



Vermont State Teachers'
Retirement System

**GASB 74 Actuarial Valuation Measured as
of June 30, 2021
December 2021**

**Daniel A. Levin, FSA MAAA FCA CEBS
Yori Rubinson, FSA MAAA**

Discussion Topics

Agenda

- Valuation Highlights
- Assumptions and Methods
 - Summary
 - Discount Rate
 - Per Capita Claims Costs
- Market Value of Assets
- Valuation Results
- Reconciliation of the Total OPEB Liability
- Actuarially Determined Contribution
- Member Demographics

Valuation Highlights

June 30, 2021 GASB 74 OPEB Actuarial Valuation

- Total OPEB Liability (TOL) increased by 1.7% over prior year
 - Expected 3.9% increase from normal plan operations
 - TOL decreased relative to expected by 2.2%
 - Reduction driven by move to a Medicare Advantage plan with drugs (MAPD)
 - Partially offset by demographic losses
- Actuarial Determined Contribution (ADC)

\$ in millions	Year Ending June 30, 2023	Year Ending June 30, 2022	Year Ending June 30, 2021
GASB 74 discount rate	2.20%	2.21%	3.50%
ADC @ GASB 74 discount rate	\$109	\$102	\$68
Long-term investment return rate	7.00%	7.00%	7.50%
ADC @ long-term return discount rate	\$55	\$52	\$46

Assumptions and Methods

Summary

Assumption or Method	Description	Same as Pension?	Updated for 2021?
Funding Method	Entry Age Normal Funding Method	Yes	No
Asset Valuation Method	Market value	No	No
Discount Rate	A blend of long-term (pension valuation) and short-term rates	No	Yes*
Salary Growth	Varies by age	Yes	No
Mortality Rates	How long members live after retirement, and how many members die prior to retirement	Yes	No
Termination Rates	How many members will leave the System prior to retirement	Yes	No
Retirement Rates	When members will retire	Yes	No
Plan Participation Rates	How many members will elect coverage upon retirement	N/A	No
Spousal Participation Rates	How many spouses of members will elect coverage upon retirement	N/A	No
Spousal Age Difference	How much older are spouses of members	N/A	Yes
Per Capita Claims Costs (Premium Rates)	Monthly cost of health care	N/A	Yes*
Trend Rates	How health care costs will increase in the future	N/A	No

* Further discussion on following pages

Assumptions and Methods

Discount Rate

- Based on a blend of short-term and long-term rates
 - Based on projected benefits, current assets, and projected assets for current members
 - Projected benefits that are covered by projected assets are discounted at the long-term expected return on assets (7.00%)
 - Projected benefits that are not covered by projected assets are discounted using a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher (2.16%)
- The discount rate is updated each year
 - For 2021, projected benefits are partially covered by projected assets and the blended rate is 2.20%
 - For comparison purposes, the 2020 valuation results used a blended rate of 2.21%

Assumptions and Methods

Per Capita Claims Costs

- Monthly cost of health care (i.e. premium rates)
- Varies by recipient type, plan elected, and Medicare status.
- 2022 non-Medicare premiums, developed by BCBS of Vermont, are based on experience from June, 2020 through May, 2021
 - Self-sustaining rates for non-Medicare retirees increased by roughly 6% more than expected
- January 1, 2022 Medicare retirees will move to a Medicare Advantage program with prescription drugs also included (MAPD)
 - Move to MAPD generates savings for Medicare retirees and State
 - Medicare retirees have subsidized non-Medicare retirees prior to 2022
 - State passed along more of the savings to Medicare retirees

Market Value of Assets (\$ in millions)

	Fiscal Year Ending June 30, 2021	Fiscal Year Ending June 30, 2020
Beginning of Year	\$8.7	\$0.3
Employer Contributions	36.6	35.2
Benefit Payouts	(30.8)	(27.6)
Administrative Expenses	(0.0)	(0.0)
Other	0.0	0.5
Investment Income (net)	<u>0.1</u>	<u>0.3</u>
End of Year	\$14.6	\$8.7
Rate of Return	0.3%	6.2%

Valuation Results (\$ in millions)

	June 30, 2021	June 30, 2020
Discount Rate	2.20%	2.21%
Total OPEB Liability (TOL):		
• Active Members	\$649	\$631
• Inactive Members	77	81
• Retirees and Beneficiaries Enrolled in Health Care	<u>564</u>	<u>556</u>
Total	\$1,290	\$1,268
Plan Fiduciary Net Position	<u>15</u>	<u>9</u>
Net OPEB Liability (NOL)	\$1,276	\$1,259
Plan Fiduciary Net Position as a percentage of TOL	1.13%	0.69%

Reconciliation of Total OPEB Liability (\$ in millions)

	Liability	% Change
Total OPEB Liability (TOL) as of June 30, 2020	\$1,268	
Expected Liability	\$1,317	
Changes		
Demographic Experience	33	2.5%
Updated per Capita Claims	26	1.9%
Updated Contribution Rates	(10)	-0.7%
Reduced Male Age Difference	(3)	-0.2%
Decreased Discount Rate from 2.21% to 2.20%	2	0.1%
Plan Change to MAPD	<u>(75)</u>	-5.5%
Total Change	(27)	
Total OPEB Liability (TOL) as of June 30, 2021	\$1,290	1.7%

Actuarially Determined Contributions (ADC)

- The ADC for the fiscal year ending June 30, 2023 uses the Projected Unit Credit actuarial method
 - Assets are projected forward from June 30, 2021 assuming contributions equal expected benefit payments
 - The Unfunded Actuarial Accrued Liability was amortized over 26 years calculated as a level percent of projected payroll

\$ in millions	Year Ending June 30, 2023	Year Ending June 30, 2022	Year Ending June 30, 2021
GASB 74 Discount Rate	2.20%	2.21%	3.50%
Actuarial Accrued Liability	\$1,520	\$1,490	\$1,069
Health Care Fund Assets	<u>(15)</u>	<u>(9)</u>	<u>(0)</u>
Unfunded Liability	\$1,505	\$1,481	\$1,069
Normal Cost	\$57	\$53	\$27
Amortization of the Unfunded Liability	<u>52</u>	<u>49</u>	<u>41</u>
Total ADC @ GASB 74 discount rate	\$109	\$102	\$68
Long-term investment return rate	7.00%	7.00%	7.50%
ADC @ long-term return discount rate	\$55	\$52	\$46

Member Demographics

	June 30, 2020*	June 30, 2019*
Active Members	9,996	9,862
Average Age	45.4	45.7
Average Years of Service	12.4	12.7
Terminated Members Entitled but Not Yet Eligible	1,919	1,990
Retirees and Beneficiaries Not Enrolled in Health Care	2,591	2,486
Retirees Enrolled in Health Care		
Retirees	6,995	6,786
Average Age of Retirees	72.6	72.3
Spouses and Dependents (excluding children)	1,310	1,241
Average Age of Spouses	70.6	70.7
Surviving Spouses	99	92
Average Age of Surviving Spouses	79.8	79.3
Total Retirees and Surviving Spouses Enrolled in Health Care	8,404	8,119

**Total OPEB Liability was measured as of June 30, 2021 and 2020 determined from actuarial valuations using data as of June 30, 2020 and 2019 respectively.*

Caveats

The assumptions, plan provisions and data used are described in the Vermont State Teachers' Retirement System Governmental Accounting Standards Board (GABS) Statement 74 Actuarial Valuation and Review of Other Postemployment Benefits (OPEB) Measured at June 30, 2021.

This presentation is based on the results of the June 30, 2021, actuarial valuation performed for the Board of Trustees of the Vermont State Teachers' 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 accounting results are based on proprietary actuarial modeling software. The accounting valuation models generate a comprehensive set of liability and cost calculations that are presented to meet accounting standards and client requirements. Our Actuarial Technology and Systems unit, comprising 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 results are also based on models for cost projections developed by Segal actuaries and programmers. The client team customizes and validates the models, and reviews the results, under the supervision of the responsible actuary.

The blended discount rate used for calculating Total OPEB Liability is based on a model developed by our Actuarial Technology and Systems unit, comprised of both actuaries and programmers. The model allows the client team, under the supervision of the responsible actuary, control over the entry of future expected contribution income, benefit payments and administrative expenses. The projection of fiduciary net position and the discounting of benefits is part of the model.

Our claims costs assumptions are based on proprietary modeling software as well as models that were developed by others. These models generate per capita claims cost calculations that are used in our valuation software. Our Health Technical Services Unit, comprised of actuaries and programmers, is responsible for the initial development and maintenance of our health models. They are also responsible for testing models that we purchase from other vendors for reasonableness. The client team inputs the paid claims, enrollments, plan provisions and assumptions into these models and reviews the results for reasonableness, under the supervision of the responsible actuary.