

RETHINKING TEACHER RETIREMENT BENEFIT SYSTEMS

COMMENTS ON SESSION II:
FISCAL SUSTAINABILITY OF RETIREE BENEFIT SYSTEMS

James R. Lamenzo

Actuary, Massachusetts Public Employee Retirement Administration Commission

Rethinking Teacher Retirement Benefit Systems
Peabody College of Vanderbilt University
Nashville, Tennessee
February 19-20, 2009

The following paper is intended to illustrate the principal points of my presentation at the NCPI conference as a discussant responding to the paper *Teacher Retirement Ponzi Schemes*. My comments primarily reflect my experience with public pension plans in Massachusetts. All of the comments in this paper are entirely my own and do not necessarily reflect the views of PERAC, any Commissioner, or staff of the Commission.

This paper provides comments on research findings presented at a national conference, "Rethinking Teacher Retirement Benefit Systems," in Nashville, Tennessee on February 19-20, 2009. The views expressed in this paper do not necessarily reflect those of sponsoring agencies or individuals acknowledged. Any errors remain the sole responsibility of the author.

As the actuary for the Massachusetts Public Employee Retirement Administration Commission (PERAC), I see dozens of newspaper articles each week portraying public defined benefit plans in a negative light. Most of the articles concern Massachusetts' plans but I also read many articles regarding large plans across the country. In fact it is hard to find a positive newspaper article about public plans. I did manage to find one in either 2006 or 2007 in the Wall Street Journal. The premise of the article was that after four years of favorable investment returns (2003-2006) maybe things weren't so bleak after all. Then came the investment losses in late 2007 and 2008 and the negative tone of the articles intensified.

I probably review defined benefit pension articles differently than people without a pension background. For starters, I review all such articles with suspicion. I have found too many articles to be misleading or inaccurate. Others attempt to cause panic. I believe many individuals and groups have preconceived notions about public defined benefit plans. In short, I believe most of these articles have a negative bias. So you can probably imagine my first thoughts when I saw the title of the paper I was to review.

I take issue with equating teacher retirement plans with a Ponzi scheme. In his introduction, the author describes a "fundamentally fraudulent system of accounting our country uses..." He concludes his second paragraph with "...it seems fully appropriate to characterize many, if not most, teachers' retirement plans as Ponzi schemes." Call me old fashioned, but I just don't think this negative characterization is fair. At best, it makes any reasonable discussion of issues surrounding teacher plans difficult. At worst, it is an unwarranted attack used to incite the public against these plans.

Much of the beginning of the author's paper deals with the Ponzi scheme idea in general, and his opinion that it permeates our financial system and Social Security. I am not an economist so I will leave others to debate the author's points on these issues. There is one thing we can agree on-

Social Security is a big problem. However, I believe the problem is fixable. Potential benefit or retirement age adjustments aside, I believe the trust needs to be funded and invested like a pension plan. I probably could spend several pages discussing my opinions with respect to Social Security, but admittedly I am no expert so will confine the rest of my comments to issues related to teacher retirement.

There are three specific issues I would like to address. These issues relate to the accounting, funded status, and employee contributions in public plans. In the final paragraph I will briefly discuss the 2008 investment losses and how these will affect pension plans going forward. Although the focus of my comments does not specifically relate to the impact of the 2008 losses, the fact is that the magnitude of the losses has increased the sentiment against public plans.

Accounting

One of the premises of the author's paper is that pension obligations are measured with fundamentally flawed accounting using discount rates that are "miles too high for the purpose of valuing benefit commitments" (page 16). This is the most complicated point in my review and there is room for reasonable discussion. However, I believe the author totally misses the point with respect to accounting issues.

As an actuary, my main concern is to fund a plan properly. I am not as concerned about accounting especially in the public sector, for reasons I will discuss later. Accounting rules can be misleading or confusing to a person unfamiliar with defined benefit plans. This is true whether the plan resides in the public or private sector. To illustrate my point see Exhibit 1- Crash Course in Actuarial Basics.

Crash Course in Actuarial Basics

	Accounting	Funding
1. Interest Rate	4%	8%
2. Actuarial Liability	200	100
3. Present Value (PV) of Accrued Benefit	160	80
4. Assets	70	70
5. Funded Ratio: (4)/(2)	NA	70.0%
6. Accounting Funded Ratio: (4)/(3)	43.8%	NA

Actuarial Liability = PV of liabilities based on service to date but includes future salary increases

PV of Accrued Benefit = PV of benefits if employees terminate today

Conclusion - The funded ratio in the Accounting column is misleading at best.

To understand the figures in the chart, I'll provide some quick definitions. The actuarial liability for each member essentially represents the present value of benefits earned to date (based on service) but taking into account the member's future salary increases. Think of the liability as a benefit projected to retirement but pro-rated for service to date. The actuarial liability for each member is added together to get the total actuarial liability for the plan.

The accrued benefit is calculated in the same manner but now the pay is based on the current pay to date. So in this case both the pay and service are "frozen". The accrued benefit reflects the benefit the member is eligible to receive at retirement age if the member leaves employment today. The present value of the accrued benefit represents the value today of this future payment stream. The present value of the accrued benefit will be less than the accrued liability because the accrued benefit does not consider future salary increases.

Notice how the actuarial liability and the present value of accrued benefit are greater when the 4% interest assumption is used. The easiest way to understand why this is so is to think of the inverse of interest earned on a bank account. Obviously, you would rather earn an 8% interest rate than a 4% interest rate on your money. If we are measuring a present value (instead of accumulating an account), we will need to have more today if the fund will accumulate at a lower interest rate to end up with the same amount in the future.

For funding, a long term rate of return on investments is used to determine contributions made by the employer. This assumption is also known as the investment return assumption. An 8.0% investment return assumption is commonly used by actuaries for both public and private sector actuarial valuations. A proposed methodology for accounting for public plans would require the use of a risk free rate of return or discount rate. By definition, a discount rate is a short term rate of return. In Exhibit 1, I assumed the discount rate to be 4.0%.

I believe the argument that public plans should use a 4.0% discount rate for accounting does not hold water. In the private sector, a lower discount rate is reasonable because companies can and do go out of business. In the public sector this rarely happens. If a company goes out of business, the benefits accrued to date must be settled at current market rates. As described earlier, the 4.0% interest rate generates higher liabilities than an 8.0% rate. Therefore, using a 4.0% rate makes the plan look more poorly funded than it actually is using an 8.0% investment return assumption. The 4.0% rate is only valid if the public plan were shutting down. Showing what the liabilities would be on a “shutdown basis” does not make any sense to me. Such a determination has absolutely no impact on the funding of the plan.

Most actuaries deem an 8.0% investment return assumption reasonable assuming an allocation to equities or the like of 65% - 70%. In Massachusetts, the State pension fund has earned an annualized return of 9.3% since inception (the 24 years from 1985-2008). This annualized return

was achieved in spite of the 2008 return of almost -30%. I know of no public sector plan that uses a long term rate of return of 4.0% to fund its pension plan.

The funded ratio reflects the plan assets divided by the actuarial liability. As shown on the exhibit (item 5, second column), the funded ratio is 70%. This represents a fairly well funded plan. Most public plans in Massachusetts had funded ratios of about 25%-35% at the inception of funding in 1989. These plans have made significant progress toward reaching full funding (a 100% funded ratio) in the last 20 years.

Now let's look at the accounting funded ratio (item 6, column 1). The assets are unchanged but the denominator in the product is now much higher. The accounting method uses the present value of accrued benefit in the denominator. The funded ratio on this basis is only about 44%. The measurement of the funded position is based on the premise that the plan were to shut down today.

I am not uncomfortable with using the accounting measure by itself. However, I understand what the measurement is telling me and what it is not telling me. It is not telling me anything about the value of the plan on a funded basis, because I would not use the accounting basis to determine the appropriation that should be made to a plan. To people not familiar with the mathematics behind the numbers, it may appear the plan is poorly funded. Or worse, people intent on undermining the defined benefit plan, may attempt to mislead the public by using the accounting measure. I argue having two separate measurements will cause confusion. The bottom line is if you really think you can only get a 4% return on a long term basis, there are a lot more problems with the economy than what's merely happening in the pension world.

Funding Issues

On page 16 of the paper, the author indicates “over two in five teacher pension plans were underfunded by 20 percent or more. And one in five was underfunded by 30 percent or more”. Well the inverse is also true- three in five are 80% or more funded and four in five are 70% or more funded. These funded ratios represent well funded plans. Actuaries may disagree about the target funding level, but most actuaries would consider a plan that is 80% funded, a well funded plan.

In Massachusetts, the Teachers’ Retirement System did not begin actuarial funding until 1990. The plan had been on a pay-as-you-go basis for about 50 years. Pay-as-you-go means that the contributions to the pension fund are made as needed to pay the current benefits for existing retirees. The concept of actuarial funding is to pay the costs for each member during their working lifetime and not leave these costs for future generations. Since the plans were not funded on an actuarial or “advance” funding basis, unfunded actuarial accrued liabilities were built up over time. As part of the funding process, these unfunded amounts must be amortized in addition to paying the ongoing cost of the plan.

The ongoing cost of the plan is referred to as the “normal cost”. A better term might be “current cost”. Normal cost is the present value of benefits expected to be earned in the current year. I consider normal cost to represent the best measure of the true cost of the plan. In Massachusetts, only 20% - 25% of the annual pension appropriation made by employers is normal cost. Approximately 75% - 80% represents payments to amortize the unfunded liability! These plans were not properly funded for 50 years and we are trying to make up for lost time.

The funded ratio for the Massachusetts Teachers’ Retirement System was about 39% in 1990. This figure increased to about 74% as of January 1, 2008. This is quite significant progress. Even with the 2008 return of -30%, we expect the funded ratio on January 1, 2009 to be about 59%.

If you look at a graph of the funded ratio over time it is moving upward and to the right. Despite the setback in 2008, the plan has moved steadily toward full funding in the past 20 years.

In this section I have indicated plan funded ratios are generally in good shape and much of the employer's contribution is due not to expensive plans but instead the "past sins" of not funding. But there is one more item that needs to be addressed that you won't read about in the newspapers-employee contributions.

Employee Contributions

On page 17, the author asks, "How will the teachers' retirement pension schemes and their government sponsors ultimately deal with their funding problems?" I would first respond as discussed above that the funding problems are overblown. Second, as also discussed above, in many cases the problems are of the employer's own making for not having a funding policy. But finally, we all must recognize that employees in the public sector pay a significant portion of their pay to help fund these pension plans.

Most, if not all, large public teacher pension plans have employee contribution requirements. In Massachusetts, new hires after 2000 contribute at a rate of 11% of pay. I am a member of the State Retirement System and I contribute at a rate of 9% of pay plus 2% for pay in excess of \$30,000. Through my employee contribution, I am contributing most, if not all, of the cost of my own retirement benefit. I can assure you I did not take the job as the State's actuary for the pension benefit. Likewise, Massachusetts teachers are paying for most if not all of their own benefit. The teachers receive an enhanced benefit (compared to state employees) if they remain in service for 30 years but the 11% contribution rate is one of the largest in the country. If a teacher does not remain

in service for 30 years, they will receive a refund so that the contribution mirrors that of a state employee (9% + 2% over \$30,000).

Let's look at the normal cost as a percentage of pay. For Massachusetts teachers, the contribution is 9.7% of pay (teachers in service prior to 2000 elected whether to adopt the enhanced plan benefit with the 11% contribution rate or maintain their current benefit and contribution rate). The employer normal cost is currently about 2.0% of pay. The fact is that the plan is cheap on a percent of pay basis for the employer. The employee is paying the bulk of the ongoing cost of the plan. The plan was initially designed so that employees and employers would share equally in the costs of the program. Over time, the law has changed and the employee has taken on a greater and greater share of the cost.

Effect of 2008 Market Losses

Much of this discussion has ignored the impact of the 2008 market loss. This loss will have a significant and lasting impact on plan funding. We must recognize that the 2008 loss is unprecedented in terms of public sector plan funding. I acknowledge there will be difficulties in dealing with this loss, but as a starting point, barring a run up in plan assets, we must assume that it will take 5-10 years to recover from this loss. Although this loss will change some of the strategies and recommendations made to plan sponsors in the short term, over the longer term this does not change my thinking on any of the issues outlined in this paper. Patience is required to properly fund these plans. Developing sound funding strategies and educating plan sponsors will be critical to the success of public defined benefit plans.