



HAS COVID AFFECTED PENSIONS FOR WORKERS WITHOUT SOCIAL SECURITY?

By Jean-Pierre Aubry and Kevin Wandrei*

INTRODUCTION

At the outset of the COVID-19 pandemic, many observers feared that the resulting recession would undermine workers' employer-sponsored retirement plans. The one-quarter of state and local government workers who are not covered by Social Security would have been particularly vulnerable, as they lack the buffer this program provides.¹ For this group, a prolonged recession, with poor investment returns and government revenue shortfalls, would have eroded the finances of their defined benefit plans – their only source of retirement income. This *brief* – based on a recent study – assesses how COVID affected the pensions of these noncovered workers.²

The discussion proceeds as follows. The first section briefly describes the universe of state and local plans for workers who are not covered by Social Security (i.e., noncovered plans). The second section documents the impact of COVID-19 on the current financial status of these plans. The third section examines

the likelihood that noncovered plans will default on their future benefit promises due to depleted pension trust fund assets. The final section concludes that the impact of COVID on noncovered plans has been minimal and, looking forward, structural headwinds such as negative cash flows and lower-than-expected investment returns continue to pose little risk to their ability to pay future benefits.

WHICH PUBLIC PLANS COVER WORKERS WITHOUT SOCIAL SECURITY?

The *Public Plans Database* (PPD) – a nationally representative dataset covering 95 percent of public pension membership and assets – identifies 59 noncovered plans, which represent the vast majority of noncovered workers nationwide.³

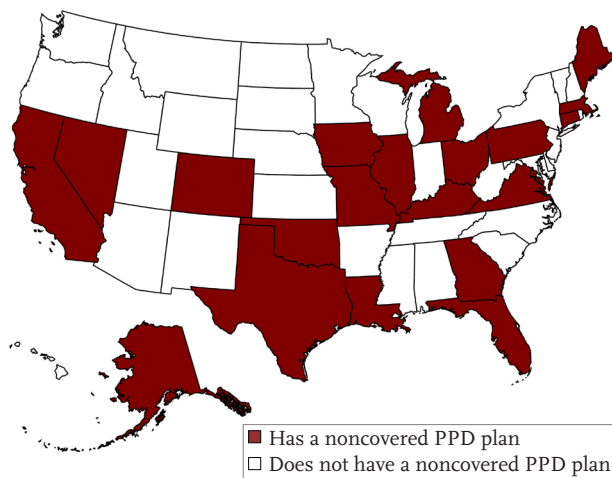
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Interestingly, the noncovered PPD plans can be found in states across the country (see Figure 1) and include teachers and public safety workers as well as general public sector employees. The plans also vary in size. The largest noncovered plan – and the largest plan in the country – is California Public Employees Retirement System (CALPERS), for which roughly 65 percent of its 2 million members are estimated to be noncovered. The largest plan for which *all* members are noncovered is Texas Teachers Retirement System (TRS), which has over 1.4 million members. At the other extreme, some smaller local public safety plans are noncovered, such as Atlanta Fire, Fairfax County Police, and Pittsburgh Police. Each of these plans has less than 3,000 members.

FIGURE 1. NONCOVERED STATE AND LOCAL PLANS, BY STATE

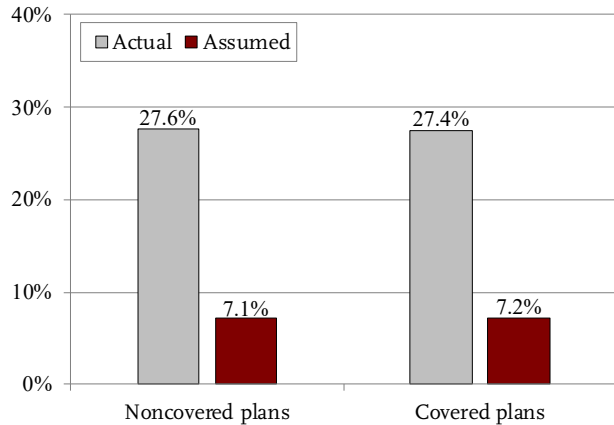


Source: Authors' illustration based on the *Public Plans Database (PPD)* (2001-2020).

COVID'S IMPACT ON PUBLIC PLANS

Two key factors underlie the financial health of public plans: investment returns on pension fund assets and contributions from government sponsors. In terms of investment performance, after the initial steep drop in the stock market in the spring of 2020, the market roared back. As a result, both covered and noncovered plans exceeded their return targets by over 20 percentage points on average (see Figure 2). In fact, many plans cited 2021 as one of the best years of investment returns on record.

FIGURE 2. ACTUAL AND ASSUMED INVESTMENT RETURNS, 2021



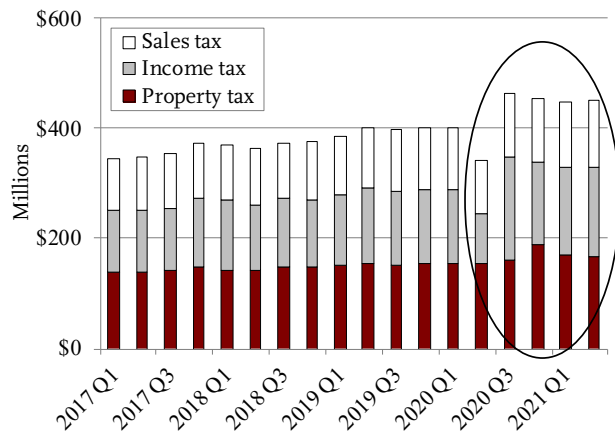
Sources: Authors' calculations based on the PPD, plan investment reports, and direct communications with plan administrators.

In terms of contributions from government sponsors, the key metric is the actuarially required contribution (ARC). The ARC is the contribution required to keep the plan on a steady path toward full funding. It equals the normal cost (the present value of the benefits accrued in a given year) plus a payment to amortize the unfunded liability (the gap between actuarial assets and actuarially accrued liabilities), generally over a period of 25 years. In recent years, governments have been contributing an increasing share of the ARC and continued to do so in FY 2020, even as the pandemic emerged.

One reason that governments continued to pay much of the ARC during COVID is that tax revenues were not substantially impacted.⁴ After a brief drop in income taxes during the second quarter of 2020, revenues rebounded significantly and still remain somewhat elevated relative to recent history (see Figure 3 on the next page). Income tax revenues, in particular, were helped by stimulus checks, unemployment benefits, and Payroll Protection Program funds that have been disbursed during the pandemic.⁵

In addition to better-than-expected tax revenues, state and local governments have also received billions of dollars in federal aid.⁶ Although the aid came with restrictions that ostensibly prohibited its use for bolstering pensions, money is fungible.⁷ And anecdotal evidence suggests that states have contributed more to pensions than they otherwise would have.⁸ Connecticut, for example, is supplementing its

FIGURE 3. QUARTERLY STATE AND LOCAL TAX REVENUES, 2017-2021

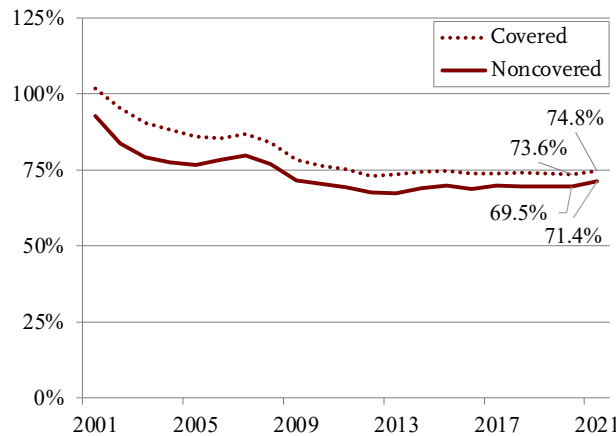


Source: Authors' calculations based on *Census of Governments: Quarterly Summary of State & Local Tax Revenue* (2017-2021).

normal pension contributions to its State Employees and Teachers plans by 35 percent in fiscal year 2022, a dollar amount that represents roughly six out of every ten federal relief dollars.⁹ New Jersey – one of the worst states in terms of its historical commitment to pension funding – has also scheduled a historically large pension contribution for the current fiscal year.¹⁰

As a result of the extraordinary investment returns and substantial pension contributions, the average funded ratio (the ratio of current assets over the

FIGURE 4. AGGREGATE FUNDED RATIO FOR COVERED AND NONCOVERED PENSION PLANS, 2000-2021



Source: Authors' calculations based on the PPD (2001-2020).

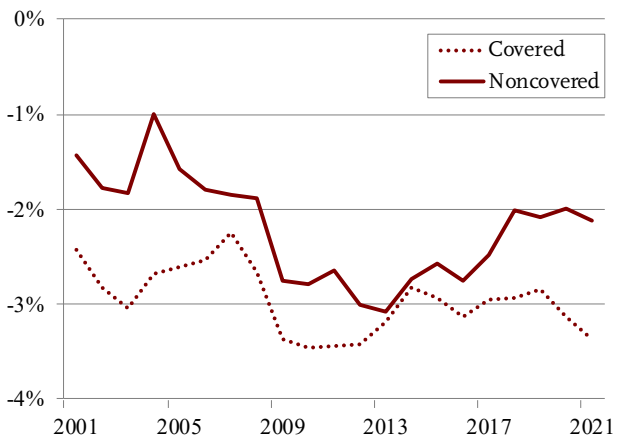
actuarially calculated present value of future benefits) for noncovered plans improved by almost 2 percentage points in 2021 – a somewhat larger increase than covered plans experienced (see Figure 4).¹¹

AND HOW ABOUT THE LONGER-TERM OUTLOOK?

Although the impact of COVID on public pension plans seems – at this point – to be virtually non-existent, plans still face the long-term structural challenges they faced prior to the pandemic. These challenges, which include negative cash flows and a dependence on achieving relatively aggressive investment targets, could threaten plans' ability to meet future benefit obligations.¹²

Noncovered plans have experienced negative cash flows equal to about 2 percent of assets in recent years. The steadily increasing benefit outflows since 2001 have raised concerns about the impact that persistently negative cash flows might have on asset levels (see Figure 5).

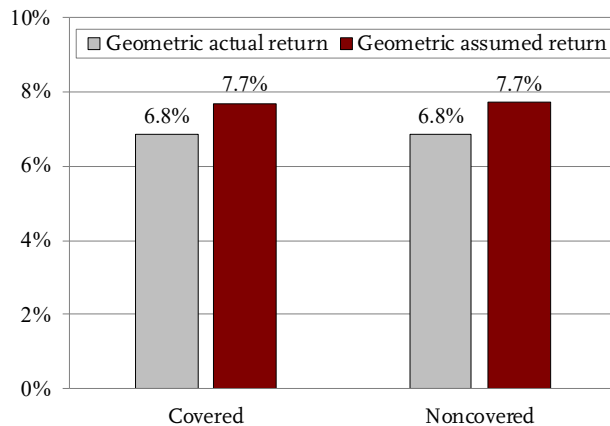
FIGURE 5. ANNUAL CASH FLOWS AS A PERCENTAGE OF ASSETS, 2001-2020



Source: Authors' calculations based on the PPD (2001-2020).

In addition, despite the strong investment returns in 2021, plans' long-term investment performance remains slightly below expectations. Specifically, both covered and noncovered plans have underperformed their expectations by about 1 percentage point since 2001 (see Figure 6 on the next page).¹³

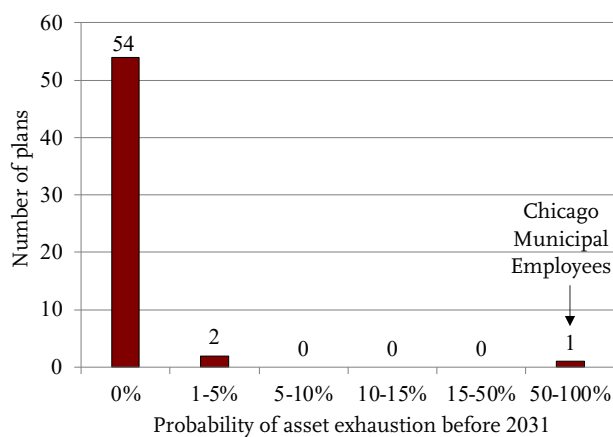
FIGURE 6. ANNUALIZED ACTUAL AND ASSUMED INVESTMENT RETURNS, 2001-2021



Sources: Authors' calculations based on the PPD, plan investment reports, and direct communications with plan administrators.

To assess whether these long-term structural challenges might cause some noncovered plans to default on future benefit promises due to depleted assets, the CRR constructed a pension model to project asset levels for each plan from 2021 to 2031.¹⁴ The model takes a somewhat pessimistic approach by assuming that plans slightly underperform their investment expectations and that contributions to the plans remain constant as a percentage of payroll even as investment returns fall short.¹⁵

FIGURE 7. NUMBER OF NONCOVERED PLANS, BY THE PROBABILITY OF ASSET EXHAUSTION BEFORE 2031



Note: Two plans (Alaska PERS and Alaska Teachers) are excluded, as they were closed to new members in 2006.
Source: Authors' calculations using PPD (2001-2020).

Even with these pessimistic assumptions, only one plan – Chicago Municipal Employees – exhibited any meaningful probability of asset exhaustion (see Figure 7). And, even in the case of Chicago Municipal, a closer investigation reveals that the City of Chicago implemented an aggressive contribution schedule in 2017 that virtually assures that the plan will remain solvent if the City follows the stated schedule (see Box). So, the main takeaway from the projection analysis is that structural headwinds – negative cash flows and lower-than-expected investment returns – pose little risk to the ability of noncovered plans to pay promised benefits.

Box. Chicago Municipal Employees: A Brief Case Study

Until 2016, the City's contribution to the Chicago Municipal Employees' plan was fixed at 1.25 times the employee contribution rather than being actuarially determined.¹⁶ As a result, the plan reported negative cash flows equal to 12 percent of assets in 2016, while the average plan in the PPD reported negative cash flows equal to 2 percent of assets. Then, in 2017, the City established an aggressive funding schedule that ramped up its contributions to actuarially determined amounts by 2023.¹⁷ The City has – to this point – adhered to the ramp-up schedule. However, it faces a 50-percent increase in contributions from 2022 to 2023.

We projected Chicago Municipal's future asset levels under three different contribution scenarios in which the City adheres to the ramp-up scheduled through 2022 and then:

1. makes the transition to actuarially determined contributions, as proposed;
2. maintains the 2022 contribution rate going forward (with payrolls growing by 2.5 percent per year); or
3. maintains the 2022 dollar amount going forward.

The results of the scenario analysis show that, if the City sticks to the ramp-up schedule and transitions to the full actuarially determined amounts, the probability of asset exhaustion is zero. However, the probability of exhaustion remains significant in scenarios two and three (a 32-percent chance and a 68-percent chance, respectively). Taken together, these results underscore how important it is for the City to adhere to its funding schedule.

CONCLUSION

The economic downturn generated by COVID had the potential to significantly impact the finances of employer-sponsored retirement plans. Of particular concern are the roughly 5 million state and local employees who are not covered by Social Security at their current job, as they lack the buffer of protection the program provides for retirees. Fortunately, the immediate impact of COVID on public plans – both covered and noncovered – has been minimal. And, looking forward, structural headwinds such as negative cash flows and lower-than-expected investment returns pose little risk to the ability of noncovered plans to pay future promised benefits.

ENDNOTES

1 Federal law allows certain public employees to be excluded from Social Security if they are covered by a pension of sufficient generosity. The legal requirements for benefit generosity are specified in the Employment Tax Regulations. Defined benefit pensions (the dominant type of plan in the state and local sectors) must provide an annuity, commencing on or before the Social Security full retirement age, of equal value to the Primary Insurance Amount (PIA) that the member would have received had he participated in Social Security. To help determine sufficient benefit generosity, the federal government has established “Safe Harbor” benefit parameters (a normal retirement age and formula for calculating annual benefits); legally, plans that meet the Safe Harbor requirements comply with the Employment Tax Regulations.

2 Aubry, Quinby, and Wandrei (2021).

3 See the Appendix for a list of the 59 noncovered plans in the PPD. In 51 of the plans, virtually all members are noncovered. In 8 of the plans, a meaningful share of members are noncovered. Purcell (2021) estimates the total number of noncovered state and local government workers to be about 4.7 million as of 2018. The number of noncovered workers in the 59 PPD plans was estimated to be about 3.9 million in 2018.

This *brief* analyzes 57 of the 59 plans, covering virtually all of the noncovered government workers in the PPD. Alaska PERS and Alaska Teachers were excluded from the analysis because they were both closed to new members in 2006. These two plans represent less than 1 percent of the total members in noncovered PPD plans.

4 The data suggest very little difference in the pattern of tax revenues during the pandemic between the two groups of states – noncovered and covered. If anything, the states with noncovered plans rebounded more strongly than the states without a noncovered plan.

5 Dadayan (2020) noted that states differed in whether they included the \$600 weekly federal unemployment supplement as taxable income. See Gordon, Dadayan, and Rueben (2020) for additional research on the importance of federal aid to states.

6 Key sources of aid were provided through the Coronavirus Aid, Relief, and Economic Security (CARES) Act of 2020 and the American Rescue Plan (ARP) Act of 2021. The CARES Act included \$150 billion for necessary expenditures incurred due to the public health emergency while the ARP Act included \$350 billion – \$195.3 billion to state governments, \$130.2 billion to local governments, \$4.5 billion to territories, and \$20 billion to tribal governments. Under the ARP Act provisions, funds are to be distributed based on a state's unemployment rate at the end of 2020, but each state is guaranteed a minimum of \$500 million. County governments receive allocations based on their population, and cities receive allocations based on existing criteria in the Community Development Block Grant.

7 Federal aid in the CARES Act is only available to cover items not already included in a government's most-recently approved budget as of March 27, 2020. Similarly, ARP Act dollars cannot be used to make pension contributions, top up rainy day funds or other reserves, fund debt service, pay legal settlements or judgments, or fund general infrastructure (other than water, sewer, and broadband).

8 Committee for a Responsible Federal Budget (2021) and Tax Foundation (2021).

9 Phaneuf (2021).

10 Young and Borak (2021).

11 As of September 2021, roughly half of PPD plans had released 2020 data and virtually none had released 2021 data. To estimate 2020 and 2021 for these plans, this analysis follows the methodology in Aubry and Wandrei (2021).

12 To some extent, negative cash flows reflect the natural maturation of the public pension system as it shifts from the asset accumulation phase (when most members are working and contributing to the pension fund) to the drawdown phase (when those same workers begin to retire and receive benefits). As such, for fully funded plans that consistently achieve their expected return, negative cash flows are not worrisome. But, for unfunded plans that struggle to achieve expected returns, negative cash flows could lead to asset exhaustion prior to payment of all promised benefits.

13 While returns since 2001 have underperformed expectations, returns since 2010 (i.e., following the Great Financial Crisis) have exceeded expectations by over 2 percentage points.

14 Quinby, Aubry, and Munnell (2020) make the point that, if noncovered plans fail to pay benefits that have been promised, workers enter a legal gray zone with respect to whether the state or locality is obligated to fulfill this promise, and with respect to their actual Social Security coverage.

15 Assuming that future contributions remain a constant percentage of payroll in an environment in which actual returns fall below expectations is conservative because, in practice, most plans would increase these contributions as plan finances decline. For more on the model and its assumptions, see Aubry, Quinby and Wandrei (2021).

16 The City of Chicago sponsors four large noncovered plans: Chicago Municipal, Chicago Teachers, Chicago Police, and Chicago Fire. All are poorly funded and have a history of larger-than-average negative cash flows due to inadequate government contribution policies. Chicago Municipal was the last city-sponsored plan to make changes to its inadequate funding schedule. As a result, Chicago Municipal currently faces the threat of asset exhaustion while the other plans are on much better footing with virtually no chance of exhausting their assets.

17 Importantly, the actuarially determined payment is designed to achieve a 90-percent funded ratio in 35 years, rather than the standard goal of a 100-percent funded ratio.

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APPENDIX

TABLE A1. SUMMARY OF NONCOVERED PLANS IN THE PPD

State	Plan	Social Security coverage	State	Plan	Social Security coverage
CA	California PERF	Some	KY	Kentucky Teachers	None
CA	University of California	Some	LA	Baton Rouge City Parish RS	None
CT	Connecticut Municipal	Some	LA	Louisiana Municipal Police	None
CT	Connecticut SERS	Some	LA	Louisiana Schools	None
GA	Georgia Teachers	Some	LA	Louisiana SERS	None
IL	Illinois SERS	Some	LA	Louisiana Teachers	None
LA	Louisiana Parochial Employees	Some	MA	Boston RS	None
TX	Texas Municipal	Some	MA	Massachusetts SRS	None
<i>Total – Some Coverage</i>			MA	Massachusetts Teachers	None
AK	Alaska PERS	None	ME	Maine State and Teacher	None
AK	Alaska Teachers	None	MI	Detroit Police and Fire	None
CA	California Teachers	None	MO	Missouri Teachers	None
CA	LA County ERS	None	NV	Nevada Police Officer and Firefighter	None
CA	Los Angeles ERS	None	NV	Nevada Regular Employees	None
CA	Los Angeles Fire and Police	None	OH	Cincinnati ERS	None
CA	Los Angeles Water and Power	None	OH	Ohio PERS	None
CA	Orange County ERS	None	OH	Ohio Police & Fire	None
CO	Colorado Municipal	None	OH	Ohio School Employees	None
CO	Colorado School	None	OH	Ohio Teachers	None
CO	Colorado State	None	OK	Oklahoma Fire	None
CO	Denver Schools	None	PA	Pittsburgh Police	None
CT	Connecticut Teachers	None	TX	Houston Firefighters	None
DC	DC Police & Fire	None	TX	Houston Police	None
DC	DC Teachers	None	TX	Texas Teachers	None
FL	Miami Fire and Police	None	VA	Fairfax County Police	None
GA	Atlanta ERS	None			
GA	Atlanta Fire	None			
GA	Atlanta Police	None			
IA	Iowa Municipal Fire and Police	None			
IL	Chicago Fire	None			
IL	Chicago Municipal	None			
IL	Chicago Police	None			
IL	Chicago Teachers	None			
IL	Illinois Teachers	None			
IL	Illinois Universities	None			

Sources: Authors' determinations based on plan documents, and communications with pension plan administrators by the National Association of State Retirement Administrators (NASRA) and the CRR.

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