

2015 State Pension Update

Special Report

Pensions Stable but Risks Continue

Debt and Pension Burden Moderate Overall: Fitch Ratings' metric combining states' debt and unfunded pension obligations is a moderate 5.8% of personal income based on fiscal 2014 data. The median for tax-supported debt totals 2.4% of personal income, while the median for unfunded pensions is 3.7% of personal income; Fitch adjusts the pension figure to reflect a 7% discount rate. Compared with Fitch's report last year (reflecting fiscal 2013 data), the debt burden is slightly lower, while the unfunded pension burden is slightly higher.

Funded Ratios Stable: The median funded ratio for major statewide systems in 2014 remained nearly unchanged in 2014 at 71.5%, based on reported data. From a prerecession high (in 2007) at 84.7%, the median funded ratio fell to 68.9% (in 2012) as severe recessionary market declines were gradually smoothed into asset valuations. Several years of strong market gains through 2014 offset remaining market declines and steadily rising liabilities, thus lifting reported funded ratios slightly, but they remain well below prerecession highs.

GASB Transition Incomplete: New GASB statement 67 pension data were reported by about 91% of major statewide systems in fiscal 2014. Under GASB 67, the median ratio of assets to liabilities is higher at 74.5%. GASB 67 measures assets at market value rather than smoothing gains and losses over multiple years. Only a few systems are reporting depletion dates under the new standard. GASB 68 implementation, which begins in fiscal 2015, will likely have a bigger impact on pension reporting given the requirement to allocate cost-sharing system information.

Contribution Practices Improve: As of fiscal 2014, actual pension contributions relative to actuarially calculated levels are at their highest point since fiscal 2009, but remain inadequate for one-half of systems. In fiscal 2014, 53% of major statewide systems received at least 100% of the actuarially calculated contribution, up from 42% in fiscal 2011, the post-recessionary low point when budgetary weakness led to cuts. Progress continues despite the rapid growth of actuarially calculated contributions, which have risen an average of 9.5% annually since fiscal 2007.

Problem Amortization Assumptions Persist: Numerous systems continue to rely on actuarial assumptions that will yield little or no progress in eliminating their unfunded obligations over time. New GASB 67 reporting leaves unchanged the previously reported funding methodology that systems still use internally to determine their actuarially calculated contribution, including how the unfunded liability is amortized.

Discount Rates Still Falling: Systems continue to lower their discount rates, with the average rate at 7.69% as of fiscal 2014 down from a high of 7.97% in fiscal 2008. Lower discount rates reflect a more conservative outlook on future market performance but raise the calculation of pension liabilities. Continued low inflation may suggest discount rates need to fall further.

Demographic Strains Continue: The median ratio of systems' active employees to retirees and beneficiaries, at 1.45 in 2014, continues to fall as retiree numbers grow and active employee numbers stay flat. The declining ratio is evidence of the rising demographic pressure on systems as public work forces age and retiree numbers to climb.

Related Research

[Pension Obligation Bonds: Weighing Benefits and Costs \(March 2015\)](#)

[New Pension Perspectives: Long-Awaited GASB Pension Changes Begin \(February 2015\)](#)

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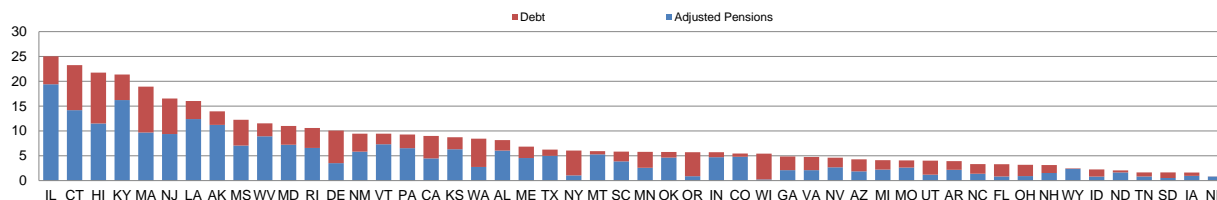
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Pension Funding Stabilizing

Debt and Pensions Remain Moderate

On an annual basis, Fitch updates its metric combining states' net tax-supported debt plus unfunded pension liabilities attributable to the state as a share of personal income. This update includes data for virtually all major statewide pension systems as of their fiscal 2014 annual reports, along with the most recent debt data available from states' disclosure.

Net Tax-Supported Debt and Adjusted Pensions as a % of Personal Income



As of this update, the median burden of states' debt plus unfunded pension liability equals 5.8% of 2014 personal income; Illinois is at the high end at 25%, while Nebraska is low at 0.8%. States' median debt totals 2.4% of personal income, while the median unfunded pension liability is 3.7% of personal income. (See Appendix A.)

States' net tax-supported debt metrics are lower than unfunded pensions as a share of personal income and distributed over a relatively narrower range, from a high of 10.2% (Hawaii) to a low of 0.0% (Nebraska). The lower debt metric is consistent with states' conservative debt management practices, including centralized issuance and affordability guidelines that constrain borrowing. The range continues to reflect states' varied willingness to use borrowing and whether state borrowing covers needs outside of state government (like for local schools).

By contrast, the range of unfunded pensions as a percentage of personal income is much wider, from a high of 19.4% (Illinois) to a low of 0.2% (Wisconsin). The wider range reflects numerous factors, including divergent benefit levels, historical contribution practices and their impact on the level of accumulated assets, actuarial assumptions and whether the state assumes full or partial responsibility for the retirement benefits of certain workers outside of the primary government (typically teachers).

Consistent with previous Fitch state pension analyses, the median state unfunded pension liability aggregates the reported unfunded liability of all state-reported systems for which the state has responsibility, adjusted to 7% return assumption. It also reflects an allocated portion of cost-sharing multiple-employer (CSME) systems' liabilities based on available disclosure.

The data in this report were extracted from states' and pension systems' comprehensive annual financial reports and/or actuarial valuations dated fiscal 2014, except as noted. For most systems, the reporting date is June 30, although it ranges from March 31 to Dec. 31.

The metrics in the 2014 report have shifted from those reported by Fitch in its previous state pension update, although reasons often vary considerably for each state. The median level of net tax-supported debt and unfunded pensions combined has fallen slightly in 2014 from the 6.1% level reported a year ago. States' net tax-supported debt has also fallen, from 2.6% reported a year ago, consistent with states' restraint in recent years in new borrowing, steady amortization of outstanding debt and rising personal income. Individual state factors are also

Fitch recently published an exposure draft of state and local government tax-supported criteria (Exposure Draft: U.S. Tax-Supported Rating Criteria, dated Sept. 10, 2015). The draft includes a number of proposed revisions to existing criteria. If applied in the proposed form, Fitch estimates the revised criteria would result in changes to fewer than 10% of existing tax-supported ratings. Fitch expects that final criteria will be approved and published by Jan. 20, 2016. Once approved, the criteria will be applied immediately to any new issue and surveillance rating review. Fitch anticipates the criteria to be applied to all ratings that fall under the criteria within a 12-month period from the final approval date.

Related Criteria

[Exposure Draft: U.S. Tax-Supported Rating Criteria \(September 2015\)](#)

[Tax-Supported Rating Criteria \(August 2012\)](#)

[U.S. State Government Tax-Supported Rating Criteria \(August 2012\)](#)

This report provides an updated summary of states' defined benefit pension obligations as disclosed in fiscal 2014 state and pension financial statements. This update includes, in Appendix A, Fitch's calculation of states' net tax-supported debt plus their aggregate unfunded pension liability. For additional information on Fitch's adjustments to defined benefit pensions, see "Improving the Comparability of State Liabilities," dated March 2012, available at www.fitchratings.com. Fitch reviewed approximately 225 defined benefit systems reported by states to determine the aggregate figures provided in Appendix A. In addition, this update provides, in Appendices B–F, performance data for 100 major statewide systems, based on their most recent financial and actuarial reports (2014 for most systems).

meaningful; for example, California saw a drop in its net tax-supported debt as it continued to retire deficit bonds issued in response to the past two downturns.

On the other hand, unfunded pension amounts have risen slightly compared with a year earlier, when Fitch calculated the median level at 3.3% of personal income. Actuarial pension liabilities have continued to rise in most states even as actuarial asset valuations have also risen with market gains (through fiscal 2014). Individual state factors include systems' shifting to more conservative actuarial assumptions (such as changes in the discount rate or cost method used to measure liabilities), the impact of statutory changes or court decisions, or new disclosure that affects how much of a CSME system's liability is allocated to the state by Fitch.

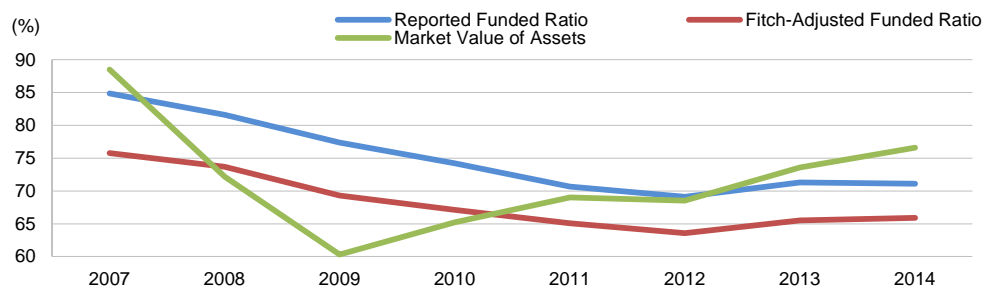
Median Funded Ratios Stabilize

The median funded ratio for major systems tracked in this report remained nearly level in 2014 for the second consecutive year at 71.5%. (See *Appendix B*.) The median funded ratio fell to 68.9% (in 2012) from the prerecession high (in 2007) at 84.7% as severe recessionary market declines were gradually recognized through systems' asset smoothing methodologies, even as system liabilities continued to climb.

The median funded ratio has risen only slightly since its post-recession low. The recovery of systems' investment portfolios has not necessarily meant a recovery in their funded ratios. Unlike asset portfolios, which are prone to year-to-year cyclicity, liabilities have risen steadily for all but a handful of closed systems because active employees continue to accrue benefits as they work.

Additionally, few systems have implemented benefit reforms that immediately reduce liabilities (such as COLA reductions affecting existing retirees), and most systems have now reduced their investment return assumptions, raising their calculation of the pension obligation.

Comparative Ratios of Assets to Liabilities



GASB 67 Reporting Begins

The transition to GASB 67 has started but remains incomplete, with approximately 91% of major pension systems having published fiscal 2014 GASB 67 figures. For systems reporting GASB 67 data, the median ratio of pension assets to liabilities measured 74.5%, compared with a median funded ratio of 71.5% based on discount rates as reported. The median Fitch-adjusted funded ratio measured 66%. (See *Appendix C*.)

For most major statewide systems, 2014 is the first year with two valuations being performed by actuaries, one for accounting purposes under the new GASB 67 standard and a parallel funding valuation consistent with past valuations. GASB 67 is changing how actuaries measure

system assets and liabilities for accounting purposes, with progress toward prefunding future benefits now expressed through a ratio of fiduciary net position (FNP) to total pension liability (TPL), replacing the former funded ratio of the actuarial value of assets (AVA) to actuarial accrued liability (AAL).

However, the older funding valuation remains critical to pension management because it determines how a system intends to amortize its UAAL over time and the level of annual contributions (annual required contribution [ARC] for funding purposes, or the actuarially determined employer contribution [ADEC] under GASB 67) needed to make progress toward amortization.

Going forward, the ratio of FNP to TPL under GASB 67 will be much more volatile than the corresponding funded ratio because GASB 67 requires assets to be valued at their market price. The 2014 ratio of FNP to TPL was higher than the funded ratio due to several strong years of unrecognized market gains being incorporated into the new ratio. This potential for volatility will likely be demonstrated in systems' fiscal 2015 financial reports given the less than robust investment returns announced by many systems this year.

While most major statewide systems (80 of 91 reporting GASB 67 figures in fiscal 2014) are reporting a higher GASB 67 ratio than their corresponding funded ratio, a handful of others (11 of 91) are reporting lower GASB 67 ratios. The latter includes five systems that are reporting depletion dates under the new standards. For systems whose actuary calculates that assets will ultimately be depleted, GASB 67 requires that benefit payments after that depletion date be discounted at a much lower discount rate, raising the resulting TPL.

As Fitch has noted previously, the absence of a depletion date does not mean a system does not face severe funding challenges. Actuaries are provided considerable discretion in determining whether identifying a depletion date is warranted under GASB 67. When reported, a depletion date underscores a system with a longstanding history of inadequate employer contributions.

GASB 68 Impact More Widespread

Fitch believes the implementation of GASB 68 will have a more pronounced impact on governments' pension reporting. Most notably, for CSME systems, which constitute about 80% of major statewide systems, GASB will require all participating employers to carry a share of systemwide assets and liabilities except under certain circumstances.

Thus, for most states, fiscal 2015 financial reports will contain allocated shares of each CSME's assets and liabilities corresponding to their own employees and other employee groups for which the state has explicit responsibility for actuarial contributions. For local governments in those same systems, financial statements and notes will likewise contain an array of pension measures for the first time.

For most states, fiscal 2014 financials are the last without the allocation of systemwide CSME liabilities called for under GASB 68. In the future, Fitch expects updates of this report to rely on the newly-reported allocations of CSME liabilities when aggregating states' total pension liabilities.

Some states have already begun disclosing new allocations. For example, in 2014, California began to report that its share of California State Teachers' Retirement System (CalSTRS), one of the largest CSME systems nationwide, was 37.7% of the overall system liability; previously, Fitch had had to estimate the share of CalSTRS's liability attributable to the state based on longstanding contribution practices. Numerous other systems also have provided detailed data on allocations of participating governments.

Contribution Practices Improving

As of their fiscal 2014 financial reports, governments' actual contributions relative to their ARC or ADEC are at the highest level since fiscal 2009. (See *Appendix D*.) In fiscal 2014, 53% of major statewide systems reported receiving at least 100% of their actuarial contributions, up from about 42% in fiscal 2011, the postrecessionary low point. Average contributions measured 91.4% of the required level in fiscal 2014, up from 84.7% in fiscal 2011.

Numerous governments trimmed actual contributions during and after the recession in order to help manage budgetary pressure. Other governments with statutory contributions left their contribution policies unchanged even as their pensions deteriorated, widening the gap between their fixed contributions and their rising ARC. More recently, as immediate budgetary pressures have abated and concern about eroded funded ratios has risen, governments appear to be bringing contributions upward, often simultaneously with other reforms.

For any given year, the ARC/ADEC, along with employee contributions for most systems, is sufficient to cover both newly earned benefits and to make progress in amortizing past underfunding over a specific time period. A willingness to make the full ARC/ADEC thus reflects, in Fitch's view, a government's commitment to extinguishing its outstanding pension obligation over time.

Plans' Actual Contributions/Actuarial Contributions by Fiscal Year^a

(% by Category)

	2008	2009	2010	2011	2012	2013	2014
100>	54.5	53.5	45.5	41.6	43.6	43.6	52.5
90–99.9	11.9	5.9	8.9	8.9	11.9	14.9	14.9
80–89.9	5.0	11.9	13.9	21.8	16.8	10.9	9.9
70–79.9	6.9	8.9	7.9	6.9	5.9	11.9	10.9
60–69.9	6.9	6.9	8.9	5.0	7.9	7.9	5.9
50–59.9	5.9	5.9	4.0	4.0	4.0	2.0	3.0
<50	8.9	6.9	10.9	11.9	9.9	8.9	3.0

^aFor fiscal years through 2013, figures based on annual required contribution (ARC). For fiscal 2014, figures based on actuarially-determined employer contribution (ADEC).

Importantly, governments are making higher contributions despite the rapid growth of the ARC/ADEC. Since their fiscal 2007 annual reports, the average ARC/ADEC for major statewide systems has risen approximately 9.5% per year. The pace of growth reflects the need in most systems to recoup past investment losses and cumulative contribution shortfalls, among other factors. Actual contributions have risen more steeply, at approximately 12.6% per year, as governments attempt to catch up on rising contributions. Fitch notes that despite these rapid increases, pensions remain a small share of states' budgets relative to other spending needs, including Medicaid and education spending.

Problematic Amortization Practices Widespread

Beyond whether systems receive their full ARC/ADEC each year or a lower amount, the ARC/ADEC remains an imperfect yardstick for measuring contribution sufficiency or whether a system can eventually extinguish its unfunded liability, in Fitch's view.

Actuarial practices that underlie the funding approach, by which pensions still manage themselves, permit a wide range of assumptions for amortizing the UAAL and calculating the ARC/ADEC.

Certain combinations of assumptions, although allowable under current actuarial standards, are unlikely to achieve steady progress toward amortizing the UAAL when applied annually.

Systems with 30-year open or rolling amortization (including 26 of major statewide systems in Fitch's review) are one such example. (See *Appendix D.*) Such systems recalculate their projected amortization at each successive valuation over a fresh 30-year period, akin to annually refunding and extending a mortgage or a debt obligation over a new repayment period. In such circumstances, contribution volatility is minimized, but progress on amortizing the liability may be very slow even if the ARC is fully paid and the system consistently achieves its investment return assumption.

If 30-year open amortization is combined with other actuarial assumptions that backload projected contributions to the distant future, such as through the level percentage of payroll method, the result can be negative amortization in which the UAAL rises with each valuation despite the ARC being fully paid each year. Among the 26 systems noted above, 19 report amortization practices that lead to negative amortization, including systems in states with some of the highest aggregate pension liabilities.

The funding assumptions informing a system's ARC/ADEC and how its UAAL is amortized are policy choices at the discretion of the system or its sponsoring government — typically the state. These choices reflect the ranking that each sponsoring government assigns to various (sometimes competing) priorities, including encouraging predictable contributions, limiting contribution volatility, minimizing the annual budgetary burden of contributions or maximizing progress on paying down the UAAL.

All else being equal, Fitch views systems with a mix of assumptions that prioritize amortizing the UAAL to be inherently less risky over the long run than systems with a shorter term focus on minimizing contributions. Positively, numerous systems have closed their amortization periods as part of recent reforms or shifted to less back-loaded methods. Other states have modified their systems' statutory provisions in order to bring their fixed contributions closer into line with actuarial recommendations.

Discount Rates Continue Falling

Systems have continued to lower the discount rates they apply in calculating both the present value of their pension liabilities and the assumed returns on their investment portfolios. (See *Appendix E.*) The average discount rate reported in 2008 for major state systems in this report was 7.97%. Since then, systems have continued to make their discount rates more conservative, with the average rate at 7.73% in 2013 and 7.69% in 2014.

The continued drop in discount rates is positive, in Fitch's view, as it reflects the experience of two significant recessions in the course of a single decade and the possibility that asset volatility going forward will leave multiyear performance averages in the future below the levels attained in the past. It also better reflects the fact that as systems mature, the duration of their liabilities falls and their need to hold more liquid, accessible investments rises.

The shift downward elevates the importance of governments consistently contributing their full ARC/ADEC. With lower future assumed returns, more of the long-term effort to pay down the UAAL by definition must come from employer and employee contributions.

Fitch expects systems to continue to lower discount rates, but not just to reflect a more conservative viewpoint on investment returns. The discount rate is composed of the expected real return on a system's portfolio and an expected inflation rate. As of 2014, the average

investment return assumption of 7.69% consisted of a real expected return of 4.66% and an expected inflation rate of 3.03%.

Actual inflation in recent years has been well below the level assumed by systems within their discount rates. Inflation has fallen below 3% since 2011 and, as of second-quarter 2015, was near zero percent. To the extent actual inflation fails to match expectations, achieving the discount rate must rely more heavily on real returns.

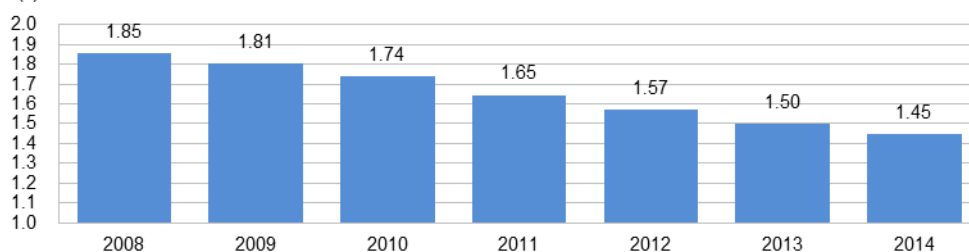
Demographic Strains Growing

Beyond the cyclical factors that have weighed on pension performance, particularly since the recession of 2008–2009, Fitch emphasizes that structural factors — most notably in the form of eroding demographics — continue to be a driving force behind rising pension liabilities.

Ratio of Actives to Retirees

(Fiscal Year)

(x)



One measure of eroding demographics is the ratio of active employees to retirees and beneficiaries. In 2008, the median ratio for major pension systems was 1.85 active employees for each retiree; as of 2014, that level has fallen to 1.45. (See *Appendix F*.)

Experience studies and mortality tables, which are routinely updated by major pension systems, invariably identify longer retirements and higher benefit payment obligations with each update. Moreover, headcount for numerous state and local governments has fallen or experienced little growth in recent years given both a historically weak economic expansion and governments' reluctance to expand baseline services. For contributory systems, in which employees pay a percentage of payroll toward their own retirement, weakening demographics shift a greater share of the contribution burden onto government employers.

Appendix A: Estimated State Net Tax-Supported Debt and Unfunded Pension Obligations^a

State	Total NTSD (\$Mil.) ^b	Debt as % Personal Income	Rank (Low to High)	Reported Pension UAAL Allocation ^c (\$Mil.)	Fitch-Adjusted Pension UAAL Allocation ^d	Fitch-Adjusted Pension Allocation as % of Personal Income ^d (\$Mil.)	Rank (Low to High)	Debt and Pension Allocation (\$Mil.)	Debt and Pension Allocation as % of Personal Income	Rank (Low to High)
Alabama	3,812.4	2.1	20	8,384.1	11,018.1	6.1	35	14,830.5	8.2	31
Alaska	1,084.3	2.7	29	3,605.4	4,467.8	11.2	45	5,552.1	14.0	43
Arizona	6,145.9	2.4	24	3,557.7	4,774.7	1.9	15	10,920.6	4.3	16
Arkansas	1,951.8	1.7	15	1,704.0	2,437.6	2.2	18	4,389.4	3.9	12
California	87,394.8	4.5	38	73,463.4	86,980.7	4.5	27	174,375.5	9.0	34
Colorado	1,672.9	0.6	5	9,985.2	12,580.6	4.8	31	14,253.5	5.4	21
Connecticut	21,157.0	9.1	48	25,877.2	33,068.3	14.2	48	54,225.3	23.2	49
Delaware	2,847.6	6.6	46	998.5	1,522.2	3.5	25	4,369.8	10.1	38
Florida	20,992.4	2.5	26	4,657.0	7,135.9	0.8	5	28,128.3	3.3	10
Georgia	10,814.2	2.7	31	6,717.9	8,285.8	2.1	17	19,100.0	4.9	19
Hawaii	6,696.7	10.2	50	6,190.1	7,512.9	11.5	46	14,209.6	21.7	48
Idaho	853.4	1.4	12	277.6	491.1	0.8	4	1,344.5	2.2	6
Illinois	34,563.8	5.6	44	111,181.5	119,003.5	19.4	50	153,567.3	25.0	50
Indiana ^e	2,575.5	1.0	8	12,321.4	12,321.4	4.7	30	14,896.9	5.7	22
Iowa	920.7	0.7	6	1,012.1	1,337.7	1.0	9	2,258.4	1.6	2
Kansas	3,147.6	2.4	25	6,376.0	8,237.5	6.3	36	11,385.1	8.7	33
Kentucky	8,478.9	5.1	41	24,021.5	26,758.1	16.2	49	35,237.0	21.4	47
Louisiana	7,114.8	3.6	35	20,340.5	24,202.4	12.4	47	31,317.2	16.0	44
Maine	1,241.4	2.3	23	2,298.5	2,468.8	4.6	28	3,710.2	6.8	30
Maryland	12,238.9	3.8	36	19,035.3	23,370.5	7.2	40	35,609.4	11.0	40
Massachusetts	36,605.5	9.2	49	30,738.6	38,369.6	9.7	44	74,975.1	18.9	46
Michigan	7,624.3	1.9	16	7,000.4	8,939.1	2.2	19	16,563.4	4.1	15
Minnesota	8,525.0	3.2	33	4,161.4	6,924.1	2.6	21	15,449.1	5.8	25
Mississippi	5,337.0	5.2	42	5,671.0	7,276.7	7.1	39	12,613.7	12.2	42
Missouri	3,625.0	1.4	13	5,051.8	6,669.4	2.6	22	10,294.4	4.1	14
Montana	259.2	0.6	4	1,684.4	2,159.4	5.3	33	2,418.6	5.9	27
Nebraska	23.7	0.0	1	403.0	718.1	0.8	3	741.8	0.8	1
Nevada	2,233.7	1.9	18	2,246.8	3,106.0	2.7	23	5,339.7	4.6	17
New Hampshire	1,123.6	1.6	14	894.2	1,073.5	1.5	13	2,197.1	3.1	8
New Jersey	36,819.5	7.1	47	40,079.9	48,252.8	9.4	43	85,072.3	16.5	45
New Mexico	2,791.7	3.6	34	3,476.2	4,522.5	5.8	34	7,314.2	9.5	37
New York	54,771.0	5.0	40	7,843.4	11,623.9	1.1	10	66,394.9	6.0	28
North Carolina	7,504.0	1.9	17	3,569.1	5,409.0	1.4	12	12,913.0	3.3	11
North Dakota	169.0	0.4	3	515.9	677.3	1.6	14	846.3	2.1	5
Ohio	11,120.4	2.3	22	2,723.7	4,435.7	0.9	8	15,556.1	3.2	9
Oklahoma	1,894.8	1.1	9	5,976.7	7,841.5	4.6	29	9,736.3	5.8	24
Oregon	7,874.0	4.8	39	487.6	1,463.7	0.9	7	9,337.7	5.7	23
Pennsylvania	16,698.5	2.7	30	34,950.3	39,839.0	6.5	37	56,537.5	9.3	35
Rhode Island	2,050.3	4.0	37	2,968.0	3,354.5	6.6	38	5,404.8	10.6	39
South Carolina	3,464.6	2.0	19	5,969.2	6,863.6	3.9	26	10,328.2	5.8	26
South Dakota	434.5	1.1	10	—	204.3	0.5	2	638.8	1.7	3
Tennessee	2,158.7	0.8	7	1,465.7	2,226.0	0.8	6	4,384.7	1.7	4
Texas	15,147.8	1.2	11	40,165.8	61,606.7	5.0	32	76,754.5	6.2	29
Utah	3,131.4	2.8	32	979.8	1,318.6	1.2	11	4,450.0	4.0	13
Vermont	616.6	2.1	21	1,520.7	2,130.4	7.3	41	2,747.0	9.4	36
Virginia	11,194.8	2.7	28	8,781.7	8,781.7	2.1	16	19,976.5	4.8	18
Washington	19,968.1	5.7	45	6,461.5	9,640.9	2.8	24	29,609.0	8.5	32
West Virginia	1,733.5	2.6	27	5,158.0	5,967.3	8.9	42	7,700.8	11.5	41
Wisconsin	13,236.3	5.2	43	9.6	604.7	0.2	1	13,841.0	5.4	20
Wyoming	31.9	0.1	2	536.0	755.8	2.4	20	787.7	2.5	7
Median		2.4				3.7			5.8	
Low		0.0				0.2			0.8	
High		10.2				19.4			25.0	

^aU.S. Bureau of Economic Analysis 2014 personal income by state as of Sept. 30, 2015. ^bNet tax-supported debt based on most recent state bond disclosure documents. ^cCombined pension data by state is estimated by Fitch for all reported state pension plans whose liability is attributable to the state based on state-provided figures and/or most recent state bond disclosure documents, state annual reports, pension system annual financial reports and actuarial valuations. ^dFitch-adjusted figures assume an 11% increase in actuarial liabilities for every 1% variance between 7% and the plan's investment return assumption. ^eIncludes the Indiana State Teachers Retirement System pre-1996 plan obligation, which was not intended to be prefunded and is considered a pay-as-you-go plan.

Appendix B: Funded Ratio Trend as Reported

(% as of Actuarial Valuation Dates)^a

System Name	Plan Type	Actuarial Valuation Date	2007 Funded Ratio	2008 Funded Ratio	2009 Funded Ratio	2010 Funded Ratio	2011 Funded Ratio	2012 Funded Ratio	2013 Funded Ratio	2014 Funded Ratio	UAAL – Latest Valuation (\$Mil.)
Alabama Employees Retirement System	AME	9/30	79.0	75.7	72.2	68.2	65.8	65.7	65.7	N.A.	4,990
Alabama Teachers Retirement System	CSME	9/30	79.5	77.6	74.7	71.1	67.5	66.5	66.2	N.A.	10,036
Alaska Public Employees' Retirement System	CSME	6/30	77.8	78.8	63.0	62.4	61.9	57.1	54.5	N.A.	5,435
Alaska Teachers' Retirement System	CSME	6/30	68.2	70.2	57.0	54.3	54.0	49.9	48.1	N.A.	3,170
Arizona Public Safety Personnel Retirement System	AME	6/30	65.2	68.8	70.0	67.7	63.7	60.2	58.7	49.2	6,217
Arizona State Retirement System	CSME	6/30	83.3	82.1	79.0	76.4	75.5	75.3	75.4	76.3	9,801
Arkansas Highway and Transportation Retirement Plan	SE	6/30	98.8	101.5	96.6	91.9	91.4	89.5	90.8	90.9	136
Arkansas Public Employees Retirement Plan	CSME	6/30	89.1	89.7	78.0	74.1	70.7	68.9	74.3	77.8	1,969
Arkansas Teacher Retirement Plan	CSME	6/30	85.3	84.9	75.7	73.8	71.8	71.2	73.2	77.3	3,935
California Public Employee Retirement Fund – State Only ^b	AME	6/30	83.1	83.0	79.9	80.2	79.0	79.0	66.1	72.1	43,265
California State Teachers' Retirement Fund	CSME	6/30	87.6	87.3	78.2	71.5	69.1	67.0	66.9	68.5	72,718
Colorado Public Employees' Retirement Association – State Division	CSME	12/31	73.3	67.9	67.0	62.8	57.7	59.2	57.5	57.8	9,885
Connecticut State Employees Retirement System	SE	6/30	53.6	51.9	51.9	44.4	47.9	42.3	42.3	41.5	14,921
Connecticut Teachers Retirement System	SE	6/30	59.5	70.0	70.0	61.4	61.4	55.2	55.2	59.0	10,803
Delaware State Employees	SE	6/30	103.7	103.1	98.8	96.0	94.0	91.5	91.1	92.3	673
District of Columbia Police and Fire Pension Plan	SE	10/1	101.0	99.8	100.7	108.0	108.6	110.1	110.1	107.3	(290)
District of Columbia Teachers Pension Plan	SE	10/1	111.6	108.2	110.8	118.3	101.9	94.4	90.1	88.6	211
Florida Retirement System	CSME	7/1	105.6	105.3	87.1	86.6	86.9	86.4	85.4	86.6	21,509
Georgia Public Employees' Retirement System	CSME	6/30	93.0	89.4	85.7	80.1	76.0	73.1	71.4	72.8	4,616
Georgia Teachers Retirement System	CSME	6/30	94.7	91.9	89.9	85.7	84.0	82.3	81.1	81.9	13,710
Hawaii Employees' Retirement Plan	CSME	6/30	67.5	68.8	64.6	61.4	59.4	59.2	60.0	61.4	8,578
Idaho Public Employee Retirement Fund	CSME	7/1	105.5	93.3	74.1	78.9	90.2	84.7	85.3	92.9	1,052
Illinois State Employees Retirement System	SE	6/30	54.2	46.1	43.5	37.4	35.5	34.7	34.2	33.7	26,211
Illinois State Universities Retirement System	CSME	6/30	68.4	58.5	54.3	46.4	44.3	42.1	41.5	42.3	21,585
Illinois Teachers' Retirement System	CSME	6/30	63.8	56.0	52.1	48.4	46.5	42.1	40.6	40.6	61,590
Indiana 1977 Police Officers and Firefighters' Pension and Disability Fund	CSME	6/30	113.6	106.4	98.0	92.7	98.8	91.9	95.2	98.3	82
Indiana Public Employees Retirement Fund ^c	CSME	6/30	98.2	97.5	93.1	85.2	80.5	76.6	80.2	82.4	2,941
Indiana Teachers' Retirement System – Pre-1996	CSME	6/30	36.0	37.7	31.9	33.1	32.0	30.1	31.8	32.8	10,997
Indiana Teachers' Retirement System – 1996	CSME	6/30	96.0	104.1	93.1	94.7	91.7	90.7	93.8	96.1	202
Iowa Public Employees' Retirement System	CSME	6/30	90.2	89.1	81.2	81.4	79.9	79.9	81.0	82.7	5,544
Kansas Public Employees Retirement System	CSME	12/31	70.8	58.8	63.7	62.2	59.2	56.4	59.9	62.3	9,469
Kentucky Employees Retirement System – Non-Hazardous	CSME	6/30	56.9	52.5	45.0	38.3	33.3	27.3	23.2	21.0	9,126
Kentucky Teachers' Retirement System	CSME	6/30	71.9	68.2	63.6	61.0	57.4	54.5	51.9	53.6	14,010
Louisiana School Employees Retirement System	CSME	6/30	80.0	76.6	65.5	61.0	59.9	61.6	62.1	66.9	807
Louisiana State Employees Retirement System	SE	6/30	67.2	67.6	60.8	57.7	57.6	55.9	60.2	59.3	7,271
Teachers Retirement System of Louisiana	CSME	6/30	71.3	70.2	59.1	54.4	55.1	55.4	56.4	57.4	11,974
Maine State Employee and Teacher Plan ^c	CSME	6/30	74.1	74.1	67.7	66.0	77.6	77.0	77.7	81.4	2,299
Maryland Employees Retirement and Pension System	CSME	6/30	79.5	77.2	63.9	62.8	62.8	62.5	63.3	65.9	7,512
Maryland Teachers Retirement and Pension System	CSME	6/30	81.1	79.6	66.1	65.4	66.3	65.8	67.1	70.7	10,815
Massachusetts State Employees' Retirement System	SE	12/31	89.4	71.6	76.5	81.0	73.8	69.1	70.3	67.5	10,959
Massachusetts Teachers' Retirement System	SE	12/31	73.9	58.2	63.0	66.3	60.7	55.7	56.3	N.A.	17,802
Michigan Public School Employees' Retirement System	CSME	9/30	88.7	83.6	78.9	71.1	64.7	61.3	59.6	N.A.	25,796
Michigan State Employees' Retirement System	SE	9/30	86.2	82.8	78.0	72.6	65.5	60.3	60.3	N.A.	6,210

^aThe funded ratios are based on the reported valuation date of each system rather than the financial statement date. ^bCalPERS reflects MVA approach as of June 30, 2013. ^cSystem reorganized from agent to cost-sharing multiple-employer plan as of the 2014 valuations. AME – Agent multiple employer. CSME – Cost-sharing multiple employer. SE – Single employer. N.A. – Not available.

Appendix B: Funded Ratio Trend as Reported (continued)

(% as of Actuarial Valuation Dates)^a

System Name	Plan Type	Actuarial Valuation Date	2007 Funded Ratio	2008 Funded Ratio	2009 Funded Ratio	2010 Funded Ratio	2011 Funded Ratio	2012 Funded Ratio	2013 Funded Ratio	2014 Funded Ratio	UAAL – Latest Valuation (\$Mil.)
Minnesota General Employees Retirement Fund	CSME	6/30	73.3	73.6	70.0	76.4	75.2	73.5	72.8	73.5	5,638
Minnesota Public Employee Police and Fire Fund	CSME	6/30	91.7	88.4	83.2	87.0	82.9	78.3	81.2	80.0	1,626
Minnesota State Employees Retirement Fund	CSME	6/30	92.5	90.2	85.9	87.3	86.3	82.7	82.0	83.0	2,121
Minnesota Teachers Retirement Fund	CSME	7/1	87.5	82.0	77.4	78.5	77.3	73.0	71.6	74.1	6,347
Mississippi Public Employees' Retirement System	CSME	6/30	73.7	72.9	67.3	64.2	62.2	58.0	57.7	61.0	14,445
Missouri Department of Transportation and Patrol Employees' Retirement System	SE	6/30	58.2	59.1	47.3	42.2	43.3	46.3	46.2	49.2	1,855
Missouri State Employees' Plan	SE	6/30	86.8	85.9	83.0	80.4	79.2	73.2	72.7	75.1	2,857
Montana Public Employees Retirement System	CSME	6/30	91.0	90.2	83.5	74.2	70.2	67.4	80.2	74.4	1,582
Montana Teachers Retirement System	CSME	7/1	79.6	79.9	66.2	65.4	61.5	59.2	66.8	65.4	1,794
Nebraska School Retirement	CSME	6/30	90.5	90.6	86.6	82.4	80.4	76.6	77.1	82.7	1,804
Nebraska State Employees' Retirement	SE	12/31	103.4	96.9	93.9	93.6	91.5	93.6	99.2	103.9	(46)
Nevada Public Employees' Retirement System	CSME	6/30	77.2	76.2	72.5	70.5	70.2	71.0	69.3	71.5	12,532
New Hampshire Retirement System	CSME	6/30	67.0	67.8	58.3	58.5	57.4	56.1	56.7	60.7	4,345
New Jersey Police and Fireman's Retirement System – State only	CSME	7/1	64.7	61.8	56.5	59.7	54.6	51.5	48.6	47.2	2,303
New Jersey Public Employees' Retirement System – State only	CSME	7/1	68.8	65.6	56.4	58.8	54.3	49.1	46.0	43.8	11,715
New Jersey Teachers' Pension and Annuity Fund	CSME	7/1	74.7	70.8	63.8	67.1	62.8	59.3	57.1	54.0	24,705
New Mexico Educational Employees Retirement System	CSME	6/30	70.5	71.5	67.5	65.7	63.0	60.7	61.9	63.1	6,256
New Mexico Public Employees' Retirement System	CSME	6/30	92.8	93.3	84.2	78.5	70.5	65.3	72.9	75.8	4,302
New York State and Local Employees' Retirement System	CSME	4/1	105.8	107.3	101.0	93.9	90.2	87.2	88.5	N.A.	17,143
New York State and Local Police and Fire Retirement System	CSME	4/1	106.5	108.0	103.8	96.7	91.9	87.9	89.5	N.A.	2,703
North Carolina Teachers' and State Employees' Retirement System	CSME	12/31	104.7	99.3	95.9	95.4	94.0	94.2	94.8	N.A.	3,442
North Dakota Public Employees' Retirement System	CSME	7/1	93.3	92.6	85.1	73.4	70.5	65.1	62.0	64.5	1,043
North Dakota Teachers' Fund For Retirement	CSME	7/1	79.2	81.9	77.7	69.8	66.3	60.9	58.8	61.8	1,198
Ohio Public Employees Retirement System	CSME	12/31	75.3	75.3	79.1	77.4	80.9	82.4	83.8	N.A.	14,420
Ohio State Teachers Retirement System	CSME	6/30	82.2	79.1	60.0	59.1	58.8	56.0	66.3	69.3	29,510
Oklahoma Firefighters Pension and Retirement System	CSME	6/30	61.6	61.8	54.2	53.4	63.7	60.9	58.8	62.1	1,224
Oklahoma Police Pension and Retirement System	CSME	6/30	79.9	82.2	76.3	74.9	93.0	90.2	89.3	94.6	119
Oklahoma Public Employees Retirement System	CSME	7/1	72.6	73.0	66.8	66.0	80.7	80.2	81.6	88.6	994
Oklahoma Teachers' Retirement System	CSME	6/30	52.5	50.5	49.8	47.9	56.7	54.8	57.2	63.2	7,207
Oregon Public Employees Retirement System	CSME	12/31	112.2	80.2	85.8	86.9	82.0	90.7	95.9	N.A.	2,580
Pennsylvania Public School Employees' Retirement System	CSME	6/30	85.8	86.0	79.2	75.1	69.1	66.3	63.8	62.0	35,121
Pennsylvania State Employees' Retirement System	CSME	12/31	97.1	89.0	84.4	75.2	65.3	58.8	59.2	59.4	18,166
Rhode Island Employees' Retirement System – State Employees	CSME	6/30	57.5	62.3	59.0	59.8	57.4	56.3	56.2	56.1	1,920
Rhode Island Employees' Retirement System – Teachers	CSME	6/30	55.4	61.0	58.1	61.8	59.7	58.8	58.1	58.2	2,682
South Carolina Police Officers' Retirement System	CSME	7/1	84.7	77.9	76.3	74.5	72.8	71.1	69.2	69.5	1,742
South Carolina Retirement System	CSME	7/1	69.7	69.3	67.8	65.5	67.4	64.7	62.5	62.7	15,979
South Dakota Retirement System	CSME	6/30	97.1	97.2	91.8	96.3	96.4	92.6	100.0	100.0	—
Tennessee State Employee, Teachers and Higher Education Employee Pension Plan	CSME	7/1	96.2	96.2	90.6	90.6	92.1	92.1	93.3	N.A.	2,273
Texas Employees Retirement System	SE	8/31	95.6	92.6	87.4	83.2	82.6	81.0	77.4	77.2	7,493
Texas Teacher Retirement System	SE	8/31	89.2	90.5	83.1	82.9	82.7	81.9	80.8	80.2	31,638

^aThe funded ratios are based on the reported valuation date of each system rather than the financial statement date. AME – Agent multiple employer. CSME – Cost-sharing multiple-employer. SE – Single employer. N.A. - Not available.

Appendix B: Funded Ratio Trend as Reported (continued)

(% as of Actuarial Valuation Dates)^a

System Name	Plan Type	Actuarial Valuation Date	2007 Funded Ratio	2008 Funded Ratio	2009 Funded Ratio	2010 Funded Ratio	2011 Funded Ratio	2012 Funded Ratio	2013 Funded Ratio	2014 Funded Ratio	UAAL – Latest Valuation (\$Mil.)
Utah Public Employees Noncontributory Retirement System	CSME	12/31	95.1	86.5	85.7	82.7	79.0	76.4	80.9	84.1	3,818
Utah Public Safety Retirement System	CSME	12/31	90.7	81.6	80.6	77.1	75.4	73.8	79.3	82.8	579
Vermont State Retirement System	SE	6/30	100.8	94.1	78.9	81.2	79.6	77.7	76.7	77.9	444
Vermont State Teachers' Retirement System	CSME	6/30	84.9	80.9	65.4	66.5	63.8	61.6	60.5	59.9	1,077
Virginia Retirement System	CSME	6/30	82.3	84.0	80.2	72.4	69.9	65.8	65.9	N.A.	26,953
Washington Law Enforcement Officers and Fire Fighters Retired System – Plan 1	CSME	6/30	122.6	128.4	125.4	126.9	134.6	135.0	125.1	127.2	(1,177)
Washington Law Enforcement Officers and Fire Fighters Retired System – Plan 2	CSME	6/30	128.8	133.5	127.9	124.3	118.7	113.7	108.9	107.3	(587)
Washington Public Employees Retirement System – Plan 1	CSME	6/30	70.7	70.9	69.9	74.1	70.7	68.9	62.6	61.0	4,959
Washington Public Employees Retirement System – Plan 2/3	CSME	6/30	101.5	101.1	99.3	97.2	97.1	99.4	91.7	90.0	2,935
Washington Teachers Retirement System – Plan 1	CSME	6/30	76.7	76.8	75.3	84.7	81.1	79.1	71.2	68.7	2,897
Washington Teachers Retirement System – Plan 2/3	CSME	6/30	112.7	107.9	101.8	100.5	99.3	103.7	95.6	93.6	626
West Virginia Public Employees' Retirement System	CSME	7/1	97.0	84.2	79.7	74.6	78.4	77.6	79.7	N.A.	1,202
West Virginia Teachers' Retirement System	CSME	7/1	51.3	50.0	41.3	46.5	53.7	53.0	57.9	N.A.	4,179
Wisconsin Retirement System	CSME	12/31	99.6	99.7	99.8	99.8	99.9	99.9	99.9	100.0	32
Wyoming Law Enforcement Retirement Plan	CSME	12/31	97.4	95.9	83.4	102.2	99.9	95.9	92.3	93.7	36
Wyoming Public Employees Pension Plan	CSME	12/31	94.4	94.0	78.6	87.5	84.6	81.9	78.6	79.0	1,761

^aThe funded ratios are based on the reported valuation date of each system rather than the financial statement date. AME – Agent multiple employer. CSME – Cost-sharing multi-employer. SE – Single employer. N.A. - Not available.

Appendix C: Comparative Ratios of Assets to Liabilities

(% as of Most Recent Actuarial Valuation Date)

System Name	Funding Valuation Date	Funded Ratio	Funded Ratio Adjusted to 7% Discount Rate	GASB 67 Ratio of FNP to TPL
Alabama Employees Retirement System ^a	9/30/13	65.7	56.2	N.A.
Alabama Teachers Retirement System	9/30/13	66.2	59.6	71.0
Alaska Public Employees' Retirement System	6/30/13	54.5	49.1	62.4
Alaska Teachers' Retirement System	6/30/13	48.1	43.3	55.7
Arizona Public Safety Personnel Retirement System	6/30/14	49.2	45.0	48.5
Arizona State Retirement System	6/30/14	76.3	68.7	69.5
Arkansas Highway and Transportation Retirement Plan	6/30/14	90.9	81.9	N.A.
Arkansas Public Employees Retirement Plan	6/30/14	77.8	71.9	84.2
Arkansas Teacher Retirement Plan	6/30/14	77.3	69.6	85.0
California Public Employee Retirement Fund (State Only)	6/30/14	72.1	68.4	N.A.
California State Teachers' Retirement Fund ^b	6/30/14	68.5	65.0	76.5
Colorado Public Employees' Retired Association – State Division	12/31/14	57.8	52.0	59.8
Connecticut State Employees Retirement System	6/30/14	41.5	37.4	39.5
Connecticut Teachers Retirement System	6/30/14	59.0	50.6	61.6
Delaware State Employees	6/30/14	92.3	87.5	95.8
District of Columbia Police and Fire Pension Plan	10/1/14	107.3	100.0	114.7
District of Columbia Teachers Pension Plan	10/1/14	88.6	93.8	94.1
Florida Retirement System	7/1/14	86.6	80.8	96.1
Georgia Employees' Retirement System	6/30/14	72.8	69.0	78.0
Georgia Teachers Retirement System	6/30/14	81.9	77.6	84.0
Hawaii Employees' Retirement Plan	6/30/14	61.4	56.7	63.9
Idaho Public Employee Retirement Fund	7/1/14	92.9	88.1	94.9
Illinois State Employees Retirement System	6/30/14	33.7	32.8	35.0
Illinois State Universities Retirement System	6/30/14	42.3	41.2	44.4
Illinois Teachers' Retirement System	6/30/14	40.6	38.5	43.0
Indiana Teachers' Retirement Fund 1996	6/30/14	96.1	96.1	99.1
Indiana Teachers' Retirement Fund Pre-1996	6/30/14	32.8	32.7	33.6
Indiana 1977 Police Officers' and Firefighters' Pension and Disability Fund	6/30/14	98.3	98.3	101.1
Indiana Public Employees Retirement Fund	6/30/14	82.4	82.4	84.3
Iowa Public Employees' Retirement System	6/30/14	82.7	78.4	87.6
Kansas Public Employees Retirement System	12/31/14	62.3	56.1	66.6
Kentucky Employees Retirement System – Non-Hazardous	6/30/14	21.0	19.4	22.3
Kentucky Teachers' Retirement System	6/30/14	53.6	50.8	45.6
Louisiana School Employees Retirement System	6/30/14	66.9	65.1	76.2
Louisiana State Employees Retirement System	6/30/14	59.3	54.8	65.0
Teachers Retirement System of Louisiana	6/30/14	57.4	53.0	63.7
Maine State Employee and Teacher Plan	6/30/14	81.4	80.3	84.0
Maryland Employees Retirement and Pension System	6/30/14	65.9	61.5	69.5
Maryland Teachers Retirement and Pension System	6/30/14	70.7	66.0	73.7
Massachusetts State Employees' Retirement System	12/31/14	67.5	62.3	76.3
Massachusetts Teachers' Retirement System	12/31/13	56.3	50.7	61.6
Michigan Public School Employees' Retirement System	9/30/13	59.6	53.7	66.1
Michigan State Employees' Retirement System	9/30/13	60.3	54.3	68.1
Minnesota General Employees Retirement Fund	6/30/14	73.5	66.9	78.7
Minnesota Public Employees Police and Fire Fund	6/30/14	80.0	72.8	87.1
Minnesota State Employees Retirement Fund	6/30/14	83.0	71.9	87.6
Minnesota Teachers Retirement Fund	7/1/14	74.1	65.2	81.5
Mississippi Public Employees' Retirement System	6/30/14	61.0	54.9	67.2
Missouri Department of Transportation and Patrol Employees' Retirement System	6/30/14	49.2	45.4	53.6
Missouri State Employees' Plan	6/30/14	75.1	67.7	79.5
Montana Public Employees Retirement System	6/30/14	74.4	68.7	79.9
Montana Teachers Retirement System	7/1/14	65.4	60.5	70.4

^aSystem reorganized in 2014; systemwide data under GASB 67 not reported. ^bFunding figures reflect the defined benefit program. ^cFiscal 2014 financial reporting date precedes GASB 67 implementation date.

Appendix C: Comparative Ratios of Assets to Liabilities (continued)

(% as of Most Recent Actuarial Valuation Date)

System Name	Funding Valuation Date	Funded Ratio	Funded Ratio Adjusted to 7% IRA	GASB 67 Ratio of Assets to Liabilities
Nebraska School Retirement	6/30/14	82.7	74.5	N.A.
Nebraska State Employees' Retirement	12/31/14	103.9	95.9	N.A.
Nevada Public Employees' Retirement System	6/30/14	71.5	64.4	76.3
New Hampshire Retirement System	6/30/14	60.7	56.0	66.3
New Jersey Police & Fireman's Retirement System – State and Local	7/1/14	72.6	66.1	58.9
New Jersey Public Employees' Retirement System – State and Local	7/1/14	60.9	55.4	42.7
New Jersey Teachers' Pension and Annuity Fund	7/1/14	54.0	49.2	33.6
New Mexico Educational Employees Retirement System	6/30/14	63.1	58.3	66.5
New Mexico Public Employees' Retirement System	6/30/14	75.8	70.0	81.3
New York State & Local Employees' Retirement System ^c	4/1/13	88.5	83.9	N.A.
New York State & Local Police and Fire Retirement System ^c	4/1/13	89.5	84.9	N.A.
North Carolina Teachers' and State Employees' Retirement System	12/31/13	94.8	92.2	98.2
North Dakota Public Employees' Retirement System	6/30/14	64.5	58.1	78.2
North Dakota Teachers' Fund For Retirement	6/30/14	61.8	55.7	66.6
Ohio Public Employees Retirement System	12/31/13	83.8	75.5	86.5
Ohio State Teachers Retirement System	7/1/14	69.3	64.0	74.7
Oklahoma Firefighters Pension and Retirement System	7/1/14	62.1	58.8	68.1
Oklahoma Police Pension and Retirement System	7/1/14	94.6	89.7	101.5
Oklahoma Public Employees Retirement System	7/1/14	88.6	84.0	97.9
Oklahoma Teachers' Retirement System	6/30/14	63.2	56.9	72.4
Oregon Public Employees Retirement System	12/31/13	95.9	88.6	103.6
Pennsylvania Public School Employees' Retirement System	6/30/14	62.0	58.7	57.2
Pennsylvania State Employees' Retirement System	12/31/14	59.4	56.3	64.8
Rhode Island Employees' Retirement System – Teachers	6/30/14	58.2	55.2	61.4
Rhode Island Employees' Retirement System – State Employees	6/30/14	56.1	53.1	58.6
South Carolina Police Officers' Retirement System	7/1/14	69.5	65.9	67.5
South Carolina Retirement System	7/1/14	62.7	59.5	59.9
South Dakota Retirement System	6/30/14	100.0	94.8	107.3
Tennessee State and Higher Education Employees Pension Plan ^a	6/30/13	93.3	88.5	98.1
Texas Employees Retirement System	8/31/14	77.2	69.6	63.4
Texas Teacher Retirement System	8/31/14	80.2	72.3	83.2
Utah Public Employees Noncontributory Retirement System	12/31/14	84.1	79.7	87.7
Utah Public Safety Retirement System	12/31/14	82.8	78.5	86.3
Vermont State Retirement System	6/30/14	77.9	68.7	82.5
Vermont State Teachers' Retirement System	6/30/14	59.9	53.2	64.0
Virginia Retirement System	6/30/13	65.9	65.9	75.5
Washington Law Enforcement Officers & Fire Fighters Retirement System – Plan 1	6/30/14	127.2	100.0	126.9
Washington Law Enforcement Officers & Fire Fighters Retirement System – Plan 2	6/30/14	107.3	100.0	116.7
Washington Public Employees Retirement System – Plan 1	6/30/14	61.0	56.1	61.2
Washington Public Employees Retirement System – Plan 2/3	6/30/14	90.0	82.7	93.3
Washington Teachers Retirement System – Plan 1	6/30/14	68.7	63.1	68.8
Washington Teachers Retirement System – Plan 2/3	6/30/14	93.6	86.1	96.8
West Virginia Public Employees' Retirement System	7/1/13	79.7	75.5	94.2
West Virginia Teachers' Retirement System	7/1/13	57.9	54.9	66.1
Wisconsin Retirement System	12/31/14	100.0	97.8	102.7
Wyoming Law Enforcement Retirement Plan	12/31/14	93.7	86.5	94.8
Wyoming Public Employees Pension Plan	12/31/14	79.0	72.9	79.1

^aSystem reorganized in 2014; GASB 67 figure combines 2014 data for separate segments. ^cFiscal 2014 financial reporting date precedes GASB 67 implementation date.

Appendix D: Percentage of ARC/ADEC Paid and Actuarial Assumptions

System Name					Amortization Assumptions ^a		
	2011 % ARC Funded	2012 % ARC Funded	2013 % ARC Funded	2014 % ADEC Funded	Period in Years	Basis	Method
Alabama Employees Retirement System ^b	100.0	100.0	100.0	100.0	30	Closed	Level %
Alabama Teachers Retirement System	100.0	100.0	100.0	100.0	30	Closed	Level %
Alaska Public Employees' Retirement System	86.0	92.7	89.2	106.8	25	Closed	Level \$
Alaska Teachers' Retirement System	78.6	84.6	85.2	102.5	25	Closed	Level \$
Arizona Public Safety Personnel Retirement System	104.9	104.6	103.7	95.9	22	Closed	Level %
Arizona State Retirement System	100.0	100.0	100.0	100.0	29	Closed	Level \$
Arkansas Highway and Transportation Retirement Plan	100.0	100.0	100.0	100.0	23	Open	Level %
Arkansas Public Employees Retirement Plan	100.0	100.0	100.0	100.0	23	Closed	Level %
Arkansas Teacher Retirement Plan	95.9	89.9	88.7	83.3	30	Closed	Level %
California Public Employee Retirement Fund – State	100.0	100.0	100.0	100.0	30	Closed	Level %
California State Teachers' Retirement Fund	46.7	45.8	44.1	50.9	30	Open	Level %
Colorado Public Employees' Retirement Association – State Division	85.0	83.0	79.0	83.1	30	Open	Level %
Connecticut State Employees Retirement System	87.5	100.0	99.9	100.0	17	Closed	Level %
Connecticut Teachers Retirement System	100.0	100.0	100.0	100.0	20	Closed	Level %
Delaware State Employees	100.0	100.0	100.0	100.0	20	Closed	Level %
District of Columbia Police and Fire Pension Plan	100.0	100.0	100.0	100.0	20	Closed	Level \$
District of Columbia Teachers Pension Plan	100.0	100.0	100.0	100.0	20	Closed	Level \$
Florida Retirement System	83.0	60.0	66.0	100.0	30	Closed	Level %
Georgia Public Employees' Retirement System	100.0	100.0	100.0	100.2	30	Open	Level \$
Georgia Teachers Retirement System	100.0	100.0	100.0	100.0	30	Open	Level %
Hawaii Employees' Retirement Plan	91.8	83.7	87.2	92.6	30	Open	Level %
Idaho Public Employee Retirement Fund	85.5	84.5	96.6	95.7	25	Open	Level %
Illinois State Employees Retirement System	87.5	86.5	87.9	86.8	30	Open	Level %
Illinois State Universities Retirement System	61.4	68.3	90.5	96.3	30	Open	Level %
Illinois Teachers' Retirement System	84.7	74.6	79.8	87.8	30	Open	Level %
Indiana 1977 Police Officers' and Firefighters' Pension and Disability Fund	99.9	95.5	155.3	109.6	30	Closed	Level \$
Indiana Public Employees Retirement Fund-State Employees	70.8	78.1	95.5	94.6	30	Closed	Level \$
Indiana Teachers' Retirement Fund – Pre-1996 Account	83.7	88.2	115.9	135.5	30	Closed	Level \$
Indiana Teachers' Retirement Fund – 1996	108.1	104.3	108.0	98.3	30	Closed	Level \$
Iowa Public Employees' Retirement System	82.3	98.2	98.0	100.0	30	Open	Level %
Kansas Public Employees Retirement System	74.0	67.0	75.0	79.4	19	Closed	Level %
Kentucky Employees Retirement System – Non-Hazardous	50.7	48.7	57.9	57.0	29	Closed	Level %
Kentucky Teachers' Retirement System	152.9	73.5	70.8	68.4	30	Open	Level %
Louisiana School Employees Retirement System	80.7	93.4	92.2	102.0	30	Closed	Level \$
Louisiana State Employees Retirement System	82.2	89.3	86.2	86.3	30	Closed	Level \$
Teachers Retirement System of Louisiana	90.2	100.0	99.0	103.3	30	Closed	Level %
Maine State Employee and Teacher Pension Plan ^b	101.7	100.1	100.0	100.0	14	Closed	Level %
Maryland Employees Retirement and Pension System	68.8	65.9	66.9	72.9	24	Closed	Level %
Maryland Teachers Retirement and Pension System	75.1	71.2	77.5	73.6	24	Closed	Level %
Massachusetts State Employees' Retirement System	92.0	83.7	77.9	79.8	27	Closed	Level %
Massachusetts Teachers' Retirement System	111.0	90.2	80.7	80.8	27	Closed	Level %
Michigan Public School Employees' Retirement System	81.5	83.4	70.6	75.6	25	Closed	Level %
Michigan State Employees' Retirement System	94.8	81.9	99.0	112.9	23	Closed	Level \$
Minnesota General Employees Retirement Fund	111.1	99.1	86.5	80.3	19	Closed	Level %
Minnesota Police and Fire Fund	88.2	80.0	66.6	86.4	27	Closed	Level %
Minnesota State Employees Retirement Fund	81.1	80.7	66.9	65.6	26	Closed	Level %
Minnesota Teachers Retirement Fund	63.4	66.4	62.7	65.0	24	Closed	Level %
Minnesota General Employees Retirement Fund	111.1	99.1	86.5	80.3	19	Closed	Level %
Minnesota Police and Fire Fund	88.2	80.0	66.6	86.4	27	Closed	Level %
Minnesota State Employees Retirement Fund	81.1	80.7	66.9	65.6	26	Closed	Level %
Minnesota Teachers Retirement Fund	63.4	66.4	62.7	65.0	24	Closed	Level %
Mississippi Public Employees' Retirement System	100.0	100.0	100.0	105.2	30	Open	Level %
Missouri Department of Transportation and Patrol Employees' Retirement System	100.0	100.0	100.0	100.0	17	Closed	Level %
Missouri State Employees' Plan	100.0	100.0	100.0	100.0	30	Closed	Level %
Montana Public Employees Retirement System	54.6	53.7	93.8	94.0	30	Open	Level %
Montana Teachers Retirement System	98.3	81.9	70.2	100.0	28	Open	Level %

^aAs of most recent valuation, reflects assumptions used in calculating the ADEC. ^bSystems reorganized as of 2014; 2014 figure not comparable to prior years. ARC – Annual required contribution; ADEC – Actuarially determined employer contribution.

Appendix D: Percentage of ARC/ADEC Paid and Actuarial Assumptions (continued)

Amortization Assumptions^a

System Name	2011 % ARC Funded	2012 % ARC Funded	2013 % ARC Funded	2014 % ADEC Funded	Period in Years	Basis	Method
Nebraska School Retirement	89.0	88.0	79.0	100.0	26	Closed	Level %
Nebraska State Employees' Retirement	100.0	100.0	100.0	100.0	25	Closed	Level \$
Nevada Public Employees' Retirement System	88.0	96.0	86.0	93.1	30	Closed	Level %
New Hampshire Retirement System	100.0	100.0	100.0	100.0	25	Closed	Level %
New Jersey Police and Fireman's Retirement System – State	2.0	14.3	27.8	29.7	30	Open	Level %
New Jersey Police and Fireman's Retirement System – Local	91.9	93.1	92.7	100.0	30	Open	Level \$
New Jersey Public Employees' Retirement System – State	3.6	15.9	28.6	14.2	30	Open	Level \$
New Jersey Public Employees' Retirement System – Local	84.1	89.6	90.5	100.0	30	Open	Level \$
New Jersey Teachers' Pension and Annuity Fund	1.4	14.0	27.7	18.2	30	Open	Level \$
New Mexico Educational Employees Retirement System	81.6	63.4	62.3	75.5	28	Closed	Level %
New Mexico Public Employees' Retirement System	100.0	100.0	100.0	80.8	30	Open	Level %
New York State and Local Employees' Retirement System	100.0	100.0	100.0	100.0	N.A.	N.A.	N.A.
New York State and Local Police and Fire Retirement System	100.0	100.0	100.0	100.0	N.A.	N.A.	N.A.
North Carolina Teachers' and State Employees' Retirement System	73.0	100.0	104.0	100.0	12	Closed	Level \$
North Dakota Public Employees' Retirement System	38.9	41.6	49.9	57.2	20	Open	Level %
North Dakota Teachers' Fund For Retirement	68.4	66.5	113.2	104.8	29	Closed	Level %
Ohio Public Employees Retirement System	100.0	100.0	100.0	100.0	21	Closed	Level %
Ohio State Teachers Retirement System	51.0	41.0	46.0	90.9	30	Open	Level %
Oklahoma Firefighters Pension and Retirement System	44.9	66.3	66.6	68.5	30	Closed	Level \$
Oklahoma Police Pension and Retirement System	38.5	94.2	83.3	74.1	5	Closed	Level \$
Oklahoma Public Employees Retirement System	62.9	109.4	105.2	108.2	13	Closed	Level %
Oklahoma Teachers' Retirement System	77.6	115.9	113.1	117.3	30	Open	Level %
Oregon Public Employees Retirement System	100.0	83.0	72.0	100.0	20	Closed	Level %
Pennsylvania Public School Employees' Retirement System	27.0	38.1	46.1	67.2	30	Open	Level \$
Pennsylvania State Employees' Retirement System	42.8	53.9	60.2	76.9	26	Closed	Level \$
Rhode Island Employees' Retirement System – State Employees	100.0	100.0	100.0	100.0	21	Closed	Level %
Rhode Island Employees' Retirement System – Teachers	100.0	100.0	100.0	100.0	21	Closed	Level %
South Carolina Police Officers' Retirement System	100.0	100.0	100.0	100.0	30	Open	Level %
South Carolina Retirement System	100.0	100.0	100.0	100.0	30	Open	Level %
South Dakota Retirement System	100.0	100.0	100.0	121.9	0	Closed	Level %
Tennessee State Employees, Teachers and Higher Education Employees Pension Plan ^b	100.0	100.0	100.0	100.0	13	Closed	Level \$
Texas Employees Retirement System	58.5	49.2	50.7	66.3	31	Open	Level %
Texas Teacher Retirement System	86.0	74.0	74.0	79.1	30	Open	Level %
Utah Public Employees Noncontributory Retirement System	100.0	100.0	100.0	100.0	20	Open	Level %
Utah Public Safety Retirement System	100.0	100.0	100.0	100.0	20	Open	Level %
Vermont State Retirement System	84.5	140.2	130.4	132.0	24	Closed	Level %
Vermont State Teachers' Retirement System	104.2	109.6	108.1	106.3	24	Closed	Level %
Virginia Retirement System	46.7	59.6	75.8	75.8	29	Open	Level %
Washington Law Enforcement Officers and Firefighters Retirement System – Plan 1	100.0	100.0	100.0	100.0	11	Closed	Level %
Washington Law Enforcement Officers and Firefighters Retirement System – Plan 2	156.9	136.9	144.3	99.6	N.A.	N.A.	N.A.
Washington Public Employees Retirement System – Plan 1	33.1	50.6	49.8	102.2	10	Open	Level %
Washington Public Employees Retirement System – Plan 2/3	80.3	94.5	95.3	97.4	N.A.	N.A.	N.A.
Washington Teachers Retirement System – Plan 1	47.0	44.1	43.1	96.4	10	Open	Level %
Washington Teachers Retirement System – Plan 2/3	72.4	92.1	98.9	97.7	N.A.	N.A.	N.A.
West Virginia Public Employees' Retirement System	83.3	105.3	96.6	96.6	21	Closed	Level \$
West Virginia Teachers' Retirement System	106.3	105.3	100.8	113.0	20	Closed	Level \$
Wisconsin Retirement System	100.0	100.0	100.0	100.0	30	Closed	Level %
Wyoming Law Enforcement Retirement Plan	153.3	135.0	122.5	88.8	30	Open	Level %
Wyoming Public Employees Pension Plan	93.4	88.2	81.2	70.8	30	Open	Level %

^aAs of most recent valuation, reflects assumptions used in calculating the ADEC. ^bSystems reorganized as of 2014; 2014 figure not comparable to prior years. ARC – Annual required contribution. ADEC – Actuarially determined employer contribution. N.A. – Not applicable.

Appendix E: Pension System Assumed Discount Rates and Inflation

(Fiscal Year)

System Name	2008 (%)	2014 (%)	2014 Inflation Component (%)
Alabama Employees Retirement System	8.00	8.00	3.00
Alabama Teachers Retirement System	8.00	8.00	3.00
Alaska Public Employees' Retirement System	8.25	8.00	3.12
Alaska Teachers' Retirement System	8.25	8.00	3.12
Arizona Public Safety Personnel Retirement System	8.50	7.85	4.00
Arizona State Retirement System	8.00	8.00	3.00
Arkansas Highway and Transportation Retirement Plan	8.00	8.00	3.50
Arkansas Public Employees Retirement Plan	8.00	7.75	3.75
Arkansas Teacher Retirement Plan	8.00	8.00	3.25
California Public Employee Retirement Fund	7.75	7.50	2.75
California State Teachers' Retirement Fund	8.00	7.50	3.00
Colorado Public Employees' Retirement Association – State Division	8.50	8.00	3.50
Connecticut State Employees Retirement System	8.25	8.00	2.75
Connecticut Teachers Retirement System	8.50	8.50	3.00
Delaware State Employees	8.00	7.50	3.25
District of Columbia Police and Fire Pension Plan	7.50	6.50	3.50
District of Columbia Teachers Pension Plan	7.50	6.50	3.50
Florida Retirement System	7.75	7.65	2.60
Georgia Public Employees' Retirement System	7.50	7.50	3.00
Georgia Teachers Retirement System	7.50	7.50	3.00
Hawaii Employees' Retirement Plan	8.00	7.75	3.00
Idaho Public Employee Retirement Fund	7.75	7.50	3.25
Illinois State Employees Retirement System	8.50	7.25	3.00
Illinois State Universities Retirement System	8.50	7.25	2.75
Illinois Teachers' Retirement System	8.50	7.50	3.00
Indiana 1977 Police Officers and Firefighters' Pension and Disability Fund	7.25	6.75	3.00
Indiana Public Employees Retirement Fund – State Employees	7.25	6.75	3.00
Indiana Teachers' Retirement Fund	7.50	6.75	3.00
Iowa Public Employees' Retirement System	7.50	7.50	3.00
Kansas Public Employees Retirement System	8.00	8.00	3.00
Kentucky Employees Retirement System – Non-Hazardous	7.75	7.75	3.50
Kentucky Teachers' Retirement System	7.50	7.50	3.50
Louisiana School Employees Retirement System	8.25	7.25	2.75
Louisiana State Employees Retirement System	8.25	7.75	3.00
Teachers Retirement System of Louisiana ^a	8.25	7.75	2.50
Maine State Employee and Teacher Plan	7.75	7.13	3.50
Maryland Employees Retirement and Pension System	7.75	7.65	2.90
Maryland Teachers Retirement and Pension System	7.75	7.65	2.90
Massachusetts State Employees' Retirement System	8.25	8.00	3.00
Massachusetts Teachers' Retirement System	8.25	8.00	3.00
Michigan Public School Employees' Retirement System	8.00	8.00	2.50
Michigan State Employees' Retirement System	8.00	8.00	2.50
Minnesota General Employees Retirement Fund	8.50	8.41	3.00
Minnesota Police and Fire Fund	8.50	8.41	3.00
Minnesota State Employees Retirement Fund ^a	8.50	8.40	3.00
Minnesota Teachers Retirement Fund ^a	8.50	8.38	3.00
Mississippi Public Employees' Retirement System	8.00	8.00	3.50
Missouri Department of Transportation and Patrol Employees' Retirement System	8.25	7.75	3.00
Missouri State Employees' Plan	8.50	8.00	2.50
Montana Public Employees Retirement System	8.00	7.75	3.00
Montana Teachers Retirement System	7.75	7.75	3.25

^aSystem uses multiple rates (select and ultimate); for systems without a reported single equivalent rate, highest rate shown.

Appendix E: Pension System Assumed Discount Rates and Inflation (continued)

(Fiscal Year)

System Name	2008 (%)	2014 (%)	2014 Inflation Component (%)
Nebraska School Retirement	8.00	8.00	3.25
Nebraska State Employees' Retirement	7.75	7.75	3.25
Nevada Public Employees' Retirement System	8.00	8.00	3.50
New Hampshire Retirement System	8.50	7.75	3.00
New Jersey Police and Fireman's Retirement System – State	8.25	7.90	3.01
New Jersey Public Employees' Retirement System – State	8.25	7.90	3.01
New Jersey Teachers' Pension and Annuity Fund	8.25	7.90	2.50
New Mexico Educational Employees Retirement System	8.00	7.75	3.00
New Mexico Public Employees' Retirement System	8.00	7.75	3.00
New York State and Local Employees' Retirement System	8.00	7.50	2.70
New York State and Local Police and Fire Retirement System	8.00	7.50	2.70
North Carolina Teachers' and State Employees' Retirement System	7.25	7.25	3.00
North Dakota Public Employees' Retirement System	8.00	8.00	3.50
North Dakota Teachers' Fund For Retirement	8.00	8.00	3.00
Ohio Public Employees Retirement System ^b	8.00	8.00	3.75
Ohio State Teachers Retirement System	8.00	7.75	2.75
Oklahoma Firefighters Pension and Retirement System	7.50	7.50	3.00
Oklahoma Police Pension and Retirement System	7.50	7.50	3.00
Oklahoma Public Employees Retirement System	7.50	7.50	3.00
Oklahoma Teachers' Retirement System	8.00	8.00	3.00
Oregon Public Employees Retirement System	8.00	7.75	2.75
Pennsylvania Public School Employees' Retirement System	8.25	7.50	3.00
Pennsylvania State Employees' Retirement System	8.50	7.50	2.75
Rhode Island Employees' Retirement System – State Employees	8.25	7.50	2.75
Rhode Island Employees' Retirement System – Teachers	8.25	7.50	2.75
South Carolina Police Officers' Retirement System	7.25	7.50	2.75
South Carolina Retirement System	7.25	7.50	2.75
South Dakota Retirement System	7.75	7.50	3.25
Tennessee State Employee Teachers and Higher Education Employee Pension Plan	7.50	7.50	3.00
Texas Employees Retirement System	8.00	8.00	3.50
Texas Teacher Retirement System	8.00	8.00	3.00
Utah Public Employees Noncontributory Retirement System	7.75	7.50	2.75
Utah Public Safety Retirement System	7.75	7.50	2.75
Vermont State Retirement System ^a	8.25	8.22	3.00
Vermont State Teachers' Retirement System ^a	8.25	8.15	3.00
Virginia Retirement System	7.50	7.00	2.50
Washington Law Enforcement Officers and Fire Fighters Retirement System – Plan 1	8.00	7.80	3.00
Washington Law Enforcement Officers and Fire Fighters Retirement System – Plan 2	8.00	7.50	3.00
Washington Public Employees Retirement System – Plan 1	8.00	7.80	N.A.
Washington Public Employees Retirement System – Plan 2/3	8.00	7.80	3.00
Washington Teachers Retirement System – Plan 1	8.00	7.80	N.A.
Washington Teachers Retirement System – Plan 2/3	8.00	7.80	3.00
West Virginia Public Employees' Retirement System	7.50	7.50	3.00
West Virginia Teachers' Retirement System	7.50	7.50	3.00
Wisconsin Retirement System ^a	7.80	7.20	3.20
Wyoming Law Enforcement Retirement Plan	8.00	7.75	3.25
Wyoming Public Employees Pension Plan	8.00	7.75	3.25

^aSystem uses multiple rates (select and ultimate); for systems without a reported single equivalent rate, highest rate shown.

Appendix F: Ratio of Active Members to Retirees and Beneficiaries

System Name	2008	2014 ^a
Alabama Employees Retirement System	2.4	1.9
Alabama Teachers Retirement System	2.0	1.6
Alaska Public Employees' Retirement System ^b	1.2	0.6
Alaska Teachers' Retirement System ^b	0.9	0.5
Arizona Public Safety Personnel Retirement System	2.6	1.8
Arizona State Retirement System	2.5	1.6
Arkansas Highway and Transportation Retirement Plan ^b	1.3	1.2
Arkansas Public Employees Retirement Plan	1.9	1.4
Arkansas Teacher Retirement Plan	2.6	1.8
California Public Employee Retirement Fund	1.7	1.0
California State Teachers' Retirement Fund – State Share	2.1	1.5
Colorado Public Employees' Retirement Association – State Division	2.3	1.5
Connecticut State Employees Retirement System	1.4	1.1
Connecticut Teachers Retirement System	1.8	1.5
Delaware State Employees	1.7	1.5
District of Columbia Police and Fire Pension Plan	3.6	2.3
District of Columbia Teachers Pension Plan	1.9	1.2
Florida Retirement System	2.5	1.7
Georgia Public Employees' Retirement System	1.9	1.3
Georgia Teachers Retirement System	2.8	1.9
Hawaii Employees' Retirement Plan	1.8	1.6
Idaho Public Employee Retirement Fund	3.7	1.6
Illinois State Employees Retirement System	1.1	0.9
Illinois State Universities Retirement System	1.6	1.2
Illinois Teachers' Retirement System	1.8	1.4
Indiana 1977 Police Officers' and Firefighters' Pension and Disability Fund	5.3	3.8
Indiana Public Employees Retirement Fund	2.3	1.8
Indiana Teachers' Retirement Fund Pre-1996 ^b	0.9	0.4
Indiana Teachers' Retirement Fund 1996	20.4	14.0
Iowa Public Employees' Retirement System	1.9	1.5
Kansas Public Employees Retirement System	2.2	1.8
Kentucky Employees Retirement System – Non-Hazardous	1.4	1.1
Kentucky Teachers' Retirement System	1.9	1.6
Louisiana School Employees Retirement System	1.1	0.9
Louisiana State Employees Retirement System	2.0	1.0
Teachers Retirement System of Louisiana ^b	1.4	1.1
Maine Public Employees Retirement System	1.5	1.2
Maryland Employees Retirement and Pension System	1.6	1.2
Maryland Teachers Retirement and Pension System	2.0	1.5
Massachusetts State Employees' Retirement System	1.7	1.6
Massachusetts Teachers' Retirement System	1.8	1.5
Michigan Public School Employees' Retirement System ^b	1.6	1.0
Michigan State Employees' Retirement System ^b	0.6	0.3
Minnesota General Employees Retirement Fund	2.2	1.7
Minnesota Public Employees Police and Fire Fund	1.5	0.9
Minnesota State Employees Retirement Fund	1.8	1.4
Minnesota Teachers Retirement Fund	1.6	1.3
Mississippi Public Employees' Retirement System	2.3	1.7
Missouri Department of Transportation and Patrol Employees' Retirement System	1.2	0.9
Missouri State Employees' Plan	1.8	1.2

^aBased on most recent fiscal year financial statement, 2014 in most cases. Calculation excludes terminated members not yet receiving benefits. ^bPlan closed.

Appendix F: Ratio of Active Members to Retirees and Beneficiaries (continued)

System Name	2008	2014 a
Montana Public Employees Retirement System	1.7	1.4
Montana Teachers Retirement System	1.6	1.3
Nebraska School Retirement	2.5	1.9
Nebraska State Employees' Retirement	33.1	11.9
Nevada Public Employees' Retirement System	2.8	1.8
New Hampshire Retirement System	2.2	1.6
New Jersey Police and Fireman's Retirement System – State and Local	1.4	0.9
New Jersey Public Employees' Retirement System – State and Local	2.4	1.7
New Jersey Teachers' Pension and Annuity Fund	2.1	1.6
New Mexico Educational Employees Retirement System	2.0	1.4
New Mexico Public Employees' Retirement System	2.1	1.5
New York State and Local Employees' Retirement System	1.6	1.3
New York State and Local Police and Fire Retirement System	1.1	0.9
North Carolina Teachers' and State Employees' Retirement System	2.2	1.7
North Dakota Public Employees' Retirement System	2.8	2.4
North Dakota Teachers' Fund For Retirement	1.5	1.3
Ohio Public Employees Retirement System	2.1	1.7
Ohio State Teachers Retirement System	1.4	1.1
Oklahoma Firefighters Pension and Retirement System	1.2	1.2
Oklahoma Police Pension and Retirement System	1.8	1.6
Oklahoma Public Employees Retirement System	1.7	1.4
Oklahoma Teachers' Retirement System	2.0	1.6
Oregon Public Employees Retirement System	1.6	1.3
Pennsylvania Public School Employees' Retirement System	1.6	1.3
Pennsylvania State Employees' Retirement System	1.0	0.9
Rhode Island Employees' Retirement System – Teachers	1.2	1.2
Rhode Island Employees' Retirement System – State Employees	1.6	1.0
South Carolina Police Officers' Retirement System	2.3	1.6
South Carolina Retirement System	1.8	1.4
South Dakota Retirement System	2.0	1.6
Tennessee State Employee Teachers and Higher Education Employee Pension Plan	1.9	1.5
Texas Employees Retirement System	1.9	1.4
Texas Teacher Retirement System	3.4	2.4
Utah Public Employees Noncontributory Retirement System	2.9	1.6
Utah Public Safety Retirement System	2.1	1.4
Vermont State Retirement System	1.9	1.4
Vermont State Teachers' Retirement System	1.9	1.2
Virginia Retirement System	2.4	1.9
Washington Law Enforcement Officers and Fire Fighters Retired System – Plan 1 ^b	0.1	0.0
Washington Law Enforcement Officers and Fire Fighters Retired System – Plan 2	17.4	6.0
Washington Public Employees Retirement System – Plan 1 ^b	0.2	0.1
Washington Public Employees Retirement System – Plan 2/3	8.1	3.5
Washington Teachers Retirement System – Plan 1 ^b	0.2	0.1
Washington Teachers Retirement System – Plan 2/3	18.5	7.6
West Virginia Public Employees' Retirement System	1.7	1.5
West Virginia Teachers' Retirement System	1.2	1.1
Wisconsin Retirement System	1.8	1.4
Wyoming Law Enforcement Retirement Plan	4.2	2.8
Wyoming Public Employees Pension Plan	1.9	1.5

^aBased on most recent fiscal year financial statement, 2014 in most cases. Calculation excludes terminated members not yet receiving benefits. ^bPlan closed.

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