

# NASRA Issue Brief: State and Local Government Contributions to Statewide Pension Plans: FY 14



July 2016

Pension benefits for employees of state and local government are paid from trusts to which public employees and their employers contribute while they are working. Timely contributions are vital to the funding and sustainability of these plans, and over time yield investment earnings that account for the largest share of pension revenues. Failing to pay required contributions results in higher future costs, due to the foregone investment earnings that the contributions would have generated.

Nationally, contributions made by state and local governments to pension trust funds in recent years account for around four percent of all spending.<sup>1</sup> Pension spending levels, however, vary widely among states and are actuarially sufficient for some pension plans and insufficient for others. Unlike employees, who must always contribute the amount prescribed in statute or by plan rules, some public employers—states, cities, etc.—have discretion to set the contributions they make to public pension plans. The result of this disparity in contribution governance arrangements is a wide range of experience among public employers concerning required contributions. Overall, however, the experience for FY 14 reflects an improved effort among state and local governments to make the full actuarially determined pension contribution, as well as a decline in the rate of growth of pension costs.

This brief describes how contributions are determined; the recent public employer contribution experience; and trends in employer contributions over time.

## The Retirement Benefit Plan Equation

A basic formula describes the financing of any type of retirement benefit:

$$C + I = B + E$$

Contributions plus investment earnings equals benefits plus expenses. The money that is drawn from a retirement plan, for benefits and administrative costs, ultimately must equal the money that is contributed to the plan and the investment earnings those contributions generate. This fundamental formula illustrates the vital role contributions play in funding a pension plan.

## Actuarially Determined Contributions

Funding a pension plan takes place over many years and typically involves a combination of contributions from employees and employers, which are invested to generate investment earnings. Contributions are a vital source of public pension funding: of the \$6.7 trillion in public pension revenue since 1985, more than one-third has come from contributions paid by employers and employees. The amount of contributions needed to a fund pension plan is calculated as part of an actuarial valuation, which is a mathematical process that determines a pension plan's condition and required cost. Professional actuaries are guided by Actuarial Standards of Practice; ASOP No. 4 provides guidance on the determination of the required cost of a pension plan. Most public pension plans have an actuarial valuation conducted annually.

An actuarially determined contribution, or ADC, reflects the sum of a) the normal cost (the estimated cost of benefits earned each year); and b) the annual cost to amortize, or pay off over a designated period of time, the unfunded liability, which is the value of benefits earned to-date but for which assets have not yet been set aside.<sup>2</sup> An ADC is affected by the many factors on which it is based, including actuarial methods and assumptions. Thus, as investment return assumptions, actuarial cost methods,

<sup>1</sup> NASRA, "State and Local Government Spending on Public Employee Retirement Systems," March 2016; calculation does not include spending from federal sources

<sup>2</sup> Governmental Accounting Standards Board, Statement No. 67, Financial Reporting for Pension Plans

mortality assumptions, amortization periods, etc. differ from one plan to another, the ADC also will vary. As a result, the ADC for two hypothetical plans with identical financial and demographic compositions could differ.

Pension plans typically maintain a funding policy by which they expect to reach full funding at the end of a specified period of time if a) the plan receives all of its actuarially determined contributions; and b) all of the plan’s actuarial assumptions—about the many factors affecting the plan, such as future investment performance, how long plan participants will work, etc.—materialize as expected. Experience rarely matches assumptions, so pension plans regularly monitor, typically through actuarial valuation and periodic actuarial experience studies, the plan’s condition and make needed adjustments to actuarial assumptions and required contribution rates to reflect the changes in experience.

Laws and rules governing pension contributions vary widely among states and cities, and those provisions can affect public pension plan funding. For more information concerning the impact of funding policies, statutes and rules, see “The Annual Required Contribution Experience of Statewide Pension Plans, FY 01 to FY 13.”<sup>3</sup>

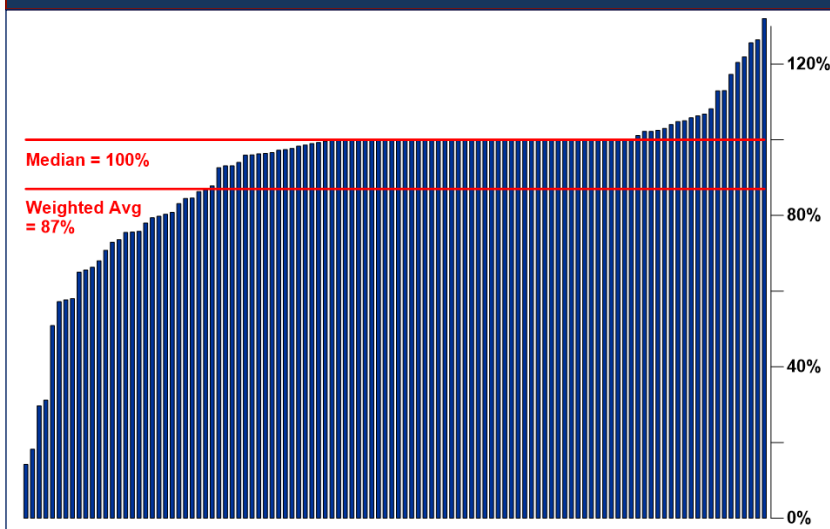
## FY 2014 Contribution Experience

As shown in Figure 1, the median actuarially determined contribution received in FY 14 was 100 percent, and ranged from 14 percent to 132 percent. On a dollar-weighted basis, the average ADC received was approximately 87 percent; the non-weighted average was 93 percent, as a few larger plans received a low portion of their ADC, reducing the weighted average. FY 14 marks the highest contribution experience since the market decline of 2008-09 increased unfunded pension liabilities and the economic recession diminished state and local fiscal conditions.

The increase in required contributions from FY 13 to FY 14 was 4.3 percent, marking the smallest annual increase in required contributions for the measurement period.

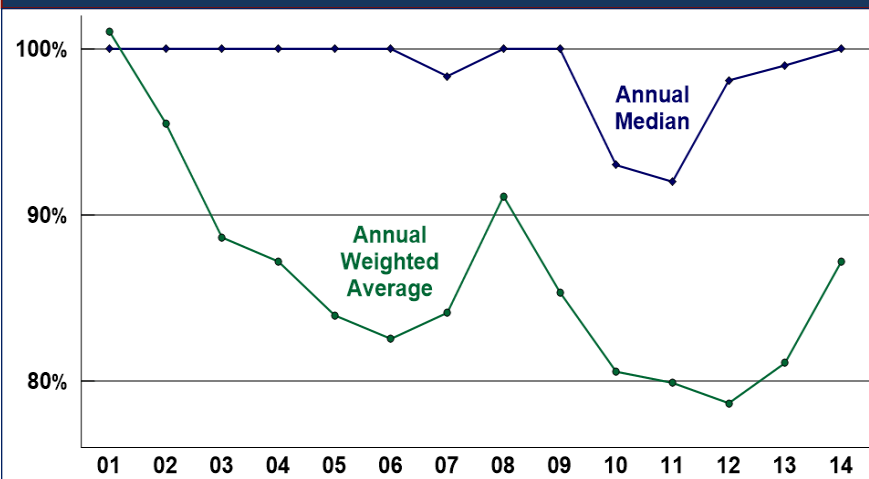
This is likely a result of multiple factors, including strong investment returns following the 2008-09 market decline, and

Figure 1: Distribution of ARC/ADC received by 112 plans, FY 14



Source: State retirement systems CAFRs compiled by NASRA

Figure 2: Median and weighted average ARC/ADC contributed to 112 statewide plans



Source: Compiled by NASRA

<sup>3</sup> NASRA, The Annual Required Contribution Experience of Statewide Pension Plans, FY 01 to FY 13

<sup>4</sup> *ibid.*

pension reforms, including higher required employee contributions and lower benefit levels (and costs) enacted in nearly every state since 2010.<sup>4</sup>

## Recent History of Employer Contributions

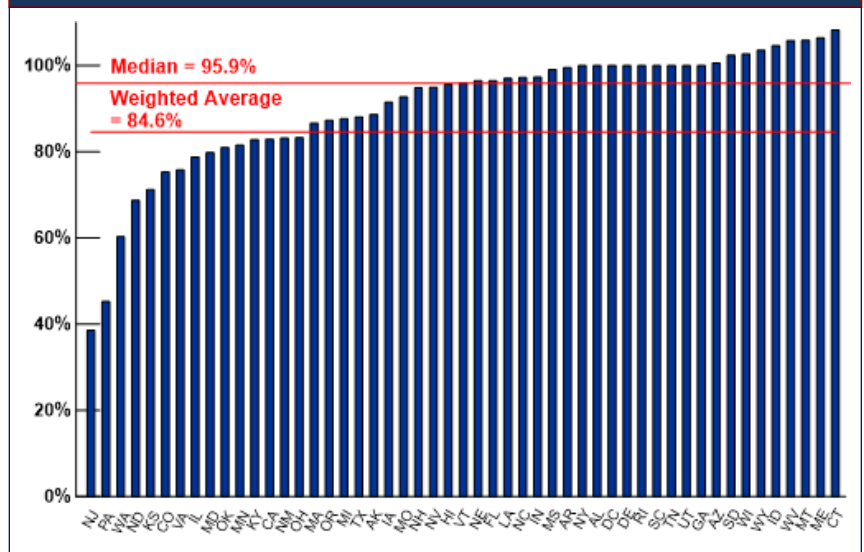
The employer contribution experience since FY 2001 covers an eventful period, including two economic recessions and two sharp market downturns that reduced pension plan assets. As a result, actuarially determined contributions rose considerably while state and local government revenues were diminished or grew more slowly. For statewide plans, actuarially determined

contributions rose from \$27.8 billion in FY 01 to \$98.2 billion in FY 14. Despite tepid fiscal conditions experienced by many states and cities, actual contributions paid by employers during this period grew from \$28.1 billion to \$85.6 billion, an increase of 204 percent. (Despite this increase, spending on pensions by states & local government remains around four percent of all spending.<sup>5</sup>) Figure 2 plots the percentage of actuarially determined contributions received from FY 01 to FY 14. Because each state is unique in terms of its governance structure, the relative cost of its pension plan(s), fiscal condition, and other factors, so is the required contribution experience of each state also unique and ranges widely. As Figure 3 shows, on a weighted average basis, states' contribution record since FY 2001 varies, from less than 40 percent to more than 100 percent. In the median, state plans received 95.9 percent of their required contributions, and 84.6 percent as a weighted average. The average actuarially determined contribution received for the period was 89 percent, as a few larger plans received a lower portion of their ADCs.

## Conclusion

Although contributions to public pensions remain on average a small percentage of state and local government spending, they also have grown in recent years. Depending on the plan, the growth of required employer contributions is due to one or more of various factors, including investment market losses, insufficient contributions in prior years, revised actuarial methods and assumptions, and experience that differs from assumptions. The overall experience for FY 14, however, reflects an improved effort among state and local government employers to make the full actuarially determined contribution, which will forestall higher costs in the future and strengthen the long-term sustainability of public pension plans.

Figure 3: Weighted average of ARC/ADC paid, by state, FY 01 to FY 14



Compiled by NASRA

## See also

National Association of State Retirement Administrators, "The Annual Required Contribution Experience of State Retirement Plans," 2015, [http://www.nasra.org/files/JointPublications/NASRA\\_ARC\\_Spotlight.pdf](http://www.nasra.org/files/JointPublications/NASRA_ARC_Spotlight.pdf)

National Association of State Retirement Administrators, Issue Brief: State and Local Government Spending on Public Employee Retirement Systems, March 2016, <http://www.nasra.org/costsbrief>

National Association of State Retirement Administrators, Issue Brief: Employee Contributions to Public Pension Funds, February 2015, <http://nasra.org/contributionsbrief>

National Association of State Retirement Administrators, "[Significant Reforms to State Retirement Systems](#)," 2016

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[National Association of State Retirement Administrators](http://www.nasra.org)

<sup>5</sup> NASRA, Issue Brief: State and Local Government Spending on Public Employee Retirement Systems, March 2016

**Table 1: 10-year history of percentage of Actuarially Determined Contribution Received for 112 Public Pension Plans, FY 05 to FY 14**

Plan	Fiscal Year									
	05	06	07	08	09	10	11	12	13	14
Alaska PERS	52.7	61.0	77.3	111.0	116.0	114.4	86.0	92.7	86.3	106.8
Alaska Teachers	45.0	54.0	62.2	106.0	139.3	78.6	84.6	85.2	86.3	102.5
Alabama Teachers	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Alabama ERS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Arkansas Teachers	117.0	113.5	103.2	101.8	104.4	107.3	95.9	89.9	88.7	84.5
Arkansas PERS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Arizona SRS	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Arizona Public Safety Personnel	100.0	100.0	107.0	104.0	103.1	104.3	104.9	104.6	103.7	95.9
California PERF	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	101.1
California Teachers	70.0	64.0	67.0	66.0	63.0	55.0	47.0	46.0	44.0	50.9
Colorado School	48.0	58.0	64.0	65.0	73.0	70.0	89.0	84.0	79.0	84.6
Colorado State	48.0	62.0	60.0	61.0	69.0	62.0	85.0	83.0	79.0	83.1
Colorado Municipal	64.0	85.0	89.0	91.0	106.0	101.0	139.0	163.0	116.0	100.0
Denver Public Schools	67.0	73.3	82.9	830.7*	27.0	8.0	20.0	27.0	37.0	31.2
Colorado Affiliated Local	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.5	100.0	125.6
Connecticut Teachers	65.9	100.0	96.9	485.7*	100.0	100.0	100.0	100.0	100.0	100.0
Connecticut SERS	100.5	100.0	100.0	99.3	92.8	80.3	87.5	100.0	99.9	100.0
DC Police & Fire	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
DC Teachers	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Delaware State Employees	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Florida RS	102.0	96.0	111.0	107.0	111.0	111.0	83.0	60.0	66.0	105.0
Georgia Teachers	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Georgia ERS	100.0	100.0	100.0	100.0	99.9	100.0	100.0	100.2	100.2	100.1
Hawaii ERS	100.0	100.0	95.3	95.7	109.9	102.1	91.8	83.7	87.2	92.6
Iowa PERS	85.6	83.8	83.3	87.2	87.8	89.5	82.3	98.2	98.0	100.0
Idaho PERS	101.6	107.4	113.0	109.0	127.4	109.0	87.4	84.0	97.0	96.0
Illinois Teachers	58.7	35.8	39.8	60.0	75.9	90.6	84.7	74.6	79.8	87.8
Illinois Municipal	100.0	100.0	100.0	100.0	100.0	91.0	95.0	98.0	99.0	100.0
Illinois Universities	62.5	47.3	54.1	62.7	63.2	76.0	68.0	73.1	90.5	96.3
Illinois SERS	58.8	31.3	43.6	59.6	77.2	93.1	87.5	86.2	88.0	86.8
Indiana Teachers	78.3	104.3	101.4	101.0	104.2	93.0	87.3	90.9	114.7	97.2
Indiana PERF	101.8	92.3	94.5	104.3	102.2	91.9	70.8	78.1	95.5	98.3
Kansas PERS	68.6	63.4	63.9	65.0	68.0	72.0	74.0	67.0	75.0	79.4
Kentucky Teachers	100.0	100.0	88.0	83.0	74.0	76.0	153.0	74.0	71.0	68.0
Kentucky County	102.2	101.2	101.7	65.5	111.8	110.2	112.0	105.7	100.0	100.0
Kentucky ERS	54.9	63.1	49.8	22.3	41.3	44.1	52.9	51.1	60.8	57.7
Louisiana Teachers	105.6	103.1	106.5	116.2	106.4	83.5	90.2	100.0	99.0	99.0
Louisiana SERS	99.2	93.1	95.9	115.3	99.0	83.9	82.3	89.3	89.6	86.3
Massachusetts Teachers	97.4	93.3	97.8	107.9	68.0	73.9	108.2	90.1	80.8	80.8
Massachusetts SERS	106.1	95.7	100.9	124.6	57.0	64.8	106.8	83.7	77.9	79.8
Maryland Teachers	93.0	92.0	87.0	91.0	89.0	92.0	75.0	71.0	78.0	73.6
Maryland PERS	63.0	65.0	68.0	82.0	73.0	73.0	68.0	65.0	71.0	72.9
Maine State and Teacher	105.0	105.9	100.0	100.0	100.0	103.5	101.8	100.0	100.0	100.0

<b>Maine Local</b>	100.1	101.1	102.5	100.0	100.0	100.0	100.0	101.4	100.0	100.0
<b>Michigan Public Schools</b>	75.7	85.7	90.8	110.5	101.1	84.7	81.5	83.4	70.6	75.6
<b>Michigan SERS</b>	83.2	73.8	47.7	115.5	97.8	88.4	94.8	71.1	99.0	112.9
<b>Michigan Municipal</b>	122.0	107.0	92.0	110.0	110.0	105.0	111.0	108.0	118.0	100.0
<b>Minnesota Teachers</b>	153.0	134.2	91.1	82.6	67.7	57.4	63.5	66.4	62.7	65.0
<b>Minnesota PERF</b>	76.6	78.1	84.4	81.0	86.2	77.3	111.1	99.1	86.5	80.3
<b>Minnesota State Employees</b>	81.1	64.9	70.7	58.3	59.6	49.4	81.1	80.7	66.9	65.6
<b>Missouri Teachers</b>	65.5	70.6	73.2	79.4	84.1	80.6	86.9	92.5	125.0	105.8
<b>Missouri State Employees</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Missouri Local</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Missouri PEERS</b>	71.8	77.5	77.0	86.0	88.8	95.5	100.0	100.0	111.5	102.2
<b>Missouri DOT and Highway Patrol</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Mississippi PERS</b>	100.0	100.0	90.0	97.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Montana PERS</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	93.9	94.0
<b>Montana Teachers</b>	100.0	223.0	117.1	100.0	100.0	98.3	98.3	89.1	70.2	100.0
<b>North Carolina Teachers and State EEs</b>	100.0	100.0	100.0	99.0	100.0	100.0	73.0	100.0	104.0	104.0
<b>North Carolina Local Government</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>North Dakota Teachers</b>	68.3	63.9	63.1	76.4	89.3	76.5	68.4	66.5	113.3	104.8
<b>North Dakota PERS</b>	65.0	69.0	61.0	70.0	69.0	56.0	39.0	42.0	50.0	57.2
<b>Nebraska County Cash Balance</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	120.4
<b>Nebraska State Cash Balance</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	126.4
<b>Nebraska State &amp; School</b>	90.0	100.0	100.0	100.0	100.0	100.0	89.0	88.0	79.0	100.0
<b>New Hampshire Retirement System</b>	100.0	100.0	100.0	75.0	75.0	100.0	100.0	100.0	100.0	100.0
<b>New Jersey Teachers</b>	0.0	8.0	49.1	44.8	6.0	1.8	1.4	14.0	27.8	18.2
<b>New Jersey PERS - state</b>	0.4	0.4	56.8	42.1	7.9	4.1	3.6	16.1	28.6	14.2
<b>New Jersey PERS - local</b>	146.4	137.8	63.4	98.8	87.2	82.9	84.1	90.2	90.5	99.8
<b>New Jersey Police &amp; Fire - state</b>	30.6	36.6	59.2	52.8	7.3	2.1	2.0	14.9	27.8	29.7
<b>New Jersey Police &amp; Fire - local</b>	37.4	54.8	72.3	91.4	90.1	91.8	91.9	92.6	92.7	100.0
<b>New Mexico PERF</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>New Mexico Teachers</b>	81.3	75.5	70.3	79.0	86.2	87.7	81.6	63.4	62.3	75.5
<b>Nevada Regular Employees</b>	100.0	97.0	97.0	96.0	93.0	93.0	89.0	96.0	86.0	93.1
<b>Nevada Police Officer and Firefighter</b>	88.0	91.0	91.0	85.0	85.0	91.0	88.0	96.0	88.0	93.1
<b>NY State &amp; Local ERS</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>New York State Teachers</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	99.3
<b>NY State &amp; Local Police &amp; Fire</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Ohio Teachers</b>	96.0	88.0	83.0	100.0	89.0	52.0	51.0	41.0	46.0	100.0
<b>Ohio PERS</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Ohio Police &amp; Fire</b>	79.0	73.0	77.0	75.0	55.0	62.0	57.0	53.0	74.0	100.0
<b>Ohio School Employees</b>	100.0	97.0	90.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Oklahoma Teachers</b>	56.2	85.8	93.1	101.1	86.6	83.6	77.6	115.9	113.1	117.3
<b>Oklahoma PERS</b>	52.5	55.3	58.4	60.5	75.2	66.8	62.9	109.4	105.2	108.2
<b>Oregon PERS</b>	100.8	55.8	74.0	100.0	100.0	100.0	83.0	72.0	86.1	100.0
<b>Pennsylvania School Employees</b>	46.0	34.0	38.0	27.0	27.0	29.0	41.0	39.0	46.0	58.0

<b>Pennsylvania State ERS</b>	46.1	35.6	39.3	39.9	39.1	31.4	42.8	53.9	60.2	100.0
<b>Rhode Island ERS</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Rhode Island Municipal</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>South Carolina RS</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>South Carolina Police</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>South Dakota PERS</b>	100.0	100.0	100.0	100.0	91.0	100.0	100.0	100.0	100.0	121.9
<b>TN State and Teachers</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>TN Political Subdivisions</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Texas Teachers</b>	82.0	83.0	85.0	102.0	108.0	86.0	86.0	74.0	74.0	78.0
<b>Texas ERS</b>	85.8	87.2	88.9	90.3	68.4	63.4	58.5	50.0	50.7	66.3
<b>Texas County &amp; District</b>	101.0	105.0	102.0	102.0	104.0	102.0	109.0	106.0	106.0	103.0
<b>Texas Municipal</b>	100.0	100.0	100.0	100.4	84.8	88.0	92.1	101.5	100.0	100.0
<b>Utah Noncontributory</b>	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
<b>Virginia Retirement System</b>	85.3	89.5	85.9	92.6	81.3	66.6	46.7	59.6	75.8	75.8
<b>Vermont Teachers</b>	51.2	44.1	98.9	99.4	100.7	101.0	104.0	109.6	108.0	106.3
<b>Vermont State Employees</b>	101.3	96.5	97.8	92.5	86.7	84.1	84.5	140.2	130.4	132.0
<b>Washington PERS 2/3</b>	33.0	49.0	73.0	88.0	119.0	85.0	80.0	94.0	95.0	97.4
<b>Washington PERS 1</b>	7.0	7.0	30.0	49.0	52.0	25.0	33.0	51.0	50.0	102.2
<b>Washington Teachers Plan 1</b>	4.0	5.0	24.0	38.0	46.0	28.0	47.0	44.0	43.0	96.4
<b>Washington Teachers Plan 2/3</b>	29.0	45.0	61.0	52.0	86.0	75.0	72.0	92.0	99.0	97.7
<b>Washington LEOFF Plan 2</b>	67.0	79.0	101.0	117.0	122.0	114.0	157.0	137.0	144.0	99.6
<b>Washington School Employees Plan 2/3</b>	16.0	37.0	64.0	69.0	89.0	75.0	70.0	88.0	91.0	98.6
<b>Wisconsin Retirement System</b>	100.0	100.0	104.0	105.0	105.0	108.0	108.0	104.0	100.0	100.0
<b>West Virginia Teachers</b>	105.5	190.1	100.0	107.5	94.3	91.4	106.4	105.3	100.8	113.0
<b>West Virginia PERS</b>	99.6	107.7	101.1	102.1	100.0	88.0	83.3	105.3	96.6	96.6
<b>Wyoming Public Employees</b>	108.0	111.0	114.0	107.0	168.0	77.0	93.0	88.0	81.0	70.8

\*Includes proceeds of pension obligation bonds.