



STATE BUDGET SOLUTIONS

Just How Big are Public Pension Liabilities?

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By Bryan Leonard

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Corrected Version: This text has been edited to correct an error in a prior version. The total debt from the Pew study has been corrected to be \$452,195,687,000 and the text has also been edited to reflect that amount.

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The jig may finally be up for state pension funds. After years of fooling the public and the federal government, academics and the media are starting to take notice of the growing crisis. Indeed, the breadth and depth of the public pension debt in the states is being exposed in news sources ranging from The New York Times to Newsweek. But just how big is the problem?

One of the most insidious aspects of pension liability is its stealth nature. Pension obligations don't appear on state balance sheets. As such, states with billions in unfunded pension liabilities may technically brag of "balanced" budgets while being swamped by pension debt. For example, Arkansas claimed a balanced budget last year, but had at least \$2 billion in unfunded pension liabilities. Indeed, the unfunded pension promises in most states dwarf the total outstanding debt, tax revenues and spending.

Complicating the issue even further is the difficulty in deciphering and understanding pension liability. As is often at the root of government transparency problems, states have devised special accounting rules that are inconsistent with the private sector and that hide the problem. As a result, the true size of pension liabilities is understated.

Fortunately, several research organizations have made serious efforts to understand and quantify this burgeoning issue. Here's a look at a few.

The Pew Center on the States recently released a report entitled "The Trillion Dollar Gap" that estimates the difference between the financial promises states have made and their actual assets. Pew calculates that states are saddled with almost half a trillion dollars in pension obligations; worse, Pew warns its estimate is low because most states won't assess their plans until June and the Pew calculation doesn't reflect dramatic investment declines in the second half of 2008.

Others have undertaken the arduous task of trying to estimate how big public pension liabilities would be if states used the same market-valuation approaches as the private sector. One such attempt comes from Andrew Biggs of the American Enterprise Institute (AEI). Biggs points out that public pension funds are allowed to assume high rates of return without recognizing risk. Using the popular Black-Scholls technique for options-pricing, Biggs estimates what public pension promises would be worth if they were valued using private sector methods. Under his analysis, the taxpayers are on the hook for a staggering \$2.8 trillion in unfunded pension liabilities.

Still another approach is the one employed by Robert Novy-Marx of the University of Chicago and Joshua Rauh of Northwestern University, who point out that the future liabilities of state governments should be calculated in present-value terms. Using the discount rate on zero-coupon Treasury yields, they calculate the present value of state employee pension liabilities to be nearly \$2.5 trillion.

Years of inaction and obfuscation have contributed to this fiscal catastrophe, and the extent of the catastrophe is made alarmingly clear by the results of all three studies. Now, many states stand at the brink of bankruptcy, the federal government continues to "aid" them with stimulus packages – and still the states are not addressing the real problems. Until the states are forced to truly balance their budgets, this problem will continue to run rampant. It's time for lawmakers to enact true reforms in pension accounting and funding.

Appendix A State Unfunded Pension Liabilities

State	PEW Study	AEI Study	Novy-Marx and Rauh (2009) Study
AL	\$9,228,918,000	\$43,544,880,000	\$40,400,000,000
AK	\$3,522,661,000	\$14,192,229,000	\$9,300,000,000
AZ	\$7,871,120,000	\$45,004,090,000	\$48,700,000,000
AR	\$2,752,546,000	\$20,026,314,000	\$15,800,000,000
CA	\$59,492,498,000	\$398,490,573,000	\$370,100,000,000
CO	\$16,813,048,000	\$71,387,842,000	\$57,400,000,000
CT	\$15,858,500,000	\$48,515,241,000	\$4,900,000,000
DE	\$129,359,000	\$5,688,663,000	\$5,100,000,000
FL	(\$1,798,789,000)	\$98,505,110,000	\$8,980,000,000
GA	\$6,384,903,000	\$58,742,784,000	\$57,000,000,000
HI	\$5,168,108,000	\$18,533,398,000	\$16,100,000,000
ID	\$772,200,000	\$10,022,613,000	\$7,900,000,000
IL	\$54,383,939,000	\$192,458,660,000	\$167,300,000,000
IN	\$9,825,830,000	\$33,756,655,000	\$30,200,000,000
IA	\$2,694,794,000	\$21,266,226,000	\$17,000,000,000
KS	\$8,279,168,000	\$21,827,991,000	\$20,100,000,000
KY	\$12,328,429,000	\$47,016,382,000	\$42,300,000,000
LA	\$11,658,734,000	\$43,797,899,000	\$36,400,000,000
ME	\$2,782,173,000	\$13,227,289,000	\$11,800,000,000
MD	\$10,926,099,000	\$48,199,258,000	\$43,500,000,000
MA	\$21,759,452,000	\$60,476,274,000	\$54,200,000,000
MI	\$11,514,600,000	\$72,187,197,000	\$63,600,000,000
MN	\$10,771,507,000	\$59,354,330,000	\$55,100,000,000
MS	\$7,971,277,000	\$32,225,716,000	\$28,700,000,000

MO	\$9,025,293,000	\$56,760,147,000	\$42,100,000,000
MT	\$1,549,503,000	\$8,633,301,000	\$7,100,000,000
NE	\$754,748,000	\$7,438,589,000	\$6,100,000,000
NV	\$7,281,752,000	\$33,529,346,000	\$17,500,000,000
NH	\$2,522,175,000	\$10,233,796,000	\$8,200,000,000
NJ	\$34,434,055,000	\$144,869,687,000	\$124,000,000,000
NM	\$4,519,887,000	\$27,875,180,000	\$23,900,000,000
NY	(\$10,428,000,000)	\$182,350,104,000	\$132,900,000,000
NC	\$504,760,000	\$48,898,412,000	\$37,800,000,000
ND	\$546,500,000	\$4,099,053,000	\$3,600,000,000
OH	\$19,502,065,000	\$187,793,480,000	\$166,700,000,000
OK	\$13,172,407,000	\$33,647,372,000	\$30,100,000,000
OR	\$10,739,000,000	\$42,203,565,000	\$37,800,000,000
PA	\$13,724,480,000	\$114,144,897,000	\$100,200,000,000
RI	\$4,353,892,000	\$15,005,840,000	\$13,900,000,000
SC	\$12,052,684,000	\$36,268,910,000	\$43,200,000,000
SD	\$182,870,000	\$5,982,103,000	\$4,700,000,000
TN	\$1,602,802,000	\$30,546,099,000	\$23,200,000,000
TX	\$13,781,228,000	\$180,720,642,000	\$142,300,000,000
UT	\$3,611,399,000	\$18,626,024,000	\$16,500,000,000
VT	\$461,551,000	\$3,602,752,000	\$3,300,000,000
VA	\$10,723,000,000	\$53,783,973,000	\$48,300,000,000
WA	(\$179,100,000)	\$51,807,902,000	\$42,900,000,000
WV	\$4,968,709,000	\$14,378,914,000	\$11,100,000,000
WI	\$252,600,000	\$62,691,675,000	\$56,200,000,000
WY	\$1,444,353,000	\$6,628,204,000	\$5,400,000,000
Total US	\$452,195,687,000	\$2,860,967,583,000	\$2,485,800,000,000

Appendix B

Five Worst State Pension Liabilities (per study)		
PEW	AEI	Novy-Marx and Rauh (2009)
California	California	California
Illinois	Illinois	Illinois
New Jersey	Ohio	Ohio
Massachusetts	New York	Texas
Ohio	Texas	New York

Appendix C

Five Best State Pension Liabilities (per study)		
PEW	AEI	Novy-Marx and Rauh (2009)
New York	Vermont	Vermont
Florida	North Dakota	North Dakota
Washington	Delaware	South Dakota
Delaware	South Dakota	Connecticut
South Dakota	Wyoming	Delaware

Appendix D

Aggregate US Unfunded Liabilities (per study)		
PEW	AEI	Novy-Marx and Rauh (2009)
\$452,195,687,000	\$2,860,967,583,000	\$2,485,800,000,000

State Pensions and Retiree Healthcare Benefits: The Trillion Dollar Gap," PEW Center on the States, accessed January 4, 2011,

http://www.pewcenteronthestates.org/report_detail.aspx?id=56695

Biggs, Andrew, "The Market Value of Public-Sector Pension Deficits," *AEI Outlook Series*, no. 1 (2010),

<http://www.aei.org/outlook/100948>

Novy-Marx, Robert and Joshua Rauh, 2010, "Public Pension Promises: How Big Are They and What Are They Worth," *Journal of Finance* (forthcoming),

http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1352608

Note: These figures were computed by taking the difference between "ABO Liabilities, Treasury Rate" and "Pension Assets" in Table IV.