How would GASB proposals affect state and local pension reporting?

Authors: Alicia Haydock Munnell, Jean-Pierre Aubry, Josh Hurwitz, Laura Quinby

**HOW WOULD GASB PROPOSALS AFFECT
STATE AND LOCAL PENSION REPORTING?**

Alicia H. Munnell, Jean-Pierre Aubry, Josh Hurwitz, and Laura Quinby

Alicia H. Munnell is the director of the Center for Retirement Research at Boston College (CRR) and the Peter F. Drucker Professor of Management Sciences at Boston College's Carroll School of Management. Jean-Pierre Aubry is the assistant director of state and local research at the CRR. Josh Hurwitz and Laura Quinby are research associates at the CRR. This paper will be published in the *Journal of Government Financial Management*. The findings and conclusions expressed are solely those of the authors and do not represent the opinions or policy of the Center for Retirement Research at Boston College.

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[*] **Data in Appendix B have been updated to reflect market asset values as of the actuarial valuation date for the following plans: Massachusetts SERS, Massachusetts Teachers, Missouri Local, North Carolina Local Government, and North Carolina Teachers and State Employees.**

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Introduction

States and localities account for pensions in their financial statements according to standards laid out by the Governmental Accounting Standards Board (GASB). Under these standards, state and local plans generally follow an actuarial model and discount their liabilities by the long-term yield on the assets held in the pension fund, roughly 8 percent. Most economists contend that the discount rate should reflect the risk associated with the liabilities and, given that benefits are guaranteed under most state laws, the appropriate discount factor is closer to the riskless rate.[1] The point is not that liabilities should be larger or smaller, but rather that the discount rate should reflect the nature of the liabilities; the characteristics of the assets backing the liabilities are irrelevant.[2]

In 2006, GASB embarked on a project to review its accounting standards for pensions and propose changes as needed. The resulting proposals, outlined in two exposure drafts released for public comment in 2011, encompass a host of reforms pertaining to virtually every aspect of pension accounting.[3] Three of the main proposals, however, pertain to the valuation of assets and liabilities used to measure reported funded ratios. First, changes in the fair value of plan assets would no longer be smoothed over a three to five year period, but rather would be immediately incorporated into the measure of plan assets. Second, projected benefit payments would be discounted by a combined rate that reflects the expected return for the portion of liabilities that are projected to be covered by plan assets and the return on high-grade municipal bonds for the portion that are to be covered by other resources. Third, the entry age normal/level percentage of payroll would be the sole allocation method used for reporting purposes.

As it seems likely that the GASB proposals will soon become final standards, this paper takes a look at how the accounting changes will alter the funded ratios of state and local plans. The first section reviews how plans currently value plan assets and employer liabilities and explains GASB's proposals. The second section presents aggregate funded ratios for the 126 plans in the *Public Plans Database* (PPD). The third section discusses some of the implications of the GASB proposals. The conclusion is that employers and plan administrators should be prepared for funded ratios reported in their financial statements to decline sharply under the new rules. But accounting changes do not alter the underlying fundamentals; $1,000 owed to a retired teacher in ten years under current

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[1] See Bader and Gold (2007); Brown and Wilcox (2009); Gold (2009); Munnell et al. (2010); and Novy-Marx and Rauh (2008, 2009, and 2011).
[2] The analysis of choice under uncertainty in economics and finance identifies the discount rate for riskless payoffs with the riskless rate of interest. See Gollier (2001); and Luenberger (1997). This correspondence underlies much of the current theory and practice for the pricing of risky assets and the setting of risk premiums. See Sharpe, Alexander, and Bailey (2003); Bodie, Merton, and Cheeton (2008); and Benninga (2008).
[3] Governmental Accounting Standards Board (2011a and 2011b).

standards will remain $1,000 owed in ten years under the new standards. So policymakers should not let new numbers throw them off the path of sensible reform.

Accounting Methods: Old and New

In the public sector, the rules for public pension reporting are set out in Governmental Accounting Standards Board (GASB) Statements 25 and 27 and their amendments.[4] GASB, like its private sector counterpart, the Financial Accounting Standards Board, is an independent organization and has no authority to enforce its standards. Many state laws, however, require that public plans comply with GASB standards, and auditors require state and local governments to comply with the standards to receive a "clean" audit opinion. In addition, bond raters generally consider whether GASB standards are followed when assessing credit standing.[5]

The financial well-being of a pension plan is frequently judged by its funded ratio. This measure equals plan assets divided by employer liabilities. Conceptually, the valuation of plan assets should be straightforward. In reality, most plans currently report funded status using a level that is smoothed, typically over a five-year period.[6] This smoothing means that asset losses incurred in 2008 are still depressing funded ratios in 2011.[7] Conversely, the full value of gains experienced in 2009 will not be recognized until 2014. In order to increase transparency in pension reporting, GASB is proposing that, for reporting purposes, plans abandon their actuarial smoothing of market gains and losses in favor of a market valuation of plan assets.

Valuing pension liabilities raises two questions. What should be included in liabilities? And what discount rate should be used to express those liabilities in today's dollars? GASB currently defines liabilities in terms of the projected benefit obligation (PBO) liability concept. The PBO includes pension benefits to be paid to retired employees, benefits earned to date by active employees based on their current salaries and years of service, *and* the effect of future salary increases on the value of pension rights already earned by active workers. With regard to the discount rate, GASB Statement 25 states that it should be based on "an estimated long-term yield for the plan, with consideration given to the nature and mix of current and planned investments…"

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[4] Statement No. 25 is titled "Financial Reporting for Defined Benefit Pension Plans and Note Disclosures for Defined Contribution Plans." Statement No. 27 is titled "Accounting for Pensions by State and Local Governmental Employers." The provisions of GASB 25 became effective June 15, 1996, and those of GASB 27 became effective one year later.
[5] U.S. Government Accountability Office (2008).
[6] The smoothing method is not a simple five-year average, but rather a gradual recognition of investment gain/loss experienced by a plan relative to its expected return on assets.
[7] See Munnell et al. (2011a).

GASB's proposed change maintains the PBO liability concept, but alters the discount rate and the allocation method, proposing that the entry age/level percentage of payroll method be used for reporting purposes. Requiring that all plans use the same actuarial cost method is a change from the current arrangement under which plans that satisfy certain parameters can select from a small sample of cost methods for reporting purposes. That being said, as shown in Figure 1, 72 percent of plans currently use the entry age normal method, and aggregate cost plans are already required to report liabilities using entry age normal, so approximately 14 percent of plans will have to change their method for reporting.

Under the new discount method, each plan will project the number of future years in which assets on hand, investment returns, and certain future employer and employee contributions will be sufficient to pay annual benefit payments.[8] The payments made in those years are discounted by the expected return on assets. Meanwhile, benefit payments that occur in years when those amounts are no longer sufficient to cover annual benefit payments will be discounted by the high-grade municipal bond yield. The new approach maintains the current link between liabilities and the assets used to pay for them; so long as the benefit payments are projected to be covered by available assets, they are discounted by expected returns. Once benefit payments exceed available assets, they are on the same footing as payments on general obligation debt and are discounted by the municipal bond rate.

Impact of Changes in Accounting on Funded Ratios

In order to demonstrate the impact of the proposed accounting changes on state and local funded ratios, this section proceeds in two steps. First, it presents funded ratios based on current GASB standards and funded ratios calculated using the market value of assets. Then, it combines market assets with liabilities discounted using the proposed discount rate to demonstrate the full impact of GASB's proposed changes.

Immediately recognizing asset gains and losses results in a funded ratio that clearly demonstrates the degree to which plan funding is tied to the fate of the stock market. Figure 2 compares aggregate funded ratios for the 126 plans in the PPD calculated over time using actuarial versus market assets. It is clear that actuarial funded ratios lag market ratios. Market assets were lower than actuarial assets in the early 2000s as gains from the late 1990s were still present in actuarial values and losses

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[8] Only those contributions that are designed to fund payments for current members, both active and inactive, would be included.

from the 2001 dotcom bubble had not yet been fully accounted for. The picture reversed between 2005 and 2007, when market assets reflected gains that had not yet been fully accounted for in the actuarial measures. The 2008 financial crisis caused an enormous decline in market assets and a 18-percentage point drop in funding, whereas actuarial assets only declined by 5 percentage points. In contrast, 2010 funded ratios using market assets increased by 3 percentage points, while funded ratios using actuarial assets were still dropping. But the bottom line is that the aggregate funded ratio using market assets was only 67 percent in 2010 compared to 76 percent using actuarial assets, so policymakers should be prepared for a sharp decline in funding if GASB introduces this change.

The next step is to estimate how funded ratios would change if liabilities were discounted using a combined rate of return. This exercise requires knowing the underlying stream of benefit payments owed by the plan in future years. Public pensions typically do not disclose this information, so the benefit stream must be re-engineered based on data from actuarial reports on the age, salary, and tenure of the workforce, as well as assumptions regarding retirement, separation, and mortality (see Appendix A).[9]

With the stream of projected benefits in hand, the task is to project the portion of that stream that will be covered by plan assets and the portion that will be covered by other resources. Projected assets depend on two factors – contributions and investment returns. Contributions, in turn, consist of two components – normal cost and amortization payments.[10] In determining how much sponsors will contribute in the future, GASB recommends looking at the percent of Annual Required Contributions (ARC) paid in the past. We interpreted the past to be the last ten years.[11] In terms of investment returns, GASB proposes to use the plan's long-run expected return.

With flows of projected benefits, government and employee contributions, and investment returns, it is possible to calculate the date when assets are not sufficient to cover annual benefit payments. All benefits payable in years prior to the crossover point are discounted using each plan's

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[9] The methodology for first re-engineering the benefit stream and then re-discounting this stream is adapted from the procedure used to estimate trust fund run-out dates under the termination framework described in Munnell et al. (2011b).

[10] The exercise is complicated by the fact that GASB's proposal puts each of these components over a different definition of payroll. Future normal cost contributions are made for current members only, whereas future amortization contributions are made for both current members and new hires. GASB's approach of using two different payrolls reflects what most plans currently do. Whereas the normal cost for current members is funded over the members' worklives, amortization of unfunded liabilities occurs over a longer period, which includes the hiring of new workers.

[11] In January 2012, GASB tentatively agreed to include guidance in the final Statement that would refer to the past five years of contributions as a key factor to be considered in this projection. See Governmental Accounting Standards Board (2011c).

assumption regarding the expected return on assets. Benefits payable after the run-out date are discounted by 3.7 percent – the current yield on high-grade municipal bonds.[12]

Figure 3 compares the funded ratios currently reported with our estimates of what these ratios would have looked like under GASB's current proposals for 2009 and 2010. Results for individual plans and our estimates of the combined discount rate that will result from GASB's new procedure can be found in Appendix B.[13] The bottom line is that the headline number would have declined in 2010 – the latest year for which data are available – from 76 percent to 57 percent.[14]

Implications of GASB's Proposals

GASB lays out the rationale for its combined rate in the exposure drafts. GASB's argument is that, while the expected rate of return is appropriate for discounting liabilities backed by assets, liabilities not covered by assets fall to the sponsoring government and therefore should be discounted by the index rate of high-yield, tax-exempt, 20-year general obligation bonds.[15] The argument is at odds with the economist's view that the discount rate should reflect the riskiness of the liabilities, irrespective of how the liabilities are funded. That debate, which has gone on for years, will not be settled in this paper. Instead, the following section discusses implementation issues, interpretation challenges, and the implications for the ARC associated with GASB proposals.

Implementation Issues

The main implementation problem with GASB's proposed combined rate is that it requires a complicated calculation based on a number of assumptions. The determination of the portion of benefits funded requires a projection of plan assets available each year to cover promised benefits. The asset projection would include assumptions not only about plan returns but also about future contributions from the government and from employees.[16] These contributions may or may not come to pass. One can imagine extended disputes about the validity of the underlying assumptions.

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[12] Bloomberg (2011).

[13] This rate equals the single number that could be used to discount the benefit stream to produce an equivalent liability to the multi-step process described above. The results were sent to each of the 126 plans for review. Plan responses are noted in the table.

[14] Of course, these estimates hinge on the contribution assumption. Actuaries have suggested that a crossover point may never be reached if plans make actuarially determined contributions that are based on a closed amortization period.

[15] Governmental Accounting Standards Board (2011a, 2011b, and 2011c).

[16] Interestingly, FASB considered and rejected such an approach not only because the contribution assumptions are so uncertain but importantly because it would "unnecessarily complicate the recognition and disclosure requirements" (Financial Accounting Standards Board, 1985).

Interpretation Challenges

Economists use pension data generated under GASB's standards to address three main economic issues: 1) basic comparisons of pension finances across states and over time; 2) the impact of pensions and other post-employment benefits (OPEBs) on government budgets and borrowing capacity; and 3) the relative compensation of public sector workers. In order to produce useful analysis, the data need to provide meaningful measures of government obligations and be consistent across states and localities and over time. The new GASB discounting proposal fails on two counts.

- It creates a liability number with no theoretical underpinnings in terms of the potential burden on states and localities. It makes no theoretical sense for two identical streams of benefits to have different values based on the funded status of the plan. Having the present discounted value of liabilities depend on both the long-run expected rate of return and on the funded status makes the numbers even more difficult to interpret and difficult to adjust for alternative returns than the current liability numbers.
- It makes comparisons across states and localities difficult because the denominator of the funded ratio will reflect the value of the assets. Moreover, a change in the funded status of a given plan will be attributable to both the change in assets and the impact of that change on the value of liabilities. This feedback complicates a systematic analysis of why funding has improved or deteriorated.

Implications for the Annual Required Contribution (ARC)

GASB's proposals will remove the ARC—the percent of payroll required to cover current service costs and amortize the unfunded liability over a maximum of thirty years— from the measurement of pension obligations and costs. In its place plans will either report an actuarially determined contribution or a statutory contribution. Those that report an actuarially determined contribution will provide information on the underlying actuarial assumptions and methods used. However, there will no longer be any GASB guidelines regarding acceptable parameters, which will make comparisons between plans difficult. Plans with a statutory rate will not be required to report an actuarially determined contribution.[17] This change not only results in a loss in analysts' ability to assess how close plan contributions are to those required to keep the system on track, but also

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[17] Governmental Accounting Standards Board (2011a and 2011b).

creates a tempting escape valve that states could use as ARCs rise beyond reach: introduce a statutory rate and dispense with reporting actuarial calculations.[18]

Conclusion

The purpose of this article is not so much to re-argue the case for using a discount rate based on the nature of the liabilities irrespective of how those liabilities are funded, but rather to provide a "heads up" in the event that the GASB proposals are adopted. The proposals may sharply reduce the reported funded levels of public sector plans. It would be unfortunate if the press and politicians characterized these new numbers as evidence of a worsening of the crisis when, in fact, states and localities have already taken numerous steps to put their plans on a more secure footing. Reforms need to be done carefully and thoughtfully, remembering that pensions are an important part of the total compensation of public sector workers. Policymakers should not let new numbers throw them off course.

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[18] Relying on statutory rates raises potential concerns – they may not be set to adequately reflect a plan's funding needs and their static nature makes it more difficult for a plan's funding strategy to respond to changing conditions.

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Figures

Figure 1. Actuarial Cost Methods Used by State and Local Plans, 2010
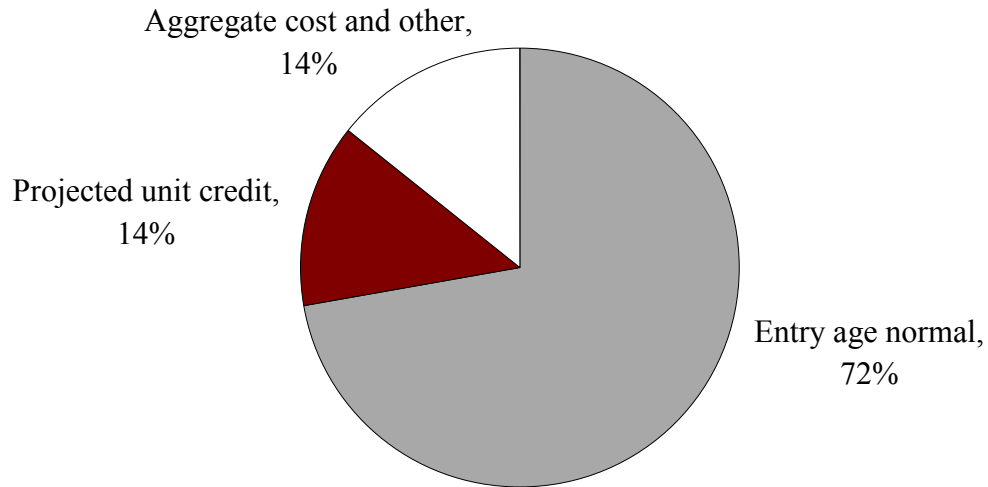
Source: Authors' calculations from *Public Plans Database* (2010).

Figure 2. Aggregate Funded Ratios for State and Local Plans Using Actuarial and Market Assets, 2001-2010
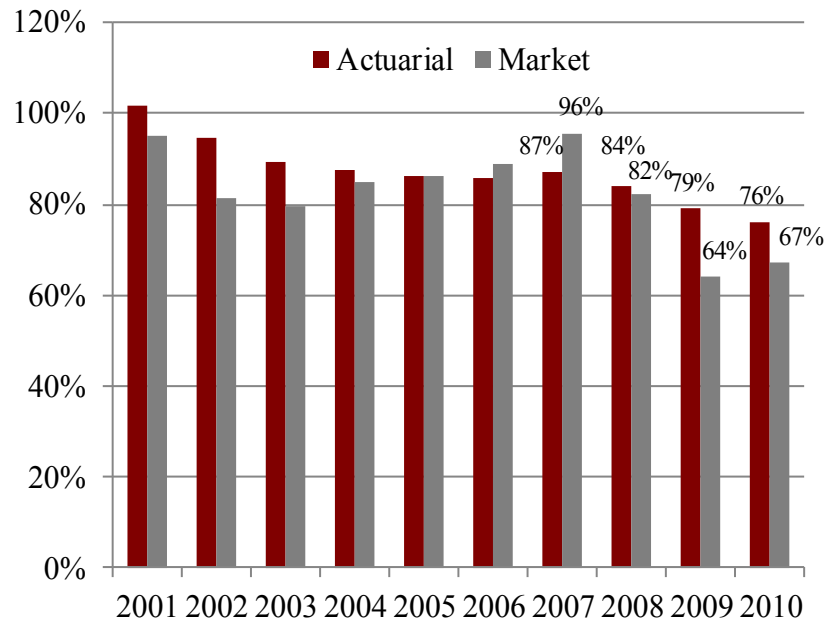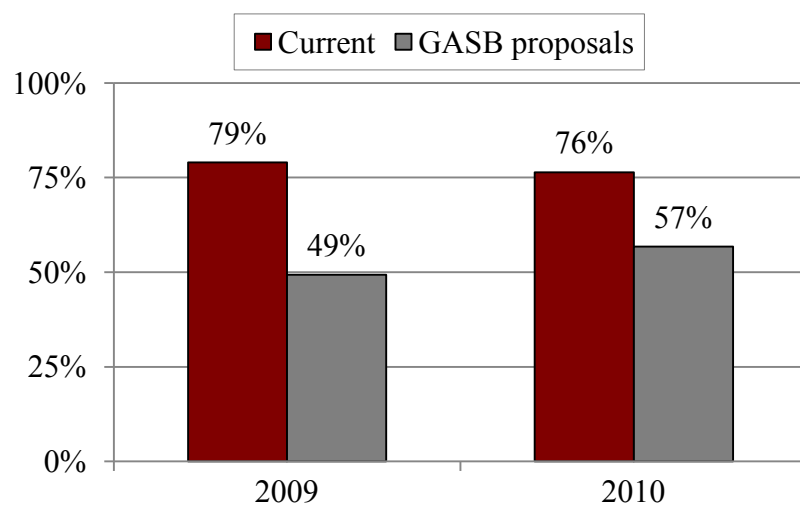

Source: Authors' calculations from *Public Plans Database* (2001-2010).

Figure 3. Aggregate Funded Ratios for State and Local Plans: Currently Reported versus GASB Proposals, 2009-2010

Source: Authors' estimates from *Public Plans Database* and various Actuarial Valuation reports (2009-2010).

Appendices

Appendix A. Methodology

The model estimates the dates when the 126 plans in our sample may exhaust their assets by projecting future pension payments for currently active workers, as well as annual asset levels.

Project Annual Benefit Payments

To determine the annual level of benefit payments that will be owed by the plan sponsor, the model must:

1) Project the age and annual benefit payment at the time of retirement for each individual in the active population.
2) Calculate the benefit payment received by current retirees.
3) Estimate the life expectancy of current and future retirees.

To this end, the model requires detailed information in three categories: demographics, actuarial assumptions, and plan design. The demographic data include the number of active members and current retirees in each plan, the average salaries and tenure of active members of different ages, and the average benefit received by retirees of different ages. Assumptions pertain to rate of return, turnover, vesting, mortality, and salary growth. The plan design data include the employee contribution rate, benefit formula, and COLA provisions. We have detailed, plan-specific assumptions for the 14 largest plans. Each plan is assigned one of the 14 sets of assumptions by comparing calculated liabilities under each of the 14 assumption sets to the plan's own reported liability.

In each year, an active member of a plan will either continue working, separate, retire, or die. At time t, the number of individuals, by birth cohort i, remaining in the plan is

$$pop_{i,t} = pop_{i,t-1} * (1 - mort_{i,t-1}) * (1 - sep_{i,t-1}) * (1 - ret_{i,t-1})$$

the number of individuals who separate is equal to

$$separates_{i,t} = pop_{i,t-1} * (1 - mort_{i,t-1}) * (sep_{i,t-1})$$

and the number of individuals who retire is equal to

$$retirees_{i,t} = pop_{i,t-1} * (1 - mort_{i,t-1}) * (ret_{i,t-1})$$

where $pop_{i,t}$, $mort_{i,t}$, $sep_{i,t}$, and $ret_{i,t}$ are the number of members, mortality rate, separation probabilities, and retirement rates respectively for cohort i at time t.

When an individual separates, his accrued tenure, salary history, and separation date are stored. Those who separate are also assigned a survival probability from their date of separation until retirement age. The starting pension benefit, S, for person n of birth cohort i who separates from the plan at time t is given by

$$S_{i,n} = a * tenure_{i,n,t} * W_{i,n,t} * P(t) * 1(tenure_{i,n} \geq vesting\ period)$$

where a is the plan's accrual rate, $tenure_{i,n}$ is the accrued years of service at the time of separation, and $P(t)$ is the probability of living from time t until retirement. The vesting period is a plan-specific input and $1(.)$ is an indicator function that takes the value of 0 if false and 1 if true.

Benefits for individuals who work until retirement age are computed in a similar manner. The starting benefit for an individual, m, at the time of retirement is

$$R_{i,m} = a * tenure_{i,m,t} * W_{i,m,t}$$

where a is the plan's accrual rate, $W_{i,t}$ is the plan-specific average of the highest annual wages received by person n or m in 2010; and $tenure_{i,t}$ is the accrued years of service as of 2010. In total, the benefits paid to birth cohort i reaching retirement at time t are equal to

$$Benefits_{i,t} = \sum_{n=1}^{N} S_{i,n} + \sum_{m=1}^{M} R_{i,m}$$

In each subsequent year, the expected value of the cohort's total benefit is equal to the previous year's payment multiplied by the plan specific cost-of-living adjustment and the survival probability of living to the next year.

$$Benefits_{i,t} = Benefits_{i,t-1} * (1 + COLA) * (1 - mort_{i,t-1})$$

Total future payments to active workers made by the pension plan in a given year is then equal to

$$B_t = \sum_{i} Benefits_{i,t} * 1(i \geq minimum\ retirement\ age\ at\ time\ t)$$

where $1(.)$ is the indicator function that takes the value of 0 if false and 1 if true.

Current retirees are treated similarly to active employees. The *Public Plans Database* records the total benefits paid to retired employees in 2010 and the proportion of those benefits paid to retirees of different ages. The model assumes that, in each subsequent year, the expected value of each retiree birth cohort's total benefit is equal to the previous year's payment multiplied by the plan-specific cost-of-living adjustment and the survival probability of living to the next year.

In order to project amortization payments, which are set relative to payroll for both current and future plan members, new hires replace employees who separate, retire, or die. The total workforce grows over time according to $growth_{t-1}$ – general population growth projections reported by the U.S. Census Bureau.

$$pop_{i,t} = (pop_{i,t-1} * (1 - mort_{i,t-1}) * (1 - sep_{i,t-1}) * (1 - ret_{i,t-1}) + (pop_{i,t-1} - (pop_{i,t-1} *$$
$$(1 - mort_{i,t-1}) * (1 - sep_{i,t-1}) * (1 - ret_{i,t-1})))) * growth_{t-1}$$

The distribution of the ages of new hires reflects those reported in the Actuarial Valuations of the fourteen largest plans.

Project Annual Asset Levels

Each year, a plan's assets increase with new contributions and income earned. Its assets decrease with the benefits it pays. The model assumes that plans receive contributions and pay benefits at two points during the year. Accordingly,

$$Assets_t = (Assets_{t-1} * (1+r)) + \left(\frac{(C_t - B_t)}{2} * (1+r)\right) + \left(\frac{(C_t - B_t)}{2}\right)$$

where r is the assumed rate of return on plan assets, and B_t is the annual benefit paid in a given year.

C_t is the contribution rate in a given year t. Calculating C_t requires several steps. The first step is to determine the percent of ARC paid in the past. For plans that currently fund based on an actuarially-determined contribution rate, the model calculates the average percent ARC paid from 2001 to 2010. Years in which plans made unusually high contributions due to the issuance of Pension Obligation Bonds are ignored. Similarly, negative amortization is top-coded at 100 percent. The second step is to multiply the dollar value of the ARC in 2010 by the average percent ARC paid to produce an adjusted contribution. Finally, it is necessary to make an assumption about where the contribution dollars go. Our assumption is that they first go to cover normal cost and any excess is applied to amortization.

Contribution amounts then need to be related to projected payrolls. The normal cost and amortization payments are divided by payroll in 2010 to produce two percentages. The normal cost percentage is applied to the payroll for current members. The amortization percentage is applied to the payroll for both current members and future hires. For plans that fully fund, the amortization payments are assumed to stop after 30 years because plan investment and actuarial assumptions are fully met and the plan generates no additional unfunded liability.

Appendix B. Funded Ratios for State and Local Plans under GASB Guidelines, 2010

Plan Name	Funded Ratio			Blended Rate
	Current	Current Liabilities w/ Market Assets	Blended Rate Liabilities w/ Market Assets	
TOTAL	76.4%	67.1%	56.8%	6.6%
Alabama ERS	68.2	57.2	57.2	8.0
Alabama Teachers	71.1	60.2	60.2	8.0
Alaska PERS	62.4	52.0	55.8	8.3
Alaska Teachers	54.3	45.2	39.4	6.4
Arizona Public Safety Personnel	67.7	55.6	55.6	8.5
Arizona SRS	76.4	61.4	61.4	8.0
Arkansas PERS	74.1	64.7	64.7	8.0
Arkansas Teachers	73.8	67.2	67.2	8.0
California PERF	83.4	65.4	65.4	7.8
California Teachers	71.0	59.7	41.2	5.1
Chicago Teachers	67.1	54.8	32.1	4.5
City of Austin ERS	69.6	69.6	63.8	6.4
Colorado Municipal[a]	73.0	72.0	44.3	5.0
Colorado School[a]	64.8	63.4	51.6	6.4
Colorado State[a]	62.8	61.3	48.4	6.2
Connecticut SERS	44.4	37.0	34.5	8.3
Connecticut Teachers	61.4	52.3	52.3	8.5
Contra Costa County	80.3	75.6	75.6	7.8
DC Police & Fire	100.7	92.4	92.4	7.0
DC Teachers	118.3	99.2	99.2	7.0
Delaware State Employees	96.0	83.3	83.3	8.0
Denver Employees	85.0	75.5	75.5	8.0
Denver Schools	88.9	88.2	88.2	8.0
Duluth Teachers	81.7	61.5	43.6	5.8
Fairfax County Schools	76.5	67.4	67.4	7.5
Florida RS	86.6	76.7	76.7	7.7
Georgia ERS	80.1	78.0	78.0	7.5
Georgia Teachers	85.7	72.2	72.2	7.5
Hawaii ERS	61.4	53.1	40.8	5.9
Houston Firefighters	93.0	81.5	81.5	8.5

Plan Name	Funded Ratio			Blended Rate
	Current	Current Liabilities w/ Market Assets	Blended Rate Liabilities w/ Market Assets	
Idaho PERS	78.9%	78.8%	78.8%	7.7%
Illinois Municipal	83.3	86.3	86.3	7.5
Illinois SERS	46.1	38.6	25.5	6.2
Illinois Teachers	48.4	40.5	17.5	4.1
Illinois Universities	46.4	40.2	43.5	8.5
Indiana PERF	85.2	72.9	77.4	7.3
Indiana Teachers[b]	44.3	40.9	41.3	7.5
Iowa PERS	81.4	75.1	71.2	7.1
Kansas PERS	62.0	51.9	46.1	7.3
Kentucky County	65.5	56.8	56.8	7.8
Kentucky ERS	40.3	33.8	23.7	4.4
Kentucky Teachers	61.0	51.2	51.2	7.5
LA County ERS	83.3	71.7	71.7	7.8
Louisiana SERS	57.7	54.6	55.4	8.3
Louisiana Teachers	54.4	50.8	50.8	8.3
Maine Local	96.3	83.6	83.6	7.8
Maine State and Teacher	66.0	57.6	57.6	7.8
Maryland PERS	59.7	54.8	54.8	7.7
Maryland Teachers	65.4	60.2	60.2	7.7
Massachusetts SERS	81.0	78.0	78.0	8.3
Massachusetts Teachers	66.3	62.6	62.6	8.3
Michigan Municipal	74.5	64.1	64.1	8.0
Michigan Public Schools	71.1	58.8	55.9	7.3
Michigan SERS	78.0	62.8	53.6	6.6
Minneapolis ERF	65.6	65.6	65.6	8.5
Minnesota PERF	76.4	66.0	34.1	4.9
Minnesota State Employees	87.3	74.9	46.0	5.6
Minnesota Teachers	78.5	67.7	49.0	6.0
Mississippi PERS	64.2	53.5	53.5	8.0
Missouri DOT and Highway Patrol	42.2	40.3	40.3	8.2
Missouri Local	81.0	85.0	85.0	7.5
Missouri PEERS	79.1	65.7	69.9	8.0
Missouri State Employees	80.4	68.3	68.3	8.5
Missouri Teachers	77.7	63.8	58.0	6.9
Montana PERS	74.0	63.3	63.3	8.0

| Plan Name | Funded Ratio | | | Blended Rate |
	Current	Current Liabilities w/ Market Assets	Blended Rate Liabilities w/ Market Assets	
Montana Teachers	65.5%	55.8%	55.8%	7.8%
Nebraska Schools	82.4	69.5	69.5	8.0
Nevada Police Officer and Firefighter	67.8	57.6	38.5	5.8
Nevada Regular Employees	71.2	60.1	60.1	8.0
New Hampshire Retirement System	58.5	54.1	55.1	8.5
New Jersey PERS	62.0	52.5	30.9	4.5
New Jersey Police & Fire	69.0	58.3	34.4	4.4
New Jersey Teachers	57.6	44.9	26.8	4.2
New Mexico PERF	78.5	64.2	64.2	8.0
New Mexico Teachers	65.7	57.4	53.0	7.4
New York City ERS	77.2	64.2	48.9	5.6
New York City Teachers	62.9	53.3	40.6	5.0
New York State Teachers	100.3	87.0	87.0	8.0
North Carolina Local Government	99.6	95.2	95.2	7.3
North Carolina Teachers and State Employees	95.4	90.3	90.3	7.3
North Dakota PERS	73.4	66.8	44.6	5.7
North Dakota Teachers	69.8	54.5	47.2	6.9
NY State & Local ERS	93.9	85.4	85.4	8.0
NY State & Local Police & Fire	96.7	87.8	87.8	8.0
Ohio PERS	77.0	79.6	79.6	8.0
Ohio Police & Fire	72.8	67.9	67.9	8.2
Ohio School Employees	72.6	60.3	60.3	8.0
Ohio Teachers	59.1	57.2	57.2	8.0
Oklahoma PERS	66.0	60.0	60.0	7.5
Oklahoma Teachers	47.9	41.8	41.8	8.0
Oregon PERS	86.9	86.9	86.9	8.0
Pennsylvania School Employees[c]	75.1	57.7	33.9	4.4
Pennsylvania State ERS	75.2	66.1	57.2	5.9
Phoenix ERS	69.3	56.9	70.9	8.3
Rhode Island ERS	48.4	41.5	41.5	8.2
Rhode Island Municipal	74.0	61.5	61.5	8.3

Plan Name	Funded Ratio			Blended Rate
	Current	Current Liabilities w/ Market Assets	Blended Rate Liabilities w/ Market Assets	
San Diego County	84.3%	68.7%	68.7%	8.3%
San Francisco City & County	91.1	74.5	74.5	7.8
South Carolina Police	74.5	58.8	58.8	7.5
South Carolina RS	65.5	50.8	50.8	7.5
South Dakota PERS	96.3	87.9	87.9	7.8
St. Louis School Employees	85.6	84.4	84.4	8.0
St. Paul Teachers	68.1	55.4	43.2	6.4
Texas County & District	89.4	89.0	89.0	8.0
Texas ERS	85.4	70.8	70.8	8.0
Texas LECOS	86.3	71.8	32.5	4.3
Texas Municipal	82.9	87.8	87.8	7.0
Texas Teachers	82.9	71.3	71.3	8.0
TN Political Subdivisions[d]	89.2	81.8	81.8	7.5
TN State and Teachers[d]	92.1	84.5	84.5	7.5
University of California	86.7	72.8	72.8	7.5
Utah Noncontributory	82.2	76.9	76.9	7.8
Vermont State Employees	81.2	75.0	71.0	8.5
Vermont Teachers	66.5	61.5	59.1	8.5
Virginia Retirement System[e]	72.4	61.3	61.3	7.5
Washington LEOFF Plan 1	127.0	104.4	113.5	8.0
Washington LEOFF Plan 2	117.0	98.4	98.4	8.0
Washington PERS 1	74.0	60.8	36.0	4.3
Washington PERS 2/3	97.2	81.7	90.5	8.0
Washington School Employees Plan 2/3	98.5	82.7	74.8	7.4
Washington Teachers Plan 1	100.5	97.7	91.7	8.0
Washington Teachers Plan 2/3	100.0	60.9	60.9	8.0
West Virginia PERS	74.6	72.6	72.6	7.5
West Virginia Teachers	46.5	46.5	46.5	7.5
Wisconsin Retirement System	99.8	93.9	93.9	7.8
Wyoming Public Employees	84.6	80.2	64.6	6.6

[a] Data for Colorado do not reflect design changes as well as an escalating contribution rate schedule that were adopted in 2011.
[b] The reported funded ratio for Indiana Teachers is made up of two separately funded accounts, the pre-1996 account and the 1996 account. The pre-1996 account is for employees hired prior to 1996 and is funded under a pay-go schedule. The 1996 account is for employees hired afterwards and is pre-funded.

The funded ratio for the pre-funded account is currently 94.7 percent. As expected, the pay-go account has a much lower funded ratio of 33.1 percent.

^c Since July 1, 2004, Pennsylvania Schools has not fully paid its ARC. Under Act 120 of 2010, the Pennsylvania School Employees Retirement System (PSERS) is moving to fully fund the plan by gradually increasing the contribution rates each year. Based on the funding provisions of Act 120, PSERS is not required to use a blended rate to discount liabilities and its 2010 funded ratio under the proposed GASB accounting standards is 57.7 percent.

^d Tennessee plans only perform actuarial valuations in odd numbered years. The current funded ratio and market funded ratio for Tennessee plans are based on 2011 data.

^e The reported funded ratios represent only state employees, teachers and political subdivisions for the VRS plan. They do not reflect the information in the other plans – SPORS, JRS and VaLORS.

Sources: Various 2010 and 2011 actuarial valuations; and *Public Plans Database* (2001-2009).

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