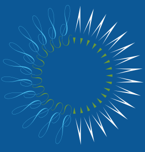


THE PEW CENTER ON THE STATES

The Widening Gap:

The Great Recession's Impact on State Pension and Retiree Health Care Costs

In the midst of the Great Recession and severe investment declines, the gap between the promises states made for employees' retirement benefits and the money they set aside to pay for them grew to at least $1.26 trillion in fiscal year 2009, resulting in a 26 percent increase in one year.

State pension plans represented slightly more than half of this shortfall, with $2.28 trillion stowed away to cover $2.94 trillion in long-term liabilities—leaving about a $660 billion gap, according to an analysis by the Pew Center on the States. Retiree health care and other benefits accounted for the remaining $604 billion, with assets totaling $31 billion to pay for $635 billion in liabilities. Pension funding shortfalls surpassed funding gaps for retiree health care and other benefits for the first time since states began reporting liabilities for the latter in fiscal year 2006.[1]

Precipitous revenue declines in fiscal year 2009 severely depleted state coffers and constrained their ability to pay their annual retirement bills. States' own actuaries recommended that they contribute nearly $115 billion to build up enough assets to fully fund their promises over the long term, but they contributed only $73 billion—or 64 percent of the total annual bill. This 2009 payment represents a three percentage point decline from the previous fiscal year's contribution, when they set aside just under $72 billion toward a $108 billion requirement.

And states' ability to meet their annual payments may not improve anytime soon; most government finance experts expect state tax revenues to continue recovering slowly in the years ahead.

The $1.26 trillion figure is based on states' own actuarial assumptions. Most states use an 8 percent discount rate—the investment target that states expect to earn, on average, in future years. But there is significant debate among policy makers and experts about what discount rate is most appropriate for states to use when valuing pension liabilities. This is an important issue because, depending on how those liabilities are calculated, states' total funding shortfall for their long-term pension obligations to public sector retirees could be as much as $1.8 trillion (using assumptions similar to corporate pensions) or $2.4 trillion (using a discount rate based on a 30-year Treasury bond). How states value long-term liabilities going forward will play an important role in defining the scale of their challenges and the actions they will have to take to meet them.

Pensions

In all, state pension systems were slightly less than 78 percent funded—declining six percentage points from the 2008 level of 84 percent. New York led the way with a funding level of 101 percent—the only state to enjoy a surplus—while Illinois and West Virginia were at the back of the pack, with just slightly more than half of their liabilities accounted for. Overall, this is a worrisome trend, because most experts, including the Government Accountability Office, advise states to have at least an 80 percent funding level. Thirty-one states were below this threshold in fiscal year 2009, a dramatic one-year increase from fiscal year 2008, when 22 states were less than 80 percent funded.

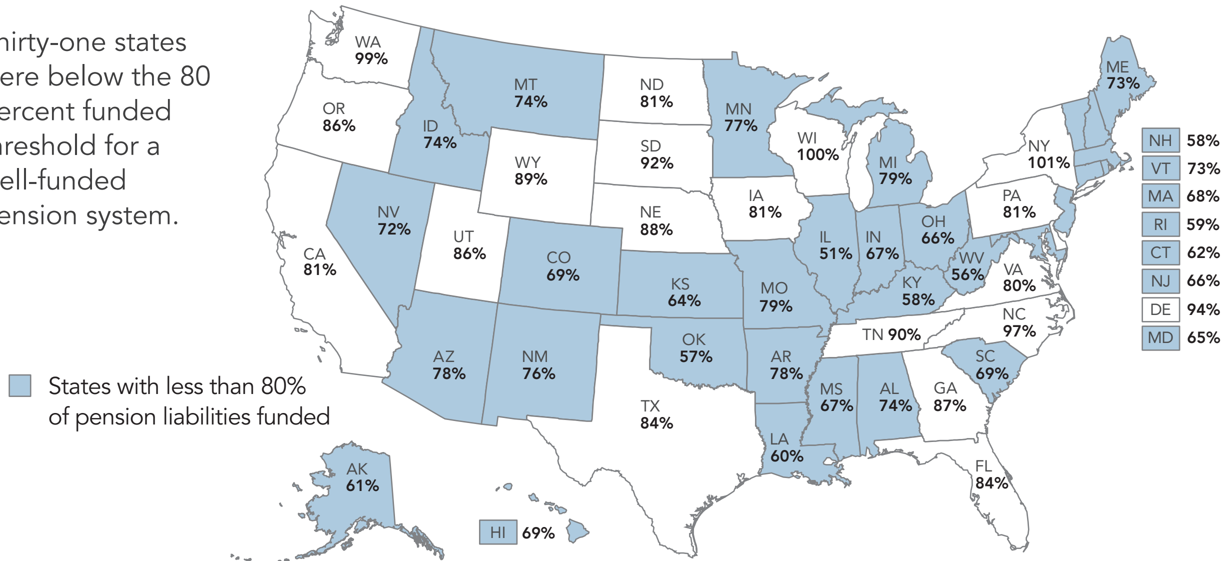
In fiscal year 2000, when pension systems were well funded, states and participating local governments had to pay $27 billion to fund their promised benefits adequately. In fiscal year 2009, the annual pension payment requirement grew to $68 billion—a nominal (non-inflation-adjusted) increase of 152 percent over nine years. States paid $56.3 billion—83 percent—of this bill in fiscal year 2009. Many experts agree that making full annual contributions is key to effectively managing the long-term costs of state retirement systems.

> Far too many states are not responsibly managing the bill for their employees' retirement.

Exhibit 1

States' Public Sector Pensions 78% Funded in FY09

Thirty-one states were below the 80 percent funded threshold for a well-funded pension system.



States with at least 80% of pension liabilities funded in fiscal year 2008, but less than 80% in fiscal year 2009.

Figures are in thousands.

State	Latest liability	Pct. funded	Latest required contribution	Pct. paid
Alabama	$41,634,554	74%	$1,214,983	100%
Alaska	15,347,768	61	268,127	110
Arizona	44,078,394	78	1,141,602	101
Arkansas	22,698,906	78	534,954	103
California	490,585,000	81	12,422,673	82
Colorado	54,536,549	69	1,310,315	66
Connecticut	41,311,400	62	1,307,200	96
Delaware	7,615,166	94	148,940	97
Florida	141,485,280	84	2,928,569	108
Georgia	79,898,410	87	1,316,048	100
Hawaii	16,549,069	69	488,770	104
Idaho	12,057,500	74	235,626	132
Illinois	126,435,510	51	4,076,467	71
Indiana	36,924,845	67	1,293,765	103
Iowa	26,602,516	81	495,196	87
Kansas	21,138,206	64	660,833	68
Kentucky	35,686,737	58	964,979	58
Louisiana	39,657,924	60	1,375,288	97
Maine	14,410,000	73	331,700	100
Maryland	53,054,565	65	1,338,342	84
Massachusetts	61,140,335	68	1,968,259	66
Michigan	72,911,900	79	1,381,577	100
Minnesota	60,835,351	77	1,128,407	78
Mississippi	31,386,747	67	741,520	100
Missouri	55,314,996	79	1,225,512	90
Montana	$10,271,027	74%	$196,002	92%
Nebraska	9,427,370	88	180,411	100
Nevada	33,148,347	72	1,344,489	90
New Hampshire	8,475,062	58	262,984	75
New Jersey	134,928,225	66	4,053,524	36
New Mexico	29,003,362	76	683,886	93
New York	146,733,000	101	2,456,223	100
North Carolina	76,976,542	97	762,442	100
North Dakota	4,475,800	81	83,339	80
Ohio	171,194,371	66	2,565,450	94
Oklahoma	34,815,244	57	1,346,040	77
Oregon	56,810,600	86	630,800	100
Pennsylvania	111,317,700	81	2,405,156	31
Rhode Island	11,500,425	59	320,173	100
South Carolina	42,050,701	69	966,538	100
South Dakota	7,494,895	92	95,280	100
Tennessee	35,198,741	90	836,911	100
Texas	155,679,204	84	2,611,397	99
Utah	24,299,183	86	665,235	100
Vermont	4,012,955	73	68,615	93
Virginia	69,135,000	80	1,608,466	82
Washington	57,754,700	99	1,829,700	73
West Virginia	14,266,419	56	541,482	96
Wisconsin	79,104,600	100	699,300	100
Wyoming	7,401,614	89	169,712	63

NOTE: Pew was able to obtain fiscal year 2009 data for all states except Hawaii and Ohio. For Hawaii, fiscal year 2008 data were used; for Ohio, 2009 data were projected using preliminary valuations.
SOURCE: Pew Center on the States 2011.

Record investment losses characterized fiscal year 2009: The nation's pension plans suffered a median 19.1 percent drop in their assets' market value.[2] For most states, whose fiscal year 2009 began on July 1, 2008 and ended on June 30, 2009, these data capture the worst effects of the financial crisis. More recently, many plans have reported double-digit investment gains for fiscal year 2010.[3]

Fiscal Year 2010 Numbers

At this writing, fiscal year 2010 data are available for just 16 states, but the information suggests great variation.[4] These states represented more than a quarter of the U.S. population in 2009.

Collectively, the average funding level across the 16 states fell slightly, from 77 percent in fiscal year 2009 to 75 percent in fiscal year 2010. Ten of the states saw their pension funding levels further decline, ranging from 1 percentage point in Maryland and Texas to 9 percentage points in North Dakota. Three states' pension systems rebounded, with funding level increases ranging from 2 percentage points in Vermont to a 5 percentage point upswing in Idaho.

This variation reflects, in part, differences in the time of year that states recognized investment gains. It also is caused by states' smoothing policies, which involve

Exhibit 2

Mixed Picture: FY10 Data Show Investment Gains, Recession's Legacy

For the 16 states for which fiscal year 2010 data are now available, the average pension funding level fell slightly to 75 percent from 77 percent the previous year.

Figures are in thousands.

	Pension liability		Pct. funded		Required contribution		Pct. paid	
State	FY10	FY09	FY10	FY09	FY10	FY09	FY10	FY09
Connecticut	$44,826,900	$41,311,400	53%	62%	$1,472,000	$1,307,200	87%	96%
Delaware	7,922,174	7,615,166	92	94	148,586	148,940	97	97
Florida	148,116,907	141,485,280	82	84	2,860,448	2,928,569	107	108
Idaho	12,513,200	12,057,500	79	74	262,100	235,626	114	132
Iowa	27,057,850	26,602,516	81	81	524,877	495,196	89	87
Kentucky	37,006,999	35,686,737	54	58	1,023,898	964,979	58	58
Louisiana	41,356,966	39,657,924	56	60	1,599,612	1,375,288	84	97
Maine	14,799,200	14,410,000	70	73	330,300	331,700	103	100
Maryland	54,498,265	53,054,565	64	65	1,544,873	1,338,342	87	84
Minnesota	57,604,243	60,835,351	80	77	1,276,570	1,128,407	67	78
Nevada	35,163,755	33,148,347	70	72	1,394,802	1,344,489	92	90
New Hampshire	8,953,932	8,475,062	58	58	269,677	262,984	100	75
North Dakota	4,977,500	4,475,800	72	81	107,524	83,339	66	80
Tennessee	35,198,741	35,198,741	90	90	836,727	836,911	100	100
Texas	163,416,523	155,679,204	83	84	3,363,531	2,611,397	82	99
Vermont	4,090,328	4,012,955	75	73	89,514	68,615	94	93

SOURCE: Pew Center on the States 2011.

spreading investment returns out over time to avoid extreme year-over-year changes in funding levels and required contributions. For example, because Idaho does not smooth returns, its unfunded liability increased by $2.4 billion between fiscal years 2008 and 2009, but then recovered by $471 million in fiscal year 2010. These were dramatic swings for a state with a relatively small pension system. Meanwhile, Maryland, which smoothes, experienced losses between fiscal years 2008 and 2009 that were milder, but the state continued to see its funding level drop in fiscal year 2010.

Overall, these results suggest that while states benefited from better returns in fiscal year 2010, the legacy of the financial crisis—and the steady deterioration in the health of many public sector retirement benefit systems throughout much of the last decade—will remain an issue for years to come.

Alaska and Ohio accounted for nearly 62 percent of all the money states had set aside to fund retiree health care.

Retiree Health Care and Other Benefits

Retiree health care and other benefits made up the rest of the shortfall in fiscal year 2009. States had a total liability of $635 billion, but had saved only about $31 billion—slightly less than 5 percent of the total cost. The situation has worsened since fiscal year 2008, when states had $587 billion in liabilities and $32 billion in assets.

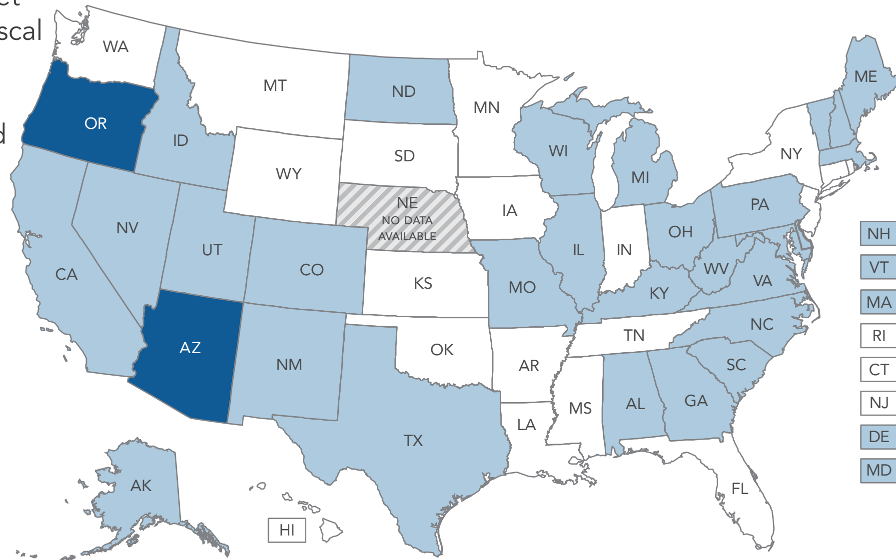
Based on the most recent data, states made only 36 percent of the $47 billion in contributions required by their own actuaries for this long-term bill. Five states—Alaska, Arizona, North Dakota, Utah and Washington—made full contributions.

Making matters worse, just two states—Alaska and Ohio—accounted for nearly 62 percent of all the money set aside to fund retiree health care as of fiscal year 2009. Nineteen states had set aside nothing to pay for these promises. These states continue to fund these benefits on a pay-as-you-go basis, covering medical costs or premiums as they are incurred by current retirees. For states offering modest benefits, this may cause little problem. But for those that have made significant promises, the future fiscal burden could be enormous if more savings are not set aside or costs are not better managed.

Exhibit 3

States' Retiree Health Benefits 5% Funded in FY09

Nineteen states had set aside no funds as of fiscal year 2009 to pay their bills coming due for retiree health care and other non-pension benefits. Only seven states had funded at least a quarter of their liability.



Percent of Liability Funded

- 50% and above
- 0.1% to 49%
- 0%

Figures are in thousands.

State	Latest liability	Pct. funded	Latest required contribution	Pct. paid
Alabama	$14,919,073	5%	$1,313,998	84%
Alaska	17,400,920	32	556,483	111
Arizona	2,219,542	69	137,703	100
Arkansas	1,865,809	0	193,770	24
California	66,596,300	0.1	5,520,943	31
Colorado	2,043,914	13	106,456	35
Connecticut	26,018,800	0	1,820,379	26
Delaware	5,636,000	1	498,300	35
Florida	3,742,846	0	254,754	32
Georgia	20,284,637	4	1,782,998	30
Hawaii	10,791,300	0	822,454	36
Idaho	493,746	1	45,494	39
Illinois	43,949,729	0.1	3,173,699	24
Indiana	524,859	0	54,290	13
Iowa	538,200	0	56,844	42
Kansas	236,910	0	26,769	34
Kentucky	8,754,555	15	901,848	33
Louisiana	11,512,100	0	1,196,387	18
Maine	2,625,963	6	156,951	52
Maryland	16,098,602	1	1,184,552	28
Massachusetts	15,166,300	2	1,345	26
Michigan	41,419,600	2	3,977,478	33
Minnesota	1,136,601	0	121,722	34
Mississippi	727,711	0	55,991	62
Missouri	3,321,637	1	276,686	52

State	Latest liability	Pct. funded	Latest required contribution	Pct. paid
Montana	$540,894	0%	$53,276	0%
Nebraska	NA	NA	NA	NA
Nevada	1,874,005	1	214,937	21
New Hampshire	3,226,105	5	272,378	42
New Jersey	66,792,900	0	5,335,500	25
New Mexico	3,116,916	5	286,538	32
New York	56,286,000	0	4,133,000	31
North Carolina	33,814,515	3	2,752,730	33
North Dakota	161,376	28	6,085	106
Ohio	43,360,893	31	2,649,286	40
Oklahoma	359,800	0	48,200	0
Oregon	555,047	68	39,285	44
Pennsylvania	16,303,617	1	1,088,997	56
Rhode Island	788,189	0	46,125	62
South Carolina	9,667,187	5	736,548	51
South Dakota	67,100	0	7,676	40
Tennessee	1,746,879	0	170,142	39
Texas	53,890,544	1	4,370,235	26
Utah	456,237	13	53,969	100
Vermont	1,628,934	0.5	116,964	19
Virginia	5,830,000	26	523,161	75
Washington	7,618,372	0	706,251	102
West Virginia	6,362,640	4	148,000	69
Wisconsin	2,326,834	28	225,362	45
Wyoming	174,161	0	20,431	69

NOTE: Data are the most recent available, ranging from 2007 to 2010. Figures for Nebraska are not available.
SOURCE: Pew Center on the States 2011.

Potential Consequences and Recent Reforms

Just as failing to meet a monthly payment on a personal loan can result in higher payments down the road, a state's failure to pay the annual bill for retirement benefits can mean it will have to pay more in the future. A comparison of New York and New Jersey provides a good example. Both states had fully funded pension plans in 2002. In subsequent years, the Garden State failed to make more than 60 percent of its annual contribution in each year and its funding gap grew to $46 billion.

While annual pension payment requirements grew 152 percent from 2000 to 2009, state general fund spending as a whole rose only 44 percent.

The Empire State, on the other hand, continued to be disciplined about funding its annual bill. Today, New York has a $147 billion liability, compared to New Jersey's $135 billion obligation, but its annual required contribution is $1.6 billion less. To put this in context, consider that New York increased K-12 education spending by $1.7 billion from fiscal year 2008 to 2009. New Jersey, meanwhile, reduced state education spending by $557 million during the same period.[5]

While annual pension payment requirements grew 152 percent from 2000-2009, state general fund spending as a whole rose only 44 percent.[6] If states' annual retirement system contributions continue to rise faster than overall general fund spending, they increasingly could compete for resources with other important priorities such as education, human services and infrastructure.

Given these and other serious implications, many states have taken steps recently to address these rising costs. In November 2010, drawing on information collected by the National Conference of State Legislatures, the Pew Center on the States released an analysis of reforms states have adopted in their pension plans since 2001 to reduce benefits and/or increase employee contributions. In 2010, at least 19 states took action to reduce their liabilities, acknowledging that the costs they face for these benefits exceed what they are willing or able to pay. Additional states are likely to do so in their 2011 legislative sessions.

Impact of Investment Return Assumptions

In recent years, a debate has emerged about the appropriate investment return rate that states should assume when calculating liabilities and contribution requirements. States typically assume an average annual return of around 8 percent, and Pew's analysis is based on those and other actuarial assumptions employed by each state. Most states have exceeded this expectation over the long term; from 1984 to 2009, the median investment return for public pension plans was 9.3 percent.[7]

Still, some observers, including renowned financier and investor Warren Buffett, argue that current assumptions are too optimistic.[8] From 1990 to 2009, states had a median investment return of 8.1 percent. But in the most recent decade, from 2000 to 2009, that figure was 3.9 percent. The stakes of this debate are high because when a state lowers its investment return assumptions, the projected value of its liabilities and the annual contributions required to meet them increase dramatically. This, in turn, expands the gap between liabilities and assets.

While there is no consensus among state officials or experts in the field about what the appropriate discount rate should be, it is useful to understand the impact of various assumptions. At the heart of the debate surrounding the appropriate discount rate assumption is whether states should calculate the current value of these long-term promises using an expected rate of return. In other words, if investment returns are disappointing and do not meet expectations, states are still required to pay retirees the benefits they have earned. Therefore, some experts recommend that states employ a "riskless rate" that might be analogous to a 30-year Treasury bond when valuing their future pension liabilities, arguing that pension obligations are legally binding and guaranteed to recipients.[9] Based on the Treasury bond's rate of 4.38 percent as of mid-March 2011, the states' cumulative liability for pension benefits would grow to $4.6 trillion, with an unfunded liability of $2.4 trillion.[10]

Another benchmark suggested by some experts is the investment return required by the Financial Accounting Standards Board (FASB), a private counterpart to the Government Accounting Standards Board.[11] FASB requires that private sector defined benefit plans use investment return assumptions based on the rate on corporate bonds: 5.22 percent as of mid-March 2011.[12] Based on this assumption, states' pension benefit liabilities would grow to $4.1 trillion, $1.8 trillion of which would be unfunded.

Methodology

The main data sources used for this project were the Comprehensive Annual Financial Reports produced by each state and pension plan for fiscal year 2009. Another key information source was state actuarial valuations. In total, Pew collected data for 231 pension plans and 162 other post-employment benefit plans. Pew was able to obtain fiscal year 2009 data for all major state pension plans for all states except Hawaii and Ohio. For Hawaii, fiscal year 2008 data were used; for Ohio, data for the Public Employees' Retirement System were projected using preliminary valuations released by the plan. For more information, please see page 52 of Pew's February 2010 report, *The Trillion Dollar Gap*.

One analysis in this brief that was not included in the *The Trillion Dollar Gap* is Pew's alternative discount rate calculations. Because pension and retiree health care liabilities will be paid out over many years, it is important for states to estimate the current value of those future costs. States use various investment rate of return assumptions, the most common of which is 8 percent. In other words, they calculate the amount that, were investments to generate 8 percent returns each year, would be equal to the eventual cost when the bill comes due. For retiree health care, states use a lower discount rate, as they typically do not have substantial assets generating returns to pay for those benefits.

Pew re-estimated pension liabilities by assuming they will come due in even increments over the next 50 years. Based on that assumption, Pew calculated an undiscounted liability and applied the new discount rate to that stream of payments.

Beyond the discount rate calculations, Pew adopted each state's actuarial assumptions. Some of the relevant assumptions states make include estimates of employee life spans, retirement ages, salary growth, marriage rates, retention rates and other demographic characteristics. States also use one of a number of approved actuarial cost methods and also may smooth gains and losses over time to manage volatility.

Endnotes

[1] Some organizations, such as the Center on Budget and Policy Priorities, the National Association of State Retirement Administrators, the National Conference of State Legislatures and the National Association of State Budget Officers, among others, have suggested that it is not appropriate to combine the unfunded liabilities of state pensions and retiree health care benefits. They contend that because retiree health care benefits do not enjoy the same level of constitutional and statutory protections as pensions, the unfunded liabilities for those benefits should be considered separately.

[2] Keith Brainard, "Public Fund Survey Summary of Findings for FY2009," National Association of State Retirement Administrators, November 2010, 9, http://www.publicfundsurvey.org/publicfundsurvey/pdfs/Summary%20of%20Findings%20FY09.pdf (accessed March 21, 2011).

[3] An August 2010 review by Stateline, a news service within the Pew Center on the States, found that many plans experienced double-digit gains in fiscal year 2010.

[4] States for which Pew was able to collect complete fiscal year 2010 pension data are Connecticut, Delaware, Florida, Idaho, Iowa, Kentucky, Louisiana, Maine, Maryland, Minnesota, Nevada, New Hampshire, North Dakota, Tennessee, Texas and Vermont.

[5] Calculations on K-12 education expenditures from general funds and other state funds were derived using data from the National Association of State Budget Officers, *Fiscal Year 2009 State Expenditure Report*, Table 7, 16.

[6] Pew Center on the States analysis of expenditure data from the National Association of State Budget Officers' Expenditure Reports from fiscal years 2000 and 2009. National Association of State Budget Officers, *Fiscal Year 2000 State Expenditure Report*, Table 1, 6. National Association of State Budget Officers, *Fiscal Year 2009 Expenditure Report*, Table 1, 6.

[7] Keith Brainard, "Public Pension Plan Investment Return Assumptions," National Association of State Retirement Administrators, March 2010, 1, http://www.nasra.org/resources/InvReturnAssumption_Final.pdf (accessed March 21, 2011).

[8] "Warren Buffett Says That Pension Accounting Encourages Cheating," Bloomberg.com, July 17, 2009, http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aCb9PTevRP3g&refer=news_index (accessed March 21, 2011).

[9] Andrew G. Biggs, "Proposed GASB Rules Show Why Only Market Valuation Fully Captures Public Pension Liabilities," *Financial Analysts Journal*, March/April 2011, http://www.aei.org/docLib/BiggsFinancialAnalysisJournal.pdf (accessed March 21, 2011); Joshua D. Rauh, "Are State Public Pensions Sustainable?", Kellogg School of Management and the National Bureau of Economic Research, December 31, 2009, http://www.taxpolicycenter.org/events/upload/Rauh-ASPSS-USC-20091231.pdf (accessed March 21, 2011).

[10] Based on the 30 Year Treasury yield curve for March 16, 2011, available through the U.S. Department of the Treasury, http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&year=2011 (accessed March 17, 2011).

[11] Josh Barro, "Unmasking Hidden Costs: Best Practices for Public Pension Transparency," Civic Report, No. 63, February 2011, http://www.manhattan-institute.org/html/cr_63.htm (accessed March 21, 2011); Orin S. Kramer, "Unfunded Benefits Dig States' $3 Trillion Hole," Bloomberg.com, January 19, 2010, http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aKQk6SUcSr3A (accessed March 21, 2011).

[12] Based on the yield of a Moody's AA-rated 20-year corporate bond, available through the Society of Actuaries, http://www.soa.org/professional-interests/pension/resources/pen-moody-rates.aspx (accessed March 17, 2011).

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The Pew Center on the States is a division of The Pew Charitable Trusts that identifies and advances effective solutions to critical issues facing states. Pew is a nonprofit organization that applies a rigorous, analytical approach to improve public policy, inform the public and stimulate civic life.

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