

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

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Abstract: This paper explores an important dimension of interest group activity—the role of groups as inside players within government—that was central to the literature decades ago, but hasn’t attracted the kind of attention and research from modern political science that it warrants. Here we aim to advance this agenda by targeting a governmental arena of great significance for the nation: public-sector pension funds. These funds 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 insider 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.

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Interest groups are central to an understanding of American politics, and political scientists have generated a vast literature on the topic. The best developed components of that literature have to do with lobbying, campaign contributions, and the contours of the interest group system itself: matters that, in addition to their substantive importance, lend themselves to quantitative analysis and thus attract a good deal of modern research (Hojnacki et al., 2012; Leech, 2010). Our focus here is on a dimension of interest group activity and influence that is equally important on substantive grounds, and has deep roots in the discipline’s classic works (Lowi, 1969; McConnell, 1966; Schattschneider, 1960; see Hacker and Pierson, 2014). Perhaps because it is less amenable to quantification, however, it hasn’t attracted the kind of attention and research from modern political science that it warrants.

This early line of work rightly argues that interest groups don’t just influence government from the outside through lobbying, money, and elections, but are also pervasively active *on the inside*—within the bureaucracy—as regular, even official participants in decision making, exercising their influence in ways that are shielded from public view. These insider activities are fundamental to the operation of government and the shaping of public policy, and political scientists ultimately need to study their full range—from how groups work their way into the machinery of government to how their insider involvement varies across policies and bureaucratic venues to 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 carrying out an analysis of how key policy 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 elements 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 is that this challenge is especially difficult because of the way public pension funds are governed, which is based on “interest groups on the inside.” Specifically, these systems typically involve a heavy dose of self-governance by the employee-beneficiaries of the system, who are granted official roles as insiders. 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 (Bawn et al., 2012).

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.

We offer this analysis in pursuit of two goals, one specific and the other general. The specific goals is to shed new light on the governance of America’s public pension funds, their susceptibility to insider group influence, and the problem of underfunding. The general goal is to help advance the discipline’s study of “interest groups on the inside,” and to encourage new work on an important but under-researched topic.

Theory

Public-sector pensions began to gain traction during the Progressive Era, and they spread slowly over the decades to become ubiquitous by the 1970s. Today, although there are many local pension plans, the great majority of state and local workers are covered by plans controlled by their states, which are our focus here (Clark, Craig, and Sabelhaus, 2011). Over the decades, these plans grew more generous, and governments routinely claimed that all was well with them financially—until the Great Recession and research by financial economists revealed that it wasn’t, and indeed that the plans were chronically underfunded (e.g., Novy-Marx and Rauh, 2009). Many states were faced with fiscal crises. Their subsequent reforms, however, have typically done just enough to avoid calamity in the present, leaving the core fiscal problems unresolved (Kiewiet and McCubbins, 2014).

Why are state governments so fiscally irresponsible? The formula for financial integrity is straightforward: contributions and investment returns must be sufficient to pay for the promised benefits. Yet the states don’t do what they need to do. In explaining why, officials often point to hard economic times and down stock markets. But these challenges are short-term, whereas 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 over most pension decisions to multi-member boards. 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 (typically by the governor) or elected; and if elected, they are chosen by the constituencies they represent, with no other citizens allowed to vote.

Political scientists have not studied these boards. There is, however, a literature on the topic, rooted in research on corporate boards of directors. A central theme in this corporate literature is that “inside” directors, appointed by or 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, make politically induced decisions—e.g., about 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, 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 useful start, but the analogy to corporate boards is misleading and its assessment of political incentives is off the mark. To understand public pensions, we need to recognize two key features that shape their politics. 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 costs; and they make generous pension packages seem eminently affordable. The true costs will eventually come due—but not for decades, and by then *other* politicians (and taxpayers) will be responsible for the bill. In the meantime, the money “saved” can be used to provide 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 laws, constitutions, and judicial decisions, state pension promises are backed by strong legal protections almost everywhere; public workers know they will actually get what they are promised even if these plans are severely underfunded.¹ Indeed, because full funding on a regular, responsible schedule

¹ On 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

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. If public workers and their unions want increasingly generous benefits, they need to convince the public that these benefits are not costly to provide. Underfunding does that. At the same time, it keeps employee payments into 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.

If public workers were atomized, they would have little basis for asserting their interests on pension boards. Pension policy is so complex that most would be uninformed about how board 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.

But employees are not atomized. They have interest groups to represent them. Most notable are the state (and local) affiliates of 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 the “nonunion” South, these unions are large, well-funded, and politically active (DiSalvo, 2015); and state pension funds are not only valuable to their members, but also of major consequence for state spending and taxing, state services (and jobs), and the investment of public money, all of which the unions care about. The unions therefore have strong incentives to be well informed about pension policy—and to

recent that it is questionable whether public employees and their unions worried about this in the past.

recruit and endorse board candidates, educate workers, mobilize the vote, and shape the decisions of elected board members.

Most states also have 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 (indeed, some are union affiliates). And while tensions may arise on occasion, their interests 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 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 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

Pension boards typically do not make decisions about the benefits employees will receive. Politicians—legislators, governors—almost always reserve those decisions for themselves. They are the ones making valuable promises to employees and getting credit for it. By contrast, they typically delegate decisions about matters affecting contributions—and thus, the imposition of costs—to the boards. Accordingly, these are the decisions we will focus on

here. Below we provide a simple overview of what the key contributions decisions are and how they relate to the underfunding problem.

Pension liabilities are supposed to be prefunded, with governments and employees setting aside sufficient funds each year to pay for the future pension benefits employees have earned. To determine what contributions are sufficient for “full funding,” the boards calculate the “actuarially required contribution,” or ARC. Inevitably, these calculations involve a host of assumptions about the discount rate, mortality rates, salary growth, inflation, and more—assumptions that are uncertain, can be manipulated, and greatly affect the calculation of the ARC.

Of these, the most consequential is the discount rate. To see why, consider a payment of \$100 million due in 20 years. What is its cost 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 \$46 million—which means that much larger current contributions are required. The higher the discount rate, then, the lower the estimate of future pension liabilities and the less governments and employees must contribute for “full funding.”²

Today, experts point to too-high discount rates as a major cause of underfunding. State pension boards typically set the discount rate equal to their expected rate of return on investments, which might seem to make sense. If they know they will need \$100 million in 20 years, and they plan to make 8% on investments, then that 8% rate should presumably determine how much they need to invest today to meet the \$100 million target. But this approach ignores

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

the very real risk that their investments will earn *less* than 8%, perhaps a lot less. And when the \$100 million comes due, they will still be required to pay it anyway.

Because of this risk, nearly all finance economists agree that the discount rates typically used by public pension plans, roughly 8%, are way too high, and that the fiscal integrity of the funds requires much lower discount rates that are closer to 4 or 5%. Such a shift would automatically entail dramatically higher annual contributions—and lots of political pain. State boards have chosen not to go that route. They have continued to embrace too-high discount rates, and thus to keep contributions lower than they should be and to chronically underfund their pension plans.

Decisions to underfund pensions do not end there. Once the ARC is calculated, based on the discount rate and other actuarial assumptions, there is no guarantee that governments will actually pay the “required” annual amounts into their pension funds. Frequently, participating governments pay only a fraction of the ARC—in spite of the fact that the ARC has *already* been manipulated to be artificially low. After the ARC is calculated, then, who decides what percentage 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 purposely not meeting the ARC requirements 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 seek to 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. Using the statutes in place for each plan from 2001 to 2014, we coded each trustee as being one of five types.

As we have discussed, statutes typically designate positions for government employees, but they 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. Others are appointed by state politicians, usually governors. We expect that employee trustees *chosen* by employees will be the most reliable representatives of employees' interests; employee trustees appointed by state politicians may have loyalty to those politicians, or perhaps have political ambitions. We therefore 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

Five of the 114 plans are not governed by a board of trustees, so our dataset tracks 109 boards from 2001 to 2014. Figure 1 shows the distributions of our five board composition variables for all 1,526 plan-years in the dataset. Starting with the distribution of *% Elected employees* (top-left panel), we find that *most* plans have employee trustees chosen by employees: 1,023 plan-years (67%) have at least some, and for boards that do, they typically hold a large share of the seats (the median is 50%).⁴ Appointed employee trustees are less common: the top-right panel shows that only 648 plan-years have this type, and for those 648, their median share

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

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

is only 40%. 71 percent of the board-year observations have at least one ex-officio trustee (middle-left panel), but they rarely make up a large percentage of the board. On the middle-right, 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-left shows that two-thirds of the boards reserve a small share of seats for private citizen or other trustees.

Overall, our data reveal that there is considerable variation in board composition across plans—and also that elected employee trustees usually have a large presence. We also find, however, that there is far less variation in board composition within plans over time. Over this 14-year period, for example, 81 of the 109 plans had no changes to their share of elected employee trustees, and in the remaining 28, nearly all of the changes were very small. In our analysis, therefore, most of the variation we explore is 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 plan-years in our dataset feature discount rates ranging from 0.055 to 0.09. 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 the other political actors involved?

We also analyze the fraction of the ARC that gets contributed each year, again using data from 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. 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 sum to 1, we set % *Ex-officio* as the excluded category. Thus, for each board composition variable, the 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 kinds of trustees.

While our focus is on the employee trustee variables, particularly % *Elected employees*, 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 ways. First, they can try to ensure that the “right” kinds of employee trustees are selected for the boards, and then 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, when public-sector unions are strong, pension funding policy overall should be more aligned with government employees’ interests. In our

models, then, we include the fraction of full-time state and local government employees in the state who are union members, 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 administrators make less responsible decisions when fiscal conditions are poor (e.g., Mitchell and Smith, 1991; Stalebrink, 2012). For that to hold, however, policymakers would have to be *more* responsible during times of low fiscal stress—and 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. 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. Is greater employee representation 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 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 large effect, equal to a full standard deviation.

⁵ This variable is constant within states over time.

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.

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. 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.

We use the same approach as before, with two modifications. First, we account for the fact that decisions about contributions often involve the state legislature. In column 2 of Table 1, we include the binary indicator *Legislative involvement*, which equals one if the legislature plays any role in the decision about what 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. In column 3 of Table 1, we exclude these cases.

The second adjustment is to exclude cases in which the dependent variable takes on extreme values. Occasionally, the fraction of the ARC paid exceeds 1 by a large amount. In researching all observations in which this fraction is greater than 1.5, we found that most either had contributions set by statute or involved special payments to the pension fund—for example, payments using 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 is no. Instead, we find that increasing the share of elected employee trustees is associated with a *lower* fraction of the ARC

⁶ We are also missing the fraction of the ARC paid for 3 plan-years.

paid. Specifically, increasing the share of elected employee trustees from 0 to 2/3 of the 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

We also estimate a statistically significant negative coefficient on public-sector union membership. In column 2, the results show 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. 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 say why it has a negative impact. One possibility is that these trustees are the most political of all, because politicians

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 fraction of the ARC paid.

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, 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 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.

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 be interpreted as union influence on the board of trustees. In contrast, with fraction of the ARC paid, strong unions could pressure the board to contribute less than the full ARC, or they could influence the legislature. In column 4, we interact *Legislative involvement* with union membership, excluding plan-years with contributions set by statute.

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 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 rates that will keep the ARCs artificially low. However, almost half 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

We have covered a great deal of ground here, dealing with two technical dependent variables, each with their own complexities. But the results of our analysis are clear. They show 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

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 they are not decisions; rather, they are the accumulation of many decisions over many years.

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 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—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, in Table 2, we test whether ex-officio members who are Democrats, and various political appointee trustees who are appointed by Democrats, make different decisions than Republicans and their appointees do. In column 1 (the discount rate model), we add an indicator of whether the governor in each state and year is a Democrat—because the governor is usually the one who appoints board members, and ex-officio trustees are usually members of the governor’s party. All of our earlier findings are substantively the same. More importantly for our purposes here, we estimate a statistically insignificant coefficient on *Democratic governor*. Therefore, discount rate decisions made by boards operating under Democratic governors are not significantly different than those operating under Republicans.

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. The coefficient on *Democratic governor* is negative ($p=0.12$), but 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.

One final question 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 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, which presumably made it more difficult for policymakers to keep their high discount rates. If so, the influence of

government employees and public-sector unions may have weakened with the onset of the recession. They continued to hold positions on the board and still had clout in many states, but perhaps they had less ability to keep discount rates high and contributions low.⁹

To investigate this, in column 3 of Table 2, we return to our discount rate model and test whether the effects of *% Elected employees* and *Union membership* decrease 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. 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 strong-union state (77%) both pre- and post-recession. We find that strong public-sector unions were still associated with higher discount rates after 2008—but less so than before. However, the interaction of *Scope* and *% Elected employees* is statistically insignificant. Thus, elected employee trustees were just as effective at keeping discount rates high after the recession as they were before.

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.

⁹ Anzia and Moe (2017) find that the politics of pensions became more partisan after 2008, but they are studying pension *benefits*, whereas we are analyzing pension *funding*—which has a different political logic.

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 toward that constituency alone. 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 fraction of the ARC paid. There, we interact *% Elected employees* with *Scope*, as in the discount rate model. In addition, because we found that the fraction of the ARC paid is lower when public-sector unions are strong *and* legislatures are involved, 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.

As in the discount rate model, 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 be somewhat protected from pressures that emerge from the outside.

Two Cases

At the heart of our quantitative analysis is a consistent finding: even with 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, but 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 “perhaps the boldest pension reform of the last decade” (Finley, 2012). Prior to the reform, the state’s pension system had suffered from chronic underfunding and was ranked among the worst in the country (Pew, 2012). The legislature’s attempts at reform—in five of the six years between 2005 and 2010—had been wholly insufficient.

Then along came Gina Raimondo: a candidate for General Treasurer in the 2010 election who was dedicated to tackling the state’s pension problems. She won with 60% of the vote and proceeded to push for pension reforms so comprehensive—and politically unprecedented—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 figure was too optimistic due to Rhode Island’s high 8.25% discount rate: which inflated the funding ratio and kept contributions artificially low—and for years had made the system and its benefits seem 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%. 7.5 percent was still too high (the fund's rate of return for the past decade had been 2.28%), but even this shift 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 (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*. 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 stretch out the payments without improving the system's fiscal integrity (Gregg and Stanton, 2011).

Raimondo went on to campaign for a legislative reform to the entire pension system, which she achieved in November of 2011. 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 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 (Rendazzo, 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) 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 lowering 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 lowered and when would it 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 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 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 protecting 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 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 their political dynamics have been similar in key respects—and consistent with our theory and quantitative evidence. In both states, (1) public employees and their unions were opposed to efforts to bolster the systems’ 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

Political scientists have carried out extensive research on the role of interest groups in lobbying and elections, and on the features of the interest group system as a whole. But as the modern literature has developed, an aspect of group activity and influence that in earlier times was prominently featured in some of our discipline's classic works (Lowi, 1969; McConnell, 1966), and that remains of great substantive importance today—the role of interest groups as inside players within government—has received far less attention than it deserves. Our study of pension boards is an attempt to do something about that.

Pension 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 of these boards are designed to enable public workers and their unions to play official roles in governing their own pension systems. The existing scholarly literature, arising from studies of corporate governance, argues that self-governance by pension beneficiaries 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 bringing attention to, as well as learning something new about, the

pervasive ways that interest groups colonize government and shape its policies from the inside. If the role of interest groups in American government is to be well understood, and indeed, if government itself is to be well understood, much more theory and research needs to be devoted to this important but relatively neglected dimension of group activity and influence. Our paper is an effort to advance that agenda.

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Figure 1: State pension board composition

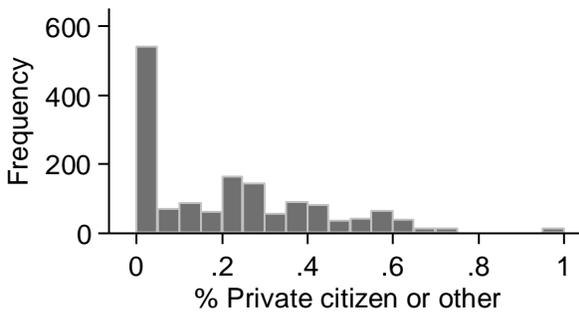
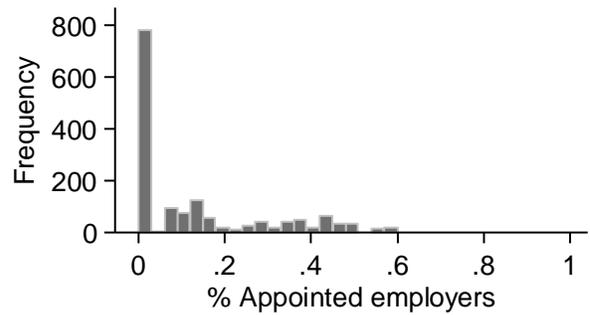
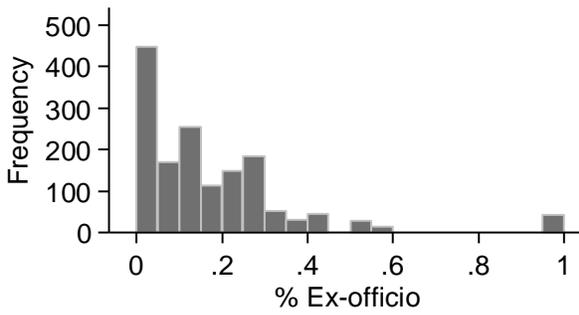
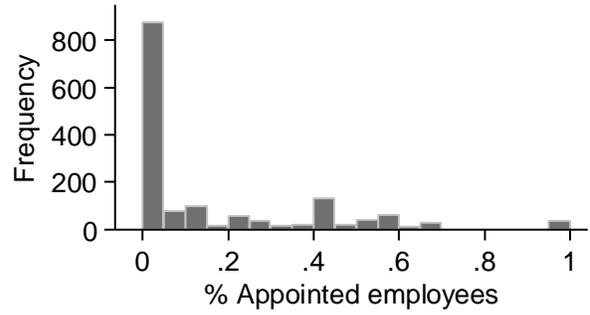
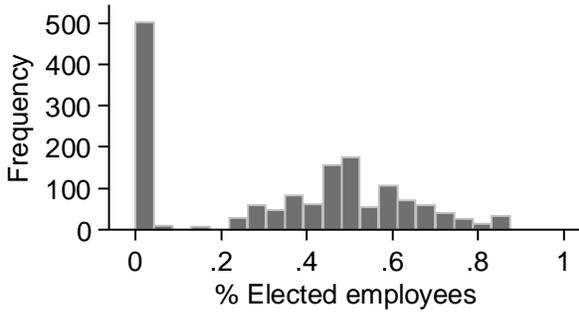


Table 1: Government employees and pension funding

	<i>Discount</i>	<i>Fraction of ARC paid</i>		
	<i>rate</i>			
	(1)	(2)	(3)	(4)
% Elected employees	0.006*** (0.002)	-0.104** (0.049)	-0.136** (0.062)	-0.105* (0.061)
% Appointed employees	0.002 (0.002)	-0.041 (0.055)	-0.126** (0.061)	-0.061 (0.059)
% Appointed employers	-0.001 (0.004)	-0.004 (0.062)	-0.031 (0.075)	-0.049 (0.083)
% Private citizen or other	0.002 (0.001)	-0.175*** (0.054)	-0.207*** (0.064)	-0.196*** (0.066)
Union membership	0.006*** (0.002)	-0.164** (0.070)	-0.214*** (0.077)	-0.018 (0.048)
% Change in state general revenue	0.002 (0.002)	-0.082 (0.116)	-0.064 (0.122)	-0.033 (0.128)
Legislative involvement		-0.16*** (0.023)	-0.16*** (0.033)	0.014 (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 board in parentheses. All models include year fixed effects. *p<0.1; **p<0.05; ***p<0.01.

Table 2: Political parties and the scope of conflict

	<i>Discount rate</i> (1)	<i>Fraction of ARC paid</i> (2)	<i>Discount rate</i> (3)	<i>Fraction of ARC paid</i> (4)
% Elected employees	0.006*** (0.002)	-0.115* (0.062)	0.007*** (0.002)	-0.114* (0.063)
% Appointed employees	0.002 (0.002)	-0.074 (0.058)	0.002 (0.002)	-0.06 (0.059)
% Appointed employers	-0.001 (0.004)	-0.046 (0.081)	-0.001 (0.004)	-0.051 (0.084)
% Private citizen or other	0.002 (0.001)	-0.18*** (0.067)	0.002 (0.001)	-0.198*** (0.066)
Democratic governor	-0.0004 (0.0003)	-0.023 (0.015)		
Union membership	0.006*** (0.002)	-0.01 (0.051)	0.007*** (0.002)	-0.02 (0.050)
% Change in state general revenue	0.002 (0.002)	-0.04 (0.123)	0.003 (0.002)	-0.044 (0.106)
Legislative involvement		-0.018 (0.056)		0.059 (0.058)
Legis. involvement * Union		-0.493*** (0.164)		-0.555*** (0.179)
Democratic legislature		-0.012 (0.015)		
Legis. involvement * Dem. legislature		0.111** (0.048)		
Scope * % Elected employees			-0.001 (0.001)	0.023 (0.046)
Scope * Union			-0.004*** (0.001)	0.006 (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*** (0.001)	-0.014 (0.034)
Post-recession union effect			0.002* (0.001)	-0.01 (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 board in parentheses. All models include year fixed effects. Tests of the “union effect” 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 A2: Discount rate and fraction of the ARC paid

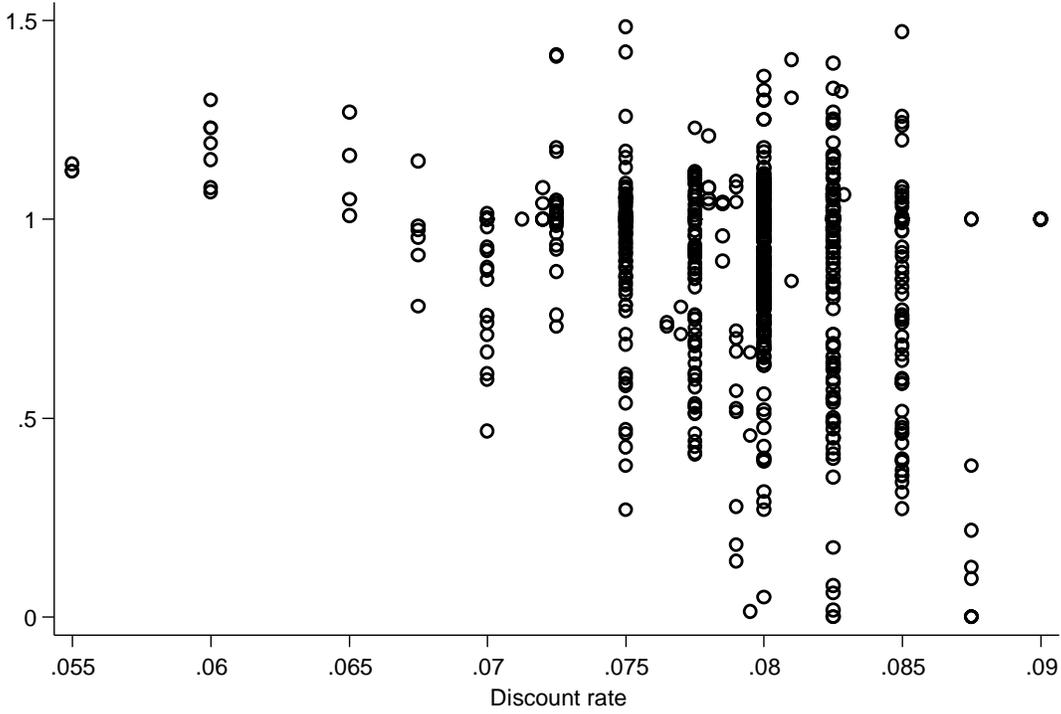


Table A1: Active and retired employee trustees

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

	<i>Discount rate</i>	<i>Fraction of ARC paid</i>	
	(1)	(2)	(3)
% Elected employees	0.006*** (0.002)	-0.085 (0.051)	-0.114* (0.062)
% Appointed employees	0.002 (0.002)	0.002 (0.050)	-0.073 (0.051)
% Appointed employers	-0.001 (0.004)	-0.011 (0.063)	-0.076 (0.084)
% Private citizen or other	0.001 (0.002)	-0.129** (0.055)	-0.156** (0.067)
Democratic governor	-0.001 (0.001)	-0.009 (0.025)	-0.024 (0.029)
Dem. governor * % Appointed employees	-0.001 (0.002)	0.025 (0.060)	0.008 (0.065)
Dem. governor * % Appointed employers	0.0002 (0.0026)	0.006 (0.071)	0.062 (0.072)
Dem. governor * % Private citizen or other	0.0015 (0.0012)	-0.059 (0.063)	-0.044 (0.064)
Union membership	0.006*** (0.002)	0.017 (0.048)	-0.007 (0.050)
% Change in state general revenue	0.002 (0.002)	-0.074 (0.120)	-0.041 (0.118)
Legislative involvement		-0.053 (0.044)	-0.016 (0.055)
Legislative involvement * Union		-0.344** (0.133)	-0.494*** (0.164)
Democratic legislature		-0.008 (0.015)	-0.01 (0.015)
Legis. involvement * Dem. legislature		0.054 (0.036)	0.111** (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* (0.049)	-0.135** (0.062)
% Appointed employees	-0.022 (0.055)	-0.119** (0.060)
% Appointed employers	0.019 (0.058)	-0.017 (0.072)
% Private citizen or other	-0.179*** (0.055)	-0.21*** (0.064)
Union membership	-0.143** (0.071)	-0.209*** (0.076)
% Change in state general revenue	0.011 (0.182)	-0.064 (0.146)
Legislative involvement	-0.142*** (0.024)	-0.159*** (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* (0.078)	-0.255*** (0.066)
% Appointed employees	-0.146** (0.067)	-0.165** (0.068)
% Appointed employers	-0.071 (0.076)	-0.141** (0.065)
% Private citizen or other	-0.049 (0.072)	-0.079 (0.059)
Union membership	-0.035 (0.060)	0.087 (0.082)
% Change in state general revenue	0.101* (0.059)	0.111* (0.064)
Legislative involvement	-0.095*** (0.024)	-0.036 (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.