An Analysis of Connecticut's State Employees Retirement System: Final Report

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Connecticut Pension Analysis
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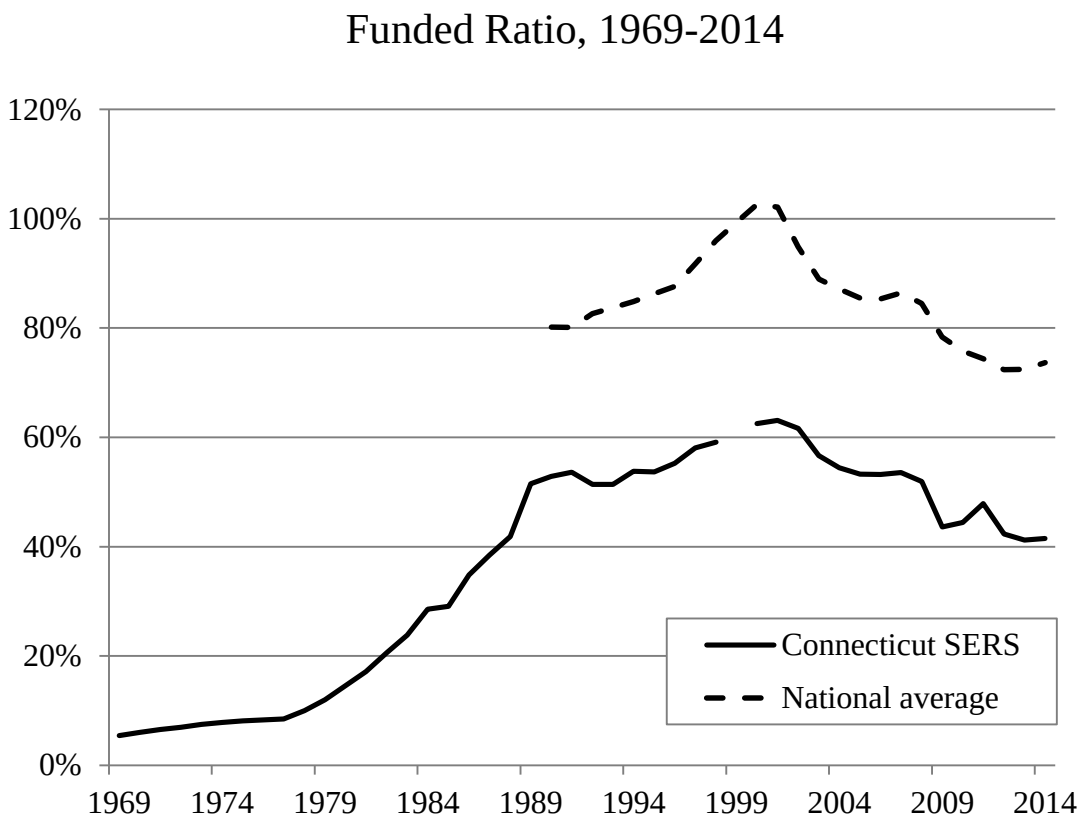
Overview

- Looking back
  - SERS' historical funded status
  - The source of SERS' unfunded liability (UAAL)
  - Today's funded status if SERS had been adequately funded

- Looking forward
  - Funded level and cost under status-quo and alternative funding methods
  - Other ways to address the UAAL
  - A better system for handling risk going forward

Looking back….

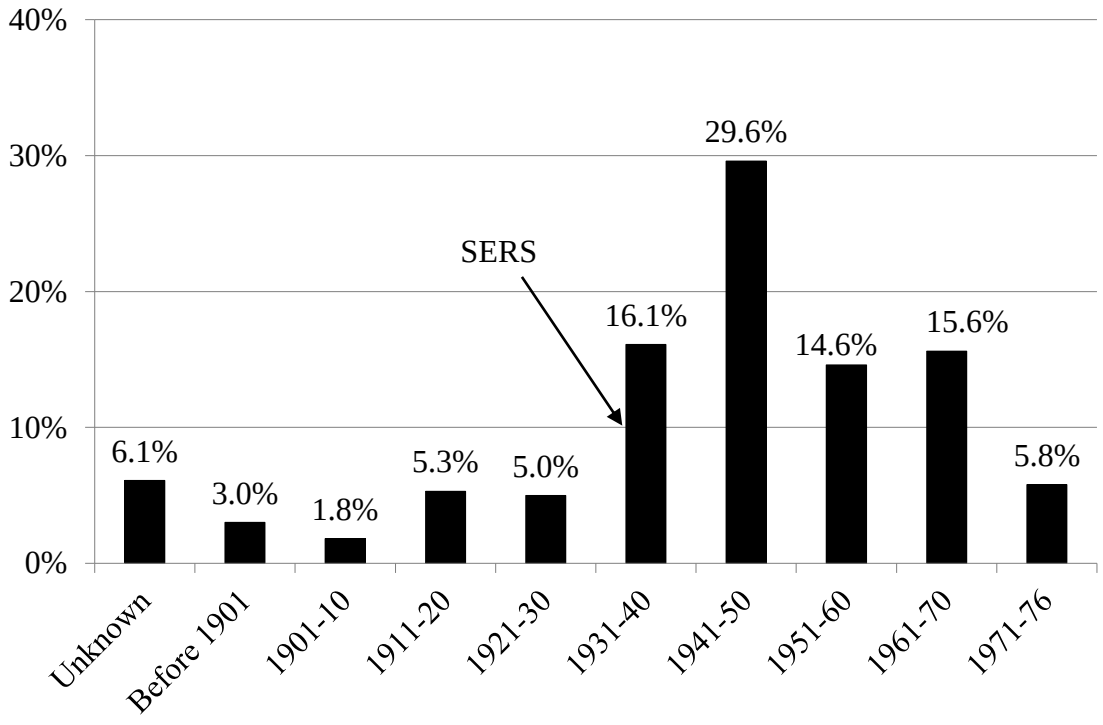
Over the past 2 decades, SERS' funded status has lagged behind the national average.



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

SERS provided benefits as far back as 1939, but did not pre-fund benefits until 1971.

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



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

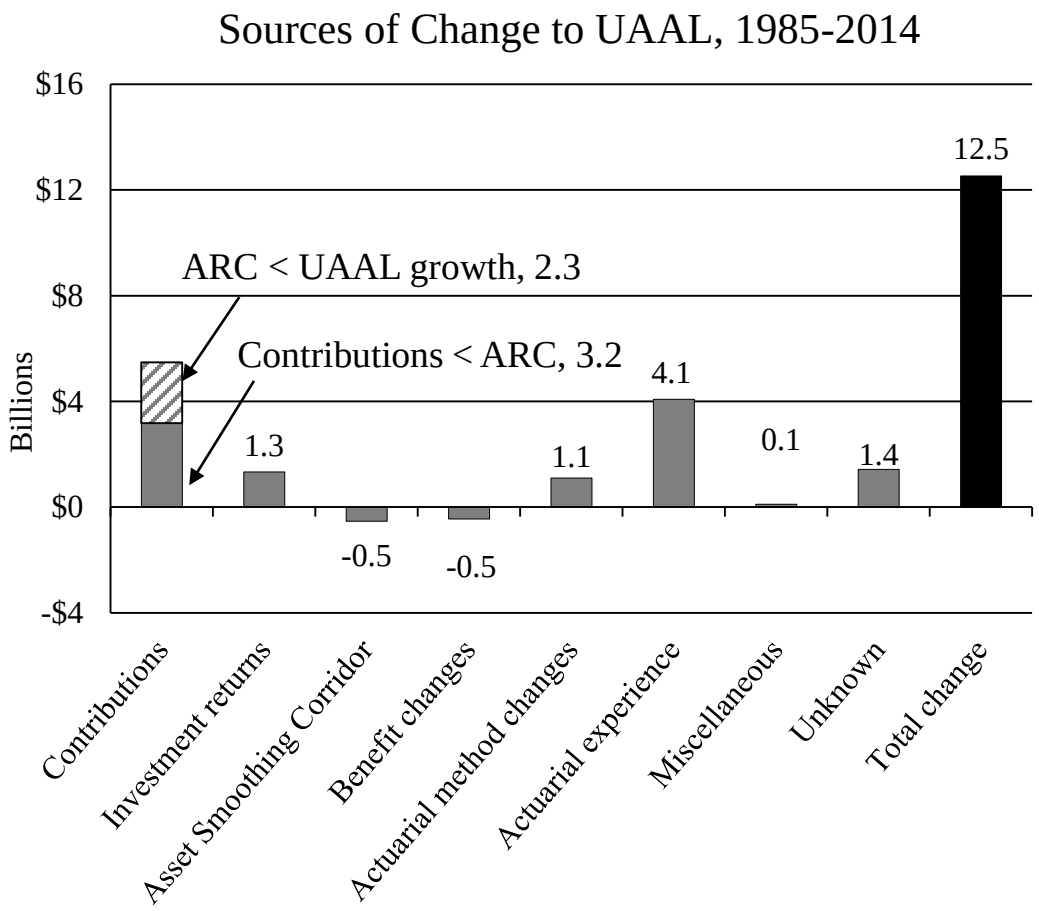
But today's poor funded ratio has to do with more than SERS' late start.

Methodology for UAAL Analysis

- Each SERS valuation provides data on the UAAL, the change in the UAAL from the prior year, and some information on factors behind the change.

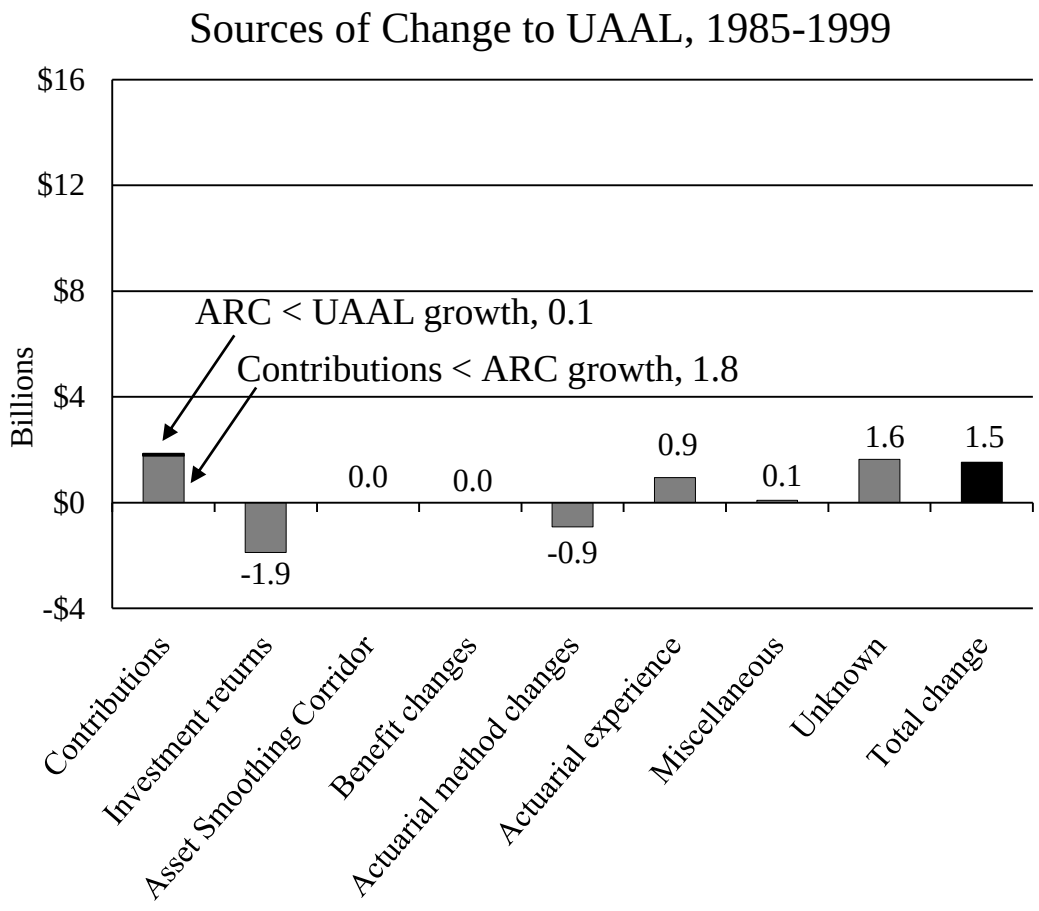
- We combine the factors into meaningful groups and sum the data from 1985-2014 to highlight the factors that have played a role in the development of the UAAL over the past 29 years.

Since 1985, actuarial experience, returns, and contributions have driven UAAL growth.



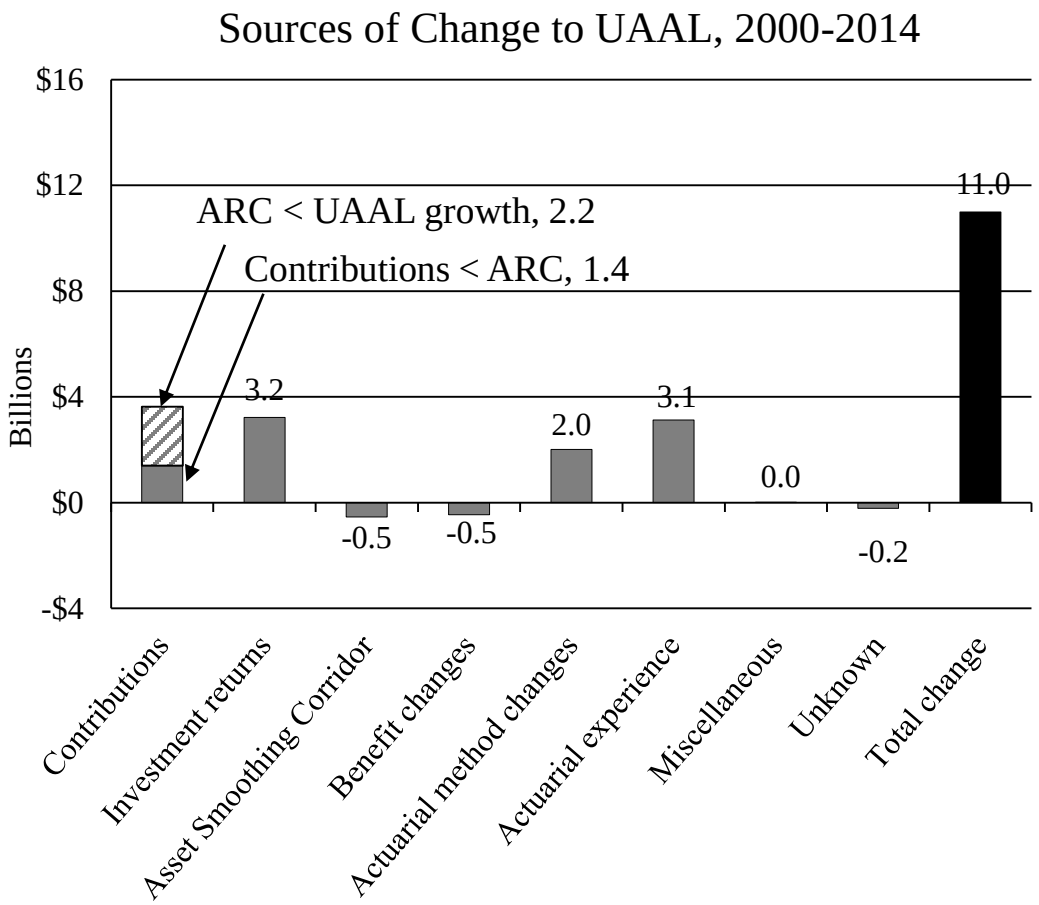
Source: Authors' calculations based on various actuarial valuations for Connecticut SERS.

But not much happened before 2000.



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

Since 2000, the UAAL has grown by $11 billion.



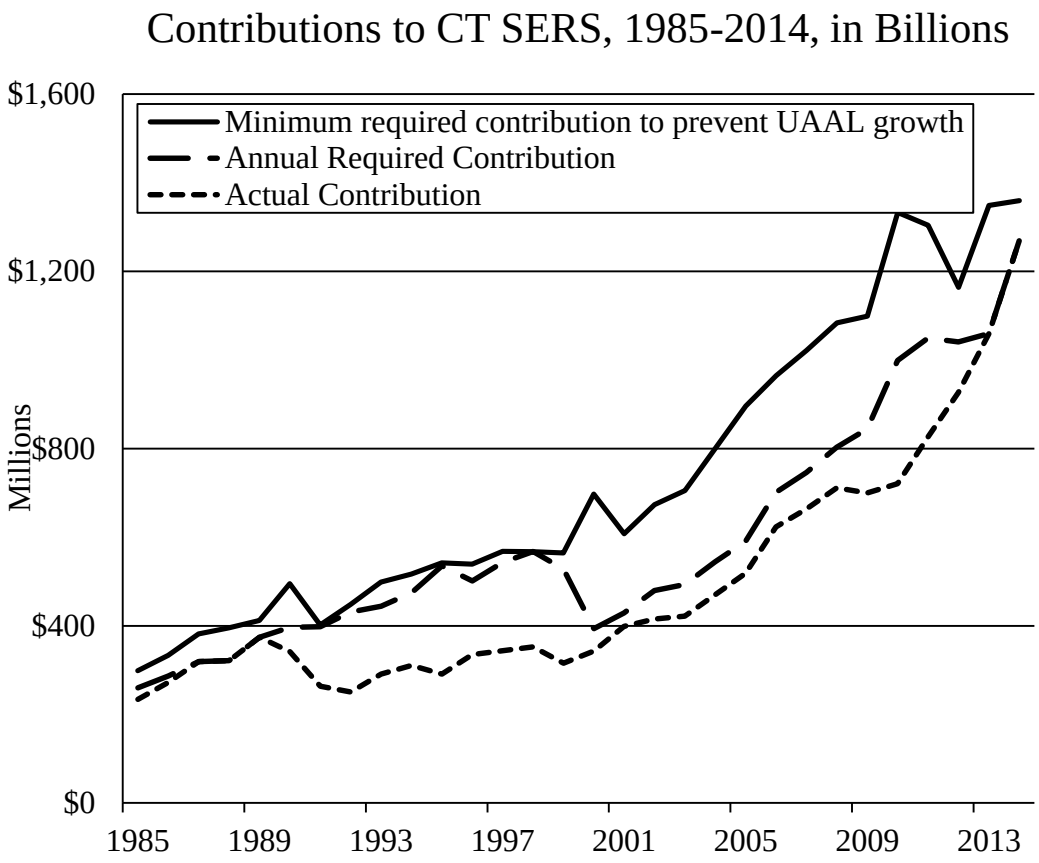
Source: Authors' calculations based on various actuarial valuations for Connecticut SERS.

Two of the factors contributing to the UAAL growth were controllable.

1. Contributions
    - SEBAC agreements and other negotiated reductions in contributions allowed account for nearly $2 billion in unfunded liabilities.
    - Starting in 2000, UAAL payments were calculated using a level-percent-of-payroll method instead of level-dollar, and no longer kept up with UAAL growth.

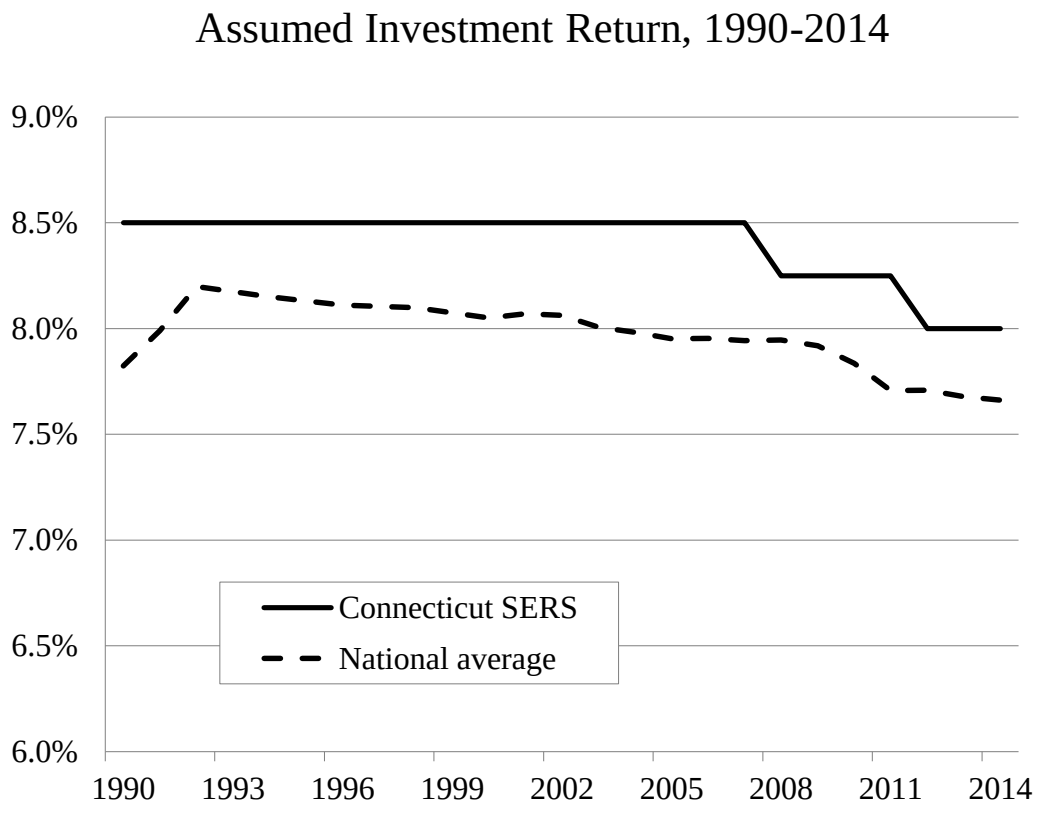
2. Assumed Investment Return
    - SERS' assumed return was higher than average.

Actual contributions fell short of required amounts.



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

Also, the assumed rate of return was unusually high.



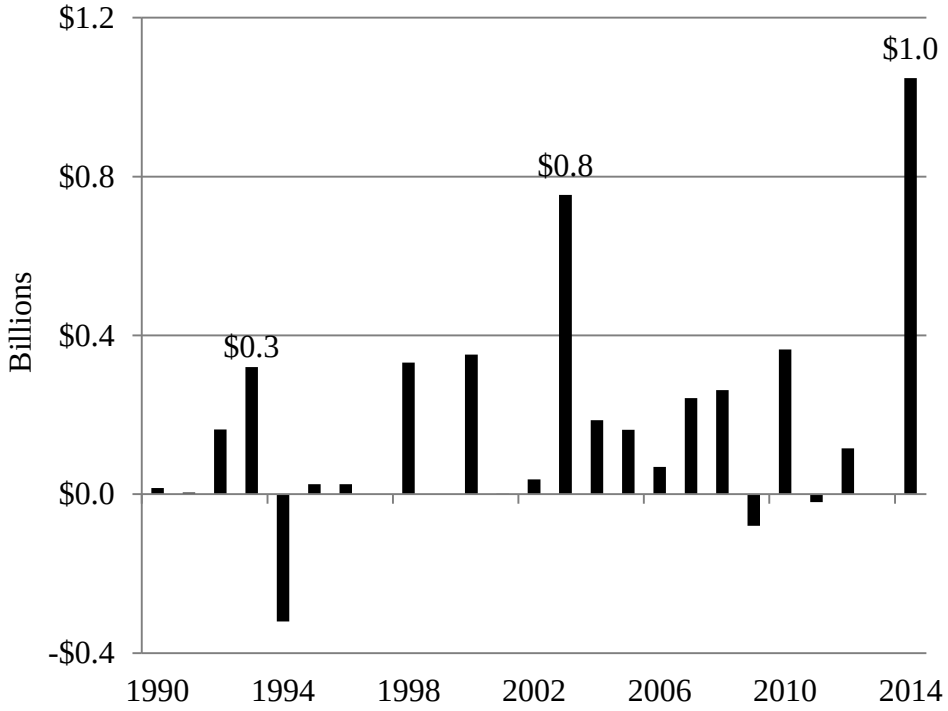
Sources: Actuarial valuations for Connecticut SERS; *PENDAT* (1990-2000); and *Public Plans Database* (2001-2014).

Two of the factors contributing to the UAAL growth were less controllable.

- Deviations from actuarial experience
- Actual investment returns

Key demographic assumptions were continually off.

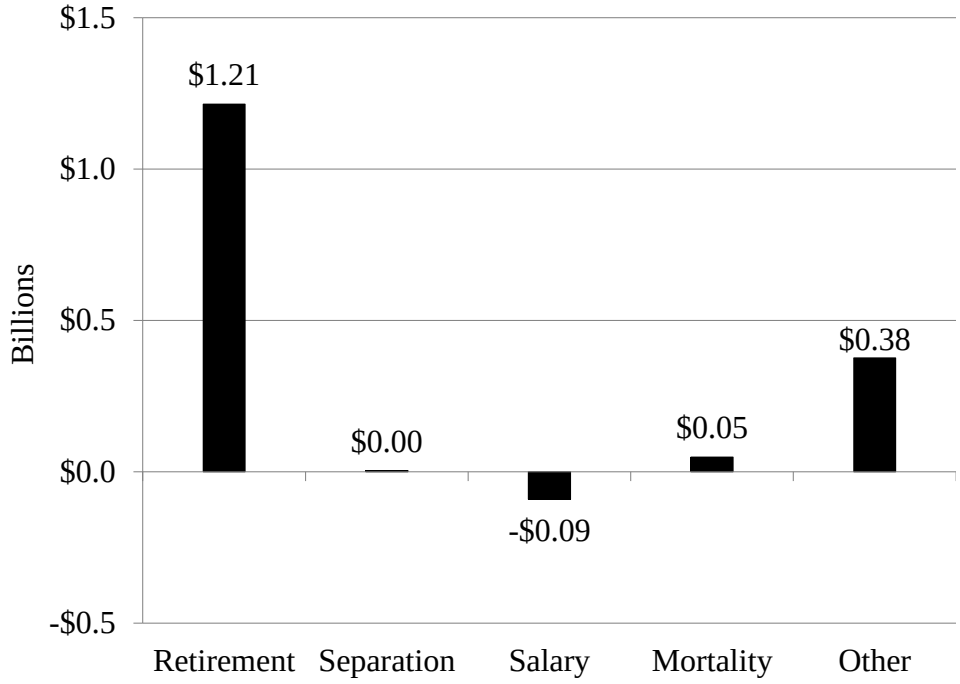
Annual Impact of Actuarial Experience on Unfunded Liabilities, 1990-2014



Sources: Authors' calculations based on CT SERS actuarial valuations; and the 1996 and 2002 Gain/Loss Studies for Connecticut SERS.

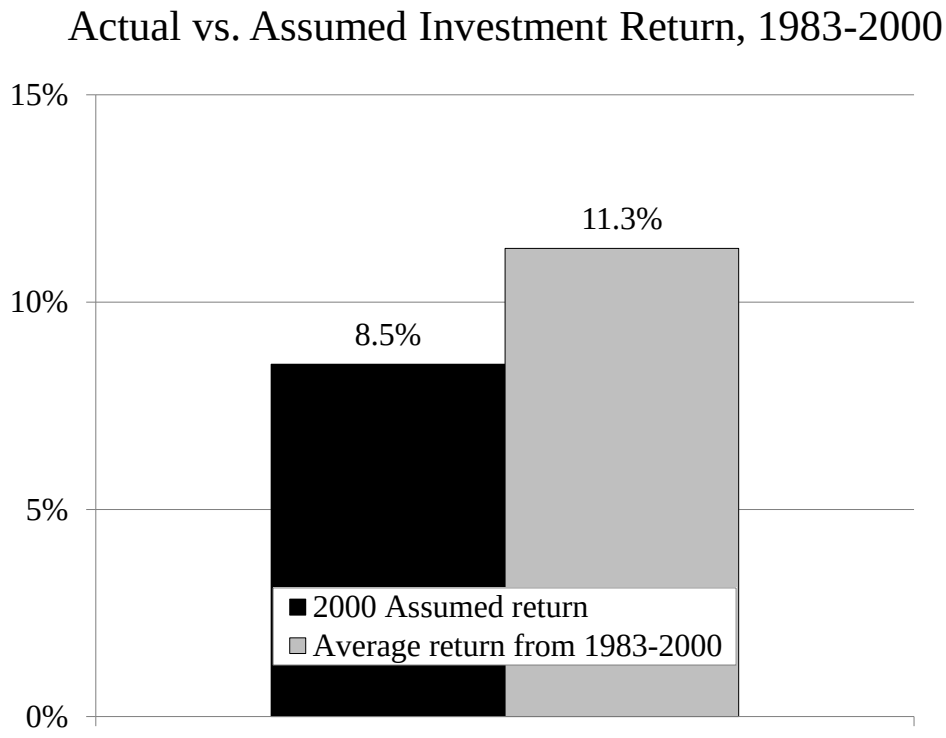
Recently, retirement assumptions have accounted for much of the poor experience.

Impact of Specific Actuarial Assumptions on Unfunded Liabilities, 2009-2014



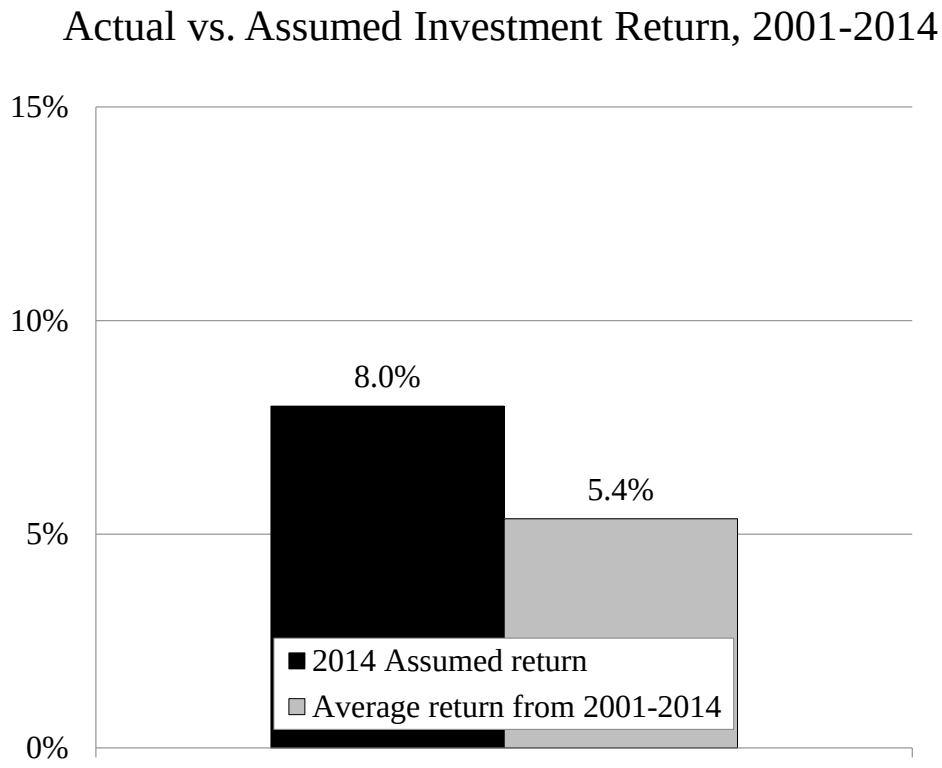
Sources: Authors' calculations based on 2009-2014 actuarial valuations for CT SERS;

Up to 2000, SERS' actual investment returns were above the assumed return.



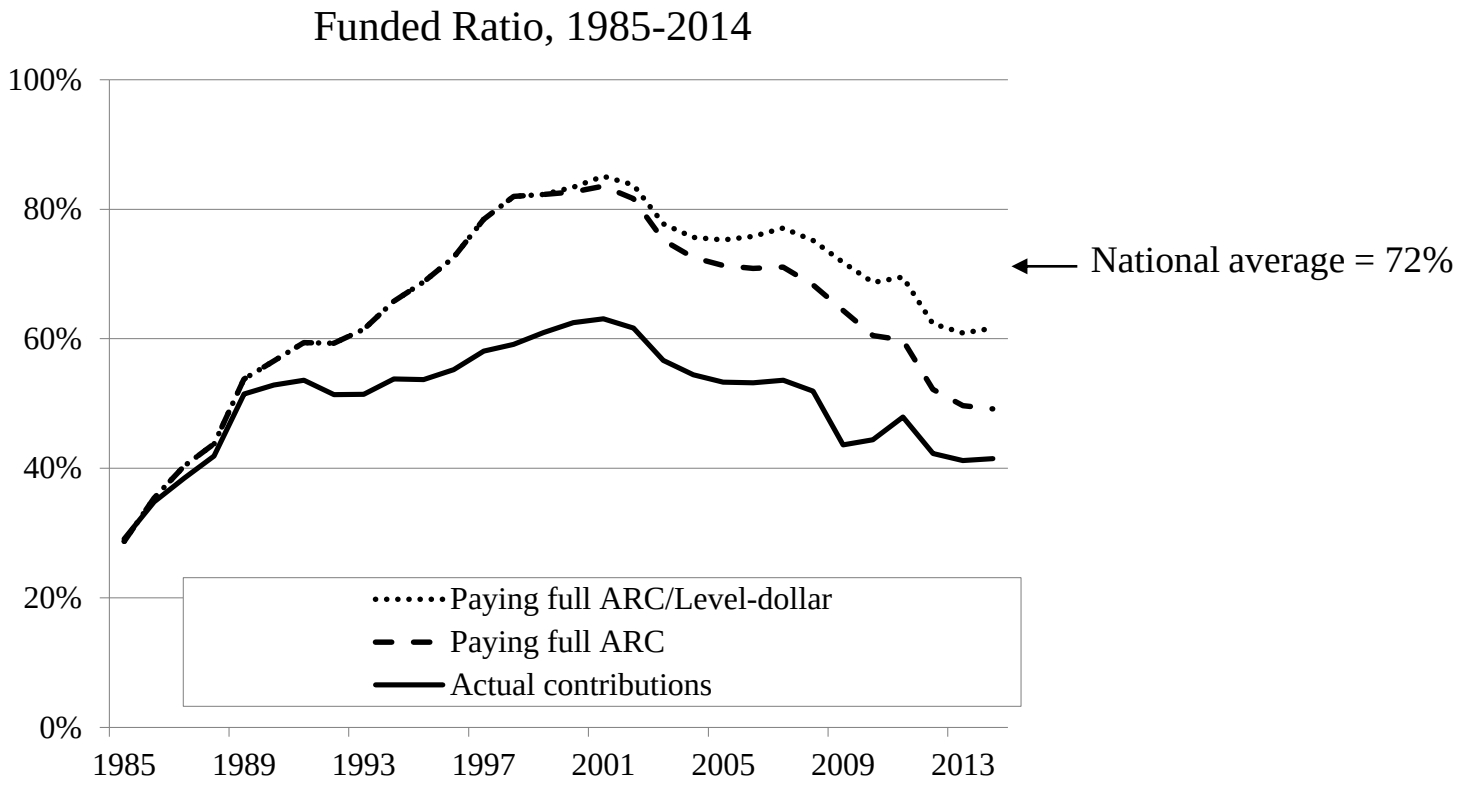
Sources: Actuarial valuations for Connecticut SERS; and Census of Governments (1983-2000).

But since 2000, investment returns have fallen considerably short of the assumed.



Sources: Actuarial valuations for Connecticut SERS; and Census of Governments (2001-2014).

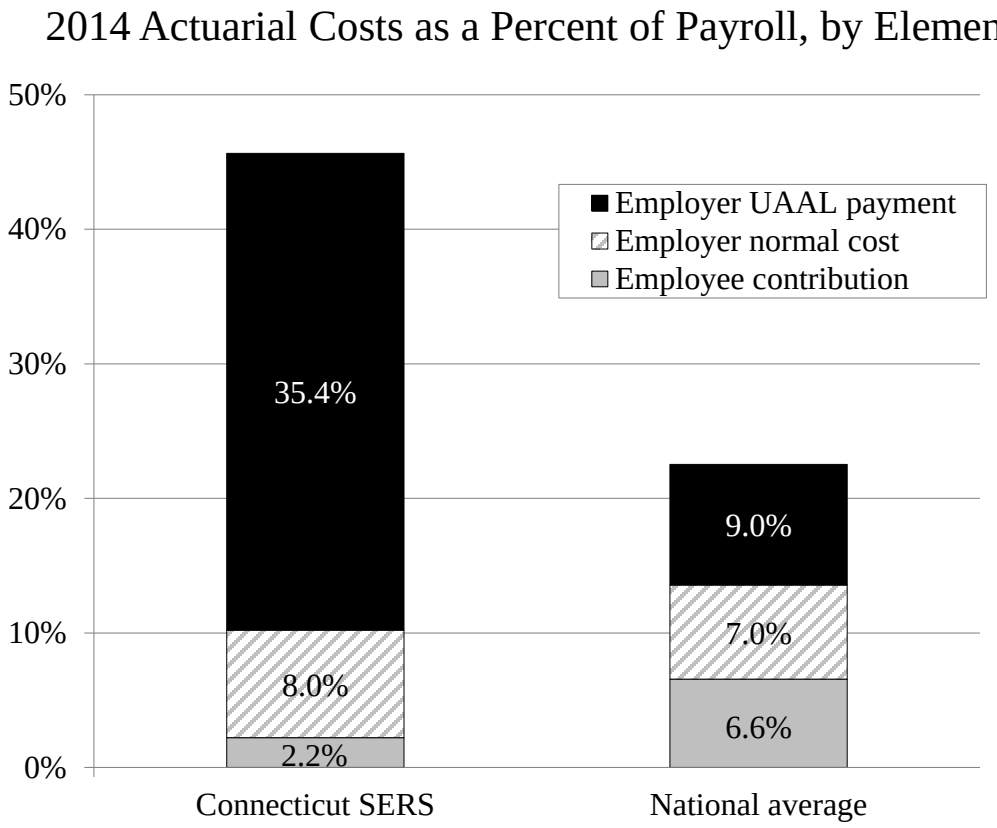
Where would SERS be today if Connecticut had contributed 100 percent of the ARC?



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

Looking forward….

The key question is how to deal with the existing UAAL.



Sources: Actuarial valuation for Connecticut SERS; and *Public Plans Database (*2014).

Three factors determine the trajectory of UAAL amortization payments.

1. Payment schedule:
    - Level dollar: front-loaded payments
    - Level percent of pay: back-loaded payments

2. Funding period
    - Closed amortization period: fixed date for full funding
    - Open amortization period: no fixed date

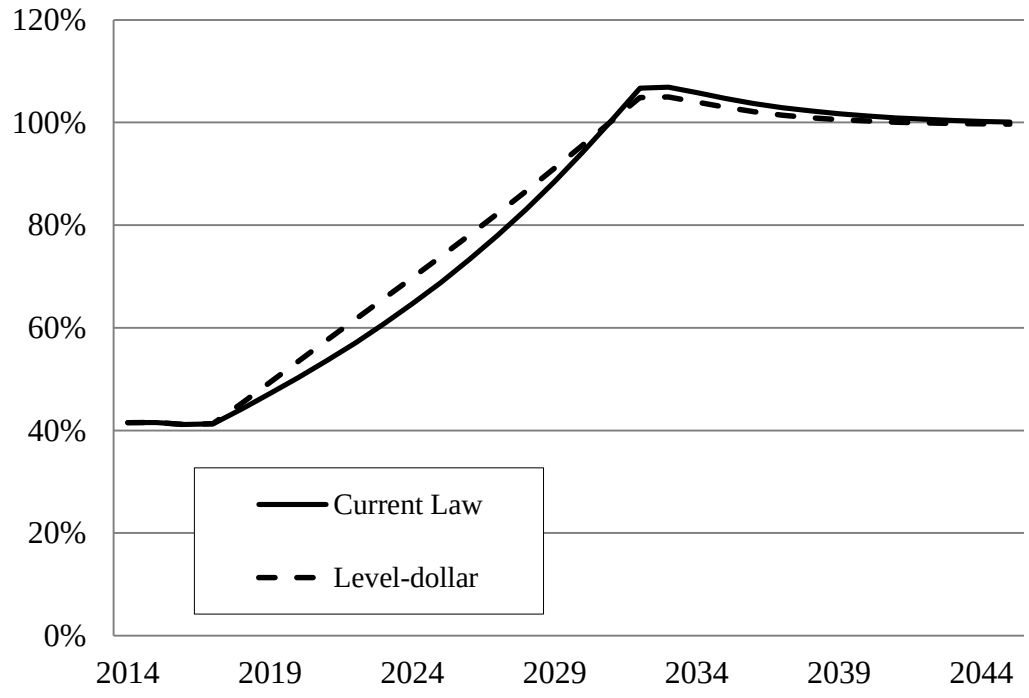
3. Length of amortization period

Projection methodology

- We begin with data from SERS 2014 actuarial valuation.
- The Actuary provides projection for payroll, normal costs, and benefit payments.
- We calculate the UAAL and amortization payment in each year.
- We assume the plan pays its full projected ARC (normal cost + amortization payment) and achieves its assumed return.
- Market assets in each year equal the prior year's assets plus contributions and investment earnings, minus benefit payments.
- SERS' actuarial smoothing method is used for actuarial assets.

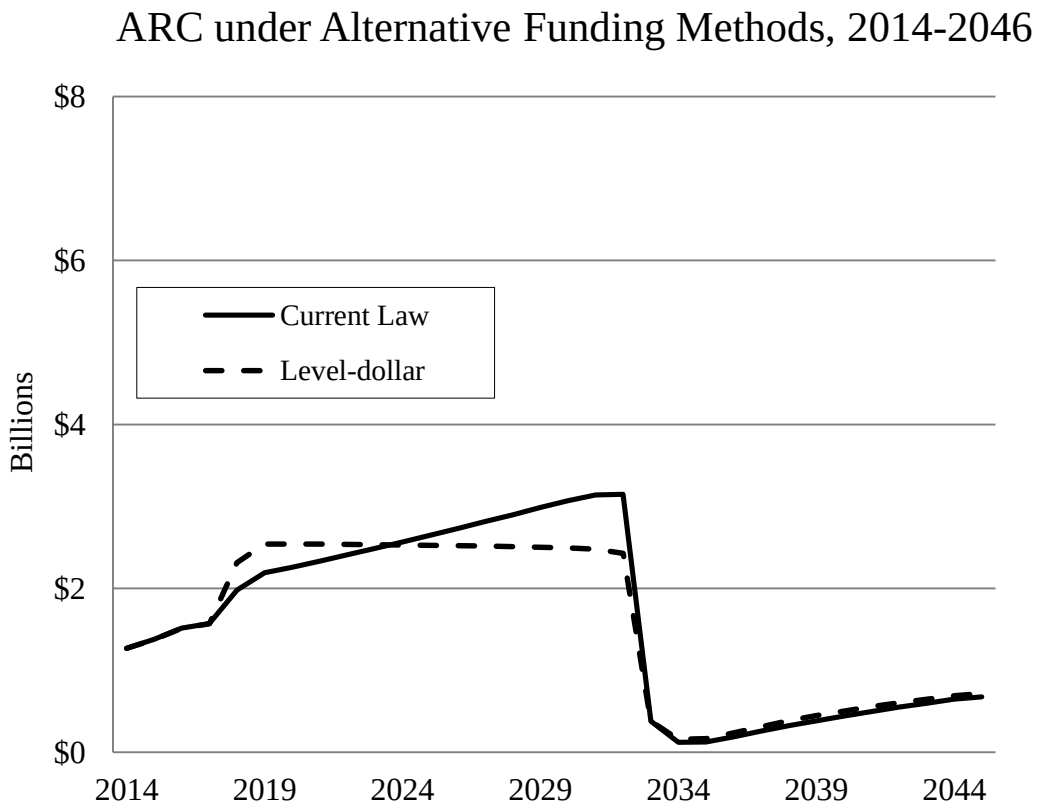
One way forward is pay off the UAAL by 2032 (current law)...

SERS Funded Ratio under Alternative Funding Methods, 2014-2046



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

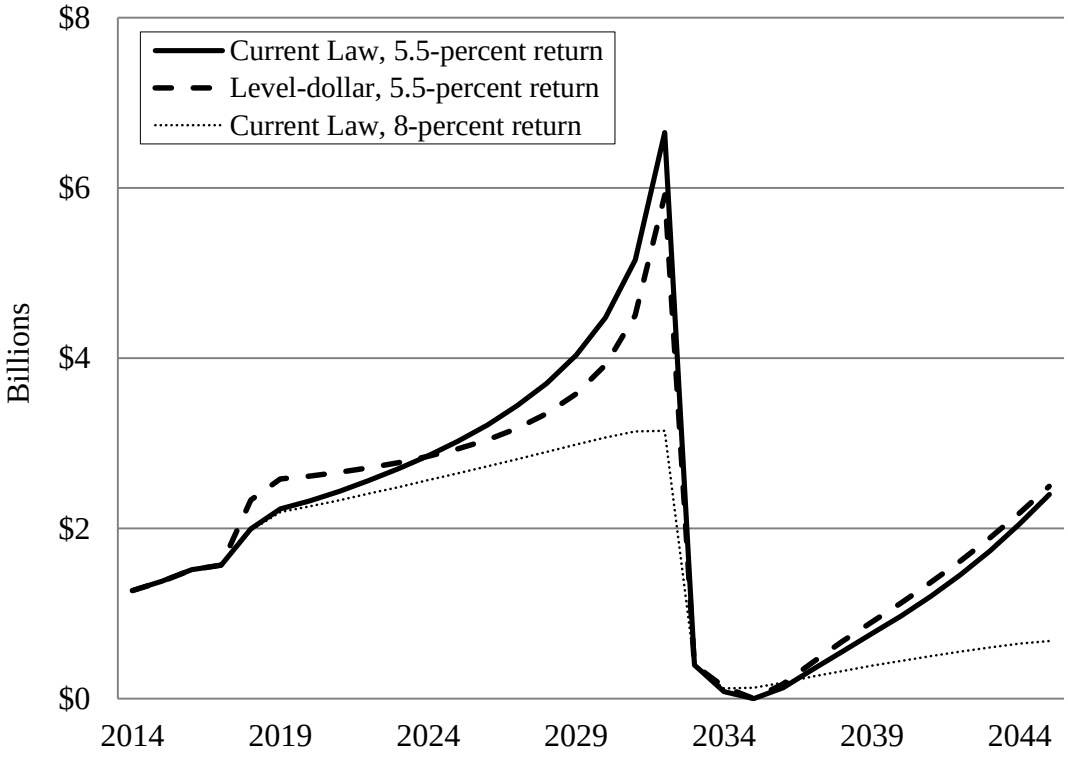
…but costs will remain high for next two decades.



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

Poor investment experience relative to the assumed could make matters much worse.

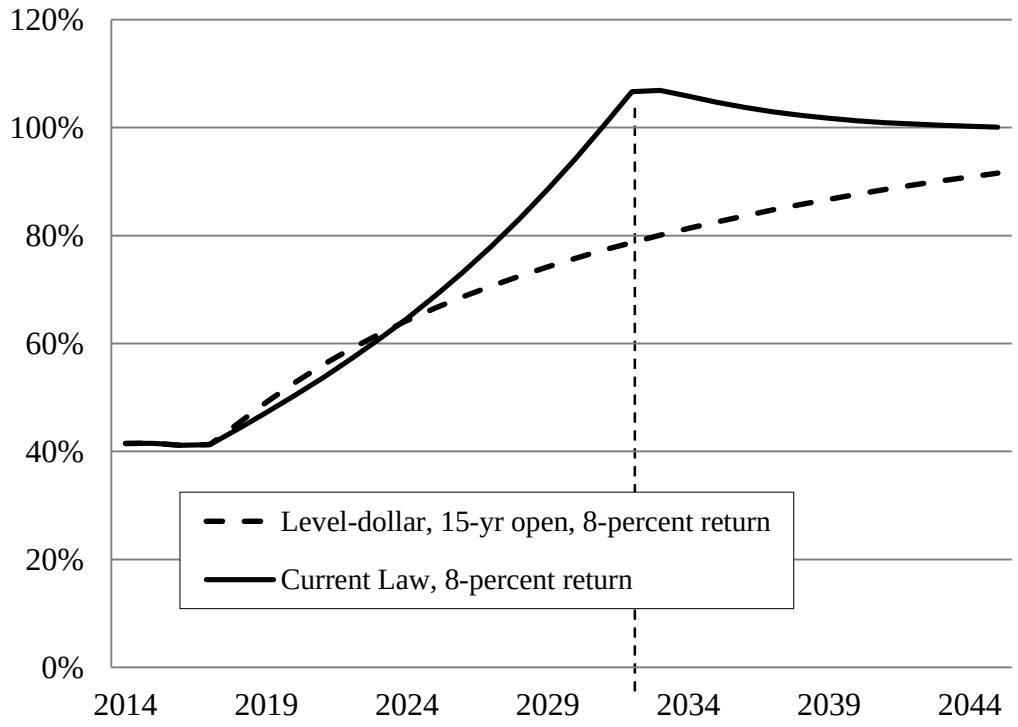
ARC under Alternative Funding Methods and Investment Returns, 2014-2046



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

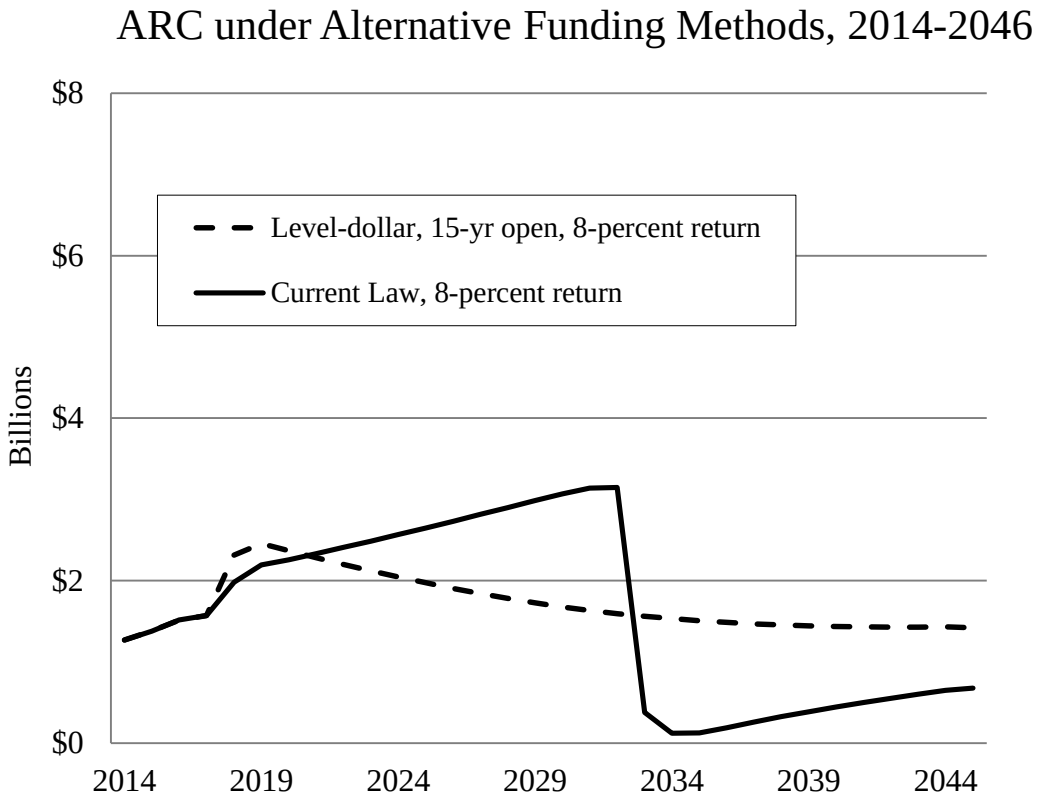
Relaxing the requirement to pay off the UAAL by 2032 will delay full funding...

SERS Funded Ratio under Alternative Funding Methods, 2014-2046



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

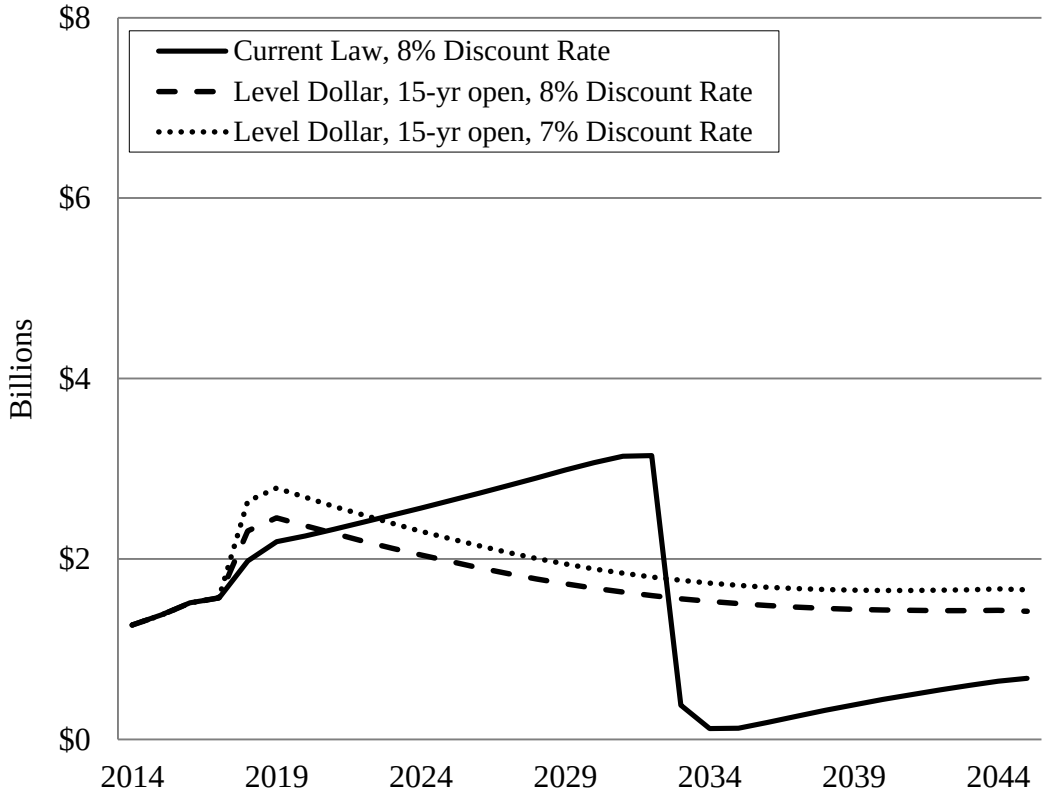
…but will reduces annual costs significantly over the next 20 years.



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

Even with a more conservative investment return assumption, costs remain lower.

ARC under Alternative Funding Methods and Assumed Returns, 2014-2046



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

Can Connecticut address the UAAL in other ways?

Separate the funding of the UAAL from ongoing plan financing to clarify the cost of benefits for current workers vs. legacy costs.

- Issue a POB or establish a dedicated tax/revenue stream.
- This is NOT an arbitrage or cost-saving mechanism. In fact, to ensure policy goals are met, it requires valuing the UAAL with a conservative interest rate.

What about the less controllable factors?

- Investment risk can be shared equitably among the plan stakeholders through a predetermined pattern of contribution increases and benefit cuts.

- Incremental increases to the normal cost due to revised actuarial assumptions can be shared evenly between employees and employers.

Conclusions

- SERS' current troubles are mainly the result of three things:
    1. Inadequate contributions
    2. Poor investment performance compared to the assumed investment return.
    3. Actuarial Experience
- The key to the future is making full required contributions.
- But paying off the UAAL by 2032 comes at a significant cost.
- Extending the payment horizon or issuing a POB could spread out the pain over a longer period.
- Lowering the assumed return and instituting procedures that automatically respond to bad outcomes would mitigate risk.

- The Center for Retirement Research at Boston College
  http://crr.bc.edu

- *Public Plans Database* (PPD)
  http://publicplansdata.org

- State and Local Pension Research
  http://crr.bc.edu/special-projects/state-local-pension-plans/

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