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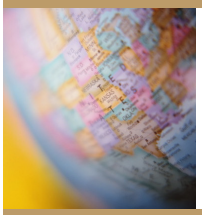

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FORENSICS AND THE FUTURE OF A CONNECTICUT PENSION PLAN

*By Jean-Pierre Aubry and Alicia H. Munnell**

Introduction

The State of Connecticut administers six retirement systems. The two largest are the State Employees Retirement System (SERS) and the Teachers' Retirement System (TRS). Over the past decade, despite a concerted effort by the State,[1] the funded status for both these systems declined by about 20 percentage points and, as of 2014, stood at 42 percent for SERS and 59 percent for TRS – among the lowest in the nation. The State requested that the Center for Retirement Research provide an assessment of both SERS and TRS to:

- identify factors that have led to today's unfunded liability;
- project the systems' finances under their current funding approaches; and
- present alternatives to shore up the systems' finances and improve budget flexibility.

This *brief* reports on the results of that effort for one of the Connecticut plans – SERS – and shows how a look backward helps define the options going forward.

The discussion proceeds as follows. The first section describes how the plan's initial legacy costs, combined with subsequent inadequate contributions, returns falling short of assumptions (after 2000), and adverse actuarial experience, contributed to SERS' current low funded ratio and large unfunded liability. The second section describes the potential for rapidly rising pension costs if Connecticut continues to target full funding by 2032, and it offers two options for more realistic financing of the unfunded liability: 1) replace the 2032 target with a reasonable rolling amortization period; or 2) separately finance the benefits for members hired prior to pre-funding on some other basis. The trade-off is that any such relaxation

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in timing would be accompanied by more serious funding of the plan, using a lower assumed rate of return and amortization based on level-dollar payments. The third section lays out the case for separately financing legacy costs: more equitable and predictable financing of benefits for those hired before pre-funding and a more accurate representation of the cost of benefits for current employees. The final section concludes that adopting a realistic funding scheme is a high priority and that separately financing the legacy costs is a promising approach not only for Connecticut but also for other states that established plans early and accumulated a large unfunded liability before entering the era of pre-funding.

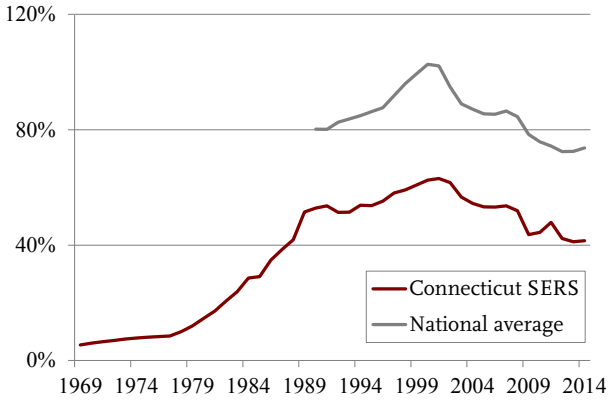
A Brief History of SERS' Funding

In 2014, SERS assets equaled 42 percent of its liabilities. This low funded ratio was the result of large legacy costs from operating on a pay-as-you go basis from 1939-1971, and – once funding began – inadequate contributions, low investment returns since the turn of the century, and early retirement incentives. As shown in Figure 1, the SERS' funded ratio has always been below the national average, although it has shared a similar pattern, rising during the stock market boom from 1990-2000 and then declining through two financial downturns since 2000.

The low funding levels have produced a large unfunded liability, amounting to $14.9 billion in 2014. A major portion of SERS' current unfunded liability stems from the many years of benefits that were promised but not pre-funded. Even when SERS did begin funding in 1971, the required contribution was ramped up slowly, so a full payment was not required until 1985. Thus, SERS entered 1985 with an unfunded liability of $2.5 billion.

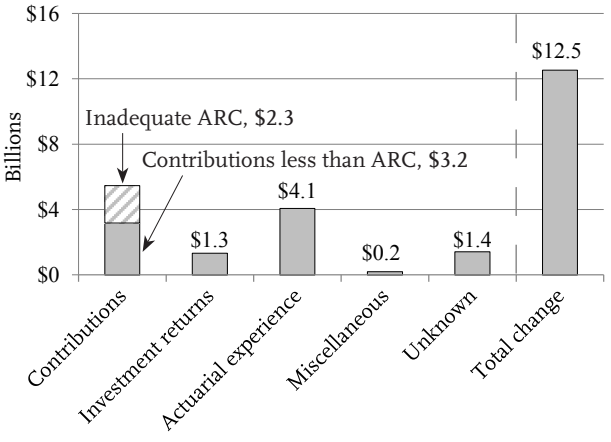
In addition to the legacy costs, the State has fallen short of its funding goals since 1985. The reasons for this failure can be culled from SERS' annual actuarial valuations, which include the starting unfunded liability, the change in the unfunded liability, and the factors that led to that change.[2] The unfunded liability grows each year by the interest on the existing unfunded liability and is reduced by contributions. A host of other factors – such as investment returns, actuarial experience, and benefit changes – also cause the unfunded liability to increase or decrease each year. Moving systematically from one year to the next over the period 1985-2014 presents a clear picture of how the unfunded liabilities developed. The three largest identifiable factors contributing to the growth in SERS' unfunded liability are inadequate contributions, investment returns falling short of the assumed return, and actuarial experience (see Figure 2).

Figure 1. Funded Ratio of Connecticut SERS Compared to the National Average, 1969-2014



Note: Funded ratios for 1970-1971, 1973-1977, 1979-1982, and 1999 were not available for SERS. CRR estimates these ratios using a straight-line approximation between actual data provided in 1969, 1972, 1978, 1983, 1998, and 2000.
Sources: Various actuarial valuations for Connecticut SERS; authors' calculations based on Zorn (1990-2000); and *Public Plans Database* (2001-2014).

Figure 2. Sources of Change to SERS' Unfunded Liabilities, 1985-2014

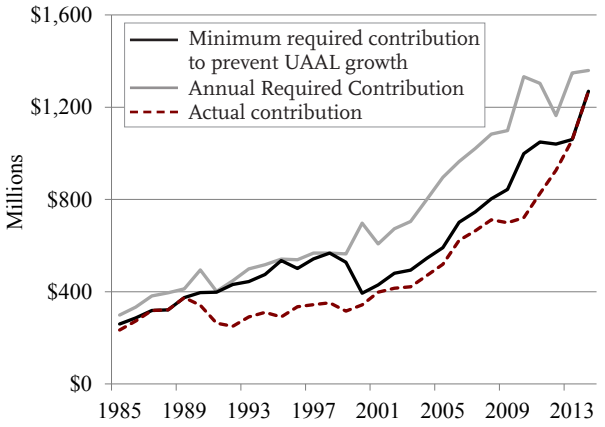


Source: Authors' calculations based on various actuarial valuations for Connecticut SERS.

Inadequate Contributions

Inadequate contributions added $5.4 billion to the 1985 unfunded liability during 1985-2014. Paying down the unfunded liability has two components: 1) calculating an appropriate amortization payment that keeps the unfunded liability from growing each year; and 2) paying the full annual required contribution (ARC). Connecticut has fallen short in both areas Figure 3 compares SERS' actual contribution to the ARC, and the ARC to the amount needed to keep the unfunded liability from growing each year. Prior to 2000, SERS calculated its amortization payments using a "level-dollar" approach that, if paid, would reduce the unfunded liability each year. But union agreements led the State to underpay for many years.

Figure 3. Minimum Contribution to Prevent UAAL Growth, ARC, and Actual Contributions for SERS, 1985-2014



Source: Authors' calculations based on various actuarial valuations for Connecticut SERS.

From 2000 onward, the amortization payment was calculated using a "level-percent-of-payroll" approach that, even if paid, allows the unfunded liability to grow for many years before declining. So, while the State paid more of its required contribution after 2000, the contributions were inadequate due to the choice of amortization method.

Actual Investment Returns Less than Assumed Returns

Prior to 2000, the actual investment returns were much higher than SERS's assumed return and thereby reduced the unfunded liability. Since 2000, however, actual returns have fallen short of assumed returns, averaging only 5.6 percent annually compared to an assumed return of 8 percent (reduced from 8.5 to 8.25 percent in 2008 and then to 8 percent in 2012). From 1985-2014, the difference between actual and assumed returns added $1.3 billion to the unfunded liability.

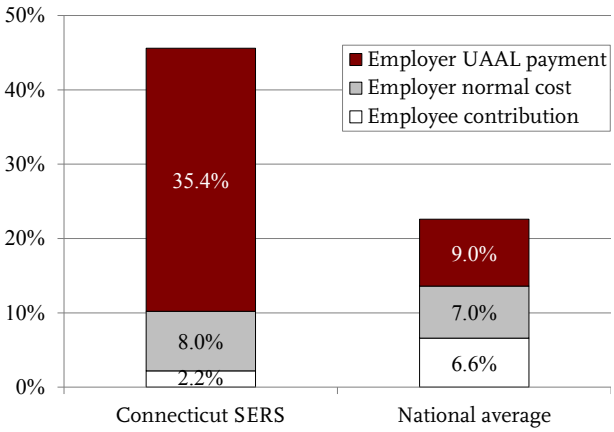
Actuarial Experience

While actuarial assumptions are not expected to precisely match experience in any given year, deviations should offset one another over the long term. But for SERS, deviations from actuarial assumptions have accounted for $4.1 billion in unfunded liabilities since 1985. Data since 2009 suggest that a significant portion of SERS' poor actuarial experience is due to retirement patterns and may be the result of ad-hoc early retirement incentive programs introduced in 1989, 1992, 1997, 2003, and 2009. The remaining portion comes from deviations in other assumptions such as mortality, turnover, and salary growth.

Alternatives Going Forward

As a result of significant underfunding in the past, the majority of pension costs for the State going forward is due to the unfunded liability (see Figure 4). In 2014, the amortization payment for SERS amounted to 35.4 percent of payroll compared to 9.0 percent

Figure 4. 2014 Actuarial Costs as Percentage of Payroll for SERS Compared to the National Average, by Element

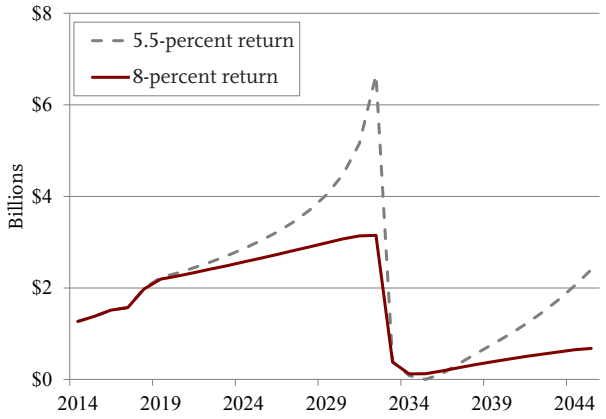


Source: Authors' calculations based on 2014 actuarial valuations for Connecticut SERS, projections by the SERS actuary, and *Public Plans Database* (2014).

for plans nationwide. In contrast, the cost of benefits provided to current employees (the total normal cost) is below the national average. And, with the reduction in benefits for new members, normal costs are projected to decrease from today's rate of 10.2 percent of payroll to about 9.2 percent of payroll.

Under the current arrangements, Connecticut is scheduled to pay off SERS' $14.9 billion unfunded liability by 2032. Costs will steadily rise over the next 18 years due to the back-loaded method for amortizing the unfunded liability. If all actuarial assumptions are met, and the system achieves its assumed returns, total costs will increase from $1.3 billion in 2014 to nearly $3.1 billion by 2032. The investment experience over the next 18 years is critical to the projection. If, instead of realizing the assumed return, SERS' investment experience is similar to the past decade, annual costs could balloon to $6.7 billion in order to be fully funded by 2032 (see Figure 5).

Figure 5. Projected ARC for SERS with Returns of 8 Percent and 5.5 Percent, 2014-2045



Source: Authors' calculations based on various actuarial valuations for Connecticut SERS.

Given the potential for very high pension costs that could crowd out essential spending on other government priorities, Connecticut was interested in alternatives. The two main alternatives were: 1) replace the 2032 full-funding date with a reasonable rolling amortization period; or 2) separately finance benefits for members hired before pre-funding over a longer time period.

The rationale for both approaches is that the existing unfunded liability was accumulated over multiple generations and is primarily for the benefits of members hired before the state started to pre-fund its pension; it is not fair to place the entire burden of paying off these benefits on a single generation.

Under either approach, the recommendation is to improve the funding process going forward by switching to a level-dollar method to amortize the unfunded liability and by reducing the assumed rate of return used to discount promised benefits. The level-dollar approach front-loads payments compared to level-percent-of-payroll and thereby improves funded levels more quickly, and it is often easier for budgeting because payments stay fixed in dollar terms. Lowering the assumed return would also increase State contributions and reduce the likelihood that actual returns would fall below the assumed return.

One additional rationale for separately financing the benefits of members hired before pre-funding is that it clarifies the cost of benefits for current workers. The current practice of adding the large amortization payment for this mostly retired group to the normal cost for current workers makes SERS' ongoing benefit promises appear much more expensive than they are.

A Closer Look at Separately Financing Legacy Costs

The idea of separately financing liabilities associated with members hired prior to pre-funding recognizes that these benefits have been consistently underfunded (even after pre-funding started) while benefits for those hired after prefunding have been relatively well funded. Moreover, those hired before 1985 were eligible for relatively generous Tier I benefits, which were replaced by less generous Tier II benefits in 1985 for new hires; and 93 percent of Tier I members are retired, so they form an easily identifiable group.

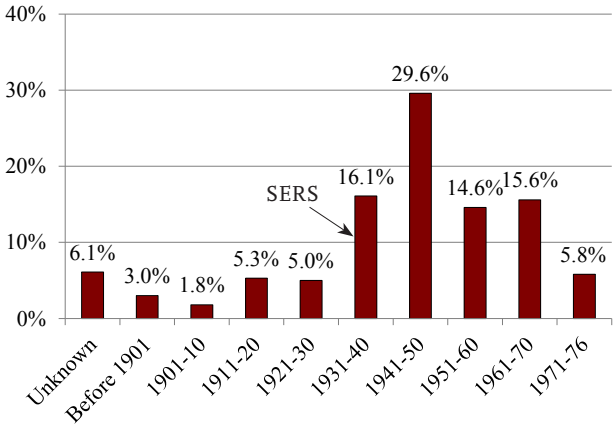
While Connecticut could decide just to pay off the Tier I unfunded liabilities over a longer period, having the State simply pay required benefits as they come due each year may be a better option. First, a pay-as-you-go approach would stretch out payments over the longest period possible, providing the greatest generational equity. Second, it also changes a malleable obligation into a fixed one; whereas the State faces no sanction for not making its full annual required contribution to the pension fund, the benefit payments must be paid each year by law. Third, pay-as-you-go makes the payment schedule fairly predictable, as it is unaffected by future changes in interest rates and investment returns.

The mechanics of separately financing Tier 1 benefits on a pay-go basis need to be worked out. One option is to leave SERS as is and simply redefine the annual required contribution as the ARC for the non-Tier 1 members plus the annual benefit payments for Tier 1 retirees. The drawback is that, even though the State would have put its pension finances on a more realistic footing, SERS would be less well funded, receiving lower contributions over the coming years than under the current arrangement. Alternatively, Tier 1 benefits could actually be separated from SERS, but the Governmental Accounting Standards Board would likely require Connecticut to report the unfunded liability for the pay-as-you-go Tier 1 plan. An approach that might solve this problem is to follow the lead of some private sector plans and turn over the Tier I liability to an insurance company for a fee (which could be financed by a bond issue). Such an approach would transfer the liability from Connecticut's books to those of an insurance company, and reassure retirees that they will receive their benefits.

The other issue is how to allocate the $10.6 billion of assets in the plan. No one knows precisely how assets were allocated between benefits for Tier 1 and other participants in the past, so some assumptions are necessary here. One approach is to allocate all assets to retirees first which, in the case of SERS, means the active members would not be funded at all. A second approach, which might be used in the private sector, is to pro-rate the assets between retirees and actives based on liabilities. A third approach would be to allocate all the assets to actives first, so that the retirees would not be funded at all.

Regardless of the details, strong arguments exist for separating out the large liabilities associated with the start of the plan. The case for separation is particularly strong when combined with a commitment to seriously fund the remaining plan (by reducing the assumed return, amortizing in level dollar amounts, and other changes). If this approach works in Connecticut, it could be helpful in many other states that have also had a long lag between the establishment of their plans and the start of funding (see Figure 6).

Figure 6. Percentage of State and Local Plans Established or Significantly Restructured, by Date



Source: U.S. Congress (1978).

Conclusion

Connecticut faces the potential of sharply rising pension costs over the next 18 years if it continues with its current plan to fully fund SERS and TRS by 2032. In both cases, the majority of these costs are a result of the relatively short time period over which each system has chosen to pay down its large unfunded liability. The unfunded liability is a product of nearly 40 years of unfunded benefit promises made prior to the beginning of pre-funding in the 1970s and 1980s, as well as funding shortfalls after the systems started to pre-fund – namely inadequate contributions and investment returns falling short of assumptions (since 2000). Adopting a realistic funding scheme is a high priority. The close look at SERS presented in this *brief* suggests that separating out liabilities for benefits of members hired before funding began seems like a promising approach, if combined with more stringent funding of the ongoing plan.

Endnotes

1 Since 2001, the State has paid, on average, 90 percent of the annual required contribution (ARC) for SERS. For TRS, the State issued $2 billion in pension obligation bonds in 2008 and has paid 100 percent of the ARC since then. Prior to that, TRS funding was less consistent; the State paid more than 80 percent of the ARC from 2001 to 2003, close to 70 percent in 2004 and 2005, and essentially 100 percent in 2006 and 2007.

2 For a detailed description of the methodology, see Munnell, Aubry and Cafarelli (2015).

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