

Slower Growth in Pension Contributions

Contribution Practices Improve But Remain Inadequate

Special Report

Slower Pace of Increases: The pace of growth in actuarial contributions to state and local government defined benefit (DB) pensions has slowed in recent years after rapid increases in the aftermath of the Great Recession. For major systems reporting fiscal 2017 data to date, the median actuarially determined contribution (ADC) rose 3.5%; actual contributions rose faster, increasing 3.7%. Recent increases are well below the post-recessionary peaks, when the median ADC rose 8.6%, in fiscal 2011, and actual contributions rose 8%, in fiscal 2014.

Contributions Rising Faster than Resources: Despite recent slower growth, the burden of pensions is substantially higher compared to a decade ago. As of fiscal 2017, ADCs for major plans were 74% higher than fiscal 2007 levels and actual contributions were 81% higher; median annual increases were 5.7% for ADCs and 6.1% for actual contributions over that period. Gains occurred against the backdrop of a historically slow economic and revenue recovery; preliminary data indicate state and local tax revenues rose by about one-third over the same period.

Actual Contributions Closer to ADC: About 67% of major pensions received contributions from participating governments that equaled or exceeded their ADCs in fiscal 2017. Recent levels are above the 46% post-recessionary low point for this figure (in fiscal 2011) and the previous peak at 61% (reached in fiscal 2008). Although this is positive, Fitch Ratings notes that cyclical contribution practices and the consistent failure of many governments to make annual contributions at their actuarial targets are likely to prolong pension challenges for many.

ADCs Likely to Head Higher: The recent slowing in contribution growth does not reflect a material improvement in the funded status of pensions, and ADC growth is likely to continue. Despite strong market gains in 2017, ADCs must rise further to cover asset performance that over time is unlikely to match investment return assumptions, the ongoing shift to less favorable (but more realistic) actuarial assumptions, and the continued inadequacy of actual contributions received by about one-third of major systems.

Related Research

[Pensions Driving State Liability Burdens \(2017 State Pension Update\) \(December 2017\)](#)

[Fitch 2018 Outlook: U.S. States \(Federal Uncertainty and Revenue Sluggishness Heighten Challenges\) \(December 2017\)](#)

[Fitch 2018 Outlook: U.S. Local Governments \(Financial Stability Amid Federal Policy Uncertainty\) \(December 2017\)](#)

[Revised Pension Risk Measurements \(Enhancing Pension Analysis in U.S. Public Finance Tax-Supported Rating Criteria\) \(May 2017\)](#)

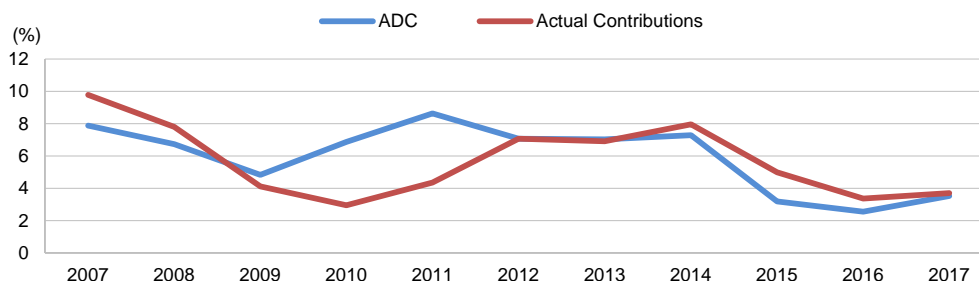
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Annual Growth Rates in ADCs and Actual Pension Contributions



ADC - Actuarially determined contribution.
Source: Fitch.

This report reviews the overall trends during the last decade of both the ADCs of major state and local DB pension systems and the actual contributions received by those systems, a period that spans the Great Recession of 2008–2009 and the subsequent economic recovery. The analysis includes data for 109 major systems with financial statements through fiscal 2016, and a further 97 systems with fiscal 2017 financial statements; systems that have yet to release their 2017 audits typically have a Dec. 31 fiscal year end. The analysis includes one or more multi-employer systems in each state, typically covering state employees, local teachers and employees of major cities. It excludes data from some agent multi-employer systems that ceased providing complete system-wide information upon implementation of GASB 67.

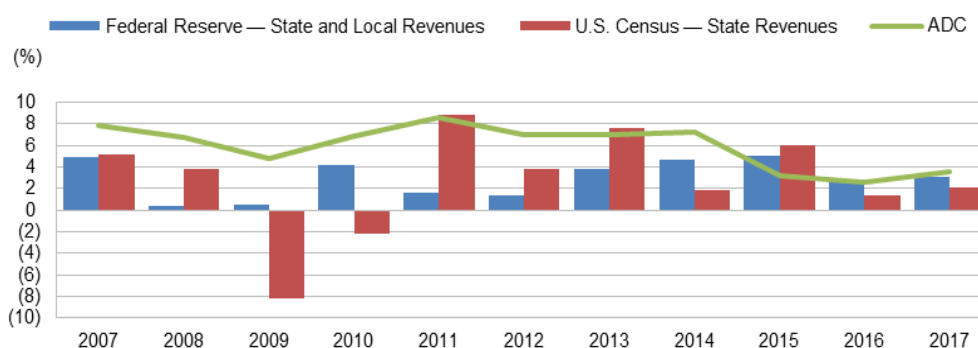
Increases in ADCs and Actual Contributions Slow

The pace of growth in pension contributions — both the ADC arising from individual system funding policies and the actual employer contributions paid by participating governments — has slowed considerably over the past three years. For systems reporting fiscal 2017 data, the median ADC grew only 3.5% in fiscal 2017, below the 10-year median increase of 5.7% for major systems. The median actual contribution rose 3.7% in fiscal 2017, well below the 10-year median of 6.1%. Slow fiscal 2017 growth follows even smaller increases in fiscal years 2015 and 2016.

Despite the recent slowdown, the ADC and actual contributions for major plans are materially higher than a decade ago and, in the aggregate, have since grown more than twice as fast as the revenue bases of state and local governments. Based on systems reporting for fiscal 2017 so far, the median ADC is 72% higher than a decade ago, and the median actual contribution is 81% higher.

Although detailed revenue surveys through 2017 have yet to be released, available data series for states and local government revenues in general indicate much slower growth. For example, the U.S. Census's quarterly state tax revenues rose 33% over the decade through the second quarter of 2017 (the fiscal year end for most states), and calendar-year Federal Reserve flow of funds data report state and local receipts rising 31% in this period. Notably, the slower ADC growth of recent years appears to be bringing it into closer alignment with revenue gains.

Annual Percentage Change, Government Revenues and ADC



ADC - Actuarially determined contribution.

Source: Fitch, Federal Reserve Board of Governors flow of funds, state and local governments' current receipts, NIPA basis, and U.S. Census, quarterly summary of state and local taxes.

Contribution Practices Improve

The faster growth of actual contributions during the period surveyed, compared to ADCs, reflects the lower starting point of actual contributions a decade ago, when states and local governments were less likely to fully pay their ADCs. As concerns about pensions' funding erosion intensified in the last decade, more sponsors have sought to correct inadequate contribution practices and the share of ADCs paid has risen. (See Appendix.)

In fiscal 2015, Kentucky paid 100% of the ADC for its general employees system after at least a decade of contributing a small share, driven by concerns about the severely underfunded status of the system; Kentucky has maintained or exceeded the ADCs since then. More often, pension sponsors with historically weak contribution practices have phased in increases toward paying a full ADC. For example, Pennsylvania's public school pension system received 100%

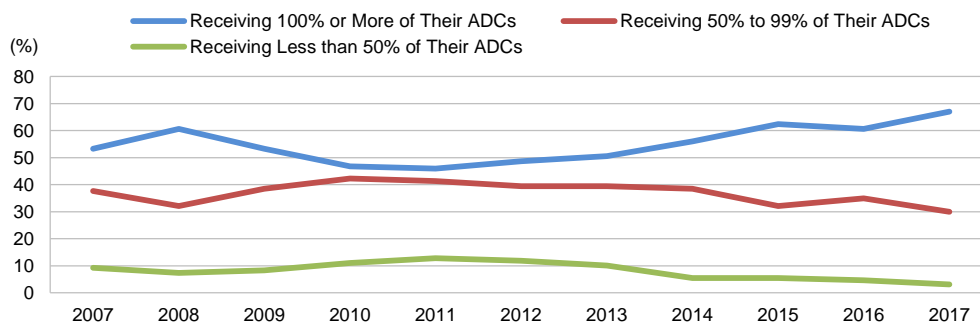
Related Criteria

U.S. Public Finance Tax-Supported
Rating Criteria (April 2018)

of its ADC in fiscal 2017 following reforms enacted in 2010 that laid out a multiyear period of gradual contribution increases. California has likewise mandated full contributions for its teachers system, being phased in over seven years through fiscal 2021, and New Jersey by policy is gradually raising actual contributions for its teacher system and the state components of the general and uniformed employees systems.

As of fiscal 2017, major pension systems were receiving a higher share of ADCs from employers than at any time in the last decade, but this figure still lags for a material percentage of systems. Based on available fiscal 2017 data, 67% of major systems received 100% or more of their reported ADC, while only three systems received less than half of their ADCs. This compares favorably to fiscal 2007, when only 53% of major systems received 100% or more of their ADCs, while 9% of major systems received less than half of their ADCs. However, Fitch notes that gains in the ratio have slowed over the past three years, and, as of 2017, one-third of systems continued to receive inadequate contributions.

Ratio of Actual Contributions to ADCs for Major Plans



ADC - Actuarially determined contribution.
Source: Fitch.

Despite examples noted above of corrective actions to improve contribution practices, the willingness of states and local governments to make full contributions is generally cyclical. The share of ADCs paid typically falls off in the wake of fiscal downturns and only gradually recovers as the fiscal condition of participating governments stabilizes. Before the Great Recession, actual contributions as a percentage of the ADC peaked in fiscal 2008, when 61% of major plans received at least 100% of their ADCs. This figure dropped precipitously both as ADCs rose in step with funding status erosion and as participating governments faced severe fiscal weakness.

Fitch views cyclical contribution practices as negative, indicating a lack of commitment to addressing long-term liabilities and depriving the system of cash inflows at a moment in the economic cycle when a nascent recovery is likely to generate strong returns. Moreover, the damage done by weak contribution practices is higher in the current environment, compared to decades past, because pension systems are more mature, with less favorable demographic and cash flow profiles.

Long-Term Factors to Push ADCs Higher

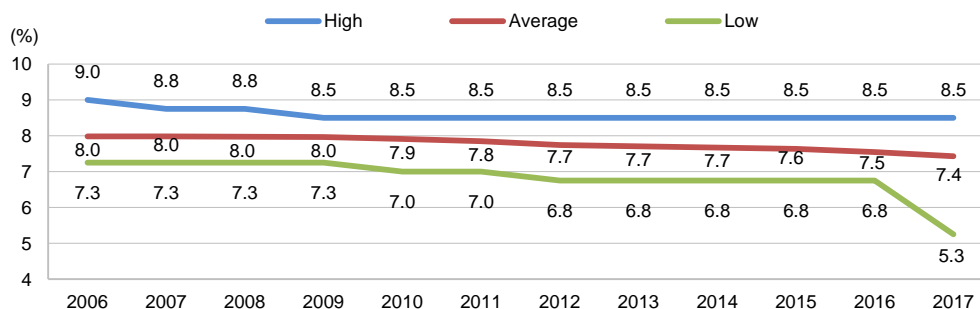
The recent slower growth in ADCs reflects short-term factors; however, it is taking place against a backdrop of longer-term unfavorable factors that will continue to push the carrying costs of pension liabilities higher over time.

The unusually severe asset losses of the 2008–2009 Great Recession drove five consecutive years of ADC increases averaging 7.4% annually between fiscal 2010 and fiscal 2014; this period corresponds with the five-year smoothing approach used by most plans to recognize portfolio gains and losses for purposes of their funding policies, from which the ADC is derived. The ADC increases of this period should be viewed as essentially permanent, in Fitch's view, with market losses being financed by each system over a time frame corresponding to its specific amortization policy. Amortization assumptions among systems differ considerably, but, for many, the higher ADCs necessary to cover recessionary losses will remain in place over decades.

Beyond the higher baseline ADCs necessary to address losses from the Great Recession, ADCs are also rising as individual systems recognize and incorporate less favorable but more realistic actuarial and economic assumptions into their valuations. Examples include periodic experience study and mortality table updates that typically result in longer projected lifespans, closing or shortening previously open-ended or long amortization periods, switching to less back-loaded level-dollar amortization from a level percentage of payroll, and lowering investment return assumptions.

The latter change — lowering investment return assumptions — will remain a particularly notable driver for many systems. Since the last recession, virtually all systems have lowered their investment return assumptions based on a less optimistic outlook for economic and asset performance over time. As of their fiscal 2017 financial statements, the average investment return assumption used in funding valuations had fallen to 7.42% from nearly 8.0% a decade earlier.

Major Systems' Investment Return Assumption



Source: Fitch.

As investment return assumptions drop, calculated accrued liabilities rise. Using accounting valuation sensitivity data as a proxy, a 1% drop in assumed returns typically raises total pension liabilities 10%–15% for most systems. How such an increase affects ADCs varies from system to system, reflecting the size of increase in the unfunded liabilities and the amortization assumptions established in their funding policies.

The current average investment return assumption remains well above the 6% level assumed by Fitch in its assessment of issuers' long-term pension liabilities, per its "U.S. Public Finance Tax-Supported Rating Criteria." Despite relatively strong market gains in 2017 in excess of investment targets, Fitch expects future multiyear pension asset performance to track below the level assumed by most systems. This performance is consistent with the more subdued economic growth trajectory of the U.S. in recent years, compared to historical experience, and inflation and interest rate environments that remain historically low. As with past recessionary losses, future asset performance below expected targets will result in higher ADCs over time.

The higher contribution trends of the last decade have taken place despite significant benefit reforms in virtually every major system. Given the irrevocable nature of vested benefits, most reforms only affect the benefits granted to newly hired workers, limiting any immediate, favorable impact on either accrued liabilities or the trajectory of contributions. One exception to this has been reducing cost of living adjustments (COLAs) for existing retirees. Lower retiree COLAs for statewide systems in Colorado and Minnesota, and for Ohio's teachers system, for example, have led to immediately lower ADCs.

How Fitch Uses Contribution Data

Fitch tracks trends in both pension ADCs and actual contributions as part of its assessment of expenditure flexibility for states and local governments. Although the ADC arises from a funding valuation, rather than the accounting valuation that produces the net pension liability (NPL) reported in audited financial statements, Fitch views the funding valuation as remaining essential because it determines how an issuer intends to address its long-term pension liability over time.

Fitch uses the ADC to represent the budget demands of pensions, combining it with debt service and the annual payment for other post-employment benefits and measuring the resulting carrying cost of long-term liabilities as a percentage of spending. Fitch also compares the ADC with actual contributions as part of its assessment of the likely direction of carrying costs in the future. If actual contributions are below the ADC, Fitch views the underpayment as a form of deficit borrowing that will add to unfunded liabilities and consequently push the carrying cost of pensions higher over time. Particularly notable are circumstances in which actual contributions are capped by statute at a level below the ADC, essentially ensuring the erosion of the pension's funded status going forward.

Unlike pensions in the private and non-for-profit sectors, where federal regulation generally compels less favorable calculations of liabilities and more rapid payoff of funding shortfalls, the absence of a uniform legal and regulatory environment for state and local DB systems means that consistently paying an ADC may not result in funding progress over time.

Funding policies rely on numerous, disparate assumptions that differ materially from one system to another. Fitch considers strengths and weaknesses in the funding valuation assumptions to understand the expected amortization profile and budgetary demand of pensions over time. Concerns arise if, for example, funding policies assume long, rolling amortization or rely on unrealistically high investment return assumptions, which may lower the resulting ADC or leave the amortization profile excessively backloaded. As with actual contributions falling short of the ADC, these factors can mean that the unfunded liability rises from year to year, even if the ADC is paid and other assumptions are met.

Fitch views investment return assumptions higher than 6% as being unreasonably high and recalculates the liability reported for accounting purposes at the lower level, using the sensitivity data provided in financial statements. The resulting Fitch-adjusted net pension liability (NPL), added to tax-supported debt, is used by Fitch in its assessment of the rated entity's long-term liability burden.

Additionally, the Fitch-adjusted NPL is used to calculate a benchmark pension contribution, an annual payment amount that amortizes the Fitch-adjusted NPL over 20 years on a level basis, in a manner similar to debt service. The benchmark contribution, when compared to the ADC, enables Fitch to assess how reasonable the pension's funding policy assumptions are for paying down the unfunded liability, and provides additional insight into the likely increase in carrying costs for pension liabilities over time.

Appendix

Ratio of Actual Contribution to ADC by Fiscal Year

(% , Major State and Local Defined Benefit Pension Systems)

System	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Alabama TRS	100	100	100	100	100	100	100	100	100	100	100
Alaska PERS	77	107	116	86	93	89	90	107	232	57	98
Alaska TRS	62	106	139	79	85	85	90	103	528	34	115
Arizona SRS	100	100	100	100	100	100	100	100	100	100	100
Arkansas PERS	100	100	100	100	100	100	100	100	100	100	100
Arkansas TRP	103	102	104	107	96	90	89	83	86	94	98
Boston RS	100	100	100	100	100	100	100	100	100	103	N.A.
California PERF — State	100	100	100	100	100	100	100	100	100	100	100
California STRS	72	82	68	60	52	51	49	51	53	69	84
Chicago MEABF	41	41	36	32	24	22	18	18	22	16	N.A.
Chicago PSTPRF	80	57	43	82	31	28	25	28	26	74	99
Colorado PERA — School Division	64	65	73	70	89	84	79	85	80	82	N.A.
Colorado PERA — State Division	60	61	69	62	85	83	79	83	80	84	N.A.
Connecticut SERS	100	99	93	80	80	87	100	100	100	99	99
Connecticut TRS	100	486	100	100	100	100	100	100	100	100	100
Cook County EOABF	80	53	43	32	33	28	25	28	26	74	N.A.
Delaware SERS	100	100	100	100	100	100	100	100	100	100	100
Florida RS	111	107	111	111	83	60	66	100	100	100	100
Georgia ERS	100	100	100	100	100	100	100	100	100	100	100
Georgia TRS	100	100	100	100	100	100	100	100	100	100	100
Hawaii ERP	95	96	110	102	92	84	87	93	100	100	100
Idaho PERF	110	109	123	109	85	85	97	96	98	113	106
Illinois SERS	44	60	77	93	88	86	88	87	88	93	84
Illinois SURS	37	49	52	69	61	68	90	96	94	87	89
Illinois TRS	40	60	76	91	85	75	80	88	85	85	66
Indiana 1977 POFFPDF	108	108	100	139	114	102	122	135	123	133	165
Indiana PERF	100	100	99	100	98	89	98	98	104	111	112
Indiana STRS — Pre-1996	100	100	100	100	100	100	100	100	100	100	100
Indiana STRS — 1996	78	102	118	156	123	117	108	110	115	120	114
Iowa PERS	83	87	88	89	82	98	98	100	102	104	105
Kansas PERS	64	65	68	72	74	67	75	79	74	81	81
Kentucky ERS — Non Haz.	50	40	38	41	51	49	58	57	100	100	121
Kentucky TRS	88	83	74	76	153	74	71	68	61	57	99
Los Angeles County ERS	100	100	100	100	100	100	100	100	100	100	100
Louisiana SERS	100	115	103	87	86	93	90	86	104	104	96
Louisiana TRS	106	116	106	84	90	101	99	103	108	105	101
Maine SETP	100	100	100	104	102	100	100	100	100	100	100
Maryland ERPS	64	76	76	75	69	66	67	73	84	93	100
Maryland TRPS	85	94	89	92	75	71	78	74	89	97	100
Massachusetts SERS	101	125	57	63	92	84	78	80	95	95	90
Massachusetts TRS	100	108	68	62	111	90	81	81	99	99	99
Michigan PSERS	91	111	101	85	82	83	71	76	90	100	103
Michigan SERS	48	115	98	88	95	82	99	113	114	95	99
Minnesota GERF	84	81	86	77	111	99	87	80	83	86	79
Minnesota PEPFF	64	60	72	71	88	80	67	86	78	87	106
Minnesota SERF	71	58	60	49	81	81	67	66	74	78	60
Minnesota TRF	91	83	68	57	63	66	63	65	77	85	78
Mississippi PERS	98	107	109	105	105	105	106	105	107	108	107
Missouri DOT & Patrol ERS	100	100	100	100	100	100	100	100	100	100	100
Missouri PSRS	73	79	84	90	87	86	125	209	99	104	107
Missouri SEP	100	100	100	100	100	100	100	100	100	100	104
Montana PERS	106	106	76	60	55	54	94	100	100	100	100
Montana TRS	154	100	100	98	98	82	70	100	100	100	100
Nebraska SR	104	104	104	105	89	88	79	117	138	163	174
Nebraska SER Cash Balance	100	100	100	100	125	116	109	115	133	152	136
Nevada PERS	103	104	101	96	95	93	96	93	96	96	99
New Hampshire RS	100	75	75	100	100	100	100	100	100	100	100
New Jersey PFRS — Local	80	100	75	100	100	100	100	100	100	100	100
New Jersey PFRS — State	57	52	5	0	0	14	29	30	34	30	40
New Jersey PERS — Local	62	81	87	100	100	100	100	100	100	100	100

Continued on next page.

Ratio of Actual Contribution to ADC by Fiscal Year (Continued)

(% , Major State and Local Defined Benefit Pension Systems)

System	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
New Jersey PERS — State	57	45	5	0	0	14	29	14	18	30	40
New Jersey TPAF	49	45	6	2	1	14	28	18	22	30	40
New Mexico EERS	70	79	86	88	82	63	62	76	88	85	83
New Mexico PERS	100	100	100	89	100	100	100	100	100	100	100
New York City ERS	100	100	100	100	100	100	100	100	100	100	100
New York City PPF	100	100	100	100	100	100	100	100	100	100	100
New York City TRS	100	100	100	100	100	100	100	100	100	100	100
New York State & Local ERS	100	100	100	100	100	100	100	100	100	100	100
New York State & Local PFRS	100	100	100	100	100	100	100	100	100	100	100
New York State TRS	100	100	100	100	100	100	100	99	99	100	100
North Carolina LGERS	107	106	105	119	106	103	104	104	102	105	102
North Carolina TSERS	109	109	100	100	73	100	104	100	100	105	100
North Dakota PERS	61	70	69	56	39	42	50	57	66	62	68
North Dakota TFR	63	76	89	77	68	66	113	105	110	98	96
Ohio PERS	100	100	100	100	100	100	100	100	100	100	N.A.
Ohio STRS	100	100	100	100	100	100	100	100	100	100	100
Oklahoma Firefighters PRS	80	56	53	44	45	66	67	69	84	90	87
Oklahoma Police PRS	59	56	57	41	38	94	83	74	114	165	142
Oklahoma PERS	58	60	75	67	63	109	105	108	146	180	153
Oklahoma TRS	93	101	87	84	78	116	113	114	132	100	101
Oregon PERS	100	100	100	100	100	100	100	100	100	100	100
Pennsylvania PSERS	39	41	29	27	27	38	46	67	78	90	100
Pennsylvania SERS	100	100	100	100	100	100	100	100	100	100	N.A.
Philadelphia Municipal PF	82	80	84	54	66	77	106	67	72	78	N.A.
Rhode Island ERS — State	100	100	100	100	100	100	100	100	100	100	100
Rhode Island ERS — Teachers	100	100	100	100	100	100	100	100	100	100	100
San Diego County ERA	110	100	100	101	114	100	105	100	100	100	100
San Francisco City & County ERS	100	100	100	100	100	100	100	100	100	100	100
South Carolina PORS	100	100	100	100	100	100	100	100	100	100	100
South Carolina RS	100	100	100	100	100	100	100	100	100	100	100
South Dakota RS	100	100	91	100	100	100	100	101	100	100	100
Tennessee Consolidated RS	100	100	100	100	100	100	100	100	100	100	100
Texas ERS	89	90	68	63	58	49	51	66	68	101	98
Texas TRS	85	102	108	86	86	74	74	79	94	98	98
Utah PERS Noncontributory	100	100	100	100	100	100	100	100	100	100	N.A.
Utah Public Safety RS	100	100	100	100	100	100	100	100	100	100	N.A.
Vermont SRS	98	92	87	84	84	140	134	132	125	118	124
Vermont STRS	101	101	101	101	104	110	108	106	100	101	100
Virginia RS — State	78	84	78	62	25	38	129	67	78	89	100
Virginia RS — Teachers	82	92	74	54	30	49	70	70	80	80	90
Washington LEOFF	101	117	122	114	157	137	144	100	100	100	105
Washington PERS — Plan 1	30	49	52	25	33	51	50	102	102	96	93
Washington PERS — Plan 2/3	73	88	119	85	80	94	95	97	97	85	89
Washington TRS — Plan 1	24	38	46	28	47	44	43	96	102	87	90
Washington TRS — Plan 2/3	61	52	86	75	72	92	99	98	99	83	88
West Virginia PERS	118	162	97	88	83	105	97	103	103	125	119
West Virginia TRS	426	110	118	108	101	102	106	105	108	110	109
Wisconsin RS	105	105	108	108	104	100	100	100	100	100	N.A.
Wyoming PEPP	114	107	168	77	93	88	81	71	86	87	N.A.

N.A. – Not available. DOT – Department of Transportation. EOABF – Employees and Officers Annuity and Benefit Fund. EERS – Educational Employees Retirement System. ERA – Employees Retirement Association. ERP – Employees Retirement Plan. ERPS – Employees Retirement and Pension System. ERS – Employees Retirement System. GERF – General Employees Retirement Fund. LEOFF – Law Enforcement Officers & Fire Fighters. LGERS – Local Government Employees Retirement System. MEABF – Municipal Employees Annuity and Benefit Fund. PEPFF – Public Employees Police & Fire Fund. PEPP – Public Employees Pension Plan. PERA – Public Employees Retirement Association. PERF – Public Employees Retirement Fund. PERP – Public Employees Retirement Plan. PERS – Public Employees Retirement System. PF – Pension fund. PFRS – Police & Firefighters Retirement System. POFFPDF – Police Officers and Firefighters Pension and Disability Fund. PORS – Police Officers Retirement System. PPF – Police Pension Plan. PSERS – Public School Employees Retirement System. PSRS – Public Schools Retirement System. PSTPRF – Public School Teachers Pension and Retirement Fund. RS – Retirement system. SEP – State Employees Plan. SEPP – State Employees Pension Plan. SERF – State Employees Retirement Fund. SERS – State Employees Retirement System. SETP – State Employee & Teacher Plan. SRS – State Retirement System. STRS – State Teachers Retirement System. SURS – State University Retirement System. TPAF – Teacher Pension & Annuity Fund. TFR – Teachers Fund for Retirement. TRP – Teachers Retirement Plan. TRPS – Teachers Retirement and Pension System. TRS – Teachers Retirement System. TSERS – Teachers and State Employees Retirement System.

Source: Fitch Ratings, individual system financial statements, actuarial valuations.

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