Do Political Parties Matter for the Funding Status of State Pension Plans?

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Abstract

Given the financial troubles facing state pension plans in recent years, we examine determinants of the ratio of assets to liabilities, or the so-called "funded ratio," based on data for 148 pension plans from 2001 to 2013. The focus in this study is on whether politics plays a role in the extent to which pension plans are fully or less than fully funded. In particular, we consider whether both the political party of the governor and the majority political party of the state legislature are determinants of the funded ratio. We control for other factors that are also likely to be related to the funded ratio. We employ empirical techniques that are best suited to address potential econometric problems in the empirical work. In general, our results indicate that politics does indeed play a significant role in explaining the funded ratios of state pension plans across the country.

1 Introduction

According to the Center for Retirement Research, by the end of 2015, the average state pension plan was underwater by nearly 30 percent. In the aggregate, Moody estimates that the liabilities for all state pension plans currently exceed their assets by $1.3 trillion. This fairly dramatic situation is certainly unsettling for both active and retired members of those plans facing the biggest shortfalls. It is also a serious concern for taxpayers who ultimately are obligated to pay the funds necessary to fulfill the promises made to pension plan members, unless reforms are implemented that curtail the extent of these promises. Of course, there is always the possibility that the dismal situation that currently exists is only temporary and in the near term things will substantially improve. However, this perspective may be more a hope than a reality.

It is important to understand what specific factors led to the dire straits that many of the state pension plans now find themselves struggling to overcome. Many studies have already examined the extent to which various factors are important in explaining the heterogeneity in the funding status of state pension plans. Our study builds upon these studies by including similar, if not exactly the same, factors as control variables. However, we extend previous studies by considering the extent to which politics may be a major factor in determining the degree to which the plans are underfunded. After all, it is elected politicians of both major

political parties that ultimately possess the authority and power to shape the financial condition of state pension plans. Since our analysis is based on a panel dataset consisting of all the state pension plans from 2001 to 2013, we not only control for other factors that likely affect the funded ratio but also take into account issues related to fixed effects, endogeneity and dynamic panel bias. The empirical results should be of interest to both other scholars as well as policymakers concerned about the financial condition of state pension plans and ways to address the growing and serious underfunding problems.

The main purpose of this study therefore is to investigate whether political factors are important in explaining the ratio of assets to liabilities, or the funded ratio, in state pension plans across the country. These factors take on critical importance given the recent financial and economic turmoil that occurred followed by a period in which interest rates have remained at historically low levels. Focusing on the role of politics is both timely and appropriate given that earlier studies of the funded ratio were unable to examine a period that includes the housing price boom and bust, the broader financial crisis, the severe recession, and the subsequent tepid recovery. Moreover, in our empirical analysis, we rely on a time series and cross-sectional dataset that covers more years and more pension plans than was typically investigated in previous studies. By using a panel dataset to cover the all the states and covering a longer period, we are able to obtain newer results than those reported in earlier studies. Furthermore, various econometric problems arise in these studies when estimating empirical models using panel datasets that have not been adequately addressed. We therefore employ the difference generalized method-of-moments estimator, with time fixed effects, since it is an appropriate method in addressing various econometric problems.

With the inclusion of our newer variables, along with the analysis of a longer study period encompassing relatively unusual events, and the employment of the most appropriate empirical technique, the empirical results will provide new information about funding shortfalls and whether political reforms are necessary to help eliminate them.

2 The State of Public Pension Systems

Serious funding challenges exist for public sector pension systems. In 2014, at the state and local level, there were 3,972 public pension systems, of which the state administered 230.[1] The state-administered pension plans account for about 90 percent of the nearly 18 million members of all public pension plans. The vast majority of these pension systems, moreover, are defined benefit plans. The funding gap (i.e., pension plan assets minus liabilities) for these plans remained relatively low from 1975 to 1995, averaging $66.5 billion per year. It then turned positive for six years, with assets exceeding liabilities by an average of $260.8 billion per year. In 2006 and every year thereafter, there was a funding gap, which reached a high of $1.6 trillion in 2011. By 2014, the total state and local government defined benefit pension plans had a funding gap that had declined to $1.3 trillion, which is still higher than in 37 of the 40-year period.

Given our focus on funded ratios, the ratio of pension fund assets to liabilities was only 53 percent in 1975. It then increased to a high of 128 percent in 1999. The ratio thereafter trended downward to a low of 64 percent in 2011. Subsequently, the ratio increased so that at the end of 2014 it was 75 percent. However, during each of the last twelve years, the ratio has been below 100 percent and even below 80 percent in each of the past six years. Many individuals consider the latter figure to be important because it is a common threshold of sustainability, i.e., the threshold needed to pay promised benefits.

Focusing on only state pension plans, the aggregate funded ratio has declined to 73 percent in 2014 from 100 percent in 2001. This is the lowest ratio over the period, except for 2012 and 2013 when the ratio was slightly lower at 71 percent. Moreover, of the 148 public pension plans in the states for which information is available in 2014, 99 of the plans have funded ratios that are less than 80 percent, or 67 percent. Only 6 of these plans have funded ratios exceeding 100 percent. Among the states, Kentucky and Illinois have the two lowest funded ratios at 46 and 47 percent, respectively.

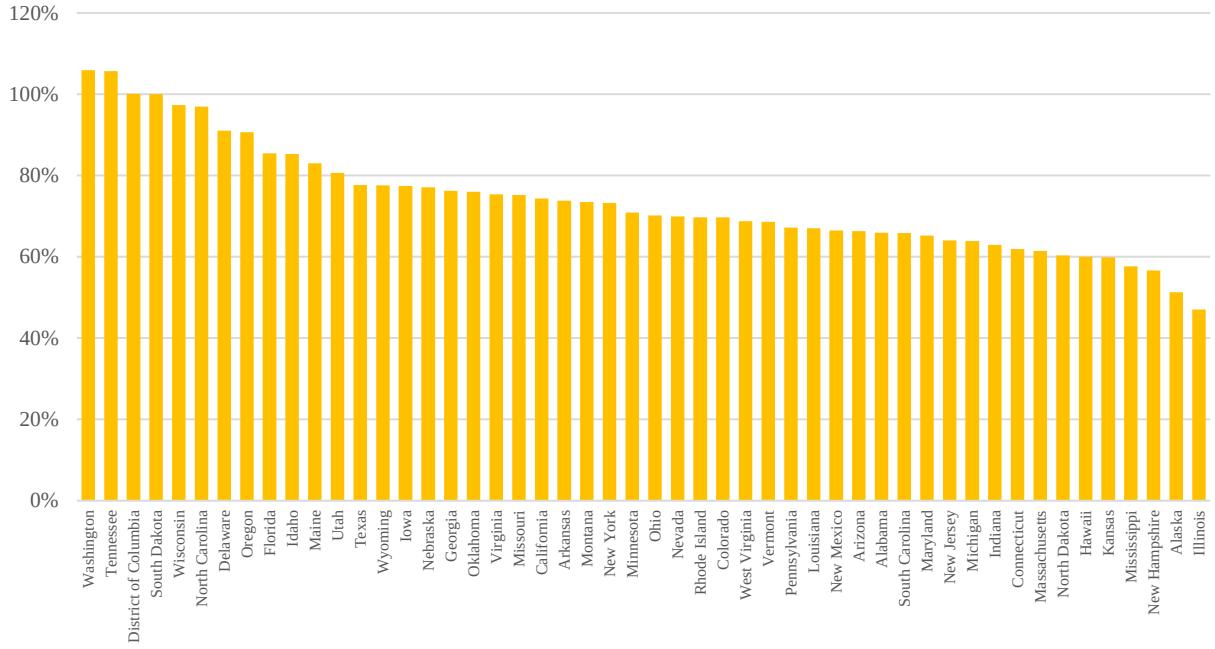
Many states have not been able to sustain their annual required contributions (ARCs) to their pension plans in the face of other demands on taxpayer dollars. In 2014, the ARC ratios range from a high of 139

[1]The sources of the data in this and the following three paragraphs are Financial Accounts of the United States, Federal Reserve Board, and Public Plans Data, 2001-2014, Center for Retirement Research at Boston College, Center for State and Local Government Excellence, and National Association of State Retirement Administrators.

percent in Colorado to a low of 48 percent in New Jersey. More generally, about half of the states have ratios less than 100 percent. In Alabama alone, the legislature appropriated approximately $1 billion in fiscal year 2014 to meet the ARC. That is in addition to the employee contributions and the investment returns of the Alabama retirement system.

Figure 1 shows the funded ratio for each of the state pension systems in 2013, with Washington having the highest ratio at 106 percent and Illinois have the lowest ratio at 47 percent. All the states, moreover, have funded ratios less than 100 percent, except for Washington and Tennessee.

Figure 1: Funded Ratio, 2013



Figures 2, 3 and 4 show which political party was in charge of governorships and state legislatures in each of the states during the period 2001 to 2013. More specifically, it shows the percentage of the years the governorship was controlled by each political party, the same for the legislature, and the same for both the governorship and legislature. It is clear that neither party has dominated the governorships and legislatures in every state over this thirteen-year period. This enables us to assess the extent to which politics matters for funded ratios in our empirical work described below.

3 Literature Review

The literature regarding public pension plans, and in particular the condition and performance of these plans, is quite extensive, covering many years and appearing in discipline-specific journals focusing on public administration, economics, finance and accounting, among other fields.[2] Our research focuses on the role of politics as a determinant of the funded ratio. However, in our analysis we control for other factors that are also considered to be important determinants of the funded ratio. In selecting other factors to control for in our analysis, we rely on previous research. In this regard, we have identified several papers that provide an empirical assessment of the role of various non-political factors in explaining the variability of the funded ratio in public pension plans. We now briefly discuss these papers.

In a relatively early study, Chaney et al. (2002) examine whether the funding status of state pension plans is related to the fiscal stress in a state and the existence of balance budget requirement in a state. Based on data for all 50 state pension plans for the years 1994 to 1995 and ordinary least squares (OLS) estimates,

[2]This section draws upon Barth et al. (2017).

Figure 2: Political Party of Governor, 2013

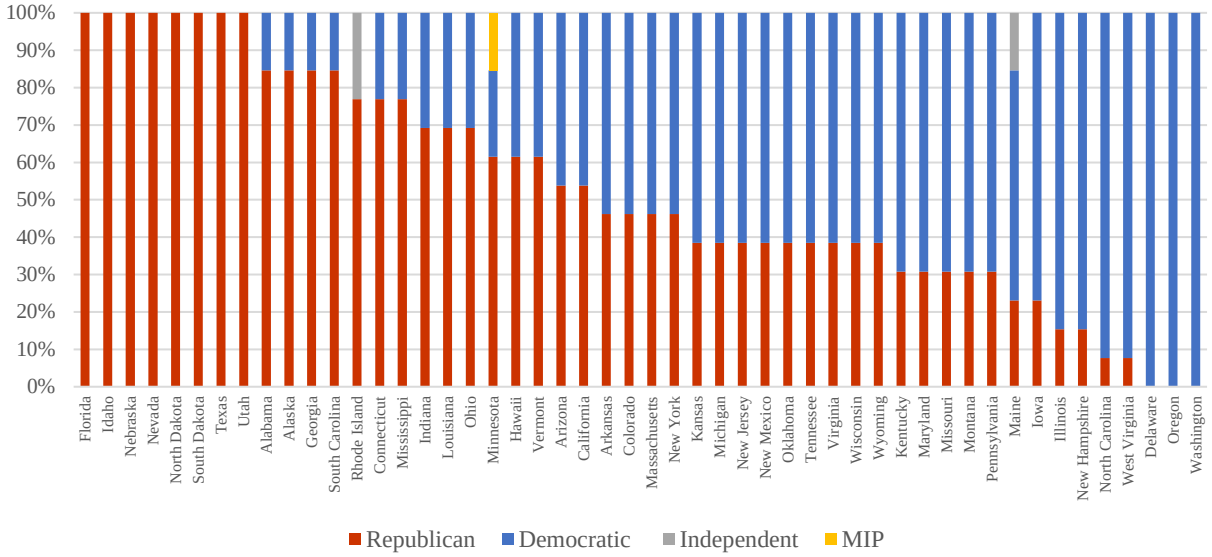


Figure 3: Political Party of Legislature, 2013

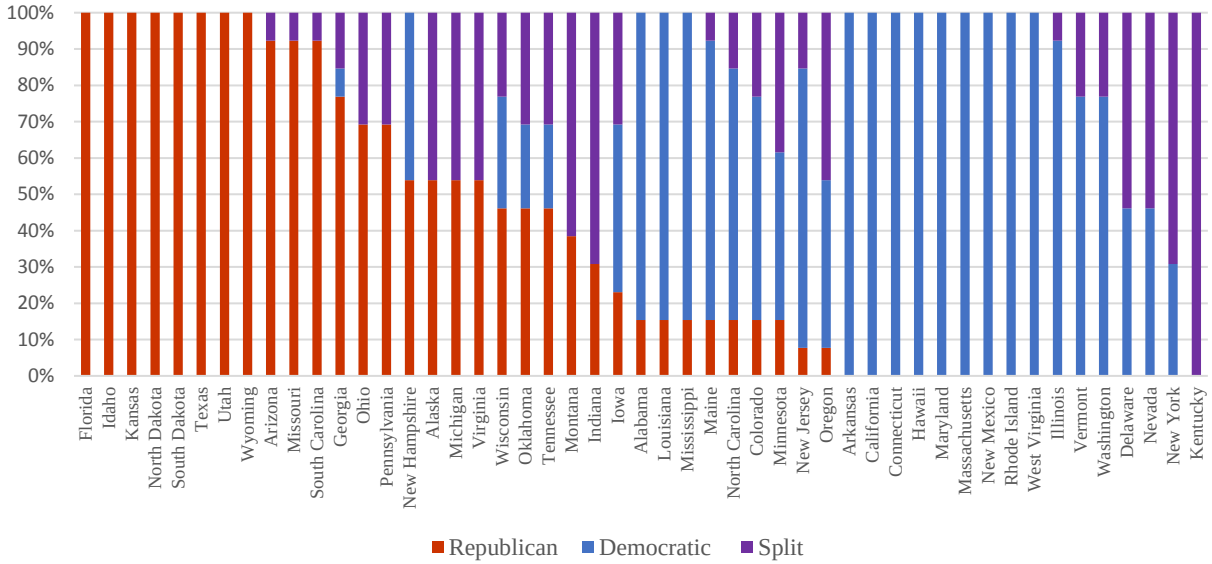
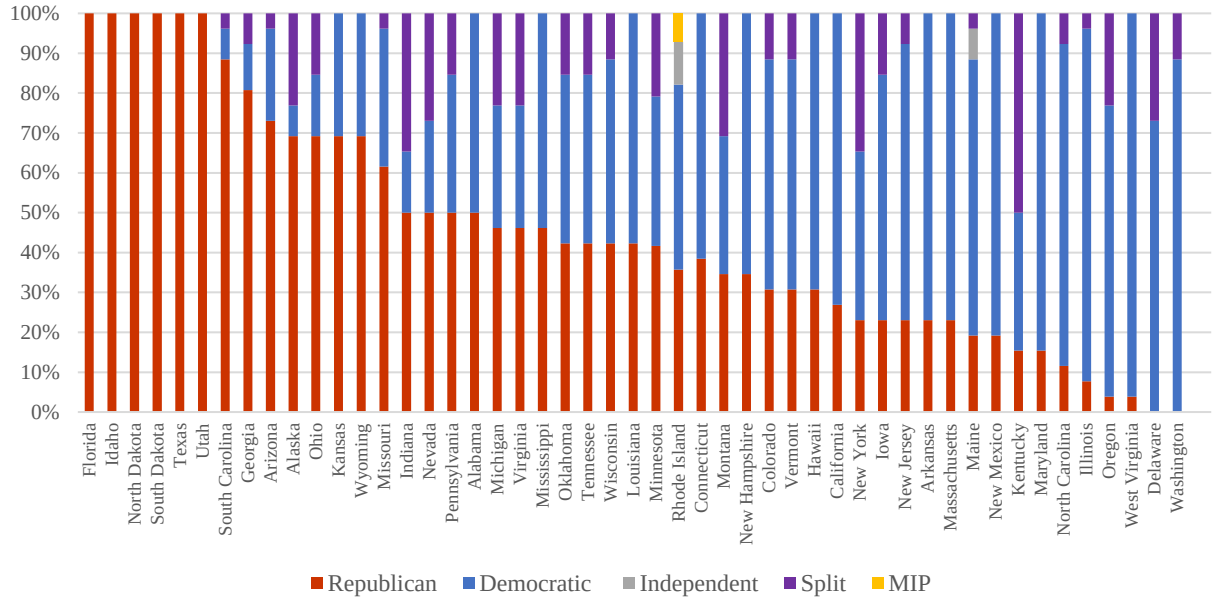


Figure 4: Political Party of both Governor and Legislature, 2013



Chaney et al. (2002) find that state pension funding is negatively affected by state fiscal stress and the existence of balanced budget requirements. In a study several years later, Yang and Mitchell (2008) examine various determinants of a plan's stock funding ratio, its flow funding ratio, and its investment performance using data for 566 plans over the period 1990 to 2000. The stock funding ratio is closely related to the funded ratio that is the focus in our paper. Based on pooled OLS regressions, Yang and Mitchell (2008) find that there is a positive and statistically significant relationship between the stock funding ratio and both the lagged funding ratio and the one-year investment return. They also find that board composition and selected management practices of public pension plans significantly affect the stock funding ratio.

Eaton and Nofsinger (2008) examine determinants of the funded ratio based on 110 state and local government pension plans and find that underfunding increased from 2002 to 2005, with the average plan having a funded ratio of 83 percent. The variation in the funded ratio across the plans is explained using the percent of females in a pension plan, the ratio of active employees to retirees, and a set of dummy variables to distinguish among the specific plans (i.e., for teachers, law and fire fighters, and other public employees). Based on pooled OLS regressions, Eaton and Nofsinger (2008) find that plans for teachers (with a large proportion of female members) have lower funded ratios. Somewhat surprising, they also find that specific asset allocations and actuarial assumptions do not appear to be important in explaining the underfunding problem.

A few years later, Munnell et al. (2011) examine 126 public pension plans over the period 1994 to 2008. In an empirical analysis using OLS techniques for the single year 2008, they find that all of these variables except for employees on the board and debt to gross state product have the expected signs and are statistically significant in explaining the funded ratio. The authors point out that at the time of their study some states were taking action to improve the funding status of their plans, but our more recent data show that the overall situation among state pension plans has not significantly improved.

More recently, Seligman (2013) examines determinants of the funded ratio using data for 127 public defined benefit plans over the period 2001 to 2009. Using maximum likelihood estimation, a Tobit model, and a random effects model, he concludes that such remedial policies as improving plan administration, altering portfolio allocations, and increasing both employee and employer contributions, appear to be more promising than either freezing or closing pension plans. A year later, Kelley (2014) examines 79 public plans in 42 different states covering the period 2001 to 2009. Based on models estimated using pooled OLS with fixed effects, it is found that the level of underfunding and both median voter income and the state debt

level are positively and statistically significantly related. The variable that is most significant in explaining unfunded liabilities, however, is the percentage of retirees to total state population. The argument made is that retirees have a shorter remaining life expectancy than active members and thus have less of an incentive to take or force action to deal with underfunding.

Mohan and Zhang (2014) address the risk-taking behavior of public pension plans for the time period 2001 to 2011 and find that public pension plan managers take on greater risk when their plans are underfunded. Furthermore, and directly related to our study, using two-stage least squares techniques, they find that larger union membership, a higher active to retiree ratio, and higher credit ratings are associated with funded ratio. In the same year, Groves (2014) relies on both OLS and mixed effects logistic regression models in an examination of the funded ratio for state and local pension plans for all 50 states and select localities from 2001 to 2009. The empirical results indicate that if public retirement systems have an investment council, the funded ratio is significantly higher. This is the main finding since other variables are not significant or the regression estimates provide inconsistent results.

A year later, Elder and Wagner (2015) examine 91 state and local defined benefit plans over the period 2001 to 2010. Including year, state and plan-specific fixed effects, they find that higher state upper house turnover rates, more electoral competition, and legislative term limits all lead to greater pension underfunding. In a study of 84 public pension plans, Wang and Peng (2016) examine determinants of the average of yearly changes in the funded ratio over the period 2001 to 2009. Based on OLS techniques, their results indicate that an increases in the investment return and reductions in the assumed return are negatively related to the pension funded ratio. They also find that the investment return is the most important factor in explaining the variation in the change of the funded ratio.

In a study focusing on 2,000 municipal pension plans covering the period 1985 to 2009 in Pennsylvania, Bagchi (2016) finds that as a municipality becomes more politically competitive, it tends to have pension plans that, while less funded, are more generous and use higher interest rates to discount actuarial liabilities.

Since our focus is on the role of politics as a determinant of the funded ratio, a factor not considered in any of the studies just reviewed, the next section of this study provides a more detailed discussion of basic reasons that various political bodies would be expected to exert significant influence over the funded ratio.

4 The Role of Politics in State Finances

4.1 Politics and State Budgetary Decisions

Many states continue to struggle with the nearly universal phenomenon of the underfunding of public pension systems and grapple with the uncertainty of any practicable solutions. Given the situations, scholars and practitioners consider "politics" as being a major factor in fiscal decision making in these states. According to Gosling (1986), "All political issues, sooner or later become budgetary issues." To better understand the larger role of politics as it pertains to state budgetary decisions, scholars have conducted empirical studies that link political actors, to some extent, to state budget decisions in general (Johnson, 1997; Barrilleaux, 1999; Hall, 2002; Kousser, 2002; Barrilleaux and Berkman, 2003; Korpi and Palme, 2003; Cox and McCubbins, 2005; Jenkins, 2006; Reed, 2006) – including state pension systems (Chapman, 2008; Gran, 2008; Coggburn and Kearney, 2010; Thom and Randazzo, 2015).

According to (Lasswell, 1936), politics is defined as "who gets what, when, and how." His definition establishes politics as being a necessity in all modern democracies and legislative policy-making at all levels of government. Lasswell's 1936 definition of politics provides an interesting perspective on state economic decision-making (i.e., whether institutional differences or political party cleavage lead to recent state budgetary issues such as underfunded state pensions). His theoretical framework ensures that budgetary decisions by governmental actors are inclusive of politics. Despite the negative view of political factions by the founding fathers, political factions are important to the electoral process and constituent's ability to correlate policy preferences to candidates.

Many scholars have examined the impact of political and institutional factors on state budget policy behavior. Rubin (2016) puts forth the theoretical proposition that budgets are *necessarily* political. Her work sets a precedent that state fiscal patterns inevitably follow the political sway of elected officials, as they

influence public policies and bureaucracies that affect public pensions. Reflective of her work are studies by Aldrich (1995), Aldrich and Rohde (2001), Aldrich et al. (2007), Kousser (2002), Hall (2002), Wright and Schaffner (2002), Jenkins (2006), Thom (2013), Thom and Randazzo (2015). There is, however, an ongoing debate as to the relative influence governors (Sharkansky, 1968; Moncrief and Thompson, 1980; Morehouse, 1981, 1996; Abney and Lauth, 1998; Goodman, 2007), state legislators (Mayhew, 1974; Barrilleaux, 1999; Wright and Schaffner, 2002; Korpi and Palme, 2003; Cox and McCubbins, 2005; Jenkins, 2006; Reed, 2006; Chapman, 2008; Gran, 2008; Thom, 2013; Thom and Randazzo, 2015), and/or political parties (Goodman, 2007) wield over state budget decisions. This would include the viability and strength of state pension systems, specifically the funded ratio.

4.2 Executive Role in State Budgets

Much of the existing research on state budgetary politics follows Sharkansky's 1968 classical work that presents budgetary decisions as a primary domain of the executive. Extant research established governors as the strong conduit of state appropriations in this pivotal area (Kousser and Phillips, 2012). Traditional scholars have highlighted the governors' formal constitutional authority as the explanation for their dominant role in the process, where they yield considerable control over state fiscal decisions. The institutional theoretical lens defines gubernatorial dominance as the degree of institutional resources held by the executive. In this vein, governors are stand-alone actors, insinuating that executive constitutional powers yield a considerable amount of autonomy in state policymaking. In a recent study, Dometrius and Wright (2010) examine the level of contribution governors make during the budget process. They rely on survey data of state agency leaders from 1978-1998 in all 50 states. Utilizing static cross-sectional analyses, they find that differences in gubernatorial budget influence overtime to minimally favor the governor. They further note that there is no significant relationship between gubernatorial line item veto power and state budget decisions.

Kousser and Phillips (2009) develop a theoretical model that compared gubernatorial budget proposals from 1989 to 2004. They view budget bargaining as a "staring match" in which the political and personal costs of a delayed budget swamp the influences of proposal power and status quo policies. They found that state governors yield high influence over final state budgets: however, the governor's power to dictate fiscal outcomes is inversely related to legislative professionalism. Most importantly this study shows that, across all legislative types, there is a positive and significant relationship between the governors' proposed and final budget.

Many studies of budgetary politics identify the party of the governor as the primary key factor to explaining budgetary outcomes in the states. However, the sole influence of the governor with respect to state budgetary decisions is much debated. Some argue that the governors' political influence in state budgetary decisions is established through their formal authority to set the agenda (Sharkansky, 1968; Barrilleaux and Berkman, 2003; Breunig and Koski, 2009; Dometrius and Wright, 2010), while others maintain that governors are a representation of their political party and partisan ideology (Morehouse, 1981; Alt and Lowry, 1994; Morehouse, 1996; Hall, 2002; May and Koski, 2007; Leigh, 2008). This research isolates the governors' actions and authority and contends that agenda success in this area increases with his/her party in control. This theoretical proposition infers that the primary influence of governors is their ability to build party coalition.

Morehouse's 1996 study finds that support from the governor's party increases the success of gubernatorial agenda items. Utilizing the party government model, she tests state party electoral strength against legislative party loyalty with governor's program bills across 10 states during the 1983 legislative session. She finds that governors' electoral party strength does influence voting loyal among political party affiliates. Party line voting was higher in states with strong party organization, and party differences were higher in states with unified government.

4.3 Legislative Role in the Budget Process

A more modern approach to Sharkansky (1968) and Alt and Lowry (1994) has dismissed the claim that governors dominate state budgets. Instead, they contend that state legislatures professionalism (Kousser and Phillips, 2009; Coggburn and Kearney, 2010), partisan cleavage (Johnson, 1997; Wright and Schaffner, 2002; Cox and McCubbins, 2005; Thom, 2013), and/or partisan composition better explain state budget

outcomes. Abney and Lauth's 1998 research, a more extensive study, presented a different theoretical approach to studying state budgetary decisions. They suggested that executive dominance over state fiscal decisions was a regime of the past. The empirical model created to measure influencing factors on state legislatures aims to capture a comprehensive dynamic of key legislative policy-making behavior in the budget process.

In a recent study, Coggburn and Kearney (2010) examine the funding of two key components of state government total compensation, namely, pensions and other postemployment benefits (OPEB), the latter consisting primarily of retiree health care. Specific to politics and state pensions, they investigate whether the funding status of state pensions is related to the political environment of states. They rely on Pew data for all 50 states for the year 2007. Based on OLS estimates, Coggburn and Kearney (2010) find that lower underfunded pension liabilities are negatively affected by professional legislatures. They further indicate that institutional capacity is important to states' pension funding behavior.

In an attempt to assess the budgetary influence of governors and legislators, Thom (2013) and Thom and Randazzo (2015) examine to what extent, if any, politics directly influences defined contribution accounts for general state employees. Thom (2013) examine states decisions to enact mandatory or optional defined contribution accounts for public employees. Utilizing a stratified Cox proportional hazardous model (Cox, 1972) he created an empirical study of surveyed state level legislative activity of 15 American states between 1996-2011. His findings overall suggest that political forces influence policy enactments. Moreover, Thom (2013) stresses that the trend toward defined contribution accounts mandates is more likely under Republican control in the legislature but not through executive partisanship. Although his results support the theoretical perspective of conservative and libertarian ideology, it is inconsistent with general research that suggests liberals are more likely to support unions and state funded pensions.

Thom (2013), "All of the Above: How Fiscal, Political, and Workforce Traits Affect Pension Funding", investigates the role of political, fiscal, and workforce characteristics as determinants of long-term pension funding. This analysis suggests that political forces have an effect on long-term pension funding, but the influence is limited. Specifically, greater proportions of Democrats in states' upper chambers correspond to higher funded ratios but the effect is largely observed by lower chamber Democratic partisanship.

Thom and Randazzo (2015) investigate the rise of underfunded liabilities in public sector pensions across the all states. This research empirically approaches state pension annual contributions with two strategies: the percentage of the ARC paid annually by each state from 2003 through 2012 and a binary measurement of states' funding levels. Thom and Randazzo (2015) suggest that state governors or legislators minimally influence state pension contributions. However, both models suggest that Democratic control of the state house increased the likelihood of full funding; while, Democratic governors increased the likelihood of underfunding.

4.4 Partisan Influence on State Budgetary Decisions

Several scholars argue that partisan cleavage is necessary to understand state budget policy outcomes. Partisan behavior has many forms not necessarily reflective solely of the party's ideology. To address the ambiguity of classical works on budgetary politics, many scholars have investigated the centrality of parties (Dickinson and Lebo, 2007) and/or members' individual policy preferences (Snyder Jr and Groseclose, 2000; Kousser, 2002; Barrilleaux and Berkman, 2003; Dometrius and Wright, 2010) as the explanatory factor to answer the question: "Does party affiliation matter?". Thus, there remains a relevant question of whether budget decisions are a response to political party ideology and coalition building. According to Kousser (2002), political party control, as a caucus and their party leaders, yield considerable control of moderates or defectors, and has a large impact on state spending priorities.

A considerable amount of the recent literature at the federal and state level rely upon spatial and setter models of legislative behaviors in Congress. Dickinson and Lebo (2007) examine the electoral motives of legislative parties and the strategic interaction between parties. They employ a macro level analysis of congressional voting and elections from 1789 to 2000. This study specifically tests the variance of party influence and its relation to policy outcomes. The data show that opposition unity is the strongest determinant of party unity, which yields far greater importance than individual preferences of legislatures. Specifically, their theory asserts that party unity is influenced by the measure of unity in opposing parties.

State pensions are susceptible to varying degrees of political party influence because of limited federal regulation on state pensions and the magnitude of legitimate constitutional authority held by governors and legislators. Cox and McCubbins (2005), using an agenda cartel model, argue that party leaders influence the chamber agenda to increase agenda success that is reflective of the party's reputation and/or ideology. Subsequent research by Jenkins (2006) finds that party influence is highly correlated with coalition building benefits, party resources, a positive reputation among constituents. He suggests that politicians are more likely to generate policy within party lies because coalition building across the aisle is costly. Thus, members' policy-making behavior is reflective of the political party's brand.

Similarly, other research finds that tax burdens are higher under Democratic leadership (Reed, 2006). In general, Democrats tend to fund fiscal and welfare programs more liberally than Republicans, whereas Republican choose to spend less per capita on discretionary spending (Kousser, 2002). Johnson (1997) finds that underfunding levels rise as Democrats yield control in state legislatures. These findings are consistent with general research that implies Democrats pursue less conservative budgetary practices. Gran (2008) infers that left-leaning political actors encourage the development of market pensions, while right-leaning political actors are more likely to exploit the weak condition of public pensions to gain political advantage in pension funding debates. These partisanship dynamics can be used to explain current state pension funding rates; however, it can vary within the same institution across states (Thom and Randazzo, 2015).

For a very long time, researchers have addressed the relevance and influence of the executive as the chief party leader. Schattschneider (1942) infers that political parties are necessary, inseparable, and highly competitive in the American landscape. His classical research began a contentious debate of whether parties, the caucus or the executive, can sway the individual policy preference of their fellow members. Morehouse (1981) suggests that the governors' position as party leader is the basis for agenda support from state legislators during the budget process. Wright and Schaffner (2002) deploy an empirical study to address the comprehensive role of parties in state legislatures. Wright and Schaffner (2002) apply the Cox's 2000 model to test the character, power, and party effects on legislative roll call voting across states. They find that voting is clearly a product of partisan cleavage, where controlling parties exercise power to sway their support to align with the party's position on legislative issues rather than vote the ideals of the legislator's individual constituent base.

Several scholars refute the idea of party centrality. Krehbiel (1993, 1999, 2000) challenges the widespread belief that parties are central to policy-making behavior. His theoretical proposition is supported by the simple belief that members vote their individual policy preference with reelection in mind. Coalition building across party lines is risky, costly, and complex, thus motivating members to create policies that are in alignment with their party lines. He contends that members' ideology is correlated to their political party affiliation but does not completely explain individual legislative behavior. His studies, which examine the marginal difference of political party influence on net policy outcomes, find that members' roll call voting is a reflection of individual policy preferences in response to their constituency. His findings add context to Mayhew's 1974 theory that interpreted legislative members' behavior as a pursuit of re-election.

The relevance and importance of party identification is usually seen as being a key factor in state budgetary decisions; however, there is much disagreement about coalition building within parties; how significant is each members' concerns about re-election, the interaction between the legislative party and the chief executive with the same party ID; and how central is the power of the party leadership. Therefore, it is difficult to identify any single critical component in party behavior within the political decision process. In addition, scholarship argues that the dominate role of the governor has diminished over time, due to the increasing professionalism of state legislatures. Modern scholars agree that state legislatures have increased its sophistication and professionalism, reversing the reputation as "the lame duck division of government." Thus, our study examines the importance of these factors as they relate to state pension contribution decisions.

5 Data and Methodology

The data used in our analysis is based on plan-level data for 148 pension plans covering all the states from 2001 through 2013 and obtained in large part from the Public Plans Database from the Center for Retirement Research at Boston College. This particular dataset includes information on plans that cover

about 90 percent of public pension membership and assets nationwide. In addition to the data obtained from this particular database, we obtained data from the Comprehensive Annual Financial Reports (CAFRs) of individual states when necessary.

The variables used in the analysis, their definitions, and sources are given in Table 1, while Table 2 provides summary statistics for these variables based on 1,840 cross-sectional, time-series observations. The focus of our study is the funded ratio, which ranges from a low of 0.19 to a high of 1.97 for the various pension plans.

Table 1: Variable Definitions

Variable	Definition	Source
Funded Ratio	Ratio of actuarial assets to actuarial liabilities.	Boston Colleges Center for Retirement Research
Unified Dem	*Unified Dem* takes 1 if Democrat controls the state legislature as well as state governorship.	National Conference of State Legislatures
Unified Rep	*Unified Rep* takes 1 if Democrat controls the state legislature as well as state governorship.	National Conference of State Legislatures
Dem Party	*Dem Party* takes 1 if Democrat controls the state legislature, otherwise 0.	National Conference of State Legislatures
Rep Party	*Rep Party* takes 1 if Republican controls the state legislature, otherwise 0.	National Conference of State Legislatures
Dem Gov	*Dem Gov* takes 1 if a governor of a state is a Democrat, otherwise 0.	National Conference of State Legislatures
Rep Gov	*Rep Gov* takes 1 if a governor of a state is a Republican, otherwise 0.	National Conference of State Legislatures
ARC	Ratio of actual contribution to required contribution of a pension plan.	Boston Colleges Center for Retirement Research
PUC	Projected unit credit method.	Boston Colleges Center for Retirement Research
Actives to Retirees	Ratio of active employees to retirees.	Boston Colleges Center for Retirement Research
Age	Age of a pension plan.	Boston Colleges Center for Retirement Research
Large Plan	A plan in the top third in terms of assets. Large Plan takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise.	Boston Colleges Center for Retirement Research
Teachers	A plan includes teachers. Teachers takes a value 1 if a plan includes teachers, 0 otherwise.	Boston Colleges Center for Retirement Research
Debt to GSP	Ratio of total state debt to gross state product (GSP).	Gross State Product (GSP), Bureau of Economic Analysis and U.S. State Debt, U.S. Census Bureau.
Actual Return	1-year investment return of a pension plan.	Boston Colleges Center for Retirement Research.
Assumed Return	Assumed investment return of a pension plan.	Boston Colleges Center for Retirement Research
Union	Ratio of public union members to total public employees in state.	http://www.unionstats.com provides private and public sector union membership, coverage, and density estimates compiled from the Current Population Survey
NMTP	The proportion of non-state workers to the total population in state.	U.S. Census Bureau.
State Ideology	Measure of state government ideology	Berry et al. (1998)

This means there are some cases in which individual state public pension plans have assets well in excess of their liabilities. Also, we focus on six key explanatory variables, which are whether the governor of a state is a Democrat or Republican, whether Democrats or Republicans control the state legislature, and whether Democrats or Republicans control the governorships and state legislatures. We also include several control variables that are likely to be related to the funded ratio. In particular, we include the actual return (1-year investment return) and the assumed return. For the sample period 2001 to 2013 used in our regression analysis, the mean and median of the actual return are 6 and 10 percent, respectively. The minimum is a negative 31 percent and the maximum is a positive 31 percent. The assumed rate of return used by states

to determine the discounted value of their pension liabilities does not have much variation since most states use 8 percent. As may be seen, both the mean and median are 8 percent, while the minimum is 6 percent and the maximum is 9 percent.

Table 2: Descriptive Statistics

Variable	N	Mean	Std. Dev.	Minimum	Median	Maximum
Funded Ratio	1840	0.82	0.19	0.19	0.82	1.97
Unified Dem	1840	0.27	0.44	0.00	0.00	1.00
Unified Rep	1840	0.23	0.42	0.00	0.00	1.00
Dem Party	1840	0.47	0.50	0.00	0.00	1.00
Rep Party	1840	0.33	0.47	0.00	0.00	1.00
Dem Gov	1840	0.48	0.50	0.00	0.00	1.00
Rep Gov	1840	0.51	0.50	0.00	1.00	1.00
ARC	1840	0.93	0.55	0.00	1.00	17.28
PUC	1840	0.09	0.29	0.00	0.00	1.00
Active to Retirees	1840	2.53	6.02	0.01[3]	1.83	179.73
Age	1840	61.82	19.22	1.00	63.00	118.00
Large Plan	1840	0.35	0.48	0.00	0.00	1.00
Teachers	1840	0.26	0.44	0.00	0.00	1.00
Debt to GSP	1840	0.07	0.03	0.02	0.06	0.20
Actual Return	1840	0.06	0.12	-0.31	0.10	0.31
Assumed Return	1840	0.08	0.00	0.06	0.08	0.09
Union	1840	0.37	0.19	0.05	0.38	0.72
NMTP	1840	0.61	0.03	0.52	0.61	0.65
State Ideology	1840	52.82	28.88	3.44	53.29	99.16

Note: Table 2 provides descriptive statistics of variables used in analysis over the period, 2001-2013. *Funded Ratio* is ratio of actuarial assets to actuarial liabilities of a pension plan. *Unified Dem* is a dummy variable that takes 1 if Democrat controls the state legislature as well as state governorship. *Unified Rep* is a dummy variable that takes 1 if Republican controls the state legislature as well as state governorship. *Dem Party* is a dummy variable that takes 1 if Democrat controls the state legislature, otherwise 0. *Rep Party* is a dummy variable that takes 1 if Republican controls the state legislature, otherwise 0. *Dem Gov* is a dummy variable that takes 1 if a governor of a state is a Democrat, otherwise 0. *Rep Gov* is a dummy variable that takes 1 if a governor of a state is a Republican, otherwise 0. *ARC* is ratio of actual contribution to required contribution of a pension plan. *PUC* is projected unit credit method. *Active to Retirees* is ratio of active employees to retirees of a pension plan. *Age* is age of a pension plan. *Large Plan* is a plan in the top third in terms of asset (*Large Plan* takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise). *Teachers* is a plan includes teachers (*Teachers* takes a value 1 if a plan includes teachers, 0 otherwise). *Debt to GSP* is ratio of total state debt to gross state product (GSP). *Actual Return* is 1-year investment return of a pension plan. *Assumed Return* is Assumed investment return of a pension plan. *Union* is ratio of public union members to total public employees in state. *NMTP* is the proportion of non-state workers to the total population in state. *State Ideology* measures state government ideology as it is described in Berry et al. (1998).

The analysis performed utilizes the generalized method of moments (GMM) estimator (Arellano and Bond, 1991; Arellano and Bover, 1995; Blundell and Bond, 1998), with and without time fixed effects, to explain the heterogeneity in funded ratios for the different pension plans across states. As shown by Nickell (1981), the GMM estimator addresses concerns about plan fixed effects and endogeneity of regressors while avoiding dynamic panel bias.

The general empirical model to be estimated is, as follows:

$$\begin{aligned} FundedRatio_{it} = \beta_0 + \beta_1 FundedRatio_{i,t-1} + \beta_2 UnifidedDem_{it} + \beta_3 UnifidedRep_{it} + \beta_4 DemParty_{it} \\ + \beta_5 RepParty_{it} + \beta_6 DemGov_{it} + \beta_7 RepGov_{it} + \beta_8 ARC_{it} + \beta 9 PUC_{it} + \beta_{10} ActivestoRetirees_{it} \\ + \beta_{11} Age_{it} + \beta_{12} LargePlan_{it} + \beta_{13} Teachers_{it} + \beta_{14} DebttoGSP_{it} + \beta_{15} ActualReturn_{it} + \\ + \beta_{16} AssumedReturn_{it} + \beta_{17} Union_{it} + \beta_{18} NMTP_{it} + \sum_{i=2001}^{2012} \delta_i Year_i + \alpha_i + \epsilon_{it} \end{aligned} \quad (1)$$

where α_i is unobserved plan-specific effect and ϵ_{it} is a random error term.

The funded ratio (*Funded Ratio*) is the variable being explained. The six explanatory variables that are the focus of our study are as follows: if a Democrat is governor of a state (*Dem Gov*), if a Republican is governor of a state (*Rep Gov*), if Democrats control the state legislature (*Dem Party*), if Republicans control the state legislature (*Rep Party*), if Democrats control the governorship as well as the state legislature (*Unified Dem*), and if Republicans control the governorship as well as the state legislature (*Unified Rep*). We also include the following control variables: the 1-year investment return of the plan (*Actual Return*), the assumed rate of return of the plan (*Assumed Return*). the ratio of actual contribution to required contribution of a pension plan (*ARC*), the projected unit credit (*PUC*), the ratio of active employees to retirees (*Actives to Retirees*), age of the plan (Dinger and Von Hagen, 2009), the plan asset size (*Large Plan*), whether teachers are members of the plan (*Teachers*), the state level debt to gross state product ratio (*Debt to GSP*), a measure of public union membership (*Union*), the proportion of non-state workers to the total population in a state (*NMTP*), and year dummy ($Year_i$).

Our expectation is that state budgetary decision-making follows party affiliation, with Democrats and Republicans on opposite sides of the fence. In reference to funded ratio, one would expect Democratic appointees to be more liberal with respect to state spending, while Republican appointees to be more conservative. This expectation would hold for both governorships and legislatures. Furthermore, the expectation is that the greater the *Actual Return* and *Assumed Return* the higher the funded ratio. Regarding the control variables, we expect the *ARC*, *Actives to Retirees*, and *Large Plan* to be positively related to the funded ratio. In the case of the other control variables, the expectation is that the greater the *PUC*, *Age*, *Teachers*, *Debt to GSP*, and *Union*, the lower the funded ratio. We are agnostic about the relationship between *NMTP* and the funded ratio, although we do interact this variable with *ARC* since we expect these two variables to be inversely related.

6 Empirical Results

Table A1 provides information on the correlations among all the variables used in our study. Consistent with our expectations, the funded ratio is negatively and significantly correlated with *Dem Gov*, *Dem Party*, and *Unified Dem*. However, the ratio is not significantly correlated with the Republican political variables. In addition, it is positively correlated with *ARC*, *Actives to Retirees*, and *Large Plan*, but negatively correlated with *PUC*, *Age*, *Teachers*, *Debt to GSP*, and *Actual Return*. It is expected that the annual required contribution and the ratio of active members to retirees are positively correlated with the funded ratio of the plan. Plan asset size is also positively correlated with the funded ratio. A possible explanation is that plans with larger assets are more likely to possess sophisticated asset management skills, which may stem from a better pool of investment advisors. Consistent with previous studies, we find the funded ratio is negatively associated with *PUC*, *Age*, *Teachers*, and *Debt to GSP*. *Assumed Return* and *Union* are not significantly correlated with the funded ratio. It is also interesting that the correlation between the *Actual Return* and *Assumed Return* is negative and significant. One might have expected that these two variables would be positively and significantly correlated, since the *Assumed Return* is meant to reflect the return that can be earned on the assets of a pension plan in the future. Thus, a higher *Actual Return* would be expected to be associated with a higher *Assumed Return*. However, it should be noted that the correlation coefficient is quite low at only 9 percent. This suggests that the *Assumed Return* has been too high based on the low interest rate environment over the past several years, as reflected in the *Actual Return*.

Table 3 presents our set of six (taking into account each of our six political variables) regression results using a difference Generalized Method of Moments (GMM) estimator which is more appropriate for dynamic panel data models.The reason is that it controls for simultaneity and unobserved heterogeneity as well as potential endogeneity by using differences in the funded ratio as instrumental variables in the regressions. We include the lagged funded ratio throughout all model specifications. The lagged level of the funded ratio is found to be significantly related to the current level. Not including the lagged funded ratio leads to an omitted variable bias, rendering the results unreliable.

More specifically, to obtain consistent estimates for a dynamic panel model using a balanced panel data[4], we rely on the difference GMM procedure developed by Arellano and Bond (1991). The lagged values of the

[4]Our data is strongly balanced over the sample period 2001-2013.

Table 3: All Pension Plans

Variable	Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio	
Equation	(1)		(2)		(3)		(4)		(5)		(6)	
Funded Ratio$_{t-1}$	0.8832	***	0.8995	***	0.8807	***	0.8864	***	0.8980	***	0.8880	***
	(18.0789)		(18.4736)		(17.9802)		(18.2012)		(18.5637)		(18.1268)	
Unified Dem	-0.0019											
	(-0.4455)											
Unified Rep					0.0067							
					(1.1222)							
Dem Party			0.0119	**					0.0117	**		
			(2.4106)						(2.3755)			
Rep Party							-0.0083				-0.0083	
							(-1.2228)				(-1.2298)	
Dem Gov			-0.0088								-0.0086	**
			(-2.2367)								(-2.1833)	
Rep Gov							0.0050		0.0053			
							(1.3012)		(1.3641)			
ARC	0.0061		0.0061		0.0060		0.0063		0.0063		0.0061	
	(1.1408)		(1.1494)		(1.1294)		(1.1820)		(1.1787)		(1.1524)	
PUC	-0.0026		-0.0022		-0.0023		-0.0024		-0.0022		-0.0023	
	(-0.2153)		(-0.1744)		(-0.1935)		(-0.1979)		(-0.1814)		(-0.1927)	
Active To Retiree	-0.0012	*	-0.0012	*	-0.0012	*	-0.0013	*	-0.0012	*	-0.0013	*
	(-1.8097)		(-1.7162)		(-1.6812)		(-1.8519)		(-1.6907)		(-1.8837)	
Age	0.0016		0.0021		0.0014		0.0017		0.0020		0.0018	
	(1.1435)		(1.4564)		(1.0138)		(1.2293)		(1.4225)		(1.2650)	
Large Plan	0.0265	***	0.0258	***	0.0266	***	0.0262	***	0.0260	***	0.0259	***
	(3.0894)		(3.0036)		(3.1511)		(3.0634)		(3.0484)		(3.0202)	
Debt to GSP	-0.0216		-0.0416		-0.0519		-0.0124		-0.0488		-0.0043	
	(-0.0890)		(-0.1708)		(-0.2108)		(-0.0514)		(-0.2013)		(-0.0178)	
Actual Return	0.1690	***	0.1715	***	0.1677	***	0.1709	***	0.1712	***	0.1712	***
	(7.5730)		(7.6327)		(7.5639)		(7.6398)		(7.6262)		(7.6464)	
Assumed Return	5.6581	***	5.7315	***	5.5818	***	5.6667	***	5.7224	***	5.6738	***
	(4.0326)		(4.0233)		(3.9449)		(4.0284)		(4.0248)		(4.0252)	
Union	-0.0919	**	-0.1042	**	-0.0981	**	-0.0959	**	-0.1033	**	-0.0967	**
	(-2.0417)		(-2.3068)		(-2.1570)		(-2.1459)		(-2.2795)		(-2.1712)	
NMTP	0.6286		0.6732		0.6965		0.5450		0.6483		0.5682	
	(0.8600)		(0.8927)		(0.9618)		(0.7401)		(0.8644)		(0.7680)	
Year dummies	YES		YES		YES		YES		YES		YES	
AR(1)	-6.24	***	-6.19	***	-6.22	***	-6.20	***	-6.18	***	-6.21	***
AR(2)	0.04		0.05		0.11		0.02		0.07		0.00	
Sargan test	7.83		8.06		7.94		7.90		7.92		8.02	
Hansen test	6.08		6.15		6.34		6.12		6.08		6.17	
Instrument	t-2		t-2		t-2		t-2		t-2		t-2	
Observations	1565		1565		1565		1565		1565		1565	
Number of plans	148		148		148		148		148		148	

Note: Table 3 reports the results of the difference GMM estimations over the period, 2001-2013. p-values in parentheses. *Funded Ratio* is ratio of actuarial assets to actuarial liabilities of a pension plan. *Unified Dem* is a dummy variable that takes 1 if Democrat controls the state legislature as well as state governorship. *Unified Rep* is a dummy variable that takes 1 if Republican controls the state legislature as well as state governorship. *Dem Party* is a dummy variable that takes 1 if Democrat controls the state legislature, otherwise 0. *Rep Party* is a dummy variable that takes 1 if Republican controls the state legislature, otherwise 0. *Dem Gov* is a dummy variable that takes 1 if a governor of a state is a Democrat, otherwise 0. *Rep Gov* is a dummy variable that takes 1 if a governor of a state is a Republican, otherwise 0. *ARC* is ratio of actual contribution to required contribution of a pension plan. *PUC* is projected unit credit method. *Active to Retirees* is ratio of active employees to retirees of a pension plan. *Age* is age of a pension plan. *Large Plan* is a plan in the top third in terms of asset (*Large Plan* takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise). *Teachers* is a plan includes teachers (*Teachers* takes a value 1 if a plan includes teachers, 0 otherwise). *Debt to GSP* is ratio of total state debt to gross state product (GSP). *Actual Return* is 1-year investment return of a pension plan. *Assumed Return* is Assumed investment return of a pension plan. *Union* is ratio of public union members to total public employees in state. *NMTP* is the proportion of non-state workers to the total population in state. *State Ideology* measures state government ideology as it is described in Berry et al. (1998). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

dependent variable are correlated with the plan-specific effects, and we allow the idiosyncratic error term, ϵ_{it}, to be potentially correlated with α_i. The unobservable α_i can be removed by an orthogonal deviation transformation proposed by Arellano and Bover (1995).

Standard diagnostic statistics conducted to check model specification (e.g., a second order autocorrelation test, AR (2), and the Sargan's and Hansen's over-dispersion test[5]) attest to the validity of the instrumentation at the 1% significance level (as shown in Table 3). However, GMM estimation typically leads to instrument proliferation which is caused by an increased number of moment conditions with the dimension of the time series and the dimension of the vector of endogenous explanatory variables. Furthermore, as sampling errors are magnified in the weighting matrix, the bias is exacerbated by the correlation between the sample moments and the estimated weighting matrix (Staiger and Stock, 1994; Bound et al., 1995; Altonji and Segal, 1996). Therefore, the Sargan's and Hansen's tests for over-identifying restrictions may suffer from a severe over-rejection problem (Sargan, 1958; Andersen and Sørensen, 1996; Bowsher, 2002). To resolve this problem, we limit the lag length to only t-2 in the instrument set in order to reduce the instrument count (Roodman, 2009).

Importantly, based on the difference GMM results, we find that when either Democrats or Republicans control both the governorships and legislatures, there is no significant relationship to the funded ratio (models 1 and 3). This finding is confirmed in model 4 when Republicans control both the governorship and the legislature. We do find that when Democrats control the legislature, there is a significantly positive relationship to the funded ratio. The positive effect is, however, offset if Democrats also control the governorship (model 2) which explains the non-significant coefficient observed in model 1. When Democrats control the legislature but Republicans control the governorship (model 5), the finding of a positive and significant effect on the funded ratio is consistent with the view that political cleavage produces a positive effect on the funded ratio.

Political party cleavage and increasing professionalism among state legislatures have received considerable attention. The reason is that party cleavage due to a non-unified government may not generate support for the governor's leadership role during the budget process, but increasing professionalism among members of state legislatures, especially when measured in terms of partisanship, is viewed at the same time as having an effect on state budgetary outcomes. Our results underscore the body of literature linking legislative branch activity to better budgetary outcomes. This trend is leading to the end of executive dominance in the budget process. Kousser and Phillips (2009) suggest that governor's yield considerable high influence over the budget process; however, the level of influence is dependent upon the level of professionalism with the legislature. The models estimated in this article provide empirical evidence that this explanation may be true for public pensions as well. Thus, this study provides practitioners and researchers better insight into pension funding across states, especially the likelihood of a higher funded ratio under Democratic leadership in state legislatures.

As concerns other results, we find positive and statistically significant coefficients for the *Actual Return* for all models, which was expected.[6] Our argument is that including the lagged funded ratio captures the marginal contribution of the *Actual Return* on the funded ratio. With regard to the *Assumed Return*, it is also found to be positively and significantly related to the funded ratio. That is, plans use the *Assumed Return* when computing the discounted value of their future obligations so that a higher assumed rate leads to lower actuarial liabilities, and thereby to a higher funded ratio of a plan. The coefficients on the lagged funded ratio and the size of plan are positive and statistically significant in all models.

As noted before, some may argue that a governor's political influence in state budgetary decisions operates through not only a political party but also reflects a partisan ideology (Morehouse, 1981; Alt and Lowry, 1994; Morehouse, 1996; Hall, 2002; May and Koski, 2007; Leigh, 2008). Table A3 presents the same set of six regression specifications as presented in Table 3 using a difference GMM estimator, but now controlling for state ideology.[7] Overall, the results remain essentially unchanged and the coefficient on *state ideology* is

[5]The null hypothesis of the Sargans and Hansens tests is that specified orthogonality conditions of the instrument set are satisfied. If we reject the null hypothesis of the Sagans or Hansens tests, we should strongly doubt the validity of the estimates.

[6]A fixed effects model may suffer from a finite sample bias (see Nickell (1981)) because we include a lagged endogenous variable in the equation. We therefore used a GMM estimator and conducted the standard diagnosis statistics (e.g., second order autocorrelation test AR (2)), which did not indicate any issue on the validity of the instrumentation at the 5% significant level.

[7]The construction of this indicator was described in Berry et al. (1998).

statistically insignificant for all model specifications.

7 Robustness Tests

In this section, we assess whether our findings are robust when differentiating among public pension plans based on the level of the administering government. We run separate regressions for whether it is the state-government or other-government level that administers the pension plans (i.e., country, city, and school). We expect that state pensions may be susceptible to a different degree of political party influence than pension plans administered at country, city, and school levels.

Tables A4 and A5 show the results for the public pension plans administered at state-government levels, with and without controlling for state ideology. Our earlier findings remain unchanged. Tables A6 and A7 show the results for the public pension plans administered at country, city, and school levels, again controlling in one case for state ideology. We now find that both the political party of the governor and the majority political party of the legislature are no longer statistically significant.

8 Summary and Conclusions

The continuous decline in public pension has raised curiosity regarding whether politics explains the antecedents of state administered plans. It is well known that public pension plans are struggling due to serious funding issues throughout the country, and many state governors and legislatures are seeking to find ways as how best to meet resolve them. Some states are moving away from the traditional defined benefit plans to either defined contribution plans or some type of hybrid plans. Some, while retaining a defined benefit plan, are increasing the level of employee contributions and raising the age at which a member becomes eligible for benefits. Some states are now even offering employees a choice of the type of plan in which they would like to enroll. The bottom line is that many who have studied the current problems facing public pensions issues believe that the defined benefit plan is simply not sustainable over the long run. Private industries have already come to this realization, and as mentioned earlier, the trend in the private sector is away from defined benefit plans toward defined contribution plans.

In an effort to understand the serious funding problems facing public pension plans, we build upon prior research and provide another and newer look at various factors that may help to explain the heterogeneity in the funded ratio. We also expand on earlier work by employing a panel dataset for 148 pension plans covering forty-nine states, excluding Nebraska, from 2001 to 2014, focusing on six primary explanatory variables and using different empirical techniques to address potential econometric concerns.

This study provides evidence that politics does indeed play a role in explaining the funded ratio for state pension systems. Indeed, contrary to our expectations, when Democrats are in control of the legislature, we find a significantly positive relationship to the funded ratio. Moreover, we find no significant relationship to the funded ratio when Republicans are in control of either the governorship or legislature, or even both.

The bottom line, from a policy standpoint, it is time for states to work to address pension funding issues. While most states currently do meet their ARC commitments, not all do so. States face many competing demands upon taxpayer dollars with money needed for a variety of state programs, such as Medicaid, education, and prison reform, among others. Unfortunately, pension funding does not always enjoy the same priority for funding as these programs. Yet, it is evident that this issue will not disappear in the near term, implying that policymakers should continue to explore ways in which to better ensure that appropriate benefits will be available for current and future retirees over the long run.

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Appendix

Table A1: Pearson Correlation Matrix

Variable	1		2		3		4		5		6		7		8		9	
1 Funded Ratio	1.000																	
2.Unified Dem	-0.068 (0.003)	***	1.000															
3.Unified Rep	0.036 (0.115)		-0.318 (0.000)	***	1.000													
4.Dem Party	-0.106 (0.000)	***	0.638 (0.000)	***	-0.508 (0.000)	***	1.000											
5 Rep Party	0.038 (0.100)	*	-0.420 (0.000)	***	0.771 (0.000)	***	-0.658 (0.000)	***	1.000									
6.Dem Gov	-0.015 (0.504)	***	0.637 (0.000)	***	-0.509 (0.000)	***	0.176 (0.000)	***	-0.221 (0.000)	***	1.000							
7.Rep Gov	0.003 (0.880)		-0.621 (0.000)	***	0.522 (0.000)	***	-0.169 (0.000)	***	0.238 (0.000)	***	-0.975 (0.000)	***	1.000					
8.ARC	0.135 (0.000)	***	-0.058 (0.011)	***	-0.003 (0.907)		-0.029 (0.197)		0.005 (0.824)		-0.058 (0.011)	**	-0.001 (0.961)		1.000			
9.PUC	-0.164 (0.000)	***	0.087 (0.000)	***	-0.047 (0.037)	**	0.091 (0.000)	***	-0.036 (0.114)		0.057 (0.013)	**	-0.049 (0.032)	**	-0.023 (0.308)		1.000	
10.Active to Retiree	0.404 (0.000)	***	0.015 (0.499)		-0.025 (0.274)		-0.034 (0.144)		-0.040 (0.085)	*	0.089 (0.000)	***	-0.086 (0.000)	**	0.030 (0.174)		-0.038 (0.090)	*
11.Age	-0.404 (0.000)	***	0.128 (0.000)	***	-0.141 (0.000)	***	0.216 (0.000)	***	-0.217 (0.000)	***	-0.020 (0.389)		0.008 (0.717)		-0.041 (0.065)	*	-0.012 (0.582)	
12.Large Plan	0.112 (0.000)	***	0.042 (0.063)	*	0.010 (0.662)		-0.010 (0.671)		-0.029 (0.197)		0.020 (0.388)		-0.009 (0.707)		-0.064 (0.004)	***	-0.015 (0.499)	
13.Teachers	-0.163 (0.000)	***	0.026 (0.259)		-0.070 (0.002)	***	0.021 (0.356)		-0.068 (0.003)	***	0.034 (0.133)		-0.039 (0.087)	*	-0.034 (0.120)		0.051 (0.020)	**
14.Debt to GSP	-0.266 (0.000)	***	0.209 (0.000)	***	-0.252 (0.000)	***	0.302 (0.000)	***	-0.296 (0.000)	***	0.132 (0.000)	***	-0.140 (0.000)	***	-0.011 (0.647)		0.044 (0.056)	**
15.Actual Return	-0.131 (0.000)	***	0.020 (0.383)		0.016 (0.498)		0.010 (0.666)		0.034 (0.147)		0.010 (0.680)		0.009 (0.684)		-0.086 (0.000)	***	-0.017 (0.441)	
16.Assumed Return	-0.018 (0.442)		-0.025 (0.274)		-0.018 (0.434)		0.051 (0.027)	**	-0.005 (0.826)		-0.067 (0.004)	***	0.065 (0.005)	***	-0.067 (0.003)	***	0.185 (0.000)	***
17.Union	-0.009 (0.677)		0.215 (0.000)	***	-0.395 (0.000)	***	0.334 (0.000)	***	-0.444 (0.000)	***	0.112 (0.000)	***	-0.137 (0.000)	***	-0.025 (0.256)		-0.002 (0.931)	
18.NMTP	0.050 (0.026)	**	0.128 (0.000)	***	-0.218 (0.000)	***	0.239 (0.000)	***	-0.262 (0.000)	***	0.062 (0.007)	***	-0.065 (0.004)	***	0.003 (0.889)		0.014 (0.533)	
19.State Ideology	-0.026 (0.248)		0.689 (0.000)	***	-0.695 (0.000)	***	0.604 (0.000)	***	-0.608 (0.000)	***	0.717 (0.000)	***	-0.727 (0.000)	***	-0.015 (0.500)		0.044 (0.052)	*

Table A2: Pearson Correlation Matrix (cont.)

10		11		12		13		14		15		16		17		18		19
1.000																		
-0.277	***	1.000																
(0.000)																		
-0.054	**	0.182	***	1.000														
(0.016)		(0.000)																
-0.002		0.277	***	0.225	***	1.000												
(0.920)		(0.000)		(0.000)														
-0.083	***	0.185	***	-0.022		0.076	***	1.000										
(0.000)		(0.000)		(0.326)		(0.001)												
-0.055	**	0.052	**	-0.026		-0.009		0.018		1.000								
(0.015)		(0.019)		(0.251)		(0.681)		(0.428)										
0.029		0.133	***	-0.020		0.077	***	0.070	***	-0.093	***	1.000						
(0.206)		(0.000)		(0.385)		(0.001)		(0.003)		(0.000)								
-0.002		0.351	***	0.135	***	0.047	**	0.471	***	-0.008		0.150	***	1.000				
(0.944)		(0.000)		(0.000)		(0.032)		(0.000)		(0.716)		(0.000)						
0.076	***	0.095	***	-0.234	***	0.069	***	0.062	***	0.022		-0.073	***	0.259	***	1.000		
(0.001)		(0.000)		(0.000)		(0.002)		(0.007)		(0.333)		(0.001)		(0.000)				
0.058	**	0.175	***	0.027		0.052	**	0.404	***	-0.039		0.022		0.459	***	0.241	***	1.000
(0.010)		(0.000)		(0.230)		(0.021)		(0.000)		(0.090)		(0.340)		(0.000)		(0.000)		

Table A1 and A2 show Pearson correlation matrix between the variables used in the analysis over the period, 2001-2013. *Funded Ratio* is ratio of actuarial assets to actuarial liabilities of a pension plan. *Unified Dem* is a dummy variable that takes 1 if Democrat controls the state legislature as well as state governorship. *Unified Rep* is a dummy variable that takes 1 if Republican controls the state legislature as well as state governorship. *Dem Party* is a dummy variable that takes 1 if Democrat controls the state legislature, otherwise 0. *Rep Party* is a dummy variable that takes 1 if Republican controls the state legislature, otherwise 0. *Dem Gov* is a dummy variable that takes 1 if a governor of a state is a Democrat, otherwise 0. *Rep Gov* is a dummy variable that takes 1 if a governor of a state is a Republican, otherwise 0. *ARC* is ratio of actual contribution to required contribution of a pension plan. *PUC* is projected unit credit method. *Active to Retirees* is ratio of active employees to retirees of a pension plan. *Age* is age of a pension plan. *Large Plan* is a plan in the top third in terms of asset (*Large Plan* takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise). *Teachers* is a plan includes teachers (*Teachers* takes a value 1 if a plan includes teachers, 0 otherwise). *Debt to GSP* is ratio of total state debt to gross state product (GSP). *Actual Return* is 1-year investment return of a pension plan. *Assumed Return* is Assumed investment return of a pension plan. *Union* is ratio of public union members to total public employees in state. *NMTP* is the proportion of non-state workers to the total population in state. *State Ideology* measures state government ideology as it is described in Berry et al. (1998). p-values in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively

Table A3: All Pension Plans (State Ideology)

Variable	Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio	
Equation	(1)		(2)		(3)		(4)		(5)		(6)	
Funded Ratio$_{t-1}$	0.8842	***	0.9020	***	0.8812	***	0.8870	***	0.8984	***	0.8910	***
	(18.1237)		(18.6741)		(17.9130)		(18.2143)		(18.5885)		(18.3238)	
Unified Dem	0.0000											
	(0.0093)											
Unified Rep					0.0057							
					(0.8683)							
Dem Party			0.0115	**					0.0116	**		
			(2.3147)						(2.3516)			
Rep Party							-0.0082				-0.0081	
							(-1.2077)				(-1.1949)	
Dem Gov			-0.0154	**							-0.0155	**
			(-2.1186)								(-2.1211)	
Rep Gov							0.0063		0.0064			
							(0.8591)		(0.8737)			
ARC	0.0062		0.0058		0.0061		0.0063		0.0063		0.0058	
	(1.1551)		(1.1019)		(1.1396)		(1.1731)		(1.1707)		(1.1013)	
PUC	-0.0022		-0.0024		-0.0022		-0.0024		-0.0022		-0.0026	
	(-0.1878)		(-0.1954)		(-0.1814)		(-0.2007)		(-0.1834)		(-0.2163)	
Active To Retiree	-0.0012	*	-0.0012	*	-0.0012	*	-0.0013	*	-0.0012	*	-0.0013	*
	(-1.7871)		(-1.7472)		(-1.6974)		(-1.8612)		(-1.6998)		(-1.9119)	
Age	0.0016		0.0022		0.0014		0.0017		0.0020		0.0019	
	(1.1266)		(1.5451)		(1.0154)		(1.2427)		(1.4353)		(1.3600)	
Large Plan	0.0262	***	0.0260	***	0.0264	***	0.0262	***	0.0260	***	0.0262	***
	(3.0517)		(3.0674)		(3.1001)		(3.0743)		(3.0578)		(3.0863)	
Debt to GSP	-0.0109		-0.0623		-0.0354		-0.0148		-0.0506		-0.0262	
	(-0.0451)		(-0.2560)		(-0.1429)		(-0.0613)		(-0.2085)		(-0.1084)	
Actual Return	0.1694	***	0.1712	***	0.1682	***	0.1709	***	0.1713	***	0.1708	***
	(7.5718)		(7.5928)		(7.5413)		(7.6260)		(7.6154)		(7.5995)	
Assumed Return	5.6785	***	5.7117	***	5.6128	***	5.6623	***	5.7180	***	5.6551	***
	(4.0380)		(3.9976)		(3.9728)		(4.0151)		(4.0128)		(3.9942)	
Union	(0.0978)	**	-0.0962	**	-0.1004	**	-0.0946	**	-0.1021	**	-0.0888	**
	(-2.1312)		(-2.1555)		(-2.1959)		(-2.1042)		(-2.2371)		(-2.0213)	
NMTP	0.6581		0.6407		0.7041		0.5418		0.6440		0.5397	
	(0.8995)		(0.8457)		(0.9706)		(0.7369)		(0.8589)		(0.7260)	
State Ideology	-0.0001		0.0002		0.0000		0.0000		0.0000		0.0002	
	(-0.8290)		(1.2359)		(-0.5908)		(0.2251)		(0.1948)		(1.2787)	
Year dummies	YES		YES		YES		YES		YES		YES	
AR(1)	-6.22	***	-6.20	***	-6.22	***	-6.21	***	-6.18	***	-6.22	***
AR(2)	0.05		0.06		0.09		0.02		0.07		0.01	
Sargan test	7.85		7.80		7.97		7.81		7.84		7.76	
Hansen test	6.20		5.97		6.38		6.08		6.04		6.01	
Instrument	t-2		t-2		t-2		t-2		t-2		t-2	
Observations	1565		1565		1565		1565		1565		1565	
Number of plans	148		148		148		148		148		148	

Note: Table A3 reports the results of the difference GMM estimations over the period, 2001-2013. *Funded Ratio* is ratio of actuarial assets to actuarial liabilities of a pension plan. *Unified Dem* is a dummy variable that takes 1 if Democrat controls the state legislature as well as state governorship. *Unified Rep* is a dummy variable that takes 1 if Republican controls the state legislature as well as state governorship. *Dem Party* is a dummy variable that takes 1 if Democrat controls the state legislature, otherwise 0. *Rep Party* is a dummy variable that takes 1 if Republican controls the state legislature, otherwise 0. *Dem Gov* is a dummy variable that takes 1 if a governor of a state is a Democrat, otherwise 0. *Rep Gov* is a dummy variable that takes 1 if a governor of a state is a Republican, otherwise 0. *ARC* is ratio of actual contribution to required contribution of a pension plan. *PUC* is projected unit credit method. *Active to Retirees* is ratio of active employees to retirees of a pension plan. *Age* is age of a pension plan. *Large Plan* is a plan in the top third in terms of asset (*Large Plan* takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise). *Teachers* is a plan includes teachers (*Teachers* takes a value 1 if a plan includes teachers, 0 otherwise). *Debt to GSP* is ratio of total state debt to gross state product (GSP). *Actual Return* is 1-year investment return of a pension plan. *Assumed Return* is Assumed investment return of a pension plan. *Union* is ratio of public union members to total public employees in state. *NMTP* is the proportion of non-state workers to the total population in state. *State Ideology* measures state government ideology as it is described in Berry et al. (1998). p-values in parentheses. ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A4: State Pension Plans

Variable	Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio	
Equation	(1)		(2)		(3)		(4)		(5)		(6)	
Funded Ratio$_{t-1}$	0.8717	***	0.8922	***	0.8699	***	0.8777	***	0.8887	***	0.8816	***
	(18.7599)		(19.5604)		(18.6270)		(18.7030)		(19.6118)		(18.6953)	
Unified Dem	0.0010											
	(0.2425)											
Unified Rep					0.0101							
					(1.5724)							
Dem Party			0.0114	**					0.0113	**		
			(2.1622)						(2.1410)			
Rep Party							-0.0054				-0.0055	
							(-0.7659)				(-0.7731)	
Dem Gov			-0.0087	**							-0.0085	**
			(-2.0903)								(-2.0331)	
Rep Gov							0.0044		0.0048			
							(1.0065)		(1.1004)			
ARC	0.0146	***	0.0145	***	0.0147	***	0.0147	***	0.0148	***	0.0144	***
	(4.5048)		(4.3745)		(4.4205)		(4.4956)		(4.6011)		(4.2780)	
PUC	-0.0153		-0.0151		-0.0155		-0.0150		-0.0152		-0.0149	
	(-1.4365)		(-1.3547)		(-1.4266)		(-1.4202)		(-1.3535)		(-1.4210)	
Active To Retiree	-0.0013	**	-0.0014	**	-0.0013	**	-0.0014	**	-0.0013	**	-0.0014	**
	(-2.1442)		(-2.2490)		(-2.1937)		(-2.3603)		(-2.1998)		(-2.4232)	
Age	0.0002		0.0006		-0.0001		0.0003		0.0006		0.0004	
	(0.1224)		(0.4918)		(-0.0379)		(0.2399)		(0.4513)		(0.2841)	
Large Plan	0.0274	***	0.0260	**	0.0272	***	0.0266	**	0.0263	**	0.0263	***
	(2.6260)		(2.4721)		(2.6544)		(2.5228)		(2.5222)		(2.4695)	
Debt to GSP	-0.0517		-0.0503		-0.0864		-0.0317		-0.0594		-0.0218	
	(-0.2723)		(-0.2652)		(-0.4353)		(-0.1673)		(-0.3147)		(-0.1146)	
Actual Return	0.1873	***	0.1906	***	0.1843	***	0.1897	***	0.1898	***	0.1906	***
	(7.8201)		(8.1073)		(7.7475)		(8.0201)		(8.0385)		(8.0872)	
Assumed Return	3.5654	***	3.5443	**	3.4144	**	3.6137	***	3.5531	***	3.6011	***
	(2.6232)		(2.5637)		(2.5056)		(2.6667)		(2.5842)		(2.6414)	
Union	-0.1016	**	-0.1097	**	-0.1066	**	-0.1014	**	-0.1089	**	-0.1022	**
	(-2.2184)		(-2.3915)		(-2.3093)		(-2.2056)		(-2.3672)		(-2.2280)	
NMTP	0.7548		0.7987		0.8592		0.7157		0.7837		0.7294	
	(0.9600)		(0.9965)		(1.1122)		(0.9162)		(0.9800)		(0.9319)	
Year dummies	YES		YES		YES		YES		YES		YES	
AR(1)	-6.41	***	-6.38	***	-6.43	***	-6.38	***	-6.39	***	-6.37	***
AR(2)	0.02		-0.01		0.09		-0.03		0.01		-0.06	
Sargan test	4.02		3.91		4.02		4.19		3.80		4.30	
Hansen test	3.80		3.57		4.03		3.94		3.50		4.02	
Instrument	t-2		t-2		t-2		t-2		t-2		t-2	
Observations	1221		1221		1221		1221		1221		1221	
Number of plans	114		114		114		114		114		114	

Note: Table A4 reports the results of the difference GMM estimations over the period, 2001-2013. p-values in parentheses. *Funded Ratio* is ratio of actuarial assets to actuarial liabilities of a pension plan. *Unified Dem* is a dummy variable that takes 1 if Democrat controls the state legislature as well as state governorship. *Unified Rep* is a dummy variable that takes 1 if Republican controls the state legislature as well as state governorship. *Dem Party* is a dummy variable that takes 1 if Democrat controls the state legislature, otherwise 0. *Rep Party* is a dummy variable that takes 1 if Republican controls the state legislature, otherwise 0. *Dem Gov* is a dummy variable that takes 1 if a governor of a state is a Democrat, otherwise 0. *Rep Gov* is a dummy variable that takes 1 if a governor of a state is a Republican, otherwise 0. *ARC* is ratio of actual contribution to required contribution of a pension plan. *PUC* is projected unit credit method. *Active to Retirees* is ratio of active employees to retirees of a pension plan. *Age* is age of a pension plan. *Large Plan* is a plan in the top third in terms of asset (*Large Plan* takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise). *Teachers* is a plan includes teachers (*Teachers* takes a value 1 if a plan includes teachers, 0 otherwise). *Debt to GSP* is ratio of total state debt to gross state product (GSP). *Actual Return* is 1-year investment return of a pension plan. *Assumed Return* is Assumed investment return of a pension plan. *Union* is ratio of public union members to total public employees in state. *NMTP* is the proportion of non-state workers to the total population in state. *State Ideology* measures state government ideology as it is described in Berry et al. (1998). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A5: State Pension Plans (State Ideology)

Variable	Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio	
Equation	(1)		(2)		(3)		(4)		(5)		(6)	
-Funded Ratio$_{t-1}$	0.8713	***	0.8972	***	0.8672	***	0.8817	***	0.8921	***	0.8875	***
	(18.8906)		(20.0371)		(18.7713)		(19.0056)		(19.8972)		(19.2270)	
Unified Dem	0.0012											
	(0.2367)											
Unified Rep					0.0117							
					(1.6351)							
Dem Party			0.0105	**					0.0108	**		
			(1.9769)						(2.0461)			
Rep Party							-0.0051				-0.0050	
							(-0.7184)				(-0.7037)	
Dem Gov			-0.0224	***							-0.0228	***
			(-2.8346)								(-2.8719)	
Rep Gov							0.0126		0.0128			
							(1.5849)		(1.6177)			
ARC	0.0146	***	0.0142	***	0.0147	***	0.0149	***	0.0151	***	0.0141	***
	(4.5086)		(4.1090)		(4.4236)		(4.4967)		(4.6167)		(4.0038)	
PUC	-0.0154		-0.0144		-0.0155		-0.0148		-0.0148		-0.0145	
	(-1.4413)		(-1.3322)		(-1.4308)		(-1.4172)		(-1.3433)		(-1.4070)	
Active To Retiree	-0.0013	**	-0.0014	**	-0.0013	**	-0.0015	**	-0.0014	**	-0.0015	***
	(-2.1411)		(-2.4005)		(-2.1476)		(-2.4693)		(-2.3025)		(-2.5809)	
Age	0.0001		0.0009		-0.0001		0.0004		0.0007		0.0006	
	(0.1085)		(0.6558)		(-0.0749)		(0.3334)		(0.5398)		(0.4641)	
Large Plan	0.0273	***	0.0269	**	0.0277	***	0.0271	**	0.0268	**	0.0272	**
	(2.6129)		(2.5677)		(2.7149)		(2.5649)		(2.5664)		(2.5647)	
Debt to GSP	-0.0460		-0.0782		-0.1000		-0.0512		-0.0788		-0.0506	
	(-0.2439)		(-0.4189)		(-0.4994)		(-0.2719)		(-0.4214)		(-0.2691)	
Actual Return	0.1872	***	0.1884	***	0.1829	***	0.1887	***	0.1888	***	0.1882	***
	(7.7938)		(7.9931)		(7.6654)		(8.0071)		(8.0232)		(7.9797)	
Assumed Return	3.5612	***	3.4298	**	3.3832	**	3.5495	**	3.4894	**	3.4902	**
	(2.6201)		(2.4390)		(2.4944)		(2.5570)		(2.4861)		(2.5086)	
Union	-0.1021	**	-0.0951	**	-0.1045	**	-0.0941	**	-0.1009	**	-0.0886	**
	(-2.2091)		(-2.1254)		(-2.2651)		(-2.0739)		(-2.2229)		(-1.9800)	
NMTP	0.7573		0.7376		0.8533		0.6816		0.7430		0.6750	
	(0.9626)		(0.8897)		(1.0976)		(0.8560)		(0.9141)		(0.8293)	
State Ideology	0.0000		0.0004	**	0.0001		0.0002		0.0002		0.0004	**
	(-0.0774)		(2.3403)		(0.7623)		(1.4426)		(1.4319)		(2.4136)	
Year dummies	YES		YES		YES		YES		YES		YES	
AR(1)	-6.42	***	-6.38	***	-6.44	***	-6.38	***	-6.38	***	-6.37	***
AR(2)	0.03		-0.07		0.11		-0.06		-0.03		-0.11	
Sargan test	3.99		3.66		3.84		3.98		3.64		3.97	
Hansen test	3.79		3.47		4.01		3.83		3.41		3.89	
Instrument	t-2		t-2		t-2		t-2		t-2		t-2	
Observations	1221		1221		1221		1221		1221		1221	
Number of plans	114		114		114		114		114		114	

Note: Table A5 reports the results of the difference GMM estimations over the period, 2001-2013. p-values in parentheses. *Funded Ratio* is ratio of actuarial assets to actuarial liabilities of a pension plan. *Unified Dem* is a dummy variable that takes 1 if Democrat controls the state legislature as well as state governorship. *Unified Rep* is a dummy variable that takes 1 if Republican controls the state legislature as well as state governorship. *Dem Party* is a dummy variable that takes 1 if Democrat controls the state legislature, otherwise 0. *Rep Party* is a dummy variable that takes 1 if Republican controls the state legislature, otherwise 0. *Dem Gov* is a dummy variable that takes 1 if a governor of a state is a Democrat, otherwise 0. *Rep Gov* is a dummy variable that takes 1 if a governor of a state is a Republican, otherwise 0. *ARC* is ratio of actual contribution to required contribution of a pension plan. *PUC* is projected unit credit method. *Active to Retirees* is ratio of active employees to retirees of a pension plan. *Age* is age of a pension plan. *Large Plan* is a plan in the top third in terms of asset (*Large Plan* takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise). *Teachers* is a plan includes teachers (*Teachers* takes a value 1 if a plan includes teachers, 0 otherwise). *Debt to GSP* is ratio of total state debt to gross state product (GSP). *Actual Return* is 1-year investment return of a pension plan. *Assumed Return* is Assumed investment return of a pension plan. *Union* is ratio of public union members to total public employees in state. *NMTP* is the proportion of non-state workers to the total population in state. *State Ideology* measures state government ideology as it is described in Berry et al. (1998). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A6: Other Pension Plans

Variable	Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio	
Equation	(1)		(2)		(3)		(4)		(5)		(6)	
Funded Ratio$_{t-1}$	0.6703	**	0.6878	**	0.7065	**	0.6892	**	0.6821	**	0.6970	**
	(2.2343)		(2.3221)		(2.3439)		(2.2420)		(2.3029)		(2.2605)	
Unified Dem	-0.0120											
	(-1.3276)											
Unified Rep					-0.0111							
					(-1.0972)							
Dem Party			0.0084						0.0078			
			(0.4188)						(0.3871)			
Rep Party							-0.0137				-0.0146	
							(-0.7688)				(-0.8115)	
Dem Gov			-0.0159								-0.0173	*
			(-1.6239)								(-1.8013)	
Rep Gov							0.0132		0.0121			
							(1.6029)		(1.4324)			
ARC	-0.0094	**	-0.0096	**	-0.0099	**	-0.0091	**	-0.0095	**	-0.0092	**
	(-2.3124)		(-2.0855)		(-2.2127)		(-2.0081)		(-2.0301)		(-2.0779)	
PUC	-0.0006		0.0000		-0.0010		-0.0020		-0.0013		-0.0005	
	(-0.0301)		-0.0015		(-0.0456)		(-0.0916)		(-0.0575)		(-0.0222)	
Active To Retiree	-0.0260		-0.0259		-0.0308		-0.0274		-0.0278		-0.0252	
	(-0.8268)		(-0.7978)		(-1.0472)		(-0.8798)		(-0.8402)		(-0.8258)	
Age	-0.0020		-0.0008		-0.0011		-0.0011		-0.0011		-0.0006	
	(-0.2284)		(-0.0810)		(-0.1315)		(-0.1178)		(-0.1237)		(-0.0648)	
Large Plan	0.0401	***	0.0400	***	0.0384	***	0.0392	***	0.0392	***	0.0401	***
	(5.5269)		(5.4489)		(4.8384)		(5.2669)		(5.1321)		(5.6241)	
Debt to GSP	-1.2271		-1.3513	*	-1.3335		-1.2907		-1.3168		-1.3276	*
	(-1.5494)		(-1.6649)		(-1.6220)		(-1.5765)		(-1.5783)		(-1.6710)	
Actual Return	0.0923	*	0.0940	*	0.0987	*	0.0972	*	0.0937	*	0.0978	*
	(1.8209)		(1.8481)		(1.8358)		(1.7896)		(1.8338)		(1.8028)	
Assumed Return	8.4980	***	8.4088	***	8.5437	***	8.3339	***	8.3382	***	8.4181	***
	(3.9390)		(3.8810)		(3.5987)		(3.5903)		(3.8967)		(3.5764)	
Union	0.1934		0.1740		0.1981		0.1754		0.1842		0.1629	
	(1.3071)		(1.0305)		(1.2577)		(0.9743)		(1.0884)		(0.9073)	
NMTP	0.3734		-0.1863		0.1306		-0.5362		-0.4593		-0.2061	
	(0.1247)		(-0.0732)		(0.0413)		(-0.1814)		(-0.1840)		(-0.0688)	
Year dummies	YES		YES		YES		YES		YES		YES	
AR(1)	-1.46		-1.44		-1.51		-1.44		-1.44		-1.44	
AR(2)	0.25		0.32		0.38		0.33		0.36		0.27	
Sargan test	36.02		36.61		37.07		37.08		36.85		36.82	
Hansen test	10.29		11.24		10.87		11.08		11.46		10.82	
Instrument	t-2		t-2		t-2		t-2		t-2		t-2	
Observations	344		344		344		344		344		344	
Number of plans	34		34		34		34		34		34	

Note: Table A6 reports the results of the difference GMM estimations over the period, 2001-2013. p-values in parentheses. *Funded Ratio* is ratio of actuarial assets to actuarial liabilities of a pension plan. *Unified Dem* is a dummy variable that takes 1 if Democrat controls the state legislature as well as state governorship. *Unified Rep* is a dummy variable that takes 1 if Republican controls the state legislature as well as state governorship. *Dem Party* is a dummy variable that takes 1 if Democrat controls the state legislature, otherwise 0. *Rep Party* is a dummy variable that takes 1 if Republican controls the state legislature, otherwise 0. *Dem Gov* is a dummy variable that takes 1 if a governor of a state is a Democrat, otherwise 0. *Rep Gov* is a dummy variable that takes 1 if a governor of a state is a Republican, otherwise 0. *ARC* is ratio of actual contribution to required contribution of a pension plan. *PUC* is projected unit credit method. *Active to Retirees* is ratio of active employees to retirees of a pension plan. *Age* is age of a pension plan. *Large Plan* is a plan in the top third in terms of asset (*Large Plan* takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise). *Teachers* is a plan includes teachers (*Teachers* takes a value 1 if a plan includes teachers, 0 otherwise). *Debt to GSP* is ratio of total state debt to gross state product (GSP). *Actual Return* is 1-year investment return of a pension plan. *Assumed Return* is Assumed investment return of a pension plan. *Union* is ratio of public union members to total public employees in state. *NMTP* is the proportion of non-state workers to the total population in state. *State Ideology* measures state government ideology as it is described in Berry et al. (1998). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.

Table A7: Other Pension Plans (State Ideology)

Variable	Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio		Funded Ratio	
Equation	(1)		(2)		(3)		(4)		(5)		(6)	
Funded Ratio$_{t-1}$	0.6752	**	0.6815	**	0.6860	**	0.6812	**	0.6771	**	0.6872	**
	(2.2337)		(2.3019)		(2.3772)		(2.2645)		(2.3033)		(2.2662)	
Unified Dem	-0.0083											
	(-0.6636)											
Unified Rep					-0.0224							
					(-1.6224)							
Dem Party			0.0089						0.0084			
			(0.4469)						(0.4201)			
Rep Party							-0.0146				-0.0151	
							(-0.8111)				(-0.8347)	
Dem Gov			-0.0140								-0.0144	
			(-0.9030)								(-0.9136)	
Rep Gov							0.0056		0.0056			
							(0.3972)		(0.4082)			
ARC	-0.0092	**	-0.0098	**	-0.0095	**	-0.0095	**	-0.0098	**	-0.0094	**
	(-2.2981)		(-2.0617)		(-2.1441)		(-2.0328)		(-2.0560)		(-2.0554)	
PUC	0.0023		-0.0002		0.0004		-0.0019		-0.0009		-0.0011	
	(0.1086)		(-0.0081)		(0.0187)		(-0.0897)		(-0.0415)		(-0.0477)	
Active To Retiree	-0.0228		-0.0276		-0.0300		-0.0287		-0.0293		-0.0268	
	(-0.7353)		(-0.8258)		(-0.9543)		(-0.9024)		(-0.8737)		(-0.8457)	
Age	-0.0017		-0.0012		-0.0021		-0.0017		-0.0017		-0.0011	
	(-0.1938)		(-0.1259)		(-0.2445)		(-0.1902)		(-0.1819)		(-0.1261)	
Large Plan	0.0407	***	0.0400	***	0.0393	***	0.0396	***	0.0395	***	0.0401	***
	(5.9379)		(5.5817)		(5.4664)		(5.6820)		(5.5258)		(5.7444)	
Debt to GSP	-1.1333		-1.2933		-1.0236		-1.1442		-1.1866		-1.2523	
	(-1.4198)		(-1.5523)		(-1.2453)		(-1.3721)		(-1.4139)		(-1.5160)	
Actual Return	0.0961	*	0.0928	*	0.0995	*	0.0962	*	0.0933	*	0.0961	*
	(1.8811)		(1.8463)		(1.8761)		(1.8174)		(1.8598)		(1.8042)	
Assumed Return	8.5161	***	8.4008	***	8.6361	***	8.3586	***	8.3861	***	8.3861	***
	(3.8253)		(3.7656)		(3.7536)		(3.4919)		(3.7690)		(3.4980)	
Union	0.1810		0.1728		0.1584		0.1573		0.1685		0.1607	
	(1.1070)		(0.9941)		(0.9817)		(0.8329)		(0.9522)		(0.8664)	
NMTP	0.3254		-0.1464		0.2222		-0.3101		-0.2384		-0.1825	
	(0.1140)		(-0.0569)		(0.0726)		(-0.0994)		(-0.0911)		(-0.0604)	
State Ideology	-0.0002		0.0000		-0.0003		-0.0002		-0.0002		-0.0001	
	(-0.5245)		(-0.1416)		(-1.4927)		(-0.6068)		(-0.5307)		(-0.2142)	
Year dummies	YES		YES		YES		YES		YES		YES	
AR(1)	-1.43		-1.42		-1.48		-1.43		-1.42		-1.43	
AR(2)	0.22		0.32		0.24		0.31		0.35		0.28	
Sargan test	36.24		37.07		36.28		37.15		36.99		37.24	
Hansen test	9.95		11.34		10.67		11.01		11.35		10.96	
Instrument	t-2		t-2		t-2		t-2		t-2		t-2	
Observations	344		344		344		344		344		344	
Number of plans	34		34		34		34		34		34	

Note: Table A7 reports the results of the difference GMM estimations over the period, 2001-2013. p-values in parentheses. *Funded Ratio* is ratio of actuarial assets to actuarial liabilities of a pension plan. *Unified Dem* is a dummy variable that takes 1 if Democrat controls the state legislature as well as state governorship. *Unified Rep* is a dummy variable that takes 1 if Republican controls the state legislature as well as state governorship. *Dem Party* is a dummy variable that takes 1 if Democrat controls the state legislature, otherwise 0. *Rep Party* is a dummy variable that takes 1 if Republican controls the state legislature, otherwise 0. *Dem Gov* is a dummy variable that takes 1 if a governor of a state is a Democrat, otherwise 0. *Rep Gov* is a dummy variable that takes 1 if a governor of a state is a Republican, otherwise 0. *ARC* is ratio of actual contribution to required contribution of a pension plan. *PUC* is projected unit credit method. *Active to Retirees* is ratio of active employees to retirees of a pension plan. *Age* is age of a pension plan. *Large Plan* is a plan in the top third in terms of asset (*Large Plan* takes a value 1 if a plan is included in the top third of our sample in terms of assets, 0 otherwise). *Teachers* is a plan includes teachers (*Teachers* takes a value 1 if a plan includes teachers, 0 otherwise). *Debt to GSP* is ratio of total state debt to gross state product (GSP). *Actual Return* is 1-year investment return of a pension plan. *Assumed Return* is Assumed investment return of a pension plan. *Union* is ratio of public union members to total public employees in state. *NMTP* is the proportion of non-state workers to the total population in state. *State Ideology* measures state government ideology as it is described in Berry et al. (1998). ***, **, and * indicate significance at the 1%, 5%, and 10% levels, respectively.