

Office of the Vermont State Treasurer

VSTRS: Demographic and Financial Overview

February 7, 2020



How Does Data Reconcile to Segal Valuation?

	Report Data		QDRO		Valuation		Variance	
Retired	8,800	188,603,170	67	604,872	8,867	189,186,312	-	21,730
Disable in Receipt	173	2,900,542			173	2,900,172	0	370
Beneficiary in Receipt	474	6,587,319			474	6,586,704	0	615
	9,447	198,091,031	67	604,872	9,514	198,673,188	-	22,716

Source: VSTRS 6-30-2019 Valuation Report, page 36

Note: Valuation treats QDRO as a separate retirement. Since a QDRO splits a retirement plan or pension plan by recognizing joint marital ownership interests in the plan, TRE has attached the QDRO amount to the associated retiree. TRE has verified with Segal that their treatment in the annual valuation has little or no impact on the reported liability for the pension plan.

For Retirees, data is broken down by three types of retirements or benefits

- Retired benefit
- Disabled benefit
- Beneficiary benefit

Pension Benefits Reconciled to Actuary Report

Per Retirement Data

(See treatment of QDROs previous page)

Benefit Payments for Retirees and Beneficiaries			
Category	Count	Average Monthly Benefit	Average Annual Benefit
Retirees	8,800	1,791.74	21,500.91
Retirees with Disabilities	173	1,397.18	16,766.14
Beneficiaries	474	1,158.11	13,897.32
Average			21,033.60
Grand Total	9,447		



Total annualized \$198,704,419

Count 9,447

Add back QDROs +67

Revised Count 9,514

Adjusted Benefit: \$20,885

Per Actuary: \$20,880

Retirees

Distribution of Benefits by Group				
Group	Count	Average Monthly Benefit	Average Annual Benefit	AFC at Retirement
A	235	2,391.25	28,695.00	43,021.18
B	506	459.01	5,508.16	23,733.56
C	8,059	1,857.94	22,295.27	58,288.73
Average		1,791.74	21,500.91	55,894.10
Grant Total	8,800			

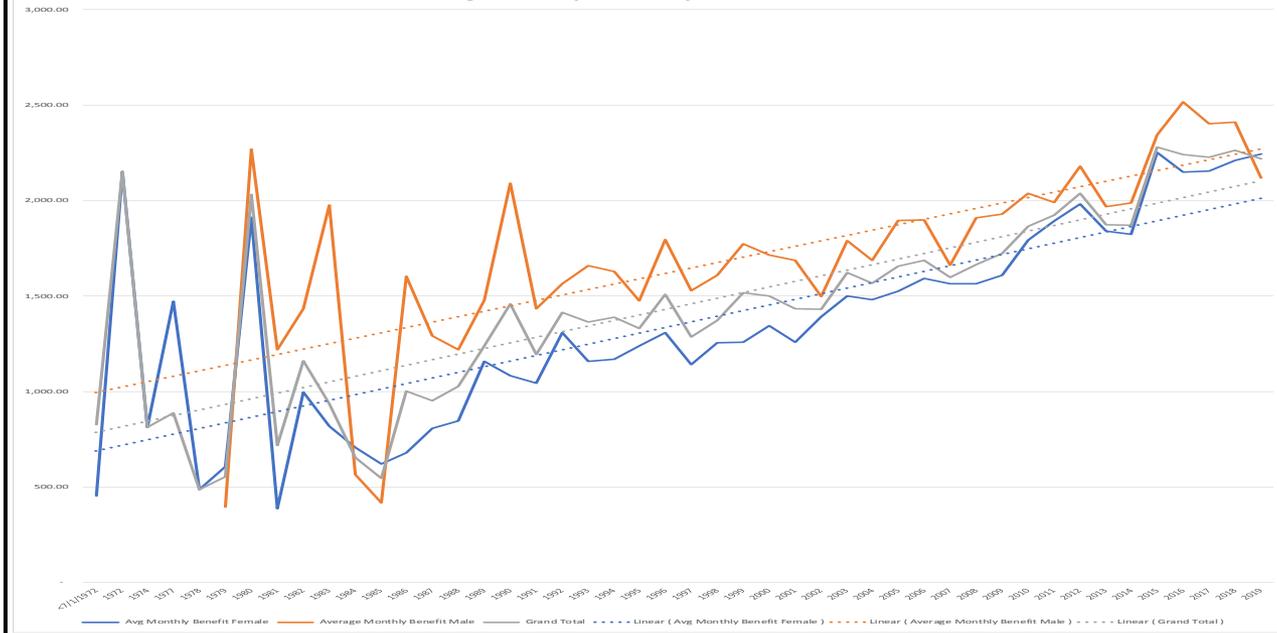
Distribution of Benefits by Gender

Gender	Count	Average Monthly Benefit	Avg Annual Benefit	Average Years of Service	Average Final Compensation (Avg)
Female	5,948	1,733.32	20,799.86	23.18	55,525.03
Male	2,852	1,913.58	22,962.99	26.14	56,663.82
Average		1,791.74	21,500.91	24.14	55,894.10
Grand Total	8,800				

Distribution of Benefits to Retirees by Group and Gender

Group	Count	Average Monthly Benefit	Annual Benefit	Average Final Compensation (Avg)
A	235	2,391.25	28,695.00	43,021.18
Female	149	2,124.42	25,493.09	41,007.59
Male	86	2,853.54	34,242.51	46,509.84
B	506	459.01	5,508.16	23,733.56
Female	278	457.39	5,488.63	22,986.80
Male	228	461.00	5,531.97	24,644.09
C	8,059	1,857.94	22,295.27	58,288.73
Female	5,521	1,787.01	21,444.17	57,555.22
Male	2,538	2,012.22	24,146.70	59,884.36
Average		1,791.74	21,500.91	55,894.10
Grand Total	8,800			

Average Monthly Benefit by Year of Retirement



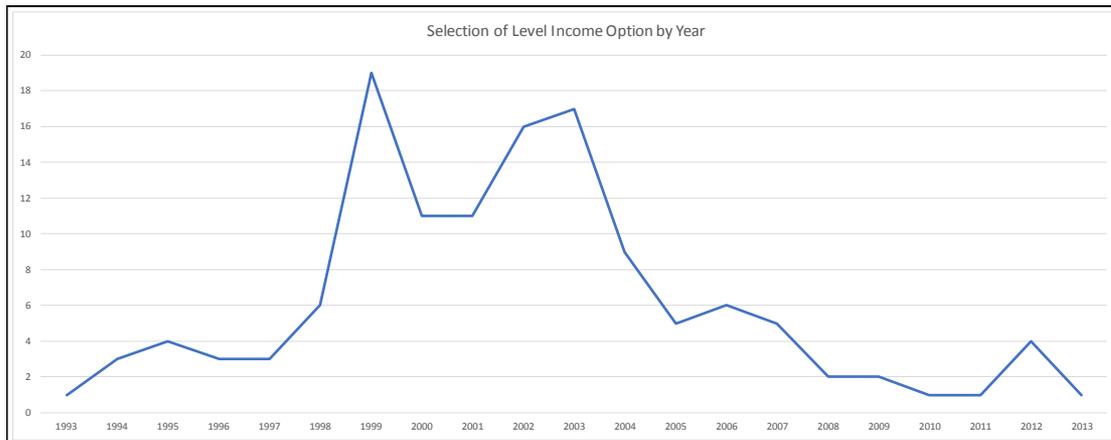
Distribution of Benefits to Retirees by Years of Service				
Years of Service	Count	Average Monthly Benefit	Average Annual Benefit	Average final Compensation (Avg)
Less than 5 years	72	267.75	3,213.00	45,982.22
5 years to less than 10 years	515	475.89	5,710.73	50,427.26
10 years to less than 15 years	1,268	645.01	7,740.06	42,898.81
15 years to less than 20 years	1,190	1,099.00	13,188.06	51,903.07
20 years to less than 25 years	1,229	1,544.04	18,528.53	56,075.64
25 years to less than 30 years	885	2,208.89	26,506.67	61,603.52
30 years to less than 35 years	2,551	2,476.34	29,716.07	58,922.47
35 years to less than 40 years	882	2,910.27	34,923.21	66,006.07
40 years to less than 45 years	194	3,057.10	36,685.16	69,192.14
45 years to less than 50 years	13	3,200.35	38,404.24	74,826.29
50 years and over	1	6,114.95	73,379.40	66,300.00
Average		1,791.74	21,500.91	55,894.10
Grand Total	8,800			

Retiree Benefits Skewed Slightly Due to Level Income Option but... Selection of this option is Declining*

A	1	2,127.72	25,532.64
C	129	1,333.72	16,004.69
Grand Total	130	1,339.83	16,077.98

Age	Count
80	2
79	9
78	3
77	9
76	12
75	12
74	11
73	13
72	13
71	10
70	6
69	6
68	10
67	3
66	2
65	3
64	1
63	3
61	1
60	1
Total	130

Reached age 62 for Social Security



*See footnote page for further explanation

Average of Annual Benefit by Type of Retirement

	Female	Male	Total	
Early	11,844.06	11,799.53	11,834.20	1878
Less than 5 years	2,559.84	-	2,559.84	1
5 years to less than 10 years	4,575.25	5,463.81	4,831.05	132
10 years to less than 15 years	7,115.87	6,634.91	7,011.80	476
15 years to less than 20 years	11,186.04	10,539.73	11,075.97	505
20 years to less than 25 years	15,543.80	15,277.87	15,488.83	537
25 years to less than 30 years	19,636.29	17,768.05	19,042.29	195
30 years to less than 35years	19,245.26	20,033.98	19,654.23	27
35 years to less than 40 years	17,633.10	16,614.72	17,123.91	4
40 years to less than 45years	23,477.16	-	23,477.16	1
Service/Normal	23,718.58	24,869.40	24,123.58	6,922.00
Less than 5 years	3,438.32	2,890.30	3,222.20	71
5 years to less than 10 years	5,777.35	6,657.00	6,013.92	383
10 years to less than 15 years	8,645.01	7,146.76	8,177.75	792
15 years to less than 20 years	15,339.55	13,162.18	14,745.15	685
20 years to less than 25 years	21,544.37	18,648.54	20,887.37	692
25 years to less than 30 years	28,607.22	28,645.83	28,616.18	690
30 years to less than 35years	30,456.52	28,931.00	29,823.71	2,524
35 years to less than 40 years	35,401.95	34,546.22	35,004.30	878
40 years to less than 45years	36,577.29	36,959.61	36,753.59	193
45 years to less than 50 years	32,249.68	40,250.60	38,404.24	13
50 years and over	73,379.40	-	73,379.40	1
Grand Total	20,799.86	22,962.99	21,500.91	8,800

Footnotes/Explanations:

- Some totals have differences due to rounding
- Variances with actuarial report:
 - Actuary lists QDROs as separate retirees while TRE links them to the retiree and treats as one retirement benefit for purposes of counts/averages. See reconciliation page.
 - Mixed members were not consolidated for purposes of counts, but this is not believed to be material to the demographic. Treatment is identical to that in actuarial report.
- Retirement with less than five years of service:
 - Up to 2004, members who retire and are 63 and older were not required to have five years of service to be eligible for a retirement benefit, which also permitted them access to health care coverage at the 20% premium rate.
 - 2004 Change: A member hired on or after July 1, 2004 must have a minimum of five years to qualify for any type of retirement
 - Note: later change to tiered health care system for Group F* employees, those hired on or after July 1, 2008.
- Level Income Option Explained:
 - At age 62, many are eligible to receive a Social Security retirement benefit. Some members, however, retire before reaching age 62 and would like to increase their benefit through the Level Income Option.
 - Under this option, a member elects to receive a percentage of the member's estimated Social Security benefit from the Retirement System before Social Security actually begins, and then receives a reduced allowance from the System after age 62 when Social Security is received. The actual Social Security benefits received will not affect the Level Income Option after the initial calculations are made.
 - Example: A member received an estimate from the Social Security Administration that his/her benefit at age 62, if he/she chooses to retire now, will be \$600 monthly. Further assume a retirement benefit from the System is \$800 monthly. Under this option a percentage of the estimated Social Security benefit based upon age (the younger you are, the smaller the percentage), is added to your retirement benefit. At age 59, for example, with the above \$600 estimate from Social Security, \$470 would be added to the monthly retirement benefit and the retiree would receive a total of \$1,270 monthly from the System until age 62. At age 62, \$600 would be subtracted from the monthly benefit amount and the retiree would receive \$670 thereafter for the remainder of his/her lifetime.

Disability Retirements

Distribution of Benefits for Disability Retirements by Group				
Group	Count	Average Monthly Benefit	Average Annual Benefit	Avg AFC at retirement
A	6	1,608.17	19,298.04	30,162.86
B	7	752.31	9,027.69	20,599.51
C	160	1,417.48	17,009.75	51,451.50
Average		1,397.18	16,766.14	49,464.82
Grand Total	173			

Distribution of Disability Retirement Benefits by Gender

Gender	Count	Average Monthly Benefit	Average Annual Benefit	Average Years of Service	Average Final Compensation (Avg)
Female	124	1,401.48	16,817.73	17.11	50,613.47
Male	49	1,386.30	16,635.60	19.38	46,558.02
Average		1,397.18	16,766.14	17.76	49,464.82
Grand Total	173				

Distribution of Benefits for Disability Retirements by Group and Gender

Group	Count	Average Monthly Benefit	Average Annual Benefit	Average Years of Service	Average Final Compensation (avg)
A	6	1,608.17	19,298.04	19.21	30,162.86
Female	3	1,319.28	15,831.32	17.23	26,275.96
Male	3	1,897.06	22,764.76	21.20	34,049.76
B	7	752.31	9,027.69	23.67	20,599.51
Female	3	634.62	7,615.40	19.43	18,803.84
Male	4	840.58	10,086.90	26.84	21,946.26
C	160	1,417.48	17,009.75	17.44	51,451.50
Female	118	1,423.06	17,076.76	17.05	52,040.94
Male	42	1,401.79	16,821.49	18.54	49,795.44
Average		1,397.18	16,766.14	17.76	49,464.82
Grand Total	173				

Beneficiaries

Distribution of Beneficiary Benefits by Group

Group	Count	Average Monthly Benefit	Average Annual Benefit	Avg AFC of Employee
A	43	1,317.53	15,810.40	28,935.15
B	72	593.09	7,117.07	26,617.38
C	359	1,252.92	15,035.02	52,402.54
Average		1,158.11	13,897.32	46,356.91
Grand Total	474			

Active Employee Data

(Per Actuary)

Vermont State Teachers' Retirement System (VSTRS)

	<u>June 30, 2019</u>	<u>June 30, 2018</u>	<u>% Change</u>
Active Members			
Vested	7,424	7,413	0.15%
Not Vested	2,438	2,479	-1.65%
Total Active members	9,862	9,892	-0.30%
Average Age	45.7	45.7	0.00%
Average Service	12.7	12.6	0.79%
Average Compensation	\$ 63,365	\$ 61,959	2.27%
Retired Members and Beneficiaries			
Number	9,514	9,269	2.64%
Net Benefit Payments	\$ 193,196,825	\$ 182,258,923	6.00%
Inactive Members	2,756	2,613	5.47%
Terminated Vested Members	819	787	4.07%

MEMBER POPULATION: 2010 – 2019

As of July 1	Active Members	Deferred Members*	Retired Members and Beneficiaries	Total Non-Actives	Ratio of Non-Actives to Actives
2010	10,509	718	6,146	6,864	0.65
2011	10,123	647	7,005	7,652	0.76
2012	10,262	793	7,376	8,169	0.80
2013	10,101	751	7,743	8,494	0.84
2014	9,952	740	8,086	8,826	0.89
2015	9,585	1,163	8,484	9,647	1.01
2016	9,919	747	8,763	9,510	0.96
2017	10,028	763	9,021	9,784	0.98
2018	9,892	787	9,269	10,056	1.02
2019	9,862	819	9,514	10,333	1.05

*Excludes inactive members as reported by the System.

MEMBERSHIP DATA STATISTICS: 2010 – 2019

As of July 1	Active Members			Retired Members*		
	Count	Average Age	Average Service	Count	Average Age	Average Monthly Amount
2010	10,509	47.1	13.8	5,831	--	\$1,319
2011	10,123	46.9	13.8	6,667	--	1,417
2012	10,262	46.9	13.1	7,014	--	1,482
2013	10,101	46.6	13.1	7,356	--	1,514
2014	9,952	46.5	13.2	7,674	69.7	1,547
2015	9,585	46.2	12.9	8,006	70.0	1,614
2016	9,919	45.9	12.7	8,259	70.8	1,641
2017	10,028	45.8	12.6	8,581	71.2	1,683
2018	9,892	45.7	12.6	8,809	71.7	1,726
2019	9,862	45.7	12.7	9,040	72.1	1,771

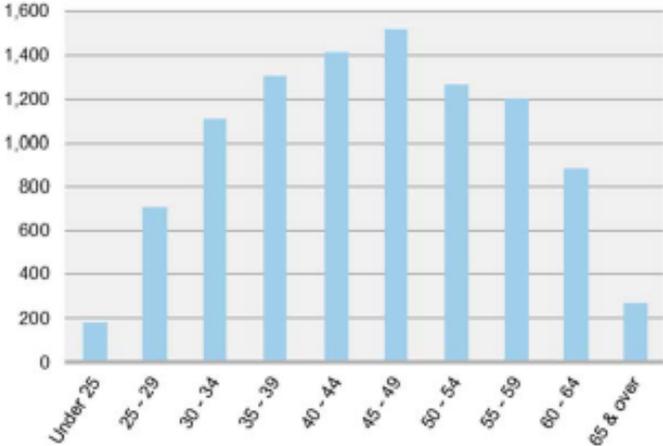
* Not including beneficiaries

Active Members

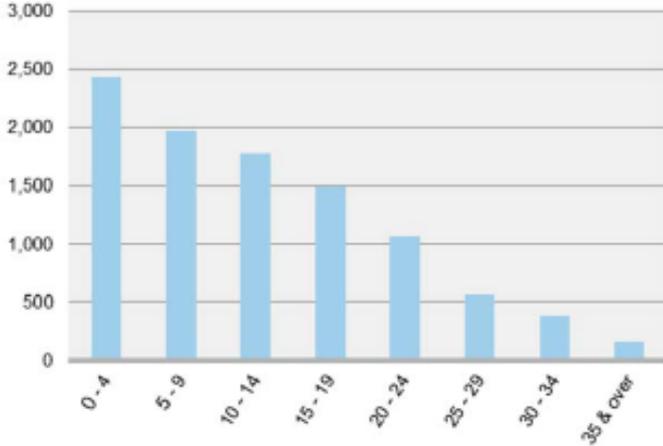
Plan costs are affected by the age, years of creditable service and payroll of active members. In this year's valuation, there were 9,862 active members with an average age of 45.7, average years of creditable service of 12.7 years, and average payroll of \$63,365. The 9,892 active members in the prior valuation had an average age of 45.7, average service of 12.6 years and average payroll of \$61,959.

Distribution of Active Members as of July 1, 2019

BY AGE



BY YEARS OF CREDITABLE SERVICE



Financial Data

FUNDING STATUS

VSTRS	2017		2018		2019	
Actuarial Accrued Liability	\$	3,282,045,614	\$	3,379,553,748	\$	3,505,319,267
Actuarial Value of Assets	\$	1,779,592,227	\$	1,866,120,413	\$	1,950,859,980
Unfunded Liability	\$	1,502,453,387	\$	1,513,433,335	\$	1,554,459,287
Funding Percentage		54.22%		55.22%		55.65%

Schedule of Funding by Year

Year ending	Actuarial Value of Assets	Actuarial Accrued Liability (AAL) (in thousands)	Unfunded AAL (UAAL)	Funded Ratio
2019	\$ 1,950,860	3,505,319	1,554,459	55.7%
2018	1,866,121	3,379,554	1,513,433	55.2%
2017	1,779,592	3,282,045	1,502,453	54.2%
2016	1,716,296	2,942,024	1,225,728	58.3%
2015	1,662,346	2,837,375	1,175,029	58.6%
2014	1,610,286	2,687,049	1,076,764	59.9%
2013	1,552,924	2,566,834	1,013,910	60.5%
2012	1,517,410	2,462,913	945,503	61.6%
2011	1,486,698	2,331,806	845,108	63.8%
2010	1,410,368	2,122,191	711,823	66.5%
2009	1,374,079	2,101,838	727,759	65.4%
2008	1,605,462	1,984,967	379,505	80.9%
2007	1,541,860	1,816,650	274,790	84.9%
2006	1,427,393	1,686,502	259,109	84.6%
2005	1,354,006	1,492,150	138,144	90.7%
2004	1,284,833	1,424,661	139,828	90.2%
2003	1,218,001	1,358,822	140,821	89.6%
2002	1,169,294	1,307,202	137,908	89.5%
2001	1,116,846	1,254,341	137,495	89.0%
2000	1,037,466	1,174,087	136,621	88.4%
1999	931,056	1,065,754	134,698	87.4%
1998	821,977	955,694	133,717	86.0%

Employee Contributions

Teachers (VSTRS):

In 2009, a teacher paid 3.54% of salary for their pension. Employees agreed to an increase to 5% effective 7/1/10. Employees also agreed to work longer to receive a full benefit – the result was a **reduction for taxpayers of \$15 million per year in the ARC, increasing over time.** For new employees after 7/1/15, that increased to 6%, generating **\$1 million initial annual savings, increasing each year, now approximating \$2.6 million.**