MOODY'S INVESTORS SERVICE

Access is everything™

# State and local pension pressure compounded by coronavirus shock

**Tom Aaron**, VP-Senior Credit Officer, US Public Finance Group

July 14, 2020

# Access is everything™

## Expertise
A comprehensive view of the global markets through our ratings and research.

## Credibility
Over 100 years of experience delivering forward-looking, independent, stable and transparent opinions.

## Engagement
Meaningful interactions across multiple channels between our analysts and market participants.

# Pre-coronavirus pension risks higher than years preceding the Great Recession

### Larger unfunded liabilities

2019: $4.1 trillion (19% of US GDP)

2007: $1.6 trillion (11% of US GDP)

### Higher annual costs

Contributions relative to revenues at or near historical peaks for many…

…but often do not “tread water” under reported discount rates

### Similar scale of asset risk

2019 assets: $4.8 trillion (22% of US GDP) (62% corporate equities)

2007 assets: $3.3 trillion (23% of US GDP) (56% corporate equities)

### Weaker cash flow

Negative non-investment cash flow (NICF) will constrain asset accumulation without higher contributions

**Less pension “smoothing” capacity**

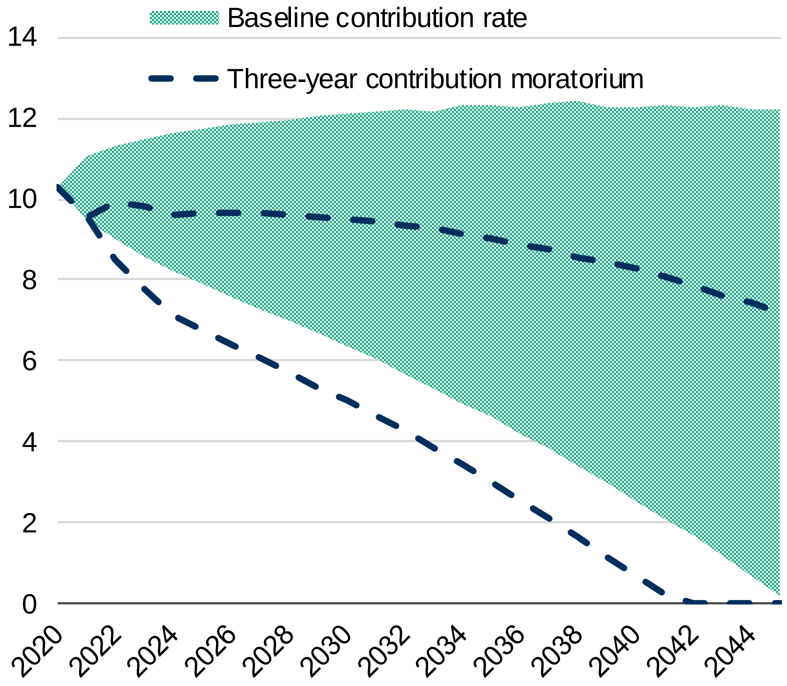
# Government contribution decisions in coming years will be a differentiating factor impacting pension risk

## Pension systems with significantly negative NICF are most susceptible

- Example large US public retirement system, with ~ -4% NICF, 11 year asset/benefit coverage in 2019
  - 24% probability of depletion by 2045, based on current (baseline) statutory contribution rate
  - 39% probability of depletion by 2045, if three-year contribution moratorium, followed by return to baseline

- Asset depletion presents additional risks
  - “PAYGO jump” cost increase
  - No ability to spare gov’t budget without benefit impairment
  - May also lose active employee contributions to an insolvent retirement system

**Asset / benefit coverage, 25% – 75% confidence band**

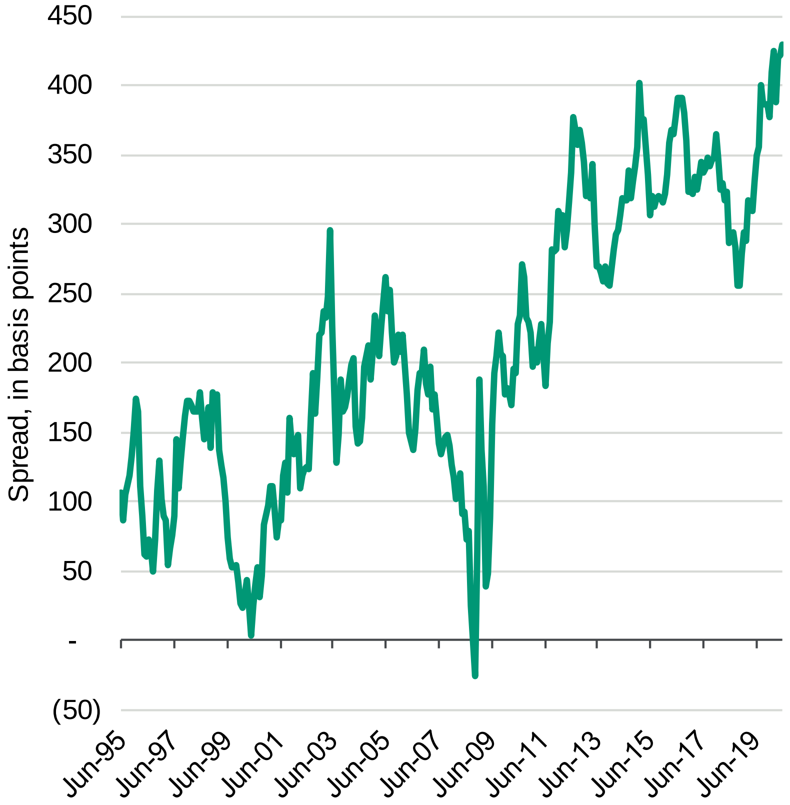



*Source: Moody’s Investors Service*

# Lower for longer interest rates mean higher risk to providers of guaranteed annuities

- Boyd, et al:
  - benefit contingencies provide governments some downside protection…
  - …but materiality of risk-reduction is limited
  - COLA changes provide liability savings potential, often a focal point of litigation
- Costrell & McGee
  - Lower near-term contributions & volatile investments → higher risk of unexpectedly high future contributions
  - “Expected contribution” weighted composite acknowledges solvency risk not always visible in governmental pension accounting

**CalPERS return target, less FTSE PLI**




*Sources: CalPERS, Society of Actuaries*

MOODY'S INVESTORS SERVICE

Access is everything™

Tom Aaron
VP – Senior Credit Officer
thomas.aaron@moodys.com
312-706-9967