Supplemental Information Appendix

This appendix describes how we assembled our dataset and presents other data and empirical results that are not shown in the article.

**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]](#footnote-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]](#footnote-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 trustees in this category are elected by a vote of the active and/or retired government employees who participate in the plan.[[3]](#footnote-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]](#footnote-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 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 article 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 article, 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 article, 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 Quantitative Analysis**

In Figure A1, we consider the relationship between our two dependent variables: the discount rate and the fraction of the ARC paid. As we discuss in the article, 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? Figure A1 (which excludes the cases where the contribution rate is set by statute) shows that there are plans (those toward 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 A1 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 article, 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, increasing the elected employee share is associated with an increase in the discount rate of 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.

Next, we explore whether there are any other plan or state characteristics that can explain the estimated relationship between *% Elected employees* and funding decisions. In the article, we test for possible effects of fiscal stress by including the percentage change in state revenue from the previous year, but in Table A2, we add a second measure: the log of total debt per capita in each state and year.[[5]](#footnote-5) We also add indicators for the types of public workers covered by the plan. Specifically, the variable *Public safety* equals 1 if the plan is for police and fire protection employees (14 plans), and *Education* equals 1 if the plan only covers teachers and other educational employees (30 plans). The omitted category is plans that cover state and local employees of many occupations (65 plans). In addition, we account for whether retirees under the plan are also eligible for Social Security (as they are in 75% of the cases). For each of these variables, we do not have any clear expectations about how they should affect the discount rate or the fraction of the ARC paid; we merely include them in these models as a robustness check.

Using information from the statutes determining board composition, we also measure the fraction of all board members who are required to have expertise in finance, investment, accounting, or related fields. While fewer than half of the statutes include such expertise requirements—only 32 in 2001 and 46 by 2014—it may be that requiring a larger share of board members to have finance or budgeting expertise will be associated with more responsible funding decisions. Alternatively, the trustees’ political and constituency concerns may matter more for funding decisions than technical expertise, in which case statutory expertise requirements might make little difference. We don’t have strong theoretical expectations for this variable, but we include it in our models to test whether expertise requirements have some relationship to funding decisions.

Column 1 of Table A2 presents the estimates from this expanded model of the discount rate. We do not find that states with higher debt per capita have higher discount rates, nor do we find any evidence that discount rates depend on whether retirees are eligible for Social Security. Also, the coefficient on *% Expert* is statistically indistinguishable from zero; a higher share of trustees with expertise does not appear to be associated with lower discount rates. Interestingly, we find some evidence that plans covering public safety workers and education employees have higher discount rates than plans that cover general state and local employees. Most importantly, though, including all of these variables does not change our main findings: both *% Elected employees* and union membership are positively associated with discount rates.

In columns 2-4, we show the results of the expanded models of the fraction of the ARC paid. Here it does appear that expertise requirements may make a small difference: the coefficient on *% Expert* is positive, implying that shifting from a board with no required expertise to one where 20% of trustees must have expertise is associated with a 2- to 3-point increase in the percentage of the ARC paid. We also find that plans covering public safety employees pay a lower fraction of the ARC, although there is no such association for plans covering educational employees. Finally, debt per capita is negatively associated with fraction of the ARC paid, which is the opposite of what we should find if greater fiscal stress leads to more underfunding. Again, the most important takeaway is that our main findings remain unchanged, even when we control for these additional plan- and state-level variables.

In a footnote of the article, we explain why we do not control for historical rates of return in our main models of the discount rate and the fraction of the ARC paid. However, we also explain there that adding the 5-year rate of return as a control variable does not affect our results in any substantive way. We show this in Table A3 below.[[6]](#footnote-6)

In our analysis, then, we have accounted for a large set of variables that could explain funding decisions, and we continue to find that a higher share of employee trustees is associated with less responsible funding decisions. Even with all of these plan and state characteristics accounted for, however, we are not able to put to rest all concerns about possible omitted variable bias. One approach to addressing lingering concern about omitted variable bias would be to include plan fixed effects: a dummy variable for each plan would partial out the effects of any plan characteristics that are constant over time. The problem with that approach, though, is that for nearly all of our plans, the share of elected employees on the board—our main independent variable of interest—is itself constant within plans over time. Thus, a model with plan fixed effects would be leveraging within-plan variation in *% Elected employees* in only 28 plans. Moreover, nearly all of the changes in those 28 plans are very small—so small that we might not expect them to result in major changes in board decision-making.

Table A4 provides the details of all 28 within-plan changes to *% Elected employees* in our dataset: we show the magnitude of the change in *% Elected employees* from 2001 to 2014, and we also show the value of *% Elected employees* as of 2014 (their board share after the change). What we can see from the table is that most of the changes to board composition were minor. 19 of the 28 cases changed the elected employees share by less than 10 percentage points. All but 3 of the 28 cases changed their share by less than 15 percentage points. It is therefore not obvious to us that we *should* expect tofind big changes in board decision-making when the elected employee share changes by a small amount—for example, the 5.6 percentage point change on the board of Alaska PERS.

Even so, we have estimated models including plan fixed effects; the estimates are shown in Table A5. (Note that we drop *Union membership* because it is constant within states over time.) In columns 1 and 2, the coefficients on all of the board composition variables are statistically insignificant. Thus, larger within-plan changes in the share of elected employee trustees are not associated with larger (or smaller) changes in the discount rate or the fraction of the ARC paid. Again, we think this is because most of the within-board changes are small and because there are so few of them.

In researching some of these cases of board composition change, however, it became clear that some of the very small changes to the elected employee share were actually meaningful. In Illinois, for example, when the legislature changed its pension board statutes in 2009, some of the elected employees on the board of the Illinois Teachers plan strongly opposed the changes. The reason for their opposition was that the new statutes added two more gubernatorial appointees to the board, which reduced the elected employee trustees’ share from 6 out of 11 members (a majority) to 6 out of 13 members (a minority).[[7]](#footnote-7) In the case of the Illinois Teachers plan, then, what appears to be a small change (8.4 percentage points) in the elected employee share was perceived to be consequential. In a final set of tests, then, we distinguish among the changes listed in Table A4 based on whether they changed the elected employees from a majority to a minority or vice versa (see the right hand column of Table A4). Specifically, we add to our dataset a variable called *Majority status*, equal to one if the elected employees are a majority of the board (50% or more) and 0 if they are not.

In columns 3 and 4 of Table A5, we add this variable to our plan fixed effects models. The results suggest that changes in the majority status of elected employees actually do affect board funding decisions—and in the directions we expect. In column 3, the positive coefficient on *Majority status* suggests that the average discount rate is 0.2 percentage points higher when a board had a majority of elected employee trustees compared to when the board had a minority. In column 4, we estimate a negative coefficient on the employee majority indicator, suggesting that fraction of the ARC paid increases, on average, when employee trustees switch from majority to minority status. In column 4, however, the coefficient on *% Elected employees* is also positive—and a closer examination of why provides a good illustration of how sensitive these estimates are. Note, from Table A4, that the Illinois Universities plan was the only one where there was a substantial increase in the elected employees’ share between 2001 and 2014 (0% to 54.5%). This was a huge change—one of a kind in our dataset. And if we drop the Illinois Universities plan from our model in column 4, the coefficient estimate on *% Elected employees* shrinks by half and is no longer statistically significant. Even when we drop that one case, the coefficient on *Majority status* remains negative and significant. But our main takeaway is that there are too few cases of within-plan change to come up with convincing estimates. And so while the direction of the effects shown in columns 3-4 of Table A5 align with our theoretical expectations, we do not put much weight on those results.

As we explain in the article (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, we exclude 24 observations where that fraction is greater than 1.5. In Table A6 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.

In Table A7, 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.[[8]](#footnote-8) 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 article), 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.

In Table A8, we test whether the results are robust to treating the data as cross-sectional. Specifically, we average each variable within plans over time, except for *Legislative involvement*, for which we take the median within plans over time. We then run the same models as in Table 1 of the article (except, of course, excluding year fixed effects). Our conclusions are the same: *% Elected employees* and *Union membership* are positively associated with the discount rate and negatively associated with the fraction of the ARC paid.

In Table A9, we supplement our analysis of political parties. Because the terms of the political appointee trustees are typically three to four years, we want to account for the possibility that some of the boards’ political appointees were appointed by a previous governor of the opposite party. To do this, we create a variable, *Recent Democratic governors*, equal to 1 if the state has had Democratic governors for the past three years, 0 if it has had Republican governors for the past three years, and 0.5 if it has had governors of both parties. In column 1 of Table A9, we interact this variable with each of our political appointee variables. All of the coefficient estimates on the interaction terms are statistically insignificant, suggesting that the decisions of the appointee trustees do not depend on the party of the politicians who appointed them. In column 2, we do the same for the model of the fraction of the ARC paid. Again, the coefficients on the interactions of *Recent Democratic governors* and the political appointee variables are all statistically insignificant, suggesting that the Democratic political appointees do not make systematically different decisions than Republican appointees

**Elected Employee Trustees and Public-Sector Unions**

As we discuss in the article, public-sector unions and government retiree associations 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. However, there is no existing research on any of this. There is also almost no press coverage of these matters, and neither the pension boards nor the unions are interested in publicizing the inner details of exactly what is going on. As Schattschneider (1960) noted long ago, subsystems thrive when they are insulated from the rest of politics, and the central players have incentives to keep it that way. That said, what evidence there is suggests that, just as worker representation is a normal, routine part of the governance of public pension boards, so is the active involvement of worker interest groups in shaping who gets elected and what they do on the boards.

Political scientists have shown that, in general, low-turnout elections—which assure that small numbers of votes can translate into victory—tend to favor organized interests (Anzia, 2014). And although the turnout rates of pension elections are rarely made public, the evidence suggests they are indeed quite low, as we can only expect. In California, for example, the CalPERS election of 2014 saw a turnout of 6.8%.[[9]](#footnote-9) In the 2018 Massachusetts pension board election, turnout was 10.5%.[[10]](#footnote-10) And in Alabama, the 2017 election for three types of employee board positions for the Teacher Retirement System—representing higher education, support personnel, and school principals—the turnout was 6.4%, 5.2%, and 10.7%, respectively.[[11]](#footnote-11) So far as we can tell, these figures seem to be fairly representative.

The low turnout, combined with the fact that public workers are the only ones eligible to vote and that labor groups have direct means of identifying and contacting them, gives these groups ample opportunity to shape electoral outcomes. It is very common for them to endorse candidates and orchestrate voting among their own members. AFSCME’s Minnesota affiliate, for example, published an “Action Update” for its members that is typical.[[12]](#footnote-12)

“Four positions are open on the Board of the Minnesota State Retirement System (MSRS), which provides retirement benefits to state employees, Metropolitan Council employees, and many non-faculty employees at the University of Minnesota. Active members should have received a ballot in the mail last week. AFSCME Council 5 has endorsed four candidates who will protect our defined benefit pensions: Michael Schweyen and Joe Sullivan for the General/Unclassified Plan; Joe Strunk for the Correctional Plan; and Wes Skoglund for the retiree seat. Postmark ballots by Tuesday, March 1, or vote online.”

The role of money in these campaigns is unclear. With the elections such under-the-radar affairs, simple endorsements and voter information campaigns may often do the job. When seats are fought over, however, money may become an important factor, and labor groups are the ones with the incentives and resources to provide it. In CalPERS elections, for example, “campaigns are mainly funded by labor unions,”[[13]](#footnote-13) and a hotly contested race for a worker board seat in 2010 gave rise to the following account.[[14]](#footnote-14)

“Recent board candidates have run well-financed campaigns, using personal appearances, telephone banks, fliers distributed through the mail and other ways to reach voters. Jelincic reported receiving $78,679 in contributions and spending $20,293. A committee sponsored by the American Federation of State, County and Municipal Employees, AFL-CIO, spent $229,832 in support of Jelincic. Hackett reported receiving $141,076, mainly from various units of the Service Employees International Union.”

Overall, there is good reason to believe that labor organizations are active and influential in board elections, and that they often succeed in getting their favored candidates elected to office. Absent a systematic study of campaigns and endorsements, however, which would require a massive research project in its own right, we cannot know how successful the unions are or how closely wedded the employee representatives are to them. But to get an initial sense of that, we had research assistants look at biographical data for the 2016 members of a sample of 40 pension boards with elected employee trustees, focusing on whether the latter had actually held leadership positions in public-sector unions (or retirement associations)—a very strict criterion. Here are a few illustrative examples:

* Alabama Teachers Retirement System Board of Control—One elected member had been president of the Alabama Education Association (AEA), another had been in several leadership positions with the AEA and was currently a board member of the Alabama Education Retirees Association, and three others had held leadership positions in local teachers unions.
* Connecticut State Employees Retirement Commission—One member had been on the executive committee of the American Federation of Teachers Connecticut, one was vice president of an SEIU local, and another had been executive vice president of the Connecticut AFL-CIO and president of two locals.
* Maryland State Retirement and Pension System Board of Trustees—One elected member was president of the Prince George’s County Educator’s Association, and another had served as president of an AFSCME local and also on the executive board of AFSCME Maryland.
* Ohio Public Employees Retirement System—One elected member had been president of an SEIU local, and another had been president of a local chapter of the AFSCME-affiliated Ohio Civil Service Employees Association.
* On the Ohio School Employee Retirement System board, five of the six elected employee trustees had been past leaders of locals of the Ohio Association of Public School Employees, and the sixth had served on a committee of the Northeast Ohio Education Association.

We found union leaders, past or present, on 28 of the 40 pension boards. This is an impressive figure in itself, but because information of this kind is difficult to find and often unavailable—these people are not famous—it is likely that the union presence is greater than we can document. Also, our count says nothing about the members who are not union leaders but were simply endorsed or favored by the unions and closely allied with them—which is what commonly happens, of course, in other decision arenas (Congress, state legislatures), and is likely to be common for pension boards as well.

All in all, then, it would be a mistake to think of employee trustees as lone individuals who are on their own in getting elected and representing constituents. They are hardly alone. The unions (and retiree associations) are well funded, well informed, exceedingly interested, actively involved, and have strong incentives to get favored candidates elected and to support and guide them when official board decisions are made. Much more research needs to be done, needless to say. But these labor interest groups clearly have integral roles to play in the governance structure, and in determining how pension boards represent the interests of workers.

**Case Selection and Additional Case Studies**

To supplement our quantitative analysis and to further explore our proposed theoretical mechanisms, we set out to collect qualitative data on how these pension boards deliberate and make key funding decisions. In particular, we wanted to know whether elected employee trustees tend to support higher discount rates and lower contributions than the political appointees and ex-officio members, and, likewise, whether the push for more responsible decision-making comes from governors, governors’ appointees, and ex-officio members from the executive branch.

In launching our search for qualitative data on board deliberation and decision-making, our primary concern was that we would not be able to find much—if any—information. In hopes of learning whatever we could, we set our sights on key decision points where we expected it was most likely that we’d be able to uncover some information about individual trustees’ positions: specifically, the meetings in which the boards voted to change discount rates.

We started by identifying all 114 plan-years in which a plan’s discount rate changed. Then, for each of those changes, we conducted extensive online searches for the minutes of the board meetings that resulted in those changes as well as media accounts of the changes. Our goal, throughout, was to learn anything we could about the trustees’ positions on the enacted changes: who were the proponents of the discount rate changes, and did elected employee trustees and unions favor higher discount rates than the other political actors?

What we learned, first of all, is that media accounts of these discount rate changes are extremely useful sources of information—but they are also exceedingly rare. Of the 114 discount rate changes, we were only able to locate politically-relevant media coverage of fourof them: CalPERS, CalSTRS, Colorado PERA, and Rhode Island. Thus, most of these rate changes—even though they are hugely consequential—do not get public attention. That said, in the rare cases where the media *does* cover pension board decisions, the coverage often sheds light on the positions and arguments of different trustees: exactly what we were looking for.

By comparison, it was somewhat easier to locate boards’ meeting minutes, but we found that the meeting minutes rarely include any information about the positions of individual trustees. In total, we were able to locate the relevant meeting minutes for 34 of the 114 cases of discount rate changes. Because some boards govern more than one plan, and also because some boards enacted multiple future rate changes with a single vote, this amounted to 25 unique cases of boards voting to change discount rates. In 14 of the 25 cases, however, the recorded votes to change the discount rate were unanimous, and so obviously those votes don’t reveal actual differences in position among the trustees—although the “unanimity” may hide considerable diversity that was resolved through political deal-making behind the scenes. In an additional 2 cases, the minutes simply said that the motion passed, without providing details on the vote. We also read the minutes’ documentation of the debates leading up to the votes, but we found that the meeting minutes almost never attribute particular comments, arguments, questions, or positions to individual trustees. Instead, they simply note that the trustees debated the issues, or that a discussion ensued. The minutes of the Colorado PERA board from November 15, 2013, are typical: about the discount rate debate, they simply report that “Trustees made statements regarding the rate of return assumptions” (page 4). Thus, while we collected and read the minutes for 25 pension boards, they rarely provided helpful information.

From this large collection of meeting minutes, then, there were only 8 cases that provided some information on differences in trustees’ positions: information that emerged because there was a contested vote on the discount rate, and because the meeting minutes documented how each trustee voted. (There were actually 9 cases with a contested vote, but one of these was Colorado PERA, which reported the vote totals but not how individual trustees voted.) But even for these 8 cases, the individual votes themselves are usually not sufficient for drawing conclusions about whether certain trustees preferred higher or lower discount rates. The reason is that sometimes trustees vote “no” on lowering the discount rate because they favor a higher discount rate, but other times they vote “no” because they think the discount rate should be even lower than the rate they’re voting on. Thus, without additional explanation of the reasons for the trustees’ votes—which is rarely, if ever, provided in the meeting minutes—it is not easy to draw conclusions about trustees’ relative positions.

What we learned from all of this is that media accounts are crucial: they are far more informative than the available primary sources (meeting minutes). Therefore, for each of the 8 cases with a contested vote and details on how individuals voted, we searched for any media accounts that could shed light on why trustees voted the way they did. Combining those 8 cases with the 4 others for which we found media accounts (Rhode Island had both a contested vote *and* media coverage), we ended up with 11 cases in which we had at least *some* information about the boards’ decisions on the discount rate.

Ultimately, we selected for the text of the article the two cases for which we were able to get the most information: Rhode Island and CalPERS. It is not a coincidence, of course, that these are two prominent cases of pension reform that involved changes in the discount rate *and* were covered extensively by the media. That said, we do have some useful information about the other 9 cases, which we briefly summarize below. The weight of the evidence heavily supports our expectations: the elected employee trustees tended to favor higher discount rates and more modest discount rate decreases, and the trustees who favored lower discount rates and larger reductions were almost always ex-officio members and political appointees.

California State Teachers Retirement System (CalSTRS)

In December 2010, the board of CalSTRS voted to lower its discount rate from 8% to 7.75%—a smaller reduction than the one recommended by the CalSTRS staff (7.5%). The vote was 8-3, with the “no” votes coming from three governor appointees. One of those governor appointees, Roger Kozberg, motioned for a 7.5% rate—the rate recommended by the CalSTRS staff—but the motion was unsuccessful.[[15]](#footnote-15) Therefore, these three governor appointees were likely voting “no” on the 7.75% rate because they believed it was not low enough.

One elected teacher representative, Dana Dillion, who motioned for the 7.75% rate, expressed concerns about the lower 7.5% rate: “I share [another teacher representative’s] concerns that we are probably going from one extreme to another…I guess I’m trying to take a more optimistic viewpoint.”[[16]](#footnote-16) A representative from the retirement committee of the California Teachers Association—who was not a formal member of the board—was also present at the meeting, and she said that if it was necessary to lower the discount rate, it should be to 7.75% rather than 7.5%.[[17]](#footnote-17) About that change, she said, “I believe this is a large jump that has a significant impact on our membership and potentially can reduce our already modest benefits.” Two other union and retiree association representatives who were present (also not board members) agreed.[[18]](#footnote-18)

What we learn from this case, then, is that three of the governor appointees were pushing to adopt the lower rate of 7.5%. At least two elected employee trustees favored the smaller reduction. And finally, there were at least three union and retiree association representatives present to observe and comment on the meeting’s proceedings, and while they seemed to favor no change to the discount rate, they preferred the smaller change to the larger change—out of a concern about how a larger change would affect member benefits.

A recent position taken by the California Federation of Teachers (CFT) also supports our argument that public-sector unions tend to support underfunding: during its convention in March of 2018, the CFT adopted a resolution promoting legislation that would lower contributions to CalSTRS. Such legislation, if enacted, would change a 2014 law: a law that increased contributions and set a goal of getting CalSTRS to 100% funded by 2046. Instead, CFT wants the goal to be getting CalSTRS to 80% funded by 2046—which would mean that employer contributions would be lowered considerably. The reason for their position, according to the CFT resolution, is that pension contributions have become “a heavy burden on employers” and have “already resulted in the stagnation or reduction of employee compensation, including cost-of-living adjustments, during a time when districts…are unable to fully staff their classrooms.”[[19]](#footnote-19) This is another example of a union explicitly promoting the underfunding of its members’ own pension benefits.

Colorado PERA

In November 2013, the board voted 8-7 to lower the discount rate from 8% to 7.5%. The vote was taken by a show of hands, so the minutes do not document how each individual trustee voted.[[20]](#footnote-20) However, this was a rare case in which the struggle over the discount rate was covered by the media, and by combining information in the meeting minutes with those media accounts, we can actually make some inferences about the trustees’ positions:

* Walker Stapleton, the state treasurer and an ex-officio trustee, had apparently pushed for three years to get the board to lower the discount rate.[[21]](#footnote-21)
* Ben Valore-Caplan, a trustee appointed by the governor, wrote a letter to the other trustees urging them to support the lower discount rate.[[22]](#footnote-22)
* Susan Murphy, a governor appointee, motioned for a vote on the lower rate, and Lynn E. Turner, another governor appointee, seconded the motion. This likely means that both of these governor appointees supported the change to a lower discount rate.
* Carole Wright, an elected employee trustee (elected by retirees), wrote an op-ed in 2012 defending the board’s existing discount rate of 8%.[[23]](#footnote-23)
* Another elected employee trustee on the board in 2013, Timothy O’Brien, had also defended the board’s existing 8% discount rate two years earlier.[[24]](#footnote-24)

From the little information we have, then, it appears that four trustees were likely supporters of a lower discount rate: an ex-officio trustee and three political appointees. Two trustees were likely opponents: elected employee trustees. Thus, while we do not know the positions of any of the other trustees, the information we do have from media accounts and the board meeting minutes lines up with our expectations. In addition, a later media account sums up the fight over pension funding as one pitting Walker Stapleton, the state treasurer and ex-officio trustee, against “the group that represents PERA members,” meaning the employee beneficiaries.[[25]](#footnote-25)

Illinois SERS

On October 19, 2010, the board lowered its discount rate from 8.5% to 7.75%. The board cast two votes: first on whether to lower the discount rate to 8% (which failed, 5-6, with one abstention), then on whether to lower the discount rate to 7.75% (which passed, 12-0).

We were not able to locate any media accounts of this decision, nor do the board meeting minutes provide any details about the discussion surrounding the discount rate change. Our best guess, then, is that the individuals who either abstained or voted “no” on the 8% discount rate but then went on to support the 7.75% rate were in favor of the lower rate—meaning they preferred the larger reduction. Four of those seven trustees were governor appointees, one was an ex-officio member (the comptroller), and two were elected employee trustees. It is also reasonable to assume that the 5 trustees who voted in support of the 8% rate probably preferred the smaller reduction. Four of those were elected employee trustees, and one was a governor appointee. If our assumptions are correct, then the political appointees and ex-officio members were in favor of the lower rate (5 out of 6 of them) and the elected employee trustees were in favor of the higher rate (4 out of 6 of them).

Illinois Teachers

On September 21, 2012, the board voted 11-2 to lower the discount rate from 8.5% to 8%. Neither the meeting minutes nor the media provide an explanation for why the two individuals cast these “no” votes, nor do they tell us anything about whether there was a prior political deal or compromise among contending sides that gave rise to such a lopsided vote. (The same point applies to most of the cases that follow below.) All the meeting minutes report is that “The Board held a lengthy discussion and discussed setting an expected rate of return on investments that is realistic.”[[26]](#footnote-26) One “no” vote came from an elected employee trustee, and the other came from a governor appointee.

Illinois Universities

On June 13, 2014, the board voted 10-1 to reduce the discount rate from 7.75% to 7.25%. The only “no” vote was cast by Craig McCrohon, a political appointee who had previously served on the board of the Illinois Teachers plan. Neither the meeting minutes nor the media provide an account of why he voted “no.”

Maryland SRPS

On June 18, 2013, the board voted 11-1 to lower the discount rate from 7.75% to 7.55% but to gradually phase-in the reduction over four years. The lone “no” vote was cast by Thurman Zollicoffer, Jr., a governor appointee. (Another governor appointee, F. Patrick Hughes, abstained.) From a media account, we know that Zollicoffer voted against the motion because he wanted to lower the discount rate immediately, as the state’s actuary was recommending, rather than gradually phasing in the lower discount rate over four years.[[27]](#footnote-27)

Missouri State Employees

On July 20, 2012, the board voted 10-1 to lower the discount rate from 8.5% to 8%. The one “no” vote was Clint Zweifel, the state treasurer and an ex-officio member. A news account from later that year indicates that Zweifel thought the new 8% discount rate was still too high.[[28]](#footnote-28) Therefore, he likely voted “no” because he thought the discount rate should be lower—again evidence that it is the ex-officio trustees and political appointees who are most likely to be the ones pushing for more responsible decisions.

New Hampshire Retirement System

On May 10, 2011, the board voted to lower the discount rate from 8.5% to 7.75%. There were no media accounts explaining individual trustees’ positions, but the meeting minutes document that there were three separate votes on the matter. They first voted on a 7.75% rate, which failed 6-8. Second, they voted on an 8% rate, which failed 3-11. The third vote was again on a 7.75% rate, which passed 10-4. There is no way to make clear inferences about why individuals voted the way they did on these three votes (for example, why a trustee would vote “no” on 7.75% the first time but “yes” on the very same discount rate on the third vote). That said, it is noteworthy that the three trustees who voted “no” on all three proposed reductions were elected employee trustees (two firefighter members and one teacher member).

Pennsylvania School Employees

On January 23, 2009, the board voted 12-2 to reduce the discount rate from 8.5% to 8.25%. The two “no” votes were from political appointees: a rare case of political appointees appointed by the legislative leadership (the President Pro Tempore of the state senate). From the meeting minutes, it is not clear why these two trustees—both designees of state senators—voted against the change. Media accounts from around that time indicate that these two senators were generally concerned about the state budget deficit and that pension costs were a particular concern,[[29]](#footnote-29) but we have no way of knowing whether they voted “no” because they opposed a lower discount rate or because they thought the reduction did not go far enough.

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Anzia, Sarah. 2014. *Timing and Turnout: How Off-Cycle Elections Favor Organized Groups*. Chicago: University of Chicago Press.

Schattschneider, E.E. 1960. *The Semi-Sovereign People: A Realist’s View of Democracy in America.* New York: Holt, Reinhart, Winston.



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| **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. | | | |

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| **Table A2: Additional control variables** | | | | |
|  | *Discount rate* | *Fraction of ARC paid* | | |
|  | (1) | (2) | (3) | (4) |
| % Elected employees | 0.006\*\*\* | -0.144\*\* | -0.211\*\*\* | -0.169\*\* |
|  | (0.002) | (0.057) | (0.076) | (0.068) |
| % Appointed employees | 0.002 | -0.057 | -0.152\*\* | -0.086 |
|  | (0.002) | (0.056) | (0.059) | (0.055) |
| % Appointed employers | -0.001 | 0.023 | -0.009 | -0.035 |
|  | (0.004) | (0.064) | (0.079) | (0.084) |
| % Private citizen or other | 0.002 | -0.199\*\*\* | -0.247\*\*\* | -0.233\*\*\* |
|  | (0.001) | (0.055) | (0.062) | (0.063) |
| Union membership | 0.006\*\*\* | -0.223\*\*\* | -0.306\*\*\* | -0.123\* |
|  | (0.002) | (0.068) | (0.084) | (0.069) |
| % Change in state general revenue | 0.002 | -0.073 | -0.071 | -0.046 |
|  | (0.001) | (0.124) | (0.133) | (0.136) |
| Ln(Total state debt per capita) | -0.0004 | 0.03\* | 0.045\* | 0.045\*\* |
|  | (0.001) | (0.017) | (0.024) | (0.020) |
| Public safety plan | 0.002 | -0.082\*\*\* | -0.09\*\*\* | -0.067\*\*\* |
|  | (0.001) | (0.026) | (0.028) | (0.023) |
| Education plan | 0.001\* | -0.038 | -0.028 | -0.028 |
|  | (0.001) | (0.033) | (0.042) | (0.040) |
| % Expert | -0.001 | 0.109\*\*\* | 0.127\*\*\* | 0.119\*\*\* |
|  | (0.001) | (0.039) | (0.041) | (0.037) |
| Social Security | 0.00004 | -0.04 | -0.054 | -0.045 |
|  | (0.001) | (0.033) | (0.048) | (0.043) |
| Legislative involvement |  | -0.156\*\*\* | -0.172\*\*\* | -0.012 |
|  |  | (0.023) | (0.033) | (0.058) |
| Legislative involvement \* Union |  |  |  | -0.398\*\*\* |
|  |  |  |  | (0.150) |
| R-squared | 0.28 | 0.3 | 0.33 | 0.37 |
| Observations | 1,526 | 1,499 | 1,137 | 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. | | | | |

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| **Table A3: Controlling for historical rate of return** | | | | |
|  | *Discount rate* | *Fraction of ARC paid* | | |
|  | (1) | (2) | (3) | (4) |
| % Elected employees | 0.006\*\*\* | -0.105\*\* | -0.132\*\* | -0.101 |
|  | (0.002) | (0.049) | (0.062) | (0.061) |
| % Appointed employees | 0.002 | -0.052 | -0.136\*\* | -0.072 |
|  | (0.002) | (0.054) | (0.060) | (0.058) |
| % Appointed employers | -0.0002 | -0.014 | -0.041 | -0.05 |
|  | (0.004) | (0.064) | (0.077) | (0.085) |
| % Private citizen or other | 0.001 | -0.186\*\*\* | -0.217\*\*\* | -0.206\*\*\* |
|  | (0.001) | (0.053) | (0.062) | (0.064) |
| Union membership | 0.005\*\*\* | -0.166\*\* | -0.215\*\*\* | -0.031 |
|  | (0.002) | (0.070) | (0.077) | (0.048) |
| % Change in state general revenue | 0.003\* | -0.095 | -0.082 | -0.055 |
|  | (0.001) | (0.116) | (0.113) | (0.117) |
| 5-year rate of return | -0.004 | 0.029 | 0.159 | 0.006 |
|  | (0.012) | (0.259) | (0.298) | (0.285) |
| Legislative involvement |  | -0.167\*\*\* | -0.17\*\*\* | -0.002 |
|  |  | (0.023) | (0.034) | (0.058) |
| Legislative involvement \* Union |  |  |  | -0.419\*\* |
|  |  |  |  | (0.172) |
| R-squared | 0.27 | 0.27 | 0.3 | 0.34 |
| Observations | 1,417 | 1,392 | 1,064 | 1,064 |
| Notes: Standard errors clustered by pension board in parentheses. All models include year fixed effects. The PPD is missing data on the 5-year rate of return for some plan-years. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. | | | | |

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| **Table A4: List of all changes to share of elected employee trustees within plans, 2001-2014** | | | |
|  |  |  |  |
| **Plan** | **Change in *% Elected employees*** | ***% Elected employees* in 2014** | **Change in majority?** |
| New Hampshire Retirement System | -0.308 | 0.308 | yes |
| TN Political Subdivisions | -0.146 | 0.167 |  |
| TN State and Teachers | -0.146 | 0.167 |  |
| Colorado State | -0.142 | 0.733 |  |
| Colorado School | -0.142 | 0.733 |  |
| Colorado Municipal | -0.142 | 0.733 |  |
| Louisiana Municipal Police | -0.121 | 0.333 |  |
| Maryland Teachers | -0.095 | 0.333 |  |
| Maryland PERS | -0.095 | 0.333 |  |
| Kentucky ERS | -0.094 | 0.462 | yes |
| Kentucky County | -0.094 | 0.462 | yes |
| Illinois Teachers | -0.084 | 0.462 | yes |
| Ohio Teachers | -0.064 | 0.636 |  |
| Louisiana SERS | -0.058 | 0.692 |  |
| Alaska PERS | -0.056 | 0.444 | yes |
| Alaska Teachers | -0.056 | 0.444 | yes |
| Ohio School Employees | -0.048 | 0.667 |  |
| Louisiana Teachers | -0.040 | 0.647 |  |
| Rhode Island Municipal | -0.033 | 0.467 | yes |
| Rhode Island ERS | -0.033 | 0.467 | yes |
| Ohio PERS | -0.030 | 0.636 |  |
| Louisiana Schools | -0.017 | 0.583 |  |
| West Virginia PERS | 0.063 | 0.063 |  |
| West Virginia Teachers | 0.063 | 0.063 |  |
| Missouri DOT and Highway Patrol | 0.064 | 0.364 |  |
| Connecticut Teachers | 0.095 | 0.429 |  |
| Illinois SERS | 0.176 | 0.462 |  |
| Illinois Universities | 0.545 | 0.545 | yes |

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| **Table A5: Plan fixed effects models** | | | | |
|  | *Discount rate* | *Fraction of ARC paid* | *Discount rate* | *Fraction of ARC paid* |
|  | (1) | (2) | (3) | (4) |
| Majority elected employees |  |  | 0.002\* | -0.093\* |
|  |  |  | (0.001) | (0.052) |
| % Elected employees | -0.003 | 0.23 | -0.007 | 0.452\* |
|  | (0.008) | (0.243) | (0.008) | (0.235) |
| % Appointed employees | 0.001 | -0.127 | -0.0004 | -0.089 |
|  | (0.006) | (0.195) | (0.006) | (0.181) |
| % Appointed employers | -0.004 | -0.37\* | -0.006 | -0.28 |
|  | (0.005) | (0.213) | (0.006) | (0.185) |
| % Private citizen or other | -0.002 | -0.074 | -0.002 | -0.077 |
|  | (0.004) | (0.178) | (0.004) | (0.171) |
| % Change in state general revenue | -0.0001 | -0.082 | 0.0001 | -0.098 |
|  | (0.001) | (0.124) | (0.001) | (0.123) |
| Legislative involvement |  | -0.203\* |  | -0.211\*\* |
|  |  | (.103) |  | (.103) |
| R-squared | 0.83 | 0.65 | 0.84 | 0.65 |
| Observations | 1,526 | 1,137 | 1,526 | 1,137 |
| Notes: Standard errors clustered by plan in parentheses. All models include plan fixed effects and year fixed effects. Columns 2 and 4 exclude cases where the contribution rate is set by statute. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. | | | | |

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| **Table A6: 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. | | |

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| **Table A7: 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. | | |

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| **Table A8: Cross-sectional analysis** | | | | |
|  | *Discount rate* | *Fraction of ARC paid* | | |
|  | (1) | (2) | (3) | (4) |
| % Elected employees | 0.006\*\*\* | -0.114\*\* | -0.147\*\* | -0.107 |
|  | (0.002) | (0.050) | (0.065) | (0.064) |
| % Appointed employees | 0.002 | -0.042 | -0.121\* | -0.046 |
|  | (0.002) | (0.056) | (0.062) | (0.060) |
| % Appointed employers | -0.001 | 0.001 | -0.024 | -0.029 |
|  | (0.004) | (0.062) | (0.074) | (0.081) |
| % Private citizen or other | 0.002 | -0.194\*\*\* | -0.219\*\*\* | -0.205\*\*\* |
|  | (0.002) | (0.056) | (0.064) | (0.066) |
| Union membership | 0.006\*\*\* | -0.178\*\* | -0.203\*\* | 0.007 |
|  | (0.002) | (0.074) | (0.079) | (0.053) |
| % Change in state general revenue | 0.064\*\* | -1.151 | -0.077 | 1.282 |
|  | (0.031) | (0.972) | (1.180) | (1.362) |
| Legislative involvement |  | -0.15\*\*\* | -0.15\*\*\* | 0.014 |
|  |  | (0.024) | (0.030) | (0.056) |
| Legislative involvement \* Union membership |  |  |  | -0.417\*\* |
|  |  |  |  | (0.159) |
| R-squared | 0.26 | 0.42 | 0.42 | 0.49 |
| Observations | 109 | 109 | 84 | 84 |
| Notes: Standard errors clustered by pension board in parentheses. The excluded board composition variable is % Ex-officio. All variables are averaged within plans across years, except for legislative involvement, which is the median within plans across years. Hypothesis tests are two-tailed. \*p<0.1; \*\*p<0.05; \*\*\*p<0.01. | | | | |

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| --- | --- | --- |
| **Table A9: Political parties** | | |
|  | *Discount rate* | *Fraction of ARC paid* |
|  | (1) | (2) |
| % Elected employees | 0.006\*\*\* | -0.114\* |
|  | (0.002) | (0.062) |
| % Appointed employees | 0.003 | -0.073 |
|  | (0.002) | (0.051) |
| % Appointed employers | -0.001 | -0.064 |
|  | (0.004) | (0.089) |
| % Private citizen or other | 0.001 | -0.145\*\* |
|  | (0.001) | (0.066) |
| Recent Democratic governors | -0.001 | -0.022 |
|  | (0.001) | (0.033) |
| Recent Dem. governors \* % Appointed employees | -0.002 | 0.013 |
|  | (0.002) | (0.079) |
| Recent Dem. governors \* % Appointed employers | 0.0005 | 0.04 |
|  | (0.003) | (0.097) |
| Recent Dem. governors \* % Private citizen or other | 0.002 | -0.063 |
|  | (0.002) | (0.069) |
| Union membership | 0.006\*\*\* | -0.008 |
|  | (0.002) | (0.051) |
| % Change in state general revenue | 0.002 | -0.044 |
|  | (0.002) | (0.118) |
| Legislative involvement |  | -0.016 |
|  |  | (0.055) |
| Legis. involvement \* Union |  | -0.496\*\*\* |
|  |  | (0.165) |
| Democratic legislature |  | -0.009 |
|  |  | (0.015) |
| Legis. involvement \* Democratic legislature |  | 0.112\*\* |
|  |  | (0.047) |
| R-squared | 0.27 | 0.36 |
| Observations | 1,526 | 1,123 |
| 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. | | |
|

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. [↑](#footnote-ref-1)
2. However, in analysis below, we differentiate between active and retired employee trustees. [↑](#footnote-ref-2)
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. [↑](#footnote-ref-3)
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. [↑](#footnote-ref-4)
5. Our reason for not including this measure in our main analysis is that it is likely endogenous: for example, a state might incur more debt if its pensions are seriously underfunded. In contrast, percentage change in general revenue—the measure we use in our main analysis—is most likely not affected by changes in pension costs or funding. [↑](#footnote-ref-5)
6. Note that the PPD is missing data on historical rates of return for some plans and years. We use the 5-year rate of return (as opposed to some other time period) because the PPD contains that information for most plan-years in our dataset. [↑](#footnote-ref-6)
7. See Adriana Colindres, “Pension revamp heads to governor’s desk,” *The State Journal-Register*, April 2, 2009, available online at http://www.sj-r.com/article/20090402/NEWS/304029888 (accessed May 4, 2018). [↑](#footnote-ref-7)
8. We are missing the funding ratio for two observations. [↑](#footnote-ref-8)
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