SOCIETY OF ACTUARIES®

Aging and Retirement

Fast Facts

Contribution Analysis: U.S. Public Pension Plans

SUMMARY

Funding public pension plans involves many factors, including plan design, approaches to cost and risk management, investment experience, plan demographics, actuarial methods and assumptions, and contribution decisions that may be subject to legislative processes. Regardless of the complexities, the goal is to provide the plan with enough assets to pay participants' benefits when they come due.

This study analyzes whether state-based and large-city public pension plans in the U.S. received sufficient contributions to reduce their unfunded liabilities. In this analysis, contributions are considered in isolation from other factors that affect a plan's funded status.

In 2016 and 2017, 63% of plans received insufficient contributions to reduce their unfunded liabilities.

The authors caution that a plan that receives enough contributions to reduce its unfunded liability may still see its unfunded liability increase because of other factors that affect funded status.

HIGHLIGHTS

- In 2016 and 2017, 63% of state-based and large-city pension plans received insufficient contributions to reduce their unfunded liabilities (assuming all actuarial assumptions were met).
- In addition, some plans that received insufficient contributions to reduce their unfunded liabilities when measured as a dollar amount did receive enough contributions to reduce their unfunded liabilities when expressed as a percent of payroll. While only 37% of plans received enough contributions to reduce their unfunded liabilities as a dollar amount in 2016 and 2017, 83% and 79%, respectively, of plans received enough contributions to reduce their unfunded liabilities as a percent of payroll. Funding plans as a percentage of payroll is a common approach among public pension plans.
- Of the plans that received insufficient contributions to reduce their unfunded liabilities as a dollar amount, more than half also fell short of the plan's target contribution.[1] This suggests that the process for determining such a plan's contributions may not align with the plan's funding policy.
- In general, the percentage of plans with unfunded labilities has been increasing since the dot-com crash in 2000–2001. Of the plans studied, in 2003, 71% of them had unfunded liabilities, and by 2009, 88% of them had unfunded liabilities. In 2017, 97% of the plans studied had unfunded liabilities.

[1] For this study, a plan's target contribution is the contribution that represents its funding policies. For many plans, the target contribution is reported in financial statements as the Actuarially Determined Contribution. However, some public plans do not report an Actuarially Determined Contribution, because, for example, they have a fixed-rate funding policy or contribution rates that are mandated by state statute.

LINK TO FULL REPORT

U.S. Public Pension Plan Contribution Analysis
https://www.soa.org/research-reports/2017/public-pension-indices/

METHODOLOGY

- Time frame: 2003–2017
- Computation:
  - Benchmark for reducing unfunded liability as a dollar amount: Normal cost plus interest on the unfunded liability. To reduce unfunded liability, contributions need to exceed the benchmark.
  - Benchmark for reducing unfunded liability as a percent of payroll: Normal cost plus interest on the unfunded liability, where the interest rate is net of the rate of assumed payroll growth. To reduce unfunded liability, contributions need to exceed the benchmark.

REPORT SPECS

- Published: February 2019
- Pages: 24
- Access: Downloadable pdf
- Research Sponsor: The Society of Actuaries (SOA)
- Authors: Lisa Schilling, FSA, EA, FCA, MAAA, and Patrick Wiese, ASA
- Contents: Introduction and executive summary, benchmarks, contribution analysis, frequency of insufficient contributions, sources of insufficient contributions, conclusions, data and methods, acknowledgements, 5 appendices, 30 figures, and 3 tables.
- Data source: Public Plans Data database and actuarial valuation reports as of Nov. 15, 2018.

YOU MIGHT ALSO LIKE

U.S. Public Pension Plan Mortality Assumptions
https://www.soa.org/research-reports/2018/public-pension-mortality/

Retirement Adequacy in the United States: Should We Be Concerned?
https://www.soa.org/research-reports/2018/retire-adequacy-us-concern/

Financial Perspectives on Aging and Retirement Across the Generations
https://www.soa.org/research-reports/2018/financial-perspectives-aging-retirement/

CONTACT

Steven Siegel
SOA Research Actuary
Research@soa.org
(847) 706-3500