

Working Paper

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**There is a Tangled Web of Factors Causing Inappropriate
Pension Funding Behavior**

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Abstract

With rationally ignorant voters on the sidelines of most public pension finance decisions, stakeholders with incentives to promote short-term focused outcomes have captured the pension funding policy process. This misaligned set of incentives for fiduciaries and taxpayers has given rise to pension funding behaviors that have explicitly and implicitly led to the rapid growth in unfunded pension liabilities across America. Understanding the interconnectivity of incentives and explicit funding behaviors is critical for developing policy agenda that can improve public plan solvency.

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I. Underfunded Public Pensions: The Web of Causality

The Actuary Civil War of 2016 that broke out this past summer between the Society of Actuaries and American Academy of Actuaries is emblematic of the challenge facing public sector pension funds in America today. There is considerable consensus that public plans are grossly underfunded. According to their own actuarial reports, the largest pension plans run by the 50 states had a cumulative overfunded position in 2001 that collapsed into roughly \$1 trillion in unfunded liabilities by 2014.² There is profoundly less consensus on what factors have caused this underfunding to emerge and whether actuarial valuations are accurately reflecting the true health (or lack thereof) of American pension plans.

Consider that at the heart of the Actuary Civil War is a disagreement over discount rate policy. Historically public sector pension funds have used their assumed rate of return on assets to discount accrued liabilities. This flies in the face of how financial economics understands risk, which would suggest calculating the value of accrued pension liabilities should be relative to the risk of liabilities, not the risk of the plan assets.³ The debate is important because if public plans were to use market based liability values, total unfunded liabilities for the biggest state plans combined would likely be closer to \$3 trillion or \$5 trillion.⁴

But there is a puzzle here: from the financial economics view of the world, pension funds explicitly choosing inappropriate discount rates have tacitly been underfunding their pension obligations for years by underreporting unfunded liabilities. Excessively high discount rates are therefore a proximate cause of at least part of the nation's unfunded liability growth problem. Thus, we could argue that low funded ratios for public sector pension plans are in part caused by inappropriate discount rate policies.

However, should a given pension fund decide to lower its discount rate (whether or not they are embracing a financial economics approach to valuing liabilities), the result would be the fund reporting a higher value of accrued liabilities, a higher recognized amount of unfunded liabilities, and then a lower reported funded ratio.⁵ We know that as assumed rates of return have fallen over the past decade, so too have discount rates — the average discount rate used by public plans has fallen from more than 8% at the turn of the

² Author's own calculation based on a review of pension plan valuations from all 50 states; plans considered were any state plan or combination of state plans comprising at least 75% of the collective liabilities of a state. Also see Pew Charitable Trusts (2015).

³ Brown and Wilcox 2009; Gold and Latter 2009; Russek 2011; Novy-Marx and Rauh 2011; Staman 2011; Biggs 2012; Waring 2012; Naughton, Petacchi, and Weber 2015; Andonov, Bauer, and Cremers 2016; Brown and Pennacchi 2016

⁴ Rauh (2015) estimates unfunded liabilities would be \$3 trillion using market-valued liabilities as of fiscal years ending 2014. Williams et al. (2016) estimates unfunded liabilities would be \$5.6 billion using market-valued liabilities as of fiscal years ending 2015. Nearly all pension funds reported returns on assets below assumed rates in fiscal year ending 2015 and up through fiscal years ending September 30, 2016. Unfunded liabilities have only gotten worse on aggregate since 2014.

⁵ All else equal, the lower the discount rate, the higher the reported value of accrued liabilities, and thus — holding assets constant — the higher the recognized unfunded liability. To be clear, adopting a lower discount rate does not “increase” the value of unfunded liabilities, it simply increases the recognized amount of those unfunded liabilities on an actuarial accounting basis. For a more complete summary of defined benefit plan funding, see: <http://bit.ly/29DTPkd>.

century to around 7.25% as of 2015.⁶ Thus, we could also argue that low funded ratios for public sector pension plans are in part caused by more appropriate discount rate policies.

This duality poses a problem for the academic (and policy) quest to understand exactly what is going on with America's public sector pension plans: the metric we have for defining whether a plan is fiscally sound or not (the funded ratio) could be the product of either historically bad or recently good policy — or, in many cases, both.

1.1 The Limits of Directly Analyzing Funded Ratios

As previously noted a given funded ratio or reported unfunded liability value could reflect either good or bad funding policy choices. Lowering the discount rate, adopting a newer mortality table, bringing salary growth assumptions in line with demographic trends, or other good funding policy choices might all result in an increase in reported accrued liabilities and thus lower funded ratios.

And yet, the majority of models in the public pension finance literature are focused on the funded ratio as the dependent variable.⁷ There are a lot of valuable contributions to the general understanding of pension plan insolvency in this literature, but much of it has mixed results, such as inconsistent findings on political party influence on funded ratios.⁸

One of the more conflicted parts of the literature is the influence of board composition. Dove et al. (2016) points out that studies have found low funded ratios are associated both with pension boards that have large plan participant representation, as well as pension boards made up primarily of elected officials or their appointees.⁹ The inconsistency in statistical findings is likely due to a combination of variance in actuarial accounting expertise from board to board plus variance in the web of causes for a specific plan's funded ratio (as discussed below).¹⁰

Clark et al. (2011) points out that there is a high degree of heterogeneity in the actuarial funding policies selected by public plans, with discount rates having the strongest influence on variance, but actuarial smoothing methods and amortization methods having significance effect as well.¹¹ Even if all state pension plans adopted a uniform discount rate policy there would still be substantial variance in funded ratios related to explicit factors (budgetary choices on paying 100% of employer contributions, benefit changes,

⁶ The reason for the decline in discount rates is related almost exclusively to plans lowering their assumed rates of return in response to market changes, not because of financial economics, but the effect of the change is the same and is in the direction that financial economists would guide pension plans.

⁷ Mitchell and Smith 1994; Schneider and Damanpour 2002; Eaton and Nofsinger 2004; Munnell, et al. 2011; Glaeser and Ponzetto 2014; Kelley 2014; Wang and Peng 2016.

⁸ See the conflicting findings in Johnson 1997; Coggburn and Kearney 2010; Thom 2013, 2015a, and 2015b; Thom and Randazzo 2015; Elder and Wager 2015.

⁹ Studies finding low funded ratios are associated with pension boards that have large plan participant representation include: Romano 1993; Iglesias and Palacios 2000; Hess and Impavido 2003; Hess 2005; Bradley et al. 2016. Studies finding low funded ratios are associated pension boards made up primarily of elected officials: Mitchell 1988; Mitchell and Hsin 1997; Munnell and Sunden 2001; Coronado et al. 2003; Yang and Mitchell 2005.

¹⁰ Clark et al. 2006; Easterday and Eaton 2012.

¹¹ See also Brown et al. 2011; Biggs 2012; Kelley 2014.

negative amortization policy, etc.). And it is these explicit behaviors that need to be at the center of work seeking to understand pension insolvency.

Encouragingly, there is an increasing amount of literature focused specifically on understanding explicit pension funding behavior itself, rather than just funded ratios.¹² This includes a better approach to examining pension board influence by Stalebrink (2014), with a focus on the relationship between different board membership compositions and the investment decisions or assumed rates of return adopted by those boards (as opposed to models that associate board composition directly with overall funded levels).¹³

1.2. A Pension Web with Many Strands

Looking past the funded ratio directly allows analytical focus to be put squarely on the pension funding behaviors themselves — and the factors that influence the behaviors in all of their interconnectivity.

A standard model in epidemiology for why disease occurs and spreads is to take account of the interconnected relationship of multiple factors (Goldenfeld 2011). This “web of causality” model can be applied in understanding unfunded liabilities as a disease plaguing state and municipal finances across the country. First, there are a myriad of behaviors, i.e. *explicit causes*, which can drive of unfunded liability growth, such as:

- Underfunding actuarially determined contribution rates, either specifically in a given budget or systematically through statutory language;¹⁴
- Adopting actuarial assumptions that are misrepresentative of reality, including using old mortality tables or salary growth assumptions that are based on historic trends but not recent demographic patterns;
- Adopting an open amortization policy that leads to negative amortization;
- Adopting a poorly designed asset allocation strategy;
- Increasing benefits without ensuring the change is fully funded, whether changes to benefit multiplier or ad-hoc COLAs; and
- Using actuarial cost methods that allow for systematic asset depletion, such as granting credits against normal cost when actuarially overfunded or allowing for experience account programs that skim assets off the top of investment returns in good years to fund benefit increase programs.

Second, there is a range of actuarial experiences, i.e. *implicit causes*, which result in growing unfunded liabilities, such as:

- Underperforming investment returns;

¹² Note: Andonov, Bauer, and Cremers (2016) develop models that look directly at discount rate policies and asset allocation decisions, as well as a model that relates discount rates to funding ratios. Also see, Coronado et al. 2003; Mohan and Zhang 2012; Andonov, Hochberg, and Rauh 2016; Bradley et al. 2016; Dove et al. 2016.

¹³ Stalebrink (2014) finds “investment return assumptions are partly determined by investment boards’ affiliation with the political process.”

¹⁴ The Government Accounting Standards Board offers guidelines for financial reporting that most state plans follow, but there are no federal statutes binding states to follow those rules for the purposes of determining funding policy.

- Changes in mortality rates;
- Changes in inflation trends;
- Death or disability shocks, particularly for smaller public safety plans; and
- Salary experience being adjusted due to a sudden change in hiring policy or economic growth.

While each of these explicit and implicit causes might be analyzed independently, rarely do they occur independently. Paying 100% of employer contributions in a given year may be related to a spike in actuarial experiences; underperforming investment returns may be specifically related to the adoption of unrealistic assumed rates of return; benefits may be increased because the actuarial assumptions used by a plan report strong funded status, even if the long-term reality under different assumptions shows a poorly funded plan.

Thus, when seeking to understand why a pension plan's unfunded liabilities have grown, we should consider more than just individual actuarial experience (implicit causes) or funding behaviors (explicit causes). Instead those funding policy behaviors and their associated actuarial experience should be understood as an interconnected web that is being cohesively influenced by some set of factors.

1.3. A Model for Untangling the Web and Refining Our Understanding of What Causes Inappropriate Funding Policy Behavior

The natural question that flows from this view is simple: what are the primary reasons that the stakeholders with the fiduciary responsibility to manage public sector pension plans — i.e. pension boards, fiduciary cabinet officers, elected officials — have failed in such a systematic way to adopt appropriate funding policies?¹⁵

I contend we can understand what is influencing the web of unfunded liability causing behaviors using a three-factor public choice theory model. The theoretical model contends that voters are rationally ignorant of pension financing and do not vote based on the policy promises or funding policy behavior of elected officials. In this vacuum, stakeholders who have minimal liability for pension contributions and an interest in short-term focused funding policy behaviors (e.g. certain elected officials, board members, labor leaders, and beneficiaries) will capture the decision making process that governs explicit behavior. And at the same time public sector employees will be seeking maximum possible rents with the least possible contribution rate or liability.

While each of these theories can partially illuminate the reasons for systematic funding policy failure, none is likely a robust explanation on their own. Thus, in this exploratory model *it is the interconnectedness* of rationally ignorant voters, poorly incentivized elected officials, self-interested pension board members capturing funding policy, and

¹⁵ I define an appropriate funding policy as one that: (a) Adopts a discount rate that reflects the risks of the liabilities of the pension plan, not the risk of the assets of the plan; (b) Chooses an asset allocation that minimizes taxpayer risks and ignores historic plan performance in favor of more realistic market forecasts; (c) Adopts other actuarial assumptions that are up to date (mortality tables, salary forecasts, inflation assumptions) and that minimize taxpayer risks; (d) Adopts an amortization policy that pays off debt over a fixed, short time frame; and (e) Pays 100% of the actuarially determined employer contribution every year.

public sector worker rent seeking that has led to the funding policy behaviors that in turn have contributed towards the growth in unfunded liabilities.

Public choice theory posits that elected officials, fiduciary officers, plan administrators, pension boards, and public sector labor leaders will all act in their own self-interest, rather than the public interest (Schneider and Damanpour 2002). From this perspective in order for a pension plan to be fully funded, the more aligned the utility of plan stakeholders and administrators are with plan solvency, the stronger pension plan's net position. However, due to confluence of factors, such incentive structures are often misaligned.

Part II of this paper explores the first set of misaligned incentives in this theoretical model, specifically looking at how rational voter behavior is not to closely monitor pension funding behavior or the effectiveness of elected official oversight of pension plans.

Part III takes up the second leg of the theoretical model, examining the groups of actors associated with pension funding, and how there is a misalignment between the groups that have captured policy decision making and where the liabilities for those decisions ultimately rests.

Part IV discusses the final part of the public choice theory model, rent seeking by the various actors and organizations in pension funding policy.

The paper concludes with a brief discussion of how some meaningful pension reform efforts have been successful in recent years, despite the alignment of incentives that has tended to push plans towards insolvency. For organizations and pension plan stakeholders seeking to address pension insolvency issues, having more precise, complete articulation of the factors driving specific funding behaviors is critical to designing sound public policy solutions. But knowledge for its own sake will not improve the solvency of public sector plans, there much be strategies for how to act and address these behavior and incentive challenges.

II. Voter Rational Ignorance of Pension Funding Policy

The quantity of information about public sector pension financing that voters must acquire in order put adequate pressure on elected officials to adopt appropriate funding policies is substantial.¹⁶ The first requirement is a baseline understanding of finance. One does not need to be an actuary to understand actuarial assumptions, but there is a time requirement needed to learn how pension funding works. But further, a voter would need

¹⁶ By elected officials we mean those representing the employers, ranging from legislators who represent state-level agencies (e.g. state police, department of transportation, or a state university), to mayors who represent municipal-level service providers (e.g. fire fighters, teachers, or clerks).

to track down and digest often very opaque actuarial valuations and other reports to get a real sense of how well funded a plan is and what behavior factors might be involved.¹⁷

Collectively this means there are real costs for a voter to invest in researching the pension funding status for their relevant local plans (Tullock 1971; Kelly 2014). Even if a voter does acquire knowledge of pension finance, they still need to hear a politician make a policy promise related to pensions or be presented with a pension reform ballot initiative in order to act on their knowledge (Glaser and Ponzetto 2014).

At the same time, there can be positive short-term effects for residents of a municipal region when tax revenue is diverted from fully funding a pension plan towards the delivery of certain public services. Failed funding policies generally lead to the crowding out of public services, via a growth in unfunded liability amortization payments, but these typically only manifest in the long-run.

Thus, the expected benefits to a voter are very low for investing time in understanding how pension financing works.¹⁸ Only when pension costs are crowding out public services or leading to proposed tax rate increases might the cognitive costs for the average voter to engage on pension financing possibly become worth the investment.¹⁹ (Pension reform ballot initiatives in places such as San Jose or Arizona are examples of such instances.)

2.1. Incentives of Elected Officials

The rational ignorance of voters means there is a relatively low political cost for elected officials — governors, state legislators, city and county commissions, special district board members, school board members, etc. — to ignore the funded level of a pension plan. Cost here being related to an officials chances being re-elected (Schneider and Damanpour 2002). If voters are not making their decisions based on pension funding levels or costs until a particular tipping point, then the incentives for an elected official to learn about pension finance are low (in this sense elected official ignorance of pension finance could be considered rational).

With low political costs for bad funding policy behaviors it is likely in the interests of any given elected official to focus on other spending priorities. For example, in order to balance the state's budget in 2014, New Jersey governor Chris Christie approved a plan to pay \$2.3 billion less than the actuarially determined employer contribution rate—60% less than the state should have paid based on its own actuarial assumptions (Russ 2014). The relative political cost for cutting other state programs or raising taxes was higher than making pension fund contributions.²⁰ Gov. Christie justified his budgetary decision by

¹⁷ As Kelley (2014) wrote, “With the opaqueness of public pension reporting, it is intuitively unlikely that the median voter in any state is actually aware of her share of the unfunded liabilities from state pension plans.”

¹⁸ And that is even before we consider the general rational ignorance of voters based on the minimal likelihood of their vote making a difference in an electoral outcome (Brennan and Lomasky 1997; Brennan 2012). Also see, Downs 1957; Somin 1998; Congleton 2001; Martinelli 2006.

¹⁹ Such crowding out is likely to happen in the long-term, meaning the elected officials responsible for poor funding policy will most likely not be in office when the unfunded liability amortization payment costs rise, requiring tough budgetary and tax policy choices.

²⁰ To the degree that analysis focusing directly on funded ratios is meaningful, Thom and Randazzo (2015) have found that states without term limits for their elected officials and have high funded ratios are *more* likely to pay 100% of

arguing that the state's unfunded liabilities were due to "sins of the past." This framing was likely heard by some voters and accepted, heard by some voters and rejected, and simply ignored or misunderstood by the rest of the electorate.

2.2. Incentives Might Not Change With Greater Awareness

When voters are rationally ignorant of pension finance their elected representatives have stronger incentives to ignore inappropriate pension funding behavior than to support behavior that promotes solvency. However, even as voters become more generally aware of pension challenges — for example, in relation to increased media coverage of pension woes in Illinois, New Jersey, or Detroit — that will not necessarily translate directly into a change in the incentives for elected officials. Rational ignorance creates strong incentives to ignore pension finance, but increased voter awareness may not necessarily change the politics of a state or local government's budget. Pension funding behaviors are still influenced by the trade-offs most elected officials make, often times favoring the short-term needs of the budget over the long-term needs of the pension plan.

The temporal factor to consider is how voters' behaviors will change over time given increased understanding of pension finance related issues. When pension funding rises to the top of priorities for voters, only then will there be substantive shift in incentives for elected officials meaningfully change to be aligned with pension solvency.

III. Capture of Pension Funding Policy

With traditional defined benefit pension plans, taxpayers bear the full liability for promised pensions.²¹ It would thus be beneficial for taxpayers to act as a group (voters) and ensure their representatives (elected officials) act in order to protect their interests. However, with voters rationally ignoring pension finance issues, stakeholders with some special interest in the funding policy of the plan are instead able to capture the funding policy process and drive behavior that does not always promote plan solvency.

These stakeholder groups are always smaller than the taxpayer base as a whole, typically have no immediate or long-term liability related to a pension plan, and are able to more easily organize and influence both political outcomes as well as pension-funding behaviors directly.²² The primary groups that look to capture funding policy can include: elected officials and their appointees (employers), active plan participants and their representatives (employees), plan beneficiaries and their representatives (retirees),

their actuarially determined employer contribution. I.e. Elected officials with short-term time horizons are more likely to push the costs of funding retirement benefits off on to future generations in order to favor other spending or tax priorities; but elected officials who have a desire to be reelected several times into the future are more considerate of pushing off budgetary expenditures. In the case of Gov. Christie, he had just won re-election at the end of 2013 and was term limited as governor when making the 2014 budget balancing decision.

²¹ For most defined benefit plans, employee contribution rates are fixed. Exceptions include plan designs where both normal cost and unfunded liability amortization payments are split 50/50 (e.g. the Arizona State Retirement System and tier 3 of the Arizona Public Safety Retirement System), plans where employer contributions are capped at a fixed rate (e.g. tier 2 of the Utah Retirement System), and plans where the employee contribution rate is benchmarked to the employer contribution rate (e.g. the South Carolina Retirement System).

²² This all follows the logic suggested by classic arguments regarding collective action, i.e. Olson (1982).

ideologically driven groups (including legislative or executive branch budget offices, fiscal agencies, or lobbying groups) and occasionally plan actuaries and administrators.

3.1 Channels for Capture

The capture mechanism for elected officials (e.g. legislators, governors, city councilmembers, mayors) has three primary channels:

- Legislatively guiding funding policy from a budgetary perspective, such as setting the employer contribution rate in statute or defining in statute what actuarial assumptions to use in calculating the employer contribution rate;
- Legislatively assigning to fiduciary officers funding policy influence, such as state laws that grant unelected treasurers or comptrollers decision-making authority over asset allocation and exposure to investment risk; and
- Serving on directly or appointing members to a pension board that is granted authority to set funding policy via adopted actuarial assumptions.

The capture mechanism for active plan participants and their representatives also has three primary channels, depending on the state laws relevant to a given plan:

- Extracting concessions in a collective bargaining process;
- Direct lobbying of elected officials by labor representatives;
- Serving on directly or appointing members to a pension board that is granted authority to set funding policy via adopted actuarial assumptions.

Beneficiaries are often times represented by the employee labor organizations already engaged in the pension funding policy decision making process, but the interests of retirees can differ from that of active members. Thus, many pension boards also have members that are specifically elected by retirees to advocate for their specific interests.

A more complicated special interest group is plan administrators, as this group's scope of power varies considerably from plan to plan. To the degree that plan administrators do seek to capture part of the funding policy process, their mechanism is primary through their influence on the pension board's decisions. However, plan administrators might also influence funding policy behaviors by limiting certain information disclosures to decision makers or explicitly making policy choices via authority assigned to them legislatively or by the board itself (Vermeer et al. 2011). Plan actuaries may have a credibility stake that leads them to push for funding policy changes that trend towards improved solvency or in maintaining a contract by underplaying long-term risks that are unlikely to manifest in the near term.

Whether any of these groups is able to meaningfully capture the funding policy process and influence explicit behaviors depends on the degree of voter ignorance, the political capital of any one group, the relative size of each group, and how variant the policy goals are within groups (insofar as this makes them more or less able to organize).²³

²³ When pension issues gain public attention, such as in Detroit during the city's bankruptcy proceedings in 2014 and 2015 or in Chicago in 2016, it can be harder for a given group to robustly influence policy. Thus the degree of voter

Successful policy capture also depends on how effective monitoring by other groups that have some conceptual stake in the solvency of a plan, including bondholders, credit rating agencies, and the media.

Recent municipal bankruptcy ruling have largely considered pension liabilities senior to municipal bondholders, but generally such cases of municipal bankruptcy have not been explicitly driven by unfunded pension liabilities. For example, even though a considerable portion of the city of Detroit's debt was related to unfunded pension liabilities, the pension funds themselves still had resources to pay out pension checks for more than another decade. The need to trigger a bankruptcy was in part related to pension funding draining city resources, but that was not the proximate cause of the ultimate decision to file for bankruptcy. Bondholder monitoring of pension liabilities has traditionally just not been robust.

Only recently have ratings agencies, theoretically with credibility liabilities, been putting more emphasis on pension funding in their municipal credit ratings. However, no credit rating model puts an overemphasis on the long-term funding policy of a plan, and contribution rates — whether based on an aggressive or conservative funding policy — are typically the more important concern.

Finally, the technical capacity and editorial judgment of the press in monitoring pension funding behavior also can influence the ability for any one group to capture funding policy decision making. Because of the highly technical nature of pension financing, and the ambivalence from the general public, newspapers and television media outlets have not traditionally been chief monitors of pension funding policy.

3.2 Capture Objectives

Setting funding policy for a defined benefit pension plan is ultimately a question of risk management: what assumptions about plan behavior should be used to calculate forecasted liabilities? And what actuarial practices should be used to calculate contribution rates relative to those liabilities, liabilities that are typically completely borne by taxpayers? In practice, however, when groups with limited or no liability capture pension-funding policy, decisions can emphasize risk transfer instead of risk management.²⁴

From the perspective of the elected official that is seeking to retain voter approval and raise campaign resources, there are trade-offs between acting in the interest of taxpayers and manipulating budgetary outlays in ways policy goals of importance to groups with a special interest beyond pension plan solvency (Selgin 1971). Similarly, the appointees of elected officials that are pension fiduciaries (e.g. appointed board members or ex-officio board members) may act in the interests of the elected officials they represent by not voting to adopt actuarial assumption that would substantially increase contribution rates and create a budgetary constraint.

ignorance matters for capture by special interest groups. Further, the legal framework for a given state — i.e. whether there is collective bargaining, so-called “Right to Work” laws, or a constitutional protection of benefits — will change the ability of employers, participants, retirees, or administrators to capture funding policy power.

²⁴ Gold 2003; Mohan and Zhang 2012.

Risk transfer in these contexts pushes off to future generations of taxpayers the liabilities for today's accrued pension obligations in favor of short-term budgetary and re-election interests.²⁵

The interests and objectives of plan participants and their representatives (e.g. public sector unions, collective bargaining representatives, pension board members elected by employees) have a similar risk transfer effect, but are less uniform than those of employers. First off, employees and labor representatives have an interest in keeping the budgetary costs of retirement plans low so that there is the potential for increases in benefits (whether these are increases in benefit formulas or cost-of-living adjustments).²⁶ Second, labor representatives may be incentivized to demonstrate near-term successes such as wage increases and in exchange may not pressure elected officials on the potential for long-term insolvency (Mitchell and Smith 1994; Kelley 2014). Third, insofar as employees are also taxpayers, they have an interest in the strong delivery of public services, and therefore could favor explicit funding behaviors that minimize contribution in the near-term and push off into the future responsibility for funding obligations.

Inasmuch as employees are future retirees they do have an interest in the long-term solvency of their pension plan. But as long as constitutional guarantees and judicially enforced contracts protect promised pension benefits, there are limited reasons for active members of a pension plan to fear for the solvency of their retirement benefits.²⁷ Only in a case where pension benefits appear to be threatened by severe underfunding (ex. Kentucky Retirement Systems, Dallas Police and Fire Pension System) or a fiscally challenged municipality (ex. Detroit, Chicago, San Jose) would concerns about solvency rise above other employee interests.

Retirees represent a subgroup of plan participants who have an interest in near-term solvency on a cash flow basis, but also the perception of long-term solvency on an accounting basis in order to avoid other stakeholders from seeking to reduce promised pension benefits as a part of an effort to improve plan solvency.

Of particular interest in seeking to understand plan participant and beneficiary capture of funding policy is this variance in interest of subgroups and their representation on pension boards. Ex-officio board members can often times be members of the plan themselves, participant elected board members might favor the interests of beneficiaries more than younger plan members by virtue of their longer years of service, and recent hires who have the largest interest in long-term solvency may have the least expertise or influence over their own labor representatives and thus not have much relational capital

²⁵ Epple and Schipper 1981; Inman 1981, 1982; Giertz and Papke 2007; Mohan and Zhang 2012.

²⁶ Many plans did offer benefit increases at least once between 1990 and 2005 when plan funded ratios looked strong. However, revaluing liabilities during that timeframe using market valued liabilities shows that many states that increased benefits did so under a false understanding of how strongly funded their pension plans were. If different actuarial accounting practices had been followed, it is possible that the impetus for increasing pension benefits would not have been as strong.

²⁷ Recent court rulings across the country have only cemented this view that in nearly every jurisdiction across the country, pension benefits are a contractual right that cannot be broken, even by the insolvency of the trust established to pay the benefits (Volokh 2014).

to capture funding policy power. This intragroup dynamic is also likely to result in transfer of risk from existing taxpayers and budgets out to future taxpayers and budgets.

Finally, for plan administrators the interest in capturing funding policy could depend on a range of self-interested factors. The administrator of a plan may have an interest in an investment allocation with larger degrees of risk because it allows themselves or their staff a larger capacity for performance-based compensation. Administrators might also see a meaningful change in actuarial assumptions as an admission of failure of past leadership. And an administrator might believe that acknowledging the current practice of inappropriate funding policy will give political capital to separate interests who are seeking to close the defined benefit plan they manage in favor of a defined contribution plan. Collectively, these interests are for emphasizing solvency in the short-term and funding policies that translate into lower contribution rates today.

Thus, whatever group is able to capture all or a portion of the ability to direct explicit funding policy behavior is likely to emphasize intergenerational risk transfer.²⁸ The primary variance is in what a given groups particular interests are for advocating short-term focused funding policy.

IV. Rent Seeking through Pension Funding Policy

Of the stakeholder groups with a special interest in influencing explicit funding policy behavior plan participants — active and retired — have the largest financial interest.²⁹

Thom's (2016) survey of the literature has found a wide body of work demonstrating that public sector employee compensation contains substantial rents, including the kinds of benefits offered and amount of wages.³⁰ Given that public sector compensation is set via a political process, decision making related to compensation is open to considerable influence by lobbying, electoral contributions, and other public activism by government worker unions. In principle, such activism by labor representatives is rent seeking behavior as it is looking to increase transfers from taxpayers to public sector workers

²⁸ It is also worth noting that the interests of taxpayers are then split along generational lines as well (Browning 1975; Verbon 1993). Today's taxpayer interests are near-term (favoring the maximum amount of tax revenue being spent on the delivery of public goods and services) while tomorrow's taxpayer interests are long-term (favoring the solvency of pension plans so that unfunded liability amortization payments do not crowd out the delivery of public goods and services). The growth of unfunded pension liabilities presents a distributional conflict between generations and can create incentives for even greater risk transfers (Breyer 1989). Also see, Merton 1983; Shiller 1999; Brown 2008; Andonov, Hochberg, and Rauh 2016.

²⁹ Plan administrators and their staff can potentially have some financial gain at stake, depending on the compensation structure for investment management. And to the degree that plan administrators seek to influence assumptions or asset allocation in a way that is personally beneficial, their activities could be constituted as rent seeking. On the whole, though, any economic rent transfers here are small in the aggregate.

³⁰ Glaser and Ponzetto (2014) find "The informational advantages of public-sector workers cause them to earn rents or quasi rents, and the political equilibrium leads to a situation in which voters and public-sector workers could both benefit from a different age-earnings profile for public-sector workers. If public-sector workers earned higher wages while young in exchange for lower pension benefits, their welfare could improve at no cost to the taxpayer." Also see, Tolchin and Tolchin 1972; Krueger 1974; Freedman 1994; Alesina et al. 2000; Bowman and West 2009; Brueckner and Neumark 2014; Enikolopov 2014; Anzia and Moe 2015; Hollibaugh 2015; Nye et al. 2015.

through various forms of compensation — which often times can most efficiently be done through deferred compensation programs like defined benefit pensions.³¹

Pension benefits can contain rents through various mechanisms. “Pension spiking” is a means of dramatically increasing retirement benefits without any requisite increase in output by the work, which in many cases leads to retirement pay being higher than salaries while working.³² It occurs when pay and benefits rules set by state or local governments allow workers to save up vacation and sick time to cash in during their final year or years of work, and that increases their total salary used to calculate their pension (which is based on a formula percentage of final salary). A

Another mechanism is “employer pick up” in which the employer, the government, not only makes its own pension contributions but also agrees to pay some or all of the share of annual payments into the pension system that would normally come from workers.

An important mechanism for retirees in some plans is a legislatively granted ad-hoc cost-of-living adjustment. Some plans do not automatically inflation adjust benefits, and with such plans employers face regular pressure to increase benefits on an annual basis, benchmarked to a change in the cost-of-living. These benefit spikes are not always paid for with increased contributions to normal cost, and since they simply increase the benefit for an already retired work they are a straightforward transfer benefit that constitutes economic rents.

Considerable rent seeking activity goes into securing and defending changes to these pay and benefit rules.³³ Such political activity can lead to the creation of symbiotic relationships between employee groups and elected officials, all without the general public being fully aware. Generally speaking, public sector workers and public sector unions are more informed about pension financing and better organized than taxpayers as a whole. Any one public sector worker will have a stronger incentive to understand the operational nature of the benefit programs they are participating in than a rationally ignorant voter.³⁴ And in turn, labor union leaders have a stronger incentive to learn the details about programs like defined benefit systems than the rank-and-file members.³⁵ Meanwhile, the voting public is reasonably unaware of the complex reporting standards for pension plan costs, the debates related to valuing unfunded liabilities, or related funding policy behaviors.

³¹ Biggs and Richwine’s (2014) analysis comparing government worker total compensation to similar private workers finds that in 42 states government workers earn a positive premium and in 12 states that premium is 20% or higher. Also see, Niskanen 1971; Bellante and Long 1981; Hunter and Rankin 1988; Gelb et al. 1991; Chandler and Gely 1995; Bahrami et al. 2009.

³² See for example Harris and Gardiner (2013) and Saillant, Moore, and Smith (2014).

³³ Just one public sector union, the American Federation of State, County and Municipal Employees, spent \$65 million on ‘political activities and lobbying’ in 2014 (Hart 2015).

³⁴ See in particular, Glaeser and Ponzetto 2014; Kelley 2014. Thom’s (2016) survey of the literature finds “public employees are more likely to vote than the general public (Brewer 2003; Corey and Garand 2002) and favor liberal candidates over conservatives (Blias et al. 1997; Jaensen et al. 2009). According to the classic ‘bureau voting’ model, public employees vote for Democrats because they view the party as more likely to embrace larger bureaucracies, and their votes are thus motivated by perceived job security (Garand et al. 1991; Gramlich and Rubinfeld 1982).”

³⁵ But those union leaders may be very focused on the short-term (i.e. they will ignore low funded ratios until the funded ratios threaten their membership directly, see the case of AZ PSPRS union leadership).

Beyond the typical lobbying channels used to pursue increased compensation without increased labor output, public sector workers in states where compensation is collectively bargained have a separate, fairly unique second channel for rent seeking (Steffen 2001). This 21st Century form of rent seeking simply uses the negotiating table to seek pension benefit increases, or to influence explicit funding policy behavior such that the accounting for pension costs does not weaken their negotiating position.

Ultimately, well-organized public sector unions can be effective in attaining transfers from less well-organized taxpayers by using the overlap of collective bargaining with more classic political activism. Attempts by state and local governments to address unfunded liabilities by reducing behavior such as pension spiking have almost universally been met by fierce defense from public sector union groups, and sometimes resistance by the members of a pension board itself. Even when elected officials overcome the incentives to ignore pension financing, they often must face off against rent seekers limiting the options for reducing unfunded liabilities.

V. Unifying the Three Factors Influencing Pension Funding Policy

As separate theories, voter rational ignorance, the capture of funding policy and pension boards, and rent seeking by public sector workers do not fully explain the systemic application of bad pension funding policies.

- Voters may not understand in intricacies of public sector pension plans, but their ignorance does not explain why active plan participants are not more engaged in seeking to reduce the volatility of risk in the plans offering them benefits.
- Knowing that elected officials underfunded a pension plan in order to spend taxpayer resources on other priorities does not explain why they are not subsequently voted out of office.
- And finding that labor unions have sought to encourage certain actuarial accounting practices that would allow a pension plan to report long-term solvency in order to allow political space to seek increases in compensation does not explain why retirees have not openly criticized inappropriate funding behavior that threatens the solvency of their plans.

It is all three theories together that tell a robust story about the underlying mechanisms that are leading the systematically adopted inappropriate funding policies that have in turn explicitly and implicitly to so much pension debt.

The conclusion is that rational ignorance of voters creates an opportunity for policy capture and rent seeking. Stakeholders with short-term interests and limited liability have captured the pension funding policy process. These stakeholders include elected officials (and their representatives) who are more concerned with near-term budget allocation than long-term solvency and employee groups who are rent seeking. And the funding policy behaviors that intentionally favor short-term outcomes have not been checked because voters are ignorant of the growth in liabilities they are responsible for.

5.1 Considering Pension Reform That Has Broken Through the Web

The framework of pension insolvency as a function of an interconnected set of incentives and behaviors does provide some landscape for how stakeholders interested in pension reform can most effectively move forward. Untangling the web thus can start by changing voter awareness of pension reform, but there will still need to be political will. Untangling the web could mean having actors with incentives for pension solvency themselves seek to co-opt the pension funding process themselves, but they will still be facing agents who have strong incentives for rent seeking in the current climate that will stand in their way.

Ideally, pension reform would start with labor leadership recognizing the long-term solvency challenges for their members' retirement systems. Organizations or individuals interested in pension reform might, thus, focus on trying to increase education about pension financing and the visibility of the risks for labor leaders in an attempt to change the existing incentives that lead labor to be a poor monitor of pension solvency.

In 2015, labor leaders for Arizona's police officers and firefighters decided that they could no longer tolerate the risks of their members' pension fund becoming insolvent and approach the state legislature with a plan to address the problem. The Arizona state senate responded to this good faith effort by public safety union leaders in kind by offering a counter proposal for pension reform. Throughout the fall of 2015, representatives of labor, municipal employers, and the state legislators traded proposed reform ideas until mutually agree upon solution was reached that would address both the existing debt for the Arizona Public Safety Personnel Retirement System as well as reduce future liabilities of the plan by 50% (Randazzo et al 2016).

Realistically, pension reform will not always start with labor representatives because of the strength of the competing short-term incentives for most union leaders. Other successful models for reform have been cases such as Utah and Rhode Island, where a single elected official decided that taking on pension reform would be a meaningful political gambit, and Michigan and Alaska where the political opposition to pension reform was weak enough as to not be able to stop a major change.³⁶

The pension reform leaders in Utah (State Sen. Dan Liljenquist) and Rhode Island (Treasurer Gina Raimondo) were relatively newly elected when taking on pension reform and did not have well-established political interests to compete with their interest in pension reform. Thus many of the incentives that are present for elected officials were not applicable. Pension reform in Michigan and Alaska was generally moved without bi-partisan consent. In the case of Michigan's 1996 closure of their state employee pension plan, it was passed during a lame duck legislative session. In the case of Alaska's 2005 closure of both their state employee and teacher plans, the reforms have since been challenged by labor in the courts multiple times.

When looking at the landscape of successful meaningful pension reform, there clearly has been a range of political approaches. Wherever pension reform has been successful,

³⁶ For more details, see case studies on Rhode Island (Randazzo 2014) and Michigan (Randazzo 2016).

though, it has been because one or more of the strands of the bad pension funding behavior web have been broken. While there may not be a clear singular path for untangling the web, simply having a better awareness of its existence can help a given locality seek to find their unique path to navigating the ignorance of voters, the short-term interests of non-liability holding stakeholders, and rent seeking by employee groups.

5.2 Conclusion

The argument that I have laid out in this paper is that to understand the nature of pension insolvency in America, the complex, interconnected web of funding policy behaviors that explicitly and implicitly cause the reported increases in unfunded liabilities should be the focus of study. And to understand what causes inappropriate funding behavior, I've sketched a theoretical public choice model arguing stakeholders with no liability have captured funding policy in order to advance short-term interests that are unrelated to plan solvency while also rent seeking without regard to the longevity of the plan. The capture and rent seeking by members without liability is possible because the party with liability, the taxpaying voters, is rationally ignorant of pension financing and costs.

In recognizing the existence of this web and the difficulty in finding ways to break through it, it appears there is an inherent instability with public sector defined benefit pension plans insofar as they are self-governed. Theories of self-regulation assume certain liability on the part of equity holders, owner-operators, and/or employees (Kelley 2014). However, if plan participants and their representatives carry no liability (due to constitutional guarantees), and employers carry no liability (because voter rational ignorance does not hold elected officials and their appointees to account for behaviors), then it is virtually impossible for the regulatory regime governing the plan to be optimal in terms of fully funding those liabilities.

Unfunded liabilities have grown because the stakeholders that carry the most liability with a defined benefit pension plan have the highest costs for understanding and engaging in public debate about pension finance. And the stakeholders that carry the least liability often lack the incentives to prioritize appropriate pension finance or have captured the funding policy process and focused it on protecting the interests of those with the most to gain in the near-term.

Improving the precision of knowledge on pension funding behavior is critical for informing the policy debates that surround addressing pension underfunding. Collectively, this analysis points groups and individuals interested in pension reform in a clear direction: any successful change to public sector pension plan design must realign the incentives of the stakeholders involved in the defined benefit pension plan. This has been successfully navigated in a few places over the past decade, but figuring out a more robustly applicable formula for how those incentives should be realigned, and what the dominant influences are on any given funding policy behavior at a local level is the next phase of where this analytical project needs to go. The academic quest to understand how public sector pension plans have fallen apart is fascinating on its own, but for taxpayers facing rising pension plan contribution rates that will crowd out other budgetary priorities this is a real and present solvency threat that needs clear solutions as soon as possible.

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