

# **Presentation to House Government Operations Committee**

**Office of the State Treasurer  
January 20, 2016**



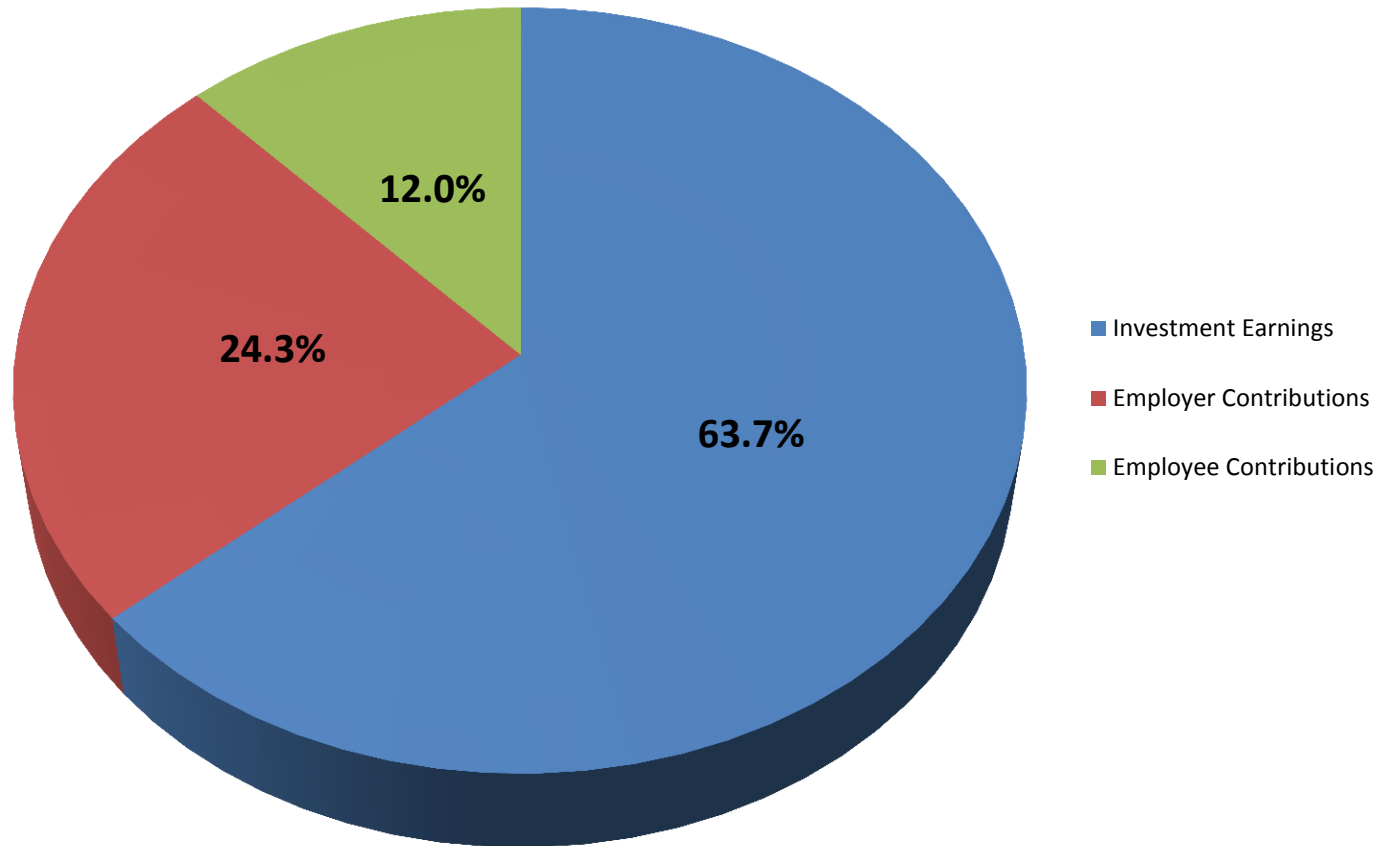
## ***Guiding Principles for a Retirement Plan***

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.

# **The Pension Challenge**

- Funding for retirement benefits, including health care, is among the largest fiscal challenges facing many state governments, including Vermont
- Health insurance has historically grown much faster than the rate of revenue growth
- Investment losses from the Great Recession significantly impacted pension funding
- At the same time, retirement security is important to Vermont's economic future
- Maintaining a disciplined approach is important to meet these challenges

# **Pension Funding: How are We Doing?**

- Measured by an Independent Actuary
- Three Important Factors:
  1. What is your funded status?
    - Pension Liabilities
    - Assets Available to meet these liabilities
  2. Are you Contributing to Plan at the Recommended Rate
    - ARC
    - ADC/ADEC
  3. Do you have a plan in place to retire the unfunded liability?

# **New Pension Accounting GASB 67/68**

- GASB 68 divorces funding and accounting
  - In prior standard, the focus was on whether the government is making its ARC contributions to adequately fund the plan
  - Under the new standard, the focus is on the size and growth of the NPL
- GASB68, based on fair market value of assets, will lead to more volatility in the NPL and funded ratio reported for accounting purposes
- Unfunded pension liabilities exist today and will tomorrow, much like the amortized portion of a mortgage
- Legislators and pension governing boards will still need to maintain/develop a funding policy to pay off the liabilities
  - Vermont's funding policy established in state statute
- Employers' unfunded pension liabilities are very large but will be paid down via annual contributions to the pension funds over many years

# **FY 2014/2015 GASB 67 Results**

(Dollar Amount in Thousands)

## **FY 2014**

|  | <b>VSERS</b> | <b>VSTRS</b> | <b>VMERS</b> |
|--|--------------|--------------|--------------|
| Total Pension Liability  | 2,008,888    | 2,663,802    | 543,652      |
| Plan Fiduciary Net Position  | (1,657,246)  | (1,705,365)  | (534,525)    |
| Net Pension Liability  | 351,642      | 958,437      | 9,127        |
| Plan Fiduciary Net Position as a Percentage of Total Pension Liability | 82.50%       | 64.02%       | 98.32%       |

## **FY 2015**

|  | <b>VSERS</b> | <b>VSTRS</b> | <b>VMERS</b> |
|--|--------------|--------------|--------------|
| Total Pension Liability  | 2,169,909    | 2,839,621    | 613,000      |
| Plan Fiduciary Net Position  | (1,624,861)  | (1,653,116)  | (535,904)    |
| Net Pension Liability  | 545,048      | 1,186,505    | 77,096       |
| Plan Fiduciary Net Position as a Percentage of Total Pension Liability | 74.88%       | 58.22%       | 87.42%       |

# **Funding Progress of the Retirement Systems**

## **State (VSERS)**

**(amounts in thousands)**

|              | Year ending<br>June 30 | Actuarial<br>Value of<br>Assets<br>(a) | Actuarial<br>Accrued<br>Liability<br>(AAL)<br>(b) | Unfunded<br>AAL<br>(UAAL)<br>(b-a) | Funded<br>Ratio<br>(a/b) | Covered<br>Payroll<br>(c) | UAAL as a<br>Percentage of<br>Covered<br>Payroll<br>((b-a)/c) |
|--------------|------------------------|--|---|------------------------------------|--------------------------|---------------------------|---|
| <b>VSERS</b> | <b>2015</b>            | <b>\$ 1,636,268</b>                    | <b>\$ 2,178,827</b>                               | <b>\$ 542,559</b>                  | <b>75.1%</b>             | <b>\$ 462,057</b>         | <b>117.4%</b>   |
|              | 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%   |



# Funding Progress of the Retirement Systems

## Teachers (VSTRS)

*(amounts in thousands)*

|              | Year ending<br>June 30 | Actuarial<br>Value of<br>Assets<br>(a) | Actuarial<br>Accrued<br>Liability<br>(AAL)<br>(b) | Unfunded<br>AAL<br>(UAAL)<br>(b-a) | Funded<br>Ratio<br>(a/b) | Covered<br>Payroll<br>(c) | UAAL as a<br>Percentage of<br>Covered<br>Payroll<br>((b-a)/c) |
|--------------|------------------------|--|---|------------------------------------|--------------------------|---------------------------|---|
| <b>VSTRS</b> | <b>2015</b>            | <b>\$ 1,662,346</b>                    | <b>\$ 2,837,375</b>                               | <b>\$ 1,175,029</b>                | <b>58.6%</b>             | <b>\$ 576,394</b>         | <b>203.9%</b>   |
|              | 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%   |

# **Funding Progress of the Retirement Systems**

## **Municipal (VMERS)**

*(amounts in thousands)*

| Year ending<br>June 30 | Actuarial<br>Value of<br>Assets<br>(a) | Actuarial<br>Accrued<br>Liability<br>(AAL)<br>(b) | Unfunded<br>AAL<br>(UAAL)<br>(b-a) | Funded<br>Ratio<br>(a/b) | Covered<br>Payroll<br>(c) | UAAAL as a<br>Percentage of<br>Covered<br>Payroll<br>((b-a)/c) |
|------------------------|--|---|------------------------------------|--------------------------|---------------------------|--|
| <b>VMERS</b>           |  |   |                                    |                          |                           |  |
| 2015                   |  |   | -----Data Pending-----             |                          |                           |  |
| 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%   |

# **Actuarial Gains or Losses**

- A pension plan has actuarial gains or losses each year because the actual events during the year (“experience”) do not exactly match the long-term assumptions previously made
- Economic Gains/Losses: Gains or losses on plan assets occur because the actual investment returns were higher or lower than anticipated
- Experience and Demographic Gains or losses: Can occur because long-term assumptions (e.g., mortality, salary increases, termination, retirement) were not met
- An experience study is completed to reset assumptions

# **FY 2015 VSERS Valuation Results**

- Incorporates an ARC recommendation of \$48,503,358.
  - Normal \$ 14,181,091
  - Accrued Liability Amortization \$ 34,322,267
- Increase from prior year of \$2.3 million
- the July experience study incorporated upward pressures due to the change from the select-and-ultimate rate of return assumption to the lower single rate return assumption of 7.95%, and new mortality assumptions. The Board wanted to undertake a further review of the components of the workforce as they related to mortality as well as salary increase assumptions. As a result two major changes were reflected in the valuation:
  - The mortality tables were adjusted to reflect a blended collar (blue collar, general collar) mix consistent with an analysis of the job titles in the active population
  - Mortality assumptions within the actuarial industry are continuing to evolve and the Treasurer's Office concurs with the Actuary's recommendation to conduct an annual review
  - Long term rates of salary increases were adjusted downward based on data supplied by HR and TRE staff

# **FY 2015 VSTRS Valuation Results**

- Incorporates an ARC recommendation of \$82,659,576.
  - Normal \$ 8,327,249
  - Accrued Liability Amortization \$ 74,332,327
- Increase from prior year of \$6.6 million
- The major upward cost drivers are the change from the select-and-ultimate rate of return assumption to the slightly lower single rate return assumption of 7.95%, and updated mortality assumptions
- Increase in retirements
- Overall, the number of active teachers continues to decline

# **VSTRS Facts**

- Membership as of June 30, 2015
  - 9,585 active
  - 2,260 inactive
  - 1,163 terminated vested
  - 8,484 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
- FY2014: VSTRS was funded at 59.9% funded (on a funding policy basis) and 64% funded per GASB 67 standard
- FY2015: VSTRS currently funded at 58.6% (on a funding policy basis), GASB 67 data not yet available.
- 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

***For Our Funding Purposes,  
the Actuarial Annual Required  
Contribution is now the  
Actuarially Determined  
(Employer) Contribution***

ARC= ADC or ADEC

# **Annual Required Contribution**

- Method by which UAL is eventually paid off (assuming it is funded)
- Annual Required Contribution (ARC):
  - A measure of needed plan funding
  - The actuarially determined pension fund contribution in a single year
- The ARC has two parts:
  1. The Normal Cost
    - 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.
  2. Amortization, which is the annual amount needed to eliminate the unfunded liability over the plan's amortization period



# 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 of 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   | <b>60.0%</b>                          | 5.0%   |
| 1992 | 312,346,750         | 161,627,755                             | 28,595,220  | 14,618,992          | 13,976,228   | <b>51.1%</b>                          | 4.7%   |
| 1993 | 324,536,824         | 163,054,487                             | 28,819,875  | 19,890,048          | 8,929,827  | <b>69.0%</b>                          | 6.1%   |
| 1994 | 335,155,405         | 164,185,441                             | 25,805,408  | 20,580,000          | 5,225,408  | <b>79.8%</b>                          | 6.1%   |
| 1995 | 346,975,007         | 165,291,243                             | 27,451,926  | 18,080,000          | 9,371,926  | <b>65.9%</b>                          | 5.2%   |
| 1996 | 355,894,809         | 164,677,904                             | 29,884,559  | 11,480,000          | 18,404,559   | <b>38.4%</b>                          | 3.2%   |
| 1997 | 364,695,370         | 164,965,008                             | 30,954,237  | 18,080,000          | 12,874,237   | <b>58.4%</b>                          | 5.0%   |
| 1998 | 357,899,112         | 159,407,825                             | 33,519,949  | 18,106,581          | 15,413,368   | <b>54.0%</b>                          | 5.1%   |
| 1999 | 372,298,852         | 162,238,275                             | 27,232,542  | 18,080,000          | 9,152,542  | <b>66.4%</b>                          | 4.9%   |
| 2000 | 387,998,959         | 163,581,443                             | 23,573,184  | 18,586,240          | 4,986,944  | <b>78.8%</b>                          | 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  | <b>88.1%</b>                          | 4.7%   |
| 2004 | 453,517,153         | 174,300,399                             | 29,608,892  | 24,446,282          | 5,162,610  | <b>82.6%</b>                          | 5.4%   |
| 2005 | 486,857,658         | 180,982,417                             | 43,592,332  | 24,446,282          | 19,146,050   | <b>56.1%</b>                          | 5.0%   |
| 2006 | 499,044,327         | 179,715,368                             | 49,923,599  | 24,985,506          | 24,938,093   | <b>50.0%</b>                          | 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%  |

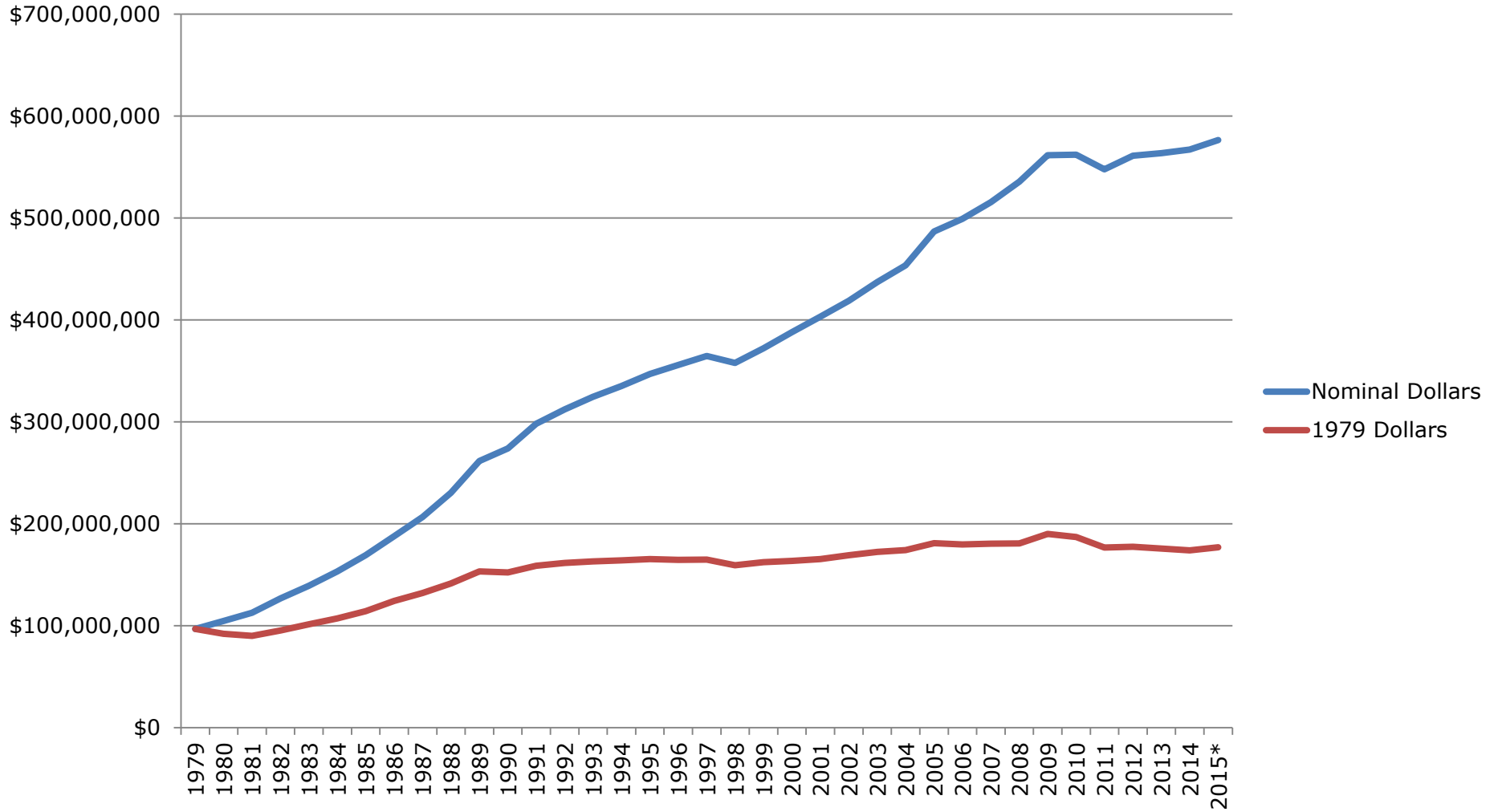
\*2015 calculation pending

# VSTRS Demographic Data

| 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       | 41.1         | 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 |
| 2015 | 9,585          | 2,260            | 1,163                   | 8,484           | 21,492       | 46.2         | 12.9            | 576,393,699         | 60,134.97 |

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

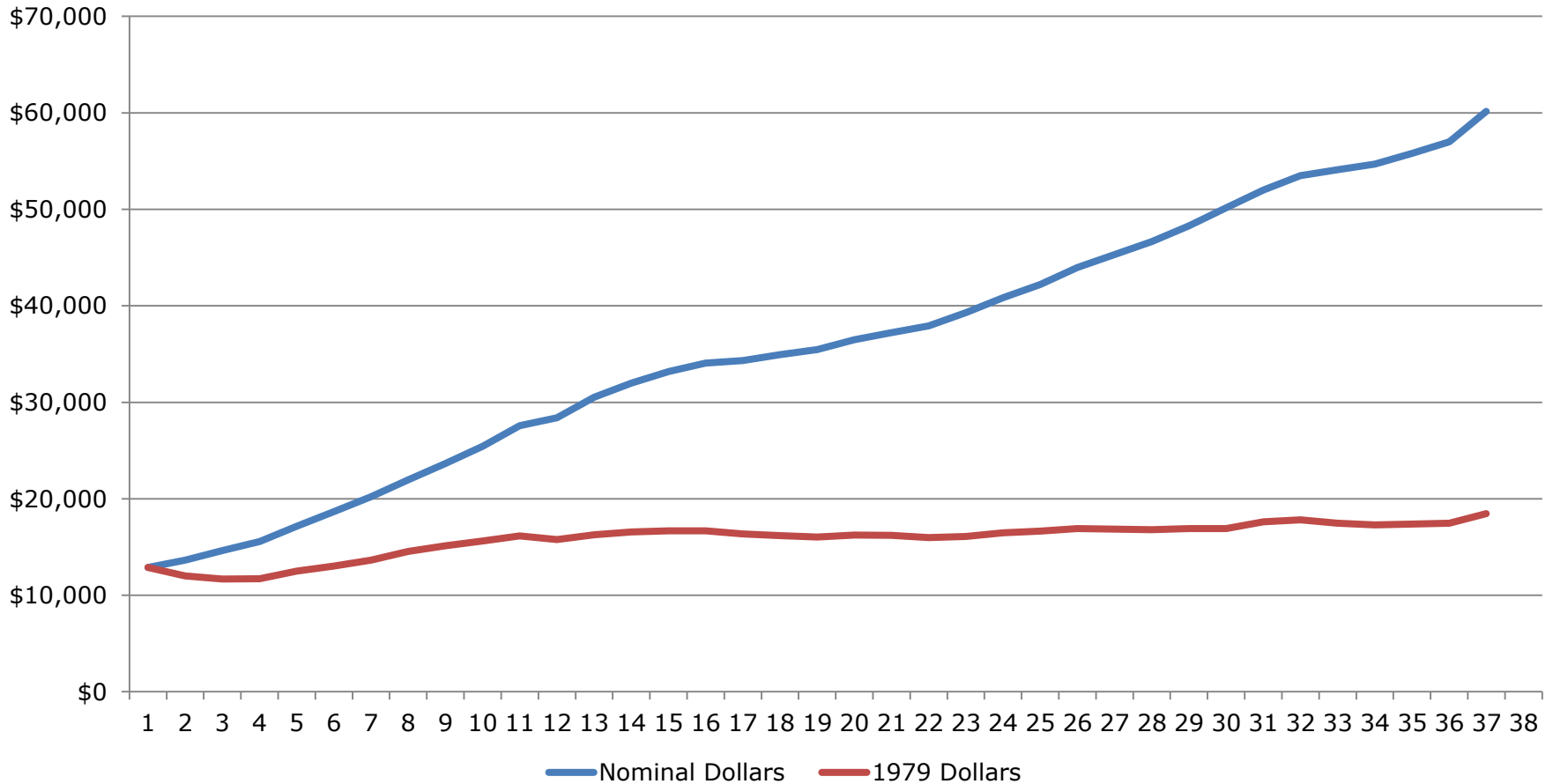
# **VSTRS Total Active Annual Compensation as of 6/30 by Year**



## **Preliminary Data**

\*2015: An estimate for 2015 is based on the change in the CPI from second quarter 2014 to second quarter 2015

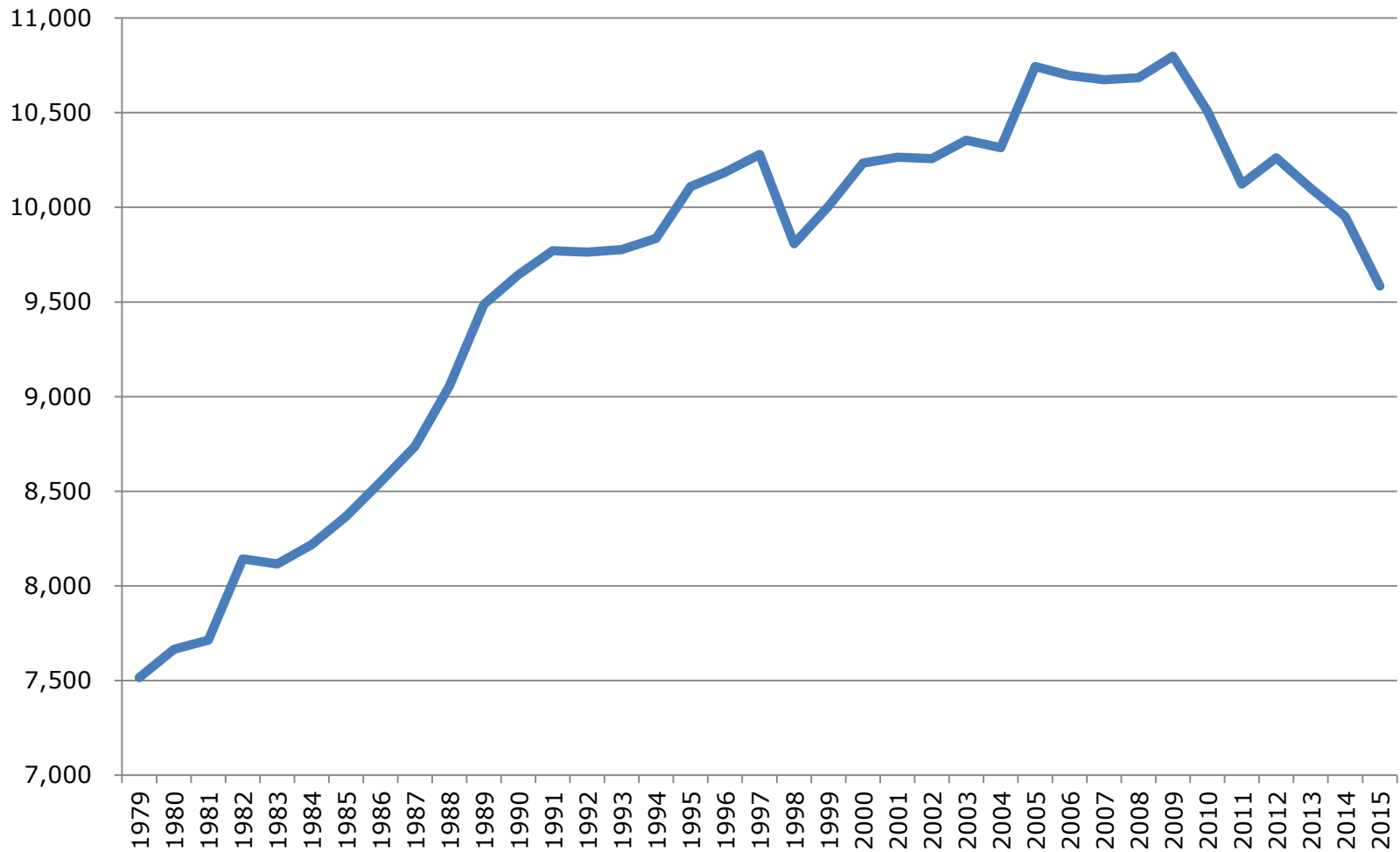
# **VSTRS Average Annual Salaries as of 6/30 by Year**



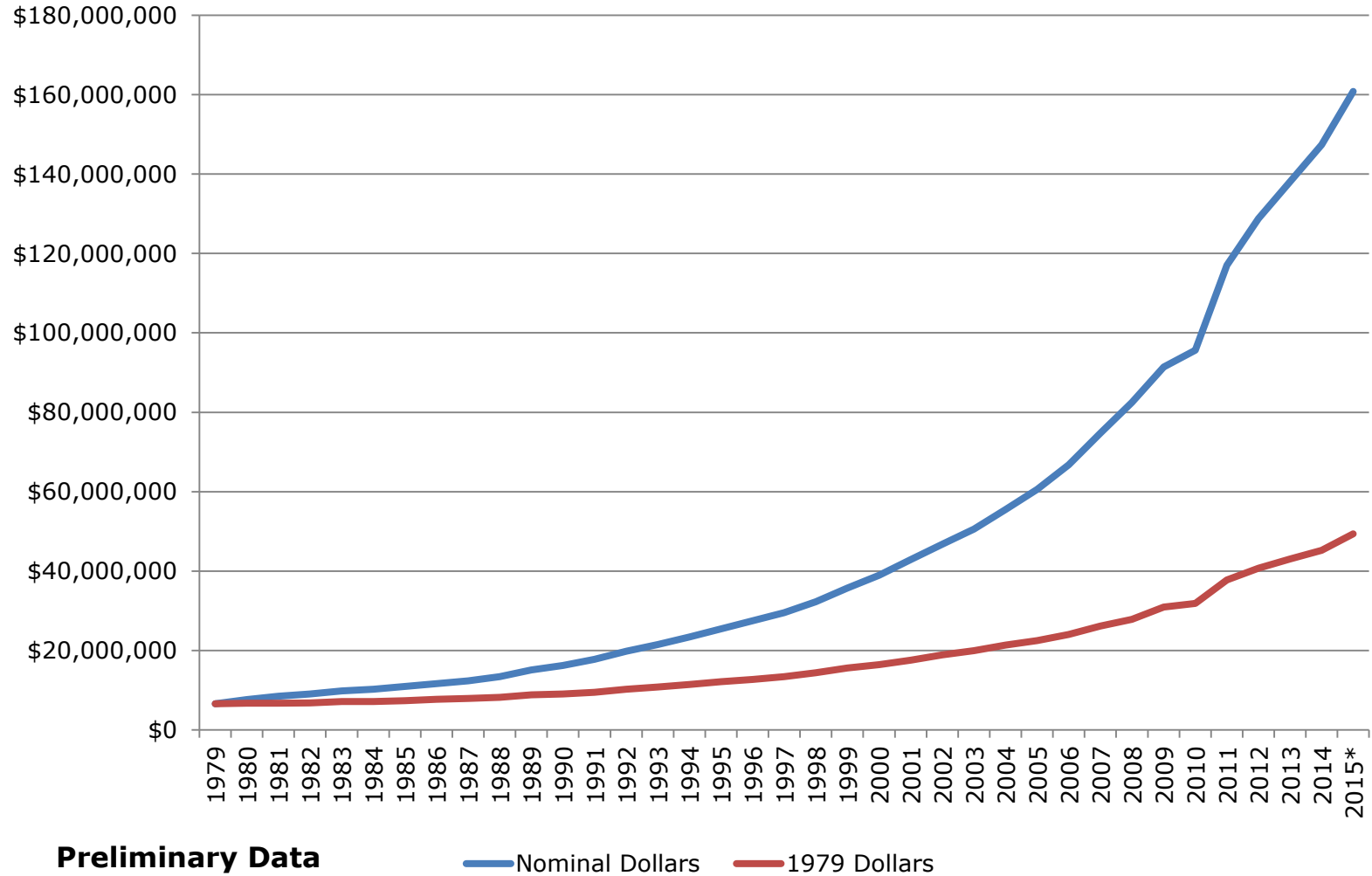
## **Preliminary Data**

\*2015: An estimate for 2015 is based on the change in the CPI from second quarter 2014 to second quarter 2015

# **VSTRS Active Member Count as of 6/30**

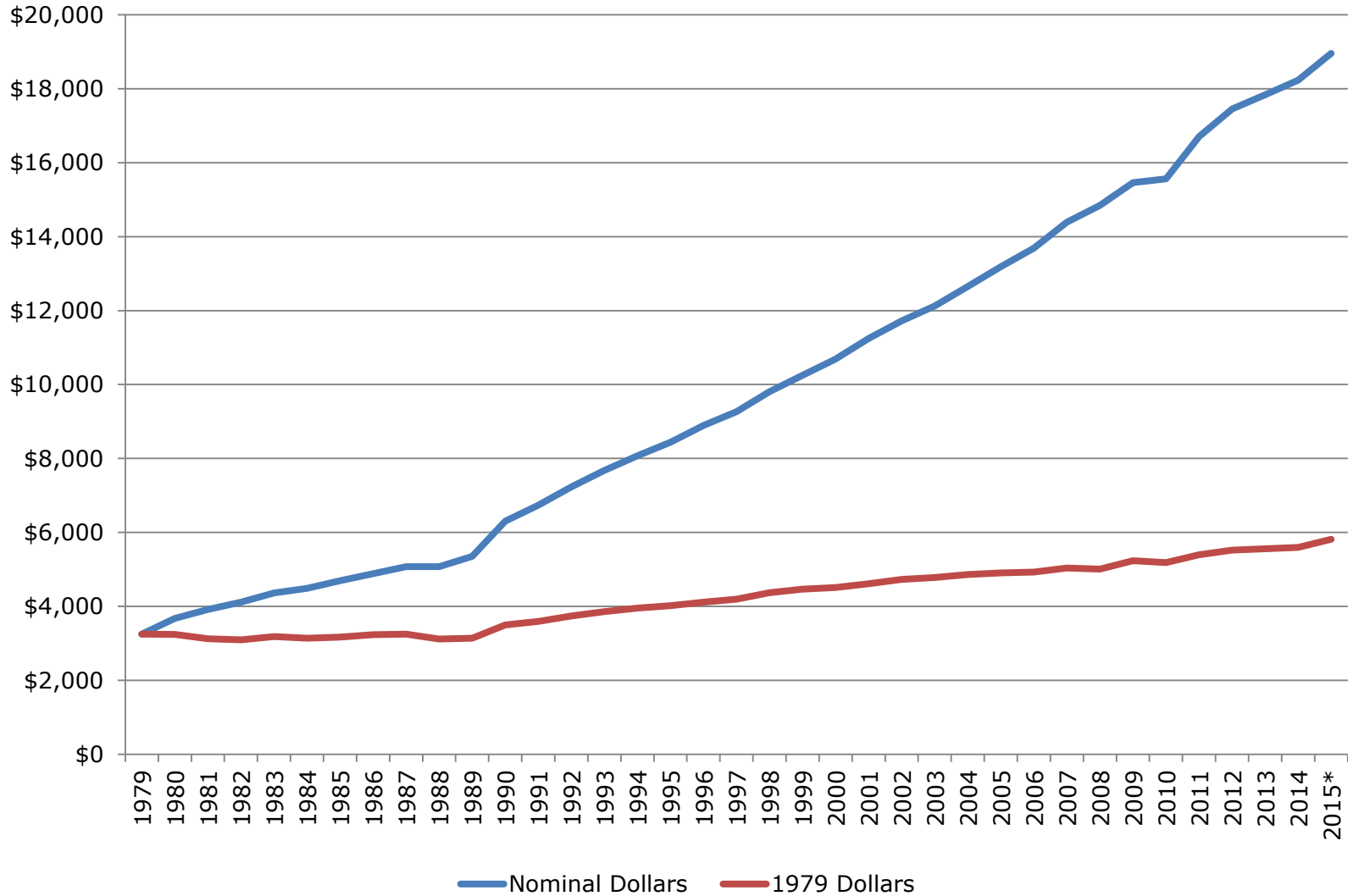


# VSTRS Growth in Retiree Total Annual Allowances



\*2015: An estimate for 2015 is based on the change in the CPI from second quarter 2014 to second quarter 2015.

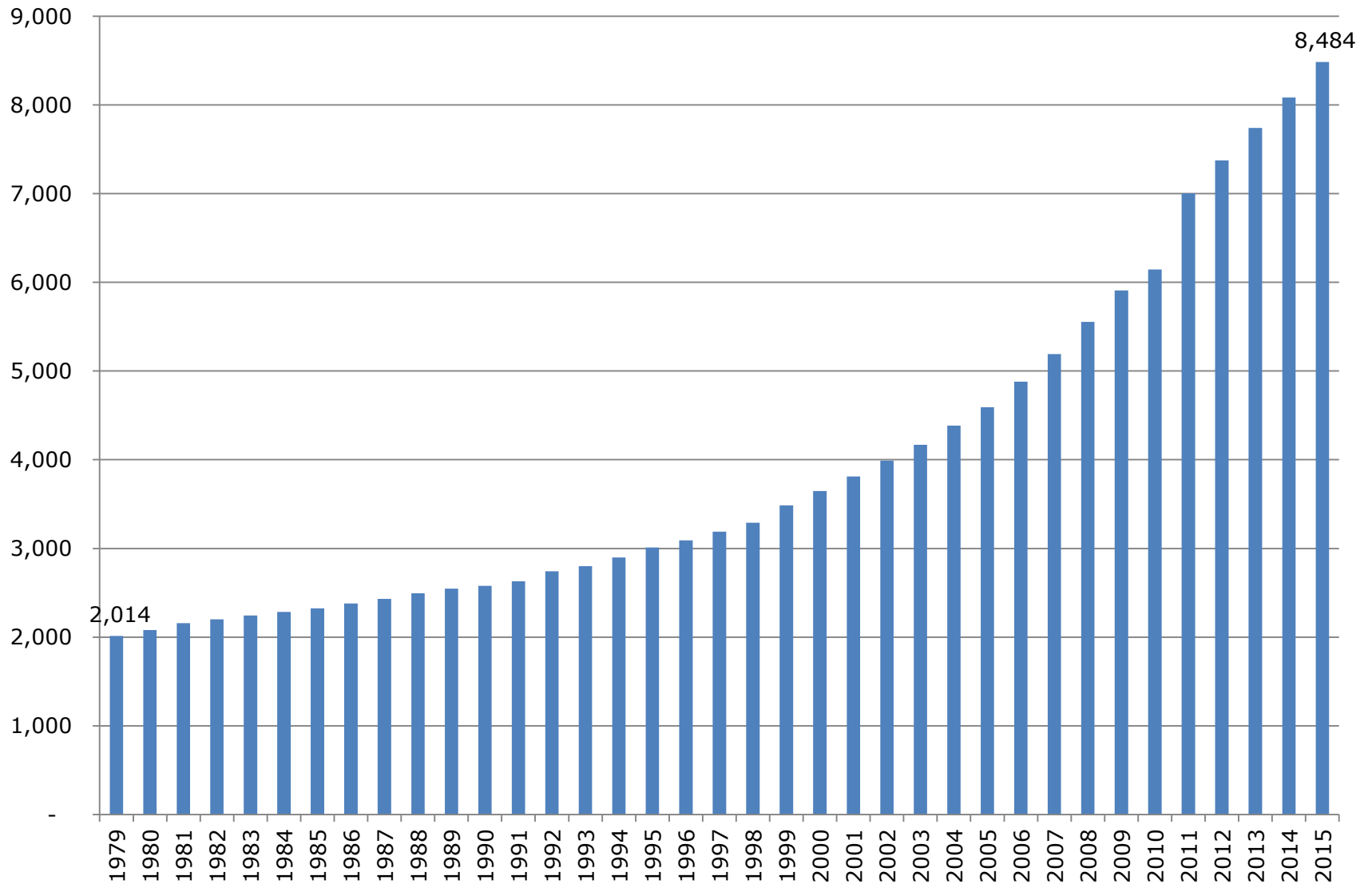
# VSTRS Average Annual Retirement Allowance by Year



## Preliminary Data

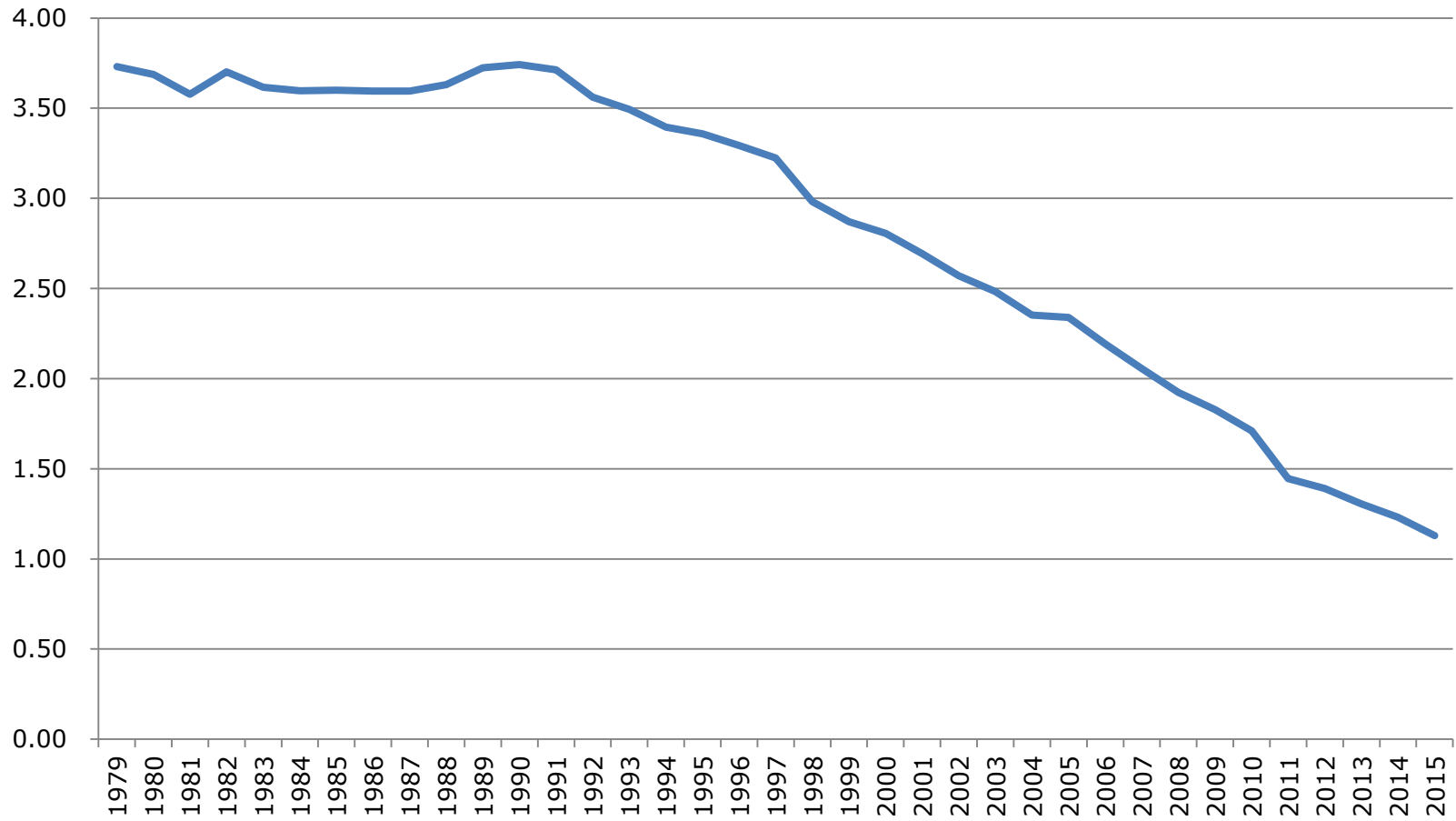
\*2015: An estimate for 2015 is based on the change in the CPI from second quarter 2014 to second quarter 2015.

# VSTRS Growth in Retiree Count as of 6/30 by Year





## VSTRS Active to Retiree Ratio



# **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.

# **Amortization**

- The amortization period is the expected period of time for UAAL to be paid-in-full
- Amortization payment (of unfunded actuarial accrued liability) : That portion of the ARC plan contribution which is designed to pay interest on and to amortize the UAAL
- Three methods for public plans:
  1. Open amortization period: A period that begins again each time a new actuarial valuation is performed. This is analogous to getting a new 30 year mortgage every year for the unpaid balance of the mortgage started the previous year
  2. Closed amortization period: A specific number of years that is counted from one date and decreases by one each year. This is analogous to a 30 year mortgage (with no re-financing)
  3. Recalculated amortization period: A period that is recalculated each time a new actuarial valuation is performed. This type of amortization commonly applies to plans with a fixed contribution rate (e.g., set in statute)
    - Source: PRB, Understanding the Basics of Actuarial Methods, April 2013

# **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
- Treasurer's Office staff will model alternatives schedules at the Committee's request to obtain an optimum solution

# **Recommendation: Consider Changes to Pension Funding Amortization Schedules for the Pension Plans**

- Potentially phase-in any upward pressures from assumption changes
- Changing the 5% increment to a lower percentage
  - Level out payments
  - More cost in early years but lower the overall cost to pay the unfunded liability “mortgage”
  - Save interest payments by taxpayer over the long-run
  - More rapid improvement of the funded position of plans