VERMONT MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM
Meeting of the Board of Trustees
October 19, 2023, 11:00 A.M.

Please note all members participated via telephone, video, or teleconference:

Members present:
CHRISTOPHER DUBE, Chairperson, Employer Representative (term expiring July 1, 2026)
KIMBERLY GLEASON, Vice-Chair, Employer Representative (term expiring July 1, 2024)
KATHLEEN RAMSAY, Employer Representative (term expiring July 1, 2026)

Members absent:
MICHAEL PIECIAK, Vermont State Treasurer
MORGAN DAYBELL, Employee Representative (term expiring July 1, 2024)

Also attending:
Gavin Boyles, Deputy Treasurer, (*designated voting member on behalf of Treasurer Pieciak)
Tim Duggan, Director of Retirement, Office of the State Treasurer
Nicole Weidman, Director of Retirement Operations and Policy, Retirement Division
Justin St. James, General Counsel, Office of the State Treasurer
Stephen Barry, Administrative Services Manager, Retirement Division
Jeremiah Breer, Chief Financial Officer, Office of the State Treasurer
Kathleen Riley, Segal Consulting
Matthew Strom, Segal Consulting
Austin Miller, Segal Consulting
Patryk Tabernacki, Segal Consulting

Mr. Dube called the Thursday, October 19, 2023 Board Meeting to order at 11:17 a.m. which was held by conference call.

ITEM 1: **Agenda approval and announcements**

On a motion made by Ms. Ramsay, seconded by Mr. Boyles, the Board voted unanimously to approve the agenda.

ITEM 2: **Approve the minutes of:**

- **October 10, 2023**

On a motion made by Mr. Ramsay, seconded by Ms. Boyles, the Board voted unanimously to approve the minutes of the October 10, 2023, as presented.

<u>ITEM 3:</u> **VMERS Actuarial Valuation 2023**

Segal Consulting presented the 2023 Actuarial Valuation for the Vermont Municipal Employees' Retirement System. The slide deck used is appended to these minutes and the link to the valuation can be found below.

Discussion centered on the impact of the $25 health care stipend on the System. Segal analyzed the impact of full or partial removal of the stipend in relation to hypothetical market returns and the effect on the possibility of crossover.

On a motion made by Ms. Ramsay, seconded by Mr. Boyles, the Board voted unanimously to accept the 2023 VMERS Actuarial Report as presented by Segal Consulting.

Link: 2023 VMERS Actuarial Valuation

<u>ITEM 4:</u> **Any other business to come before the Board**

On a motion made by Ms. Ramsay, seconded by Mr. Boyles, the Board voted unanimously to adjourn at 12:23 p.m.

<u>Next Meeting Date</u>:

The next scheduled VMERS meeting is November 9, 2023 at 2:00 p.m.

Respectfully submitted,

SB

Stephen Barry
Secretary of the Board

Vertmont Municipal Employees'
Retirement System

Actuarial Valuation as of June 30, 2023

October 19, 2023

Kathy Riley / Matt Strom / Patryk Tabernacki / Austin Miller

This document has been prepared by Segal for the benefit of the Board of Trustees of the Vermont Municipal Employees' Retirement System and is not complete without the presentation provided at the October 19, 2023, meeting of the Board of Trustees.

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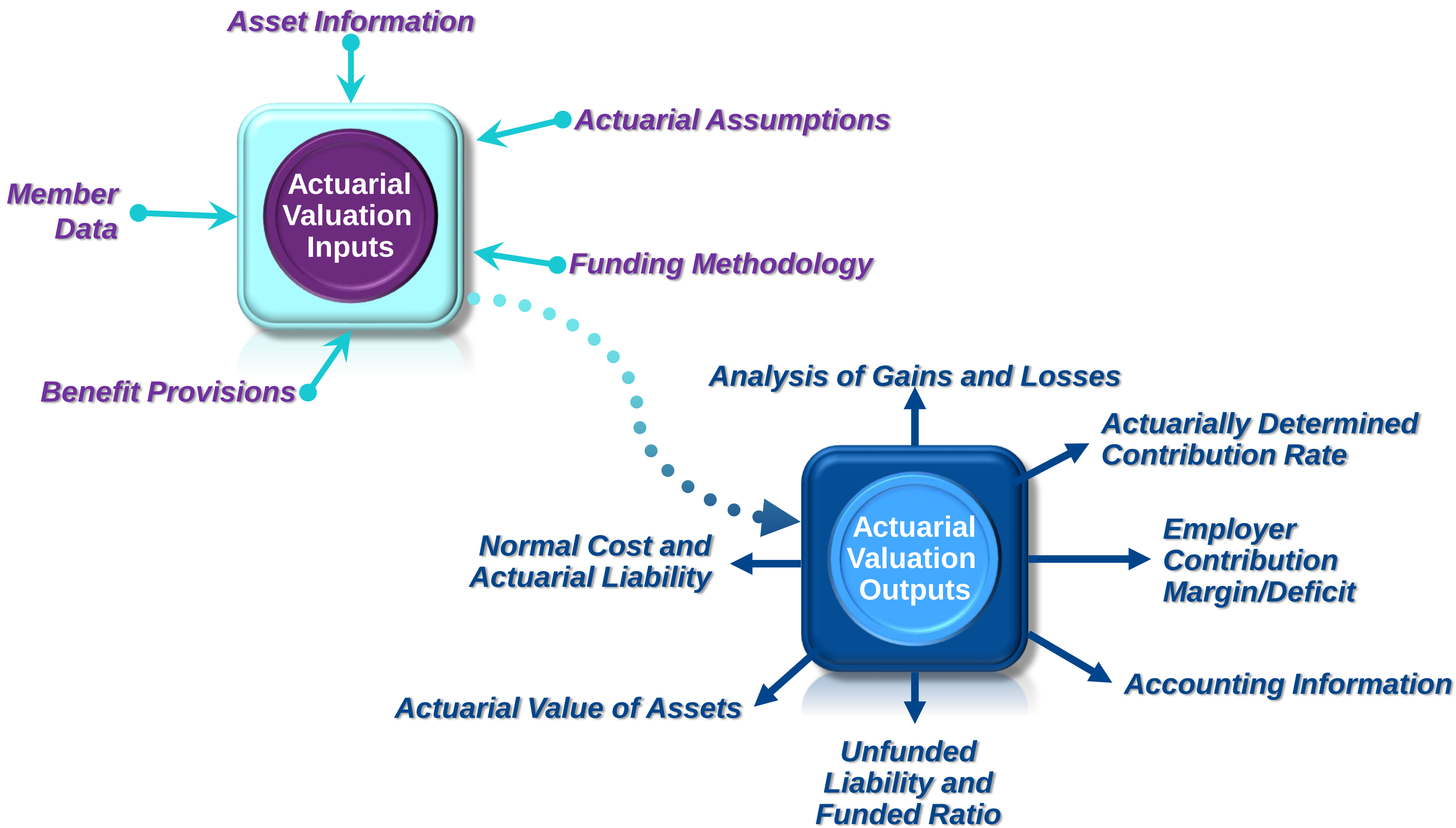
Segal

Agenda

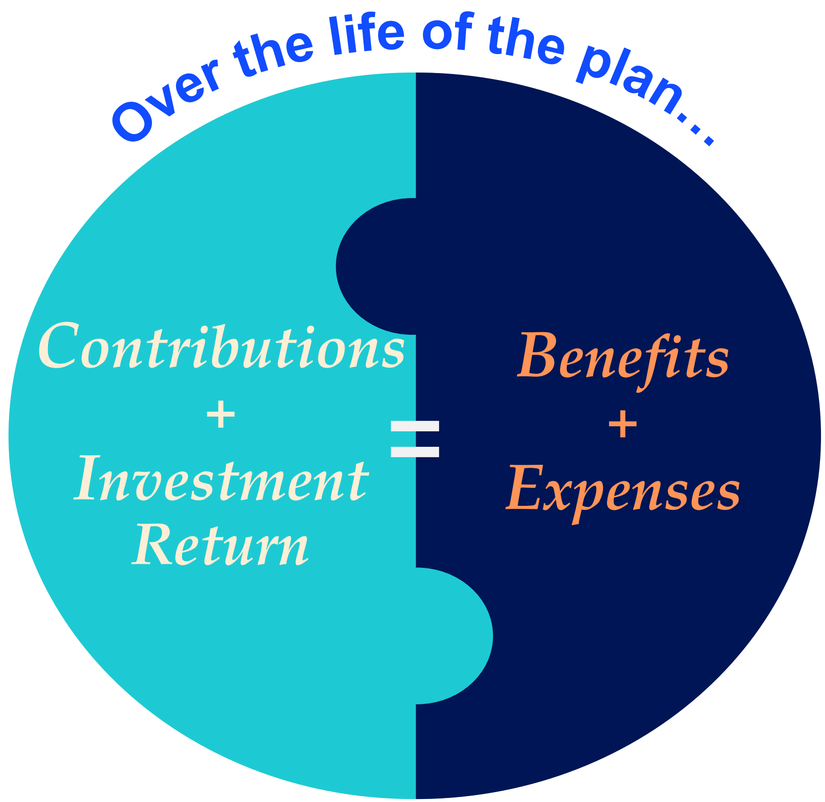
Overview of Valuation Process

Valuation Results and Projections

The Valuation Process



Actuarial Balance



Or: *Contributions* = *Benefits* + *Expenses* – *Investment Return*

Actuarial Assumptions

Demographic

- Retirement
- Disability
- Death in active service
- Withdrawal
- Death after retirement

Economic

- Inflation – 2.30%
- Investment return – 7.00%
- Salary increases – 6.2% for new members to 4.1% for members with 37+ years of service
- COLA* – 1.10% for Group A members; 1.20% for Groups B, C and D members

Actuaries make assumptions as to when and why a member will leave active service and estimate the amount and duration of the pension benefits paid.

*The January 1, 2024, COLA is expected to be 1.10% for all members.

Actuarial Methods

Asset Valuation Method

- Investment gains and losses recognized over a number of years
- VMERS uses a five-year smoothing method
- A 20% market value corridor is applied – actuarial value of assets must fall within 80% to 120% of market value

Actuarial Cost Method

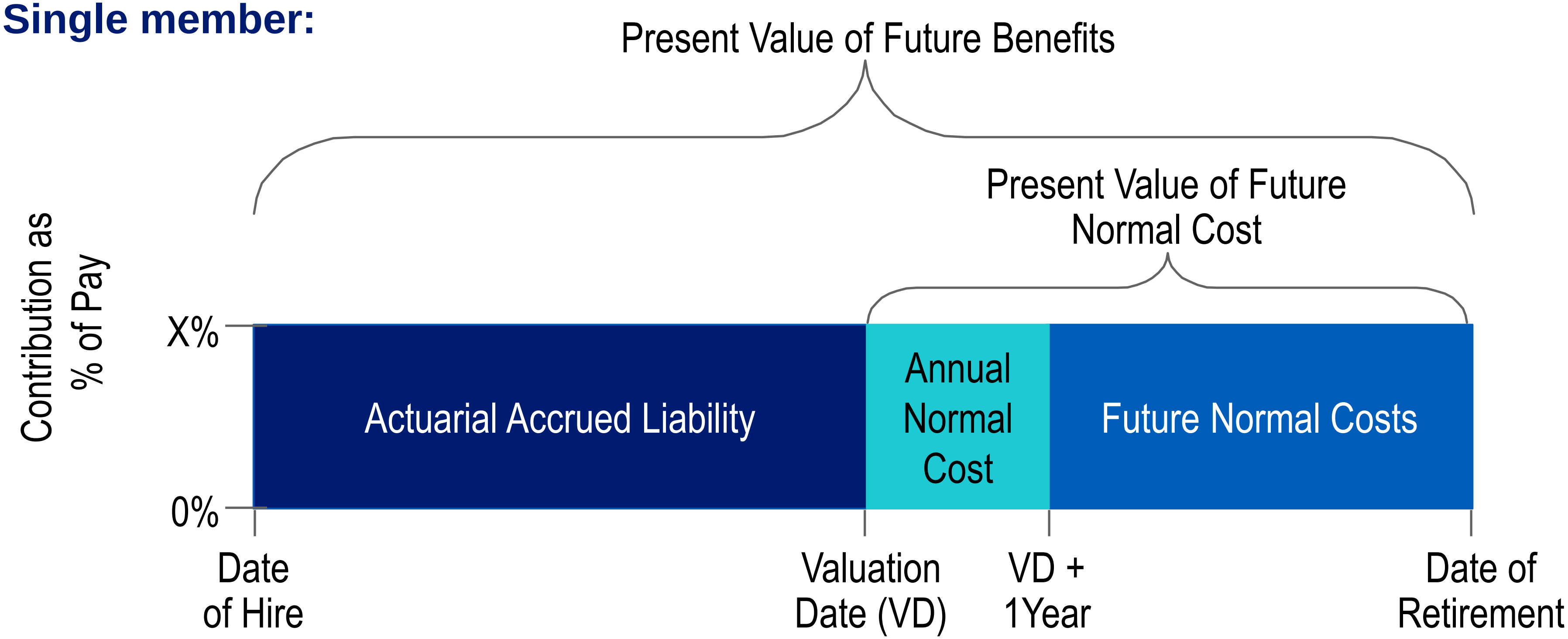
- Allocation of liability to past and future service
- VMERS uses the entry age normal cost method
  - Allocates cost of member's retirement benefit over expected career as a level % of salary
  - Most common cost method among public sector retirement systems
  - Required by GASB for financial statement reporting purposes

Amortization Method

- Relies on two inputs:
  - Number of years to amortize the UAL
  - Level dollar or level percentage of payroll approach
- VMERS' amortization method:
  - Closed period ending on June 30, 2038
  - 15 years remaining
  - Level percent of pay with 3% payroll growth assumption

Funding Process

Single member:

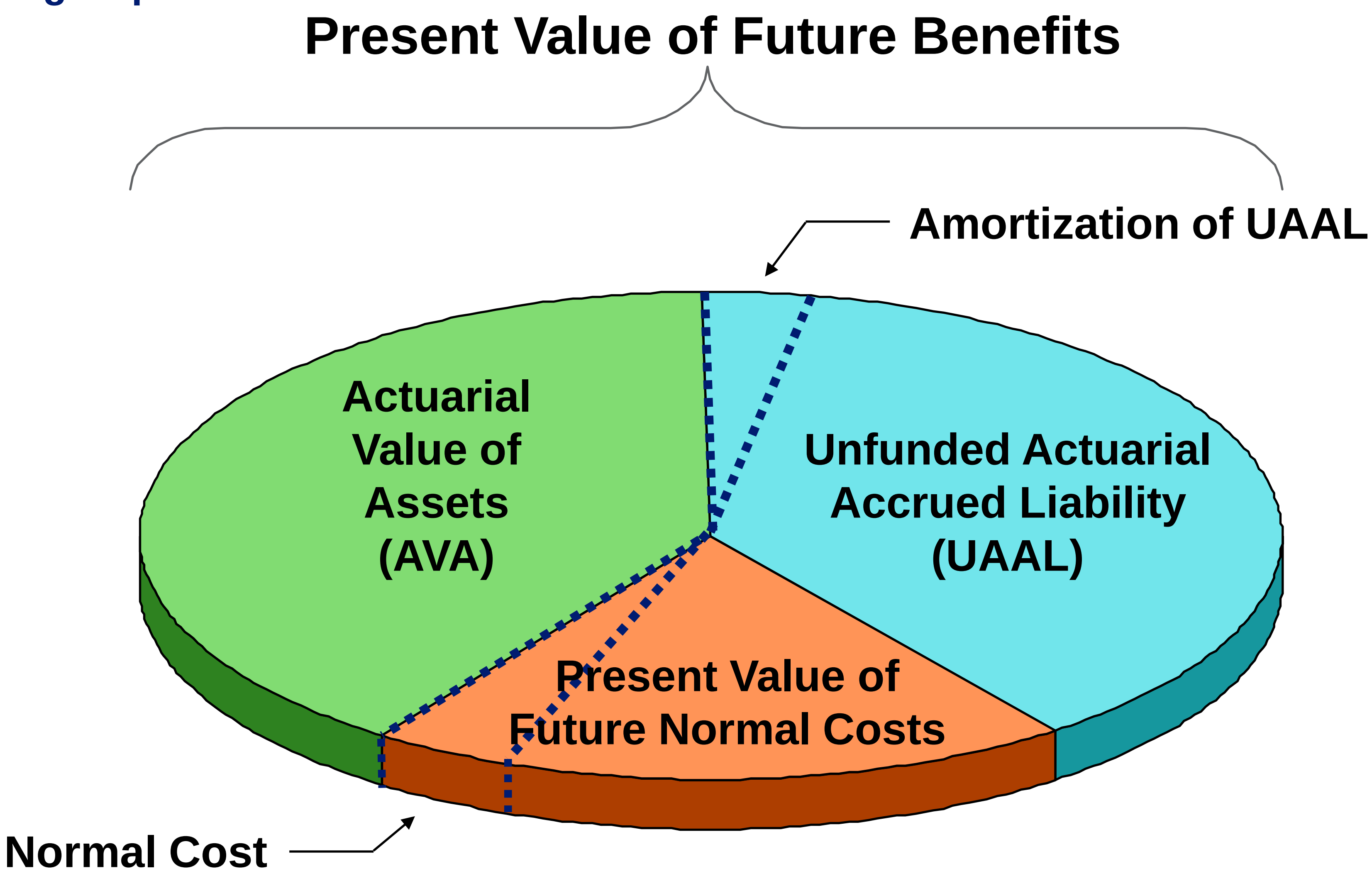


Entry Age cost method: Allocates cost between past and future service

- **Normal Cost:** Cost of annual benefit accrual as a level percent of salary
- **Actuarial Accrued Liability:** Represents accumulated value of past normal costs (or difference between total cost and present value of future normal costs)
- **Unfunded Actuarial Accrued Liability:** Actuarial accrued liability minus actuarial value of assets

Actuarially Determined Contribution

Entire group:



Summary of Valuation Highlights

June 30, 2023, Actuarial Valuation

- The return on the market value of assets for the year ending June 30, 2023, was **7.60%***
  - Gradual recognition of deferred losses resulted in **5.75%** return on the actuarial value of assets
- The Board approved changes to actuarial assumptions effective June 30, 2023
  - Changes resulted in a net increase in actuarial liability of **$3.7 million**
- Funded ratio (actuarial basis) decreased from 77.05% (as of 6/30/2022) to **75.06%**
  - Projected funded ratio (market basis) in 2038 decreased from 75.44% to 75.32%
- Net impact on the actuarially determined contribution (ADC) was an increase from 11.60% of payroll to **12.14%** of payroll
- The average employer contribution rate for fiscal 2025 is **7.19%**, which results in a contribution shortfall of **4.70%** compared to the projected fiscal 2025 ADC of 11.89%
  - The fiscal 2025 employer rates and ADC reflect an additional 0.25% scheduled rate increase for both members and employers
- The GASB blended discount rate analysis results in **no crossover** date and as a result the June 30, 2023, GASB disclosures will be based on the 7.00% long-term assumption

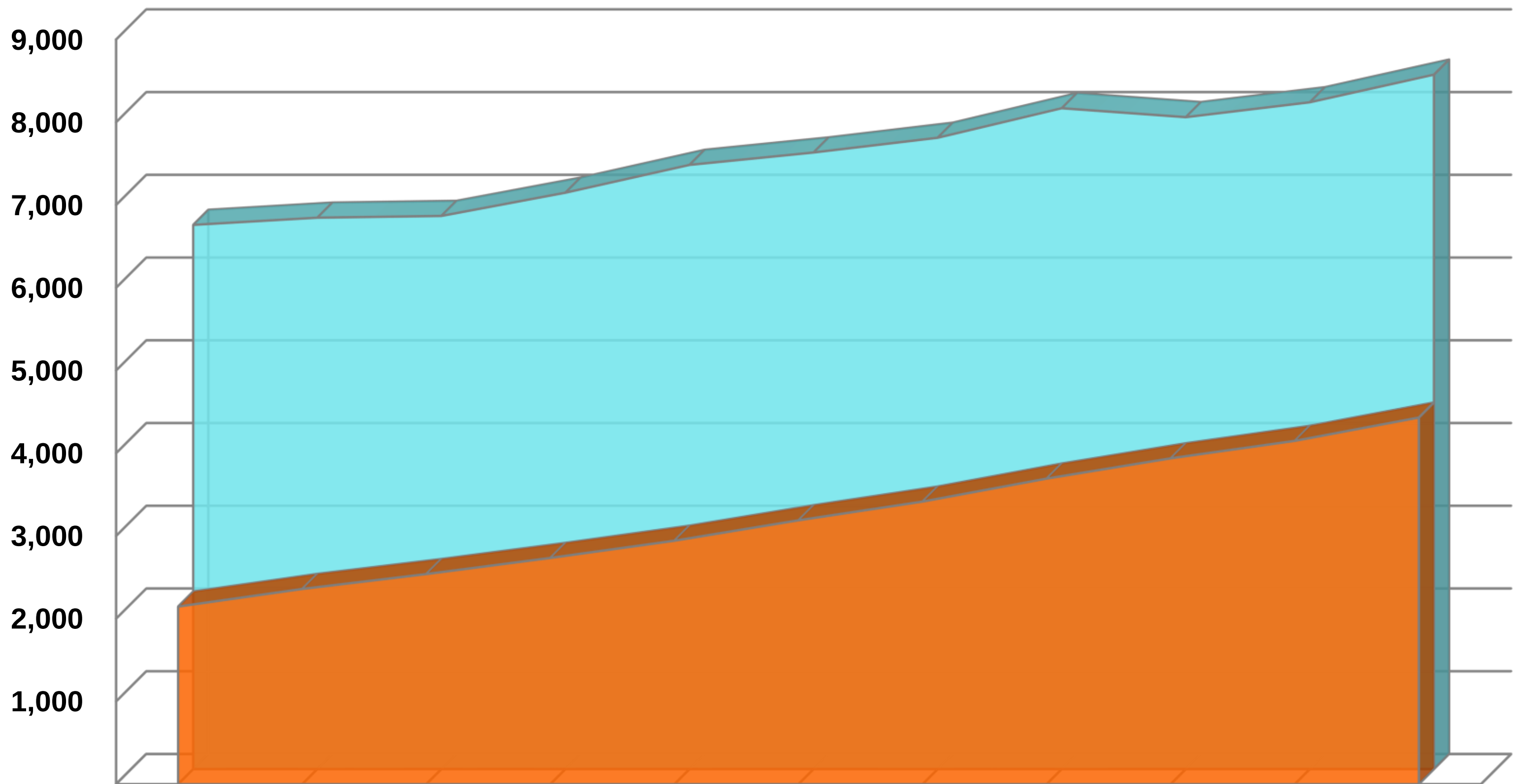
* Based on Segal calculation, which may differ slightly from the rate determined by the VPIC Investment Advisor for various reasons (e.g. cash flows)

Membership

Membership information as of June 30

	2023	2022	Change
Actives			
• Number	8,393	8,059	+4.1%
• Payroll (annualized)	$392.2 mil	$355.7 mil	+10.3%
• Average Age	46.9 years	47.3 years	−0.4 years
• Average Service	7.8 years	8.1 years	−0.3 years
Retirees and Beneficiaries			
• Number	4,431	4,149	+6.8%
• Total Annual Benefits	$52.7 mil	$46.7 mil	+12.8%
• Average Monthly Benefit	$991	$937	+5.8%

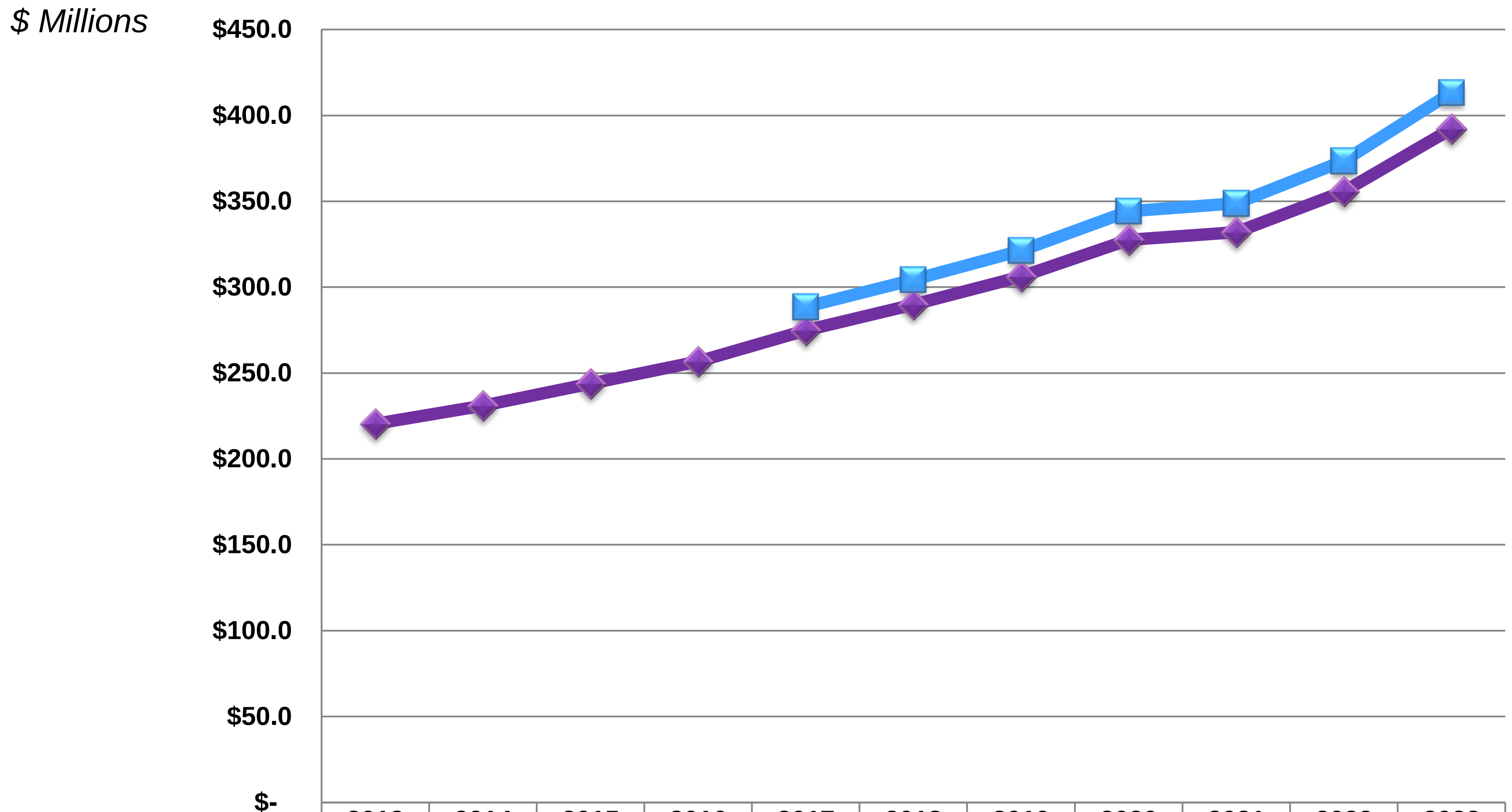
Active and Retired Membership



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Retired Members	2,146	2,359	2,539	2,734	2,942	3,189	3,415	3,693	3,938	4,149	4,431
Active Members	6,577	6,664	6,685	6,966	7,302	7,452	7,630	7,987	7,879	8,059	8,393

Since 2013, number of retirees and beneficiaries has increased 7.5% per year on average while the number of active members has increased 2.5% per year on average.

Active Payroll

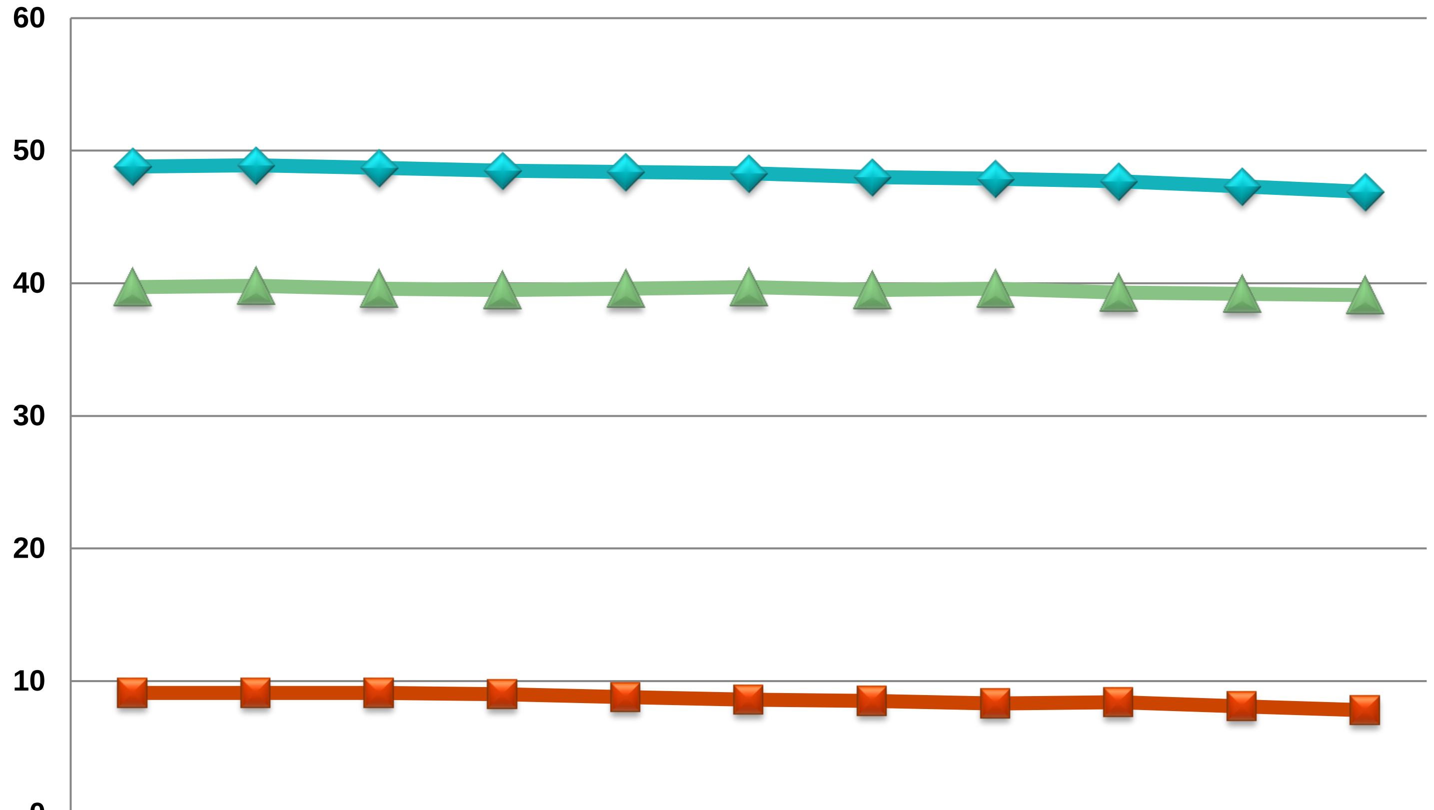


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Covered Payroll*	$220.4	$231.0	$243.8	$256.7	$274.8	$289.8	$306.1	$327.5	$332.0	$355.7	$392.2
Projected Payroll**					$288.6	$304.3	$321.4	$344.1	$348.8	$373.6	$413.2

*Prior year; **Upcoming year

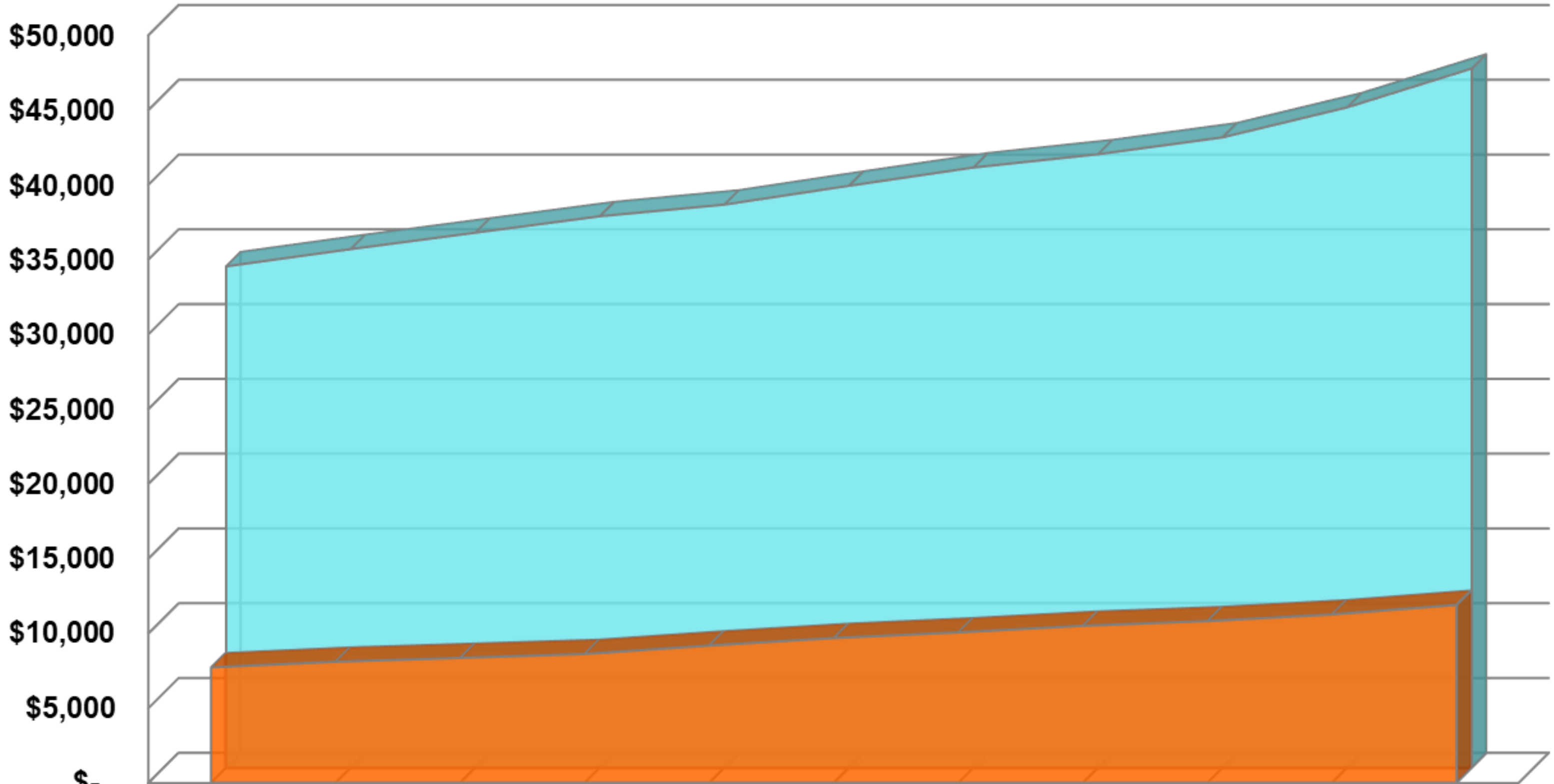
Since 2013, active payroll has increased, on average, 6.0% per year.

Average Age and Service of Active Members



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Average Age	48.8	48.9	48.7	48.5	48.4	48.3	48.0	47.9	47.7	47.3	46.9
Average Service	9.1	9.1	9.1	9.0	8.8	8.6	8.5	8.3	8.4	8.1	7.8
Average Hire Age	39.7	39.8	39.6	39.5	39.6	39.7	39.5	39.6	39.3	39.2	39.1

Average Salary and Average Benefit (Annual Amounts)



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Average Benefit	$7,704	$8,082	$8,341	$8,599	$9,165	$9,668	$10,045	$10,488	$10,800	$11,245	$11,886
Average Salary	$33,506	$34,659	$35,757	$36,855	$37,635	$38,894	$40,118	$41,003	$42,132	$44,138	$46,733

Since 2013, average salary has increased, on average, 3.1% per year, and the average annual benefit has increased, on average, 4.3% per year.

Assets

- The market value of assets increased from $846 million (as of 6/30/2022) to $912 million (as of 6/30/2023)
  - Segal estimated the investment return at 7.60%, net of investment expenses
- The actuarial value of assets, which smooths investment gains and losses over a period of five years, increased from $893 million (as of 6/30/2022) to $946 million (as of 6/30/2023)
  - Investment return of 5.75%, net of investment expenses
  - Compared to the return assumption of 7.00%
  - Actuarial value is 103.8% of market
  - There is a total of $34 million of deferred net investment losses that will be recognized in future years
- Average annual returns are:

	Actuarial Value	Market Value
5-year average	6.7%	6.2%
10-year average	7.1%	6.3%
15-year average	6.2%	6.2%
20-year average	6.3%	6.3%

Market Value of Assets ($ in millions)

For Fiscal Year Ending June 30

	2023	2022
Beginning of Year	$846	$926
Contributions:		
• Employer*	27	25
• Member	30	25
• Total	$57	$50
Benefits and Refunds	−54	−48
Investment Income (net)	63	−82
End of Year	$912	$846
Rate of Return	7.60%	−8.69%

* Net of administrative expenses, but including net other income

Note: numbers may not add due to rounding

Actuarial Value of Assets ($ in millions)

1. Market Value of Assets as of June 30, 2022	$846
2. Cash Flow Items for FYE June 30, 2023	2
3. Expected Return	59
4. Expected Market Value of Assets: **1 + 2 + 3**	$907
5. Actual Market Value of Assets on June 30, 2023	912
6. Excess/(Shortfall) for FYE June 30, 2023: **5 − 4**	5

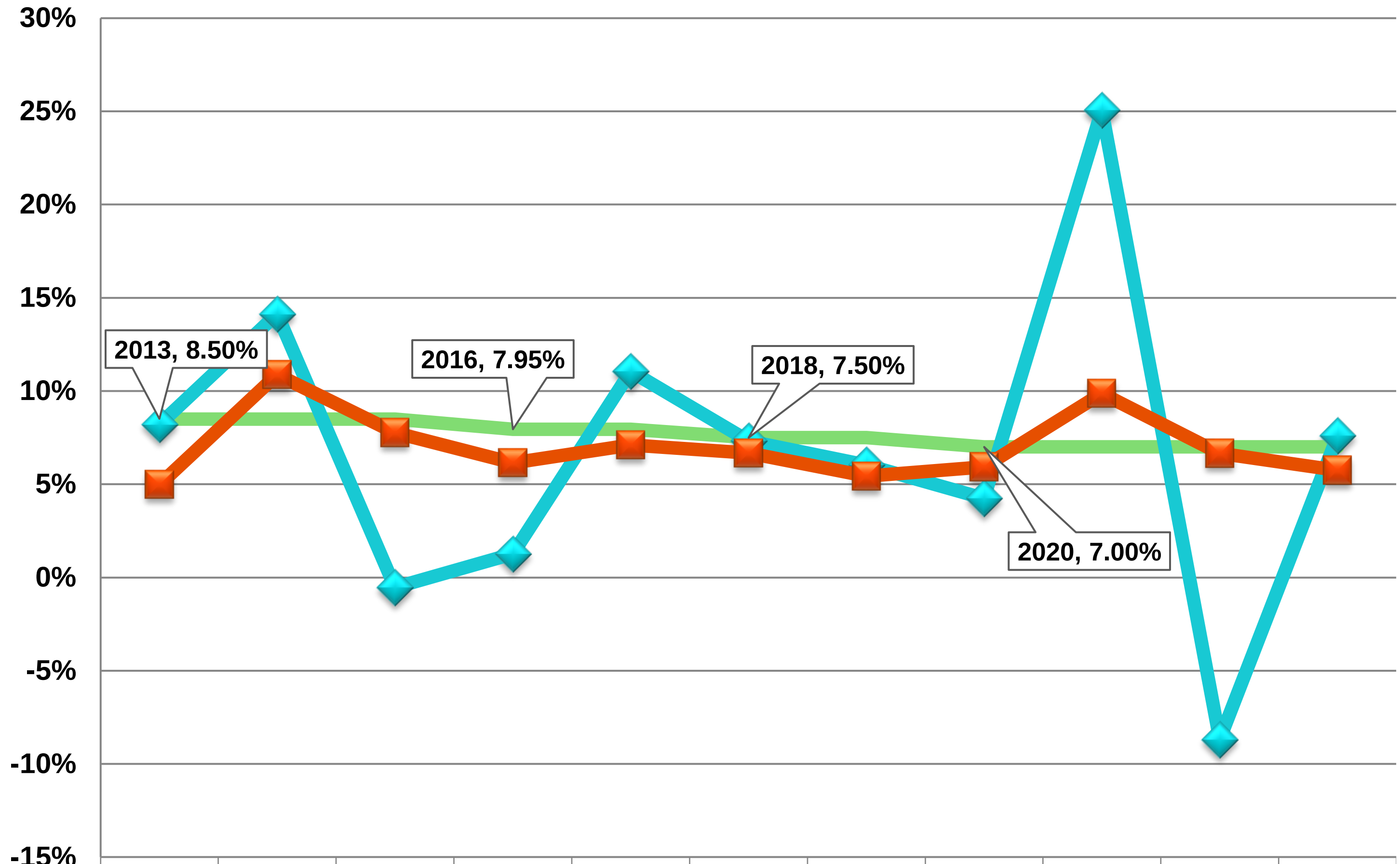
Excess/(Shortfall) Returns:

Year	Initial Amount	Deferral %	Unrecognized Amount
2023	$5	80%	$4
2022	−145	60%	−87
2021	134	40%	54
2020	−23	20%	−5
2019	−10	0%	0
7. Total			−$34

8. Actuarial Value of Assets as of June 30, 2023: **5 − 7**	$946
Actuarial Value of Assets as a % of Market Value of Assets	103.8%

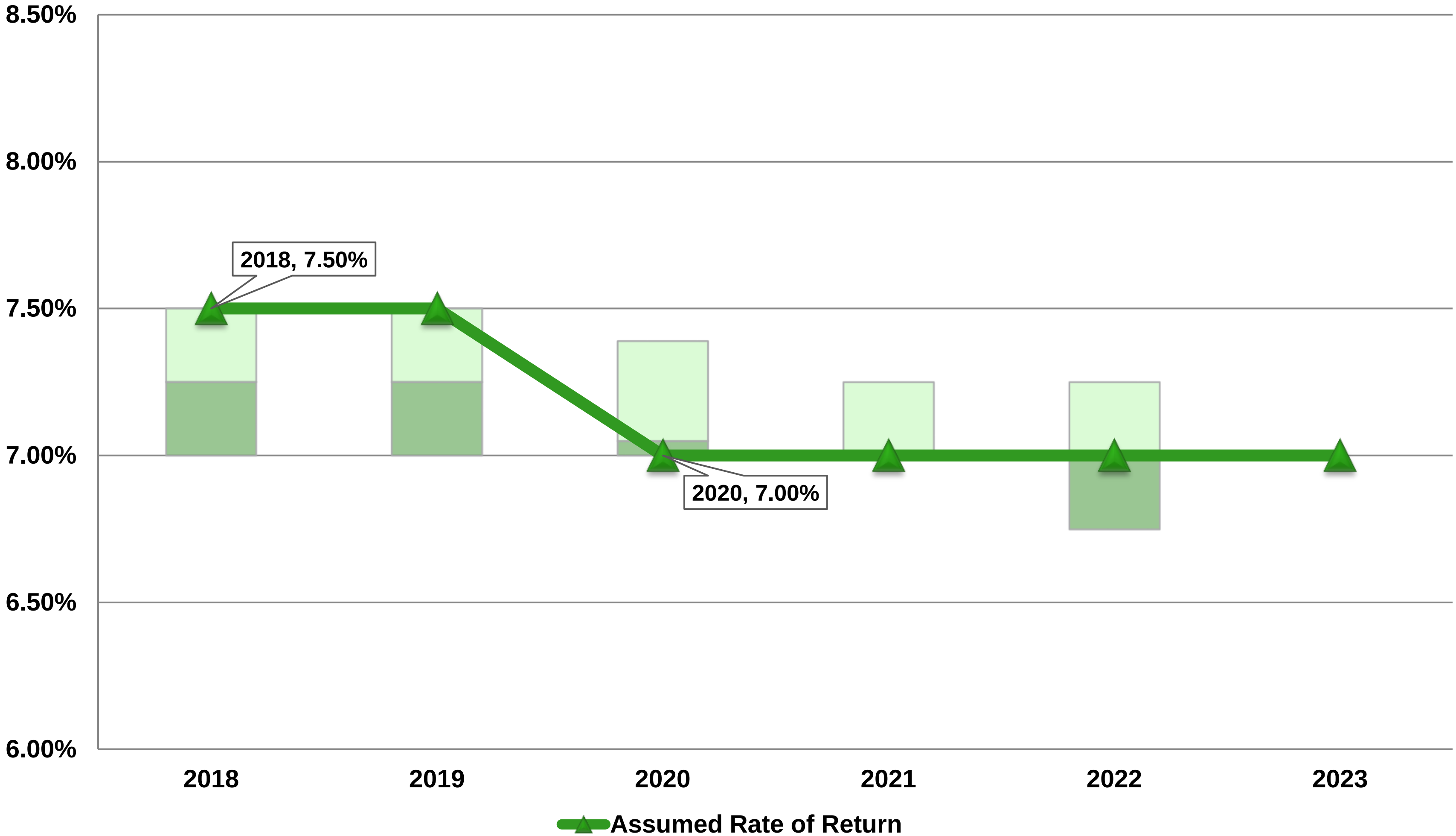
Note: numbers may not add due to rounding

Asset Returns



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Assumed Rate of Return	8.50%	8.50%	8.50%	7.95%	7.95%	7.50%	7.50%	7.00%	7.00%	7.00%	7.00%
Market Value of Assets	8.2%	14.1%	-0.5%	1.3%	11.1%	7.3%	6.0%	4.2%	25.1%	-8.7%	7.6%
Actuarial Value of Assets	5.0%	10.9%	7.8%	6.1%	7.1%	6.7%	5.4%	5.9%	9.9%	6.7%	5.8%

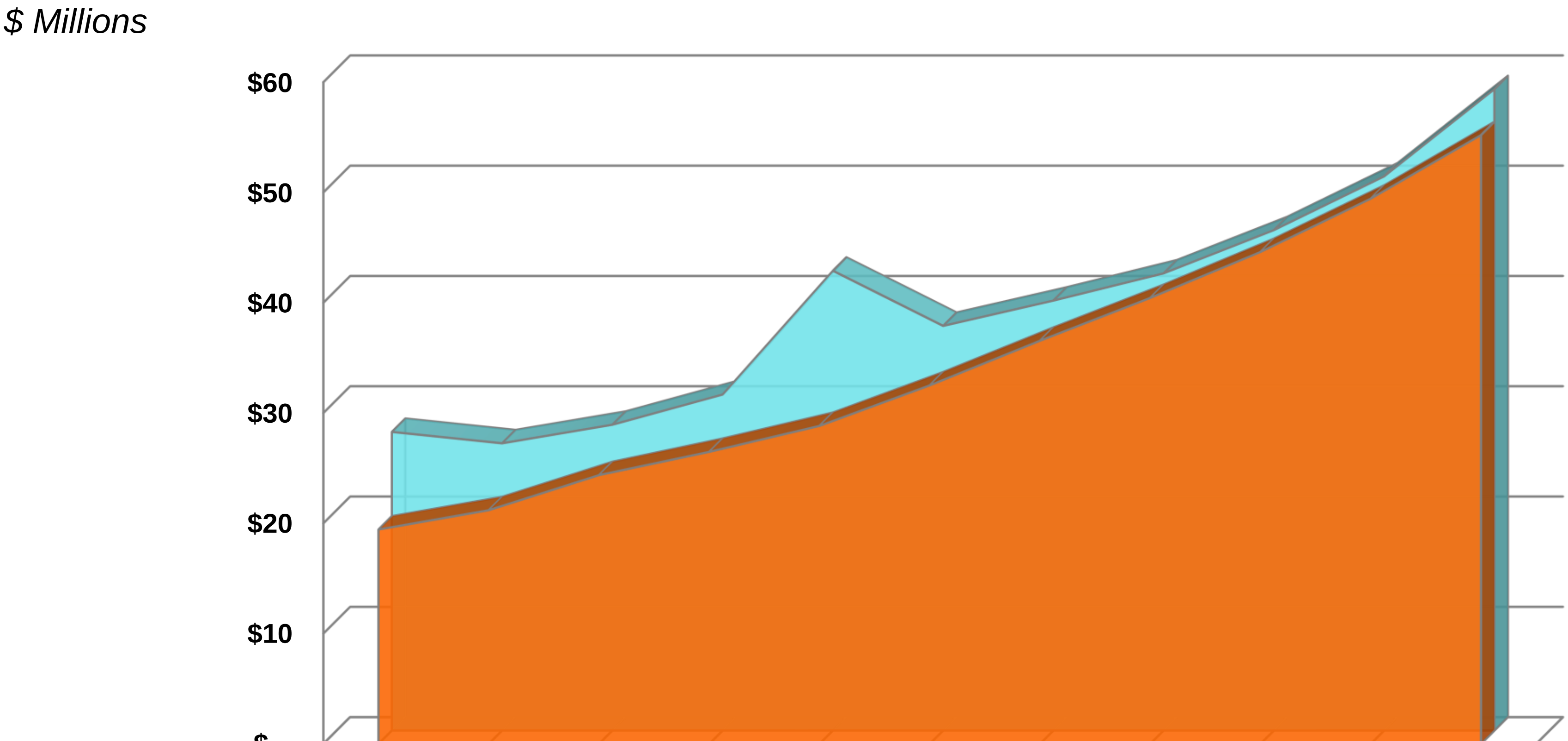
Investment Return Assumption, Comparison With Other Public Systems



For context, historical data is compared to 112 systems in the Public Plans Data* that cover local and municipal employees. The top marker represents the 2nd quartile (50th to 75th percentile) and the lower marker represents the 3rd quartile (25th to 50th percentile), where the middle line indicates the median.

* Public Plans Data. 2018-2023. Center for Retirement Research at Boston College, Mission Square Research Institute, and National Association of State Retirement Administrators.

Contributions vs. Benefits and Refunds

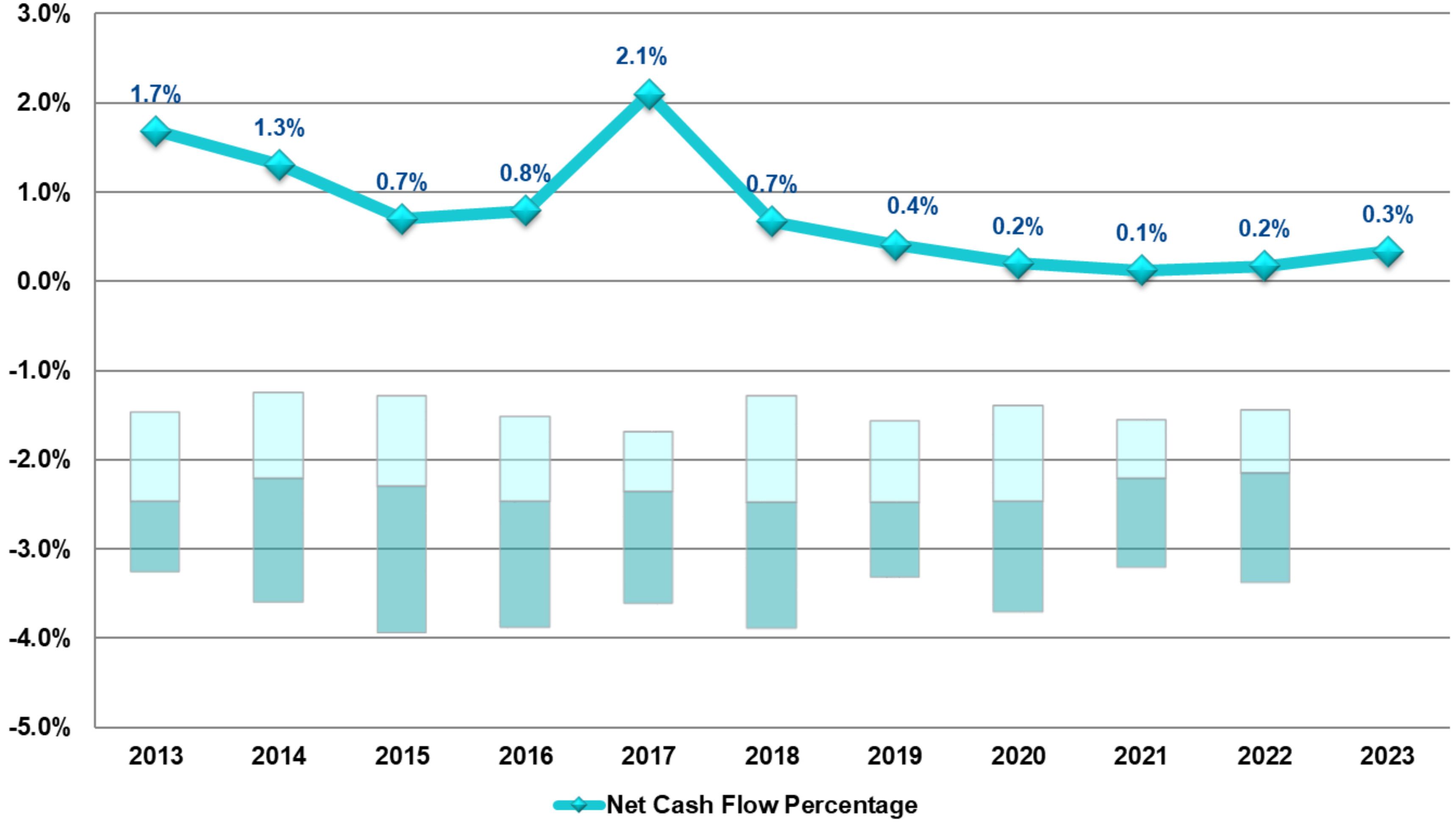


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Benefits & Refunds*	$19.4	$21.2	$24.4	$26.5	$28.8	$32.5	$36.6	$40.4	$44.6	$49.4	$55.2
Contributions**	$27.1	$26.0	$27.7	$30.5	$41.7	$36.7	$39.0	$41.5	$45.4	$50.2	$58.2

* Includes administrative expenses

** Includes member and employer contributions

Net Cash Flow as a % of Market Value, Comparison With Other Public Systems



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Segal

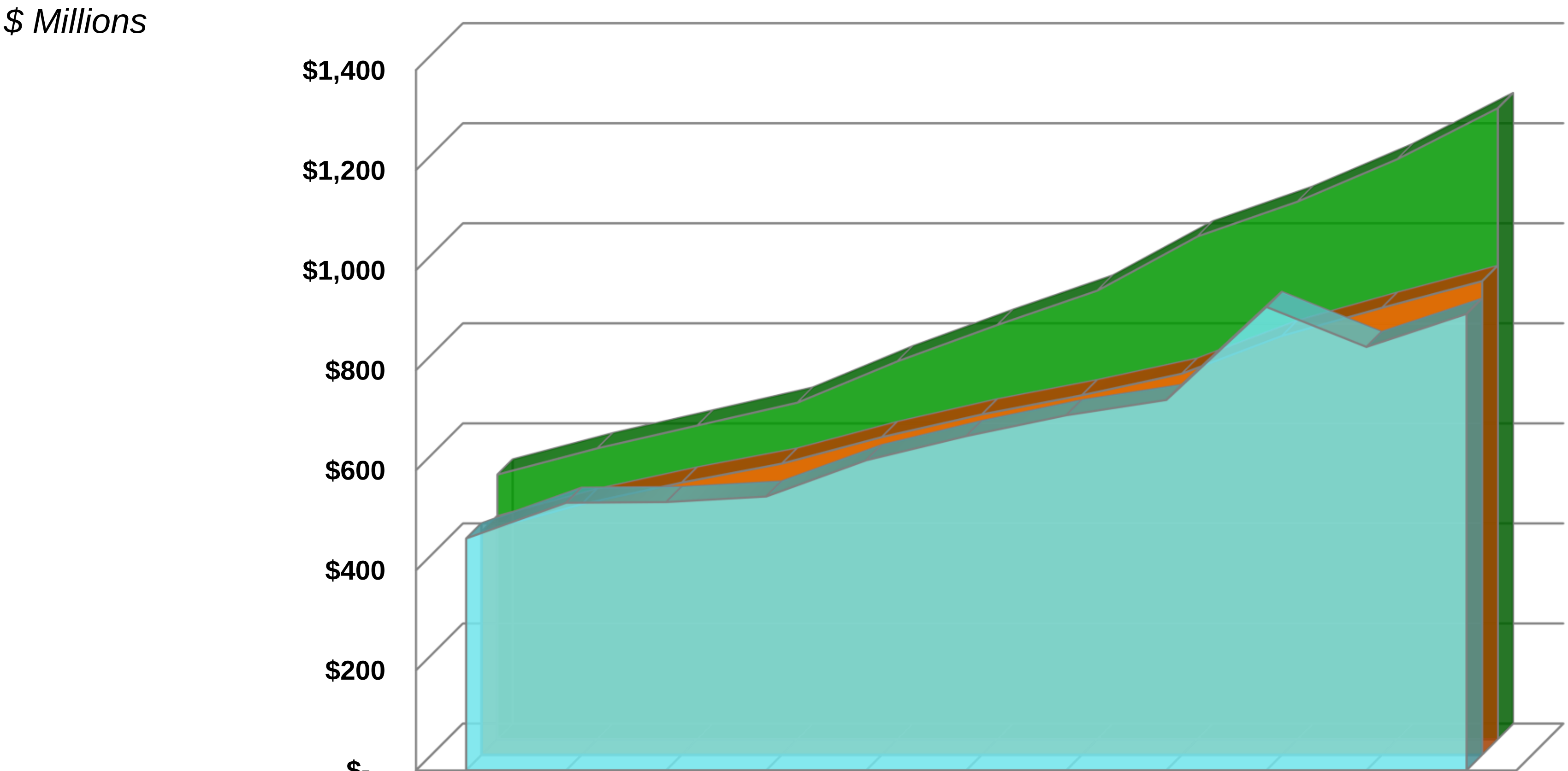
Valuation Results ($ in millions)

Valuation Results as of June 30

	2023	2022
Actuarial Accrued Liability:		
• Active Members	$579	$550
• Inactive Members	93	83
• Retirees and Beneficiaries	590	527
Total	$1,261	$1,159
Actuarial Value of Assets	946	893
Unfunded Accrued Liability	$315	$266
Funded Ratio	75.1%	77.1%
Market Value of Assets	$912	$846
Unfunded Liability, Market Basis	349	313
Funded Ratio, Market Basis	72.3%	73.0%

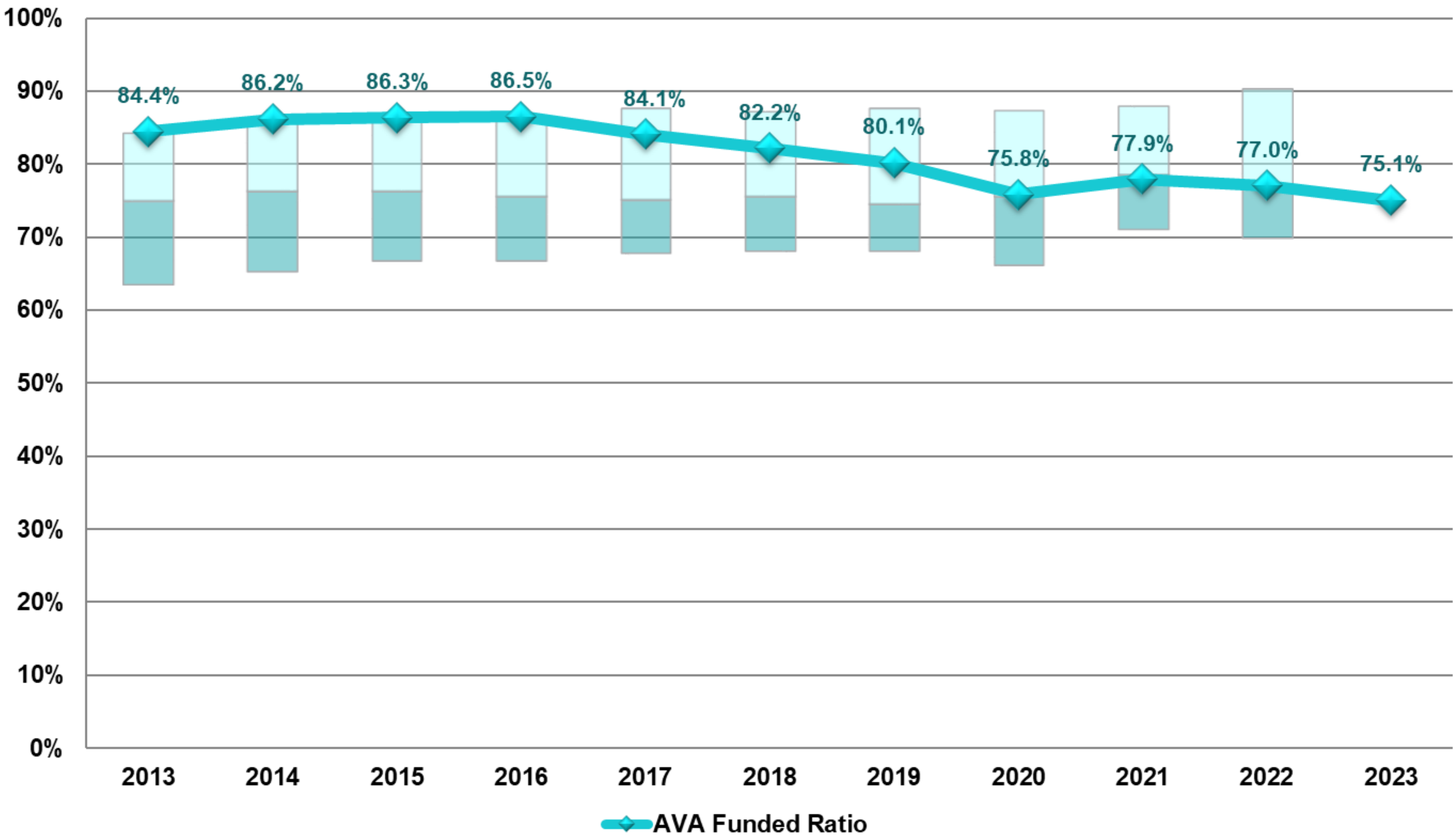
Note: numbers may not add due to rounding

Market and Actuarial Values of Assets Compared to Actuarial Accrued Liability



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Market Value of Assets	$463	$535	$536	$547	$620	$668	$709	$740	$926	$846	$912
Actuarial Value of Assets	$446	$501	$544	$582	$635	$680	$718	$762	$837	$893	$946
Actuarial Accrued Liability	$528	$581	$627	$672	$755	$828	$896	$1,005	$1,074	$1,159	$1,261

Funded Ratio, AVA Basis, Comparison With Other Public Systems



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Actuarially Determined Contribution

	For the Year Beginning	
	July 1, 2023	July 1, 2022
Normal Cost Rate*	12.20%	12.12%
Member Rate	−6.82%	−6.55%
Employer Normal Cost Rate	5.38%	5.57%
Amortization of UAAL	6.76%	6.03%
Preliminary Contribution Requirement	12.14%	11.60%

* Includes 0.45% in 2023 and 0.40% in 2022 for administrative expenses

Reconciliation of ADC from July 1, 2022, to July 1, 2023	
Expected change in amortization (payroll growth)	−0.41%
Contribution (more)/less than ADC	0.24%
Effect of investment (gain)/loss	0.27%
Effect of other (gain)/loss on accrued liability	0.68%
Effect of change in actuarial assumptions	0.03%
Net effect of other changes, including payroll	−0.27%
Total change	0.54%

FY25 ADC by Group

Actuarially Determined Contribution by Group for Fiscal Year Ending June 30, 2025

		Group A	Group B	Group C	Group D	Total
1	Normal contributions					
	(a) Member[1]	4.000%	6.375%	11.500%	12.850%	7.072%
	(b) Employer	3.917%	5.126%	6.241%	6.888%	5.127%
	(c) Total	7.917%	11.501%	17.741%	19.738%	12.199%
2	Payment on unfunded liability through June 30, 2038	3.833%	6.524%	10.792%	8.834%	6.761%
3	Actuarially determined contribution rate: **1b + 2**	7.750%	11.650%	17.033%	15.722%	11.888%
4	Current funding policy contribution rate	5.500%	7.000%	8.750%	11.350%	7.185%
5	Contribution excess/(shortfall): **4 – 3**	-2.250%	-4.650%	-8.283%	-4.372%	-4.703%

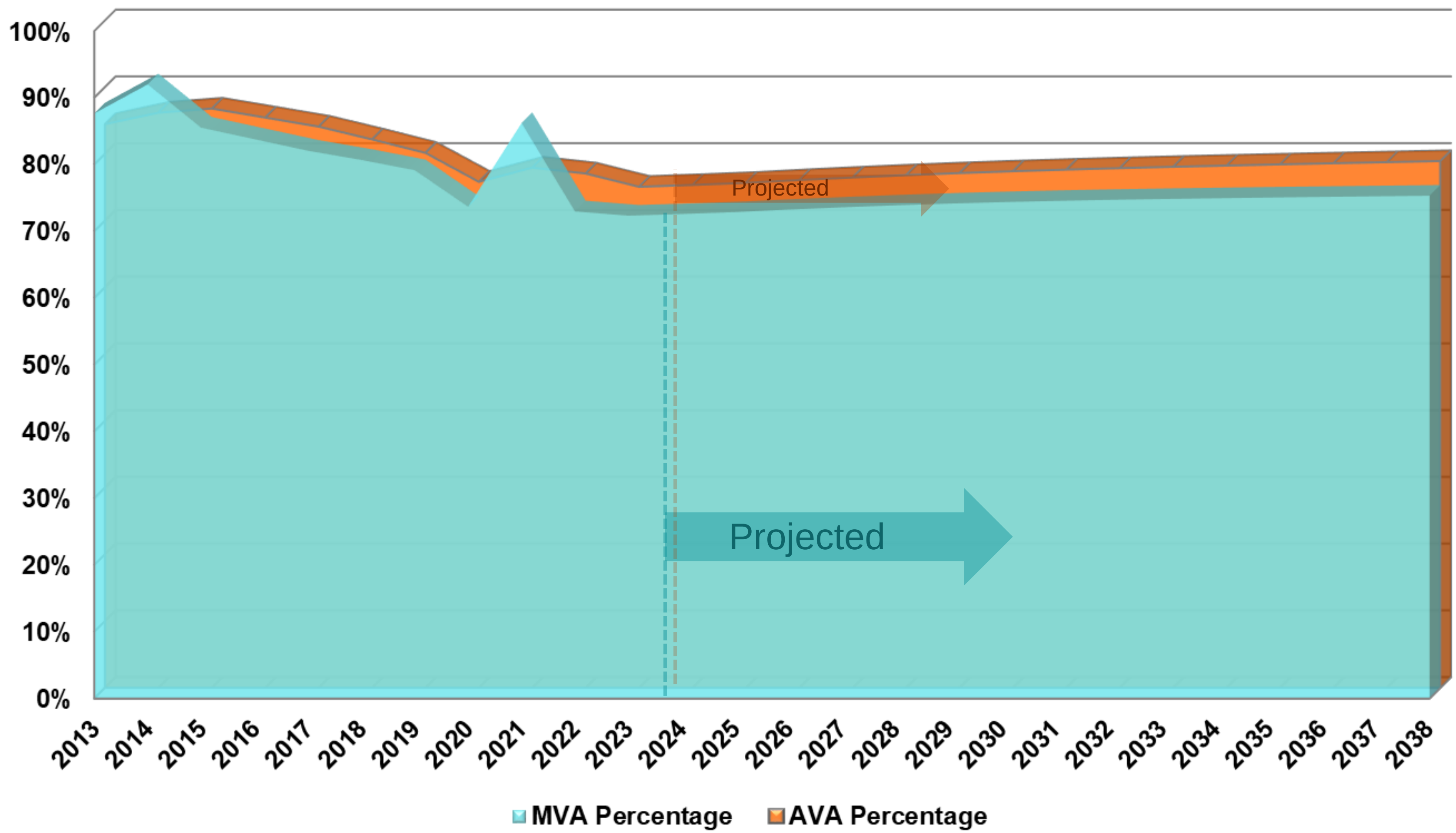
Member Contribution Rates:	• Group A	3.50% effective July 1, 2022; 3.75% effective July 1, 2023; 4.00% effective July 1, 2024; 4.25% effective July 1, 2025, and thereafter.
	• Group B	5.875% effective July 1, 2022; 6.125% effective July 1, 2023; 6.375% effective July 1, 2024; 6.625% effective July 1, 2025, and thereafter.
	• Group C	11.00% effective July 1, 2022; 11.25% effective July 1, 2023; 11.50% effective July 1, 2024; 11.75% effective July 1, 2025, and thereafter.
	• Group D	12.35% effective July 1, 2022; 12.60% effective July 1, 2023; 12.85% effective July 1, 2024; 13.10% effective July 1, 2025, and thereafter.
Employer Contribution Rates:	• Group A	5.00% effective July 1, 2022; 5.25% effective July 1, 2023; 5.50% effective July 1, 2024; 5.75% effective July 1, 2025, and thereafter.
	• Group B	6.50% effective July 1, 2022; 6.75% effective July 1, 2023; 7.00% effective July 1, 2024; 7.25% effective July 1, 2025, and thereafter.
	• Group C	8.25% effective July 1, 2022; 8.50% effective July 1, 2023; 8.75% effective July 1, 2024; 9.00% effective July 1, 2025, and thereafter.
	• Group D	10.85% effective July 1, 2022; 11.10% effective July 1, 2023; 11.35% effective July 1, 2024; 11.60% effective July 1, 2025, and thereafter.

Amortization Schedule

As of July 1	Balance	Amortization Payment	Projected Funded Percentage if Contributions are Based on Current Contribution Rates (Actuarial Value of Assets)*	Projected Funded Percentage if Contributions are Based on Current Contribution Rates (Market Value of Assets)*
2023	$314,507,491	$27,937,630	75.06%	72.34%
2024	307,624,106	28,775,759	75.33%	72.59%
2025	299,391,916	29,639,032	75.65%	72.87%
2026	289,690,497	30,528,203	76.08%	73.26%
2027	278,390,213	31,444,049	76.45%	73.59%
2028	265,351,551	32,387,371	76.80%	73.89%
2029	250,424,403	33,358,992	77.11%	74.15%
2030	233,447,302	34,359,761	77.39%	74.37%
2031	214,246,599	35,390,554	77.63%	74.55%
2032	192,635,587	36,452,271	77.86%	74.71%
2033	168,413,556	37,545,839	78.05%	74.84%
2034	141,364,787	38,672,214	78.24%	74.95%
2035	111,257,473	39,832,381	78.42%	75.05%
2036	77,842,561	41,027,352	78.59%	75.15%
2037	40,852,517	42,258,173	78.75%	75.24%
2038	0	0	78.91%	75.32%

* At the November 17, 2020, Board meeting, the Board voted unanimously to authorize employer contribution rate increases of 0.50% each year for a period of four years, beginning July 1, 2022. In 2022, the Legislature passed H.740, which included an increase in the employee rate of 0.25% for each group for four years, beginning July 1, 2022, effectively splitting the Board-authorized increase evenly between members and employers.

Funded Percentage Projections



* The projected AVA funded percentages shown above assume that the Actuarial Value of Assets earn 7.00% per year in each future year and do not reflect the $34 million deferred net investment losses as of the June 30, 2023, valuation date.

Five-Year History of Gain/(Loss)

Experience for the Year Ended June 30

$ Thousands	2023	2022	2021	2020	2019
Investments	−$11,215	−$2,913	$21,858	−$11,256	−$14,044
Admin expenses	252	145	N/A	N/A	N/A
Demographics					
• Turnover	−$1,402	$8,420	−$1,910	−$6,643	−$3,644
• Retirement	−7,724	−3,611	−2,674	−4,895	−6,418
• Mortality	−1,784	217	516	−3,822	−1,150
• Disability retirement	−252	−53	−193	−108	59
• Salary/service	−10,849	−10,248	1,670	5,013	1,849
• COLA experience	813	−7,224	−4,281	3,060	1,463
• Miscellaneous	−7,445	−5,611	408	−2,305	−4,408
• Subtotal	−$28,644	−$18,110	−$6,464	−$9,701	−$12,250
Total	**−$39,608**	**−$20,877**	**$15,394**	**−$20,957**	**−$26,294**

Note: numbers may not add due to rounding

Additional Disclosure

Low-Default-Risk Obligation Measure

- Recent revision to ASOP 4 requires the disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation
  - LDROM is required to be calculated using "*a discount rate…derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future*."
- As of June 30, 2023, the LDROM for VMERS is **$1.98 billion**, based on a discount rate of 3.65%*
  - This compares to the plan's actuarial accrued liability of $1.26 billion
  - The difference of $0.72 billion can be viewed as representing the expected savings from investing in the plan's diversified portfolio compared to investing only in low-default-risk securities
- In general, if plan assets were invested exclusively in low-default-risk securities, the funded status would be lower and the Actuarially Determined Contribution would be higher
  - While investing in a portfolio with low-default-risk securities may be more likely to reduce investment volatility and the volatility of employer contributions, it also may be more likely to result in higher employer contributions or lower benefits

* Based on the Bond Buyer General Obligation 20-year Municipal Bond Index Rate as published by The Bond Buyer on the closing date nearest June 30, 2023

Caveats

This presentation is based on the results of the June 30, 2023, actuarial valuation performed for the Board of Trustees of the Vermont Municipal Employees' Retirement System. The actuarial valuation report has information on the plan provisions, data, methods and assumptions used in the valuation. Use of the information in this presentation is subject to the caveats described in that document. The measurements in this presentation may not be appropriate for purposes other than those described in the actuarial valuation report.

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on our proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models and reviews test lives and results, under the supervision of the responsible actuary.

The actuarial calculations were directed under the supervision of Matthew A. Strom, FSA, MAAA, EA. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate. The investment return and inflation assumptions were selected by the Vermont Pension Investment Commission and the remaining actuarial assumptions were selected by the Board based on our analysis and recommendations. In my opinion, the assumptions are reasonable and take into account the experience of the Plan and reasonable expectations.