

Public Pension Management Tools in Action

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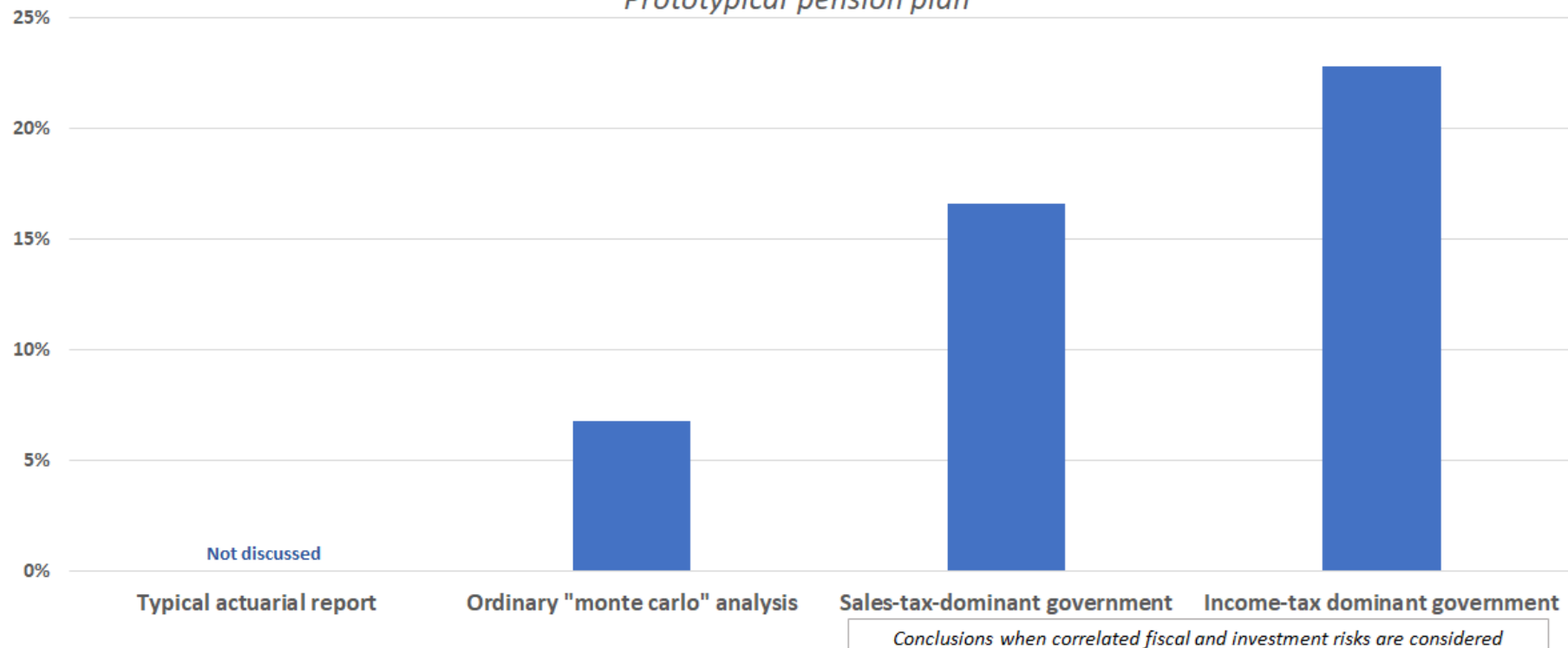
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Major risks to pension funding

- Investment returns
- Government ability to pay contributions
 - *These risks are correlated*
- Both are worrisome in the Covid-19 environment
- Some risk- and cost-sharing policies can lower the investment-return risks *to the employer*
- Stress-testing government finances and pension finances can help identify and manage the fiscal risks

**Probability that employer contributions will rise at least 5% of tax revenue within 30 years
(At least doubling the initial employer contribution)**

Prototypical pension plan



Assumes: 7.5% expected return, 12% standard deviation, initial ERC 5% of taxes, 15-year open constant-dollar amortization, average demographics.

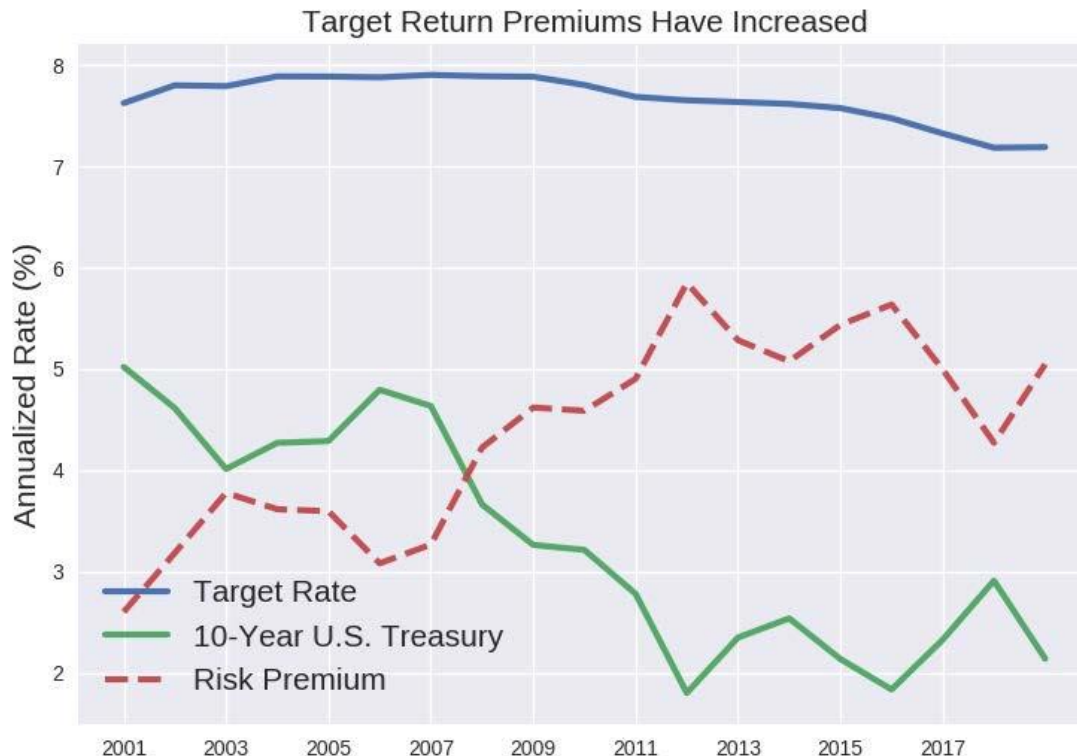
Source: Yin, Yimeng, and Don Boyd. "Analyzing the Interplay Between Public Pension Finances and Governmental Finances: Lessons from Linking an Economic Model to a Pension Fund Model." The State and Local Government Finance Project, Center for Policy Research, Rockefeller College, February 2019. https://www.albany.edu/slgf/Yin%20Boyd%20SLGFP%20PensionSimulationMacroLinkagePaper_February2019.pdf.

Investment return risks in the Covid-19 era

- Crash then recovery for plan fiscal years ending in June 2020:
 - [Milliman market value funded ratios](#) 100 largest public plans:
 - 74.9% Dec 2019
 - 66.0% !! crash (Mar 2020)
 - 71.2% Jun 2020
 - [Pew estimates](#) typical returns fell 4-5% short in year ending June 2020 - bad but not catastrophe
- S&P 500 up ~5.5% since June despite recent declines
- But risks abound:
 - Near-term Covid-19 and econ downsides (next section)
 - Low interest-rate environment (Sheiner, Lenney, Lutz) appears here for a long time
 - Plans ~70+% invested in risky assets. Unless they lower return assumptions, they need to be.
 - Public plans perched on a precipice.

Low interest rates require lower assumed returns or more investment risk (or beat-the-market skill)

- Decline in risk-free interest rates (green line), coupled with...
- Only *minimal decline in assumed returns* (blue line), means...
- Plans must seek a large risk premium (maroon dashed line), by...
- Investing in riskier assets, and...
- Risking both much better and much worse outcomes



Source: Winkelmann, Kurt, Jordan Pandolfo, and Cameron Brummond, Revisiting Why Public Pension Reform Is So Hard, Heller-Hurwicz Economics Institute, University of Minnesota, August 15, 2020, <https://cla.umn.edu/heller-hurwicz/news-events/story/policy-brief-revisiting-why-public-pension-reform-so-hard>.

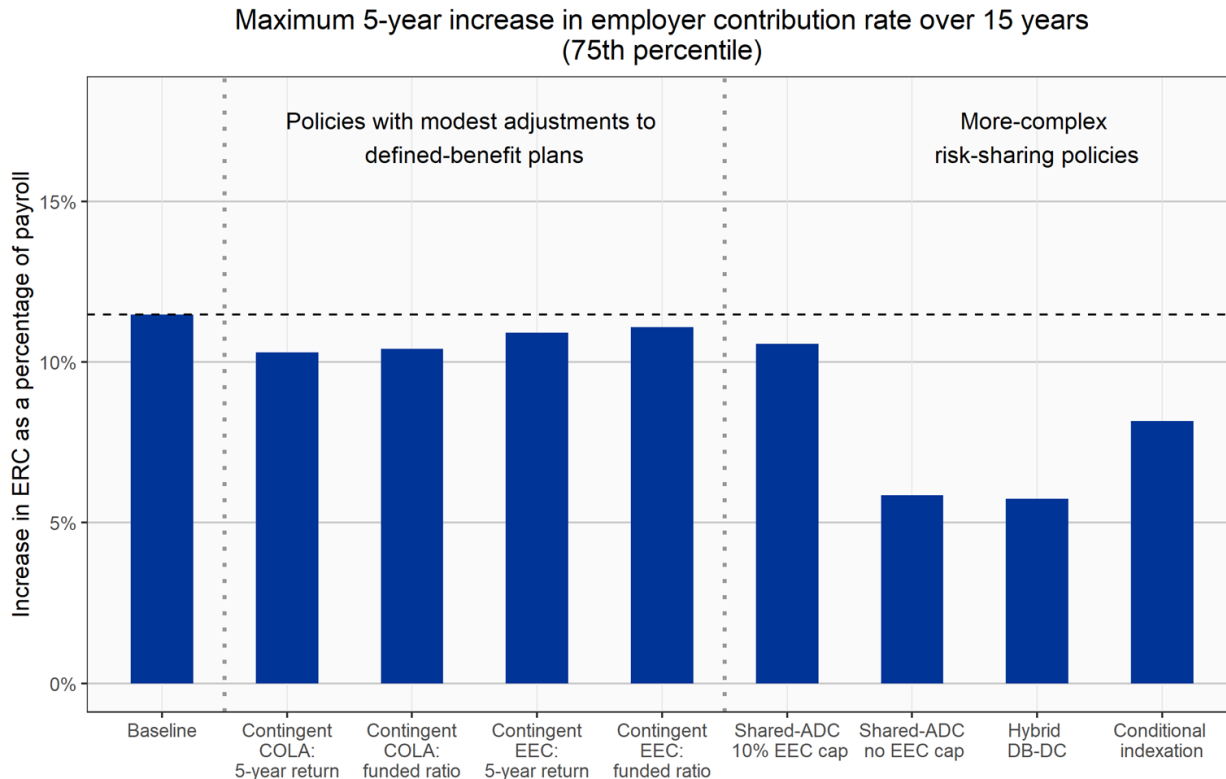
Tax revenue risks

- Economic news, while awful has been better than worst early estimates. Labor market better than expected. Stock market has not collapsed.
- State tax revenue in Covid-19 period (Mar-Aug 2020) down 3.6% in median state vs. year ago. PIT -1.3%, sales tax -2.6%, corporate -10.8%.
- Moody's Analytics alternative severe scenario: biggest factors are (1) Covid-19 resurgence and lockdowns, (2) no fiscal stimulus; both seem quite realistic. They estimate combined state-local revenue-Medicaid shortfall over 2020-2022 of \$450b in baseline, \$650b in severe.
- Major related risks: timing and effectiveness of vaccine, stock market
- Hard policy choices after fiscal stimulus resolution known. Pension benefits and contributions will be on the table. (S&L contributions currently ~\$170b annually.)

Sources: Economic Forecasting Survey, *Wall Street Journal*, <https://www.wsj.com/graphics/econsurvey/>; White, Dan, U.S. State and Local Government Shortfall Update, Moody's Analytics, September 21, 2020; Dadayan, Lucy, *Monthly State Revenue Highlights* and *State Tax and Economic Review*, various issues, Urban Institute, 2020; Bureau of Economic Analysis, National Income and Product Accounts, Table 7.24. Transactions of State and Local Government Defined Benefit Pension Plans.

Risk-sharing policies can provide meaningful protection

- Some contingent COLA and employee-contribution policies, *when fully effective*, can reduce risk of large employer contribution increases.
- More-complex or -radical policies can achieve greater risk reduction.
- Important to remember that risk-sharing means risk-transfer.
- Motivating factor for introducing risk-sharing often is immediate cost reduction.



Plan is assumed to be 75% funded at beginning of simulation.

Conclusions

- States and localities face major economic, fiscal, and pension investment risks. They are correlated in ways that exacerbate fiscal pressure.
- Public plans are poised to be hit hard if markets fall.
- Some risk- and cost-sharing policies can transfer meaningful risk and cost from employers to plan members. They need to be evaluated from multiple perspectives including impact on employer attractiveness.
- Stress testing can help identify and manage fiscal risks and pension risks.
- Better to have these procedures and policies in effect before downside risks occur than wish so afterward.
- Stay tuned for our Arnold Ventures-supported guidebook on risk-sharing and for work with and for the Pew Charitable Trusts on these issues.