



# Public Sector Retirement Systems

Steps to providing support and technical assistance: An update

## Overview

The Pew Charitable Trusts performs 50-state and major city research on all aspects of public pension systems, including their fiscal health, investment practices, benefits design, and governance. Pew's project on public sector retirement systems developed some of the first and most comprehensive studies of underfunded public pensions throughout the United States. This fact sheet updates guidance on our work initially published in 2015.

Drawing on our research expertise, we provide technical assistance to policymakers considering ways to ensure that their retirement systems are affordable and sustainable and put workers on the path to a secure retirement. At the invitation of cities and states across the country, we undertake an objective and data-driven process to analyze these systems and to develop and examine options for improvements. Those options are tailored to each jurisdiction because there is no one-size-fits-all approach. The process seeks to answer nine key questions:

1. What is the current fiscal status of the state's or city's retirement system?
2. What are the historical factors that have contributed to any unfunded retirement liabilities?
3. How are current retirement benefits structured?
4. What are the expected impacts of any past reforms?
5. What is the fiscal outlook for the system over the next five to 30 years?

6. What are the economic and fiscal risks over the short and long term?
7. What are the retirement system's current investment policies, performance, and costs?
8. How does pension plan governance compare with that of other states and standard practices?
9. **In states and cities where policymakers are considering new proposals, we build on analysis from the first eight questions to apply sophisticated financial and actuarial models to analyze the impact of proposed modifications. How would proposed solutions affect fiscal sustainability for government and taxpayers, and retirement security for workers?**

Below we provide greater detail on these questions.

## 1. What is the current fiscal status of the state's or city's retirement system?

We start by reviewing state or city actuarial valuations and financial reports to evaluate the current health of the pension plan. Our work involves an extensive review of comprehensive annual financial reports, actuarial reports and valuations, and other documents that disclose financial details about the pension systems, concentrating on central data points.

Among the key data points:

- **Funding data.** Assets, liabilities, and the unfunded actuarial accrued liability.
- **Funding contribution data.** Funding requirements as determined by the plan's actuary, broken out by normal cost and the cost of amortizing the unfunded liability; analysis of how the funding policy is projected to reduce pension debt over time; and review of whether plan sponsors have fully paid the actuarial required or determined contributions.
- **Budgetary impact.** Contributions as a share of payroll, state or local spending, revenue, and other measures.
- **Rating agency evaluation summary.** Bond rating agencies evaluate the impact of pension system fiscal health on creditworthiness and provide independent evaluation of policies that states and cities have in place or are considering for funding and managing retirement systems. Pew summarizes recent reports and standard criteria for evaluating pensions, tailoring the information to each state or city.

## 2. What are the historical factors that have contributed to any unfunded retirement liabilities?

Using actuarial analyses produced by the pension plan as the primary resource, we provide policymakers with an examination of the historic sources of any existing unfunded liabilities—comparing the relative magnitude and impact of unpaid contributions as well as the difference between actual and expected investment returns. The review also considers changes to benefits or actuarial assumptions.

Among the key data points:

- **At a minimum, a 10-year history of unfunded liabilities, broken out by the main causes, including contribution shortfalls, investment returns, and changes to assumptions and benefits.**

## 3. How are current retirement benefits structured?

We assess the plan's benefit design by analyzing retirement savings and replacement rate outcomes. These analyses are designed to show expected savings and benefit levels for career workers, along with younger and midcareer workers who may change jobs. Our effort to assess retirement benefits for any individual

also includes whether an employee is eligible to participate in Social Security, as that eligibility increases replacement income and offers protection against inflation during retirement.

Among the key data points:

- **Potential replacement income.** Retirement income as a share of career-end take-home pay, derived by taking expected income from government-sponsored retirement benefits as a share of projected final salary, adjusted to reflect post-tax take-home pay.
- **Retirement savings rate.** The percentage of salary saved annually that is available to a worker who may leave public service before reaching retirement age eligibility. Helps measure savings for workers who may change jobs early in or midway through their careers.
- **Value of lifetime benefits.** The total amount of government-sponsored retirement income an employee can expect to receive over a lifetime. Calculated as the expected present value of the future stream of benefits. That provides a single amount of plan benefits that shows how the value changes based on plan type, service years, start age, and date of separation or retirement.
- **Vesting periods, attrition rates, and interest on employee contributions.**
- **Retirees' participation in Social Security.**
- **The effect of projected inflation on retirement benefits, with and without expected cost-of-living adjustments.**
- **Retiree health care benefits.**

#### 4. What are the expected impacts of any past reforms?

Most states and many cities have taken action to better manage pension liabilities, and some also have taken steps to address retiree health benefit liabilities. We examine past reforms to determine their long-term effects on the retirement plan, such as how well they mitigate against future economic downturns and what changes to the benefit plans mean for workers' retirement security.

Among the key data points:

- **Long-term contribution and debt projections with and without past reforms.**
- **Analysis of benefits based on plan changes for short-term, medium-term, and career workers.**

#### 5. What is the fiscal outlook for the system over the next five to 30 years?

Pew works with an actuarial partner to develop long-term projections of assets, liabilities, and contributions to give policymakers an accurate picture of the projected fiscal position and costs if plan assumptions are met. We include standard actuarial measures as well as fiscal metrics for pension debt reduction, cash flow, and share of budget, and provide a descriptive summary.

Among the key data points:

- **Funding data.** Assets, liabilities, unfunded actuarial accrued liability, and debt level.
- **Net amortization.** A contribution benchmark that measures the expected change in pension debt for a given year when plan assumptions are met. This measure provides the estimated funding a plan needs to keep the net pension liability from growing.

- **Cash flow analysis.** The analysis measures operating cash flow by totaling employer and employee contributions and looking at additional inflows from other sources—before subtracting benefit payments. For most public plans, this number will be negative, highlighting how actuarial funding and the maturity of plan demographics leave pension funds dependent on investment returns to maintain asset levels.
- **Budgetary context.** Analysis of contributions as a share of payroll (or other appropriate measure) over the next 30 years.

## 6. What are the economic and fiscal risks over the short and long term?

Pew summarizes the risks and predictability of costs under the current plan design and funding policy. These analyses include sensitivity analysis of pension contributions, liabilities, and pension debt at different rates of return, as well as scenarios examining the impact of asset shocks and various contribution practices. This helps develop a complete view of fiscal health. Analyses using stochastic simulation, a modeling approach that randomly generates scenarios based on key assumptions, as well as other analytical approaches can be applied as necessary.

Among the key data points:

- **Five-year funding policy outlook.** We assess sustainability of current pension funding policies through sensitivity analysis of contributions and pension debt under varying economic conditions over a five-year time horizon.
- **Baseline projections.** These provide a 30-year projection of key fiscal indicators, including liabilities, assets, funding levels, employer and employee contributions, and payroll, based on plan assumptions and current policy.
- **Stress testing.** These are five- to 20-year projections of the same key fiscal indicators noted above for consideration of scenarios in which actual returns differ from assumed return rates.
  - Analysis of investment performance scenarios should include rates of return that are 1 to 3 percentage points higher or lower than expected results.
  - Stress testing should include specific asset shock scenarios, such as an immediate 15 percent loss of assets followed by lower than expected returns.
  - Scenarios should calculate outcomes under existing policy as well as holding contributions constant at currently projected levels, as a proxy for affordability.
- **Sensitivity analysis.** This provides estimates of plan liabilities, unfunded liabilities, and percent funded, as well as overall normal cost and the normal cost for the most recent tier of benefits measured at a range of discount rates.

## 7. What are the retirement system's current investment policies, performance, and costs?

Pew evaluates the investment policies and practices in the context of historic performance benchmarks, and asset management fees. The assessment includes a review of asset allocation as well as payments for expenses and fees in comparison with peers and national averages.

Among the key data points:

- **Current asset allocation, including the proportion in riskier assets and alternatives.**
- **10-, 20-, and 25-year performance gross and net of fees (subject to data availability), compared with relevant benchmarking (by asset class, if available), and an analysis of the drivers of performance.**
- **Assessment of investment rate or return assumption.**
- **Fee and expense levels.**

## 8. How does pension plan governance compare with that of other states and standard practice?

Pew analyzes the current laws and policies of the state or city and evaluates their applicability to the Uniform Management of Public Employee Retirement Systems Act (UMPERSA) core fiduciary elements, best practices established by experts at the Uniform Law Commission in 1997. We also examine the plan's board composition and structure for comparison with other states and standard practices.

Among the key data points:

- **Number of UMPERSA elements in place with a focus on the key protections.**
- **Board composition with summary of expertise requirements.**

## 9. How would proposed solutions affect fiscal sustainability for government and taxpayers, and retirement security for workers?

As policymakers consider these issues, Pew's analysis is designed to ensure that they have accurate assessments of the effects, strengths, and weaknesses of various proposals. We model the results of proposed solutions on budgets and workers' retirement savings, and share suggestions with policymakers on best practices.

Among the key data points:

- **Evaluation of how proposed plan changes would affect the fiscal sustainability and cost predictability of the retirement system. Among the factors examined to measure the effect of proposed policy changes on future budgets are net amortization, cash flow analysis, and total pension cost metrics. (See detail in questions 5 and 6.)**
- **Demonstration and analysis of how various plan proposals would affect the retirement security of different groups of workers by assessing proposals on our core metrics, depending on age, type of service, length of public employment, and other factors. (See more detail in question 3.) Factors include:**
  - Potential replacement income.
  - Retirement savings rate.
  - Value of lifetime benefits.

## Glossary

**Actuarial report.** A document outlining the calculations made to assess the current and future costs of pension plans and retiree health plans.

**Amortize.** Make scheduled payments to eliminate pension liabilities over a period of time.

**Asset allocation.** The distribution of assets under management and typically invested by designated asset classes, such as equities, fixed income, or alternatives (which include private equity, real estate, and other complex financial instruments).

**Comprehensive annual financial report.** An annual disclosure produced by a state or pension system detailing key financial data.

**Funded ratio.** The level of assets on hand in proportion to pension costs.

**Normal cost.** The cost of benefits earned by employees in any given year.

**Replacement rate.** The percentage of pre-retirement income.

**Unfunded actuarial accrued liability.** The difference between the total value of pension benefits owed to current and retired employees or dependents and the plan assets on hand. This is an unfunded obligation for past service.

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## For further information, please visit:

[pewtrusts.org/publicpensions](https://pewtrusts.org/publicpensions)

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