creating value for clients and communities. RBC's financial stability, security, and scale enable RBC GAM to invest in top-quality proprietary product development and investment research, support advanced technology platforms and security, and attract and retain talented people, providing comfort to clients and driving business growth. Our multi-national workforce and access to global markets bolster local knowledge in key regions, enabling RBC GAM to do our part in delivering on RBC's overall goal to help clients thrive and communities prosper. RBC Global Asset Management Inc. and PH&N Institutional PH&N Institutional was founded in 1964, and was a privately held entity until 2008 when it was acquired by RBC. In 2010, the entity was amalgamated with RBC Asset Management Inc. to form RBC Global Asset Management Inc. (RBC GAM Inc.), an indirect, wholly-owned subsidiary of RBC, and the manager of the RBC, Phillips, Hager & North (PH&N), and BlueBay Funds in Canada. Today, PH&N Institutional serves Canadian institutional investors as a business division of RBC GAM Inc. RBC Global Asset Management (U.S.) Inc. (RBC GAM-US) Founded in 1983, RBC GAM-US was known as Voyager Asset Management Inc. when RBC acquired the firm in 2001, and ultimately changed its name to RBC Global Asset Management (U.S.) Inc. in 2010 to reflect the firm's role as the US institutional asset management business for RBC GAM in the United States. RBC GAM-US is an indirect, wholly-owned subsidiary of RBC. RBC BlueBay Asset Management (RBC BlueBay) RBC BlueBay refers to the combination of RBC's equity capabilities located in London and Asia; and BlueBay's specialty fixed income platform. The combined business offers institutional investors and intermediaries a full range of fixed income, equity, and alternative strategies. In the UK, RBC GAM was originally founded in October 1998, ultimately becoming RBC Global Asset Management (UK) Limited in 2013, at which time its investment-focused operations were expanded to include distribution. RBC GAM-UK is a wholly-owned subsidiary of Royal Bank of Canada Holdings Limited, itself a wholly-owned subsidiary of RBC. The BlueBay business was founded in 2001 as an active fixed income specialist asset manager and was acquired by RBC GAM in 2010 in order to expand its franchise in EMEA, including regional offices located across Europe and Japan. Following the acquisition, BlueBay Asset Management PLC changed its corporate status to a private limited company; and in 2012, the investment management business of BlueBay was transferred to an English limited liability partnership. In 2020, the two London-based businesses, RBC GAM-UK and BlueBay LLP, began evolving toward a single operating model to better harness the capabilities and growth of the respective businesses. Effective April 1, 2023, BlueBay LLP and RBC GAM-UK consolidated the businesses' UK legal entity structures, with BlueBay LLP transferring its business to RBC GAM-UK. Bringing together equity, fixed income and specialist alternative strategies under one operational umbrella allows RBC BlueBay to streamline service for clients in EMEA APAC. RBC Global Asset Management (Asia) Limited (RBC GAM-Asia) Founded in 1978, RBC GAM's Asian presence was renamed to RBC GAM-Asia in 2019, and is 100% owned by RBC Trade Asia Limited, which is, in turn, owned by RBC. RBC GAM-Asia comprises primarily a single investment team focused on Asian Equities, and provides investment management services and products to clients across Asia, and worldwide through its affiliates.



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Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report

Period Ended

June 30, 2023

Total Fund Growth of Assets

	Second Quarter Fiscal Year-To-Date		One Year	Three Years
Beginning Market Value	\$34,415,475	\$33,628,622	\$34,977,754	\$37,047,024
Net Cash Flow	\$180,760	\$270,175	-\$1,301,777	-\$6,214,552
Net Investment Change	\$381,718	\$1,079,156	\$1,301,977	\$4,145,482
Ending Market Value	\$34,977,953	\$34,977,953	\$34,977,953	\$34,977,953

Total Fund Growth of Assets

	Five Years	Seven Years	Ten Years
Beginning Market Value	\$34,948,924	\$36,711,581	\$27,514,264
Net Cash Flow	-\$7,485,160	-\$12,835,385	-\$9,327,356
Net Investment Change	\$7,514,189	\$11,101,757	\$16,791,044
Ending Market Value	\$34,977,953	\$34,977,953	\$34,977,953

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

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023			
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs
Total Fund	\$34,977,953	100.0%	1.1%	3.2%	3.9%	4.0%
Total Domestic Large Cap Equity	\$4,202,352	12.0%	9.8%	19.3%	21.2%	15.0%
Total Investment Grade Fixed Income	\$11,162,583	31.9%	-0.6%	2.0%	0.3%	-1.9%
Total Short Duration High Yield Fixed Income	\$11,602,344	33.2%	1.4%	2.9%	6.7%	2.9%
Total Real Estate - Core	\$3,464,282	9.9%	-2.2%	-5.4%	-9.1%	8.5%
Total Real Estate - Value Add	\$3,448,554	9.9%	0.4%	0.7%	4.0%	--
Total Cash Equivalents	\$1,097,837	3.1%				

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Summary (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023		
			5 Yrs	7 Yrs	10 Yrs
Total Fund	\$34,977,953	100.0%	4.4%	4.6%	5.1%
Total Domestic Large Cap Equity	\$4,202,352	12.0%	9.0%	10.8%	10.8%
Total Investment Grade Fixed Income	\$11,162,583	31.9%	1.7%	1.2%	2.0%
Total Short Duration High Yield Fixed Income	\$11,602,344	33.2%	3.4%	3.5%	3.4%
Total Real Estate - Core	\$3,464,282	9.9%	7.2%	7.4%	8.9%
Total Real Estate - Value Add	\$3,448,554	9.9%	--	--	--
Total Cash Equivalents	\$1,097,837	3.1%			

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Summary (Gross of Fees)

	Fiscal Year Ending December 31st						
	Fiscal YTD	2022	2021	2020	2019	2018	2017
Total Fund	3.2%	-5.1%	8.9%	5.5%	9.7%	1.0%	6.8%
<i>Total Fund Benchmark</i>	<i>3.4%</i>	<i>-5.0%</i>	<i>8.0%</i>	<i>4.9%</i>	<i>9.9%</i>	<i>1.0%</i>	<i>5.2%</i>

	Fiscal Year Ending December 31st				
	2016	2015	2014	2013	2012
Total Fund	6.5%	3.3%	6.1%	9.2%	7.7%
<i>Total Fund Benchmark</i>	<i>7.5%</i>	<i>3.0%</i>	<i>5.9%</i>	<i>8.3%</i>	<i>8.3%</i>

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Summary (Net of Fees)

Fiscal Year Ending December 31st							
	Fiscal YTD	2022	2021	2020	2019	2018	2017
Total Fund	2.9%	-5.6%	8.4%	4.9%	9.1%	0.4%	6.2%
<i>Total Fund Benchmark</i>	<i>3.4%</i>	<i>-5.0%</i>	<i>8.0%</i>	<i>4.9%</i>	<i>9.9%</i>	<i>1.0%</i>	<i>5.2%</i>

Fiscal Year Ending December 31st					
	2016	2015	2014	2013	2012
Total Fund	5.9%	2.7%	5.5%	8.6%	7.3%
<i>Total Fund Benchmark</i>	<i>7.5%</i>	<i>3.0%</i>	<i>5.9%</i>	<i>8.3%</i>	<i>8.3%</i>

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Current vs. Policy						
	Current	Current	Policy	Policy Range	Difference	Difference
Domestic Large Cap Equity	\$4,202,352	12.0%	10.0%	5.0% - 15.0%	2.0%	\$704,557
Investment Grade Fixed Income	\$11,162,583	31.9%	35.0%	30.0% - 40.0%	-3.1%	-\$1,079,700
Short Duration High Yield Fixed Income	\$11,602,344	33.2%	35.0%	30.0% - 40.0%	-1.8%	-\$639,940
Real Estate - Core	\$3,464,282	9.9%	10.0%	5.0% - 15.0%	-0.1%	-\$33,513
Real Estate - Value Add	\$3,448,554	9.9%	10.0%	5.0% - 15.0%	-0.1%	-\$49,241
Cash Equivalents	\$1,097,837	3.1%	0.0%	0.0% - 0.0%	3.1%	\$1,097,837
Total	\$34,977,953	100.0%	100.0%			

- Policy adopted February 2023; effective April 2023.
- Cash equivalents allocation includes:
 - \$41K partial redemption in-transit from real estate - core (ARA Core Property Fund, LP); proceeds available in July 2023.
 - \$26K distribution in-transit from real estate - core (ARA Core Property Fund, LP); proceeds available in July 2023.

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: August 21, 2018, 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.

Recommendation: Rebalance cash to investment grade fixed income and short duration high yield fixed income allocations if not needed for benefits/expenses.

Real Estate - Core Redemption (In Millions) as of June 30, 2023						
Manager	Redemption Type	Effective Date	Withdrawal Queue	Requested \$	Received \$	Remaining \$
ARA Core Property Fund, LP	Partial	Dec-22	Sep-22	\$0.60	\$0.09	\$0.51
Total				\$0.60	\$0.09	\$0.51

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Commitment and Funding of Real Estate - Core (In Millions) as of June 30, 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	\$7.0	\$3.5	\$10.5	1.4	2.0
Total		\$5.2	\$0.0	1.0	\$5.2	\$7.0	\$3.5	\$10.5	1.4	2.0

Commitment and Funding of Real Estate - Value Add (In Millions) as of June 30, 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	\$0.6	\$3.4	\$4.0	0.2	1.1
Total		\$3.8	\$0.0	1.0	\$3.8	\$0.6	\$3.4	\$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.

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023				
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Fund	\$34,977,953	100.0%	1.0%	2.9%	3.4%	3.4%	3.8%
Total Domestic Large Cap Equity	\$4,202,352	12.0%	9.8%	19.1%	20.9%	14.6%	8.6%
Vanguard Growth Index Fund Admiral Shares	\$2,156,959	6.2%	13.6%	33.2%	28.0%	--	--
CRSP US Large Cap Growth TR USD			13.6%	33.3%	28.0%	--	--
Wedge Capital Management - QVM	\$2,045,393	5.8%	6.0%	7.7%	14.9%	14.1%	8.3%
Russell 1000 Value			4.1%	5.1%	11.5%	14.3%	8.1%
Total Investment Grade Fixed Income	\$11,162,583	31.9%	-0.7%	1.9%	0.0%	-2.2%	1.4%
Wedge Capital Management	\$11,162,583	31.9%	-0.7%	1.9%	0.0%	-2.2%	1.4%
Bloomberg US Govt/Credit Int TR			-0.8%	1.5%	-0.1%	-2.5%	1.2%
Total Short Duration High Yield Fixed Income	\$11,602,344	33.2%	1.3%	2.7%	6.2%	2.4%	2.9%
Chartwell Investment Partners SDHY	\$11,602,344	33.2%	1.3%	2.7%	6.2%	2.4%	2.9%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			1.3%	3.6%	7.1%	3.4%	3.7%
Bloomberg US Govt/Credit Int TR			-0.8%	1.5%	-0.1%	-2.5%	1.2%

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Detail (Net of Fees) - Annualized

			Ending June 30, 2023				
	Market Value	% of Portfolio	2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs
Total Real Estate - Core	\$3,464,282	9.9%	-2.5%	-5.9%	-10.1%	7.3%	6.1%
ARA Core Property Fund, LP	\$3,464,282	9.9%	-2.5%	-5.9%	-10.1%	7.3%	6.1%
<i>NCREIF ODCE Equal Weighted Net</i>			-3.0%	-6.4%	-10.4%	7.6%	6.1%
Total Real Estate - Value Add	\$3,448,554	9.9%	0.1%	0.1%	2.7%	--	--
Boyd Watterson State Government Fund, LP	\$3,448,554	9.9%	0.1%	0.1%	2.7%	--	--
<i>Long-Term Income Objective 9%</i>			2.2%	4.4%	9.0%	--	--
<i>NCREIF ODCE Equal Weighted Net</i>			-3.0%	-6.4%	-10.4%	--	--
Total Cash Equivalents	\$1,097,837	3.1%					
Cash Account	\$1,030,317	2.9%					
Cash in Transit - ARA Core Property Fund, LP							
Redemption Proceeds	\$41,040	0.1%					
Cash in Transit - ARA Core Property Fund, LP							
Distribution Proceeds	\$26,480	0.1%					

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Detail (Net of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023			
			7 Yrs	10 Yrs	Inception	Inception Date
Total Fund	\$34,977,953	100.0%	4.0%	4.5%	4.6%	Oct-97
Total Domestic Large Cap Equity	\$4,202,352	12.0%	10.4%	10.3%	5.3%	Apr-99
Vanguard Growth Index Fund Admiral Shares	\$2,156,959	6.2%	--	--	5.0%	Mar-21
CRSP US Large Cap Growth TR USD			--	--	5.1%	Mar-21
Wedge Capital Management - QVM	\$2,045,393	5.8%	10.2%	10.2%	11.2%	Dec-12
Russell 1000 Value			8.9%	9.2%	10.4%	Dec-12
Total Investment Grade Fixed Income	\$11,162,583	31.9%	0.8%	1.6%	3.7%	Jan-99
Wedge Capital Management	\$11,162,583	31.9%	0.8%	1.6%	3.2%	Jan-03
Bloomberg US Govt/Credit Int TR			0.8%	1.4%	2.9%	Jan-03
Total Short Duration High Yield Fixed Income	\$11,602,344	33.2%	3.0%	2.9%	2.9%	Sep-12
Chartwell Investment Partners SDHY	\$11,602,344	33.2%	3.0%	2.9%	2.9%	Sep-12
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			3.7%	3.9%	3.9%	Sep-12
Bloomberg US Govt/Credit Int TR			0.8%	1.4%	1.2%	Sep-12

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Detail (Net of Fees) - Annualized

			Ending June 30, 2023			
	Market Value	% of Portfolio	7 Yrs	10 Yrs	Inception	Inception Date
Total Real Estate - Core	\$3,464,282	9.9%	6.2%	7.7%	4.9%	Apr-07
ARA Core Property Fund, LP	\$3,464,282	9.9%	6.2%	7.7%	4.9%	Apr-07
<i>NCREIF ODCE Equal Weighted Net</i>			6.5%	8.1%	5.2%	Apr-07
Total Real Estate - Value Add	\$3,448,554	9.9%	--	--	4.5%	Oct-21
Boyd Watterson State Government Fund, LP	\$3,448,554	9.9%	--	--	4.5%	Oct-21
<i>Long-Term Income Objective 9%</i>			--	--	9.0%	Oct-21
<i>NCREIF ODCE Equal Weighted Net</i>			--	--	4.6%	Oct-21
Total Cash Equivalents	\$1,097,837	3.1%				
Cash Account	\$1,030,317	2.9%				
Cash in Transit - ARA Core Property Fund, LP						
Redemption Proceeds	\$41,040	0.1%				
Cash in Transit - ARA Core Property Fund, LP						
Distribution Proceeds	\$26,480	0.1%				

Account Information		Vanguard Growth Index Fund Admiral Shares		
Account Name	Vanguard Growth Index Fund Admiral Shares	Ending June 30, 2023		
Account Structure	Mutual Fund	Second Quarter		Inception
Investment Style	Passive			3/31/21
Inception Date	3/31/21	Beginning Market Value	\$1,898,494	\$0
Account Type	Domestic Large Cap Growth Equity	Net Cash Flow	\$0	\$1,825,000
Benchmark	CRSP US Large Cap Growth TR USD	Net Investment Change	\$258,466	\$331,959
Universe	Large Growth MStar MF	Ending Market Value	\$2,156,959	\$2,156,959

											Calendar Years													
	2023 Q2	Rank	YTD Rank	1 Yr Rank	3 Yrs Rank	5 Yrs Rank					2022 Rank	2021 Rank	2020 Rank	2019 Rank	2018 Rank	Inception	Inception Date							
Vanguard Growth Index Fund Admiral Shares	13.6%	23	33.2%	13	28.0%	19	--	--	--	--	-33.1%	69	--	--	--	--	--	5.0%	Mar-21					
CRSP US Large Cap Growth TR USD	13.6%	23	33.3%	13	28.0%	19	--	--	--	--	-33.1%	68	--	--	--	--	--	5.1%	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

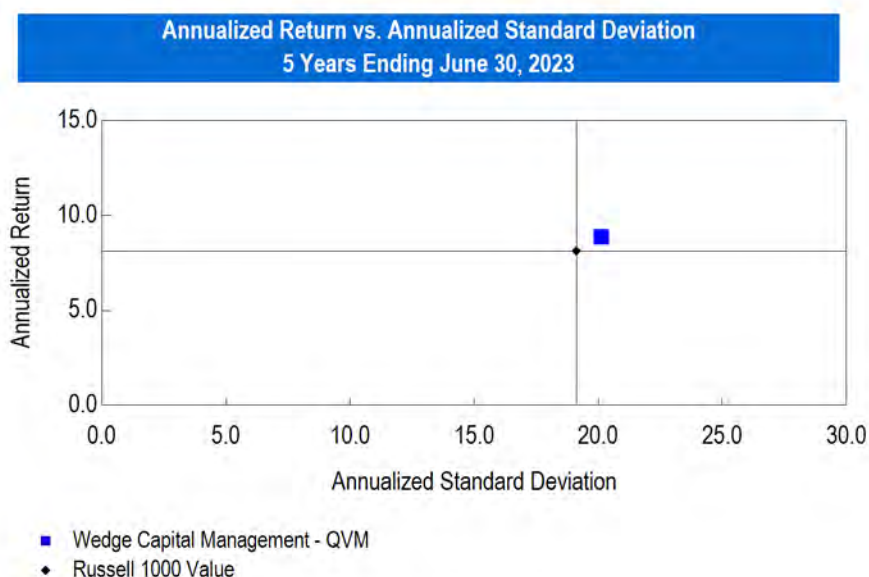
Recommendation: None.

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 June 30, 2023		
	Second Quarter	Inception 12/1/12
Beginning Market Value	\$2,427,134	\$0
Net Cash Flow	-\$500,000	-\$4,078,444
Net Investment Change	\$118,259	\$6,123,838
Ending Market Value	\$2,045,393	\$2,045,393



3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management - QVM	14.7%	17.9%	96.1%	95.4%
Russell 1000 Value	14.3%	17.4%	100.0%	100.0%

5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management - QVM	8.8%	20.1%	102.3%	99.2%
Russell 1000 Value	8.1%	19.1%	100.0%	100.0%

Calendar Years												Inception	Inception Date
2022 Rank		2021 Rank		2020 Rank		2019 Rank		2018 Rank					
-12.2%	88	30.9%	19	6.5%	40	29.6%	25	-11.9%	81			11.8%	Dec-12
-7.5%	69	25.2%	72	2.8%	62	26.5%	54	-8.3%	50			10.4%	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 a due diligence meeting with Wedge Capital on February 10, 2022.

Recommendation: None.

Compliance Summary

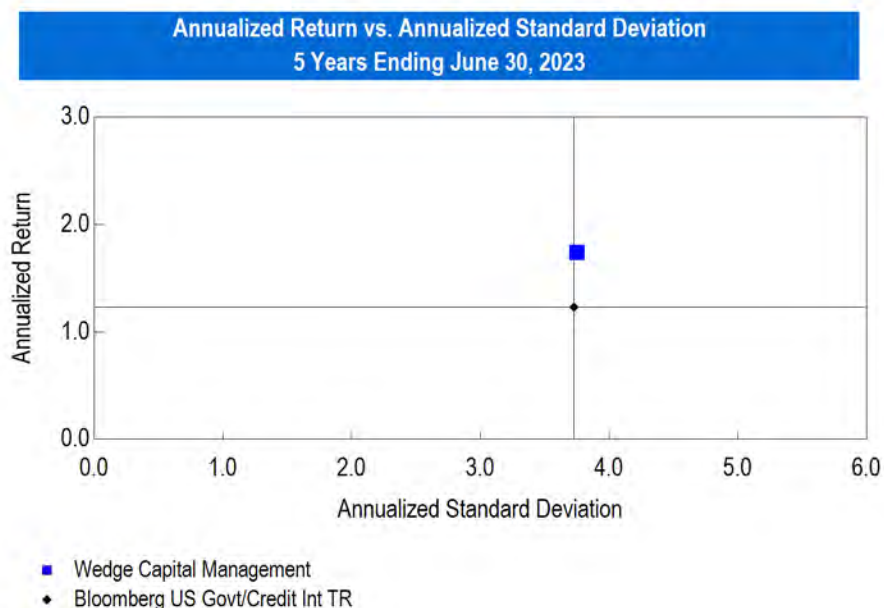
Exceptions: None.

Action to be taken: None.

Items of Interest: Personnel Departures - The manager stated effective June 30, 2023, Bradley S. Fisher, General Partner, retired from the firm, and Jason T. Boles and John M. Carr, both General Partners, departed from the firm. Wesley Stoltz, who shared the Co-Head of Fixed Income responsibilities with Brad Fisher, will assume full responsibility for all fixed income strategies. Jason T. Boles, Equity Analyst and General Partner, will have his responsibilities absorbed by other members of the equity analyst team. John M. Carr, Client Portfolio Manager and General Partner, will have his responsibilities absorbed by other members of the client portfolio management team. **Ownership Changes** - The manager states departures noted above will not have any material impact on company ownership, or operations. **Form ADV** - The manager filed an amended Form ADV in July 2023, reflecting the change in the membership of their partnership. Please see the full compliance report for the Form ADV Part 2A and the list of material changes.

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 June 30, 2023		
	Second Quarter	Inception 1/1/03
Beginning Market Value	\$11,235,154	\$3,769,223
Net Cash Flow	\$0	\$450,913
Net Investment Change	-\$72,570	\$6,942,448
Ending Market Value	\$11,162,583	\$11,162,583



3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management	-1.9%	4.1%	101.6%	92.9%
Bloomberg US Govt/Credit Int TR	-2.5%	4.1%	100.0%	100.0%

5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Wedge Capital Management	1.7%	3.8%	103.8%	93.3%
Bloomberg US Govt/Credit Int TR	1.2%	3.7%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Wedge Capital Management	-0.6%	2.0%	0.3%	-1.9%	1.7%	-7.9%	-1.1%	7.6%	6.9%	1.1%	3.5%	Jan-03
Bloomberg US Govt/Credit Int TR	-0.8%	1.5%	-0.1%	-2.5%	1.2%	-8.2%	-1.4%	6.4%	6.8%	0.9%	2.9%	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

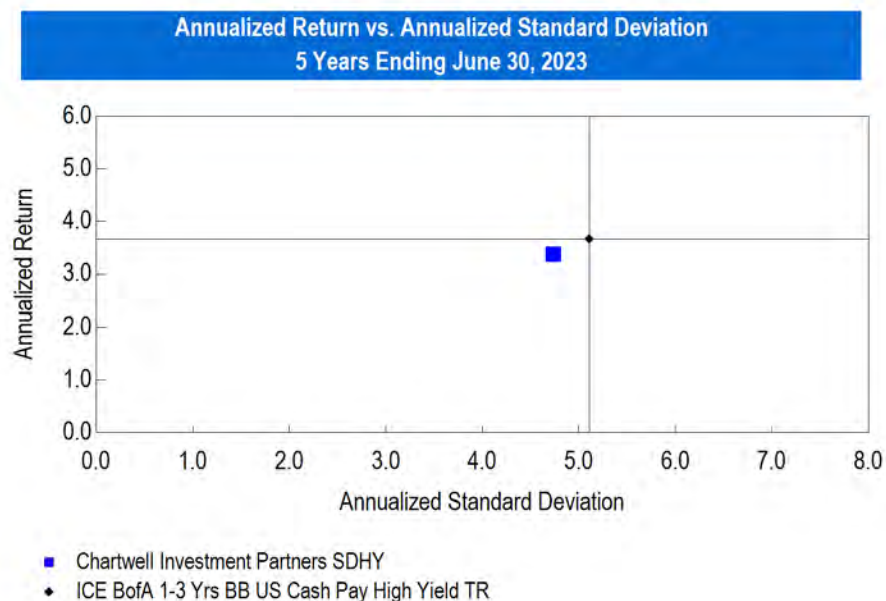
Exceptions: None.

Action to be taken: None.

Items of Interest: Personnel Departures - The manager stated effective June 30, 2023, Bradley S. Fisher, General Partner, retired from the firm, and Jason T. Boles and John M. Carr, both General Partners, departed from the firm. Wesley Stoltz, who shared the Co-Head of Fixed Income responsibilities with Brad Fisher, will assume full responsibility for all fixed income strategies. Jason T. Boles, Equity Analyst and General Partner, will have his responsibilities absorbed by other members of the equity analyst team. John M. Carr, Client Portfolio Manager and General Partner, will have his responsibilities absorbed by other members of the client portfolio management team. **Ownership Changes** - The manager states departures noted above will not have any material impact on company ownership, or operations. **Form ADV** - The manager filed an amended Form ADV in July 2023, reflecting the change in the membership of their partnership. Please see the full compliance report for the Form ADV Part 2A and the list of material changes.

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 June 30, 2023		
	Second Quarter	Inception 9/1/12
Beginning Market Value	\$10,446,014	\$0
Net Cash Flow	\$1,000,000	\$7,884,627
Net Investment Change	\$156,330	\$3,717,717
Ending Market Value	\$11,602,344	\$11,602,344



3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners SDHY	2.9%	4.4%	94.9%	102.9%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	3.4%	4.3%	100.0%	100.0%

5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
Chartwell Investment Partners SDHY	3.4%	4.7%	91.7%	94.5%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	3.7%	5.1%	100.0%	100.0%

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Chartwell Investment Partners SDHY	1.4%	2.9%	6.7%	2.9%	3.4%	-2.5%	3.0%	5.0%	7.9%	1.2%	3.4%	Sep-12
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR	1.3%	3.6%	7.1%	3.4%	3.7%	-3.1%	3.2%	5.4%	8.7%	1.4%	3.9%	Sep-12
Bloomberg US Govt/Credit Int TR	-0.8%	1.5%	-0.1%	-2.5%	1.2%	-8.2%	-1.4%	6.4%	6.8%	0.9%	1.2%	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: None.

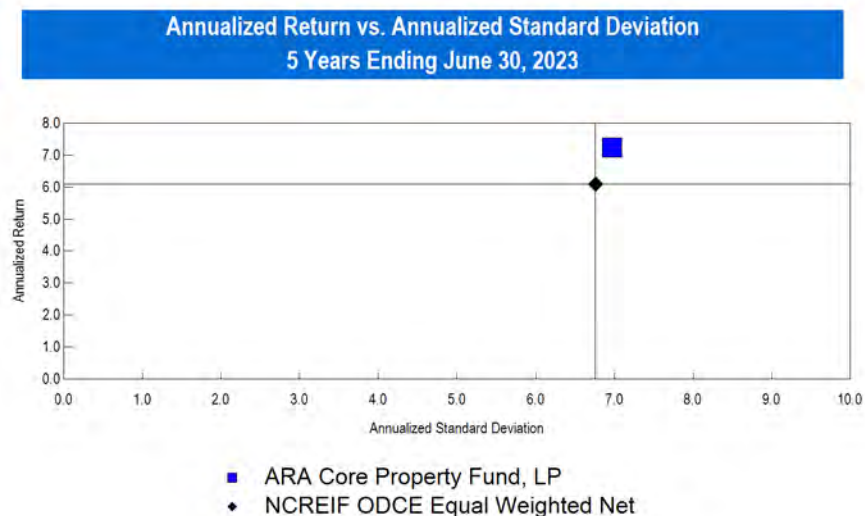
Account Information	
Account Name	ARA Core Property Fund, LP
Account Structure	Commingled Fund
Investment Style	Active
Inception Date	4/01/07
Account Type	Real Estate - Core
Benchmark	NCREIF ODCE Equal Weighted Net
Universe	

ARA Core Property Fund, LP		
Ending June 30, 2023		
	Second Quarter	Inception 4/1/07
Beginning Market Value	\$3,621,918	\$0
Net Cash Flow	-\$67,520	-\$1,863,758
Net Investment Change	-\$90,116	\$5,328,041
Ending Market Value	\$3,464,282	\$3,464,282

Income is distributed.

3 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
ARA Core Property Fund, LP	8.5%	8.9%	106.1%	94.8%
NCREIF ODCE Equal Weighted Net	7.6%	8.6%	100.0%	100.0%

5 Years Ending June 30, 2023				
	Anlzd Return	Anlzd Standard Deviation	Up Mkt Capture Ratio	Down Mkt Capture Ratio
ARA Core Property Fund, LP	7.2%	7.0%	113.2%	93.7%
NCREIF ODCE Equal Weighted Net	6.1%	6.8%	100.0%	100.0%



	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
ARA Core Property Fund, LP	-2.2%	-5.4%	-9.1%	8.5%	7.2%	9.4%	21.9%	1.6%	6.3%	8.7%	6.1%	Apr-07
NCREIF ODCE Equal Weighted Net	-3.0%	-6.4%	-10.4%	7.6%	6.1%	7.6%	21.9%	0.8%	5.2%	7.3%	5.2%	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 June 30, 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 timely received for the September 30, 2023 redemption date and that a queue will be in place in third quarter of 2023. **Derivatives** - The manager stated yes to Part A question #5, however ARA does not perform stress testing as the Fund only holds one derivative security for interest rate hedging purposes.

Account Information		Boyd Watterson State Government Fund, LP		
Account Name	Boyd Watterson State Government Fund, LP	Ending June 30, 2023		
Account Structure	Commingled Fund	Second Quarter		Inception
Investment Style	Active			10/1/21
Inception Date	10/01/21	Beginning Market Value	\$3,443,923	\$0
Account Type	Real Estate - Value Add	Net Cash Flow	\$0	\$3,150,000
Benchmark	Long-Term Income Objective 9%	Net Investment Change	\$4,631	\$298,554
Universe		Ending Market Value	\$3,448,554	\$3,448,554

Income is distributed.

	Calendar Years											Inception Date
	2023 Q2	YTD	1 Yr	3 Yrs	5 Yrs	2022	2021	2020	2019	2018	Inception	
Boyd Watterson State Government Fund, LP	0.4%	0.7%	4.0%	--	--	7.4%	--	--	--	--	5.8%	Oct-21
Long-Term Income Objective 9%	2.2%	4.4%	9.0%	--	--	9.0%	--	--	--	--	9.0%	Oct-21
NCREIF ODCE Equal Weighted Net	-3.0%	-6.4%	-10.4%	--	--	7.6%	--	--	--	--	4.6%	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 and July 14, 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 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.

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

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023						
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Fund	\$34,977,953	100.0%	1.1%	3.2%	3.9%	4.0%	4.4%	4.6%	5.1%
Total Domestic Large Cap Equity	\$4,202,352	12.0%	9.8%	19.3%	21.2%	15.0%	9.0%	10.8%	10.8%
Vanguard Growth Index Fund Admiral Shares	\$2,156,959	6.2%	13.6%	33.2%	28.0%	--	--	--	--
CRSP US Large Cap Growth TR USD			13.6%	33.3%	28.0%	--	--	--	--
Wedge Capital Management - QVM	\$2,045,393	5.8%	6.2%	7.9%	15.5%	14.7%	8.8%	10.7%	10.7%
Russell 1000 Value			4.1%	5.1%	11.5%	14.3%	8.1%	8.9%	9.2%
Total Investment Grade Fixed Income	\$11,162,583	31.9%	-0.6%	2.0%	0.3%	-1.9%	1.7%	1.2%	2.0%
Wedge Capital Management	\$11,162,583	31.9%	-0.6%	2.0%	0.3%	-1.9%	1.7%	1.2%	2.0%
Bloomberg US Govt/Credit Int TR			-0.8%	1.5%	-0.1%	-2.5%	1.2%	0.8%	1.4%
Total Short Duration High Yield Fixed Income	\$11,602,344	33.2%	1.4%	2.9%	6.7%	2.9%	3.4%	3.5%	3.4%
Chartwell Investment Partners SDHY	\$11,602,344	33.2%	1.4%	2.9%	6.7%	2.9%	3.4%	3.5%	3.4%
ICE BofA 1-3 Yrs BB US Cash Pay High Yield TR			1.3%	3.6%	7.1%	3.4%	3.7%	3.7%	3.9%
Bloomberg US Govt/Credit Int TR			-0.8%	1.5%	-0.1%	-2.5%	1.2%	0.8%	1.4%
Total Real Estate - Core	\$3,464,282	9.9%	-2.2%	-5.4%	-9.1%	8.5%	7.2%	7.4%	8.9%
ARA Core Property Fund, LP	\$3,464,282	9.9%	-2.2%	-5.4%	-9.1%	8.5%	7.2%	7.4%	8.9%
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	7.6%	6.1%	6.5%	8.1%

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Performance Detail (Gross of Fees) - Annualized

	Market Value	% of Portfolio	Ending June 30, 2023						
			2023 Q2	Fiscal YTD	1 Yr	3 Yrs	5 Yrs	7 Yrs	10 Yrs
Total Real Estate - Value Add	\$3,448,554	9.9%	0.4%	0.7%	4.0%	--	--	--	--
Boyd Watterson State Government Fund, LP	\$3,448,554	9.9%	0.4%	0.7%	4.0%	--	--	--	--
Long-Term Income Objective 9%			2.2%	4.4%	9.0%	--	--	--	--
NCREIF ODCE Equal Weighted Net			-3.0%	-6.4%	-10.4%	--	--	--	--
Total Cash Equivalents	\$1,097,837	3.1%							
Cash Account	\$1,030,317	2.9%							
Cash in Transit - ARA Core Property Fund, LP Redemption Proceeds	\$41,040	0.1%							
Cash in Transit - ARA Core Property Fund, LP Distribution Proceeds	\$26,480	0.1%							

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

Account	Fee Schedule	Market Value As of 6/30/2023	% of Portfolio	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
Total Domestic Large Cap Equity	-	\$4,202,352	12.0%	--	--
Vanguard Growth Index Fund Admiral Shares	0.05% of Assets	\$2,156,959	6.2%	\$1,078	0.05%
*Wedge Capital Management - QVM	0.50% of Assets	\$2,045,393	5.8%	\$10,227	0.50%
Total Investment Grade Fixed Income	-	\$11,162,583	31.9%	--	--
*Wedge Capital Management	0.33% of Assets	\$11,162,583	31.9%	\$36,278	0.33%
Total Short Duration High Yield Fixed Income	-	\$11,602,344	33.2%	--	--
Chartwell Investment Partners SDHY	0.50% of Assets	\$11,602,344	33.2%	\$58,012	0.50%
Total Real Estate - Core	-	\$3,464,282	9.9%	--	--
ARA Core Property Fund, LP	1.10% of Assets	\$3,464,282	9.9%	\$38,107	1.10%
Total Real Estate - Value Add	-	\$3,448,554	9.9%	--	--
Boyd Watterson State Government Fund, LP	1.25% of First 25.0 Mil, 1.15% of Next 75.0 Mil, 1.05% Thereafter	\$3,448,554	9.9%	\$43,107	1.25%
Total Cash Equivalents	-	\$1,097,837	3.1%	--	--
Cash Account	-	\$1,030,317	2.9%	--	--
Cash in Transit - ARA Core Property Fund, LP Redemption Proceeds	-	\$41,040	0.1%	--	--
Cash in Transit - ARA Core Property Fund, LP Distribution Proceeds	-	\$26,480	0.1%	--	--
Investment Management Fee		\$34,977,953	100.0%	\$186,810	0.53%

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.

Operating Engineers Local No. 77 Trust Fund of Washington DC

Master Consulting Services Report as of June 30, 2023

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 10% / Long-Term Income Objective 9% 10%
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 10% / Long-Term Income Objective 9% 10%
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.

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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The Fund's performance is attributable to factors other than the advice of IPS because, among other things, (a) IPS may act in an advisory capacity (i.e., IPS may not have discretion over Fund assets), (b) the Fund may or may not follow advice provided by IPS, and (c) returns may include investments made prior to the Fund's relationship with IPS. Nothing contained herein constitutes investment, legal, accounting, actuarial, or tax advice, or a recommendation to buy, sell, or hold a security or pursue a particular investment vehicle or any trading strategy. Past performance is no guaranty of future results.

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

