



# ISSUE BRIEF

## **Financing Retiree Health Care: Assessing GASB 45 Estimates of Liabilities**



**Robert L. Clark**

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**W**hat are the key assumptions that actuaries examine to estimate a government's unfunded retiree health costs? Dr. Robert Clark gives a clear analysis of how health care plan design, demographic factors, and financing methods affect the estimate of future costs.

State and local government employers are faced with a number of uncertainties about the future of health care in the United States as well as in their particular organizations. This issue brief examines some of the broad questions that will affect future costs.

- Will health insurance costs continue to rise faster than other public expenditures?
- Will employers make changes in their health plans or the eligibility criteria for retiree health benefits?
- Will employers make changes in the way they pay for their unfunded health care liabilities?
- What impact would the establishment of a trust fund have on unfunded liabilities?
- What changes in Medicare or national health policy will occur?

Many states and localities have begun to shift from a pay-as-you-go basis to other strategies to finance their future health care costs. Those states that have established trust funds to help pay for future liabilities have seen a significant reduction in their unfunded liability,

The Center for State and Local Government Excellence and researchers from North Carolina State University's School of Public and International Affairs and College of Management have established a partnership to focus on state and local government retiree health care. Future Center publications will examine what governments are doing to finance retiree health care, policy alternatives, intergenerational issues, and benchmarking.

Founded to explore issues that are important to attract and retain the talent needed for public service, the Center is committed to identifying best practices that can ensure the economic security of future retirees. Government leaders will need authoritative data to understand the issues.

The Center gratefully acknowledges the financial support from the ICMA Retirement Corporation to undertake this research project.

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# Financing Retiree Health Care: Assessing GASB 45 Estimates of Liabilities

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The Government Accounting Standards Board adopted Statement No. 45 (GASB 45) to give investors and stakeholders a better assessment of the costs of providing retiree health benefit plans to employees in the public sector. GASB 45 requires public employers to produce an actuarial statement, using generally accepted accounting standards, which presents the projected actuarial accrued liabilities and the annual required contributions for retiree health plans.<sup>1</sup>

The goal of GASB 45 is to provide a transparent assessment of the liabilities associated with health care promises to public employees. In general, GASB 45 requires state and local governments to report the present value of the future liability of health care promises to current workers as these benefits are accrued, along with the present value of these promises to current retirees.<sup>2</sup> In addition, the actuarial report must indicate the annual required contribution needed to pay current health care costs and to amortize current unfunded liabilities.

GASB 45 is an important tool for policymakers and stakeholders in determining future compensation and employment policies and tax policies. Because this information will be widely reported and discussed, it is important to understand the actuarial statements and assumptions that underlie the estimates.

This Issue Brief examines each of the main assumptions on which the actuarial assessments depend. These assumptions determine the estimated future cost of the program and include:

- the generosity and parameters of the current health care plan.
- the future size and age structure of retirees and workforce based on mortality rates, hiring patterns, and age specific turnover rates.

- the cost of future health care based on the currently promised benefits. The reports assume a pattern of future health care inflation to project the future costs per plan participant. Together, these assumptions generate the projected annual accrual of liabilities and expenditures on retiree health plans. Finally, the actuary selects an appropriate discount rate to determine the present value of future costs of the health plan.

If a government uses pay-as-you-go financing for its retiree medical plan, the actuarial accrued liabilities (AAL) are equal to the unfunded actuarially accrued liabilities (UAAL). Using these data, the actuary also determines the annual required contribution (ARC), which is equal to current expenditures plus the additional contribution needed to completely fund the UAAL over a 30-year period. This Issue Brief discusses these assumptions and their importance in determining financial challenges facing state and local governments.

## Will Retiree Health Plans Remain Unchanged?

Any projection of the future cost of a benefit plan requires an assumption about the generosity of the plan for future employees and retirees. Assuming that the parameters of the current plan remain in force is a reasonable starting point and it is understandable that this would be required to project future liabilities for retiree health plans. This methodology provides a good baseline for assessing the cost of the existing program. Such estimates yield important information to policy makers and can help them decide whether the state or local government can afford to maintain this employee benefit at its current level.

However, it is unlikely that all aspects of current retiree health plans will be maintained by pub-

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lic employers. In fact, most plans covering state and local government employees and retirees are amended regularly in an effort to reduce cost increases. Government employers have increased premiums, raised deductibles, increased co-payments, restricted choice, and raised the eligibility for their retiree medical plans. At the extreme, public sector employers could offer retirees continued coverage in their medical plans but require them to pay the full cost of participation in the plan. If the retiree is required to pay 100 percent of the premium, the cost to the state or local government become much lower.<sup>3</sup>

Presenting the liabilities associated with the current retiree health plan provides useful information to policymakers, investors, and other stakeholders. However, these liabilities are partly within the control of the policymaker as state legislatures and city councils can substantially reduce future costs of these programs by changing basic parameters of the plans. The ability to modify these plans may be limited by laws, regulations, and employment contracts.

Another cause of uncertainty about this assumption in projecting future liabilities relates to Medicare and national policies on universal health insurance. All retiree medical plans are integrated with Medicare; retirees age 65 and older are typically required to enroll in Medicare. Medicare becomes the primary payer of medical bills and the employer retiree health plan becomes the secondary payer. This integration with Medicare substantially reduces the cost of offering health insurance to retirees. However, the employer does not determine the provisions of Medicare. The federal government is also struggling with rapidly rising costs of Medicare and new cost containment measures can be anticipated. Such measures tend to reduce Medicare reimbursements but increase the cost to employer-provided retiree health insurance. The likelihood of these changes implies that the cost estimates based on existing systems would underestimate the future expenditures by state and local governments.

Another change in national policies that could have a major impact on the projected liabilities is the possibility that there might be major health care legislation that would move the United States toward some type of universal coverage or national health insurance. A key question of any new national health policy would be how the new policy will affect existing employer-provided retiree health plans. Would universal health insurance allow public sector employers to eliminate their retiree health plans if their retirees were covered by a national plan? Would this eliminate

these unfunded liabilities now projected in the GASB 45 statements? This type of uncertainty might be one reason why state and local governments are delaying major changes in retiree health plans.

## Projecting Plan Demographics

The actuaries use standard demographic models based on current data to project the demographic future of plan participants. Administrative records indicate past patterns of hiring, turnover, and retirements. These data are used to project the future labor force and then the future population of retirees. Appropriate life tables are employed to determine life expectancies and the length of time medical coverage is provided to retirees. While the past is not always a predictor of the demographic future, these models are an appropriate method of projecting future costs associated with retiree health plans.

## What is the Correct Discount Rate?

In the determination of the UAAL and ARC, GASB 45 requires state and local governments to use a discount rate consistent with the return on the “investments that are expected to be used to finance the payment of benefits.” For public employers that do not prefund their these plans, the appropriate discount rate should approximate the yield on the portfolio of the state’s general assets from which funds are drawn to pay for the health benefits for retirees. However, if the state establishes an irrevocable trust to partially or wholly finance the retiree health benefit program, GASB standards allow the use of a rate consistent with the return on these investments.<sup>4</sup>

For public employers with trust funds for retiree health plans, the actuary may adopt the same discount rate used to determine the financial status of the state’s pension plan.<sup>5</sup> In recent years, the rate of return on pension funds is often assumed to be in the range of 7 to 9 percent while the rates of return on more liquid financial accounts of the state are closer to 4 percent.<sup>6</sup> Thus, state and local governments that establish fully funded plans could use the higher discount rates to determine their accrued liabilities and the ARCs, while public employers that have partially funded plans can use a blended rate between 4 and 7 to 9 percent to calculate their accrued liabilities.

Many of the actuarial statements that have been prepared by consulting and actuarial firms show the

impact of alternative scenarios. Typically, the statements report the UAAL using a discount rate of approximately 4 percent, which is consistent with the current pay-as-you-go status of these plans. The consultants often illustrate the impact of a movement toward full funding by incorporating a discount rate of approximately 8 percent into the calculations.

Most of the actuarial reports we have reviewed assume a discount rate between 4 and 5 percent. Table 1 reports the baseline discount rate for each state in bold along with alternative rates that are also presented in the report. One outlier in the use of the lower discount rate in conjunction with pay-as-you-go financing is Delaware, which used an 8 percent discount rate even though its plans “are largely unfunded” (Delaware report, 2005). Another state using a rather high discount rate is Rhode Island, which reports its UAAL and ARC using a discount rate of 8.25 percent even though it has not established a fund for its OPEBs.<sup>7</sup>

Obviously, the higher discount rate used in the calculation, the smaller the projected liability associated with retiree health plans. For example, the California actuarial statement presents estimates of its UAAL using three discount rates. If a 4.5 percent discount rate that is consistent with a pay-as-you-go system produces an unfunded liability of \$47.9 billion, using a discount rate of 6.125 for a partially funded plan results in a UAAL of \$38.2 billion, and adopting a 7.75 percent discount rate, as if the state were to move to full funding, yields an unfunded liability of only \$31.3 billion. The actuarial report for Connecticut provides estimates for various levels of funding and the impact of a proposal by the governor to establish a small trust fund. The magnitude of the estimated UAAL varies from \$21.7 billion with a 4.5 percent discount rate to only \$11.4 billion if an 8.5 percent discount rate is adopted.

Of course a lower UAAL also implies a lower ARC. New York State Deputy Comptroller Thomas Sanzillo (2007) testified before the New York State Assembly that the liability of the state (including SUNY) was approximately \$47 billion and that the annual required contribution was \$3.7 billion if the state continued with no pre-funding. However, he then reported that if the state committed to fully fund its OPEB obligations, the ARC would be only \$2.4 billion based on using a discount rate of 8.0 percent. This latter value represented \$1.1 billion to support current benefits payable and \$1.3 billion in contributions to a fund to support future benefits.

Until recently, virtually all states with retiree health plans financed these plans from general state revenues

**Table 1.** UAAL by Discount Rate (in billions of dollars)

	Discount Rate* (in percent)	UAAL (billions of dollars)
Alabama	<b>5.0</b>	\$12.53
	6.0	\$10.67
California	<b>4.5</b>	\$47.88
	6.125	\$38.24
	7.75	\$31.28
Connecticut	<b>4.5</b>	\$21.68
	4.7	\$20.88
	6.08	\$16.36
	8.5	\$11.37
Florida	<b>4.0</b>	\$3.08
	7.75	\$1.92
Georgia	4.5	\$19.56
	<b>6.0</b>	\$15.04
Hawaii	<b>5.0</b>	\$9.68
	8.0	\$6.27
Maine	<b>4.5</b>	\$4.76
	7.5	\$3.23
Maryland	<b>4.25</b>	\$14.54
	7.75	\$9.00
Massachusetts	<b>4.5</b>	\$12.29
	8.25	\$7.56
New Hampshire	<b>4.5</b>	\$2.86
	8.5	\$1.55
New Jersey	<b>4.5</b>	\$68.83
	8.25	\$37.37
North Dakota	<b>5.0</b>	\$0.031
	8.0	\$0.024
Oklahoma	<b>3.5</b>	\$0.815
	7.5	\$0.586
Oregon	<b>4.5</b>	\$0.309
	7.5	\$0.238
Rhode Island	5.0	\$0.696
	7.0	\$0.550
	<b>8.25</b>	\$0.480
South Carolina	<b>4.5</b>	\$10.049
	6.0	\$7.599
	7.25	\$6.446
Vermont	<b>3.75</b>	\$1.419
	8.0	\$0.691
Wyoming	<b>4.0</b>	\$0.072
	8.5	\$0.041

\*Values in bold are the baseline discount rates used in the actuarial statement.

Source: Actuarial statements of various states.

and so most of the reports are based on the lower discount rates associated with money market accounts and short-term paper. Does shifting to a funded plan really reduce plan liabilities? Should actuaries change the discount rate from 4 to 8 percent simply because a state or local government establishes a trust fund for its retiree health plan?

There is a current debate between advocates of the principles of financial economics and those associated with the traditional actuarial approach to calculating future liabilities. Proponents of financial economics argue that pension and retiree health liabilities should be calculated in a manner similar to determination of bond prices. Thus, future expenditures should be discounted using bond yields whether the employer has established a fund or not.<sup>8</sup> If one accepts the principles of financial economics, the choice of a discount rate is clear and independent of the funding mechanisms used for retiree health plans.

## How Fast Will Medical Prices Rise?

The rate of medical inflation will determine the future cost of liabilities associated with retiree health benefits and thus the future liability of the current program if it is maintained. For the past two decades, medical inflation has typically been twice the annual increase in the consumer price index (CPI).<sup>9</sup> As a result, the cost of providing health insurance to workers and retirees alike has risen dramatically. The Kaiser Family Foundation/Hewitt Associates 2005 Retiree Health Benefits Survey reports that the total cost to employers and employees of providing retiree health benefits increased by 16.0 percent in 2002, 13.7 percent in 2003, 12.7 percent in 2004 and 10.3 percent in 2005. While health care inflation continues to outstrip the increase in the CPI, most projections of health care costs used in the actuarial reports project a decline in the rate of medical inflation.

Virtually all of the actuarial reports for state retiree health insurance plans assume that medical inflation will decline from its current level of 10 to 14 percent per year to a rate of around 5 percent. Of course, lower assumed rates of inflation result in lower liabilities and annual required contributions, thus making the state's financial position look rosier. The statement for Hawaii illustrates the importance of the inflation assumptions. Baseline assumptions indicated an UAAL of \$9.7 billion. A one percentage point increase in the health care inflation rate raises the UAAL to \$11.6 billion or an increase of almost 20 percent.

**Table 2.** State UAAL by Inflation Rate Assumption (in billions of dollars)

	Health Care Inflation Trend		
	-1%	Baseline	+1%
Florida	\$2.66	\$3.08	\$3.08
Hawaii	\$8.19	\$9.68	\$11.60
Maryland	\$13.13	\$14.54	\$16.23
Massachusetts	\$11.28	\$13.29	\$15.88
North Dakota	\$0.028	\$0.031	\$0.033
Oklahoma	\$0.745	\$0.815	\$0.895

Source: Actuarial statements of various states.

**Table 3.** State ARC by Inflation Rate Assumption (in billions of dollars)

	Health Care Inflation Trend		
	-1%	Baseline	+1%
Florida	\$0.17	\$0.21	\$0.25
Hawaii	\$0.58	\$0.71	\$0.88
Maryland	\$0.47	\$1.11	\$1.27
Massachusetts	\$0.87	\$1.06	\$1.32
North Dakota	\$0.004	\$0.004	\$0.004
Oklahoma	\$0.078	\$0.087	\$0.068

Source: Actuarial statements of various states.

The assumptions on health care in the various state reports vary, in part, due to the date of the report and the rate of inflation at that time. If the rate of inflation for health care were to continue at its current rate, all projections of state UAALs and ARCs would be much higher.<sup>10</sup> Tables 2 and 3 illustrate the substantial change in the UAAL and ARC for state plans associated with a one percent change in the inflation assumptions as reported in the actuarial reports of six states. The sensitivity of these estimates to only a one percent faster rate of inflation in health care should alert policy analysts to the potential of considerably higher liabilities for these plans.

## Policy Implications and Concerns

GASB 45 has generated substantial discussion among policymakers, investors, and plan administrators. Was it needed? What does it mean? What are its implications? GASB 45 requires public sector employers to determine and disclose projections of liabilities associated with retiree health plans. Beyond disclosing the liabilities

and costs, GASB 45 does not require states and local governments to take any actions. It does not require the establishment of an irrevocable trust, it does not require full funding or the movement toward full funding. It does not require the elimination or the reduction in the generosity of retiree medical plans.

Disclosure of plan liabilities does matter. Our review illustrates the sensitivity of the estimated liabilities to the assumptions and the importance of understanding how the estimates are obtained. As presented in the GASB reports, these data should be considered an important indicator of the future policymakers should consider in determining future retiree health policies. However, the predictions should be considered as best approximations of future costs and public employers should recognize the uncertainty around the estimates.

## References

Gabriel Roeder Smith & Company. 2008. "Valuing Public Pension Plans: Comparing Financial Economic with Conventional Approaches," *GRS Insight*, April.

Government Accounting Standards Board. 1994. Statement No. 27. *Accounting for Pensions by State and Local Employers*. <http://www.gasb.org/st/index.html>

Government Accounting Standards Board. 2004. Statement No. 43. *Financial Reporting for Post-employment Benefit Plans Other than Pension Plans*. [www.gasb.org/st/summary/gtstm43.html](http://www.gasb.org/st/summary/gtstm43.html)

Government Accounting Standards Board. 2004. Statement No. 45. *Accounting and Financial Reporting by Employers for Post-employment Benefits Other Than Pensions (OPEB)* <http://www.gasb.org/st/index.html>

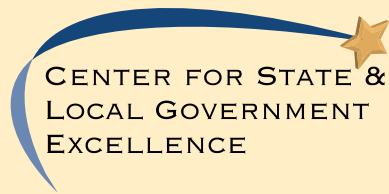
Kaiser Family Foundation/Hewitt Associates. 2005. *Retiree Health Benefits Survey*.

Sanzillo, Thomas. January 2007. "Testimony From First Deputy Comptroller Thomas Sanzillo Regarding GASB 45 Accounting Change," *News From the Office of the New York State Comptroller*.

U.S General Accounting Office. 2008. *State and Local Government Retiree Benefits: Current Funded Status of Pension and Health Benefits*. GAO-08-223. January.

## Endnotes

- 1 GASB Statement 45, *Accounting and Financial Reporting by Employers for Post-employment Benefits Other Than Pensions (OPEB)* was issued by the Governmental Accounting Standards Board in 2004. Basically, GASB 45 requires public employers to account for the cost of retiree health plans using the same methods used to estimate the liabilities associated with pensions. The complete standard can be seen at <http://www.gasb.org/st/summary/gtstm45.html>. Earlier in 2004, GASB issued Statement No. 43, *Financial Reporting for Post-employment Benefit Plans Other than Pension Plans*. GASB 43 sought to establish uniform reporting standards for retiree health plans.
- 2 Vicente (2006) provides a useful explanation of the new accounting standards and a summary of the issues raised by GASB 45.
- 3 In an earlier Issue Brief, we presented the unfunded accrued actuarial liabilities for most of the states. The magnitude of the state UAAL varies substantially across the states. State that require retirees to pay 100 percent of the premium have very low UAALs while states that pay 100 percent of the premium have relatively large UAALs.
- 4 Initially, this could mean that the state fully funds the annual required contribution. The ARC is equal to current annual expenses for retiree medical plus the amount needed to amortize the unfunded liabilities of the state RHI programs over 30 years. This would imply that the state is on track to shift from pay-as-you-go funding toward having assets in a fund equal to all accrued liabilities.
- 5 GASB 27 issued in 1994 established standards for measuring and reporting pension expenditures and liabilities associated with public sector pension plans.
- 6 GAO (2008) reports that 70 percent of state and local government pension plans assumed a return of 8.0 to 8.5 percent per year in calculating their liabilities in 2006. Thirty percent of the plans used a somewhat lower rate with the minimum rate being 7.0 percent.
- 7 The Rhode Island actuarial statement also presents projected liabilities using a 7.0 percent and a 5.0 percent discount rate; however, the executive summary of the report only mentions the values based on the 8.25 percent discount rate.
- 8 A review of this debate is presented in Gabriel Roeder Smith, (2008).
- 9 Comparisons of the trends in the annual rate of increase in the CPI and the rate of medical care inflation can be seen on the website of the Bureau of Labor Statistics, [www.bls.gov](http://www.bls.gov).
- 10 A similar problem confronts the Trustees of Medicare when they prepare their annual report estimating the unfunded liabilities and actuarial status of this program. In general, the Trustees have assumed that the rate of medical inflation will decline from current rates to the rate of growth of GDP plus one percent.



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