State and Local Pension Sustainability: Effect of Covid-19

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Disclaimer

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This paper should not be reported as representing the views of the Bank of England or members of the Monetary Policy Committee, Financial Policy Committee, or Prudential Regulation Authority Board.

Introduction

In previous work (along with Byron Lutz) we assessed what state and local governments need to do to make their pension plans “sustainable” rather than to make them fully funded

Now economic conditions have changed

We assess how those changing economic conditions affect the sustainability of public pension plans

We explore the implications of state and local governments cutting their pension contributions to smooth through the fiscal strain from the pandemic

Background

Previous work on S&L pensions focused on appropriately valuing liabilities

- Argued that discount rate used by plans too low, and thus plans were less funded than stated.

Lennie, Lutz, Schuele, and Sheiner argued that lack of full funding does not imply that plans will face problems in the future. Plans can be sustainable—in the sense that benefits are payable while pension contributions as a share of GDP are stable—without full funding.

A less than fully-funded plan is ≈ fully-funded plan + implicit debt.

- Using riskless rates of return, plans have never been fully funded. So, S&L govs have always held pension debt.
- Moving to full funding—paying off the debt—would make current generation of taxpayers *worse off* relative to future generations.
- Better to spread the costs of the current debt over current and future generations, by keeping it constant as a share of GDP.

Using detailed actuarial projections and nationally representative sample of 40 plans, we assessed what plans need to do to achieve sustainability. We use those plans and that machinery today.

Assumptions about Rates of Return and Discount Rates

Academic discussion focused on appropriate discount rate to compute present value of accrued liabilities.

This rate is not very important for sustainability analysis.

- If just want to make sure cash flows are sufficient to pay benefits, don't care about present values.

Rate of return on pension assets is what matters. Still have to adjust for risk, but the adjustment may be different.

What is appropriate risk-adjusted rate for that calculation? Is it the rate on Treasuries?

- Not clear plans should be indifferent between investing in risky assets vs Treasuries, suggesting that the Treasury rate may be a bit too low.

But this is an area that is in need of a lot more research.

We use 3 deterministic rates of return: the Treasury rate, the average rate of return plans have experienced, and something in the middle.

Effects of COVID on Economic Conditions: Two Cases

"CBO Case"

Use CBO economic forecast:

- Lower GDP growth, getting back up to pre-COVID baseline in about ten years.
- Lower real wage growth over most of next ten years.
- Decline in state and local spending that is not as deep but lasts much longer than decline in GDP.

And incorporate 1.4 ppt decline in 20-year TIPs since January.

Pessimistic Case: ALSO

Assumes pension assets fall 20% -- about the decline seen in March, which could happen again.

Assumes 0.3 ppt lower productivity growth in perpetuity.

- Lower productivity following GR meant that economy never got back to pre-recession baseline.
- Also possible that the unique aspects of this recession: the lockdowns, working from home, disruptions to supply chains, need to prepare for future pandemics will impair productivity growth

Covid Sustainability Metrics

What happens to contribution change required to achieve long-run sustainability?

- Stabilize implicit debt/assets as share of GDP without regard to the level
- Make sure contributions are sufficient to pay benefits in perpetuity

What happens to contribution increase if want implicit debt as a share of GDP to be same 30 years from today as it is now?

- Don’t allow debt to increase relative to today

What happens to asset exhaustion dates given Covid?

Sustainability pre-post Covid

Contribution Change Required to Achieve Stability
Percent of Payroll

	Long-Run			Same Debt/GDP in 30 Years			Fully Funded in 30 Years		
	Pre-COVID	Post-Covid		Pre-COVID	Post-Covid		Pre-COVID	Post-Covid	
		CBO	Pessimistic		CBO	Pessimistic		CBO	Pessimistic
Asset Returns									
low	12.1%	12.2%	12.5%	14.1%	18.5%	19.1%	43.2%	55.1%	57.1%
medium	6.6%	10.9%	11.9%	5.8%	10.7%	12.8%	27.7%	38.6%	41.7%
high	-1.3%	4.5%	7.0%	-2.8%	2.5%	6.1%	13.3%	23.3%	27.6%

Rates of Return

Pre-covid:
Real rates of return:
1%, 3% and 5%

Post-covid:
Real rates of return:
-.4%, 1.6%, 3.6%

Long-run stabilization:

- With very low rates of return, plans become essentially pay-as-you-go in the long-run, so COVID changes have little effect.

- With medium and high rates of return, lower rates of return and worse economics increase required contributions noticeably.

Sustainability pre-post Covid

Contribution Change Required to Achieve Stability
Percent of Payroll

	Long-Run			Same Debt/GDP in 30 Years			Fully Funded in 30 Years		
	Pre-COVID	Post-Covid		Pre-COVID	Post-Covid		Pre-COVID	Post-Covid	
		CBO	Pessimistic		CBO	Pessimistic		CBO	Pessimistic
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medium	6.6%	10.9%	11.9%	5.8%	10.7%	12.8%	27.7%	38.6%	41.7%
high	-1.3%	4.5%	7.0%	-2.8%	2.5%	6.1%	13.3%	23.3%	27.6%

Same Debt to GDP :

For all rate of return assumptions, required contributions increase.

But increases relative to achieving full-funding much smaller.

Optimal Pension Funding Policy During Pandemic

S&L govs have balanced budget requirements that limit borrowing, but borrowing during recessions makes sense:

- Large cuts to public services may be more costly than smaller cuts over many years
- Big reductions in S&L spending lengthen and deepen recession (like following GR)

Likely preferable for federal government to borrow and issue grants:

- Lower borrowing costs, more ability to bear debt, internalize economic spillovers across states

But if grants insufficient, rainy day funds and changes in pension funding policies allow government to lower saving and limit spending cutbacks, without violating balanced budget rules

With interest rates even lower than before the pandemic, cost of dissaving lower and possibly negative (especially considering macroeconomic spillovers of spending cuts.)

Would a moratorium on pension payments be a significant help?

For US as a whole, pension contributions in 2019 represented 4.7% of own source revenues (revenues they raise from taxes and fees, as opposed to federal grants).

With GDP expected to be down about 6% in 2020—and state and local revenue down somewhat more—this is a significant source of funds.

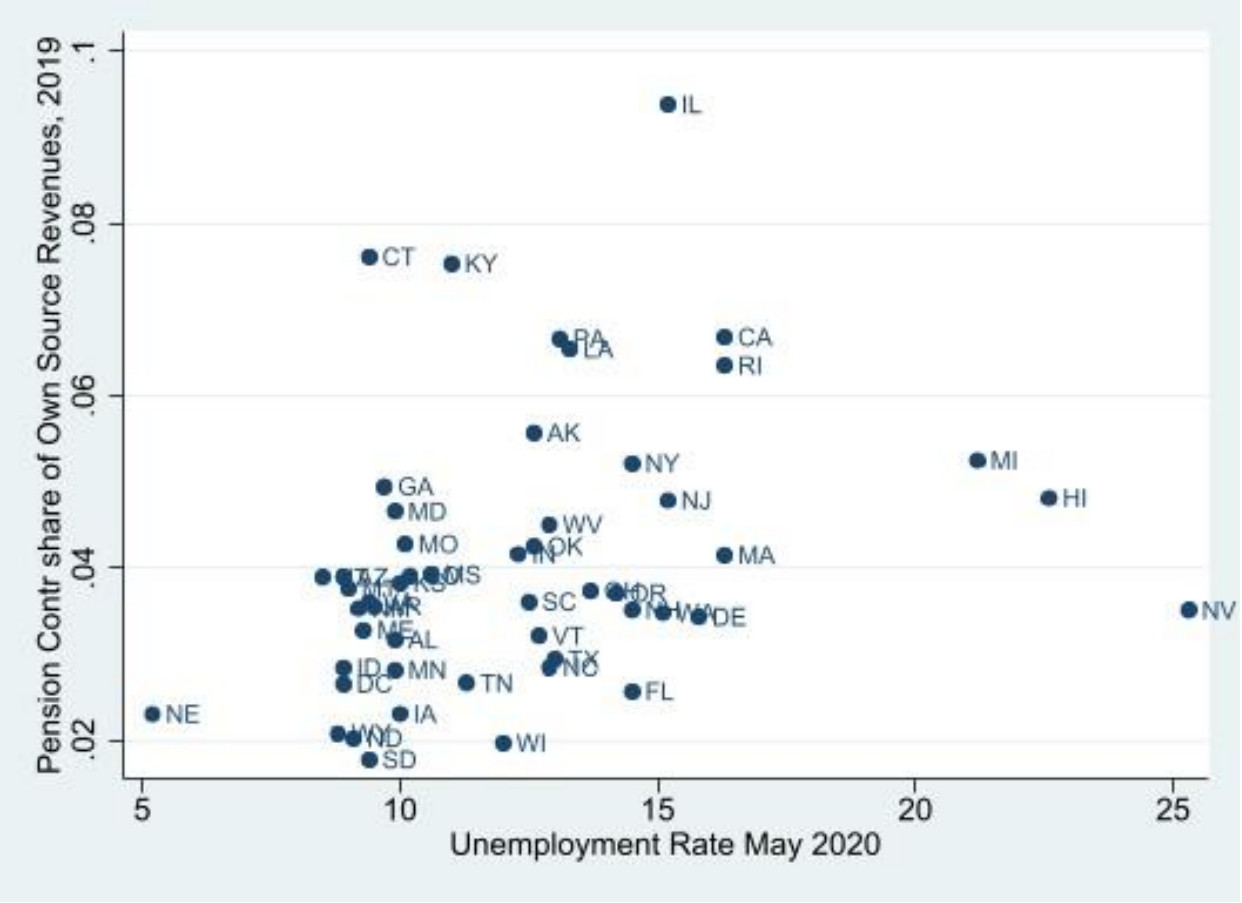
Budget Balances (rainy day funds + surpluses) at end of 2019 were 3.2% of own source revenues, and can only be used once—whereas contributions can be cut for multiple years.

Cutting back on pension contributions could go a long way toward mitigating spending cuts.

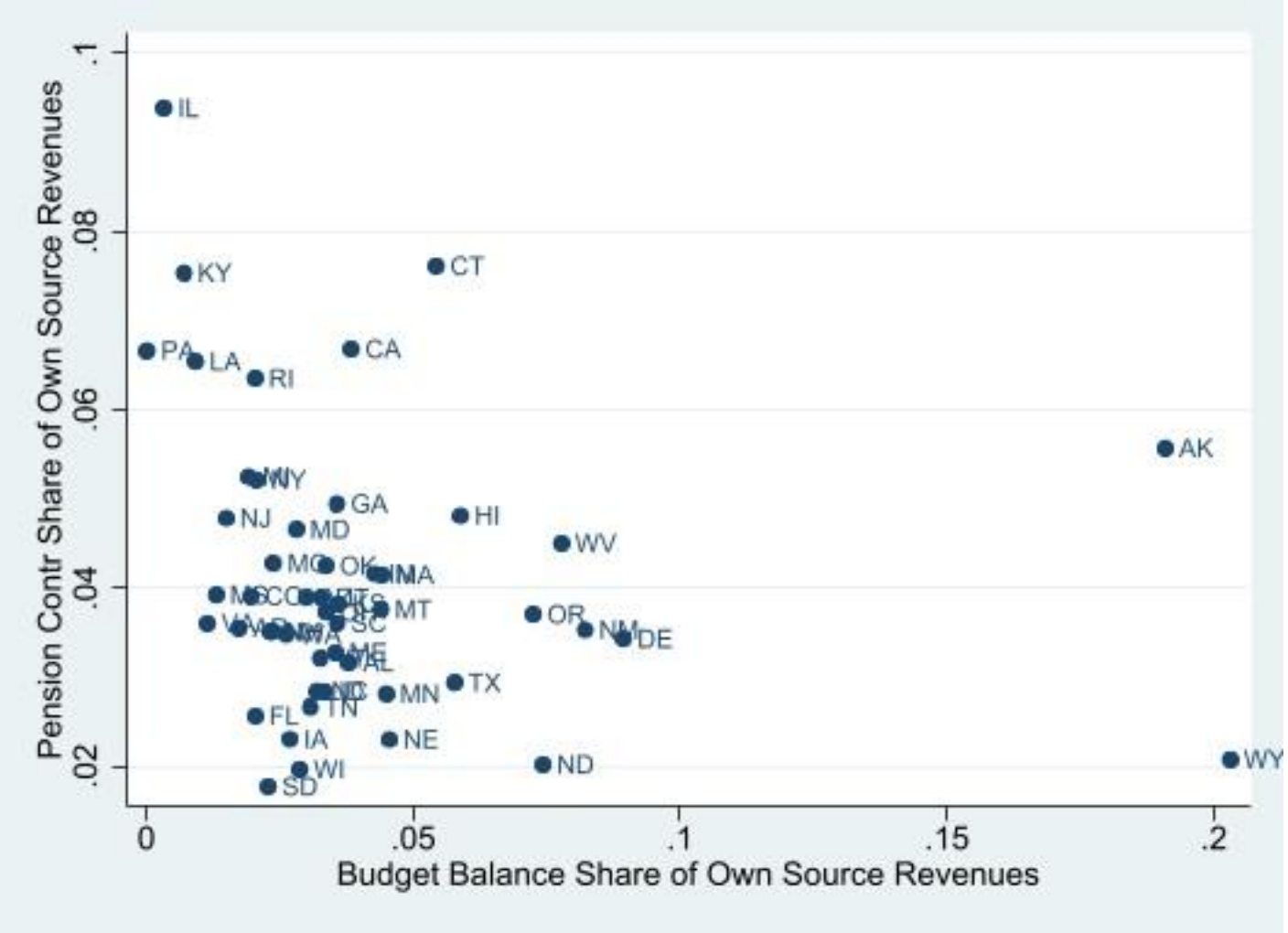
We consider sustainability implications of stopping pension contributions for 3 years.

- Of course, this is just illustrative. Plans could reduce contributions instead of stopping them, do it for a shorter or longer period of time, etc.

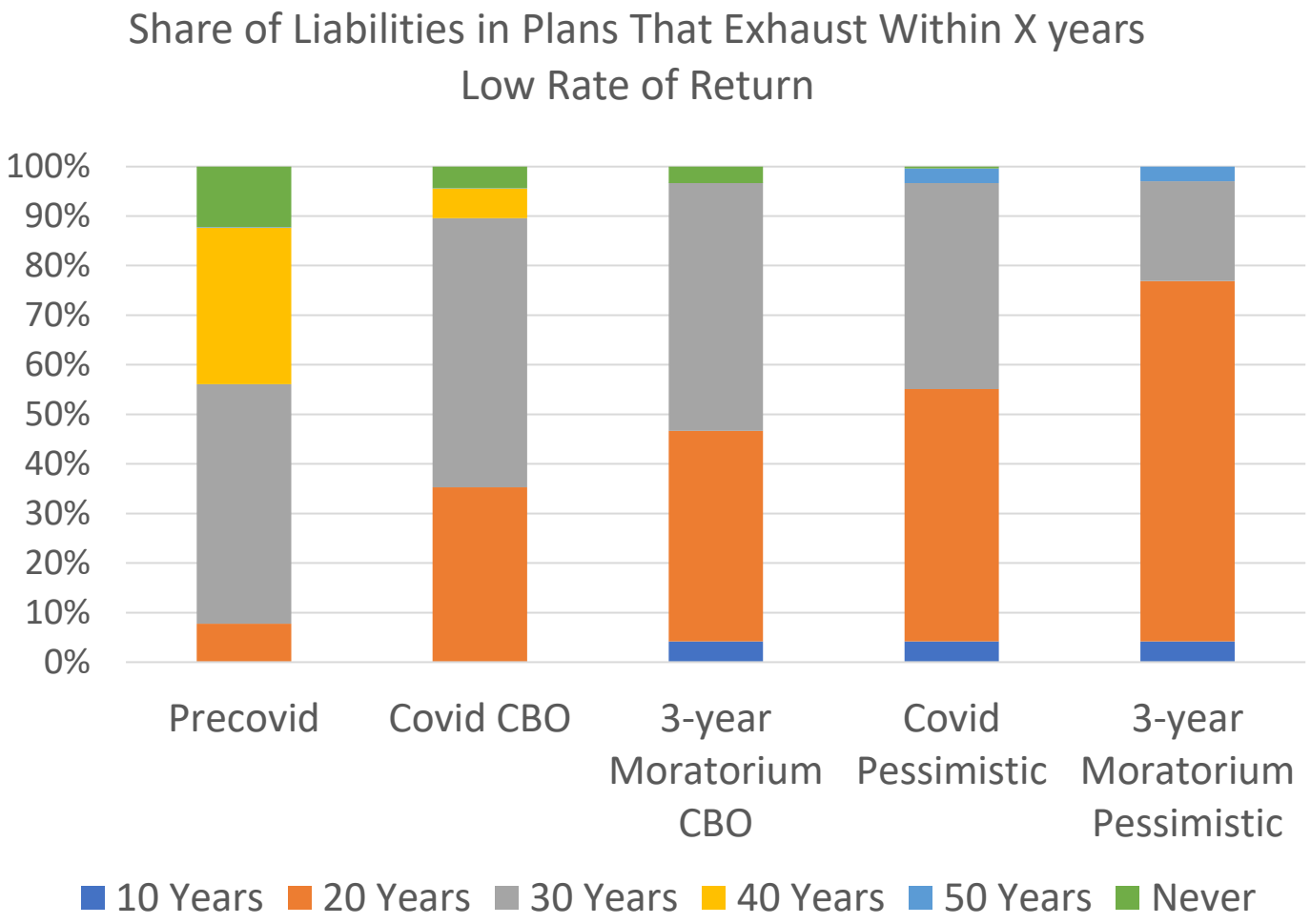
Many states with high unemployment rates have sizable pension contributions



And some states without large balances to draw on do make large pension contributions



Sustainability consequences of 3-year moratorium: plan exhaustion at low rate of return



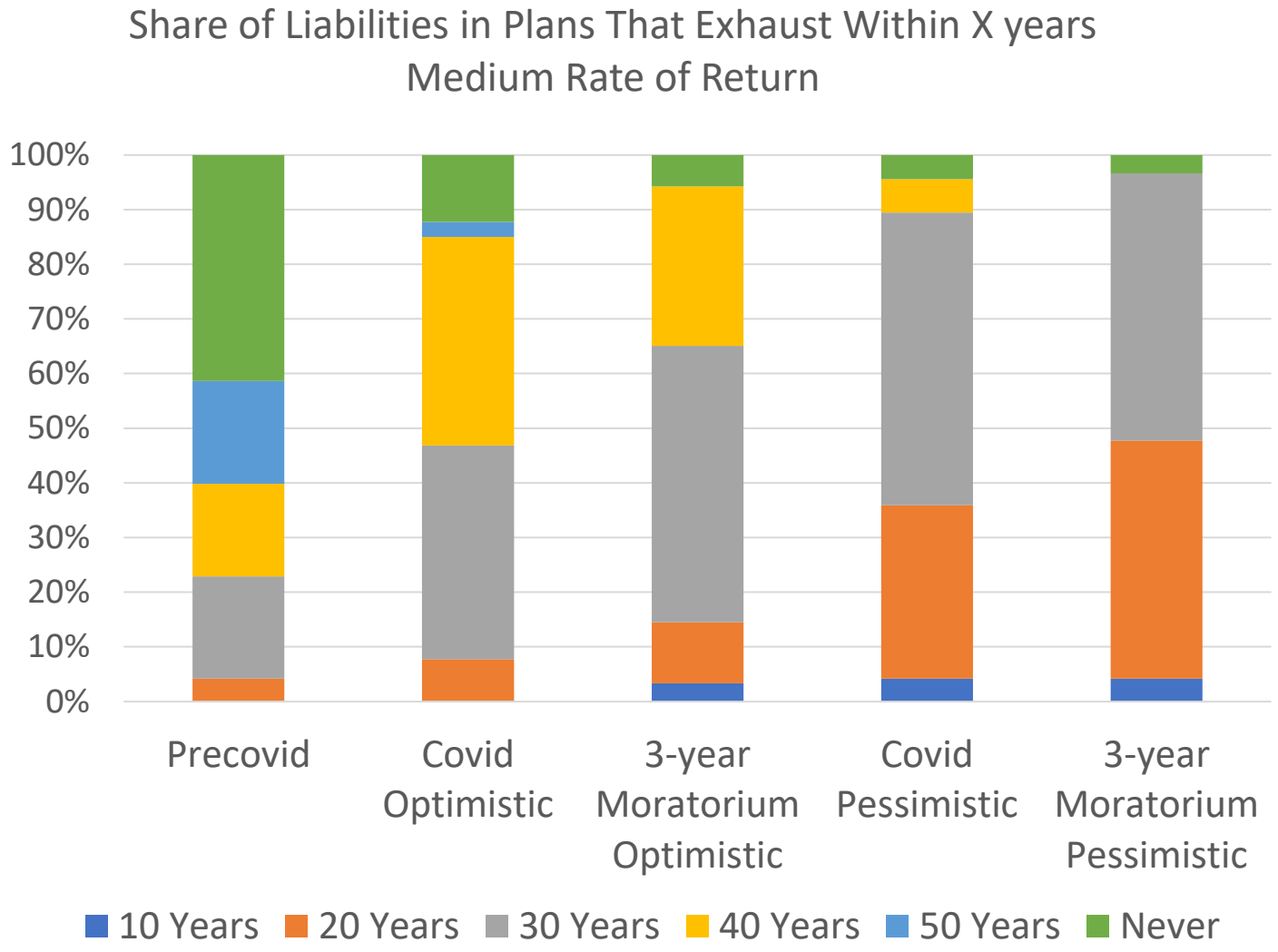
Pre-Covid:
55% of liabilities in plans that exhausted by 30 years. No plan exhausted in next 10 years.

Covid CBO: still no plans exhaust within ten years, but 90% of liabilities in plans that exhaust by 30 years.

3-year moratorium increases that to 97%, and 4% liabilities in plans that exhaust within 10 years.

Pessimistic case brings forward exhaustion dates even further

Sustainability consequences of 3-year moratorium: plan exhaustion at medium rate of return



Similar effects but exhaustion dates generally further off.

Covid CBO: 45% of plans exhaust assets within 30 years.

3-year moratorium CBO: 65% of liabilities in plans that exhaust before

Effects of 3-Year Moratorium on Sustainability

	Effect of Moratorium on Contribution Change Required to Achieve Stability Percent of Payroll					
	Long Run		Same Debt/GDP in 30 Years		Fully Funded in 30 Years	
	CBO	Pessimistic	CBO	Pessimistic	CBO	Pessimistic
Asset Returns						
-0.4%	-1.6%	-1.3%	2.3%	1.7%	0.9%	0.9%
1.6%	-0.1%	0.2%	2.7%	2.2%	1.5%	1.4%
3.6%	1.0%	1.3%	2.8%	2.6%	1.7%	1.8%

For long-run stability (where you allow plans to be less funded but stable after moratorium) moratorium *lowers* required contributions *or raises them very little* with low and moderate rates of return.

- When rate of return < econ. growth rate, assets expensive to maintain so lower assets lowers contributions.

For same debt/GDP in 30 years and full funding, moratorium raises contributions required after 3 years, but not by very much.

Conclusions

COVID puts plans in worse shape. Lower payroll means lower contributions and lower rates of return mean less asset income. Asset exhaustion comes sooner for many plans.

But real risk-adjusted return over 20 year horizon is now negative and well below growth rate of the economy. Suggests less rush to increase contributions, and little cost of moratorium.

And state and local governments under tremendous fiscal strain due to Covid recession, which could entail spending cuts that are bad for macroeconomy and for constituents.

If the federal government does not pass a big enough aid package, plan sponsors should consider reducing pension contributions in order to free up budget space, as the costs for their communities may well be below the benefits.