

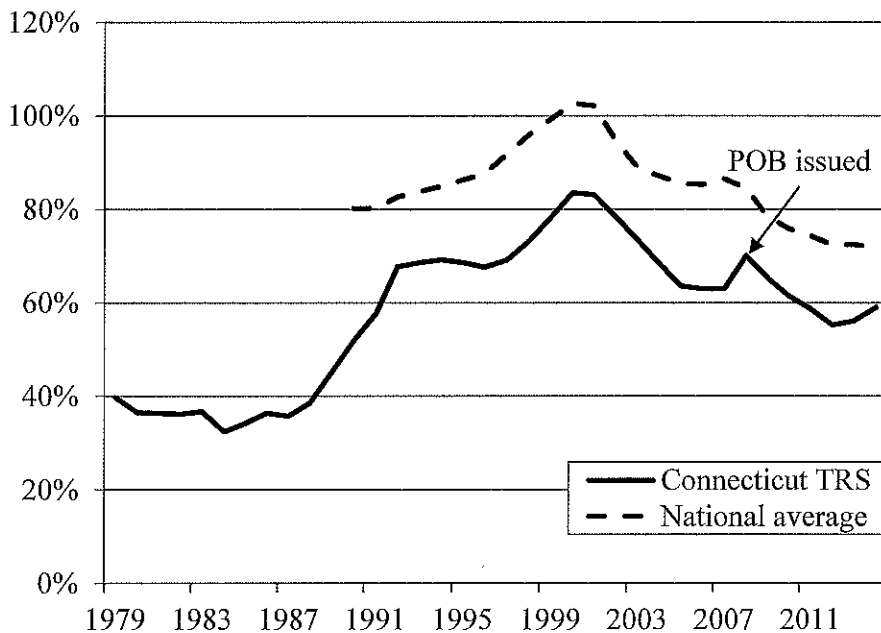
### III. Connecticut Teachers' Retirement System (TRS)

#### A. A Brief History of TRS' Funding

Like SERS, TRS has been providing retirement benefits to its members since at least 1939 – longer than most state and local retirement systems in the United States. And, also like SERS, for much of TRS' history, benefits were paid as they came due, through annual appropriations by the State.

In 1979, the Legislature established an actuarial funding program (Public Act 79-436). Figure 24 shows the funded status for TRS from its first actuarial valuation performed as of July 1, 1979 through 2014 and provides, for comparison purposes, the national average funded ratio for state and local plans since 1990 (data prior to 1990 were not available).

Figure 24. *Funded Ratio of Connecticut TRS Compared to the National Average, 1979-2014*



Note: Beginning in 1992, TRS valuations have been performed biennially in even-numbered years (i.e. 1992, 1994, 1996, etc). Data for odd-numbered years are estimated by taking the average of the year before and after.

Sources: Various actuarial valuations for Connecticut TRS; PENDAT (1990-2000); and *Public Plans Database* (2001-2014).

At the outset, TRS was 40-percent funded (due in large part to the accumulation of employee contributions) and had a \$1.5 billion unfunded liability (equaling 234 percent of TRS' payroll). After about 10 years of pre-funding by the State, TRS entered the 1990s with a funded ratio of only about 50 percent – well below the national average. And its UAAL was still 238 percent of payroll (compared to a national average of 56 percent). While TRS' funded ratio has remained below the national average since 1990, it shares a similar pattern, rising due to strong market performance from 1990-2000, and then declining as a result of two financial downturns since

2000. Today, the unfunded liability of TRS stands at \$11 billion, equaling 282 percent of TRS' payroll compared to the national average of 185 percent.

## **B. Factors Driving Current Unfunded Liabilities in TRS**

Three factors are behind the current unfunded liability of TRS: 1) legacy costs due to benefits promised before TRS was pre-funded; 2) a history of inadequate contributions once the State decided to pre-fund; and 3) investment returns less than expectations since 2000. Each factor will be discussed in detail below. Dollar amounts have not been adjusted for inflation.

### *Legacy Costs*

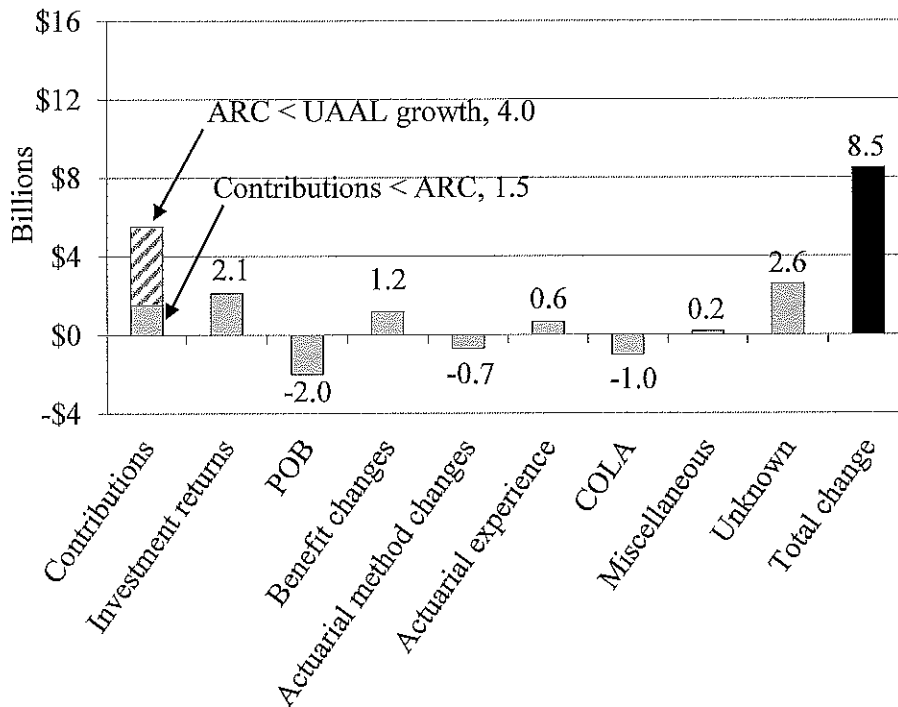
A large portion of TRS' current unfunded liability stems from the many years of benefits promised without pre-funding. Retirement benefits earned by employees prior to 1979 were completely unfunded by the State (although partially pre-funded through employee contributions). When the State decided to pre-fund benefits, it was immediately presented with a \$1.5 billion unfunded liability for benefits earned by employees during the pay-go years. The burden of those unfunded benefits still lingers in the current finances of TRS, accounting for \$4.1 billion, or about 38 percent, of TRS' \$10.8-billion unfunded liability.

In addition to the initial legacy costs, other factors have also played a role in today's unfunded liability. Because detailed data on TRS' unfunded liability are not available from 1979-1982, this assessment of TRS' underfunding focuses primarily on the change in the unfunded liability from 1983-present (see Figure 25).<sup>6</sup>

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<sup>6</sup> See the Appendix for a detailed account of the annual changes to the UAAL since 1985.

Figure 25. Sources of Change to UAAL for TRS, 1983-2014, in Billions



Source: CRR calculations based on various actuarial valuations for Connecticut TRS.

Since 1983, the UAAL has grown by \$8.5 billion – from an initial value of \$2.5 billion to today’s value of \$11 billion.<sup>7</sup> As Figure 28 shows, the two largest identifiable contributors to the growth in the UAAL have been inadequate contributions and low investment returns relative to the assumed return. Other elements, such as actuarial experience, benefit changes, and changes to assumptions and methods have had marginal and essentially offsetting impacts. The Pension Obligation Bond (POB) issued by the State in 2008 – discussed below – lowered the UAAL by \$2 billion, but simultaneously increased the State’s overall indebtedness by \$2 billion.

*Inadequate Contributions*

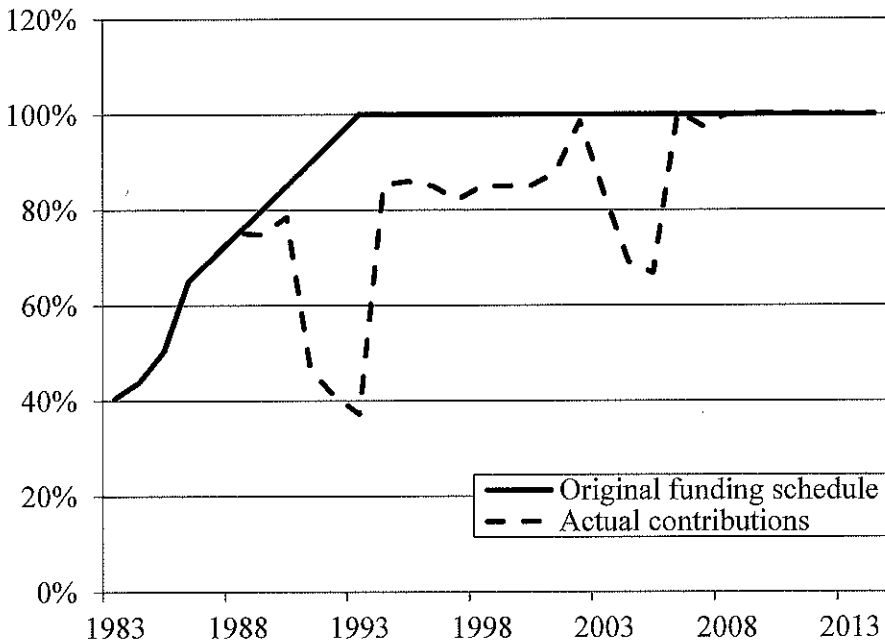
Paying down the unfunded liability has two components: 1) calculating an amortization payment that keeps the unfunded liability from growing each year; and 2) making the full payment. Connecticut TRS has fallen short in both areas. Similar to SERS, TRS’ underpayment of the ARC began as soon as the State decided to pre-fund. At the outset, State law provided for a ramp-up schedule in the State’s funding requirement. In 1979, the State was only required to pay 35 percent of the ARC. This percentage was scheduled to gradually increase until 1993, when the State would be required to pay the full ARC.

Figure 26 shows the actual payments relative to the scheduled percent of ARC from 1983-2014. While the State has made good on its obligation to pay the ARC in recent years, TRS (like

<sup>7</sup> See the Appendix for the methodology of the UAAL analysis.

SERS) has not been as disciplined historically. Even during the ramp-up period prior to 1993, the State often did not meet the lower scheduled payments. Since 1985, underpayment has added \$1.5 billion in unfunded liabilities (see the solid grey area of the contributions bar in Figure 25).

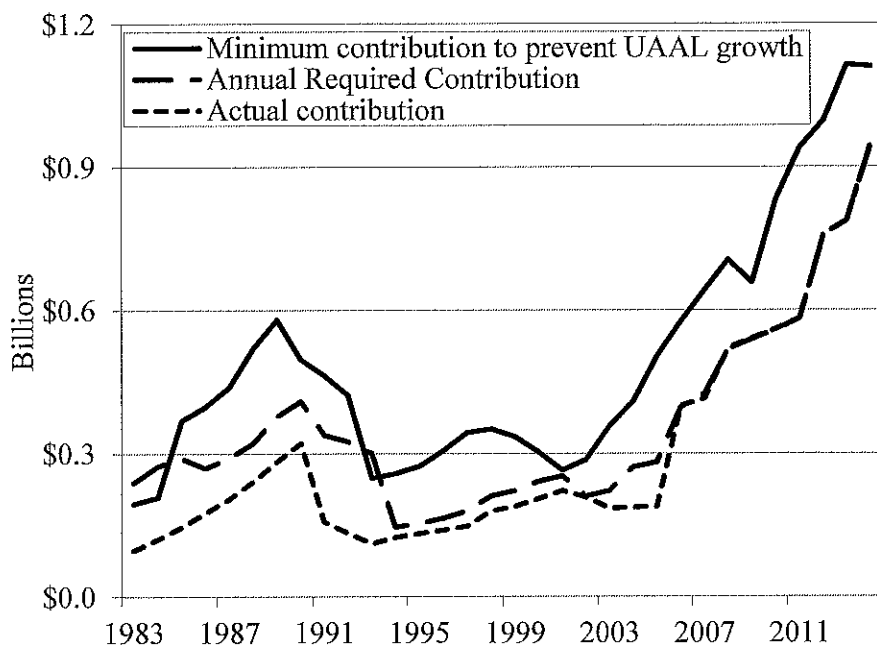
Figure 26. *Percent of Annual Required Contributions Paid for TRS, 1983-2014*



Source: CRR calculations based on various actuarial valuations for Connecticut TRS.

Figure 27 shows the minimum contribution required to prevent growth in the UAAL, compared to the calculated ARC and the actual contributions made from 1983-2014.

Figure 27. *Minimum Contribution to Prevent UAAL Growth, ARC, and Actual Contribution for TRS, 1983-2014*



Source: CRR calculations based on various actuarial valuations for Connecticut TRS.

Since the State began pre-funding TRS, the level-percent-of-payroll method has been used to calculate the UAAL amortization payment. As discussed earlier, this method backloads payments and, when coupled with a long amortization period, results in payments that are too low to keep the UAAL from growing during the early years of the period. From 1979-1992, TRS annually reset its 40-year horizon. In 1992, TRS set the amortization date to 2032. As a result, even if the State had paid the ARC in most years – which it did not – payments would not have been enough to slow the growth of the UAAL. Since 1985, the use of the level-percent-of-payroll method to calculate the amortization component of the ARC has added \$4.0 billion in unfunded liabilities (see the hatched grey area of the contributions bar in Figure 25).<sup>8</sup> In combination with the \$1.5 billion in unfunded liabilities from underpayment of the ARC, the total unfunded liabilities due to inadequate contributions for TRS are \$5.5 billion.

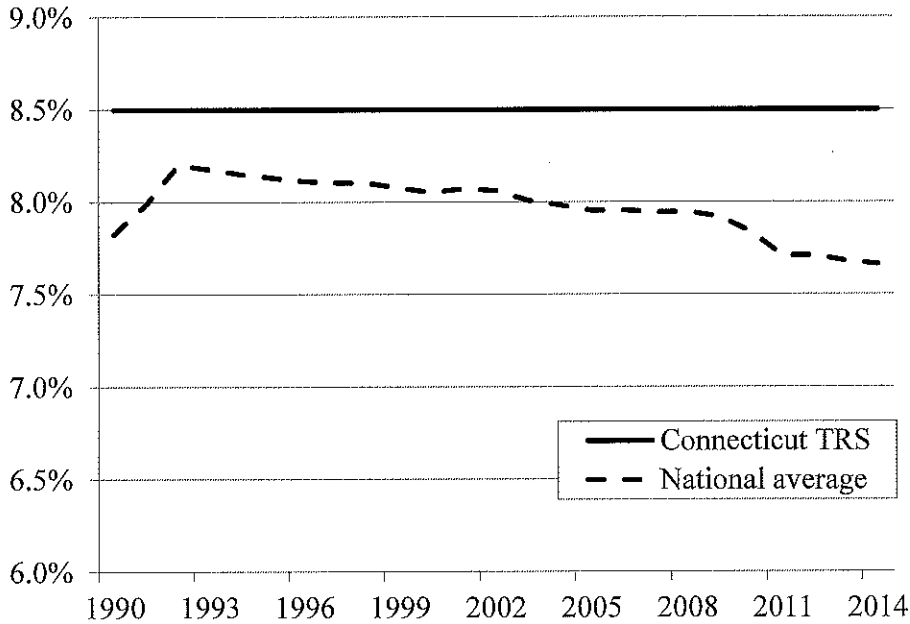
### *Investment Returns*

The impact of investment returns on the unfunded liability depends on the difference between the system's assumed return and actual return. For TRS, this difference has added \$2.7 billion in unfunded liabilities since 1985. Figure 28 shows the TRS' assumed return compared to the national average from 1990-2014. Like SERS, TRS' assumed return has been, and continues to

<sup>8</sup> A smaller issue with the calculated ARC is that there is a delay between when the ARC is calculated and when it is scheduled to be paid. As a result, the amortization payment scheduled for each year is generally based on the UAAL from two or three years prior. This situation often results in contributions that are inadequate for the current year's unfunded liability.

be, high compared to the national average. However, unlike SERS, TRS has not lowered its assumed return in the wake of the financial crisis. This reluctance to lower the return assumption is difficult to understand given that, since at least 2000, the assets of TRS and SERS have both been held within Connecticut's Combined Investment Fund and have had nearly identical asset allocations.

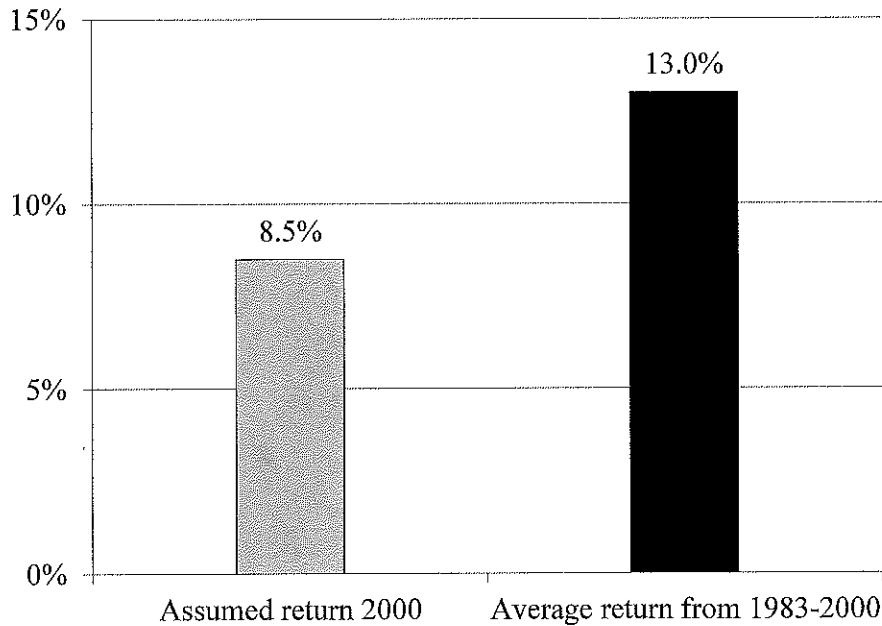
Figure 28. *Assumed Return for TRS Compared to the National Average, 1990-2014*



Sources: Various actuarial valuations for Connecticut TRS; PENDAT (1990-2000); and *Public Plans Database* (2001-2014).

Figure 29a compares the actual and assumed return for TRS from 1983-2000. Over that period, TRS' investment return was 4.5 percentage points above its assumed return. As a result, investment experience from 1985-2000 *reduced* unfunded liabilities by \$3.5 billion.

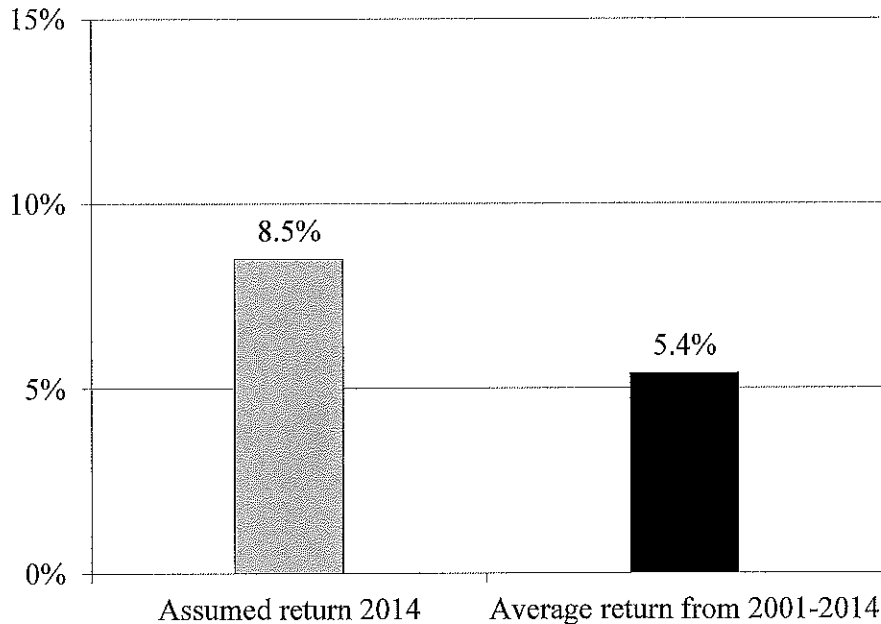
Figure 29a. *Actual and Assumed Investment Return for TRS, 1983-2000*



Sources: Various actuarial valuations for Connecticut TRS; and U.S Census Bureau (1983-2000).

Figure 29b compares the actual and assumed returns for TRS from 2001-2014. Unlike the prior years, TRS' investment experience during this period was more than 3.0 percentage points below its assumed return. As a result, investment experience has added \$5.7 billion in unfunded liabilities since 2000.

Figure 29b. *Actual and Assumed Investment Return for TRS, 2001-2014*



Sources: Various actuarial valuations for Connecticut TRS; and U.S Census Bureau (2001-2014).

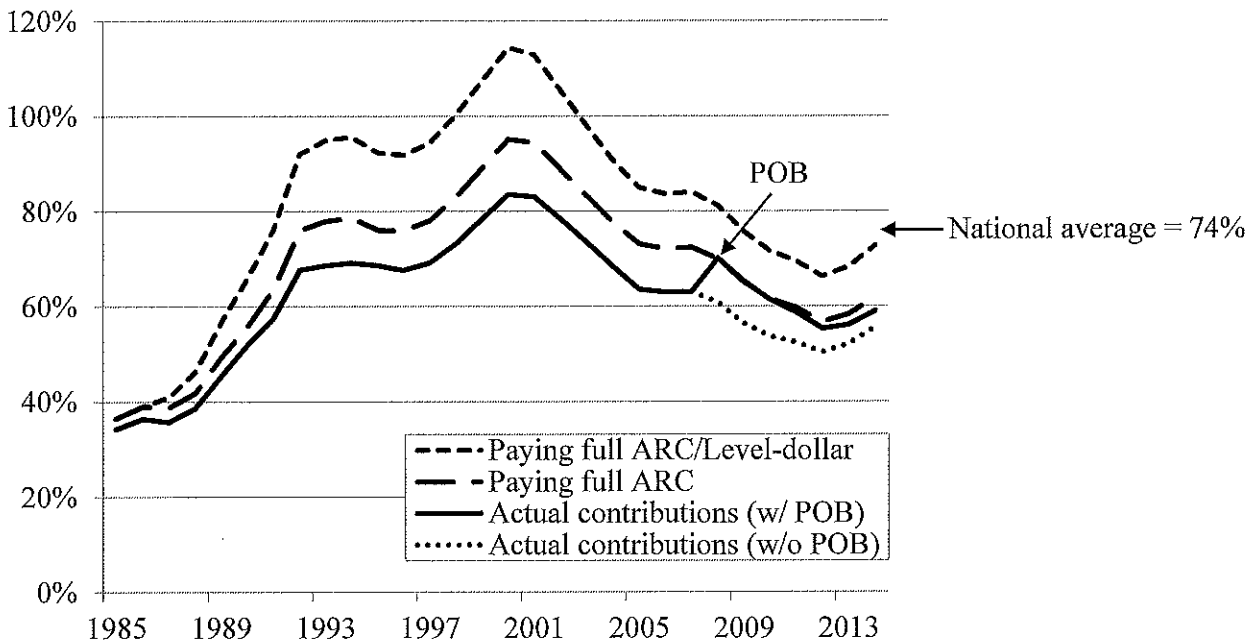
### C. An Alternate History for TRS: Controllable vs. Uncontrollable Factors

Like SERS, the majority of TRS' current underfunding stems from the legacy of unfunded benefits, inadequate contributions throughout the State's history of pre-funding, and low investment returns relative to the assumed return since 2000. Some of these factors are more controllable than others. Nothing could be done about the initial legacy costs, other than to have had the State pre-fund benefits since TRS' inception. The impact of the low returns could have been mitigated by lowering the assumed return, but actual investment performance is extremely difficult to predict. However, contributions (and how they were calculated) were definitely within the control of the State, and the State often knowingly underpaid.

What would TRS' funded level be today if the plan had: a) fully paid the ARC from 1985-2014; and b) used a level-dollar amortization method throughout? To answer this question, we recalculate TRS' funded ratio over time under these two assumptions (see Figure 30).



Figure 30. TRS Funded Ratio under Various Funding Regimes, 1985-2014



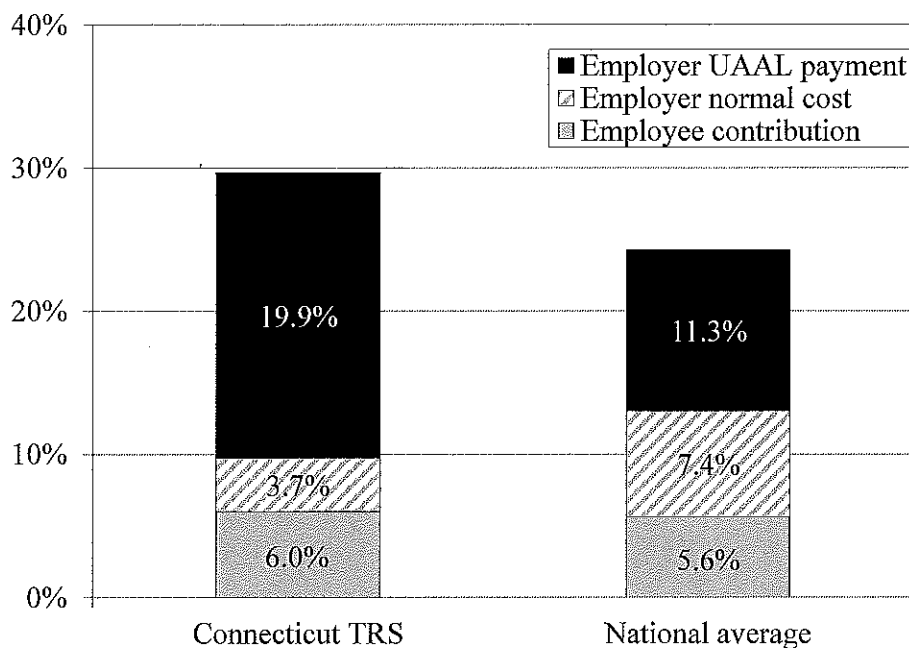
Source: CRR calculations based on various actuarial valuations for Connecticut TRS.

If TRS had simply paid its full ARC, its funded ratio would be slightly better than it is today (and it would not have had to issue a POB to reach that level). But, if the plan had also used a level-dollar amortization method throughout, its current funded ratio would have improved to 71 percent – just below the national average.

#### D. Projections of TRS' Finances

This section projects the funded ratio for TRS and the State's required contributions under current law. Like SERS, the main driver of contributions to TRS is the unfunded liability from legacy costs and funding shortfalls, not overly generous benefits. The total normal cost as a percent of payroll (employee contributions plus employer normal cost) is a good way to compare plan generosity among plans. Figure 31 shows that benefits provided to members of TRS actually fall below that of Teachers' plans elsewhere, and that the State pays very little compared to the national average. The lion's share of costs to the State is due to the unfunded liability.

Figure 31. 2014 Actuarial Costs as a Percent of Payroll for TRS Compared to the National Average, by Element

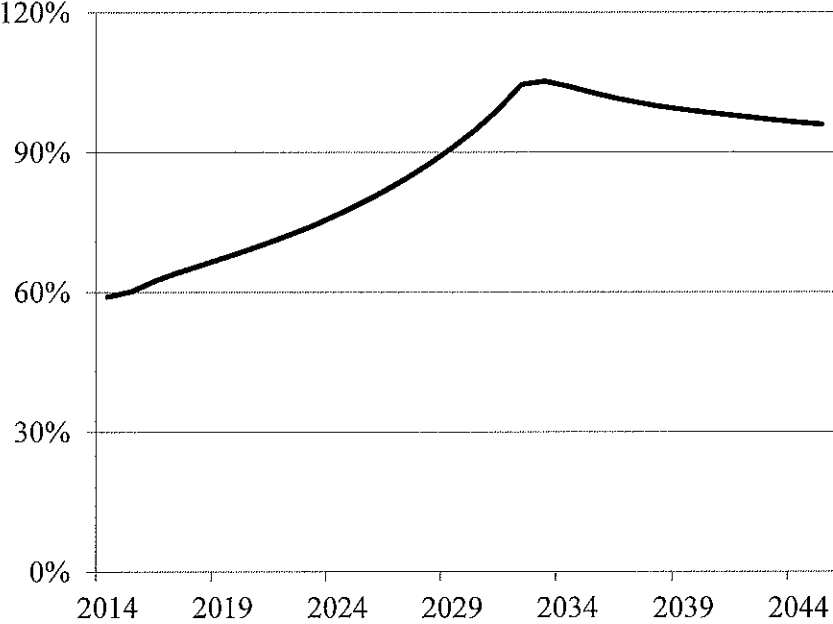


Sources: CRR calculations based on various actuarial valuations for Connecticut TRS; and *Public Plans Database* (2014).

Under current law, TRS' unfunded liability is to be paid off by 2032 (a closed period) using the level-percent-of-payroll amortization method.<sup>9</sup> Figure 32 shows the funded ratio and Figure 33 shows the ARC (normal cost plus amortization payment) under current law from 2014-2045. If the State pays the full ARC, TRS achieves its assumed return of 8.5 percent each year, and actuarial experience perfectly matches assumptions, the figures show full funding is achieved by 2032. Over the same period, the ARC – primarily as a result of the back-loaded amortization method – steadily rises each year from just under \$1 billion in 2014 to \$1.7 billion in 2032. Once the UAAL is paid off, the required contribution drops precipitously to about \$150 million to cover TRS' normal cost.

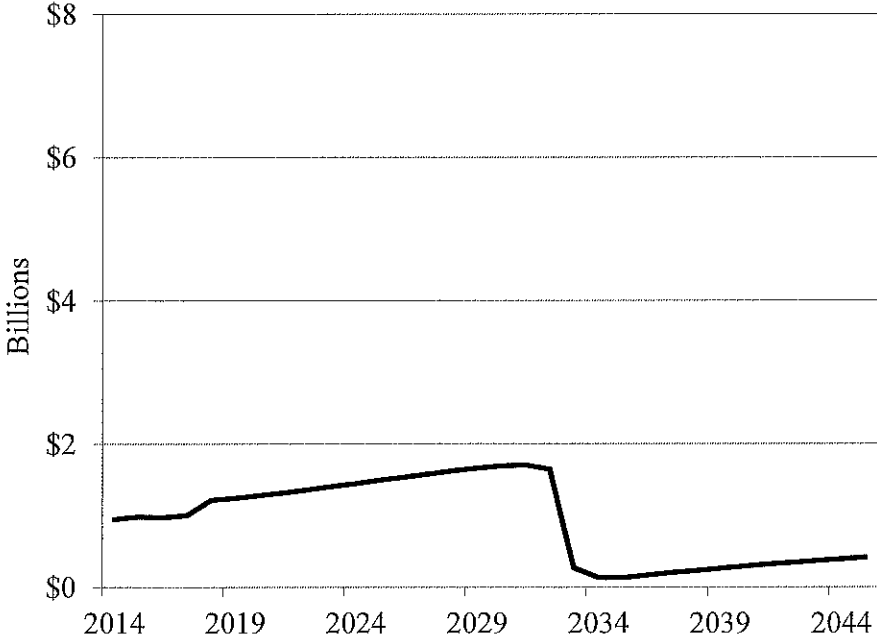
<sup>9</sup> A small portion of the TRS's UAAL is being separately amortized over a longer period. This portion is primarily the result of benefit changes over time.

Figure 32. *Projected Funded Ratio for TRS under Current Law, 2014-2045*



Source: CRR calculations.

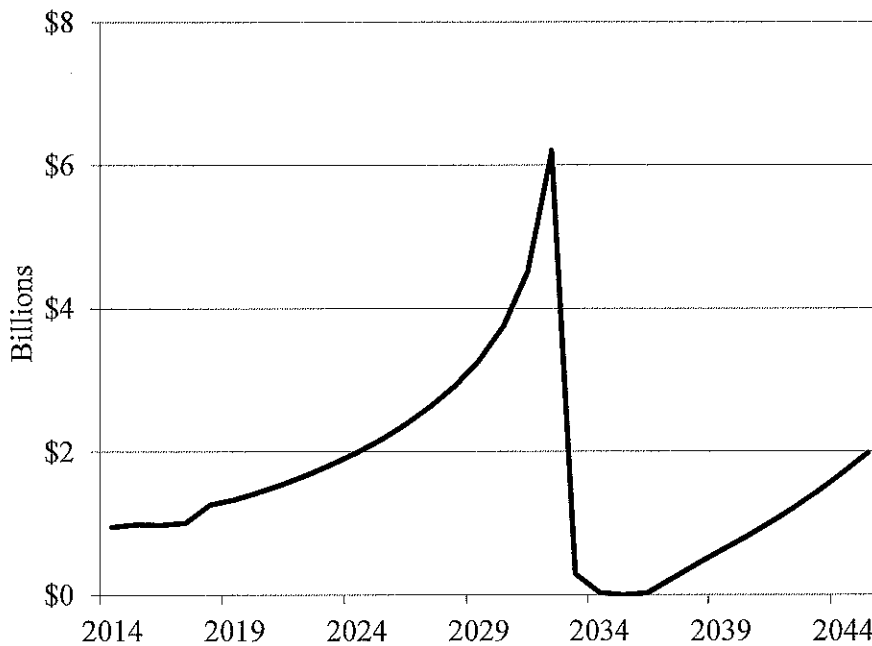
Figure 33. *Projected ARC for TRS under Current Law, 2014-2045*



Source: CRR calculations.

The assumption that TRS achieves its assumed return is critical to the cost projection. Figure 34 shows the ARC if the investment returns over the projection period are similar to the past decade – 5.5 percent – rather than TRS’ assumed return of 8.5 percent. In that case, the ARC rises from \$1 billion in 2014 to \$6 billion in 2032. Again, required contributions drop precipitously after the TRS achieves full funding.

Figure 34. *Projected ARC for TRS under Current Law, and a 5.5-Percent Return, 2014-2045*



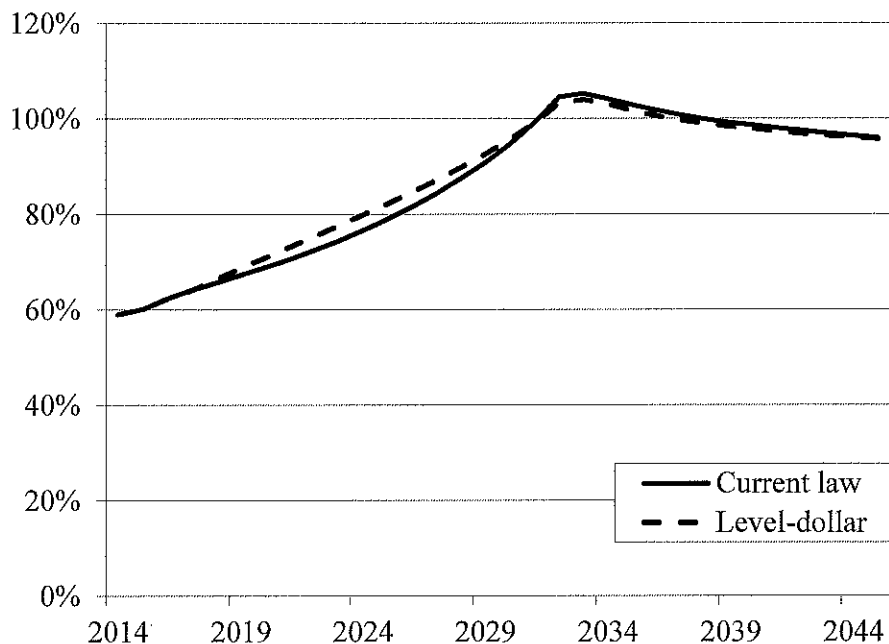
Source: CRR calculations.

### E. Alternatives to TRS’ Current Funding Methods

#### *Alternative 1. Switch to a Level-Dollar Amortization of the UAAL*

To limit the scheduled increases in cost resulting from the level-percent-of-payroll method, one alternative for TRS is to switch to level-dollar amortization of the UAAL. Figure 35 shows a projection of TRS’ funded ratio under the two methods, maintaining the full funding date of 2032. Due to the backloading of amortization payments, the funded ratio under the level-percent-of-payroll method falls below that of the level-dollar method. However, because the 2032 full funding date is only 18 years away, the path of the funded ratio differs very little between the two methods.

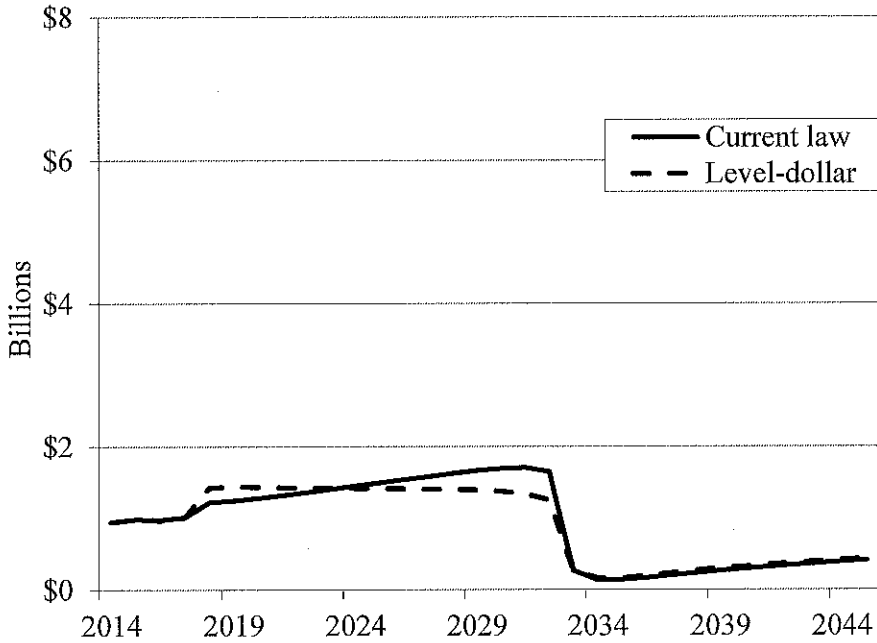
Figure 35. *Projected Funded Ratio for TRS under Alternative Funding Methods, 2014-2045*



Source: CRR calculations.

In contrast to the funded ratio, the contributions under the two amortization methods have very different trajectories (see Figure 36). While contributions under the level-dollar method are greater than those under the level-percent-of-payroll method in the early years, they stay relatively flat throughout at about \$1.3 billion. On the other hand, contributions under the level-percent-of-payroll method eventually exceed the level-dollar payments, peaking at \$1.7 billion in 2032. In both cases, State contributions drop precipitously to the TRS normal cost once the system reaches full funding.

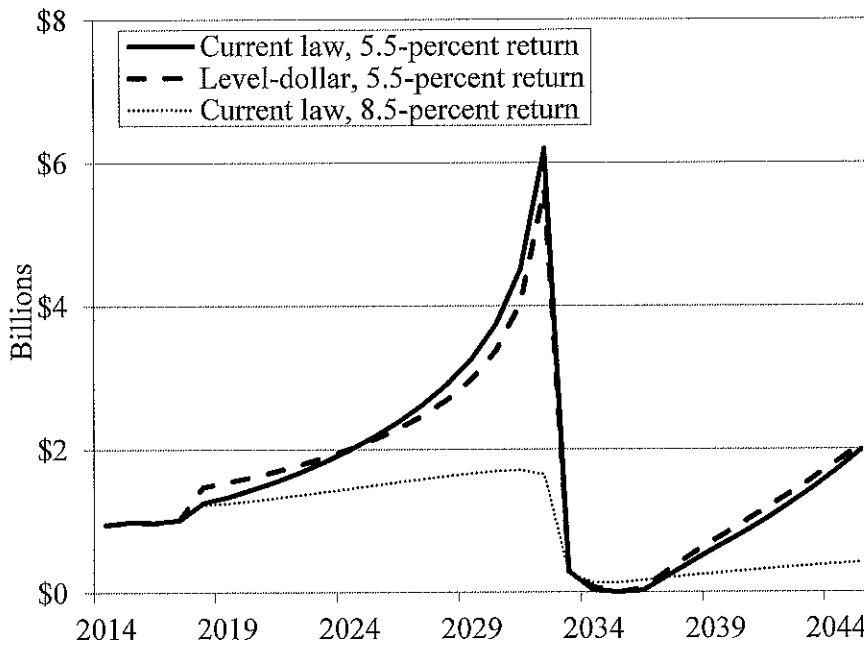
Figure 36. *Projected ARC for TRS under Alternative Funding Methods, 2014-2045*



Source: CRR calculations.

Again, because returns are critical to the projection of costs, Figure 37 shows employer costs under the two methods with a 5.5-percent return over the projection period. Under both methods, costs could rise to almost \$6.2 billion before dropping to about \$150 million in normal costs once the UAAL is paid off. For visual comparison, the light line in the figure shows the projected cost under current law and under an 8.5-percent return.

Figure 37. *Projected ARC for TRS under Alternative Funding Methods and a 5.5-Percent Return, 2014-2045*



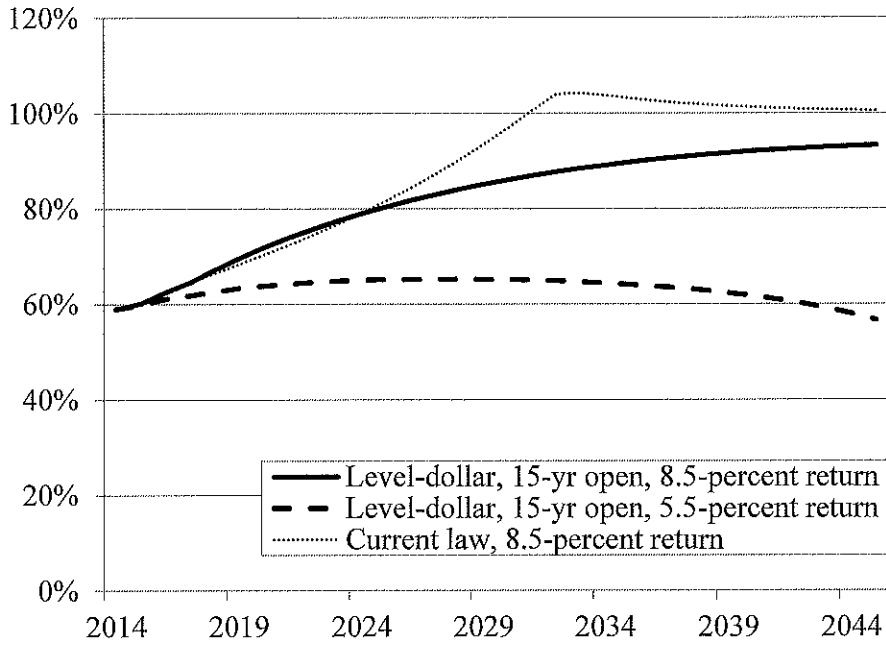
Source: CRR calculations.

*Alternative 2. Switch to a Level-Dollar and 15-year Open Amortization of the UAAL*

As the above figures show, maintaining the status quo may be quite costly for the State, especially if TRS does not realize its assumed return of 8.5 percent. Switching to a level-dollar method provides little relief. Additionally, in terms of budgeting, the precipitous drop in contributions once the plan reaches full funding is not practical. As such, it may be preferable to switch to a level-dollar amortization of the UAAL and employ a 15-year open period for amortization, allowing for more manageable contributions by the State while ensuring TRS remains well funded (if not fully funded).

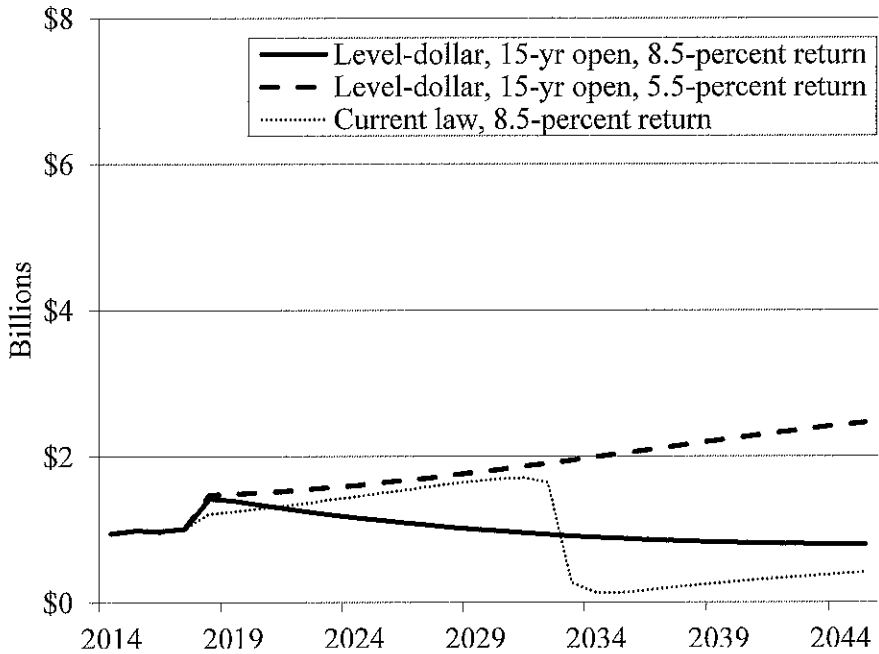
Figures 38 and 39 show the results of this approach under TRS’ assumed return – 8.5 percent – and a 5.5-percent return (similar to the average return since 2000). The actual outcome will likely fall in between. While the 15-year open amortization approach does mitigate costs, it also delays full funding. This delay can be especially meaningful when returns are below expectations.

Figure 38. *Projected Funded Ratio for TRS under Level-Dollar, 15-year Open Amortization, 2014-2045*



Source: CRR calculations.

Figure 39. *Projected ARC for TRS under Level-Dollar, 15-year Open Amortization, 2014-2045*



Source: CRR calculations.

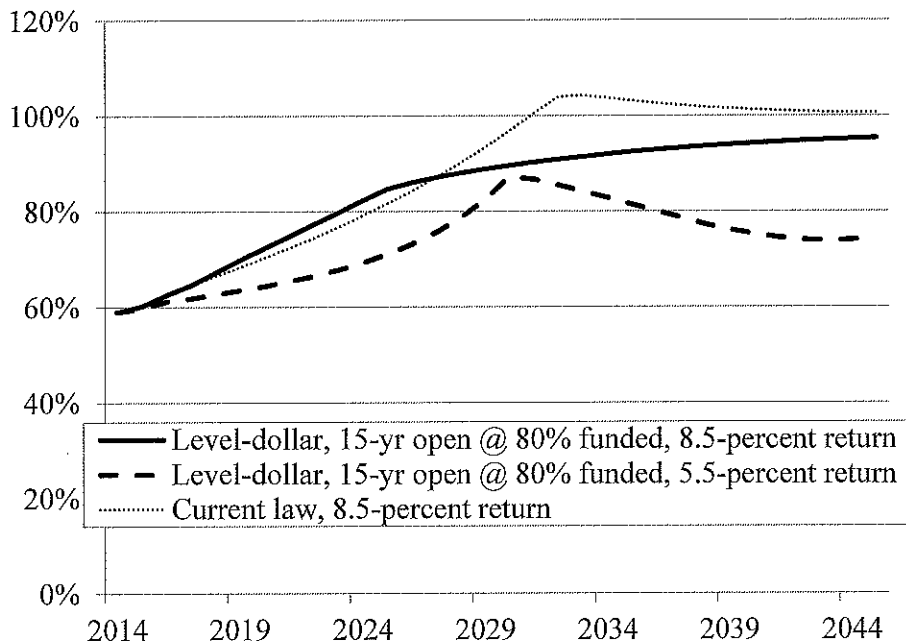


*Alternative 3. Relax 2032 Full-funding Date When 80 Percent Funded*

Whether under the level-dollar or level-percent approach, the 2032 full-funding date presents real risks to the State of dramatic contribution rate volatility as the date approaches. Yet, shifting to a 15-year open amortization significantly delays funding improvements. One other approach, is to maintain the 2032 full-funding goal until the plan reaches a lower funding threshold deemed to be adequate. At that point, relaxing the full-funding date may provide contribution rate relief, while not greatly risking the plan’s fiscal health.

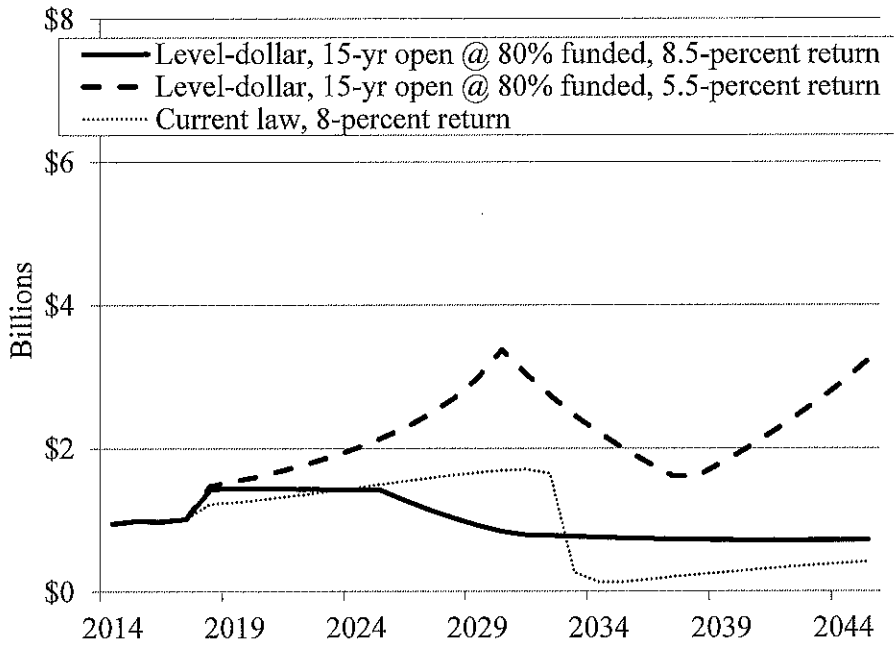
Figures 40 and 41 show the funded ratio and State required contributions under a level-dollar amortization approach that maintains the 2032 full-funding date until TRS is 80-percent funded and then shifts to an open 15-year amortization. As the figure shows, under both the 8-percent and 5.5-percent return scenarios, funding improves quickly in the early years under the 2032 full-funding date and, when the plan shifts to an open amortization, contribution pressure is reduced, while maintaining reasonable funding.

Figure 40. *Projected Funded Ratio for TRS under Level-Dollar and 15-year Open Amortization at 80-percent Funded, 2014-2045*



Source: CRR calculations.

Figure 41. *Projected ARC for TRS under Level-Dollar and 15-year Open Amortization at 80-percent funded, 2014-2045*

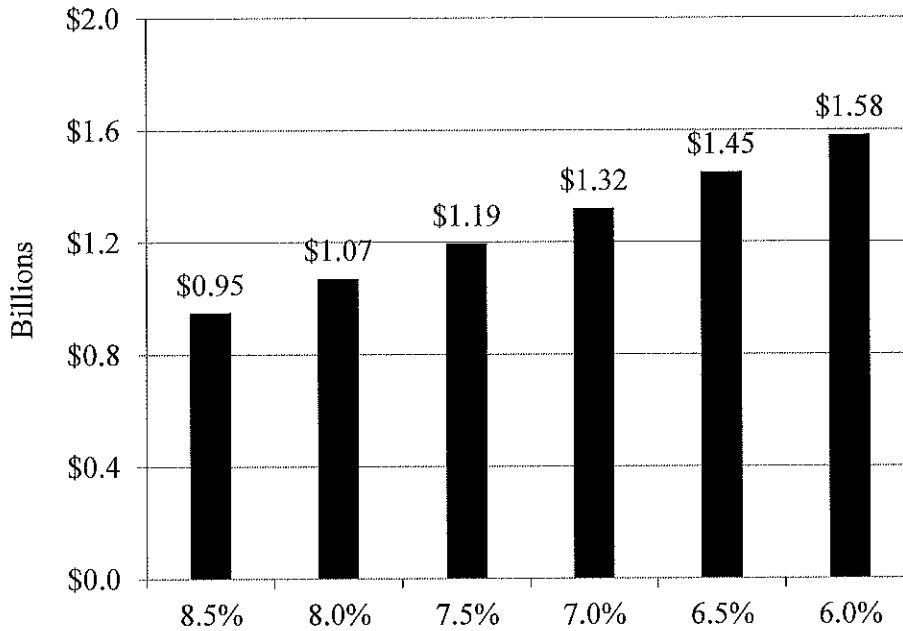


Source: CRR calculations.

#### *Lowering the Discount Rate/Long-Term Assumed Return*

The decision to change the long-term assumed return involves a relatively straightforward trade-off. Reducing the assumed return means paying more into the system (to make up for lower expected returns). But, it also lowers the likelihood of paying amortization payments in the future for unfunded liabilities that arise due to investment performance that is below the assumed return. Conversely, increasing the assumed return means paying less up front, but it increases the likelihood of having to pay more to make up for unfunded liabilities that accrue if investment experience falls short. Figure 42 shows the impact of various discount rates on the 2014 ARC for TRS. It reflects the change in up-front costs from discount rate changes, but does not include the change in the likelihood of paying UAAL payments down the road if returns do not meet expectations.

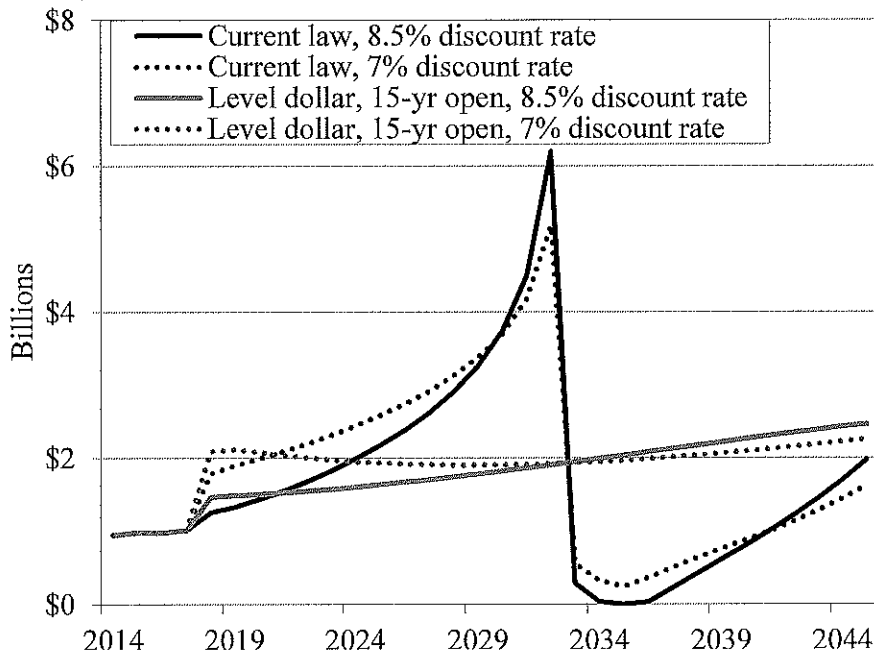
Figure 42. 2014 ARC for TRS under Various Discount Rates/Long-term Assumed Returns



Source: CRR calculations.

Figure 43 shows the trajectory of costs for SERS under an 8.5-percent and 7-percent assumed return, given an actual return of 5.5 percent. The figure clearly illustrates the trade-off described above. When compared to the 8.5-percent assumed return, the 7-percent assumed return requires more contributions in the early years and less in the later years.

Figure 43. *Projected ARC for TRS under Various Discount Rates and a 5.5-percent Return, 2014-2045*



Source: CRR calculations.

*Separately Finance Liabilities for Members Hired before 1979.*

When considering alternatives for addressing TRS’ unfunded liability going forward, the separate financing of liabilities associated with TRS members hired prior to pre-funding should be considered. As stated above, TRS benefits were totally unfunded by the State prior to 1979 and only partially funded from 1979-1993. However, accurately apportioning the *current* unfunded liability to members hired prior to 1979 requires recreating the funding history for TRS as if benefits for those hired prior to 1979 were separately funded with their own trust.<sup>10</sup> As the results in Table 3 show, if you do this the majority of TRS’ current unfunded liabilities are, in fact, associated with those hired prior to 1979, while the benefits for more recently hired members are almost fully funded.

<sup>10</sup> We estimate annual liabilities, benefit payments, and payroll for members hired prior to 1979 by assuming a straight-line growth in liabilities and annual benefit payments from the TRS total levels in 1979 to the 2014 levels specifically for those hired prior to 1979 that are provided by the TRS administrators and actuaries. The total normal cost contributions for pre-1979 members is based on the reported payroll and the total entry age normal cost rate calculated in 1979 (with periodic adjustments made for changes in the discount rate). Investment returns are assumed to be equal to the returns experienced by TRS as a whole. We back into the assets, liabilities, and unfunded liabilities for those hired after 1979 by subtracting the pre-1979 estimates from the totals for TRS liabilities, assets, unfunded liabilities, and contributions reported in the annual valuations. The amortization payment to pre-1979 members is proportional to TRS’ total amortization payment based on the proportion of the UAAL that pre-1979 members represent two years prior.

Table 3. 2014 Assets, Liabilities, Unfunded Liabilities, and Funded Ratio for TRS, by Employee Group

Employee Group	Assets (billions)	Liabilities (billions)	Unfunded liabilities (billions)	Funded ratio
Hired prior to 1979	\$5.7	\$16.1	\$10.4	35.3%
Hired after 1979	9.8	10.2	.4	96.0
Total	15.5	26.3	10.8	59.0

Source: CRR calculations based on data from TRS Actuary and Connecticut TRS 2014 Valuation.

Today, the majority members hired prior to 1979 are retired, and nearly 90 percent of liabilities for members hired prior to 1979 are for retirees (see Table 4). Thus, the current unfunded liability for TRS is primarily the product of benefit promises made to existing retirees that were never properly funded. In contrast, benefits for members hired after 1979 have been almost fully funded as they have accrued.

Table 4. 2014 Membership and Liabilities for TRS, by Employee Group

Employee Group	Actives	Retirees	Active liability (billions)	Retiree liability (billions)
Hired prior to 1979	2,978	28,197	\$1.7	\$14.4
Hired after 1979	48,455	17,644	7.9	2.3
Total	51,433	45,841	9.6	16.7

Source: CRR calculations based on data from TRS Actuary and Connecticut TRS 2014 Valuation.

Separately financing the liabilities associated with members hired before 1979 recognizes the dramatic difference in funding for the two groups. Benefits for those hired prior to 1979 have been consistently underfunded (even after pre-funding began), and today are 35 percent funded. In contrast, benefits for those hired after 1979 are currently almost 100 percent funded

The two main policy arguments for separating the liabilities are intergenerational equity and the perception of costs for current employees. First is intergenerational equity. The liability for members hired prior to 1979 has been accumulated over multiple generations, and the services provided by those members are no longer being enjoyed by current generations because most members are retired. As such, it is not fair to place the entire burden of funding the remaining benefits for this group on a single generation (as under current law). A longer time horizon for amortizing these unfunded benefits that better spreads the costs over multiple generations would be more appropriate. The second argument is that the cost of benefits for members hired prior to 1979 place an undue burden on current employees. The unfunded liability for members hired after 1979 is estimated to be only about \$400 million. In contrast, unfunded liability for members hired prior to 1979 is \$10.4 billion. Combining the cost of the unfunded liabilities for members hired prior to 1979 with that of those hired afterward skews the perception of benefits offered to current teachers by misrepresenting the pension costs for current employees to the taxpayer.

## **F. TRS' Pension Obligation Bond**

Connecticut issued a \$2 billion POB in 2008 to fund TRS, shifting a portion of its pension costs into bond payments. The bond matures in 2032, precisely the same date that TRS is scheduled to extinguish its unfunded liability.

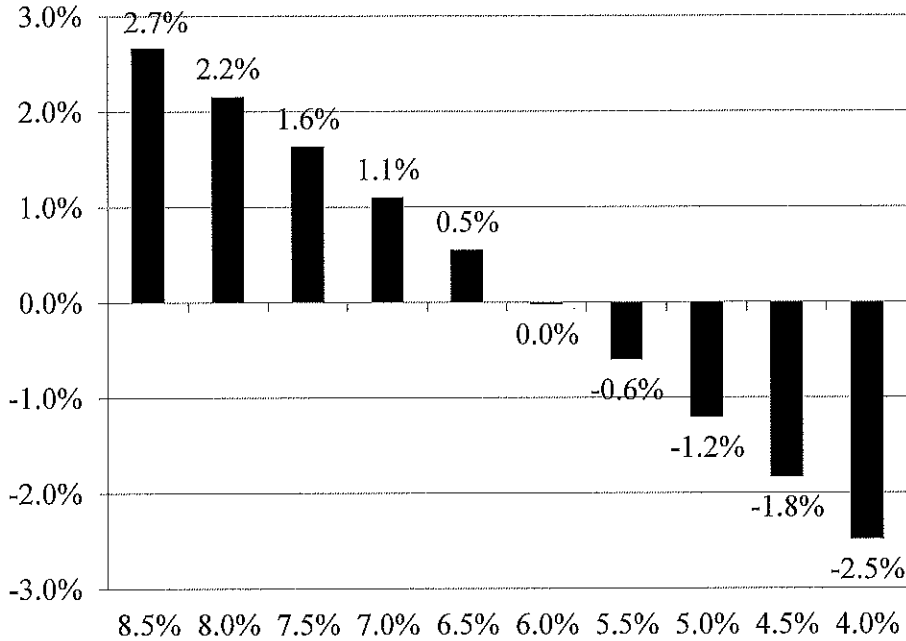
POBs raise issues in terms of investment risk and required payments. In terms of investment risk, if the average return earned on the invested bond proceeds is greater than the interest payments, the bond can be a net gain to the government's finances. Otherwise, it will be a loss. Investment risk aside, a POB restructures pension payments for the plan sponsor. Borrowed funds immediately improve the plan's funded ratio and lower annual pension costs. This decrease is offset by the POB's annual interest payments and the repayment of principal.

### *POB Investment Risk*

In order to assess the extent to which the POB has met the State's expectations, we calculate the internal rate of return (IRR) on the bond. The assumption is that the proceeds from the bond are invested in accordance with the allocation of TRS' assets. Beginning with fiscal year 2009, we calculate the growth of the invested bond proceeds for that year, then subtract the interest (using the stated coupon rate) and principal payments for that year to get a new beginning balance for the following year, and this process is repeated until the date of the assessment. At the date of assessment, we compare the ending balance with the initial proceeds to calculate an IRR.

Using this approach, we find that the TRS POB has returned, on average, negative 30 basis points a year since 2008. To extend this analysis over the full life of the bond, we use a distribution of possible returns from 2014-2032. The results, shown in Figure 44, highlight the variability in possible investment performance of the POB over its lifetime.

Figure 44. *Annualized Return on TRS' POB Proceeds at Various Investment Returns*



Source: CRR calculations.

#### *Projection of Required Payments*

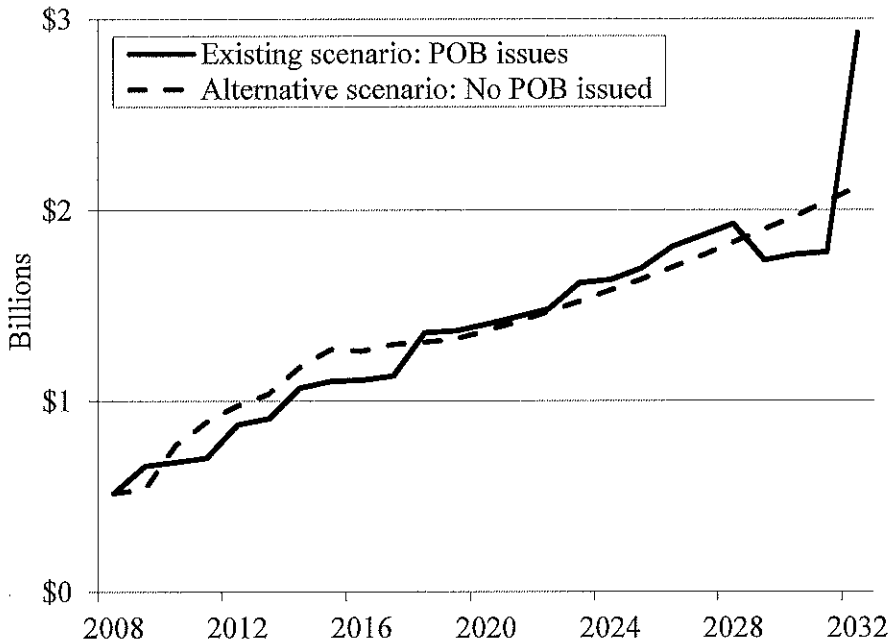
We project the State's overall pension costs (including ARC and POB payments) under two scenarios: 1) the existing arrangement in which the POB was issued in 2008; and 2) assuming the POB had never been issued.

Modeling total State costs under the existing arrangement involves three steps. First, we use actual required pension payments reported for 2008-2014. Second, we project future required pension payments assuming TRS receives 100 percent of the required pension payments and achieves its assumed return of 8.5 percent annually. Third, to get total State costs, we add annual POB interest and principal payments to required pension payments.

The second scenario also has three steps. First, we decrease reported 2008 pension assets by \$2 billion to account for the POB never being issued. Second, we project required pension payments from 2008-2014 assuming the State pays the same percent of required payment and TRS achieves the same returns as reported for those years. Third, we project required pension payments from 2014 forward assuming TRS receives 100 percent of the required pension payments and achieves its assumed return of 8.5 percent annually.

Figure 45 shows the State's costs under the two scenarios. In the near-term, State costs under the existing arrangement are less than if the POB had not been issued. However, from 2018 onward, annual costs are greater under the status quo. And, under the status quo, there is a 1.2-billion dollar principal payment in 2032.

Figure 45. *State Costs With and Without POB Issuance, 2008-2032*



Source: CRR calculations.

## G. Conclusion

TRS faces rising pension costs over the next 18 years if it continues with its current plan to fully fund the system by 2032. The majority of the costs are a result of the relatively short time period over which TRS has chosen to pay down its large UAAL. TRS' UAAL is mainly the result of underfunding benefits for those hired prior to 1979, when TRS began pre-funding. Although unfunded liabilities occurred after the system started to pre-fund—due to inadequate contributions and investment returns (since 2000) falling short of assumptions—benefits earned by members hired after 1979 have been relatively well funded. This report identifies four adjustments to the current funding plan both to address the large costs associated with underfunded benefits for members hired prior to 1979, and to prevent future funding shortfalls for the employees hired more recently.

To address the costs associated with benefits for those hired prior to 1979:

- Separately finance—over a long time horizon—the liabilities for members hired prior to 1979.

To prevent funding shortfalls for ongoing benefits:

- Shift to level-dollar amortization of unfunded liabilities
- Replace 2032 full-funding date with a reasonable rolling amortization period
- Lower the long-term assumed investment return



Implementing these changes will more fairly distribute the costs associated with benefits for members hired prior to 1979 and better secure ongoing benefits for employees hired more recently.

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