Collective Bargaining & Member Advocacy

1201 16th St., N.W. | Washington, DC 20036-3290 | Phone: (202) 822-7080 | Fax: (202) 822-7833

A Non-Expert's Guide to Actuarial Valuations

Most of us avoid actuarial valuations like the plague. Just picking one up can frighten even the toughest negotiator, and cracking just the cover can bring the best of us to our knees. But even those of us who are not technical experts can learn to identify and work with the key parts of actuarial valuations. And that's good news, because in order to defend our hard-earned retiree health care benefits, dealing with actuarial valuations will become an increasingly important part of our work.

Here's the reason: New accounting standards are changing the way state and local governments account for their employees' retiree health care benefits. These new standards are contained in Statement 45 of the Governmental Accounting Standards Board (GASB), a nongovernmental organization that establishes accounting principles. The rules say that employers should measure, recognize, and present information on the value of non-pension retiree benefits such as health care, life insurance, vision plans, and dental coverage. These benefits are called "other postemployment benefits" (OPEB). Similar standards already exist for pension accounting. This fact sheet focuses on retiree health care, given their cost. In most cases, actuaries will do the measuring and issue an actuarial valuation with the results. The value of OPEB could be 10, 20, or even 50 times the amount paid annually to cover current retirees' health care benefits.

The Work of Actuaries

Actuaries use multiple facts and assumptions to determine how much benefits will cost in the future. Then, they work backward, figuring out how much money we would have to set aside now if we wanted the money to grow large enough to pay for those benefits in the future (technically, that's the present value of the future benefits). The money grows by gathering interest or through other investment returns (or it shrinks due to investment losses). If the facts and assumptions used in an actuarial valuation are not good, the outcome won't be either.

What to Look for in a Retiree Health Care Actuarial Valuation

When looking at an actuarial valuation, it's important to analyze various facts and assumptions regarding the benefits structure, plan participant demographics, and economic assumptions, among other things. It's also important to review the projected benefit costs based on those facts and assumptions. Even the calculation method used by actuaries can affect the way costs are reported.

Key Facts and Assumptions in a Retiree Health Care Valuation

For a retiree health care valuation, actuaries consider a long list of factors. The specifics of your plan and plan participants help to dictate which have the biggest impact on the outcome of the valuation, but some of the most consistently important facts and assumptions are listed here. (For more details, see the description of the key variables used in retiree health care actuarial valuations, in Appendix 2 of the report: *Defending Retiree Health Care Benefits: An NEA Guide to Understanding and Preparing for the New GASB Standards* (available on the Internet at http://connect.nea.org/comp/retireehealthcare.htm).

- **The benefits structure.** Logically, a comprehensive plan that pays 100 percent of all medical costs will cost more than one that pays and covers far less. So, actuaries have to know what the plan offers. And they need to know what the "substantive plan" is — as described in writing and understood through verbal communications.

  Heads up: *This means that one of the simplest ways to change the outcome of an actuarial valuation is to weaken the terms of the plan, and many employers will try to start a conversation by doing just that. Also, as employers create task forces or other groups to study retiree health care benefits, they frequently ask for detailed recommendations on how specific benefit changes would affect the value of the benefits promised by the employer.*

- **The demographic makeup of plan participants.** Here, we're talking about the number, age, and sex of plan participants, information about spousal coverage, and retirement rates, among other factors. Health care costs tend to rise dramatically as people age, but even without age-related cost considerations, demographics are important. For example, the new standards don't ask employers to account for the benefits that actives have yet to earn, so the younger your actives are, the lower your overall unfunded liability is likely to be — because they won't have earned as much toward their retiree health care benefits.

  Heads up: *The current age and other demographic characteristics of your members are fact-based inputs, but don't take for granted that an actuary received the right facts. Plus, the actuary is going to project costs many decades into the future, so a variety of assumptions will be utilized, including future staff turnover. Make sure the actuary receives the most correct and up-to-date information. If it's too late for that, determine whether incorrect information affected the valuation's output.*

- **The rate of return that investments are likely to get** (sometimes referred to as the **discount rate**). If you set aside money to pay for benefits in the future, but you only receive a 1 percent investment return, it's going to take you a lot longer to reach your savings goal than if you're receiving 12 percent on your investments. The example at the end of this fact sheet illustrates the importance of the investment rate of return, showing the difference in liability if a 2 percent and 8 percent rate is used. Valuations can be produced using just one rate, or actuaries can create multiple scenarios with different rates. Actuaries also have leeway in suggesting assumed rates of return. The new accounting rules point out that if you are going to pre-fund the benefits using a trust dedicated to that purpose, you can use a higher rate than if you keep the money in a general account.

  Heads up: *Understand that retiree health care liability figures are easily inflated or deflated depending on the investment return assumption, so, if your valuation is not yet completed, you may want to insist that any actuarial valuation take into account a higher and a lower investment rate of return. Learn what kind of rate was used to calculate the figure, and if that rate was reasonable. While you're at it, determine if the actuarial valuation you're discussing included different scenarios.*

- **The rate of health care cost increases (health care trend).** No one really knows for sure what health care costs are going to be 30 years from now. However, an actuary can give you the best guess possible.

  Heads up: *Check the health care cost rate of increase assumptions used, and make sure they make sense for your plan participants. If assumptions about the future cost of benefits are too optimistic (for example, expecting lower increases than reasonable), the actuarial valuation will underestimate the cost of benefits in the years ahead, resulting in the future in an unfunded liability that will be larger than expected.*

Key Figures in Retiree Health Care Valuations

- **Accrued actuarial liability.** This is the amount the actuary determines it would take to pay for the already promised benefits over the period of the valuation — if money were set aside now in order to grow through interest and other investment returns. Subtracting money already set aside to pre-fund benefits provides the "unfunded accrued actuarial liability," as described below. (By the way, the period covered by the valuation is usually 30 years, but you should double check yours.)

  Heads up: *This number will be much, much bigger than the amount the employer pays every year to cover current retirees' health care benefits. Try not to let this figure set the tone for your discussions, because employers are not going to put aside this money all at once and, in fact, are not required to put aside any money at all.*

- **Unfunded accrued actuarial liability.** This figure tells you the overall liability after subtracting out any money already set aside to pre-fund the benefits. This number is likely to catch the attention of employers, lawmakers, and journalists. It will be the same as the accrued actuarial liability if the employer has no money set aside to pre-fund benefits. It will be smaller if money has been set aside, but it is still likely to be quite large.

  Heads up: *Don't let the number set the tone for your discussions. Here's why: The figure can be amortized (spread out) over a period of 30 years. For suggestions about how to talk about the new standards, see "Plain Talk about New Accounting Standards for Education Employers," an NEA Collective Bargaining and Member Advocacy fact sheet.*

- **Unfunded liabilities sliced and diced.** In addition to the unfunded liability figure, two new pieces of information in an employer's financial statement are going to jump out at you. The first one is the **annual service cost** (or **normal cost**); that's the value of the retiree health care benefits that actives earn during the year. If an employer paid only this and interest on the unfunded liability every year, the unfunded liability would stop growing (although it wouldn't get any smaller). The other figure to look for is the **amortized portion of the unfunded accrued actuarial liability**. For purposes of producing the year's financial statement, an employer can break up the unfunded liability into pieces and show it little by little over 30 years.

  Heads up: *This is where the rubber meets the road. These are the numbers that are likely to be the focus of serious discussions, because they bring the liability figure into year-to-year perspective. So, determine the key assumptions and learn whether you are discussing the correct, up-to-date figures.*

- **Annual required contribution.** This term refers to the amount that an employer would contribute if the employer wanted to set money aside to cover the year's portion of the amortized unfunded liability and the annual service cost.

  Heads up: *Don't let the name fool you; the new accounting rules don't actually "require" contributions.*

For Further Information

For further information on this subject, please contact the NEA Collective Bargaining and Member Advocacy Department at (202) 822-7080 or mailto:collectivebargaining@nea.org.

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Actuarial Valuation for a Teachers' Retirement System
Actuarial Analysis Conducted June 2004
Costs for Year 2005
(Annotations by NEA)

The new accounting standards allow employers to assume a higher rate of return on assets placed in an irrevocable trust. The difference in the resulting liability calculations can be huge. Using the higher rate of return shaves more than $1 billion off the unfunded liability of this plan.

a) Assumed investment return	8%	2%
b) Actuarial value of assets	$0	$0
c) Actuarial accrued liability		
Active Participants	$303,854,640	$1,231,692,833
Retired Participants	$131,369,424	$254,076,087
Total	$435,224,064	$1,485,768,920
d) Unfunded actuarial liability (c.-b.)	$435,224,064	$1,485,768,920
e) Funded ratio (c./b.)	0%	0%
f) Annual covered payroll	$453,517,000	$ 453,517,000
g) Unfunded actuarial liability as percentage of covered payroll	96.0%	327.6%
h) Normal cost for the 2005 fiscal year	$18,343,569	$98,864,637
i) Amortization of unfunded actuarial liability for the 2005 fiscal year (30-year)	$22,886,578	$32,159,070
j) Annual required contribution (ARC) for the 2005 fiscal year (h.+i.)	$41,230,147	$131,023,707
k) Expected benefit payments	$10,160,530	$10,160,530
l) Increase in annual cost to fund the plan (j.-k.)	$31,069,617	$120,863,177

The cost of retiree health care benefits already earned by active employees during 2005 is expected to be $18 million — if the fund sets aside the money in an irrevocable trust — but almost $100 million if paid out of general revenues.

In order to pre-fund the future health care benefits accrued during 2005 and pay off a portion of the unfunded liability that built up in prior years (together, the "annual required contribution"), it would take over $41 million if the amount were calculated using the higher assumed return. The tab increases by almost $100 million if the lower rate is used. Notice that the big contributor to the different figures is the annual service cost (normal cost).

The accrued actuarial liability and the unfunded actuarial liability are the same because the plan has not been pre-funded. For the same reason, the actuarial value of assets is $0 and the funded ratio (the relationship of pre-funded assets to the liability) is also $0.

This is the year's allocated portion of the liability from prior years.

This is the amount of new money it would take in 2005 to pre-fund this year's portion of the benefits – above and beyond the payments planned for current retirees' benefits.

The cost of the retiree health care benefits that current retirees will use during 2005 does not change with the assumed rate of return on investments (neither does the cost of the annual payroll).