Bond Case Briefs

Municipal Finance Law Since 1971

Looming Public Pension Crisis Is Bigger Than It Appears.

Summary

- Public pension plans are vastly underfunded and imperil state and local budgets over the long-term.
- High credit ratings and optimistic actuarial assumptions mask the full extent of the looming crises.
- Low yields on long-term municipal bonds reflect hunger for yield and obliviousness to underlying risks.

With 30-Year muni bonds yielding a paltry 3.39% on average (according toBloomberg), investors seem to be assuming both that inflation will remain historically low over that holding period and public pension costs will not imperil state and municipal budgets. In fact, the average muni yield of 3.39% was equivalent to the 30-year treasury yield as of 5/23/2014 despite the fact that the federal government has powerful options available to it to avert default (i.e. seigniorage). Even when factoring in munis' favorable tax treatment, the effective 30-year muni-Treasury spread is small.

Famed investor Warren Buffett weighed in on public pensions in his 2013 shareholder letter:

> "Local and state financial problems are accelerating, in large part because public entities promised pensions they couldn't afford. Citizens and public officials typically under-appreciated the gigantic financial tapeworm that was born when promises were made that conflicted with a willingness to fund them.…During the next decade, you will read a lot of news – bad news – about public pension plans."

While there has been some public discussion about the looming public pension crisis, most of the conversation has been driven either by special interest groups that sought to deny pensioners the benefits they were promised or public sector unions advocating for their members. The reports produced by the state plans, themselves, use an accounting gimmick (overestimating future investment returns) to understate the amount of the unfunded liability. Using data from data.gov and the Boston College Center for Retirement Research, I estimate that there was at least a $1.1+ **TRILLION** cumulative unfunded liability in state and local plans, for which data is available, as of the 2010 plan year end (usually June 30, 2010). That represents more than half the entire aggregate annual budgets of all fifty US states. Detailed aggregate, state-by-state, and plan-by-plan data is presented at the bottom of the article.

Surprisingly, aggregate 2012 state-level data shows that most states underperformed **all** of the relevant benchmark indexes for their plan year periods. 2002-2010 plan-level data shows that not a single plan (out of the 120 analyzed) attained its assumed rate of return over that 9 year period; most were short by a large margin. All but one of the plans showed a funding shortfall as of year-end 2010, using my methodology (that does not give funds credit for returns assumptions that have proven to be wildly optimistic), and, in aggregate, plans had only about two-thirds of the assets required to be fully funded.

At a high level, the implication for muni-bond holders is clear. Many of the states with very high levels of unfunded liabilities sport high credit ratings. While most of the state plans' actuarial reports assume a 7.5%-8% future rate of return on investments, the 2012 data shows that most pension plans underperformed **both** the Barclays US Aggregate Bond Index and major stock indexes over the 2012 fiscal year (July 2011 – June 2012)–and posted nowhere near their assumed rates of return. Estimating the individual plans' annual rate of return between the 2001 fiscal year end and the 2010 fiscal year end (the most recent time period for which the BC data is available for many of the plans) shows that **not a single plan** (out of 120 for which data was available) achieved its assumed rate of annual return over that period; most underperformed by a considerable margin. While higher market returns in 2011-2013 may have closed some of that gap, the extent to which anticipated returns were overestimated for the 9 year period analyzed is very large.

Individual investors tend to have exposure to municipal bonds by either owning the bonds directly or through a mutual fund. In addition, there are a number of uninsured long-term or high yield muni-bond ETFs:

SPDR Nuveen Barclays Capital Muni Bond (TFI)

Market Vectors AMT-Free Long Municipal Index ETF (MLN)

SPDR Nuveen S&P High Yield Municipal Bond ETF (HYMB)

Market Vectors High-Yield Municipal Bond Index ETF (HYD)

However, taking a bearish position on the muni market is a challenging exercise. Long term puts do not seem to be available for any of the above-listed ETFs. While there is a Markit muni CDS (credit-default-swap) index (MCDX), it does not currently present a trading opportunity for most individual investors. Normal short positions (i.e. in the above-listed ETFs) are inherently risky, because of the unlimited downside exposure, and are not really suitable for most individual investors.

Analysis

The 2012 plan year, for most states, runs from July 2011 – June 2012. Over that period, stock and bond indexes posted returns from 3.14% to 7.48%:

Rate of Benchmark returns for June 2011 – June 2012	Closing Price 30-Jun-11	Closing Price 30-Jun-12	% Change	Source
NASDAQ	2,773.52	2,935.05	5.82%	Yahoo Finance
S&P500	1,320.64	1,362.16	3.14%	Google Finance
Dow Jones	12,414.34	12,880.09	3.75%	Google Finance
Barclays US Aggregate Bond Index			7.48%	Barclays
* Barclays index calculated as product of monthly reported (1+RoR) rates of return over the holding period				

Surprisingly, most of the state pensions underperformed **every single one** of these indexes and Arkansas, Hawaii, and New Jersey even posted negative returns for the 2012 plan year. Below is the estimated (approximate) 2012 fiscal year annual return for the aggregate of each state's (non-local) plans (as reported by Data.gov), calculated as the value of the investment returns divided by the ending plan balance less the net outflows for the year less the posted returns–and contrasted with

the benchmark indexes. The number of plans that underperformed **every single one** of the indexes is staggering.

	Est Rate of	**Indexes**
State	**Return in 2012**	**Exceeded**
Alabama	18.04%	4*
Alaska	1.11%	0
Arizona	1.23%	0
Arkansas	-0.42%	0
California	3.26%	1
Colorado	2.15%	0
Connecticut	3.52%	1
Delaware	4.72%	2
Florida	5.00%	2
Georgia	1.97%	0
Hawaii	-0.18%	0
Idaho	1.55%	0
Illinois	0.83%	0
Indiana	1.02%	0
Iowa	3.48%	1
Kansas	0.96%	0
Kentucky	1.43%	0
Louisiana	0.02%	0
Maine	0.72%	0
Maryland	0.92%	0
Massachusetts	-0.26%	0
Michigan	12.18%	4*
Minnesota	3.09%	0
Mississippi	0.51%	0
Missouri	3.41%	1
Montana	16.35%	4
Nebraska	1.04%	0
Nevada	3.14%	0
New Hampshire	2.29%	0
New Jersey	-1.34%	0
New Mexico	0.35%	0
New York	4.61%	2
North Carolina	7.61%	4
North Dakota	9.13%	4
Ohio	1.30%	0
Oklahoma	1.37%	0

Oregon	1.22%	0
Pennsylvania	2.86%	0
Rhode Island	1.72%	0
South Carolina	0.68%	0
South Dakota	1.81%	0
Tennessee	5.34%	2
Texas	8.11%	4*
Utah	2.65%	0
Vermont	19.53%	4
Virginia	1.76%	0
Washington	1.70%	0
West Virginia	1.61%	0
Wisconsin	1.04%	0
Wyoming	-0.70%	0

* Indicates plan has fiscal year that differs from that used to calculate the index

The Boston College data set has annual data points for 126 individual state and local pension plans between 2010 and 2011. However, there are many missing data points for 2011 and a number of artifacts/outliers that appear to be problematic. Removing those from the data set yields 2001-2002 through 2009-2010 performance data for 120 plans. Analyzing this data (estimating the annual rate of return in year X as the investment return for year X divided by the ending market value of investments in year X-1), alongside each plan's assumed rate of return demonstrates that, over that time period, **every single one of the plans** dramatically overestimated their annual rate of return over the time period in question.

Recent Estimated Returns	Estimated Gross %	Estimated rate of	2010 Annual
Relative to Returns Assumption	Return (2002-2010)	return (2002-2010)	Returns Assumption
Alabama ERS	-3.58%	-0.40%	8.00%
Alabama Teachers	0.13%	0.01%	8.00%
Alaska PERS	-9.55%	-1.11%	8.00%
Alaska Teachers	-5.49%	-0.63%	8.00%
Arizona Public Safety Personnel	-3.67%	-0.42%	8.25%
Arizona SRS	12.05%	1.27%	8.00%
Arkansas PERS	11.11%	1.18%	8.00%
Arkansas Teachers	25.98%	2.60%	8.00%
California PERF	15.57%	1.62%	7.75%
California Teachers	7.45%	0.80%	7.75%
Chicago Teachers	9.64%	1.03%	8.00%
City of Austin ERS	41.27%	3.91%	7.75%
Colorado Municipal	39.85%	3.80%	8.00%

Colorado School	31.68%	3.10%	8.00%
Colorado State	28.22%	2.80%	8.00%
Connecticut SERS	-10.58%	-1.23%	8.25%
Connecticut Teachers	45.74%	4.27%	8.50%
Contra Costa County	28.42%	2.82%	7.75%
DC Police & Fire	21.56%	2.19%	7.00%
DC Teachers	22.07%	2.24%	7.00%
Delaware State Employees	18.48%	1.90%	7.50%
Denver Employees	27.03%	2.69%	8.00%
Denver Schools	31.36%	3.08%	8.00%
Duluth Teachers	-6.36%	-0.73%	8.50%
Fairfax County Schools	19.17%	1.97%	7.50%
Florida RS	11.33%	1.20%	7.75%
Georgia ERS	9.56%	1.02%	7.50%
Georgia Teachers	4.57%	0.50%	7.50%
Hawaii ERS	10.39%	1.10%	8.00%
Houston Firefighters	39.48%	3.77%	8.50%
Idaho PERS	19.07%	1.96%	7.25%
Illinois Municipal	46.38%	4.32%	7.50%
Illinois SERS	5.32%	0.58%	7.75%
Illinois Teachers	16.47%	1.71%	8.50%
Illinois Universities	20.43%	2.09%	7.75%
Indiana PERF	40.51%	3.85%	7.00%
Indiana Teachers	7.97%	0.86%	7.00%
Iowa PERS	23.84%	2.40%	7.50%
Kansas PERS	17.36%	1.79%	8.00%
Kentucky County	9.22%	0.98%	7.75%
Kentucky ERS	10.71%	1.14%	7.75%
Kentucky Teachers	-1.35%	-0.15%	8.00%
LA County ERS	-13.83%	-1.64%	5.00%
Louisiana SERS	20.42%	2.09%	8.25%
Louisiana Teachers	8.22%	0.88%	8.25%
Maine Local	39.03%	3.73%	7.25%
Maine State and Teacher	22.25%	2.26%	7.25%
Maryland PERS	14.08%	1.47%	7.75%
Maryland Teachers	14.89%	1.55%	7.75%
Michigan Municipal	43.92%	4.13%	8.00%
Michigan Public Schools	40.87%	3.88%	8.00%
Minneapolis ERF	19.58%	2.01%	6.00%
Minnesota PERF	-16.47%	-1.98%	8.50%

Minnesota State Employees	42.14%	3.98%	8.50%
Minnesota Teachers	-4.94%	-0.56%	8.50%
Mississippi PERS	3.47%	0.38%	8.00%
Missouri DOT and Highway Patrol	31.10%	3.05%	8.00%
Missouri Local	25.22%	2.53%	7.25%
Missouri PEERS	13.35%	1.40%	8.00%
Missouri State Employees	43.95%	4.13%	8.50%
Missouri Teachers	13.03%	1.37%	8.00%
Montana PERS	-3.96%	-0.45%	7.75%
Montana Teachers	-5.37%	-0.61%	7.75%
Nebraska Schools	16.74%	1.73%	8.00%
Nevada Regular Employees	7.13%	0.77%	8.00%
New Hampshire Retirement System	8.43%	0.90%	7.75%
New Jersey PERS	6.49%	0.70%	8.25%
New Jersey Police & Fire	6.87%	0.74%	8.25%
New Jersey Teachers	6.10%	0.66%	8.25%
New Mexico PERF	5.55%	0.60%	7.75%
New Mexico Teachers	14.77%	1.54%	7.75%
New York City ERS	4.76%	0.52%	8.00%
New York City Teachers	4.50%	0.49%	8.00%
New York State Teachers	10.69%	1.14%	8.00%
North Carolina Local Government	57.96%	5.21%	7.25%
North Carolina Teachers and State Employees	55.07%	5.00%	7.25%
North Dakota PERS	16.95%	1.76%	8.00%
North Dakota Teachers	9.97%	1.06%	8.00%
NY State & Local ERS	23.87%	2.41%	8.00%
NY State & Local Police & Fire	23.98%	2.42%	8.00%
Ohio PERS	26.43%	2.64%	8.00%
Ohio Police & Fire	30.85%	3.03%	8.25%
Ohio School Employees	7.59%	0.82%	8.00%
Ohio Teachers	12.21%	1.29%	8.00%
Oklahoma PERS	18.53%	1.91%	7.50%
Oklahoma Teachers	20.88%	2.13%	8.00%
Oregon PERS	27.69%	2.75%	8.00%
Pennsylvania School Employees	18.23%	1.88%	7.75%
Pennsylvania State ERS	57.45%	5.17%	8.00%
Phoenix ERS	5.95%	0.64%	8.00%
Rhode Island ERS	14.12%	1.48%	7.50%
Rhode Island Municipal	14.14%	1.48%	7.50%
San Diego County	32.88%	3.21%	8.00%

San Francisco City & County	20.41%	2.09%	7.66%
South Carolina Police	4.50%	0.49%	8.00%
South Carolina RS	6.63%	0.72%	8.00%
South Dakota PERS	19.90%	2.04%	7.75%
St. Louis School Employees	34.37%	3.34%	8.00%
St. Paul Teachers	37.72%	3.62%	8.50%
Texas County & District	44.55%	4.18%	8.00%
Texas ERS	8.49%	0.91%	8.00%
Texas LECOS	8.39%	0.90%	8.00%
Texas Municipal	21.60%	2.20%	7.00%
Texas Teachers	18.69%	1.92%	8.00%
University of California	2.86%	0.31%	7.50%
Utah Noncontributory	37.43%	3.60%	7.75%
Vermont State Employees	19.09%	1.96%	6.25%
Vermont Teachers	20.55%	2.10%	6.25%
Virginia Retirement System	24.73%	2.49%	7.00%
Washington LEOFF Plan 1	23.80%	2.40%	8.00%
Washington LEOFF Plan 2	25.03%	2.51%	8.00%
Washington PERS 1	23.17%	2.34%	8.00%
Washington PERS 2/3	24.28%	2.44%	8.00%
Washington School Employees Plan 2/3	24.07%	2.43%	8.00%
Washington Teachers Plan 1	23.33%	2.36%	8.00%
Washington Teachers Plan 2/3	24.19%	2.44%	8.00%
West Virginia PERS	37.88%	3.63%	7.50%
West Virginia Teachers	39.35%	3.76%	7.50%
Wisconsin Retirement System	48.69%	4.51%	7.20%
Wyoming Public Employees	23.12%	2.34%	8.00%

* Excludes MA (outlier w/-80%- returns in 2009)

* Excludes TN (missing actuarial data from 2010)

* Excludes plans with missing data

Michigan SERS

Nevada Police Officer and Firefighter

Note that the plans calculate their unfunded liabilities assuming the above (high) rate of returns on their investments and an actuarial methodology called asset smoothing. As a result, they are almost universally arguing that $1 of assets in their plan today actually offsets more than $1 of NPV worth of plan liabilities. To calculate my estimate of their unfunded liabilities, I assume that $1 of assets **at their period end market value** offsets $1 of NPV of liabilities (no asset smoothing). Below is a plan by plan account of the estimated unfunded liabilities according to my calculations versus each

plan’s.

Actuarial vs. Market Value of Assets	Actuarial Assets	Market Value of	Actuarial Liabilities	Liabilities Less	% Shortfall
Market Value of Assets vs. Liabilities	2010 ($1000s)	Assets 2010 ($1000s)	2010 ($1000s)	Assets (at Market)	
Alabama ERS	$ 9,739,331	$ 8,176,732	$ 14,284,119	$ 6,107,387	42.76%
Alabama Teachers	$ 20,132,779	$ 17,037,673	$ 28,299,523	$ 11,261,850	39.80%
Alaska PERS	$ 6,469,832	$ 5,391,527	$ 10,371,672	$ 4,980,145	48.02%
Alaska Teachers	$ 3,259,868	$ 2,716,557	$ 6,006,981	$ 3,290,424	54.78%
Arizona Public Safety Personnel	$ 5,591,304	$ 4,585,863	$ 8,255,185	$ 3,669,322	44.45%
Arizona SRS	$ 27,572,000	$ 22,146,960	$ 36,073,000	$ 13,926,040	38.61%
Arkansas PERS	$ 5,409,000	$ 4,728,500	$ 7,304,000	$ 2,575,500	35.26%
Arkansas Teachers	$ 10,845,000	$ 9,883,574	$ 14,702,000	$ 4,818,426	32.77%
California PERF	$ 257,070,000	$ 201,616,074	$ 308,343,000	$ 106,726,926	34.61%
California Teachers	$ 140,291,000	$ 129,768,107	$ 196,315,000	$ 66,546,893	33.90%
Chicago Teachers	$ 10,917,417	$ 8,947,470	$ 16,319,744	$ 7,372,273	45.17%
City of Austin ERS	$ 1,711,600	$ 1,711,577	$ 2,460,700	$ 749,123	30.44%
Colorado Municipal	$ 2,926,045	$ 2,883,504	$ 4,005,566	$ 1,122,062	28.01%
Colorado School	$ 20,321,736	$ 19,870,277	$ 31,339,754	$ 11,469,477	36.60%
Colorado State	$ 12,791,946	$ 12,487,105	$ 20,356,176	$ 7,869,071	38.66%
Connecticut SERS	$ 9,349,605	$ 7,791,337	$ 21,054,197	$ 13,262,860	62.99%
Connecticut Teachers	$ 14,430,200	$ 12,284,330	$ 23,495,900	$ 11,211,570	47.72%
Contra Costa County	$ 5,341,822	$ 5,027,157	$ 6,654,037	$ 1,626,880	24.45%
DC Police & Fire	$ 5,137,409	$ 2,925,742	$ 5,137,409	$ 2,211,667	43.05%
DC Teachers	$ 1,671,184	$ 1,317,470	$ 1,671,184	$ 353,714	21.17%
Delaware State Employees	$ 6,808,957	$ 5,909,159	$ 7,096,326	$ 1,187,167	16.73%
Denver Employees	$ 1,942,870	$ 1,725,680	$ 2,284,760	$ 559,080	24.47%
Denver Schools	$ 2,961,720	$ 2,940,926	$ 3,332,814	$ 391,888	11.76%
Duluth Teachers	$ 255,309	$ 192,403	$ 312,650	$ 120,247	38.46%
Fairfax County Schools	$ 1,822,603	$ 1,607,663	$ 2,384,061	$ 776,398	32.57%

Florida RS	$ 120,929,666	$ 107,179,990	$ 139,652,377	$ 32,472,387	23.25%
Georgia ERS	$ 13,046,193	$ 10,956,296	$ 16,295,352	$ 5,339,056	32.76%
Georgia Teachers	$ 54,529,416	$ 45,925,549	$ 63,592,037	$ 17,666,488	27.78%
Hawaii ERS	$ 11,345,600	$ 9,821,633	$ 18,483,700	$ 8,662,067	46.86%
Houston Firefighters	$ 3,116,848	$ 2,721,637	$ 3,337,473	$ 615,836	18.45%
Idaho PERS	$ 9,632,100	$ 9,599,892	$ 12,187,900	$ 2,588,008	21.23%
Illinois Municipal	$ 24,251,137	$ 25,141,889	$ 29,129,228	$ 3,987,339	13.69%
Illinois SERS	$ 10,961,540	$ 9,201,831	$ 29,309,464	$ 20,107,634	68.60%
Illinois Teachers	$ 37,439,092	$ 31,323,784	$ 77,293,198	$ 45,969,414	59.47%
Illinois Universities	$ 13,966,643	$ 12,121,542	$ 30,120,427	$ 17,998,885	59.76%
Indiana PERF	$ 12,357,199	$ 10,581,319	$ 14,506,052	$ 3,924,733	27.06%
Indiana Teachers	$ 8,804,964	$ 8,140,769	$ 19,896,625	$ 11,755,856	59.08%
Iowa PERS	$ 21,537,459	$ 19,878,080	$ 26,468,420	$ 6,590,340	24.90%
Kansas PERS	$ 13,589,658	$ 11,352,784	$ 21,853,783	$ 10,500,999	48.05%
Kentucky County	$ 7,296,322	$ 6,327,382	$ 11,131,174	$ 4,803,792	43.16%
Kentucky ERS	$ 4,712,945	$ 3,948,108	$ 11,692,945	$ 7,744,837	66.24%
Kentucky Teachers	$ 14,851,330	$ 12,456,619	$ 24,344,316	$ 11,887,697	48.83%
LA County ERS	$ 38,839,392	$ 33,433,888	$ 46,646,838	$ 13,212,950	28.33%
Louisiana SERS	$ 8,512,403	$ 8,064,543	$ 14,764,015	$ 6,699,472	45.38%
Louisiana Teachers	$ 12,868,484	$ 12,021,431	$ 23,674,842	$ 11,653,411	49.22%
Maine Local	$ 2,045,337	$ 1,781,153	$ 2,122,833	$ 341,680	16.10%
Maine State and Teacher	$ 8,369,763	$ 7,288,320	$ 12,676,367	$ 5,388,047	42.50%
Maryland PERS	$ 11,937,944	$ 10,983,303	$ 19,009,788	$ 8,026,485	42.22%
Maryland Teachers	$ 20,908,150	$ 19,256,510	$ 31,963,421	$ 12,706,911	39.75%
Michigan Municipal	$ 6,945,423	$ 5,973,039	$ 9,317,222	$ 3,344,183	35.89%
Michigan Public Schools	$ 43,294,000	$ 35,855,478	$ 60,927,000	$ 25,071,522	41.15%
Minneapolis ERF	$ 844,033	$ 844,033	$ 1,286,151	$ 442,118	34.38%
Minnesota PERF	$ 13,126,993	$ 11,338,582	$ 17,180,956	$ 5,842,374	34.00%
Minnesota State Employees	$ 8,960,391	$ 7,692,531	$ 10,264,071	$ 2,571,540	25.05%
Minnesota Teachers	$ 17,323,146	$ 14,939,540	$ 22,081,634	$ 7,142,094	32.34%
Mississippi PERS	$ 20,143,426	$ 16,788,214	$ 31,399,988	$ 14,611,774	46.53%
Missouri DOT and Highway Patrol	$ 1,375,845	$ 1,312,717	$ 3,258,867	$ 1,946,150	59.72%

Missouri Local	$ 3,592,226	$ 3,695,341	$ 4,432,332	$ 736,991	16.63%
Missouri PEERS	$ 2,892,411	$ 2,404,425	$ 3,658,713	$ 1,254,288	34.28%
Missouri State Employees	$ 7,923,377	$ 6,727,623	$ 9,853,155	$ 3,125,532	31.72%
Missouri Teachers	$ 28,931,331	$ 23,755,741	$ 37,233,602	$ 13,477,861	36.20%
Montana PERS	$ 3,889,890	$ 3,315,906	$ 5,241,819	$ 1,925,913	36.74%
Montana Teachers	$ 2,956,583	$ 2,521,446	$ 4,518,168	$ 1,996,722	44.19%
Nebraska Schools	$ 7,040,909	$ 5,940,537	$ 8,542,119	$ 2,601,582	30.46%
Nevada Regular Employees	$ 19,665,764	$ 16,604,769	$ 27,616,270	$ 11,011,501	39.87%
New Hampshire Retirement System	$ 5,233,838	$ 4,847,852	$ 8,953,932	$ 4,106,080	45.86%
New Jersey PERS	$ 28,734,593	$ 24,332,712	$ 41,347,836	$ 17,015,124	41.15%
New Jersey Police & Fire	$ 22,558,521	$ 19,844,138	$ 29,274,359	$ 9,430,222	32.21%
New Jersey Teachers	$ 33,265,327	$ 25,892,496	$ 49,543,348	$ 23,650,852	47.74%
New Mexico PERF	$ 12,243,713	$ 10,016,491	$ 15,601,461	$ 5,584,970	35.80%
New Mexico Teachers	$ 9,431,300	$ 8,232,523	$ 14,353,500	$ 6,120,977	42.64%
New York City ERS	$ 42,556,400	$ 35,383,794	$ 42,556,400	$ 7,172,606	16.85%
New York City Teachers	$ 31,135,400	$ 26,398,410	$ 31,135,400	$ 4,736,990	15.21%
New York State Teachers	$ 105,302,082	$ 76,844,937	$ 105,302,082	$ 28,457,145	27.02%
North Carolina Local Government	$ 18,570,514	$ 15,795,385	$ 18,646,430	$ 2,851,045	15.29%
North Carolina Teachers and State Employees	$ 57,102,198	$ 48,773,836	$ 59,876,066	$ 11,102,230	18.54%
North Dakota PERS	$ 1,621,723	$ 1,474,185	$ 2,208,386	$ 734,201	33.25%
North Dakota Teachers	$ 1,841,960	$ 1,437,950	$ 2,637,165	$ 1,199,215	45.47%
NY State & Local ERS	$ 158,159,164	$ 114,057,641	$ 158,159,164	$ 44,101,523	27.88%
NY State & Local Police & Fire	$ 28,605,772	$ 20,194,091	$ 28,605,772	$ 8,411,681	29.41%
Ohio PERS	$ 60,599,000	$ 63,515,006	$ 79,630,000	$ 16,114,994	20.24%

Ohio Police & Fire	$ 10,681,012	$ 10,075,500	$ 15,384,437	$ 5,308,937	34.51%
Ohio School Employees	$ 10,787,000	$ 8,953,363	$ 14,855,000	$ 5,901,637	39.73%
Ohio Teachers	$ 55,946,259	$ 54,140,413	$ 94,720,669	$ 40,580,256	42.84%
Oklahoma PERS	$ 6,348,416	$ 5,774,379	$ 9,622,628	$ 3,848,249	39.99%
Oklahoma Teachers	$ 9,566,700	$ 8,351,966	$ 19,980,600	$ 11,628,634	58.20%
Oregon PERS	$ 51,583,600	$ 47,685,015	$ 59,329,500	$ 11,644,485	19.63%
Pennsylvania School Employees	$ 59,306,848	$ 45,598,475	$ 79,005,428	$ 33,406,953	42.28%
Pennsylvania State ERS	$ 29,443,945	$ 25,886,102	$ 39,179,594	$ 13,293,492	33.93%
Phoenix ERS	$ 1,868,093	$ 1,535,174	$ 2,697,288	$ 1,162,114	43.08%
Rhode Island ERS	$ 6,405,209	$ 5,487,924	$ 13,238,855	$ 7,750,931	58.55%
Rhode Island Municipal	$ 1,196,385	$ 1,000,481	$ 1,626,621	$ 626,140	38.49%
San Diego County	$ 8,433,310	$ 6,868,944	$ 9,999,161	$ 3,130,217	31.30%
San Francisco City & County	$ 16,069,058	$ 13,136,786	$ 17,643,394	$ 4,506,608	25.54%
South Carolina Police	$ 3,612,700	$ 2,851,474	$ 4,850,457	$ 1,998,983	41.21%
South Carolina RS	$ 25,400,331	$ 19,681,137	$ 38,774,029	$ 19,092,892	49.24%
South Dakota PERS	$ 7,119,875	$ 6,496,635	$ 7,393,251	$ 896,616	12.13%
St. Louis School Employees	$ 944,357	$ 937,594	$ 1,066,271	$ 128,677	12.07%
St. Paul Teachers	$ 1,001,444	$ 815,307	$ 1,471,630	$ 656,323	44.60%
Texas County & District	$ 17,808,600	$ 17,729,760	$ 19,931,200	$ 2,201,440	11.05%
Texas ERS	$ 23,628,567	$ 19,580,610	$ 27,668,876	$ 8,088,266	29.23%
Texas LECOS	$ 802,897	$ 668,353	$ 930,747	$ 262,394	28.19%
Texas Municipal	$ 16,986,000	$ 17,992,494	$ 20,481,500	$ 2,489,006	12.15%
Texas Teachers	$ 111,293,000	$ 95,688,405	$ 134,191,000	$ 38,502,595	28.69%
University of California	$ 41,195,318	$ 34,574,454	$ 47,504,309	$ 12,929,855	27.22%
Utah Noncontributory	$ 16,895,039	$ 15,802,205	$ 20,544,827	$ 4,742,622	23.08%
Vermont State Employees	$ 1,265,404	$ 1,169,845	$ 1,559,324	$ 389,479	24.98%
Vermont Teachers	$ 1,410,368	$ 1,305,250	$ 2,122,191	$ 816,941	38.50%

Virginia Retirement System	$ 52,729,000	$ 44,645,816	$ 72,801,000	$ 28,155,184	38.67%
Washington LEOFF Plan 1	$ 5,560,900	$ 4,586,358	$ 4,393,300	$ (193,058)	-4.39%
Washington LEOFF Plan 2	$ 7,927,000	$ 5,081,657	$ 7,927,000	$ 2,845,343	35.89%
Washington PERS 1	$ 9,293,000	$ 7,626,486	$ 12,538,100	$ 4,911,614	39.17%
Washington PERS 2/3	$ 25,978,000	$ 16,368,663	$ 25,978,000	$ 9,609,337	36.99%
Washington School Employees Plan 2/3	$ 3,459,000	$ 2,237,385	$ 3,459,000	$ 1,221,615	35.32%
Washington Teachers Plan 1	$ 7,791,300	$ 6,404,061	$ 9,201,300	$ 2,797,239	30.40%
Washington Teachers Plan 2/3	$ 9,106,000	$ 5,547,281	$ 9,106,000	$ 3,558,719	39.08%
West Virginia PERS	$ 3,974,609	$ 3,866,588	$ 5,325,830	$ 1,459,242	27.40%
West Virginia Teachers	$ 4,143,540	$ 4,143,540	$ 8,904,312	$ 4,760,772	53.47%
Wisconsin Retirement System	$ 80,626,900	$ 75,872,072	$ 80,758,800	$ 4,886,728	6.05%
Wyoming Public Employees	$ 5,799,531	$ 5,495,337	$ 6,855,643	$ 1,360,306	19.84%
Total	**$2,629,875,887**	**$ 2,231,596,280**	**$ 3,375,676,773**	**$ 1,144,080,493**	**33.89%**
Overstatement of	**Assets**	**$ 398,279,607**			
	Estimated Unfunded Obligations		**$ 1,144,080,493**		

In total, my calculations show over a $1.1 trillion unfunded liability in the 120 state and local plans **excluding** any unfunded liabilities in additional local plans within each state for which data is unavailable (the plans excluded from the plan-level analysis: MA, TN, etc. would increase this aggregate shortfall if included). While investment returns are likely to be higher in the 2012-2014 fiscal years, closing some of this gap, it would be imprudent to assume that the strong performance of the underlying investment indexes continues at that elevated rate.

Policymakers at the state and local levels will be forced to make difficult trade-offs in the years ahead. $1.1 trillion is **more than half of the aggregate total state budgets** for the most recent fiscal years for whichdata is available (5/25/2014). It is a very big number, and no amount of unreasonable assumptions or whitewashing will make it go away on its own. Retirees, future retirees, taxpayers, and municipal bond holders all deserve better than the uncertain future presented by the status quo. The political cost of taking action is high but the ultimate financial cost of inaction will be far higher.

If you are holding muni bonds (either directly or indirectly) in your search for yield, you should consider the specific risks of the state or municipality, and its unfunded obligations, in the context of your investment.

NOTE: The full excel workbook containing the raw data, and my calculations, is available upon request. If you make use of any of the data in this article, please cite the following sources:

1) Lenny Grover's article on Seeking Alpha

2) Data.gov

3) Boston College Center for Retirement Research

Lenny Grover
May. 27, 2014 10:08 AM ET

Copyright © 2026 Bond Case Briefs | bondcasebriefs.com