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RESEARCH BRIEF

# The State of Pensions 2022 | Year End Update

## The Era of Volatility: Asset Shocks, Inflation, and War

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# The State of Pensions at the end of 2022 is Fragile.

The calendar year 2022 was not a great time to be managing pension fund assets. While a few hedge funds and money managers successfully navigated the choppy and volatile investment waters of 2022, most lost money. Some lost a lot. At one point during 2022, CalPERS was down around $80 billion from the $500 billion they'd started the year with — and there were just 15 states that ended 2021 with more than $80 billion in total assets under management.

Fortunately, the investment losses in 2022 didn't wipe out all the funded status gains from 2021. Unfortunately, the sharp losses this year have exposed — yet again — the lack of resilience plaguing many public pension plans.

Once all public pension plans release their 2022 data, we estimate that the combined funded status for the top state and local retirement systems will be 77.3% — factoring in estimates with data through December 31, 2022. This is down from the 83.9% funded ratio during fiscal year 2021.

Looking ahead there are warning signs everywhere:

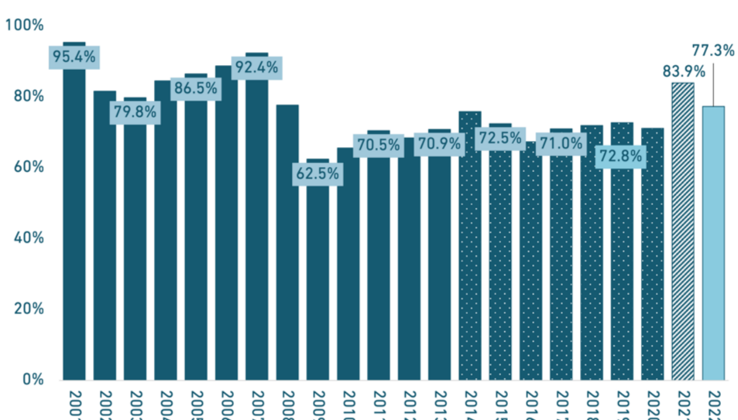
1. Most major public market indices are effectively flat over the last six months.
2. Private equity returns get reported on a lag of up to six months, and with each update in 2022 values were coming down — which means 2022 numbers were including overstated private equity asset valuations and 2023 numbers are going to incorporate those losses.
3. The Federal Reserve is signaling more interest rate hikes with persisting inflation, war in Ukraine continues, and the end of China's Zero-Covid policy will create near-term pressures on global commerce in 2023.

This means that, to-date, it is unlikely that most pension funds are on track to hit their assumed rates of return for 2023, even if they do generate a positive overall return. Pension fund trustees should be considering lower investment assumptions and state legislatures should be looking at larger contribution rates.

## The national funded ratio average is projected to decline from 83.9% in 2021 to 77.3% in 2022.

States and cities have made full contributions to their pension funds and in many cases even provided supplemental contributions. But poor investment returns in 2022 have driven down the average funded ratio for state and local plans. This is a loss of roughly half of last year's improvement.

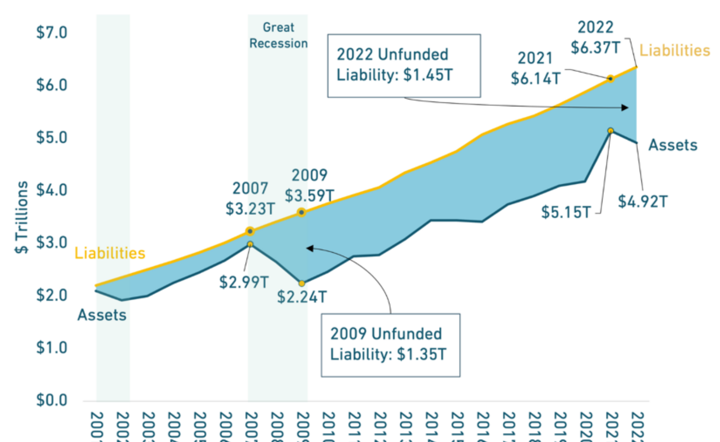
FUNDED RATIO AVERAGE
FOR STATE & LOCAL PENSION PLANS | 2001-2021 + 2022 Estimate




## The total pension funding shortfall will increase to $1.45 trillion in 2022, reversing the one-year drip below the $1 trillion line in 2021.

Strong investment returns in 2021 led to a decline in unfunded liabilities down to $986.6 billion. That pension debt has increased back up to $1.45 trillion as of 2022's calendar year end due to poor investment returns. Better-than-expected performance from private equity kept the increase from being larger.

TOTAL UNFUNDED LIABILITIES
FOR STATE & LOCAL PENSION PLANS | 2001-2021 + 2022 Estimate

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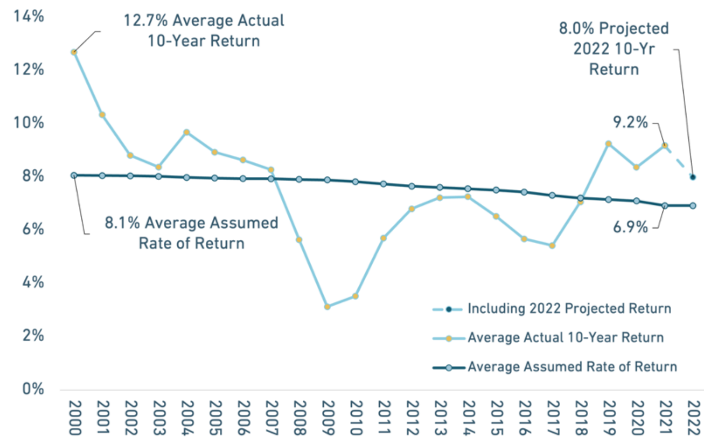
## A -6.1% average investment return for the 2022 fiscal year has erased nearly half of the funded ratio gains of 2021.

Preliminary 2022 investment returns show a -6.14% return on average for state and local plans (for the 2022 fiscal year as utilized by each plan, including data measured through December 31). All systems are forecast to miss their assumed return for the year, currently averaging 6.9%.

Last year's incredible investment returns (24.8% on average) did include some future returns that were "pulled forward" and ultimately led to a market correction. The average return for 2020-2022 is 7.1%; capital market forecasts suggest the average return over the next decade is likely to be around 6%.

INVESTMENT RETURN AVERAGES
COMPARED TO ASSUMED RATES OF RETURN | 2001-2022



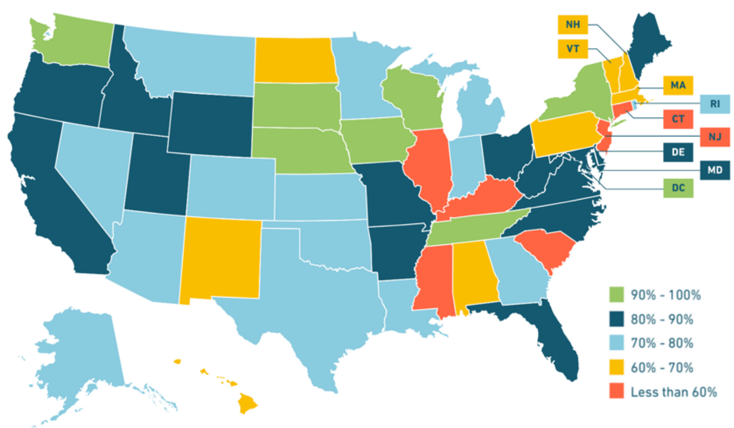

## Most state and municipal pension plans in the United States are distressed or fragile.

Within the states, funded ratios and unfunded liability levels continue to vary considerably from state to state. For example, in California the State Teachers' Retirement System is under 70% funded while the City of Los Angeles Fire and Police Pension Plan is 98% funded.

A few state pension plans still report a Resilient funded status (90% or better for three years continuously). However, the vast majority of U.S. pension plans have a Fragile (90% to 60%) or Distressed (60% or less) funded status.

*Please see page 3 of this report for a list of all states ranked by funded ratio.*

2022 ESTIMATED AGGREGATE STATE FUNDED RATIOS BASED ON ESTIMATED ASSETS FOR STATE & LOCAL PENSION PLANS




## How This Update Changes Our Findings for State and Local Pension Plans:

- The average 2022 estimated rate of return shifted from -6.0% (as of data through September 30) to -6.14% after factoring in reported preliminary returns and updated private equity data for the third quarter of 2022.
- The average 2022 funded ratio shifted from 77.9% (estimated as of June 30) to 77.3% based on updated return data and recently published actuarial valuations.
- Total 2022 unfunded liabilities shifted from $1.4 trillion (estimated as of June 30) to $1.45 trillion based on updated return data and recently published actuarial valuations.
- The average 2021 actual funded ratio shifted from 84.8% to 83.9% based on additional reported plan data.
- Total 2021 unfunded liabilities report shifted from $976.3 billion to $986.6 billion based additional reported plan data, notably for California Public Employees' Retirement System.

To read more about State of Pensions visit Equable.org/StateofPensions2022

# Funded Ratio Ranking, by State | 2022

| Rank | State | Funded Ratio | Unfunded Liability |
|---|---|---|---|
| 1 | District of Columbia | 103.4% | -$323,351,808 |
| 2 | Washington | 102.9% | -$4,006,809,472 |
| 3 | South Dakota | 100.0% | $0 |
| 4 | Tennessee | 99.5% | $330,451,520 |
| 5 | Nebraska | 96.1% | $665,939,840 |
| 6 | New York | 94.4% | $37,288,583,680 |
| 7 | Wisconsin | 93.2% | $10,018,704,512 |
| 8 | Iowa | 90.9% | $4,339,720,704 |
| 9 | North Carolina | 88.8% | $14,425,116,672 |
| 10 | Delaware | 88.8% | $1,367,923,712 |
| 11 | Maine | 87.2% | $2,678,935,552 |
| 12 | West Virginia | 86.2% | $2,715,104,768 |
| 13 | Utah | 86.0% | $6,244,379,112 |
| 14 | Oregon | 84.5% | $15,312,052,224 |
| 15 | Virginia | 83.8% | $20,445,987,136 |
| 16 | Florida | 83.3% | $36,957,610,240 |
| 17 | Idaho | 83.1% | $3,938,758,656 |
| 18 | Arkansas | 82.9% | $7,327,147,776 |
| 19 | Wyoming | 82.6% | $1,951,591,424 |
| 20 | Ohio | 82.1% | $50,128,445,824 |
| 21 | Missouri | 81.6% | $17,675,925,568 |
| 22 | Maryland | 81.3% | $16,664,515,328 |
| 23 | California | 80.0% | $274,801,209,642 |
| 24 | Texas | 78.9% | $84,597,283,200 |
| 25 | Minnesota | 77.9% | $22,457,894,528 |
| 26 | Oklahoma | 77.9% | $10,430,485,248 |

| Rank | State | Funded Ratio | Unfunded Liability |
|---|---|---|---|
| 27 | Kansas | 76.4% | $8,270,645,616 |
| 28 | Michigan | 75.5% | $32,950,344,720 |
| 29 | Nevada | 75.1% | $18,054,893,568 |
| 30 | Rhode Island | 72.7% | $3,863,383,680 |
| 31 | Montana | 72.4% | $4,344,711,168 |
| 32 | Georgia | 72.3% | $39,809,781,248 |
| 33 | Colorado | 72.2% | $26,397,374,336 |
| 34 | Arizona | 71.8% | $26,996,553,952 |
| 35 | Alaska | 71.3% | $6,763,752,448 |
| 36 | Louisiana | 71.1% | $21,530,430,224 |
| 37 | Indiana | 70.0% | $14,527,537,152 |
| 38 | Hawaii | 68.5% | $11,190,476,800 |
| 39 | Massachusetts | 67.9% | $35,140,395,008 |
| 40 | Alabama | 67.3% | $21,070,035,072 |
| 41 | New Mexico | 66.3% | $16,214,644,736 |
| 42 | Pennsylvania | 65.3% | $63,830,526,208 |
| 43 | New Hampshire | 65.1% | $5,736,130,560 |
| 44 | Vermont | 61.9% | $3,355,864,768 |
| 45 | North Dakota | 60.1% | $4,427,750,400 |
| 46 | Mississippi | 59.9% | $20,583,639,040 |
| 47 | South Carolina | 57.8% | $27,865,324,032 |
| 48 | Connecticut | 51.5% | $41,852,312,448 |
| 49 | New Jersey | 50.1% | $100,052,413,440 |
| 50 | Illinois | 50.0% | $209,967,487,488 |
| 51 | Kentucky | 47.3% | $42,259,716,736 |

*Data for each state includes statewide plans and large municipally managed plans (those with at least $1 billion in liabilities).*

Funded ratio rankings for individual pension plans are available at
[Equable.org/PensionPlanFundedRatios](Equable.org/PensionPlanFundedRatios)

## WHAT IS INCLUDED IN THIS UPDATE?

When we published State of Pensions in July 2022, there were still 31 state or local retirement systems that had not released data for the fiscal year ending 2021. These plans amounted to 16.8% of anticipated accrued liabilities for 2021, most of which is related to CalPERS (although we did include their reported market valued asset data). Further, our July report relied almost entirely on estimated investment returns using benchmarks for the various reported asset classes that pension funds were using as of 2021.

Over the last six months most retirement systems have released new and updated data, including preliminary investment return data for 2022 and actuarial valuations. This January 2023 update uses those reports to include the following:

- Updated 2021 actual financial data (including the addition of actuarial valuation report data from 29 retirement systems that represent 16.7% of the accrued liabilities in our dataset, which is nearly all outstanding data for the fiscal year). Reports with 2021 data are still outstanding from one state system (Pennsylvania Municipal Retirement System) and an assortment of municipal systems covered in our database.

- Updated 2022 estimates (using audited or preliminary investment returns from retirement systems, pension fund trusts, and state treasurer or comptroller offices). As of this update, 76.4% of retirement systems (172 of 225 with available data) reported preliminary investment returns for their full fiscal 2022. Nearly all of the remaining plans have fiscal years ending December 31. For the remaining plans, 35 (15.6% of total plans) provided partial year returns for 2022, which we combined with benchmark returns to estimate a fiscal year return. The other 18 plans (8.0% of total plans) have not reported any investment performance for fiscal 2022, meaning that their estimates are based entirely on respective asset allocations and asset class benchmark returns.

For this update, there were no additional retirement systems or pension plans added to the database of 228 entities from Equable Public Retirement Research Database that were covered in the report. Three municipal plans did not provide enough data to provide roll-forward estimate in this update: Omaha Police and Fire, Providence ERS, and Nashville-Davidson ERS.

Note: *This report is not estimating mid-2023 fiscal year funded status. We use investment data through December 31 to estimate returns for defined benefit plans with fiscal years ending in August, September, or December that have not otherwise released preliminary estimates of their own rates of return for the 2022 fiscal year.*

## ABOUT STATE OF PENSIONS

State of Pensions is Equable Institute's annual report on the status of statewide public pension systems, put into a historic context. Governments face a wide range of challenges in general – and some of the largest are growing, and often unpredictable, pension costs. State of Pensions analyzes trends in public pension funding, investments, contributions, cash flows, and benefits for 228 of the largest statewide and municipal retirement systems in all 50 states to illuminate the scale and effects of these challenges. Click here to access previous editions of State of Pensions, as well as additional data and resources.

## ABOUT EQUABLE INSTITUTE

Equable Institute is a bipartisan nonprofit that works with public retirement system stakeholders to solve complex pension funding challenges with data-driven solutions.

## ABOUT THE AUTHORS

**Anthony Randazzo (Executive Director)** is a national expert on public sector pension policy and has provided technical assistance to more than a dozen states and cities on ways to improve retirement plan sustainability.

**Jonathan Moody, PhD (Vice President for Research)** has developed a wide range of academic and policy research on municipal finance subjects, including state budgeting and reserve funds, state credit ratings, state fiscal management, and public retirement benefits.

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