VERMONT STATE EMPLOYEES' RETIREMENT SYSTEM
Meeting of the Board of Trustees – Conference Call, Treasurer's Conference Room
October 19, 2023 – 8:30 a.m.

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

Members present:
ROGER DUMAS, Chair, VRSEA Representative (term expiring October 31, 2024)
ERIC DAVIS, VSEA Representative (term expiring September 30, 2025)
JEAN-PAUL ISABELLE, VSEA Representative (term expiring September 30, 2024) THOMAS MOZZER, VSEA Representative (term expiring September 30, 2024)
BETH FASTIGGI, Commissioner of Human Resources
ADAM GRESHIN, Commissioner of Finance and Management
JAY WISNER, Governor's Delegate position
ALLEN BLAKE, VRSEA Alternate Representative (term expiring October 31, 2024)

Members absent:
MICHAEL PIECIAK, VT State Treasurer
JOHN VORDER BRUEGGE, VSEA Alternate Representative (term expiring September 30, 2025)

Also attending:
Gavin Boyles, Deputy Treasurer, (*designated voting member on behalf of Treasurer Pieciak)
Tim Duggan, Director, Vermont Retirement Systems.
Nicole Weidman, Director of Retirement Operations and Policy, Retirement Division
Stephen Barry, Administrative Services Manager, Retirement Division
Justin St. James, General Counsel, Vermont State Treasurer's Office
Jeramiah Breer, Chief Financial Officer, Vermont State Treasurer's Office
Scott Baker, Director of Financial Reporting, Vermont State Treasurer's Office
Nicolas Kramer, Budget & Management Analyst, Department of Finance and Management
Kathleen Riley, Segal Consulting
Matthew Strom, Segal Consulting
Austin Miller, Segal Consulting
Patryk Tabernacki, Segal Consulting

The Chair, Roger Dumas, called the Thursday, October 19, 2023 meeting to order at 8:31 a.m., which was held by conference call.

ITEM 1: Agenda approval and announcements

On a motion made by Mr. Isabelle, seconded by Mr. Davis, the Board voted unanimously to approve the agenda.

ITEM 2: **Approve the Minutes of:**

- October 12, 2023

On a motion made by Mr. Isabelle, seconded by Mr. Wisner, the Board voted unanimously to approve the minutes.

ITEM 3: **VSERS Actuarial Valuation 2023**

Segal Consulting presented the 2023 Actuarial Valuation for the Vermont State 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 increase to the Normal Cost and timing of contributions. Mr. Wisner asked about whether the ADEC obligation is based on the percentage of payroll or the dollar amount that the Board certifies. Mr. Duggan confirmed that the obligation is the dollar amount and that staff works closely with Mr. Greshin's team and Finance and Management to ensure that obligation is met.

On a motion made by Mr. Wisner, seconded by Mr. Isabelle, the Board voted unanimously to accept the 2023 VSERS Actuarial Report as presented by Segal Consulting.

On a motion made by Mr. Wisner, seconded by Mr. Boyles, pursuant to 3 V.S.A. § 473(c)(8), the Board voted unanimously to certify the FY25 actuarially determined employer contribution (ADEC) of $131,346,935, and the additional required FY25 payment of $12,000,000.

On a motion made by Mr. Wisner, seconded by Mr. Isabelle, pursuant to 3 V.S.A. § 471(n), the Board voted unanimously to recommend to the Governor and General Assembly that the ADEC of $131,346,935 be fully funded and appropriated in the next fiscal year in order to achieve and preserve the financial integrity of the fund, and that the additional required FY25 payment of $12,000,000 also be fully funded and appropriated.

Link: [2023 VSERS Actuarial Valuation]

ITEM 4: **Adjournment**

Mr. Davis asked for confirmation about a possible budget surplus from FY23 that would be partially allocated to the State Retirement Fund. Mr. Greshin confirmed that there was no budget surplus in FY23.

On a motion made by Mr. Isabelle, seconded by Mr. Davis, the Board voted unanimously to adjourn at 9:48 a.m.

Next Meeting Date:

The next regularly scheduled VSERS Board meeting is on November 9, 2023 at 9:00 a.m.

Respectfully submitted,

Stephen Barry
Secretary to the Board

Vermont State 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 State 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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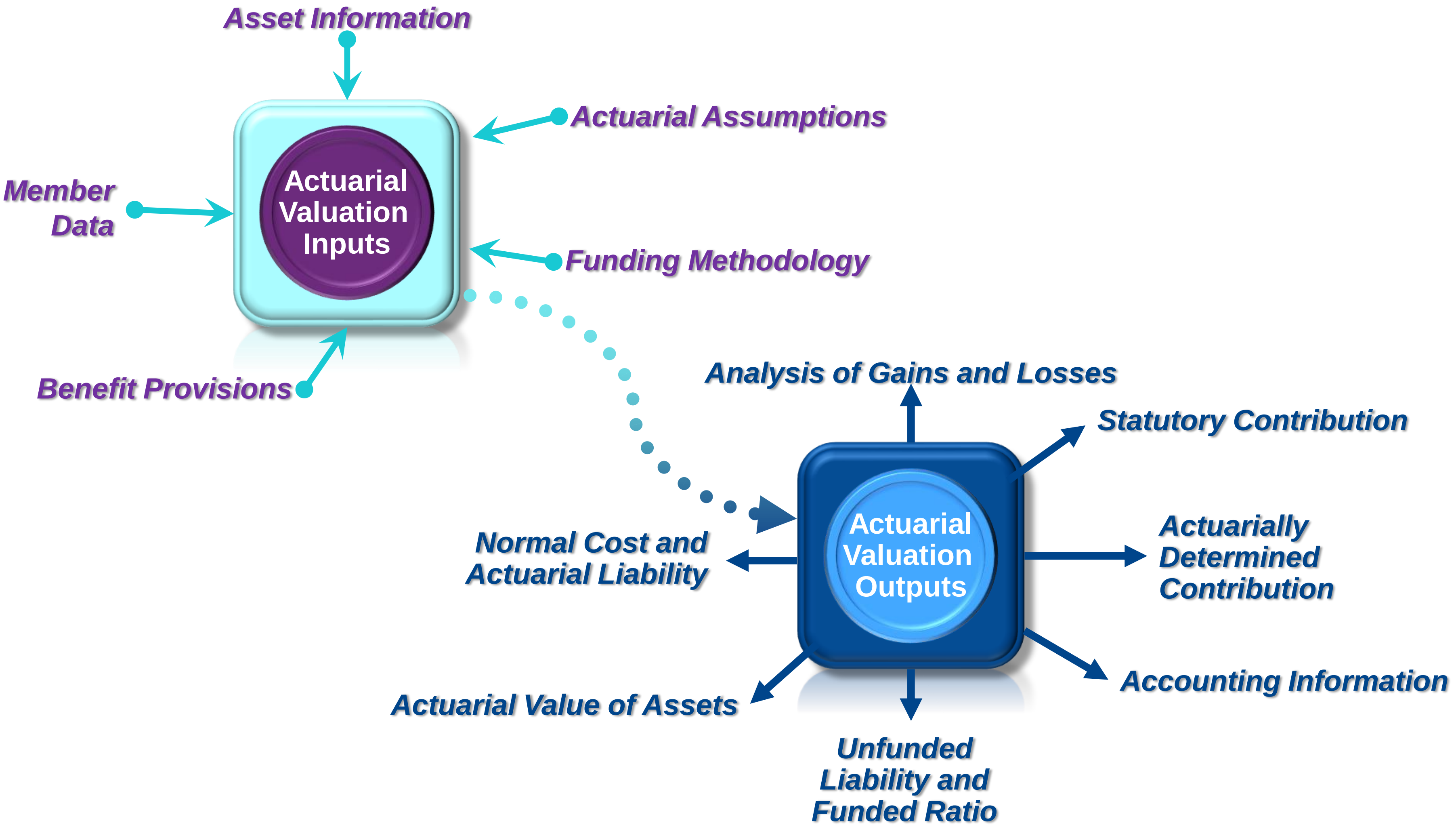
Segal

Agenda

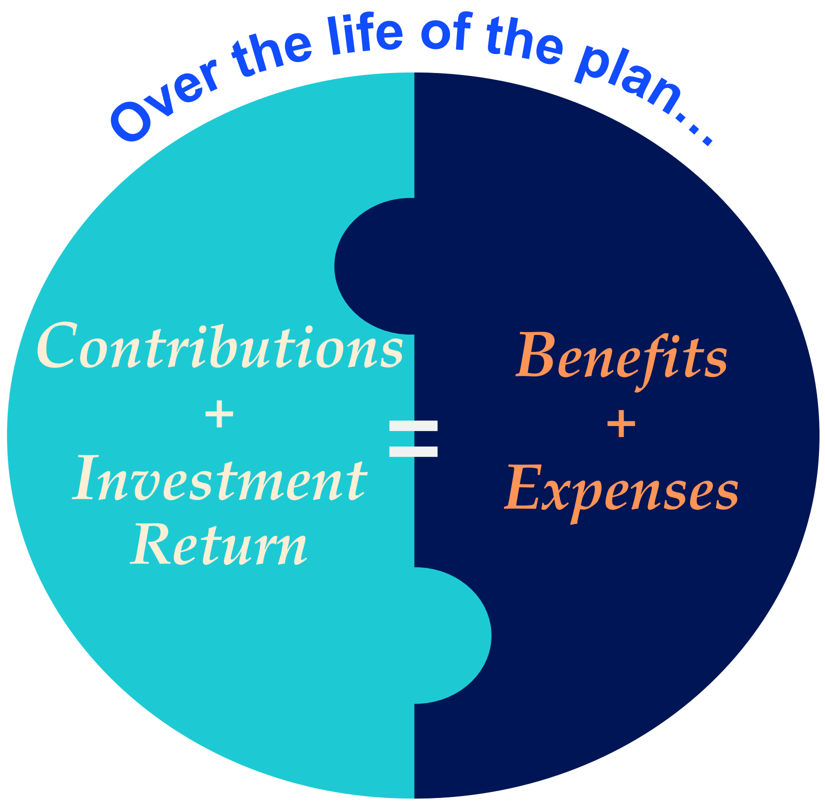
Overview of Valuation Process

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 – 6.4% for new members to 3.8% for members with 37+ years of service
- COLA* – ranges from 1.10% to 2.35% depending on Group, retirement date, and age first eligible for unreduced retirement

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% or 2.20%, depending on Group, retirement date, and age first eligible for unreduced retirement.

Actuarial Methods

Asset Valuation Method

- Investment gains and losses recognized over a number of years
- VSERS recognizes 20% of the difference between expected and actual returns in the current year
- A 20% market value corridor is applied – actuarial value of assets must fall within 80% to 120% of market value

Actuarial Cost Method

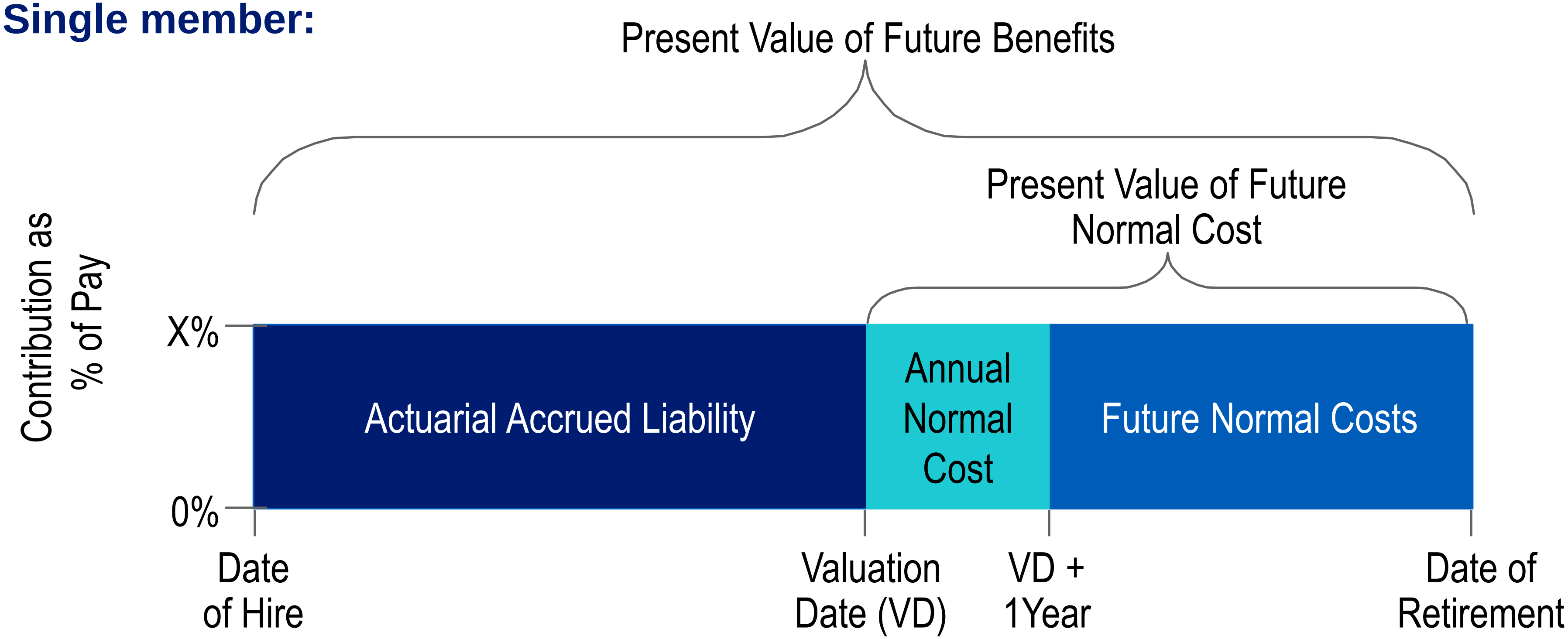
- Allocation of liability to past and future service
- VSERS uses the entry age normal cost method
  - Allocates cost of member's retirement benefit over expected career as a level % of salary
  - Most common cost method among public sector retirement systems
  - Required by GASB for financial statement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

Amortization Method

- Relies on two inputs:
  - Number of years to amortize the UAL
  - Level dollar or level percentage of payroll approach
- VSERS' amortization method:
  - Closed period ending on June 30, 2038
  - 15 years remaining
  - Payments calculated to increase by 3% per year

Funding Process

Single member:

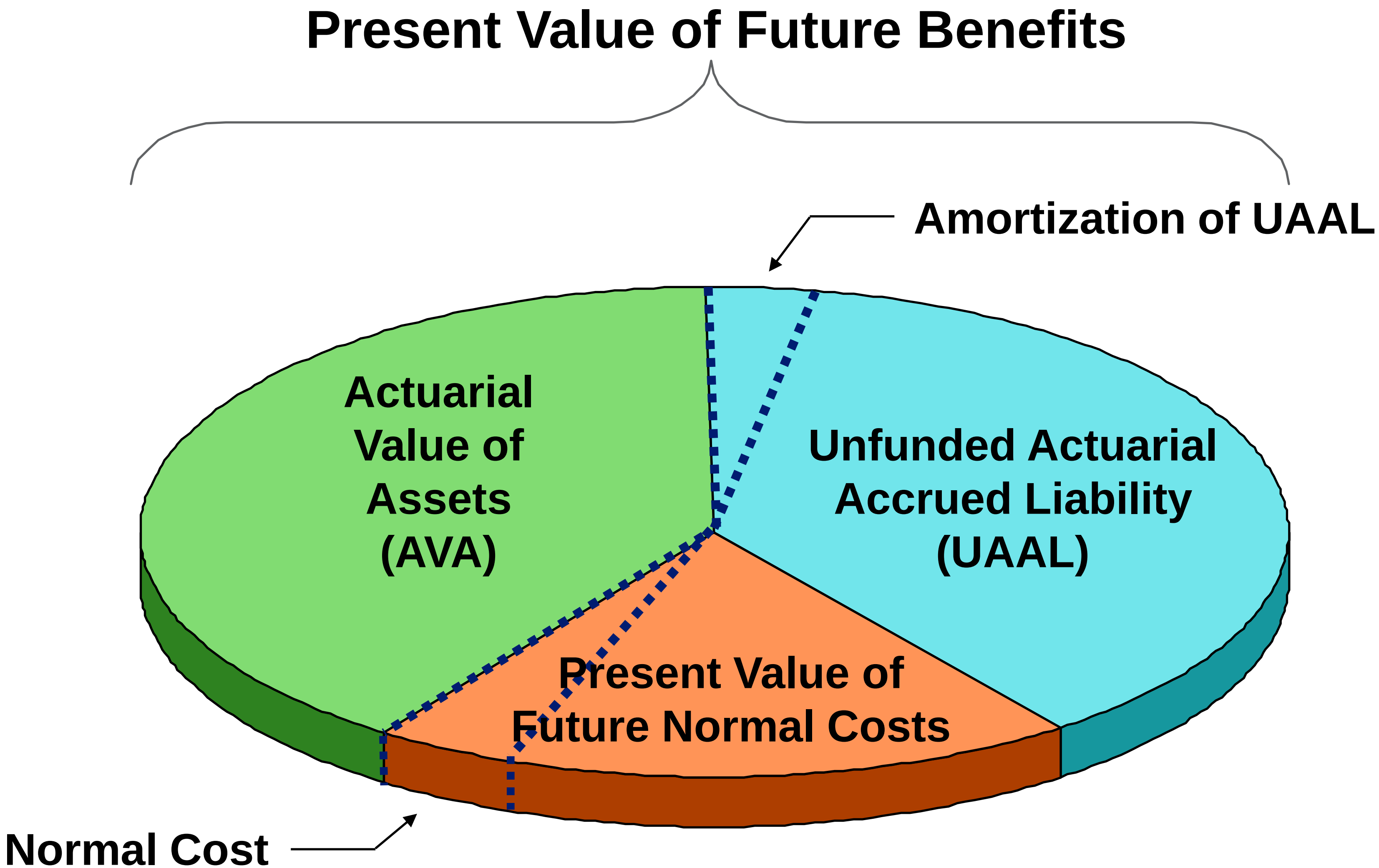


Entry Age cost method: Allocates cost between past and future service

- **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 **7.58%***
  - Gradual recognition of deferred losses resulted in **5.95%** return on the actuarial value of assets
- Act 114 included changes that impacted member contributions beginning in FY23
  - Contribution rates vary based on hourly salary quartile
- The Board approved changes to actuarial assumptions effective June 30, 2023
  - Changes resulted in a net increase in actuarial liability of **$13.3 million**
- Funded ratio (actuarial basis) increased from 69.85% (as of 6/30/2022) to **70.31%**
- Net impact on the preliminary contribution requirement was an increase from 19.99% of payroll to **20.06%** of payroll
  - In terms of dollars, the preliminary contribution requirement increased from $120.8 million for fiscal 2023 to $131.1 million for fiscal 2024
- The estimated fiscal 2025 contribution for budget purposes is **$131.3 million**

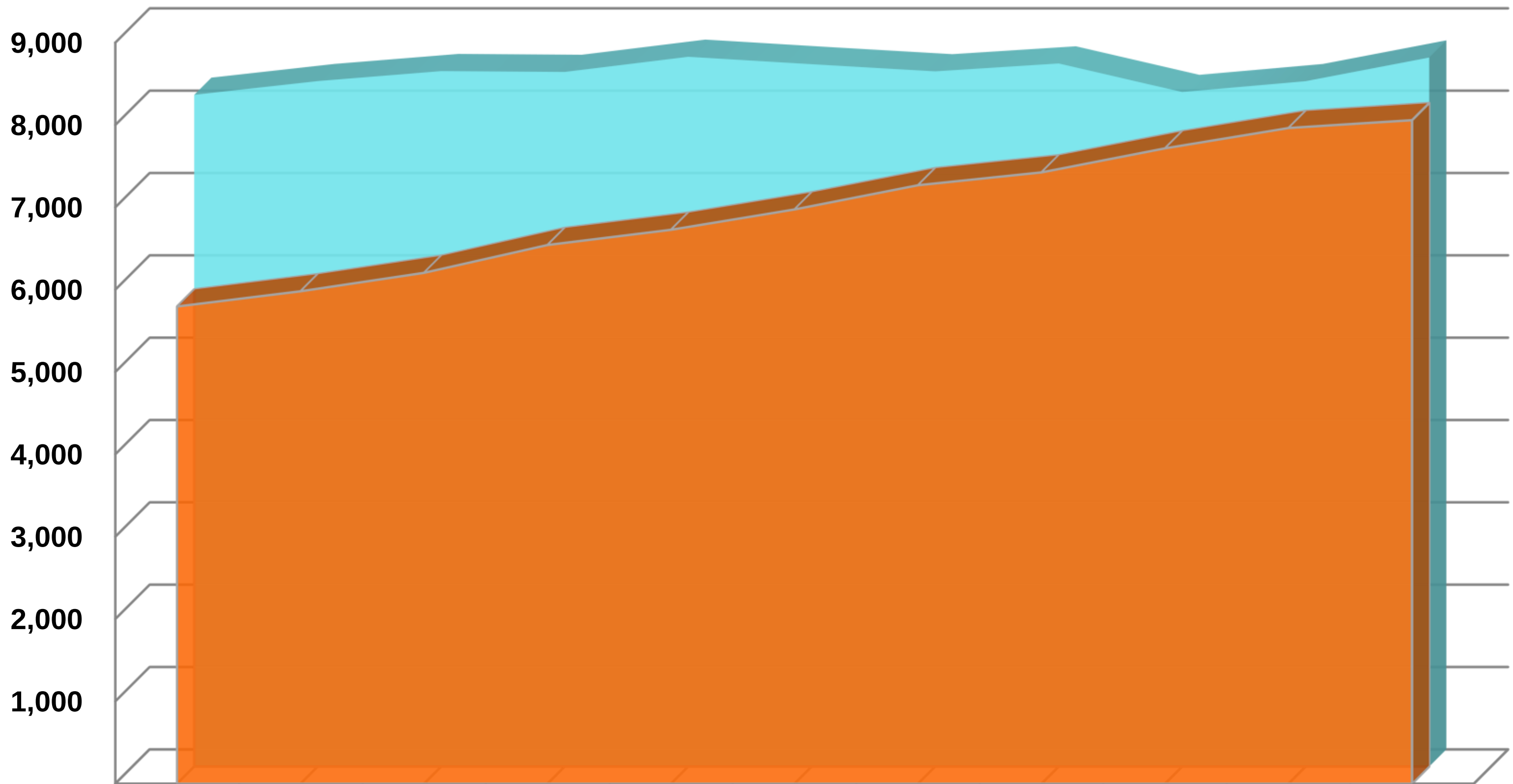
* Based on Segal calculation, which may differ slightly from the rate determined by the VPIC Investment Advisor for various reasons (e.g., cash flow timing)

Membership

Membership information as of June 30

	2023	2022	Change
Actives			
• Number	8,611	8,324	+3.4%
• Payroll (annualized)	$621.3 mil	$577.0 mil	+7.7%
• Average Age	45.1 years	45.3 years	−0.2 years
• Average Service	10.2 years	10.4 years	−0.2 years
Retirees and Beneficiaries			
• Number	8,058	7,963	+1.2%
• Total Annual Benefits	$186.4 mil	$175.3 mil	+6.3%
• Average Monthly Benefit	$1,928	$1,835	+5.1%

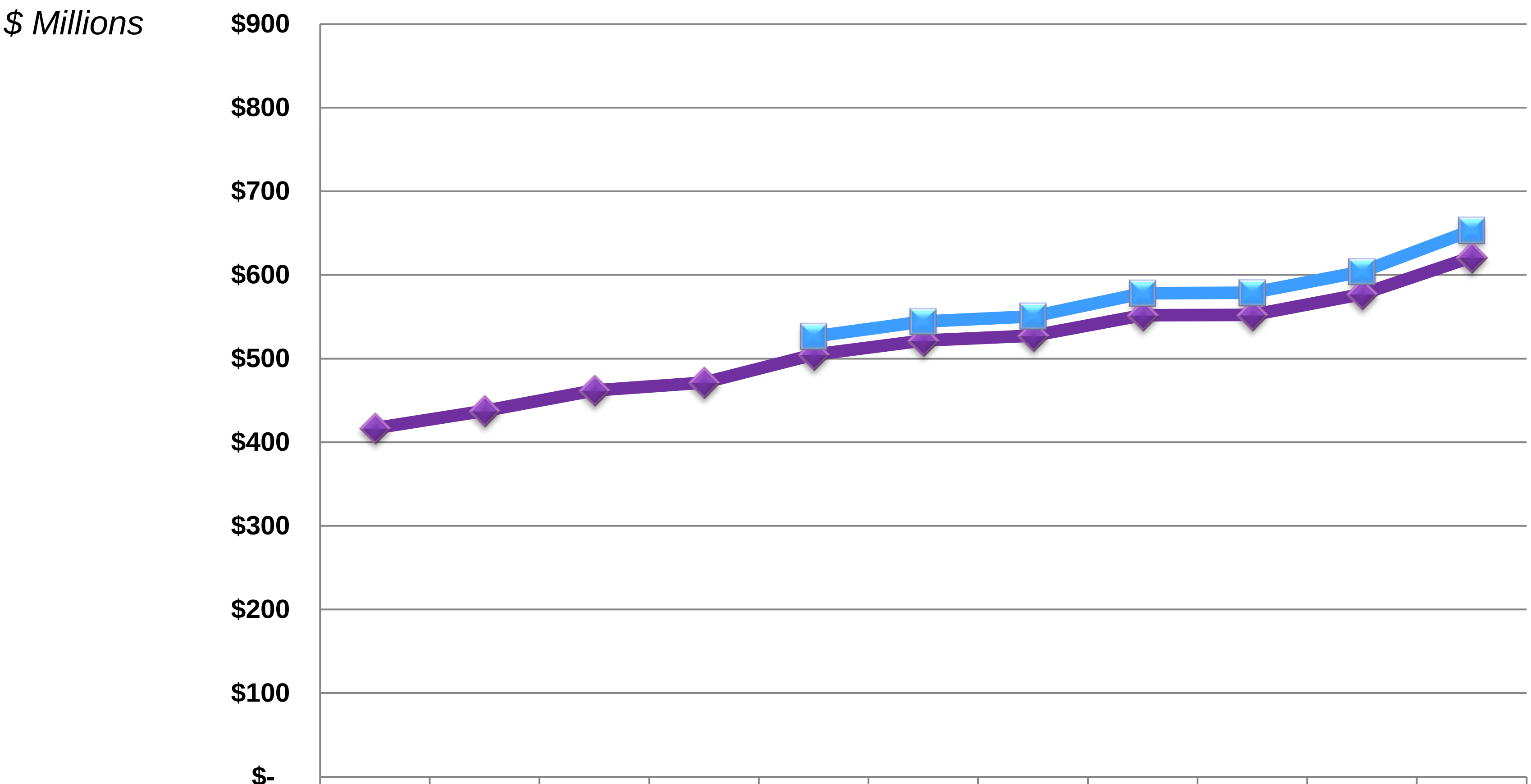
Active and Retired Membership



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Retired Members	5,795	5,980	6,204	6,542	6,727	6,974	7,268	7,424	7,716	7,963	8,058
Active Members	8,158	8,325	8,446	8,436	8,620	8,530	8,443	8,539	8,192	8,324	8,611

Active membership increased to a peak of 8,620 in 2017.
The active count in 2023 is close to reaching that level again.

Active Payroll



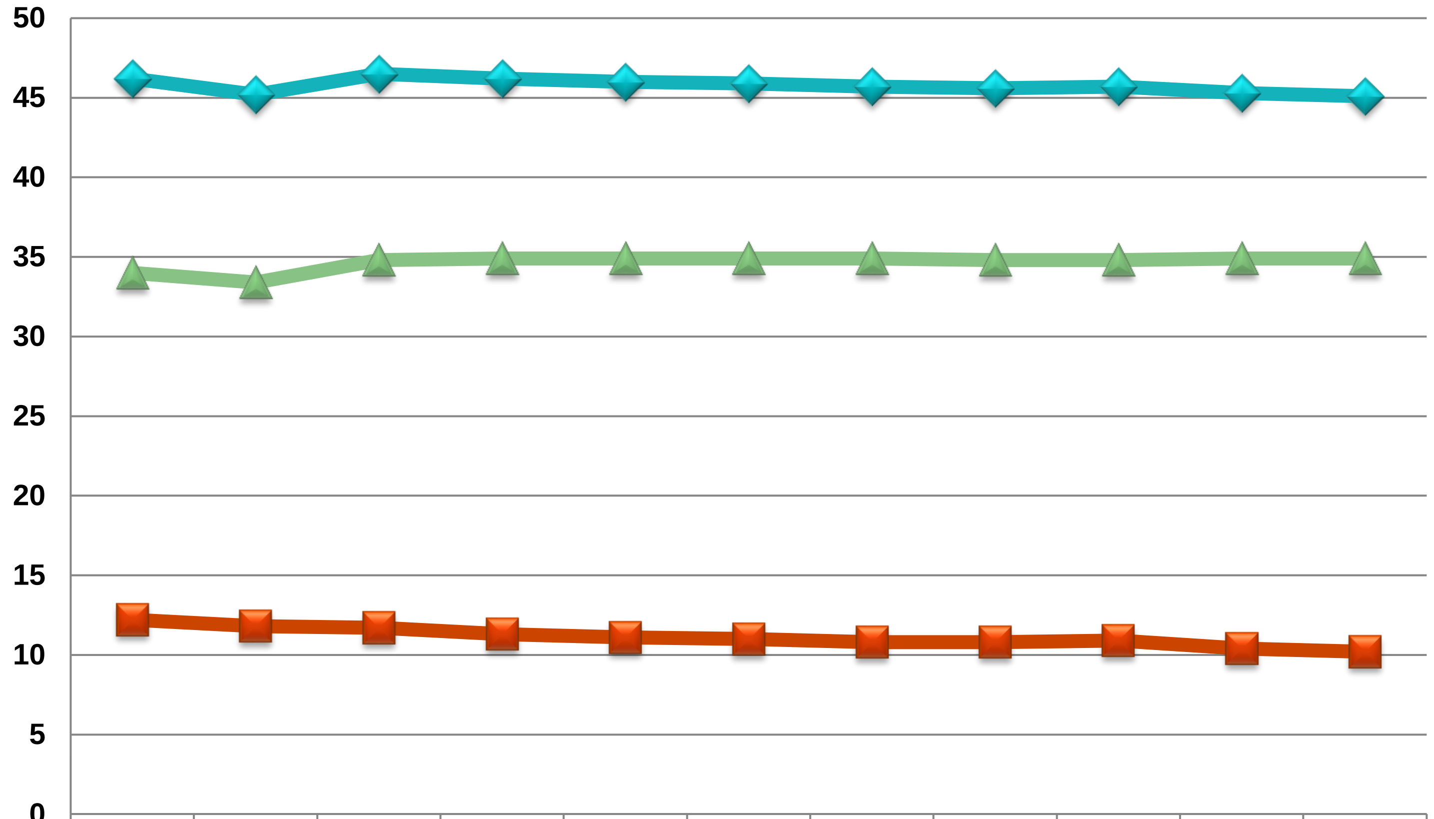
	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Covered Payroll*	$416.8	$437.7	$462.1	$471.3	$504.6	$521.7	$527.6	$552.0	$552.3	$577.0	$621.3
Projected Payroll**					$526.4	$544.4	$550.5	$578.2	$578.7	$604.1	$653.2

*Prior year

**Upcoming year

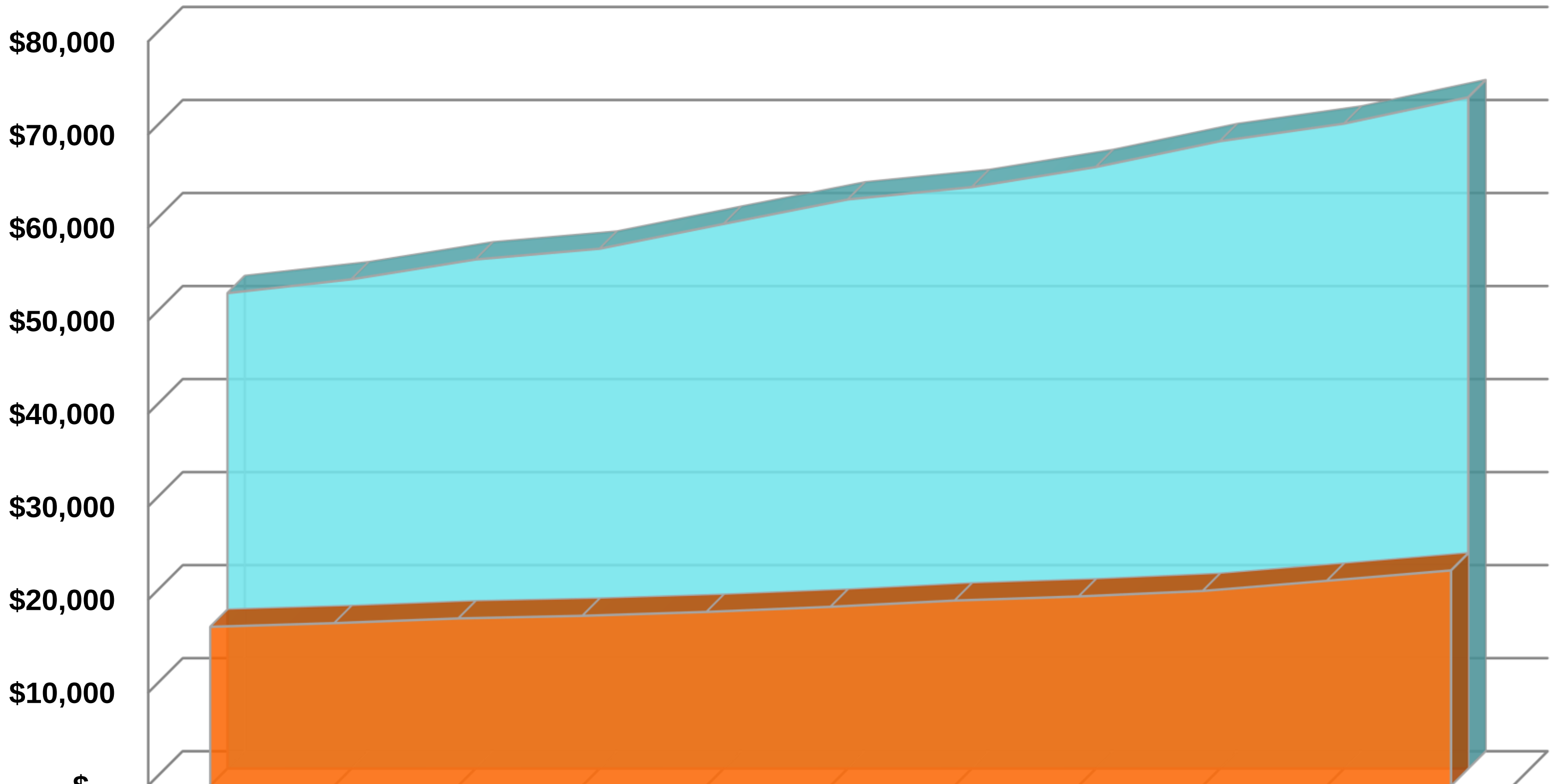
Since 2013, active payroll has increased, on average, 4.1% per year.

Average Age and Service of Active Members



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Average Age	46.2	45.2	46.5	46.2	46.0	45.9	45.7	45.6	45.7	45.3	45.1
Average Service	12.2	11.8	11.7	11.3	11.1	11.0	10.8	10.8	10.9	10.4	10.2
Average Hire Age	34.0	33.4	34.8	34.9	34.9	34.9	34.9	34.8	34.8	34.9	34.9

Average Salary and Average Benefit (Annual Amounts)



	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Average Benefit	$17,072	$17,467	$17,975	$18,255	$18,675	$19,225	$19,896	$20,336	$20,927	$22,019	$23,135
Average Salary	$51,087	$52,574	$54,707	$55,864	$58,533	$61,157	$62,486	$64,642	$67,421	$69,312	$72,147

Since 2013, average salary has increased, on average, 3.5% per year, and the average annual benefit has increased, on average, 3.1% per year.

Assets

- The market value of assets increased from $2.28 billion (as of 6/30/2022) to $2.42 billion (as of 6/30/2023)
  - Segal estimated the investment return at 7.58%, net of investment expenses
- The actuarial value of assets, which smooths investment gains and losses over a period of five years, increased from $2.41 billion (as of 6/30/2022) to $2.52 billion (as of 6/30/2023)
  - Return of 5.95%, net of investment expenses
  - Compared to the assumption of 7.00%
  - Actuarial value is 104.1% of market
  - There is a total of $100 million of deferred net investment losses that will be recognized in future years
- Average annual returns are:

	Actuarial Value	**Market Value**
5-year average	6.8%	6.3%
10-year average	6.9%	6.4%
15-year average	6.1%	6.2%
20-year average	6.4%	6.6%

Market Value of Assets ($ in millions)

For Fiscal Year Ending June 30

	2023	2022
Beginning of Year	$2,277	$2,425
Contributions:		
• Employer*	115	196
• Member	49	45
• Total	$164	$241
Benefits and Refunds	−186	−174
Investment Income (net)	169	−215
End of Year	$2,423	$2,277
Rate of Return	7.58%	−8.66%

* Net of administrative expenses, but including net other income

Note: numbers may not add due to rounding

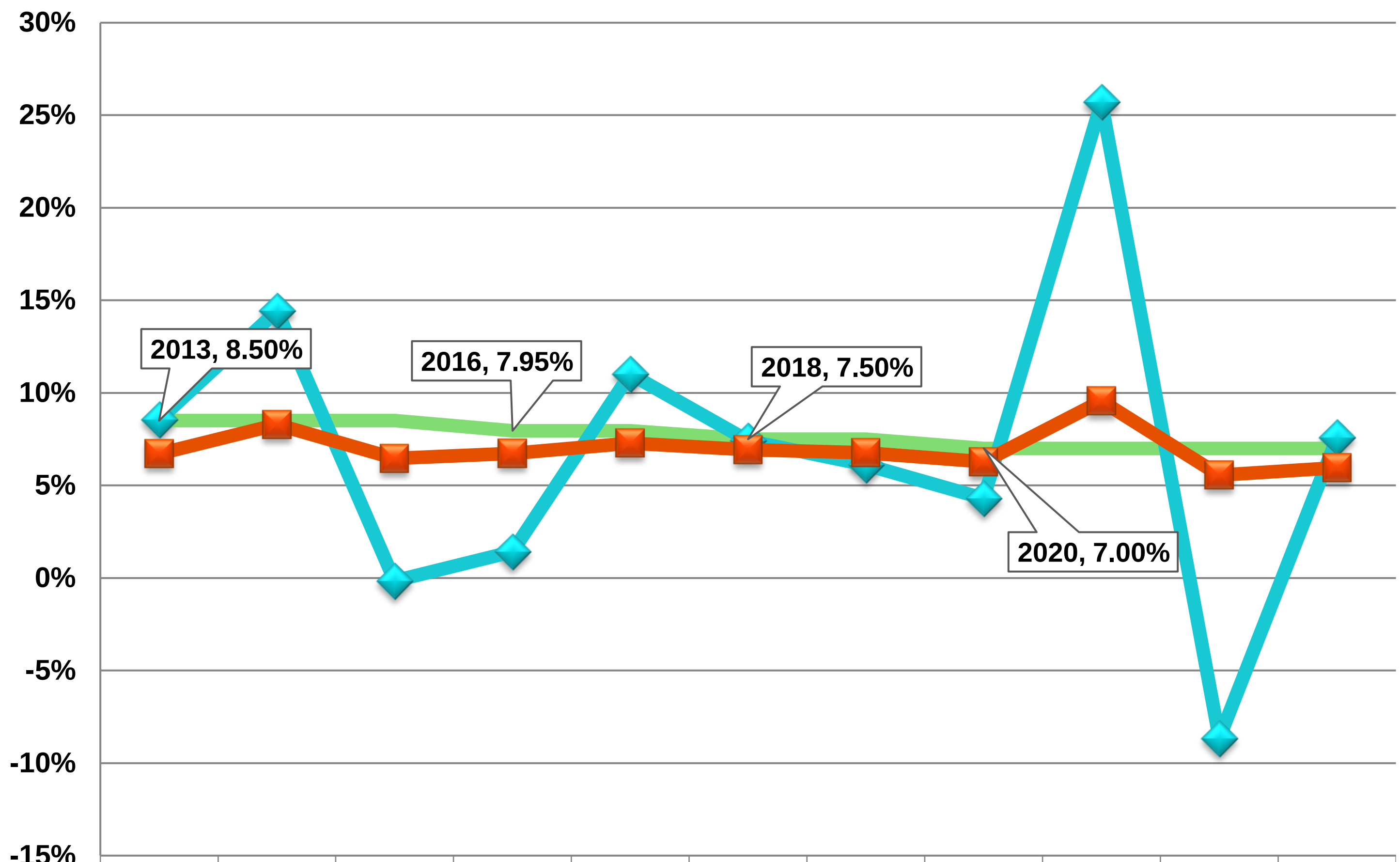
Actuarial Value of Assets ($ in millions)

For Fiscal Year Ending June 30

	2023	
1. Prior Year Actuarial Value		$2,406
2. Net New Money, Including Expected Investment Income		143
3. Preliminary Asset Value: **1 + 2**		$2,548
4. Smoothing Adjustment:		
a. Market Value of Assets	$2,423	
b. Preliminary Asset Value	2,548	
c. Unrecognized Appreciation: **a − b**	−$125	
d. Adjustment	20%	−25
5. Actuarial Value of Assets: **3 + 4d**		$2,523
6. Actuarial Value as a Percentage of Market Value: **5 ÷ 4a**		104.1%

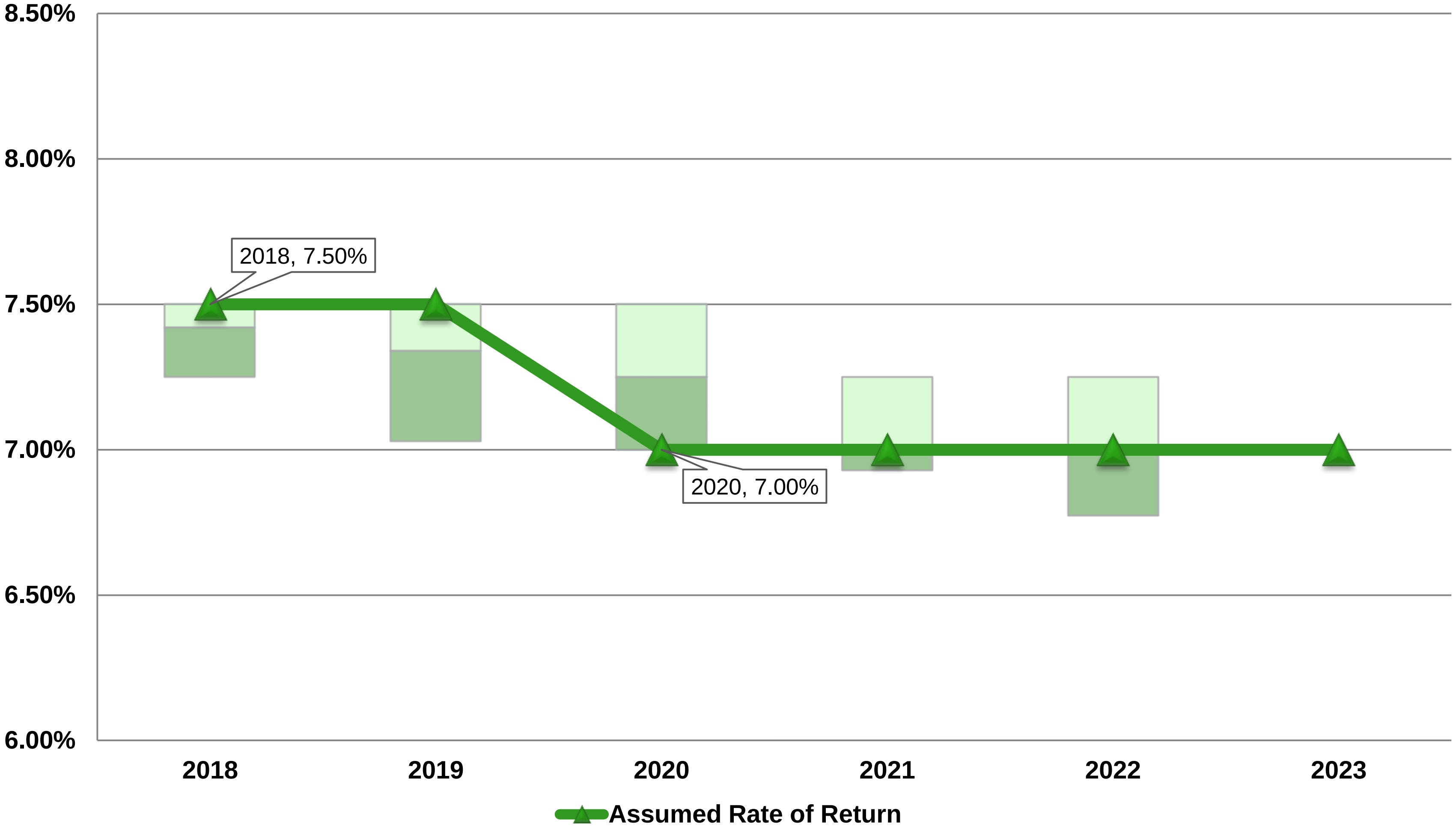
Note: numbers may not add due to rounding

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	8.6%	14.4%	-0.2%	1.4%	11.0%	7.4%	6.1%	4.3%	25.7%	-8.7%	7.6%
Actuarial Value of Assets	6.7%	8.3%	6.5%	6.7%	7.3%	6.9%	6.8%	6.3%	9.6%	5.6%	6.0%

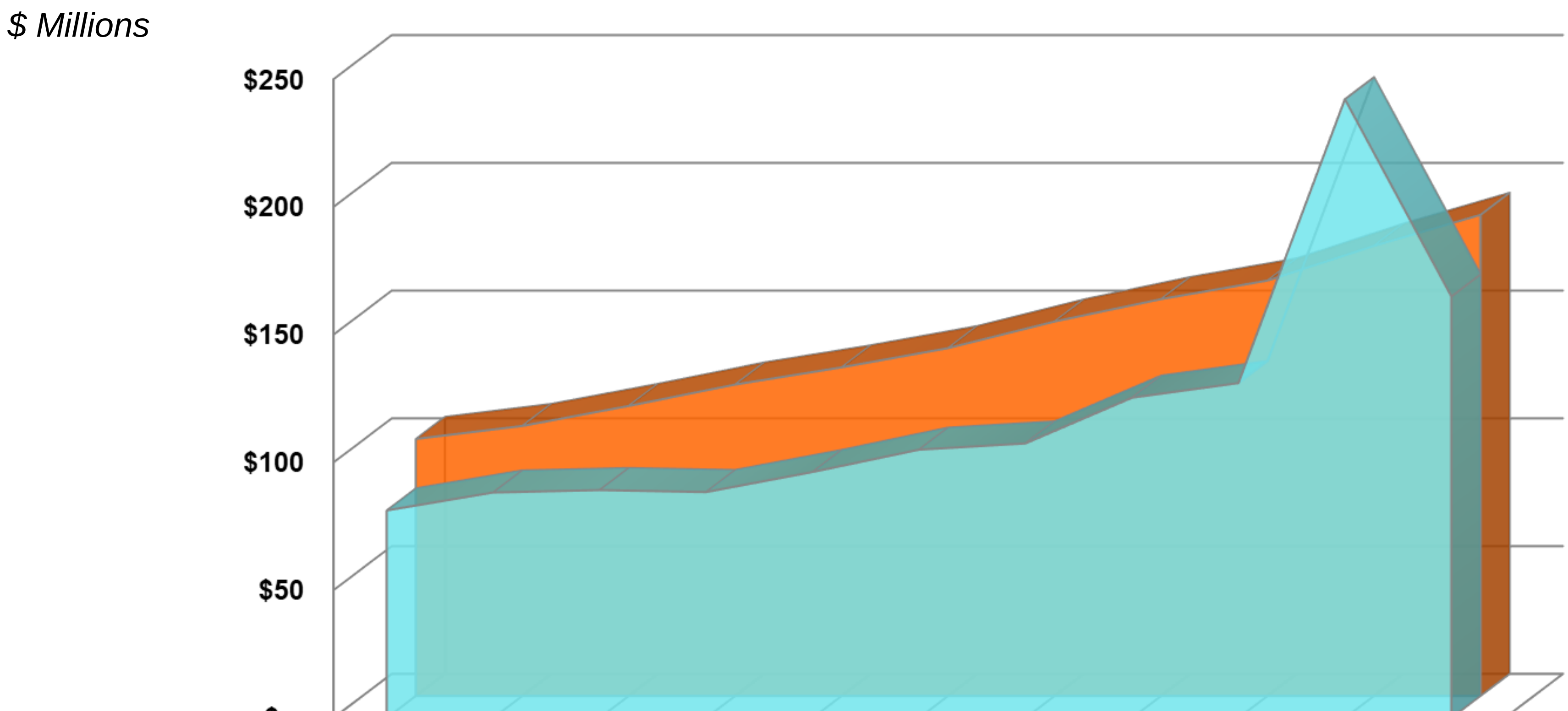
Investment Return Assumption, Comparison With Other Public Systems



For context, historical data is compared to 55 systems in the Public Plans Data* that primarily cover state 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

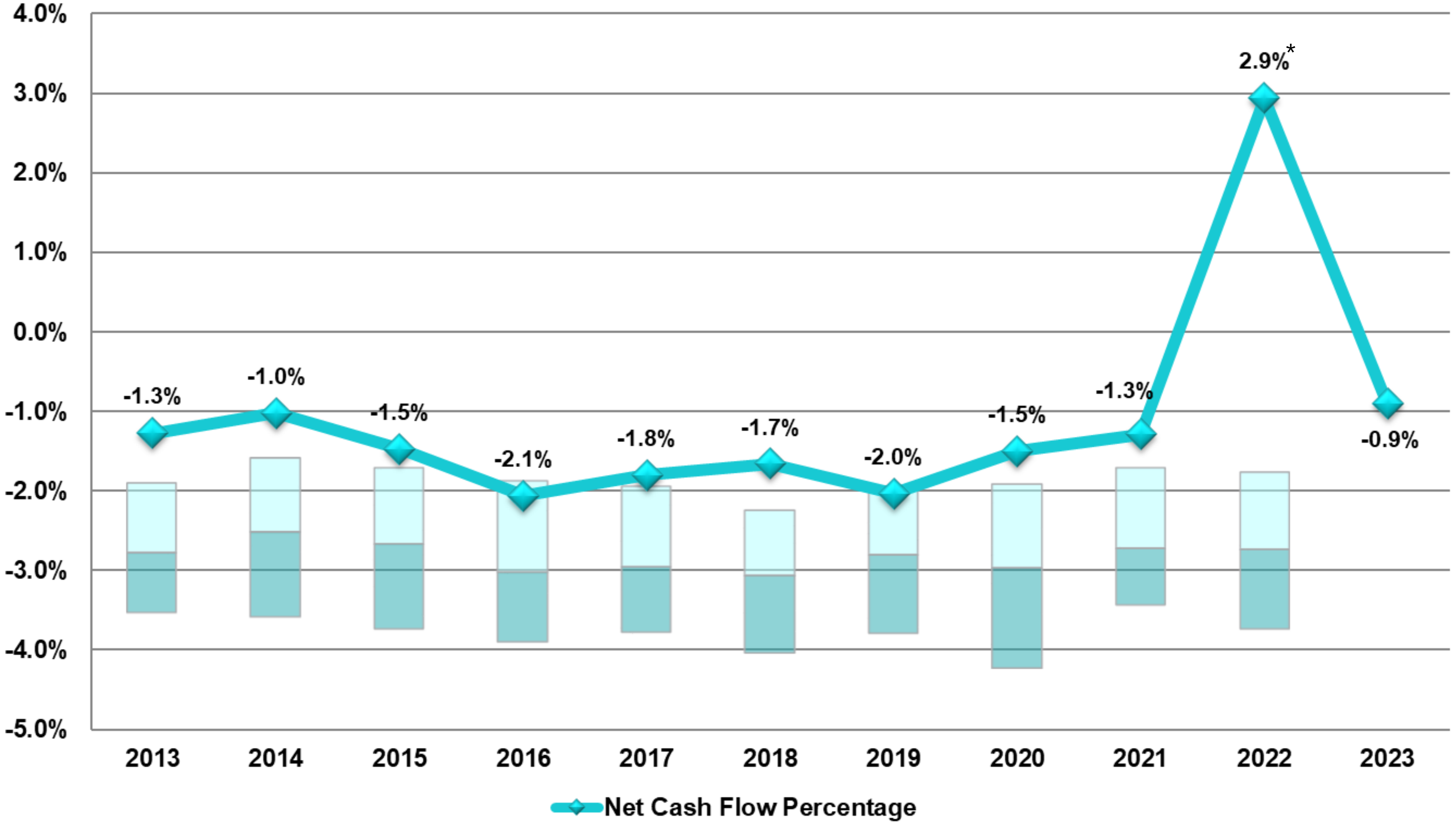


	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Contributions*	$81.2	$88.2	$89.2	$88.4	$96.2	$105.0	$107.4	$125.3	$131.1	$242.2	$165.0
Benefits & Refunds**	$100.6	$105.7	$113.5	$121.9	$128.6	$136.1	$146.5	$155.3	$162.6	$176.1	$188.3

* Includes member and employer contributions along with additional State contributions from Act 114 in 2022 and beyond.

** Includes administrative expenses, and depreciation and health/life insurance expenses (2014 and prior).

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



***2022 net cash flow includes additional State contributions from Act 114.**

For context, historical data is compared to 55 systems in the Public Plans Data* that primarily cover state employees. The top marker represents the 2^{nd} quartile (50^{th} to 75^{th} percentile) and the lower marker represents the 3^{rd} quartile (25^{th} to 50^{th} percentile), where the middle line indicates the median.

* Public Plans Data. 2013-2023. Center for Retirement Research at Boston College, Mission Square Research Institute, and National Association of State Retirement Administrators.

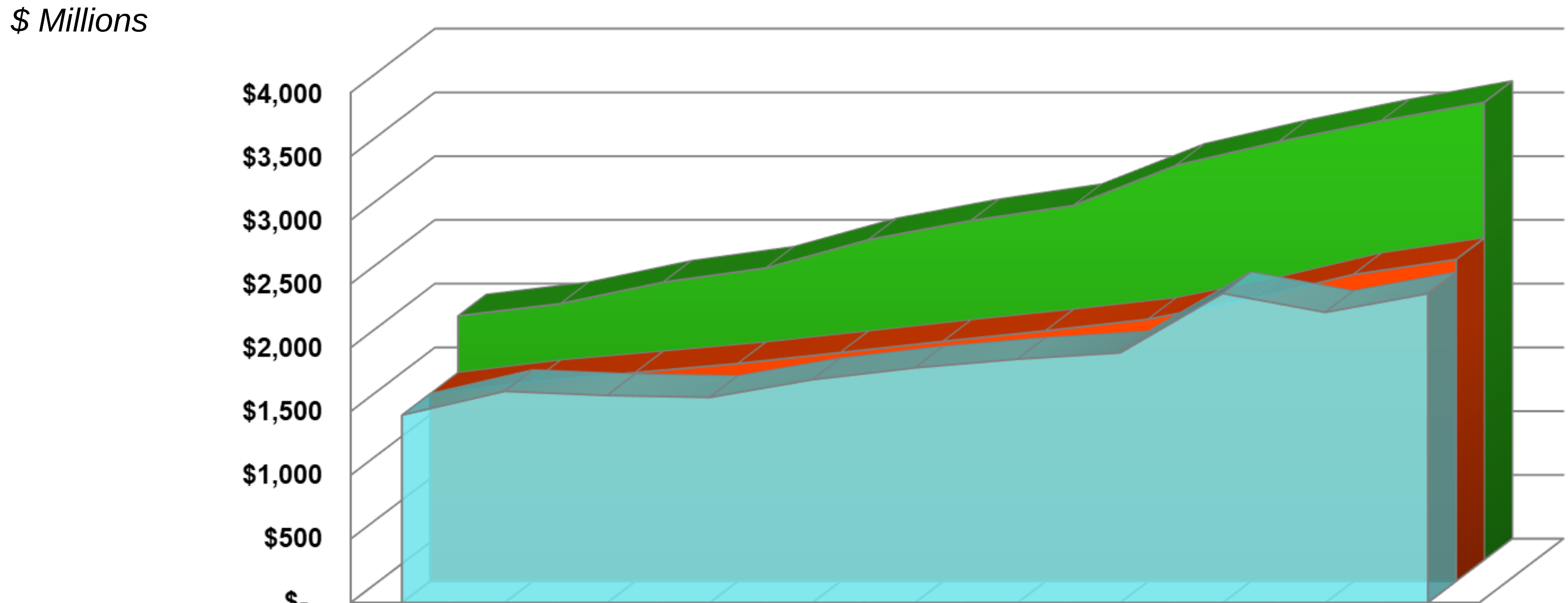
Valuation Results ($ in millions)

Valuation Results as of June 30

	2023	2022
Actuarial Accrued Liability:		
• Active Members	$1,212	$1,136
• Inactive Members	106	98
• Retirees and Beneficiaries	2,271	2,210
Total	$3,589	$3,444
Actuarial Value of Assets	2,523	2,406
Unfunded Accrued Liability	$1,066	$1,038
Funded Ratio	70.3%	69.9%
Market Value of Assets	$2,423	$2,277
Unfunded Liability, Market Basis	1,166	1,167
Funded Ratio, Market Basis	67.5%	66.1%

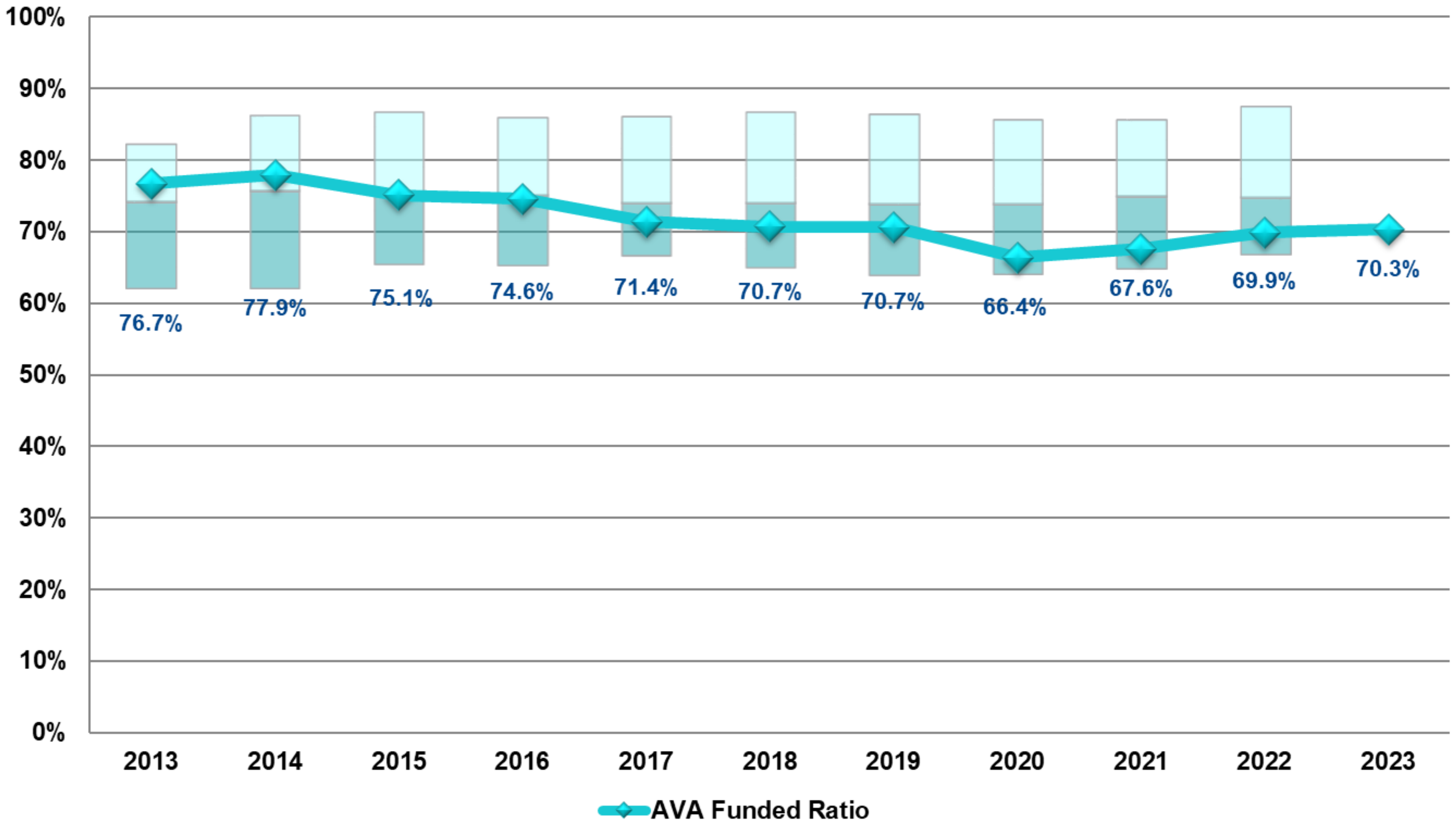
Note: numbers may not add due to rounding

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	$1,470	$1,657	$1,625	$1,610	$1,748	$1,842	$1,909	$1,959	$2,425	$2,277	$2,423
Actuarial Value of Assets	$1,469	$1,566	$1,636	$1,707	$1,794	$1,882	$1,965	$2,055	$2,216	$2,406	$2,523
Actuarial Accrued Liability	$1,914	$2,010	$2,179	$2,289	$2,511	$2,662	$2,780	$3,095	$3,281	$3,444	$3,589

Funded Ratio, AVA Basis, Comparison With Other Public Systems



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* Public Plans Data. 2013-2023. Center for Retirement Research at Boston College, Mission Square Research Institute, and National Association of State Retirement Administrators.

Preliminary Contribution Requirement

	For the Year Beginning	
	July 1, 2023	July 1, 2022
Normal Cost Rate*	13.22%	12.66%
Member Rate	−7.65%	−7.23%
Employer Normal Cost Rate	5.57%	5.43%
Amortization of UAAL	14.49%	14.56%
Preliminary Contribution Requirement	20.06%	19.99%

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

Reconciliation of Preliminary Contribution Requirement from July 1, 2022, to July 1, 2023	
Expected change in amortization (payroll growth)	0.44%
Contribution (more)/less than ADC**	−0.03%
Effect of investment (gain)/loss	0.37%
Effect of other (gain)/loss on accrued liability	0.14%
Effect of change in actuarial assumptions	0.47%
Net effect of other changes, including payroll	−1.32%
Total change	0.07%

** The contribution actually paid during fiscal 2023 was based on the June 30, 2021, actuarial valuation, and was not adjusted for timing lag used for budgeting purposes.

Amortization Schedule and Projected Employer Contribution Amounts

As of July 1	Balance	Additional Contribution[1]	Amortization Payment	Funded Percentage
2023	$1,065,721,602	$9,000,000	$90,903,961	70.31%
2024	1,036,980,653	12,000,000	97,001,194	71.99%
2025	996,817,587	15,000,000	98,682,385	74.02%
2026	949,000,844	15,000,000	100,007,735	76.12%
2027	896,465,977	15,000,000	101,255,428	78.22%
2028	838,963,046	15,000,000	102,399,277	80.32%
2029	776,251,702	15,000,000	103,404,356	82.41%
2030	708,110,904	15,000,000	104,222,758	84.51%
2031	634,353,687	15,000,000	104,786,394	86.60%
2032	554,850,435	15,000,000	104,993,883	88.68%
2033	469,567,328	0	104,684,562	90.75%
2034	394,150,488	0	107,825,098	92.51%
2035	310,205,873	0	111,059,851	94.31%
2036	217,039,081	0	114,391,647	96.16%
2037	113,904,177	0	117,823,396	98.06%
2038	0	0	0	100.00%

	Year Ending June 30, 2025	Year Ending June 30, 2026
Projected Payroll	$676,055,720	$699,717,670
Employer Normal Cost Rate[2]	5.08%	4.63%
Projected Contributions		
Employer Normal Cost	$34,345,741	$32,399,113
Unfunded Liability Payment	97,001,194	98,682,385
Total	**$131,346,935**	**$131,081,498**

[1] Under Act 114, beginning in FY24, the State is contributing an additional payment that grows to $15 million in FY26 and remains at that level until the funded percentage reaches 90%.

[2] Reflects an estimated 0.49% and 0.45% increase in member contribution rate effective FY25 and FY26, respectively, under Act 114.

Five-Year History of Gain/(Loss)

Experience for the Year Ended June 30

$ Thousands	2023	2022	2021	2020	2019
Investments	−$25,030	−$32,288	$52,181	−$23,940	−$13,758
Admin expenses	−$81	$44	N/A	N/A	N/A
Demographics					
• Turnover	$4,513	$13,686	$3,447	−$2,813	−$1,589
• Retirement	−5,791	−22,922	−19,016	−8,892	−13,425
• Mortality	8,005	10,207	−4,440	3,692	−1,885
• Disability retirement	−59	−1,599	−158	−434	292
• Salary/service	−8,553	−30,740	−4,449	−3,698	344
• COLA experience	3,240	−46,707	−35,589	23,970	11,994
• Miscellaneous	−10,722	−9,645	−3,195	−2,407	−14,995
• Subtotal	−$9,365	−$87,721	−$63,401	$9,417	−$19,263
Total	**−$34,476**	**−$119,965**	**−$11,220**	**−$14,523**	**−$33,021**

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 VSERS is **$5.57 billion**, based on a discount rate of 3.65%*
  - This compares to the plan's actuarial accrued liability of $3.59 billion
  - The difference of $1.98 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 State 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.