Interest Groups on the Inside: The Governance of Public Pension Funds

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Abstract: New scholarship in American politics argues that interest groups need to be brought to the center of the field once again. We attempt to further that agenda. We reconnect with an older literature of great importance—on capture, subgovernments, and interest group liberalism—to study interest groups as insiders that play officially recognized roles as part of government itself. Our empirical focus is on state-run pension boards: which control trillions of dollars, have vast fiscal and social consequences, and are commonly designed to give public employees and their unions—the systems' beneficiaries—official roles in governance. We develop a theory arguing that employee representatives can actually be expected to favor policies that undermine the fiscal integrity of their own pension plans. Our analysis of decisions by 109 pension boards, 2001-2014, supports this expectation—and indicates that, for public pensions, "interest groups on the inside" wield influence that weakens effective government.

Decades ago, interest groups were central to the study of American government, and group-based theories shaped the thinking of eminent scholars about the whole of politics (Truman, 1951; Schattschneider, 1960; Dahl, 1960; Lowi, 1969; Wilson, 1974). Yet despite the dramatic rise in the numbers, types, and activism of interest groups in subsequent years, their exalted status was not to last. The Downsian revolution transformed political science during the 1970s and 1980s, reframing politics in terms of politicians, voters, and the electoral connection—and pushing interest groups to the periphery (Downs, 1957; Hacker and Pierson, 2014). Interest groups continued to be studied, but with a much-narrowed focus—mainly on lobbying and PACs—and with far less analytic heft in the discipline (Hojnacki et al., 2012; Leech, 2010).

Today, a counter-revolution is brewing. At its forefront are Hacker and Pierson (2014), who argue that policy-seeking interest groups are the driving force behind the policy process. Also at the forefront are Cohen et al. (2008) and Bawn et al. (2012), who argue that American political parties are coalitions of interest groups, and that parties cater to groups by choosing policies in the "electoral blind spot" of voters, who are too ill-informed to know that their own interests are not being served.

Where this movement will lead remains to be seen. Its logic has yet to be fully developed, and the Downsian tradition is still very influential. That said, interest groups have been marginalized for too long. The field would benefit if scholars devoted much more attention to them—and broadened their purview well beyond lobbying and PACs.

This paper attempts to move that agenda forward. We reconnect with an older literature of great importance that has long been shunted aside: the literature on capture, subgovernments, and interest group liberalism (Lowi, 1969; McConnell 1966; Schattschneider, 1960). This early

work rightly argues that interest groups don't just influence government from the outside through lobbying and campaign contributions, but are also pervasively active on the inside—within the bureaucracy—as regular, even official participants in decision making, exercising their influence shielded from public view. The modern-day focus on interest groups as outsiders overlooks a vast realm of insider group activity that is essential for understanding their overall influence on government and policy.

Political scientists need to study how groups work their way into the machinery of government, how their insider involvement varies across policies and bureaucratic venues, and what the consequences are. In this paper, we aim to make progress by targeting a governmental arena of great significance for the nation—public-sector pension funds—and exploring how key decisions are shaped by "interest groups on the inside."

Public pension funds (other than Social Security) have rarely been studied by political scientists. Yet they are critical components of every state government, as well as many local governments. Their economic significance is staggering: they collect, invest, and distribute astronomical sums of public money, and with assets of about $4 trillion, they represent the largest pool of investment capital in the country. They are also crucial matters of public policy: crucial as the main source of retirement security for millions of public-sector workers, but also because many pension programs are seriously underfunded—pressuring government budgets, crowding out public services, and burdening future generations. These fiscal consequences are so severe that the underfunding of public pensions looms as one of the great policy challenges of the modern era (DiSalvo, 2015; Kiewiet and McCubbins, 2014).

Our argument here is that this challenge is especially difficult because of the way public pension funds are governed. A key problem is that these systems typically involve a heavy dose

of self-governance by the employee-beneficiaries of the system. It might seem that self-governance would help ensure full funding, because the employees' own retirement benefits are on the line. Yet theory suggests that employee representatives actually have incentives to favor policies that undermine the fiscal well-being of their own pension funds. Their ability to embrace such policies, moreover, is only enhanced by the profound complexity of pension issues and their relegation to the bureaucratic shadows—which make pension decisions an inside affair most of the time, and a set-up for maneuvers in the "electoral blind spot" of voters.

By focusing on public pension funds, therefore, we are in a good position to explore "interest groups on the inside" in a significant realm of public policy. In our empirical analysis, we carry out a study of 109 state-operated pension funds over the period 2001 to 2014—focusing on the composition of their governing boards, key types of decisions, and employee effects on decisional outcomes. The findings reveal that employee interests are in fact influential, and that, as theory leads us to expect, their official presence as bureaucratic insiders works to undermine the fiscal integrity of state pension systems.

This analysis sheds new light on the governance of America's public pension funds, their susceptibility to interest group influence, and the problem of underfunding. But more generally, our hope is that, by highlighting the role of "interest groups on the inside," we can underline the value of bringing interest groups back to center stage in the field of American politics—and of reconnecting with an older political science literature that still has much to offer.

Background

Pensions for public-sector workers began to gain traction during the Progressive Era as an integral component of the emerging American welfare state. By 1960 all but 11 states had adopted pension plans for their own employees, and by the mid-1970s, every one of them had.

Local governments moved in the same direction—although many local plans have been consolidated at the state level, allowing for greater expertise and financial security. Today, most state and local workers are covered by pension funds controlled by their states (Clark, Craig, and Sabelhaus, 2011).

Over the decades, public pensions have grown much more generous and thus much more costly to fund. As this occurred, governments routinely claimed that the contributions going into their pension funds, augmented by investment returns, were sufficient to cover the benefits promised to retirees. All was supposedly good—until the Great Recession and research by financial economists revealed that it wasn't (e.g., Novy-Marx and Rauh, 2009). Indeed, the research showed that these pension plans had been chronically underfunded for a very long time.

Many states were faced with fiscal crises, and pension reform quickly topped their political agendas. The ensuing wave of reform, however, hasn't come close to providing full funding. State policymakers have typically done just enough to avoid calamity in the present—leaving the core fiscal problems festering and unresolved (Kiewiet and McCubbins, 2014).

Theory

Why are state governments so fiscally irresponsible? The formula for financial integrity is straightforward: the promised benefits must be covered by contributions and investment returns sufficient to pay for them. Yet the states don't do what they need to do. In explaining their funding problems, officials often point to hard economic times and down stock markets. But these challenges are short-term, and the real problems are endemic. They arise from the way pension systems are governed and the incentives of those who govern them.

All but a few states follow the same basic model: they delegate authority to multi-member boards. The legislature and the governor are ultimately in charge, but in practice they

mainly use their authority to set benefit levels, and sometimes contribution levels. Almost all other decisions are left to the pension boards.

The composition of these boards is set in statute. The typical board consists of five to fifteen trustees, some participating ex-officio and the rest representing various constituencies: active public workers, retired public workers, government employers (e.g., school districts, counties), and the public. The ex-officio trustees are on the board automatically. The others are either appointed (almost always by the governor) or elected; and if elected—which is the norm for employee trustees but not others—they are chosen by the specific constituencies they represent (for example, active state employees), with no other citizens allowed to vote.

Political scientists have not studied the behavior of these boards. There is, however, a scholarly literature on the topic. Its roots are in the research on corporate boards of directors, where a central theme is that "inside" directors—appointed by or otherwise beholden to management—have interests that divert them from serving as faithful agents of stockholders (the principals); and that the inclusion of "independent" or "outside" actors is crucial if boards are to represent stockholder interests. Board composition matters, and what matters most is the balance between "inside" and "outside" directors (Hess, 2005; Stalebrink, 2014; Romano, 1995)

The same theoretical lens is applied to public pension boards. Here the inside actors are the ex-officio members and the political appointees, who, the logic suggests, tend to make politically induced decisions—about investments in local firms, for example, or the hiring of favored investment advisors—that are not best for their funds. At the other end of the spectrum are the trustees elected by active or retired workers. As pension beneficiaries, so the argument goes, they are the principals, and they want their plans to be strictly monitored, expertly managed, and fully funded. "Overall," as Hess (2005) summarizes it, "member-elected trustees

have strong incentives to perform their board-related duties, while politically affiliated trustees have incentives to shirk and act opportunistically.

This literature is a valuable foray into uncharted territory. But the analogy to corporate boards is somewhat misleading, and its analysis of incentives is incomplete and in some respects upside-down. Political scientists would approach the topic very differently.

The place to start is with a broader view of the politics of pensions. Two features stand out. The first is that pensions lend themselves to "fiscal illusion" (e.g., Buchanan and Wagner, 1977), which politicians can employ to great advantage. Specifically, they can gain the support of public workers and their unions by offering generous pension benefits—and they can gain further by *not* requiring governments to make the high annual contributions necessary to fully fund those benefits. This way, they keep current government costs artificially low; they keep voters unaware of the true cost burden; and they make generous pension packages seem eminently affordable. The true costs will eventually come due. But this won't happen for decades, and by then *other* politicians (and taxpayers) will be responsible for the bill. In the meantime, the public money "saved" can be used to support other government services, limit taxes, or balance budgets. For all these reasons, politicians have strong incentives to be fiscally irresponsible in their approach to pensions.

The second basic feature is that public workers and their unions have incentives to support the chronic underfunding of their own pensions. Due to state statutes and constitutions as well as judicial decisions, the pensions promised by state politicians are backed by strong legal protections almost everywhere; public workers know they will actually get what they are

promised from state-run pension plans, even if these plans are severely underfunded.[1] Indeed, because full funding on a regular, responsible schedule would be tremendously costly for state (and local) budgets—crowding out other services, forcing higher taxes, and otherwise making the true costs of pensions painfully transparent to citizens—public workers and their unions have incentives to *prefer* that their pension plans be underfunded. Underfunding keeps current outlays low, and enables the fiscal illusion that pension benefits are much less expensive than they really are. If public workers and their unions want increasingly generous benefits, they need to convince the public that these benefits are not costly to provide. At the same time, underfunding keeps employee contributions to their own pension funds at artificially low levels; and by freeing up public money for other government services, it keeps public workers employed and provides funds for salaries and raises.

As a short hand, we have spoken here about employees and their unions. But it should be clear that, if public workers were atomized, they would have little basis for asserting their interests on pension boards. Pension policy is so arcane that the majority would be uninformed about how fundamental decisions affect their interests. They would also be poorly informed about board elections and candidates—for these are low-visibility elections that occur in the political shadows, and ultimately involve issues that are incredibly technical.

[1] For details on states' legal protections for pensions, see Monahan (2010). This logic for state-administered pensions might not apply with equal force for local pension funds, because local governments can declare bankruptcy and put pensions at risk. However, local bankruptcies are so rare and so recent that it is questionable whether public employees and their unions worried about this in the past.

Employees, however, are not atomized. They have organized interest groups to represent them. Most notable are the state (and local) affiliates of the nation's major public-sector unions: AFSCME, the SEIU, the National Education Association, the American Federation of Teachers, the International Association of Fire Fighters, and others. In most states, even in the "nonunion" South, these unions are large, well-funded, and politically active (DiSalvo, 2015). They care intensely about their states' pension funds, which are not only of great material value to their members, but are of major consequence for state spending and taxing, state services (and jobs), and the investment of public money. They therefore have strong incentives to be well informed about pension policy—and to recruit and endorse board candidates, educate workers, mobilize the vote, and provide elected board members with advice to shape their decisions.

Most states also have active retiree associations that organize retired public workers and focus like lasers on their pension boards. These associations have the same incentives to get informed and involved that the unions do (some, in fact, are affiliates of the major unions). Although there may be organizational tensions on occasion, the pension interests of these retiree associations are largely the same as the unions' when it comes to underfunding: they benefit from it, because it promotes the fiscal illusion that valuable pensions can be provided by governments at low cost.

In sum, if we take these features of pension politics as a theoretical baseline, we arrive at a perspective that departs radically from the existing scholarly literature. It is a mistake, in our view, to portray politicians and political appointees as the source of fiscal irresponsibility, to portray elected employee trustees as champions of fiscal integrity, and to argue that pension boards will be better run when public workers have a greater role in governance. There are strong theoretical reasons, in fact, for expecting that *all* these players have incentives to govern

public pensions in a fiscally irresponsible manner—and for expecting, in particular, that employee trustees have incentives to undermine the fiscal integrity of their own pension funds.

The Mechanics of Public Pension Contributions

When it comes to funding public pensions, the mechanics differ from one plan to the next, but most state-operated plans have certain fundamentals in common. As we've discussed, nearly all plans are governed by a board of trustees that derives its authority from the state legislature. And while there are many different decisions that affect a plan's overall funding ratio, the boards—sometimes in conjunction with state legislatures—make two main types of decisions that greatly affect how much governments contribute each year: decisions about actuarial assumptions, and decisions about how much of the officially "required" amount to contribute. To explain the set-up of our empirical analysis, we need to provide an overview of these decisions and why they matter so much for pension funding.

First, it is important to understand that public pension liabilities are supposed to be prefunded: governments and employees set aside funds each year for the benefits that have been earned by active employees that year. To determine what has to be contributed today in order to "fully fund" the benefits that will be paid in the future, the boards and their actuaries do an actuarial valuation, one important product of which is the calculation of the "actuarially required contribution," or ARC. There is considerable uncertainty in these calculations, and actuarial valuation involves a host of assumptions about mortality rates, salary growth, inflation, and more. That means that decisions about the assumptions, which seem technical and nonpolitical, profoundly affect the calculation of the ARC—and thus what governments are called on to pay into pension funds each year.

The assumption with the largest impact on the calculation of the ARC is the discount rate. To see why, consider a payment of $100 million due in 20 years. What is the cost of that liability in today's dollars? If we use an 8% annual interest rate to discount that future liability, the answer is $21 million. But if we use a 4% discount rate, it is much higher: $46 million. When public pension plans determine how much must be contributed today (the ARCs) to cover the stream of payments (liabilities) in the future, then, their decisions about discount rates have enormous impacts. The higher the discount rate, the smaller the estimate of future pension liabilities, and the less governments are called on to contribute.[2]

Today, experts point to discount rates as a major contributor to underfunding. The standard practice among state pension boards is to set the discount rate equal to the expected rate of return on pension assets—which, at first glance, might seem to make sense. If government officials know they will need $100 million in 20 years, and they plan to invest money in the stock market with an 8% expected return, it might seem reasonable to use that 8% rate to determine how much money they need to invest today to get to the $100 million target. And that is precisely what public pension administrators do. Pension assets are heavily invested in stocks, private equity, and hedge funds, and so the expected rates of return—and thus the discount rates plans use—are high, typically around 8%. The problem, however, has to do with *risk*. Returning to our example above, there is a good chance that $21 million invested in the stock market today will earn considerably *less* than 8% returns—and that in 20 years' time, government officials will have less than the $100 million they owe. Can government then pay less than $100 million when it comes due? In the case of public pensions, the answer is no. For

[2] For detailed overviews, see Brown and Wilcox (2009) and Novy-Marx and Rauh (2009, 2011).

defined benefit plans, the benefits must be paid *regardless* of whether the funds available are sufficient.

Because of this, nearly all finance experts agree that the discount rates used by public pension plans are far too high. A basic principle of finance theory is that future liabilities should be discounted based on the risk they will not be paid—*not* based on the assets chosen to back those future payments (Rauh, 2016). The risk of governments defaulting on their pension benefit payments is very low, because those benefits are legally protected. In practical terms, this means that public pensions should use discount rates closer to 4 or 5% (similar to private-sector pensions). But the continued use of too-high discount rates allows plan administrators to make liabilities look smaller than they are, and thereby to keep ARCs lower than they should be. If discount rates were lowered significantly, the result would be huge increases in what governments are called on to contribute to pensions each year—and a tremendous amount of political pain to go around.

Actuarial assumptions can therefore warp the calculation of the ARC, and that is an important and largely hidden way in which public pensions are underfunded. But decisions to underfund pensions do not end there. Once the ARC is calculated, there is no guarantee that governments will actually pay that amount. Frequently, participating governments pay only a fraction of the ARC—in spite of the fact that the ARC has *already* been manipulated (through the actuarial assumptions) to be artificially low. After the ARC is calculated, then, who decides what amount governments will actually pay into the funds?

Here, the decision is sometimes the prerogative of the board, or it can involve the legislature. In some plans, for example, the board decides what will be contributed, but the legislature must approve the contribution rate, or must directly appropriate funds, or may place a

cap on contributions. In a few other plans, the contribution rate is determined by statute, which specifies a fixed percentage of payroll to be contributed year after year. Clearly, we need to account for this variation in our analysis. For the moment, though, we simply point out that this is another major channel through which policymakers can actively underfund pensions.

In our empirical analysis, therefore, we will focus both on decisions about the discount rate and about how much of the ARC gets paid. Our goal is to assess whether government employees and their unions push for increased contributions and more responsible funding policies, or, as we have argued, they underfund pensions just like everyone else involved.

Data on Pension Boards

To explore the effects of public worker involvement in pension governance, we assembled a new dataset. We started with the 2015 Public Plans Database (PPD) from Boston College's Center for Retirement Research, which compiles statistics from the comprehensive annual financial reports of 114 state-operated pension plans. Then, for each plan, we used LexisNexis Academic, state legislatures' websites, and pension plans' websites to locate the statutes that specify how their boards are composed. A typical statute lays out conditions for who the trustees have to be and how they are to be selected. After surveying the statutes in place for each plan from 2001 to 2014, we created five categories of trustees and coded each trustee as being one of the five types.

As we discussed earlier, statutes typically designate positions for active or retired government employees, but those employee trustees can be selected in different ways. Many are chosen by elections in which only public workers can vote, or by state or local bargaining units. Other employee trustees are appointed by state-level politicians, usually governors. We expect that employee trustees *chosen* by government employees will be the most reliable representatives

of government employees' interests; employee trustees appointed by state politicians may have loyalty to those politicians, or perhaps have political ambitions. For our analysis, therefore, we create two employee trustee variables: the percentage of board members who are employee trustees chosen by employees (*% Elected employees*), and the percentage who are employee trustees appointed by politicians (*% Appointed employees*).

There are three additional categories. First, most plans reserve positions for state government officers, such as the governor or the treasurer, who sit on the board by virtue of being elected or appointed to their government positions. Therefore, we create a variable equal to the percentage of trustees who are ex-officio members. Second, some plans assign positions to representatives of government employers, almost all of whom are appointed by state officials, usually the governor. This is our next variable: the percentage of board members who are employer trustees appointed by politicians. Finally, some statutes create positions for private citizens, taxpayers, or people with financial expertise; still others do not provide criteria for certain trustees. Nearly all such trustees are appointed by state officials, usually the governor. Our final variable groups these miscellaneous trustees together: the percentage of board members who are either private citizen or other trustees.[3]

Of the 114 plans, 5 are not governed by a board of trustees, so our dataset tracks the composition of 109 boards from 2001 to 2014. We begin our analysis by looking at the overall share of employee trustees on the boards: we add together *% Elected employees* and *% Appointed employees* and present the distribution of that combined variable for all 1,526 plan-years in our dataset. See the top left of Figure 1. Strikingly, this variable is zero for only 84

[3] For a more detailed description of our coding, see the online appendix.

observations; 103 of the 109 plans reserve positions for public workers. Also, employee trustees typically have a large share of the seats: for boards that have them, the median share is 50%. Thus, it is common for a key interest group to be in a position of policymaking authority.

We next examine the two categories of employee trustees separately: the top-right panel of Figure 1 shows the distribution of *% Elected employees*, and the middle-left panel shows *% Appointed employees*. Clearly, it is more common for employee trustees to be elected by employees rather than appointed by politicians. In all, 1,023 plan-years feature at least some elected employees, compared to only 648 plan-years with appointed employees. In our analysis, we keep these variables separate to test whether elected employee trustees act more reliably in employees' interests.[4]

The distributions of the remaining board composition variables are shown in the final three plots of Figure 1. In the middle-right plot, we can see that 71% of the board-year observations have at least one ex-officio member, but they rarely make up a large percentage of the board. On the bottom-left, we show that most boards do not have any employer trustees, and that when they are present, they are usually a small contingent. Finally, the bottom-right shows that two-thirds of the boards reserve a small share of seats for private citizens, taxpayers, non-beneficiaries, financial experts, or trustees for which no criteria are specified. Thus, there is considerable variation in board composition across plans.

[4] As we show in the online appendix, the relationship between state public-sector union membership and *% Elected employees* is very weak: many states in the South, for example, have pension boards with large contingents of employee trustees.

There is far less variation in board composition within plans over time, however. Over this 14-year period, for example, 81 of the 109 plans had no changes to their share of elected employee trustees. In the remaining 28 plans, nearly all of the changes to *% Elected employees* were very small. Therefore, most of the variation we explore is variation across plans.

Government Employees and Public Pension Funding

We turn next to the question of whether public workers are a force for more responsible decision-making. Our first dependent variable is the discount rate. While plans rarely make major changes to their discount rates from year to year, there is meaningful variation in the rates used by these 109 plans over the 14 years in our study. According to the PPD, the 1,526 plan-years in our dataset feature discount rates ranging from 0.055 to 0.09, with a median of 0.08. In our analysis, we ask: Do government employees influence decisions about actuarial assumptions in a more responsible direction—meaning in the direction of *lower* discount rates? Or, as we have argued, do government employees have incentives to keep discount rates high—and required contributions low—just like all of the other political actors involved?

We also analyze the fraction of the ARC (which has the assumptions built in) that gets contributed each year, again using data provided in the PPD. In our dataset, the median value of this variable is 1, or 100% of the ARC. Occasionally, it is greater than 1. But far more frequently—in 43% of the observations—it is less than 1, meaning that governments contributed less than what was officially required to fully fund pensions. Our goal is to test whether public employees influence this decision in the direction of more responsible funding. If so, we should see that greater employee presence is associated with a higher fraction of the ARC paid. If not, or if they have even greater incentives than other policymakers to keep contributions down, we should find no effect or a negative effect.

To model these dependent variables, we use OLS with standard errors clustered by pension board, regressing both the discount rate and the fraction of the ARC paid on the board composition variables. Because the five board composition variables are fractions that sum to 1, we set *% Ex-officio* as the excluded category. This means that for each board composition variable in the model, the estimated coefficient can be interpreted as the effect of increasing the share of that type of trustee while decreasing the share of ex-officio members, holding constant the shares of the other three kinds of trustees.

Our focus will be on the coefficients on the employee trustee variables, especially the coefficients on *% Elected employees*. But we also need to consider public-sector unions as potentially important actors. When unions are strong, we expect that they can influence pension funding decisions in a few different ways. First, they can try to ensure that the "right" kinds of employee trustees are selected for the boards, and once those employee trustees are in place, they can try to inform their policy decisions. But the unions can also try to influence the selection and decisions of the *other* decision-makers: ex-officio trustees, political appointee trustees, and even the legislature. Therefore, there is good reason to think that when public-sector unions are strong, pension funding policy overall will be more aligned with government employees' interests. In our models, then, we include a measure of public-sector union strength: the fraction of full-time state and local government employees in the state who are members of unions, compiled using Current Population Survey data from 2000 to 2010.[5]

We also need to consider whether economic conditions or fiscal stress affect policymakers' decisions. Certain scholars argue that pension funds make less responsible

[5] This variable is constant within states over time.

decisions when fiscal conditions are poor (e.g., Mitchell and Smith, 1991; Stalebrink, 2012), the idea being that policymakers try to keep pension contributions low when government budgets are tight. For that relationship to hold, however, policymakers would have to be *more* responsible, and make adequate contributions, during times of low fiscal stress—and we question whether they do that. Examples abound of governments taking "pension holidays" (lowering contributions) during good economic times. Thus, it is an open question whether there is a systematic effect of fiscal stress on pension funding policy. To explore this, we include year fixed effects, which account for year-to-year variation in national economic conditions, including stock market returns, and the percentage change in state general revenue from the previous year, which accounts for variation in fiscal pressure from state to state and within states over time.

Empirical Results

In column 1 of Table 1, we present the results of the discount rate model. If the question is whether greater employee representation on pension boards is associated with lower discount rates, the answer is clearly no. The coefficient on *% Elected employees* is not negative—it is *positive*. This is the opposite of what we should find if the elected employee trustees are a force for more responsible funding. Instead, they appear to be a force for *less* responsible funding decisions: on average, compared to boards with no elected employee trustees, boards that are 2/3 elected employee trustees have discount rates that are 0.42 percentage points higher. This is a substantively large effect, equal to a full standard deviation.

Next, we consider whether increasing the share of *politically-appointed* employee trustees has the same positive association with discount rates. Our expectation, explained above, is that these trustees should be weaker representatives of workers' interests. The results in column 1 are consistent with that intuition: the coefficient on *% Appointed employees* is

statistically insignificant, and an F-test rejects the hypothesis that it is equal to the coefficient on *% Elected employees*. Thus, in contrast to the employee trustees chosen by employees, increasing the share of politically-appointed employee trustees has no effect on discount rates.

What about the non-employee political appointees? In column 1, we find no evidence that increasing their share of the board makes any difference. The coefficients on *% Appointed employers* and *% Private citizen or other* are both statistically insignificant, suggesting that these trustees do not push for different discount rates than ex-officio trustees.

We also find no clear effect of fiscal stress. The year fixed effects (not presented) show that discount rates have gradually lowered over time, and the coefficient on state revenue growth is statistically insignificant. Neither pattern supports the hypothesis that fiscal stress makes administrators more likely to keep discount rates high.

In fact, aside from *% Elected employees*, the only other variable that has a statistically significant association with discount rates is public-sector union membership, and the relationship is positive. Apparently, strong public-sector unions do not push boards toward more responsible actuarial assumptions—but rather the opposite. On average, boards in states like Rhode Island, with 77% union membership, adopt discount rates that are 0.38 percentage points higher than boards in states like Mississippi, with 8% union membership. Again, this is a sizeable effect, equivalent to 90% of a standard deviation. This means that government employees not only influence discount rates by having their own representatives on the boards, but they also exert political pressure through their unions—resulting in higher discount rates.

Even with the actuarial assumptions built into the ARC, policymakers still often contribute a fraction of the officially required amount. This, then, is the variable we model next:

the fraction of the ARC paid. If plans with greater employee representation are more dependable in paying the full ARC, then perhaps that helps make up for their rosier actuarial assumptions.

To model the fraction of the ARC paid, we use the same general approach as before, with two modifications. First, we need to account for the fact that decisions about contributions often involve the state legislature. In column 2 of Table 1, we include a binary indicator called *Legislative involvement*, which equals one if the legislature plays any role in the decision about what amount gets contributed. However, in 378 of the observations, the contribution rate is set by statute, usually specifying that contributions will be a fixed percentage of payroll. Not only is the board not directly involved in these cases, but the ARC is not even the target amount. These cases may add noise to our models, and so in column 3 of Table 1, we exclude them.

The second adjustment is to exclude a small number of cases in which the dependent variable takes on extreme values. As we mentioned earlier, the fraction of the ARC paid sometimes exceeds 1, occasionally by a large amount. We researched all observations in which this fraction is greater than 1.5, and we found that most either had contributions set by statute or involved special payments to the pension fund—for example, one-time payments using the proceeds of pension obligation bonds. In columns 2-4 of Table 1, therefore, we drop 24 plan-year observations in which the fraction of the ARC paid is greater than 1.5.[6]

Turning first to column 2, does the evidence suggest that government employees are associated with more reliable payment of the ARC? The answer, in short, is no. Instead, we find that increasing the share of elected employee trustees is associated with a *lower* fraction of the ARC paid. Specifically, increasing the share of elected employee trustees from 0 to 2/3 of the

[6] We are also missing the fraction of the ARC paid for 3 plan-years in our dataset.

board is associated with a 7-point decrease in the percentage of the ARC paid. Thus, not only are employee trustees associated with more distorted ARCs (because of higher discount rates), but they are also associated with paying a lower percentage of those more distorted ARCs. [7] This is hard to reconcile with the pension literature's argument that government employees should be a force for more responsible funding.

Our conclusion here is bolstered by the statistically significant negative coefficient on public-sector union membership. In column 2, we find that a shift from a low-union state like Mississippi to a high-union state like Rhode Island is associated with an 11-point drop in the percentage of the ARC paid. Therefore, when public-sector unions are strong, the result is less responsible funding of public workers' pensions.

As in the discount rate model, we find that increasing the share of politically-appointed employee trustees has no significant relationship with the fraction of the ARC paid. We also estimate an insignificant coefficient on the share of appointed employer trustees. But one surprising finding is the negative coefficient on *% Private citizen or other*. We did not expect this relationship, nor do we have a good explanation for it. Because this category combines a few different types of trustees—private citizens, taxpayer representatives, finance experts, and trustees for whom the statutes provide no criteria—it is difficult to tease out why it has a negative impact. One possibility is that these trustees are the most political of all, because

[7] One might wonder whether active employee trustees behave differently than retired employee trustees, perhaps due to differences in their time horizons. In the online appendix, we estimate separate coefficients for active and retired employee trustees, and we find no significant difference between the two—either for the discount rate or the fraction of the ARC paid.

politicians have few constraints on who they can appoint. However, we did not find a similar effect in the discount rate model, which leads us to question whether this negative effect is meaningful.

As in the discount rate model, it does not appear that policymakers in fiscally stressed states are more likely to underfund their pensions. Moreover, the negative coefficient on *Legislative involvement* shows that when the legislature gets involved, as it often does, the effect on the fraction of the ARC paid is negative. On average, plans that involve the legislature in the decision about contributions pay 16 percentage points less of the ARC.

In column 3, we drop the cases where contribution rates are set by statute, and our findings get even stronger. The negative coefficient on *% Elected employees* grows to -0.136, significant at the 5 percent level. Here, we also estimate a significant negative effect of increasing the share of appointed employee trustees, similar in magnitude to the effect of *% Elected employees*. Also, compared to column 2, the negative coefficient on *Union membership* is even larger. We also continue to find negative effects of the share of private citizen and other trustees and legislative involvement. As expected, then, our results become clearer when we limit the analysis to cases where the board is involved and the ARC is a target used for deciding on contributions. When public workers are more involved in the decision, the result is a lower fraction of the ARC paid.

Finally, in column 4 of Table 1, we probe the possible channels through which strong unions negatively affect the fraction of the ARC paid. In the case of the discount rate, this additional step wasn't necessary, because decisions about the discount rate are virtually always made by the board—and so the coefficient on public-sector union membership could reasonably be interpreted as union influence on the board of trustees. In contrast, with fraction of the ARC

paid, it could be that strong unions pressure the board to contribute less than the full ARC, or it could be that the effect of unions primarily works through their influence on the legislature. In column 4, we interact *Legislative involvement* with union membership, again excluding plan-years with contributions set by statute.

There, we find that when legislatures are not involved in the decision, strong unions are not associated with a lower fraction of the ARC paid. This means that when it is entirely up to the board to decide on what fraction of the ARC to pay, public-sector unions have their influence at the assumption-setting stage: they push the boards to adopt discount-rate assumptions that will keep the ARCs artificially low. However, almost half of the plan-years in column 4 do involve the legislature in some way. And when the legislature is involved, union strength has a large negative influence on the fraction of the ARC paid. In a state like Mississippi, with 8% public-sector union membership, having the legislature involved in the contribution decision has no discernable effect on the fraction of the ARC paid. In a state like Rhode Island, however, with 77% public-sector union membership, legislative involvement is associated with a 32-point decrease in the percentage of the ARC paid. Thus, when legislatures are involved, strong unions can successfully pressure legislators to keep contributions down.[8]

[8] We have also explored whether greater employee representation is associated with lower overall funding ratios (assets divided by liabilities). In analysis presented in the online appendix, we find that employee trustees and public-sector unions are both significantly associated with lower funding ratios. However, funding ratios are not a main focus of our analysis here because funding ratios are not decisions; rather, they are the accumulation of many decisions (including decisions about investments) over many years.

We have covered a great deal of ground here, dealing with two technical dependent variables, each with their own complexities. But the overall thrust of our analysis is clear. It shows that increasing the share of government employees on pension boards—especially those chosen by government employees themselves—is associated with higher discount rates and a lower fraction of the ARC paid. And when public-sector unions are strong, and can therefore influence the various actors involved, the result again is higher discount rates and lower-than-required contributions. The general pattern, then, is that greater involvement of government employees is associated with less responsible pension funding decisions.

Political Parties and the Scope of Conflict

In order to provide a more complete account, we want to consider whether there are other political variables that might affect these decisions. The most obvious candidate is political party. At first glance, it would seem that Democrats and Republicans should approach public pensions differently, because labor issues usually divide the major parties (Jochim and Jones, 2012). But when it comes to standing up for the fiscal integrity of public pension systems—and thus paying the much-higher costs that such integrity would entail, along with the policy trade-offs (including taxes) that such costs would entail—politicians of both parties have incentives to back away from full funding, to free up money for other priorities, and to push political pain into the future. There may well be no partisan differences.

Even so, partisanship is a matter worth exploring, and we do that in Table 2. Starting with decisions about the discount rate, we want to test whether ex-officio members who are Democrats, and various political appointee trustees who are appointed by Democrats, make different kinds of decisions than Republicans and their appointees do. To test for that, we add to the model an indicator of whether the governor in each state and year is a Democrat. Ultimately,

the governor is usually the one who appoints board members, and the ex-officio trustees are usually members of the governor's party.

In column 1 of Table 2, we regress the discount rate on the variables from column 1 of Table 1, plus the governor's party. All of our earlier findings are substantively the same. More importantly for our purposes here, we estimate a small and statistically insignificant coefficient on *Democratic governor*. Therefore, discount rate decisions made by boards operating under Democratic governors are not significantly different than decisions made by boards operating under Republican governors.

In column 2 of Table 2, we explore whether Democrats are associated with a higher (or lower) fraction of the ARC paid. The model is the same as column 4 of Table 1 except that we include three new binary indicators. The first is *Democratic governor*, again to test whether boards' decisions depend on the party of the executive branch. The second is *Democratic legislature*, which equals 1 if the Democrats have majorities in both chambers of the legislature, and the third is the interaction of *Legislative involvement* and *Democratic legislature*. With the second two variables, we are testing whether Democratic legislatures make different decisions than divided or Republican legislatures.

The estimates in column 2 reveal no consistent pattern in the relationship between political party and fraction of the ARC paid. On the one hand, the coefficient on *Democratic governor* is negative (p=0.12). On the other hand, when legislatures are involved, the effect of having a Democratic legislature is positive. All we can say, then, is that no clear pattern of partisanship emerges. And there is good reason to expect as much. Democrats have incentives to underfund, and so do Republicans. The pattern that does clearly emerge from this analysis is

that greater government employee representation on the board and stronger public-sector unions are associated with these decisions—in the direction of less responsible funding.

One final question worth asking is whether the politics of pension funding changed with the onset of the Great Recession, which triggered an expansion of the scope of conflict on the pension issue. The funds suffered staggering investment losses, voters were suddenly flooded with information about public pensions, new interest groups became active on the issue, and there was much pressure for governments to "do something" to address the fiscal crisis (Anzia and Moe, 2017).

How might these developments have affected the politics of pension funding? One possibility is that the fiscal crisis and the increased public scrutiny made it harder for policymakers to continue making irresponsible decisions. For example, many reformers, think tanks, and good government groups began to criticize plans' rosy actuarial assumptions. In this new environment, it presumably became more difficult for policymakers to keep their high discount rates, or to pay less than the full ARC. If so, the influence of government employees and public-sector unions may have weakened with the onset of the recession. While they continued to hold positions on the board, and while they still had clout in many state governments, perhaps they had less ability to keep discount rates high and contributions low after the recession.[9]

[9] Anzia and Moe (2017) also find that the politics of public pensions became more partisan after the Great Recession, but they are studying pension *benefits*, whereas we are analyzing pension *funding*—which has a different political logic.

We investigate this in a final set of models. In column 3 of Table 2, we return to our discount rate model and test whether the effects of our two key variables of interest—*% Elected employees* and *Union membership*—decrease in magnitude in the post-2008 period. We do this by interacting both variables with *Scope*, which equals 1 for years later than 2008 and 0 otherwise. As we show in column 3, the coefficient on the interaction of *Scope* and *Union membership* is negative and significant, consistent with our expectation. At the bottom of column 3, we calculate the effect of a shift from a weak-union state (8%) to a high-union state (77%) both pre- and post-recession, and we find that strong public-sector unions were still associated with higher discount rates after 2008—but less so than before. Interestingly, however, the coefficient on the interaction of *Scope* and *% Elected employees* is statistically insignificant. Thus, we find that elected employee trustees were just as effective at keeping discount rates high after the recession as they were before. Their influence did not weaken with the expansion in the scope of conflict.

There is a plausible theoretical reason for these mixed findings that is worth considering. After the onset of the Great Recession, public-sector unions were operating in a more hostile political environment, one in which they had to contend with newly activated opposition groups and reformers, and governments were under pressure to "do something" to address the fiscal crisis. Elected employee trustees, by contrast, may have remained insulated from much of this. They were elected solely by government employees, and once they were sitting in inside positions of policymaking authority, they could simply make decisions with an eye to that constituency alone—and continue the fiscal illusion they had always found so beneficial. Perhaps it makes sense, then, that the effect of elected employee trustees did not change with the

onset of the Great Recession—because *their* political environment on the inside had not changed much at all.

In column 4 of Table 2, we explore whether these same patterns hold for the model of the fraction of the ARC paid. There, we interact *% Elected employees* with *Scope*, as in the discount rate model. In addition, because we found (in Table 1) that the fraction of the ARC paid is lower when public-sector unions are strong *and* legislatures are involved in the decision, we include a triple interaction of *Scope*, legislative involvement, and union strength (and all component interactions). We again find evidence that the influence of public-sector unions decreased in the post-recession period. Focusing on the cases in which the legislature is involved, we find (at the bottom of column 4) that until 2008, strong union states paid an average of 40 percentage points less of the ARC than weak union states. After 2008, there was still a gap between strong and weak union states, but that gap had shrunk to 22 points. Thus, strong unions were successful in pressuring legislatures to keep contributions low before the recession, but after the recession, their ability to do so was weakened.

Just as in the discount rate model, however, we find that the coefficient on the interaction between *% Elected employees* and *Scope* is statistically insignificant. Thus, the ability of elected employee trustees to keep contributions low did not weaken with the onset of the Great Recession. This is in line with the idea—which we offer as a plausible suggestion—that when interest groups secure positions of direct policymaking authority, and thus have power on the inside, they may well be somewhat protected from pressures that emerge from the outside.

Two Cases

Particulars aside, at the heart of our quantitative analysis is a simple, consistent finding: even after the pressures of the Great Recession, public employees and their unions favored

policy decisions that undermined rather than bolstered the fiscal integrity of their own pension systems. In our view, these statistical findings are in accord with what a detailed qualitative analysis would show, were it to explore in depth the substance of pension politics. We cannot do that here, of course. But we think it is helpful to illustrate by offering a brief overview of two prominent cases: Rhode Island and California.

Rhode Island stands out for having adopted, in 2011, "perhaps the boldest pension reform of the last decade" (Finley, 2012). Prior to the reform, the state's pension system had long suffered from chronic underfunding and was ranked among the worst in the country (Pew, 2012). The legislature's anemic attempts at "reform"—in five of the six years between 2005 and 2010—had been wholly insufficient.

But then along came a political neophyte named Gina Raimondo: venture capitalist, Rhodes Scholar, degrees from Harvard and Yale, dedicated to seriously tackling the state's pension problems—and running for General Treasurer in the 2010 election. She won with 60% of the vote, and proceeded to push for pension reforms so comprehensive—and politically unprecedented, anywhere—that they made her nationally famous.

The system was in dire straits. State contributions had grown from 5.6% of payroll in 2002 to 23% in 2011 and were projected to be 35% in 2013. The number of retired employees drawing pension payments exceeded the number of active employees paying in. The funding ratio in 2010 was a miserable 54.3%, and even that lowly figure was way too optimistic due to Rhode Island's high 8.25% discount rate: which not only inflated the funding ratio, but also kept contributions artificially low—and for years had made the system and its benefits seem much more affordable than they really were (Raimondo, 2011).

Raimondo's "critical first step" as chair of the state's pension board was to push the board to lower the discount rate from 8.25% to a "more realistic" 7.5%—which was still much too high, given that the fund's actual rate of return for the past decade had been 2.28%. Even this shift, however, had huge consequences. The fund's liabilities were now recalculated to be $6.8 billion, an increase of 45% from the original figure of $4.7 billion—and barring some kind of reform, the state now had to increase contributions by $300 million per year, a huge budgetary hit (Raimondo, 2011; Rendazzo, 2014).

The vote on the pension board was indicative of the battle lines: the ex officios and political appointees on the 15-member board voted yes, but *six of the seven employee representatives voted no*. The system was clearly broken, but the public-sector employees and their unions did not support this fundamental means, strongly recommended by state actuaries, of moving toward full funding. Their concern was that it would drastically increase costs, distress the public, and put pressure on benefits. The day of the vote, the executive director of the National Education Association suggested alternatives, such as re-amortizing the unfunded liability over a longer period, that would simply stretch out the payments without improving the system's fiscal integrity (Gregg and Stanton, 2011).

Raimondo went on from this victory on the discount rate to campaign for a legislative reform to the entire pension system, which she achieved in November of 2011 to national acclaim. Throughout this campaign, her main opponents were public-sector unions, which claimed that Raimondo had manufactured the pension crisis by lowering the discount rate and making benefit levels seem much more costly than before. As they framed it, there was no crisis, and Raimondo's painful moves toward fiscal integrity—which were strongly recommended by

actuaries (but still short of what was necessary for full funding)—were unwarranted (Randazzo, 2014).

Rhode Island was unusual in achieving major pension reforms, but its politics were not unusual at all. As the Rockefeller Institute of Government (2014) recently noted, "Most states have engaged in pension 'reform' since the onslaught of the 2007 recession…In those states where public employee unions are prevalent, there has been determined labor resistance to reform efforts."

In recent years, those efforts have almost universally involved cuts in the discount rate. As the *Wall Street Journal* (Martin, 2015) explains, "New upheavals in global markets and a sustained period of low interest rates are forcing [public pension funds] to abandon a long-held belief that stocks, bonds, and other holdings would earn 8% each year…Public pension funds from California to New York are cutting investment-return predictions to their lowest levels since the 1980s..." The politics of the issue, however, remained. In each case, the question was: how much would the discount rate be cut and when would it actually go into effect?

This brings us to our second case, California, whose Calpers is the nation's largest pension fund. In late 2015, Calpers debated a highly unusual plan to reduce the discount rate from 7.5% to 6.5% *over a period of 25 to 30 years*. Governor Jerry Brown and his appointees wanted a much quicker reduction, but the unions clearly did not. Said the *Sacramento Bee* (Kasler, 2015), the discount rate is "a sensitive political issue for Calpers. Moving too quickly to lower the fund's expected returns would mean imposing higher contributions on member agencies…(and) the faster the contributions go up, the more the political pressure builds for change in the pension system. Several members of the Calpers board, which tends to tilt toward labor interests, said the go-slow approach is better." Labor won out, with minor compromise,

and Calpers decided to reduce its discount rate over a slightly shorter 20-year time frame. Brown called the plan "irresponsible" (Kasler, 2016).

Time went on, but the issue didn't go away. Calpers was in bad shape, just 68% funded. Its investments had earned a paltry 0.61% in 2015-16 and 2.4% in 2014-15. Its financial consultant warned it to expect "a very painful decade" (Kasler, 2016). In late 2016, Governor Brown insisted again on a quick drop in the discount rate—but "Calpers members who come from the ranks of labor balked." Said an employee member from the SEIU, "I'm a little confused at the panic and expediency you guys are selling us right now. I think that we need to step back and breathe" (Myers, 2016).

This stand-off led to a smoke-filled-room bargaining session, and ultimately to a political deal that was ratified by the Calpers board. It called for lowering the discount rate from 7.5% to 7% (not 6.5%) over three years, and phasing in these incremental changes *over eight years* for government agencies as they make increasingly higher contributions. Brown thereby made some progress in trying to protect the fiscal integrity of the system—but he didn't get nearly the reform that he (and experts) had sought, due to resistance from the unions (Borenstein, 2016).

As one close observer of California pension politics put it, the eight-year phase-in ensures that "even if investments earn 7 percent annually, the pension system will continue to rack up more taxpayer debt" (because contributions will be inadequate). Moreover, "the 7 percent target is not low enough…The pension system's consultant warned last summer that Calpers should anticipate an average 6.2 percent annual return for the next 10 years, which would further exacerbate the debt." The deal was essentially just an "incremental adjustment that kicks the proverbial can further down the road…It still won't be enough to stop the hemorrhaging" (Borenstein, 2016).

California and Rhode Island are different states with different pension systems, but, as we have shown, their political dynamics have been similar in key respects—and consistent with our theory and evidence. In both states, (1) public employees and their unions were opposed to reformist efforts to bolster the system's fiscal integrity; (2) the champions of reform were government officials, who showed themselves to be better guardians of fiscal integrity than the beneficiaries; and (3) the reforms that government officials pursued, while steps in the right direction, fell far short of what was needed for full funding.

Conclusion

In *The End of Liberalism*, Theodore Lowi (1969) famously argued that American government is not a democracy-promoting arena of pluralist competition, but rather a corrupted version of it in which groups colonize government, exercise public authority as insiders, and promote their special interests at the expense of ordinary citizens. Similar themes can be found in other classic works (e.g., Schattschneider, 1960; McConnell, 1966).

In recent decades, models of politicians and voters have come to dominate scholarly thinking, and interest groups have been pushed to the periphery. When they've been studied at all, the focus has been narrowed to lobbying and campaign contributions. As a subversive line of new scholarship rightly argues, this is unfortunate. Interest groups are fundamental to an understanding of American government, and they need to be brought to the center of theory and research once again (Hacker and Pierson, 2014; Bawn et al., 2012; Cohen et al., 2008).

In this paper, our aim is to further that agenda—by focusing on interest groups, but also by expanding the way they are currently studied. Interest groups are more than just outsiders that influence government through lobbying and elections. They are often insiders that play official roles within government itself, and this is just as true today as it was when Lowi and

other prominent scholars wrote about it decades ago. It is time to reconnect with this work and explore the full range of avenues by which interest groups shape American government.

Our study of pension boards is a step in that direction. These boards are government agencies of great significance—they control trillions of dollars, with vast consequences for governments, public workers, and society as a whole—and their operation in the bureaucratic shadows, surrounded by mind-numbing technicalities, gives interest groups much opportunity to exercise inside influence over policy (Schattschneider, 1960).

Almost all pension boards are designed to enable public workers and their unions to play official roles in governing their own pension systems. The existing scholarly literature argues that self-governance is a good thing—because public employees, as pension-fund principals, have incentives to ensure the funds' fiscal integrity, while politicians and their appointees are susceptible to political influences and have incentives to be fiscally irresponsible.

As we show here, there are strong theoretical reasons for believing that the existing literature has it wrong, and that *all* the key actors have incentives to behave irresponsibly. Most important, for public workers and their unions—the supposed guardians of the system—chronic underfunding is simply smart politics. Their pension benefits are legally protected, whether properly funded or not; and underfunding, by promoting the fiscal illusion that benefits are inexpensive and affordable, works to their great advantage. It is the key to gaining political support for generous benefit levels. It also frees up public money for other government services, and thus for higher public employment, salaries, and raises.

Our empirical analysis of 109 state-run pension plans demonstrates that, as our theory suggests, public employees and their unions are not the champions of fiscal integrity. Indeed, the evidence shows that, in their key pension decisions—regarding the discount rate and the

percentage of the ARC paid—they are consistently *less* fiscally responsible than the ex-officio politicians and (most) political appointees are. In this case, at least, self-governance and its official encouragement of "interest groups on the inside" tend to promote outcomes that undermine effective government.

This paper is but an opening wedge in studying the politics of public pension boards. Among other things, it would be instructive to explore how and why self-governance came to be part of their formal design, and what political efforts have been made to change that. It would also be revealing to take a deeper look at politicians and their appointees, and in particular, to ascertain whether their electoral connection to taxpayers—which public workers and their unions don't have—leads them to be more fiscally responsible than the beneficiaries themselves, perhaps accounting for the empirical results we find here. It would also be helpful to explore the role of financial experts: who are indispensable to the proper management of any pension system, but also have their own financial interests and, if appointed by politicians, may well be responsive to political influences.

The study of pension boards is important in its own right. But we study it here because it is also one means of pursuing a larger, very promising scholarly agenda—that of bringing interest groups back to center stage in the study of American politics, with special attention to the pervasive ways that they colonize government and shape its policies from the inside. Our hope is that this paper contributes to that agenda, and in so doing helps to encourage new theory and research that extends to the full scope of American government —and builds on classic work in political science that still holds great value and insight.

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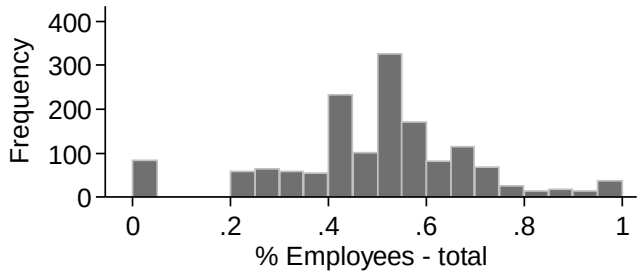
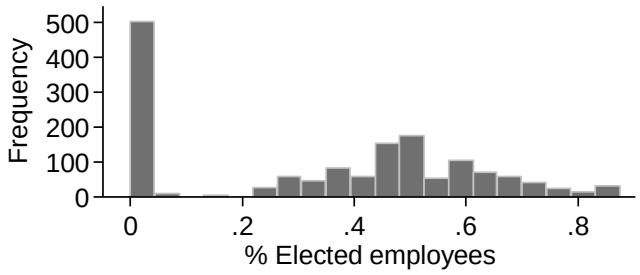
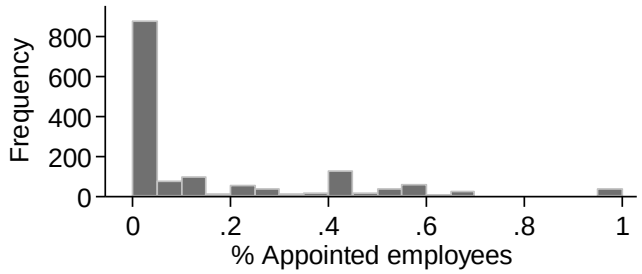
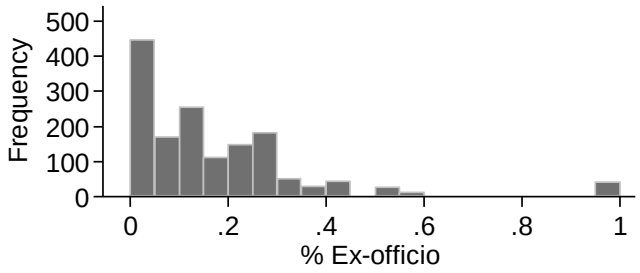
Figure 1: State pension board composition









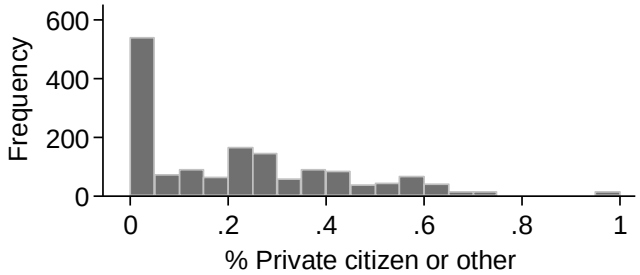


Table 1: Government employees and public pension funding

	Discount rate	*Fraction of ARC paid*		
	(1)	(2)	(3)	(4)
% Elected employees	0.006***	-0.104**	-0.136**	-0.105*
	(0.002)	(0.049)	(0.062)	(0.061)
% Appointed employees	0.002	-0.041	-0.126**	-0.061
	(0.002)	(0.055)	(0.061)	(0.059)
% Appointed employers	-0.001	-0.004	-0.031	-0.049
	(0.004)	(0.062)	(0.075)	(0.083)
% Private citizen or other	0.002	-0.175***	-0.207***	-0.196***
	(0.001)	(0.054)	(0.064)	(0.066)
Union membership	0.006***	-0.164**	-0.214***	-0.018
	(0.002)	(0.070)	(0.077)	(0.048)
% Change in state general revenue	0.002	-0.082	-0.064	-0.033
	(0.002)	(0.116)	(0.122)	(0.128)
Legislative involvement		-0.16***	-0.16***	0.014
		(0.023)	(0.033)	(0.056)
Legislative involvement * Union membership				-0.441***
				(0.166)
R-squared	0.26	0.26	0.28	0.33
Observations	1,526	1,499	1,137	1,137

Notes: Standard errors clustered by pension board in parentheses. The excluded board composition variable is % Ex-officio. All models include year fixed effects. Hypothesis tests are two-tailed. *p<0.1; **p<0.05; ***p<0.01.

Table 2: Political parties and the scope of conflict

	Discount rate (1)	*Fraction of ARC paid* (2)	*Discount rate* (3)	*Fraction of ARC paid* (4)
% Elected employees	0.006***	-0.115*	0.007***	-0.114*
	(0.002)	(0.062)	(0.002)	(0.063)
% Appointed employees	0.002	-0.074	0.002	-0.06
	(0.002)	(0.058)	(0.002)	(0.059)
% Appointed employers	-0.001	-0.046	-0.001	-0.051
	(0.004)	(0.081)	(0.004)	(0.084)
% Private citizen or other	0.002	-0.18***	0.002	-0.198***
	(0.001)	(0.067)	(0.001)	(0.066)
Democratic governor	-0.0004	-0.023		
	(0.0003)	(0.015)		
Union membership	0.006***	-0.01	0.007***	-0.02
	(0.002)	(0.051)	(0.002)	(0.050)
% Change in state general revenue	0.002	-0.04	0.003	-0.044
	(0.002)	(0.123)	(0.002)	(0.106)
Legislative involvement		-0.018		0.059
		(0.056)		(0.058)
Legis. involvement * Union		-0.493***		-0.555***
		(0.164)		(0.179)
Democratic legislature		-0.012		
		(0.015)		
Legis. involvement * Dem. legislature		0.111**		
		(0.048)		
Scope * % Elected employees			-0.001	0.023
			(0.001)	(0.046)
Scope * Union			-0.004***	0.006
			(0.001)	(0.030)
Scope * Legis. involvement				-0.101**
				(0.045)
Scope * Legis. involvement * Union				0.255**
				(0.123)
R-squared	0.26	0.36	0.27	0.34
Observations	1,526	1,123	1,526	1,137
Pre-recession union effect			0.005***	-0.014
			(0.001)	(0.034)
Post-recession union effect			0.002*	-0.01
			(0.001)	(0.036)
Pre-recession union effect, with legislative involvement				-0.396***
				(0.114)
Post-recession union effect, with legislative involvement				-0.217*
				(0.112)

Notes: Standard errors clustered by pension board in parentheses. All models include year fixed effects. Tests of the "union effect" at the bottom represent comparisons between strong union (77% membership) and weak union (8% membership) states. *p<0.1; **p<0.05; ***p<0.01.

Supplemental Information Appendix

This appendix describes how we assembled the dataset for our paper and presents some empirical results that are not shown in the paper.

Data

To build our dataset, we started with the 2015 Public Plans Database (PPD) provided by Boston College's Center on Retirement Research. The 2015 PPD assembles key statistics from the comprehensive annual financial reports (CAFRs) of the major state and local public pension plans in the United States. For the 114 major state retirement systems, we used LexisNexis Academic and information on the systems' websites to collect the state statutes that specify who sits on their governing boards and how those trustees are selected. In addition, we recorded changes to each plan's governing statutes over time, based on an annotated legislative history. We then used the statutes to code each board's composition for each year, from 2001 to 2014.[1]

We coded each trustee according to who they are (or which constituencies they represent) and how they are chosen. Our five board composition variables are as follows:

Ex-officio trustees: This category includes all officials who serve on the pension board by virtue of being elected or appointed to some other state political office, such as the governor, state treasurer, or a relevant state department head. In cases where the statute allows the official to send a designee to serve on the board, the designees are also coded as ex-officio trustees.

Elected employee trustees: We define employee trustees as those who satisfy at least one of the following criteria: 1) the statute explicitly calls them "employee trustees" (usually in contrast to "employer trustees"); 2) the statute calls for a trustee who is serving in or retired from a government employee position, such as teacher or police officer; 3) the statute calls for a trustee to be chosen from among government employees or by government employees. If the statute designates certain positions for active employees and others for retirees, we code both as employee trustees.[2] In order to fall in this first employee trustee category, however, the employee trustee has to be chosen by government employees, retirees, or unions. Most of the

[1] Five plans are not governed by a pension board of trustees: the University of California Retirement Plan and four plans in the state of Washington. We exclude these plans from our analysis.

[2] However, in Table A2 below, we differentiate between active and retired employee trustees.

trustees in this category are elected by a vote of the active and/or retired government employees who participate in the plan.[3] Some others are chosen by the unions or bargaining units that represent the employee participants of the plan. Still other trustees in this category are appointed by the governor from a restricted list of nominees (i.e., two to five nominees) submitted exclusively by those unions or bargaining units.

Appointed employee trustees: This category includes employee trustees (defined as above) who are appointed to the board by state politicians.[4] Nearly all of the trustees in this category are appointed by the governor. In a few cases, the employee trustees are appointed by some other executive branch official, a judicial branch official, or a legislative leader such as the speaker of the house or majority party leader.

Appointed employer trustees: We define employer trustees as those who satisfy at least one of the following criteria: 1) the statute explicitly calls for "employer," "executive," or "management" trustees (usually in contrast to "employee trustees"); 2) the statute calls for a trustee currently serving in a position of government employer responsibilities, such as a local government elected official or department head, a superintendent, or a budget officer; 3) the statute calls for a trustee chosen by employer associations, such as the county or municipal association of the state. Most of the trustees in this category are appointed by the governor, but a few are chosen by the leadership of the state legislature.

Private citizen or other trustees: The final category is a miscellaneous category that includes trustees who are private citizens as well as those who do not fit into any of the four categories above. Specifically, private citizen trustees are those who are explicitly called "private citizens" in the statute or who cannot be public officials, employees of the governing units covered by the retirement plan, or participants in the retirement plan. There are also some trustees who do not fit into any of the four categories above, usually because the statute does not specify criteria for who may or may not be appointed to that position. Almost all of the trustees in this miscellaneous category are appointed by the governor, but a few are appointed by other government officials.

There are nine boards in our dataset that feature private citizen or other trustees who are chosen by the other members of the board. We categorize these trustees according to the overall composition of the boards that chose them. For seven of the nine plans, the boards appointing these trustees were half employee trustees (mostly elected) and half non-employee trustees. For those seven plans, we coded the board-appointed trustees as half appointed private citizen or

[3] We include in this category two private citizen trustees on the Kentucky Teachers board who are elected by plan participants, but who may not themselves be employees.
[4] There are a few cases in which the statute designates positions for "plan participant" trustees, appointed by state officials, and we include them in this category.

other trustees and half elected employee trustees. For the remaining two plans, which did not have any elected employee trustees, we coded the board-appointed trustees as private citizen or other trustees.

Our dependent variables for the paper come from the 2015 PPD. There were a few plan-year observations in the PPD that had missing values for the discount rate, the fraction of the ARC paid, or the funding ratio; for those cases, we consulted the plans' CAFRs to fill in the missing values. As described in the paper, we also researched plan-years with very high fractions of the ARC paid (greater than 1.5). A few of these values were errors, and we used information in the CAFRs to correct them. For three yearly observations of one plan (Maine Local), we were unable to determine the correct fraction of the ARC paid, and so the dependent variable is missing for those three cases. Most of the remaining outliers are cases in which the contribution rate is set by statute or where plan administrators made a special one-time contribution to the fund—often using proceeds from pension obligation bonds. In the analysis in the paper, we drop plan-years with fractions of the ARC paid greater than 1.5 (24 observations).

We also had to collect data from each CAFR on how the decision about employer contributions (and thus the fraction of the ARC paid) is made for each plan and year. In many cases, this decision is made by the board of trustees alone. In others, the board sets the contribution rate, but the legislature is involved in the final decision: the legislature might be required to approve the contribution rate set by the board, or it might be required to directly appropriate funds for the contribution, or it might set a cap on the contribution amount. There are also several plan-years for which the contribution rate is set by statute, specifying a fixed percentage of payroll that will be contributed each year. Using information in each CAFR, we coded each plan-year along these lines, creating an indicator for whether the legislature is

involved in the decision and another indicator specifically for whether the contribution rate is set by statute.

Additional Empirical Results

In the paper, we show that the share of elected employee trustees on state pension boards varies considerably across plans. It is reasonable to wonder whether elected employee trustees only make up a large share of the boards in states with strong public-sector unions. Figure A1 below shows that that is not the case. Actually, the relationship between *Union membership* and *% Elected employees* (shown here as of 2001) is weak; the correlation in our dataset is only 0.11. It is true that many boards in strong-union states have large shares of elected employee trustees, but some boards don't have any (such as Michigan SERS) while others have a relatively small share (such as the Wisconsin Retirement System, where only 4 of 13 members were elected employee trustees). Also, there are several plans in states with low union membership that have boards dominated by elected employee trustees, such as in Colorado, Mississippi, and Louisiana. Therefore, even if we look at strong- and weak-union states separately, there is meaningful variation in the share of elected employee trustees on the pension boards.

We next consider the relationship between our two dependent variables: the discount rate and the fraction of the ARC paid. As we discuss in the paper, these are two of the major channels through which boards (and sometimes legislatures) can actively underfund pensions. Our empirical findings show that boards with more elected employee trustees are associated with greater underfunding on both measures: they have higher average discount rates and lower average fractions of the ARC paid. But do individual plans tend to use one lever or another—for example, by adopting overly optimistic assumptions so that they can then pay 100% of a lower ARC—or do many boards underfund using both instruments? We explore this in Figure A2,

which excludes the cases where the contribution rate is set by statute. The figure shows that there are plans (those toward the the top right) that underfund in one way but not the other, but also that many plans (toward the lower right) are worse funders *overall*: they use both high discount rates *and* pay a lower fraction of the ARC. A few others, specifically those clustered toward the top left, tend to adopt more realistic assumptions and pay the full ARC. However, the overall relationship in Figure A2 is negative, showing that the two underfunding options are not mutually exclusive: many boards underfund pensions in both ways.

In our discussion of the statutes, we mentioned that some boards have separate positions for either active government employees or retired government employees (or both), while others do not specify whether the employee trustees need to be active or retired. In the version of the board composition coding we use for our paper, we group all elected employee trustees together—active, retired, and general—because we expect that they have the same incentives to underfund pensions. In what follows, we break these employee trustees into three separate categories to test whether they have different effects on funding decisions.

Table A1 presents the results. Our coefficient estimates here are less precise—which makes sense given that the elected employee trustee variable is now broken into three groups—but most importantly, we find no significant differences between the coefficients on active, retired, or general employees. In column 1, the effect of increasing the elected employee share on the discount rate is about 0.6 to 0.8 percentage points, regardless of whether the trustees are active, retired, or general employees. In an F-test, we cannot reject the null hypothesis of no difference between these coefficients. The same is true in columns 2 and 3, where we rerun the models of the fraction of the ARC paid, first with all observations (column 2), then excluding plans with contribution rates set by statute and adding the interaction between *Legislative*

involvement and *Union membership*. For both sets of estimates, an F-test shows no difference between the coefficients on active, retired, and general employee trustees. Thus, our results suggest that retired and active employee trustees do not behave in fundamentally different ways on funding decisions.

As a next step, we carry out additional tests of how the political party of the governor affects pension board decisions. In Table 2 of the paper, we explored whether the party of the governor (who often sits on the board and also appoints most of the appointed board members) makes a difference to discount rates and the fraction of the ARC paid. In those models, we simply added *Democratic governor* as an independent variable and found that it had little effect. In Table A2 below, we also try interacting *Democratic governor* with each category of politically-appointed trustee to test whether the party of the governor matters more for certain categories of political appointees. The answer is no. There are no cases in which the effect of increasing the share of one type of appointed trustee is significantly different under a Democratic governor than a Republican governor.

As we explain in the paper (and above), there are a small number of plan-year observations with very high values of the fraction of the ARC paid. In our main analysis, therefore, we exclude 24 observations where that fraction is greater than 1.5. In Table A3 below, we adopt a more conservative approach to excluding observations. First, in column 1, we only exclude the 9 plan-year observations in which pension administrators made a very large, one-time payment to the funds, usually using proceeds from pension obligation bonds. In column 2, we also exclude the plan-years in which contributions were set by statute rather than by the board. In both sets of results, our coefficient estimates on *% Elected employees* and *Union*

membership are negative and statistically significant, even if slightly smaller (less negative) than in Table 1.

Finally, in Table A4, we present our models of plan funding ratios. In column 1, we regress the official funding ratio of each plan-year on the board composition variables, union membership, change in state general revenue, and the legislative intervention variable.[5] We find that increasing the share of employee trustees (both elected and appointed) relative to ex-officio members is associated with significantly lower funding ratios. Focusing on the coefficient on *% Elected employees*, the results imply that moving from a plan with no elected employee trustees to one with 2/3 elected employee trustees is associated with a decrease in the funding ratio of 10 percentage points. In column 2, where we drop the cases with contribution rates set by statute and interact *Legislative involvement* with *Union membership* (mirroring column 4 of Table 1 in the paper), that effect is even larger: 17 points. Moreover, when legislatures are involved in decisions about contributions, increasing public-sector union membership from Mississippi levels to Rhode Island levels is associated with a 10-percentage-point drop in the funding ratio (p=0.148). Therefore, we do find that greater government employee involvement in pension funding decisions is associated with lower overall funding ratios.

[5] We are missing the funding ratio for two observations.

Figure A1: Union membership and % Elected employees, 2001

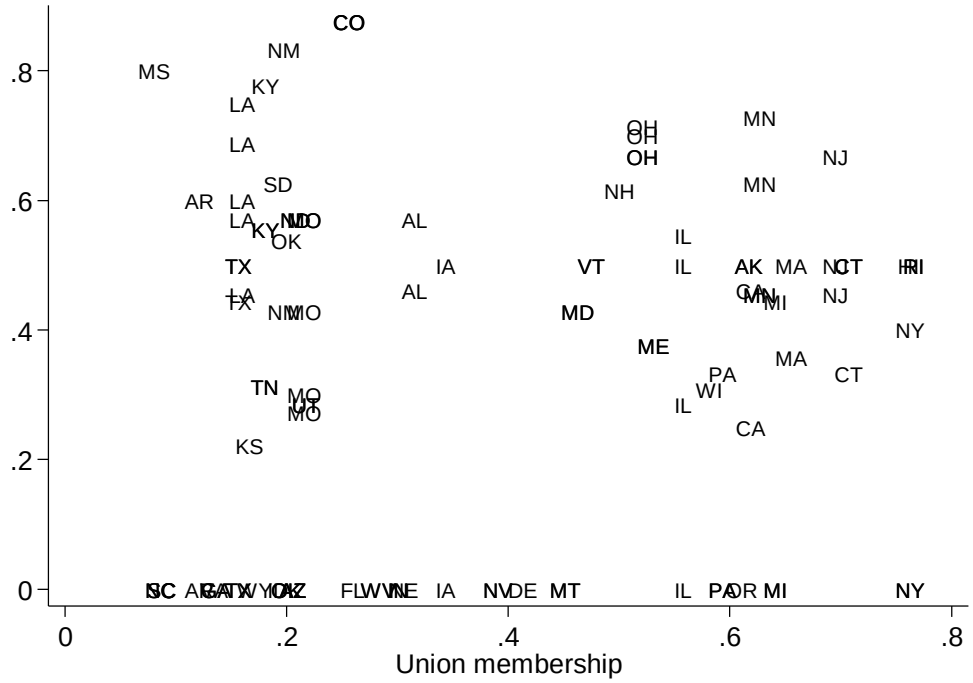


Figure A2: Discount rate and fraction of the ARC paid

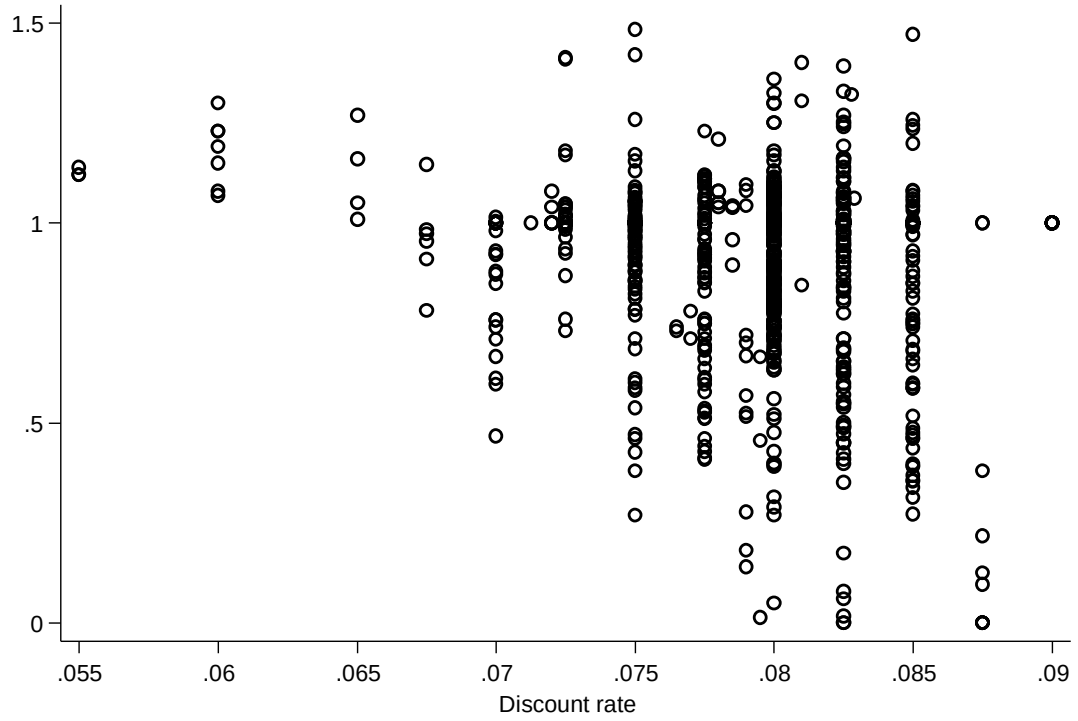


Table A1: Active and retired employee trustees

	Discount rate	*Fraction of ARC paid*	
	(1)	(2)	(3)
% Elected active employees	0.006**	-0.086	-0.077
	(0.002)	(0.064)	(0.073)
% Elected retired employees	0.006	-0.067	-0.085
	(0.005)	(0.153)	(0.154)
% Elected general employees	0.008***	-0.18	-0.16
	(0.002)	(0.112)	(0.108)
% Appointed employees	0.002	-0.038	-0.055
	(0.002)	(0.054)	(0.057)
% Appointed employers	-0.001	0.004	-0.04
	(0.004)	(0.066)	(0.086)
% Private citizen or other	0.001	-0.162***	-0.189***
	(0.001)	(0.052)	(0.062)
Union membership	0.005***	-0.158**	-0.017
	(0.002)	(0.064)	(0.047)
% Change in state general revenue	0.002	-0.089	-0.035
	(0.002)	(0.115)	(0.127)
Legislative involvement		-0.155***	0.016
		(0.023)	(0.055)
Legislative involvement * Union			-0.424***
			(0.157)
R-squared	0.26	0.27	0.34
Observations	1,526	1,499	1,137

Notes: Standard errors clustered by pension board in parentheses. All models include year fixed effects. *p<0.1; **p<0.05; ***p<0.01.

Table A2: Additional models, political parties

	Discount rate	*Fraction of ARC paid*	
	(1)	(2)	(3)
% Elected employees	0.006***	-0.085	-0.114*
	(0.002)	(0.051)	(0.062)
% Appointed employees	0.002	0.002	-0.073
	(0.002)	(0.050)	(0.051)
% Appointed employers	-0.001	-0.011	-0.076
	(0.004)	(0.063)	(0.084)
% Private citizen or other	0.001	-0.129**	-0.156**
	(0.002)	(0.055)	(0.067)
Democratic governor	-0.001	-0.009	-0.024
	(0.001)	(0.025)	(0.029)
Dem. governor * % Appointed employees	-0.001	0.025	0.008
	(0.002)	(0.060)	(0.065)
Dem. governor * % Appointed employers	0.0002	0.006	0.062
	(0.0026)	(0.071)	(0.072)
Dem. governor * % Private citizen or other	0.0015	-0.059	-0.044
	(0.0012)	(0.063)	(0.064)
Union membership	0.006***	0.017	-0.007
	(0.002)	(0.048)	(0.050)
% Change in state general revenue	0.002	-0.074	-0.041
	(0.002)	(0.120)	(0.118)
Legislative involvement		-0.053	-0.016
		(0.044)	(0.055)
Legislative involvement * Union		-0.344**	-0.494***
		(0.133)	(0.164)
Democratic legislature		-0.008	-0.01
		(0.015)	(0.015)
Legis. involvement * Dem. legislature		0.054	0.111**
		(0.036)	(0.048)
R-squared	0.26	0.3	0.36
Observations	1,526	1,485	1,123

Notes: Standard errors clustered by pension board in parentheses. All models include year fixed effects. *p<0.1; **p<0.05; ***p<0.01.

Table A3: Models of fraction of the ARC paid, including outliers

	(1)	(2)
% Elected employees	-0.091*	-0.135**
	(0.049)	(0.062)
% Appointed employees	-0.022	-0.119**
	(0.055)	(0.060)
% Appointed employers	0.019	-0.017
	(0.058)	(0.072)
% Private citizen or other	-0.179***	-0.21***
	(0.055)	(0.064)
Union membership	-0.143**	-0.209***
	(0.071)	(0.076)
% Change in state general revenue	0.011	-0.064
	(0.182)	(0.146)
Legislative involvement	-0.142***	-0.159***
	(0.024)	(0.033)
R-squared	0.18	0.28
Observations	1,514	1,140

Notes: Standard errors clustered by pension board in parentheses. All models include year fixed effects. Hypothesis tests are two-tailed. *p<0.1; **p<0.05; ***p<0.01.

Table A4: Funding ratios

	(1)	(2)
% Elected employees	-0.156*	-0.255***
	(0.078)	(0.066)
% Appointed employees	-0.146**	-0.165**
	(0.067)	(0.068)
% Appointed employers	-0.071	-0.141**
	(0.076)	(0.065)
% Private citizen or other	-0.049	-0.079
	(0.072)	(0.059)
Union membership	-0.035	0.087
	(0.060)	(0.082)
% Change in state general revenue	0.101*	0.111*
	(0.059)	(0.064)
Legislative involvement	-0.095***	-0.036
	(0.024)	(0.064)
Legislative involvement * Union		-0.234*
		(0.131)
R-squared	0.31	0.39
Observations	1,524	1,146

Notes: Standard errors clustered by pension board in parentheses. All models include year fixed effects. *p<0.1; **p<0.05; ***p<0.01.