



THE STATE OF MASSACHUSETTS

The plans:

Massachusetts has two large state-administered pension systems, four smaller state-administered systems, and many locally-administered systems. The state also maintains one retiree health plan. This analysis focuses primarily on the two large state-administered systems – the Massachusetts State Employees' Retirement System (SERS) and the Massachusetts Teachers' Retirement System (TRS) – which make up nearly 60 percent of active public plan membership in the state.

The impact of the crisis:

As a result of the economic crisis, the amount required to amortize unfunded liabilities increased for both SERS and TRS. For SERS, the amount jumped from 4 percent to 11 percent of payroll. TRS experienced a jump of similar magnitude, with the amount increasing from 12 percent to 20 percent of payroll. Over the crisis period, both systems continued to pay 100 percent of their annual required contribution (ARC). For the state as a whole, the economic crisis increased the share of state and local budgets devoted to pensions from 3.1 percent to 4.4 percent.

The impact of pension plan reforms:

In response to the financial crisis and subsequent spike in pension costs, SERS and TRS went through a series of plan reforms that significantly reduced benefits for new hires. These reductions include increasing the required age for full pension benefits, reducing the age-related benefit factor, and increasing the average salary period. The result is that employers' contributions to the normal cost are projected to be cut in half by 2046, when all employees will be covered under the reduced benefits. For SERS, employer normal costs are projected to drop from 4 percent today to 2 percent of payroll in 2046. For TRS, that drop is from 2 percent to 1 percent of payroll.

If both systems continue to pay the full ARC and assumed returns are realized, the payments required to amortize the unfunded liability will decline. Taking into account both their benefit reductions and paying down their unfunded liabilities, the share of state and local budgets devoted to pension costs is projected to drop from 7.4 percent today to 3.2 percent by 2046. A key element in the projected pension costs for SERS and TRS will be each system's ability to stick to their funding schedule. Currently, both systems have in place a 2040 target date for full funding.

Total state costs:

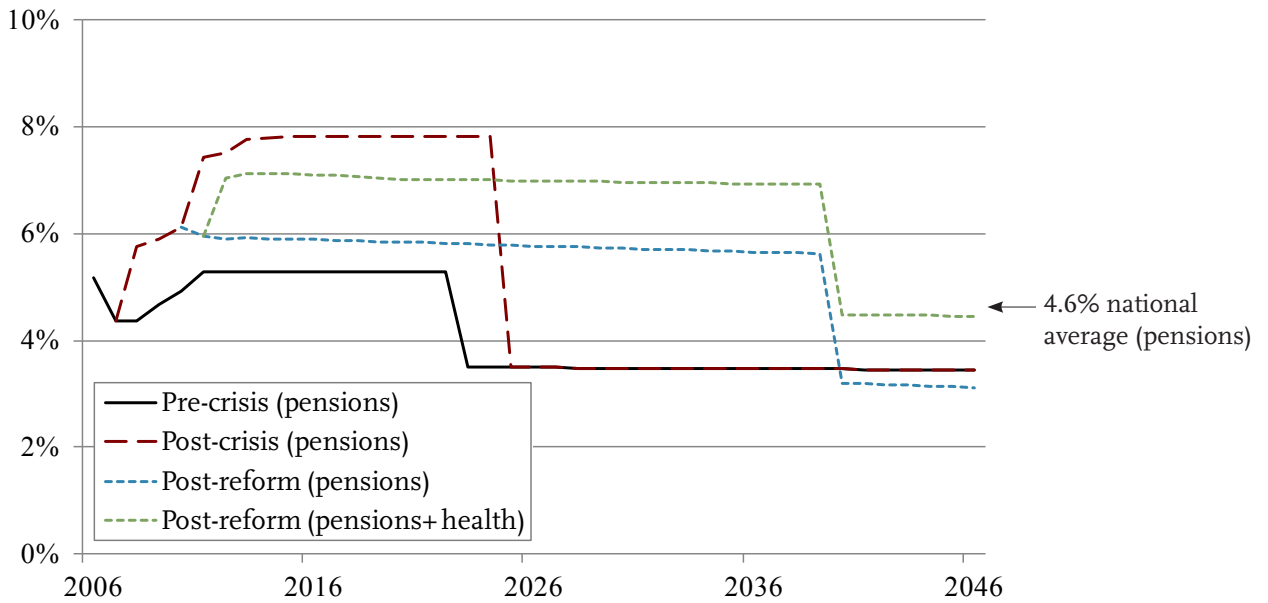
Massachusetts also provides retiree health benefits, which amounted to about 0.8 percent of state and local budgets prior to the crisis, but are projected to grow to 1.3 percent by 2046. When retiree health and pension costs are combined, Massachusetts' total retirement benefit costs as a percent of state and local budgets equaled 5.1 percent prior to the crisis, increased to 8.5 percent during the crisis, and are projected to drop to 4.5 percent in 2046 after pension reforms.



PENSION AND RETIREE HEALTH COSTS: PRE- AND POST-CRISIS

MASSACHUSETTS: TOTAL PENSION AND RETIREE HEALTH COSTS

FIGURE I. EMPLOYER PENSION AND RETIREE HEALTH COSTS AS PERCENT OF BUDGET: PRE-CRISIS, POST-CRISIS, AND POST-REFORM



Note: Budget = general own source revenues of all Massachusetts state/local governments. Retiree health costs assumed pay-as-you-go.

TABLE I. EMPLOYER PENSION AND RETIREE HEALTH COSTS AS PERCENT OF BUDGET, BY PLAN

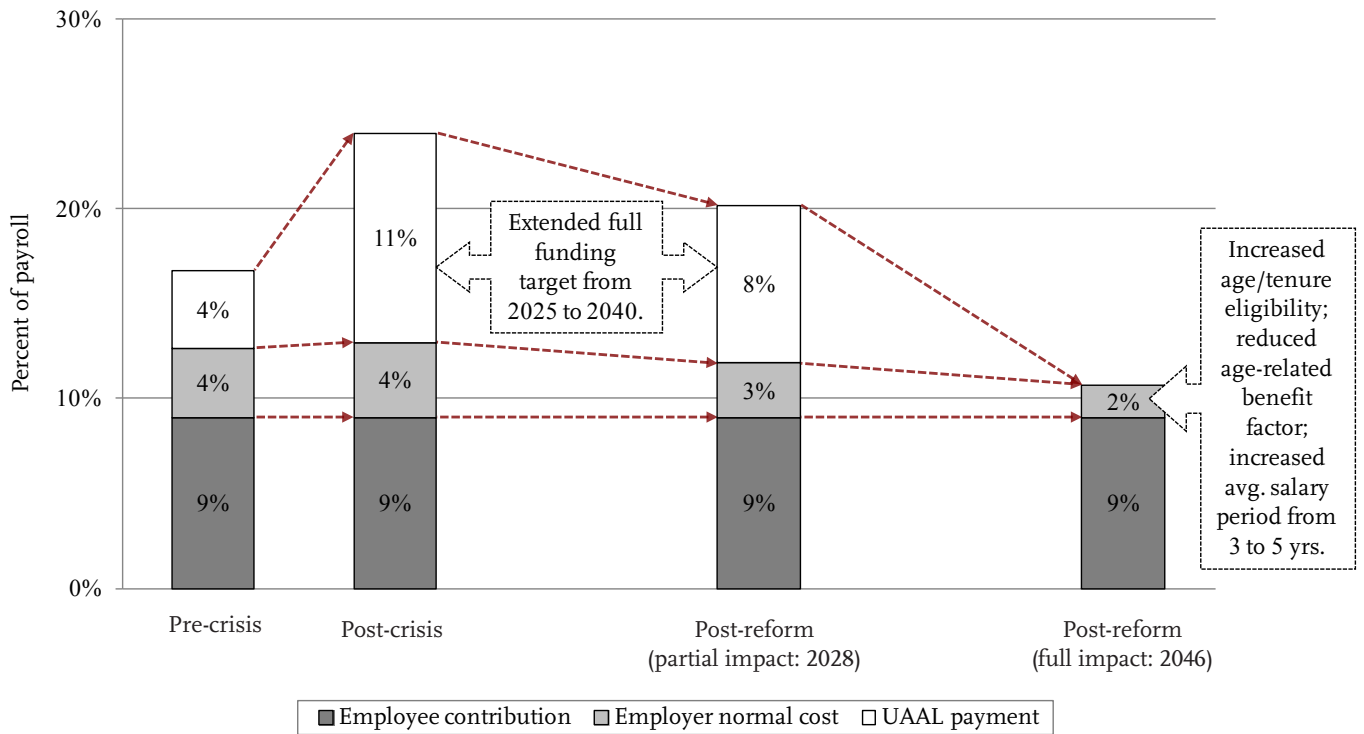
| Plan | Pre-crisis | Post-crisis | Post-reform | |
|----------------------------------|------------|-------------|-------------|-------|
| | | | 2028 | 2046 |
| Total pensions | 4.3 % | 7.4% | 5.7% | 3.2 % |
| Massachusetts SERS | 0.8 | 1.7 | 1.1 | 0.2 |
| Massachusetts TRS | 1.6 | 2.8 | 1.7 | 0.1 |
| Other pension plans ^a | 1.9 | 2.9 | 2.9 | 2.9 |
| Total retiree health | 0.8 | 1.1 | 1.2 | 1.3 |
| Massachusetts GIC | 0.8 | 1.1 | 1.2 | 1.3 |
| Total | 5.1 | 8.5 | 6.9 | 4.5 |

^a Includes seven state-pooled municipal retirement systems (Berkshire, Essex, Franklin, Hampden, Hampshire, Middlesex counties, and the City of Worcester), three authorities (Massachusetts Port Authority, Turnpike Authority, and Water Resources Authority), the Massachusetts Housing Finance Agency, and all the locally-administered pension plans within Massachusetts.

Sources: CRR calculations from plan actuarial valuations; and U.S. Census Bureau, *State and Local Government Finances* and *State and Local Public-Employee Retirement Systems*.

MASSACHUSETTS STATE BOARD OF RETIREMENT SYSTEM (SERS)

FIGURE 2. PENSION COSTS AS PERCENT OF PAYROLL: PRE-CRISIS, POST-CRISIS, AND POST-REFORM



KEY FACTS

Structure of retirement system

- Social Security coverage
- Defined benefit
- Defined contribution/hybrid

Funding method and history

- Set by statute
- Actuarially determined

Contributions based on slowly rising payments over a fixed UAAL amortization period. Post-crisis, the state increased amortization period from 14 to 29 years.

Plan design changes

- Cut COLA
- Increased employee contribution
- Increased age/tenure eligibility
- Increased average salary period: new hires only
- Reduced benefit factor: new hires only
- None

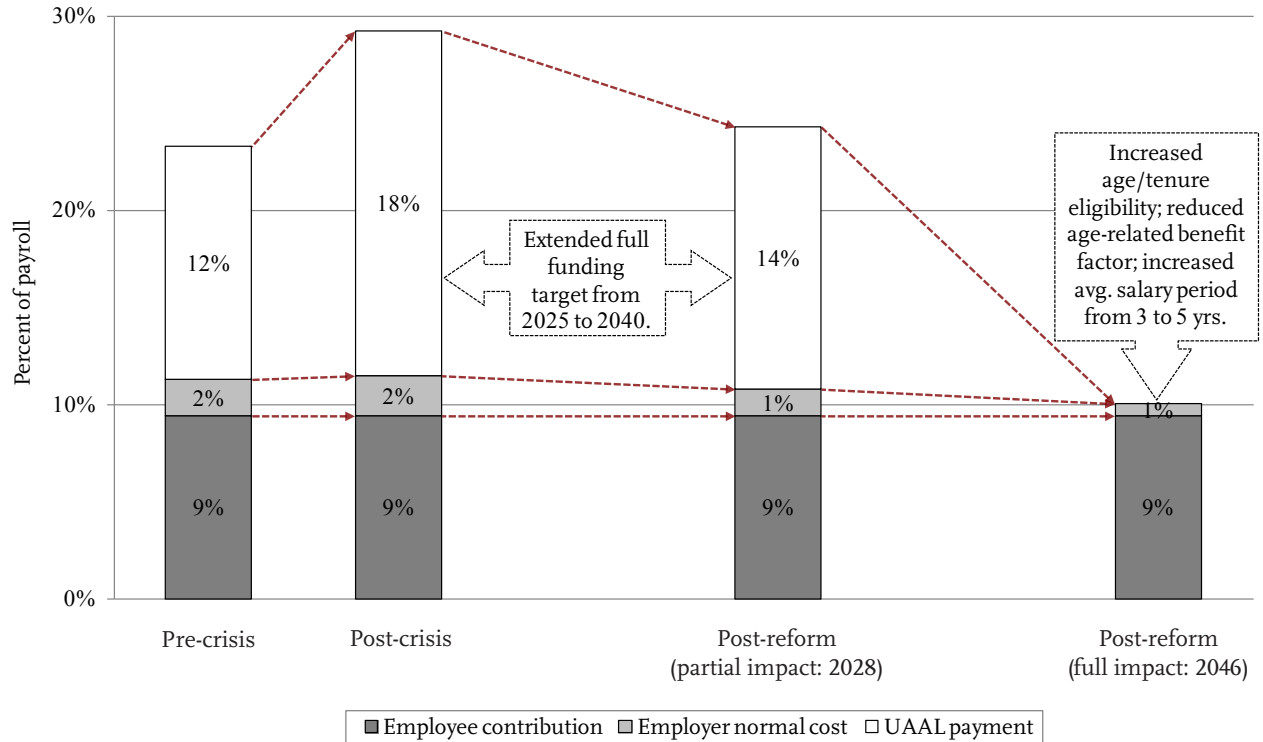
TABLE 2. PENSION FINANCES AND ACTUARIAL ASSUMPTIONS

| Item | Pre-crisis | Post-crisis | Post-reform | |
|----------------------|------------|-------------|-------------|--------|
| | | | 2028 | 2046 |
| Plan finances | | | | |
| Funded ratio | 89.4% | 71.6% | - | - |
| Employer ARC rate | 7.7 | 14.2 | 11.2 | 1.7 |
| Percent of ARC paid | 101.0 | 125.0 | 100 | 100 |
| Assumptions | | | | |
| Discount rate | 8.25 | 8.25 | 8.25 | 8.25 |
| Payroll growth | 4.5 | 4.0 | 4.0 | 4.0 |
| Amortization period | 16 yrs. | 14 yrs. | 12 yrs. | 0 yrs. |

Sources: Actuarial valuations and CRR calculations.

MASSACHUSETTS TEACHERS RETIREMENT BOARD (TRS)

FIGURE 3. PENSION COSTS AS PERCENT OF PAYROLL: PRE-CRISIS, POST-CRISIS, AND POST-REFORM



KEY FACTS

Structure of retirement system

- Social Security coverage
- Defined benefit
- Defined contribution/hybrid

Funding method and history

- Set by statute
- Actuarially determined

Contributions based on slowly rising payments over fixed UAAL amortization period. Post-crisis, the state increased amortization period from 14 to 29 years.

Plan design changes

- Cut COLA
- Increased employee contribution
- Increased age/tenure eligibility
- Increased average salary period: new hires only
- Reduced benefit factor: new hires only
- None

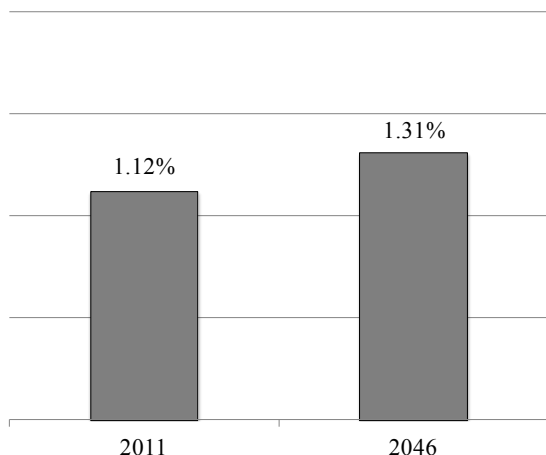
TABLE 3. PENSION FINANCES AND ACTUARIAL ASSUMPTIONS

| Item | Pre-crisis | Post-crisis | Post-reform | |
|----------------------|------------|-------------|-------------|--------|
| | | | 2028 | 2046 |
| Plan finances | | | | |
| Funded ratio | 73.9 % | 58.2 % | - | - |
| Employer ARC rate | 13.9 | 20.4 | 14.9 | 0.6 |
| Percent of ARC paid | 98.0 | 108.0 | 100 | 100 |
| Assumptions | | | | |
| Discount rate | 8.25 | 8.25 | 8.25 | 8.25 |
| Payroll growth | 4.5 | 4.0 | 4.0 | 4.0 |
| Amortization period | 16 yrs. | 14 yrs. | 12 yrs. | 0 yrs. |

Sources: Actuarial valuations and CRR calculations.

COMMONWEALTH OF MASSACHUSETTS GROUP INSURANCE COMMISSION (GIC)

RETIREE HEALTH AS PERCENT OF BUDGET

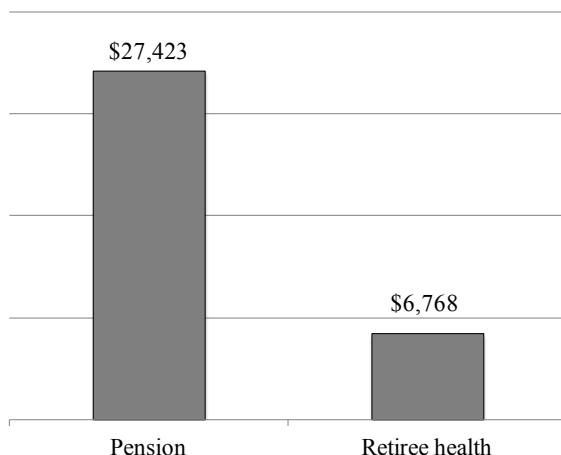


Sources: CRR calculations from plan actuarial valuations; and U.S. Census Bureau, *State and Local Government Finances*.

Retiree health funding and costs

- Funding method: Pay-as-you-go.
- Medical inflation rate: 8.5 percent, drops to 5 percent in 2017.
- Employer contribution: Pays 80 percent, 85 percent, or 90 percent of insurance premiums based on year of hire and employee classification.

AVERAGE ANNUAL BENEFIT



Source: CRR calculations from plan actuarial valuations.

Benefits and membership

- Benefit eligibility: Retired members who are eligible for pensions can receive coverage with the employer subsidy upon retirement.
- Benefits for Medicare-eligible retirees: The Commonwealth subsidizes two plans.
- Active employees: 73,646
- Beneficiaries: 70,070
- Most recent actuarial valuation: 10/30/10