Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom

Please click the link below to join the webinar:
https://zoom.us/j/95660579576
Or Telephone: +1 646 931 3860 US
Webinar ID: 956 6057 9576

1. Agenda

Subject	**1.1. Motion to adopt agenda**
Meeting	December 18, 2023 - Retirement Board Meeting - Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom
Category	1. Agenda
Department	Retirement Administration
Type	Action Procedural
Recommended Action	Motion to adopt agenda

2. Public Forum

Subject	**2.1. Verbal Comments**
Meeting	December 18, 2023 - Retirement Board Meeting - Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom
Category	2. Public Forum
Department	Retirement Administration
Type	Action Procedural

3. Approve Minutes from November 20, 2023

Subject	**3.1. Approve Minutes from November 20, 2023**
Meeting	December 18, 2023 - Retirement Board Meeting - Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom
Category	3. Approve Minutes from November 20, 2023
Department	Retirement Administration

Type	Action Minutes

4. Approve Return of Contributions

Subject	**4.1. Kyle Clauss, Class B $3,360.11, Effective Date of Benefit: 12/01/2023**
Meeting	December 18, 2023 - Retirement Board Meeting - Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom
Category	4. Approve Return of Contributions
Department	Retirement Administration
Type	Action Information
Recommended Action	approve return of contribution for Kyle Clauss

5. Approve Retirement Application

Subject	**5.1. Benjamin R. O'Brien, Class A $7,774.34, Effective Date of Benefit: 12/01/2023, Payment Date: 12/15/2023**
Meeting	December 18, 2023 - Retirement Board Meeting - Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom
Category	5. Approve Retirement Application
Department	Retirement Administration
Type	Action
Recommended Action	approve retirement application for Benjamin R. O'Brien

6. Administrative Update

Subject	**6.1. Hooker & Holcombe/USI Consulting Group final 2023 Experience Study Report**
Meeting	December 18, 2023 - Retirement Board Meeting - Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom
Category	6. Administrative Update
Department	Retirement Administration
Type	Information Report
Recommended Action	waive the reading, accept the report and place it on file

7. Fiducient Flash Report

Subject	**7.1. Fiducient Flash Report**
Meeting	December 18, 2023 - Retirement Board Meeting - Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom

Category	7. Fiducient Flash Report
Department	Retirement Administration
Type	Information Report

8. Adjournment

Subject	**8.1. Motion to adjourn**
Meeting	December 18, 2023 - Retirement Board Meeting - Monday, December 18, 2023, 9:30 AM, Burlington City Hall, 1st Floor, Bushor Conference Room or via Zoom
Category	8. Adjournment
Department	Retirement Administration
Type	Action Procedural
Recommended Action	Motion to adjourn

BURLINGTON RETIREMENT BOARD
CITY HALL, 1ST FLOOR BUSHOR CONF ROOM
OR
REMOTE MEETING WITH CALL-IN
BURLINGTON, VERMONT
MINUTES OF MEETING
DRAFT
November 20, 2023

MEMBERS PRESENT:	Robert Hooper (Chair) Munir Kasti (Vice Chair) David Mount Kyle Blake Tom Chenette Katherine Schad
MEMBERS ABSENT:	Patrick Robins Matt Dow
OTHERS PRESENT:	Kate Pizzi Hayley McClenahan Steve Lemanski Robert Lessard

---

1.0 CALL TO ORDER
Robert Hooper called the Retirement Board meeting to order at 9:03 AM.

2.0 PUBLIC FORUM (VERBAL)
2.01 Verbal Comments
None.

3.0 APPROVE MINUTES
3.1 October 16, 2023

MOTION by David Mount, SECOND by Tom Chenette, to approve the minutes of October 16, 2023.

VOTING: unanimous; motion carries.

4.0 APPROVE RETURN OF CONTRIBUTIONS

4.1 Daniela Puentes Jaimes, Class B $2,251.55, Effective Date of Benefit: 12/01/2023

MOTION by Tom Chenette, SECOND by David Mount, to approve the return of contributions for Daniela Puentes Jaimes.

VOTING: unanimous; motion carries.

4.2 Joseph Crites, Class B $2,811.29, Effective Date of Benefit: 12/01/2023

MOTION by Tom Chenette, SECOND by David Mount, to approve the return of contributions for Joseph Crites.

VOTING: unanimous; motion carries.

4.3 Cristopher R. Farnsworth, Class B $22,382.07, Effective Date of Benefit: 11/01/2023

MOTION by Tom Chenette, SECOND by David Mount, to approve the return of contributions for Christopher R. Farnsworth.

VOTING: unanimous; motion carries.

4.4 Denise A. Bailey, Class B $6,201.92, Effective Date of Benefit: 12/01/2023

MOTION by Tom Chenette, SECOND by David Mount, to approve the return of contributions for Denise A. Bailey.

VOTING: unanimous; motion carries.

4.5 Jordan Elizabeth Poirier, Class B $42,923.60, Effective Date of Benefit 12/01/2023

MOTION by Tom Chenette, SECOND by David Mount, to approve the return of contributions for Jordan Elizabeth Poirier.

VOTING: unanimous; motion carries.

4.6 Ravi Venkataraman, Class B $2,075.15, Effective Date of Benefit: 12/01/2023

MOTION by Tom Chenette, SECOND by David Mount, to approve the return of contributions for Ravi Venkataraman.

VOTING: unanimous; motion carries.

5.0 APPROVE RETIREMENT APPLICATIONS

5.1 Lise Veronneau, Class B $7,528.61, Effective Date of Benefit: 11/01/2023, Payment Date: 11/15/2023

MOTION by David Mount, SECOND by Kyle Blake, to approve the retirement application for Lise Veronneau.

VOTING: unanimous; motion carries.

5.2 Robyn M. Miller

MOTION by David Mount, SECOND by Kyle Blake, to approve the retirement application for Robyn M. Miller.

VOTING: unanimous; motion carries.

5.3 James MacKinnon

MOTION by David Mount, SECOND by Kyle Blake, to approve the retirement application for James MacKinnon.

VOTING: unanimous; motion carries.

5.4 Craig E. Paradee

MOTION by David Mount, SECOND by Kyle Blake, to approve the retirement application for Craig E. Paradee.

VOTING: unanimous; motion carries.

5.5 John Vickery

MOTION by David Mount, SECOND by Kyle Blake, to approve the retirement application for John Vickery.

VOTING: unanimous; motion carries.

5.6 Suzanne T. Lamphere

MOTION by David Mount, SECOND by Kyle Blake, to approve the retirement application for Suzanne T. Lamphere.

VOTING: unanimous; motion carries.

5.7 Barbara E. Kopacz, Class B $815.29, Effective Date of Benefit: 12/01/2023, Payment Date: 12/15/2023

MOTION by David Mount, SECOND by Kyle Blake, to approve the retirement application for Barbara E. Kopacz.

VOTING: unanimous; motion carries.

6.0 DISABILITY RETIREMENT APPLICATION

6.1 Effective Date of Benefit: N/A. Payment Date
Chief Administrative Officer Schad noted that this is a placeholder on the agenda and that there are no Disability Retirement Applications for the BERS Board to consider this month.

7.0 ADMINISTRATIVE UPDATE

7.1 CY2024 COLA approvals
Chief Administrative Officer Schad said that COLAs are issued by calendar year, per the City's charter, and that the rate of COLAs for different classes is dictated by contract. She noted that it is the BERS Board's charge to approve the COLAs. She pointed out where the BERS Board has discretion to not approve the COLA for certain classes and age groups if the funding levels aren't sufficient, though she recommended approving the full COLA for each class and age group as presented. Mr. Blake asked what impacted approving the COLAs would have on the funded ratios for the pension, and Mr. Lemanski replied that the actuaries have built assumptions into funded ratio projections that the COLAs would be approved.

MOTION by Kyle Blake, SECOND by Tom Chenette, to approve the COLA increases as allowed by the COLA basis.

VOTING: unanimous; motion carries.

8.0 INVESTMENT UPDATE

8.1 Investment Portfolio and Performance Update for October 2023
Ms. Pizzi began by providing an overview of asset class performance for October, 2023. She noted that she is also presenting Year to Date performance numbers through November 16, 2023, as the market has changed significantly since the end of October. She noted that strong economic data was put out in October, which actually had a negative impact on equity markets, as they are anticipating interest rates to stay higher for longer than anticipated. She noted that since the end of October, interest rates have decreased, leading investors to speculate that they may be dropping and causing positive increases in core bonds and other fixed income assets. She also noted strong returns in the last two weeks in equities across the board, though they had had poor performance in October. She noted poor October performance for the real asset markets, though there was a positive showing in the last two weeks.

Ms. Pizzi then spoke about asset allocation in the BERS portfolio. She noted that the total plan value is currently at approximately $208.3 million (which includes the prepaid pension benefits of about $2.3 million). She noted that 26% of assets are allocated to fixed income (slightly above the target allocation of 25%), about 69% are allocated to equities, and 4.5% to real assets (under the target of 6%). She noted that some redemptions have come in from the UBS Trumbull Property redemption pool (approximately $288,000).

Ms. Pizzi then provided an overview of the BERS portfolio performance. She noted that the portfolio is down 2.7% from last month overall (a decrease of $5.7 million) which is in line with the benchmark. She noted that the portfolio is down 5.9% fiscal year-to-date, and up 2.5% calendar year-to-date. She spoke briefly about manager performance.

9.0 ACTUARIAL UPDATE

9.1 Review and recommendations regarding 2023 Experience Study
Mr. Lemanski and Mr. Lessard of Hooker & Holcombe walked through the BERS 2023 Experience Study. Mr. Lemanski began by speaking about the purpose of the experience study. He said that the experience study was conducted using experience from July 1, 2017 through June 30, 2022 and that it analyzed the demographic and economic assumptions of the plan. He said that it compares current plan assumptions

against actual experience to determine whether the assumptions remain reasonable. He said that where experience is different enough, they update the assumptions. He said that this leads to less fluctuation in actual plan experience and gains/losses.

Mr. Lessard then outlined the demographic assumptions and proposed changes to assumptions based on experience in the study. Mr. Lessard spoke briefly about mortality assumptions, noting that they are proposing to change to different set of mortality tables, which were derived from the first-ever published mortality study of public sector experience. He spoke about retirement assumptions, noting that they are proposing decreasing the rate from 15-35 years of service to 15-30 years of service, given that members are retiring with fewer years of service than were used in previous assumptions. He said that within Class A, they should also consider separate retirement assumptions for Fire and Police. He noted that age-based retirement rates remain appropriate for Class B, with minor adjustments. He spoke about turnover assumptions, noting that service-based turnover rates remain appropriate for Class A, though experience suggests they should consider separate turnover assumptions for Fire and Police. He recommended that Class B assumptions for turnover use the same methodology as in prior experience studies, but with slightly increased rates. He then spoke about disability assumptions. He noted that Class A experience suggests that separate disability assumptions should be used for Fire and Police, and that Class B experience shows that there were fewer actual disabilities than expected, leading to the proposed rate decrease. He spoke briefly about the spouse age difference assumption, noting a proposed decrease from 3 years to 2 years in the assumption of the age difference.

Mr. Lemanski then spoke about the economic assumptions and proposed changes to assumptions based on the experience study. He spoke about inflation assumptions and COLAs. He noted that though recent inflation has been high, they do not believe this trend will continue indefinitely, and they have proposed an increase in the inflation assumption from 2.6% to 2.7%, an increase in payroll growth assumptions from 3% to 3.1% per year, and are proposing to keep COLAs at 2.6%, as it remains in line with long-term expectations. He spoke about rate of compensation increases (which include promotions and step increases in addition to general increases). He noted that for Class A, they are proposing separate assumptions for Fire and Police based on experience, and that the proposed Fire rates are generally slightly higher than the proposed Police rates at earlier service periods. He noted that there were proposed small adjustments to the rates for Class B. He noted that all rate increasers incorporate a long-term inflation assumption of 2.7%. Mr. Lemanski then spoke about COLA election assumptions, noting that the plan has full/half/no COLA election for determining accrual rates used to calculate a member’s final benefit. He noted that new hires are only able to take a full COLA benefit, but people hired prior to certain dates in each class can take a large benefit with no COLA, a smaller benefit with half COLA, and a smaller benefit with full COLA. He noted that they are proposing to change the Class A assumption from 85 no COLA/15% full COLA to 80% no COLA and 20% full COLA, and the Class B assumption from 75% no COLA/25% full COLA to 70% no COLA/30% full COLA. He noted that experience has shown that people are electing to take the full COLA more often than the assumptions had anticipated, saying that some of this may be due to heightened inflation. Mr. Lemanski then spoke about investment return assumption, noting that they are proposing an assumption of 7.1% or lower, based on current capital market assumptions. He said that the final assumption should be selected in consultation with the BERS investment advisor.

The BERS Board discussed the experience study and the proposed changes to the assumptions presented by Mr. Lemanski and Mr. Lessard. Chief Administrative Officer Schad asked Ms. Pizzi whether her firm would advise selecting a rate of return assumption of 7.10%. Ms. Pizzi replied that 7.10% is a supportable rate, based on portfolio performance and asset allocation. Mr. Lemanski said that a possible alternative is that the BERS Board could adopt all other assumption proposals except for the proposed rate of return, and allow Hooker & Holcombe to true up both 2022 and 2023 with the updated assumptions. He said that they could revisit the topic of the rate of return assumption once that is complete and discuss it when they discuss the portfolio’s direct rate smoothing and funding policy. Mr. Mount asked about funding ratios and what a good target funding ratio is based on what other public pension plans are seeing. Mr. Lemanski replied that a good target for funding ratios tends to be around 75%.Mr. Kasti noted that the BERS Board had previously approved a five-year plan to adjust the investment return assumption down to 7.00% in 2023, and asked why they would deviate from that. He also asked what was included in the study for depreciation and smoothing. Mr. Lemanski replied that funding policy (amortization and smoothing) will be discussed separately, and that they are just discussing assumptions at this juncture, and that funding policy will be discussed when the valuation results are presented. He said that while the policy recommended a 7.00% investment return assumption for 2023, they have analyzed experience from the past five years to recommend a different assumption, which they are proposing now.

MOTION by David Mount, SECOND by Katherine Schad, to accept the proposed assumption changes as presented by Hooker & Holcombe, with the exception of the investment return assumption; further to request that Hooker & Holcombe prepare the FY23 valuation report using rate of return assumptions of 7.00% and 7.10%, so that the BERS Board may compare them and make a final decision on the investment return assumption.

VOTING: 3 ayes, 1 nay (Mr. Blake), 1 abstention (Mr. Chenette); motion carries.

10.0 ADJOURN

10.1 Motion to Adjourn

The meeting adjourned at 10:05 AM.

RScty: AACoonradt

Calculation of Return of Employee Contributions — Form A

Burlington Employees' Retirement System — Kyle Clauss

IMPORTANT: City of Burlington reserves the right to correct any errors in the Calculation of Pension Benefit and Options. If it is determined at any time that the information provided in this Pension Distribution Kit conflicts with the terms of the Plan, the terms of the Plan will govern. Under the law, a plan must be operated in accordance with its terms and errors must be corrected. As a Plan participant, you may have made post-tax contributions to the Plan. As a result, a portion of your benefit may be non-taxable. **Consult with your tax advisor if you have any questions.**

Information Used in Determination

Participant Name:	**Kyle Clauss**	Class:	B
Date of Birth:		Department:	Non-Union
Date of Hire:	12/12/2022	Post-Tax Employee Contributions:	$0.00
Date of Termination:	10/02/2023	Normal Retirement Date (NRD):	03/09/2058
Beneficiary Date of Birth:	N/A	Payment Start Date:	12/01/2023
		Vesting Percentage:	0.0000%

Determination of Employee Contribution Balance with Interest

Period Ending	Description	Transaction	Balance at End of Period
06/30/2023	Contributions	$2,353.12	$2,353.12
06/30/2023	Interest at 2%	$0.00	$2,353.12
10/02/2023	Contributions	$987.49	$3,340.61
11/30/2023	Interest at 2%	$19.50	$3,360.11

(1)	Pre-Tax Employee Contributions (Taxable):	$3,340.61
(2)	Interest Accrued on Employee Contributions (5.5% through 12/31/2017, 2% thereafter):	$19.50
(3)	Total Return of Employee Contributions with Interest:	$\boxed{\$3,360.11}$

Determination of Taxable Portion of Benefit

Form of Payment	Total Benefit	Taxable Portion	Non-Taxable Portion
Return of Contributions	$3,360.11	$3,360.11	0.00

Calculation of Benefit Options — Form A

Burlington Employees' Retirement System, Class A - Fire Union — Benjamin R. O'Brien

IMPORTANT: City of Burlington reserves the right to correct any errors in the Calculation of Pension Benefit and Options. If it is determined at any time that the information provided in this Pension Distribution Kit conflicts with the terms of the Plan, the terms of the Plan will govern. Under the law, a plan must be operated in accordance with its terms and errors must be corrected.

Type of Calculation

Regular Service

Information Used in Benefit Determination

Participant Name:	**Benjamin R O'Brien**	Class:	A
Date of Birth:		Department:	Fire Union
Date of Hire:	10/26/1998	Vesting Percentage:	100.0000%
Date of Termination:	11/08/2023	Normal Retirement Date (NRD):	10/26/2023
Beneficiary Date of Birth:		Payment Start Date:	12/01/2023
		Employee Contribution Balance w/ Interest as of 12/01/2023:	$222,958.62

Earnings

Average Final Compensation*: $87,112.32

Determination of Benefit Amount

(1)	Years of Creditable Service (CS)			25.00000
(2)	Years of CS on or prior to June 30, 2006 [(2) + (3) is not to exceed 25 years] (7.66667 of overtime service)			7.66667
(3)	Years of CS after June 30, 2006 [(2) + (3) is not to exceed 25 years] (17.33333 of overtime service)			17.33333
	COLA Option	Full COLA	Half COLA	No COLA
(4)	Accrual Rate on or prior to June 30, 2006 (not to exceed 25 years)	2.750%	3.250%	3.800%
(5)	Accrual Rate after June 30, 2006 (not to exceed 25 years)	2.750%	3.250%	3.600%
(6)	Retirement Accrual Percentage = [1.17 x 7.66667 x (4)] + [1.17 x 17.33333 x (5)]	80.4375%	95.0625%	107.0940%
(7)	Monthly Vested Benefit Payable at Payment Start Date *= (6) x Average Final Compensation/12 x Vesting Percentage*	$5,839.25	$6,900.93	$7,774.34

Benefit Options Available

Form of Payment	Option Factor	Full COLA Initial Benefit	Full COLA Survivor's Benefit(1)	Half COLA Initial Benefit	Half COLA Survivor's Benefit(1)	No COLA Initial Benefit	No COLA Survivor's Benefit(1)
Straight Life Annuity	1.0076	$5,883.63	**	$6,953.38	**	$7,833.42	**
5 Year Certain & Life Annuity	1.0000	$5,839.25	$5,839.25	$6,900.93	$6,900.93	$7,774.34	$7,774.34
100% Joint & Survivor Annuity	0.8884	$5,187.59	$5,187.59	$6,130.79	$6,130.79	$6,906.72	$6,906.72
50% Joint & Survivor Annuity	0.9442	$5,513.42	$2,756.71	$6,515.86	$3,257.93	$7,340.53	$3,670.27
100% Joint & Survivor Pop-Up Annuity	0.8801	$5,139.12	$5,139.12	$6,073.51	$6,073.51	$6,842.20	$6,842.20
50% Joint & Survivor Pop-Up Annuity	0.9397	$5,487.14	$2,743.57	$6,484.80	$3,242.40	$7,305.55	$3,652.78
Return of Employee Contributions	N/A	$222,958.62	N/A	$222,958.62	N/A	$222,958.62	N/A

(1) **Survivor Benefits**: for the Joint & Survivor Annuity payments, the survivor's benefit is only payable if the chosen survivor is alive upon the participant's death. If the chosen survivor is not alive, then no additional benefit is payable upon participant death. The choice of survivor may not be changed after benefit payments have commenced.

** Average is of the three highest years of base earnings*

***Amount in excess (if any) of accumulated employee contributions, with interest, over payments made*

BURLINGTON EMPLOYEES' RETIREMENT SYSTEM

2023 EXPERIENCE STUDY

REVIEW PERIOD: JULY 1, 2017 – JUNE 30, 2022

Table of Contents

Report Prepared By:

Steve A. Lemanski	Robert P. Lessard	Rebecca Lunt
Vice President, Senior Consulting Actuary	Consulting Actuary	Senior Actuarial Associate
860.856.2073	860.856.2106	860.856.2133
slemanski@hhconsultants.com	rlessard@hhconsultants.com	rlunt@hhconsultants.com

Burlington Employees' Retirement System

Executive Summary

The following is an Executive Summary of our recommendations based on the results of the Experience Study for the review period July 1, 2017 to June 30, 2022. The impact on the valuation results is shown under two separate investment return assumptions to provide the information necessary to review the effect of that assumption. Exhibit I shows additional details of the impact on the actuarial valuation results under those seven scenarios. Exhibit II shows the data analysis used to develop the recommended assumption changes by employee group when appropriate.

Pro Forma Impact on Actuarial Valuation Results

$ millions			
Investment Return	7.10%	7.10%	7.00%
Assumptions	Current	Proposed	Proposed
Present Value of Benefits	$376.0	$374.1	$378.9
Increase/(Decrease)		***($1.9)***	***$2.9***
Actuarial Accrued Liability	$325.8	$328.5	$332.0
Increase/(Decrease)		***$2.7***	***$6.2***
Actuarial Value of Assets	$227.0	$227.0	$227.0
Increase/(Decrease)		***$0.0***	***$0.0***
Funded Ratio	69.7%	69.1%	68.4%
Increase/(Decrease)		***(0.6%)***	***(1.3%)***
City's Normal Cost	$3.57	$3.25	$3.38
Increase/(Decrease)		***($0.32)***	***($0.19)***
Actuarially Determined Employer Contribution	$13.06	$12.97	$13.32
Increase/(Decrease)		***($0.09)***	***$0.26***

Mortality

Current Basis:

Class A:

Retirees – RP-2014 Adjusted to 2006 Total Dataset Mortality Table, projected to the valuation date with Scale MP-2021.

Disabled – RP-2014 Adjusted to 2006 Disabled Mortality Table, projected to the valuation date with Scale MP-2021.

Survivors – RP-2014 Adjusted to 2006 Total Dataset Mortality Table, projected to the valuation date with Scale MP-2021.

Class B:

Retirees – RP-2014 Adjusted to 2006 Total Dataset Mortality Table, projected to the valuation date with Scale MP-2021, set forward 2 years.

Disabled – RP-2014 Adjusted to 2006 Disabled Mortality Table, projected to the valuation date with Scale MP-2021.

Survivors – RP-2014 Adjusted to 2006 Total Dataset Mortality Table, projected to the valuation date with Scale MP-2021, set forward 2 years

Comment:

Our recommendation is to use the mortality tables based on the latest published public retirement study released by the Society of Actuaries. The actual mortality for Class A Retirees and Class B was greater than expected, so we recommend a set forward of rates for these tables.

Recommendation:

Class A:

Retirees – Pub-2010 Public Retirement Plans Amount-Weighted Mortality Tables for Public Safety Employees, for non-annuitants and annuitants, projected to the valuation date with Scale MP-2021, set forward 2 years.

Disabled – Pub-2010 Public Retirement Plans Amount-Weighted Mortality Tables for Public Safety Disabled Retirees, projected to the valuation date with Scale MP-2021.

Survivors – Pub-2010 Public Retirement Plans Amount-Weighted Mortality Tables for Public Safety Contingent Survivors, projected to the valuation date with Scale MP-2021.

Class B:

Retirees – Pub-2010 Public Retirement Plans Amount-Weighted Mortality Tables for General Employees, for non-annuitants and annuitants, projected to the valuation date with Scale MP-2021, set forward 2 years.

Disabled – Pub-2010 Public Retirement Plans Amount-Weighted Mortality Tables for General Disabled Retirees, projected to the valuation date with Scale MP-2021, set forward 3 years.

Survivors – Pub-2010 Public Retirement Plans Amount-Weighted Mortality Tables for General Contingent Survivors, projected to the valuation date with Scale MP-2021, set forward 3 years.

Retirement rates

Current Basis:

Class A

Completed Years of Service	Rate
<15	0%
15-18	5%
19	15%
20-23	25%
24	30%
25	75%
26-29	50%
30-34	75%
35+	100%

Compulsory retirement is assumed at age 60.

Class B

Age	Rate
55-59	5.0%
60	7.5%
61	12.5%
62	18.0%
63	22.5%
64-65	25.0%
66-69	30.0%
70-74	50.0%
75+	100.0%

Comment:

For Class A, Fire employees had fewer retirements than expected, while Police employees had more retirements than expected. The actual and expected rates for Class B were similar.

Recommendation:

For Class A, we recommend separate retirement assumptions for Fire and Police and assuming 100% retirement at 30 years of service for both groups. For Class B, we recommend minor adjustments to the rates to better fit the experience.

The proposed rates of retirement are as follows:

Class A - Fire

Completed Years of Service	Rate
<15	0%
15-18	2.5%
19	5%
20-23	20%
24	50%
25	85%
26-29	60%
30+	100%

Compulsory retirement is assumed at age 60.

Class A - Police

Completed Years of Service	Rate
<15	0%
15-16	2.5%
17-18	7.5%
19	20%
20-24	40%
25	85%
26-29	60%
30+	100%

Compulsory retirement is assumed at age 60.

Class B

Age	Rate
55-57	3%
58-59	8%
60-61	10%
62	16%
63-64	20%
65-69	30%
70-74	50%
75+	100%

Termination prior to retirement

Current Basis:

The assumed rates of termination are as follows:

Class A

Completed Years of Service	Rate
<1	8.0%
1	7.0%
2-6	6.0%
7	5.0%
8	4.5%
9	4.0%
10+	0.0%

Class B

	Completed Years of Service			
Age	0	1	2	3+
20	29.8%	25.0%	21.0%	24.18%
25	27.8%	22.5%	18.5%	17.68%
30	25.8%	20.0%	16.0%	13.13%
35	23.8%	17.8%	13.8%	10.27%
40	21.8%	15.8%	11.8%	8.45%
45	19.8%	14.1%	10.1%	7.15%
50	17.8%	12.6%	8.6%	5.85%
55	0.0%	0.0%	0.0%	0.00%

Comment:

For Class A, both Fire and Police employees are terminating more frequently than expected, especially within the first 5 years of service. Class B employees continue to have experience that supports a select and ultimate table, though the current rates should be updated.

Recommendation:

For Class A, we recommend separate termination assumptions for Fire and Police. We also recommend increasing the termination rates primarily for the first 5 years of service. For Class B, we recommend increasing the termination rates for all ages and years of service.

The proposed rates of termination are as follows:

Class A - Fire

Completed Years of Service	Rate
<3	10.0%
3	9.0%
4	8.0%
5	7.0%
6	6.0%
7	5.0%
8	4.5%
9	4.0%
10+	0.0%

Class A - Police

Completed Years of Service	Rate
<2	12.0%
2	11.0%
3	10.0%
4	9.0%
5	7.0%
6	6.0%
7	5.0%
8	4.0%
9	3.0%
10+	0.0%

Class B - 110% of the Vaughn Select & Ultimate Withdrawal Table for service prior to 3 years, and 140% of the Vaughn Select & Ultimate Withdrawal Table thereafter.

	Completed Years of Service			
Age	**0**	**1**	**2**	**3+**
20	32.8%	27.5%	23.1%	26.0%
25	30.6%	24.8%	20.4%	19.0%
30	28.4%	22.0%	17.6%	14.1%
35	26.2%	19.6%	15.2%	11.1%
40	24.0%	17.4%	13.0%	9.1%
45	21.8%	15.5%	11.1%	7.7%
50	19.6%	13.9%	9.5%	6.3%
55	0.0%	0.0%	0.0%	0.0%

Disability

Current Basis:

Class A: 1985 Pension Disability Study Class 2 Table for Males and Females.

Class B: 1985 Pension Disability Study Class 1 Table for Males and Females.

Comment:

For Class A Fire, there were more disabilities than expected. For Class A Police, the current assumptions provide a good fit with actual experience. For Class B, there were fewer disabilities than expected.

Recommendation:

For Class A, we recommend separate disability assumptions for Fire and Police. The proposed table for Fire employees will change from Class 2 to Class 3 and we will continue to use the Class 2 table for Police employees. For Class B, we recommend using 60% of the current table.

Class A Fire: 1985 Pension Disability Study Class 3 Table for Males and Females.

Class A Police: 1985 Pension Disability Study Class 2 Table for Males and Females.

Class B: 60% of 1985 Pension Disability Study Class 1 Table for Males and Females.

Inflation

Current Basis:

2.60%.

Comment:

We recommend updating the assumption to be consistent with the current long-term inflation assumption for Hooker & Holcombe Investment Advisors, which is based on a 20-year time horizon.

Recommendation:

We recommend that the assumption be increased to 2.70%.

COLAs

Current Basis:

All pensions are adjusted for "cost of living" variations as determined by Consumer Price Index (CPI). The maximum annual adjustment is either 5.00% or 2.75% for all members, dependent on retirement date and group. Annual increases of 2.60% were assumed.

Comment:

The current assumption continues to be a good fit with long-term expectations.

Recommendation:

We recommend that the assumption remain unchanged.

Rate of compensation increase (including inflation)

Current Basis:

Annual increases:

Class A

Completed Years of Service	Rate*
<1	10.0%
1	8.5%
2	7.3%
3	6.3%
4	5.9%
5	5.6%
6	5.4%
7	5.2%
8	5.0%
9	4.8%
10	4.7%
11	4.6%
12	4.5%
13	4.4%
14	4.3%
15	4.2%
16	4.0%
17	3.8%
18	3.7%
19	3.6%
20+	3.5%

* Inflation: 2.60%

Class B

Completed Years of Service	Rate*
<1	6.6%
1	6.0%
2	5.5%
3	5.1%
4	4.9%
5	4.7%
6	4.5%
7	4.4%
8	4.3%
9	4.3%
10	4.2%
11	4.2%
12	4.1%
13	4.0%
14	3.9%
15	3.8%
16	3.8%
17	3.8%
18	3.7%
19	3.6%
20+	3.5%

* Inflation: 2.60%

Comment:

Experience suggests that the rates for Class A and Class B generally provide a good fit but some changes are necessary.

Rate of compensation increase (including inflation) (cont.)

Recommendation:

Adopt merit tables shown below:

Class A - Fire

Completed Years of Service	Rate*
<1	11.0%
1	9.0%
2	8.0%
3	7.0%
4	6.5%
5	6.0%
6	5.5%
7	5.0%
8	5.0%
9	5.0%
10	4.8%
11	4.7%
12	4.6%
13	4.5%
14	4.4%
15	4.3%
16	4.2%
17	4.0%
18	3.8%
19	3.7%
20+	3.6%

* Inflation: 2.70%

Class A - Police

Completed Years of Service	Rate*
<1	9.0%
1	8.0%
2	7.2%
3	6.2%
4	6.0%
5	5.7%
6	5.5%
7	5.3%
8	5.2%
9	5.1%
10	4.9%
11	4.7%
12	4.6%
13	4.5%
14	4.4%
15	4.3%
16	4.2%
17	4.0%
18	3.8%
19	3.7%
20+	3.6%

* Inflation: 2.70%

Class B

Completed Years of Service	Rate*
<1	6.5%
1	6.2%
2	6.0%
3	5.1%
4	4.9%
5	4.8%
6	4.7%
7	4.6%
8	4.5%
9	4.4%
10	4.3%
11	4.2%
12	4.1%
13	4.1%
14	4.0%
15	3.9%
16	3.9%
17	3.9%
18	3.8%
19	3.7%
20+	3.6%

* Inflation: 2.70%

Payroll growth

Current Basis:

3.00%.

Comment:

We suggest that this assumption remain consistent with the recommended inflation assumption.

Recommendation:

We recommend that the assumption be increased to 3.10%.

Spouse age difference

Current Basis:

Husbands are assumed to be 3 years older than wives.

Comment:

Based on the current retiree population, the spouse age difference is smaller than expected.

Recommendation:

We recommend that the assumption change so that husbands are 2 years older than wives.

COLA (benefit accrual rate) election

Current Basis:

For Class A, 85% of retiring members are assumed to elect the no COLA benefit accrual rate and 15% of retiring members are assumed to elect the full COLA benefit accrual rate. For Class B, 75% of retiring members are assumed to elect the no COLA benefit accrual rate and 25% of retiring members are assumed to elect the full COLA benefit accrual rate.

Comment:

See Section F for details.

Recommendation:

For Class A, change the assumption so that 80% of retiring members are assumed to elect the no COLA benefit accrual rate and 20% of retiring members are assumed to elect the full COLA benefit accrual rate. For Class B, change the assumption so that 70% of retiring members are assumed to elect the no COLA benefit accrual rate and 30% of retiring members are assumed to elect the full COLA benefit accrual rate.

Investment rate of return

Current Basis:

7.10% per year, net of investment-related and administrative expenses.

Comment:

See Section G for details.

Recommendation:

Based on updated capital market assumptions (Hooker & Holcombe Investment Advisors, 2023), we recommend that the assumption be 7.10% or lower. However, the final assumed long-term rate of return should be selected in consultation with the plan's investment advisor.

Actuarial Certification

This report presents the results of the 2023 Experience Study of the Burlington Employees' Retirement System and the pro forma impact that our recommendations for changes in assumptions have on the June 30, 2022 Actuarial Valuation results. It also provides the support for our recommendations. This report may not be appropriate for any other purpose.

The valuation results present in this report have been calculated in accordance with generally accepted actuarial principles and practices. We certify that the actuarial assumptions and methods were selected by us and represent our best estimate of anticipated actuarial experience under the plan.

In preparing all related valuation results, we have relied on employee data provided by the City and on asset and contribution information also provided by the City. We have not audited the employee data or the financial information, although we have reviewed them for reasonableness.

The results in this report are based on the Plan as summarized in the June 30, 2022 Actuarial Valuation Report and unless otherwise specified in this report the actuarial assumptions and methods detailed in that same report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

The signing actuaries are independent of the Plan Sponsor. We are not aware of any relationship that would impact the objectivity of our work.

We are members of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.

Steve A. Lemanski, FSA, FCA, EA, MAAA
Vice President, Senior Consulting Actuary

Robert P. Lessard
Robert P. Lessard, ASA, FCA, EA, MAAA
Consulting Actuary

November 29, 2023

Exhibit I – Pro Forma Impact on Actuarial Valuation Results

	$ millions		
Investment Return	7.10%	7.10%	7.00%
Other Assumptions	Current	Proposed	Proposed
Present Value of Benefits - Actives	$155.4	$151.7	$154.5
Present Value of Benefits - Inactives	$220.6	$222.4	$224.4
Present Value of Benefits - Total	$376.0	$374.1	$378.9
Increase/(Decrease)		***($1.9)***	***$2.9***
Actuarial Accrued Liability - Actives	$105.2	$106.1	$107.7
Actuarial Accrued Liability - Inactives	$220.6	$222.4	$224.3
Actuarial Accrued Liability - Total	$325.8	$328.5	$332.0
Increase/(Decrease)		***$2.7***	***$6.2***
Actuarial Value of Assets	$227.0	$227.0	$227.0
Increase/(Decrease)		***$0.0***	***$0.0***
Funded Ratio	69.7%	69.1%	68.4%
Increase/(Decrease)		***(0.6%)***	***(1.3%)***
Gross Normal Cost	$6.55	$6.23	$6.35
Estimated Employee Contributions	($2.98)	($2.98)	($2.98)
City's Normal Cost	$3.57	$3.25	$3.37
Increase/(Decrease)		***($0.32)***	***($0.20)***
Actuarially Determined Employer Contribution	$13.06	$12.97	$13.32
Increase/(Decrease)		***($0.09)***	***$0.26***

Exhibit I – Pro Forma Impact on Actuarial Valuation Results

Class A

	$ millions		
Investment Return	7.10%	7.10%	7.00%
Other Assumptions	Current	Proposed	Proposed
Present Value of Benefits - Actives	$72.3	$70.7	$72.2
Present Value of Benefits - Inactives	$109.1	$108.7	$109.7
Present Value of Benefits - Total	$181.4	$179.4	$181.9
Increase/(Decrease)		***($2.0)***	***$0.5***
Actuarial Accrued Liability - Actives	$44.1	$45.0	$45.7
Actuarial Accrued Liability - Inactives	$109.2	$108.7	$109.7
Actuarial Accrued Liability - Total	$153.3	$153.7	$155.4
Increase/(Decrease)		***$0.4***	***$2.1***
Actuarial Value of Assets	$100.0	$100.0	$100.0
Increase/(Decrease)		***$0.0***	***$0.0***
Funded Ratio	65.2%	65.1%	64.3%
Increase/(Decrease)		***(0.1%)***	***(0.9%)***
Gross Normal Cost	$3.21	$3.21	$3.28
Estimated Employee Contributions	($1.18)	($1.18)	($1.18)
City's Normal Cost	$2.03	$2.03	$2.10
Increase/(Decrease)		***$0.00***	***$0.07***
Actuarially Determined Employer Contribution	$7.05	$7.09	$7.27
Increase/(Decrease)		***$0.04***	***$0.22***

Exhibit I – Pro Forma Impact on Actuarial Valuation Results

Class B

	$ millions		
Assumptions	Current	Proposed	Proposed
Present Value of Benefits - Actives	$83.1	$81.0	$82.3
Present Value of Benefits - Inactives	$111.5	$113.7	$114.7
Present Value of Benefits - Total	$194.6	$194.7	$197.0
Increase/(Decrease)		***$0.1***	***$2.4***
Actuarial Accrued Liability - Actives	$61.1	$61.1	$62.0
Actuarial Accrued Liability - Inactives	$111.4	$113.7	$114.6
Actuarial Accrued Liability - Total	$172.5	$174.8	$176.6
Increase/(Decrease)		***$2.3***	***$4.1***
Actuarial Value of Assets	$127.0	$127.0	$127.0
Increase/(Decrease)		***$0.0***	***$0.0***
Funded Ratio	73.6%	72.7%	71.9%
Increase/(Decrease)		***(0.9%)***	***(1.7%)***
Gross Normal Cost	$3.34	$3.02	$3.07
Estimated Employee Contributions	($1.80)	($1.80)	($1.80)
City's Normal Cost	$1.54	$1.22	$1.27
Increase/(Decrease)		***($0.32)***	***($0.27)***
Actuarially Determined Employer Contribution	$6.01	$5.88	$6.05
Increase/(Decrease)		***($0.13)***	***$0.04***

Exhibit II – Section A-1 – Mortality Rates – Retirees

Actual 2017-2022 Experience Compared to Current Assumption

Class A

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	168	0	0.6	0.00%	0.38%	0.00%
55-59	142	0	0.9	0.00%	0.66%	0.00%
60-64	149	0	1.4	0.00%	0.94%	0.00%
65-69	117	1	1.6	0.85%	1.39%	61.50%
70-74	133	5	2.7	3.76%	2.03%	184.90%
75-79	78	3	2.6	3.85%	3.30%	116.70%
80-84	18	2	1.0	11.11%	5.79%	191.80%
85-89	15	2	1.6	13.33%	10.51%	126.80%
90+	9	2	1.5	22.22%	16.35%	135.90%
Grand Total	829	15	14.0	1.81%	1.68%	107.40%

Exhibit II – Section A-1 – Mortality Rates – Retirees

Actual 2017-2022 Experience Compared to Proposed Assumption

Class A

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	168	0	0.4	0.00%	0.24%	0.00%
55-59	142	0	0.7	0.00%	0.46%	0.00%
60-64	149	0	1.2	0.00%	0.81%	0.00%
65-69	117	1	1.6	0.85%	1.40%	61.20%
70-74	133	5	3.0	3.76%	2.27%	165.80%
75-79	78	3	3.1	3.85%	4.00%	96.10%
80-84	18	2	1.3	11.11%	7.45%	149.10%
85-89	15	2	2.0	13.33%	13.57%	98.30%
90+	9	2	1.8	22.22%	19.84%	112.00%
Grand Total	829	15	15.2	1.81%	1.83%	98.70%

Recommendation:

We recommend an update to the rates based on the latest public pension mortality study released by the Society of Actuaries, with a 2-year set forward of rates applied.

Exhibit II – Section A-1 – Mortality Rates – Retirees

Actual 2017-2022 Experience Compared to Current Assumption

Class B

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	0	0	0.0	0.00%	0.00%	0.00%
55-59	64	0	0.5	0.00%	0.72%	0.00%
60-64	231	2	2.4	0.87%	1.06%	82.00%
65-69	734	6	11.2	0.82%	1.52%	53.80%
70-74	606	9	13.4	1.49%	2.21%	67.20%
75-79	303	17	11.1	5.61%	3.68%	152.60%
80-84	196	6	13.1	3.06%	6.68%	45.80%
85-89	110	14	12.6	12.73%	11.41%	111.50%
90+	31	5	5.7	16.13%	18.28%	88.30%
Grand Total	2,282	62	71.7	2.72%	3.14%	86.50%

Exhibit II – Section A-1 – Mortality Rates – Retirees

Actual 2017-2022 Experience Compared to Proposed Assumption

Class B

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	0	0	0.0	0.00%	0.00%	0.00%
55-59	64	0	0.3	0.00%	0.53%	0.00%
60-64	231	2	1.8	0.87%	0.78%	111.50%
65-69	734	6	8.7	0.82%	1.19%	68.60%
70-74	606	9	11.3	1.49%	1.86%	79.90%
75-79	303	17	10.0	5.61%	3.29%	170.60%
80-84	196	6	12.4	3.06%	6.31%	48.50%
85-89	110	14	12.0	12.73%	10.89%	116.90%
90+	38	8	7.1	58.99%	42.02%	266.60%
Grand Total	2,282	62	63.5	2.72%	2.78%	97.60%

Recommendation:

We recommend an update to the rates based on the latest public pension mortality study released by the Society of Actuaries with a 2-year set forward of rates still applied.

Exhibit II – Section A-2 – Mortality Rates – Survivors

Actual 2017-2022 Experience Compared to Current Assumption

Class A

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	25	0	0.0	0.00%	0.55%	0.00%
55-59	11	0	0.1	0.00%	0.46%	0.00%
60-64	15	1	0.1	6.67%	0.68%	982.50%
65-69	11	0	0.1	0.00%	1.01%	0.00%
70-74	5	0	0.1	0.00%	1.77%	0.00%
75-79	22	0	0.6	0.00%	2.68%	0.00%
80-84	4	0	0.2	0.00%	4.86%	0.00%
85-89	7	0	0.7	0.00%	9.67%	0.00%
90+	1	0	0.1	0.00%	14.44%	0.00%
Grand Total	101	1	2.0	0.99%	1.98%	50.10%

Exhibit II – Section A-2 – Mortality Rates – Survivors

Actual 2017-2022 Experience Compared to Proposed Assumption

Class A

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	25	0	0.1	0.00%	0.77%	0.00%
55-59	11	0	0.1	0.00%	0.54%	0.00%
60-64	15	1	0.1	6.67%	0.72%	922.80%
65-69	11	0	0.1	0.00%	0.98%	0.00%
70-74	5	0	0.1	0.00%	1.63%	0.00%
75-79	22	0	0.5	0.00%	2.48%	0.00%
80-84	4	0	0.2	0.00%	4.43%	0.00%
85-89	7	0	0.6	0.00%	9.16%	0.00%
90+	1	0	0.1	0.00%	13.58%	0.00%
Grand Total	101	1	1.9	0.99%	1.89%	52.40%

Recommendation:

We recommend an update to the rates based on the latest public pension mortality study released by the Society of Actuaries.

Exhibit II – Section A-2 – Mortality Rates – Survivors

Actual 2017-2022 Experience Compared to Current Assumption

Class B

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	36	0	0.1	0.00%	0.71%	0.00%
55-59	22	0	0.1	0.00%	0.58%	0.00%
60-64	26	1	0.2	3.85%	0.91%	423.10%
65-69	63	2	0.8	3.17%	1.32%	240.90%
70-74	58	1	1.1	1.72%	1.96%	88.00%
75-79	58	3	2.0	5.17%	3.40%	152.30%
80-84	38	2	2.1	5.26%	5.60%	94.00%
85-89	40	3	4.5	7.50%	11.19%	67.10%
90+	34	6	6.5	43.39%	42.28%	200.00%
Grand Total	375	18	17.5	4.80%	4.66%	102.90%

Exhibit II – Section A-2 – Mortality Rates – Survivors

Actual 2017-2022 Experience Compared to Proposed Assumption

Class B

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	36	0	0.1	0.00%	0.97%	0.00%
55-59	22	0	0.2	0.00%	0.72%	0.00%
60-64	26	1	0.3	3.85%	1.02%	377.80%
65-69	63	2	0.9	3.17%	1.43%	221.30%
70-74	58	1	1.2	1.72%	2.06%	83.50%
75-79	58	3	2.0	5.17%	3.49%	148.30%
80-84	38	2	2.2	5.26%	5.78%	91.00%
85-89	40	3	4.6	7.50%	11.57%	64.80%
90+	34	6	6.6	43.39%	43.08%	196.20%
Grand Total	375	18	18.1	4.80%	4.83%	99.40%

Recommendation:

We recommend an update to the rates based on the latest public pension mortality study by the Society of Actuaries, with a 3-year set forward of rates applied.

Exhibit II – Section A-3 – Mortality Rates – Disabilities

Actual 2017-2022 Experience Compared to Current Assumption

Class A

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	25	0	0.5	0.00%	7.19%	0.00%
55-59	0	0	0.0	0.00%	0.00%	0.00%
60-64	0	0	0.0	0.00%	0.00%	0.00%
65-69	0	0	0.0	0.00%	0.00%	0.00%
70-74	4	0	0.2	0.00%	4.81%	0.00%
75-79	0	0	0.0	0.00%	0.00%	0.00%
80-84	0	0	0.0	0.00%	0.00%	0.00%
85-89	0	0	0.0	0.00%	0.00%	0.00%
90+	0	0	0.0	0.00%	0.00%	0.00%
Grand Total	29	0	0.7	0.00%	2.34%	0.00%

Exhibit II – Section A-3 – Mortality Rates – Disabilities

Actual 2017-2022 Experience Compared to <u>Proposed Assumption</u>

Class A

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	25	0	0.1	0.00%	1.09%	0.00%
55-59	0	0	0.0	0.00%	0.00%	0.00%
60-64	0	0	0.0	0.00%	0.00%	0.00%
65-69	0	0	0.0	0.00%	0.00%	0.00%
70-74	4	0	0.1	0.00%	2.28%	0.00%
75-79	0	0	0.0	0.00%	0.00%	0.00%
80-84	0	0	0.0	0.00%	0.00%	0.00%
85-89	0	0	0.0	0.00%	0.00%	0.00%
90+	0	0	0.0	0.00%	0.00%	0.00%
Grand Total	29	0	0.2	0.00%	0.58%	0.00%

Recommendation:

We recommend an update to the rates based on the latest public pension mortality study released by the Society of Actuaries.

Exhibit II – Section A-3 – Mortality Rates – Disabilities

Actual 2017-2022 Experience Compared to Current Assumption

Class B

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	5	0	0.1	0.00%	4.73%	0.00%
55-59	36	4	0.8	11.11%	2.33%	477.90%
60-64	60	2	1.6	3.33%	2.66%	125.30%
65-69	18	0	0.6	0.00%	3.13%	0.00%
70-74	0	0	0.0	0.00%	0.00%	0.00%
75-79	0	0	0.0	0.00%	0.00%	0.00%
80-84	0	0	0.0	0.00%	0.00%	0.00%
85-89	0	0	0.0	0.00%	0.00%	0.00%
90+	0	0	0.0	0.00%	0.00%	0.00%
Grand Total	119	6	3.1	5.04%	2.59%	194.50%

Exhibit II – Section A-3 – Mortality Rates – Disabilities

Actual 2017-2022 Experience Compared to Proposed Assumption

Class B

Age	# of Lives	Actual Deaths	Expected Deaths	Actual %	Expected %	Ratio: Actual over Expected
<55	5	0	0.1	0.00%	3.62%	0.00%
55-59	36	4	0.9	11.11%	2.43%	457.00%
60-64	60	2	1.7	3.33%	2.82%	118.30%
65-69	18	0	0.6	0.00%	3.30%	0.00%
70-74	0	0	0.0	0.00%	0.00%	0.00%
75-79	0	0	0.0	0.00%	0.00%	0.00%
80-84	0	0	0.0	0.00%	0.00%	0.00%
85-89	0	0	0.0	0.00%	0.00%	0.00%
90+	0	0	0.0	0.00%	0.00%	0.00%
Grand Total	119	6	3.2	5.04%	2.72%	185.30%

Recommendation:

We recommend an update to the rates based on the latest public pension mortality study released by the Society of Actuaries, with a 3-year set forward of rates applied.

Exhibit II – Section B – Retirement Rates

Actual 2017-2022 Experience Compared to Current Assumption

Class A - Fire

Service	# of Lives	Actual Retirements	Expected Retirements	Actual %	Expected %	Ratio: Actual over Expected
<15	5	0	0.0	0.00%	0.00%	0.00%
15	5	0	0.3	0.00%	5.00%	0.00%
16	8	0	0.4	0.00%	5.00%	0.00%
17	8	0	0.4	0.00%	5.00%	0.00%
18	8	0	0.4	0.00%	5.00%	0.00%
19	12	0	1.8	0.00%	15.00%	0.00%
20	10	2	2.5	20.00%	25.00%	80.00%
21	10	1	2.5	10.00%	25.00%	40.00%
22	7	1	1.8	14.29%	25.00%	57.10%
23	5	1	1.3	20.00%	25.00%	80.00%
24	3	2	0.9	66.67%	30.00%	222.20%
25	2	1	1.5	50.00%	75.00%	66.70%
26	1	1	0.5	100.00%	50.00%	200.00%
27	0	0	0.0	0.00%	0.00%	0.00%
28	1	1	1.0	100.00%	100.00%	100.00%
29	0	0	0.0	0.00%	0.00%	0.00%
30	0	0	0.0	0.00%	0.00%	0.00%
31	0	0	0.0	0.00%	0.00%	0.00%
32	0	0	0.0	0.00%	0.00%	0.00%
33	0	0	0.0	0.00%	0.00%	0.00%
34	0	0	0.0	0.00%	0.00%	0.00%
35+	0	0	0.0	0.00%	0.00%	0.00%
Grand Total	85	10	15.2	11.76%	17.82%	66.00%

Exhibit II – Section B – Retirement Rates

Actual 2017-2022 Experience Compared to Proposed Assumption

Class A - Fire

Service	# of Lives	Actual Retirements	Expected Retirements	Actual %	Expected %	Ratio: Actual over Expected
<15	5	0	0.0	0.00%	0.00%	0.00%
15	5	0	0.1	0.00%	2.50%	0.00%
16	8	0	0.2	0.00%	2.50%	0.00%
17	8	0	0.2	0.00%	2.50%	0.00%
18	8	0	0.2	0.00%	2.50%	0.00%
19	12	0	0.6	0.00%	5.00%	0.00%
20	10	2	2.0	20.00%	20.00%	100.00%
21	10	1	2.0	10.00%	20.00%	50.00%
22	7	1	1.4	14.29%	20.00%	71.40%
23	5	1	1.0	20.00%	20.00%	100.00%
24	3	2	1.5	66.67%	50.00%	133.30%
25	2	1	1.7	50.00%	85.00%	58.80%
26	1	1	0.6	100.00%	60.00%	166.70%
27	0	0	0.0	0.00%	0.00%	0.00%
28	1	1	1.0	100.00%	100.00%	100.00%
29	0	0	0.0	0.00%	0.00%	0.00%
30	0	0	0.0	0.00%	0.00%	0.00%
31	0	0	0.0	0.00%	0.00%	0.00%
32	0	0	0.0	0.00%	0.00%	0.00%
33	0	0	0.0	0.00%	0.00%	0.00%
34	0	0	0.0	0.00%	0.00%	0.00%
35+	0	0	0.0	0.00%	0.00%	0.00%
Grand Total	85	10	12.5	11.76%	14.74%	79.80%

Recommendation:

A service-based table remains appropriate, though some rates require an update. Our recommendation is to adopt the proposed table.

Exhibit II – Section B – Retirement Rates

Actual 2017-2022 Experience Compared to Current Assumption

Class A - Police

Service	# of Lives	Actual Retirements	Expected Retirements	Actual %	Expected %	Ratio: Actual over Expected
<15	8	0	0.0	0.00%	0.00%	0.00%
15	4	0	0.2	0.00%	5.00%	0.00%
16	8	0	0.4	0.00%	5.00%	0.00%
17	9	1	0.5	11.11%	5.00%	222.20%
18	15	1	1.7	6.67%	11.33%	58.80%
19	17	4	2.6	23.53%	15.00%	156.90%
20	16	9	4.0	56.25%	25.00%	225.00%
21	7	3	1.8	42.86%	25.00%	171.40%
22	5	2	1.3	40.00%	25.00%	160.00%
23	2	1	0.5	50.00%	25.00%	200.00%
24	1	0	0.3	0.00%	30.00%	0.00%
25	1	0	0.8	0.00%	75.00%	0.00%
26	0	0	0.0	0.00%	0.00%	0.00%
27	0	0	0.0	0.00%	0.00%	0.00%
28	0	0	0.0	0.00%	0.00%	0.00%
29	0	0	0.0	0.00%	0.00%	0.00%
30	0	0	0.0	0.00%	0.00%	0.00%
31	0	0	0.0	0.00%	0.00%	0.00%
32	0	0	0.0	0.00%	0.00%	0.00%
33	0	0	0.0	0.00%	0.00%	0.00%
34	0	0	0.0	0.00%	0.00%	0.00%
35+	0	0	0.0	0.00%	0.00%	0.00%
Grand Total	93	21	13.9	22.58%	14.89%	151.60%

Exhibit II – Section B – Retirement Rates

Actual 2017-2022 Experience Compared to <u>Proposed Assumption</u>

Class A - Police

Service	# of Lives	Actual Retirements	Expected Retirements	Actual %	Expected %	Ratio: Actual over Expected
<15	8	0	0.0	0.00%	0.00%	0.00%
15	4	0	0.1	0.00%	2.50%	0.00%
16	8	0	0.2	0.00%	2.50%	0.00%
17	9	1	0.7	11.11%	7.50%	148.10%
18	15	1	2.1	6.67%	13.67%	48.80%
19	17	4	3.4	23.53%	20.00%	117.60%
20	16	9	6.4	56.25%	40.00%	140.60%
21	7	3	2.8	42.86%	40.00%	107.10%
22	5	2	2.0	40.00%	40.00%	100.00%
23	2	1	0.8	50.00%	40.00%	125.00%
24	1	0	0.4	0.00%	40.00%	0.00%
25	1	0	0.9	0.00%	85.00%	0.00%
26	0	0	0.0	0.00%	0.00%	0.00%
27	0	0	0.0	0.00%	0.00%	0.00%
28	0	0	0.0	0.00%	0.00%	0.00%
29	0	0	0.0	0.00%	0.00%	0.00%
30	0	0	0.0	0.00%	0.00%	0.00%
31	0	0	0.0	0.00%	0.00%	0.00%
32	0	0	0.0	0.00%	0.00%	0.00%
33	0	0	0.0	0.00%	0.00%	0.00%
34	0	0	0.0	0.00%	0.00%	0.00%
35+	0	0	0.0	0.00%	0.00%	0.00%
Grand Total	93	21	19.7	22.58%	21.16%	106.70%

Recommendation:

A service-based table remains appropriate, though some rates require an update. Our recommendation is to adopt the proposed table.

Exhibit II – Section B – Retirement Rates

Actual 2017-2022 Experience Compared to Current Assumption

Class B

Age	# of Lives	Actual Retirements	Expected Retirements	Actual %	Expected %	Ratio: Actual over Expected
<55	0	0	0.0	0.00%	0.00%	0.00%
55	83	4	4.2	4.82%	5.00%	96.40%
56	81	2	4.1	2.47%	5.00%	49.40%
57	94	2	4.7	2.13%	5.00%	42.60%
58	99	10	5.0	10.10%	5.00%	202.00%
59	91	6	4.6	6.59%	5.00%	131.90%
60	79	12	5.9	15.19%	7.50%	202.50%
61	80	8	10.0	10.00%	12.50%	80.00%
62	74	12	13.3	16.22%	18.00%	90.10%
63	65	11	14.6	16.92%	22.50%	75.20%
64	57	10	14.3	17.54%	25.00%	70.20%
65	47	17	11.8	36.17%	25.00%	144.70%
66	31	9	9.3	29.03%	30.00%	96.80%
67	20	6	6.0	30.00%	30.00%	100.00%
68	15	4	4.5	26.67%	30.00%	88.90%
69	11	3	3.3	27.27%	30.00%	90.90%
70	9	4	4.5	44.44%	50.00%	88.90%
71	4	2	2.0	50.00%	50.00%	100.00%
72	3	0	1.5	0.00%	50.00%	0.00%
73	3	0	1.5	0.00%	50.00%	0.00%
74	2	1	1.0	50.00%	50.00%	100.00%
75+	11	5	11.0	45.45%	100.00%	45.50%
Grand Total	959	128	136.9	13.35%	14.27%	93.50%

Exhibit II – Section B – Retirement Rates

Actual 2017-2022 Experience Compared to Proposed Assumption

Class B

Age	# of Lives	Actual Retirements	Expected Retirements	Actual %	Expected %	Ratio: Actual over Expected
<55	0	0	0.0	0.00%	0.00%	0.00%
55	83	4	2.5	4.82%	3.00%	160.60%
56	81	2	2.4	2.47%	3.00%	82.30%
57	94	2	2.8	2.13%	3.00%	70.90%
58	99	10	7.9	10.10%	8.00%	126.30%
59	91	6	7.3	6.59%	8.00%	82.40%
60	79	12	7.9	15.19%	10.00%	151.90%
61	80	8	8.0	10.00%	10.00%	100.00%
62	74	12	11.8	16.22%	16.00%	101.40%
63	65	11	13.0	16.92%	20.00%	84.60%
64	57	10	11.4	17.54%	20.00%	87.70%
65	47	17	14.1	36.17%	30.00%	120.60%
66	31	9	9.3	29.03%	30.00%	96.80%
67	20	6	6.0	30.00%	30.00%	100.00%
68	15	4	4.5	26.67%	30.00%	88.90%
69	11	3	3.3	27.27%	30.00%	90.90%
70	9	4	4.5	44.44%	50.00%	88.90%
71	4	2	2.0	50.00%	50.00%	100.00%
72	3	0	1.5	0.00%	50.00%	0.00%
73	3	0	1.5	0.00%	50.00%	0.00%
74	2	1	1.0	50.00%	50.00%	100.00%
75+	11	5	11.0	45.45%	100.00%	45.50%
Grand Total	959	128	133.8	13.35%	13.95%	95.70%

Recommendation:

An age-based table remains appropriate, though some rates require an update. Our recommendation is to adopt the proposed table.

Exhibit II – Section C – Turnover Rates

Actual 2017-2022 Experience Compared to Current Assumption

Class A - Fire

Service	# of Lives	Actual Terminations	Expected Terminations	Actual %	Expected %	Ratio: Actual over Expected
0	22	2	1.8	9.09%	8.00%	113.60%
1	31	5	2.2	16.13%	7.00%	230.40%
2	22	4	1.3	18.18%	6.00%	303.00%
3	19	0	1.1	0.00%	6.00%	0.00%
4	23	3	1.4	13.04%	6.00%	217.40%
5	20	0	1.2	0.00%	6.00%	0.00%
6	23	2	1.4	8.70%	6.00%	144.90%
7	22	0	1.1	0.00%	5.00%	0.00%
8	23	1	1.0	4.35%	4.50%	96.60%
9	18	0	0.7	0.00%	4.00%	0.00%
10+	116	4	0.0	3.45%	0.00%	0.00%
Grand Total	339	21	13.2	6.19%	3.90%	159.00%

Exhibit II – Section C – Turnover Rates

Actual 2017-2022 Experience Compared to Proposed Assumption

Class A - Fire

Service	# of Lives	Actual Terminations	Expected Terminations	Actual %	Expected %	Ratio: Actual over Expected
0	22	2	2.2	9.09%	10.00%	90.90%
1	31	5	3.1	16.13%	10.00%	161.30%
2	22	4	2.2	18.18%	10.00%	181.80%
3	19	0	1.7	0.00%	9.00%	0.00%
4	23	3	1.8	13.04%	8.00%	163.00%
5	20	0	1.4	0.00%	7.00%	0.00%
6	23	2	1.4	8.70%	6.00%	144.90%
7	22	0	1.1	0.00%	5.00%	0.00%
8	23	1	1.0	4.35%	4.50%	96.60%
9	18	0	0.7	0.00%	4.00%	0.00%
10+	116	4	0.0	3.45%	0.00%	0.00%
Grand Total	339	21	16.7	6.19%	4.92%	125.90%

Recommendation:

The proposed table was developed from actual turnover experience. Our recommendation is to adopt the proposed table.

Exhibit II – Section C – Turnover Rates

Actual 2017-2022 Experience Compared to Current Assumption

Class A - Police

Service	# of Lives	Actual Terminations	Expected Terminations	Actual %	Expected %	Ratio: Actual over Expected
0	11	3	0.9	27.27%	8.00%	340.90%
1	33	3	2.3	9.09%	7.00%	129.90%
2	38	8	2.3	21.05%	6.00%	350.90%
3	31	3	1.9	9.68%	6.00%	161.30%
4	32	5	1.9	15.63%	6.00%	260.40%
5	29	3	1.7	10.34%	6.00%	172.40%
6	29	4	1.7	13.79%	6.00%	229.90%
7	23	4	1.2	17.39%	5.00%	347.80%
8	21	0	0.9	0.00%	4.50%	0.00%
9	17	1	0.7	5.88%	4.00%	147.10%
10+	109	8	0.0	7.34%	0.00%	0.00%
Grand Total	373	42	15.5	11.26%	4.16%	270.90%

Exhibit II – Section C – Turnover Rates

Actual 2017-2022 Experience Compared to Proposed Assumption

Class A - Police

Service	# of Lives	Actual Terminations	Expected Terminations	Actual %	Expected %	Ratio: Actual over Expected
0	11	3	1.3	27.27%	12.00%	227.30%
1	33	3	4.0	9.09%	12.00%	75.80%
2	38	8	4.2	21.05%	11.00%	191.40%
3	31	3	3.1	9.68%	10.00%	96.80%
4	32	5	2.9	15.63%	9.00%	173.60%
5	29	3	2.0	10.34%	7.00%	147.80%
6	29	4	1.7	13.79%	6.00%	229.90%
7	23	4	1.2	17.39%	5.00%	347.80%
8	21	0	0.8	0.00%	4.00%	0.00%
9	17	1	0.5	5.88%	3.00%	196.10%
10+	109	8	0.0	7.34%	0.00%	0.00%
Grand Total	373	42	21.7	11.26%	5.82%	193.50%

Recommendation:

The proposed table was developed from actual turnover experience. Our recommendation is to adopt the proposed table.

Exhibit II – Section C – Turnover Rates

Actual 2017-2022 Experience Compared to Current Assumption

Class B

Service	Age	# of Lives	Actual Terminations	Expected Terminations	Actual %	Expected %	Ratio: Actual over Expected
<3	<25	111	24	25.5	64.65%	68.17%	291.10%
	25-29	191	51	40.1	80.08%	65.86%	381.00%
	30-34	164	35	30.3	70.00%	59.21%	356.80%
	35-39	110	26	18.1	63.06%	53.41%	390.40%
	40-44	87	11	12.7	30.79%	47.15%	224.50%
	45-49	76	7	9.8	26.50%	41.97%	221.40%
	50-54	77	14	8.9	59.41%	37.02%	491.20%
	55+	123	31	0.0	81.33%	0.00%	0.00%
	Subtotal	939	199	145.3	63.86%	49.04%	412.20%
3+	<25	7	1	1.4	14.29%	20.09%	71.10%
	25-29	125	25	18.7	20.00%	14.96%	133.70%
	30-34	220	35	26.2	15.91%	11.90%	133.70%
	35-39	221	32	20.8	14.48%	9.39%	154.20%
	40-44	254	26	20.1	10.24%	7.92%	129.30%
	45-49	318	27	20.9	8.49%	6.58%	129.00%
	50-54	411	26	21.9	6.33%	5.34%	118.60%
	55+	100	5	0.0	5.00%	0.00%	0.00%
	Subtotal	1,656	177	130.0	10.69%	7.85%	136.20%
Total	<25	118	25	26.9	21.19%	22.75%	93.10%
	25-29	316	76	58.8	24.05%	18.59%	129.40%
	30-34	384	70	56.5	18.23%	14.70%	124.00%
	35-39	331	58	38.9	17.52%	11.74%	149.20%
	40-44	341	37	32.8	10.85%	9.61%	112.90%
	45-49	394	34	30.7	8.63%	7.80%	110.60%
	50-54	488	40	30.8	8.20%	6.32%	129.70%
	55+	223	36	0.0	16.14%	0.00%	0.00%
Grand Total		2,595	376	275.3	14.49%	10.61%	136.60%

Exhibit II – Section C – Turnover Rates

Actual 2017-2022 Experience Compared to Proposed Assumption

Class B

Service	Age	# of Lives	Actual Terminations	Expected Terminations	Actual %	Expected %	Ratio: Actual over Expected
<3	<25	111	24	28.0	64.65%	74.99%	264.70%
	25-29	191	51	44.1	80.08%	72.45%	346.30%
	30-34	164	35	33.3	70.00%	65.13%	324.40%
	35-39	110	26	19.9	63.06%	58.75%	355.00%
	40-44	87	11	13.9	30.79%	51.87%	204.10%
	45-49	76	7	10.8	26.50%	46.17%	201.20%
	50-54	77	14	9.8	59.41%	40.72%	446.60%
	55+	123	31	0.0	81.33%	0.00%	0.00%
	Subtotal	939	199	159.8	63.86%	53.94%	374.80%
3+	<25	7	1	1.5	14.29%	21.64%	66.00%
	25-29	125	25	20.1	20.00%	16.11%	124.10%
	30-34	220	35	28.2	15.91%	12.81%	124.20%
	35-39	221	32	22.3	14.48%	10.11%	143.20%
	40-44	254	26	21.7	10.24%	8.53%	120.10%
	45-49	318	27	22.6	8.49%	7.09%	119.70%
	50-54	411	26	23.6	6.33%	5.75%	110.10%
	55+	100	5	0.0	5.00%	0.00%	0.00%
	Subtotal	1,656	177	140.0	10.69%	8.45%	126.40%
Total	<25	118	25	29.5	21.19%	25.00%	84.70%
	25-29	316	76	64.2	24.05%	20.31%	118.40%
	30-34	384	70	61.5	18.23%	16.02%	113.80%
	35-39	331	58	42.3	17.52%	12.77%	137.20%
	40-44	341	37	35.6	10.85%	10.44%	104.00%
	45-49	394	34	33.3	8.63%	8.46%	102.00%
	50-54	488	40	33.4	8.20%	6.85%	119.70%
	55+	223	36	0.0	16.14%	0.00%	0.00%
Grand Total		2,595	376	299.8	14.49%	11.55%	125.40%

Recommendation:

Actual experience suggests that the current assumption should remain a select and ultimate table but that the assumed rates should be updated. We recommend adopting 110% of the Vaughn Select & Ultimate Withdrawal Table for service prior to 3 years and 140% of the Vaughn Select & Ultimate Withdrawal Table thereafter.

Exhibit II – Section D – Disability Rates

Actual 2017-2022 Experience Compared to Current Assumption

Class A - Fire

Age	# of Lives	Actual Disabilities	Expected Disabilties	Actual %	Expected %	Ratio: Actual over Expected
<25	26	0	0.0	0.00%	0.08%	0.00%
25-29	56	0	0.1	0.00%	0.11%	0.00%
30-34	86	0	0.1	0.00%	0.16%	0.00%
35-39	75	1	0.2	1.33%	0.24%	546.30%
40-44	70	0	0.3	0.00%	0.38%	0.00%
45-49	66	4	0.4	6.06%	0.62%	983.10%
50-54	35	0	0.4	0.00%	1.02%	0.00%
55+	10	0	0.2	0.00%	1.45%	0.00%
Grand Total	424	5	1.6	1.18%	0.37%	316.80%

Exhibit II – Section D – Disability Rates

Actual 2017-2022 Experience Compared to Proposed Assumption

Class A - Fire

Age	# of Lives	Actual Disabilities	Expected Disabilties	Actual %	Expected %	Ratio: Actual over Expected
<25	26	0	0.1	0.00%	0.18%	0.00%
25-29	56	0	0.1	0.00%	0.25%	0.00%
30-34	86	0	0.3	0.00%	0.35%	0.00%
35-39	75	1	0.4	1.33%	0.50%	269.10%
40-44	70	0	0.5	0.00%	0.67%	0.00%
45-49	66	4	0.6	6.06%	0.96%	628.90%
50-54	35	0	0.5	0.00%	1.47%	0.00%
55+	10	0	0.2	0.00%	2.05%	0.00%
Grand Total	424	5	2.7	1.18%	0.64%	185.70%

Recommendation:

The actual experience shows that there were more disabilities than expected. Our recommendation is to use the 1985 Pension Disability Study Class 3 Table for Males and Females.

Exhibit II – Section D – Disability Rates

Actual 2017-2022 Experience Compared to <u>Current Assumption</u>

Class A - Police

Age	# of Lives	Actual Disabilities	Expected Disabilties	Actual %	Expected %	Ratio: Actual over Expected
<25	19	0	0.0	0.00%	0.08%	0.00%
25-29	91	0	0.1	0.00%	0.11%	0.00%
30-34	85	0	0.1	0.00%	0.16%	0.00%
35-39	112	2	0.3	1.79%	0.25%	720.10%
40-44	87	0	0.3	0.00%	0.38%	0.00%
45-49	51	0	0.3	0.00%	0.60%	0.00%
50-54	16	0	0.2	0.00%	1.03%	0.00%
55+	5	0	0.1	0.00%	1.40%	0.00%
Grand Total	466	2	1.4	0.43%	0.30%	141.90%

Recommendation:

We recommend that the assumption remain unchanged.

Exhibit II – Section D – Disability Rates

Actual 2017-2022 Experience Compared to Current Assumption

Class B

Age	# of Lives	Actual Disabilities	Expected Disabilities	Actual %	Expected %	Ratio: Actual over Expected
<25	118	0	0.0	0.00%	0.04%	0.00%
25-29	316	0	0.2	0.00%	0.05%	0.00%
30-34	384	1	0.3	0.26%	0.08%	342.30%
35-39	331	0	0.4	0.00%	0.12%	0.00%
40-44	341	0	0.7	0.00%	0.19%	0.00%
45-49	394	0	1.3	0.00%	0.32%	0.00%
50-54	488	1	2.7	0.20%	0.56%	36.50%
55-59	564	3	5.6	0.53%	0.99%	53.60%
60-64	431	2	5.8	0.46%	1.35%	34.40%
65+	187	0	2.4	0.00%	1.30%	0.00%
Grand Total	3,554	7	19.4	0.20%	0.55%	36.10%

Exhibit II – Section D – Disability Rates

Actual 2017-2022 Experience Compared to Proposed Assumption

Class B

Age	# of Lives	Actual Disabilities	Expected Disabilities	Actual %	Expected %	Ratio: Actual over Expected
<25	118	0	0.0	0.00%	0.02%	0.00%
25-29	316	0	0.1	0.00%	0.03%	0.00%
30-34	384	1	0.2	0.26%	0.05%	570.60%
35-39	331	0	0.2	0.00%	0.07%	0.00%
40-44	341	0	0.4	0.00%	0.11%	0.00%
45-49	394	0	0.8	0.00%	0.19%	0.00%
50-54	488	1	1.6	0.20%	0.34%	60.90%
55-59	564	3	3.4	0.53%	0.59%	89.40%
60-64	431	2	3.5	0.46%	0.81%	57.30%
65+	187	0	1.5	0.00%	0.78%	0.00%
Grand Total	3,554	7	11.6	0.20%	0.33%	60.20%

Recommendation:

The actual experience shows that there were less disabilities than expected. Our recommendation is to use 60% of the 1985 Pension Disability Study Class 1 Table for Males and Females.

Exhibit II – Section E – Rate of Compensation Increase

Actual 2017-2022 Experience Compared to Current Assumption

Class A - Fire

Service	# of Lives	Prior Year Salaries	Actual Salaries	Expected Salaries	Ratio: Actual over Expected
0	46	2,048,567	2,255,787	2,253,424	100.10%
1	18	934,531	1,072,316	1,013,966	105.80%
2	19	1,112,861	1,119,406	1,194,100	93.70%
3	20	1,142,594	1,147,550	1,214,577	94.50%
4	21	1,221,554	1,263,375	1,293,626	97.70%
5	22	1,299,843	1,394,601	1,372,634	101.60%
6	22	1,312,374	1,368,968	1,383,242	99.00%
7	22	1,380,315	1,470,360	1,452,091	101.30%
8	18	1,124,484	1,163,241	1,180,709	98.50%
9	14	911,914	906,372	955,686	94.80%
10	11	697,720	714,591	730,513	97.80%
11	9	589,269	629,674	616,376	102.20%
12	9	563,777	636,325	589,147	108.00%
13	8	525,045	563,712	548,147	102.80%
14	14	936,733	979,796	977,013	100.30%
15	14	961,645	1,001,483	1,002,035	99.90%
16	15	1,061,264	1,116,102	1,103,714	101.10%
17	18	1,361,743	1,430,635	1,413,489	101.20%
18	22	1,718,277	1,797,848	1,781,854	100.90%
19	15	1,207,700	1,253,948	1,251,177	100.20%
20+	31	2,664,291	2,826,326	2,757,541	102.50%
Grand Total	388	24,776,501	26,112,415	26,085,061	100.10%

Exhibit II – Section E – Rate of Compensation Increase

Actual 2017-2022 Experience Compared to Proposed Assumption

Class A - Fire

Service	# of Lives	Prior Year Salaries	Actual Salaries	Expected Salaries	Ratio: Actual over Expected
0	46	2,048,567	2,255,787	2,271,845	99.29%
1	18	934,531	1,072,316	1,017,248	105.40%
2	19	1,112,861	1,119,406	1,199,967	93.30%
3	20	1,142,594	1,147,550	1,220,327	94.00%
4	21	1,221,554	1,263,375	1,298,404	97.30%
5	22	1,299,843	1,394,601	1,374,963	101.40%
6	22	1,312,374	1,368,968	1,381,499	99.10%
7	22	1,380,315	1,470,360	1,445,952	101.70%
8	18	1,124,484	1,163,241	1,177,956	98.80%
9	14	911,914	906,372	955,277	94.90%
10	11	697,720	714,591	729,469	98.00%
11	9	589,269	629,674	615,480	102.30%
12	9	563,777	636,325	588,276	108.20%
13	8	525,045	563,712	547,324	103.00%
14	14	936,733	979,796	975,521	100.40%
15	14	961,645	1,001,483	1,000,481	100.10%
16	15	1,061,264	1,116,102	1,103,035	101.20%
17	18	1,361,743	1,430,635	1,412,552	101.30%
18	22	1,718,277	1,797,848	1,778,871	101.10%
19	15	1,207,700	1,253,948	1,249,051	100.40%
20+	31	2,664,291	2,826,326	2,752,788	102.70%
Grand Total	388	24,776,501	26,112,415	26,096,286	100.06%

Recommendation:

Our recommendation is to adopt the proposed merit table, which includes an updated long-term inflation assumption of 2.70%.

Exhibit II – Section E – Rate of Compensation Increase

Actual 2017-2022 Experience Compared to Current Assumption

Class A - Police

Service	# of Lives	Prior Year Salaries	Actual Salaries	Expected Salaries	Ratio: Actual over Expected
0	38	2,016,061	2,198,898	2,217,667	99.15%
1	30	1,710,121	1,785,964	1,855,481	96.30%
2	28	1,591,490	1,670,744	1,707,669	97.80%
3	27	1,537,821	1,605,489	1,634,703	98.20%
4	26	1,561,228	1,585,009	1,653,340	95.90%
5	25	1,540,039	1,638,015	1,626,281	100.70%
6	19	1,220,057	1,251,149	1,285,940	97.30%
7	20	1,307,782	1,348,026	1,375,787	98.00%
8	17	1,115,320	1,189,294	1,171,086	101.60%
9	15	977,600	1,031,455	1,024,525	100.70%
10	16	1,090,104	1,157,006	1,141,339	101.40%
11	12	826,502	872,177	864,521	100.90%
12	13	930,362	972,972	972,228	100.10%
13	13	941,620	953,588	983,051	97.00%
14	15	1,096,980	1,167,506	1,144,150	102.00%
15	18	1,412,252	1,459,491	1,471,566	99.20%
16	19	1,503,581	1,563,189	1,563,725	100.00%
17	18	1,462,967	1,512,377	1,518,560	99.60%
18	15	1,198,027	1,248,977	1,242,354	100.50%
19	7	609,658	633,215	631,605	100.30%
20+	10	791,082	823,645	818,770	100.60%
Grand Total	401	26,440,654	27,668,187	27,904,348	99.15%

Exhibit II – Section E – Rate of Compensation Increase

Actual 2017-2022 Experience Compared to Proposed Assumption

Class A - Police

Service	# of Lives	Prior Year Salaries	Actual Salaries	Expected Salaries	Ratio: Actual over Expected
0	38	2,016,061	2,198,898	2,194,506	100.20%
1	30	1,710,121	1,785,964	1,843,975	96.90%
2	28	1,591,490	1,670,744	1,703,021	98.10%
3	27	1,537,821	1,605,489	1,629,844	98.50%
4	26	1,561,228	1,585,009	1,651,454	96.00%
5	25	1,540,039	1,638,015	1,624,310	100.80%
6	19	1,220,057	1,251,149	1,284,320	97.40%
7	20	1,307,782	1,348,026	1,373,987	98.10%
8	17	1,115,320	1,189,294	1,170,640	101.60%
9	15	977,600	1,031,455	1,025,088	100.60%
10	16	1,090,104	1,157,006	1,140,824	101.40%
11	12	826,502	872,177	863,265	101.00%
12	13	930,362	972,972	970,792	100.20%
13	13	941,620	953,588	981,575	97.10%
14	15	1,096,980	1,167,506	1,142,404	102.20%
15	18	1,412,252	1,459,491	1,469,284	99.30%
16	19	1,503,581	1,563,189	1,562,762	100.00%
17	18	1,462,967	1,512,377	1,517,553	99.70%
18	15	1,198,027	1,248,977	1,240,274	100.70%
19	7	609,658	633,215	630,532	100.40%
20+	10	791,082	823,645	817,359	100.80%
Grand Total	401	26,440,654	27,668,187	27,837,769	99.39%

Recommendation:

Our recommendation is to adopt the proposed merit table, which includes an updated long-term inflation assumption of 2.70%.

Exhibit II – Section E – Rate of Compensation Increase

Actual 2017-2022 Experience Compared to Current Assumption

Class B

Service	# of Lives	Prior Year Salaries	Actual Salaries	Expected Salaries	Ratio: Actual over Expected
0	460	21,634,189	23,009,241	23,062,046	99.77%
1	279	13,940,686	14,722,054	14,777,127	99.60%
2	242	12,869,679	13,777,770	13,577,512	101.50%
3	207	11,742,371	12,168,524	12,341,232	98.60%
4	177	10,209,613	10,696,137	10,709,884	99.90%
5	141	8,471,594	8,585,922	8,869,758	96.80%
6	115	6,855,413	7,086,729	7,163,907	98.90%
7	102	5,894,155	6,188,228	6,153,498	100.60%
8	99	5,779,781	6,039,094	6,028,311	100.20%
9	84	4,885,867	5,099,318	5,095,960	100.10%
10	82	4,732,123	4,998,748	4,930,872	101.40%
11	74	4,309,851	4,483,797	4,490,865	99.80%
12	66	3,928,215	4,008,582	4,089,272	98.00%
13	60	3,444,698	3,554,494	3,582,486	99.20%
14	62	3,595,433	3,752,606	3,735,655	100.50%
15	64	3,615,440	3,845,544	3,752,827	102.50%
16	54	3,309,830	3,385,357	3,435,603	98.50%
17	63	3,490,532	3,578,663	3,623,172	98.80%
18	69	3,778,576	3,902,596	3,918,384	99.60%
19	54	2,974,802	3,042,529	3,081,895	98.70%
20+	482	33,825,161	35,087,958	35,009,042	100.20%
Grand Total	3,036	173,288,009	181,013,892	181,429,308	99.77%

Exhibit II – Section E – Rate of Compensation Increase

Actual 2017-2022 Experience Compared to Proposed Assumption

Class B

Service	# of Lives	Prior Year Salaries	Actual Salaries	Expected Salaries	Ratio: Actual over Expected
0	460	21,634,189	23,009,241	22,995,240	100.06%
1	279	13,940,686	14,722,054	14,774,896	99.60%
2	242	12,869,679	13,777,770	13,613,444	101.20%
3	207	11,742,371	12,168,524	12,312,768	98.80%
4	177	10,209,613	10,696,137	10,684,646	100.10%
5	141	8,471,594	8,585,922	8,857,085	96.90%
6	115	6,855,413	7,086,729	7,160,342	99.00%
7	102	5,894,155	6,188,228	6,150,292	100.60%
8	99	5,779,781	6,039,094	6,025,028	100.20%
9	84	4,885,867	5,099,318	5,088,181	100.20%
10	82	4,732,123	4,998,748	4,923,225	101.50%
11	74	4,309,851	4,483,797	4,479,487	100.10%
12	66	3,928,215	4,008,582	4,078,807	98.30%
13	60	3,444,698	3,554,494	3,576,754	99.40%
14	62	3,595,433	3,752,606	3,729,586	100.60%
15	64	3,615,440	3,845,544	3,746,637	102.60%
16	54	3,309,830	3,385,357	3,429,937	98.70%
17	63	3,490,532	3,578,663	3,617,196	98.90%
18	69	3,778,576	3,902,596	3,911,824	99.80%
19	54	2,974,802	3,042,529	3,076,659	98.90%
20+	482	33,825,161	35,087,958	34,948,698	100.40%
Grand Total	3,036	173,288,009	181,013,892	181,180,732	99.91%

Recommendation:

Our recommendation is to adopt the proposed merit table, which includes an updated long-term inflation assumption of 2.70%.

Exhibit B – Section F – COLA (Benefit Accrual Rate)

For Class A, 85% of retiring members are assumed to elect the no COLA benefit accrual rate and 15% of retiring members are assumed to elect the full COLA benefit accrual rate. For Class B, 75% of retiring members are assumed to elect the no COLA benefit accrual rate and 25% of retiring members are assumed to elect the full COLA benefit accrual rate.

For members that retired during the 2017-2022 measurement period, the COLA elected was as follows:

COLA Selection	Class A	Class B
Full COLA	20.1%	32.7%
Half COLA	8.8%	5.2%
No COLA	70.9%	62.1%

Recommendation:

We recommend changing the Class A assumption so that 80% of retiring members are assumed to elect the no COLA benefit accrual rate and 20% of retiring members are assumed to elect the full COLA benefit accrual rate. We also recommend changing the Class B assumption so that 70% of retiring members are assumed to elect the no COLA benefit accrual rate and 30% of retiring members are assumed to elect the full COLA benefit accrual rate.

Exhibit II – Section G – Investment Return Assumption

Expected Long-Term Return Based on Asset Allocation

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
Core Fixed Income	17.50%	0.05%	0.01%
U.S. Bonds - Dynamic	7.50%	2.05%	0.15%
U.S. Large Cap Equity	31.00%	5.00%	1.55%
U.S. Small Cap Equity	9.00%	5.30%	0.48%
International Developed Equity	20.50%	6.40%	1.31%
International Emerging Markets Equity	7.00%	7.70%	0.54%
Private Equity	0.50%	7.05%	0.04%
Real Estate	6.00%	4.90%	0.29%
Timberland	1.00%	3.30%	0.03%
	100.00%		4.40%
Long-Term Inflation Expectation			2.70%
Long-Term Expected Nominal Return			7.10%

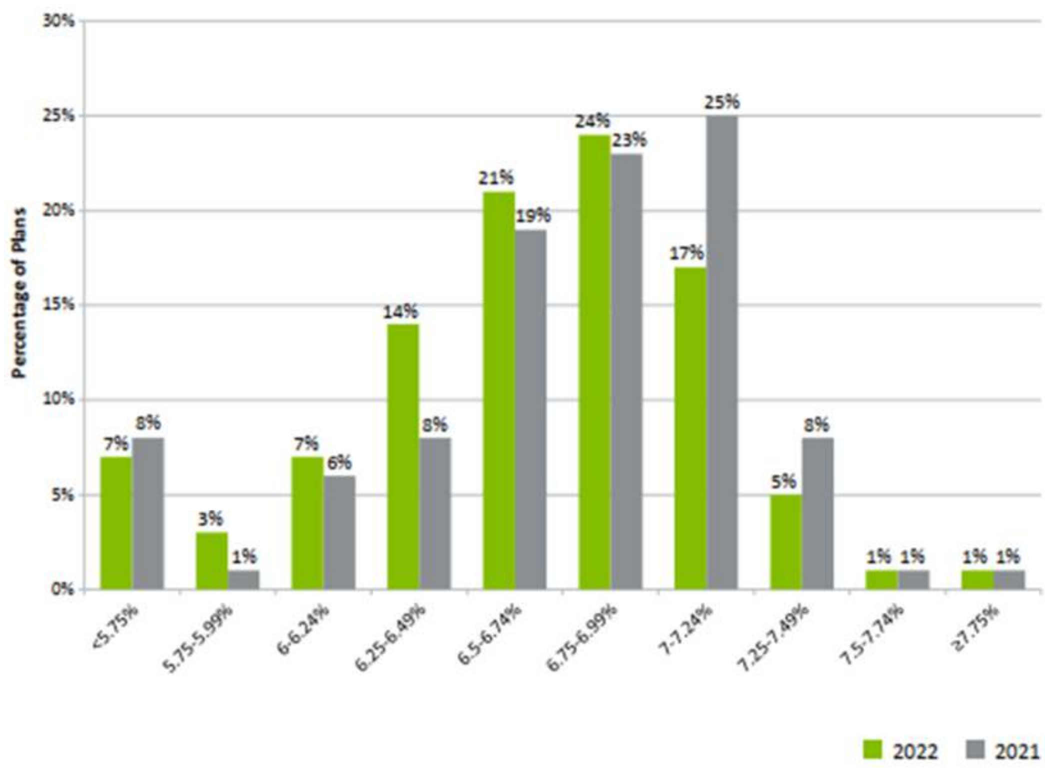
**Long-Term Real Returns are provided by Hooker & Holcombe Investment Advisors. The returns are geometric means.*

The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return are developed. Best estimates of the real rates of return for each major asset class are included in the pension plan's target asset allocation.

The information above is based on geometric means and does not reflect additional returns through investment selection, asset allocation and rebalancing.

Exhibit II – Section G – Investment Return Assumption

Survey of Long-Term Rate of Return Assumption, based on FYE 2022 CAFRs*



** This information comes from approximately 200 Connecticut plans that we gathered data on.*

Recommendation:

The plan's current asset allocation combined with updated long term capital market expectations (H&H Investment Advisors, 2023) and assuming 2.70% inflation supports an investment return assumption of 7.10%.

As a result, our recommendation is that the proposed assumption be 7.10% or lower. However, the final rate should be selected in consultation with the plan's investment advisor.

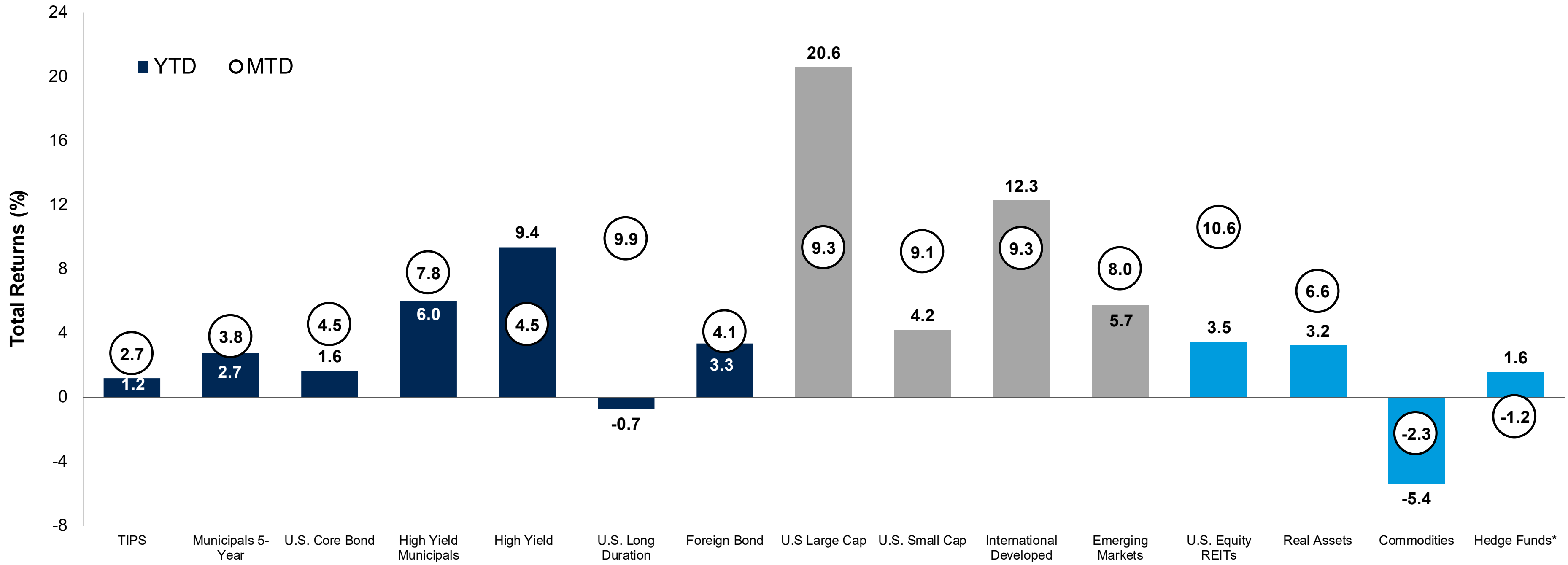
FIDUCIENT Advisors

Helping Clients Prosper

City of Burlington Employees Retirement System

Monthly Performance Update - November 2023

Asset Class Performance



Source: Morningstar Direct. As of November 30, 2023. *Hedge fund returns are as of October 31, 2023.

Fixed Income (November)

+ Interest rates fell sharply in the month as inflation moderated and the Federal Reserve reduced its hawkish tone. Bond prices rallied and the Bloomberg U.S. Aggregate Bond Index recorded its best monthly return in 30 years.

+ High yield posted strong results as investors favored riskier segments. It remains near the top of the asset class year-to-date.

+ Dollar weakness and falling rates abroad were tailwinds for non-U.S. debt.

Equity (November)

+ Equity markets around the world rebounded in November. A less hawkish Fed, rhetoric around increased odds of a soft landing, and positive earnings growth in Q3 helped propel markets.

+ Developed markets performed essentially in line with one another, posting high single digit gains in the risk on environment.

+ China continues to weigh on the emerging market equity space, which lagged developed markets in the month despite a positive absolute return.

Real Asset / Alternatives (November)

+ REITs rallied in the month alongside equity counterparts and pushed into positive territory year-to-date.

- Concerns of slowing global demand, especially out of China, has pushed energy prices lower, contributing to the negative return in commodities.

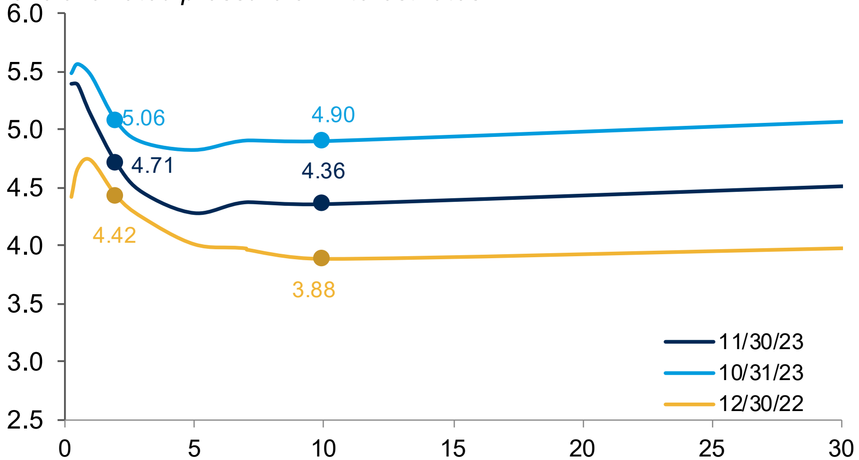
- Hedge funds, reported on a month lag, were mixed in October, posting a modestly negative return.

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

Fixed Income Market Update

U.S. Treasury Yield Curve

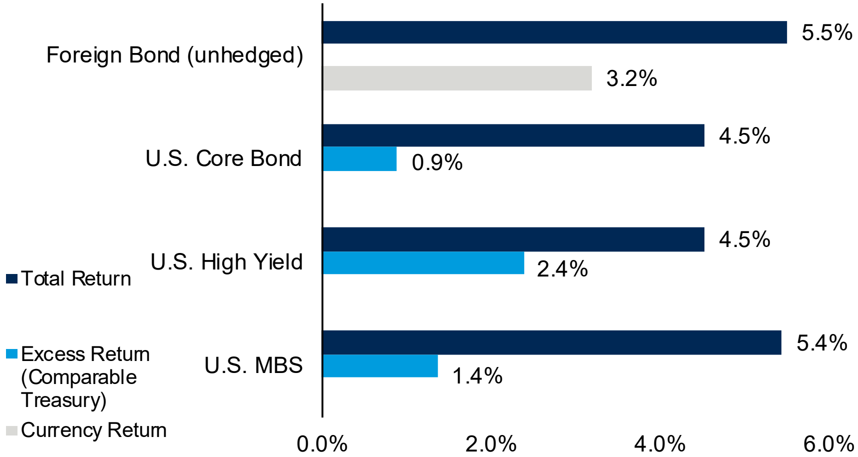
Rates fell across the U.S. yield curve and the curve remains inverted. Volatility in the bond market persists, but a less hawkish Federal Reserve, expectations of a rate hike pause, and moderating inflation have alleviated pressure on interest rates.



Source: FactSet. As of November 30, 2023.

Index Performance Attribution (November 2023)

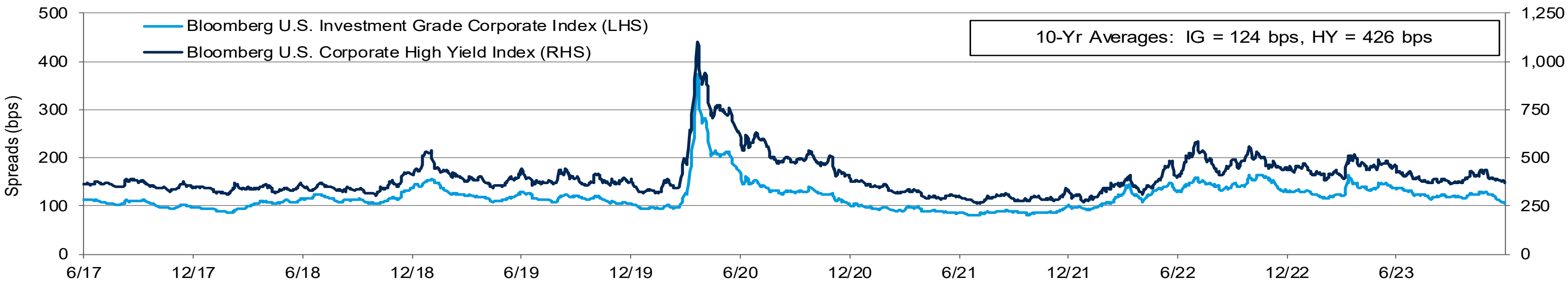
Fixed income markets broke the monthly decline streak for the first time since May. Tightening credit spreads and appetite for risk led many sectors to outpace Treasuries on a duration adjusted basis.



Source: FactSet. As of November 30, 2023.

Credit Market Spreads – Trailing 5 Years

Investment grade and high yield credit spreads compressed in November hovering near 2023 tights and remain well below their respective 10-year averages. Fundamentals remain reasonably favorable in the corporate sectors as companies have termed out debt. Issuance has been lower this year, providing a technical tailwind, as companies that are able to postpone issuance in the higher rate environment have done so.



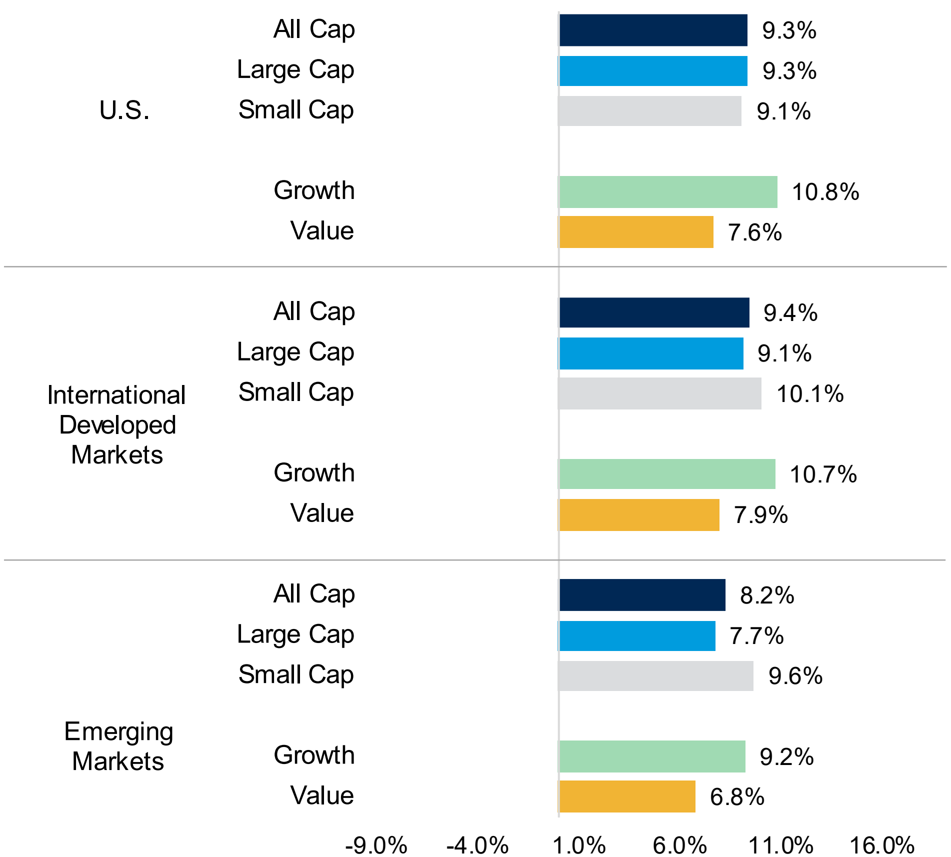
Source: FactSet. As of November 30, 2023.

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.

Equity Market Update

Market Capitalization & Style Performance (November 2023)

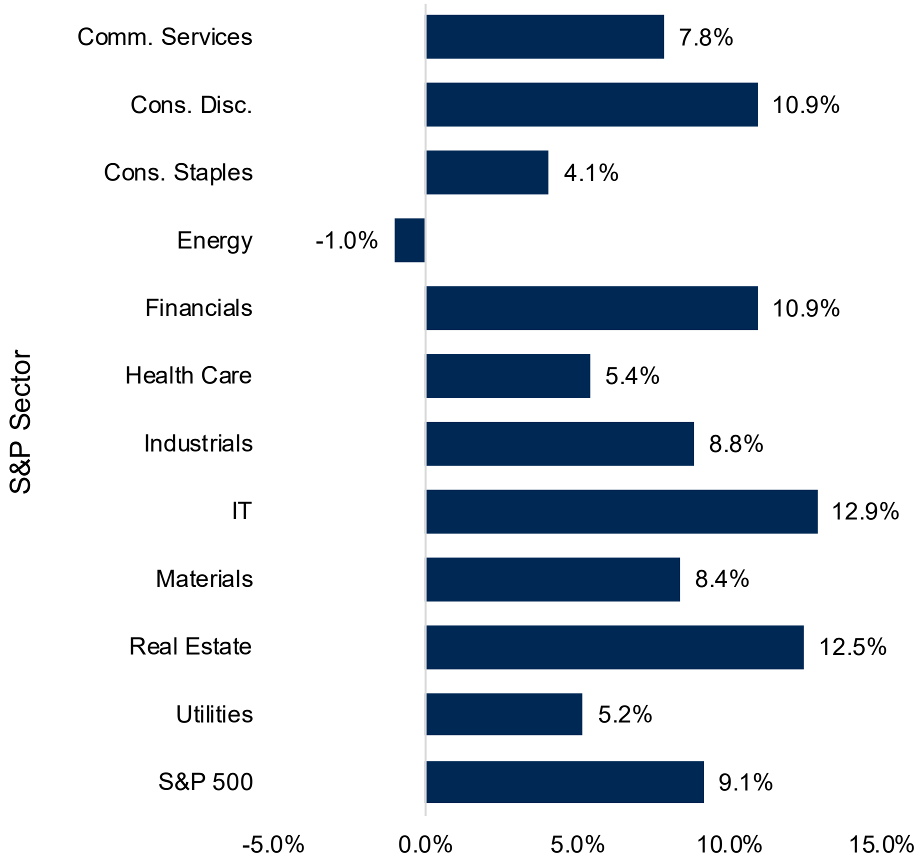
Despite lagging year-to-date, small cap equities had a breakout moment with increased talk around a soft landing and a Federal Reserve likely in "pause" mode. Growth equities outperformed as the large technology names posted strong returns and they account for a large concentrated part of the growth indexes.



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

U.S. Equities – Returns by Sector (November 2023)

An equity rebound drove most sectors in the S&P 500 higher. Areas such as real estate and IT were standouts, both benefiting from lower interest rates and positive momentum from softening Fed language. Energy was the only sector in negative territory stemming primarily from falling oil prices.



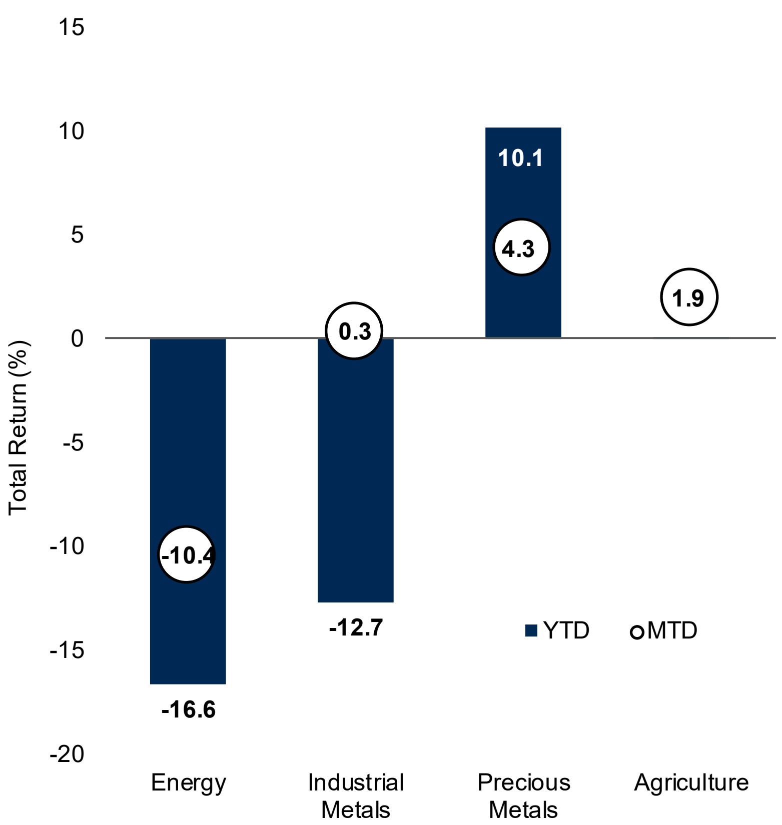
Source: Morningstar Direct. As of November 30, 2023.

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 Asset Market Update

Commodity Performance (November 2023)

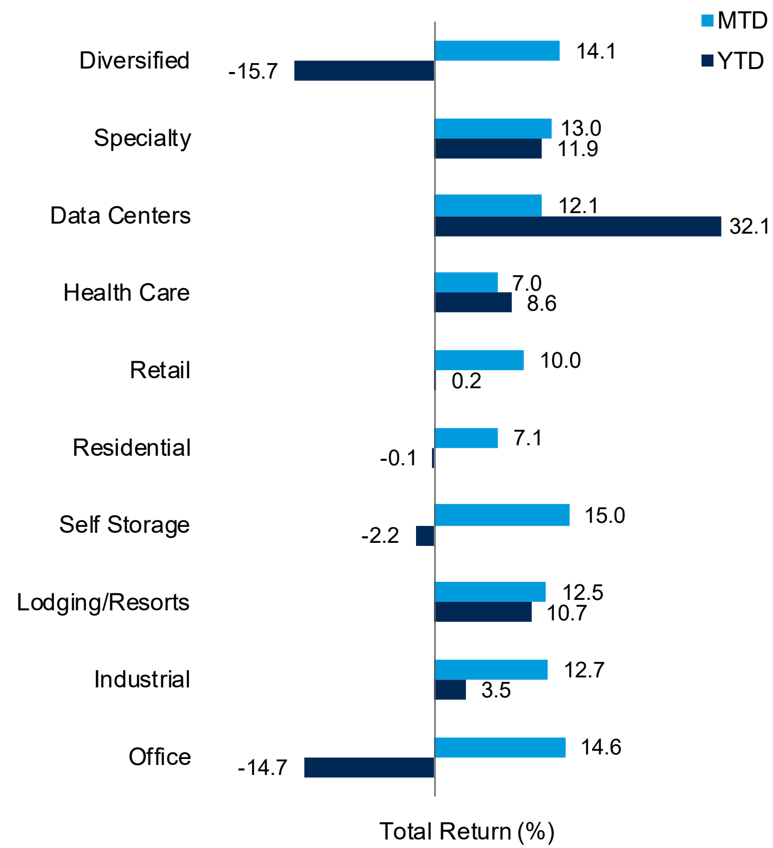
Commodities struggled in November, driven primarily by a declining energy sector. Falling oil prices were a key factor in the weak results as fears mounted of slowing global economic growth. OPEC+ announced upcoming production cuts at the end of November in an effort to bolster prices.



Source: FactSet. As of November 30, 2023.

REIT Sector Performance (November 2023)

REITs benefited from both the equity market rally and the declining interest rate environment. Expectations of the Fed pausing its hiking campaign contributed to the broad strength. Data centers have performed remarkably on the back of all the hype surrounding AI.



Source: FactSet. As of November 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.

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

Global Fixed Income Markets	**MTD**	**YTD**	**1YR**	**3YR**	**5YR**	**7YR**	**10YR**	**15YR**
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%	0.6%	2.4%	4.5%
Global Equity Markets	**MTD**	**YTD**	**1YR**	**3YR**	**5YR**	**7YR**	**10YR**	**15YR**
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%
Alternatives	**MTD**	**YTD**	**1YR**	**3YR**	**5YR**	**7YR**	**10YR**	**15YR**
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.

Asset Allocation

Total Plan | **As of November 30, 2023**

	Asset Allocation ($)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
Total Plan	**223,670,799**	**100.0**	**100.0**	**0.0**
Prepaid Pension Benefits	94,493	0.0	0.0	0.0
Total Invested Assets	**223,576,306**	**100.0**	**100.0**	**0.0**
Short Term Liquidity	**373,547**	**0.2**	**0.0**	**0.2**
Key Bank Cash Portfolio	17,808	0.0	0.0	0.0
First American Govt Oblig Fund Z	2	0.0	0.0	0.0
Alternatives Account Cash	355,737	0.2	0.0	0.2
Fixed Income	**57,803,703**	**25.8**	**25.0**	**0.8**
JIC Core Bond Fund I	40,867,329	18.3	17.5	0.8
BlackRock Strategic Income Opportunities K	16,936,374	7.6	7.5	0.1
Equity	**156,148,107**	**69.8**	**69.0**	**0.8**
Domestic Equity	**93,679,770**	**41.9**	**41.0**	**0.9**
Mellon Large Cap Core	74,727,061	33.4	32.0	1.4
Mellon Smid Cap Core	18,952,709	8.5	9.0	-0.5
International Equity	**61,750,322**	**27.6**	**27.5**	**0.1**
Mellon EAFE Fund	46,374,702	20.7	20.5	0.2
Mellon Emerging Markets	15,375,620	6.9	7.0	-0.1
Private Equity	**718,015**	**0.3**	**0.5**	**-0.2**
Hamilton Lane II	18,110	0.0	-	-
Hamilton Lane VII A	493,126	0.2	-	-
Hamilton Lane VII B	206,779	0.1	-	-
Real Assets	**9,250,950**	**4.1**	**6.0**	**-1.9**
UBS Trumbull Property Fund	9,250,950	4.1	6.0	-1.9

Valuations data as of:
Hamilton Lane VII - 06/30/2023
Hamilton Lane II - 06/30/2023
UBS Trumbull Property Fund - 09/30/2023

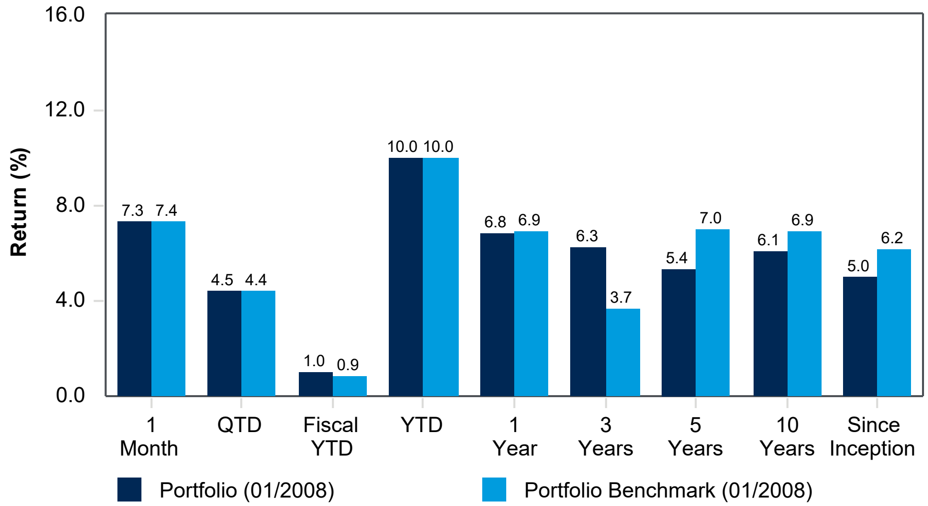
All private equity and real estate assets are adjusted for any subsequent capital activity.

Investments with a zero balance were held in the portfolio during the reporting period and will be removed once they no longer impact portfolio performance.
Asset Allocation weightings may not add up to 100% due to rounding.

Portfolio Dashboard

Total Invested Assets | As of November 30, 2023

Historical Performance



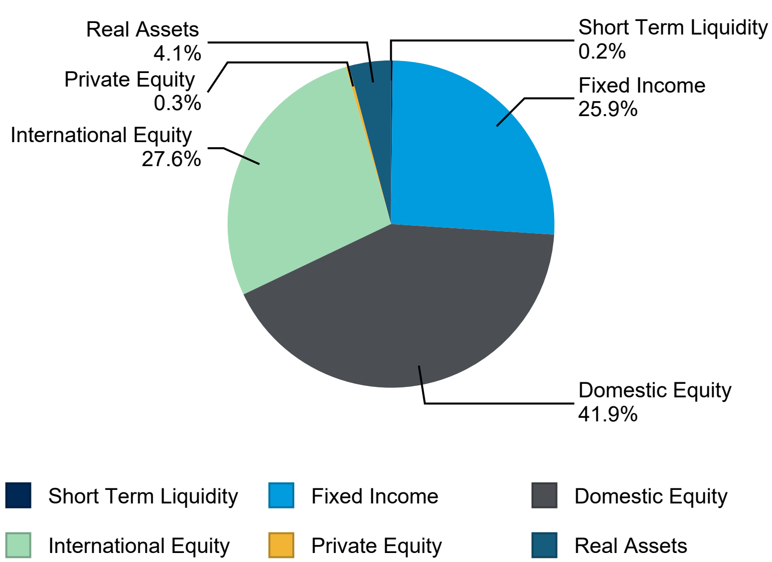
Summary of Cash Flows

	1 Month	QTD	Fiscal YTD	YTD	1 Year
Total Invested Assets					
Beginning Market Value	208,287,863	214,037,737	221,367,949	210,591,427	216,883,890
Net Contributions	-	-2,452	-9,871	-7,766,154	-7,768,415
Gain/Loss	15,288,443	9,541,021	2,218,228	20,751,033	14,460,831
Ending Market Value	223,576,306	223,576,306	223,576,306	223,576,306	223,576,306

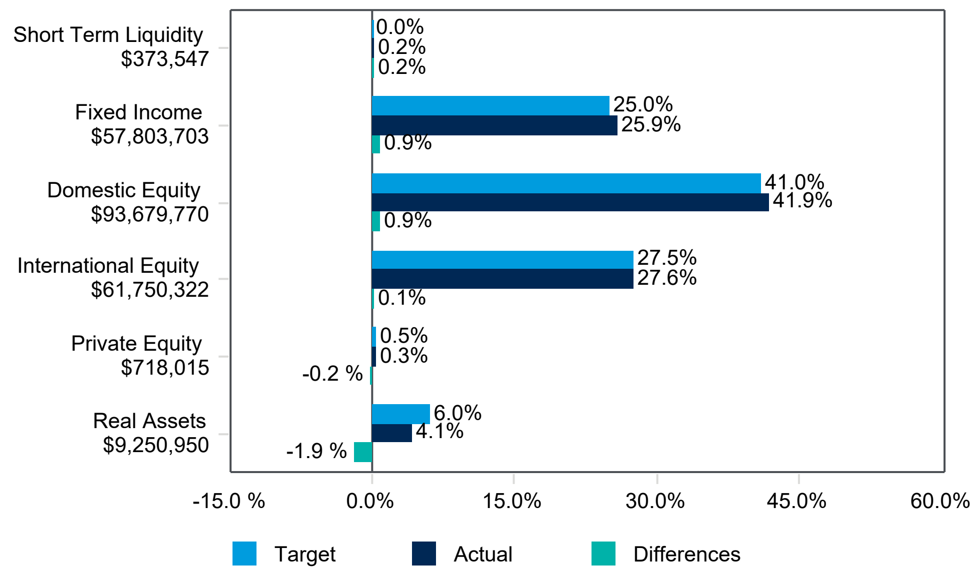
Current Benchmark Composition

From Date	To Date	
01/2023	Present	25.00% Blmbg. U.S. Aggregate, 32.50% S&P 500, 9.00% Russell 2500 Index, 20.50% MSCI EAFE (Net), 7.00% MSCI Emerging Markets (Net), 6.00% NCREIF Fund Index - ODCE (net)

Portfolio Allocation



Actual vs. Target Allocations



Asset Allocation

Total Invested Assets As of November 30, 2023

	Asset Allocation ($)	Asset Allocation (%)	Target Allocation (%)	Differences (%)
Total Invested Assets	**223,576,306**	**100.0**	**100.0**	**0.0**
Short Term Liquidity	**373,547**	**0.2**	**0.0**	**0.2**
Key Bank Cash Portfolio	17,808	0.0	0.0	0.0
First American Govt Oblig Fund Z	2	0.0	0.0	0.0
Alternatives Account Cash	355,737	0.2	0.0	0.2
Fixed Income	**57,803,703**	**25.9**	**25.0**	**0.9**
JIC Core Bond Fund I	40,867,329	18.3	17.5	0.8
BlackRock Strategic Income Opportunities K	16,936,374	7.6	7.5	0.1
Equity	**156,148,107**	**69.8**	**69.0**	**0.8**
Domestic Equity	**93,679,770**	**41.9**	**41.0**	**0.9**
Mellon Large Cap Core	74,727,061	33.4	32.0	1.4
Mellon Smid Cap Core	18,952,709	8.5	9.0	-0.5
International Equity	**61,750,322**	**27.6**	**27.5**	**0.1**
Mellon EAFE Fund	46,374,702	20.7	20.5	0.2
Mellon Emerging Markets	15,375,620	6.9	7.0	-0.1
Private Equity	**718,015**	**0.3**	**0.5**	**-0.2**
Hamilton Lane II	18,110	0.0	-	-
Hamilton Lane VII A	493,126	0.2	-	-
Hamilton Lane VII B	206,779	0.1	-	-
Real Assets	**9,250,950**	**4.1**	**6.0**	**-1.9**
UBS Trumbull Property Fund	9,250,950	4.1	6.0	-1.9

Valuations data as of:
Hamilton Lane VII - 06/30/2023
Hamilton Lane II - 06/30/2023
UBS Trumbull Property Fund - 09/30/2023

All private equity and real estate assets are adjusted for any subsequent capital activity.

Investments with a zero balance were held in the portfolio during the reporting period and will be removed once they no longer impact portfolio performance.
Asset Allocation weightings may not add up to 100% due to rounding.

Manager Performance

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
Total Invested Assets (excluding Prepaid)	**223,576,306**	**100.0**	**7.3**	**4.5**	**1.0**	**10.0**	**6.8**	**6.3**	**5.4**	**6.1**	**5.0**	**01/2008**
Policy Benchmark			*7.4*	*4.4*	*0.9*	*10.0*	*6.9*	*3.7*	*7.0*	*6.9*	*6.2*	
Secondary Benchmark			*7.4*	*4.4*	*0.9*	*9.8*	*6.6*	*3.2*	*6.6*	*6.6*	*6.0*	
Short Term Liquidity	**373,547**	**0.2**	**0.1**	**0.5**	**1.4**	**2.2**	**2.3**	**-**	**-**	**-**	**0.8**	**01/2021**
90 Day U.S. Treasury Bill			*0.4*	*0.9*	*2.2*	*4.5*	*4.9*	*2.0*	*1.8*	*1.2*	*2.1*	
First American Govt Oblig Fund Z	**2**	**0.0**	**0.0**	**0.0**	**0.9**	**3.1**	**3.4**	**-**	**-**	**-**	**-**	**02/2022**
90 Day U.S. Treasury Bill			*0.4*	*0.9*	*2.2*	*4.5*	*4.9*	*2.0*	*1.8*	*1.2*	*3.3*	
Key Bank Cash Portfolio	**17,808**	**0.0**										
Alternatives Account Cash	**355,737**	**0.2**	**0.5**	**0.9**	**2.1**	**-**	**-**	**-**	**-**	**-**	**2.1**	**07/2023**
Fixed Income	**57,803,703**	**25.9**	**4.3**	**2.9**	**0.1**	**2.2**	**1.7**	**-**	**-**	**-**	**-4.5**	**01/2021**
Blmbg. U.S. Aggregate			*4.5*	*2.9*	*-0.4*	*1.6*	*1.2*	*-4.5*	*0.7*	*1.4*	*-4.6*	
JIC Core Bond Fund I	**40,867,329**	**18.3**	**5.0**	**3.0**	**-0.8**	**1.3**	**0.5**	**-5.0**	**0.8**	**1.7**	**-2.8**	**03/2020**
Blmbg. U.S. Aggregate			*4.5*	*2.9*	*-0.4*	*1.6*	*1.2*	*-4.5*	*0.7*	*1.4*	*-2.7*	
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	-2.6	
JIC Core Bond Fund I Rank			13	16	87	82	89	85	42	20	69	
BlackRock Strategic Income Opportunities K	**16,936,374**	**7.6**	**2.9**	**2.5**	**2.1**	**4.2**	**4.4**	**0.3**	**2.9**	**2.6**	**-0.3**	**02/2022**
Blmbg. U.S. Aggregate			*4.5*	*2.9*	*-0.4*	*1.6*	*1.2*	*-4.5*	*0.7*	*1.4*	*-5.4*	
IM Alternative Credit Focus (MF) Median			2.2	1.9	2.0	5.0	5.0	0.1	1.7	1.5	-0.9	
BlackRock Strategic Income Opportunities K Rank			35	37	44	55	54	44	31	19	40	

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

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
Equity	**156,148,107**	**69.8**	**9.0**	**5.3**	**1.5**	**14.8**	**10.8**	**-**	**-**	**-**	**4.2**	**01/2021**
MSCI AC World Index (Net)			*9.2*	*5.9*	*2.3*	*16.6*	*12.0*	*5.7*	*9.1*	*7.6*	*4.2*	
Domestic Equity	**93,679,770**	**41.9**	**9.1**	**5.9**	**2.1**	**17.7**	**10.9**	**-**	**-**	**-**	**6.9**	**01/2021**
Domestic Equity Benchmark			*9.1*	*5.9*	*2.0*	*17.5*	*10.7*	*8.5*	*11.2*	*10.6*	*6.9*	
Mellon Large Cap Core	**74,727,061**	**33.4**	**9.1**	**6.8**	**3.3**	**20.8**	**13.9**	**9.8**	**12.5**	**-**	**13.0**	**04/2016**
S&P 500			*9.1*	*6.8*	*3.3*	*20.8*	*13.8*	*9.8*	*12.5*	*11.8*	*13.0*	
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	12.0	
Mellon Large Cap Core Rank			44	47	53	34	34	24	26	-	21	
Mellon Smid Cap Core	**18,952,709**	**8.5**	**9.0**	**2.4**	**-2.4**	**6.3**	**-0.1**	**3.5**	**7.1**	**-**	**9.1**	**04/2016**
Russell 2500 Index			*9.0*	*2.4*	*-2.5*	*6.1*	*-0.3*	*3.3*	*6.9*	*7.5*	*9.0*	
IM U.S. SMID Cap Equity (MF) Median			8.9	2.3	-2.5	6.0	0.3	4.2	6.9	7.4	8.8	
Mellon Smid Cap Core Rank			43	48	50	48	55	55	47	-	41	
International Equity	**61,750,322**	**27.6**	**8.9**	**4.6**	**0.6**	**10.9**	**10.5**	**-**	**-**	**-**	**-0.5**	**01/2021**
International Equity Benchmark			*9.0*	*4.6*	*0.6*	*10.6*	*10.3*	*1.8*	*5.4*	*3.7*	*-0.2*	
Mellon EAFE Fund	**46,374,702**	**20.7**	**9.3**	**4.9**	**0.6**	**12.7**	**12.8**	**4.2**	**6.4**	**-**	**6.6**	**04/2016**
MSCI EAFE (Net)			*9.3*	*4.9*	*0.5*	*12.3*	*12.4*	*3.8*	*6.0*	*3.9*	*6.1*	
IM International Large Cap Core Equity (MF) Median			8.6	4.9	-0.6	11.4	9.2	3.1	5.6	3.1	5.6	
Mellon EAFE Fund Rank			25	53	15	25	5	30	29	-	21	
Mellon Emerging Markets	**15,375,620**	**6.9**	**7.9**	**3.7**	**0.6**	**5.6**	**4.2**	**-4.3**	**2.2**	**-**	**4.6**	**04/2016**
MSCI Emerging Markets (Net)			*8.0*	*3.8*	*0.8*	*5.7*	*4.2*	*-4.0*	*2.3*	*2.1*	*4.7*	
IM Emerging Markets Equity (MF) Median			7.5	3.7	-0.3	6.8	4.3	-4.5	2.6	1.9	4.4	
Mellon Emerging Markets Rank			36	51	37	64	51	48	60	-	47	

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

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
Private Equity	718,015	0.3	0.0	0.0	0.0	-3.8	-2.1	-	-	-	0.8	01/2021
Hamilton Lane II	18,110	0.0	0.0	0.0	0.0	-31.6	-26.9	-18.7	0.3	7.1	11.0	03/2009
Hamilton Lane VII A	493,126	0.2	0.0	0.0	0.0	-2.2	-2.7	4.1	8.5	11.0	10.4	07/2011
Hamilton Lane VII B	206,779	0.1	0.0	0.0	0.0	-4.3	2.0	-2.6	3.5	7.6	8.1	07/2011
UBS Trumbull Property Fund	9,250,950	4.1	0.0	0.0	-1.7	-12.1	-16.9	0.3	-0.7	-	1.3	07/2016
NCREIF Fund Index - ODCE (net)			*0.0*	*0.0*	*-2.1*	*-8.1*	*-12.9*	*6.2*	*4.7*	*7.2*	*5.4*	

Valuations data as of:

Hamilton Lane VII - 06/30/2023
Hamilton Lane II - 06/30/2023
UBS Trumbull Property Fund - 09/30/2023

All private equity and real estate assets are adjusted for any subsequent capital activity.

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

Total Invested Assets | As of November 30, 2023

Account Name	From Date	To Date	Benchmark
Total Invested Assets	**01/2023**	**Present**	**25.0% Blmbg. U.S. Aggregate, 32.5% S&P 500, 9.0% Russell 2500 Index, 20.5% MSCI EAFE (Net), 7.0% MSCI Emerging Markets (Net), 6.0% NCREIF Fund Index - ODCE (net)**
	09/2022	01/2023	25.0% Blmbg. U.S. Aggregate, 31.5% S&P 500, 9.0% Russell 2500 Index, 20.5% MSCI EAFE (Net), 7.0% MSCI Emerging Markets (Net), 6.0% NCREIF Fund Index - ODCE (net), 1.0% NCREIF Timberland Index
	05/2021	09/2022	18.0% Blmbg. U.S. Aggregate, 31.5% S&P 500, 10.5% Russell 2500 Index, 23.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 6.0% NCREIF Fund Index - ODCE (net), 1.0% NCREIF Timberland Index
	12/2019	05/2021	20.0% Blmbg. U.S. Aggregate, 32.0% S&P 500, 18.0% Russell 2500 Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 8.0% NCREIF Fund Index - ODCE (net), 2.0% NCREIF Timberland Index
	06/2017	12/2019	20.0% Blmbg. Intermed. U.S. Government/Credit, 30.0% S&P 500, 18.0% Russell 2500 Index, 2.0% S&P Completion Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 8.0% NCREIF Fund Index - ODCE (net), 2.0% NCREIF Timberland Index
	01/2016	06/2017	28.0% Blmbg. Intermed. U.S. Government/Credit, 30.0% S&P 500, 18.0% Russell 2500 Index, 2.0% S&P Completion Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 2.0% NCREIF Timberland Index
	01/2008	01/2016	20.0% Blmbg. U.S. Aggregate, 32.0% S&P 500, 18.0% Russell 2500 Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 8.0% NCREIF Fund Index - ODCE (net), 2.0% NCREIF Timberland Index
Secondary Benchmark	**01/2023**	**Present**	**25.0% Blmbg. U.S. Aggregate, 32.5% S&P 500, 9.0% Russell 2500 Index, 20.5% MSCI EAFE (Net), 7.0% MSCI Emerging Markets (Net), 6.0% UBS Trumbull Property Fund**
	09/2022	01/2023	25.0% Blmbg. U.S. Aggregate, 31.5% S&P 500, 9.0% Russell 2500 Index, 20.5% MSCI EAFE (Net), 7.0% MSCI Emerging Markets (Net), 6.0% UBS Trumbull Property Fund, 1.0% Molpus SWF II
	05/2021	09/2022	18.0% Blmbg. U.S. Aggregate, 31.5% S&P 500, 10.5% Russell 2500 Index, 23.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 6.0% UBS Trumbull Property Fund, 1.0% Molpus SWF II
	12/2019	05/2021	20.0% Blmbg. U.S. Aggregate, 32.0% S&P 500, 18.0% Russell 2500 Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 8.0% UBS Trumbull Property Fund, 2.0% Molpus SWF II
	06/2017	12/2019	20.0% Blmbg. Intermed. U.S. Government/Credit, 30.0% S&P 500, 18.0% Russell 2500 Index, 2.0% S&P Completion Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 8.0% UBS Trumbull Property Fund, 2.0% Molpus SWF II
	07/2016	06/2017	28.0% Blmbg. Intermed. U.S. Government/Credit, 30.0% S&P 500, 18.0% Russell 2500 Index, 2.0% S&P Completion Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 2.0% Molpus SWF II
	01/2016	07/2016	28.0% Blmbg. Intermed. U.S. Government/Credit, 30.0% S&P 500, 18.0% Russell 2500 Index, 2.0% S&P Completion Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 2.0% Molpus SWF II
	03/2009	01/2016	20.0% Blmbg. U.S. Aggregate, 32.0% S&P 500, 18.0% Russell 2500 Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 8.0% NCREIF Fund Index - ODCE (net), 2.0% Molpus SWF II
	01/2008	03/2009	20.0% Blmbg. U.S. Aggregate, 32.0% S&P 500, 18.0% Russell 2500 Index, 10.0% MSCI EAFE (Net), 10.0% MSCI Emerging Markets (Net), 8.0% NCREIF Fund Index - ODCE (net), 2.0% NCREIF Timberland Index

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 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% Blomberg 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 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.

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 riskof 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.