

Retirement Funds Update/Outlook

Presentation to the House Appropriations Committee

(Preliminary Draft)

April 2015

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Pension & Retirement Boards

- Vermont State Employees' Retirement System (VSERS)
- Vermont State Teachers' Retirement System (VSTRS)
- Vermont Municipal Employees' Retirement System (VMERS)
- Vermont Pension Investment Committee

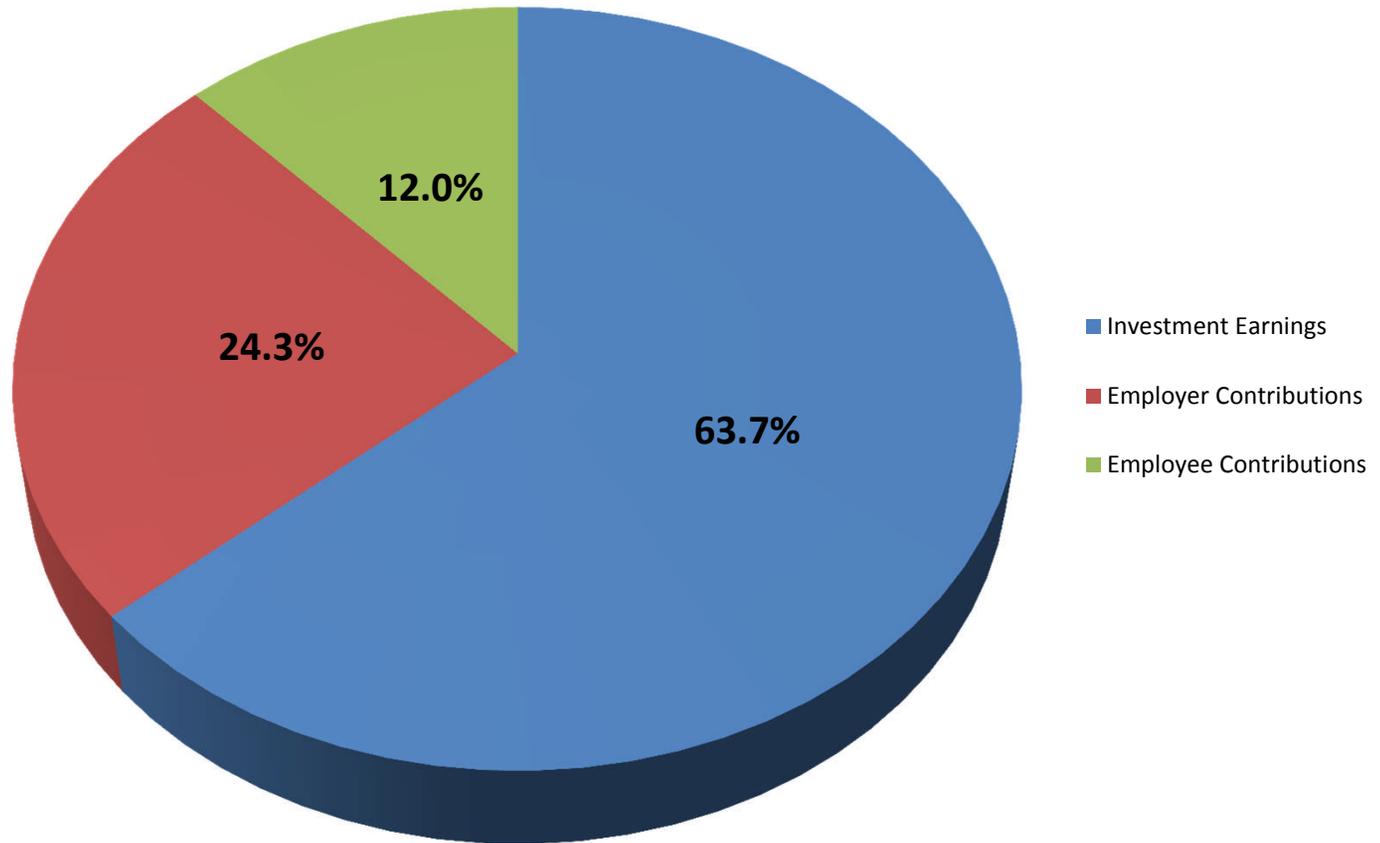
Guiding Principles for a Retirement Plan

Fairness and Sustainability Are Both Essential to Benefit Plans

What Do We Want From Our Retirement Benefit Plan?

- ▶ **Recruitment** – The benefit plan should act as an incentive for recruiting high quality employees. The plan must be competitive with those in other states and within Vermont.
- ▶ **Retention** – The benefit plan should act as an incentive for retaining high-quality employees and maintaining a stable workforce. The plan should also be compatible with changing workforce and demographic trends.
- ▶ **Reward** – The benefit plan should provide a solid foundation for retirement security following a career in public service.
- ▶ **Sustainability** – The cost of the benefit plan should be sustainable and predictable over the long term.
- ▶ **Affordability** – The cost of the benefit plan should be affordable for current and future public employees and other taxpayers.
- ▶ **Fairness** – The benefit plan should be fair to workers and other taxpayers.
- ▶ **Equity** – The benefit plan should be equitable for all parties.

Investment Earnings Comprise the Greatest Source of Revenue



Source: NASRA, [Key Facts Regarding State and Local Government Defined Benefit Plans](#), January 2007.

Retirement Systems Operations

State Employees' Retirement System - Summary of Operations

Category	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
SOURCE OF FUNDS										
Employee Contributions	\$ 15,112,105	\$ 14,561,467	\$ 15,456,691	\$ 18,614,102	\$ 22,148,754	\$ 22,840,354	\$ 22,269,041	\$ 27,708,009	\$ 29,847,352	\$ 31,745,692
Employer Contributions	36,493,435	36,866,451	39,297,002	39,179,823	25,134,235	31,468,884	37,572,599	40,302,433	51,370,307	56,482,985
Other Income	777,792	1,171,516	205,321	169,984	1,041,870	227,524	743,172	377,562	638,736	453,852
Investment Income (Reduction)	90,452,723	115,146,415	192,625,279	(84,156,254)	(242,976,381)	182,593,261	238,386,383	23,604,774	110,715,697	203,721,748
APPLICATION OF FUNDS										
Retirement Benefits	48,893,673	53,435,617	58,859,659	64,060,488	70,043,119	79,001,908	84,716,513	90,170,209	96,241,493	101,436,005
Refunds	1,402,481	1,351,911	1,526,140	1,414,144	1,403,995	1,521,440	1,731,375	1,908,752	2,515,758	2,461,242
Health/Life Insurance Expenses	11,329,269	11,590,588	13,541,092	16,371,373	-	-	-	-	-	-
Other Expenses	1,255,852	1,329,081	511,435	1,254,577	1,219,287	891,477	1,147,576	1,328,919	1,374,643	1,158,183
	635,618	668,929	344,719	631,321	477,966	568,278	613,899	702,136	437,367	595,306
Addition (Reduction) to Net Assets Held In Trust for Pension Benefits	\$ 79,319,162	\$ 99,369,723	\$ 172,801,248	\$ (109,924,248)	\$ (267,795,889)	\$ 155,146,920	\$ 210,761,832	\$ (2,117,238)	\$ 92,002,831	\$ 186,753,541

Teachers' Retirement System -- Summary of Operations

Category	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
SOURCE OF FUNDS										
Employee Contributions	\$ 21,158,452	\$ 21,884,140	\$ 22,533,479	\$ 22,918,798	\$ 20,937,686	\$ 25,315,397	\$ 32,062,253	\$ 31,827,995	\$ 32,343,368	\$ 32,558,584
Employer Contributions	24,446,282	24,446,282	37,341,609	39,549,097	35,960,934	40,545,321	47,134,361	51,731,875	63,646,240	71,869,736
Other Income	373,705	1,180,606	2,093,219	1,628,242	3,754,020	1,817,540	3,341,877	4,505,246	1,733,033	1,209,177
Investment Income (Reduction)	115,058,694	130,835,585	244,437,213	(110,019,634)	(307,382,559)	208,723,610	261,886,311	24,726,665	120,403,030	212,338,194
APPLICATION OF FUNDS										
Retirement Benefits	60,147,731	66,272,471	74,368,306	82,157,642	89,825,986	96,448,102	106,930,467	117,801,002	129,416,052	138,484,665
Refunds	1,104,278	1,290,197	1,625,140	1,280,715	1,420,776	1,183,659	1,218,955	1,521,099	1,604,283	1,870,988
Health/Life Insurance Expenses	10,167,601	11,233,854	13,040,783	15,081,847	16,421,176	17,203,669	18,749,675	20,620,144	22,459,219	24,640,986
Administrative Expenses	1,052,772	1,679,883	817,052	866,473	1,249,774	1,078,762	1,399,732	1,604,735	1,680,722	1,474,827
Other Expenses	682,438	580,403	203,444	542,665	606,434	303,741	609,091	391,832	233,735	491,184
Addition (Reduction) to Net Assets Held In Trust for Pension Benefits	\$ 87,882,313	\$ 97,289,805	\$ 216,350,795	\$ (145,852,839)	\$ (356,254,065)	\$ 160,183,935	\$ 215,516,882	\$ (29,147,031)	\$ 62,731,660	\$ 151,013,041

Municipal Retirement System -- Summary of Operations

Category	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
SOURCE OF FUNDS										
Employee Contributions	\$ 7,404,119	\$ 8,744,718	\$ 9,769,882	\$ 9,906,709	\$ 9,557,973	\$ 10,711,600	\$ 11,702,728	\$ 11,337,926	\$ 15,060,665	\$ 13,233,728
Employer Contributions	8,058,810	7,926,436	8,535,396	-	8,008,862	10,592,919	11,117,363	11,532,230	12,014,186	12,805,737
Other Income	298,475	228,746	206,101	124,132	1,321,919	203,549	266,425	118,191	170,381	2,142,868
Investment Income (Reduction)	18,165,861	27,697,371	46,637,360	(19,472,654)	(56,937,342)	47,598,096	66,957,781	7,671,464	34,838,507	64,346,116
APPLICATION OF FUNDS										
Retirement Benefits	6,418,097	7,120,325	7,969,703	9,064,725	10,228,263	11,073,098	12,298,902	14,214,160	16,101,187	18,153,649
Refunds	1,140,245	1,102,940	1,389,583	1,143,397	1,223,465	1,127,574	1,275,979	1,664,687	1,587,311	1,673,188
Health/Life Insurance Expenses	-	-	-	-	-	-	-	-	-	-
Administrative Expenses	367,810	439,983	687,382	623,619	798,458	393,947	569,603	672,851	749,447	588,022
Other Expenses	423,937	1,101,883	560,473	506,817	588,899	795,522	886,709	469,599	999,434	774,543
Addition (Reduction) to Net Assets Held In Trust for Pension Benefits	\$ 25,577,176	\$ 34,832,140	\$ 54,541,598	\$ (20,780,371)	\$ (50,887,673)	\$ 55,716,023	\$ 75,013,104	\$ 13,638,514	\$ 42,646,360	\$ 71,339,047

Actuarial Concepts *(Funding)*

$$\text{UAL} = \text{AAL} - \text{AVA}$$

- **Actuarial accrued liability (AAL)**
Present value of projected future benefits
- **Actuarial value of assets (AVA)**
Market-related value, with smoothing, designed to minimize volatility
- **Unfunded (actuarial) Accrued Liability (UAL)**

Annual Actuarially Required Contribution **(ARC)**

- Method by which UAL is eventually paid off (assuming it is funded)
- Annual required contribution

Normal cost

Amortization of UAL

ARC Components

- ARC has two components:
 - Normal Cost
 - Amortization of the Unfunded Actuarial Accrued Liability
- **Normal Cost**
 - Computed differently under different funding methods.
 - The normal cost generally represents the portion of the cost of projected benefits allocated to the current plan year.
 - The employer normal cost equals the total normal cost of the plan reduced by employee contributions.
- **Normal cost** represents the present value of benefits attributed by the funding method to service rendered during the valuation year. Under the Entry Age Normal method, the attribution is made by taking the cost of the full projected benefit for each participant and spreading it as a level percentage of payroll from year of hire to the assumed retirement date.

Great Recession Impact on Funding Status

Pension Liabilities

UAAL (pension only):

	State Employees	Teachers
As of 6/30/08 Valuation:	\$87.1 Million	\$379.5 Million
As of 6/30/09 Valuation:	\$326.5 Million	\$727.8 Million

Funding Ratio:

	State Employees	Teachers
As of 6/30/08 Valuation:	94.1%	80.9%
As of 6/30/09 Valuation	78.9%	65.4%

Plan Status Based on Funding Policy

Teacher Plan	2013	2014
Actuarial Accrued Liability	\$2,566,834,655	\$2,687,049,333
Actuarial Value of Assets	\$1,552,924,370	\$1,610,285,523
Unfunded Liability	\$1,013,910,285	\$1,076,763,810
Funding percentage	60.5%	59.9%
State Plan		
Actuarial Accrued Liability	\$1,914,299,984	\$2,010,089,866
Actuarial Value of Assets	\$1,469,169,902	\$1,566,075,540
Unfunded Liability	\$445,130,082	\$444,014,326
Funding percentage	76.7%	77.9%
Municipal Plan		
Actuarial Accrued Liability	\$528,426,358	\$580,972,276
Actuarial Value of Assets	\$446,235,922	\$500,557,919
Unfunded Liability	\$82,190,436	\$80,414,357
Funding percentage	84.4%	86.2%

FY 2014 GASB 67 Results

(Dollar Amounts in Thousands)

	<u>Vermont State Retirement System</u>	<u>Vermont State Teachers' Retirement System</u>	<u>Vermont Municipal Employees Retirement System</u>
Total pension liability	\$ 2,008,888	\$ 2,663,802	\$ 543,652
Plan fiduciary net position	<u>(1,657,246)</u>	<u>(1,705,365)</u>	<u>(534,525)</u>
Net pension liability	<u>\$ 351,642</u>	<u>\$ 958,437</u>	<u>\$ 9,127</u>
Plan fiduciary net position as a percentage of total pension liability	82.50%	64.02%	98.32%

Sensitivity of NPL to Changes in Discount Rate

	<u>VSRS</u>	<u>STRS</u>	<u>MERS</u>
One-percent decrease			
Discount rate	7.22%	7.15%	7.23%
Net pension liability	\$ 587,188	\$ 1,258,726	\$ 76,886
Net pension liability, as reported			
Discount rate	8.22%	8.15%	8.23%
Net pension liability	\$ 351,642	\$ 958,437	\$ 9,127
One-percent increase			
Discount rate	9.22%	9.15%	9.23%
Net pension liability (asset)	\$ 153,107	\$ 706,364	\$ (47,722)

Upward pressures and Initiatives

- Experience Study
 - Interest Rate Assumption
 - Other economic, demographic and experience impacts
- VSERS Employee Contribution Rates
 - FY2016 sunset
 - Act 63 of 2011 requires review of member contribution rate structure
- Amortization Tables for Unfunded Liability

Consider Changes to Pension Funding Amortization Schedules for both State and Teachers' Systems

- State System: "Until the unfunded accrued liability is liquidated, the basic accrued liability contribution shall be the annual payment required to liquidate the unfunded accrued liability over a period of 30 years from July 1, 2008, provided that the amount of each annual basic accrued liability contribution after June 30, 2009, shall be five percent greater than the preceding annual basic accrued liability contribution. Any variation in the contribution of normal, basic, unfunded accrued liability or additional unfunded accrued liability contributions from those recommended by the actuary and any actuarial gains and losses shall be added or subtracted to the unfunded accrued liability and amortized over the remainder of the 30-year period."
- Teachers System: "It is the policy of the state of Vermont to liquidate fully the unfunded accrued liability to the system. Until the unfunded accrued liability is liquidated, the accrued liability contribution shall be the annual payment required to liquidate the unfunded accrued liability over a period of 30 years from July 1, 2008, provided that the amount of each annual accrued liability contribution after June 30, 2009, shall be five percent greater than the preceding annual accrued liability contribution. Any variation in the contribution of normal or unfunded accrued liability contributions from those recommended by the actuary and any actuarial gains and losses shall be added or subtracted to the unfunded accrued liability and amortized over the remainder of the 30-year period."

Amortization Schedule:

- While the State has a date set in statute, 2038, to pay down the unfunded liability, the payment schedule increases in 5% increments each year
- This has the effect of increasing interest associated with the payment of these liabilities
- Leveling out the payment schedule would increase ARC payments in the short-term but have the effect of saving the taxpayers millions of dollars over the long-term
- This would also have the effect of a more rapid reduction of the unfunded liability
- Changes to amortization schedule can be phased in to cushion budgetary impact
- The Treasurer's Office will present sample amortization schedules to the Committee in a separate document.
- Treasurer's Office staff will model alternatives schedules at the Committee's request to obtain an optimum solution

An Overview of VMERS

- Vermont Municipal Employees' Retirement System (VMERS) is the public pension plan provided by the State of Vermont for participating municipalities' employees. It was created in 1975 and is governed by Vermont Statute Title 24, Chapter 125.
- Plan has approximately 450 participating entities
- As of June 30, 2014, the plan has assets of \$534,525,477.

Vermont Municipal Employees' Retirement System (VMERS)

	<u>June 30, 2014</u>	<u>June 30, 2013</u>	<u>% Change</u>
Active Members			
Vested	4,129	4,102	0.66%
Not Vested	2,535	2,475	2.42%
Total Active members	<u>6,664</u>	<u>6,577</u>	1.32%
Average Age	48.87	48.76	0.23%
Average Service	9.13	9.10	0.33%
Average Compensation	\$ 34,659	\$ 33,506	3.44%
 Retired Members and Beneficiaries			
Number	2,359	2,146	9.93%
Annual Retirement Allowances	\$ 19,065,769	\$ 16,532,859	15.32%
 Inactive Members	1,817	1,765	2.95%
 Terminated Vested Members	692	652	6.13%

VMERS Membership

(as of July 1, 2014)

Member Type	Group A	Group B	Group C	Group D	Total
Active, Vested	1,632	1,954	451	92	4,129
Active, Not Vested	994	1,222	273	46	2,535
Terminated Vested	385	285	17	5	692
Inactive	912	818	77	10	1,817
Retired	954	1,127	256	22	2,146
Total	4,877	5,406	1,074	175	11,532

VMERS Facts

- VMERS benefits are funded by member contributions, employer contributions, and net investment returns.
- Investment returns historically provide the majority of funding for pension benefits.
- VMERS is currently 86.2% funded. Much of the unfunded liability is related to investment performance in the Great Recession while recent smaller amounts are attributable to retirement experience, demographic or economic assumptions.
- Employer rates are set by the VMERS Board of Trustees every year after an annual actuarial valuation is conducted by an independent actuary.
- Member rates are set by the Legislature although the Board does make recommendations.

Funding Progress of the Retirement Systems- VMERS

Year ending June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
2014	\$ 500,558	\$ 580,972	\$ 80,414	86.2%	\$ 230,969	34.8%
2013	446,236	528,426	82,190	84.4%	220,372	37.3%
2012	417,443	488,572	71,129	85.4%	215,075	33.1%
2011	402,550	436,229	33,679	92.3%	205,589	16.4%
2010	376,153	409,022	32,869	92.0%	202,405	16.2%
2009	331,407	366,973	35,566	90.3%	191,521	18.6%
2008	348,740	343,685	(5,055)	101.5%	175,894	-2.9%
2007	325,774	309,853	(15,921)	105.1%	162,321	-9.8%
2006	288,347	276,552	(11,795)	104.3%	148,815	-7.9%
2005	259,076	248,140	(10,936)	104.4%	146,190	-7.5%
2004	232,890	225,092	(7,798)	103.5%	135,351	-5.8%
2003	222,854	218,533	(4,321)	102.0%	126,216	-3.4%
2002	193,278	176,109	(17,169)	109.7%	106,986	-16.0%
2001	177,928	158,786	(19,142)	112.1%	101,873	-18.8%
2000	161,900	138,697	(23,203)	116.7%	87,147	-26.6%
1999	137,454	114,481	(22,973)	120.1%	70,808	-32.4%
1998	113,678	102,005	(11,673)	111.4%	87,328	-13.4%
1997	96,196	85,686	(10,510)	112.3%	70,800	-14.8%

VMERS Contribution chart

VMERS EMPLOYER CONTRIBUTION RATES*				
	GROUP A	GROUP B	GROUP C	GROUP D
7/1/1999	4.200%	5.600%	6.500%	
7/1/2000	4.000%	5.000%	6.000%	
7/1/2010	4.000%	5.000%	6.500%	9.500%
7/1/2013	4.000%	5.125%	6.625%	9.625%
1/1/2014	4.000%	5.125%	6.750%	9.625%
7/1/2014	4.000%	5.375%	6.875%	9.750%
1/1/2015	4.000%	5.375%	7.000%	9.750%
7/1/2015	4.000%	5.500%	7.125%	9.850%
1/1/2016	4.000%	5.500%	7.250%	9.850%



Approved by the VMERS Board

VMERS EMPLOYEE CONTRIBUTION RATES				
	GROUP A	GROUP B	GROUP C	GROUP D
7/1/1999	3.000%	5.000%	11.000%	
7/1/2000	2.500%	4.500%	9.000%	
7/1/2010	2.500%	4.500%	9.250%	11.000%
7/1/2013	2.500%	4.625%	9.375%	11.125%
1/1/2014	2.500%	4.625%	9.500%	11.125%
7/1/2014	2.500%	4.750%	9.625%	11.250%
1/1/2015	2.500%	4.750%	9.750%	11.250%
7/1/2015	2.500%	4.875%	9.875%	11.350%
1/1/2016	2.500%	4.875%	10.000%	11.350%



Proposed Changes

* Employer rates are set by the VMERS Board of Trustees

** Employee rates are set by the Legislature by statute

An Overview of VSERS

- The Vermont State Retirement System (VSRS) is the public pension plan provided by the State of Vermont for State employees. It was created in 1944 and is governed by Vermont Statute Title 3, Chapter 16.
- **VSRS Group Plans**
 - Group A covers employees in active service as of June 30, 1981 and elected to continue to make contributions, or were hired between July 1, 1981 and June 30, 1984 and elected to enroll in Group A. This plan is closed to new enrollment.
 - Group C covers state police officers and public safety employees assigned to law enforcement duties.
 - Group D covers supreme court justices, as well as superior and district court judges. Probate judges, appointed prior to July 1, 1987 are also covered by this plan. Probate judges are now in Group F.
 - Group F is the largest group in the plan. State employees hired after January 1, 1991 are automatically enrolled in this plan.
- As of June 30, 2014 the plan has assets of \$1,657,245,868

Vermont State Employees' Retirement System (VSERS)

Active Members	<u>June 30, 2014</u>	<u>June 30, 2013</u>	<u>% Change</u>
Vested	5,637	5,763	-2.19%
Not Vested	2,688	2,395	12.23%
Total Active members	<u>8,325</u>	<u>8,158</u>	2.05%
Average Age	45.21	46.17	-2.08%
Average Service	11.77	12.15	-3.13%
Average Compensation	\$ 52,574	\$ 51,087	2.91%
Retired Members and Beneficiaries			
Number	5,980	5,795	3.19%
Annual Retirement Allowances	\$ 104,452,793	\$ 98,932,427	5.58%
Inactive Members	867	796	8.92%
Terminated Vested Members	732	741	-1.21%

Funding Progress of the Retirement Systems- VSERS

Year ending June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
2014	\$ 1,566,076	\$ 2,010,090	\$ 444,014	77.9%	\$ 437,676	101.4%
2013	1,469,170	1,914,300	445,130	76.8%	416,766	106.8%
2012	1,400,779	1,802,604	401,825	77.7%	385,526	104.2%
2011	1,348,763	1,695,301	346,538	79.6%	398,264	87.0%
2010	1,265,404	1,559,324	293,920	81.2%	393,829	74.6%
2009	1,217,638	1,544,144	326,506	78.9%	404,516	80.7%
2008	1,377,101	1,464,202	87,101	94.1%	404,593	21.5%
2007	1,318,687	1,307,643	(11,044)	100.8%	386,917	-2.9%
2006	1,223,323	1,232,367	9,044	99.3%	369,310	2.4%
2005	1,148,908	1,174,796	25,888	97.8%	349,258	7.4%
2004	1,081,359	1,107,634	26,275	97.6%	336,615	7.8%
2003	1,025,469	1,052,004	26,535	97.5%	319,855	8.3%
2002	990,450	1,017,129	26,679	97.4%	300,994	8.9%
2001	954,821	1,026,993	72,172	93.0%	278,507	25.9%
2000	895,151	967,064	71,913	92.6%	266,519	27.0%
1999	804,970	876,412	71,442	91.8%	238,281	30.0%
1998	733,716	804,501	70,785	91.2%	235,956	30.0%
1997	639,128	753,883	114,755	84.8%	227,000	50.6%

Pension Cost Reductions VSERS

ARC FY 11

As of 6/30/09 Valuation: \$41.6 Million
Revised Per Negotiated Salary Changes: \$37.2 Million

This represents a savings to employer of \$4.4 million

FY11 Savings based on a two year -3% pay cut and freezing/pushing out steps/COLAs

ARC FY 12

As of 6/30/09 Valuation: \$43.5 Million
As of 6/30/10 Valuation: \$36.6 Million
Revised Per Proposed Statute Changes: \$31.6 Million

Labor force reductions and pay changes incorporated in 6/30/10 valuation

Proposed Increases in employee contributions represent a savings to employer of \$5.0 million.

\$300,000 to fund restoration of AFC in pension calculations

Upward Pressures on Funding

- Employee Census has significant impact on the ARC

– 6/30/2008	8,442
– 6/30/2009	8,095
– 6/30/2010	7,782
– 6/30/2014	8,325

- FY 2009 Retirement Incentive

An Overview of VSTRS

- The Vermont State Teachers' Retirement System (VSTRS) is the public pension plan provided by the State of Vermont for State teachers. It was created in 1947 and is governed by Vermont Statute Title 16, Chapter 55.
- As of June 30, 2014, the plan has assets of \$1,705,364,605.

VSTRS Facts

- Membership as of June 30, 2014:
 - 9,952 active
 - 2,416 inactive
 - 740 terminated vested
 - 8,086 retired
- VSTRS benefits are currently funded by member contributions, contributions by the state (general fund), and net investment returns.
- Investment returns historically provide the majority of funding for pension benefits.
- VSTRS is currently 59.9% funded (on a funding policy basis) and 64% funded per GASB 67 standard.
- VSTRS was not as well funded as the state or municipal plan going into the Great Recession, because of significant periods of underfunding the actuary's recommended contribution and the impact of paying health care in the pension fund without explicit funding sources. Smaller amounts are attributable to retirement experience, demographic or economic assumptions.

Vermont State Teachers' Retirement System (VSTRS)

	<u>June 30, 2014</u>	<u>June 30, 2013</u>	<u>% Change</u>
Active Members			
Vested	7,720	7,822	-1.30%
Not Vested	2,232	2,279	-2.06%
Total Active members	9,952	10,101	-1.48%
Average Age	46.53	46.61	-0.17%
Average Service	13.15	13.09	0.46%
Average Compensation	\$ 56,981	\$ 55,799	2.12%
Retired Members and Beneficiaries			
Number	8,086	7,743	4.43%
Annual Retirement Allowances	\$ 147,409,221	\$ 138,079,875	6.76%
Inactive Members	2,416	2,322	4.05%
Terminated Vested Members	740	751	-1.46%

Funding Progress of the Retirement Systems- VSTRS

Year ending June 30	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
2014	\$ 1,610,286	\$ 2,687,049	\$ 1,076,764	59.9%	567,074	189.9%
2013	1,552,924	2,566,834	1,013,910	60.5%	563,623	179.9%
2012	1,517,410	2,462,913	945,503	61.6%	561,179	168.5%
2011	1,486,698	2,331,806	845,108	63.8%	547,748	154.3%
2010	1,410,368	2,122,191	711,823	66.5%	562,150	126.6%
2009	1,374,079	2,101,838	727,759	65.4%	561,588	129.6%
2008	1,605,462	1,984,967	379,505	80.9%	535,807	70.8%
2007	1,541,860	1,816,650	274,790	84.9%	515,573	53.3%
2006	1,427,393	1,686,502	259,109	84.6%	499,044	51.9%
2005*	1,354,006	1,492,150	138,144	90.7%	468,858	29.5%
2004*	1,284,833	1,424,661	139,828	90.2%	453,517	30.8%
2003*	1,218,001	1,358,822	140,821	89.6%	437,239	32.2%
2002*	1,169,294	1,307,202	137,908	89.5%	418,904	32.9%
2001*	1,116,846	1,254,341	137,495	89.0%	403,258	34.1%
2000*	1,037,466	1,174,087	136,621	88.4%	387,999	35.2%
1999*	931,056	1,065,754	134,698	87.4%	372,299	36.2%
1998*	821,977	955,694	133,717	86.0%	357,899	37.4%
1997*	717,396	849,179	131,783	84.5%	364,695	36.1%

*Systems funding method changed from Entry Age Normal with Frozen Initial Liability to Entry Age Normal effective with 2006 actuarial valuation

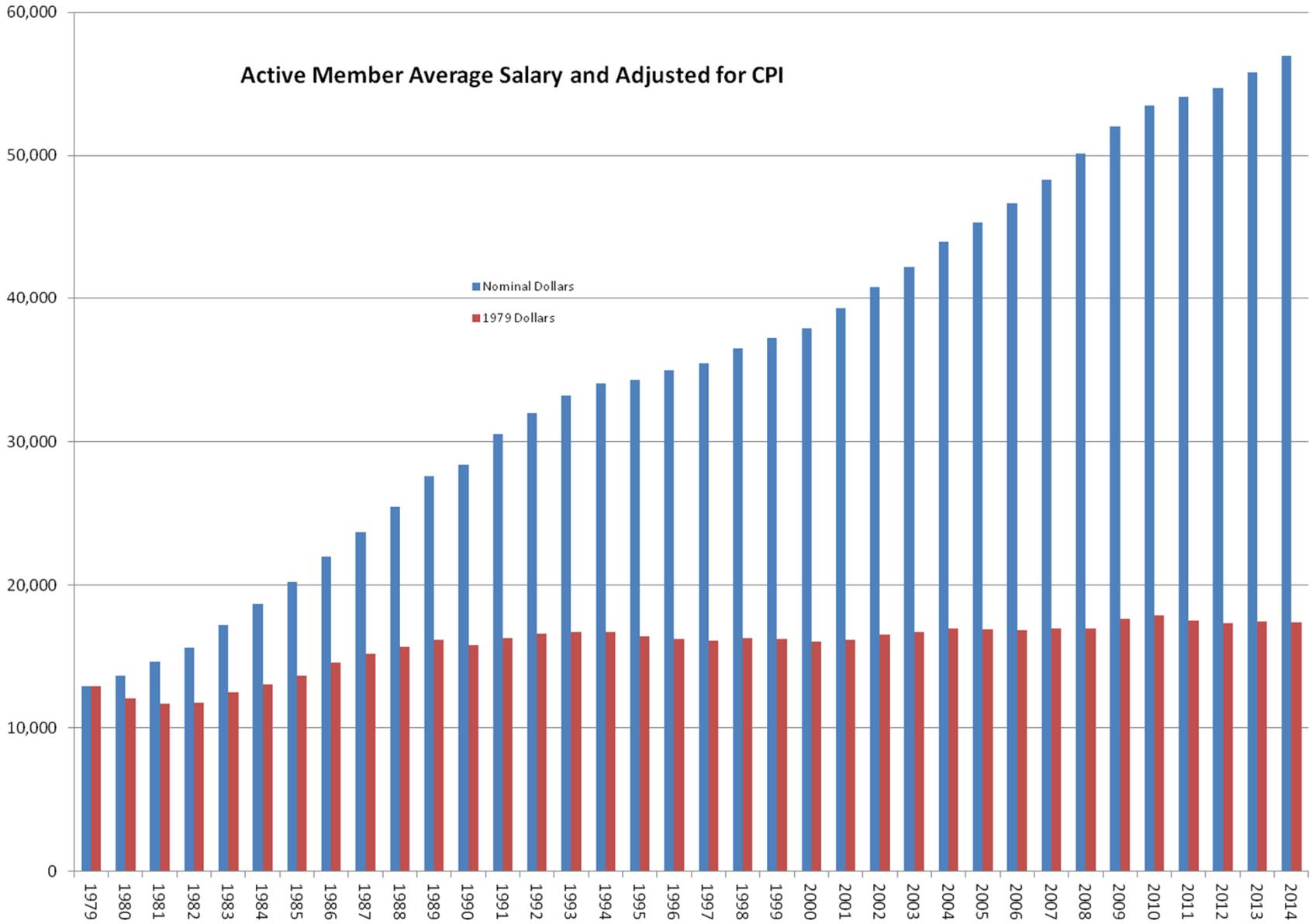
VSTRS- Funding History

Year	Total VSTRS Payroll	Total VSTRS Payroll/ Using 1979 Dollars	Recommended Contribution For Budget based on Actuarial projection	Actual Contribution	\$ Difference: Act vs. Rec. (Uses Budget Beginning 1996)	Percentage of Request Budget Basis	Actual Contribution as a Percentage of Payroll
1979	96,725,620	96,725,620	7,806,825	4,825,155	2,981,670	61.8%	5.0%
1980	104,521,888	92,090,887	8,944,090	8,471,960	472,130	94.7%	8.1%
1981	112,811,389	90,100,185	9,862,861	8,830,900	1,031,961	89.5%	7.8%
1982	126,748,398	95,356,826	10,200,209	7,822,760	2,377,449	76.7%	6.2%
1983	139,085,342	101,381,484	10,721,814	10,929,355	(207,541)	101.9%	7.9%
1984	153,329,729	107,138,964	12,341,069	11,592,100	748,969	93.9%	7.6%
1985	169,219,652	114,176,085	13,475,181	12,567,866	907,315	93.3%	7.4%
1986	187,834,677	124,423,335	14,668,095	14,461,148	206,947	98.6%	7.7%
1987	206,728,650	132,117,077	15,925,452	16,239,416	(313,964)	102.0%	7.9%
1988	230,430,153	141,413,602	16,294,346	17,186,259	(891,913)	105.5%	7.5%
1989	261,596,990	153,160,818	18,072,172	19,000,000	(927,828)	105.1%	7.3%
1990	273,951,188	152,171,815	21,320,155	19,561,000	1,759,155	91.7%	7.1%
1991	298,104,184	158,901,349	25,013,437	15,000,000	10,013,437	60.0%	5.0%
1992	312,346,750	161,627,755	28,595,220	14,618,992	13,976,228	51.1%	4.7%
1993	324,536,824	163,054,487	28,819,875	19,890,048	8,929,827	69.0%	6.1%
1994	335,155,405	164,185,441	25,805,408	20,580,000	5,225,408	79.8%	6.1%
1995	346,975,007	165,291,243	27,451,926	18,080,000	9,371,926	65.9%	5.2%
1996	355,894,809	164,677,904	29,884,559	11,480,000	18,404,559	38.4%	3.2%
1997	364,695,370	164,965,008	30,954,237	18,080,000	12,874,237	58.4%	5.0%
1998	357,899,112	159,407,825	33,519,949	18,106,581	15,413,368	54.0%	5.1%
1999	372,298,852	162,238,275	27,232,542	18,080,000	9,152,542	66.4%	4.9%
2000	387,998,959	163,581,443	23,573,184	18,586,240	4,986,944	78.8%	4.8%
2001	403,258,305	165,310,858	20,882,521	19,143,827	1,738,694	91.7%	4.7%
2002	418,904,021	169,051,873	21,965,322	20,446,282	1,519,040	93.1%	4.9%
2003	437,238,543	172,519,121	23,197,088	20,446,282	2,750,806	88.1%	4.7%
2004	453,517,153	174,300,399	29,608,892	24,446,282	5,162,610	82.6%	5.4%
2005	486,857,658	180,982,417	43,592,332	24,446,282	19,146,050	56.1%	5.0%
2006	499,044,327	179,715,368	49,923,599	24,985,506	24,938,093	50.0%	5.0%
2007	515,572,694	180,525,786	38,200,000	38,496,410	(296,410)	100.8%	7.5%
2008	535,807,012	180,673,697	40,749,097	40,955,566	(206,469)	100.5%	7.6%
2009	561,588,013	190,043,162	37,077,050	37,349,818	(272,768)	100.7%	6.7%
2010	562,149,916	187,163,315	41,503,002	41,920,603	(417,601)	101.0%	7.5%
2011	547,748,405	176,788,081	48,233,006	50,268,131	(2,035,125)	104.2%	9.2%
2012	561,179,272	177,450,696	51,241,932	56,152,011	(4,910,079)	109.6%	10.0%
2013	563,623,421	175,650,701	60,182,755	65,086,320	(4,903,565)	108.1%	11.5%
2014	567,073,601	172,732,337	68,352,825	72,668,412	(4,315,587)	106.3%	12.8%

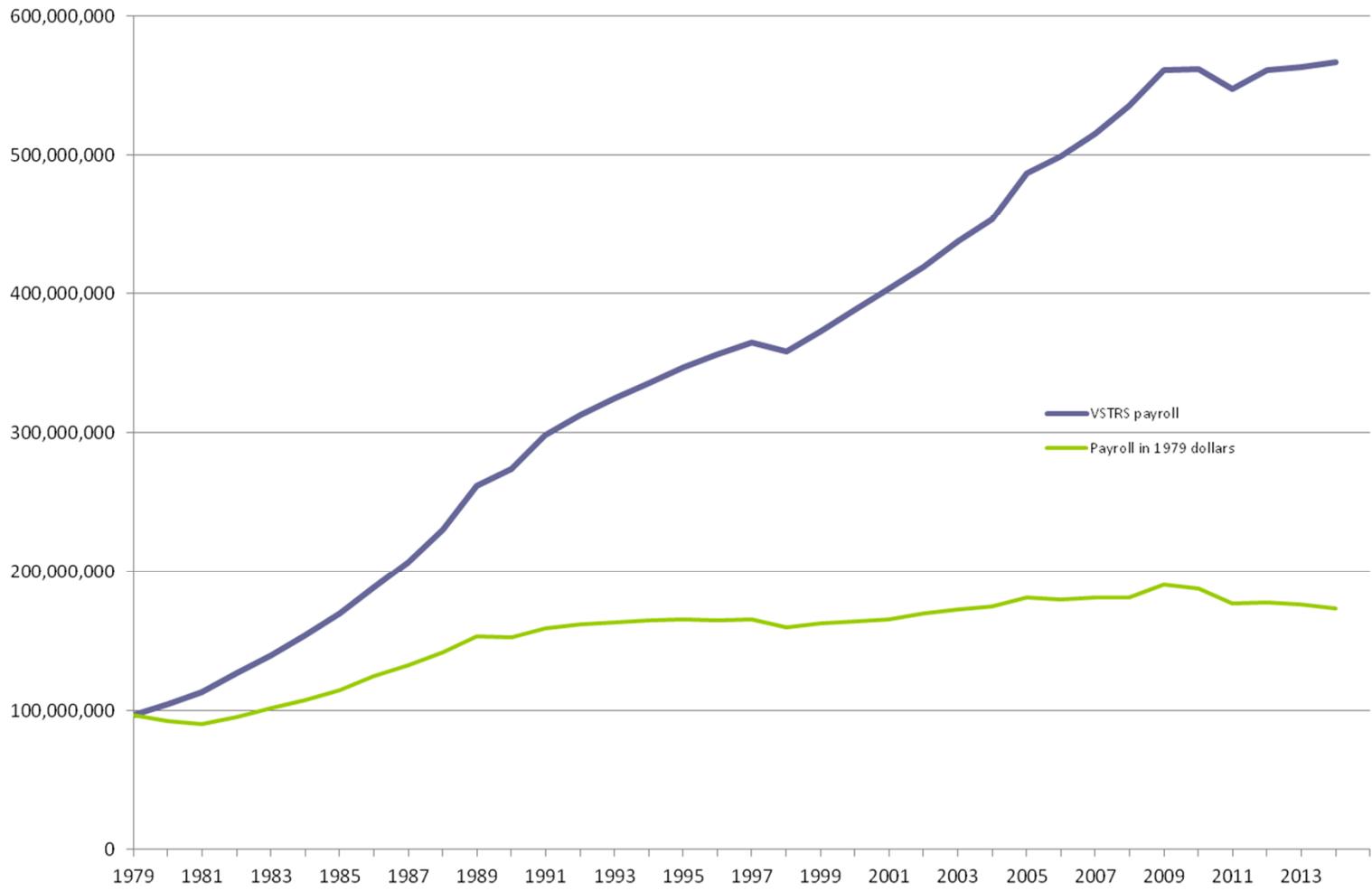
Year	Active Members	Inactive Members	Deferred Vested Members	Retired members	System Total	Actives Only			
						Average Age	Average Service	Annual Compensation	Avg
1979	7,515	603	24	2,014	10,156	38.5	8.3	96,725,620	12,871.01
1980	7,665	526	25	2,079	10,295	38.7	8.5	104,521,888	13,636.25
1981	7,713	614	25	2,156	10,508	39.0	8.7	112,811,389	14,626.14
1982	8,143	881	28	2,200	11,252	40.0	9.4	126,748,398	15,565.32
1983	8,116	1,209	29	2,244	11,598	39.6	9.7	139,085,342	17,137.18
1984	8,218	1,312	33	2,285	11,848	40.0	10.0	153,329,729	18,657.79
1985	8,367	1,302	122	2,324	12,115	40.4	10.3	169,219,652	20,224.65
1986	8,549	1,455	142	2,378	12,524	40.8	10.4	187,834,677	21,971.54
1987	8,737	1,493	184	2,430	12,844	41.1	10.6	206,728,650	23,661.29
1988	9,057	1,426	245	2,495	13,223	41.5	10.6	230,430,153	25,442.22
1989	9,487	1,428	286	2,547	13,748	41.8	10.7	261,596,990	27,574.26
1990	9,644	1,417	334	2,577	13,972	42.2	11.0	273,951,188	28,406.39
1991	9,770	1,442	383	2,631	14,226	42.8	11.4	298,104,184	30,512.20
1992	9,763	1,339	427	2,742	14,271	43.2	11.1	312,346,750	31,992.91
1993	9,777	1,267	475	2,799	14,318	43.6	11.5	324,536,824	33,193.91
1994	9,836	1,265	508	2,897	14,506	44.0	11.8	335,155,405	34,074.36
1995	10,110	1,292	393	3,011	14,806	44.2	12.4	346,975,007	34,319.98
1996	10,185	1,465	414	3,092	15,156	44.5	12.6	355,894,809	34,943.03
1997	10,280	1,681	402	3,188	15,551	44.9	12.9	364,695,370	35,476.20
1998	9,808	2,227	381	3,289	15,705	45.1	13.2	357,899,112	36,490.53
1999	10,006	2,278	376	3,485	16,145	44.9	12.2	372,298,852	37,207.56
2000	10,234	2,414	356	3,647	16,651	44.9	12.0	387,998,959	37,912.74
2001	10,264	2,654	495	3,812	17,225	45.1	12.1	403,258,305	39,288.61
2002	10,257	2,932	513	3,991	17,693	44.5	12.4	418,904,021	40,840.79
2003	10,355	2,901	583	4,169	18,008	45.4	12.5	437,238,543	42,224.87
2004	10,315	3,084	560	4,386	18,345	45.9	12.8	453,517,153	43,966.76
2005	10,744	2,906	568	4,592	18,810	44.6	12.6	486,857,658	45,314.38
2006	10,696	2,777	759	4,879	19,111	46.7	13.6	499,044,327	46,657.10
2007	10,675	2,901	741	5,192	19,509	46.7	13.6	515,572,694	48,297.21
2008	10,685	2,929	705	5,555	19,874	46.9	13.6	535,807,012	50,145.72
2009	10,799	2,655	721	5,910	20,085	47.1	13.8	561,588,013	52,003.71
2010	10,509	2,853	718	6,146	20,226	47.1	13.8	562,149,916	53,492.24
2011	10,123	2,675	647	7,005	20,450	46.9	13.8	547,748,405	54,109.30
2012	10,262	2,193	793	7,376	20,624	46.9	13.1	561,179,272	54,685.18
2013	10,101	2,322	751	7,743	20,917	46.6	13.1	563,623,421	55,798.77
2014	9,952	2,416	740	8,086	21,194	46.5	13.2	567,073,601	56,980.87

Note: Based on data point of 6/30; does not include new hires/transfers/terminations during year but does reflect school year end retirements. Includes members of the teachers retirement system, does not include school staff (non licensed positions) that are included in the municipal retirement system

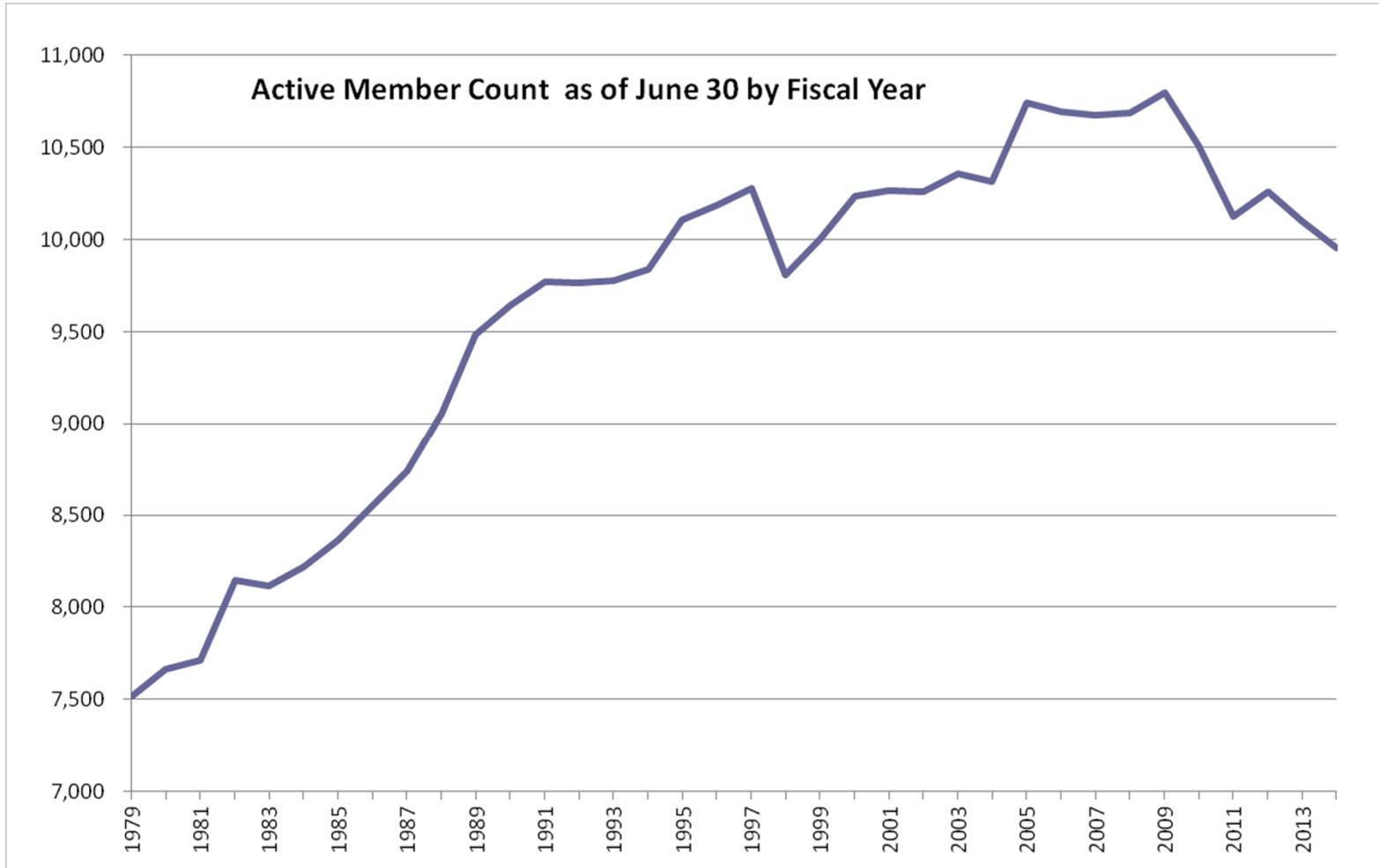
Active Member Average Salary and Adjusted for CPI



Growth in Payroll for Active Teachers as of Fiscal Year End



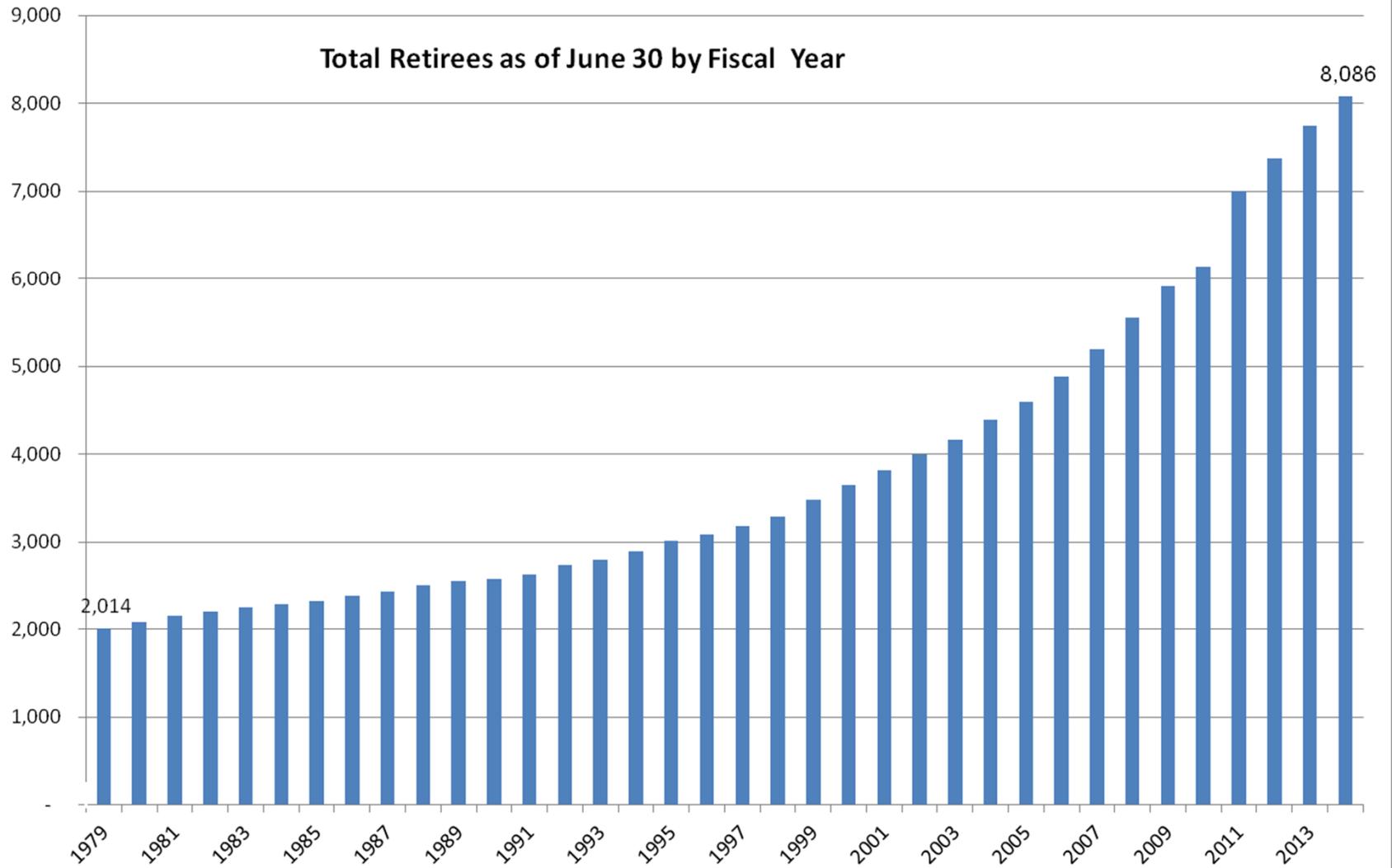
Some slowdown/Reduction of Active Teacher Population >> Additional Retirees



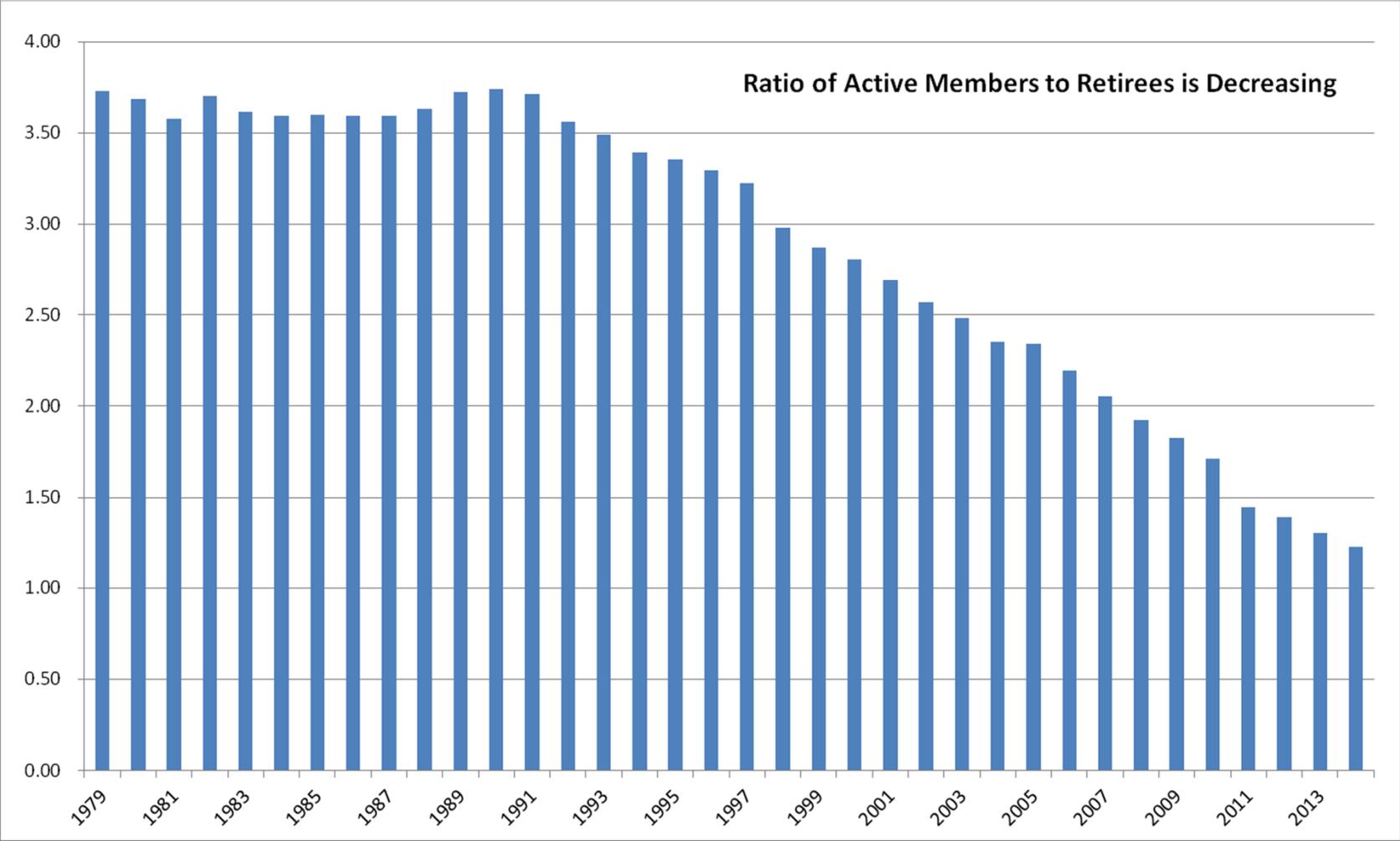
Retiree Data

Year	Annual Retirement Allowances	Avg Retirement Allowance	Total Retirees	Active to Retiree Ratio	Service Pensions	Disability Retirements	Beneficiaries of Deceased Members
1979	6,536,436	3,245.50	2,014	3.73	1,832	42	140
1980	7,640,076	3,674.88	2,079	3.69	1,894	44	141
1981	8,439,552	3,914.45	2,156	3.58	1,959	46	151
1982	9,045,804	4,111.73	2,200	3.70	2,005	46	149
1983	9,787,080	4,361.44	2,244	3.62	2,049	47	148
1984	10,251,108	4,486.26	2,285	3.60	2,091	51	143
1985	10,903,572	4,691.73	2,324	3.60	2,126	53	145
1986	11,616,456	4,884.97	2,378	3.60	2,174	51	153
1987	12,337,656	5,077.22	2,430	3.60	2,222	58	150
1988	13,362,432	5,355.68	2,495	3.63			
1989	15,084,456	5,922.44	2,547	3.72	2,328	62	157
1990	16,242,600	6,302.91	2,577	3.74	2,352	62	163
1991	17,727,860	6,738.07	2,631	3.71	2,396	67	168
1992	19,820,232	7,228.39	2,742	3.56	2,485	75	182
1993	21,488,292	7,677.13	2,799	3.49	2,543	78	178
1994	23,385,984	8,072.48	2,897	3.40	2,628	78	191
1995	25,416,756	8,441.30	3,011	3.36	2,732	86	193
1996	27,489,723	8,890.60	3,092	3.29	2,830	88	174
1997	29,540,472	9,266.15	3,188	3.22	2,898	95	195
1998	32,256,765	9,807.47	3,289	2.98	3,089	113	87
1999	35,705,781	10,245.56	3,485	2.87	3,169	95	221
2000	38,982,920	10,689.04	3,647	2.81	3,302	98	247
2001	42,867,493	11,245.41	3,812	2.69	3,462	105	245
2002	46,774,212	11,719.92	3,991	2.57	3,624	113	254
2003	50,540,997	12,123.05	4,169	2.48	3,791	118	260
2004	55,504,554	12,654.94	4,386	2.35	4,003	119	264
2005	60,545,793	13,185.06	4,592	2.34	4,195	126	271
2006	66,776,433	13,686.50	4,879	2.19	4,471	132	276
2007	74,726,093	14,392.54	5,192	2.06	4,767	136	289
2008	82,480,807	14,848.03	5,555	1.92	5,106	141	308
2009	91,393,401	15,464.20	5,910	1.83	5,439	147	324
2010	95,664,775	15,565.37	6,146	1.71	5,676	155	315
2011	117,019,135	16,705.09	7,005	1.45	6,509	158	338
2012	128,765,217	17,457.32	7,376	1	6,856	158	362
2013	138,079,875	17,832.87	7,743	1.30	7,195	161	387
2014	147,409,221	18,230.18	8,086	1.23	7,515	159	412

Total Retirees as of June 30 by Fiscal Year



Ratio of Active Members to Retirees is Decreasing



Issues related to Active to Retiree Ratio

- Unlike a “pay-as-you-go” plan such as Social Security, the actuary takes this in account when developing models to prefund benefits.
- The increasing trend may get ahead of actuarial demographic assumptions, creating actuarial losses.
- Trends are indicative of a maturing plan and can make it more difficult to achieve the objectives of full funding.
- Potentially creates more volatility in employer contribution rates.
- As more funds are needed for benefit payments, the system has a greater negative cash flow (benefit payments exceed contributions), requiring more liquid assets to fund these payments.
- Impacts asset allocation strategy over time. May have VPIC impacts.

Changes to VSTRS Pension FY2010

- Provided \$15.2 million of first year savings
- For employees more than five years from normal retirement eligibility (less than 25 years of service or less than 57 years old), normal retirement will be 65 or rule of 90 (combination of years of service and age), instead of 62 years old or with 30 years of service at any age. Early retirement will stay at 55, but the reduction will be an actuarial calculation.
- Employees more than five years from normal retirement eligibility will be eligible for a maximum benefit of 60% AFC, instead of the current 50% AFC, with a higher (2%, instead of 1.67%) multiplier upon completion of 20 years of service.
- Employees within five years of normal retirement eligibility will be eligible for a maximum benefit up to 53.34% of AFC instead of current 50% maximum, using the 1.67% multiplier, in recognition of years earned after July 1, 2010.
- Prohibition of extraordinary increases in average final compensation (limit of 10% per year during AFC determination period)
- being used to determine retirement benefit levels.
- Employee Contributions increased from 3.54% to 5% of payroll *

* Increased in FY2015 to 6% for non-vested employees as of 7/1/2014.

Changes to VSTRS Pension FY2010

Normal Cost FY 11

As of 6/30/09 Valuation:	\$22.8 Million
Revised Per H.764:	\$10.3 Million

Amortization of Unfunded Liability FY 11

As of 6/30/09 Valuation:	\$40.7 Million
Revised Per H.764:	\$37.9 Million

ARC FY 11

As of 6/30/09 Valuation:	\$63.5 Million
Revised Per H.764:	\$48.2 Million

***Benefit Changes Have Lowered Normal Cost
which has remained in expected
parameters.....***

Teachers' System	
FY 2011 normal cost as of 6/30/09 Valuation	\$22.8 Million
Revised as a result of enacted changes	\$10.3 Million
Normal Cost for FY 2016 as projected in 2010	\$12.8 Million
Normal Cost for FY 2015 in most recent 6valuation	\$10.4 million

but Amortization cost for Unfunded Liability is Being Fueled, to a significant degree, by Health Care expense losses...

Teachers' System	
FY 2011 amortiz. cost as of 6/30/09 Valuation:	\$40.7 Million
Revised as a result of enacted changes	\$37.9 Million
Amortiz. Cost for FY 2016 as projected in 2010	\$48.5 Million
Amortiz. Cost for FY 2016 in most recent valuation	\$65.7 Million

Health Care Benefit Overview

Vermont enacted a tiered health care benefit system for teachers in July 2010

- **Changed amount of subsidized coverage for new hires and those with less than 10 years of service**
- **Active teachers with more than 10 years of service given opportunity to obtain single or spousal coverage**

Tiered health care system implemented for group F members of the State system hired on or after July 1, 2008

- **No subsidized coverage for less than 10 years of service and phased in subsidized coverage for 11+ years of service**

Retirement Payments *Value of Prefunding*

- **Collectively the Vermont Retirement systems:** \$258.1 million paid in retirement benefits in FY2014. In a pay-go structure this is what would need to be appropriated (via state and municipal sources)
- ***Total state and municipal contributions*** in FY2014 totaled \$141.2 million.
- **We need to apply the same discipline to health care!**

OPEB Liability Growth is Fueled by Lack of Pre-Funding

VSERS - Other Post-Employment Benefits Funding Analysis

	<u>Pre-Funding Basis</u>	<u>Pay-As-You-Go Basis</u>
Assumed Discount Rate	8.10%	4.0%
Actuarial Value of Assets	\$ 18,904,148	\$ 18,904,148
Actuarial Accrued Liability		
- Active Participants	\$ 328,321,072	\$ 641,246,523
- Retired Participants	\$ 317,265,272	\$ 451,481,714
- TOTAL	\$ 645,586,344	\$ 1,092,728,237
Unfunded Actuarial Liability	\$ 626,682,196	\$ 1,073,824,089
Funded Ratio	2.9%	1.7%
Annual Covered Payroll	\$ 464,517,262	\$ 464,517,262
Unfunded Actuarial Liability (as % of covered payroll)	134.9%	231.2%
Normal Cost for FY 2015	\$ 17,012,205	\$ 41,186,839
Amortization of Unfunded Actuarial Liability for FY 2015 (30 yr)	\$ 30,865,115	\$ 31,050,012
Interest on expected net retiree claims	\$ (1,485,858)	\$ (740,989)
Annual Required Contribution (ARC) for FY 2015	\$ 46,391,462	\$ 71,495,862
Expected Benefit Payments	\$ 37,416,308	\$ 37,416,308
Increase in Annual Cost to Fund Plan	\$ 8,975,154	\$ 34,079,554



OPEB Liability Growth is Fueled by Lack of Pre-Funding

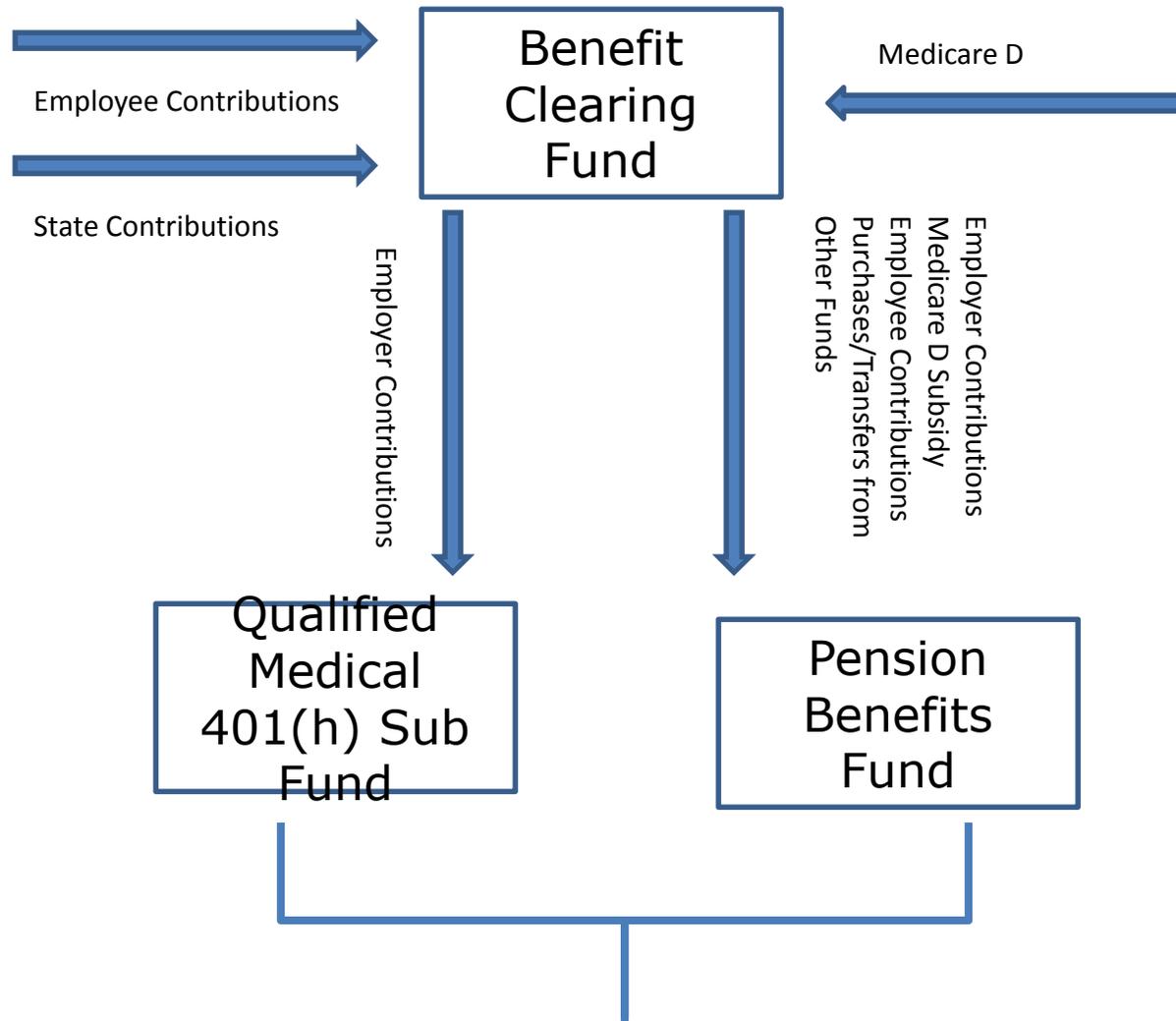
VSTRS - Other Post-Employment Benefits Funding Analysis

	<u>Pre-Funding Basis</u>	<u>Pay-As-You-Go Basis</u>
Assumed Investment Return	7.9%	4.0%
Actuarial Value of Assets	\$ -	\$ -
Actuarial Accrued Liability		
- Active Participants	\$ 147,861,187	\$ 319,008,121
- Retired Participants	\$ 293,664,691	\$ 447,767,357
- TOTAL	\$ 441,525,878	\$ 766,775,478
Unfunded Actuarial Liability	\$ 441,525,878	\$ 766,775,478
Funded Ratio	0.0%	0.0%
Annual Covered Payroll	\$ 565,658,407	\$ 565,658,407
Unfunded Actuarial Liability (as % of covered payroll)	78.1%	135.6%
Normal Cost for FY 2015	\$ 7,971,140	\$ 19,381,093
Amortization of Unfunded Actuarial Liability for FY 2015 (30 yr)	\$ 21,251,642	\$ 22,171,590
Interest on expected net retiree claims	\$ (1,104,166)	\$ (564,315)
Annual Required Contribution (ARC) for FY 2015	\$ 28,118,616	\$ 40,988,368
Expected Benefit Payments	\$ 28,495,158	\$ 28,495,158
Increase in Annual Cost to Fund Plan	\$ (376,542)	N/A

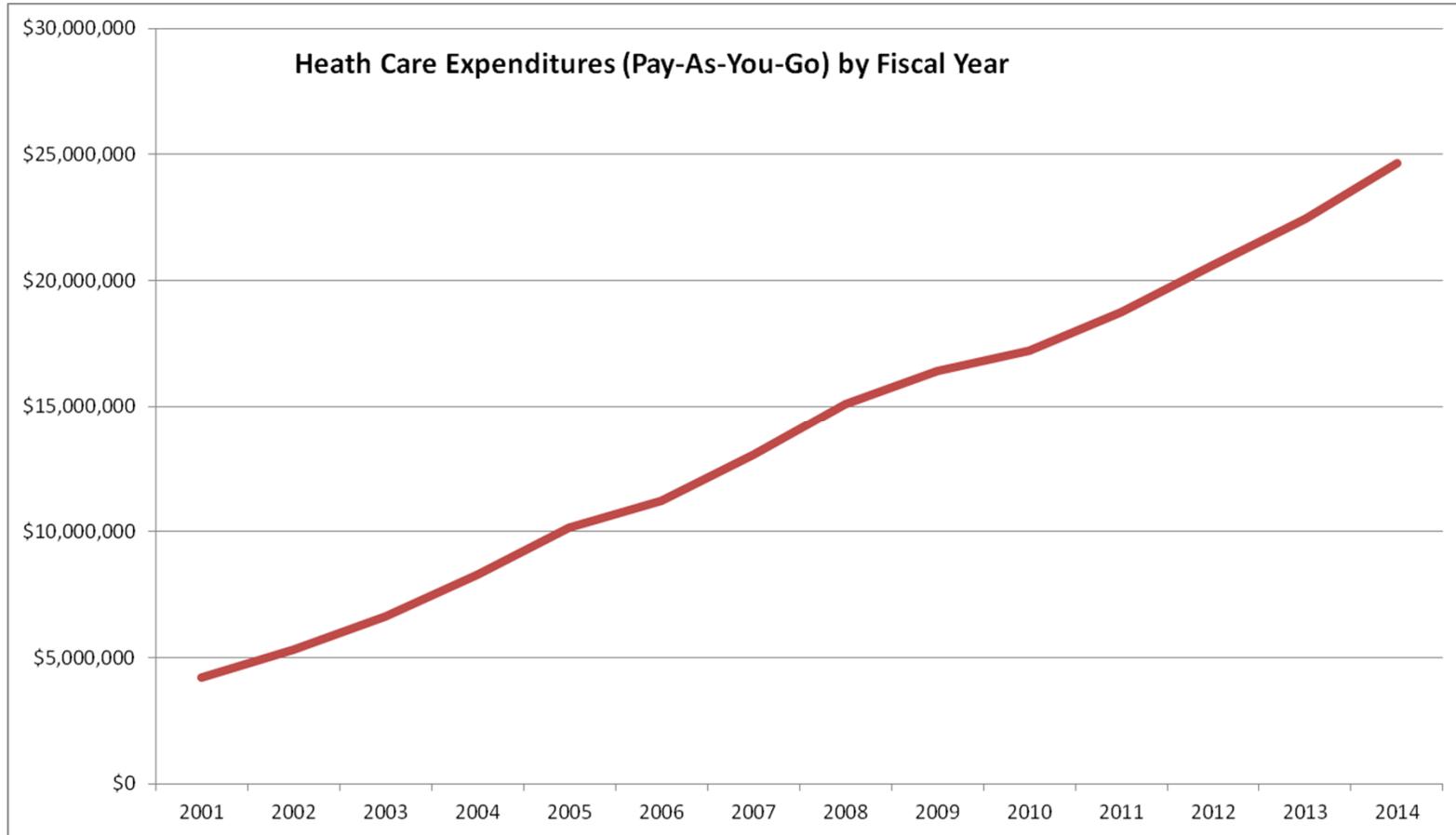


Teacher Health Care and
Pensions
Act 179

Pension Fund Structure Up to FY 2015



Health Care Expenses Are Rising



Health Care Expenses													
2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014
4,194,215	5,299,600	6,634,738	8,279,332	10,167,601	11,233,854	13,040,783	15,081,847	16,421,176	17,203,669	18,749,675	20,620,144	22,459,219	24,640,986

As retiree health care takes a bigger bite out of available funds, VSTRS's pension funded position is threatened and the annual actuarial required contributions (ARC) is rising at an accelerated rate.

Impact of Enacted Benefit Changes to 2010 OPEB Valuation

- Actual impact on unfunded liability exceeded original estimates, in part in combination with other lower health care inflation rates:
- Per the consulting actuary, The decrease in liability is attributable to the following factors:
 - an increase in plan premiums smaller than expected;
 - removal of assumed age-morbidity factors;
 - changes to eligibility and cost-sharing plan provisions effective July 1, 2010, including associated changes in assumptions and attribution method.
- Unfunded liability reduced in **2010 from \$872 million to \$704 million.**

Teacher Unfunded OPEB Liability

Unfunded Teacher OPEB Liability

6/30/2014	\$777 Million	
6/30/2013	\$713 Million	} Implementation of Employer Group Waiver Plan (EGWP)
6/30/2012	\$827 Million	
6/30/2011	\$780 million	} Implemented Savings Initiatives including Tiered Eligibility Structure
6/30/2010	\$704 million	
6/30/2009	\$872 million	

- Liability Side has been addressed with significant initiatives but lack of a funding policy for health care continued to create upward pressures through 2014.

Factors Impacting Unfunded Liability:

- Expected increases due to the passage of time (and lack of funding) although offset in 2013 by EGWP initiative negotiated with NEA
- Updates to demographic assumptions as recommended by the Experience Study of the State Teacher's Retirement System of Vermont, presented to the Board on March 23, 2011
- 2009-2010- Negotiated benefit changes with NEA

Example Amortization of \$20 million of Retiree Healthcare Costs

Fiscal Year-End Date	Unfunded Liability Balance	"Select and Ultimate" Discount Rate	Interest on Unfunded Liability	Amortization Increasing at 5.00%
6/30/2012	20,000,000	6.25%	1,250,000	1,150,174
6/30/2013	20,099,826	6.75%	1,356,738	1,207,682
6/30/2014	20,248,882	7.00%	1,417,422	1,268,067
6/30/2015	20,398,237	7.50%	1,529,868	1,331,470
6/30/2016	20,596,635	7.75%	1,596,239	1,398,043
6/30/2017	20,794,831	8.25%	1,715,574	1,467,945
6/30/2018	21,042,459	8.25%	1,736,003	1,541,343
6/30/2019	21,237,120	8.25%	1,752,062	1,618,410
6/30/2020	21,370,772	8.50%	1,816,516	1,699,330
6/30/2021	21,487,957	8.50%	1,826,476	1,784,297
6/30/2022	21,530,137	8.50%	1,830,062	1,873,512
6/30/2023	21,486,686	8.50%	1,826,368	1,967,187
6/30/2024	21,345,867	8.50%	1,814,399	2,065,547
6/30/2025	21,094,719	8.50%	1,793,051	2,168,824
6/30/2026	20,718,947	8.50%	1,761,110	2,277,265
6/30/2027	20,202,792	8.75%	1,767,744	2,391,129
6/30/2028	19,579,408	9.00%	1,762,147	2,510,685
6/30/2029	18,830,869	9.00%	1,694,778	2,636,219
6/30/2030	17,889,428	9.00%	1,610,049	2,768,030
6/30/2031	16,731,447	9.00%	1,505,830	2,906,432
6/30/2032	15,330,845	9.00%	1,379,776	3,051,753
6/30/2033	13,658,868	9.00%	1,229,298	3,204,341
6/30/2034	11,683,825	9.00%	1,051,544	3,364,558
6/30/2035	9,370,812	9.00%	843,373	3,532,786
6/30/2036	6,681,399	9.00%	601,326	3,709,425
6/30/2037	3,573,299	9.00%	321,597	3,894,896
6/30/2038	0	9.00%	0	0

Fundamental Changes to Health Care Funding Effective 7/1/2014

- The State has established and funded a separate trust to account for the assets and liabilities of the retiree medical benefit plan.
- Annual contributions to the Retiree Medical Plan are be separately identified in the State budget and not commingled with Retirement Plan contributions.
- A series of funding sources were put in place, replacing the “retroactive” funding approach.
- Will save \$480 million in interest through 2038.

Sources of Funds over Next 10 Years

