# TOWN OF WEST HARTFORD
# PENSION BOARD

## Regular Meeting

Scheduled For

Monday

October 17, 2022

at 7:45 am

Room 400 Town Hall

TOWN OF WEST HARTFORD PENSION BOARD MEETING
Monday, October 17, 2022 at 7:45 a.m.
Room 400 Town Hall

I. Roll Call/Attendance
Guests: Mayor Shari Cantor; Rick Ledwith, Town Manager; Catherine Lombardi, Acting Director of Human Resources; Lori Kearney, Clerk of the Board; Chris Kachmar, Fiducient Advisors; Mary Fay, Town Council.

II. Lazaro Guzman, Chair
  A. Opening comments

III. Chris Kachmar, Fiducient Advisors
  A. Market update/September flash report
  B. Continued discussion - active versus passive investment strategy

IV. Brittany MacGilpin, Town Matters

V. Lori Kearney, Human Resources Specialist
  A. Meeting schedule for 2022
  B. Summary of Pension Administration

VI. Formal Actions
  A. Minutes
    1. Approval of the minutes for the special meeting held on Monday, September 26, 2022.
    *“Motion to approve the minutes for the special meeting held on Monday, September 26, 2022.”*
  B. Pension Administration
    1. Memberships
    2. Terminations and Refunds
    3. Applications for Approval
      a. Early retirement applications
      b. Normal retirement applications
      c. Survivorship applications
      d. QDRO applications
    *“Motion to approve Pension Administration.”*
  C. Invoices for Consideration
    1. Principal Custody Solutions – Invoice for payment in the amount of $9,706.31 for the period from 4/1/2022 – 6/30/2022. Invoice date 7/22/2022.
    2. Fiducient Advisors – Invoice for payment in the amount of $12,500 for quarterly consulting costs for the period from 7/1/2022 – 9/30/2022. Invoice date 10/4/2022.
    *“Motion to approve Invoices for Consideration.”*

VII. New Business

VIII. Adjournment – *“Motion to adjourn.”*

V(A)

TO: Pension Board

FROM: Lori Kearney, Human Resources Specialist

DATE: October 17, 2022

SUBJECT: **2022 Pension Board Meeting Dates**

The Pension Board meetings are planned for Mondays at 7:45 a.m.

October 17, 2022 (In-person, Room 400)
November 14, 2022

**A special meeting of the Town of West Hartford Pension Board was held on Monday, September 26, 2022 at 7:45 a.m. in room 400 of Town Hall.**

**The meeting was called to order at 7:52 a.m.**

I. Roll Call/Attendance

**Pension Board Members:** Chair Lazaro Guzman and Commissioners Alan Lebow, Perry Salonia (via phone), and Brittany MacGilpin.

**Participants/Guests:** Rick Ledwith, Town Manager, Chris Kachmar, Fiducient Advisors (via phone), Lori Kearney, Clerk of the Board, Cathy Lombardi, Acting Director of Human Resources, and Kathy Zager, Senior Personnel Analyst

**Absent:** Commissioner Peter Privitera, Mayor Cantor, Mary Fay, Town Council

II. Chair's Opening Comments

A. Kathy Zager named Clerk of the Board effective November 1, 2022.

III. Chris Kachmar, Fiducient Advisors

A. Quarterly investment review – Q2 2022

Fiducient Advisors reviewed the investment policy statement as part of the fiduciary governance calendar for Q2. There are no recommendations for change. The Pension Board will review the IPS by the end of the year. Fiducient Advisors also reviewed Board Best Practices and consider the Pension Board's governance framework to be in good working order with no action items identified. There was continued volatility in the capital markets year to date that will likely continue for the remainder of the year due to the question on where the Fed will be with rates. Returns across asset classes were largely negative for the quarter. The mild recession YTD may lead to better returns in 1Q 2023. How severe the recession might be remains an unknown. The portfolio dashboard shows the pension plan down by approximately 11% QTD, although it has held up fairly well given the challenges. Current manager performance all in maintain status. The pension portfolio's asset allocation is close to targets. The final POB funds will be invested next week.

B. Active versus passive investment strategy

The portfolio is almost half indexed. Board to focus on asset allocation work and active versus passive strategy over the next few months with deeper discussion of funds that fall in passive and active zones. Total manager value added is -.9% for the one year period ending June 30, 2022.

IV. Unfinished Business

A. Continued discussion on valuation service change (biennial to annual)

Changing from the current biennial valuation to an annual valuation will increase fees by $18,000. There would be a credit of $2,000 if the pension census data comes from the MARC administration system. This credit would cancel out the additional cost to enhance the valuation to provide additional information for Al's pension dashboard. The Board discussed whether changing to an annual valuation schedule would benefit the Board and/or impact or change its actions and decisions. An annual valuation may be more beneficial to Town operations. Biennial valuations seemed to be working for the Pension Board. However, an annual valuation would be beneficial by providing more frequent information for the pension dashboard and POB program in terms of returns, potential asset allocation changes, and funding. **Motion by Chair Guzman to move from biennial to annual valuations. Motion seconded by Al Lebow.**

**Brittany MacGilpin – yes**

**Al Lebow– yes**
**Perry Salonia – yes**
**Lazaro Guzman– yes**
**Peter Privitera – absent**
**All in favor. Motion passed.**

V. Brittany MacGilpin, Town Matters
No items to report.

VI. Lori Kearney, Clerk of the Board
A. Meeting schedule for 2022
October 17 and November 14, 2022, both planned as in-person meetings.
B. Status update on MARC pension administration system
Corporation Counsel review the MARC agreement and made suggestions for edits and clarifications. These areas were discussed with Milliman and revisions were made to the agreement based on those negotiations. Lori will provide the pertinent changes to the Board.
C. Summary of Pension Administration

VII. Formal Actions
A. Minutes
1. Approval of the minutes for the virtual regular meeting held on Monday, May 16, 2022.
Motion by Chair Guzman for approval of the minutes for the virtual regular meeting held on Monday, May 16, 2022. It was unanimously voted to approve the minutes for the virtual regular meeting held on Monday, May 16, 2022.
2. Approval of the minutes for the virtual special meeting held on Monday, June 13, 2022.
Motion by Chair Guzman for approval of the minutes for the virtual special meeting held on Monday, June 13, 2022. It was unanimously voted to approve the minutes for the virtual special meeting held on Monday, June 13, 2022.

B. Pension Administration
Motion by Chair Guzman for approval of the items under Pension Administration. It was unanimously voted to approve the items under Pension Administration.
1. Memberships
BOE – Kristen Aceto, Tyanna Arroyo, Kristen Banning, Victoria Batayte, Kelly Condon, Lauren Corneau, Debbie DeJesus, Kathleen Duford, Emily Miller, Erin Peters, Emiko Shin, Eileen Theriault, Linda Todd, Sara West
Town – Derek Andrade, Brandon Barlow, Dustin Belfiore, Debra Biella, Briana Brumaghim, Marie Callahan, Isaiah Colon, Esteban Enriquez, David Frost, Marie Gilbuena, David Kent, Jeffrey Kyle, Patrick Lacruz, Tiana Pelletier, Donato Pesce, Adnan Sadiku, Benjamin Santandreu, Wojciech Sigut, Erica Sledge, Martyna Srebrna, Claudia Tata, Sean Waltman, Ryan Winterberger
2. Terminations and Refunds
BOE – Illona Dubaldo (contributions deducted in error), Polly LaValley
Town – Scott Smith
3. Applications for Approval
a. Vested interest applications
BOE – Kathleen Langan
Town – Paula Knake
b. Early retirement applications
BOE – Mary Daly

c. Normal retirement applications

BOE – Thomas Amodio, Wanda Bender, Linda Epstein, Maryann Hall, Marcia Katz, Ellen Martinelli, Stephen Mason, Alan Pinto, Jeffrey Runyon (100% CA of Dorothy Runyon), Francine Therion

Town - Kerry Cloukey, Leopoldo Negron, Lane Pelton, Nelson Petrone III, Susan Rheaume, Eric Rocheleau, Nicholas Roman, Barbara Rowlson (50% CA of Robert Rowlson)

c. Survivorships applications

Town – Borghil Bilak (survivor of Fred Bilak, Fire), Audrey Plourd (survivor of Richard Plourde, Fire)

IX. Adjournment

**Motion by Chair Guzman to adjourn the meeting at 8:54 a.m. It was unanimously voted to adjourn.**

Attest:

Lori Kearney

Lori Kearney, Clerk of the Board

TO: Pension Board

FROM: Lori Kearney, Human Resources Specialist, Pension Division

DATE: October 17, 2022

SUBJECT: Pension Plan Membership

In accordance with the definition of employee as stated in Section 30-8 of the Pension Ordinance, I recommend that the following employees of the Town of West Hartford be accepted into the Pension Plan as of the dates listed below:

| NEW MEMBERS - PBD | | | | |
|---|---|---|---|---|
| **NAME** | **POSITION** | **DOH** | **DOE** | **DEPT** |
| Abrams, Erin | Paraprofessional | 8/31/2022 | 11/30/2022 | BOE |
| Bruenn, Leslie | Attendance Coordinator | 8/31/2022 | 11/30/2022 | BOE |
| Casale, Gregory | Paraprofessional | 8/31/2022 | 11/30/2022 | BOE |
| Cefaratti, Chelsey | Paraprofessional | 9/1/2022 | 12/1/2022 | BOE |
| DePercio, Kelsey | Paraprofessional | 9/7/2022 | 12/7/2022 | BOE |
| Dubois, Daniel | Streets Maintainer I | 9/12/2022 | 12/12/2022 | Streets |
| Fagan, Elizabeth | Police Officer | 9/12/2022 | 12/12/2022 | Police |
| Hill, Bertha | Paraprofessional | 8/31/2022 | 11/30/2022 | BOE |
| Huebner, Renee | Paraprofessional | 8/31/2022 | 11/30/2022 | BOE |
| Macko, Michelle | Paraprofessional | 10/6/2022 | 1/6/2023 | BOE |
| Malave, Melissa | Paraprofessional | 9/14/2022 | 12/14/2022 | BOE |
| Milch, Sara | Paraprofessional | 8/31/2022 | 11/30/2022 | BOE |
| Moemeka, Ikechukwu | Paraprofessional | 9/19/2022 | 12/19/2022 | BOE |
| O'Day, Dominique | Paraprofessional | 8/31/2022 | 11/30/2022 | BOE |
| Rosa, Maria | Paraprofessional | 9/19/2022 | 12/19/2022 | BOE |
| Santiago, Lisa | Reg Behavior Tech | 9/19/2022 | 12/19/2022 | BOE |
| Sharoh, Jamie | Paraprofessional | 8/31/2022 | 11/30/2022 | BOE |
| Shifrin, Kristin | Paraprofessional | 8/31/2022 | 11/30/2022 | BOE |
| Simko, Stacie | Physical Therapist | 8/29/2022 | 11/29/2022 | BOE |
| Slaiher-Benjamin, Anita | ASL Interpreter | 10/1/2022 | 1/1/2023 | BOE |
| Tougas, Camden | Paraprofessional | 1/31/2022 | 4/30/2022 | BOE |
| Vega Calderon, Gabriel | Bldg. Maint. Tech. | 10/11/2022 | 1/11/2023 | Plant Svcs |
| Weir, Shantelle | Police Officer | 9/12/2022 | 12/12/2022 | Police |

VI(B)(2)

TO: Pension Board

FROM: Lori Kearney, Human Resources Specialist, Pension Division

DATE: October 17, 2022

SUBJECT: Withdrawals and Terminations

## NON-VESTED WITHDRAWALS and TERMINATIONS

Reaffirmation of termination for employees with non-vested rights in accordance with Section 30-28 of the Pension Ordinance:

| Name | Hire Date | Termination Date | Gross Refund | Department | Plan |
|---|---|---|---|---|---|
| Kenia Severino | 9/1/2021 | 6/30/2022 | $830.79 | BOE – Paraprofessional | E |

## VESTED WITHDRAWALS and TERMINATIONS

Reaffirmation of termination for employees with vested rights in accordance with Section 30-28 of the Pension Ordinance.

| Name | Hire Date | Termination Date | Gross Refund | Department | Plan |
|---|---|---|---|---|---|
| | | | | | |

# Early Retirements - For Approval - Pension Board Meeting October 17, 2022 - CHART #1

| Name | | Date of Early | Years of Service | Department | Benefit Before 65 | After 65 | Status | Plan |
|---|---|---|---|---|---|---|---|---|
| RODRIGUEZ | AIDA | 6/30/2022 | 21 YRS 10 MOS | BOE - PARA | | $770.65 | CA | B |
| WOLFF | BETH | 8/29/2022 | 16 YEARS | BOE - PHYS THER | | $1,573.29 | LA | B |

VI(B)(3)(b)

## Normal Retirements - For Approval - Pension Board Meeting October 17, 2022 - CHART #2

| Name | | Date of Normal | Years of Svs. | Dept. | Benefit - Before 62/65 | After 62/65 | Status | Plan |
|---|---|---|---|---|---|---|---|---|
| STANKOSKI | PENNY | 8/22/2022 | 22 YEARS 6 MONTH | ASSESSMENT | | $3,709.19 | LA | B |
| STRZALKA | DAVID | 8/27/2022 | 21 YRS 6 MOS | POLICE | | $5,227.51 | LA | D |

VI(B)(3)(c)

## Survivorship Benefits - For Approval - Pension Board Meeting October 17, 2022 - CHART #3

| Name | | Date of Benefit | Survivor / CA of: | Benefit | Plan |
|---|---|---|---|---|---|
| HOWARD | SHELAGH | 9/1/2022 | DOUGLAS HOWARD | $2,173.79 | D |

VI(B)(3)(d)

## Qualified Domestic Relations Order - For Approval - Pension Board Meeting, October 17, 2022 - Chart #4

| Name | | Date of Benefit | Retiree Name | Benefit | Plan |
|---|---|---|---|---|---|
| MOREAU | AIMEE | 8/27/2022 | DAVID STRZALKA | $1,577.95 | D |

Principal® | Custody Solutions

| | |
|---|---|
| **Fee Invoice:** | **13713814** |
| *Account Number:* | 9541684070 |
| *For Period:* | 04/01/2022 - 06/30/2022 |
| *Invoice Date:* | 07/22/2022 |

TOWN OF WEST HARTFORD PENSION
Peter Privitera
Director of Financial Services
Town of West Hartford
50 South Main Street
West Hartford CT 06107

Return To:
Principal Custody Solutions
Revenue Processing
P.O. Box 10317
Des Moines, IA 50306-0317

$9,706.31

**PAYMENT DUE UPON RECEIPT**

Account Name: TOWN OF WEST HARTFORD PENSION
Contact: Joseph DePalma 515-878-1323

Fold Here

| **Summary of Current Period Fees** | **Charged** | **Billed** | **Total** |
|---|---|---|---|
| Administration | | $6,686.31 | $6,686.31 |
| Other Services | | $500.00 | $500.00 |
| Transaction | | $2,520.00 | $2,520.00 |
| **Total Current Period Fees** | | $9,706.31 | $9,706.31 |

Wire/ACH Instructions:
Wells Fargo Bank, N.A
ABA/Routing: 121000248
Acct No: 4543773808
Acct Name: Principal Bank PCS Fee DDA
FFC/Customer ID: Revenue Processing Invoice #



**PLEASE RETURN THIS PAGE WITH PAYMENT**

Principal® | Custody Solutions

| | |
|---|---|
| **Fee Invoice:** | **13713814** |
| *Account Number:* | 9541684070 |
| *For Period:* | 04/01/2022 - 06/30/2022 |
| *Invoice Date:* | 07/22/2022 |

Account Name: TOWN OF WEST HARTFORD PENSION
Contact: Joseph DePalma 515-878-1323

| **Services** | **Value / Quantity** | | **Rate** | **Frequency** | **Amount** |
|---|---|---|---|---|---|
| **Administration** | | | | | |
| Market Value | 18,648,810.86 | @ | 0.0000137499 | | 256.42 |
| | | | | **Total Administration** | **$256.42** |
| **Other Services** | | | | | |
| Account Reporting | 1.00 | @ | 500.00 | x 1/4 | 125.00 |
| | | | | **Total Other Services** | **$125.00** |
| **Transaction** | | | | | |
| Domestic Depository Settlements | 318.00 | @ | 5.00 | | 1,590.00 |
| | | | | **Total Transaction** | **$1,590.00** |
| | | | | **Total** | **$1,971.42** |

Principal® | Custody Solutions

| | |
|---|---|
| **Fee Invoice:** | **13713814** |
| *Account Number:* | 9541684070 |
| *For Period:* | 04/01/2022 - 06/30/2022 |
| *Invoice Date:* | 07/22/2022 |

Account Name: Whartfordpen - FDS
Contact: Joseph DePalma 515-878-1323

| Services | Value / Quantity | | Rate | Frequency | Amount |
|---|---|---|---|---|---|
| **Administration** | | | | | |
| Market Value | 429,878,833.57 | @ | 0.00001375 | | 5,910.83 |
| | | | | **Total Administration** | **$5,910.83** |
| **Other Services** | | | | | |
| Account Reporting | 1.00 | @ | 500.00 | x 1/4 | 125.00 |
| | | | | **Total Other Services** | **$125.00** |
| **Transaction** | | | | | |
| Non Proprietary Fund Buy Sell Delivery Receipt | 13.00 | @ | 10.00 | | 130.00 |
| | | | | **Total Transaction** | **$130.00** |
| | | | | **Total** | **$6,165.83** |

| | |
|---|---|
| **Fee Invoice:** | **13713814** |
| *Account Number:* | 9541684070 |
| *For Period:* | 04/01/2022 - 06/30/2022 |
| *Invoice Date:* | 07/22/2022 |

Principal® Custody Solutions

Account Name: Whartfordpen Silvercrest
Contact: Joseph DePalma 515-878-1323

| Services | Value / Quantity | | Rate | Frequency | Amount |
|---|---|---|---|---|---|
| **Administration** | | | | | |
| Market Value | 18,645,279.97 | @ | 0.0000137504 | | 256.38 |
| | | | | **Total Administration** | **$256.38** |
| **Other Services** | | | | | |
| Account Reporting | 1.00 | @ | 500.00 | x 1/4 | 125.00 |
| | | | | **Total Other Services** | **$125.00** |
| **Transaction** | | | | | |
| Domestic Depository Settlements | 150.00 | @ | 5.00 | | 750.00 |
| | | | | **Total Transaction** | **$750.00** |
| | | | | **Total** | **$1,131.38** |

Principal® | Custody Solutions

| | |
|---|---|
| **Fee Invoice:** | **13713814** |
| *Account Number:* | 9541684070 |
| *For Period:* | 04/01/2022 - 06/30/2022 |
| *Invoice Date:* | 07/22/2022 |

Account Name: Whartfordpen Pob Proceeds
Contact: Joseph DePalma 515-878-1323

| Services | Value / Quantity | | Rate | Frequency | Amount |
|---|---|---|---|---|---|
| **Administration** | | | | | |
| Market Value | 19,104,220.16 | @ | 0.0000137498 | | 262.68 |
| | | | | **Total Administration** | **$262.68** |
| **Other Services** | | | | | |
| Account Reporting | 1.00 | @ | 500.00 | x 1/4 | 125.00 |
| | | | | **Total Other Services** | **$125.00** |
| **Transaction** | | | | | |
| Non Proprietary Fund Buy Sell Delivery Receipt | 5.00 | @ | 10.00 | | 50.00 |
| | | | | **Total Transaction** | **$50.00** |
| | | | | **Total** | **$437.68** |

**Summary**

| | |
|---|---|
| **Total Charged to Account** | **$0.00** |
| **Total Billed** | **$9,706.31** |
| **Payment Due** | **$9,706.31** |

Principal® | Custody Solutions

| | |
|---|---|
| **Fee Invoice:** | **1 3713814** |
| *Account Number:* | 954 1684070 |
| *For Period:* | 04/01/2022 - 06/30/2022 |
| *Invoice Date:* | 07/22/2022 |

Account Name: TOWN OF WEST HARTFORD PENSION
Contact: Joseph DePalma 515-878-1323

| Account Number | Account Name | Charged | Billed | Total |
|---|---|---|---|---|
| 24129801 | Whartfordpen Silvercrest | | $1,131.38 | $1,131.38 |
| 24129802 | Whartfordpen Pob Proceeds | | $437.68 | $437.68 |
| 9541684070 | TOWN OF WEST HARTFORD PENSION | | $1,971.42 | $1,971.42 |
| 9546683935 | Whartfordpen - FDS | | $6,165.83 | $6,165.83 |
| **Total** | | | $9,706.31 | $9,706.31 |

# FIDUCIENT Advisors

# INVOICE

HOME OFFICE
CHICAGO
500 West Madison St, Ste 1700
Chicago, IL 60661
312.853.1000

HARTFORD, CT ~ WASHINGTON DC ~ BOSTON, MA ~ PORTLAND, ME ~ AUSTIN, TX ~ LOS ANGELES, CA

www.fiducient.com

Town of West Hartford
50 South Main Street
West Hartford, CT 06107

Date:October 12, 2022
Invoice #: 1053_09302022

VI(C)(2)

| | |
|---|---|
| **Invoice for:** | West Hartford, Town of-Defined Contribution |
| **Billing Period:** | July 01, 2022 to September 30, 2022 |
| **Quarter Ending/Valuation Date:** | September 30, 2022 |
| **Total Amount Due:** | **$9,012.50** |

**Schedule**

Annual Consulting Cost $36,050.00*

*Annual Cost will increase by 3% each year on or about anniversary date.

Invoice sent to: Lori Kearney

**ACH/Wire**
Wells Fargo Bank
420 Montgomery Street
San Francisco, CA 94104
ABA # 121000248
Account # 4677401630
Swift Code WFBIUS6S

**Check Payments**
Mail to LockBox
Fiducient Advisors LLC
PO Box 856577
Minneapolis, MN 55485-6577

EIN 36-4001764

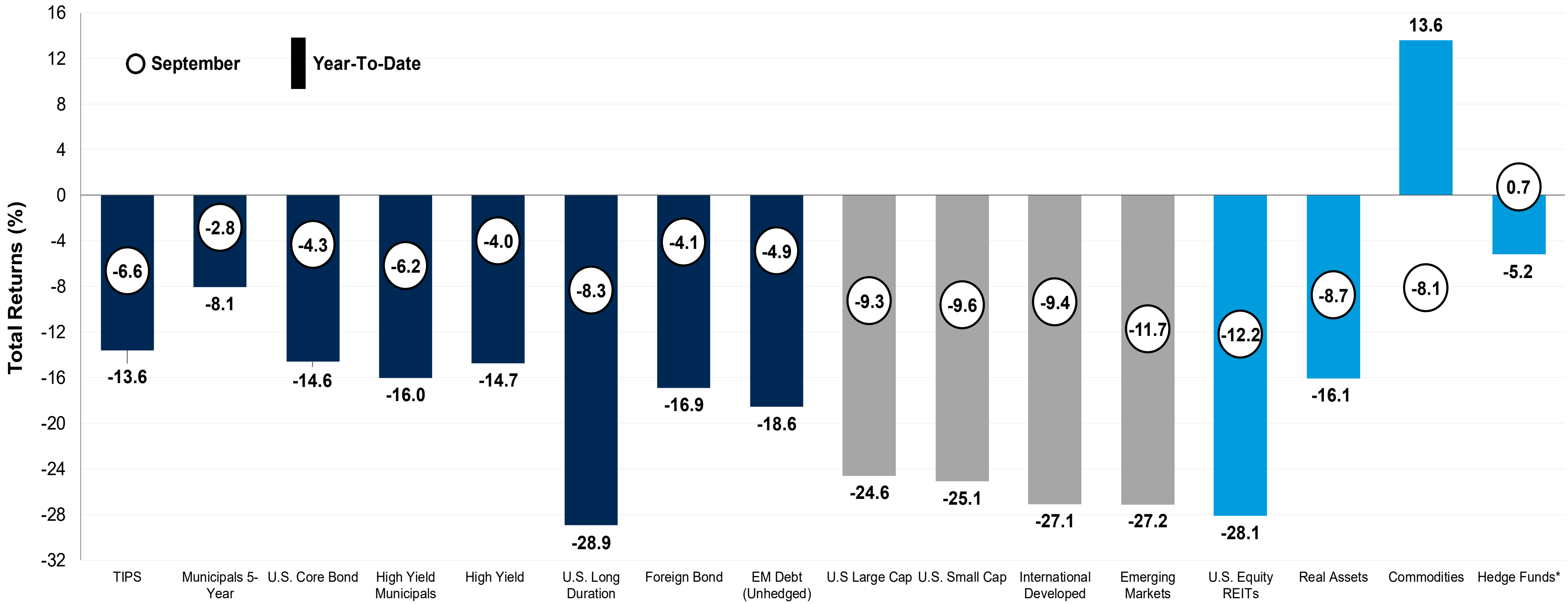
If you have any questions, please contact your consultant or the Finance Team at FinanceTeam@fiducient.com.

***Thank you for your business.***

# Town of West Hartford Pension Plan

## Monthly Performance Update - September 2022

# Asset Class Performance




Source: Morningstar Direct. As of September 30, 2022. *Hedge fund returns are as of August 31, 2022.

## Fixed Income (September)

- With an explicit commitment to combating high inflation, central banks globally raised rates, adding to pain for fixed income investors.

- The US Fed raised rates by 0.75 percent for a third consecutive time, leading markets to reprice their rate expectations for this year and next.

- Foreign bond markets outperformed as the Bank of Japan intervened in their bond markets late in the month; however, US dollar strength was a headwind.

## Equity (September)

- Equities plumbed new lows for the year amid downward earnings revisions, rate hikes and a mixed macroeconomic picture.

- Currencies across the globe lost value relative to the US dollar, which further reduced equity returns for US-based investors.

- Emerging Markets retreated, largely due to volatility in China. Continued impacts included COVID-zero policies, a domestic real estate pullback and geopolitical tensions.

## Real Asset / Alternatives (September)

- REITs were lower in September alongside equities as earnings were revised downwards and higher interest rates weighed on asset valuations.

- Prospects of lower demand pushed commodity prices lower across the board, in a reversal of prior trends this year.

+ Hedge funds delivered a positive return in August, countering negative returns in both equities and fixed income.

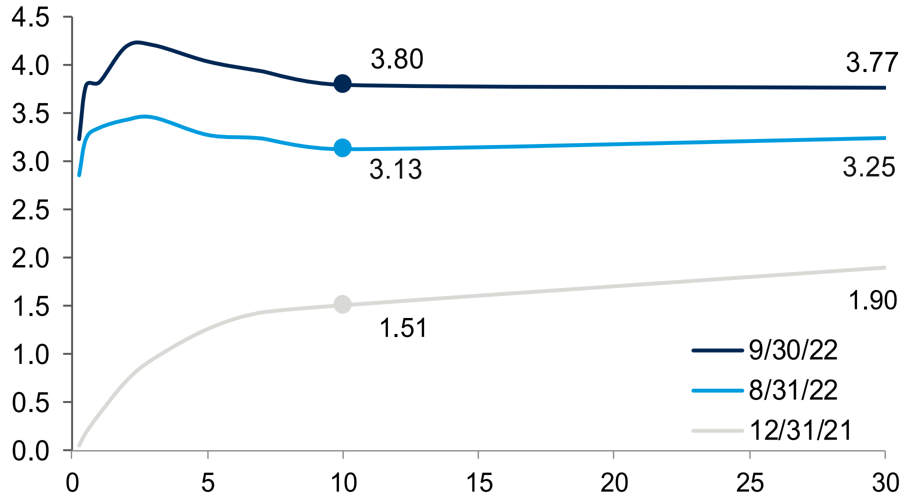


*See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.*

# Fixed Income Market Update

## U.S. Treasury Yield Curve

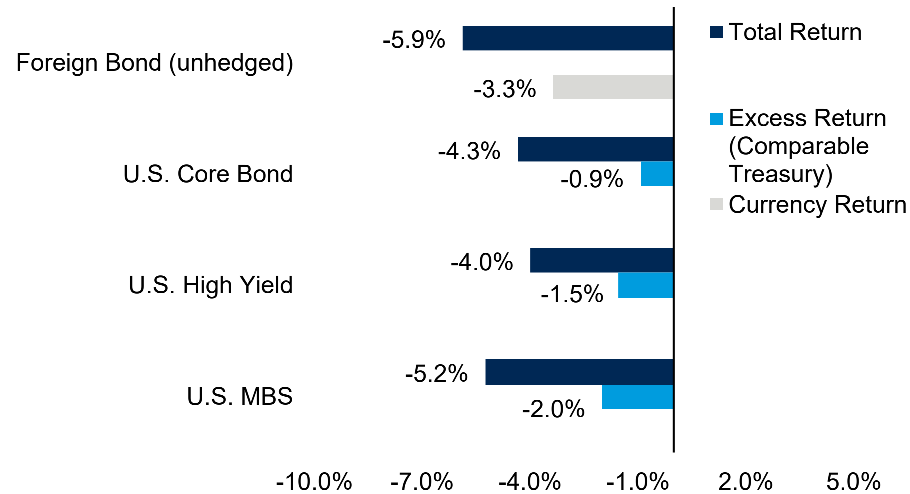
*A third 75 basis point hike by the Fed showed their adherence to policy tightening, leading to higher rates and further inversion of the yield curve as shorter-term rates rose faster than medium- and long-term rates.*




Source: FactSet. As of September 30, 2022.

## Index Performance Attribution (September 2022)

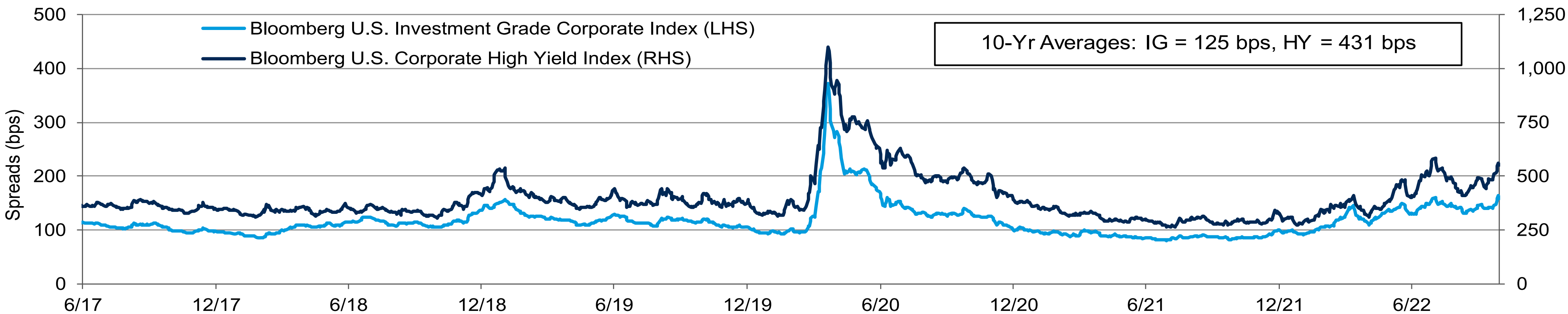
*A broad-based drawdown across fixed income markets was driven by higher rates and a weaker fundamental outlook; US dollar strength dragged on foreign bonds.*




Source: FactSet. As of September 30, 2022.

## Credit Market Spreads – Trailing 5 Years

*Credit markets saw deteriorating fundamentals amid downward earnings estimates and weaker demand forecasts. These negative events led to higher spreads, as both the investment grade and high yield indices ended September with spreads higher than their 10-year averages.*



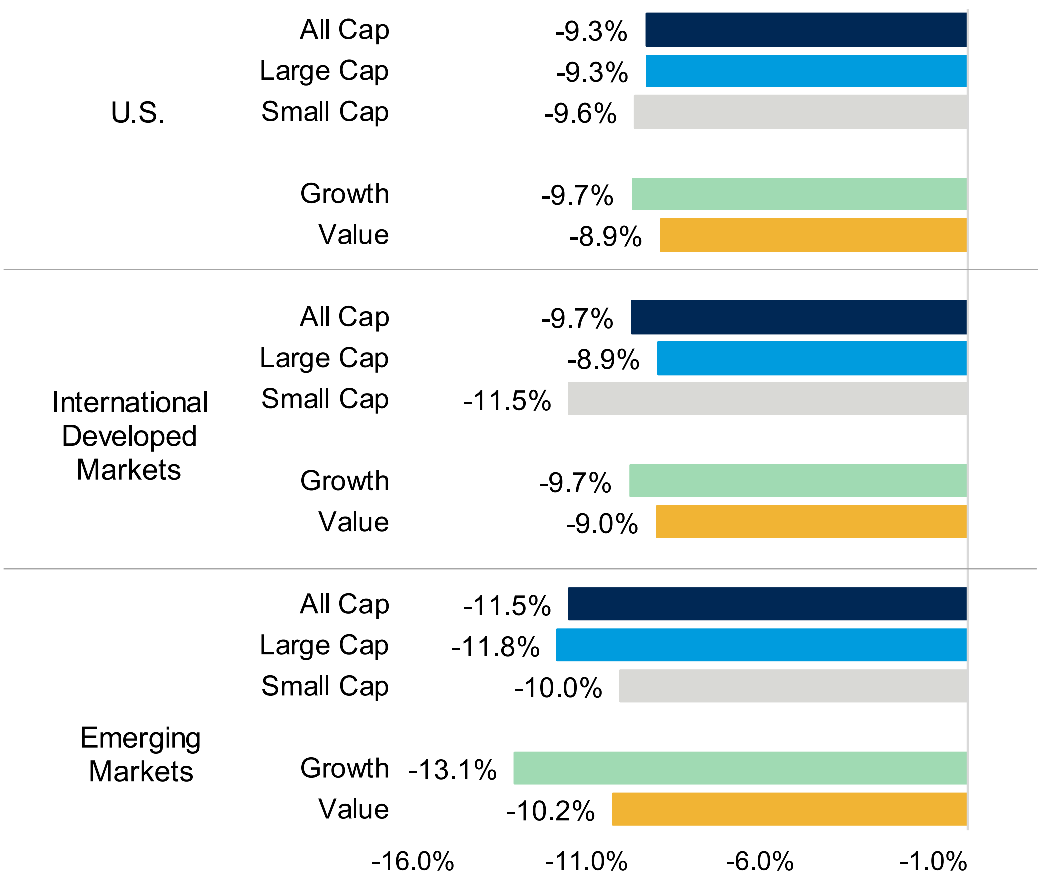

Source: FactSet. As of September 30, 2022.


*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.*

# Equity Market Update

## Market Capitalization & Style Performance (September 2022)

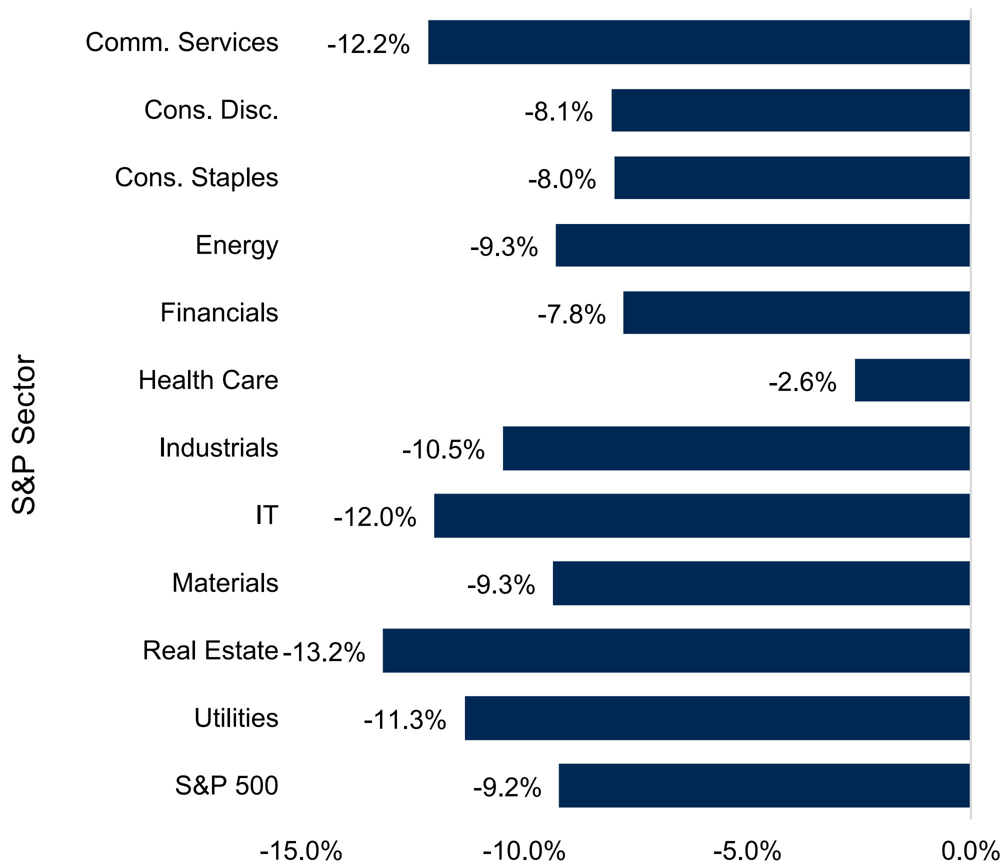
*Stock markets across the world saw a downturn. Domestic markets slightly outperformed International Developed equities and Emerging Markets lagged significantly as China pulled back. Value slightly outperformed growth across geographies as rates continued to climb higher as central banks tightened.*




Source: Morningstar Direct. As of September 30, 2022.

## U.S. Equities – Returns by Sector (September 2022)

*As analysts revised earnings downwards, markets were led lower across sectors. In the U.S., third quarter estimates for earnings growth came down from 9.8% in June to 2.9% as of month-end, the largest cut to estimates since the 2020 COVID recession.*[1]




Source: Morningstar Direct. As of September 30, 2022.

[1]Source: FactSet, as of September 30, 2022.

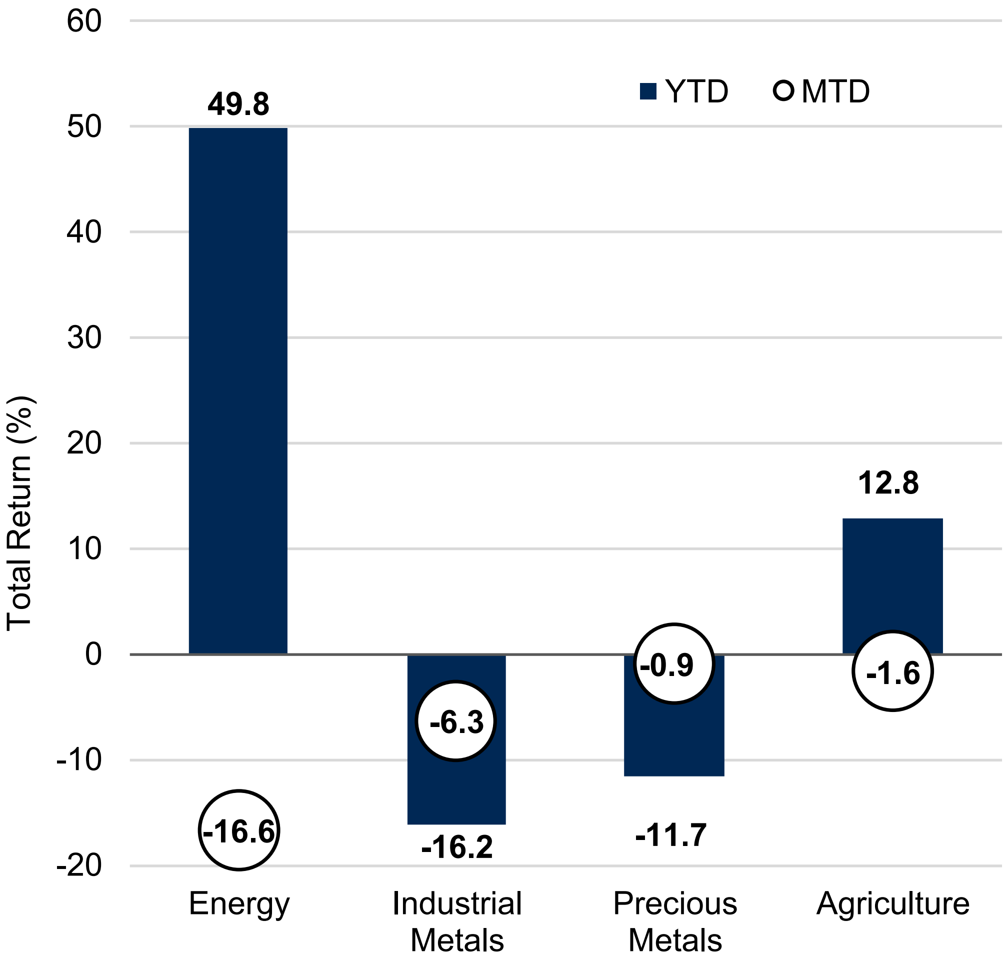


*See disclosures for list of indices representing each asset class. Past performance does not indicate future performance and there is a possibility of a loss.*

# Real Asset Market Update

## Real Assets Performance (September 2022)

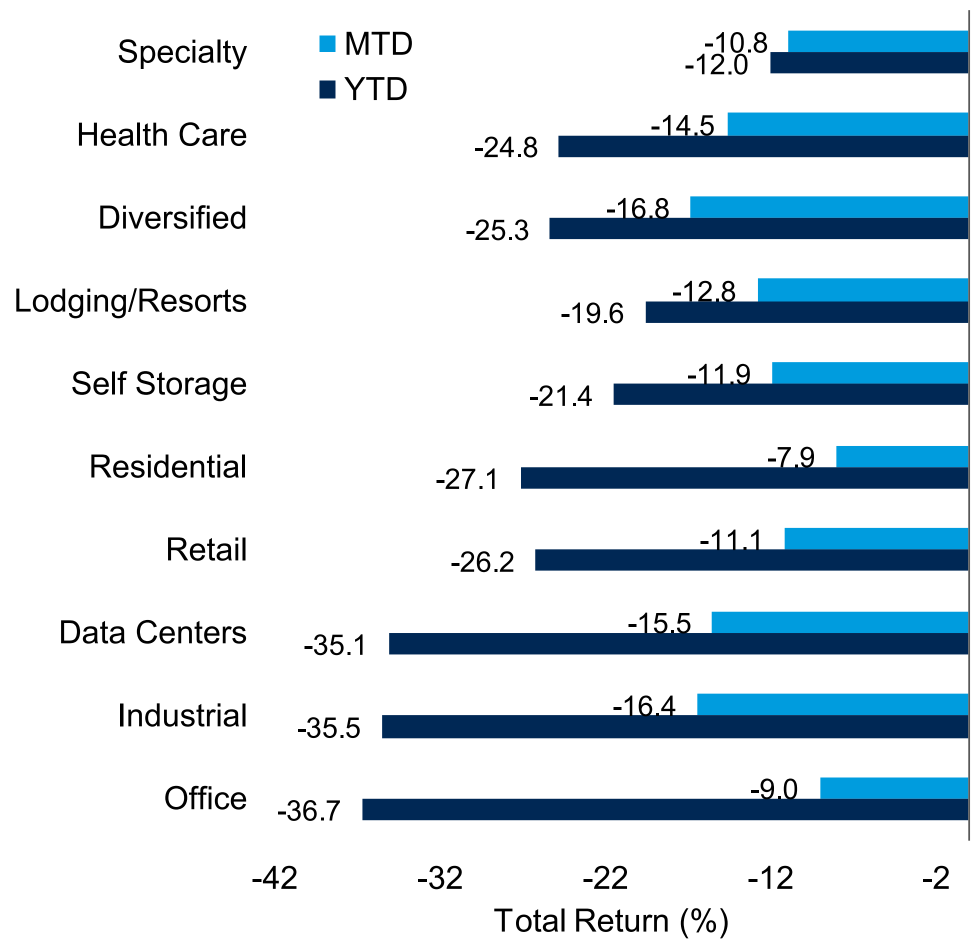
*Commodity markets saw positive supply trends for most of the month which, paired with a gloomier demand outlook, pushed prices down across the board. Industrial metals and agricultural commodities were lower as global growth forecasts were revised down.*




Source: FactSet. As of September 30, 2022.

## REIT Sector Performance (September 2022)

*All sectors of the real estate market were lower in September, a similar trend to equity market sectors. Themes like a worsening outlook for corporate earnings and higher rates similarly dragged on REIT names, with a cooling housing market especially weighing on sentiment.*




Source: FactSet. As of September 30, 2022.

# Financial Markets Performance

## Financial Markets Performance

**Total Return as of September 30, 2022**

***Periods greater than one year are annualized***

***All returns are in U.S. dollar terms***

| Global Fixed Income Markets | MTD | YTD | 1YR | 3YR | 5YR | 7YR | 10YR | 15YR |
|---|---|---|---|---|---|---|---|---|
| Bloomberg 1-3-Month T-Bill | 0.2% | 0.6% | 0.6% | 0.6% | 1.1% | 0.9% | 0.6% | 0.6% |
| Bloomberg U.S. TIPS | -6.6% | -13.6% | -11.6% | 0.8% | 2.0% | 2.2% | 1.0% | 3.2% |
| Bloomberg Municipal Bond (5 Year) | -2.8% | -8.1% | -8.0% | -0.9% | 0.5% | 0.9% | 1.2% | 2.7% |
| Bloomberg High Yield Municipal Bond | -6.2% | -16.0% | -15.1% | -1.4% | 2.3% | 3.4% | 3.5% | 3.9% |
| Bloomberg U.S. Aggregate | -4.3% | -14.6% | -14.6% | -3.3% | -0.3% | 0.5% | 0.9% | 2.7% |
| Bloomberg U.S. Corporate High Yield | -4.0% | -14.7% | -14.1% | -0.5% | 1.6% | 4.1% | 3.9% | 5.7% |
| Bloomberg Global Aggregate ex-U.S. Hedged | -2.3% | -9.9% | -9.9% | -3.0% | 0.7% | 1.5% | 2.2% | 3.1% |
| Bloomberg Global Aggregate ex-U.S. Unhedged | -5.9% | -23.9% | -24.8% | -7.8% | -4.0% | -1.7% | -2.4% | 0.3% |
| Bloomberg U.S. Long Gov / Credit | -8.3% | -28.9% | -27.4% | -7.3% | -1.2% | 1.0% | 1.4% | 4.4% |
| JPMorgan GBI-EM Global Diversified | -4.9% | -18.6% | -20.6% | -7.1% | -3.9% | 0.4% | -2.4% | 1.2% |
| **Global Equity Markets** | **MTD** | **YTD** | **1YR** | **3YR** | **5YR** | **7YR** | **10YR** | **15YR** |
| S&P 500 | -9.2% | -23.9% | -15.5% | 8.2% | 9.2% | 11.4% | 11.7% | 8.0% |
| Dow Jones Industrial Average | -8.8% | -19.7% | -13.4% | 4.4% | 7.4% | 11.0% | 10.5% | 7.6% |
| NASDAQ Composite | -10.4% | -32.0% | -26.3% | 10.6% | 11.2% | 13.7% | 14.2% | 10.7% |
| Russell 3000 | -9.3% | -24.6% | -17.6% | 7.7% | 8.6% | 10.9% | 11.4% | 7.9% |
| Russell 1000 | -9.3% | -24.6% | -17.2% | 7.9% | 9.0% | 11.2% | 11.6% | 8.0% |
| Russell 1000 Growth | -9.7% | -30.7% | -22.6% | 10.7% | 12.2% | 13.7% | 13.7% | 10.1% |
| Russell 1000 Value | -8.8% | -17.8% | -11.4% | 4.4% | 5.3% | 8.1% | 9.2% | 5.7% |
| Russell Mid Cap | -9.3% | -24.3% | -19.4% | 5.2% | 6.5% | 8.8% | 10.3% | 7.5% |
| Russell Mid Cap Growth | -8.5% | -31.5% | -29.5% | 4.3% | 7.6% | 9.5% | 10.9% | 8.0% |
| Russell Mid Cap Value | -9.7% | -20.4% | -13.6% | 4.5% | 4.8% | 7.7% | 9.4% | 6.8% |
| Russell 2000 | -9.6% | -25.1% | -23.5% | 4.3% | 3.6% | 7.5% | 8.6% | 6.4% |
| Russell 2000 Growth | -9.0% | -29.3% | -29.3% | 2.9% | 3.6% | 7.1% | 8.8% | 6.8% |
| Russell 2000 Value | -10.2% | -21.1% | -17.7% | 4.7% | 2.9% | 7.4% | 7.9% | 5.7% |
| MSCI ACWI | -9.6% | -25.6% | -20.7% | 3.7% | 4.4% | 7.4% | 7.3% | 4.1% |
| MSCI ACWI ex. U.S. | -10.0% | -26.5% | -25.2% | -1.5% | -0.8% | 3.3% | 3.0% | 0.6% |
| MSCI EAFE | -9.4% | -27.1% | -25.1% | -1.8% | -0.8% | 2.8% | 3.7% | 0.6% |
| MSCI EAFE Growth | -9.7% | -33.0% | -30.3% | -1.5% | 0.7% | 3.9% | 4.7% | 1.6% |
| MSCI EAFE Value | -9.0% | -21.1% | -20.2% | -2.8% | -2.7% | 1.4% | 2.4% | -0.6% |
| MSCI EAFE Small Cap | -11.5% | -32.1% | -32.1% | -2.2% | -1.8% | 3.2% | 5.3% | 2.4% |
| MSCI Emerging Markets | -11.7% | -27.2% | -28.1% | -2.1% | -1.8% | 3.9% | 1.0% | 0.3% |
| **Alternatives** | **MTD** | **YTD** | **1YR** | **3YR** | **5YR** | **7YR** | **10YR** | **15YR** |
| Consumer Price Index* | 0.1% | 5.5% | 8.2% | 4.9% | 3.8% | 3.1% | 2.5% | 2.4% |
| FTSE NAREIT Equity REITs | -12.2% | -28.1% | -16.4% | -2.0% | 2.9% | 4.9% | 6.3% | 4.9% |
| S&P Real Assets | -8.7% | -16.1% | -12.0% | 0.4% | 2.1% | 4.0% | 3.0% | 3.6% |
| FTSE EPRA NAREIT Developed | -12.3% | -29.4% | -22.1% | -5.6% | 0.1% | 2.4% | 3.8% | 1.7% |
| FTSE EPRA NAREIT Developed ex U.S. | -12.7% | -31.0% | -29.6% | -9.5% | -3.1% | 0.0% | 1.3% | -0.7% |
| Bloomberg Commodity Total Return | -8.1% | 13.6% | 11.8% | 13.5% | 7.0% | 4.5% | -2.1% | -2.4% |
| HFRI Fund of Funds Composite* | 0.5% | -5.3% | -4.8% | 4.6% | 3.5% | 3.1% | 3.7% | 2.0% |
| HFRI Fund Weighted Composite* | 0.5% | -4.0% | -3.8% | 6.9% | 5.1% | 5.1% | 5.0% | 3.9% |
| Alerian MLP | -7.6% | 18.9% | 19.6% | 4.5% | 1.9% | 2.5% | 0.7% | 4.9% |

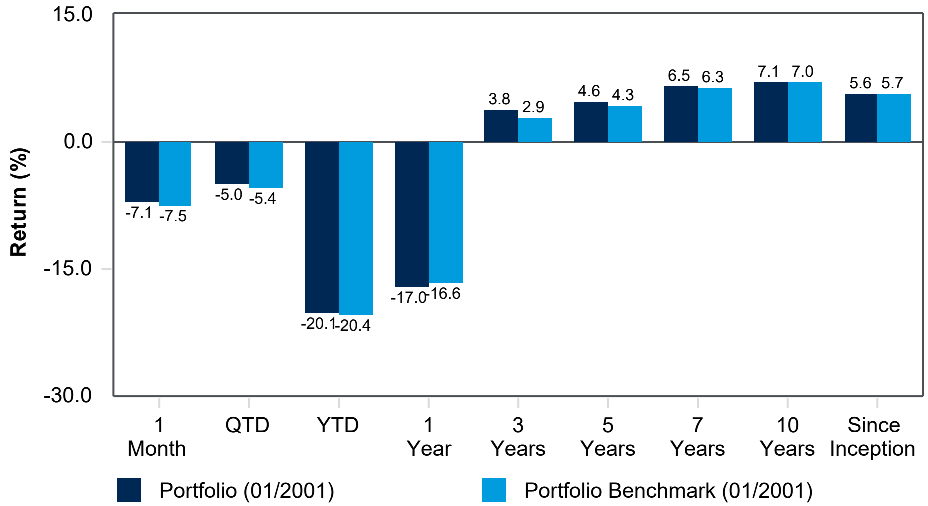
*Sources: Morningstar, FactSet. As of September 30, 2022. *Consumer Price Index and HFRI indexes as of August 31, 2022.*

# Portfolio Dashboard

West Hartford Total Pension

As of September 30, 2022

## Historical Performance



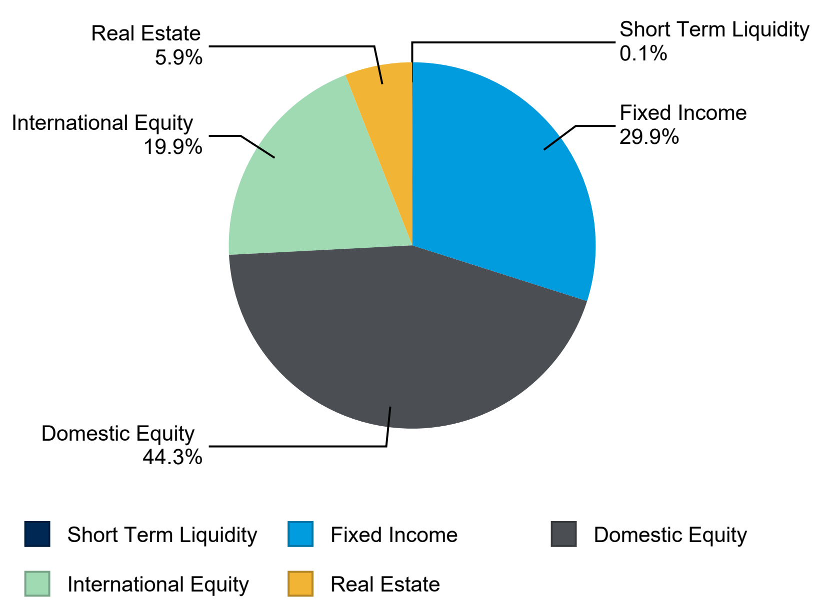

## Summary of Cash Flows

| | 1 Month | QTD | YTD | 1 Year |
|---|---|---|---|---|
| Beginning Market Value | 480,060,185 | 469,366,511 | 384,591,877 | 321,789,416 |
| Net Contributions | - | 37,946 | 162,148,714 | 210,652,111 |
| Gain/Loss | -34,132,681 | -23,476,953 | -100,813,087 | -86,514,023 |
| Ending Market Value | 445,927,504 | 445,927,504 | 445,927,504 | 445,927,504 |

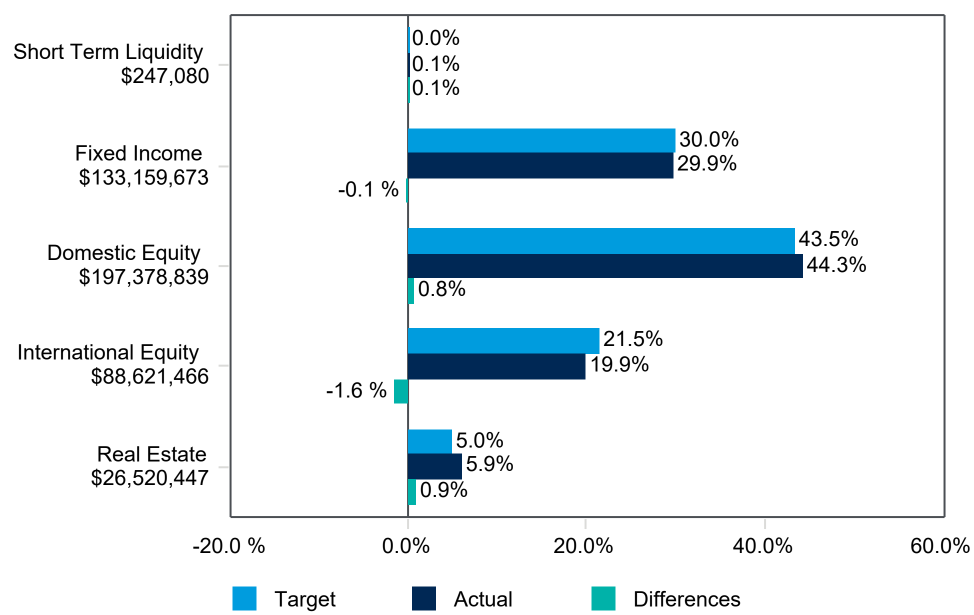
## Current Benchmark Composition

| From Date | To Date | |
|---|---|---|
| 04/2018 | Present | 30.00% Blmbg. U.S. Aggregate, 43.50% Russell 3000 Index, 21.50% MSCI AC World ex USA (Net), 5.00% NCREIF Fund Index - ODCE (net) |

## Portfolio Allocation




## Actual vs. Target Allocations



# Asset Allocation

West Hartford Total Pension

As of September 30, 2022

| | Asset Allocation ($) | Asset Allocation (%) | Target Allocation (%) | Differences (%) |
|---|---|---|---|---|
| **West Hartford Total Pension** | **445,927,504** | **100.0** | **100.0** | **0.0** |
| **Short Term Liquidity** | **247,080** | **0.1** | **0.0** | **0.1** |
| AllSpring Govt Money Market Fund | 247,080 | 0.1 | 0.0 | 0.1 |
| **Fixed Income** | **133,159,673** | **29.9** | **30.0** | **-0.1** |
| Vanguard Total Bond Market Index Instl | 75,980,765 | 17.0 | 17.0 | 0.0 |
| Metropolitan West Total Return Bond Pl | 57,178,907 | 12.8 | 13.0 | -0.2 |
| **Domestic Equity** | **197,378,839** | **44.3** | **43.5** | **0.8** |
| Vanguard Total Stock Market Index Instl | 141,444,369 | 31.7 | 31.3 | 0.5 |
| T. Rowe Price Instl Large Cap Value | 17,991,059 | 4.0 | 4.3 | -0.2 |
| Silvercrest Small Cap Value | 18,341,771 | 4.1 | 4.0 | 0.1 |
| Pier Capital Small Cap Growth | 19,595,920 | 4.4 | 4.0 | 0.4 |
| Equity Holdings | 5,720 | 0.0 | 0.0 | 0.0 |
| **International Equity** | **88,621,466** | **19.9** | **21.5** | **-1.6** |
| Acadian Non-US All Cap Equity Fund,USD Hedged | 22,422,623 | 5.0 | 5.0 | 0.0 |
| Harbor Diversified International All Cap Ret | 22,158,948 | 5.0 | 5.5 | -0.5 |
| Causeway International Value Instl | 21,717,346 | 4.9 | 5.5 | -0.6 |
| Vanguard International Growth Adm | 22,322,549 | 5.0 | 5.5 | -0.5 |
| **Real Estate** | **26,520,447** | **5.9** | **5.0** | **0.9** |
| Barings Core Property Fund LP | 26,520,447 | 5.9 | 5.0 | 0.9 |

## Manager Performance

West Hartford Total Pension | As of September 30, 2022

| | Allocation | | Performance(%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % | QTD | YTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Inception | Inception Date |
| **West Hartford Total Pension** | **445,927,504** | **100.0** | **-5.0** | **-20.1** | **-17.0** | **3.8** | **4.6** | **7.1** | **5.6** | **01/2001** |
| *Pension Blended Benchmark* | | | *-5.4* | *-20.4* | *-16.6* | *2.9* | *4.3* | *7.0* | *5.7* | |
| **Short Term Liquidity** | **247,080** | **0.1** | **0.8** | **1.3** | **1.3** | **0.7** | **1.1** | **0.6** | **0.5** | **06/2010** |
| *90 Day U.S. Treasury Bill* | | | *0.5* | *0.6* | *0.6* | *0.6* | *1.1* | *0.7* | *0.6* | |
| **AllSpring Govt Money Market Fund** | **247,080** | **0.1** | **0.8** | **1.3** | **1.3** | **0.7** | **1.1** | **0.6** | **0.5** | **06/2010** |
| *90 Day U.S. Treasury Bill* | | | *0.5* | *0.6* | *0.6* | *0.6* | *1.1* | *0.7* | *0.6* | |
| **Fixed Income** | **133,159,673** | **29.9** | **-4.9** | **-15.2** | **-15.2** | **-3.2** | **-0.2** | **0.9** | **3.2** | **12/2008** |
| *Blmbg. U.S. Aggregate* | | | *-4.8* | *-14.6* | *-14.6* | *-3.3* | *-0.3* | *0.9* | *2.6* | |
| **Vanguard Total Bond Market Index Instl** | **75,980,765** | **17.0** | **-4.6** | **-14.6** | **-14.6** | **-3.3** | **-0.2** | **0.9** | **1.5** | **11/2010** |
| *Blmbg. U.S. Aggregate* | | | *-4.8* | *-14.6* | *-14.6* | *-3.3* | *-0.3* | *0.9* | *1.6* | |
| IM U.S. Broad Market Core Fixed Income (MF) Median | | | -4.7 | -15.2 | -15.3 | -3.2 | -0.3 | 0.9 | 1.6 | |
| Vanguard Total Bond Market Index Instl Rank | | | 47 | 26 | 26 | 55 | 40 | 53 | 58 | |
| **Metropolitan West Total Return Bond Pl** | **57,178,907** | **12.8** | **-5.2** | **-16.2** | **-16.3** | **-3.2** | **-0.1** | **1.3** | **0.6** | **05/2015** |
| *Blmbg. U.S. Aggregate* | | | *-4.8* | *-14.6* | *-14.6* | *-3.3* | *-0.3* | *0.9* | *0.5* | |
| IM U.S. Broad Market Core+ Fixed Income (MF) Median | | | -4.4 | -15.3 | -15.4 | -2.9 | -0.2 | 1.1 | 0.6 | |
| Metropolitan West Total Return Bond Pl Rank | | | 88 | 72 | 71 | 66 | 45 | 34 | 55 | |
| **Domestic Equity** | **197,378,839** | **44.3** | **-4.0** | **-23.9** | **-18.0** | **7.6** | **8.2** | **11.0** | **12.6** | **12/2008** |
| *Russell 3000 Index* | | | *-4.5* | *-24.6* | *-17.6* | *7.7* | *8.6* | *11.4* | *12.8* | |
| **Vanguard Total Stock Market Index Instl** | **141,444,369** | **31.7** | **-4.5** | **-24.9** | **-18.0** | **7.6** | **8.6** | **11.3** | **12.8** | **06/2009** |
| *CRSP US Total Market Spliced Index* | | | *-4.4* | *-24.9* | *-18.0* | *7.6* | *8.6* | *11.3* | *12.8* | |
| IM U.S. Multi-Cap Core Equity (MF) Median | | | -4.6 | -24.3 | -17.3 | 6.4 | 7.1 | 10.2 | 11.3 | |
| Vanguard Total Stock Market Index Instl Rank | | | 41 | 59 | 60 | 28 | 21 | 18 | 9 | |
| **T. Rowe Price Instl Large Cap Value** | **17,991,059** | **4.0** | **-5.7** | **-15.1** | **-9.2** | **5.6** | **5.9** | **9.9** | **7.6** | **07/2005** |
| *Russell 1000 Value Index* | | | *-5.6* | *-17.8* | *-11.4* | *4.4* | *5.3* | *9.2* | *6.8* | |
| IM U.S. Large Cap Value Equity (MF) Median | | | -5.6 | -16.7 | -9.6 | 5.3 | 6.1 | 9.3 | 6.9 | |
| T. Rowe Price Instl Large Cap Value Rank | | | 54 | 26 | 44 | 45 | 55 | 29 | 30 | |

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

West Hartford Total Pension | As of September 30, 2022

| | Allocation | | Performance(%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % | QTD | YTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Inception | Inception Date |
| **Silvercrest Small Cap Value** | **18,341,771** | **4.1** | **-3.5** | **-17.8** | **-11.2** | **5.5** | **3.6** | **-** | **4.9** | **12/2016** |
| *Russell 2000 Value Index* | | | *-4.6* | *-21.1* | *-17.7* | *4.7* | *2.9* | *7.9* | *4.2* | |
| IM U.S. Small Cap Value Equity (MF) Median | | | -5.4 | -19.9 | -15.2 | 5.8 | 3.2 | 7.8 | 4.2 | |
| Silvercrest Small Cap Value Rank | | | 26 | 25 | 19 | 58 | 39 | - | 34 | |
| **Pier Capital Small Cap Growth** | **19,595,920** | **4.4** | **0.1** | **-35.2** | **-36.5** | **5.6** | **7.2** | **10.9** | **9.4** | **01/2001** |
| *Russell 2000 Growth Index* | | | *0.2* | *-29.3* | *-29.3* | *2.9* | *3.6* | *8.8* | *6.2* | |
| IM U.S. Small Cap Growth Equity (MF) Median | | | -1.4 | -30.4 | -29.1 | 4.7 | 5.9 | 9.3 | 7.1 | |
| Pier Capital Small Cap Growth Rank | | | 29 | 82 | 82 | 38 | 38 | 16 | 6 | |
| **Equity Holdings** | **5,720** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **0.0** | **-** | **0.0** | **11/2016** |
| **International Equity** | **88,621,466** | **19.9** | **-8.6** | **-25.7** | **-25.2** | **3.2** | **2.1** | **5.1** | **8.0** | **12/2008** |
| *International Equity Benchmark* | | | *-9.9* | *-26.5* | *-25.2* | *-1.5* | *-1.0* | *3.6* | *5.4* | |
| **Acadian Non-US All Cap Equity Fund,USD Hedged** | **22,422,623** | **5.0** | **-1.8** | **-12.8** | **-9.4** | **7.9** | **-** | **-** | **5.3** | **05/2018** |
| *MSCI EAFE US Dollar Hedged Index (Net)* | | | *-2.8* | *-13.0* | *-9.4* | *4.0* | *4.7* | *8.5* | *4.2* | |
| IM International Multi-Cap Core Equity (MF) Median | | | -10.4 | -27.4 | -25.7 | -1.9 | -1.3 | 3.3 | -2.5 | |
| Acadian Non-US All Cap Equity Fund,USD Hedged Rank | | | 1 | 1 | 1 | 1 | - | - | 1 | |
| **Harbor Diversified International All Cap Ret** | **22,158,948** | **5.0** | **-10.2** | **-26.8** | **-25.9** | **-1.4** | **-0.6** | **-** | **-1.5** | **03/2018** |
| *MSCI AC World ex USA (Net)* | | | *-9.9* | *-26.5* | *-25.2* | *-1.5* | *-0.8* | *3.0* | *-2.1* | |
| IM International Large Cap Core Equity (MF) Median | | | -10.2 | -27.7 | -25.4 | -1.8 | -1.4 | 3.0 | -2.1 | |
| Harbor Diversified International All Cap Ret Rank | | | 51 | 35 | 58 | 46 | 25 | - | 27 | |
| **Causeway International Value Instl** | **21,717,346** | **4.9** | **-11.6** | **-24.0** | **-23.3** | **-0.9** | **-2.1** | **2.8** | **4.0** | **05/2004** |
| *MSCI EAFE Value Index (Net)* | | | *-10.2* | *-21.1* | *-20.2* | *-2.8* | *-2.7* | *2.4* | *3.2* | |
| IM International Large Cap Value Equity (MF) Median | | | -10.7 | -24.4 | -22.6 | -2.0 | -2.4 | 2.3 | 3.5 | |
| Causeway International Value Instl Rank | | | 62 | 41 | 62 | 28 | 35 | 28 | 24 | |
| **Vanguard International Growth Adm** | **22,322,549** | **5.0** | **-10.2** | **-38.5** | **-40.2** | **3.7** | **3.1** | **7.3** | **1.5** | **03/2018** |
| *MSCI AC World ex USA Growth (Net)* | | | *-9.4* | *-31.8* | *-30.2* | *-1.4* | *0.2* | *4.0* | *-1.1* | |
| IM International Large Cap Growth Equity (MF) Median | | | -9.6 | -30.9 | -28.7 | -0.8 | -0.1 | 3.9 | -1.1 | |
| Vanguard International Growth Adm Rank | | | 72 | 92 | 96 | 7 | 9 | 2 | 15 | |

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

West Hartford Total Pension | As of September 30, 2022

| | Allocation | | Performance(%) | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % | QTD | YTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Inception | Inception Date |
| **Real Estate** | **26,520,447** | **5.9** | **0.0** | **9.6** | **17.6** | **9.6** | **8.2** | **8.8** | **5.3** | **01/2008** |
| *NCREIF Fund Index - ODCE (net)* | | | *0.0* | *12.0* | *20.6* | *11.3* | *9.2* | *9.9* | *5.7* | |
| **Barings Core Property Fund LP** | **26,520,447** | **5.9** | **0.0** | **9.6** | **17.6** | **9.6** | **8.2** | **8.8** | **5.3** | **01/2008** |
| *NCREIF Fund Index - ODCE (net)* | | | *0.0* | *12.0* | *20.6* | *11.3* | *9.2* | *9.9* | *5.7* | |

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.

# Benchmark History

West Hartford Total Pension | As of September 30, 2022

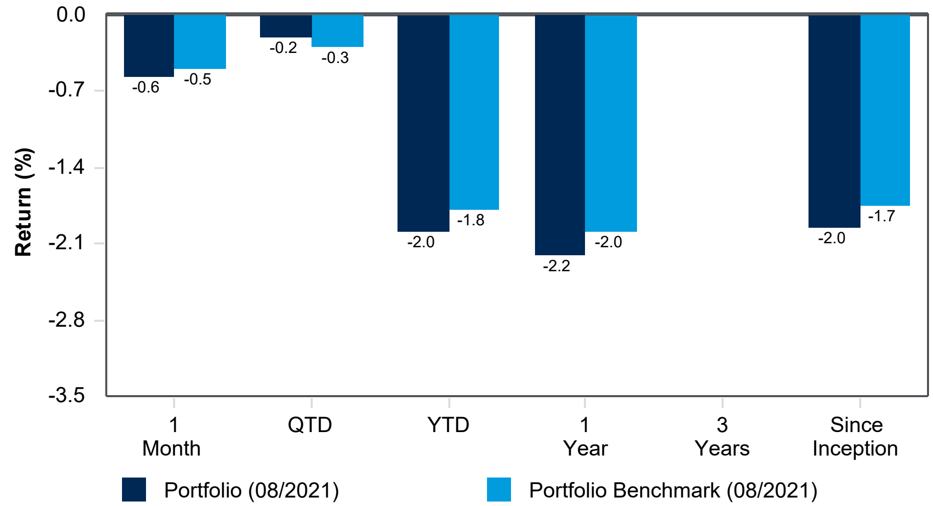
| Account Name | From Date | To Date | Benchmark |
|---|---|---|---|
| **West Hartford Total Pension** | **04/2018** | **Present** | **30.0% Blmbg. U.S. Aggregate, 43.5% Russell 3000 Index, 21.5% MSCI AC World ex USA (Net), 5.0% NCREIF Fund Index - ODCE (net)** |
| | 03/2018 | 04/2018 | 30.0% Blmbg. U.S. Aggregate, 50.0% Russell 3000 Index, 15.0% MSCI AC World ex USA (Net), 5.0% NCREIF Fund Index - ODCE (net) |
| | 12/2017 | 03/2018 | 30.0% Blmbg. U.S. Aggregate, 57.0% Russell 3000 Index, 8.0% MSCI EAFE (Net), 5.0% NCREIF Fund Index - ODCE (net) |
| | 10/2010 | 12/2017 | 30.0% Blmbg. U.S. Aggregate, 54.0% Russell 3000 Index, 11.0% MSCI EAFE (Net), 5.0% NCREIF Fund Index - ODCE (net) |
| | 01/2008 | 10/2010 | 30.0% Blmbg. U.S. Aggregate, 12.0% Russell 1000 Value Index, 12.0% Russell 1000 Growth Index, 19.0% Russell 3000 Index, 11.0% Russell 2000 Index, 11.0% MSCI EAFE (Net), 5.0% NCREIF Fund Index - ODCE (net) |
| | 08/2003 | 01/2008 | 11.0% MSCI EAFE (Net), 35.0% Blmbg. U.S. Aggregate, 12.0% Russell 1000 Growth Index, 12.0% Russell 1000 Value Index, 19.0% Russell 3000 Index, 11.0% Russell 2000 Index |
| | 07/2002 | 08/2003 | 12.0% MSCI EAFE (Net), 3.0% 90 Day U.S. Treasury Bill, 35.0% Blmbg. U.S. Aggregate, 10.0% Russell 1000 Growth Index, 14.0% Russell 1000 Value Index, 19.0% Russell 3000 Index, 7.0% Russell 2000 Index |
| | 06/2002 | 07/2002 | 12.0% MSCI EAFE (Net), 3.0% 90 Day U.S. Treasury Bill, 35.0% Blmbg. U.S. Aggregate, 10.0% Russell 1000 Growth Index, 14.0% Russell 1000 Value Index, 19.0% Russell 3000 Index, 7.0% Russell 2000 Index |
| | 01/2001 | 06/2002 | 15.0% MSCI EAFE (Net), 35.0% Blmbg. U.S. Aggregate, 10.0% Russell 1000 Growth Index, 14.0% Russell 1000 Value Index, 19.0% Russell 3000 Index, 7.0% Russell 2000 Index |

# Portfolio Dashboard

West Hartford POB ST Account

As of September 30, 2022

## Historical Performance



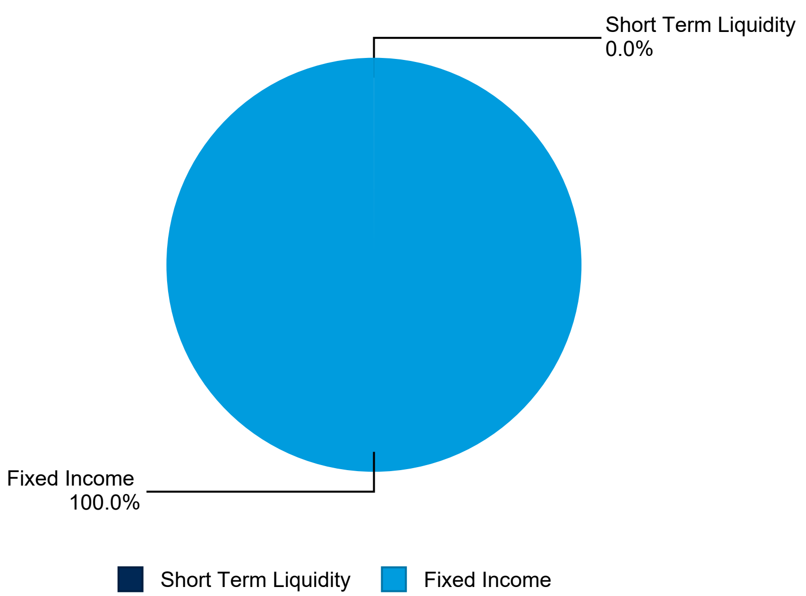

## Summary of Cash Flows

| | 1 Month | QTD | YTD | Since Inception |
|---|---|---|---|---|
| Beginning Market Value | 19,219,696 | 19,149,743 | 214,645,209 | 269,288,163 |
| Net Contributions | - | - | -193,000,000 | -247,000,000 |
| Gain/Loss | -108,028 | -38,076 | -2,533,542 | -3,176,495 |
| Ending Market Value | 19,111,668 | 19,111,668 | 19,111,668 | 19,111,668 |

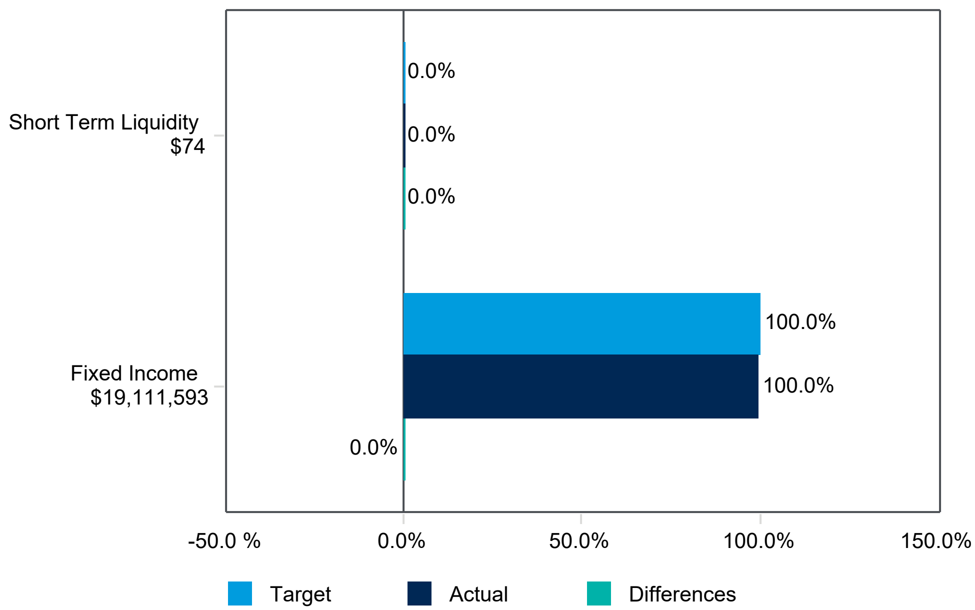
## Current Benchmark Composition

| From Date | To Date | |
|---|---|---|
| 08/2021 | Present | 25.00% 90 Day U.S. Treasury Bill, 25.00% Blmbg. U.S. Credit 1-5 Year Index, 50.00% Blmbg. Short-term Government/Corporate |

## Portfolio Allocation




## Actual vs. Target Allocations



# Asset Allocation

West Hartford POB ST Account | As of September 30, 2022

| | Asset Allocation ($) | Asset Allocation (%) | Target Allocation (%) | Differences (%) |
|---|---|---|---|---|
| **West Hartford POB ST Account** | **19,111,668** | **100.0** | **100.0** | **0.0** |
| **Short Term Liquidity** | **74** | **0.0** | **0.0** | **0.0** |
| AllSpring Govt Money Market Fund | 74 | 0.0 | 0.0 | 0.0 |
| **Fixed Income** | **19,111,593** | **100.0** | **100.0** | **0.0** |
| Baird Ultra Short Term Bond Fund Instl | 9,609,151 | 50.3 | 50.0 | 0.3 |
| Payden Limited Maturity Fund SI | 4,685,445 | 24.5 | 25.0 | -0.5 |
| Vanguard Short Term Invst Grade Inst | 4,816,998 | 25.2 | 25.0 | 0.2 |

## Manager Performance

West Hartford POB ST Account | As of September 30, 2022

| | Allocation | | Performance(%) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Market Value ($) | % | QTD | YTD | 1 Year | 3 Years | 5 Years | 10 Years | Since Inception | Inception Date | Manager Status |
| **West Hartford POB ST Account** | **19,111,668** | **100.0** | **-0.2** | **-2.0** | **-2.2** | **-** | **-** | **-** | **-2.0** | **08/2021** | |
| *POB ST Blended Benchmark* | | | *-0.3* | *-1.8* | *-2.0* | *-* | *-* | *-* | *-1.7* | | |
| **Short Term Liquidity** | **74** | **0.0** | **0.5** | **0.5** | **0.5** | **-** | **-** | **-** | **0.4** | **08/2021** | |
| *90 Day U.S. Treasury Bill* | | | *0.5* | *0.6* | *0.6* | *0.6* | *1.1* | *0.7* | *0.5* | | |
| **AllSpring Govt Money Market Fund** | **74** | **0.0** | **0.5** | **0.5** | **0.5** | **-** | **-** | **-** | **0.4** | **08/2021** | |
| *90 Day U.S. Treasury Bill* | | | *0.5* | *0.6* | *0.6* | *0.6* | *1.1* | *0.7* | *0.5* | | |
| **Fixed Income** | **19,111,593** | **100.0** | **-0.2** | **-2.1** | **-2.3** | **-** | **-** | **-** | **-2.1** | **08/2021** | |
| *POB ST Fixed Income Benchmark* | | | *-0.3* | *-1.8* | *-2.0* | *-* | *-* | *-* | *-1.7* | | |
| **Baird Ultra Short Term Bond Fund Instl** | **9,609,151** | **50.3** | **0.3** | **-0.1** | **-0.1** | **0.8** | **1.4** | **-** | **-0.1** | **08/2021** | **Maintain** |
| *Blmbg. Short-term Government/Corporate* | | | *0.2* | *-0.2* | *-0.2* | *0.6* | *1.2* | *0.8* | *-0.2* | | |
| IM U.S. Short Term Investment Grade (MF) Median | | | -1.0 | -4.7 | -5.2 | -0.1 | 0.8 | 0.9 | -4.5 | | |
| Baird Ultra Short Term Bond Fund Instl Rank | | | 20 | 8 | 6 | 5 | 7 | - | 6 | | |
| **Payden Limited Maturity Fund SI** | **4,685,445** | **24.5** | **0.5** | **-0.5** | **-0.6** | **0.7** | **1.4** | **1.1** | **-0.5** | **08/2021** | **Maintain** |
| *90 Day U.S. Treasury Bill* | | | *0.5* | *0.6* | *0.6* | *0.6* | *1.1* | *0.7* | *0.5* | | |
| IM U.S. Short Term Investment Grade (MF) Median | | | -1.0 | -4.7 | -5.2 | -0.1 | 0.8 | 0.9 | -4.5 | | |
| Payden Limited Maturity Fund SI Rank | | | 10 | 13 | 13 | 7 | 7 | 28 | 12 | | |
| **Vanguard Short Term Invst Grade Inst** | **4,816,998** | **25.2** | **-1.9** | **-7.3** | **-8.0** | **-0.7** | **0.8** | **1.4** | **-7.1** | **08/2021** | **Maintain** |
| *Blmbg. U.S. Credit 1-5 Year Index* | | | *-2.0* | *-7.2* | *-7.9* | *-0.7* | *0.9* | *1.4* | *-7.0* | | |
| IM U.S. Short Term Investment Grade (MF) Median | | | -1.0 | -4.7 | -5.2 | -0.1 | 0.8 | 0.9 | -4.5 | | |
| Vanguard Short Term Invst Grade Inst Rank | | | 95 | 96 | 97 | 78 | 57 | 12 | 97 | | |

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.

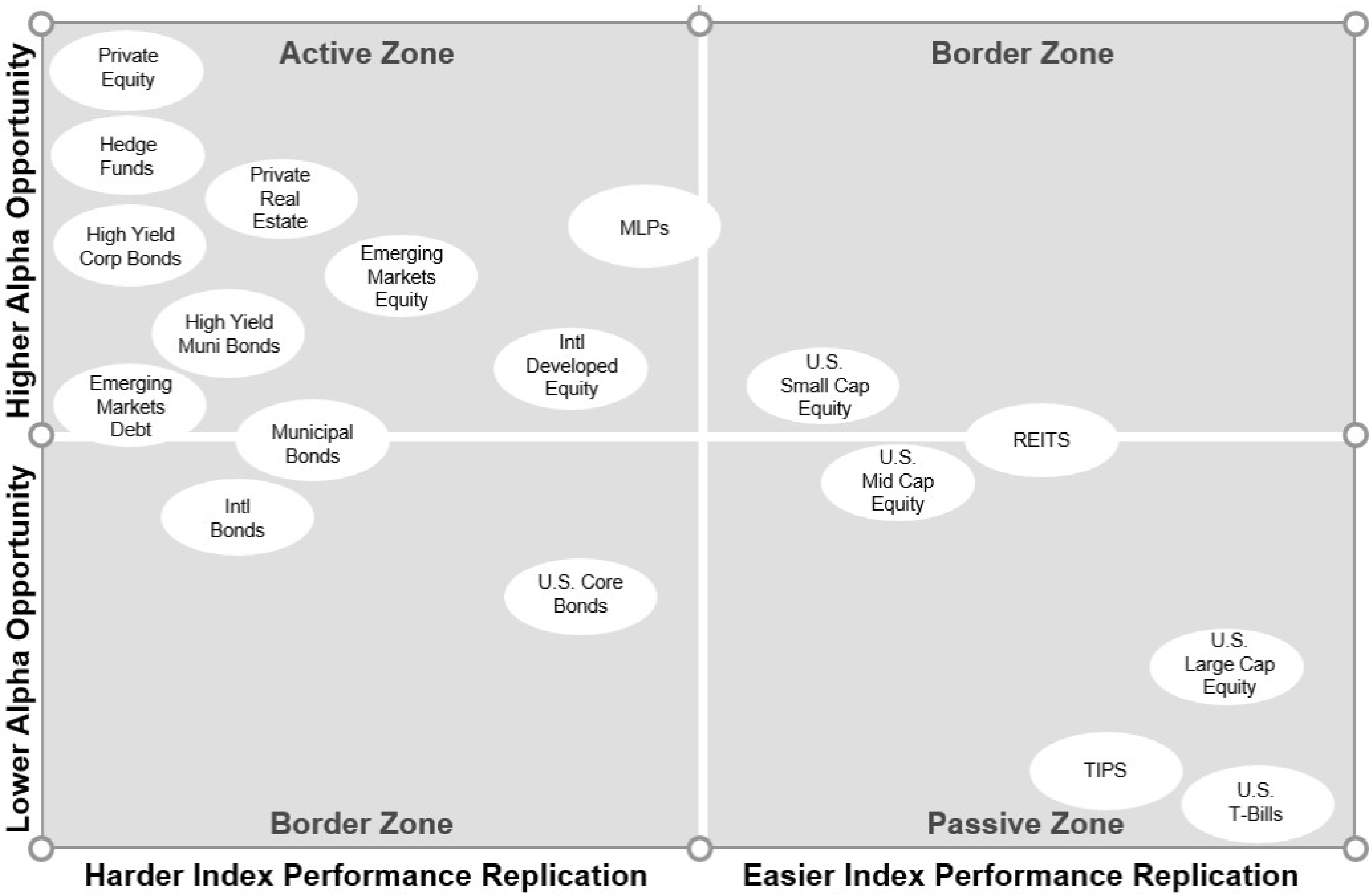
# Benchmark History

West Hartford POB ST Account

As of September 30, 2022

| Account Name | From Date | To Date | Benchmark |
|---|---|---|---|
| West Hartford POB ST Account | 08/2021 | Present | 25.0% 90 Day U.S. Treasury Bill, 25.0% Blmbg. U.S. Credit 1-5 Year Index, 50.0% Blmbg. Short-term Government/Corporate |

# Active vs. Passive Management Asset Class Perspectives



# 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.

**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 Barclays 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 Barclays Capital US Treasury Inflation Protected Securities Index** consists of Inflation-Protection securities issued by the U.S. Treasury.
- **Bloomberg Barclays 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 Barclays Muni 1 Year Index** is the 1-year (1-2) component of the Municipal Bond index.
- **Bloomberg Barclays Muni 3 Year Index** is the 3-year (2-4) component of the Municipal Bond index.
- **Bloomberg Barclays Muni 5 Year Index** is the 5-year (4-6) component of the Municipal Bond index.
- **Bloomberg Barclays Muni 7 Year Index** is the 7-year (6-8) component of the Municipal Bond index.
- **Bloomberg Barclays 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 Barclays 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 Barclays 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 Barclays 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%: Barclays U.S. Treasury Inflation Notes Total Return Index
    - **PIMCO Inflation Response Multi Asset Fund:** 45% Barclays 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 Barclays 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 Barclays US1-5Yr Gov/Cr Flt Adj Index:** Bloomberg Barclays U.S. 1–5 Year Government/Credit Bond Index through December 31, 2009; Bloomberg Barclays U.S. 1–5 Year Government/Credit Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg Barclays US5-10Yr Gov/Cr Flt Adj Index:** Bloomberg Barclays U.S. 5–10 Year Government/Credit Bond Index through December 31, 2009; Bloomberg Barclays U.S. 5–10 Year Government/Credit Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg Barclays US Agg Flt Adj Index:** Bloomberg Barclays U.S. Aggregate Bond Index through December 31, 2009; Bloomberg Barclays U.S. Aggregate Float Adjusted Index thereafter.
- **Vanguard Spliced Bloomberg Barclays US Long Gov/Cr Flt Adj Index:** Bloomberg Barclays U.S. Long Government/Credit Bond Index through December 31, 2009; Bloomberg Barclays 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 Barclays U.S. Aggregate Bond Index through May 31, 2005; 60% MSCI US Broad Market Index and 40% Bloomberg Barclays U.S. Aggregate Bond Index through December 31, 2009; 60% MSCI US Broad Market Index and 40% Bloomberg Barclays U.S. Aggregate Float Adjusted Index through January 14, 2013; and 60% CRSP US Total Market Index and 40% Blomberg Barclays U.S. Aggregate Float Adjusted Index thereafter.
- **Vanguard Spliced Intermediate-Term Tax-Exempt Index:** Bloomberg Barclays 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 AC 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, outperforming75%.
- **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 that 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 betweer 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 an 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 dividin 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 Fiducient Advisors' reports and the custodian reports based on whether the report utilizes trade date or 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 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 perfor 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 Fiducient Advisors are described in Part 2 of the Form ADV.

**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.