



# TOWN OF LEDYARD CONNECTICUT

741 Colonel Ledyard Highway  
Ledyard, Connecticut 06339

## Retirement Board

### ~ AGENDA ~

Chairman  
John Rodolico

Regular Meeting

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Tuesday, December 19, 2023

10:00 AM

Council Chambers - Hybrid Format

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#### REMOTE MEETING INFORMATION

**Meeting ID: 834 1680 4511**

**Passcode: 011397**

**Zoom Meeting Link:**

**<https://us06web.zoom.us/j/83416804511?pwd=gZzH5iEl3xmVjuiNjNkPXO2qmVgtgB.1>**

**Dial by your location:**

**+1 646 558 8656 US (New York)**

#### I. CALL TO ORDER

#### II. ROLL CALL

#### III. PRESENTATIONS

1. Chris Rowlin, Fiducient Advisors will be presenting the 3Q investment review and the November performance flash report.

**Attachments:** [Town of Ledyard - 3Q23 QIR](#)

#### IV. REVIEW AND APPROVAL OF MINUTES

1. Motion to APPROVE Regular Meeting Minutes from November 21, 2023, as written.

**Attachments:** [Retirement Board minutes 11-21-23](#)

#### V. DIRECTOR OF HUMAN RESOURCES UPDATE

1. Director of Human Resources update.

#### VI. FINANCE DIRECTOR'S REPORTS

1. Finance Director's Report.

#### VII. OLD BUSINESS

1. Any Other Old Business to come before the Board.
2. Discussion on a review of applicable labor contracts and retirement documents for Town of Ledyard employee groups with applicability to retirement eligibility and benefits continued.

#### VIII. NEW BUSINESS

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1. Motion to APPROVE payment of USI invoice #90086413, dated September 30, 2023, in the amount of \$8,500.00 for Core Installment Fee (50%) - Actuarial Services - 2023 Plan Year

**Attachments:** [Town of Ledyard \(1003385\) 90086413 9.30.2023](#)

2. Any other New Business to come before the Board.

**IX. ADJOURNMENT**

DISCLAIMER: Although we try to be timely and accurate these are not official records of the Town.



# TOWN OF LEDYARD

741 Colonel Ledyard  
Highway  
Ledyard, CT 06339-1511

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**File #:** 23-2341

**Agenda Date:** 12/19/2023

**Agenda #:** 1.

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AGENDA REQUEST  
GENERAL DISCUSSION ITEM

**Subject:**

Chris Rowllins, Fiducient Advisors will be presenting the 3Q investment review and the November performance flash report.

**Background:**

(type text here)

**Department Comment/Recommendation:**

(type text here)



**FIDUCIENT**  
Advisors

Helping Clients Prosper

Ledyard, CT

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Quarterly Investment Review - Third Quarter 2023

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*Please consult with your advisor, attorney and accountant, as appropriate, regarding specific advice. Past performance does not indicate future performance and there is risk of loss.*



# Fiducient Advisors Update



## Retirement Plans

### Featured Insights

- Blog - Smart Nudges: Behavioral Finance Successes and Opportunities in Defined Contribution Plans
- Pension Awareness Video Series and Newsletter
  - Liability-Driven Investing
  - Cash Balance Plans
  - Alternative Investments
  - Inverted Yield Curves
  - Effective Use of Glidepaths



## Research Insights

- Monthly Market Recaps
- Monthly Market Updates
  - *Summer Doldrums – August*
  - *Markets Heat Up in July – July*
- 2023 Third Quarter Considerations



## Endowments & Foundations

### Featured Insights

- Nonprofit Investment Stewards Podcast
- Mission-Aligned Investing: *Where Are We and Where to Next?*
- Blog: Knowledge is Power in Uncertain Times



## The Wealth Office®

### Featured Insights

- Blog: Don't Let Healthcare Costs Derail a Healthy Retirement
- Blog: Shield Your Wealth – Seven Steps to Better Protect Your Financial Information
- Blog: Preparing for Rising College Costs: Start Early & Save Often
- Watch Your Step! Avoid These 10 Common Investor Pitfalls

- Mid-Year Capital Markets Outlook
- Marketable Alternatives Mid-Year Update
- Private Markets Semi-Annual Update



# 2023 Investor Conference

*That's a wrap!*

## Featured speakers:

- Rick Rieder** | BlackRock
- Thasunda Brown Duckett** | TIAA
- John Diehl** | Hartford Funds
- Dr. Joseph Coughlin** | MIT AgeLab
- Sarah Hoffman** | Fidelity Investments
- Rob Mazzoni** | Wellington Management



# Save the Date!

## 2024 Investor Conference

*Chicago Marriott Downtown  
Magnificent Mile  
September 25 - 26*

## 2023 New Associates – Welcome!

**Sabrina Bailey**  
CEO

**Jeffrey Mitchell**  
Senior Consultant

**Graham Chidester**  
Performance Analyst

**Samia Naz**  
Middle Office Associate

# Table of Contents



Section 1	Fiduciary Governance Calendar
Section 2	Capital Markets Overview
Section 3	Portfolio and Manager Review



# Fiduciary Governance Calendar



\*Timing of actuarial review is dependent on client's individual plan and/or fiscal year and actuarial input.

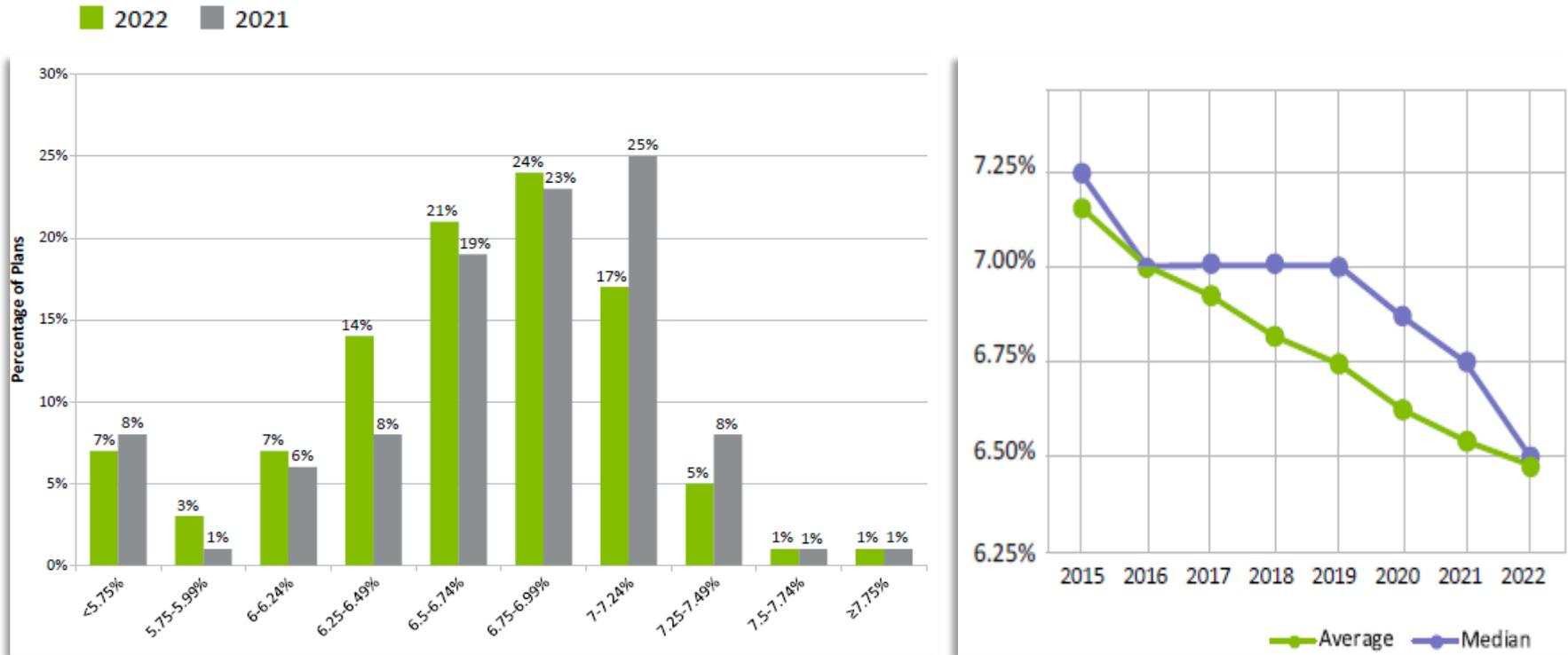


Town of Ledyard		
	<u>7/1/2023</u>	<u>7/1/2021</u>
Actuarial Value of Assets	\$30,367,826	\$28,700,912
Total Accrued Liability	\$34,234,228	\$32,850,603
Funded Ratio	88.7%	87.4%
Actuarial Return Assumption	6.25%	6.25%



# Trends in Investment Return Assumptions

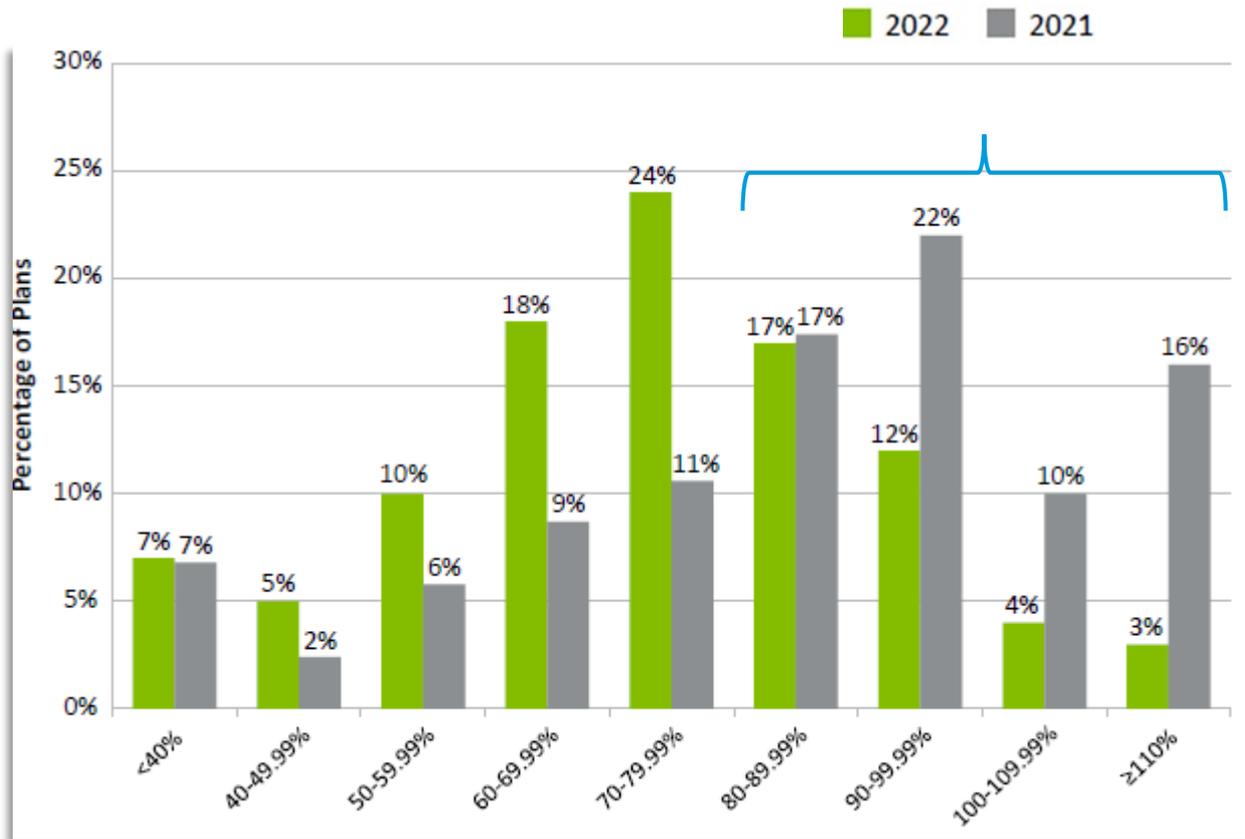
- The average investment return assumption across Connecticut municipal pension plans was 6.46% and the median was 6.50% for FY 2022. This represents a continued trend of public plans setting the assumed rate of return at lower, more achievable targets.
- The average long-term rate of return assumption has declined by 68 basis points, from 7.14% to 6.46%, from FY 2015 to FY 2022. We expect to see a pause in setting lower assumed rates of return on a go forward bases due to the restoration of higher bond yields.



Source: Hooker & Holcombe 2023 Municipal Pension & OPEB Report: 200 Municipal CT Plans. Data extracted from the CAFRs submitted by local municipalities in CT for fiscal year ending June 30, 2022

# Trends in Funded Ratios

- Funded ratios for CT municipal pension plans declined for FY 2022 following a challenging investment environment. The average funded ratio stood at 72.4% for FY 2022 down from 85.8% as of FY 2021.
- For FY 2022, 36% of the pension plans analyzed exceeded the 80% funded mark, a notable decrease from when 65% of pension plans exceeded 80% funded levels in FY 2021.

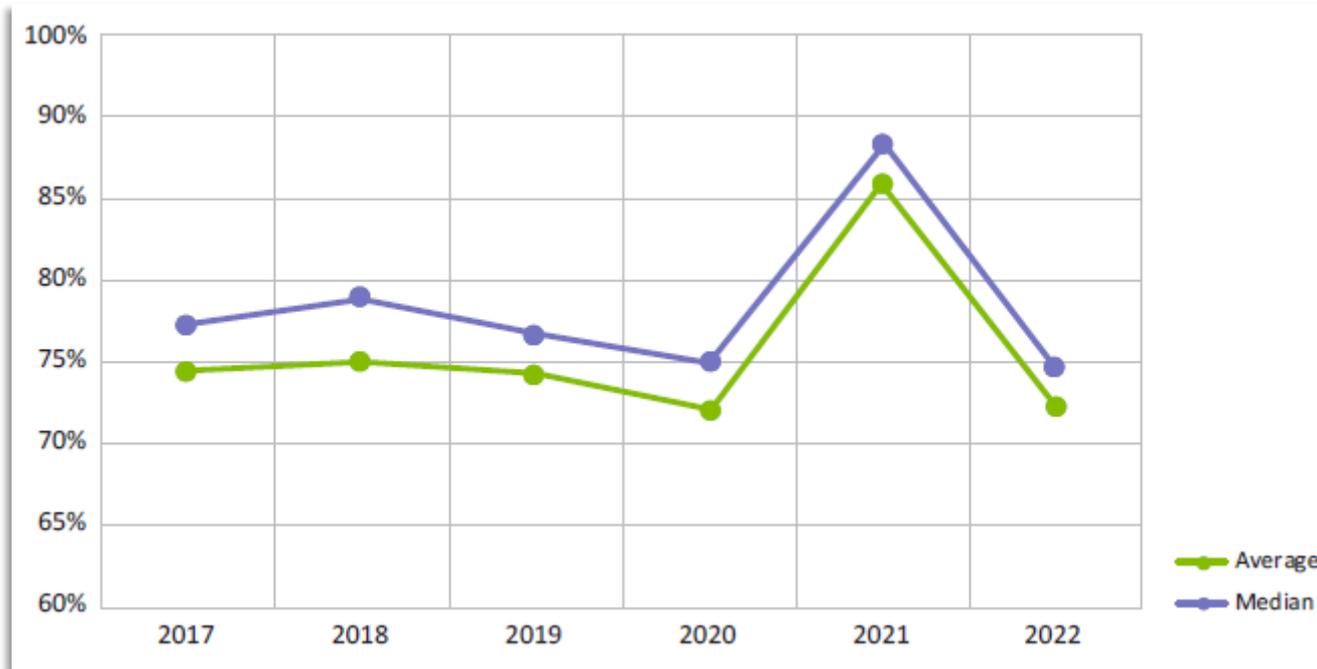


Source: Hooker & Holcombe 2023 Municipal Pension & OPEB Report: 200 Municipal CT Plans. Data extracted from the CAFRs submitted by local municipalities in CT for fiscal year ending June 30, 2022



# Trends in Funded Ratios

- The illustration below provides a historical trend for CT municipal pension plans since 2017.
- Following outsized investment performance in FY 2021 which resulted in a meaningful spike and improvement in the average funded ratio, FY 2022's challenging investment environment resulted in a return to historical averages.



Source: Hooker & Holcombe 2023 Municipal Pension & OPEB Report: 200 Municipal CT Plans. Data extracted from the CAFRs submitted by local municipalities in CT for fiscal year ending June 30, 2022



# Trends in Funded Ratios for OPEB Plans

- Roughly 53% of CT OPEB plans are unfunded with 47% of plans funded with an OPEB trust.
- For plans funding an OPEB, the average funded ratio was 36.5% for FY 2022 and represents a 6.6% decrease from FY 2021. The median investment return assumption for funded OPEB plans stood at 6.25%, a decrease of 25 basis points FY 2021.

PERCENTAGE OF FUNDED OPEB PLAN INCREASES



UNFUNDED

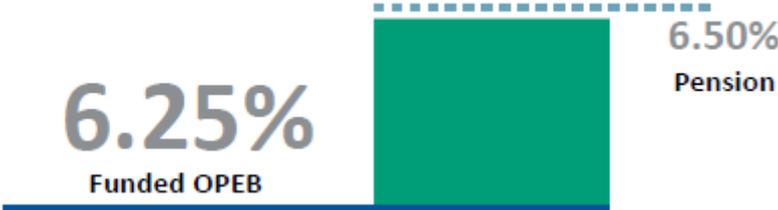


FUNDED BY  
OPEB TRUST

DECREASE IN AVERAGE FUNDED RATIO



Investment Return Assumptions



Source: Hooker & Holcombe 2023 Municipal Pension & OPEB Report: 175 municipal OPEB plans. Data extracted from the CAFRs submitted by local municipalities in CT for fiscal year ending June 30, 2022



# Market Themes

1. We are likely at or near the peak cycle Federal Funds rate as the Fed evaluates a lagged impact from its monetary policy actions. Although markets consolidated a bit in the quarter on an evolving Fed narrative, a Fed “pause” and a higher for longer environment has historically resulted in favorable capital market returns.
2. Rising interest rates have increased the return outlook for fixed income and valuations look attractive relative to equities. Evaluating the new environment and the role fixed income plays in meeting investment objectives is top of mind for investors.
3. Inflation has improved significantly since peaking above nine percent in 2022 and is approaching the Fed’s two percent target. However, the final steps will likely be the hardest to overcome and the path may not be linear.

## Performance Following the Fed’s Last Hike – Next 12 Months

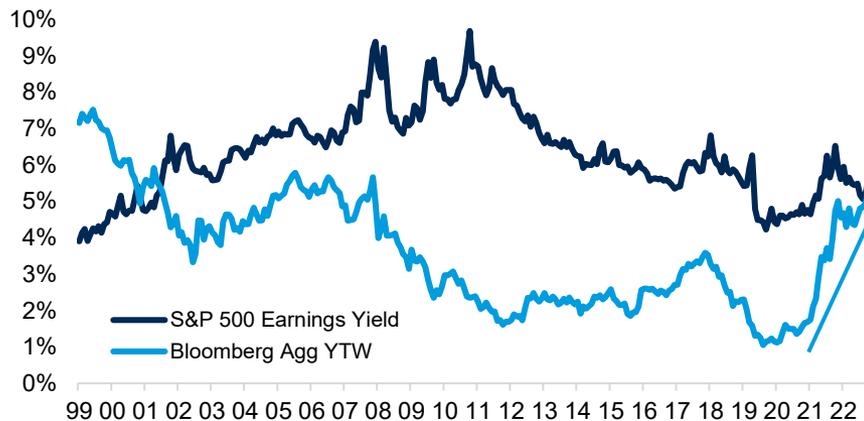
Financial markets have performed well following the Federal Reserve’s last rate hike, historically re-pricing ahead of the Fed. For example, the 10-year U.S. Treasury yield typically peaks prior to a Fed pause.

Date of Last Fed Rate Hike	“Pause” (Months to Next Cut)	Forward 3-Year Return from Date of Last Rate Hike (%)		
		Bbg Agg	1-3m Tbill	S&P 500
12/20/2018	7.5	5.0	0.9	25.0
6/29/2006	14.9	6.6	3.1	-8.0
5/16/2000	7.7	11.1	3.4	-12.4
3/25/1997	18.4	6.3	5.2	26.5
2/1/1995	5.2	10.2	5.5	30.5
<i>Averages</i>		<i>7.8</i>	<i>3.6</i>	<i>12.3</i>

Sources: Federal Reserve, FactSet, Morningstar Direct. As of September 30, 2023. Indexes used are Bloomberg U.S. Aggregate Bond Index, Bloomberg 1-3m TBill Index, and S&P 500 Index.

## Relative Valuations Between Equity and Fixed Income

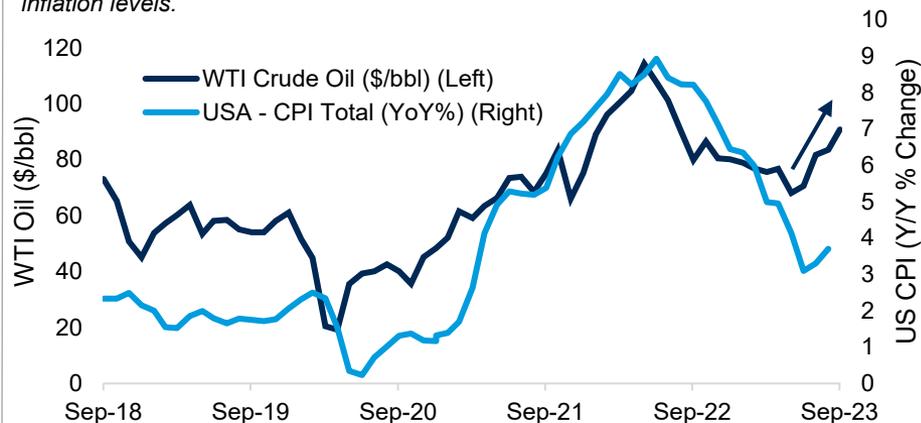
Bond yields have risen and the relative valuation gap between U.S. equity and fixed income has converged to nearly equal levels, the closest valuations have been in over 20 years.



Source: FactSet. As of September 30, 2023.

## Oil Prices Ticked Higher in the Quarter

Oil prices moved higher during the third quarter on the back of continued supply constraints from OPEC. Commodity prices are a large component of inflation and are one of the many factors that may contribute to the volatile path toward target inflation levels.



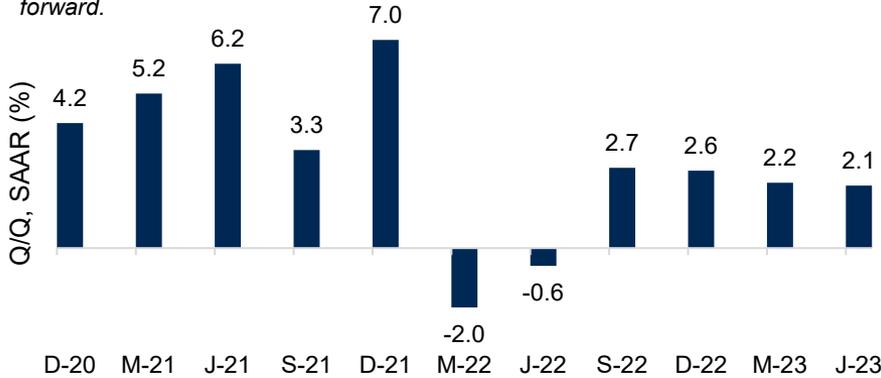
Source: FactSet. Oil as of September 30, 2023; CPI as of August 31, 2023.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.

# Economic Review

## U.S. Real GDP Growth

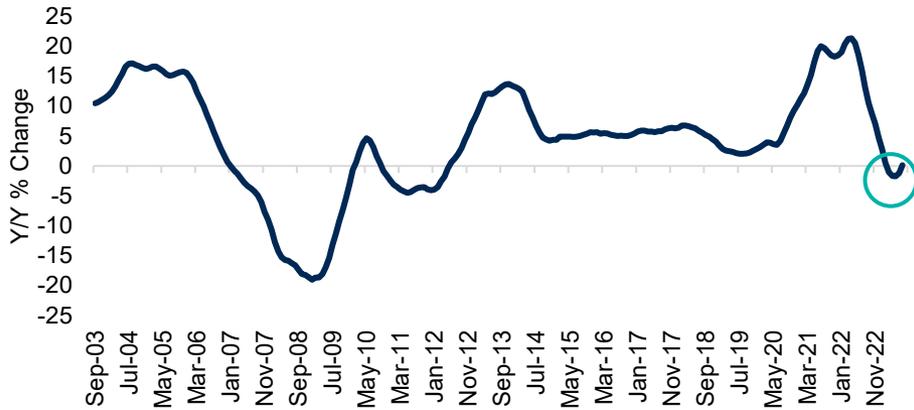
The U.S. economy remains resilient despite tightening monetary conditions. Favorable consumer spending and business investment helped propel growth in Q2 2023. Market expectations of recession have shifted significantly lower since the start of the year, but there are cautionary signs that may impact growth going forward.



Sources: FactSet, BEA. As of September 30, 2023.

## S&P Case Shiller 20 City Home Price Index

The index fell on a year over year basis for the first time in over ten years. Home prices, which have been a stubbornly sticky portion of inflation, have moderated and may help ease inflation levels in the future.



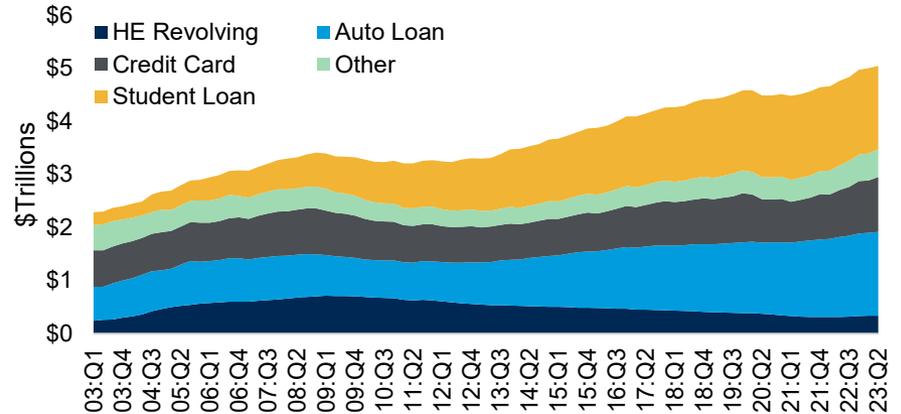
Sources: FactSet, S&P/Case Shiller. As of July 31, 2023.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.

Indices cannot be invested in directly.

## Rising Consumer Debt – Ex Mortgages

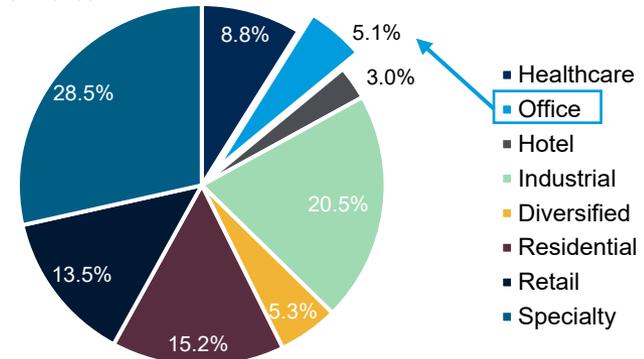
The U.S. consumer has been strong over the past few years but growing debt levels, rising delinquencies, increased cost of financing, declining savings, and the resumption of student loan payments, may test consumer resilience going forward.



Source: Federal Reserve Bank of New York. As of Q2 2023

## Office Only a Small Portion of REIT Market

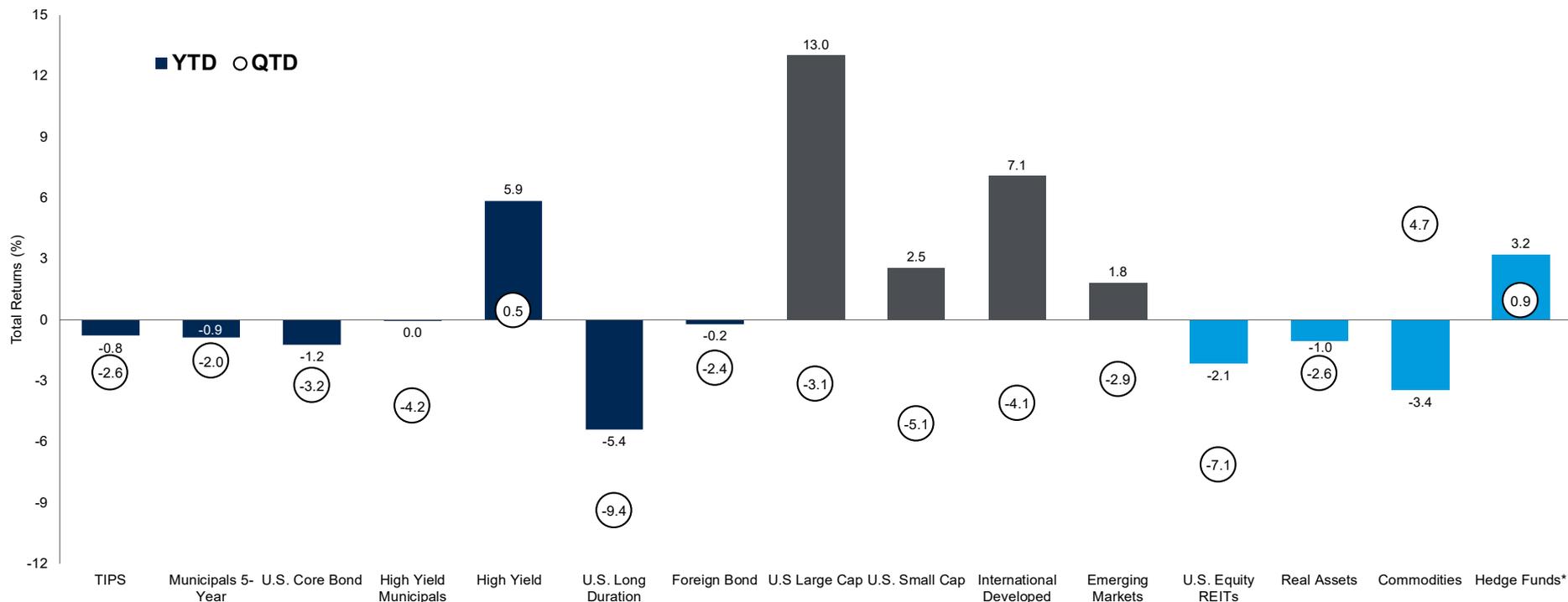
Commercial real estate continues to garner headlines, driven by weakness in the office market. While the office space certainly deserves attention, it only accounts for a small portion of the REIT market and fundamentals remain healthy across other property types.



Source: Morningstar Direct. As of September 30, 2023. Sector weights of the FTSE Nareit Equity REIT Index.



# Asset Class Returns



Source: Morningstar Direct. As of September 30, 2023. \*Hedge fund returns as of August 31, 2023.

## Fixed Income (3Q)

- Volatility continued in fixed income markets and most segments posted negative returns. Interest rates rose as markets digested the possibility of a higher-for-longer regime from the Federal Reserve as the central bank continues to tackle bringing inflation to target levels.

+ High yield fared best as the segment, which has a lower duration profile than core fixed income, is less sensitive to interest rate changes.

- Long duration assets saw large declines in the quarter as longer dated rates experienced a sharp jump higher in the quarter.

## Equity (3Q)

- Equities were broadly lower in the period as higher interest rates led to a re-pricing of valuations. U.S. large cap outperformed small cap.

- Developed non-U.S. struggled in the quarter. The Eurozone continues to have weak economic activity and central banks remain in tightening stances.

- Emerging markets outperformed in the quarter but were still negative on an absolute basis. Positive momentum in the Indian economy provided a tailwind for the emerging region.

## Real Asset / Alternatives (3Q)

- REITs took a step back during the period. Self-storage, Diversified and Residential were among the worst performing sub-sectors.

+ Commodities were a standout in the third quarter. Strong results stemmed from a jump in oil prices.

+ Hedge funds (reported on a month lag) posted a positive return for the first two months of the quarter. Event Driven and Relative Value strategies were among the top performing components.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.

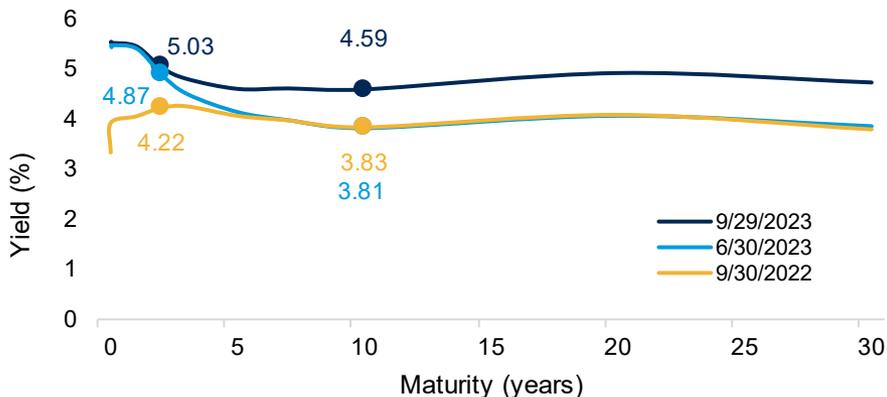
Indices cannot be invested in directly.



# Fixed Income Market Update

## U.S. Treasury Yield Curve

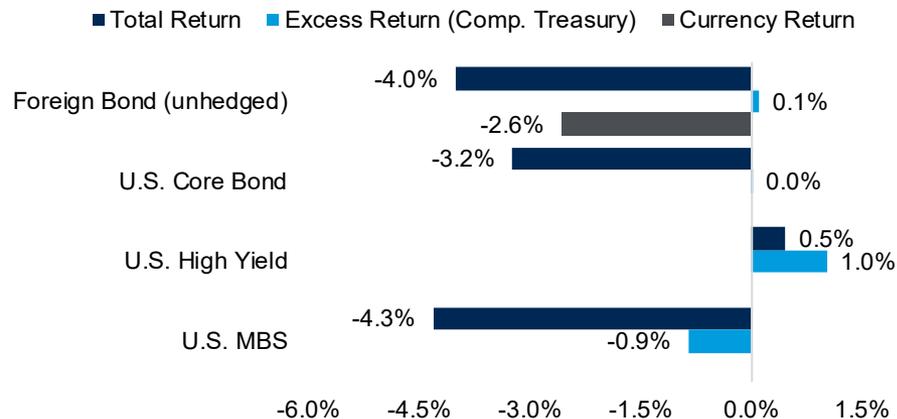
Interest rates rose across the yield curve during the quarter. The Fed paused in September following July's 25 basis point hike. The prospect of a higher-for-longer environment as inflation moves closer to the 2% target was a main driver of the move higher.



Source: FactSet. As of September 29, 2023.

## Index Performance Attribution (3Q 2023)

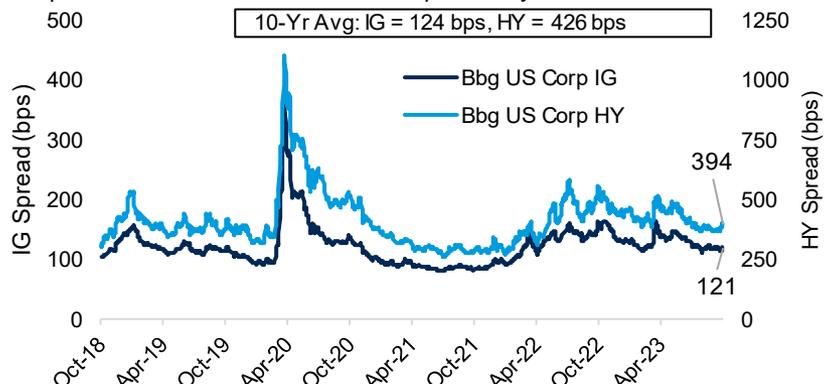
"Risk-on" sentiment early in the quarter fueled the corporate high yield market as fundamentals remain favorable and supply has been constrained. The MBS market continues to struggle amid the volatile and rising interest rate environment.



Source: FactSet. As of September 29, 2023.

## Corporate Market Spreads – Trailing 5 Years

Corporate credit spreads ended the quarter essentially where they began. After a strong rally in July, spreads widened to end the quarter. Issuance ticked up in September but remains low relative to previous years.

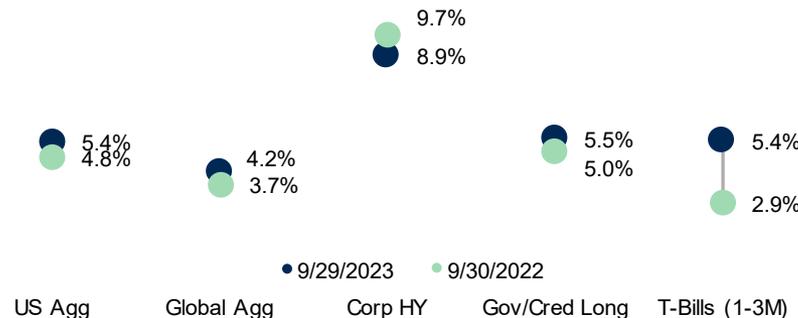


Source: FactSet. As of September 29, 2023.

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## Current Yield-to-Worst vs. 1 Year Ago

Yields continue to rise, fueled primarily by increasing interest rates as credit spreads have remained subdued. The return outlook for fixed income looks more attractive compared to this time last year.



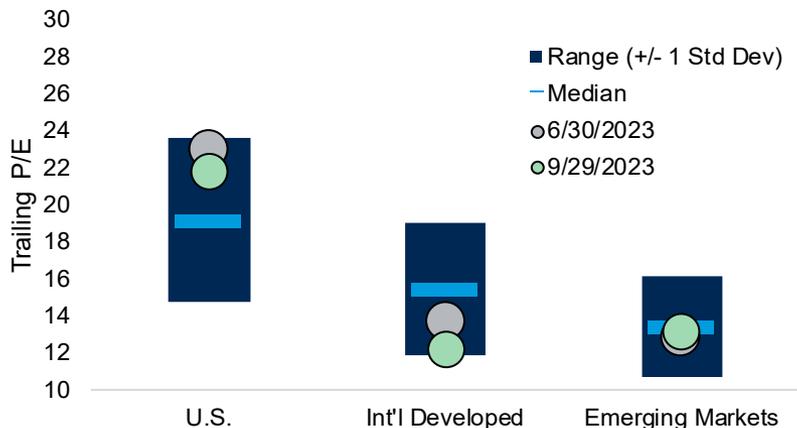
Source: FactSet. As of September 29, 2023. Based on respective Bloomberg Index.



# Equity Market Update

## Equity Valuations (Trailing PE – Last 15 Years)

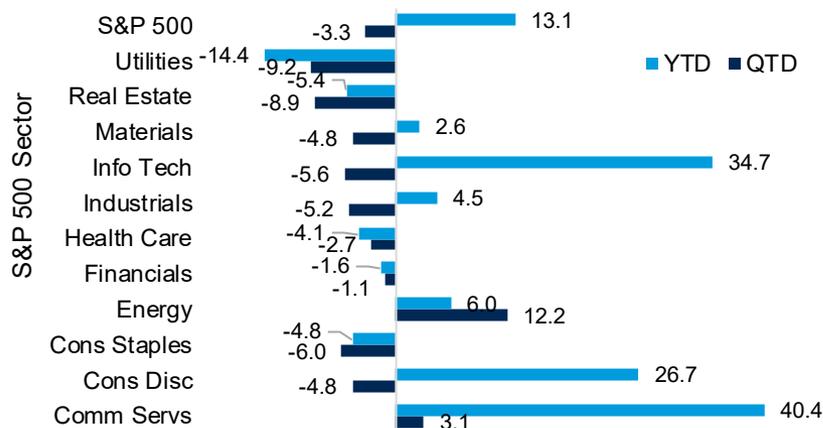
Equity valuations compressed in the third quarter as prices fell. Higher rates were the main culprit of the repricing. Non-U.S. markets continue to look favorably valued relative to the U.S.



Source: FactSet. As of September 29, 2023.

## U.S. Equities – Return by Sector (3Q 2023)

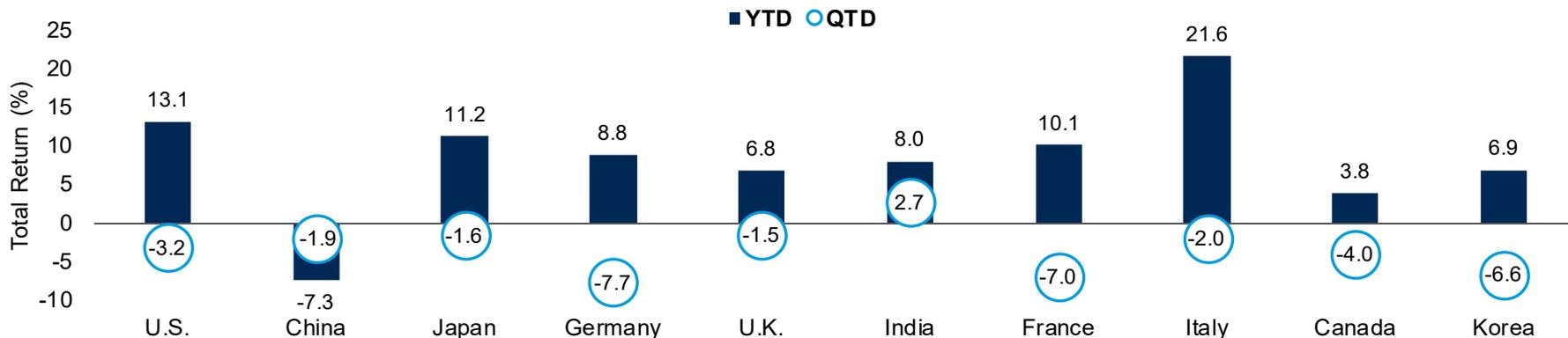
Energy and communication services were the lone positive sectors in the quarter. Energy benefited from a spike in oil prices, while Alphabet and Meta were top contributors within the communication sector.



Source: Morningstar Direct. As of September 30, 2023. Total Returns.

## Country Total Returns (%) – Top 10 Largest Economies

Most global equity markets saw declining returns during the third quarter, but still remain positive year to date. A higher-for-longer interest rate environment prompted much of the sell-off for developed markets as investors weighed the potential impact to future economic growth and the effect on corporate earnings. Much of Europe struggled, with key countries such as Germany reporting negative GDP growth. On the other hand, India was a bright spot on the back of favorable economic data.



Source: Morningstar Direct. As of September 30, 2023.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.

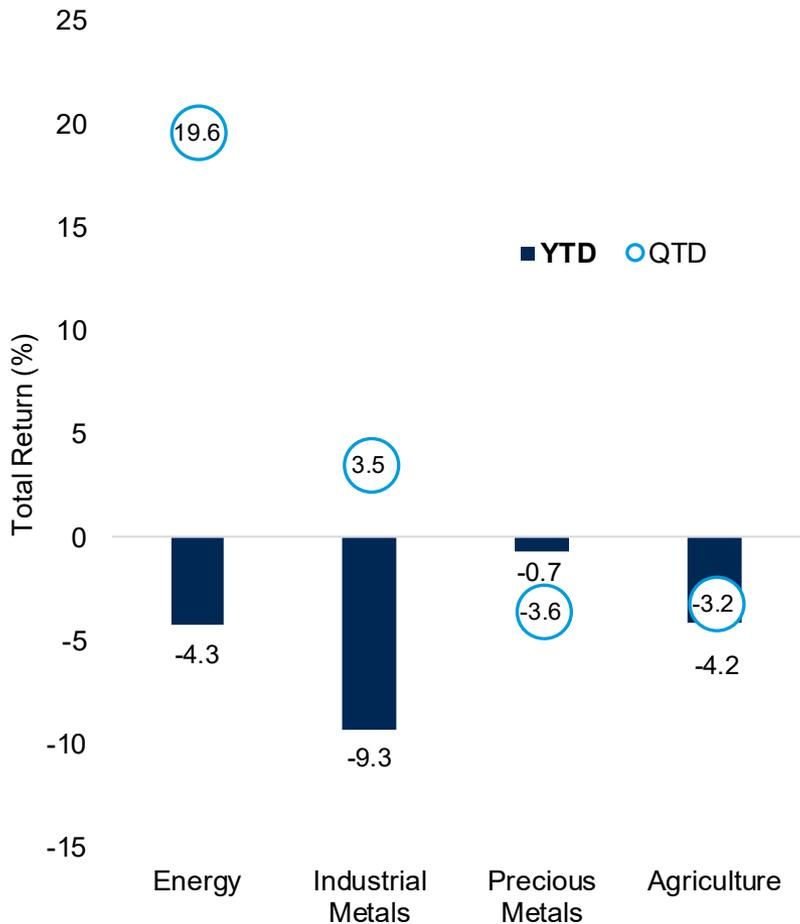
Indices cannot be invested in directly.



# Real Assets Market Update

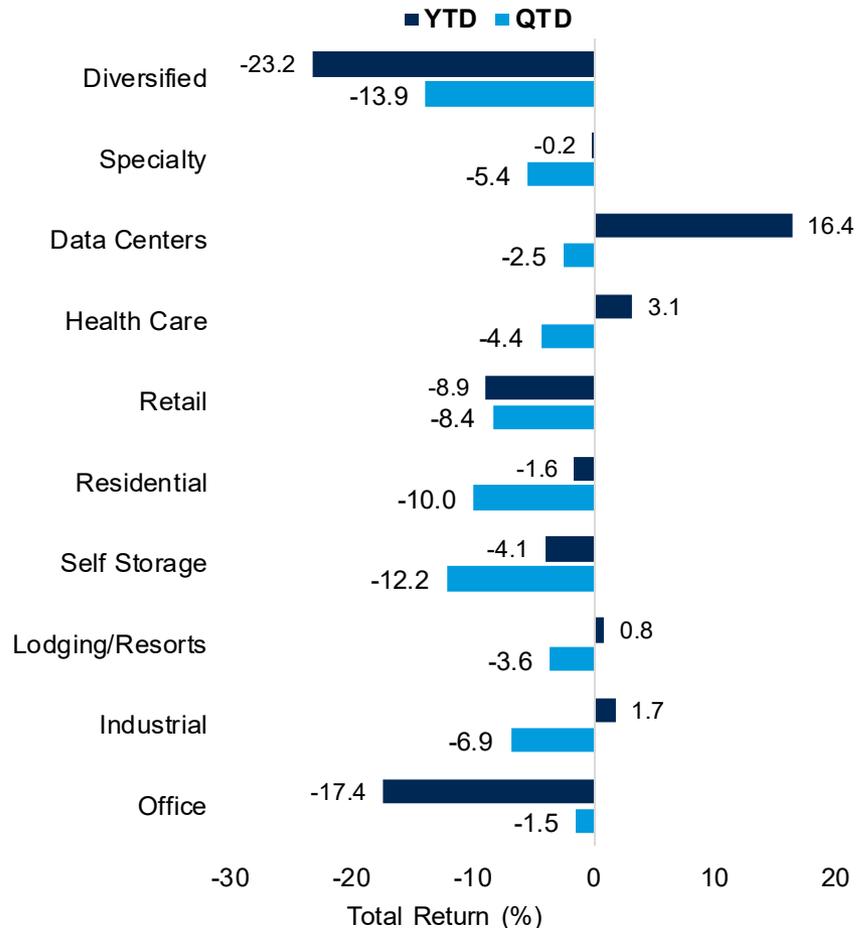
## Commodity Performance

Commodities overall posted a positive return, but underlying results were mixed. Energy was the clear leader in the quarter, driven by constrained supply from OPEC, with oil prices approaching \$100 a barrel.



## REIT Sector Performance

The general equity selloff and greater interest rate sensitivity of REITs pushed the segment lower. The Diversified sub-sector was among the worst in the quarter as Towers, which are a large component, came under pressure amid concerns surrounding cable lines polluting rivers.



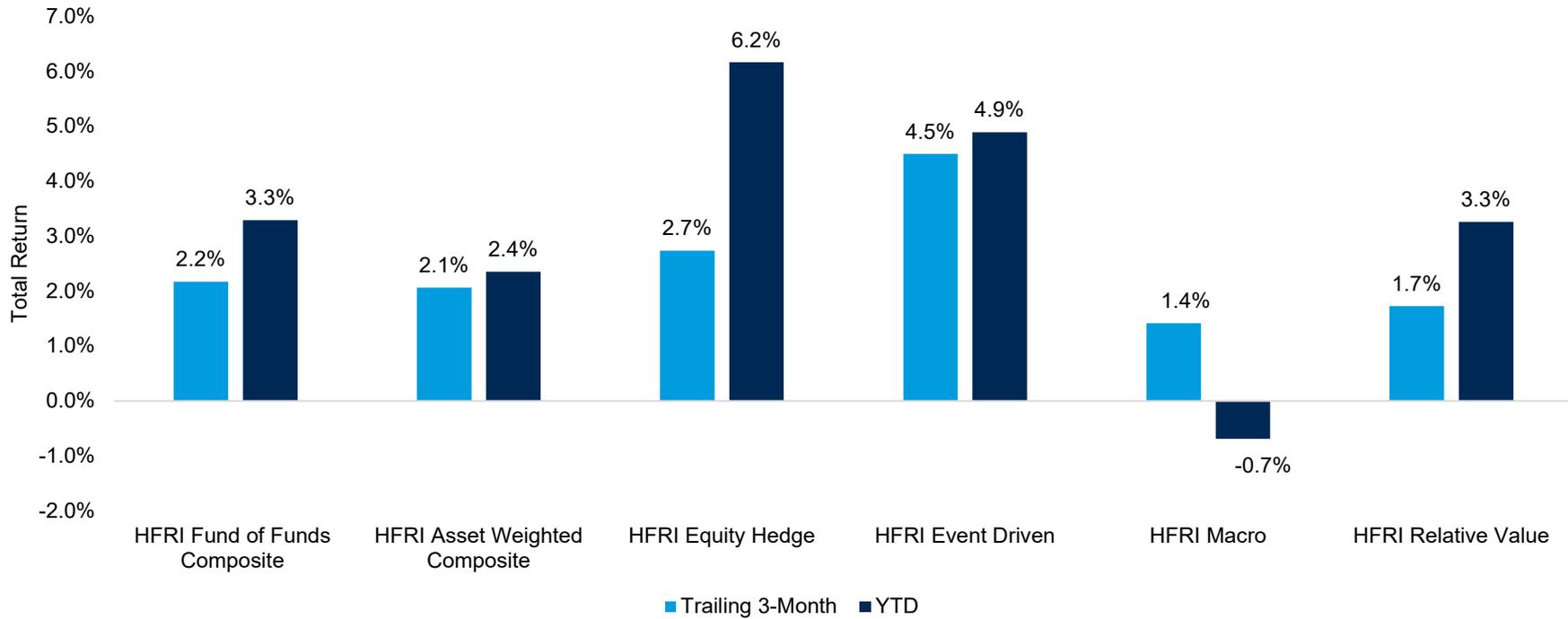
Source: Morningstar Direct. As of September 30, 2023.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.

Indices cannot be invested in directly.



# Marketable Alternatives



Source: Morningstar Direct. As of August 31, 2023.

## Fund of Funds / Asset Weighted (3Q)

+ The HFRI Fund of Funds Composite returned 2.2 percent over the trailing 3-month period, bringing its year-to-date return to 3.3 percent.

+ The HFRI Asset Weighted Composite returned 2.1 percent over the trailing 3-month period, bringing its year-to-date return to 2.4 percent.

+/- Marketable alternatives lagged equity markets but outpaced fixed income markets over the trailing 3-month period amidst continued volatility in fixed income and rising interest rates.

## Equity Hedge / Event Driven (3Q)

+ Equity Hedge strategies returned 2.7 percent over the period, participating in a strong equity market. Fundamental Value and Quantitative Directional focused funds were notable contributors.

+ Event Driven strategies returned 4.5 percent over the period and finished as the best performing strategy type.

+ Activist and Special Situations focused funds were amongst the highest performers during the period, returning 6.6 percent and 6.2 percent, respectively.

## Macro / Relative Value (3Q)

+ Macro strategies returned 1.4 percent over the period, with discretionary managers generally outpacing their systematic peers.

+ Relative Value strategies returned 1.7 percent over the period with broad positive performance across strategy types.

+ Within Relative Value strategies, Yield Alternatives focused funds were a notable bright spot, returning 4.9 percent over the period.

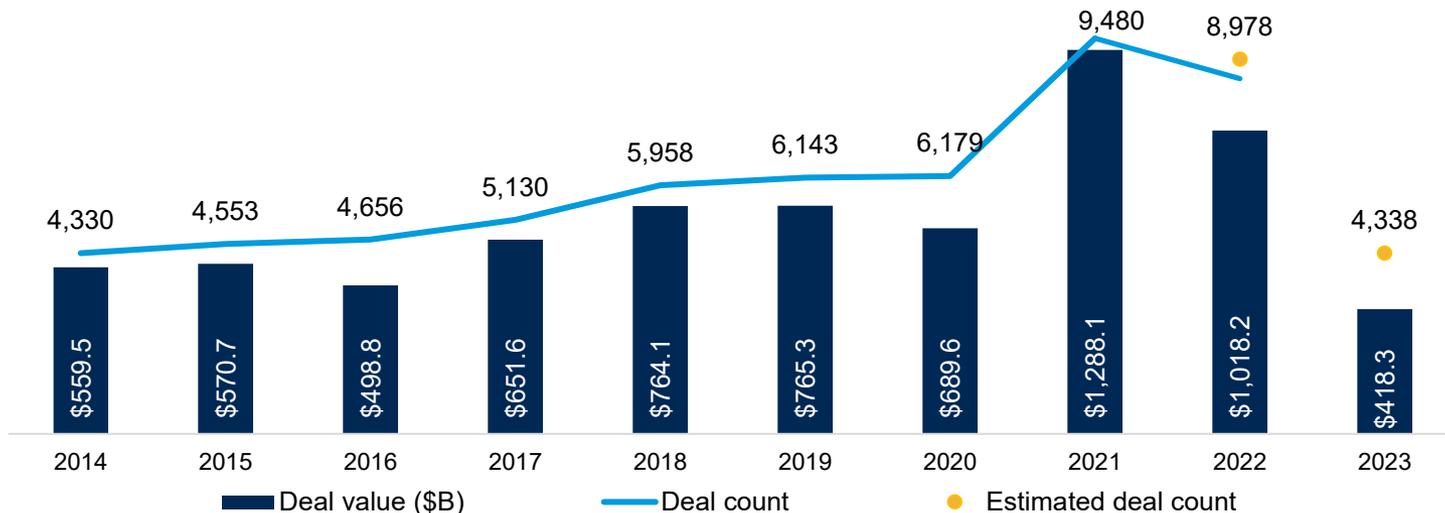
Benchmark Return Indices cannot be invested in directly. HFRI benchmarks are net of fees. Past performance does not indicate future performance and there is a possibility of a loss. See disclosures for list of indices representing each asset class.



# Private Equity Market Update

## U.S. Private Equity Deal Activity

U.S. Private Equity deal activity in the first half of the year was high but has moderated from a record 2021 and 2022 years.



Source: Pitchbook. As of June 30, 2023.

## Private Equity Performance (As of March 31, 2023)

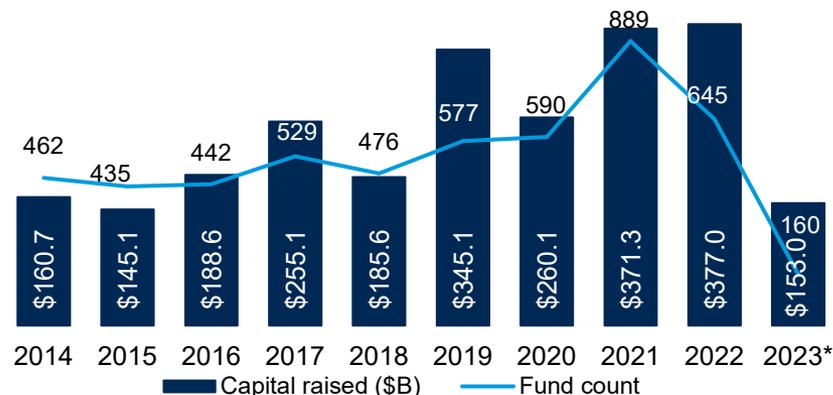
Private equity performance was dispersed during the first quarter of 2023 with US Venture posting negative returns while buyout was modestly positive. For most of 2022 and early 2023, buyout was more resilient while growth and venture lagged.

Benchmark	1-YR	3-YR	5-YR	10-Y	15-Y
US Private Equity Index	-1.5%	25.8%	18.5%	17.0%	13.0%
US Buyout Index	2.0%	25.7%	17.7%	16.6%	12.6%
US Growth Equity Index	-10.3%	26.2%	21.0%	18.2%	14.8%
US Venture Capital Index	-18.2%	26.3%	21.5%	18.4%	12.9%
S&P 500 Index	-7.7%	18.6%	11.2%	12.2%	10.1%

Source: Cambridge Associates. As of March 31, 2023. Returns presented as horizon pooled return, net of fees. S&P 500 Index as of March 31, 2023. Indices cannot be invested in directly.

## U.S. Private Equity Fundraising Activity

Following record years in 2021 and 2022, the fundraising market moderated in the first and second quarter of 2023. However, the middle market, funds \$100MM - \$5BN, is on track to have its best fundraising year ever.



Source: Pitchbook. As of June 30, 2023.



# The Case for Diversification

2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	YTD	10 Years (Ann)
U.S. Small Cap 38.8	U.S. Equity REITs 30.1	U.S. Equity REITs 3.2	U.S. Small Cap 21.3	Emerging Markets 37.3	High Yield Munis 4.8	U.S. Large Cap 31.5	U.S. Small Cap 20.0	U.S. Equity REITs 43.2	Commodities 16.1	U.S. Large Cap 13.0	U.S. Large Cap 11.6
U.S. Large Cap 32.4	High Yield Munis 13.8	Municipals 5-Year 2.4	High Yield 17.1	International Dev. 25.0	Municipals 5-Year 1.7	U.S. Equity REITs 26.0	U.S. Large Cap 18.4	Commodities 27.1	Municipals 5-Year -5.3	International Developed 7.1	U.S. Small Cap 6.6
International Dev. 22.8	U.S. Large Cap 13.7	High Yield Munis 1.8	U.S. Large Cap 12.0	U.S. Large Cap 21.8	Foreign Bond 0.5	U.S. Small Cap 25.5	Emerging Markets 18.3	US Large Cap 26.5	Hedge Funds -5.6	High Yield 5.9	U.S. Equity REITs 6.0
Balanced 12.2	Core Bond 6.0	U.S. Large Cap 1.4	Commodities 11.7	U.S. Small Cap 14.6	Core Bond 0.0	International Dev. 22.5	TIPS 11.0	US Small Cap 14.8	High Yield -11.2	Balanced 3.4	High Yield 4.2
Hedge Funds 9.0	Balanced 5.1	Core Bond 0.6	Emerging Markets 11.2	Balanced 13.6	TIPS -1.3	Emerging Markets 18.4	Balanced 8.8	International Dev. 11.3	TIPS -11.8	Hedge Funds 3.2	Balanced 4.1
High Yield 7.4	U.S. Small Cap 4.9	Hedge Funds -0.3	U.S. Equity REITs 8.5	High Yield Munis 9.7	High Yield -2.1	Balanced 17.5	International Dev. 7.8	Balanced 9.8	U.S. Core Bond -13.0	U.S. Small Cap 2.5	High Yield Municipals 4.0
U.S. Equity REITs 2.5	TIPS 3.6	International Dev. -0.8	Balanced 7.6	Hedge Funds 7.8	Hedge Funds -4.0	High Yield 14.3	Core Bond 7.5	High Yield Munis 7.8	High Yield Municipals -13.1	Emerging Markets 1.8	International Developed 3.8
Municipals 5-Year 0.8	Hedge Funds 3.4	TIPS -1.4	TIPS 4.7	High Yield 7.5	U.S. Large Cap -4.4	High Yield Munis 10.7	Hedge Funds 7.1	TIPS 6.0	Foreign Bond -14.2	High Yield Municipals 0.0	Hedge Funds 3.5
Foreign Bond -1.0	Municipals 5-Year 3.2	Foreign Bond -2.3	Foreign Bond 3.2	Foreign Bond 6.5	U.S. Equity REITs -4.6	Core Bond 8.7	High Yield 7.1	Hedge Funds 5.7	International Dev. -14.5	Foreign Bond -0.2	Emerging Markets 2.1
Core Bond -2.0	Foreign Bond 2.9	Balanced -3.3	High Yield Munis 3.0	U.S. Equity REITs 5.2	Balanced -5.8	TIPS 8.4	Foreign Bond 7.0	High Yield 5.3	Balanced -14.9	TIPS -0.8	TIPS 1.7
Emerging Markets -2.6	High Yield 2.5	U.S. Small Cap -4.4	Core Bond 2.6	Core Bond 3.5	U.S. Small Cap -11.0	Hedge Funds 7.8	High Yield Munis 4.9	Municipals 5-Year 0.3	U.S. Large Cap -19.1	Municipals 5-Year -0.9	Municipals 5-Year 1.4
High Yield Munis -5.5	Emerging Markets -2.2	High Yield -4.5	International Dev. 1.0	Municipals 5-Year 3.1	Commodities -11.2	Commodities 7.7	Municipals 5-Year 4.3	Core Bond -1.5	Emerging Markets -20.1	U.S. Core Bond -1.2	U.S. Core Bond 1.1
TIPS -8.6	International Dev. -4.9	Emerging Markets -14.9	Hedge Funds 0.5	TIPS 3.0	International Dev. -13.8	Foreign Bond 6.3	Commodities -3.1	Emerging Markets -2.5	U.S. Small Cap -20.4	U.S. Equity REITs -2.1	Foreign Bond 0.3
Commodities -9.5	Commodities -17.0	Commodities -24.7	Municipals 5-Year -0.4	Commodities 1.7	Emerging Markets -14.6	Municipals 5-Year 5.4	U.S. Equity REITs -8.0	Foreign Bond -4.2	U.S. Equity REITs -24.4	Commodities -3.4	Commodities -0.7

Sources: Morningstar, FactSet. As of September 30, 2023. \*Periods greater than one year are annualized. Total returns in U.S. dollars. Hedge Funds as of August 31, 2023.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss. Indices cannot be invested in directly.



# Financial Markets Performance

**Total Return as of September 30, 2023**  
**Periods greater than one year are annualized**  
**All returns are in U.S. dollar terms**

<b>Global Fixed Income Markets</b>	<b>QTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
Bloomberg 1-3-Month T-Bill	1.3%	3.7%	4.6%	1.8%	1.7%	1.5%	1.1%	0.8%
Bloomberg U.S. TIPS	-2.6%	-0.8%	1.2%	-2.0%	2.1%	1.5%	1.7%	2.9%
Bloomberg Municipal Bond (5 Year)	-2.0%	-0.9%	2.2%	-1.7%	1.0%	0.8%	1.4%	2.6%
Bloomberg High Yield Municipal Bond	-4.2%	0.0%	3.5%	-0.7%	1.7%	2.3%	4.0%	4.9%
Bloomberg U.S. Aggregate	-3.2%	-1.2%	0.6%	-5.2%	0.1%	-0.1%	1.1%	2.5%
Bloomberg U.S. Corporate High Yield	0.5%	5.9%	10.3%	1.8%	3.0%	3.8%	4.2%	7.3%
Bloomberg Global Aggregate ex-U.S. Hedged	-0.8%	2.8%	3.0%	-2.6%	0.8%	0.9%	2.3%	3.1%
Bloomberg Global Aggregate ex-U.S. Unhedged	-4.0%	-3.2%	3.4%	-8.4%	-3.1%	-2.8%	-1.7%	0.4%
Bloomberg U.S. Long Gov / Credit	-9.4%	-5.4%	-2.9%	-11.9%	-1.2%	-1.4%	1.9%	4.3%
<b>Global Equity Markets</b>	<b>QTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
S&P 500	-3.3%	13.1%	21.6%	10.2%	9.9%	12.2%	11.9%	11.3%
Dow Jones Industrial Average	-2.1%	2.7%	19.2%	8.6%	7.1%	11.5%	10.8%	10.5%
NASDAQ Composite	-3.9%	27.1%	26.1%	6.6%	11.4%	15.0%	14.5%	14.3%
Russell 3000	-3.3%	12.4%	20.5%	9.4%	9.1%	11.6%	11.3%	11.0%
Russell 1000	-3.1%	13.0%	21.2%	9.5%	9.6%	12.0%	11.6%	11.3%
Russell 1000 Growth	-3.1%	25.0%	27.7%	8.0%	12.4%	15.6%	14.5%	13.7%
Russell 1000 Value	-3.2%	1.8%	14.4%	11.1%	6.2%	7.9%	8.5%	8.6%
Russell Mid Cap	-4.7%	3.9%	13.4%	8.1%	6.4%	8.7%	9.0%	10.3%
Russell Mid Cap Growth	-5.2%	9.9%	17.5%	2.6%	7.0%	10.4%	9.9%	11.3%
Russell Mid Cap Value	-4.5%	0.5%	11.0%	11.0%	5.2%	6.8%	7.9%	9.2%
Russell 2000	-5.1%	2.5%	8.9%	7.2%	2.4%	6.6%	6.6%	8.1%
Russell 2000 Growth	-7.3%	5.2%	9.6%	1.1%	1.6%	6.8%	6.7%	8.8%
Russell 2000 Value	-3.0%	-0.5%	7.8%	13.3%	2.6%	5.9%	6.2%	7.2%
MSCI ACWI	-3.4%	10.1%	20.8%	6.9%	6.5%	8.6%	7.6%	7.6%
MSCI ACWI ex. U.S.	-3.8%	5.3%	20.4%	3.7%	2.6%	4.7%	3.3%	4.3%
MSCI EAFE	-4.1%	7.1%	25.6%	5.8%	3.2%	5.3%	3.8%	4.7%
MSCI EAFE Growth	-8.6%	4.3%	20.0%	0.4%	3.2%	5.3%	4.4%	5.2%
MSCI EAFE Value	0.6%	9.9%	31.5%	11.1%	2.8%	5.0%	3.0%	3.9%
MSCI EAFE Small Cap	-3.5%	1.8%	17.9%	1.1%	0.8%	4.0%	4.3%	6.6%
MSCI Emerging Markets	-2.9%	1.8%	11.7%	-1.7%	0.6%	3.2%	2.1%	3.8%
<b>Alternatives</b>	<b>QTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
Consumer Price Index*	0.8%	2.4%	3.7%	5.7%	4.0%	3.5%	2.8%	2.3%
FTSE NAREIT Equity REITs	-7.1%	-2.1%	3.0%	5.8%	2.8%	2.6%	6.0%	5.9%
S&P Real Assets	-2.6%	-1.0%	6.2%	4.3%	2.9%	3.2%	3.2%	4.8%
FTSE EPRA NAREIT Developed	-5.6%	-4.1%	2.7%	1.5%	-0.3%	0.7%	3.0%	4.4%
FTSE EPRA NAREIT Developed ex U.S.	-2.8%	-6.9%	2.8%	-4.2%	-3.5%	-1.1%	0.1%	3.0%
Bloomberg Commodity Total Return	4.7%	-3.4%	-1.3%	16.2%	6.1%	4.7%	-0.7%	-2.3%
HFRI Fund of Funds Composite*	0.9%	3.2%	3.3%	3.8%	3.4%	3.9%	3.5%	2.4%
HFRI Asset Weighted Composite*	1.0%	2.4%	0.4%	5.5%	3.5%	4.0%	3.8%	3.9%

Sources: Morningstar, FactSet. As of September 30, 2023. \*Consumer Price Index and HFRI indexes as of August 31, 2023.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.

Indices cannot be invested in directly.

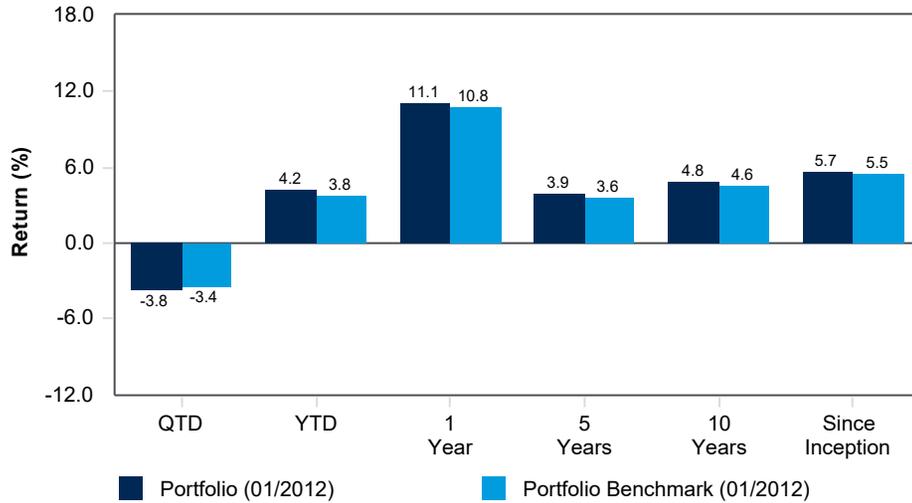


# Portfolio Dashboard

Town of Ledyard Pension Plan

As of September 30, 2023

## Historical Performance



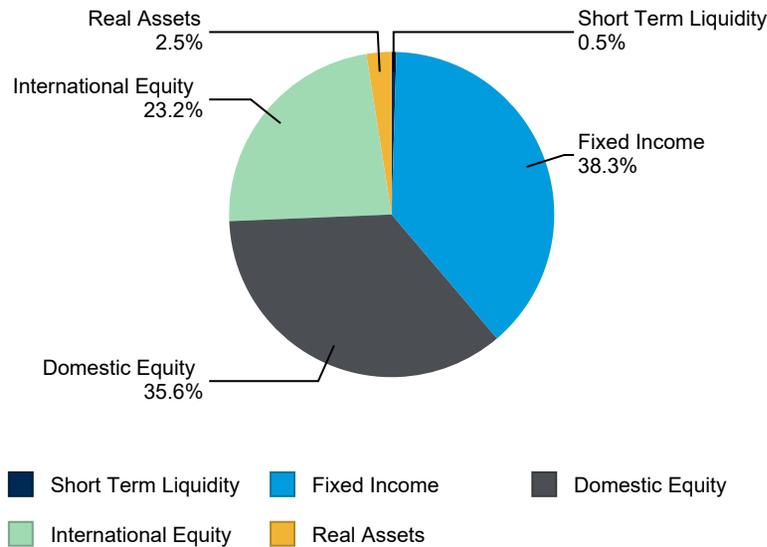
## Summary of Cash Flows

	QTD	YTD	1 Year	Since Inception
Beginning Market Value	28,790,563	26,338,323	25,159,586	11,303,089
Net Contributions	-472,171	-211,782	-687,578	2,604,276
Gain/Loss	-1,069,625	1,122,226	2,776,759	13,341,401
Ending Market Value	27,248,767	27,248,767	27,248,767	27,248,767

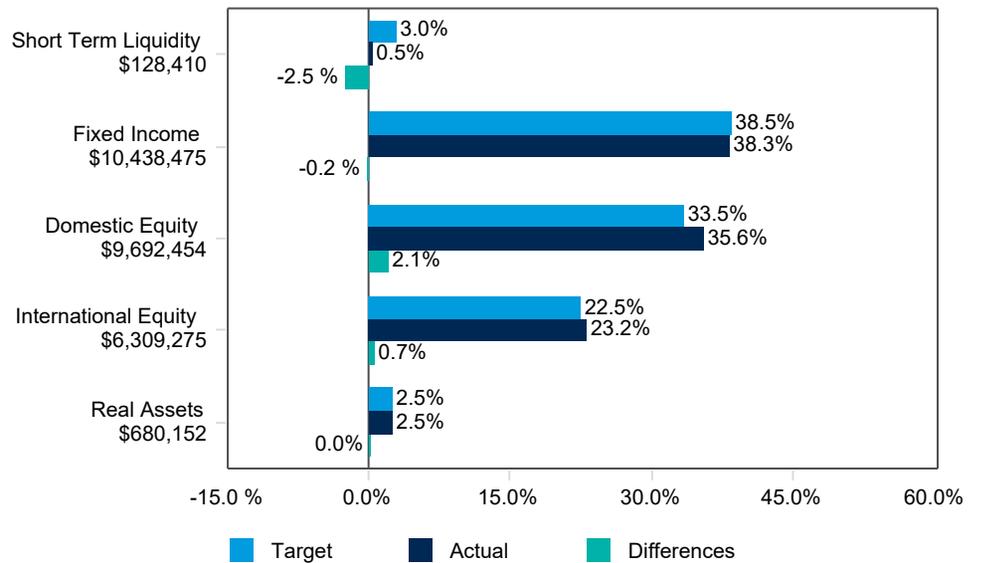
## Current Benchmark Composition

From Date	To Date	Composition
06/2023	Present	3.00% 90 Day U.S. Treasury Bill, 38.50% Blmbg. U.S. Aggregate, 21.50% S&P 500, 12.00% Russell 2000 Index, 8.50% MSCI AC World ex USA (Net), 7.50% MSCI EAFE (Net), 6.50% MSCI Emerging Markets (Net), 2.50% S&P Real Assets

## Portfolio Allocation



## Actual vs. Target Allocations



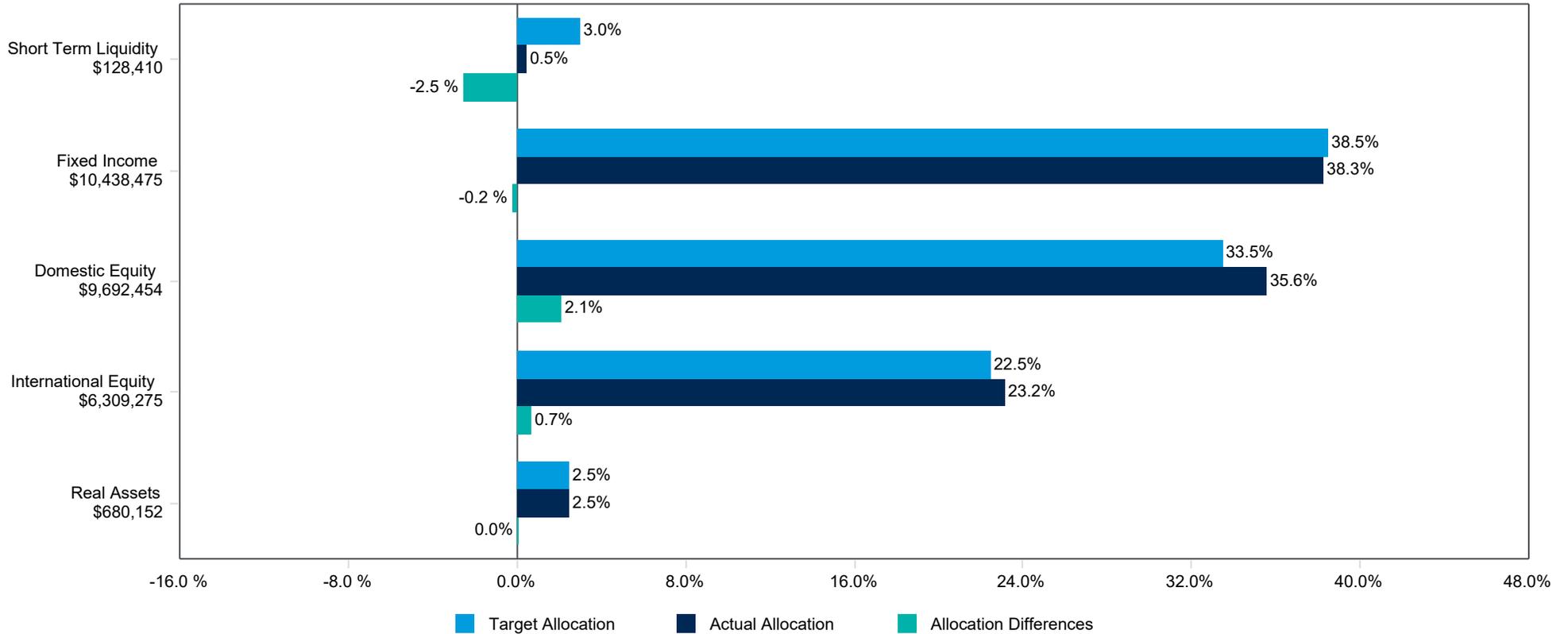


# Asset Allocation

Town of Ledyard Pension Plan

As of September 30, 2023

## Actual vs. Target



	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
Short Term Liquidity	128,410	0.5	3.0	-2.5
Fixed Income	10,438,475	38.3	38.5	-0.2
Domestic Equity	9,692,454	35.6	33.5	2.1
International Equity	6,309,275	23.2	22.5	0.7
Real Assets	680,152	2.5	2.5	0.0
<b>Town of Ledyard Pension Plan</b>	<b>27,248,767</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>



# Asset Allocation

Town of Ledyard Pension Plan

As of September 30, 2023

	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
<b>Town of Ledyard Pension Plan</b>	<b>27,248,767</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>
<b>Short Term Liquidity</b>	<b>128,410</b>	<b>0.5</b>	<b>3.0</b>	<b>-2.5</b>
Dreyfus Treasury Securities Cash Management	128,410	0.5	3.0	-2.5
<b>Fixed Income</b>	<b>10,438,475</b>	<b>38.3</b>	<b>38.5</b>	<b>-0.2</b>
Vanguard Total Bond Market Index Adm	2,728,860	10.0	10.0	0.0
Metropolitan West Total Return Bond PI	3,468,167	12.7	13.0	-0.3
PGIM Total Return Bond R6	3,532,651	13.0	13.0	0.0
BlackRock Strategic Income Opportunities Class K	708,798	2.6	2.5	0.1
<b>Domestic Equity</b>	<b>9,692,454</b>	<b>35.6</b>	<b>33.5</b>	<b>2.1</b>
Vanguard Institutional Index Fund Instl	4,154,084	15.2	14.5	0.7
Touchstone Large Cap Focused Fund Instl	2,028,246	7.4	7.0	0.4
Neuberger Berman Genesis R6	1,742,312	6.4	6.0	0.4
William Blair Small Cap Value R6	902,075	3.3	3.0	0.3
Hood River Small Cap Growth R	865,738	3.2	3.0	0.2
<b>International Equity</b>	<b>6,309,275</b>	<b>23.2</b>	<b>22.5</b>	<b>0.7</b>
Vanguard Total International Stock Index Adm	2,377,498	8.7	8.5	0.2
T. Rowe Price Overseas Stock Instl	2,145,600	7.9	7.5	0.4
Invesco Developing Markets R6	1,786,177	6.6	6.5	0.1
<b>Real Assets</b>	<b>680,152</b>	<b>2.5</b>	<b>2.5</b>	<b>0.0</b>
DWS RREEF Real Assets R6	680,152	2.5	2.5	0.0



## Performance Overview

Town of Ledyard Pension Plan

As of September 30, 2023

### Trailing Performance Summary

	QTD	YTD	1 Year	3 Years	5 Years	7 Years	10 Years	Since Inception	Inception Date
<b>Town of Ledyard Pension Plan</b>	<b>-3.8</b>	<b>4.2</b>	<b>11.1</b>	<b>2.2</b>	<b>3.9</b>	<b>5.0</b>	<b>4.8</b>	<b>5.7</b>	<b>01/2012</b>
<i>Blended Benchmark</i>	<i>-3.4</i>	<i>3.8</i>	<i>10.8</i>	<i>2.4</i>	<i>3.6</i>	<i>4.8</i>	<i>4.6</i>	<i>5.5</i>	<i>01/2012</i>

### Calendar Year Performance Summary

	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Town of Ledyard Pension Plan</b>	<b>-16.2</b>	<b>10.6</b>	<b>14.9</b>	<b>19.0</b>	<b>-6.3</b>	<b>13.1</b>	<b>10.0</b>	<b>-3.1</b>	<b>2.3</b>	<b>13.2</b>
<i>Blended Benchmark</i>	<i>-15.2</i>	<i>9.8</i>	<i>13.6</i>	<i>18.4</i>	<i>-6.0</i>	<i>12.9</i>	<i>9.1</i>	<i>-3.5</i>	<i>3.6</i>	<i>12.3</i>

### Plan Reconciliation

	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Town of Ledyard Pension Plan</b>								<b>01/2012</b>
Beginning Market Value	28,790,563	26,338,323	25,159,586	27,060,281	24,071,711	16,667,153	11,303,089	
Net Contributions	-472,171	-211,782	-687,578	-1,676,327	-1,865,130	-151,335	2,604,276	
Gain/Loss	-1,069,625	1,122,226	2,776,759	1,864,812	5,042,186	10,732,948	13,341,401	
Ending Market Value	27,248,767	27,248,767	27,248,767	27,248,767	27,248,767	27,248,767	27,248,767	

### Benchmark Composition

	Weight (%)
<b>Jun-2023</b>	
90 Day U.S. Treasury Bill	3.0
Blmbg. U.S. Aggregate	38.5
S&P 500	21.5
Russell 2000 Index	12.0
MSCI AC World ex USA (Net)	8.5
MSCI EAFE (Net)	7.5
MSCI Emerging Markets (Net)	6.5
S&P Real Assets	2.5

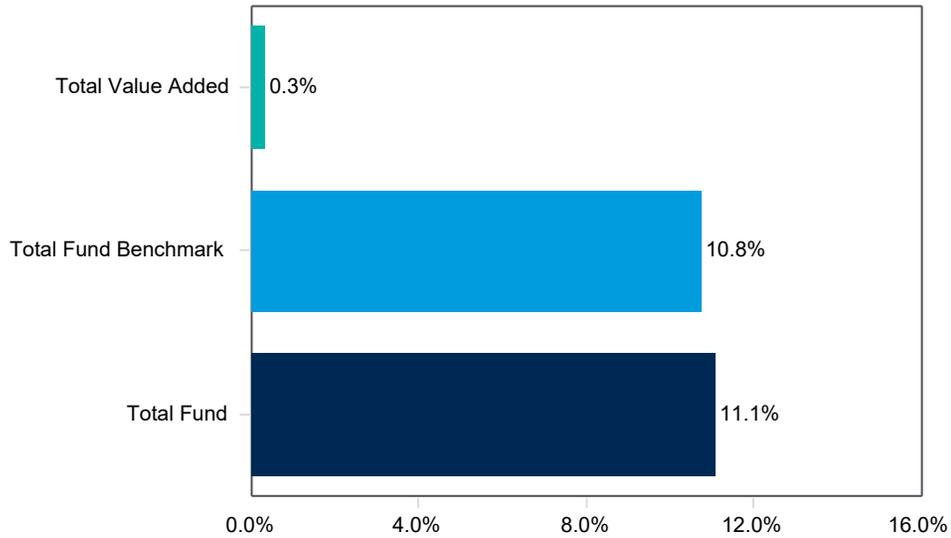


# Performance Attribution

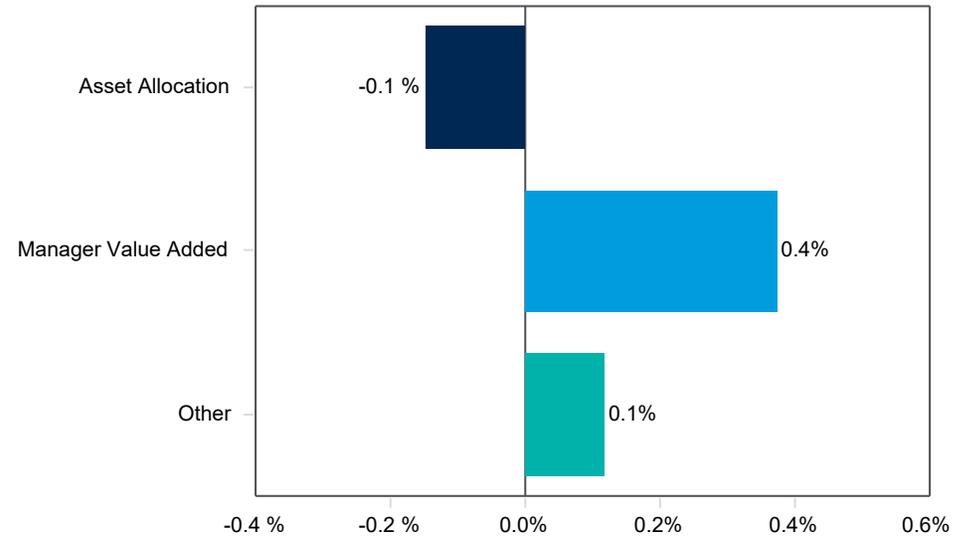
Town of Ledyard Pension Plan vs. Attribution Blended Benchmark

1 Year Ending September 30, 2023

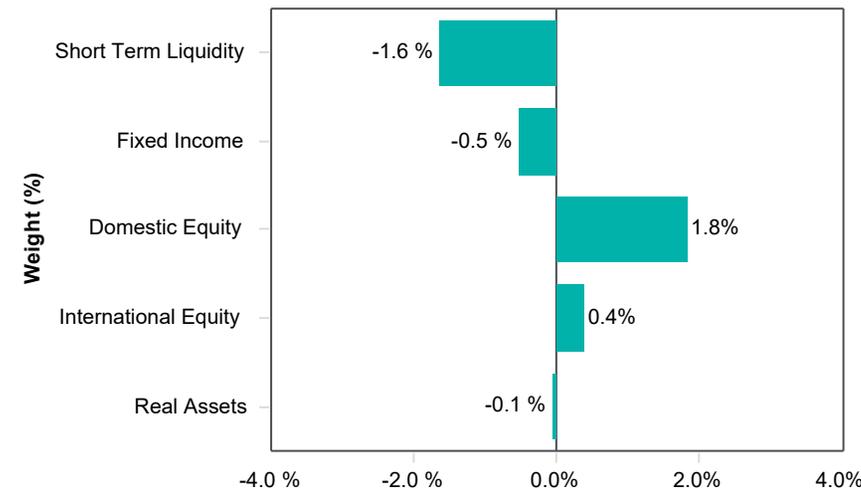
## Total Fund Performance



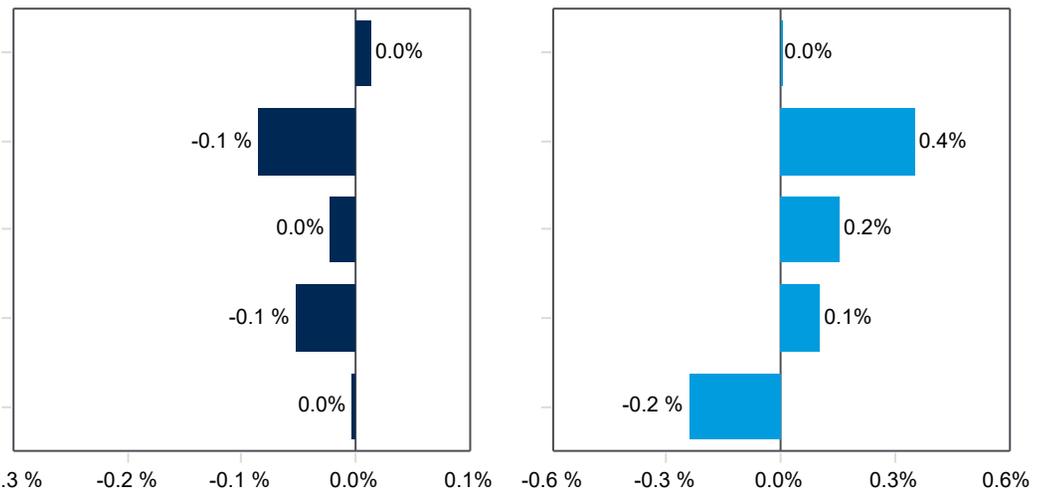
## Total Value Added:0.3%



## Total Asset Allocation:-0.1%



## Total Manager Value Added:0.4%



Average Active Weight

Asset Allocation Value Added

Manager Value Added



# Manager Status Commentary

As of September 30, 2023

Manager	Recommendation	Comments
Vanguard Total Bond Market Index Adm	Maintain	
Metropolitan West Total Return Bond PI	Watch 3Q 2023	TCW announced long-time Generalist Portfolio Managers, Laird Landmann and Stephen Kane, will be retiring at the end of 2023 and no earlier than 2024, respectively. Bryan Whalen, who currently serves as co-CIO and Generalist Portfolio Manager alongside Mr. Kane, will remain in his role and will become the sole CIO at the end of 2023. Mr. Kane will continue to serve as a Generalist Portfolio Manager until his retirement. Ruben Hovhannisyian and Jerry Cudzil will join the Generalist Portfolio Manager team, effective immediately. Mr. Hovhannisyian has worked directly in support of the Generalist team for 16 years, while Mr. Cudzil has been with the firm for over 10 years and previously served as Co-Head of Credit and Head of Credit Trading.
PGIM Total Return Bond R6	Maintain	
BlackRock Strategic Income Opportunities Class K	Maintain	
Vanguard Institutional Index Fund Instl	Maintain	
Touchstone Large Cap Focused Fund Instl	Maintain	
Neuberger Berman Genesis R6	Discuss 2Q 2023	Portfolio Manager Judith Vale will transition to a Portfolio Strategist role in January 2024, at which time the strategy will continue to be co-managed by long-time PMs Bob D'Alelio, Brett Reiner and Greg Spiegel. The overall impact of this change is minimal given this strategy has been co-managed for a long period of time, and the team in place has enough tenure working together that we don't anticipate any meaningful impact to the process or portfolio. As a result of Ms. Vale's year end transition, we have placed the strategy on Discuss.
William Blair Small Cap Value R6	Maintain	
Hood River Small Cap Growth R	Maintain	
Vanguard Total International Stock Index Adm	Maintain	
T. Rowe Price Overseas Stock Instl	Maintain	
Invesco Developing Markets R6	Maintain	
DWS RREEF Real Assets R6	Maintain	

Commentary produced upon change of status.

# FLASH Memo

**Subject:** TCW Fixed Income Team – Upcoming Retirements and Promotions

**Previous Status:** Maintain

**Current Status:** Watch

**Effective Date:** August 2023

## Overview

TCW recently announced significant changes to the fixed income team, including the upcoming retirements of two longstanding Generalist Portfolio Managers, Laird Landmann and Stephen Kane. Mr. Landmann will be retiring at the end of 2023, with Mr. Kane retiring no earlier than the end of 2024. Bryan Whalen, who currently serves as co-CIO and Generalist Portfolio Manager alongside Mr. Kane, will remain in his role and will become the sole CIO at the end of 2023. Mr. Kane will continue to serve as a Generalist Portfolio Manager until his retirement.

Ruben Hovhannisyan and Jerry Cudzil will join the Generalist Portfolio Manager team, effective immediately. Mr. Hovhannisyan has worked directly in support of the Generalist team for 16 years, while Mr. Cudzil has been with the firm for over 10 years and previously served as Co-Head of Credit and Head of Credit Trading. TCW's team approach, where the Generalist Portfolio Managers set the top-down macro-orientation and risk budget while the sector specialists conduct the bottom-up security selection within their respective coverage areas, is expected to continue.

The fixed income team also promoted four senior research professionals (Tammy Karp, Drew Sweeney, Ken Toshima and Palak Pathak) to a newly formed role, Senior Portfolio Manager. They will join the Generalist Portfolio Managers and Specialist Portfolio Managers (Liza Crawford, Brian Gelfand, Steven Purdy, Bret Barker, and Jamie Patton) on the newly formalized Fixed Income Investment Committee.

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## Recommendation

Messrs. Landmann and Kane, along with former CIO Tad Rivelle (who departed the firm at the end of 2021), co-founded Metropolitan West Asset Management (“MetWest”) in 1996 before it was acquired by TCW in 2010. The three portfolio managers developed and implemented the relative value, contrarian philosophy MetWest is known for, and brought Bryan Whalen into the firm in 2004. The upcoming retirements of Laird Landmann and Stephen Kane are material and mark the next steps in the transition to the second generation of fixed income leadership.

The announcement comes on the heels of previous senior leadership departures, including Tad Rivelle’s retirement in 2021 and former CEO David Lippman’s departure in 2022. Katie Koch, CEO, filled the firm’s leadership position in February 2023. Bryan Whalen has been working alongside the founding investors for the better part of two decades and will continue to carry the torch within the investment team, but the newly named Generalist Portfolio Managers have large shoes to fill. While the team structure in place helps provide continuity in the process, the impact of the newly formalized Fixed Income Investment Committee is yet to be determined.

The changes to the fixed income team also come amidst challenging performance relative to peers and the benchmark for the MetWest Total Return strategy. The Generalist/Specialist structure has historically delivered favorable results through a risk-controlled top-down framework combined with strong underlying security selection from the specialist teams. Our evaluation of the changes will aim to determine if the team’s ability to deliver long-term alpha can continue in a similar fashion.

As a result of the upcoming retirements and team changes, we have placed the MetWest Total Return, TCW Core Fixed Income, MetWest Low Duration, and TCW Total Return strategies on “Watch” as we further monitor and evaluate the newly named portfolio managers, team structure, and portfolios. We do not recommend any action be taken at this time.

# FLASH Memo

**Subject:** Neuberger Berman Genesis PM Transition

**Previous Status:** Maintain

**Current Status:** Discuss

**Effective Date:** July 2023

## Overview

Neuberger Berman announced that Portfolio Manager Judith Vale will be transitioning to a Portfolio Strategist role starting in 2024. In this newly created role, she will focus on providing investment guidance and analysis to the portfolio managers and broader investment team but will no longer have portfolio management responsibilities. Ms. Vale has been a portfolio manager on the strategy since 1994 and has co-managed this strategy with Bob D'Alelio since January 1996. Both were instrumental in growing the team over the years, which is now a 12-member team.

Starting in January 2024, the Neuberger Berman Genesis strategy will be co-managed by Robert D'Alelio, Brett Reiner and Greg Spiegel who will share decision making authority for the portfolio. The strategy has been co-managed by Ms. Vale, Mr. D'Alelio, Mr. Reiner and Mr. Spiegel since 2019, though from 2016-2018 Ms. Vale and Mr. D'Alelio were lead portfolio managers and Mr. Reiner and Mr. Spiegel were associate portfolio managers. Mr. Reiner joined the team in 2003 as a research analyst and has been with Neuberger Berman since 2000 while Mr. Spiegel joined the team and the firm in 2012 as a research analyst. The portfolio management team is supported by a dedicated team of five sector analysts.

## Recommendation

We had anticipated a transition or retirement from Ms. Vale given her tenure, and there has been a succession plan in place for quite some time, lessening the impact of this transition. We are reassured by the fact that Ms. Vale will still contribute to the strategy, though in a different capacity. It's likely she will

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retire fully at some point in the future, but the Portfolio Strategist role is a testament to her continued commitment to the strategy.

The overall impact of this change is minimal given this strategy has been co-managed for a long period of time, and the team in place has enough tenure working together that we don't anticipate any meaningful impact to the process or portfolio. As a result of Ms. Vale's year end transition, we have placed the strategy on Discuss.

If you have any questions, please contact your investment consultant.



# Manager Performance

Town of Ledyard Pension Plan

As of September 30, 2023

	Allocation		Performance(%)								Manager Status
	Market Value (\$)	%	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
<b>Town of Ledyard Pension Plan</b>	<b>27,248,767</b>	<b>100.0</b>	<b>-3.8</b>	<b>4.2</b>	<b>11.1</b>	<b>2.2</b>	<b>3.9</b>	<b>4.8</b>	<b>5.7</b>	<b>01/2012</b>	
<i>Blended Benchmark</i>			-3.4	3.8	10.8	2.4	3.6	4.6	5.5		
<b>Short Term Liquidity</b>	<b>128,410</b>	<b>0.5</b>	<b>1.3</b>	<b>3.5</b>	<b>4.3</b>	<b>1.6</b>	<b>1.6</b>	<b>1.0</b>	<b>0.8</b>	<b>01/2012</b>	
<i>90 Day U.S. Treasury Bill</i>			1.3	3.6	4.5	1.7	1.7	1.1	0.9		
<b>Dreyfus Treasury Securities Cash Management</b>	<b>128,410</b>	<b>0.5</b>	<b>1.3</b>	<b>3.5</b>	<b>4.3</b>	<b>1.6</b>	<b>1.6</b>	<b>1.0</b>	<b>0.8</b>	<b>01/2012</b>	
<i>90 Day U.S. Treasury Bill</i>			1.3	3.6	4.5	1.7	1.7	1.1	0.9		
<b>Fixed Income</b>	<b>10,438,475</b>	<b>38.3</b>	<b>-2.8</b>	<b>-0.4</b>	<b>1.5</b>	<b>-4.8</b>	<b>0.3</b>	<b>1.5</b>	<b>1.8</b>	<b>01/2012</b>	
<i>Blmbg. U.S. Aggregate</i>			-3.2	-1.2	0.6	-5.2	0.1	1.1	1.1		
<b>Vanguard Total Bond Market Index Adm</b>	<b>2,728,860</b>	<b>10.0</b>	<b>-3.1</b>	<b>-0.9</b>	<b>0.7</b>	<b>-5.2</b>	<b>0.1</b>	<b>1.1</b>	<b>1.1</b>	<b>01/2012</b>	<b>Maintain</b>
<i>Blmbg. U.S. Aggregate</i>			-3.2	-1.2	0.6	-5.2	0.1	1.1	1.1		
IM U.S. Broad Market Core Fixed Income (MF) Median			-3.1	-0.9	0.8	-5.1	0.1	1.1	1.3		
Vanguard Total Bond Market Index Adm Rank			51	52	53	57	44	51	64		
<b>Metropolitan West Total Return Bond PI</b>	<b>3,468,167</b>	<b>12.7</b>	<b>-3.5</b>	<b>-1.4</b>	<b>0.4</b>	<b>-5.5</b>	<b>0.1</b>	<b>1.2</b>	<b>1.8</b>	<b>04/2012</b>	<b>Watch</b>
<i>Blmbg. U.S. Aggregate</i>			-3.2	-1.2	0.6	-5.2	0.1	1.1	1.1		
IM U.S. Broad Market Core+ Fixed Income (MF) Median			-3.0	-0.6	1.3	-4.8	0.3	1.3	1.5		
Metropolitan West Total Return Bond PI Rank			84	77	74	81	61	54	31		
<b>PGIM Total Return Bond R6</b>	<b>3,532,651</b>	<b>13.0</b>	<b>-2.5</b>	<b>0.6</b>	<b>2.9</b>	<b>-4.7</b>	<b>0.6</b>	<b>2.0</b>	<b>1.2</b>	<b>04/2015</b>	<b>Maintain</b>
<i>Blmbg. U.S. Aggregate</i>			-3.2	-1.2	0.6	-5.2	0.1	1.1	0.5		
IM U.S. Broad Market Core+ Fixed Income (MF) Median			-3.0	-0.6	1.3	-4.8	0.3	1.3	0.6		
PGIM Total Return Bond R6 Rank			21	13	10	44	33	14	17		
<b>BlackRock Strategic Income Opportunities Class K</b>	<b>708,798</b>	<b>2.6</b>	<b>-0.3</b>	<b>1.7</b>	<b>3.4</b>	<b>0.4</b>	<b>2.2</b>	<b>2.5</b>	<b>-0.7</b>	<b>04/2022</b>	<b>Maintain</b>
<i>Blmbg. U.S. Aggregate</i>			-3.2	-1.2	0.6	-5.2	0.1	1.1	-5.8		
IM Alternative Credit Focus (MF) Median			-0.6	1.9	4.4	0.2	1.2	1.4	-1.3		
BlackRock Strategic Income Opportunities Class K Rank			46	52	57	49	30	20	43		

Manager performance for mutual funds and ETFs is based on NAV and provided by Lipper. Performance for non-mutual fund or ETF investments is based on the returns provided by managers, calculations based on a manager statement, or calculations based on a statement or data from the client's custodian. Funds may include returns of an equivalent share class with a longer return history if period includes dates prior to the fund's inception. Returns are net of fees unless otherwise stated. The fund's inception date represents the first month the client made the investment. Composite performance includes all funds held in the composite since inception. Inception dates for asset class composites reflect the start date at which these returns could be calculated using historical and existing system capabilities and may vary from the inception dates of underlying component strategies.



# Manager Performance

Town of Ledyard Pension Plan

As of September 30, 2023

	Allocation		Performance(%)								Manager Status
	Market Value (\$)	%	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
<b>Domestic Equity</b>	<b>9,692,454</b>	<b>35.6</b>	<b>-4.2</b>	<b>10.0</b>	<b>17.6</b>	<b>9.0</b>	<b>8.9</b>	<b>10.9</b>	<b>12.5</b>	<b>01/2012</b>	
<i>Domestic Equity Benchmark</i>			-3.9	9.3	17.1	9.2	7.6	10.3	12.0		
<b>Vanguard Institutional Index Fund Instl</b>	<b>4,154,084</b>	<b>15.2</b>	<b>-3.3</b>	<b>13.0</b>	<b>21.6</b>	<b>10.1</b>	<b>9.9</b>	<b>11.9</b>	<b>13.1</b>	<b>01/2012</b>	<b>Maintain</b>
<i>S&amp;P 500</i>			-3.3	13.1	21.6	10.2	9.9	11.9	13.2		
IM U.S. Large Cap Core Equity (MF) Median			-3.2	11.6	20.9	8.9	9.0	10.8	12.2		
Vanguard Institutional Index Fund Instl Rank			56	34	40	25	24	13	18		
<b>Touchstone Large Cap Focused Fund Instl</b>	<b>2,028,246</b>	<b>7.4</b>	<b>-3.8</b>	<b>13.9</b>	<b>23.0</b>	<b>10.3</b>	<b>11.0</b>	<b>12.2</b>	<b>14.7</b>	<b>01/2019</b>	<b>Maintain</b>
<i>S&amp;P 500</i>			-3.3	13.1	21.6	10.2	9.9	11.9	13.9		
IM U.S. Large Cap Core Equity (MF) Median			-3.2	11.6	20.9	8.9	9.0	10.8	12.9		
Touchstone Large Cap Focused Fund Instl Rank			73	25	23	23	5	9	9		
<b>Neuberger Berman Genesis R6</b>	<b>1,742,312</b>	<b>6.4</b>	<b>-5.4</b>	<b>6.1</b>	<b>13.0</b>	<b>7.1</b>	<b>6.7</b>	<b>8.8</b>	<b>10.1</b>	<b>04/2012</b>	<b>Discuss</b>
<i>Russell 2000 Index</i>			-5.1	2.5	8.9	7.2	2.4	6.6	8.3		
IM U.S. Small Cap Core Equity (MF) Median			-4.0	2.6	11.8	12.0	3.5	6.8	8.3		
Neuberger Berman Genesis R6 Rank			82	16	44	87	7	4	5		
<b>William Blair Small Cap Value R6</b>	<b>902,075</b>	<b>3.3</b>	<b>-2.2</b>	<b>-0.1</b>	<b>10.5</b>	<b>14.2</b>	<b>3.4</b>	<b>7.5</b>	<b>-3.2</b>	<b>12/2021</b>	<b>Maintain</b>
<i>Russell 2000 Value Index</i>			-3.0	-0.5	7.8	13.3	2.6	6.2	-6.4		
IM U.S. Small Cap Value Equity (MF) Median			-2.0	2.7	14.5	17.2	4.3	6.4	-2.3		
William Blair Small Cap Value R6 Rank			54	75	77	80	66	21	63		
<b>Hood River Small Cap Growth R</b>	<b>865,738</b>	<b>3.2</b>	<b>-8.5</b>	<b>5.2</b>	<b>4.8</b>	<b>7.1</b>	<b>7.3</b>	<b>11.2</b>	<b>-12.7</b>	<b>12/2021</b>	<b>Maintain</b>
<i>Russell 2000 Growth Index</i>			-7.3	5.2	9.6	1.1	1.6	6.7	-12.8		
IM U.S. Small Cap Growth Equity (MF) Median			-6.3	4.4	9.6	2.3	3.3	7.4	-12.8		
Hood River Small Cap Growth R Rank			84	42	82	19	5	1	49		

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# Manager Performance

Town of Ledyard Pension Plan

As of September 30, 2023

	Allocation		Performance(%)								Manager Status
	Market Value (\$)	%	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date	
<b>International Equity</b>	<b>6,309,275</b>	<b>23.2</b>	<b>-4.8</b>	<b>5.1</b>	<b>20.2</b>	<b>2.1</b>	<b>2.2</b>	<b>2.9</b>	<b>3.7</b>	<b>03/2012</b>	
<i>International Equity Benchmark</i>			-3.6	4.9	19.6	2.9	2.3	3.2	3.6		
<b>Vanguard Total International Stock Index Adm</b>	<b>2,377,498</b>	<b>8.7</b>	<b>-4.0</b>	<b>5.0</b>	<b>20.5</b>	<b>3.9</b>	<b>2.7</b>	<b>3.6</b>	<b>4.5</b>	<b>04/2012</b>	<b>Maintain</b>
<i>FTSE Global All Cap ex US Spliced Index</i>			-3.3	5.5	20.4	4.1	2.9	3.7	4.6		
IM International Large Cap Core Equity (MF) Median			-5.0	6.2	24.2	5.0	2.8	3.3	4.4		
Vanguard Total International Stock Index Adm Rank			18	65	84	64	56	32	50		
<b>T. Rowe Price Overseas Stock Instl</b>	<b>2,145,600</b>	<b>7.9</b>	<b>-4.6</b>	<b>6.0</b>	<b>23.8</b>	<b>5.5</b>	<b>3.2</b>	<b>4.2</b>	<b>2.8</b>	<b>06/2018</b>	<b>Maintain</b>
<i>MSCI EAFE (Net)</i>			-4.1	7.1	25.6	5.8	3.2	3.8	3.1		
IM International Large Cap Core Equity (MF) Median			-5.0	6.2	24.2	5.0	2.8	3.3	2.4		
T. Rowe Price Overseas Stock Instl Rank			36	52	54	40	35	11	39		
<b>Invesco Developing Markets R6</b>	<b>1,786,177</b>	<b>6.6</b>	<b>-6.2</b>	<b>4.2</b>	<b>16.1</b>	<b>-4.7</b>	<b>-0.3</b>	<b>1.6</b>	<b>2.3</b>	<b>04/2012</b>	<b>Maintain</b>
<i>MSCI Emerging Markets (Net)</i>			-2.9	1.8	11.7	-1.7	0.6	2.1	1.7		
IM Emerging Markets Equity (MF) Median			-3.8	3.2	13.1	-2.4	0.8	1.9	1.7		
Invesco Developing Markets R6 Rank			91	38	30	68	77	60	34		
<b>Real Assets</b>	<b>680,152</b>	<b>2.5</b>	<b>-3.7</b>	<b>-5.3</b>	<b>1.1</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-12.3</b>	<b>04/2022</b>	
<i>S&amp;P Real Assets</i>			-2.6	-1.0	6.2	4.3	2.9	3.2	-8.4		
<b>DWS RREEF Real Assets R6</b>	<b>680,152</b>	<b>2.5</b>	<b>-3.7</b>	<b>-5.3</b>	<b>1.1</b>	<b>5.4</b>	<b>4.6</b>	<b>3.9</b>	<b>-12.3</b>	<b>04/2022</b>	<b>Maintain</b>
<i>S&amp;P Real Assets</i>			-2.6	-1.0	6.2	4.3	2.9	3.2	-8.4		

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# Calendar Year Performance

Town of Ledyard Pension Plan

As of September 30, 2023

	Performance(%)									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Town of Ledyard Pension Plan</b>	<b>-16.2</b>	<b>10.6</b>	<b>14.9</b>	<b>19.0</b>	<b>-6.3</b>	<b>13.1</b>	<b>10.0</b>	<b>-3.1</b>	<b>2.3</b>	<b>13.2</b>
<i>Blended Benchmark</i>	<i>-15.2</i>	<i>9.8</i>	<i>13.6</i>	<i>18.4</i>	<i>-6.0</i>	<i>12.9</i>	<i>9.1</i>	<i>-3.5</i>	<i>3.6</i>	<i>12.3</i>
<b>Short Term Liquidity</b>	<b>1.3</b>	<b>0.0</b>	<b>0.4</b>	<b>2.0</b>	<b>1.8</b>	<b>0.6</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<i>90 Day U.S. Treasury Bill</i>	<i>1.5</i>	<i>0.0</i>	<i>0.7</i>	<i>2.3</i>	<i>1.9</i>	<i>0.9</i>	<i>0.3</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
<b>Dreyfus Treasury Securities Cash Management</b>	<b>1.3</b>	<b>0.0</b>	<b>0.4</b>	<b>2.0</b>	<b>1.8</b>	<b>0.6</b>	<b>0.2</b>	<b>0.0</b>	<b>0.0</b>	<b>0.0</b>
<i>90 Day U.S. Treasury Bill</i>	<i>1.5</i>	<i>0.0</i>	<i>0.7</i>	<i>2.3</i>	<i>1.9</i>	<i>0.9</i>	<i>0.3</i>	<i>0.0</i>	<i>0.0</i>	<i>0.0</i>
<b>Fixed Income</b>	<b>-13.5</b>	<b>-1.3</b>	<b>8.3</b>	<b>9.1</b>	<b>0.0</b>	<b>4.6</b>	<b>4.6</b>	<b>-0.2</b>	<b>5.2</b>	<b>-0.2</b>
<i>Blmbg. U.S. Aggregate</i>	<i>-13.0</i>	<i>-1.5</i>	<i>7.5</i>	<i>8.7</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>
<b>Vanguard Total Bond Market Index Adm</b>	<b>-13.2</b>	<b>-1.7</b>	<b>7.7</b>	<b>8.7</b>	<b>0.0</b>	<b>3.6</b>	<b>2.6</b>	<b>0.4</b>	<b>5.9</b>	<b>-2.1</b>
<i>Blmbg. U.S. Aggregate</i>	<i>-13.0</i>	<i>-1.5</i>	<i>7.5</i>	<i>8.7</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>
IM U.S. Broad Market Core Fixed Income (MF) Median	-13.7	-1.3	8.2	8.8	-0.6	3.6	2.9	0.0	5.5	-2.0
Vanguard Total Bond Market Index Adm Rank	28	66	65	53	20	54	64	30	32	59
<b>Metropolitan West Total Return Bond PI</b>	<b>-14.7</b>	<b>-1.1</b>	<b>9.2</b>	<b>9.2</b>	<b>0.3</b>	<b>3.5</b>	<b>2.6</b>	<b>0.2</b>	<b>6.2</b>	<b>0.4</b>
<i>Blmbg. U.S. Aggregate</i>	<i>-13.0</i>	<i>-1.5</i>	<i>7.5</i>	<i>8.7</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>
IM U.S. Broad Market Core+ Fixed Income (MF) Median	-13.7	-0.9	8.6	9.3	-1.0	4.5	4.1	-0.3	5.1	-1.1
Metropolitan West Total Return Bond PI Rank	73	57	36	55	11	79	86	26	25	16
<b>PGIM Total Return Bond R6</b>	<b>-14.9</b>	<b>-1.2</b>	<b>8.1</b>	<b>11.1</b>	<b>-0.6</b>	<b>6.7</b>	<b>4.8</b>	<b>0.1</b>	<b>7.3</b>	<b>-0.9</b>
<i>Blmbg. U.S. Aggregate</i>	<i>-13.0</i>	<i>-1.5</i>	<i>7.5</i>	<i>8.7</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>
IM U.S. Broad Market Core+ Fixed Income (MF) Median	-13.7	-0.9	8.6	9.3	-1.0	4.5	4.1	-0.3	5.1	-1.1
PGIM Total Return Bond R6 Rank	76	60	60	11	36	2	30	35	8	44
<b>BlackRock Strategic Income Opportunities Class K</b>	<b>-5.6</b>	<b>1.0</b>	<b>7.3</b>	<b>7.8</b>	<b>-0.5</b>	<b>5.0</b>	<b>3.6</b>	<b>-0.6</b>	<b>3.6</b>	<b>3.0</b>
<i>Blmbg. U.S. Aggregate</i>	<i>-13.0</i>	<i>-1.5</i>	<i>7.5</i>	<i>8.7</i>	<i>0.0</i>	<i>3.5</i>	<i>2.6</i>	<i>0.5</i>	<i>6.0</i>	<i>-2.0</i>
IM Alternative Credit Focus (MF) Median	-7.6	1.9	3.9	7.3	-1.9	4.5	4.9	-1.6	1.0	-0.1
BlackRock Strategic Income Opportunities Class K Rank	41	58	17	43	29	43	64	25	21	31
<b>Domestic Equity</b>	<b>-18.2</b>	<b>25.1</b>	<b>21.7</b>	<b>30.7</b>	<b>-5.1</b>	<b>19.7</b>	<b>13.9</b>	<b>1.1</b>	<b>9.0</b>	<b>34.0</b>
<i>Domestic Equity Benchmark</i>	<i>-18.8</i>	<i>24.4</i>	<i>19.2</i>	<i>29.8</i>	<i>-6.3</i>	<i>19.5</i>	<i>15.1</i>	<i>-0.5</i>	<i>10.8</i>	<i>34.5</i>
<b>Vanguard Institutional Index Fund Instl</b>	<b>-18.1</b>	<b>28.7</b>	<b>18.4</b>	<b>31.5</b>	<b>-4.4</b>	<b>21.8</b>	<b>11.9</b>	<b>1.4</b>	<b>13.7</b>	<b>32.3</b>
<i>S&amp;P 500</i>	<i>-18.1</i>	<i>28.7</i>	<i>18.4</i>	<i>31.5</i>	<i>-4.4</i>	<i>21.8</i>	<i>12.0</i>	<i>1.4</i>	<i>13.7</i>	<i>32.4</i>
IM U.S. Large Cap Core Equity (MF) Median	-18.7	26.9	18.4	30.7	-5.4	21.5	9.7	0.5	11.5	31.8
Vanguard Institutional Index Fund Instl Rank	46	26	50	37	32	45	20	35	18	38



# Calendar Year Performance

Town of Ledyard Pension Plan

As of September 30, 2023

	Performance(%)									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Touchstone Large Cap Focused Fund Instl</b>	<b>-17.3</b>	<b>25.6</b>	<b>24.2</b>	<b>30.6</b>	<b>-2.4</b>	<b>23.6</b>	<b>11.6</b>	<b>0.9</b>	<b>10.6</b>	<b>31.0</b>
<i>S&amp;P 500</i>	-18.1	28.7	18.4	31.5	-4.4	21.8	12.0	1.4	13.7	32.4
IM U.S. Large Cap Core Equity (MF) Median	-18.7	26.9	18.4	30.7	-5.4	21.5	9.7	0.5	11.5	31.8
Touchstone Large Cap Focused Fund Instl Rank	37	67	10	52	16	25	25	44	65	61
<b>Neuberger Berman Genesis R6</b>	<b>-19.0</b>	<b>18.5</b>	<b>25.2</b>	<b>29.8</b>	<b>-6.4</b>	<b>15.9</b>	<b>18.4</b>	<b>0.5</b>	<b>0.0</b>	<b>37.2</b>
<i>Russell 2000 Index</i>	-20.4	14.8	20.0	25.5	-11.0	14.6	21.3	-4.4	4.9	38.8
IM U.S. Small Cap Core Equity (MF) Median	-15.8	25.1	9.9	23.9	-12.7	12.1	21.7	-4.3	4.7	36.8
Neuberger Berman Genesis R6 Rank	79	83	5	7	5	14	79	3	86	47
<b>William Blair Small Cap Value R6</b>	<b>-11.1</b>	<b>29.5</b>	<b>2.8</b>	<b>26.2</b>	<b>-14.0</b>	<b>13.1</b>	<b>31.4</b>	<b>-3.2</b>	<b>2.9</b>	<b>36.2</b>
<i>Russell 2000 Value Index</i>	-14.5	28.3	4.6	22.4	-12.9	7.8	31.7	-7.5	4.2	34.5
IM U.S. Small Cap Value Equity (MF) Median	-11.1	32.0	3.6	21.1	-16.1	8.5	26.7	-7.0	3.4	36.5
William Blair Small Cap Value R6 Rank	52	66	57	9	32	13	18	11	59	55
<b>Hood River Small Cap Growth R</b>	<b>-27.9</b>	<b>23.9</b>	<b>60.8</b>	<b>24.2</b>	<b>-6.8</b>	<b>20.8</b>	<b>13.5</b>	<b>0.8</b>	<b>8.6</b>	<b>43.9</b>
<i>Russell 2000 Growth Index</i>	-26.4	2.8	34.6	28.5	-9.3	22.2	11.3	-1.4	5.6	43.3
IM U.S. Small Cap Growth Equity (MF) Median	-27.5	10.5	36.6	27.6	-5.6	20.7	10.1	-2.4	2.8	42.5
Hood River Small Cap Growth R Rank	53	9	10	73	57	50	27	17	4	40
<b>International Equity</b>	<b>-18.0</b>	<b>5.2</b>	<b>12.5</b>	<b>23.0</b>	<b>-13.8</b>	<b>28.6</b>	<b>4.1</b>	<b>-7.3</b>	<b>-5.2</b>	<b>13.5</b>
<i>International Equity Benchmark</i>	-16.6	5.9	12.0	20.6	-14.1	29.8	5.6	-7.2	-3.6	11.4
<b>Vanguard Total International Stock Index Adm</b>	<b>-16.0</b>	<b>8.6</b>	<b>11.3</b>	<b>21.5</b>	<b>-14.4</b>	<b>27.6</b>	<b>4.7</b>	<b>-4.3</b>	<b>-4.2</b>	<b>15.1</b>
<i>FTSE Global All Cap ex US Spliced Index</i>	-16.1	8.8	11.2	21.8	-14.6	27.4	4.7	-4.3	-3.4	15.8
IM International Large Cap Core Equity (MF) Median	-15.1	10.7	9.1	22.1	-15.0	25.0	0.0	-1.9	-6.0	20.4
Vanguard Total International Stock Index Adm Rank	61	72	34	61	41	25	12	70	19	75
<b>T. Rowe Price Overseas Stock Instl</b>	<b>-15.4</b>	<b>12.4</b>	<b>9.3</b>	<b>23.0</b>	<b>-14.8</b>	<b>27.2</b>	<b>3.0</b>	<b>-2.5</b>	<b>-4.5</b>	<b>21.8</b>
<i>MSCI EAFE (Net)</i>	-14.5	11.3	7.8	22.0	-13.8	25.0	1.0	-0.8	-4.9	22.8
IM International Large Cap Core Equity (MF) Median	-15.1	10.7	9.1	22.1	-15.0	25.0	0.0	-1.9	-6.0	20.4
T. Rowe Price Overseas Stock Instl Rank	56	27	47	37	47	25	14	59	23	29
<b>Invesco Developing Markets R6</b>	<b>-24.8</b>	<b>-7.1</b>	<b>17.7</b>	<b>24.5</b>	<b>-11.8</b>	<b>35.3</b>	<b>7.4</b>	<b>-13.7</b>	<b>-4.4</b>	<b>8.9</b>
<i>MSCI Emerging Markets (Net)</i>	-20.1	-2.5	18.3	18.4	-14.6	37.3	11.2	-14.9	-2.2	-2.6
IM Emerging Markets Equity (MF) Median	-22.5	-1.6	17.7	20.2	-16.5	35.7	8.3	-13.7	-3.0	-1.5
Invesco Developing Markets R6 Rank	68	81	51	26	12	52	54	50	68	14



# Calendar Year Performance

Town of Ledyard Pension Plan

As of September 30, 2023

	Performance(%)									
	2022	2021	2020	2019	2018	2017	2016	2015	2014	2013
<b>Real Assets</b>	-	-	-	-	-	-	-	-	-	-
<i>S&amp;P Real Assets</i>	-9.9	15.4	1.2	17.2	-5.9	11.2	10.8	-10.1	5.4	4.2
<b>DWS RREEF Real Assets R6</b>	<b>-9.6</b>	<b>23.9</b>	<b>3.9</b>	<b>21.8</b>	<b>-5.1</b>	<b>15.0</b>	<b>4.4</b>	<b>-9.5</b>	<b>3.5</b>	<b>1.2</b>
<i>S&amp;P Real Assets</i>	-9.9	15.4	1.2	17.2	-5.9	11.2	10.8	-10.1	5.4	4.2



## Investment Gain/Loss Summary

Town of Ledyard Pension Plan

1 Quarter Ending September 30, 2023

	Market Value as of 07/01/2023	Net Contributions	Gain/Loss	Market Value As of 09/30/2023
<b>Town of Ledyard Pension Plan</b>	<b>28,790,563</b>	<b>-472,171</b>	<b>-1,069,625</b>	<b>27,248,767</b>
<b>Short Term Liquidity</b>	<b>596,887</b>	<b>-472,171</b>	<b>3,694</b>	<b>128,410</b>
Dreyfus Treasury Securities Cash Management	596,887	-472,171	3,694	128,410
<b>Fixed Income</b>	<b>10,743,043</b>	<b>-</b>	<b>-304,567</b>	<b>10,438,475</b>
Vanguard Total Bond Market Index Adm	2,815,763	-	-86,903	2,728,860
Metropolitan West Total Return Bond PI	3,592,225	-	-124,058	3,468,167
PGIM Total Return Bond R6	3,623,872	-	-91,221	3,532,651
BlackRock Strategic Income Opportunities Class K	711,183	-	-2,385	708,798
<b>Domestic Equity</b>	<b>10,113,641</b>	<b>-</b>	<b>-421,187</b>	<b>9,692,454</b>
Vanguard Institutional Index Fund Instl	4,294,895	-	-140,811	4,154,084
Touchstone Large Cap Focused Fund Instl	2,108,122	-	-79,876	2,028,246
Neuberger Berman Genesis R6	1,842,192	-	-99,880	1,742,312
William Blair Small Cap Value R6	922,287	-	-20,213	902,075
Hood River Small Cap Growth R	946,145	-	-80,407	865,738
<b>International Equity</b>	<b>6,630,507</b>	<b>-</b>	<b>-321,232</b>	<b>6,309,275</b>
Vanguard Total International Stock Index Adm	2,477,035	-	-99,537	2,377,498
T. Rowe Price Overseas Stock Instl	2,249,003	-	-103,402	2,145,600
Invesco Developing Markets R6	1,904,470	-	-118,293	1,786,177
<b>Real Assets</b>	<b>706,485</b>	<b>-</b>	<b>-26,333</b>	<b>680,152</b>
DWS RREEF Real Assets R6	706,485	-	-26,333	680,152



# Portfolio Statistics

Town of Ledyard Pension Plan

As of September 30, 2023

	QTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
Return	-3.8	4.2	11.1	2.2	3.9	4.8	5.7	01/2012
Standard Deviation	2.5	3.1	11.8	12.3	12.6	9.8	9.4	
Upside Risk	1.3	2.5	3.0	9.1	9.2	7.4	7.2	
Downside Risk	2.5	1.8	6.1	8.3	8.7	6.6	6.3	
<b>vs. Blended Benchmark</b>								
Alpha	-0.2	0.0	-0.3	-0.2	0.2	0.1	0.1	
Beta	1.0	1.0	1.1	1.0	1.0	1.0	1.0	
Information Ratio	-1.3	0.2	0.4	-0.1	0.3	0.2	0.3	
Tracking Error	0.1	0.2	1.1	1.2	1.1	1.0	0.9	
<b>vs. 90 Day U.S. Treasury Bill</b>								
Sharpe Ratio	-0.7	0.0	0.6	0.1	0.2	0.4	0.5	

Calculation based on monthly periodicity.



# Estimated Fee Analysis

Town of Ledyard Pension Plan

As of September 30, 2023

	Market Value (\$)	Estimated Annual Fee (\$)	Estimated Annual Fee (%)
<b>Town of Ledyard Pension Plan</b>	<b>27,248,767</b>	<b>114,907</b>	<b>0.42</b>
<b>Short Term Liquidity</b>	<b>128,410</b>	<b>-</b>	<b>-</b>
Dreyfus Treasury Securities Cash Management	128,410	-	-
<b>Fixed Income</b>	<b>10,438,475</b>	<b>32,369</b>	<b>0.31</b>
Vanguard Total Bond Market Index Adm	2,728,860	1,364	0.05
Metropolitan West Total Return Bond PI	3,468,167	12,832	0.37
PGIM Total Return Bond R6	3,532,651	13,777	0.39
BlackRock Strategic Income Opportunities Class K	708,798	4,395	0.62
<b>Domestic Equity</b>	<b>9,692,454</b>	<b>44,422</b>	<b>0.46</b>
Vanguard Institutional Index Fund Instl	4,154,084	1,454	0.04
Touchstone Large Cap Focused Fund Instl	2,028,246	14,198	0.70
Neuberger Berman Genesis R6	1,742,312	12,893	0.74
William Blair Small Cap Value R6	902,075	7,307	0.81
Hood River Small Cap Growth R	865,738	8,571	0.99
<b>International Equity</b>	<b>6,309,275</b>	<b>31,995</b>	<b>0.51</b>
Vanguard Total International Stock Index Adm	2,377,498	2,615	0.11
T. Rowe Price Overseas Stock Instl	2,145,600	14,376	0.67
Invesco Developing Markets R6	1,786,177	15,004	0.84
<b>Real Assets</b>	<b>680,152</b>	<b>6,121</b>	<b>0.90</b>
DWS RREEF Real Assets R6	680,152	6,121	0.90

The figures on this page have been obtained from sources we deem to be reliable. Fiducient Advisors has not independently verified this information.

Fee calculations for mutual funds represent fees at the net expense level. Fee calculations for commingled funds and/or alternative investments reflect base management fees and exclude underlying fund expenses captured at the NAV level, any applicable performance-based fees, or incentive fees. Fees for fund of funds are shown at the fund of fund level and do not include fees charged by underlying investment managers/funds.



Ledyard, CT

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## Monthly Performance Update - November 2023

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*Please consult with your advisor, attorney and accountant, as appropriate, regarding specific advice. Past performance does not indicate future performance and there is risk of loss.*



# Financial Markets Performance

**Total Return as of November 30, 2023**  
**Periods greater than one year are annualized**  
**All returns are in U.S. dollar terms**

<b>Global Fixed Income Markets</b>	<b>MTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
Bloomberg 1-3-Month T-Bill	0.4%	4.6%	5.0%	2.1%	1.8%	1.7%	1.2%	0.8%
Bloomberg U.S. TIPS	2.7%	1.2%	0.1%	-1.5%	2.7%	2.1%	2.0%	3.6%
Bloomberg Municipal Bond (5 Year)	3.8%	2.7%	3.2%	-0.7%	1.6%	1.8%	1.7%	2.7%
Bloomberg High Yield Municipal Bond	7.8%	6.0%	5.9%	0.4%	3.1%	4.3%	4.6%	6.4%
Bloomberg U.S. Aggregate	4.5%	1.6%	1.2%	-4.5%	0.7%	0.8%	1.4%	2.7%
Bloomberg U.S. Corporate High Yield	4.5%	9.4%	8.7%	1.4%	4.1%	4.3%	4.3%	9.4%
Bloomberg Global Aggregate ex-U.S. Hedged	2.6%	5.4%	3.5%	-2.0%	1.2%	1.5%	2.5%	3.1%
Bloomberg Global Aggregate ex-U.S. Unhedged	5.5%	1.2%	2.5%	-7.9%	-2.0%	-0.8%	-1.3%	0.8%
Bloomberg U.S. Long Gov / Credit	9.9%	-0.7%	-2.1%	-11.0%	0.3%	2.6%	2.4%	4.5%
<b>Global Equity Markets</b>	<b>MTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
S&P 500	9.1%	20.8%	13.8%	9.8%	12.5%	13.0%	11.8%	13.7%
Dow Jones Industrial Average	9.2%	10.7%	6.2%	8.9%	9.4%	11.9%	10.9%	12.5%
NASDAQ Composite	10.8%	37.0%	25.1%	6.1%	15.2%	16.1%	14.5%	17.2%
Russell 3000	9.3%	19.6%	12.6%	8.3%	11.8%	12.3%	11.2%	13.6%
Russell 1000	9.3%	20.6%	13.6%	8.7%	12.2%	12.7%	11.6%	13.8%
Russell 1000 Growth	10.9%	36.6%	26.2%	8.9%	16.4%	17.2%	14.7%	16.5%
Russell 1000 Value	7.5%	5.6%	1.4%	8.3%	7.5%	7.9%	8.1%	10.8%
Russell Mid Cap	10.2%	8.8%	2.9%	4.9%	8.7%	9.1%	8.9%	13.3%
Russell Mid Cap Growth	12.2%	17.0%	10.0%	0.4%	10.1%	11.4%	10.1%	14.4%
Russell Mid Cap Value	9.4%	4.6%	-0.7%	7.3%	7.1%	6.9%	7.7%	12.2%
Russell 2000	9.1%	4.2%	-2.6%	1.1%	4.8%	6.0%	6.1%	10.9%
Russell 2000 Growth	9.1%	6.0%	-0.8%	-4.3%	4.2%	6.6%	6.2%	11.6%
Russell 2000 Value	9.0%	2.0%	-4.7%	6.5%	4.7%	4.9%	5.7%	9.8%
MSCI ACWI	9.2%	16.6%	12.0%	5.7%	9.1%	9.6%	7.6%	10.1%
MSCI ACWI ex. U.S.	9.0%	10.1%	9.3%	1.7%	5.1%	6.0%	3.4%	6.8%
MSCI EAFE	9.3%	12.3%	12.4%	3.8%	6.0%	6.6%	3.9%	7.0%
MSCI EAFE Growth	10.7%	11.2%	10.0%	0.0%	6.5%	7.5%	4.7%	7.7%
MSCI EAFE Value	7.9%	13.4%	14.8%	7.4%	5.0%	5.5%	2.8%	6.1%
MSCI EAFE Small Cap	10.1%	5.5%	6.6%	-0.8%	3.7%	5.3%	4.3%	9.2%
MSCI Emerging Markets	8.0%	5.7%	4.2%	-4.0%	2.3%	4.4%	2.1%	6.8%
<b>Alternatives</b>	<b>MTD</b>	<b>YTD</b>	<b>1YR</b>	<b>3YR</b>	<b>5YR</b>	<b>7YR</b>	<b>10YR</b>	<b>15YR</b>
Consumer Price Index*	0.0%	2.9%	3.2%	5.7%	4.0%	3.5%	2.8%	2.4%
FTSE NAREIT Equity REITs	10.6%	3.5%	-1.9%	5.0%	3.6%	4.5%	6.7%	10.9%
S&P Real Assets	6.6%	3.2%	1.5%	3.4%	4.3%	4.5%	3.5%	6.9%
FTSE EPRA NAREIT Developed	10.7%	1.1%	-1.6%	0.3%	0.8%	2.7%	3.6%	8.2%
FTSE EPRA NAREIT Developed ex U.S.	11.1%	-2.0%	-0.5%	-5.5%	-2.0%	0.9%	0.7%	5.9%
Bloomberg Commodity Total Return	-2.3%	-5.4%	-7.7%	13.6%	6.3%	4.3%	-0.7%	-0.4%
HFRI Fund of Funds Composite*	-1.2%	1.6%	2.9%	3.2%	3.7%	3.6%	3.0%	3.2%
HFRI Asset Weighted Composite*	-0.3%	3.3%	1.5%	6.2%	4.0%	4.1%	3.6%	4.8%
Alerian MLP	6.9%	29.4%	23.3%	34.5%	10.3%	6.4%	2.3%	10.3%

Sources: Morningstar, FactSet. As of November 30, 2023. \*Consumer Price Index and HFRI indexes as of October 31, 2023.

See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.

Indices cannot be invested in directly.

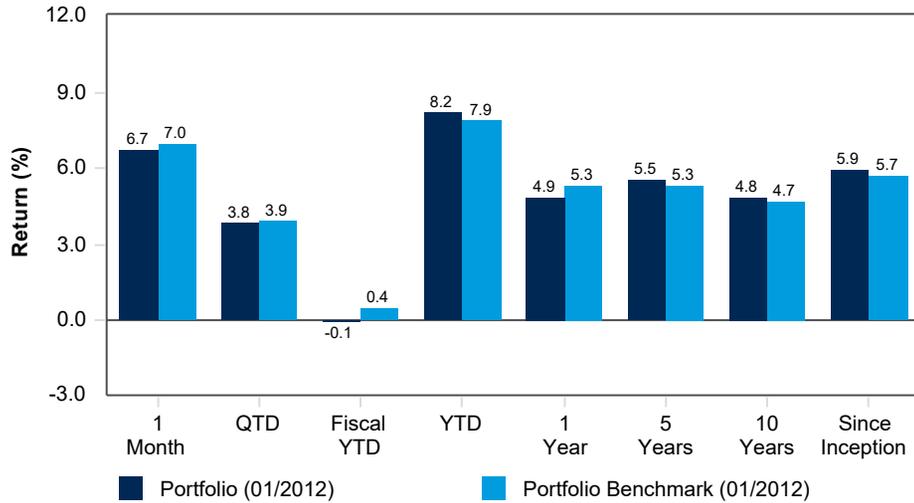


# Portfolio Dashboard

Town of Ledyard Pension Plan

As of November 30, 2023

## Historical Performance



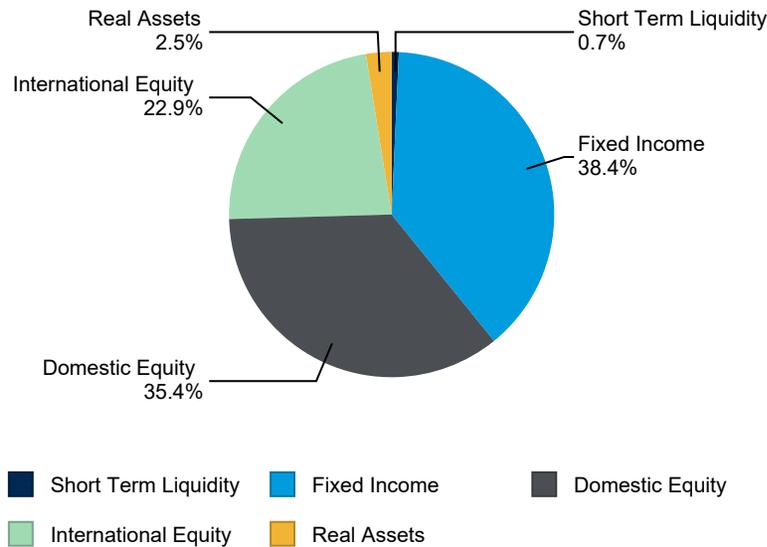
## Summary of Cash Flows

	1 Month	QTD	Fiscal YTD	YTD	1 Year
Beginning Market Value	26,346,447	27,246,622	28,790,563	26,338,323	27,310,769
Net Contributions	-155,975	-332,174	-804,345	-543,956	-684,542
Gain/Loss	1,753,685	1,029,708	-42,062	2,149,790	1,317,930
Ending Market Value	27,944,157	27,944,157	27,944,157	27,944,157	27,944,157

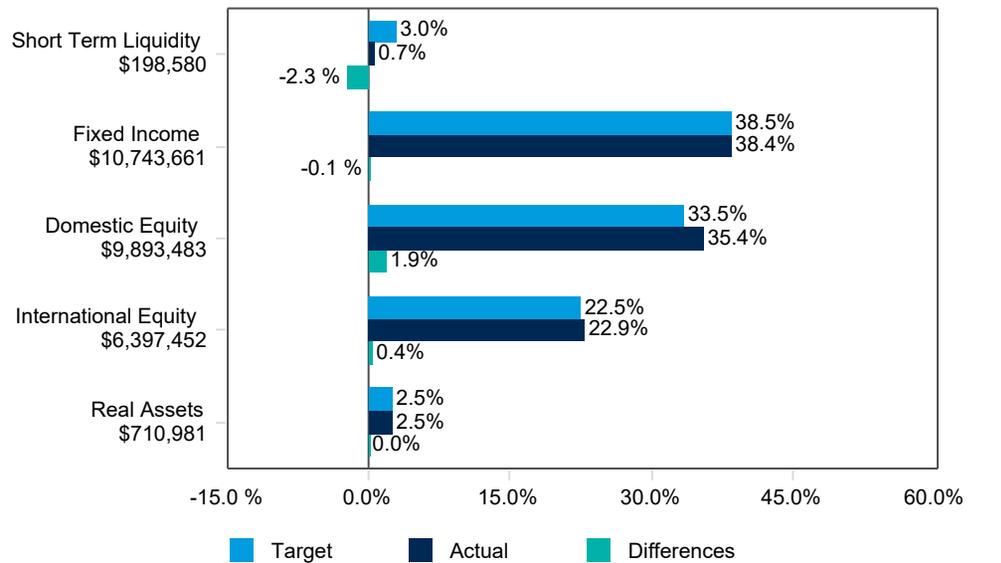
## Current Benchmark Composition

From Date	To Date	Composition
06/2023	Present	3.00% 90 Day U.S. Treasury Bill, 38.50% Blmbg. U.S. Aggregate, 21.50% S&P 500, 12.00% Russell 2000 Index, 8.50% MSCI AC World ex USA (Net), 7.50% MSCI EAFE (Net), 6.50% MSCI Emerging Markets (Net), 2.50% S&P Real Assets

## Portfolio Allocation



## Actual vs. Target Allocations





# Asset Allocation

Town of Ledyard Pension Plan

As of November 30, 2023

	Asset Allocation (\$)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
<b>Town of Ledyard Pension Plan</b>	<b>27,944,157</b>	<b>100.0</b>	<b>100.0</b>	<b>0.0</b>
<b>Short Term Liquidity</b>	<b>198,580</b>	<b>0.7</b>	<b>3.0</b>	<b>-2.3</b>
Dreyfus Treasury Securities Cash Management	198,580	0.7	3.0	-2.3
<b>Fixed Income</b>	<b>10,743,661</b>	<b>38.4</b>	<b>38.5</b>	<b>-0.1</b>
Vanguard Total Bond Market Index Adm	2,807,469	10.0	10.0	0.0
Metropolitan West Total Return Bond PI	3,570,934	12.8	13.0	-0.2
PGIM Total Return Bond R6	3,638,993	13.0	13.0	0.0
BlackRock Strategic Income Opportunities Class K	726,266	2.6	2.5	0.1
<b>Domestic Equity</b>	<b>9,893,483</b>	<b>35.4</b>	<b>33.5</b>	<b>1.9</b>
Vanguard Institutional Index Fund Instl	4,277,630	15.3	14.5	0.8
Touchstone Large Cap Focused Fund Instl	2,085,341	7.5	7.0	0.5
Neuberger Berman Genesis R6	1,720,609	6.2	6.0	0.2
William Blair Small Cap Value R6	901,423	3.2	3.0	0.2
Hood River Small Cap Growth R	908,481	3.3	3.0	0.3
<b>International Equity</b>	<b>6,397,452</b>	<b>22.9</b>	<b>22.5</b>	<b>0.4</b>
Vanguard Total International Stock Index Adm	2,434,600	8.7	8.5	0.2
T. Rowe Price Overseas Stock Instl	2,121,701	7.6	7.5	0.1
Invesco Developing Markets R6	1,841,151	6.6	6.5	0.1
<b>Real Assets</b>	<b>710,981</b>	<b>2.5</b>	<b>2.5</b>	<b>0.0</b>
DWS RREEF Real Assets R6	710,981	2.5	2.5	0.0



# Manager Performance

Town of Ledyard Pension Plan

As of November 30, 2023

	Allocation		Performance(%)									
	Market Value (\$)	%	1 Month	QTD	Fiscal YTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Town of Ledyard Pension Plan</b>	<b>27,944,157</b>	<b>100.0</b>	<b>6.7</b>	<b>3.8</b>	<b>-0.1</b>	<b>8.2</b>	<b>4.9</b>	<b>1.2</b>	<b>5.5</b>	<b>4.8</b>	<b>5.9</b>	<b>01/2012</b>
<i>Blended Benchmark</i>			7.0	3.9	0.4	7.9	5.3	1.3	5.3	4.7	5.7	
<b>Dreyfus Treasury Securities Cash Management</b>	<b>198,580</b>	<b>0.7</b>	<b>0.4</b>	<b>0.9</b>	<b>2.1</b>	<b>4.4</b>	<b>4.7</b>	<b>1.9</b>	<b>1.7</b>	<b>1.1</b>	<b>0.9</b>	<b>01/2012</b>
<i>90 Day U.S. Treasury Bill</i>			0.4	0.9	2.2	4.5	4.9	2.0	1.8	1.2	1.0	
<b>Fixed Income</b>	<b>10,743,661</b>	<b>38.4</b>	<b>4.7</b>	<b>2.9</b>	<b>0.0</b>	<b>2.5</b>	<b>2.2</b>	<b>-4.2</b>	<b>0.9</b>	<b>1.7</b>	<b>2.0</b>	<b>12/2011</b>
<i>Blmbg. U.S. Aggregate</i>			4.5	2.9	-0.4	1.6	1.2	-4.5	0.7	1.4	1.5	
<b>Vanguard Total Bond Market Index Adm</b>	<b>2,807,469</b>	<b>10.0</b>	<b>4.5</b>	<b>2.9</b>	<b>-0.3</b>	<b>1.9</b>	<b>1.3</b>	<b>-4.5</b>	<b>0.7</b>	<b>1.4</b>	<b>1.3</b>	<b>01/2012</b>
<i>Blmbg. U.S. Aggregate</i>			4.5	2.9	-0.4	1.6	1.2	-4.5	0.7	1.4	1.4	
IM U.S. Broad Market Core Fixed Income (MF) Median			4.6	2.9	-0.4	1.9	1.4	-4.5	0.7	1.3	1.5	
Vanguard Total Bond Market Index Adm Rank			62	43	43	47	58	41	50	50	64	
<b>Metropolitan West Total Return Bond PI</b>	<b>3,570,934</b>	<b>12.8</b>	<b>5.1</b>	<b>3.0</b>	<b>-0.6</b>	<b>1.6</b>	<b>1.1</b>	<b>-4.9</b>	<b>0.8</b>	<b>1.4</b>	<b>2.0</b>	<b>04/2012</b>
<i>Blmbg. U.S. Aggregate</i>			4.5	2.9	-0.4	1.6	1.2	-4.5	0.7	1.4	1.4	
IM U.S. Broad Market Core+ Fixed Income (MF) Median			4.7	2.9	-0.2	2.2	1.8	-4.4	1.0	1.5	1.7	
Metropolitan West Total Return Bond PI Rank			18	31	75	73	74	74	64	53	31	
<b>PGIM Total Return Bond R6</b>	<b>3,638,993</b>	<b>13.0</b>	<b>4.8</b>	<b>3.0</b>	<b>0.4</b>	<b>3.6</b>	<b>3.3</b>	<b>-4.3</b>	<b>1.2</b>	<b>2.2</b>	<b>1.5</b>	<b>04/2015</b>
<i>Blmbg. U.S. Aggregate</i>			4.5	2.9	-0.4	1.6	1.2	-4.5	0.7	1.4	0.8	
IM U.S. Broad Market Core+ Fixed Income (MF) Median			4.7	2.9	-0.2	2.2	1.8	-4.4	1.0	1.5	1.0	
PGIM Total Return Bond R6 Rank			41	32	17	9	9	46	39	12	16	
<b>BlackRock Strategic Income Opportunities Class K</b>	<b>726,266</b>	<b>2.6</b>	<b>2.9</b>	<b>2.5</b>	<b>2.1</b>	<b>4.2</b>	<b>4.4</b>	<b>0.3</b>	<b>2.9</b>	<b>2.6</b>	<b>0.8</b>	<b>04/2022</b>
<i>Blmbg. U.S. Aggregate</i>			4.5	2.9	-0.4	1.6	1.2	-4.5	0.7	1.4	-3.6	
IM Alternative Credit Focus (MF) Median			2.2	1.9	2.0	5.0	5.0	0.1	1.7	1.5	0.4	
BlackRock Strategic Income Opportunities Class K Rank			35	37	44	55	54	44	31	19	42	

Manager performance for mutual funds and ETFs is based on NAV and provided by Lipper. Performance for non-mutual fund or ETF investments is based on the returns provided by managers, calculations based on a manager statement, or calculations based on a statement or data from the client's custodian. Funds may include returns of an equivalent share class with a longer return history if period includes dates prior to the fund's inception. Returns are net of fees unless otherwise stated. The fund's inception date represents the first month the client made the investment. Composite performance includes all funds held in the composite since inception. Inception dates for asset class composites reflect the start date at which these returns could be calculated using historical and existing system capabilities and may vary from the inception dates of underlying component strategies.



# Manager Performance

Town of Ledyard Pension Plan

As of November 30, 2023

	Allocation		Performance(%)									
	Market Value (\$)	%	1 Month	QTD	Fiscal YTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>Domestic Equity</b>	<b>9,893,483</b>	<b>35.4</b>	<b>8.7</b>	<b>4.8</b>	<b>0.4</b>	<b>15.2</b>	<b>8.3</b>	<b>7.3</b>	<b>11.1</b>	<b>10.6</b>	<b>12.7</b>	<b>12/2011</b>
<i>Domestic Equity Benchmark</i>			9.1	5.0	0.9	14.8	7.8	6.9	10.1	10.1	12.3	
<b>Vanguard Institutional Index Fund Instl</b>	<b>4,277,630</b>	<b>15.3</b>	<b>9.1</b>	<b>6.8</b>	<b>3.3</b>	<b>20.8</b>	<b>13.8</b>	<b>9.7</b>	<b>12.5</b>	<b>11.8</b>	<b>13.6</b>	<b>01/2012</b>
<i>S&amp;P 500</i>			9.1	6.8	3.3	20.8	13.8	9.8	12.5	11.8	13.6	
IM U.S. Large Cap Core Equity (MF) Median			9.0	6.8	3.4	19.4	12.9	8.6	11.6	10.7	12.7	
Vanguard Institutional Index Fund Instl Rank			45	47	54	35	35	25	26	15	18	
<b>Touchstone Large Cap Focused Fund Instl</b>	<b>2,085,341</b>	<b>7.5</b>	<b>8.6</b>	<b>6.8</b>	<b>2.7</b>	<b>21.6</b>	<b>15.2</b>	<b>9.6</b>	<b>13.2</b>	<b>12.1</b>	<b>15.7</b>	<b>01/2019</b>
<i>S&amp;P 500</i>			9.1	6.8	3.3	20.8	13.8	9.8	12.5	11.8	14.9	
IM U.S. Large Cap Core Equity (MF) Median			9.0	6.8	3.4	19.4	12.9	8.6	11.6	10.7	13.9	
Touchstone Large Cap Focused Fund Instl Rank			66	53	73	27	23	27	12	8	11	
<b>Neuberger Berman Genesis R6</b>	<b>1,720,609</b>	<b>6.2</b>	<b>7.3</b>	<b>0.2</b>	<b>-5.2</b>	<b>6.3</b>	<b>-0.7</b>	<b>2.7</b>	<b>8.1</b>	<b>8.2</b>	<b>9.9</b>	<b>04/2012</b>
<i>Russell 2000 Index</i>			9.1	1.6	-3.6	4.2	-2.6	1.1	4.8	6.1	8.4	
IM U.S. Small Cap Core Equity (MF) Median			8.2	1.8	-2.6	4.3	-1.9	6.3	5.8	6.3	8.4	
Neuberger Berman Genesis R6 Rank			76	88	89	28	39	82	13	5	7	
<b>William Blair Small Cap Value R6</b>	<b>901,423</b>	<b>3.2</b>	<b>6.2</b>	<b>-0.1</b>	<b>-2.3</b>	<b>-0.2</b>	<b>-6.9</b>	<b>7.1</b>	<b>5.4</b>	<b>6.9</b>	<b>-3.0</b>	<b>12/2021</b>
<i>Russell 2000 Value Index</i>			9.0	2.5	-0.5	2.0	-4.7	6.5	4.7	5.7	-4.7	
IM U.S. Small Cap Value Equity (MF) Median			8.0	2.2	0.0	4.6	-1.5	10.1	6.5	5.9	-1.1	
William Blair Small Cap Value R6 Rank			88	94	76	91	93	88	74	25	77	
<b>Hood River Small Cap Growth R</b>	<b>908,481</b>	<b>3.3</b>	<b>12.8</b>	<b>4.9</b>	<b>-4.0</b>	<b>10.4</b>	<b>2.9</b>	<b>3.2</b>	<b>11.2</b>	<b>11.0</b>	<b>-9.5</b>	<b>12/2021</b>
<i>Russell 2000 Growth Index</i>			9.1	0.7	-6.7	6.0	-0.8	-4.3	4.2	6.2	-11.5	
IM U.S. Small Cap Growth Equity (MF) Median			9.2	1.0	-5.4	5.7	-0.6	-2.5	5.8	6.9	-11.3	
Hood River Small Cap Growth R Rank			2	1	29	13	18	14	3	1	32	

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# Manager Performance

Town of Ledyard Pension Plan

As of November 30, 2023

	Allocation		Performance(%)									
	Market Value (\$)	%	1 Month	QTD	Fiscal YTD	YTD	1 Year	3 Years	5 Years	10 Years	Since Inception	Inception Date
<b>International Equity</b>	<b>6,397,452</b>	<b>22.9</b>	<b>7.3</b>	<b>3.9</b>	<b>-1.2</b>	<b>9.2</b>	<b>6.1</b>	<b>0.0</b>	<b>4.5</b>	<b>3.0</b>	<b>4.0</b>	<b>03/2012</b>
<i>International Equity Benchmark</i>			8.8	4.4	0.6	9.6	8.8	0.8	4.7	3.3	4.0	
<b>Vanguard Total International Stock Index Adm</b>	<b>2,434,600</b>	<b>8.7</b>	<b>8.5</b>	<b>4.6</b>	<b>0.4</b>	<b>9.9</b>	<b>7.5</b>	<b>2.0</b>	<b>5.2</b>	<b>3.7</b>	<b>4.8</b>	<b>04/2012</b>
<i>FTSE Global All Cap ex US Spliced Index</i>			9.1	4.4	0.9	10.1	9.5	2.0	5.4	3.8	4.9	
IM International Large Cap Core Equity (MF) Median			8.6	4.9	-0.6	11.4	9.2	3.1	5.6	3.1	4.8	
Vanguard Total International Stock Index Adm Rank			67	57	18	73	73	69	60	31	52	
<b>T. Rowe Price Overseas Stock Instl</b>	<b>2,121,701</b>	<b>7.6</b>	<b>7.9</b>	<b>3.8</b>	<b>-1.0</b>	<b>10.0</b>	<b>7.0</b>	<b>3.5</b>	<b>5.8</b>	<b>4.1</b>	<b>3.4</b>	<b>06/2018</b>
<i>MSCI EAFE (Net)</i>			9.3	4.9	0.5	12.3	12.4	3.8	6.0	3.9	3.9	
IM International Large Cap Core Equity (MF) Median			8.6	4.9	-0.6	11.4	9.2	3.1	5.6	3.1	3.3	
T. Rowe Price Overseas Stock Instl Rank			81	73	58	71	74	41	43	15	45	
<b>Invesco Developing Markets R6</b>	<b>1,841,151</b>	<b>6.6</b>	<b>5.2</b>	<b>3.1</b>	<b>-3.3</b>	<b>7.4</b>	<b>3.5</b>	<b>-7.1</b>	<b>1.3</b>	<b>1.6</b>	<b>2.5</b>	<b>04/2012</b>
<i>MSCI Emerging Markets (Net)</i>			8.0	3.8	0.8	5.7	4.2	-4.0	2.3	2.1	2.0	
IM Emerging Markets Equity (MF) Median			7.5	3.7	-0.3	6.8	4.3	-4.5	2.6	1.9	2.0	
Invesco Developing Markets R6 Rank			94	72	92	44	58	70	78	62	36	
<b>Real Assets</b>	<b>710,981</b>	<b>2.5</b>	<b>6.5</b>	<b>4.5</b>	<b>0.6</b>	<b>-1.0</b>	<b>-3.8</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>-8.8</b>	<b>04/2022</b>
<i>S&amp;P Real Assets</i>			6.6	4.3	1.5	3.2	1.5	3.4	4.3	3.5	-5.2	
<b>DWS RREEF Real Assets R6</b>	<b>710,981</b>	<b>2.5</b>	<b>6.5</b>	<b>4.5</b>	<b>0.6</b>	<b>-1.0</b>	<b>-3.8</b>	<b>4.5</b>	<b>6.0</b>	<b>4.3</b>	<b>-8.8</b>	<b>04/2022</b>
<i>S&amp;P Real Assets</i>			6.6	4.3	1.5	3.2	1.5	3.4	4.3	3.5	-5.2	

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# Definitions & Disclosures

Please note: Due to rounding methodologies of various data providers, certain returns in this report might differ slightly when compared to other sources

## REGULATORY DISCLOSURES

**Offer of ADV Part 2A:** Rule 204-3 under the Investment Advisers Act of 1940 requires that we make an annual offer to clients to send them, without charge, a written disclosure statement meeting the requirements of such rule. We will be glad to send a copy of our ADV Part 2A to you upon your written request to [compliance@fiducient.com](mailto:compliance@fiducient.com).

## INDEX DEFINITIONS

- **Citigroup 3 Month T-Bill** measures monthly return equivalents of yield averages that are not marked to market. The Three-Month Treasury Bill Indexes consist of the last three three-month Treasury bill issues.
- **Ryan 3 Yr. GIC** is an arithmetic mean of market rates of \$1 million Guaranteed Interest Contracts held for three years.
- **Bloomberg Treasury U.S. T-Bills-1-3 Month Index** includes aged U.S. Treasury bills, notes and bonds with a remaining maturity from 1 up to (but not including) 3 months. It excludes zero coupon strips.
- **Bloomberg Capital US Treasury Inflation Protected Securities Index** consists of Inflation-Protection securities issued by the U.S. Treasury.
- **Bloomberg Muni Index** is a rules-based, market-value-weighted index engineered for the long-term tax-exempt bond market. Bonds must be rated investment-grade by at least two ratings agencies.
- **Bloomberg Muni 1 Year Index** is the 1-year (1-2) component of the Municipal Bond index.
- **Bloomberg Muni 3 Year Index** is the 3-year (2-4) component of the Municipal Bond index.
- **Bloomberg Muni 5 Year Index** is the 5-year (4-6) component of the Municipal Bond index.
- **Bloomberg Muni 7 Year Index** is the 7-year (6-8) component of the Municipal Bond index.
- **Bloomberg Intermediate U.S. Gov't/Credit** is the Intermediate component of the U.S. Government/Credit index, which includes securities in the Government and Credit Indices. The Government Index includes treasuries and agencies, while the credit index includes publicly issued U.S. corporate and foreign debentures and secured notes that meet specified maturity, liquidity, and quality requirements.
- **Bloomberg U.S. Aggregate Index** covers the U.S. investment grade fixed rate bond market, with index components for government and corporate securities, mortgage pass-through securities, and asset-backed securities.
- **Bloomberg Global Aggregate ex. USD Indices** represent a broad-based measure of the global investment-grade fixed income markets. The two major components of this index are the Pan-European Aggregate and the Asian-Pacific Aggregate Indices. The index also includes Eurodollar and Euro-Yen corporate bonds and Canadian government, agency and corporate securities.
- **Bloomberg U.S. Corporate High Yield Index** covers the universe of fixed rate, non-investment grade debt. Eurobonds and debt issues from countries designated as emerging markets (sovereign rating of Baa1/BBB+/BBB+ and below using the middle of Moody's, S&P, and Fitch) are excluded, but Canadian and global bonds (SEC registered) of issuers in non-EMG countries are included.
- **JP Morgan Government Bond Index-Emerging Market (GBI-EM) Index** is a comprehensive, global local emerging markets index, and consists of regularly traded, liquid fixed-rate, domestic currency government bonds to which international investors can gain exposure.
- **The S&P 500** is a capitalization-weighted index of 500 stocks designed to measure performance of the broad domestic economy through changes in the aggregate market value of 500 stocks representing all major industries.
- **The Dow Jones Industrial Index** is a price-weighted average of 30 blue-chip stocks that are generally the leaders in their industry.
- **The NASDAQ** is a broad-based capitalization-weighted index of stocks in all three NASDAQ tiers: Global Select, Global Market and Capital Market.
- **Russell 3000** is a market-cap-weighted index which consists of roughly 3,000 of the largest companies in the U.S. as determined by market capitalization. It represents nearly 98% of the investable U.S. equity market.
- **Russell 1000** consists of the largest 1000 companies in the Russell 3000 Index.
- **Russell 1000 Growth** measures the performance of those Russell 1000 companies with higher P/B ratios and higher forecasted growth values.
- **Russell 1000 Value** measures the performance of those Russell 1000 companies with lower P/B ratios and lower forecasted growth values.
- **Russell Mid Cap** measures the performance of the 800 smallest companies in the Russell 1000 Index.
- **Russell Mid Cap Growth** measures the performance of those Russell Mid Cap companies with higher P/B ratios and higher forecasted growth values.
- **Russell Mid Cap Value** measures the performance of those Russell Mid Cap companies with lower P/B ratios and lower forecasted growth values.
- **Russell 2000** consists of the 2,000 smallest U.S. companies in the Russell 3000 index.
- **Russell 2000 Growth** measures the performance of the Russell 2000 companies with higher P/B ratios and higher forecasted growth values.
- **Russell 2000 Value** measures the performance of those Russell 2000 companies with lower P/B ratios and lower forecasted growth values.
- **Russell 2500** consists of the 2,500 smallest U.S. companies in the Russell 3000 index.
- **Russell 2500 Growth** measures the performance of the Russell 2500 companies with higher P/B ratios and higher forecasted growth values.
- **Russell 2500 Value** measures the performance of those Russell 2500 companies with lower P/B ratios and lower forecasted growth values.
- **MSCI World** captures large and mid-cap representation across 23 Developed Markets countries. With 1,645 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.
- **MSCI ACWI (All Country World Index) ex. U.S. Index** captures large and mid-cap representation across 22 of 23 Developed Markets countries (excluding the United States) and 23 Emerging Markets countries. With 1,859 constituents, the index covers approximately 85% of the global equity opportunity set outside the US.
- **MSCI ACWI (All Country World Index) ex. U.S. Small Cap Index** captures small cap representation across 22 of 23 Developed Markets countries (excluding the US) and 23 Emerging Markets countries. With 4,368 constituents, the index covers approximately 14% of the global equity opportunity set outside the US.
- **MSCI EAFE** is an equity index which captures large and mid-cap representation across Developed Markets countries around the world, excluding the US and Canada. With 930 constituents, the index covers approximately 85% of the free float-adjusted market capitalization in each country.

- **MSCI EAFE Value** captures large and mid-cap securities exhibiting overall value style characteristics across Developed Markets countries around the world, excluding the US and Canada. The value investment style characteristics for index construction are defined using three variables: book value to price, 12-month forward earnings to price and dividend yield. With 507 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index.
- **MSCI EAFE Growth** captures large and mid-cap securities exhibiting overall growth style characteristics across Developed Markets countries around the world, excluding the US and Canada. The growth investment style characteristics for index construction are defined using five variables: long-term forward EPS growth rate, short-term forward EPS growth rate, current internal growth rate and long-term historical EPS growth trend and long-term historical sales per share growth trend. With 542 constituents, the index targets 50% coverage of the free float-adjusted market capitalization of the MSCI EAFE Index.
- **MSCI Emerging Markets** captures large and mid-cap representation across 23 Emerging Markets countries. With 836 constituents, the index covers approximately 85% of the free-float adjusted market capitalization in each country.
- **Consumer Price Index** is a measure of prices paid by consumers for a market basket of consumer goods and services. The yearly (or monthly) growth rates represent the inflation rate.
- **FTSE NAREIT Equity REITs Index** contains all Equity REITs not designed as Timber REITs or Infrastructure REITs.
- **S&P Developed World Property** defines and measures the investable universe of publicly traded property companies domiciled in developed markets. The companies in the index are engaged in real estate related activities, such as property ownership, management, development, rental and investment.
- **S&P Developed World Property x U.S.** defines and measures the investable universe of publicly traded property companies domiciled in developed countries outside of the U.S. The companies included are engaged in real estate related activities, such as property ownership, management, development, rental and investment.
- **Fund Specific Broad Real Asset Benchmarks:**
  - **DWS Real Assets:** 30%: Dow Jones Brookfield Infrastructure Index, 30%: FTSE EPRA/NAREIT Developed Index, 15%: Bloomberg Commodity Index, 15%: S&P Global Natural Resources Index, 10%: U.S. Treasury Inflation Notes Total Return Index
  - **PIMCO Inflation Response Multi Asset Fund:** 45% Bloomberg U.S. TIPS, 20% Bloomberg Commodity Index, 15% JP Morgan Emerging Local Markets Plus, 10% Dow Jones Select REIT, 10% Bloomberg Gold Subindex Total Return
  - **Principal Diversified Real Assets:** 35% BbgBarc U.S. Treasury TIPS Index, 20% S&P Global Infrastructure Index NTR, 20% S&P Global Natural Resources Index NTR, 15% Bloomberg Commodity Index, and 10% FTSE EPRA/NAREIT Developed Index NTR
  - **Wellington Diversified Inflation H:** 50% MSCI ACWI Commodity Producers Index, 25% Bloomberg Commodity Index, and 25% Bloomberg Bloomberg US TIPS 1 – 10 Year Index
- **Bloomberg Commodity Index** is calculated on an excess return basis and reflects commodity futures price movements. The index rebalances annually weighted 2/3 by trading volume and 1/3 by world production and weight-caps are applied at the commodity, sector and group level for diversification.
- **HFRI Fund Weighted Composite Index** is a global, equal-weighted index of over 2,000 single-manager funds that report to HFR Database. Constituent funds report monthly net of all fees performance in US Dollar and have a minimum of \$50 Million under management or a twelve (12) month track record of active performance. The HFRI Fund Weighted Composite Index does not include Funds of Hedge Funds.
- **The Alerian MLP Index** is the leading gauge of energy Master Limited Partnerships (MLPs). The float adjusted, capitalization-weighted index, whose constituents represent approximately 85% of total float-adjusted market capitalization, is disseminated real-time on a price-return basis (AMZ) and on a total-return basis.
- **The Adjusted Alerian MLP Index** is commensurate with 65% of the monthly returns of the Alerian MLP Index to incorporate the effect of deferred tax liabilities incurred by MLP entities.
- **Cambridge Associates U.S. Private Equity Index** is based on data compiled from more than 1,200 institutional-quality buyout, growth equity, private equity energy, and mezzanine funds formed between 1986 and 2015.
- **Cambridge Associates U.S. Venture Capital Index** is based on data compiled from over 1,600 institutional-quality venture capital funds formed between 1986 and 2015.
- **Vanguard Spliced Bloomberg US1-5Yr Gov/Cr Flt Adj Index:** Bloomberg U.S. 1–5 Year Government/Credit Bond Index through December 31, 2009; Bloomberg U.S. 1–5 Year Government/Credit Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg US5-10Yr Gov/Cr Flt Adj Index:** Bloomberg U.S. 5–10 Year Government/Credit Bond Index through December 31, 2009; Bloomberg U.S. 5–10 Year Government/Credit Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg US Agg Flt Adj Index:** Bloomberg U.S. Aggregate Bond Index through December 31, 2009; Bloomberg U.S. Aggregate Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg US Long Gov/Cr Flt Adj Index:** Bloomberg U.S. Long Government/Credit Bond Index through December 31, 2009; Bloomberg U.S. Long Government/Credit Float Adjusted Index thereafter.
- **Vanguard Balanced Composite Index:** Made up of two unmanaged benchmarks, weighted 60% Dow Jones U.S. Total Stock Market Index (formerly the Dow Jones Wilshire 5000 Index) and 40% Bloomberg U.S. Aggregate Bond Index through May 31, 2005; 60% MSCI US Broad Market Index and 40% Bloomberg U.S. Aggregate Bond Index through December 31, 2009; 60% MSCI US Broad Market Index and 40% Bloomberg U.S. Aggregate Float Adjusted Index through January 14, 2013; and 60% CRSP US Total Market Index and 40% Bloomberg U.S. Aggregate Float Adjusted Index thereafter.
- **Vanguard Spliced Intermediate-Term Tax-Exempt Index:** Bloomberg 1–15 Year Municipal Bond Index.
- **Vanguard Spliced Extended Market Index:** Dow Jones Wilshire 4500 Index through June 17, 2005; S&P Transitional Completion Index through September 16, 2005; S&P Completion Index thereafter.
- **Vanguard Spliced Value Index:** S&P 500 Value Index (formerly the S&P 500/Barra Value Index) through May 16, 2003; MSCI US Prime Market Value Index through April 16, 2013; CRSP US Large Cap Value Index thereafter.
- **Vanguard Spliced Large Cap Index:** Consists of MSCI US Prime Market 750 Index through January 30, 2013, and the CRSP US Large Cap Index thereafter.
- **Vanguard Spliced Growth Index:** S&P 500 Growth Index (formerly the S&P 500/Barra Growth Index) through May 16, 2003; MSCI US Prime Market Growth Index through April 16, 2013; CRSP US Large Cap Growth Index thereafter.
- **Vanguard Spliced Mid Cap Value Index:** MSCI US Mid Cap Value Index through April 16, 2013; CRSP US Mid Cap Value Index thereafter.
- **Vanguard Spliced Mid Cap Index:** S&P MidCap 400 Index through May 16, 2003; the MSCI US Mid Cap 450 Index through January 30, 2013; and the CRSP US Mid Cap Index thereafter.
- **Vanguard Spliced Mid Cap Growth Index:** MSCI US Mid Cap Growth Index through April 16, 2013; CRSP US Mid Cap Growth Index thereafter.
- **Vanguard Spliced Total Stock Market Index:** Dow Jones U.S. Total Stock Market Index (formerly known as the Dow Jones Wilshire 5000 Index) through April 22, 2005; MSCI US Broad Market Index through June 2, 2013; and CRSP US Total Market Index thereafter.
- **Vanguard Spliced Small Cap Value Index:** SmallCap 600 Value Index (formerly the S&P SmallCap 600/Barra Value Index) through May 16, 2003; MSCI US Small Cap Value Index through April 16, 2013; CRSP US Small Cap Value Index thereafter.

- **Vanguard Spliced Small Cap Index:** Russell 2000 Index through May 16, 2003; the MSCI US Small Cap 1750 Index through January 30, 2013; and the CRSP US Small Cap Index thereafter.
- **Vanguard Spliced Small Cap Growth Index:** S&P SmallCap 600 Growth Index (formerly the S&P SmallCap 600/Barra Value Index) through May 16, 2003; MSCI US Small Cap Growth Index through April 16, 2013; CRSP US Small Cap Growth Index thereafter.
- **Vanguard Spliced Total International Stock Index:** Consists of the Total International Composite Index through August 31, 2006; the MSCI EAFE + Emerging Markets Index through December 15, 2010; the MSCI ACWI ex USA IMI Index through June 2, 2013; and FTSE Global All Cap ex US Index thereafter. Benchmark returns are adjusted for withholding taxes.
- **Vanguard Spliced Developed Markets Index:** MSCI EAFE Index through May 28, 2013; FTSE Developed ex North America Index through December 20, 2015; FTSE Developed All Cap ex US Transition Index through May 31, 2016; FTSE Developed All Cap ex US Index thereafter. Benchmark returns are adjusted for withholding taxes.
- **Vanguard Spliced Emerging Markets Index:** Select Emerging Markets Index through August 23, 2006; MSCI Emerging Markets Index through January 9, 2013; FTSE Emerging Transition Index through June 27, 2013; FTSE Emerging Index through November 1, 2015; and FTSE Emerging Markets All Cap China A Transition Index thereafter. Benchmark returns are adjusted for withholding taxes.
- **Vanguard REIT Spliced Index:** MSCI US REIT Index adjusted to include a 2% cash position (Lipper Money Market Average) through April 30, 2009; MSCI US REIT Index through January 31, 2018; MSCI US Investable Market Real Estate 25/50 Transition Index through July 24, 2018; MSCI US Investable Market Real Estate 25/50 Index thereafter.

#### **Additional:**

- Equity sector returns are calculated by Russell and MSCI for domestic and international markets, respectively. MSCI sector definitions correspond to the MSCI GICS® classification (Global Industry Classification System); Russell uses its own sector and industry classifications.
- MSCI country returns are calculated by MSCI and are free float-adjusted market capitalization indices that are designed to measure equity market performance in each specific country.
- Currency returns are calculated using Bloomberg's historical spot rate indices and are calculated using the U.S. dollar as the base currency.
- The Index of Leading Economic Indicators, calculated by The Conference Board, is used as a barometer of economic activity over a range of three to six months. The index is used to determine the direction and stability of the economy. The composite index of leading indicators, which is derived from 10 leading indicators, helps to signal turning points in the economy and forecast economic cycles. The leading indicators are the following: average weekly hours, average weekly initial claims, manufacturers' new orders, both consumer and non-defense capital goods, vendor performance, building permits, stock prices, money supply (M2), the interest rate spread and the index of consumer expectations.
- S&P Target Date Indexes are constructed using a survey method of current target date investments with \$100 million or more in assets under management. Allocations for each vintage are comprised of exchange-traded funds that represent respective asset classes used in target date portfolios. The indexes are designed to represent a market consensus glide path.

#### **DEFINITION OF KEY STATISTICS AND TERMS**

- **Returns:** A percentage figure used when reporting historical average compounded rate of investment return. All returns are annualized if the period for which they are calculated exceeds one year.
- **Universe Comparison:** The universe compares the fund's returns to a group of other investment portfolios with similar investment strategies. The returns for the fund, the index and the universe percentiles are displayed. A percentile ranking of 1 is the best, while a percentile ranking of 100 is the worst. For example, a ranking of 50 indicates the fund outperformed half of the universe. A ranking of 25 indicates the fund was in the top 25% of the universe, outperforming 75%.
- **Returns In Up/Down Markets:** This measures how the fund performed in both up and down markets. The methodology is to segregate the performance for each time period into the quarters in which the market, as defined by the index, was positive and negative. Quarters with negative index returns are treated as down markets, and quarters with positive index returns are treated as up markets. Thus, in a 3 year or 12 quarter period, there might be 4 down quarters and 8 up quarters. A simple arithmetic average of returns is calculated for the fund and the index based on the up quarters. A simple arithmetic average of returns is calculated for the fund and the index based on the down quarters. The up market capture ratio is the ratio of the fund's return in up markets to the index. The down market capture ratio is the ratio of the fund's return in down markets to the index. Ideally, the fund would have a greater up market capture ratio than down market capture ratio.
- **Standard Deviation:** Standard deviation is a statistical measure of the range of performance within which the total returns of a fund fall. When a fund has a high standard deviation, the range of performance is very wide, meaning there is a greater volatility. Approximately 68% of the time, the total return of any given fund will differ from the average total return by no more than plus or minus the standard deviation figure. Ninety-five percent of the time, a fund's total return will be within a range of plus or minus two times the standard deviation from the average total return. If the quarterly or monthly returns are all the same the standard deviation will be zero. The more they vary from one another, the higher the standard deviation. Standard deviation can be misleading as a risk indicator for funds with high total returns because large positive deviations will increase the standard deviation without a corresponding increase in the risk of the fund. While positive volatility is welcome, negative is not.
- **R-Squared:** This reflects the percentage of a fund's movements that are explained by movements in its benchmark index. An R-squared of 100 means that all movements of a fund are completely explained by movements in the index. Conversely, a low R-squared indicates very few of the fund's movements are explained by movements in the benchmark index. R-squared can also be used to ascertain the significance of a particular beta. Generally, a higher R-squared will indicate a more reliable beta figure. If the R-squared is lower, then the beta is less relevant to the fund's performance. A measure of diversification, R-squared indicates the extent to which fluctuations in portfolio returns are explained by market. An R-squared = 0.70 implies that 70% of the fluctuation in a portfolio's return is explained by the fluctuation in the market. In this instance, overweighting or underweighting of industry groups or individual securities is responsible for 30% of the fund's movement.
- **Beta:** This is a measure of a fund's market risk. The beta of the market is 1.00. Accordingly, a fund with a 1.10 beta is expected to perform 10% better than the market in up markets and 10% worse than the market in down markets. It is important to note, however, a low fund beta does not imply the fund has a low level of volatility; rather, a low beta means only that the fund's market-related risk is low. Because beta analyzes the market risk of a fund by showing how responsive the fund is to the market, its usefulness depends on the degree to which the markets determine the fund's total risk (indicated by R-squared).
- **Alpha:** The Alpha is the nonsystematic return, or the return that can't be attributed to the market. It can be thought of as how the manager performed if the market's return was zero. A positive alpha implies the manager added value to the return of the portfolio over that of the market. A negative alpha implies the manager did not contribute any value over the performance of the market.
- **Sharpe Ratio:** The Sharpe ratio is the excess return per unit of total risk as measured by standard deviation. Higher numbers are better, indicating more return for the level of risk experienced. The ratio is a fund's return minus the risk-free rate of return (30-day T-Bill rate) divided by the fund's standard deviation. The higher the Sharpe ratio, the more reward you are receiving per unit of total risk. This measure can be used to rank the performance of mutual funds or other portfolios.
- **Treynor Ratio:** The Treynor ratio measures returns earned in excess of that which could have been earned on a riskless investment per each unit of market risk. The ratio relates excess return over the risk-free rate to the additional risk taken; however, systematic risk is used instead of total risk. The Treynor ratio is similar to the Sharpe ratio, except in the fact that it uses the beta to evaluate the returns rather than the standard deviation of portfolio returns. High values mean better return for risk taken.

- **Tracking Error:** Tracking error measures the volatility of the difference in annual returns between the manager and the index. This value is calculated by measuring the standard deviation of the difference between the manager and index returns. For example, a tracking error of +/- 5 would mean there is about a 68% chance (1 standard deviation event) that the manager's returns will fall within +/- 5% of the benchmark's annual return.
- **Information Ratio:** The information ratio is a measure of the consistency of excess return. This value is determined by taking the annualized excess return over a benchmark (style benchmark by default) and dividing it by the standard deviation of excess return.
- **Consistency:** Consistency shows the percent of the periods the fund has beaten the index and the percent of the periods the index has beat the fund. A high average for the fund (e.g., over 50) is desirable, indicating the fund has beaten the index frequently.
- **Downside Risk:** Downside risk is a measure similar to standard deviation but focuses only on the negative movements of the return series. It is calculated by taking the standard deviation of the negative quarterly set of returns. The higher the factor, the riskier the product.
- **M-Squared:** M-squared, or the Modigliani risk-adjusted performance measure is used to characterize how well a portfolio's return rewards an investor for the amount of risk taken, relative to that of some benchmark portfolio and to the risk-free rate.

#### DEFINITION OF KEY PRIVATE EQUITY TERMS

- **PIC (Paid in Capital):** The amount of committed capital that has been transferred from the limited partner to the general partner.
- **TVPI (Total Value to Paid in Capital):** Money returned to limited partners plus the fund's unrealized investments, divided by money paid-in to the partnership. The TVPI should equal RVPI plus DPI.
- **DPI (Distribution to Paid In Capital):** Money returned (distributions) to limited partners divided by money paid in to the partnership. Also called cash-on-cash multiple.
- **RVPI (Residual Value to Paid In Capital):** The value of a fund's unrealized investments divided by money paid-in to the partnership.
- **Internal rate of return (IRR):** This is the most appropriate performance benchmark for private equity investments. It is a time-weighted return expressed as a percentage. IRR uses the present sum of cash drawdowns (money invested), the present value of distributions (money returned from investments) and the current value of unrealized investments and applies a discount.
- **Commitment:** Every investor in a private equity fund commits to investing a specified sum of money in the fund partnership over a specified period of time. The fund records this as the limited partnership's capital commitment. The sum of capital commitments is equal to the size of the fund.
- **Capital Distribution:** These are the returns that an investor in a private equity fund receives. It is the income and capital realized from investments less expenses and liabilities. Once a limited partner has had their cost of investment returned, further distributions are actual profit. The partnership agreement determines the timing of distributions to the limited partner. It will also determine how profits are divided among the limited partners and general partner.
- **Carried Interest:** The share of profits that the fund manager is due once it has returned the cost of investment to investors. Carried interest is normally expressed as a percentage of the total profits of the fund.
- **Co-Investment:** Co-Investments are minority investments made alongside a private equity investor in an LBO, a recapitalization, or an expansion capital transaction. It is a passive, non-controlling investment, as the private equity firm involved will typically exercise control and perform monitoring functions.
- **General Partner (GP):** This can refer to the top-ranking partners at a private equity firm as well as the firm managing the private equity fund.
- **GP Commitments:** It is normal practice for the GP managing a private equity fund to also make a financial commitment to the fund on the same basis as the LPs in the fund, and this is seen as an important factor driving the alignment of GP and LP interests. The historic benchmark for GP commitments has been 1% of the total fund size, but this is by no means universal, and many GPs commit significantly larger amounts. Furthermore, there has been a marked trend towards GPs making larger commitments to their funds over recent years.
- **Leveraged Buy-Out (LBO):** The acquisition of a company using debt and equity finance.
- **Limited Partner (LP):** Institutions or high-net-worth individuals/sophisticated investors that contribute capital to a private equity fund.
- **Public Market Equivalent (PME):** Performance measure used to evaluate performance relative to the market. It is calculated as the ratio of the discounted value of the LP's inflows divided by the discounted value of outflows, with the discounting performed using realized market returns.
- **Primaries:** An original investment vehicle that invests directly into a company or asset.

#### VALUATION POLICY

Fiducient Advisors does not engage an independent third-party pricing service to value securities. Our reports are generated using the security prices provided by custodians used by our clients. Our custodial pricing hierarchy is available upon request. If a client holds a security not reported by the first custodian within the hierarchy, the valuation is generated from the next custodian within the hierarchy, and so forth. Each custodian uses pricing services from outside vendors, where the vendors may generate nominally different prices. Therefore, this report can reflect minor valuation differences from those contained in a custodian's report. In rare instances where FA overrides a custodial price, prices are taken from Bloomberg.

#### REPORTING POLICY

This report is intended for the exclusive use of the client listed within the report. Content is privileged and confidential. Any dissemination or distribution is strictly prohibited. Information has been obtained from a variety of sources believed to be reliable though not independently verified. Any forecast represents median expectations and actual returns, volatilities and correlations will differ from forecasts. Please note each client has customized investment objectives and constraints and the investment strategy for each portfolio is based on a client-specific asset allocation model. Past performance does not indicate future performance and there is a possibility of a loss. Performance calculated net of investment fees. Certain portfolios presented may be gross of Fiducient Advisors' fees and actual performance would be reduced by investment advisory fees. This report does not represent a specific investment recommendation. Please consult with your advisor, attorney, and accountant, as appropriate, regarding specific advice.

Custodian reports are the reports that govern the account. There will be different account values between Fiduciant Advisors' reports and the custodian reports based on whether the report utilizes trade date or settlement date to calculate value. Additionally, difference between values contained on reports may be caused by different accrued income values. Any forecasts represent future expectations and actual returns, volatilities and correlations will differ from forecasts. This report does not represent a specific investment recommendation. Please consult with your advisor, attorney, and accountant, as appropriate, regarding specific advice. Past performance does not indicate future performance and there is a possibility of a loss.

Manager performance for mutual funds and ETFs is based on NAV and provided by Lipper. Performance for non-mutual fund or ETF investments is based on the returns provided by managers, calculations based on a manager statement, or calculations based on a statement or data from the client's custodian. Unless specified otherwise, all returns are net of individual manager fees, represent total returns and are annualized for periods greater than one year. The deduction of fees produces a compounding effect that reduces the total rate of return over time. As an example, the effect of investment management fees on the total value of a client's portfolio assuming (a) quarterly fee assessment, (b) \$1,000,000 investment, (c) portfolio return of 8% a year, and (d) 0.50% annual investment advisory fee would be \$5,228 in the first year, and cumulative effects of \$30,342 over five years and \$73,826 over ten years. Additional information on advisory fees charged by Fiduciant Advisors are described in Part 2 of the Form ADV.

## **MATERIAL RISKS & LIMITATIONS**

**Fixed Income** securities are subject to interest rate risks, the risk of default and liquidity risk. U.S. investors exposed to non-U.S. fixed income may also be subject to currency risk and fluctuations.  
-Liability Driven Investing (LDI) Assets

**Cash** may be subject to the loss of principal and over longer period of time may lose purchasing power due to inflation.  
-Short Term Liquidity

**Domestic Equity** can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to changes to underlying company conditions, sector or industry factors, or other macro events. These may happen quickly and unpredictably.

**International Equity** can be volatile. The rise or fall in prices take place for a number of reasons including, but not limited to changes to underlying company conditions, sector or industry impacts, or other macro events. These may happen quickly and unpredictably. International equity allocations may also be impact by currency and/or country specific risks which may result in lower liquidity in some markets.

**Real Assets** can be volatile and may include asset segments that may have greater volatility than investment in traditional equity securities. Such volatility could be influenced by a myriad of factors including, but not limited to overall market volatility, changes in interest rates, political and regulatory developments, or other exogenous events like weather or natural disaster.

**Private Equity** involves higher risk and is suitable only for sophisticated investors. Along with traditional equity market risks, private equity investments are also subject to higher fees, lower liquidity and the potential for leverage that may amplify volatility and/or the potential loss of capital.

**Private Credit** involves higher risk and is suitable only for sophisticated investors. These assets are subject to interest rate risks, the risk of default and limited liquidity. U.S. investors exposed to non-U.S. private credit may also be subject to currency risk and fluctuations.

**Private Real Estate** involves higher risk and is suitable only for sophisticated investors. Real estate assets can be volatile and may include unique risks to the asset class like leverage and/or industry, sector or geographical concentration. Declines in real estate value may take place for a number of reasons including, but are not limited to economic conditions, change in condition of the underlying property or defaults by the borrow.

**Marketable Alternatives** involves higher risk and is suitable only for sophisticated investors. Along with traditional market risks, marketable alternatives are also subject to higher fees, lower liquidity and the potential for leverage that may amplify volatility or the potential for loss of capital. Additionally, short selling involved certain risks including, but not limited to additional costs, and the potential for unlimited loss on certain short sale positions.

## **OTHER**

By regulation, closed-end funds utilizing debt for leverage must report their interest expense, as well as their income tax expense, as part of their total expense ratio. To make for a useful comparison between closed-end funds and both open-end funds and exchange-traded funds, adjusted expense ratios excluding interest and income tax expenses are utilized for closed-end funds within this report. See disclosure on closed-end fund fact sheets for information regarding the total expense ratio of each closed-end fund.

Please advise us of any changes in your objectives or circumstances.

## **CUSTODIAN STATEMENTS**

Please remember to review the periodic statements you receive from you custodian. If you do not receive periodic statements from your custodian or notice issues with the activity reported in those statements, please contact FA or your custodian immediately.



# TOWN OF LEDYARD

741 Colonel Ledyard  
Highway  
Ledyard, CT 06339-1511

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**File #:** 23-2340

**Agenda Date:** 12/19/2023

**Agenda #:** 1.

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AGENDA REQUEST  
GENERAL DISCUSSION ITEM

**Subject:**

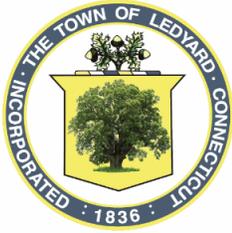
Motion to APPROVE Regular Meeting Minutes from November 21, 2023, as written.

**Background:**

(type text here)

**Department Comment/Recommendation:**

(type text here)



# TOWN OF LEDYARD

741 Colonel Ledyard Highway  
Ledyard, Connecticut 06339

## Retirement Board Meeting Minutes

Chairman  
John Rodolico

### Regular Meeting

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Tuesday, November 21, 2023

10:00 AM

Council Chambers - Hybrid Format

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#### I. CALL TO ORDER

Ms. Wadecki was appointed as Chairperson in Mr. Rodolico's absence.  
The meeting was called to order by Sharon Wadecki at 10:06 a.m.

#### II. ROLL CALL

**Present** Board Member William Thorne  
Board Member Roger Coddling  
Board Member Sharon Wadecki

**Excused** Chairman John Rodolico  
Board Member Daniel Panosky

Staff present:

Mayor Fred Allyn III  
Ian Stammel, Assistant Finance Director  
Marisa Iannella Rodriguez, Human Resource Director  
Matt Bonin, Finance Director  
Christina Hostetler, Town Hall Assistant

#### III. PRESENTATIONS

1. Frederica Daniels, USI Actuaries will be presenting the July 1, 2023, Actuarial Valuation and the June 30, 2023, GASB Disclosure Report.

Frederica Daniels, USI Actuaries started the presentation by saying that the decision to re-amortize past liabilities over a ten-year period has helped control the projected contribution levels and keep things stable while amortizing the cost over the expected time frame of the plan, at least while the active group is still working and accruing benefits. She added that it is still reasonable to continue to use the 3% assumption built in for the budget. If there is major census changes year to year or major investment swings (as was seen coming out of 2022/23) then a re-assessment will be done to see if there is a need to adjust the contribution level from 3% (this would be considered an off-year evaluation). Ms. Daniels stated that USI produces annual benefit statements for the active employees so technically census updates are created every year just not the full evaluation report.

Looking at the Principal Results of the Valuation Ms. Daniels said one of the most important things to look at is the "Actuarial Value of Assets as a % Actuarial Accrued Liability" which

went up to 88.71%. The other is payroll, specifically the contribution percentage. On average the Town is contributing 21% to the plan on behalf of employees.

Two years ago, there were 235 total participants now there is 202. As for active participants the numbers went down from 63 to 48. This decrease in active employees averages seven to eight per year. If this trend continues, in five to seven years there may not be any more active employees.

Ms. Daniels mentioned that there is good news is that the plan is trending down on the unfunded liability and trending upward on the funded ratio (from 87% to approximately 89% in two years).

The contributions made by the Town each year on behalf of the plan is made up of two pieces; funding over time and funding the cost of any new benefits as the employees continue to work (Employer Normal Cost). The Normal cost was \$317,453 in 2021 and now is down to \$206,279, almost a third less. As the population decreases so will the Employer normal cost. Matt Bonin, Finance Director asked what the difference is between compensation increases and payroll growth rate. Ms. Daniels explained that the payroll growth rate is the total group vs. compensation is the general increase per person.

The GASB report is the Government standard formality that needs to be completed rather than a set of calculations used for recommendations. The governance for the GASB reporting requires different types of disclosure for expenses. Ms. Daniels said the GASB was included in the presentation to formally announce to the Board that the report and the disclosure obligations have been completed.

#### IV. REVIEW AND APPROVAL OF MINUTES

1. Motion to APPROVE Regular Meeting Minutes from September 19, 2023 and October 17, 2023, as written.

**RESULT:** APPROVED AND SO DECLARED

**MOVER:** Sharon Wadecki

**SECONDER:** William Thorne

**AYE** 3 Thorne Coddington Wadecki

**EXCUSED** 2 Rodolico Panosky

#### V. DIRECTOR OF HUMAN RESOURCES UPDATE

1. Director of Human Resources update.

Marisa Iannella-Rodriguez, Human Resource Director reported that a few weeks ago that she, Bill Saums, Town Councilor and Chief Rich were invited by the Office of the State Comptroller to have a conversation regarding the Town pension plan and defined contribution plan and what the Town would be looking for in the future. The State is looking to build a MERS 2.0, also known as second tier. There has been some confusion surrounding the plan which doesn't actually exist yet. Ms. Iannella-Rodriguez said it is exciting to receive an invitation to be part of the conversation with the State.

Bill Thorne asked if there were any major changes from the Retirement perspective with the newly negotiated Nursing and Dispatch contracts? Ms. Iannella-Rodriguez answered no. She said there will be a small increases to both the defined contribution and match and otherwise a commitment to exploring and researching options for the future.

**RESULT:** DISCUSSED

## **VI. FINANCE DIRECTOR'S REPORT**

### **1. Finance Director's Report.**

Nothing to report.

## **VII. OLD BUSINESS**

### **1. Motion to APPROVE amendment to the IPS to reflect changes to allocation targets.**

**RESULT:** APPROVED AND SO DECLARED

**MOVER:** Sharon Wadecki

**SECONDER:** William Thorne

**AYE** 3 Thorne Coddington Wadecki

**EXCUSED** 2 Rodolico Panosky

### **2. Discussion on a review of applicable labor contracts and retirement documents for Town of Ledyard employee groups with applicability to retirement eligibility and benefits continued.**

Mr. Thorne reported that the table is still a work in progress. Ms. Iannella-Rodriguez said she has a good amount of information that she can send to Mr. Thorne for use in the table.

**RESULT:** DISCUSSED

### **3. Any Other Old Business to come before the Board.**

None.

## **VIII. NEW BUSINESS**

### **1. Motion to APPROVE a monthly retirement benefit for Michele Maynard in the amount of \$373.50 in the form of a modified cash refund annuity effective November 1, 2023.**

**RESULT:** APPROVED AND SO DECLARED

**MOVER:** Sharon Wadecki

**SECONDER:** William Thorne

**AYE** 3 Thorne Coddington Wadecki

**EXCUSED** 2 Rodolico Panosky

### **2. Motion to APPROVE retirement benefit for Steven Masalin in the amount of \$4,718.05 in the form of a modified cash refund annuity effective February 1, 2024.**

**RESULT:** APPROVED AND SO DECLARED

**MOVER:** Sharon Wadecki

**SECONDER:** William Thorne

**AYE** 3 Thorne Coddington Wadecki

**EXCUSED** 2 Rodolico Panosky

- 3. Motion to APPROVE payment to USI, invoice #90088346, dated October 31, 2023, in the total amount of \$1,200.00 (\$400.00 per benefit calculation for Michelle Maynard and Steve Masalin plus \$400.00 for annual pension liability breakout for WPCA members).

Mr. Thorne asked why there are charges for annual pension liability breakout for WPCA members. Mr. Bonin explained that some of the pension liability has to be allocated for water and sewer employees and this charge is for the calculation. It was questioned why this is paid by the Retirement Board instead of included in the Audit fees. Mr. Bonin said the Retirement Board paid for it last year (2022) but he is not sure of how it work in previous years. Ian Stammel, Assistant Finance Director confirmed that this charge has never came out of the Water/Sewer budget.

**RESULT:** APPROVED AND SO DECLARED

**MOVER:** Sharon Wadecki

**SECONDER:** William Thorne

**AYE** 3 Thorne Coddington Wadecki

**EXCUSED** 2 Rodolico Panosky

- 4. Any other New Business to come before the Board.

None.

**IX. ADJOURNMENT**

Motion to ADJOURN the Regular Meeting at 10:47 p.m.

**RESULT:** APPROVED AND SO DECLARED

**MOVER:** Sharon Wadecki

**SECONDER:** William Thorne

**AYE** 3 Thorne Coddington Wadecki

**EXCUSED** 2 Rodolico Panosky

**DISCLAIMER:** Although we try to be timely and accurate these are not official records of the Town.



# TOWN OF LEDYARD

741 Colonel Ledyard  
Highway  
Ledyard, CT 06339-1511

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**File #:** 23-2172

**Agenda Date:** 12/19/2023

**Agenda #:** 1.

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AGENDA REQUEST  
GENERAL DISCUSSION ITEM

**Subject:**

Director of Human Resources update.

**Background:**

(type text here)

**Department Comment/Recommendation:**

(type text here)



# TOWN OF LEDYARD

741 Colonel Ledyard  
Highway  
Ledyard, CT 06339-1511

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**File #:** 23-2085

**Agenda Date:** 12/19/2023

**Agenda #:** 1.

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AGENDA REQUEST  
GENERAL DISCUSSION ITEM

**Subject:**

Finance Director's Report.

**Background:**

(type text here)

**Department Comment/Recommendation:**

(type text here)



# TOWN OF LEDYARD

741 Colonel Ledyard  
Highway  
Ledyard, CT 06339-1511

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**File #:** 23-1850

**Agenda Date:** 12/19/2023

**Agenda #:** 1.

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AGENDA REQUEST  
GENERAL DISCUSSION ITEM

**Subject:**

Any Other Old Business to come before the Board.

**Background:**

(type text here)

**Department Comment/Recommendation:**

(type text here)



# TOWN OF LEDYARD

741 Colonel Ledyard  
Highway  
Ledyard, CT 06339-1511

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**File #:** 23-2178

**Agenda Date:** 12/19/2023

**Agenda #:** 2.

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AGENDA REQUEST  
GENERAL DISCUSSION ITEM

**Subject:**

Discussion on a review of applicable labor contracts and retirement documents for Town of Ledyard employee groups with applicability to retirement eligibility and benefits continued.

**Background:**

From the November 21, 2023 meeting:

Mr. Thorne reported that the table is still a work in progress. Ms. Iannella-Rodriguez said she has a good amount of information that she can send to Mr. Thorne for use in the table.

**Department Comment/Recommendation:**

(type text here)



# TOWN OF LEDYARD

741 Colonel Ledyard  
Highway  
Ledyard, CT 06339-1511

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**File #:** 23-2339

**Agenda Date:** 12/19/2023

**Agenda #:** 1.

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AGENDA REQUEST  
GENERAL DISCUSSION ITEM

**Subject:**

Motion to APPROVE payment of USI invoice #90086413, dated September 30, 2023, in the amount of \$8,500.00 for Core Installment Fee (50%) - Actuarial Services - 2023 Plan Year

**Background:**

Please note - the Retirement Board is not voting on the second charge for OPEB-ASC 715-60 Valuation.

**Department Comment/Recommendation:**

(type text here)



USI Consulting Group, Inc.  
 95 Glastonbury Blvd.  
 Suite 102  
 Glastonbury, CT 06033-6503  
 (860) 633-5283

261 Madison Avenue 5th Floor,  
 New York, NY 10016

601 Union Street Suite 1000  
 Seattle, WA 98101

725 RXR Plaza, East Tower  
 Uniondale, NY 11556

# Invoice

Bill To :
Town of Ledyard Matt Bonin 741 Colonel Ledyard Highway Ledyard CT 06339

Remit To:
USI Consulting Group, Inc. 95 Glastonbury Blvd  Glastonbury, CT 06033 (860) 633-5283

Information	
<b>Invoice No.</b>	90086413
<b>Invoice Date</b>	09/30/2023
<b>Customer No.</b>	1003385
<b>Terms of Payment</b>	Net due in 15 days
<b>Purchase Order Number</b>	DB-CT - 1

Service	Amount
Core Actuarial Services	8,500.00
Core Installment Fee (50%) - Actuarial Services - 2023 Plan Year	
OPEB-ASC 715-60 Valuation	4,200.00
Core Installment Fee (50%) - OPEB Services - 2023 Plan Year	
<b>Total</b>	<b>12,700.00</b>



# TOWN OF LEDYARD

741 Colonel Ledyard  
Highway  
Ledyard, CT 06339-1511

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**File #:** 23-1851

**Agenda Date:** 12/19/2023

**Agenda #:** 2.

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AGENDA REQUEST  
GENERAL DISCUSSION ITEM

**Subject:**

Any other New Business to come before the Board.

**Background:**

(type text here)

**Department Comment/Recommendation:**

(type text here)