THE INVISIBLE HAND OF INSTITUTIONS: WHO GOVERNS STATE AND LOCAL PUBLIC PENSIONS?

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A Dissertation

Presented to

The Faculty of the Department

of Political Science

University of Houston

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In Partial Fulfillment

Of the Requirements for the Degree of

Doctor of Philosophy

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By

Elena Farah

December, 2013

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Elena Farah

APPROVED:

Jim Granato, Ph.D.
Committee Chair

University of Houston

Richard Murray, Ph.D.
University of Houston

James Thurmond, Ph.D.
University of Houston

Michael Granof, Ph.D.
University of Texas at Austin

John W. Roberts, Ph.D.
Dean, College of Liberal Arts and Social Sciences
Department of English

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ABSTRACT

Public pension systems represent a critical piece in the puzzle of public financial sustainability. Unfunded pension liabilities deserve additional scrutiny in the post Great Recession environment of sluggish economic growth, high unemployment, an aging population and increased debt burdens at all levels of government. Left unaddressed, these liabilities are an added social and economic challenge, mortgaging capacity of state and local governments to provide essential public services to their constituencies and ensure secure retirement of their employees.

Formal and informal institutional arrangements have a large role in shaping public pension policy at the state and local level. It is critical that these institutions remain transparent, representative and that policy process be conducted in a manner publicly accountable to all stake holders, including pension beneficiaries and taxpayers. Appropriate incentives, such as congruence between policy costs and benefits, are critical to long-term financial sustainability of public pensions.

This dissertation identifies key actors influencing public pension policy at the state and local level, their respective incentives, and quantifies the impact of their decisions on the financial sustainability of public pension systems. This research uses the Institutional Analysis and Development (IAD) framework to evaluate the consequences of formal and “invisible” institutions on pension policy, identifying “design principles” conducive to creating financially sustainable public pension systems. This study also examines the applicability of the IAD framework to the policy sphere of public pensions more broadly.

These issues are examined in a detailed case study of the City of Houston (COH). The COH had over $2.6 billion in fiscal 2012 unfunded pension liabilities. The case study is based on original interviews with major policy stake holders, a field study of the Financial Management Task Force assembled to assess long-term financial hurdles facing COH, and an intervention time-series analysis of the COH unfunded pension liabilities.

This study finds that beneficiaries’ interests are overrepresented in all pension governance structures at the expense of those of taxpayers; politicians’ electoral horizons discourage tackling long-term issues such as pensions; split state-local governance design discourages sustainable solutions; and current pension institutions lack in both transparency and public accountability.

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“We can’t solve problems by using the same kind of thinking we used when we created them.”

Albert Einstein

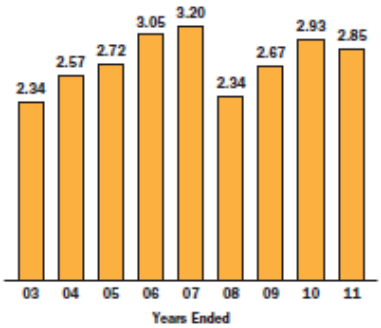
Chapter 1: Introduction

Statement of the Problem

Public pensions constitute a critical piece in the puzzle of financially sustainable public organizations. Solvent pension systems are as important as structurally balanced budgets, realistic and financially sound capital improvement programs and responsible debt financing. Pensions and other post-employment benefits (OPEBs), such as employee healthcare, came to public scrutiny in the 2000s as major drivers of unfunded liabilities for state and local governments. Projected demographic and economic trends are likely to continue to jeopardize the funded status of many pension systems, spelling the need for potential reform.

While pension assets fluctuated widely since the slowdown of 2001, the Great Recession caused a stock market collapse, wiping out significant financial holdings of many pension funds (Urahn et al., 2010). In 2008 public sector pension plans' median investment decline was 25 percent (Urahn et al., 2010). This drop in value still existed three years later as seen in Figure 1 below. By then it was still only partially accounted for as a result of contemporaneous actuarial practices allowing spreading out investment losses over a period of several years:

Figure 1: Value of State and Local Government Defined Benefit Assets ($T)



Source: (U.S. Federal Reserve, complied by NASRA)

To put this in perspective, the Dow Jones Industrial Average fell over 50 percent from its all-time high of over 14,000 points in October 2007 to close at just under 6,000 in March 2009 (Amadeo, 2012). While the largest collapse of 90 percent of stock value occurred in the 1930's during the Great Depression over a period of three years, this most recent precipitous fall took only eighteen months. The global scale of this financial hit and the sheer speed with which the Great Recession massacred investment portfolios – stocks fell a dramatic 18 percent in just one week in October 2008 -- caught most institutional and individual investors off guard. The result was most unprecedented savings losses in recent history.

At the time, estimates of public pension solvency and long-term sustainability varied, depending upon plan assumptions.[1] After the Great Recession, the Pew Center on the States pegged this unfunded liability at about $1 trillion (Urahn et al., 2010). Other studies utilizing a lower discount rate assumption estimated the unfunded pension price tag to be equal to anywhere between $2.5 trillion (Novy-Marx and Rauh, 2009) and $4.6 trillion (Biggs, 2012).

Slow economic recovery from the Great Recession shrank revenues from property, sales and income taxes further straining government budgets. To balance operations many state and local plan sponsors piled on additional unfunded liabilities (Benton et al., 2009) by diverting moneys from annually actuarially determined pension contributions – sometimes in exchange for concessions from organized employee groups or for a promise to repay foregone contributions with interest.

In fiscal 2013 pension funds in aggregate finally recaptured all of their lost asset value and surpassed the peak they reached in 2007 before the Great Recession began. Cash and

[1] Sustainable systems feature "method[s] of harvesting or using a resource so that the resource is not depleted or permanently damaged" (http://www.merriam-webster.com)

securities holdings of the 100 largest public employee pensions equaled nearly $3 trillion in 2013 (Lambert, 2013).

Nevertheless, pension plans would still need to make up for the six years of unrealized investment returns. Further, in 2013 the rate of growth in withdrawals from pension systems equaled 16.6 percent from a year earlier, outpacing the rate of increase in assets of 8.4 percent in 2013 (Lambert, 2013). This means that more money flowed out of pension systems than came in, indicating that pension systems may still be facing structural pressures.

Left unaddressed, structural imbalances in pension systems may threaten solvency of underfunded pension plans. Diminished institutional and individual retirement savings coupled with persistent unemployment due to the recent economic recession and uncertain growth prospects for the national economy may threaten retirement security for all Americans.

Public Financial Wealth is a Common-pool Resource: Relevance of the IAD Framework to the Study of Pensions

Since mid-2000 the share of state and local budgets required to pay public pensions and other post-employment benefits (OPEB) has been on the rise. In practical terms, this compromises the discretionary spending capacity of governments, forcing politically difficult trade-offs between cutting essential government services, raising taxes or attempting to reign in pension expenses via changing benefit structures. While all of these alternatives are politically costly, preserving the status quo threatens financial sustainability of governments, compromising their ability to deliver essential services to their constituencies and eroding their credit ratings (Ruggerio et al., 2011).

Deteriorated credit quality may hinder governments' ability to access capital markets to raise capital for operations or for investments. For example, after Detroit filed for bankruptcy in July 2013 several local governments in Michigan that had nothing to do with the fiscal troubles of Detroit had to postpone their scheduled bond offerings because investors demanded a premium in the form of higher interest rates for borrowings by all state issuers.

This is because by allowing Detroit to file for bankruptcy, the State of Michigan demonstrated its lack of political will to bail out a local issuer in fiscal distress. In the eyes of investors, this made debt issued by all Michigan issuers appear more risky, at least temporarily. As a result of this market perception, several school districts decided they were unable to afford the higher cost of bond borrowings and decided to pull the issuances off the market.

Puerto Rico, which is not bankrupt but is widely believed to be insolvent, is also paying risk premiums in a private placement of its bonds that it was unable to sell in the open market. Unfunded public pension liabilities were a significant contributor to Puerto Rico's fiscal quagmire.

According to some industry estimates, state and local pensions in 2012 had just over half of required assets to pay for accrued benefit liabilities. According to Moody's Investors Service, in 2012 state and local pension obligations were funded at respective 53 percent and 57 percent utilizing fair value of assets and a market based discount rate equal to a high-quality municipal bond index (Van Wagner and Blake, 2013).

A critical factor responsible for this dramatic underfunding relates to prior policy choices with respect to incurring and subsequently failing to fund pension obligations. This dissertation examines how incentives (micro-foundations) inherent in pension governance structures and the budgeting process affected prior policy decisions regarding benefit design and funding in recent years. It also examines how these incentive structures may be changed to ensure

better long-term sustainability of public pension plans and overall compensation structures going forward.

In particular, the focus is on identifying what micro-foundations (i.e. incentives and other behavioral drivers and organizational structures) encourage institutional arrangements that breed suboptimal policy outcomes at the expense of organic, self-imposed control mechanisms to ensure sustainable management of financial resources over multiple generations. The ultimate research goal is to identify via close examination of case studies opportunities to create inclusive policies involving multiple stakeholders – with respect to both processes and outcomes – to ensure political transparency as well as long-term accountability.

This research utilizes the Institutional Analysis and Development (IAD) framework (Ostrom, 2007; Poteete, Janssen and Ostrom, 2010). Initially motivated by studies of complex public economies of U.S. metropolitan areas, the IAD framework has been used extensively for analysis of diverse common-pool natural resource systems (Ostrom, 1990) to identify "design principles" most conducive to sustainability. Polski's (2003) study of successful economic and institutional change within the U.S. commercial banking sector is an example of the IAD framework applied to the political economy of finance.

Although this is the first time the IAD framework is used to study the policy arena of public pensions, there are many conceptual analogies between natural common-pool resource systems[2] and public pension systems. Public pension policy is characterized by fragmented decision-making at multiple levels of government and by existence of multiple stake-holders within the same level of government. Various stake-holders operate within the same territorial jurisdiction (the tax base) which provides a common-pool resource in the form of

[2] *Common-pool* resource is a resource from which one person's use subtracts units not available to others and exclusion or limitation of users is difficult (Ostrom, 2007; Poteete, Janssen and Ostrom, 2010, p. 150).

collectable tax revenue. Each of the stake-holders stands to benefit from a disproportionate allocation of tax revenue, and all stand to lose if the tax base becomes “overharvested,” (i.e. overtaxed to the point that residents and businesses would find it more attractive to relocate to other places (Craig, 2011)), leading to diminished tax collections and depletion of the common-pool resource.

Another example of the tax resource being depleted is its allocation to uses other than provision of essential government services to the extent that taxpayers feel they do not receive value for their money and choose to relocate. This may happen without a corresponding tax increase in situations where a share of the operating budget is increasingly committed to non-productive use from the taxpayers’ perspective.

The IAD framework adds much value in situations where it is desirable to identify best practices -- design principles -- in instances where communities are able to overcome collective action barriers and balance short-term individual incentives with long-term community benefits. This research seeks to spell out such successful design principles of public pension systems, in particular their governance structures and funding mechanisms. In the process, the applicability of the IAD framework to public pension policy (and public finance more broadly) is evaluated.

The following is an example of a conceptual analogy between public pension systems in the broader context of financially sustainable governments and sustainable natural resource systems. The Colorado River that supplies clean water to the seven states from Wyoming to California is expected to be unable to provide enough water resources to support the growing communities potentially expected to nearly double over the next fifty years, unless more water is produced or saved, according to the most recent federal report.

The agreements that govern water usage were signed in the twentieth century based on the water resources available in the wet years. Recent normal years saw a nearly 10 percent drop in available water, with even fewer water resources available in the drought years.

Potential policy alternatives to alleviate the looming water shortage may include: conservation or additional water production through pumping water from the Missouri River, or importing icebergs and water tankers from the North, or desalinating ocean water. Otherwise, the Colorado River basin is likely to face a severe water shortage in the next fifty years. These policy alternatives all vary in cost, but most present some inconvenience in the short-term to ensure long-term resource sustainability. While water is still available for now, some actors may feel that no urgent action is necessary. At the same time, postponing policy action is likely to make all reforms more costly the longer they are delayed.

Parallels to the structural issues plaguing public pensions are striking. The robust market returns of the nineties created an expectation in the mind of many policy-makers and public employees nationwide that high market returns would continue indefinitely. As a result, public employee benefits were routinely enhanced and written into law or governing statutes, committing ever-increasing shares of public financial resources to long-term pension obligations as opposed to increasing salaries, for example (operations).

Market downturns of 2001 and especially 2008 exposed the vulnerability of overly aggressive market return assumptions, resulting in vast unfunded liability balances for most if not all state and locally sponsored pension plans. The pending retirement bubble due to the aging of the US population is further expected to result in ever-increasing numbers of beneficiaries receiving pension annuities for longer periods of time with fewer younger employees expected to support the retiree cohorts. Mature pension plans in which the number of retirees is significantly higher than the number of actives paying into the systems are likely to experience the most financial strain as a result of this demographic shift. Policy

alternatives to amend this structurally unsound situation are costly in the short-run and may be opposed by public employee stakeholders as well as the general public is tax hikes are required.

Chapter Outline

This dissertation is organized in the following way. Chapter 1 introduces the reader to the problem of unfunded pension liabilities and to the concept of public financial wealth as a common-pool resource. Chapters 2 and 3 contain the literature revenue and research design. Chapter 4 is a primer on public pensions providing an overview of most relevant financial terms and concepts, including types of plans, importance of selecting an appropriate discount rate, as well as funding and reporting assumptions. This chapter will be most helpful to those unfamiliar with some of the complexities of public pension policy representing a quick conceptual gateway into the analytical chapters that follow.

Chapters 5 and 6 provide an in-depth case study of the unfunded pension liabilities in the City of Houston (COH). The impact of unfunded pensions on the overall COH financial sustainability is discussed. The COH represents a formidable case study as a large and growing metropolitan area well-endowed with financial resources due to its expanding tax base benefiting from a strong oil and gas and medical sectors and favorable demographic trends. Nevertheless, the COH ran a structural deficit since the early 2000's until 2012 and 2013 when a modest surplus was registered.

Nevertheless, the COH's pension and OPEBs are exerting an increasingly large pressure on the COH finances. If left unchanged, these liabilities stand to threaten financial sustainability of the COH exactly at a moment when its growing population is likely to expect increased and improved police and fire protection as well as continued delivery of the quality of life the COH residents grew to expect from its government.

Furthermore, the COH burdened with its unfunded liabilities may be unable to deliver such services. Despite much discussion at the local and state level, progress at curtailing pension liabilities has been modest at best. Chapter 5 introduces key actors involved in local and state pension policy and the financial impact their decisions had on the long-term sustainability of the COH itself and its pension systems in the early 2000's.

Chapter 6 is a detailed account of the Long-range Financial Management Task Force assembled by the Mayor and the COH Council in the second half of 2011 and first months of 2012 specifically to investigate potential solutions to the unfunded liabilities crisis. This chapter draws on detailed notes taken during the task force deliberations to test the micro-foundations and the gatekeeper hypotheses. Field evidence indicates that: 1) major actors' personal preferences consistently inform their preferred positions on pensions; and 2) preferences of board members as gate keepers of pension policy are overrepresented in the policy process and its outcomes are the expense of other policy stakeholders.

In conclusion, Chapter 7 lists pension system design principles most conducive to long-term financial sustainability of pension systems and their sponsoring government especially in light of reporting changes recommended by the Government Accounting Standards Board and modified credit rating rationale by rating agencies. These best practices include reporting transparency, inclusion of all policy stakeholders in the policy making process as well as consistent alignment of costs and benefits among pension system participants. Potential bottlenecks to reform are discussed and together with some suggestions to overcome those.

Chapter 2: Literature Review

The topic of this dissertation lies at an intersection of public policy, political science, public finance, and political economy, drawing on research into the collective action problem, its resolution mechanisms, as well as new institutionalism theories of policy making and challenges of public representation (principal-agent). Industry reports on public pensions and government accounting are used to illustrate and quantify the real day-to-day consequences of key pension policy decisions. Socially constructed policies and accompanying rhetoric - important aspects of the pension policy discourse – receive brief treatment.

Collective Action

It is a common *a priori* belief that collective action challenges within common pool resource systems are expected to lead to the tragedy of the commons (Hardin, 1968), depleting resources and undermining sustainability over multiple generations. The collective action theory has evolved to explain structural causes of this frequent empirical reality, such as informational asymmetry, participant inertia, short time horizon of decision makers, mismatch between costs and benefits and propensity of participants to free ride, to name a few. Corresponding policy solutions to mitigate resource mismanagement at the aggregate level include instituting coercive laws (institutions to control behavior) and taxes or perks aimed at altering individual incentives (Hardin, 1968; Olson, 1965).

The “Big Challenge” (Dougherty and Miller, 2010) of sustainable policy design is to create policy solutions that are attractive both at the individual level of the beneficiaries as well as at the larger level of the sponsoring community over the long run, as illustrated in the matrix below:

Figure 2: Impact of Policy Design on Individual Beneficiaries and the Sponsor

	Impact on Sponsoring Community	
Impact on Individual	**Positive**	**Negative**
Positive	Win-Win (I)	Win-Lose (II)
Negative	Lose-Win (IV)	Lose-Lose (III)

Adapted from: (Dougherty and Miller, 2010).

A challenge is to design policies attractive for both beneficiaries and the sponsoring community at large (cell I) and avoid policies the impact of which would be negative for both (cell III). This can be accomplished only if both constituencies – beneficiaries and sponsors – are represented throughout the policy making process. Absent transparent representative institutions governing policy, neither of the key constituencies is likely to self-moderate.

Normally, institutional collective action (ICA) dilemmas remain very pronounced in the fragmented systems of the American government where decisions by one independent formal authority often fail to consider costs and/or benefits imposed on other members of the system (Feiock and Scholz, 2010). In these fragmented systems of decision making, which include metropolitan governments in the U.S., ICA resolution mechanisms such as networks, joint projects and/or partnerships may provide an alternative solution to reshape motivations of actors in a way that minimizes negative externalities of decisions by any one agency or group of agencies on others (Feiock and Scholz, 2010). However, usefulness and applicability of these ICA conflict resolution mechanisms may be limited in situations where

mutually preferred outcomes (policy equilibrium) may not exist (Jones, 2010), or their existence may not be obvious to key system participants.

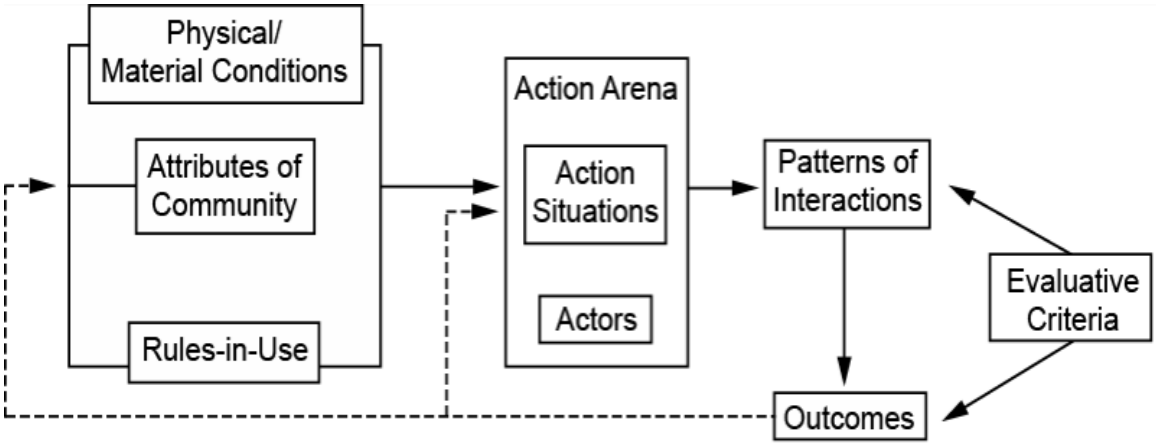
Given this theoretical context, success stories of overcoming collective action challenges in some way constitute an empirical irregularity and deserve a thorough investigation (Ostrom, 2000). The Institutional Analysis and Development (IAD) framework has evolved from intensive field studies and laboratory experiments and helped identify key features – design principles - of successful common pool resource systems/partnerships (Ostrom, 2000; Poteete et al., 2010). These design principles foster development of organic institutions from within the subsystem and feature:

- communication channels and mutually agreed upon self-monitoring conflict resolution mechanisms
- repetitive as opposed to one-shot interaction between participants to encourage cooperation and reciprocity and foster trust
- congruence between benefits and costs
- inclusive processes for making rules
- institutional change (reform) originating from within the system rather than externally imposed by a third party, which maintains legitimacy of resulting institutions and encourages collaboration (Poteete, Janssen and Ostrom, 2010).

The IAD framework offers a *conceptual map* to identify key components of decision making and to analyze, explain and predict behavior within institutional arrangements. Behavior of relevant actors may be explained and predicted by paying careful attention to the micro-

foundations that subsequently inform public policy.[3] Figure 3 illustrates these key components and how they relate to each other.

Figure 3: IAD Framework



Source: (Ostrom et. al., 2010).

As seen in the path diagram above, biophysical condition of the subsystem, attributes of the community, rules-in-use and dynamics within an action arena are interrelated via complex patterns. Interactions among key players and policy outcomes are affecting and being themselves affected by norms and evaluative criteria within the subsystem (Ostrom: 2007).

Utilizing key IAD framework categories helps make sense of the institutional dynamics of the public pension policy process. For example, biophysical conditions encompass such concepts as the general wealth of the tax base, whether this tax base is growing, declining or concentrated in a particular industry or a few large taxpayers, the extent to which the tax base is urban or rural, densely or sparsely populated in the like. This is roughly what rating agencies such as Moody's and Standard and Poor's refer to as "the strength of the tax base."

[3] *Micro-foundations* are incentives that inform individual or group level choices. Micro-foundations are specific to "a policy choice environment including principal policy makers and their roles…possible outcomes…and payoffs…and strategies policy makers employ to achieve outcomes (Polski, 2003, p. 3).

Attributes of the community include such concepts as the extent of unionization of municipal employees; history of the relationship between unions and politicians and the dichotomy of the relationship between plans beneficiaries and their sponsoring employers: generational and residential aspects, willingness to tolerate intergenerational equity, what local business community offers their employees in terms of retirement packages, and the like.

Rules-in-use refer to statutes and policy documents (written as well as unwritten norms) specifying pension benefits, allocation of pension funds for investment, actuarial assumptions as well as less tangible management practices such as level of professionalism, risk tolerance and moral attitudes regarding strength of entitlements.

Action Arena

A key component of the IAD Framework presented in Figure 1 is an "action arena," which refers to the social – or political - space where individuals interact and make decisions (Ostrom, 2007). "Unpacking" an action situation means identifying the following:

- Set of participants confronting a collective-action problem
- Sets of positions or roles participants fill in the context of this situation
- Set of allowable actions for participants in each role or position, and the level of control that an individual or group has over an action
- Potential outcomes associated with each possible combination of actions
- Amount of information available to actors
- Costs and benefits associated with each possible action and outcome.

Although physical and material conditions of different states and localities may vary, the menu of action situations related to municipal pension policy is likely to be limited, predictable and comparable across different contexts because the "rules in use", incentives

major actors face and their patterns of interaction are similar. Action situations are also likely to evoke predictable patterns of behavior by participants. Action arenas of pension policy – at the state and local level – are the major unit of analysis for this research.

Actors

Participants or actors can be either single individuals or groups.[4] Actors vary in: 1) the way they acquire, process, and retain information (Ostrom and Ostrom, 1971); 2) their subjective preferences towards outcomes (Buchanan 1979); 3) processes used to select actions; and 4) resources (Poteete, Janssen and Ostrom, 2009). Actors have an incentive to undervalue costs of their preferred alternatives to others, especially if decision-makers ("gate keepers" of public policy) themselves do not incur costs as a result of their choices (Buchanan, 1979). The two costs often underplayed in policy-making are "the burden placed on society by the coercive collection of funds (taxation) and the opportunity cost of the funds" [5] (Payne, 1991: 38).

Types of actors engaged in pension policy making are broadly comparable across different contexts. Patterns of interactions among actors are generalizable; outcomes of interactions are quantifiable as policy decisions related to benefit design and funding of public pensions. Impact of these decisions is also visible and quantifiable as unfunded pension liabilities and annual funding requirements for pensions.

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[4] Commonly, four assumptions are made about individual behavior: 1) *self-interest* assuming clear preferences; 2) *rationality* or ability to rank alternatives in a transitive manner: 3) *utility maximization* or adopting strategies that result in highest personal net benefits (Ostrom and Ostrom, 1979); and 4) levels of available *information*: conditions of certainty (deterministic), risk (probabilistic) and uncertainty (allowing for learning) (Ostrom and Ostrom, 1971). By contrast, the IAD framework assumes that individuals are *boundedly* rational – intendedly rational but only limitedly so (Ostrom, 2007) – and are fallible learners varying in terms of their personal commitment to keeping promises and honoring forms of reciprocity extended to them (Ostrom, 2000, 2007).

[5] *Opportunity cost* here relates to the benefits that would accrue from privately spending the same money.

Rules and Governance

Government institutions are formally designed and delineated and frequently perceived as tangible (through associated buildings that serve respective functions). By contrast, governance structures may be both formal (statutes) and informal, as verbal agreements, or simply rules de facto in use among actors. Sometimes informal agreements "just happen" as a result of repeated interactions among actors driven by trust (or mistrust) between actors. Informal networks may involve coalitions of unlikely actors from different levels and branches of government. Because informal institutions are less visible, potential resistance to policy design or implementation staged by such coalitions may be difficult to perceive and overcome.

Governance arrangements may serve to promote successful policy outcomes or, by contrast, hinder optimal policy making. This is because institutions – often "invisible" and taken as given by relevant actors – mediate policy-making by either empowering or disabling participants in the policy debate from having any significant impact on policy outcomes. Institutions control outcomes via shaping the policy discourse, such as setting the agenda and defining the menu of policy alternatives (quote). The role "invisible" governance arrangements play in shaping the menu of available policy alternatives is often misunderstood and underappreciated.

Original design and subsequent modification of governance structures and rules occurs in an environment of political struggle of multiple interests over who sets the constitutional rules and therefore bears the decision and external costs of government action (Jones, 2010). Governance structures affect and are themselves affected by the characteristics of the action arena.

Institutions are not neutral. They are gate-keepers filtering ideas. Since there is much to be gained politically from either preserving or modifying existing institutions, actors and their

coalitions constantly seek to solidify (institutionalize) and defend their systemic advantages by influencing the shape of resulting institutions. Thus in order to respond to the question "Who has the ultimate influence on public pension policy outcomes?" it is first appropriate to examine which actors (or coalitions of actors) have a controlling number of votes within the key governing institutions. Second, examination of incentives of dominant actors or their coalitions explains the preferred policy action of the controlling block, which incidentally is often the policy either enacted or very difficult to modify.

Principal-Agent Dynamics

Principal-agent problems often arise "from difficulties in aggregating preferences [at the level of] the institutional unit and preference divergence between members and representatives authorized to negotiate on collective agreements" (Feiock, 2007). Successful resolution of collective action conflicts in such situations depends on the extent of preference integration (and representation) among the members of the composite unit as well as on the institutional capacity for conflict resolution when principal and agent preferences diverge (Feiock and Scholtz, 2011). While principal-agent relationships are most likely to succeed in the context of full disclosure of information, transparent policy-making and clear lines of authority and responsibility, public pension policy making occurs in a context of fragmented federal, state and local politics, incomplete and distorted information and opinions informed by prior beliefs and group loyalties.

Are agents responsible for public pension policy acting in the interest of the principal(s)? As seen below, more often than not the exact opposite is true: pension beneficiaries tend to have a disproportionately large leverage over pension policy at the expense of taxpayers. Moreover, agents (either elected or appointed) are themselves designing systems of incentives on behalf of – and with the implicit approval of -- the principal(s) that tend to disproportionately benefit the agents themselves.

Such lopsided policy design may lead to unintended results whereby the financial sustainability of a pension plan is compromised in the long-run, hurting the same beneficiaries the plan originally intended to protect despite (or due to) trustees' best efforts (the lose-lose cell in the Big Challenge matrix on page seven). This is a classic example of overharvesting where uncontrolled intensive short-term utilization of a resource (overly generous benefits) contributes to resource depletion in the long-run, undermining health of the community dependent on the resource for survival.

In this case, plan beneficiaries that expect to receive benefits upon retirement may find their pension funds depleted at the very time their pensions are due to them. It is then truly in the interests of all parties – public employees, elected officials, and taxpayers – to see to it that both pension plan funding and fund outlays occur in a transparent, responsible manner with input from all relevant parties to ensure public pension sustainability in the long-run as well as accountability and protection of the public interest.

Despite this seemingly common ground, why are agents failing their principals and why do institutions get the blame? This is because principals and agents' incentives are misaligned. This asymmetry is further strengthened by the system of incentives embedded in current institutions via which public pension policy is determined, leading to suboptimal policy outcomes. The normative implication is that taxpayers' – and long-term beneficiaries' -- interest in sustainable operations of their respective governments (here in the form of transparent pension benefits and responsible funding decisions) is underrepresented in both the pension policy process and its outcomes. Designing governance systems that allow for representation of multiple preferences, where all parties are included at the decision-making table in a transparent setting and where asymmetric/preferential disclosure of information is avoided would fit the criteria of successful design principles.

Additionally, introduction of communication channels (especially face-to-face) among participants is often associated with making the policy process more inclusive and policy outcomes more globally optimized (i.e. in the interest of all), building trust and ensuring more uniform representation of preferences. For example, introduction of "cheap talk" [6] among participants in experimental settings seems to encourage cooperation among parties (Ostrom, 2000).

Designing governance systems, which allow for representation of multiple preferences and where all parties are included at the decision-making table would fit the criteria of a successful design principle. Such governance systems may potentially empower actors (some of which may be institutional in nature) to have an incentive to work together to achieve outcomes that would be preferred to the best outcomes actors could achieve acting individually (Feiock and Scholz, 2010). This collaborative context of policy-making helps remove barriers to resolving collective action *dilemmas* (Feiock and Scholz, 2010), which short of their successful resolution have a potential to disintegrate into full-blown zero-sum conflicts.

Public Pensions: Principals

While the exact menu of actors may vary across different contexts, depending upon the specific level of government and respective individual statutes guiding each, some features are common. As a rule, each government – state or local – is the ultimate payer of its respective employee pension obligations (bonded and balance sheet). Since local US governments theoretically have ample taxing powers on property within their jurisdictions (in certain cases somewhat bound by voter approved limitations but ample nevertheless), ultimately it is the taxpayers residing in these jurisdictions that are responsible for any potential shortfalls in public pension funds. While states are less dependent on property

[6] "Cheap talk" means that verbal agreements are not enforced (Ostrom, 2000).

revenues and to fund operations rely instead on a mix of sales, income and other taxes (as well as intergovernmental transfers), state residents are also the ultimate payers of public pension obligations of their respective states. Thus, it is appropriate to talk of the general public (individual taxpayers) as a key principal of the public pension policy.

Taxpayers

Taxpayers are *a priori* expected to favor lower taxes and a comprehensive, high quality, reasonably priced service mix as well as a good quality of life from their respective governments. Public employee pension benefits are included in the costs of municipal services and should ideally be accrued at the time of active employment to ensure intergenerational equity. On average, taxpayers may be expected to "shop around" and vote with their feet if the quality of services where they live degrades or costs (taxes) increase without a corresponding improvement in services. Taxpayers may be more likely to move out to a cheaper, better quality location in areas where multiple adjacent governments and territorial units actively compete for new businesses and residents (Craig, 2011).

Public Employees

Public employees as a group are also principals. Public employees (actives and retired) have a contractual agreement with their respective government or state employers according to which they contribute part of their salary towards the pooled pension fund retirement account (for defined benefit plans) with the expectation of receiving specified benefits at the time of retirement. Public employees as a group de facto delegate the authority to manage and oversee retirement accounts to their respective pension Boards of Trustees due to the way defined benefit plans are structured. It is their expectation – and their local elected officials' implied obligation – that the pension account will continue to be

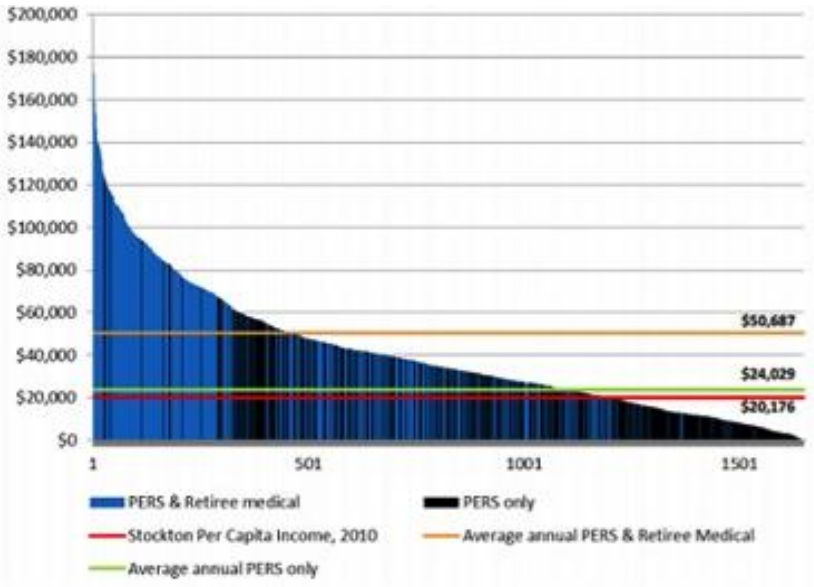
funded on an ongoing basis through budgetary contributions specified by City Councils and through investment returns on the fund assets in addition to member contributions.

Public employees may *a priori* be expected to favor pension plans with more certain payouts (defined benefit over defined contribution), higher overall pension benefits and cost of living adjustments (COLAS), lower (or no) copayments, financial formulas that retain experienced employees (DROP accounts), early retirement age, etc. All these plan design options tend to increase the overall cost of pension plans. In cases where public employees are also residents of the political unit, they may be concerned with taxes as well. However, in this instance, benefits are highly concentrated to one group (public employees), while costs are dispersed over a large number of taxpayers, so in the mind of public employees concentrated gains from pension policy are likely to topple concerns over the dispersed costs of an increase in taxes necessary to fund enhanced benefits.

Public employees are themselves far from representing a monolithic group as far as benefits are concerned. While exact data is difficult to come by due to a well-orchestrated effort by most public pension funds to keep individual pension data private and thus hidden even from the sponsoring state and local entities' finance staff, based upon anecdotal evidence in localities where such data was made public due to court orders – most recently the cities of Bell and Stockton, CA – it is reasonable to assume existence of a stratified benefit structure among different groups of employees based on dates of hire and also on seniority.

Figure below illustrates the compensation stratification for the City of Stockton's, CA public employees, while also putting total compensation of public employees in the broader context of what private employers are paying locally:

Figure 4: Annual Pensions for Retirees With and Without Retiree Medical, City of Stockton, CA



(Source: Long, 2013)

Per capita income may understate the earnings statistic because its calculation includes children and non-working individuals. Instead a more comparable metric for individual income could include estimated median earnings for males and females, at $30,351 and $20,880, respectively.[7] While local pension benefit of $24,000 appears in line with the area averages, total benefits including retiree medical coverage are double that. These numbers demonstrate that Stockton, CA public employees are well-compensated compared to their private peers when total compensation is taken into account.

Eyeballing the distribution, more than two thirds of retirees are receiving amounts above the average pension benefit; a sizeable minority receives more than four times the average annual benefit. This illustrates how focusing on the average pension benefit fails to tell the complete story of how benefits are distributed across public employee groups, which may be

[7] Estimates for 2010 from http://www.areavibes.com/stockton-ca/employment/ accessed on September 24, 2013

far from homogeneous. Unfortunately, comparable distribution for the City of Houston, TX is currently not available for privacy concerns cited by the pension systems who have a monopoly on this data.

Without disclosure of individual level data by the pension funds staff to state and local government plan sponsors it is impossible to verify how prevalent and/or pervasive the stratified pattern of compensation referenced above is (or is not). It is only possible to hypothesize that the senior echelon of public employee leaders (policy insiders with publicly unchecked access to how benefit rules are determined) is likely to disproportionately benefit from compensation structures, including pensions, compared to the rank and file employees who often receive modest pensions consistent with their work history. It is thus fair to assume a priori that public pension reform would likely benefit from first reviewing compensation structures for the top tier of public employees prior to making dramatic compensation changes across the board. More empirical data currently unavailable would be needed to verify this hypothesis.

As seen above, the preferences of two key principals of public pension policy – taxpayers and public employees – broadly speaking appear to be in direct conflict, which gives this problem an appearance of a zero-sum game. However, this is not necessarily true. In one instance, taxpayers and public employees often share the same concern. Namely, both the taxpayers *and* public employees want their government operations to be sustainable or structurally balanced over the long run to avoid persistent government deficits, deterioration of services and, in more grave circumstances, municipal bankruptcy that might negate any pension contracts.

However, this claim rests on an important assumption that public employees reside within the service and taxable jurisdictions of the government entity sponsoring respective pension plans. While this may be true for most state jurisdictions, this may not always hold for local

governments, varying widely across localities. For example, in the City of Houston (COH) most municipal employees live within the city limits, while a significant number of the COH public safety employees reside outside the city, according to the interviews with public officials familiar with the matter.

Potential mobility of employees at retirement also matters – if public retirees' are less "rooted" in a community and are able to move out to a different location while collecting a lifelong annuity from their former employer, they will be less concerned about the financial impact their and their peers' retirement package has on the municipal plan sponsor. In such situations, it may be difficult to find common ground between retirees and taxpayers.

Retirees' concern about financial sustainability of the public pension plan sponsor will be conditional on the likelihood of insolvency of either the sponsoring government or the plan itself, or both, potentially leading to bankruptcy or any other debt restructuring, including pension contracts. If the likelihood of municipal bankruptcy, or any other debt restructuring, is high, retirees may be more concerned about financial solvency of the public plan sponsor, and as such willing to either cash out their pensions or accept benefit adjustments, such as COLAs. If the likelihood of bankruptcy is remote, retirees are likely to support all benefit enhancements, with little regard to the sponsoring government long-term solvency, especially in cases where retirees no longer reside locally.

Structurally balanced financial operations imply that current revenues raised suffice to cover current operations. Structurally balanced pension systems imply that benefits are funded as they are accrued to employees so that accumulated pension assets suffice to cover pension benefits when they are due. Any stress in the financial system (unexpectedly low revenues or unexpectedly high expenses) is likely to jeopardize the sustainability of overall government operations. Since pension payments increasingly constitute a fairly large portion of government budgets, it is then in the common interest of taxpayers and public employees

alike to ensure that pension systems are consistently funded and responsibly managed over the long run to avoid any unpleasant budgetary surprises. It is on this topic that cooperation and collaboration between taxpayers and public employees is not only possible but desirable.

However, the general public as a rule does not engage in direct negotiations with public employees regarding the quality of their pension benefits and corresponding tax rates. Taxpayers and public employees delegate the authority to conduct negotiations on their behalf to elected officials and appointed bureaucrats described below.

Public Pensions: Agents

At the municipal level, key delegates are the Mayor and City Council elected by the general public (which includes public employees), professional organizations of public employees, pension fund Boards of Trustees (with varying mixes of elected and appointed representatives) and the state legislature. These agents have different incentives which inform their preferred alternatives about pension benefit design and funding.

The state plays a key role in metropolitan policy making due to its unique influence on policy via funding, imposing legal constraints and mandates, and serving as a final arbiter in specifying statutory authority (Jones, 2010). As a result, the state must be considered as an actor in ICA situations and the development and maintenance of mitigating conflict resolution and monitoring mechanisms (Jones, 2010).

Elected Officials

Elected officials, assumed to be self-interested and occupied with reelection prospects (Mayhew, 2004), normally have a short time horizon and tend to think in terms of "administrations" rather than long-term. They will find it attractive to pass tax rebates or enhance pension benefits for which they can take electoral credit today but the true price tag

for which will not be known for many years since by then they will no longer be in office and thus not electorally accountable. Kicking the pension funding can down the road is a very attractive, rational approach to governing by politicians. Transitioning current pension plans – most of which are technically insolvent if left unchanged – to financial sustainability would require painful choices such as raising retirement age, trimming benefits (at least for new hires), increasing employee contribution rates, raising taxes, etc. All of these alternatives imply a decrease in the quality of life *today* to mitigate tough choices *tomorrow*. Electorally these alternatives are a tough sell and many politicians chose to take a less risky path and avoid proposing or voting for such dramatic changes altogether.

Motivated by their electoral incentives, politicians are additionally rewarded for "taking positions rather than achieving effects" (Mayhew, 2004). Taking positions to gain votes is a very successful reelection strategy, especially in the public pension debate which is often framed in moral and symbolic terms. Examples of populist positions which tend to be electorally effective are: "standing up for public employees," "ensuring dignity in retirement," "honoring past promises," and the like. All these at their core are morally very sound positions and contractual promises, such as public pensions, have every right – legal and moral – to be honored. However, when politicians resort to such slogans, this often masks their lack of any real policy solutions that could actually ensure in the long-term that past promises be met and retirement dignity sustained and is simply an appeal to a friendly constituent audience.

Often elected officials making decisions about pensions are also expected beneficiaries of these same pensions. For example, council members who are also public employees qualify for benefits they may have political power to alter. The situation is even more acute with the elected trustees of pension systems all of whom are beneficiaries of the plans they not only administer but also design benefits for.

So in a way, public agents are designing pension plans on behalf of the society at large of which they are direct, primary beneficiaries themselves. Politicians/plan beneficiaries may be *a priori* expected to favor generous pensions which would be sustainable for as long as they (or their direct survivors) may benefit from them. Concerns with short-term plan generosity may topple preoccupation with long-term sustainability beyond a reasonable time horizon and concerns with current plan beneficiaries (retirees and current employees) dominate over preoccupation with future employees. Solidarity is normally stronger with current employees and retirees than with potential ("impersonal") future employees, creating a new *insider-outsider* schism which is easier to exploit when evaluating policy alternatives and which is less politically costly.

Elected officials at the municipal and state levels are also subject to lobbying by various professional organizations (such as firefighter and police unions) and industry representatives (such as actuarial firms and investment management funds) that have a personal interest in enhancing benefits and preserving large pools of public pension money available for professional management. By contrast, taxpayers are less organized and their lobbying efforts, if present, are more dispersed.

Given the discussion above, it is surprising that reformist politicians exist at all because willingness to consider reforms of popular public policies, such as pensions, is often politically suicidal. Apparently an anomaly, reformist politicians may be informed by either their truly fiscally conservative ideology or by an honest, somewhat idealistic attempt to preserve public pensions in the long-run in their more sustainable form. While this alone could be a focus of a different project, the explanation of motivation of reformist politicians is beyond the scope of this dissertation.

Due to their short-term horizon, elected officials have an incentive to underfund the annually required pension contribution to balance the budget to either fund favorite projects or

provide tax cuts to their target constituencies. This is because by underfunding pensions politicians gain more budgetary flexibility in the short-term, while they are less concerned with undermining structural solvency of the pension system in the long-run. In an illogical situation, politicians may even choose to balance the budget by underfunding pensions, sometimes granting employees a corresponding benefit enhancement during the same year.

This is a double hit for the pension system: not only is the required annual contribution foregone disrupting the ongoing amortization of accrued liability, but further long-term obligations are incurred with an immediate additional increase in the unfunded liability. To recall from the prior section, any retroactive benefit enhancement disrupts the schedule of payments because prior assumptions according to which pension benefits were previously calculated and funded are no longer valid. A retroactive increase in benefits creates a new unfunded liability that should now be amortized with an *increase* not *reduction* in annually required contributions. In addition, pension plans also need to realize higher future returns to compensate for forgone market returns on the assets missing due to underfunding in each budgetary period.

For example, after the San Diego City Council secured political support by unions to balance annual operations by underfunding the annual pension contribution while simultaneously agreeing to a benefit increase for public employees, the City of San Diego subsequent required pension costs neared 20% of its budget (Greenhut, 2007). Although such decisions are detrimental to long-term pension sustainability, balancing annual budgets by underfunding pensions is a favorite in the arsenal of political tools, especially during tough economic times.

Both the COH municipal and police pension systems have also recently suffered from underfunding their annual pension contributions, as will be discussed in detail in further sections.

In addition, short-term limits, such as those in COH where politicians are elected for two years only with a maximum of three terms and no ability to run again in the future, provide ripe incentives for sacrificing important long-term reforms and decisions in favor of politically attractive short-term strategic choices. Politicians are instead focused on solidifying and growing their electoral coalitions, since their reelection horizon is so short. Also, for local politicians with future statewide office ambitions, alienating solid voting blocs such as public safety is politically dangerous, since these employee groups are both well organized and very politically active at the state level, at least in Texas. As a result, important issues, such as public pension reform, never get fully addressed, instead getting trumped by strategic short-term political interest.

Public Employees Professional Organizations

Most public employees professional organizations are expected to defend their members' group interest by protecting the integrity of current benefits and negotiating on behalf of their members in favor of benefit enhancements and against increases in contribution rates. Professional organizations of public employees will often lobby relevant politicians on behalf of pension beneficiaries in an effort to build alliances and secure favorable votes. The extent of influence of professional organizations varies depending on each particular context.

Professional organizations are also concerned with their own bureaucratic survival – and the budget. In an effort to justify their "raison-d'etre", they are likely to assume extreme positions and rely on propaganda to enlist followers.

Boards of Trustees

Composite institutional agents – Boards of Trustees (Boards) – are key to understanding the dynamics of public pension policy making and its outcomes. The exact composition of the

Boards of Trustees for the COH public pension systems and its impact on how and why benefit decisions are made is addressed in detail in subsequent sections.

In its best practices related to the governance of public employee post-retirement benefit systems, the Government Finance Officers Association (GFOA) notes that trustees of post-retirement benefit funds are expected to be bound by *fiduciary duties*, which can be divided into three categories:

Duty of loyalty: the obligation to act for the exclusive benefit of the plan participants and beneficiaries. The trustee must put the interest of all plan participants and beneficiaries above their own interests or those of any third parties. Regardless of their selection process, fiduciaries must be reminded that they do not represent a specific constituency or interest group.

Duty of care: the responsibility to administer the plan efficiently and properly. The duty of care includes consideration and monitoring of the *financial sustainability* of the plan design and funding practices. By ensuring plan financial sustainability, trustees also protect the interests of the sponsoring entity of the plan.

Duty of prudence: the obligation to act prudently in exercising power or discretion over the interests that are the subject of the fiduciary relationship. The general standard is that a trustee should act in a way that a reasonable or prudent person acts in a similar situation or in the conduct of his or her affairs (GFOA, 2010).

The same GFOA “best practices” state that “proper Board structure and clarity of Board roles and responsibilities that are consistently and fairly enforced promote good governance and provide legal protections for both plan fiduciaries and plan participants. Through prudent management, trustees, individually and collectively, must act in the best interest of all participants and beneficiaries” (GFOA, 2010).

Since among the duties mentioned above is care to ensure pensions are financially sustainable, it follows that Boards also should make their administrative and benefit design decisions taking into consideration all relevant parties, such as taxpayers and different groups of employees. It is thus appropriate to examine who board trustees are, what incentives they face when making decisions and whether there are structural biases in the board composition that might lead to decisions incompatible with the long-term sustainability of pensions plans, respective sponsoring governments, or both.

Normally, municipal Boards of Trustees are created and governed by respective state statutes (and sometimes local laws) to ensure their independent nature and prevent politicians at the local level from meddling with pension funds. Governing fiduciaries set strategy and policy, determine decision-making authority and delegate day-to-day management of the retirement system (GFOA, 2010). As such, the Boards are in charge of overseeing benefits accrual and payments, evaluating and proposing changes to benefit plans, selecting an actuary firm and evaluating resulting actuarial analysis for accuracy of assumptions and projections, selecting an investment management firm and overseeing investment performance of pension assets, etc.

Information Asymmetries Related to Benefit Calculation

Originally intended to strengthen the municipal pension system, in reality such design has a number of inherent flaws. While in many cases the power to govern and modify Boards of Trustees rests with the state, it is respective municipalities that are expected to fund pension benefits for its employees. As local governments struggle to forecast future pension cash flows, they have to do so largely in the dark without all the information available to them and rely instead blindly on the projections given to them by the Boards.

GFOA “best practices” stress that decisions related to pensions must be made “in a fair, honest, and open manner, with information shared among fellow fiduciaries and all interested parties to enhance the quality of the system’s decision-making process. Policies should discourage fiduciaries who are plan participants from voting on matters that advance their personal financial interests, and should provide a mechanism for independent trustees to vote separately on such matters if a conflict of interest affects multiple members” (GFOA, 2010).

Despite these recommendations, real information flow is often quite distorted. Although the Boards are intimately involved with all aspects of public pension management, the information they are required – and normally choose - to publically disclose is rather limited in scope. It is normally aggregate in nature and actuarial projections are static, so that it is impossible to independently verify them or evaluate any potential changes resulting from adjustments of assumptions or actual data differing from its assumed values. The Boards normally fail to share individual beneficiary data with the public citing privacy concerns, which makes it impossible for municipal finance officers to match pensions to the working history of respective employees and make any longevity projections of their own that will directly affect future pension cash flows.

Municipalities also have a limited capacity to check for and prevent potential fraud, or potential abuse of the public pension system at the moment when an employee retires and his or her initial pension is calculated. Benefits are initially calculated according to a variety of formulas which may include such factors as years of service, employee age, final (or average, or two months highest, or two weeks highest, etc.) salary which may be spiked by including unpaid vacation leave and overtime, multipliers, DROP (deferred retirement) accounts, etc. Formulas are complicated and subject to change, so that the calculated pension benefit will depend upon what rules and regulations were in place at the time of the

initial benefit calculation. Two employees with comparable work histories who retired at different times may qualify for different – sometimes by much - amounts of pension benefits depending upon which formula was used at each time. And because this information most of the time is not publicly disclosed, they will never be aware of this inequity.

Given such complexities and potential for system abuse, transparency of benefit calculation is critical, especially since these benefits are effectively paid out of public funds. Taxpayers need reassurances that their money is used responsibly, municipal finance officers need reliable information to forecast and plan for funding pensions over the long haul, and public employees need reassurances that pension benefits are equitable – across space and time - and that public pension resources are not abused by a selected few to the detriment of the many generations of benefit beneficiaries. Although keeping individual benefit formulas transparent appears to be advantageous to both taxpayers and beneficiaries at large, in reality this information is kept confidential by the Boards.

Discount Rate

Discount rate is a variable used to determine the present value, or today's cost, of pension promises. The higher the selected discount rate, the lower the present value of pension obligations. Issues relevant to the selection of the discount rate are discussed in detail in Chapter 2.

The Board works with an actuarial firm to select a recommended discount rate. The COH has zero leverage over the selection of the discount rate. All projected cash flows required to keep the pension system financially sound are based on the discount rate selected by the actuarial firm upon the recommendations of the Board. The actuarial firm is not required to disclose individual beneficiary information provided to it by the Board to the COH, the

pension systems' sponsoring entity. The actuarial firm normally produces one static analysis of the pension system without varying the agreed upon discount rate.

COH as the sponsor of its three pension systems is unable to conduct alternative forecasts of projected benefit payments and their funding requirements for lack of access to individual level data.

Composition of Board of Trustees

GFOA "best practices" specify that while the size of the Board is expected to vary depending on the complexity of the system (optimally between seven and thirteen members), most effective Boards will boast members that possess a mixed menu of skills, competencies and behaviors, as well as knowledge of sound decision-making principles. Board compositions should ideally reflect the varied interests of those responsible for funding the plans (the sponsoring entity) and should include participants and retirees, citizens of the governmental unit, and officers of the plan sponsor, as well as independent directors. This is deemed necessary to assure balanced deliberations and decision-making (GFOA, 2010). Notably, these "best practices" are advisory in nature and not enforced.

In reality, in many if not most cases, the majority of Board members are elected by either active or retired employees. This makes pension trustees partial to any discussion of benefit design. Not only will any benefit enhancement affect the trustees directly by adding to their personal benefits, but they will also be able to take electoral credit from the friendly constituencies they represent, not unlike politicians discussed above. This is an example where agents are designing their own incentives on behalf of the beneficiaries and the public, in the grey area of undisclosed pension information. Naturally, elected trustees are expected to maintain increased levels of benefits, reduced contribution rates and nondisclosure of pension information in cases where it is attractive to beneficiaries.

Appointed trustees – expected to be more objective despite the fact that they are also public employees and have a personal interest in benefits! - are sometimes excluded from serving on critical subcommittees of the Boards.

To sum up, most of the agents responsible for designing, implementing and overseeing public pension policy are direct beneficiaries of this same policy, either as current or future retirees themselves or elected officials exploiting this policy domain for electoral gain. Most of these agents are hardly expected to self-moderate, especially in the environment of fragmented federalist policy making with incomplete and distorted information and unclear lines of accountability.

Socially Constructed Design of Pension Policies

Pension policies are socially constructed and have clear social consequences. Social construction refers to the intentional creation within the political discourse of "target population" groups deemed more or less deserving of policy benefits. Socially constructed policy designs contain symbolic messages conditioning policy perception and response by a target population (Schneider and Ingram: 1997).

Socially constructed images and rhetoric evoke strong emotional reactions and defense mechanisms, complicating objective (factual) evaluation of issues. Public reaction to policy design varies depending on whether its beneficiaries are socially regarded as "deserving" of the benefits they receive. For example, public pensions have been historically constructed with a strong moral component of entitlement. Thus pensions – technically a component of total compensation for public employees – tend to enjoy both strong legal protection and an additional moral backing as "the right thing to do".

Policy dialogue often disintegrates because key actors – or groups of actors – inhabit different socially constructed realities. Politicians, public employees and taxpayer advocates

routinely fail to agree on such seemingly factual key concepts as the discount rate (used to calculate pension liabilities), strength of contractual obligations and degree of entitlements. Due to varying socially constructed perceptions, key actors routinely refuse to recognize the extent to which current pensions are underfunded.

Socially constructed policies also have strong feedback mechanisms in that “policies produce politics” (Pierson, 1993). Key examples of feedback mechanisms include: 1) changes in social groups and their political goals; and 2) transformation of state capacities (Skocpol, 1995). Public pension policy has also been consequential in shaping global capital markets industry, initiating an additional public-private-public feedback mechanism as discussed below.

Over time, a large block of the electorate consisting of municipal and state employees has evolved as a direct consequence of pensions offered to public employees. Pension policies supply these target populations with both resources and incentives to overcome the collective action problem discussed above (Pierson, 1993). Pension benefits (policy “spoils”) incentivize public employees to mobilize to protect their benefits. Pension policy is thus catalyst for organized political action (Pierson, 1993) by public employees.

At least in the short-term, there may be real costs associated with pension reform traced to specific groups of key actors, such as: 1) potentially reduced benefits for current and future employees, 2) loss of elections by public officials; 3) reduced political clout by fund administrators and labor unions in case of institutional reform; 4) and altered market dynamics for institutional money managers with winners and losers in terms of asset classes and investment strategies. Since modifying pension policy design has tangible consequences, key actors are likely to mobilize to either sponsor reform or stall in favor of the status quo, resorting to socially constructed rhetoric and imagery to serve their ends.

Proposed changes to policy design are likely to threaten and trigger efforts for self-preservation of current institutions evolved to administer and facilitate the implementation of the current menu of policies. For example, shifting from guaranteed pension annuities to personal savings accounts will likely reduce over time the role of pension funds and necessitate an altered allocation mix of pension investments. Thus pension reform is likely to encounter resistance from bureaucracies and public institutions that sprang up to enjoy a prominent status due to current pension policy design.

Public pension policies have also shaped the capital markets landscape, which evolved over time to serve the needs of large institutional pension fund investors. Just the top 109 largest public pension funds collectively manage over $1.3 trillion in assets (Pyramis Global Institutional Investor Survey, 2012), providing steady business to institutional money managers, investment advisors and private equity firms. Changes in benefit design may necessitate adjustments to pension fund asset allocations, elevating some asset classes at the expense of others, potentially wreaking havoc for business models of some key actors in the institutional investment industry. These "target populations" - private beneficiaries of public policies - are also incentivized to become key political actors to defend current pension policies, illustrating the public-private-public feedback mechanism of pension policy.

Summary

The following implications stem from the discussion above:

> *Implication 1*: Micro-foundations (self-interest) inform preferences of key actors, influencing their preferred policy alternatives.
>
> *Implication 2*: Different governance structures lead to different outcomes within similar contexts.

Implication 3: Preferences of actors in key roles ("gate keepers") are overrepresented.

This research is an original attempt to identify successful design principles in the policy arena of public pensions by focusing in particular on governance structures and funding mechanisms. In the process, key actors and their preferences are identified and examined.

Identifying whose preferences inform public pension policy is especially relevant because dedicating current dollars to public pensions implies not only foregone present day alternatives but also mortgaging the future spending capacity of governments, potentially limiting policy options of future generations.

Likewise, any potential reform of current pension plans is likely to bring about a broader discussion of the public pension compensation structures, such as salary and job security issues. Some of these may encounter resistance from civil servants and their professional unions. Returning to financial generational equity may also mean bumping up salaries short-term as pension contributions get smaller – thus increasing the current spending category in the budget. As a result, total government spending may increase in any case, only categories may differ.

Since this is the first time the IAD framework is applied to this policy area, this dissertation examines the overall applicability of this framework to public pension policy (and public finance more broadly).

Chapter 3: Research Design

Similar to many other studies utilizing the new institutionalist theoretical framework, this dissertation relies on multiple research methods including in-depth case studies, financial sensitivity simulations, and interviews with key public officials and industry experts familiar with the topic, as well as statistical intervention analysis of pension systems, when data is available.

The institutional approach refers to studies that examine impact of institutions – formal and informal – on policy processes and outcomes. By examining action situations within which actors interact, constrained or empowered by institutions, it is possible to single out structural/systemic features across different contexts, state and local. Major decisions on pension policy design and funding are decomposed to identify impact of actors or groups of actors on the dependent (action) variables of required pension contributions and plan funding levels. Intervention analysis provides a statistical tool to quantify the impact of policy decisions related to benefit design and funding.

Public pension policy is a multi-faceted complex phenomenon in which a host of actors tend to interact through various venues at multiple levels of government, and with different degrees of coordination and autonomy. These interactions occur simultaneously or sequentially --- over varying time periods. These known factors can impair efforts to determine causal relations. For example, although it is common in the Western research tradition to assume that causality works forward in time, in the case of public pensions, it is reasonable to assume policy actors form expectations about the future effects of potential changes to pension policy on their constituencies: they act today in anticipation of these possible effects tomorrow. As such, even assuming a temporal causal arrow from past to future may be problematic to an extent.

Actors

As discussed above, public pension policy has human consequences, with pension benefits understood interchangeably with individual livelihood at retirement. Concerned actors have well-formed and strong opinions on the topic. Opinions are informed by social construction (Ingram, Schneider, and deLeon, 2007), where public safety personnel, for instance, tend to evoke a particular image in the eyes of the general public, with the discussion frequently framed in normative terms. Actors also have strong varying opinions on how enforceable contractual obligations are and even on what constitutes the contractual obligations. Across different states there is significant wiggle room for interpretation as to whether only pensions are contractual obligations, whether these contracts also apply to cost of living adjustments and whether new employees' benefits have the same protection as those for current employees and retirees (Spiotto, 2010). Most opinions are primarily informed by the loyalties of actors (their personal self-interest as well as preferences of their constituencies), so it is appropriate to assume any information will be perceived asymmetrically and discounted according to preexisting beliefs. This renders obsolete the assumption that more information leads to learning and potentially to adjustment of outcomes.

Given these complexities of the public pension policy arena it is unreasonable to expect isolation of one mechanism of policy making which accounts for most of the variance. A more realistic goal is to break down the broad policy area into its components – action situations - for which testable hypotheses may be generated. This design is better suited for gathering sufficient evidence to test the key hypotheses while ruling out alternative explanations.

Action Situations

This study assumes sustainable, organically designed pension policy is a critical component of overall government financial sustainability. There are two quantifiable variables best suited to measure financial sustainability of public pensions. These are: 1) the size of the unfunded liability; and 2) annual pension contributions as a percentage of payroll (Diamond, 2010).

Terms

In addition, there are important terms (concepts) associated with these measures. The term *unfunded pension liability* (unfunded actuarially accrued liability) refers to the difference between the accrued actuarial liability (i.e., the accumulation of all earned pension benefits) and the amounts of available assets in the pension trust fund (Newton, 2008).

Annually Required Contribution (ARC) is an actuarially computed annual pension expense sensitive to many actuarial assumptions, such as the choice of a discount rate discussed below, longevity of employees and their qualified survivors, projected benefit changes, etc. ARC includes: 1) the cost of new accrued benefits that year; 2) amortized payments to reduce unfunded liabilities (due to insufficient amount contributed in prior periods); and 3) amortized payments to make up actuarial losses. ARC being an accounting concept, states and local governments are not formally required to contribute full ARC to fund their respective pension obligations. ARC is not formally a binding funding requirement.

At the same time, making annual pension contributions in amounts close to the computed ARC helps prevent unfunded pension liabilities from crawling up, since pension obligations are funded in a consistent fashion. Nevertheless, full funding of the ARC that would consume a large portion of the operating budget may not always be feasible.

When discussing pension sustainability, it is necessary to consider both variables – the size of the unfunded liability and the ARC – because there are situations when annual payments required to keep pensions well-funded become so large as to represent an unsustainable burden on operating budgets of governments, jeopardizing provision of essential services. What is considered a "sustainable" percentage of payroll varies across different government contexts.

Pension plans also vary in their maturity, featuring different ratios of actives to retirees. More mature plans are likely to require higher ARC as a percentage of payroll. In other words, a sponsoring government may be expected to pay a higher portion of its funds in pensions and other benefits due for past services in addition to paying for salaries for current services.

Measures

There are several action situations that directly influence the size of the unfunded pension liability. Specifically, these are decisions regarding annual contributions to the pension funds (as discussed above), benefits design (payments out of the system), and determination of the discount rate and investment performance of pension funds. The basic model is a simple accounting equation, where unfunded liabilities equal the difference between pension contributions and benefit payments, taking into consideration investment performance of fund assets:

UL = C – B +/- I

Where, UL = unfunded pension liabilities; C = contributions; B = benefit payments; and I = investment performance of the fund.

As seen from the equation above, unfunded liabilities may run amok when one, two or all three conditions are true: 1) pension contributions are too low; 2) pension benefits are too

high: or 3) or investment performance of the fund is lower than expected. While investment performance is closely linked to the overall market performance largely outside direct control of decision makers, decisions regarding benefit structures and pension contributions are actor driven and lend themselves well for use as primary action variables for this study. Determination of the discount rate is also a key action variable because fund contributions are calculated on its basis.

To assess the relative impact of the unfunded liability a different variable is commonly preferred. The *funded ratio* refers to a ratio between the actuarial value of assets and actuarially accrued liabilities, indicating the extent to which the pension plan is funded. Thus this statistic relates the size of the unfunded liability to the overall size of the pension system. Until recently, the funded ratio has been most widely used by financial analysts, such as rating agencies, to compare across different state and municipal pension systems (Hampton et al., 2008).

Since 2012, rating agencies have been increasingly shying away from relying on sponsor reported funded ratios to make across-the-plan assessments, focusing instead on the net pension liability calculated in-house, as discussed in sections below.

This is because the funded ratio is very sensitive to a number of actuarial assumptions discussed below and if public entities chose to change their accounting methods and assumptions from one time period to the next, it would be difficult to understand the multiyear trend in pension funding for a single public entity (Benton, 2009). Thus it is best to apply caution when using the funded ratio for across-the-plan (or even temporal within-the-plan) analysis.

Analysts aiming to assess a pension plan sustainability need to look “behind” the funded ratio, spelling out who sets assumptions and within which context of policy making. For political and/or personal reasons key decision-makers may want to manipulate actuarial

assumptions to arrive at a favorable funded ratio statistic reported on the books to generate public support for a particular policy action, such as benefit enhancement (or reduction). It is also possible to envision instances when a seemingly healthy funded ratio may mask an underlying problem with the pension plan.

For example, a funded ratio of 80 percent calculated at a 4.5 percent discount rate indicates that the pension system today set aside more money relative to its respective liabilities compared to a system that boasts a funded ratio of 80 percent calculated at an 8.5 percent discount rate. This may be because the second system has a more aggressive investment strategy. If the second system succeeds in meeting its investment target, it may not experience financial hurdles. If its investment returns fail to materialize in the long-run, the second system would have been better off financially assuming a lower discount rate.

Notably, rating agencies incorporate into the methodology the funded ratio statistic in the broader context of financial sustainability. They consider the size of unfunded pension obligations to the scale of issuer's resources, in other words, to the relative ability to pay measures, such as government revenues and economic base (Van Wagner and Blake, 2012). Pension contributions as percentage of payroll or as percentage of total budgetary expense would provide one such measure. Pension contributions must further be divided into the normal cost of the plan (price of benefits accrued within any budgetary period) and the costs of amortization of the unfunded liability, which is what it costs to pay off the unfunded liability in any given period (closed or open).

For smaller plan sponsors participating in pooled investment funds, their respective portion of unfunded liabilities is expected to be attributed to their balance sheets going forward. This is a dramatic change in terms of reporting for plan sponsors and may significantly increase the reported debt burden for respective governments (GASB 68).

In its 2012 *Request for Comment*, Moody's Investors Service considered generating a common metric to jointly account for bonded debt and unfunded pension and health obligations. The rationale behind this was an attempt to scale pension expense to the sponsor's ability to pay in the context of other long-term obligations. A ratio of unfunded liability to the taxable value of the issuer, similar to the calculation of the traditional general obligation debt burden, could constitute one such metric (Van Wagner and Blake, 2012).

In its most recent publication (Van Wagner and Blake, 2013), Moody's signaled its intention to continue to account for bonded debt and unfunded pension obligations separately instead of merging them into one common metric. However, the rating agency will treat accrued pension debt as a debt-like obligation, incorporating these liabilities into the debt portion of its methodologies. This adjustment in approach was due to feedback received from the industry that pension liabilities are "soft debt" estimates and can be changed through policy action, which is very different from "hard" bonded debt obligation.

The "soft debt" nature of pension obligations likely has been confirmed by a recent federal court bankruptcy ruling regarding the City of Stockton's financial obligations towards the California Public Employees' Retirement System (CALPERS). This ruling set an important precedent nationally by suggesting that CALPERS is just a "garden variety" of creditor and its contractual payments may also be renegotiated in case of bankruptcy similar to those of other creditors, because "bankruptcy is nothing but the impairment of contracts" (Long, 2013).

Until recently, pension systems boasted strong legal protection from respective state laws – implicitly and explicitly. Every time a public plan sponsor attempted to negotiate pension terms through bankruptcy, expensive lawsuits followed. Instead, Stockton's bankruptcy ruling suggested that in the event of a bankruptcy, federal law may trump state statutes

guaranteeing pension contracts to potentially allow for their partial settlement as plan sponsor tries to return to financial sustainability.

When the City of Detroit filed for bankruptcy in July 2013, the City's Special Manager Kevin Orr also made a point that pension obligations belonged in the camp with all other "unsecured debt". Incidentally, Detroit's bonded general obligation debt was also lumped into the same category, potentially ushering in a whole new era of how creditors, bond holders and rating agencies may evaluate the security of general obligation debt going forward, at least in the State of Michigan. None of these two bankruptcy cases is resolved at the time of this writing, so there continues to remain a grey area as to how secure pension contracts are in the federal bankruptcy court.

Summary

To sum up, benefit design, pension contribution rates and discount rate are institutionalized choices by key decision makers from the menu of policy alternatives. These action variables are products of actions by and interactions among actors within the existing governance structures, providing invaluable insights into whose preferences become institutionalized and why. These policy choices bear directly on the overall sustainability of municipal pensions and governments overall, while current rules and regulations that inform the policy-making process may either promote or hinder long-term financial sustainability. Transparency in reporting pension liabilities helps prevent situation of "policy capture" by main actors to their advantage.

This is because the policy-making process (and by consequence its outcomes) may be structured to encourage broad community representation of interests or, by contrast, be captured to serve a concentrated narrow interest. "Unpacking" these key action situations to

identify dominant actors and their preferences, as well as evaluate the role of relative institutions in municipal policy-making and outcomes, is a key goal of this project.

Chapter 4: Public Pension Primer

Defined Benefit and Defined Contribution Plans

Most state and local governments offer their employees defined benefit (DB) pension plans specifying the amount of benefits available to retirees. Under DB plans, an employee receives a set monthly amount upon retirement based upon the participant's wages, length of service, and age, or any combination of these, depending on individual plan specifics. This benefit is guaranteed for the life of the employee and/or the joint lives of the member and their spouse, often including a cost of living adjustment (COLA) - also known as a multiplier - for every year of retirement. Under a DB plan, the employer assumes all the risk that assets may not produce sufficient investment returns to support a promised level of retirement (McCourt, 2006; Newton, 2008), as well as longevity risk that retirees will outlive the assets set aside for their pensions.

By contrast, most private companies offer their employees defined contribution (DC) plans - such as 401(k) - which stipulate only the amounts to be contributed by an employer and offer no guarantee as to any specific benefits received by retirees (Benton et al., 2009). The ultimate pension benefit is based exclusively upon the joint contributions to the plan by the employer and employee and by the plan's own investment performance. The benefit ceases when the account balance is depleted, regardless of the retiree's age and circumstances, transferring the risks associated with the portfolio investment performance, inflation, and the like to the employees (McCourt, 2006; Newton, 2008).

While first private DB plans in the US date back over 125 years ago (employee pensions offered by early railroad companies), lately American private companies have been consistently phasing, or "freezing" them out. The number of privately offered DB plans more than halved to 50,000 from 103,000 between 1999 and 1975 (McCourt, 2006).

Among the many reasons cited for this shift are the desire of particularly smaller companies to avoid increased liability and costs associated with DB plans (McCourt, 2006). After the introduction of new IRS regulations in the early eighties, DC plans came to be regarded as viable retirement vehicles, making them a staple of retirement plans for the corporate America.

Figure below offers a comparative summary of retirement options available to private and public employees:

Figure 5: Private Sector Plans vs. Public Sector Plans

Characteristics of Private Sector Retirement Plans	Characteristics of Public Sector Retirement Plans
Approximately one-half of private sector workers have a retirement plan – usually a 401(K) – although a minority has a defined benefit pension plan. Private sector employees who are in traditional defined benefit pension plans typically do not contribute to the plan. The Employee Retirement Income Security Act of 1974 (ERISA), changes in the tax code, accounting practices, and personnel management systems of private sector employers prompted many private sector sponsors to convert from defined benefit plans to 401(K)s. All private sector employees participate in Social Security.	Most public employees have a defined benefit plan and contribute to it. 70 percent of public workers participate in Social Security. Retirement benefits tend to be higher compared with private plans and often include a cost of living adjustment (COLA). Starting in 1986, state and local governments have followed the accounting standards set by the Governmental Accounting Standards Board (GASB) to report their benefit obligations and pension fund assets. Prior to 1986, National Council on Governmental Accounting (NCGA). Bond raters consider whether GASB standards are followed in assessing credit standing. Often there is a different plan for teachers, general government, or public safety employees.

Source: (Center for State and Local Government Excellence, 2013)

Both DB and DC plans may be structured in a variety of ways.

Alternative Pension Plans

Cash Balance

This is a DB plan that defines the benefit in terms of a stated account balance. In a typical cash balance plan, a participant's account is credited each year with a "pay credit" (such as five percent of compensation/employee salary paid by the employer) and an "interest credit" (either a fixed rate or a variable rate that is linked to an index such as the one-year Treasury bill rate). Increases and decreases in the value of the plan's investments as a result of market fluctuations do not directly affect the benefit amounts promised to participants. Thus, the investment risks on plan assets are borne solely by the employer. In some plans, employees may share in investment gains above the fixed rate, creating an asymmetric profit and loss distribution.

When a participant becomes entitled to receive benefits under such cash balance plan, the benefits that are received are defined in terms of an account balance (US Department of Labor (2012)). When an employee reaches retirement age, the employer may offer the employee an annuity based on the size of the retirement account and/or the ability to take all or a portion of the account as a lump sum. Cash-balance plans are also portable and may be taken out as a lump sum payment and rolled over into IRA accounts if an employee leaves prior to reaching retirement age. This is in sharp contrast to traditional DB plans, which are not portable. Nebraska has utilized a cash balance pension plan for its state and county employees since 2003 (McGee, 2011; Oakley, 2011).

Side-by-side and Stacked Hybrid

Side-by-side hybrid plans are pension plans whereby employers maintain both and allow employees to choose from either a DC or a DB plans. Utah and Florida operate a DB and DC side-by-side, allowing their employees to choose between the two (McGee, 2011).

In a stacked hybrid pension system, a modest baseline DB plan is complemented with a mandatory or optional DC plan, allowing for a minimum retirement security and an option to set additional retirement funds aside. Among such hybrid plans are recently reformed pension systems of Rhode Island and the City of Atlanta, GA.

Figure 6: Main Alternatives to Defined Benefit Pension Plans

Defined Contribution	Investments are self-directed and member must manage account for duration of retirement.
Pooled Defined Contribution	Like a traditional DC plan but contributions are pooled and invested by plan sponsor. Lump sum distribution is taken at retirement.
Cash Balance	Member receives pay and investment credits into a "virtual account." Contributions are invested through sponsor trust fund. At retirement, account balance may be annuitized.
Side-by-side and Stacked Hybrid	Members and sponsor contribute to both a small DB plans and a small DC plan, which together are expected to provide adequate level of benefits. DB contributions are invested through sponsor trust fund and paid out as annuities at retirement. DC contributions are self-directed and taken as a lump sum at retirement.

Source: (Teacher Retirement System of Texas, 2012)

Pension Buyout

Increasingly, actors are considering a buyout option where a plan sponsor offers its employees an upfront cash payment in exchange for a guaranteed annuity. This option has been successfully utilized in the private sector and may harbor a lot of potential for public plans wishing to unload risks related to pricing and funding future benefit. Main highlights of this policy option are in the table below:

Figure 7: Pros and Cons of Pension Buyout Option for Sponsors and Beneficiaries

Actor / *Perception*	Sponsor	Beneficiary
Advantage	Increased plan financial sustainability due to elimination of - Longevity risk - Market risk - Budget risk Low political risk due to nonpartisan nature of this solution Low legal costs due to voluntary nature of opt-in Improved long-term balance sheet position	Elimination of bankruptcy and budget risk – swapping an uncertain annuity subject to political squabble for a certain upfront payment A dollar today is worth more than a dollar tomorrow: beneficiaries may prefer a risk-free upfront payment, unless legacy plan provides generous COLAs to preserve the purchasing power of the annuity Elimination of legal costs due to potential lawsuits if sponsor changes plan terms

Actor / *Perception*	Sponsor	Beneficiary
Disadvantage/ Concerns	Immediate conversion of long-term liabilities into short-term liabilities necessitates a large cash expenditure near term that has not been budgeted for at a time government finances are already strained Ability to bond this liability may depend on the credit quality and current debt burden, as well as on market conditions If many sponsors come to bond market simultaneously this may make bonded debt more expensive – on the flipside, may create an attractive high quality investment vehicle during the time of high market volatility Will this debt be tax free? Currently pension bonds are taxable. Need for regulators to decide	Likely mistrust and concern by beneficiaries that sponsor will discount future cash flows at an excessively high discount rate resulting in lower valuation of annuities Concerns with managing the lump sum payment upon receipt include: Will government plan sponsor continue to manage these funds upon conversion on behalf of beneficiaries or will new financial advisors become involved (new industry players/new hats for old players)? What will be default management settings: allocations, costs, etc.? Will individual retirement accounts be able to generate long-term returns similar to historical returns? Will they be pooled? Will there be an opportunity for devolution (re-annuitization) of the payout to provide predictable annual/monthly cash flows to beneficiaries? Who will provide these services and at what price? Who will bear investment and longevity risks, etc.? Opportunities for retirement insurance industry?

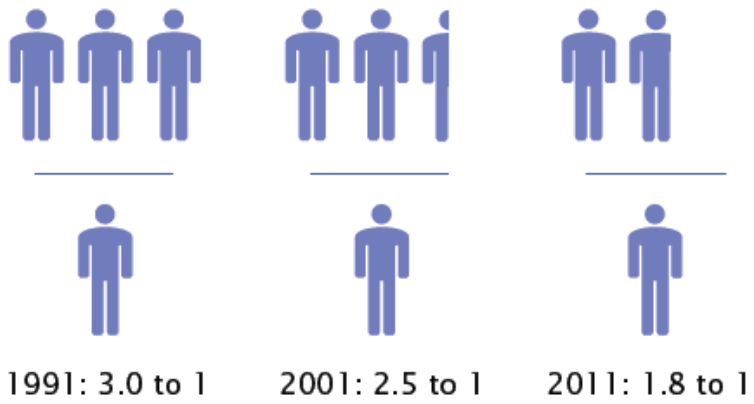
Demographic Challenges

State-administered pensions systems' membership accounted for 90.3 percent of the total membership for state- and locally administered pension systems (Becker-Medina, 2012). While total membership increased a very slim 0.2 percent in 2011, the number of total

beneficiaries, including retirees and survivors of deceased retirees, increased at a more robust 4.4 percent in the same period (Becker-Medina, 2012).

This illustrates an ongoing twenty year trend of reduced ratios of active payers to pension beneficiaries – a direct result of the continuing aging of the U.S. population. Figure 18 below shows that while in the decade between 1991 and 2001 the ratio of actives to beneficiaries declined by 17 percent from 3 to 2.5, between 2001 and 2011 this same ratio dropped by a whopping 28 percent, for a total decline of 40 percent over twenty years:

Figure 8: Ratio of Current Contributors to Beneficiaries of State-Administered Public Pension Systems: 1991, 2001, and 2011



Source: (U.S. Census Bureau, 2011)

As Baby Boomers employed in the public sector continue to retire, fewer working members will be expected to pay for their retirement. This also means that fewer working members – and most likely taxpayers - are expected to contribute to the amortization of the gargantuan unfunded pension liabilities amassed to pay accrued annuities to current vested beneficiaries.

With Texas enjoying a net gain in population growth, its ratios are among the best in the nation equal to 2.8 actives to beneficiaries. Nevertheless, Texas is not immune to the

retirement of Baby Boomers and most of its pension systems face sizeable unfunded pension liabilities.

While covered payroll used as a basis to compute actuarially required contributions has increased by only a slim 0.3 percent in 2011, pension obligations jumped up 3.7 percent (Becker-Medina, 2012). This means that as pension obligations are coming due at an increasing rate, they are exerting more and more pressure on local and state budgets likely to find it extremely difficult to finance them.

Ensuring Retirement Income Security

Today DB pension plans are dominant in the public sector. As late as in 1998, 90 percent of full-time state and local government workers participated in a DB plan, while only 14 percent actively participated in a DC plan (McCourt, 2006). The Government Accounting Office (GAO) reported in late 2007 that at that time only Alaska and Michigan offered new employees a DC as their "primary pension plan," with Indiana and Oregon offering a hybrid plan and all other states offering only DB plans to new employees in their primary plan (GAO, 2007).

Supporters of public DB plans point to such attractive features as maximizing personal retirement savings and serving as an attractive tool to recruit and retain qualified personnel (McCourt, 2006) as a raison d'etre for these plans' continued existence.

Several studies have also pointed to DB plans' structural efficiencies in comparison to DC plans, such as reduced duration of the retirement liability achieved from pooling employees of different age into the system (Baker, 2011; Fornia, 2011; NCPRS, 2011; TRS, 2012). This employee longevity averaging is an attractive feature of DB plans especially when individuals today may be expected to spend nearly as much time in retirement as they did in employment.

This holds true in particular for the public safety personnel who tend to retire at fifty and in some cases prior to fifty if retirement eligibility requirements have been met according to individual benefit formulas. If DB annuities are replaced with individual retirement savings account, funds must be set aside in sufficient amounts to provide for the employer and their survivors for thirty plus years in retirement. This may be extremely difficult to accomplish with an individual DC type plan, unless public salaries are increased simultaneously with the benefit reform.

Further, the ability of DB plans' asset managers to lock significant portions of investment assets in highly volatile yet profitable, illiquid asset classes, such as real estate and private equity, has a potential to generate higher yields over time given appropriate market conditions. At the same time, DB plans can still continue making on-going cash payments to beneficiaries from on-going cash contributions.

A similar arrangement would be unavailable to DC plans for different reasons, including shorter-investment time horizons of DC plans as well as lower risk tolerance for individual retirement investment accounts. This explains findings by several studies that DC plans tend to me more costly in comparison with DB plans, i.e. either provide lower benefits for the same price or require higher contributions (by employees, or plans sponsor, or both) to generate the same level of benefits (Baker, 2011; Fornia, 2011; NCPRS, 2011; TRS, 2012).

All else equal, administrative costs for DB plans also tend to be lower due to aggregation of plan management tasks in comparison to administrative costs of managing each individual retirement savings account separately.

Conceptually, DB plans seem to be better positioned and more efficient to provide higher quality benefits for multiple generations of beneficiaries. If DB plans were indeed run in this efficient way, unfunded pension liabilities would likely be minimal. Unfortunately DB plans are run by humans for the benefit of humans. In fact, DB plans consistently "leak" funds as a

result of policy “pockets of inefficiencies” exemplified by non-transparent, non-representative and non-publicly accountable governing and other decision-making arrangements.

Any investment gains or administrative savings DB plans might enjoy as a result of these built-in structural advantages barely suffice to counteract costs resulting from unsustainably high benefit levels the true cost for which is often understated, pushed into the future and non-transparent to the public. Any ad hoc benefit increases or additional fund disbursements, such as the 13th check paid out to retirees at the discretion of the Boards of Trustees jeopardize long-term sustainability of public pension funds.

For example, the above mentioned studies implicitly assume full funding of DB plans to support the argument that DB plans are “cheaper” in the long-run that their DC alternatives. In reality, most DB plans are underfunded, some significantly so. This means that respective plan sponsors or participating employees, or both, should have been contributing more money to support their current levels of benefits and that the true cost of most plans was higher than currently reported.

All unfunded liabilities are due yesterday when they should have been funded. This means that costs of benefits to current retirees were understated to the past generations enjoying services provided by retirees at the time of their active employment. This also means that past government services were effectively subsidized by current and future generations of taxpayers and recent hires who effectively are expected to make the funds full today for the excesses of yesterday. Routine inadequate funding of DB plans while promising generous levels of benefits does not make these plans cheaper. Somebody has to pay at some point. To truly compare DB plans to DC plans a better metric of current cost of the plans in addition to the costs of amortizing respective unfunded liabilities needs to be employed.

Additional studies point to the multiplier effects of public pensions on local and regional economies (Boivie, 2012), however a similar argument that money not paid out in taxes –

left in local taxpayers' pockets – has similar multiplier effects that work through very much the same mechanisms.

Sponsors moving away from DB to DC plans also have to consider that about one-fourth of state and local government employees (27.5 percent) are not covered by Social Security for various historical and other reasons (Nuschler et al., 2011). An even larger proportion of public safety personnel are without Social Security coverage, for example an estimated 70 percent of all fire fighters (Nuschler et al., 2011). To compare, Social Security covers about 94 percent of all workers in the United States, with most of the remaining 6 percent of non-covered workers being public employees.

The 1935 Social Security Act did not extend coverage to state and local government workers. Nevertheless in the 1950s, Congress passed laws to allow state and local government employees who have public pensions to elect Social Security coverage through employee referendums. In 1990, Congress made Social Security coverage mandatory, starting in July 1991, for most state and local government employees who are not covered by an alternative public pension plan (Nuschler et al., 2011). In Texas, over half of state and local employees – 52 percent – receive all their retirement benefits from public pension plans and are without Social Security coverage.

Terminating a DB plan for those employees who rely on public pensions as a sole means of retirement security means plan sponsors would need to immediately contribute 6.2 percent of payroll to Social Security, representing a new type of current budgetary expense. Notably, mandatory Social Security coverage of public employees has also been considered at the federal level as a potential policy tool to improve solvency of Social Security (Nuschler et al., 2011) and guarantee retirement security for public employees in financially distressed state and local pension systems.

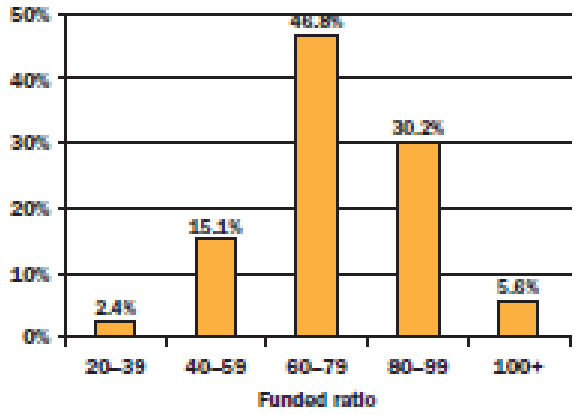
Despite potential transitional pitfalls, criticism of public DB plans in their current shape is ever increasing. DB plans are prefunded, requiring employers – local and state governments – to invest assets decades in advance to support the promised level of benefits. Benefit promises are extremely difficult to quantify and predict with certainty as a result of a host of assumptions involved in calculating the actuarial liability: the date and type of benefit commencement, amount of earned benefit payments and their duration (McDaniel, 2011), the expected asset allocation, long-term performance of different asset classes, management fees, changes in actuarial practices, etc. Incorrect assumptions over time may have dramatic effects on the extent to which a pension plan may be underfunded as do insufficient contributions by plan sponsors.

To illustrate, when market yields are low, as they remained in the aftermath of the Great Recession, valuing retirement obligations at then current market rates would have resulted in pension promises being severely underfunded. In addition market returns on assets tend to fall short of actuarially assumed amounts in low-yield environment, compounding the problem of pension underfunding.

For example, applying a market-based discount rate based on the high-grade long-term corporate bond index equal to 5.5 percent in 2010 and 2011 and a fair value of assets to value state retirement obligations, their funded ratios would have dropped to 46 and 53 percent, respectively. By contrast, the same methodology applied to local DB pension plans would have yielded funded ratios of 52 and 57 percent, respectively, (Van Wagner and Blake, 2013, 2012).

All through 2011, public DB plans on average were still falling short of assets sufficient to pay retirement benefits even at higher assumed actuarial rates, as seen in Figure below:

Figure 9: Distribution of Funded Ratios for Public Plans, 2011



Source: (Center for State and Local Government Excellence (SLGE), 2013)

To be sure, even partially funded pension systems may be able to continue to pay benefits to current retirees for an extended period due to the sheer amount of assets they manage. The bigger problem relates to recent hires who are contributing into respective retirement systems enhancing their current cash flow with an expectation of receiving future benefits which by the time recent hires retire pension systems may not have funds on hand to pay. There is a potential financial intergenerational inequity between current retirees and future retirees, whereby retirement security of future retirees is jeopardized at the expense of current retirees.

Recent hires should be the most concerned with the long-term solvency of respective pension systems because in the context where DB plans are severely underfunded, new employees might be better off investing into alternative retirement vehicles, such as cash balance, DC or even hybrid plans.

Discount Rate: Pricing Retirement Promises

Discount rate is a political, as well as financial variable, highly sensitive to a host of assumptions. It matter who determines the discount rate and how. Discount rate is one of

the most controversial aspects of accounting for public pensions. A heated debate is ongoing in the financial and academic community as to which discount rate is more appropriate to estimate the present (discounted) value of the unfunded public pension liabilities.

The main conceptual issue remains whether the discount rate should be tied to projected long-term investment performance of respective funds or whether this rate should relate instead to valuing future pension payouts based on their likelihood of being paid and/or on the sponsoring government's ability to finance those with borrowing in the open market, if necessary (credit quality).

Discounting pension liabilities at the projected rate of return on pension assets would allow pension plans to be guided by the average historical returns on their investments to select the appropriate discount rate for the future. Alternatively, discount rates linked to the risk of pension liability and/or credit quality are independent of the long-term rate of return altogether (Apostolou, et al, 2013). It is common to find a lot of confusion in the industry over which conceptual discount rate is discussed.

Accurate estimates of the net present value of accrued pension liabilities in DB plans is critical, since sufficient assets need to be set aside today to pay obligations due many years into the future. The impact of change in the discount rate may be illustrated by the following example. When the present value of a pension liability is recalculated at a Treasury rate based benchmark of 4.5 percent or a bond index rate, instead of a hypothetical 8 percent, the size of the present day liability may increase as much as by 40 percent (Newton, 2008).

The impact that change in the discount rate has on the funding levels of pension schemes is dramatic due to the power of the compound interest – ability to generate returns on prior returns over time. If actual returns come short of projections at any point, this "loss" may only be compensated by higher returns at later periods. Suppressed market returns over

extended periods of time coupled with more aggressive assumed discount rates lead to system underfunding.

The higher the actuarially assumed discount rate, the lower the reported pension liability, and vice versa (Benton, 2009).

All else equal, overstating the discount rate may lead to insufficient funds being set aside to pay future benefits, undermining pension system sustainability and violating taxpayer generational equity. While in 2012 the average discount rate was 7.65 percent weighted by the size of the plan based upon the 126 plans surveyed by the National Association of State Retirement Administrators (Mason, 2013), it ranged from about 7 to 8.5 percent.

Decomposing Discount Rate

Historically, many public plans used the projected long-term return on respective pension assets as their discount rate based on the expectation that funds set aside for pensions on an annual basis would predictably grow at a certain rate over the long-term horizon of thirty plus years. Historical long-term rate of return for the industry and for respective funds was used as a benchmark to forecast how much in funds was required to be set aside.

At the same time, “a plan sponsor could decide to reduce [ongoing contributions to pension funds] by assuming high investment growth assumptions [to be realized] by investing in riskier assets and [creating] an illogical outcome whereby a sponsor reduces their annual contributions by assuming more risk” (Kibler and Mier, 2010). This ignores the fact that riskier assets also have a wider distribution of outcomes and therefore ignores the risk completely (Rauh, 2010).

A discount rate tied to return on investments would have three "building blocks" (components): price inflation, real return and managerial fund expenses. A typical calculation of the discount rate is illustrated below: [8]

Figure 10: Building Blocks of a Discount Rate

Price Inflation	3.00%
Real Return	6.10%
Plan Expenses	- 0.60%
Net Return Assumptions	8.50%

Real return is further decomposed into a net risk-free rate of return and a risk premium based on plan asset allocation (McDaniel, 2011). While investing in highly risky asset classes, such as private equity, would be associated with more favorable returns on investment over time, these asset classes are also known to have high volatility of returns and are very sensitive to economic downturns. High exposure to such asset classes may leave pension funds vulnerable during down economic cycles, as was the case in 2008 and 2009 when a median pension fund loss was 25 percent, during the very times when municipal budgets were already in a crunch.

For a pension fund using the long-term rate of return as its discount rate, to arrive at the net return of 8.5 percent calculated above, it is necessary to achieve a 9.1 percent net expected nominal investment return. In this example, actuaries assume that this can be accomplished by investing 70 percent of the funds in medium to highly risky asset classes in the following proportions: 20 percent in US equity (long-term expected return of 8.9 percent), 20 percent

[8] This calculation is based on an actual investigation study conducted by an actuary for the Houston Municipal Employees Pension System (HMEPS) in June 2003. The following asset allocation example is selected from this study.

in non US equity (long-term expected return of 9.7 percent), 18 percent in private equity (long-term expected return of 13.4 percent) and 12 percent in real estate (long-term expected return of 10.4 percent). In addition to being risky, the former two asset classes are also illiquid, which means public money may be tied up in management funds that invest in cyclical assets that are difficult or impossible to sell or that can only be sold at highly discounted prices during a down business cycle. There is also no guarantee this type of funds will not collapse during an economic crisis, wiping out a significant proportion of municipal pension holdings altogether.

Following the same logic that equates the discount rate to the assumed rate of return on investment of 8 percent and above implies an equity (or similar asset) holding of at least 79 percent of the portfolio (Warr, 2010). Large exposure to volatile asset classes left most pension funds at the mercy of the most recent Great Recession (officially started in December 2007). Curiously, precipitous drop in value of many pension funds in 2008 and 2009 reinforced a perverse incentive for decision makers to remain invested in risky assets in an effort to recapture lost value quicker.

Risk and Returns: Gamble and Responsibility

This begs a question of how much risk exposure for municipal investments is appropriate despite the temptation to "manage" the funds out of the red ink though aggressive investment strategies. Taxpayers who while being the ultimate payers of pension benefits are routinely excluded from investment decisions may also need to be engaged in the dialogue of how much risk tolerance is appropriate for public funds.

Big bets with private equity by public pension funds represent a perfect example of how misaligned incentives endanger public money in the long run. In an attempt to achieve an aggressive target return of 8 to 8.5 percent in a low-yield investment climate, public funds

are increasingly assuming risk from investing in illiquid, volatile assets, such as private equity and real estate. These investments often lack transparency.

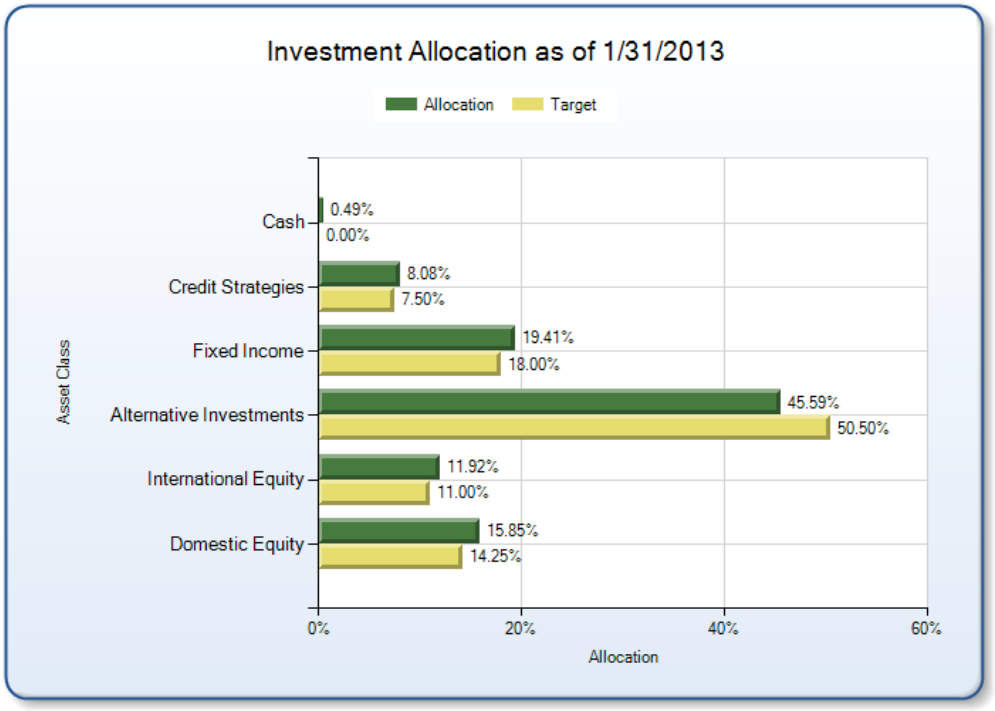
Fund managers are hoping to benefit from the “illiquidity premium” to boost weak funded ratios battered by the Great Recession. Otherwise, failure to reap attractive returns on investment of pension assets would force sponsor governments to cough up additional annual pension contributions at the time of budget crunch, raise employee contributions, modify benefits or terminate public defined benefit plans altogether –- none may be politically attractive or feasible.

In 2011 private equity accounted for about 7 percent of total defined benefit assets among the top 200 U.S. retirement funds, with higher allocations for some individual funds. Since then, senior pension executives have been steadily moving their money into “sub-asset” classes, such as emerging markets, high-yield bonds, and bank loans. Additionally, according to the U.S. Government Accountability Office, the percentage of large plans investing in hedge funds also grew from 47 percent in 2007 to 60 percent in 2010.

According to a 2012 Pyramis Global Institutional Investor survey, this trend is likely to continue, with 67 percent of largest public pension systems indicating plans to boost their share of illiquid alternatives, and 37 percent increasing exposure to “sub-asset” classes. This is a dramatic investment paradigm shift from relying on a traditional blended portfolio of stocks and bonds, which historically generated real rolling returns of about 5 percent over a typical time horizon of 30 years.

As an example, the figure below represents an actual allocation for the police pension system of the COH:

Figure 11: HPOPS Investment Allocation by Asset Class



Source: (HPOPS, 2013)

As seen above, nearly half of the police pension assets are committed to alternative asset classes, while credit strategies as well as fixed income are broad categories which are not readily spelled out. Specifically, it is unclear if fixed income at any point included any high-yield risky bonds and/or international sovereign debt. Without knowing all the details, this gives reasons to wonder if the COH pension fund is pursuing overly aggressive investment strategies with public funds that might result in serious losses to beneficiaries and taxpayers were market conditions to make an unfavorable turn.

To illustrate the risk inherent in such investments, one reason why Cyprus banks nearly went bankrupt recently was their investment bets on the high-yield sovereign debt of Greece in an effort to boost their portfolio yields. That bet surely failed to pay off causing the entire banking sector of that country to nearly collapse and forcing draconian bailout measures of public and private entities with widely spread out socialized costs.

In addition, the COH police pension fund had the highest investment expense for all three funds in 2012, indicating active and/or expensive management. For example, in fiscal 2012, HMEPS spent $6 million in administrative and $6.3 million in investment expenses, both around 0.2 percent of plan assets. Unfunded liability per HMEPS member was $118,390. HPOPS spent $4.4 million in administrative and a whopping $23 million in investment expenses – or over five times the amount of administrative expense and significantly higher than the amount spent by two other funds. This was equal to respective 0.1 percent and 0.6 percent of plan assets. Despite the highest investment expense, HPOPS unfunded liability per member was the highest at $144,972. HFRRF spent $7.4 million in administrative and $7.6 million in investment expenses, equal to about 0.2 percent of plan assets. Unfunded liability per member was $88,681.[9]

Equally worrisome is that investment decisions across public pension funds are increasingly "streamlined" to allow investment managers to take advantage of arbitrage opportunities and "dynamic management" of public funds through flexible mandates. This may lead to poor oversight and lack of representation in portfolio allocation decisions, spelling trouble when markets turn in unexpected directions.

Delegating decision-making power to a small number of professional fund managers whose compensation is tied solely to the investment performance of funds under their management relative to peers may be tricky. These actors face zero incentive to take balanced positions. They win when the fund strikes big gains. If the fund loses a large portion of assets, the worst scenario they face is loose their job. They are not publicly, politically or even legally accountable for investment losses as a result of taking aggressive positions in volatile investment classes. On the other hand, it may take sponsoring governments decades to get

[9] Window on State Government, Texas Comptroller of Public Accounts Susan Combs website www.trackingtx.org/index.php/pension accessed on September 17, 2013

out of a potential financial debacle and in the process cohorts of retirees and employees might suffer.

Implications of a systemic pension debacle would be dreadful for pension beneficiaries whose pension savings could be wiped out and for sponsoring governments already facing structural budget pressures which most certainly would fail to close the funding gaps with contributions. Millions of retirees would find themselves without annuities and millions more would approach retirement without any savings, overwhelming social safety net programs and spiraling down the standard of living at a time most localities, states and the federal government are already wrestling with debt crises of their own, as well as aging infrastructure.

Given such dramatic societal costs of potential failure of pension systems, absence of adequate guarding mechanisms to prevent collapse of pensions due to poor investment choices is alarming.

Quite the opposite, current incentives regarding costs and benefits encourage excessive risk taking with public money, privately accruing gains and socializing all losses. Fund managers are compensated lavishly for short-term gains, while bearing no responsibility for sour bets, with taxpayers and public employees remaining on the hook if any of these bets fail to pay off. It appears that the only real winners are investment managers and their staffs.

Under a similar context of perverse incentives, traders lost billions on Wall Street shocking markets. Today the gamble is with public funds. Compensation structures at pension funds, as well as aggressive target return rates encouraging funds to take excessive risk, deserve continued public scrutiny and oversight to reduce the chances these “alternative investments” may go wrong.

Funding Retirement Promises

Government accounting standards require that the cost of public pensions be recognized on the income statement over the working lives of employees to ensure generational equity, with an idea that current taxpayers benefiting from the services provided by employees also pay to accrue pension benefits for those same employees (McDaniel, 2011). In a plan that has been consistently funded at the same rate that benefits have been accruing over employees' working lives the unfunded liability is expected to be zero on average, although the actual liability will fluctuate depending on the actual fund performance.

From an employee's perspective, a retirement plan serves the primary purpose of enabling them to save and invest effectively for retirement. From the municipal finance perspective, public pensions are deferred monetary compensation to public employees in lieu of current salaries and or/bonuses. They serve as a tool to first attract good career employees and later retain qualified, mid-career employees. Thus public pensions represent a critical component of overall employee compensation together with salaries and OPEBs.

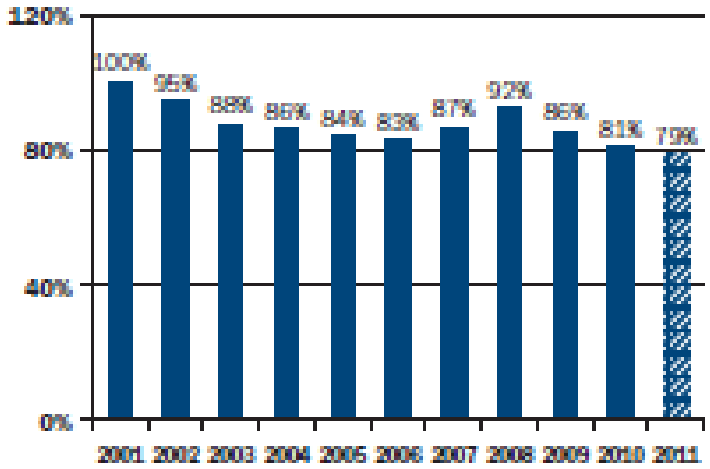
Pension funding decisions are made by elected officials as part of the annual (or biannual, where appropriate) budget cycle. Politicians creating budget plans may face incentives to underfund pensions to instead pay for other projects and/or keep taxes low, especially during tough economic times when resources are scarce. The unfunded liability becomes a distant concept due thirty years from the current administration's time in office, when responsibility for prior funding decisions is not likely to be traced easily.

Annually Required Contribution (ARC)

One way to consistently fund pensions is for governments to pay the Annually Required Contribution (ARC) rate computed by actuaries, although there are no formal accounting requirements to do so. ARC is sensitive to the choice of the discount rate and other actuarial

assumptions. An ARC payment includes: 1) the cost of new accrued benefits; 2) amortized payments to make up unfunded liabilities (due to prior decisions); and 3) amortized payments to make up actuarial losses. In truth, most states and local governments have failed to make ARC payments in full since 2001, kicking the financial can down the road as seen in Figure 12 below:

Figure 12: Percent of Annual Required Contribution Paid, 2001-2011



Source: (Center for State & Local Government Excellence, 2013)

This is because there are often multiple interests competing for where public dollars get spent, resulting in a perpetual temptation by politicians to forego paying into the pension systems in good times and bad times alike. Good economic times normally are characterized by high returns on fund investments, which grow the asset base and make regular annual payments appear less “urgent.”

By contrast, in bad economic times operational budgets come under a lot of strain as revenues plummet, programs and projects get cut, furloughs and workforce attrition and sometimes firing measures need to be implemented and politicians seek out any “creative” ways to balance the budgets, which may include underfunding ARC. And taxpayers certainly never like the idea of having their taxes increased to pay for public pensions.

To illustrate, COH is now dedicating about 9 percent of its annual budget to pensions, this amount is significantly understating what is required to fund normal pension costs and amortize existing liabilities. Current portion of 9 percent of the budget vastly underestimates the true cost of current benefits, while pushing funding deficits further forward and making pensions appear more affordable than they are. This will be discussed in more detail in further sections.

Smoothing

Smoothing refers to an actuarial process whereby investment losses and gains are recognized over a number of years, dampening the effects of market volatility on assets under management. The rationale behind this practice was that it prevented the ARC from jumping or declining abruptly, making required funding amounts more predictable.

Smoothing (commonly over three to five years) was responsible for the fact that severe investment losses of 2008 were not fully incorporated into the financial reports for many funds until 2013, camouflaging the extent to which many assets were wiped out and masking the corresponding unfunded liability. Smoothing also largely explained the difference between the market and actuarial value of a fund, with any difference between the actual experience and actuarial assumptions called an “actuarial loss or gain.”

Until the most recent GASB 67 rules discussed below, public pension plans were not required to account for changes in the market, or fair values of their pension portfolios in the period of change. A requirement to value pension assets and liabilities at market rates by private pension plans has likely contributed to the phasing out of private DB plans since the reforms of the seventies and eighties. Private companies found the requirements to fund volatility much too costly and unpredictable and over time largely opted out in favor of DC plans, as seen in Figure 13 below:

Figure 13: Pension Benefit Guaranty Corporation - Single Employer Plan Terminations

Source: Pension Benefit Guaranty Corporation (2010, 2001)

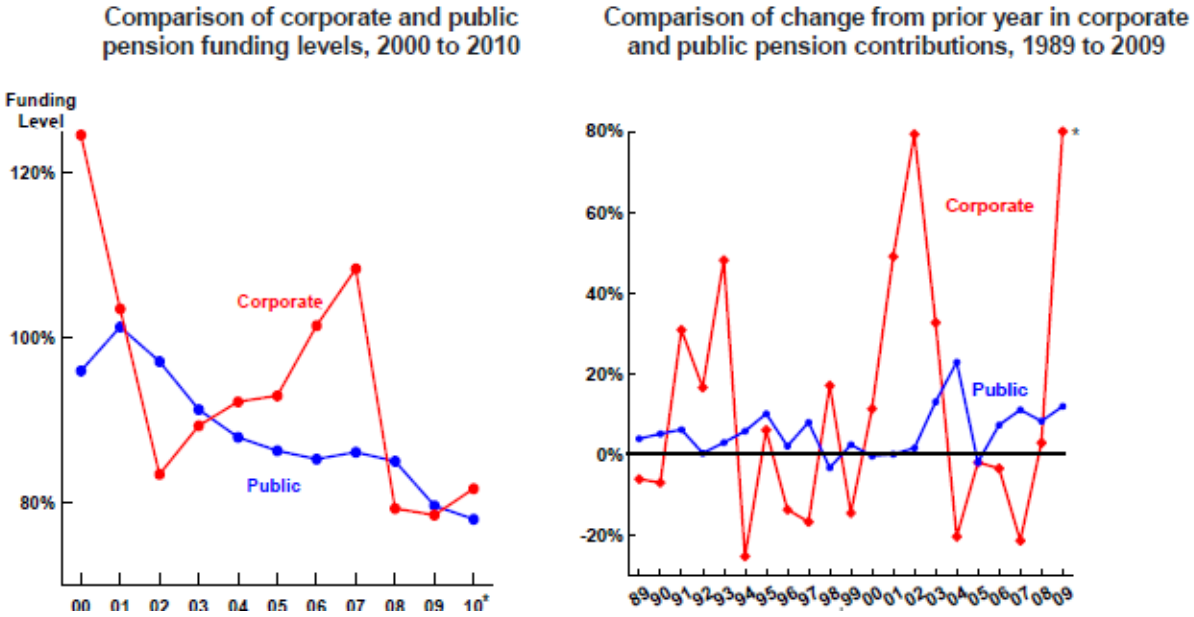
According to the new GASB 67 rules establishing reporting requirements for public pension systems:

"pension plan investments—whether equity or debt securities, real estate, investment derivative instruments, or other investments—should be reported at their fair value at the end of the pension plan's reporting period. The fair value of an investment is the amount that the pension plan could reasonably expect to receive in a current sale between a willing buyer and a willing seller—that is, other than in a forced or liquidation sale. Fair value should be measured by the market price if there is an active market for the investment. If such prices are not available, fair value should be estimated."

It remains to be seen what impact incorporating fair value of assets into public pension reporting may have on the volatility of actuarially determined amounts for funding.

Figure 14 below [10] compare the historical volatility in the funding levels of private and public plans. Private plans funded levels are much more volatile, mostly because public plans allowed for smoothing while private plans require reporting at fair market value over the same time period:

Figure 14: Corporate vs. Public Pension Funding Levels, Costs



Source: (Willshire, Milliman, and Public Fund Survey, US Department of Labor, US Census Bureau)

Amortization

Amortization period is a technique which allows public pension funds to spread the cost of the unfunded liability over a long period, typically equal to thirty years, because public pension funds are assumed to exist in perpetuity. The thirty year amortization may occur over a closed period (all of the unfunded liability needs to be amortized within thirty years) or

[10] The charts used in this section are from a presentation "Defined Benefit Pension Policy and Efficiencies" delivered by Diane Oakley to the Houston Long-Range Financial Management Task Force on December 5, 2011

over an open period (as unfunded liabilities persist that may be rolled forward indefinitely). Amortization relates to spreading out the costs of paying down the unfunded pension liability. A longer assumed amortization period decreases the portion of the ARC that goes to funding past liabilities in the current period, pushing the costs of paying for past services forward.

GASB Analytical Approach

In 2012 Government Accounting Standards Board (GASB) which sets the accounting standards for the public sector, finalized a single system of accounting to replace the menu of financial reporting options previously available to public pension plans.

Statement No. 67, *Financial Reporting for Pension Plans*, revised existing guidance for the financial reports of most pension plans. Statement No. 68, *Accounting and Financial Reporting for Pensions*, revised and established new financial reporting requirements for most public pension plans.

The stated objective of Statement 68 was "to improve accounting and financial reporting by state and local governments for pensions. It also [improved] information provided by state and local governmental employers about financial support for pensions…provided by other entities… Statement [68 resulted] from a comprehensive review of effectiveness of existing standards of accounting and financial reporting for pensions with regard to providing decision-useful information, supporting assessments of accountability and inter-period equity, and creating additional transparency" (GASB 68).

The above mentioned criteria of effectiveness are nearly identical to the design principles of sustainable organizations introduced earlier, including clear lines of accountability, intergenerational equity and transparent decision-making structures. Equally important would be another principle of representation of decision-making structures.

GASB Chairman Robert H. Attmore stated in a GASB press release on June 25, 2012:

"The new standards will improve the way state and local governments report their pension liabilities and expenses, resulting in a more faithful representation of the full impact of these obligations. Among other improvements, net pension liabilities will be reported on the balance sheet, providing citizens and other users of these financial reports with a clearer picture of the size and nature of these financial obligations to current and former employees for past services rendered".

Statement No. 68 replaces the earlier Statement No. 27, requiring public DB plan sponsors to recognize their long-term obligation for pension benefits as a liability for the first time, and to more comprehensively and comparably measure the annual costs of pension benefits. This Statement calls for an immediate recognition of more pension expense that is currently required, so that in addition to the annual service cost and interest on the pension liability the effect on net pension liability of changes in benefit terms, such as projections of ad hoc COLA adjustments are also immediately recognized (no smoothing).

Further, public plan sponsors will use a single actuarial cost allocation method – "entry age" – with each period's service cost determined as level percentage of pay. Government assets will be stated at market values.

GASB projects that its new accounting standards scheduled to go into effect as of fiscal 2015 for most governments are likely to:

"improve the decision-usefulness of information in employer and governmental non-employer contributing entity financial reports and will enhance its value for assessing accountability and inter-period equity ***by requiring recognition of the entire net pension liability and a more comprehensive measure of pension expense****. Decision-usefulness*

and accountability also will be enhanced through new note disclosures and required supplementary information, as follows:

- *More robust disclosures of assumptions will allow for better informed assessments of the reasonableness of pension measurements.*
- *Explanations of how and why the net pension liability changed from year to year will improve transparency.*
- *The summary net pension liability information, including ratios, will offer an indication of the extent to which the total pension liability is covered by resources held by the pension plan.*
- *The contribution schedules will provide measures to evaluate decisions related to the assessment of contribution rates—in comparison to actuarially, statutorily, or contractually determined rates, when such rates are determined. It also will provide information about whether employers and non-employer contributing entities, if applicable, are keeping pace with those contribution rates.*

The consistency and transparency of the information reported by employers and governmental non-employer contributing entities about pension transactions will be improved by requiring:

- *The use of a discount rate that considers the availability of the pension plan's fiduciary net position associated with the pensions of current active and inactive employees and the investment horizon of those resources, rather than utilizing only the long-term expected rate of return regardless of whether the pension plan's fiduciary net position is projected to be sufficient to make projected benefit payments and is expected to be invested using a strategy to achieve that return*

- *A single method of attributing the actuarial present value of projected benefit payments to periods of employee service, rather than allowing a choice among six methods with additional variations*
- *Immediate recognition in pension expense, rather than a choice of recognition periods, of the effects of changes of benefit terms and the effects of projected pension plan investment earnings*
- *Recognition of pension expense that incorporates deferred outflows of resources and deferred inflows of resources related to pensions over a defined, closed period, rather than a choice between an open or closed period.*

The comparability of reported pension information also will be improved by the changes related to the attribution method used to determine service cost and the total pension liability, requirements for immediate recognition in pension expense of certain items, and the establishment of standardized expense recognition periods for amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions."[11]

These upcoming reporting changes are a significant departure from prior reporting formats. They are likely to have a compounding effect on the financial condition of DB pension systems maintained by state and local governments: the worst funded plans will see their unfunded liabilities increase the most on the balance sheet.

Discount Rate

According to the GASB press release, the rate used to discount projected benefit payouts to their present value will be based on a single blended rate, reflecting: 1) the long-term expected rate of return on plan investments as long as the plan net position is projected

[11] Summary of Statement No. 68 Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27

under specific conditions to be sufficient to pay pensions of current employees and retirees and the pension plan assets are expected to be invested using a strategy to achieve that return; and 2) a yield or index rate on tax-exempt 20-year, AA-or-higher rated municipal bonds to the extent that the conditions for use of the long-term expected rate of return are not met. Thus, individual governments will continue to select their long-term actuarial rates of return based upon the estimated earnings rate they deem reasonable to the extent pension assets are available, so certain variance in the assumed discount rate across different plans is likely.

Regardless, new GASB regulations have a potential to increase transparency and comparability of how much is owed in post-retirement obligations across different plans, allowing for a more solid comparative analysis across pension plans in the future.

Pension Funding

Most recent GASB accounting recommendations do not address how governments should calculate their ARC payments. With the introduction of the new GASB rules in 2012 requiring employers to recognize an unfunded pension obligation on the balance sheet, a new measure of pension expense is calculated that may have little relation to the actuarially determined contribution (GASB 68). This pension expense is likely to be larger and more volatile than the current GASB measures of the unfunded actuarial accrued liability and annual pension cost.

Pension expense relates to recognition of changes in the components of the net pension liability – the changes in the total pension liability and in the pension plan's fiduciary net position. Statement 68 requires that most changes in the net pension liability be included in pension expense in the period of change:

"Changes in the total pension liability resulting from current-period service cost, interest on the total pension liability, and changes of benefit terms are required to be included in pension expense immediately. Projected earnings on the pension plan's investments are also required to be included in the determination of pension expense immediately" (GASB 68).

The amount the government reports as pension expense in the financial statements will reflect the following: 1) additional earned benefits per period; 2) the interest on pension liability; 3) any changes in benefit terms; 4) changes on total benefit liability resulting from differences between actual experience and assumptions; 5) projected earnings on investments; and 6) changes in net plan position other than investments (Apostolou et al., 2013).

Moody's Analytical Approach

Credit rating agencies have increasingly recognized their preference for evaluating accrued pension liabilities in the context of market conditions, as illustrated by Moody's Investors Service updated credit rating methodology (Van Wagner and Blake, 2013, 2012). To this end, Moody's in 2012 and 2013 communicated its intention to: 1) retain the market or fair value to measure pension plan assets; 2) use a high-grade long-term taxable bond index rate to compute the present value of future benefits; 3) allocate multiple-employer cost-sharing plan liabilities among participating governments, based on information available regarding proportional plan contributions; 4) amortize adjusted net pension liabilities on a level dollar basis over a period of twenty years (Wagner and Blake, 2013).

Discount Rate

Rating agencies' decision to estimate accrued liabilities at a more conservative rate is based on the following rationale:

- *"Investment return assumptions in use by public plans today are inconsistent with actual return experience over the past decade (when total returns on the S&P500 index grew at about 4.1 percent annually) and today's low fixed-income yield environment" (Van Wagner and Blake, 2012).* Further to the point, a traditional blended portfolio of stocks and bonds historically generated real rolling returns of about 5 percent over a typical time horizon of 30 years.
- *"A high-grade bond index is a reasonable proxy for government's cost of financing portions of its pension liability with additional bonded debt."*
- *"High-grade bonds are an available investment that could be used in a low-risk strategy to "match-fund" pension assets and liabilities" (Van Wagner and Blake, 2012).*

The last point is relevant in a climate where pension funds are increasingly willing to consider different investment strategies to ensure funds are available to make payments when due. For example, according to a Liability Driven Investment (LDI) strategy, pension funds managers may wish to align the duration (average maturity of payments) between the asset and the liability sides of the pension system in an effort to reduce overall portfolio risk (Northern Trust). Therefore, medium to long-term maturity high quality corporate bonds may increasingly play an important role in such portfolios, despite their typically lower rates of return than other high-yield asset classes (real estates, private equity, etc.).

Moody's further explains the difference between the market-based discount rate used to assess present value of pension liabilities and the long-term discount rate used by actuaries for most public pension plans as follows:

"The bond index approach to the discount rate is a significant departure from the discount rate typically used in the public sector. In the public sector actuarial approach, the measurement focus is tied to an objective of developing a long-term funding strategy for the

pension plan. The discount rate is set equal to the assumed long-term investment return on plan assets and the resulting actuarial accrued liability is essentially a present value of expected future government contributions to the plan.

In contrast, [Moody's] approach estimates the present value of the stream of future benefit payments accrued by current employees, using current market interest rates as the guide to the current value of future cash flows. This approach is similar to that used in corporate accounting to derive net pension liability. Because the accrued liabilities of most government pensions include projections of active employees' future salary increases, while corporate pensions do not, [Moody's] measure of government net pension liability will be more conservative" (Wagner and Blake, 2013).

While actuarial valuations may be attractive to plan sponsors for budgetary planning, Moody's believes this approach may be less attractive for balance sheet analysis, since it incorporates an element of market risk which increases with larger assumed returns (Wagner and Blake, 2013).

National average actuarial discount rate was 7.65 percent in 2012 weighted by the size of the plan based in the 126 plans surveyed by the National Association of State Retirement Administrators (Mason, 2013). Actuarial rates range between 7.25 percent to 8.5 nationally, while the discount rate for the COH's three pension funds is at the higher end of the distribution equal to 8.5 percent.

Higher actuarial discount rates are normally justified based on long-term historical performance of respective pension systems. However, there is disagreement as to whether recent low-yield market conditions have constituted a market anomaly or a "new normal", in which case relying on lower discount rates going forward may be justified. Moody's recent discount rate used to value liabilities was closer to 5.5 percent based on the Citibank's Pension Discount Curve for 2010 and 2011.

Using market-based discount rates and fair asset values in a low-yield environment is likely to result in adjusted net pension liabilities that are significantly higher than their reported actuarial counterparts. If these conditions persist, this might lead to credit pressures for those plan sponsors whose combined reported liabilities may be out of line with those in their rated peer group. Some governments are weary of the recent rating methodology changes, since even those plans that today are considered healthy (i.e. with the funded ratios of over 80 percent at current discount rates) are likely to see their funded ratios drop when their liabilities are recalculated at a lower rate of 5.5 percent.

Notably, governments are not expected nor required to use these values for their reporting or funding purposes.

At the same time, a market-based discount rate current as of the date of plan valuation yields a point-in-time liability measure that promotes better comparability among governments for the purposes of balance sheet analysis (Wagner and Blake, 2013). This is because different actuarial assumptions about the discount rate may result in different present value estimates of otherwise identical projected pension payments (Wagner and Blake, 2013), hindering across-the-plan comparisons.

Moody's proposed market-based discount rate is similar to that used in the private sector, where Financial Accounting Standards Board (FASB) regulations require pension plans to discount assets at a rate consistent with the yield on high-quality corporate bonds (Van Wagner and Blake, 2012). In a similar fashion, Fitch Ratings is also discounting pension liabilities at a more conservative rate – most recently equal to about 7 percent – for their in-house analysis of government indebtedness.

Pension Expense and Amortization of Unfunded Liabilities

Further, Moody's has also changed its approach to calculating required pension expenses for rating purposes (Wagner and Blake, 2013). These adjusted pension measures are in no way intended as funding or reporting guidelines for rated governments but rather as estimates of the extent of pension related liabilities relative to each plan sponsor's ability to pay. This way Moody's and other rating agencies are generating in-house metrics to align the different amortization schedules and other key assumptions of different governments to be able to rank them according to their respective pension burdens (in the context of other credit characteristics) for rating purposes.

Nevertheless, such metrics are very useful to compare pension burden relative to financial resources across different plan sponsors. The forthcoming comparative charts by rating agencies are going to be much more useful for cross-sectional pension sustainability analysis than prior funded ratios.

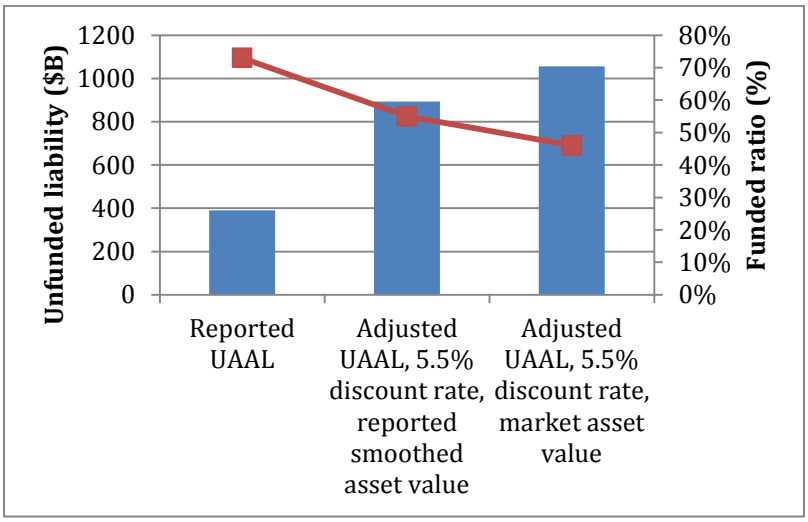
The change of the amortization period to twenty years makes the amortization similar to a bond payment structure. Annual amortization is equal to the amount necessary to eliminate the unfunded liability over a given amortization period, typically calculated as a level percent of payroll (Van Wagner, 2012). Indefinite amortization schedules – or amortizing pension liabilities over an open thirty year period - effectively amounts to pension indebtedness never being fully repaid.

For example, six of the pension plans in Texas have infinite amortization schedules, including the Teacher Retirement and Employer Retirement plans which together account for the lion share of 68 percent of all pension assets and liabilities in the state. Several other Texas plans' creative amortization schedules extend from 35 to 123 years, while amortization between twenty and thirty years is more common. Several funds have shorter amortization schedules (from the Pension Review Board database, 2012).

Applying Moody's Updated Methodology to State and Local Pension Liabilities: Examples

Moody's database reported an aggregate fiscal 2010 unfunded liability for the fifty states and about 8,500 rated local governments as of $766 billion, divided almost equally between the two sectors of local and state governments (Van Wagner, 2012). Below is an example of applying updated Moody's methodology to state pension liabilities in 2012:

Figure 15: Impact of Pension Reporting Adjustments on States Funded Status



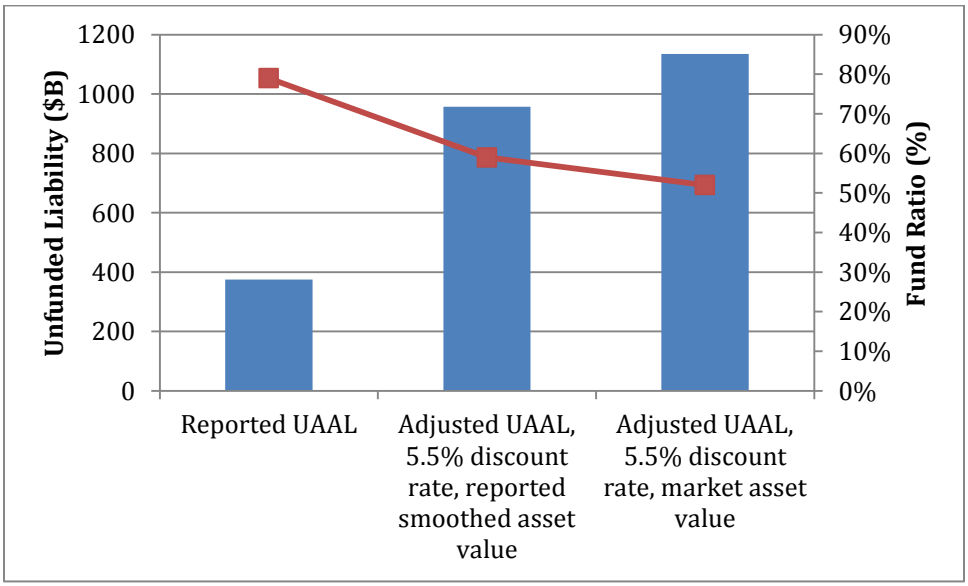
Source: (Van Wagner, 2012)

The unfunded pension liability would have nearly tripled to $1.056 trillion (74 percent of total state revenues) from current $391 billion once reporting changes were incorporated. A corresponding state annual contribution $128.8 billion (9.1 percent of revenues) would have been required to fully fund current benefits and amortize existing liabilities. This would have equaled a 250 percent increase over the current required amount of $36.6 billion, or 2.6 percent of state revenues (Van Wagner, 2012). Overall, valued using this Moody's in-house methodology in 2012, state pension plans would have been only 46 percent funded (Van Wagner, 2012).

To be fair, this example represents a fairly conservative way to price state retirement benefits. However, a full range of sensitivity scenarios needs to be considered when current pension promises are evaluated, especially in the context of other indebtedness for the states – and their residents – to understand the true price tag of benefits owed to state employees, the extent to which these promised may be underfunded and additional financial contributions that might be required down the road to turn these statutory promised into real annuities for retirees.

In a similar fashion, unfunded liability for municipal governments rated by Moody's would have exploded threefold to $1,135 trillion from currently reported $375 billion if updated Moody's methodology were applied in 2012, as seen in the figure below:

Figure 16: Impact of Pension Reporting Adjustments on Rated Local Government Funded Status



Source: (Van Wagner, 2012)

Moody's in-house rating conclusion: municipal plans would have been only 52 percent funded in aggregate (Van Wagner, 2012). The required increase in annual contributions needed to close the gap would have been difficult to estimate given the poor quality – or

simply absence – of reliable data. It is fair to conclude that local governments may have vastly underestimated the true cost of promised post-employment benefits.

Summary of Industry Trends

To sum up, both regulators and credit rating agencies in 2012 and 2013 moved towards using fair market value of pension assets to calculate accrued liabilities to estimate the value of promised pension benefits. Moody's has also repeatedly signaled that it distinguishes between the assumptions used as the rationale for its ratings and the funding guidelines individual plan sponsors may wish to follow. Each plan sponsor is expected to follow its own funding strategy fitting each government's context. Furthermore, the financial health of most pension plans has already been incorporated into current ratings, and as such rating agencies likely expect minimum impact on most outstanding ratings as a result of their adjusted rating methodology.

Figure 17 below represents a summary of upcoming reporting and rating methodology changes and how they may relate to "real" budgeting by governments, compiled by several professional organizations, including the National Governors Association, National League of Cities, Center for State and Local Governance Excellence, and others:

Figure 17: Summary of Statistics for Financial Reporting, Rating and Budgeting

Separate Pension Numbers for Books, Bonds, and Budgets			
	Books	**Bonds**	**Budgets**
Purpose	Standardized financial reporting of pensions for accounting	Stress testing the degree to which pension obligations may affect a government's ability to repay bonded debt	Determining an annual pension contribution to properly fund benefits
Primary audience	Users of government financial statements	Ratings analysts	State/local policymakers
Source of calculation	Accounting standards set by the Governmental Accounting Standards Board (GASB)	Practices established by individual credit rating agencies	State/local statutory, administrative and procedural rules
Methodology	Pensions are accounted for through the computation of a Net Pension Liability, i.e., the difference between the market value of pension fund assets and benefit obligations as of a specific date	Varies by rating agency, as pensions are just one of many metrics used to determine a bond rating	Most governments make actuarially determined contributions, calculated within established parameters as a level percentage of payroll to fully fund benefits earned each year and to amortize unfunded liabilities
What's changing	The Net Pension Liability is a new figure that will be placed on basic government financial statements and is expected to create unprecedented volatility and, in some cases, could dwarf other items on the financial statement	Some ratings agencies have announced that in their credit analytics, they will adjust pension data using uniform, generally more conservative assumptions regarding amortization periods and investment returns	New GASB standards will no longer include parameters for calculating an annual required contribution. Although this does not necessitate a change to existing funding policies or statutes, governments are urged to follow recommended guidelines established by the Pension Funding Task Force

(Source: NGA, 2013)

Public plan sponsors would benefit from paying attention to these industry trends to review respective DB plans for how well those are funded under a set of more conservative assumptions to potentially make necessary adjustments to benefit design and administration.

Otherwise after fiscal 2014 and 2015 when GASB reporting standards kick in, many plan sponsors may find themselves facing significantly larger amounts of off-balance sheet pension related debt. Given the statutory protection of most pensions, this "soft-debt" must

nevertheless be paid and plan sponsors should recalculate their liabilities to know how much money they actually need and then consider potential sources of funding.

Given the market drivers for increased pension transparency in valuing promised benefits, one would hope it will be more difficult for politicians to promise unfunded benefits and be able to hide them in long-term notes to the financial statements.

In the short-run, transitioning towards more transparent reporting requirements might place some plan sponsors in dire financial straits as the true cost of incurred benefit promised becomes known. In the long-run however, improved pension accounting transparency is likely to eliminate “pockets of inefficiency” and policy capture which allowed for exuberant promises, inadequate pension funding, and in some cases, for excessive risk taking with public funds. Eliminating such “pockets of inefficiency” would contribute to long-term sustainability of pension systems and their government sponsors.

Chapter 5: The COH Pension System

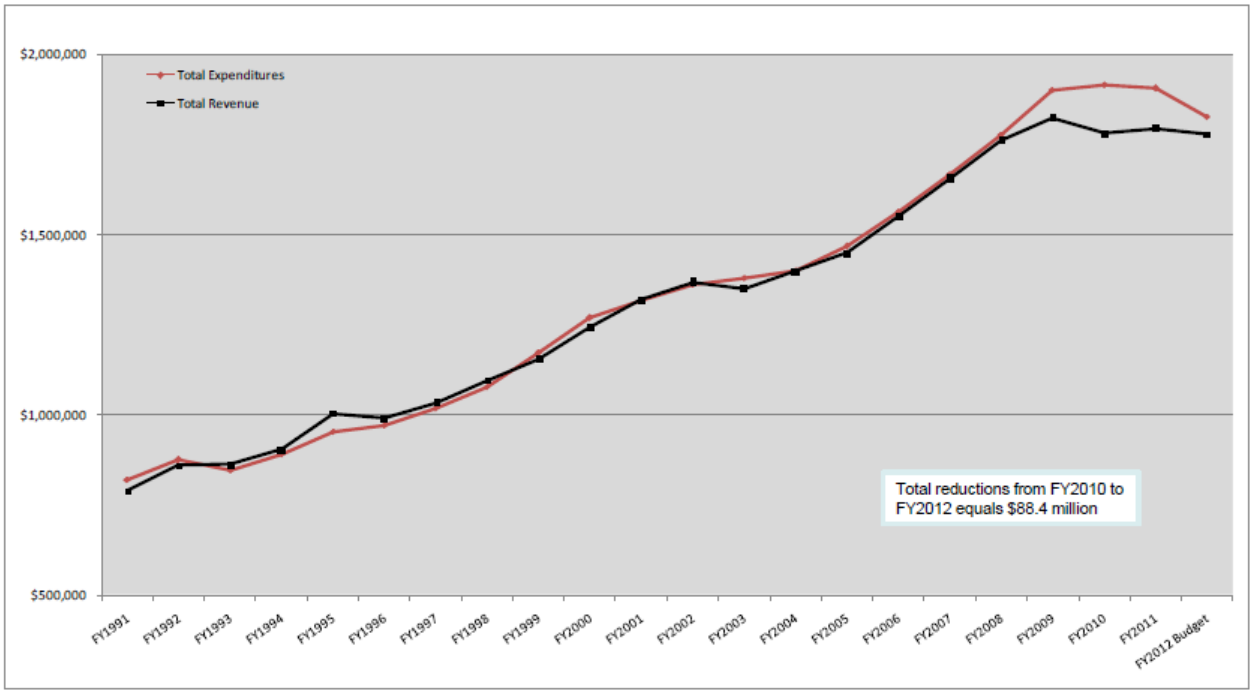
Economic and Financial Condition of COH

The COH is the fourth most populous city in the nation with the estimated population of over two and a half million people, just behind New York, Los Angeles and Chicago; it is the largest city in the southern U.S. and Texas. The COH, the county seat of Harris County, is the economic center of the Houston MSA, which ranks as fifth largest in the U.S. with a population of over six million. Houston continues to serve as the center of the country's energy sector. Moody's Economy.com reports the COH's dependence on the volatile energy sector decreasing to a certain degree given the importance of its medical services and research, transportation and distribution sectors. The strengthened energy industry is expected to continue to generate jobs going forward, while property values remain attractive. Overall, Houston is expected to remain a net recipient of population growth nationwide and regionally due to its robust, growing economy.

Projected population growth is likely to require additional municipal services mix and expanded investment in the infrastructure. This translates into growing expenses for salaries, pensions and OPEBs, as well as future debt borrowing. However, the COH budget may not have the necessary budgetary flexibility to accommodate these additional service requirements, despite its expanding taxbase and robust economy. Furthermore, major challenges to the COH balanced budgets are structural in nature, as detailed below.

Between 2004 and 2011, the COH was operating at a deficit before taking into account non-recurring resources, transfers from external funds, and the use of the General Fund reserves, as seen in the figure below:

Figure 18: General Fund Revenue and Expenditure Data ($ '000):



Source: (COH Financial Reports, 2011)

This inability to reverse this trend of expenditures outpacing revenues resulted in dwindling reserves close to five percent by fiscal 2011, significantly limiting the COH's financial flexibility.

Fiscal 2012 results were a welcome surprise aided by higher tax collections and cost-cutting measures implemented by the COH, adding nearly $25 million to the undesignated fund balance and resulting in unassigned reserves of $153 million, or eight percent of General Fund revenues. By comparison, fiscal 2011 reserves equaled seven percent of General Fund revenues. Continued augmentation of the General Fund undesignated financial reserves would strengthen the COH financial position, enhancing its ability to withstand long-term structural pressures on the budget. Fiscal 2013 financial results would be indicative of whether this trend will continue, while fiscal 2013 budget projected another draw down of reserves.

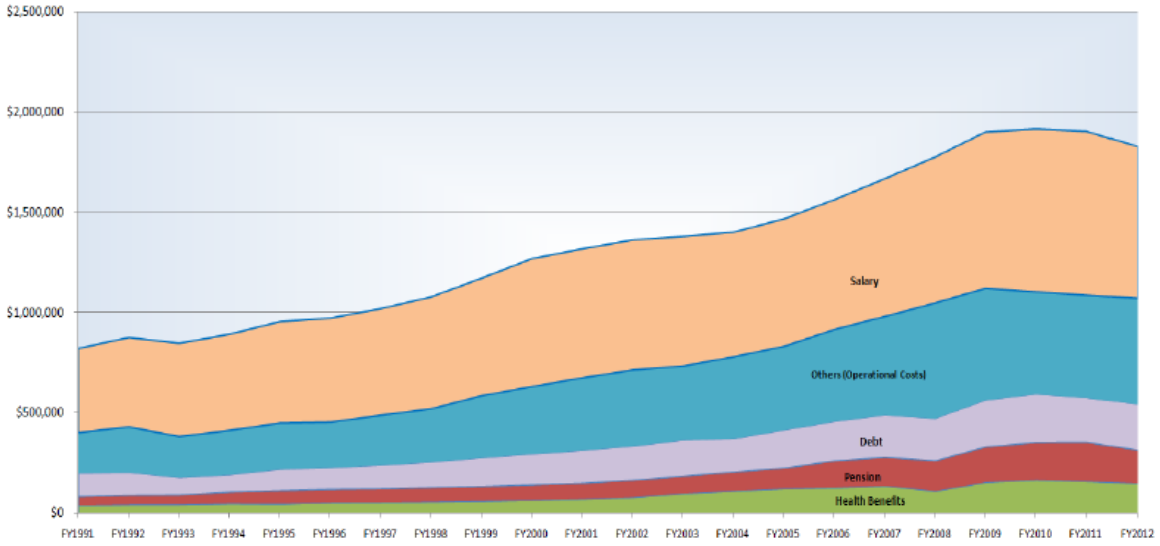
Earlier in 2012 the COH Finance Department ran several scenarios varying assumptions of property value and sales tax growth as well as different payment schedules to assess the true extent of structural issues plaguing the COH's financial condition. In summary, the growth in pensions, health benefits, and debt service expenses outpaces growth of salary costs, taking up an increasing portion if the General Fund budget.

In other words, the COH's non-discretionary legacy expenses due for past services are increasing faster than ongoing operational expenses for current services. In addition, the COH has no room to grow its services to absorb costs for new services needed for its exploding population and related infrastructure needs.

As expressed by the COH Finance Department: "even with lower spending plans going forward, the COH's ability to repay debt and afford [current levels of spending on capital, equipment, and technology] is an issue due to increasing expenditures and insufficient revenues." With its expenditures driven by mandatory categories, current financial path for the COH is unsustainable.

Annual debt expense accounted for nearly 12 percent of fiscal 2011 spending. Actual pension expense represented 10.3 percent in fiscal 2011 and was budgeted at 9 percent of fiscal 2012 expenditures, as seen in Figure 20 below:

Figure 19: General Fund Expenditures by Category



Source: (COH Financial Reports, 2011)

This indicated an increase from the 6 to 7 percent of expenditures, typical of earlier periods.

However, Figure 20 above fails to reflect the true cost of benefits, since the early 2000s the COH has been contributing only approximately 70 percent of ARC to fund pensions. While debt service schedule is projected to remain at steady rates, the COH pension expenses are rising faster than other recurring revenues available to offset the structural pressures on the budget. This way, pensions represent a very important element in the puzzle of the COH's sustainability and focusing on pensions as a key component of overall financial viability is appropriate.

To illustrate, fiscal 2012 debt service requirement to fund approximately $3 billion in outstanding general obligation bonds for capital improvements and $540 million in pension notes was just under $300 million, or 16.5 percent of fiscal 2012 revenues of $1.8 billion. Approximately one sixth of this amount, about $54, million went towards financing the costs of borrowing with pension notes to help bridge the unfunded pension liability in the municipal and police pension funds. This is equal to 3 percent of total fiscal 2012 revenues.

Recent ARC amounts as a percentage of payroll were in the ballpark of 23 percent for municipal, 33 percent for police and 27 percent for firefighter pension systems. In dollar amounts, total ARC to fully fund municipal, police and fire pensions constituted nearly $312 million in fiscal 2012, or 17.5 percent of total revenues. Thus, to finance its pension obligations – both bonded and "soft" – Houston should have allocated approximately **20 percent**, or one fifth, of all its fiscal 2012 revenues.

This is a sizeable chunk of revenues competing against salaries, various city programs, on-going infrastructure investments, etc. The actual amount contributed to pensions was less than that at $225.7 million, or 12 percent of revenues. This means that Houston paid only slightly over 70 percent of the amount necessary to fund pensions in fiscal 2012, pushing the cost of underfunding forward to future budgetary cycles and/or administrations to deal with.

In fiscal 2012 the unfunded liability for all three funds equaled **$2.6 billion**, or 143 percent of total City revenues.

To sum up, amounts Houston owes for pensions are far from trivial. And this is without taking into consideration employee healthcare obligations, which represented a separate **$2 billion** in fiscal 2012 and would have been enough to fully consume all revenues by themselves. These obligations are funded on a pay-as-you go basis out of current budgets with no advance prefunding.

While the COH has been contributing less than ARC to the municipal and police plans according to negotiated agreements, shortfalls in annual contributions snowball overtime due to foregone interest on the missing plan assets. As a result, these two plans expect to

be paid back with interest the difference between the amounts actuarially required and contributed over the last several years.[12]

The COH unfunded pension liability of over $2.6 billion for all three funds (as of fiscal 2012) is equal to just under 2 percent of the COH's full assessed value of $142.8 billion. In comparison, the COH's direct debt burden (excluding debt from overlapping entities, such as school districts) equals 2.3 percent (Moody's 2001 credit report) of full value.

One of the reasons Houston has been routinely underfunding its police and municipal pensions over the last decade is because of unsustainable benefit enhancements passed in the early 2000s in the context of little policy transparency and public accountability, discussed in detail in further sections.

Background on COH's Pensions

The COH maintains three pension programs: municipal, police and firefighters. The three retirement benefit plans and their designs, funding requirements, investment management, benefits administration and communications are mandated by state law. While the COH must offer these plans, their management and oversight is the responsibility of the following independently governed trust organizations, as described below.

The Houston Municipal Employees Pension System (HMEPS or Municipal System) provides benefits to most municipal employees other than classified police officers and firefighters.

The Houston Police Officers' Pension System (HPOPS or the Police System) provides benefits to the City's classified police officers.

The Houston Firefighters' Relief and Retirement Fund (HFRRF or the Firefighter Fund) pays benefits to the City's classified firefighters.

[12] Based on interviews with pension plan officials

All police and fire, and the majority of municipal employees are participating in contributory defined benefits pension plans. Recently hired municipal employees participate in a non-contributory defined benefit plan providing employees with a baseline annuity at retirement. All defined benefit plans are administered by respective pension systems. Municipal employees may increase the amount saved for retirement by voluntarily contributing towards their respective 457 DC plans administered by the COH.

The original idea behind the reforms that modified benefits for the younger cohorts of employees was to create for them a version of a stacked hybrid plan where a modest lifelong annuity would be supplemented with individual retirement savings accounts encouraged by the COH as a sponsoring employer. At the same time, the design model as implemented may have been flawed from the beginning.

Instead of considering the baseline DB and the accompanying DC as two components of the same retirement savings scheme that would be administered by the municipal pension system, only the DB portion of the benefit is managed by HMEPS. Rather than establish a sister DC savings plan within HMEPS as a stacked hybrid would imply, the decision was made by the boards and the COH to refer new employees to create accounts within the already existing 457 DC plan maintained by the COH. At the same time, enrollment in these accounts was made voluntary rather than required.

This had several unintended consequences. Because the DB and DC components of the pension are managed in the truncated fashion and because participation in the DC portion of the scheme is voluntary, many employees fail to create and contributing to their DC accounts. Overtime, this is likely to result in lack of savings for retirement for the younger cohort of the COH municipal employees, according to officials familiar with the topic.

The COH makes contributions of 6.2 percent of payroll for its municipal employees who are also eligible for Social Security benefits. Neither police nor firefighters are eligible for Social

Security benefits; therefore the COH does not make retirement contributions of 6.2 percent of payroll on their behalf. Therefore, in an unlikely scenario if COH were to close the two respective pension plans for its public safety employees, the COH would be obligated to immediately start making required Social Security contributions on behalf of these employees likewise equal to 6.2 percent of payroll. Any potential plan savings realized from public plan terminations would thus be those in excess of the mandatory Social Security payments.

All three retirement systems provide its employees with defined benefit pension plans, guaranteeing a specific monthly dollar amount upon retirement. This amount based on the employee's earning history, length of employment with the COH, and the age at retirement is independent of the investment performance of assets under management. Figure 21 provides insight into the relative size of the systems:

Figure 20: Size of Pension Systems

	HMEPS	HPOPS	HFRRF
1. Number of members as of July 1, 2010			
a. Actives	12,913	5,347	3,911
b. Retirees	8,526	2,985	2,609
c. Deferred Vesteds	5,685	24	8
d. Total	27,124	8,356	6,528
2. Approximate size of staff	28	20	29
3. FY2012 Operating Budget*	$5.9M	$3.9M	$7.2M
4. Market value of assets at 6/30/2011	$2.1B	$3.5B	$3.2B

*Excluding investment related expenses which offset investment income

Source: (COH Presentation on Pensions, 2011)

The ratio of actives to retirees is 1.5 for HMEPS, 1.8 for HPOPS and 1.5 for HFRRF. This means that there are less than two active members to support each retiree with

contributions. Thus, on-going investment gains and municipal contributions are essential to the plan survival.

The ratio of the market value of plan assets per employee (actives and retirees) is much lower for the municipal fund in comparison to those for police and fire pension funds. As discussed in sections below, the municipal plan also has the highest ratio of unfunded pension liabilities per employee compared to the other two funds.

COH Actors Involved in Policy Process

The Mayor

The Mayor serves as the Executive Officer of the City. As the City's chief administrator and official representative, the Mayor is responsible for the general management of the City and for seeing that all laws and ordinances are enforced. Administrative duties include the appointments, with Council approval, of department heads and persons serving on advisory boards. The Mayor also appoints several trustees to the Boards, as discussed below in more detail.

As Executive Officer, the Mayor administers oaths and signs all motions, resolutions and ordinances passed by City Council. The Mayor also serves a legislative function, presiding over City Council with voting privileges. The Mayor is responsible for advising Council of the City's financial condition and presents to Council an annual budget for approval.

The City Council

The City Council is the City's legislative body, with the power to enact and enforce all ordinances and resolutions. Eleven Council Members are elected from districts and five are elected at-large, by all voters of the COH.

The sixteen members of Council, along with the Mayor, act only by ordinance, resolution or motion. They adopt and may alter the annual budget and confirm the Mayor's appointments.

Council is also responsible for the appropriation and issuance of bonds and the awarding of contracts and the approval of COH's expenditures over $50,000. Council may lease or dispose of the COH's real estate and may levy assessments against property. Council determines its own rules of procedure, and its meetings are open to the public.

Sixteen Council Members are elected every two years, in odd-numbered years. Council Members are limited to serving three terms of two years each, with each term beginning on January 2 of the even-numbered year. Five Council Members are elected At-Large, or city-wide, while the other eleven are elected to geographic districts of roughly the same proportion of population.

Because all Council members may serve only three two-year terms (maximum six years) and after that are unable to run for Council positions ever again, their political horizons tend to be fairly short. First, as self-interested politicians their main concern is to get reelected every two years. Second, after serving on the Council for the maximum of six years, many politicians wish to continue their political careers locally, i.e. school district Board, Comptroller, etc., or try their luck running for statewide offices.

As a result, Council members may choose to act as self-interested strategic politicians and worry more about solidifying their electoral coalitions through position taking that appeals to their constituents rather than attempt to address complicated issues like pension sustainability. Such issues are toxic for strategic politicians with career ambitions, because they imply fairly large political costs in the short run with benefits accruing over the long run when politicians are not expected to stay around to reap political rewards. In other words, it is completely rational for self-interested politicians to kick the can down the road on pensions.

Notably, the COH Mayors also subject to term limits face similar constraints to accumulate and preserve their political capital while in office without alienating much constituency to continue their political career.

While the COH Council is limited in its ability to influence trust fund administration and disclosure governed by state laws, it is ultimately responsible for making adequate contributions to the pension funds. Regular actuarially determined pension contributions are not statutorily determined (or required) so the extent to which pension contributions are prioritized in the budget depends upon the composition of the COH council and individual and composite preferences of its members.

The COH council has several choices: make contributions equal to the actuarially required amounts, make payments below or above these amounts, or make no payments and divert funds towards other budgetary uses, for example, to benefit electoral constituencies of individual council members. Some council members who owe their election to public employee majorities may view annual pension funding contributions as policy “spoils” to give back to their backers. As such, electoral coalitions supporting council members are important predictors of respective members’ votes on the pension budget.

The COH also considers pension benefits as part of the broader comprehensive benefit structure and views contributions to the pension funds in conjunction with payroll and Social Security contributions (for municipal employees only). Notably, for the last few years the COH finances have been structurally imbalanced even when pension funding is taken out of the equation. This creates incentives for COH council and the Mayor to underfund pensions, pushing the problem of unfunded liabilities towards future administrations in an effort to balance operations within the current budget cycle and keep pet projects going.

Chief Pension Executive

This position was created by Mayor Bill While after 2004 to address the challenge of the unfunded pension liability. The Chief Pension Executive is responsible for conducting an impartial analysis on the state of the pension systems, red flagging potential problems in the design/execution of pension policies as well as proposing potential solutions to ensure the pension system is adequately funded in a sustainable fashion. This position is currently held by Mr. Craig Mason appointed by Mayor Bill White.

State Legislature

All three pension funds are governed by respective state laws. State legislators approve and adopt the structure of funds as well as specific design and levels of benefits, without having any responsibility whatsoever for the funding of local DB systems.

State legislation is a product of politics at both state and local of government. Many state legislators started their careers locally before they progressed to serve at the state level, as discussed above. They may continue to have strong loyalties towards local coalitions that supported them first for local and later for state offices and likely would prefer not to rock the boat with the highly contentious issue of public pension reform.

Further, pension reform is traditionally an “urban” issue in the state that boasts a large rural and suburban-exurban bloc of legislators that dominate the Republican majority in both houses in Austin. Urban state office holders may be weary of talking about pension reform in fear of alienating important voting blocs active at the state level, such as public employees more broadly and especially public safety employee groups which have a strong lobby presence in the state capitol. Thus it is rational for most state politicians to avoid sponsoring pension reform bills despite the generally conservative nature of Texas state politics.

Texas Pension Review Board

The Texas State Pension Review Board (PRB) was created in 1979 by House Bill 1506, 66th Legislature (Chapter 801, Government Code), as an independent state agency to oversee and review state and local government retirement systems in Texas.

The Board is composed of nine members. The Governor, with the advice and consent of the Senate, appoints seven members with the following qualifications or experience:

- three persons with experience in the field of securities investment, pension administration, or pension law;
- one actuary;
- one person with experience in governmental finance;
- one contributing member of a public retirement system;
- one person receiving benefits from a public retirement system.

The Lieutenant Governor appoints one Senator to the Board and the Speaker of the House appoints one Representative. Senator John Whitmire served on the Pension Review Board from 1996 until 2013. Senator Whitmire's role in shaping pension policy at the state level is discussed in further sections related to the financial taskforce.

The Texas Pension Review Board (PRB) is mandated to oversee all Texas public retirement systems, both state and local, in regard to their actuarial soundness and compliance with state law. PRB's mission is to provide the State of Texas with the necessary information and recommendations to ensure that our public retirement systems, whose combined assets total in the multi-billions, are financially sound, benefits are equitable, the systems are properly managed, tax expenditures for employee benefits are kept to a minimum while still

providing for those employees, and to expand the knowledge and education of administrators, trustees, and members of Texas public pension funds.

Pending current draft legislation, PRB's authority may be further extended to provide additional oversight of investment returns and assumptions as well as of trustees' fiduciary duties.

Pension Fund Trustees

The boards are responsible for the general administration, management, and operation of the pension system, including the direction of investments and oversight of the fund's assets. Trustees of the three pension system boards select an actuarial firm to conduct analysis of the unfunded liability, setting the discount rate as well as other actuarial assumptions and propose to the COH changes to the benefit structure based upon the actuarial analysis.

HMEPS

An eleven-member Board of Trustees administers HMEPS. The Trustees include four elected trustees who are members of HMEPS, two elected trustees who are retirees of HMEPS, a trustee appointed by the elected trustees, the mayor's appointee, the controller's appointee, and two city council appointees.

HPOPS

The HPOPS board is composed of seven members, as follows: three employees of the police department having membership in the pension system, two retired members who are receiving pensions from the system and are not officers or employees of the COH, the administrative head of the COH or the administrative head's authorized representative, and the COH treasurer or the person representing the treasurer.

HFRRF

The ten-member HFRRF board consists of five firefighters elected by active firefighters, the city treasurer or person representing the treasurer, the mayor or an appointed representative of the mayor, two citizen members elected by the firefighter trustees, and a retiree who is elected by other retirees. The active firefighter trustees represent various ranks in the Houston Fire Department.

The boards hire an executive director to oversee staff; develop policy for investments, personnel, and other procedures; set their own budget; and work with the Mayor's office to develop pension benefits legislation.

Actuaries

Actuarial firms selected by the boards determine the value of assets to be accumulated to pay active and retired employees and the size of unfunded liabilities, based on the cost methodology, discount rates, amortization schedule, years of smoothing, etc. The boards are ultimately responsible for the assumptions used.

While actuarial companies in many cases have had lasting partnerships with pension funds, their incentive is also to retain fund business. Actuarial analysis is an art subject to multiple assumptions, most of which can be defended with historical data from selected time periods, with no guarantees about future performance. "Tweaking" actuarial assumptions may have a dramatic impact on the end price tag of pensions and respecting unfunded liabilities.

Most of the time actuarial analysis of pension fund performance performed annually is based on a single set of assumptions, resulting in a static single point projection of the unfunded liability for each fund. This is different from relying on a range of assumptions – sensitivity analyses – to arrive at a menu of potential outcomes that both pensions systems and their sponsors could evaluate.

Asset Managers

Professional investment firms selected and hired by pension boards assist them in performing portfolio allocation and management of pension funds. Their compensation is tied to how well they outperform their peers in terms of returns on assets. Investment firms are not responsible for whether or not pension plans will be able to meet their retirement obligations when due.

Figure 21 below lists main action situations related to pension policy and COH actors responsible for making key decisions regarding benefit design, administration as well as rules on procedures that govern the process:

Figure 21: Main Components of the Action Arena in COH: Action Situations and Main Actors

COH Rules and Governance

State pension statutes establish the governance structure of each pension system, the COH and employee contribution levels and the method for the determination of benefits payable to retirees under the Pension Systems. The HMEPS statute and the HPOPS statute allow for modification of the COH and employee contribution levels and the determination of benefits payable to retirees according to the meet and confer process between the respective funds and the COH. In contrast, the HFRRF statute solely governs both benefits and contributions. This means that current state statute explicitly prevents the COH from being able to negotiate with its firefighter pension system regarding any changes to either benefit design or funding requirements.

Participant Interaction: The Meet and Confer Process

"Meet and Confer" refers to a process of direct negotiations between the municipal and police funds and the COH Mayor to determine annual pension contributions and negotiate benefit levels. It is an institutional arrangement written in the state statute that allows the COH to have direct influence on its local pension policy. The Mayor directs "Meet and Confer" negotiations on behalf of the COH. "Meet and Confer" negotiations are separate from labor bargaining agreements which are conducted between the COH and professional employee unions. Thus the COH has separate negotiations with its employee representatives regarding salaries and pensions, although both constitute part of total compensation.

Through the "Meet and Confer" provision the COH is able to make amendments in the current benefit and funding structure subject to agreement of the pension boards. The Municipal System and Police Systems are authorized by the HMEPS Statute and the HPOPS Statute, respectively, to make binding agreements with the COH with regard to the

COH and employee contribution rates, the determination of benefits payable to retirees and other matters that differ from those provided in the Pension Statutes.

For example, the COH benefit and contributions were until recently based on a "Meet and Confer" agreement valid through 2011. New Meet and Confer agreements were passed in 2011 determining annual contributions to pensions. By contrast, the HFRRF Statute does not authorize comprehensive agreements on such issues through the "Meet and Confer" process.

Moreover, lack of "Meet and Confer" provision in the firefighter pension statute allowed the HFRRF to unilaterally demand in the midst of the Great Recession pension contributions equal 29 percent of payroll for fiscal 2009 and 2010 even though this was higher than the actuarially computed amount. Notably, the COH believes that "current contribution rate [to HFRRF] is unsustainable in the future" (Official Statement for COH, 2010).

While the Pension Statutes require each pension system to undergo periodic actuarial valuations, there is no statutory requirement that the funding plan determined through "Meet and Confer" negotiations be actuarially based or subject to independent actuarial evaluation. Accordingly, the funding plan arrived at through the "Meet and Confer" process may not be consistent with the actuarially determined contributions. This introduces potential for systemic underfunding of pension systems that has plagued the municipal and police plans over the recent years.

The $ 2.6B (and Ticking) Elephant in the Room: COH Unfunded Pension Liability

The funding problems at the COH's three pension systems started before the Great Recession is normally single-handedly accused of distressing pensions. Two of the COH pensions became seriously underfunded in the early 2000s as a result of several

implemented retirement incentives that, while attractive to municipal and public safety employees at the time, jeopardized the systems in the long-run. Further, benefit enhancements were granted in an environment of little policy transparency and public accountability.

While HFRRF boasts an attractive funded ratio (since its annual funded transfers are mandated by state law), its projected current ARC of 33 percent of payroll nevertheless exerts serious pressure on the COH's budget, jeopardizing plan sustainability in the long-run. A healthy funded ratio and a sustainable ARC payment are both important metrics for financial pension sustainability.

HMEPS: Roots of the Problem

The foundation for the current $1.46 billion unfunded liability facing HMEPS was laid in 2001 under the Mayor Lee Brown administration. Then the HMEPS board of trustees proposed an increase in benefits including an increase in pensions to nearly 90 percent of salary after 25 years of service. The actuarial firm Towers Perrin prepared a report for the HMPES board of trustees estimating that this benefit enhancement would cost the COH 15 percent of payroll in contributions, assuming together with the board very low opt-in rates from non-contributory to contributory plans.

At that time, the COH was making ARC payments of about 10 percent of payroll to cover pensions on top of 6.2 percent of payroll to pay for Social Security benefits. Since the estimated new price tag appeared reasonable and consistent with the COH target contribution rates, the COH Council and subsequently state legislature approved this proposed benefit increase. Thus the enhanced benefit structure was written into state law and would require a subsequent change in state law to be modified. Notably, by the end of 2003 the same consultant Towers Perrin was predicting the cost of pensions would

skyrocket to over 53 percent, or over $100 million more in ARC, to fund municipal pensions alone (Feldstein, 2004).

It is unclear where in the process of pricing benefit enhancements the undervaluation or miscommunication of true costs occurred. No single party claimed responsibility at the time. In hindsight, it appears clear that inaccurate assumptions about understated opt-in rates by employees approved by the boards and incorporated into the actuarial report are at the root of the problem here. Lack of transparency around the process of recommending, pricing and approving the new benefit structure was largely responsible for insufficient scrutiny of the preliminary cost assessment for accuracy. It is even more worrisome that this process continues to lack transparency, so nothing prevents similar issues from happening ever again.

The COH three pension boards enjoy a bureaucratic autonomy and a monopoly on detailed information regarding employee benefits they are not required by law to release to outside parties, such as the COH (plan sponsor), COH appointed actuary or the public. As such, it is impossible to independently verify either assumptions accompanying a proposed benefit change or its resulting price tag. As will be discussed in the following chapter, the three boards of trustees are also staffed primarily with pension beneficiaries who stand to personally benefit from benefit increases. Trustees hire and work closely with the actuarial firm that forecasts benefit costs based on assumptions. This process is also closed to scrutiny by either the plan sponsor or the public.

Had the process been open to public scrutiny, erroneous assumptions incorporated into the initial cost assessment would likely have been questioned by either other actuaries or Council Members or the public. Key among those was the assumption that the historical trend of very low opt-in rates from the non-contributory to contributory pension systems

would continue even after the heavily subsidized opt-in option was made much more attractive to employees.

Some background history would help illustrate to which extent this assumption was flawed. In the early 2000s HMEPS offered two retirement options to its employees: one in which employees contributed nothing, and one in which they contributed 4 percent of their check. Before the 2001 changes, a 25-year employee in the non-contributory plan would have gotten a 50 percent pension. After the changes, this estimate rose slightly to 51.3 percent.

In comparison, before the changes in the contributory plan, a 25-year employee would have gotten approximately 66 percent of salary, reflecting the value of their own contributions. After the changes, this percentage rose to 88.8 percent (Feldstein, 2004).

But the rule change that broke the bank was the newly acquired ability by employees to switch from the non-contributory plan to the contributory one. Employees had an opportunity to retroactively “buy” previous years by paying four percent of the salary they earned in that year plus six percent interest (Feldstein, 2004). It is difficult to rationalize why employees were only charged in one year to purchase an expensive lifelong benefit and why the interest charged was six percent which is below the eight and a half percent assumed by HMEPS as its annual return on investment.

Thus during the early 2000s, pension costs and benefits for HMEPS were misaligned. Employees were allowed to buy into a more generous plan without making sufficient contributions. This violated one of the most important requirements of sustainability and made HMEPS underfunded overnight, since more employees now qualified for the benefits for which no money had been set aside.

Naturally, a large number of employees took advantage of this “subsidized” pension benefit while it was legally available, with 1,400 and 1,500 employees switching from the non-

contributory to the contributory plan in the first and second years, respectively. In contrast, prior to the changes, very few employees would switch between the plans (Feldstein, 2004).

In their February 2001 assessment, the pension board and the actuary assumed that a small number of employees would switch between the plans working off the historical trends rather than providing realistic estimates based on the expected behavior of employees facing modified incentives. As a result, initial estimates of the new benefit costs communicated to the COH and later written in state law were seriously understated.

Nearly 3,000 employees switched during the early two years because it was in their best interest to do so. This was to be expected, and appropriate guards/incentives should have been put in place to price the extra benefits they became entitled to accordingly.

It was then members of the boards and their vested constituencies who benefited handsomely from the rule change. And since there was no external oversight of the discussions between the board and the actuary appointed by the same board, their unrealistic assumption went unnoticed and unquestioned.

By contrast, public, transparent discussions of the proposed benefit policy change at the time of adoption and its implications on the budget would likely have resulted in a much higher scrutiny of this policy. Potentially, the terms of the benefit enhancement would have been different, sparing the COH the financial pension turmoil it is currently in. To illustrate, it appears that some members of the COH Council at the time were inquiring about the ability to boost their own pensions, but withdrew their interest after realizing these discussions would have to be conducted during the Council meetings open to the public (quote).

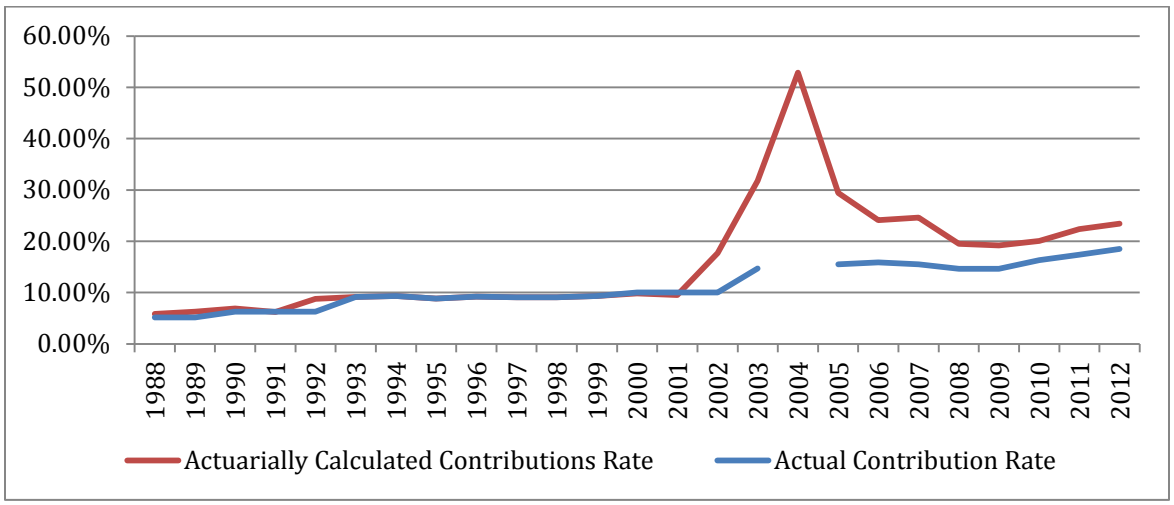
Further, none of the key actors involved with proposing or passing the enhanced benefit suffered any personal responsibility, politically or financially. Quite the opposite, some were able to collect attractive pensions as result. Thus, failure of HMEPS solvency is first and

foremost an institutional failure that allows critical long-term financial decisions to be made by insiders for the benefit of insiders in the context of little financial transparency and public accountability.

Price Tag of HMEPS Policy Decisions

Figure 22 compares between actuarially computed and actual contributions to the HMEPS as a percentage of payroll for the period between 1988 and 2012:

Figure 22: HMEPS Actuarially Computed and Actual Contributions by COH, % of Payroll



Source: (HMEPS Actuarial Valuation Report for the year beginning July 1, 2011)

As seen from figure 22, until 2001, the COH actual pension contributions were tracking actuarially required amounts. However post the 2001 benefit enhancements, the COH consistently contributed less than was required to fully fund its pensions, largely as a result of the unsustainable costs brought about by this ad hoc benefit change.

Figure 21 omits an actual contribution for 2004 equal to 93 percent of payroll as an outlier. At that time the COH made a one-time contribution of a $300 million note backed by the collateral of the Hilton Americas Houston hotel building. Despite the COH intentions to close

the funding gap with the proceeds of the sale of the hotel, this property was never sold. The COH was paying 8.5 percent per year in interest on the note until paying it back from the GO bond proceeds.

Figures 23 and 24 provide strong quantitative evidence that the difference in amounts required to fund the HMEPS pensions before and after the 2001 benefit enhancements are statistically significant at the 99 confidence level:

Figure 23: HMEPS Calculated Contribution Rate (ARC) as % of Payroll, Means Test

	Time Period	
	1988-2001	2002-2012
Mean	8.28%	24.55%
t-statistics of Mean Equality (p-value in parenthesis)	**-5.49** (0.00)	

On average, ARC payments post benefit change were three times the amounts required to fully fund pensions prior to the passage of enhanced benefits and opt-in rules.

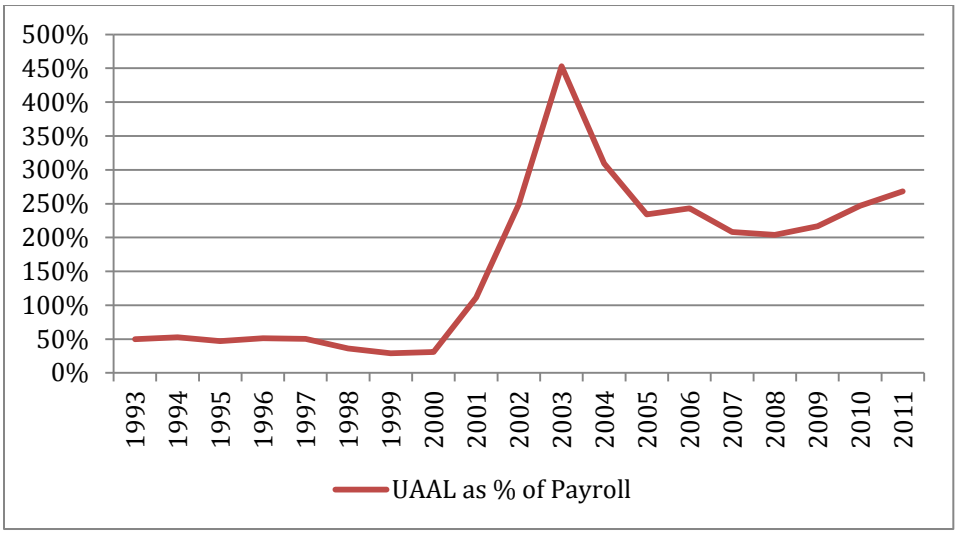
Figure 24: HMEPS Actual Contribution Rate as % of Payroll, Means Test

	Time Period	
	1988-2001	2002-2012
Mean	7.92%	14.82%
t-statistics of Mean Equality (p-value in parenthesis)	**-7.57** (0.00)	

Similar to the results in Table 23, the difference between pre- and post-rule changes amounts the COH actually contributed to HMEPS is also statistically significant at the 99 percent confidence level. On average, municipal pension actual funding commitments were nearly twice as high after the benefit enhancement and the opt-in allowance.

Figure 25 compares the unfunded pension liability as a percentage of payroll before and after the rules change:

Figure 25: HMEPS Unfunded Pension Liability as % of Payroll



Source: (HMEPS Actuarial Valuation Report for the year beginning July 1, 2011)

To be sure, the increase of in the unfunded liability in the early 2000s was partially due to the dismal market performance in fiscal 2001 and 2002, when the fund lost 4.56 percent and 8 percent of its market value, respectfully. By contrast, focusing on the ARC as a percentage of payroll isolates the effect of rule change regardless of the market performance.

The difference between unfunded liability as a percentage of payroll pre- and post-implementing benefit enhancement is statistically significant at the 99 percent confidence level:

Figure 26: HMEPS Unfunded Pension Liability as % of Payroll, Means Test

	Time Period	
	1993-2001	2002-2011
Mean	50.96%	263.23%
t-statistics of Mean Equality (p-value in parenthesis)	**-8.24** (0.00)	

The average unfunded pension liability as a percentage of payroll increased five-fold once the benefit enhancement and opt-in were implemented.

Figures 27 and 28 provide further quantitative evidence that the differences in unfunded liabilities expressed in dollar terms and as funded ratios for the periods before and after the benefit enhancement are both statistically significant at the 99 percent confidence level:

Figure 27: Schedule of HMEPS Funding Progress (1993-2011): Unfunded Pension Liability ('000), Means Test

	Time Period	
	1993-2001	2002-2011
Mean	$194,368	$1,177,943
t-statistics of Mean Equality (p-value in parenthesis)	**-10.15** (0.00)	

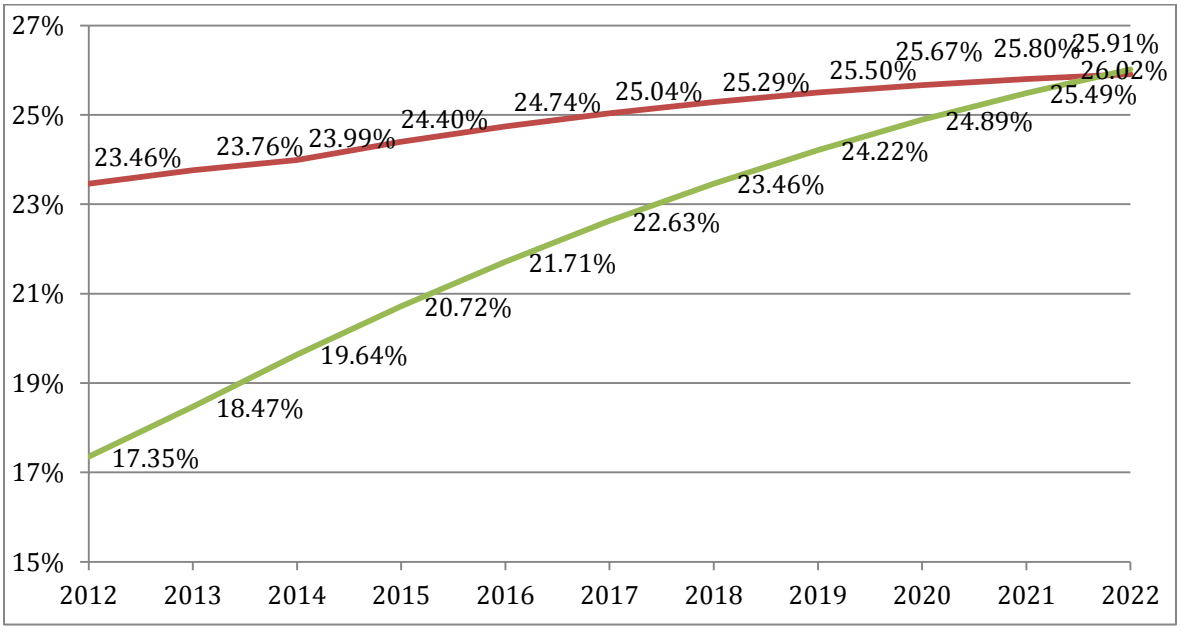
The HMEPS unfunded liability increased six-fold, in great part due to the non-transparent and non-publicly accountable benefit enhancement.

Figure 28: Schedule of HMEPS Funding Progress (1993-2011): Funded Ratio (%), Means Test

	Time Period	
	1993-2001	2002-2011
Mean	83.07%	62.36%
t-statistics of Mean Equality (p-value in parenthesis)	**7.01** (0.00)	

The legacy pensions' excessive funding requirements exacerbated by the ad hoc benefit increase of 2001 are projected to persist, haunting the COH financial health for decades to come. Notably, the COH is projected to fund only a portion of what is required since it is unable to meet the unsustainable ARC fully, as seen in Figure 29:

Figure 29: Comparison between Actuarially Computed and Contributed Amounts, HMEPS



Source: (HMEPS Actuarial Valuation Report for the year beginning July 1, 2011)

As the COH keeps underfunding its ARC (in red) by only funding portion of what is required (in green), the unfunded liability is being pushed forward on an open thirty-year amortization schedule as per the Meet and Confer agreement between the COH and HMEPS in 2011. HMEPS ARC is estimated to approach 30 percent of payroll in fiscal 2018. This means that at that time about one fourth (25 percent) of all municipal personnel costs are projected to go towards funding pensions, with the lion share of those slanted to amortize the costs of legacy pensions.

Municipal legacy pension costs may be amortized indefinitely unless the COH makes a conscious effort to either reduce its legacy benefit obligations or allocate additional resources to funding them. To illustrate, legacy (unfunded liability amortization costs) already comprised over three-fourths of the 2012 ARC: 17.59 percent out of the computed 23.45 percent. Short of change in strategy, HMEPS may remain perpetually underfunded as a direct result of the change in rules in 2001 facilitated by self-interested politicians and implemented by self-interested policy insiders without minimal public scrutiny and without any subsequent public accountability of key actors.

HMEPS: Initial Reforms

Mayor Bill White inherited the unfunded pension liabilities from the prior administration and attempted to rein in the crisis through a series of steps. While a state constitutional amendment was passed in November 2003 prohibiting local municipalities from reducing accrued pension benefits, citizens of Houston voted in the May 2004 general election to opt out of this state constitutional amendment. While this option has not been utilized, this awards potential fiscal flexibility for the COH going forward, by delegating control of benefits back to the local level.

An additional position of Chief Pension Executive was created to enhance communication among stakeholders and provide impartial fiscal analysis of pension plans sustainability. Mr. Craig Mason, who currently occupies this post, has since prepared numerous reports and sensitivity scenarios trying to identify the weak points in the pensions systems and suggest potential ways to improve their long-term sustainability. The Chief Pension Executive also gained a seat on all three boards of trustees. Total two council appointees and a controller appointee were added to the HMEPS board.

To provide immediate funding relief for its struggling pension systems, the COH also issued $608 million on Pension Obligation Bonds, the proceeds from which were utilized as follows: 1) $482 million to fund HMEPS (80 percent); 2) $123 million to fund HPOPS (20 percent); and 3) $3 million for underwriter discount and related cost of issuance (1/2 percent). HMEPS received four fifths of the total bond proceeds.

Issuance of Pension Obligation Bonds may be a useful policy tool only in those circumstances when the issuer is able to benefit from arbitrage from investing bond proceeds. This is because pension bonds are not tax-exempt. Municipalities tend to pay between 5.5 to 6.5 percent interest on these bonds with the expectation that they can reinvest bonds proceeds and generate a higher return on this investment, for example at an 8.5 percent currently assumed by the COH pension systems. Under these conditions, the issuer pockets 2 percent net interest payment, helping it close the funding gap over time.

However, in a low yield environment prevalent over the last five years, COH would have been expected to keep paying 6.3 interest on its bonds (which co-incidentally would have been a fairly attractive investment themselves), while likely unable to generate equal returns elsewhere in the market. Thus at least in the short run, pension bonds may have done more harm than good for the COH municipal pension system.

The Center for Retirement Research reported in 2010 that a large share of pension obligation bonds historically fared poorly with the exception of those issued in the early stages of the stock boom of the nineties or at the very trough of the stock market collapse in 2008 (Munnell et al., 2010).

In addition to their timing, pension bonds must also be evaluated in the broader context of the financial sustainability of the issuing entity. For example, Moody's incorporates into its ratings the structure of pension bonds, asset allocation of their proceeds, interest on the bonds and investment returns assumptions, and overall debt capacity of the issuer (Evangel et al., 1999). Pension bonds are effectively recognized as a policy tool to provide immediate relief from the budget crunch. They are not a substitute for reform. Critically important is the ability by the issuing government to avoid accumulation of further unfunded liabilities post issuance – something the COH has been unable to accomplish to date.

The 2004 meet and confer agreement between the COH and HMEPS reduced future benefit accrual rates; increased eligibility age for retirement from "rule of 70" to "rule of 75" (requiring employees to work longer and retire older); increased mandatory employee contribution rate from 4 percent to 5 percent; transferred an (illiquid) asset valued at $300 million to the pension fund; and adopted a schedule of increasing dollar contributions for fiscal 2005 through fiscal 2007.

These measures considered by the COH to be an interim step to fund solvency resulted in the reduction of the projected contribution rate from 52 to 24 percent of payroll. Notably, the unfunded problem was already present prior to the Great Recession of 2008 and 2009. The Great Recession had a compounding effect on the HMEPS unfunded liability; it was not the single cause for the crisis.

The subsequent reforms of 2007 were more long term in nature and were accomplished via the meet and confer process, a reliable channel of communication between the COH and its

employees. The COH target funding level was now equal to 15 percent of payroll (consistent with historical averages prior to benefit enhancement).

A separate tier was created for new employees featuring a hybrid defined benefit/defined contribution plan to provide a basic level of income replacement at no cost to employees. For employees who would choose to forego career employment, defined contribution plan offered an opportunity for capital accumulation in a retirement account that could travel to a new job, in a public or private sector. Thus the new plan promoted both career employment and enhanced ability to hire mid-career workers, while sharing some risks – investment, longevity, inflation - between the COH and its employees. This design was more likely to make the pension system financially sustainable in the long run.

New employees could earn a full benefit at age 62 or choose to retire early with a reduced benefit; COLAs and DROP accounts were eliminated and the post-retirement survivor's benefit became optional. DROP accounts and their impact on the COH financial sustainability will be discussed in more detail in the next chapter. At the same time, generous legacy pensions which necessitated reforms in the first place remained intact, in a striking example of generational inequity. Older cohorts of employees would pay less and earn significantly more in guaranteed benefits that younger cohorts that would pay more, get less and face more uncertainty.

The current retirement schemes for HMEPS are structured as follows in one of the three programs. There is a contributory defined benefits pension program (Plan A) for employees hired between January 1, 1999 and January 1, 2008 whereby employees contribute 5 percent of their salary to the plan.

Employees hired prior to January 1, 1999 had a choice between Plan A (the contributory defined benefit program) and a non-contributory plan (Plan B). Employees hired after January 1, 2008 are covered by a new non-contributory defined benefit plan (Plan D). As of

July 1, 2009, 66.8 percent of active employees of the COH were in Plan A, 16.1 percent were in Plan B, and 17.1 percent were in Plan D.

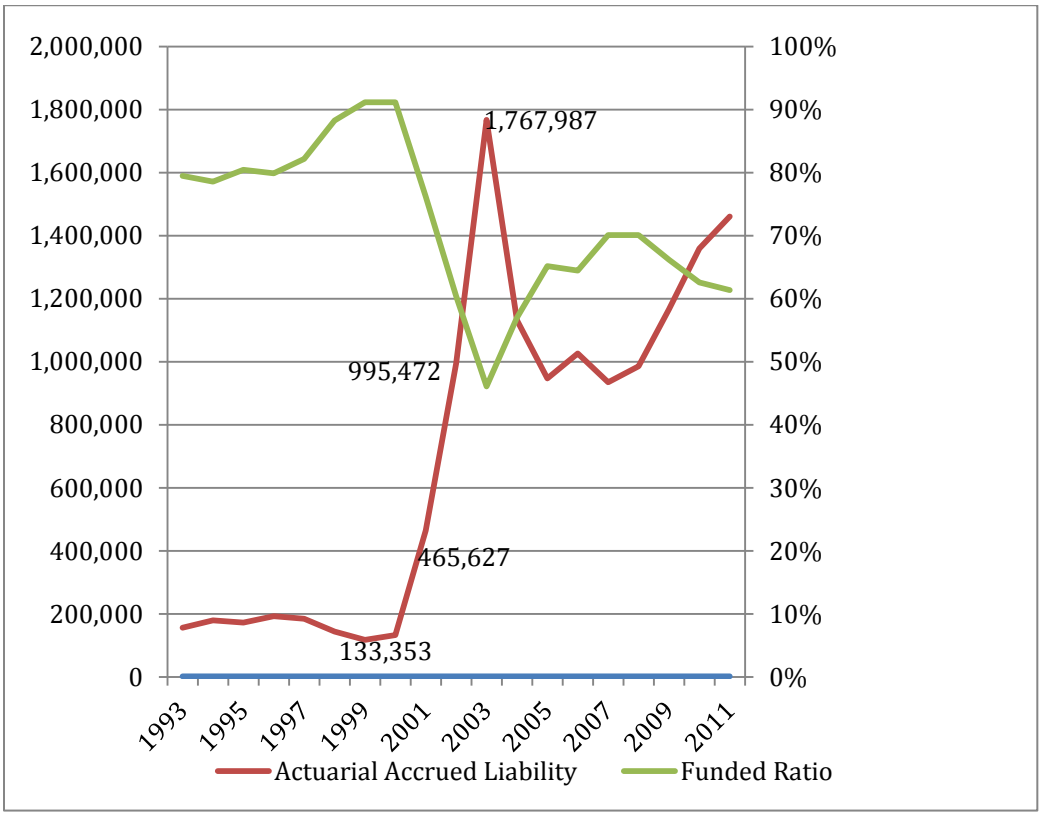
Thus the lion share of municipal employees is entitled to benefits they were able to opt into on the cheap as a result of the 2001 enhancement. This rule switch is singlehandedly responsible for a huge portion of the unfunded liability in the municipal pension fund.

The municipal pension is an example of a “multi-tier system”, which by virtue of its design is prone to inter-system inequity because employees with very similar work histories may qualify for completely different benefits depending on when they were hired and what legislation was in place at that time. The multi-tier system is the direct result of the patchwork-like response by primary decision makers to the pension crisis a decade ago.

Despite the above mentioned reforms, HMEPS today faces a $1.46 billion unfunded liability, which is equivalent to a $118,390 unfunded liability per member (Texas Comptroller website). This is because its legacy pensions which are bankrupting the system remain untouched by reform. Although the COH has retained the right via a referendum to renegotiate accrued benefits with its employees, it has to date chose not to utilize this option.

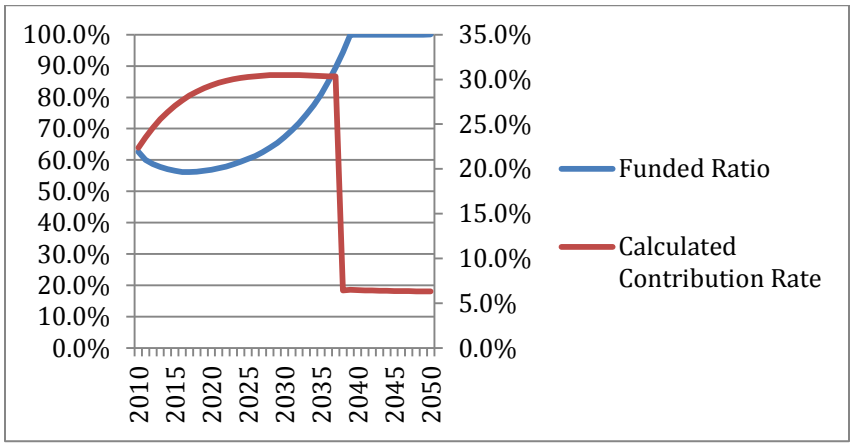
Figure 30 shows the historical growth in the actuarially computed unfunded liability for the COH:

Figure 30: Historical Actuarially Accrued Liability and Funded Ratio, HMEPS



Unfunded liabilities are expected to continue to plague HMEPS for decades to come, since the amounts required to fully fund these pensions per each year are fiscally unsustainable. The figure below based on HMEPS own actuarial projections shows the fiscal path to full funding, assuming an 8.5 percent discount rate and a close amortization period of thirty years:

Figure 31: Projected Contribution Rates for HMEPS (as of July, 2010)



Source: (HMEPS Actuarial Valuation, July, 2010)

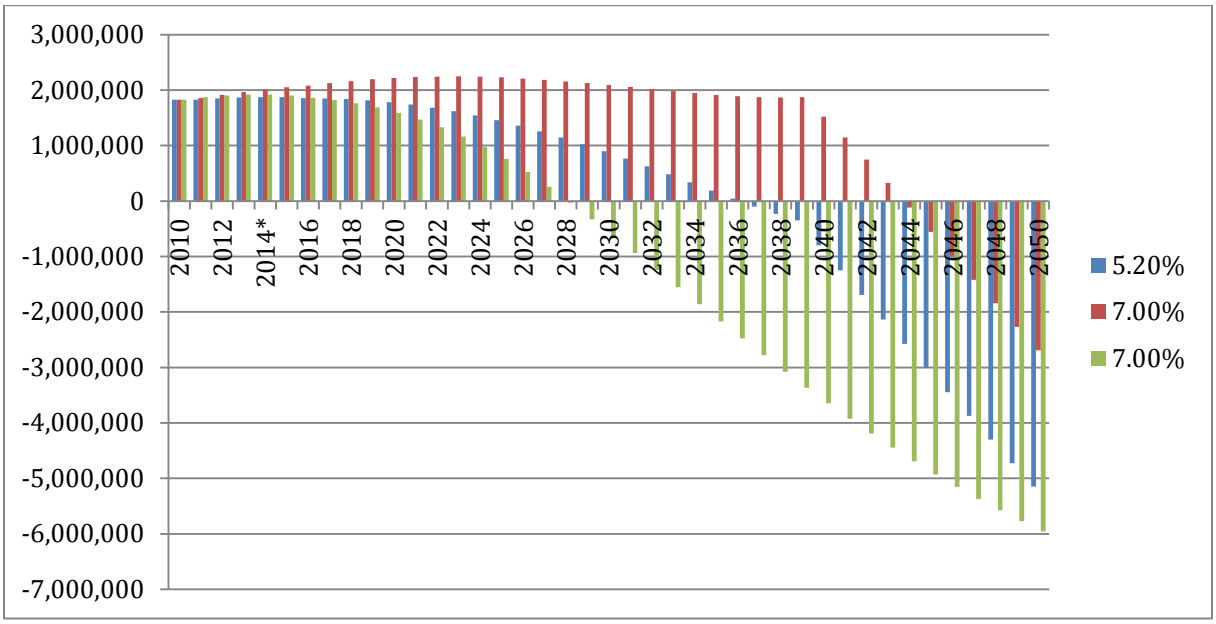
To fully fund its current pensions and amortize the unfunded liability, HMEPS is expected to pay between 25 and 30 percent of payroll through 2037. Notably, the COH target rate was around 15 percent as approved by the COH Council and State Legislature in 2001. Actual contributions to HMEPS were in line with this target but well below the amounts required above – equal to 15 percent of payroll in fiscal 2011. At comparable rates of contributions, HMEPS will continue to remain underfunded unless legacy pensions are changed or additional sources of revenues are diverted towards funding pensions.

These projections also implicitly assume the fund making 8.5 percent per year in interest. Actual net returns were 8.1 percent for twenty years, 6 percent for fifteen years, 7.2 percent for ten years and 1.3 percent for five years (through 2012).[13] This further indicates that projections above are overly optimistic about the possibility of fully funding HMEPS over the next thirty years.

[13] From the Chief Pensions Officer report to the COH Council, January 2013

Projections below show what would happen to the HMEPS pension assets under alternative market scenarios, assuming current payout structure and required contributions rates between 20 and thirty percent of payroll remain unchanged:

Figure 32: Projections of HMEPS Asset Value Given Different Market Scenarios and Contribution Rates (in 000's)



Source: (HMEPS Actuarial Valuation, July, 2010)

The blue bars indicate the market value of HMEPS assets assuming a long-term market return rate of 5.2 percent. This number is in line with a high-grade corporate bond index. In this scenario, HMEPS will slowly cannibalize itself by 2037.

The red bars assume a more optimistic long-term return on assets of 7 percent annually. Nevertheless, the fund is projected to run out of money by 2044.

If the COH decides to contribute a level 18 percent of payroll, while preserving the HMEPS benefit structure, the pension fund will run out of money faster in 2028. This graph is shown by green bars, and that is only fifteen years down the road.

HPOPS: Roots of the Problem

Prior to 2004, HPOPS statute used to include provisions allowing for individual "benefit spiking", such as basing pension benefits on the highest pay in the two week period and including any and other one-time payments, to calculate initial annuities. This could result in pension annuities exceeding salaries at retirement. "Spiking" amounts were not budgeted for, leading to structural underfunding of pensions over time. The *Houston Chronicle* reported recently that the 2011 class of retiring police officers received an average 12 percent boost in their incomes by moving off payroll as a direct result of these spiking provisions, as estimated by the COH Chief Pension Executive Craig Mason (Moran, 2012). According to the same estimates, the average 25-plus-year firefighter got a pension 58 percent higher that his annual salary. Firefighters' pensions continue to be subject to spiking provisions, as discussed further.

Additional compensation changes were made through collective bargaining between the COH and the Houston Police Officer Union without due consideration on the HPOPS pension liabilities. As a direct consequence of these events, the COH actuarially determined contribution rate to HPOPS increased dramatically from approximately 17 percent of payroll to approximately 30 percent of payroll in 2004.[14]

HPOPS: Initial Reforms

The Meet and Confer agreement of 2004 eliminated provisions conducive to spiking and established a new lower liability benefit structure for police officers sworn in after October 2004, including: 1) reduced benefit levels; 2) increased employee contributions; 3) a minimum retirement eligibility age of 55, and 4) the elimination of DROP. This Meet and

[14] Interview with the COH Chief Pension Executive Craig Mason

Confer agreement between HPOPS and the COH also provided for an increasing dollar contributions schedule to HPOPS to fund pensions at least through June 2023.

The Meet and Confer Agreement of 2011 provided for a portion of the scheduled contribution for fiscal 2012 to be made with an "in kind" contribution of real estate valued at $17 million (Mason, 2011) to help mitigate the financial burden on the General Funds stemming from the calculated contribution of $83 million.

Depending on the quality of the collateral property, it may be possible to rent the building out and collect rent. More often than not though, such "in-kind" contributions are in fact budgeting gimmicks, unless the asset is sold and proceeds are invested in the pension fund to generate investment proceeds. For instance, the in-kind contribution above was the police headquarters building which can barely be rented out.

Such de facto failure to contribute required amount each year means that the following year the foregone amount plus an interest payment at the 8.5 percent assumed investment return rate must be deposited to make the pension system whole. Such payment was not made in fiscal 2013.

The unfunded pension liability was $770 million (latest available for fiscal 2011), or equal to $144,972 per member.[15]

HFRRF: Roots of the Problem

The HFFRF statute allows the HFFRF board to increase benefits without the COH approval if the HFFRF actuary determines that the increase would not pose "a material risk of jeopardizing the fund's ability to pay existing benefit" (Mason, 2011).

[15] Texas Comptroller of Public Accounts

In 2000-01 the HFRRF board represented to the COH, the State Pension Board and the firefighters that it could deliver the increased benefits with minimal impact on the COH's long-term funding obligations. The actuarial analysis presented by the HFRRF board indicated that increased benefits could be funded adequately by continuing contributions at the historical rate of payroll approximately equal to 18 percent of payroll (Mason, 2011). This benefit increase was approved by the State Pension Review Board and supported by Mayor Lee Brown based on submitted information.

After the benefit increase was implemented, the "normal cost" to fund current accruals increased by nearly 60 percent from 14 percent of payroll to 22.3 percent of payroll in 2001. And by 2004, the actuarially calculated COH's contribution rate increased to 30 percent of payroll, equal to double to contribution rate in effect prior to benefit increase and over three times the member contribution rate of 9 percent (Mason, 2011).

HFRRF: No Reform

Since the HFRRF statute does not provide for a Meet and Confer provision, the COH has failed to date to conduct meaningful negotiations regarding bringing the firefighter benefit structure in line with an affordable firefighter benefit structure. The HFRRF board has been unwilling to make any concessions, while the COH is required by state law to make full ARC payments. This explains why the firefighter pension fund has been able to maintain a healthy 90 percent funded ratio at an 8.5 assumed discount rate.

Normally, full ARC funding would signal a healthy long-term financial outlook. Except that in the case of HFRRF, the ARC required to pay accrued benefits, subject to "spiking" as well as DROP accounts, is truly unsustainable.

According to the estimates by the COH Chief Pension Executive, the ARC is equal to 29.4 percent of payroll for fiscal 2011 and 23.9 percent of payroll for fiscal 2012 through 2014.

The COH is projected to increase to approximately 36 percent of payroll by fiscal 2015. This projected contribution rate is 2.5 time the rate in effect prior to the benefit increases as a result of the 2000 changes, 4 times the member contribution rate, and 3 times the median contribution rate from a national survey of plans covering members who are not eligible for Social Security benefits.

Summary

It is very hard to predict when asset market bubbles will burst. Nevertheless, it is possible – and highly desirable – to put rules and procedures in place that would promote sustainability of public financial systems, such as public pension trusts. Most importantly, decisions on public pensions need to be made in a transparent, publicly accountable fashion where all relevant parties are included in the process, to avoid any policy changes that would disproportionately benefit certain target groups at the expense of others.

As seen in the section above, municipal public pensions were already severely underfunded prior to the Great Recession of 2008 and 2009. The Great Recession simply compounded an already financially unsustainable situation, making it worse. The primary cause of the COH municipal pension underfunding was the ability of a small group of insiders to pass an unsustainable benefit enhancement without much public scrutiny or accountability. In addition, assumptions regarding the true cost of the benefit enhancement were flawed, resulting in a nearly immediate ballooning of unfunded liabilities over the years following the benefit enhancement.

In the case of the COH, pension insiders were able to write into law benefits of which they were direct beneficiaries. They were able to accomplish this due to lack of oversight and public accountability. Transparent, representative institutions governing pension process

and its outcomes would likely have prevented this capture of pension policy by insiders, reducing the mammoth price tag for both new employees and taxpayers.

As a general rule, fully funding the ARC is a recipe for a well-funded pension system. But the ARC needs to be sustainable, i.e. based on fair and equitable benefit structures. As the case of the COH demonstrates, lack of transparency may result in making retirement promises that become so high that the sustainability of the whole system may be in jeopardy.

"The world is full of bad behavior that results when the entity with the power to make decisions is not the same entity that bears financial responsibility for the results."[16]

Chapter 6: COH Financial Management Task Force

The Financial Management Task Force (FMTF) represented an effort led by the COH Council and Mayor Annise Parker to bring main stakeholders together at the same table to examine and recommend potential solutions to address major drivers behind the structural deficit and unfunded pension and OPEB obligations.

The taskforce effectively moved the debate on pensions and OPEB liabilities from behind the closed doors of meet-and-confer and labor negotiations to the public arena, with all sessions open to public attendance and all documents available on the COH website. Actors were forced out of their habitual institutional environments to negotiate and bargain in a previously untested setting, publicly revealing their preferences and allegiances. By creating this brand-new institutional channel for communication, the taskforce served as a natural experiment to test all of the micro-foundations, governance structures and gatekeeper hypotheses.

Hypothesis 1: Micro-foundations (self-interest) inform preferences of key actors, influencing their preferred policy alternatives.

Hypothesis 2: Different governance structures lead to different outcomes within similar contexts.

[16] From a *Forbes* Magazine article by Jeffrey Brown entitled "Three Hard Lessons from Illinois Public Pension Reform", published May 30, 2012

Hypothesis 3: Preferences of actors in key roles ("gate keepers") are overrepresented.

Public statements made during the sessions and individual interviews with the taskforce officials constitute original data to test the hypotheses above. In addition, financial and legal documents gathered during the time the taskforce was in session allow to create financial sensitivity analysis of different policy alternatives, and also put a price tag on potential pension reforms and on the policy choice of preserving the status quo.

Background

When in June of 2011 the Houston City Council adopted a fiscal 2012 budget, it incorporated a budgetary amendment creating the FMTF to "review the COH's long-term financial situation and develop recommendations for a long-term plan of action for Council discussion and adoption." The full language of the amendment as adopted read:

"[The] Council requires adequate input and information to address both the short-term and long-term financial needs of the COH. Within sixty days, the administration shall appoint, with Council approval, a Long-Range Financial Management Task Force consisting of at least two Council Members, a representative of the Administration, a representative from each of the COH's three labor unions, a representative from each of the COH's three pension systems, and five members of the community representing business and residents comprised of financial and actuarial experts, business interests and community leaders. The Controller shall also be represented on the task force; however his representative shall neither be appointed by the Mayor nor confirmed by the COH Council."

"The task force will review the COH long-term financial situation and develop recommendations for a long-term plan of action for Council discussion and adoption. The task force will address long-range plans to include the COH's unfunded liabilities, pension

plans, benefit management, long-term indebtedness, and all other COH financial obligations. The task force shall present its final report to the Mayor followed by a meeting of a Committee of the Whole no later than January 31, 2012. The final report will include a recommendation on whether continued existence of the group, in its current or altered form, would be beneficial. The Task Force shall maintain as privileged and confidential any work product or draft document used to compose its final report. The task force shall be advisory only."

In addition to bringing together in one institutional setting the main actors responsible for conducting pension policy in COH, the task force also assigned a formal role to representatives of the broader Houston community – a proxy for taxpayers. The advisory role of the task force ensured that all recommendations resulting from discussions were non-binding, meant to eliminate the existential threat to pensions feared by public employees and create room for a healthy debate.

While the composition of the task force allowed for a representation of most of stakeholders, this representation was nevertheless lopsided and heavily weighted towards policy insiders. This evoked criticism from the Houston academic community as early as the initial time of the taskforce creation (Craig, Diamond and Fernandez, 2011). Notably, younger cohorts of employees were excluded and current retirees were overrepresented in the debate, since all pension system representatives were also current beneficiaries.

Below is the list of the task force members appointed on August 16, 2011 and their current roles current:

- Michael C. Nichols, Chair, Community Representative
- Fletcher Thorne-Thomsen, Jr., Community Representative
- Barbara J. Paige, Community Representative
- Ana Lee Sanchez Jacobs, Community Representative

- Gene Dewhurst, Community Representative
- Anne Clutterbuck, COH Council Representative
- C.O. “Brad” Bradford, COH Council Representative (and also a retiree of the Houston police system)
- Stephen C. Costello, COH Council Representative
- Melvin Hughes, Houston Organization of Public Employees (HOPE) Representative
- Terry A. Bratton, Houston Police Officers’ Union Representative
- Celeste Fatheree, Houston Professional Fire Fighters Association Representative
- Barbara Chelette, Houston Municipal Employees Pension System Representative
- Ralph D. Marsh, Houston Police Officer’s Pension System Representative
- Todd Clark, Houston Firefighters’ Relief and Retirement Fund Representative
- Carolyn Lacye, Mayoral Representative
- Chris Brown, COH Controller’s Representative

Five out of the sixteen task force members (roughly third) represented the Houston community, with the Chairman voting only to break the tie. Two out of the three Council members were the original sponsors of the budgetary amendment to create the task force, while one was a former police officer and a current beneficiary of a pension estimated equal to at least $95,000 annually (Moran, 2013). The three union representatives and three pension system representatives were all vested and several were current pensioners and therefore beneficiaries of the status quo pension system. All elected Council and career COH employees were eligible for pensions and, as a result, had self-interest in preserving at least the currently vested portion of their pensions.

Rules of the Game

The task force members met twenty-one times from August 22, 2011 until February 6, 2012. Over this five month period, the sixteen COH elected officials, community leaders and employee and retirees representatives heard from the COH administration officials, outside experts, business leaders, and academics who presented on numerous topics relevant to the COH long-term financial health. As stated in the final report, "task force members focused on structural, operation, and management issues affecting the COH finances [over the next twenty years], rather than on the impact of the current recession" (Nichols, 2012).

Among topics presented to the task force members by academic and professional experts were a twenty year forecast of the COH revenues and expenses, local demographic and economic trends, the size of current and projected COH pension and OPEB obligations, and debt and capital improvement plan schedules. These purely educational presentations were designed to enable task force members to make informed choices about what to do with the COH long-term obligations putting pressure on the budget: bonded debt and ballooning pensions and healthcare benefits.

Creators of the task force made an implicit assumption that exposing primary stakeholders to information would inform and potentially persuade them to soften their often conflicting positions and find ways to collaborate. As seen below, such collaboration failed to occur, with very little learning taking place and with actors predominantly guided in their policy recommendations by their self-interest which remained unchanged. If anything, several stakeholders solidified their original positions, becoming less inclined to negotiate and more hostile to pension reform.

Evidence of successful self-learning by the taskforce participants would have included a shift in their previously stated positions on pension reform, which could have been captured

as a change in voting coalition patterns or a stated willingness to negotiate with the other side. Instead, representatives of the pension boards and employee unions always voted as a block sticking to their original preferences, with the COH Council representative who is also a beneficiary of the police pension system joining them most of the time.

Upon the conclusion of the taskforce, the six employee representatives submitted a dissenting minority report discussed in further sections. It is thus appropriate to assume that, at least for this sample of the COH employees officially representing the larger constituent population (and its preferences), new information was sufficiently discounted and/or perceived as partisan and biased, so that their original policy preferences remained unaltered. Further research utilizing surveys or interviews may provide further quantitative support for this initial finding, which is not the primary focus of this work.

Each of the task force members anonymously submitted to the chair written policy suggestions designed to help the city mitigate some of its long-term financial challenges. These constituted the “menu of alternatives” discussed during five deliberative sessions. All decisions were made by a public vote, with the majority winning and the chair breaking the tie. When the full quorum was present, at least eight votes would be required to keep an item on the agenda.

Characterized by the Chairman, the task force presented a forum, “a safe place to put ideas forward” rather than a typical political discussion. In an effort to preserve as many members’ suggestions as possible and avoid politicizing the debate, the members decided to develop a wide range of alternatives rather than consensus recommendations.

This decision was critical to shaping the end product of the task force activity. Process required to create a non-binding broad menu of alternatives – essentially the agenda for the COH Council – is dramatically different from that needed to build agreement around oftentimes thorny issues related to health and pension obligations on which major actors fail

to see eye to eye. The former requires less commitment and poses less threat to stakeholders, while the latter would force stakeholders to compromise – a rare event in pension policy making. At the same time, a broad menu of alternatives is less useful as a policy document, with limited practical applicability. Another alternative end product considered – and voted down by the majority – was a menu of alternatives with an assigned price tag to the COH budget.

Despite its light, non-binding nature, even this "menu of alternatives" was perceived threatening to some stakeholders. Trustees and representatives of COH professional unions would routinely team up (together with a sympathetic Council member and a beneficiary of the police pension system) voting as a block to oppose any policy recommendation intended to make pension systems more transparent, consolidate financial accounts under the COH financial director and/or allow access to pension data to any entity not affiliated with the trustees. Examination of votes on these decisions provides evidence to test the gatekeeper hypothesis.

Notably, the decision criteria used to determine whether policy recommendations were going to remain on the menu of the alternatives excluded rules and governance mechanisms altogether. This "second face of power" (Bachrach and Baratz, 1962) – the power of keeping critical items off the agenda – is very telling. By underplaying the importance of pension rules and governance, stakeholders ensured that the current power structure never came under discussion and current gate-keepers (notably trustees) retained all their powers to set pension policy. Likewise, the list of items removed from the final menu of alternatives is as important – if not more important – than the final items submitted to the Mayor and the Council.

Final evaluative criteria agreed upon to select policy alternatives included:

- Alternatives must have a clear financial impact on COH

- This impact must be material (significant)
- This impact must be long-term in nature

Applied indiscriminately, these evaluative criteria provided a decision-making loophole allowing for removal of all policy options that had an indirect long-term material impact on the COH finances, demonstrated in the examples below.

Policy Options Missing from the Final Report – "The Second Face" of Power

This section focuses on the second face of power (Bachrach and Baratz, 1962) of the "foregone agenda" – the list of alternatives never submitted for discussion to the Mayor and the COH Council. If considered, many of these policy alternatives would have made the COH pension systems more transparent, their funding more streamlined and adequate, while keeping pension benefits more responsible and equitable.

If implemented, any and all of these alternatives would have reduced conflict of interest currently plaguing the systems, would have limited transfer of wealth to current beneficiaries from future beneficiaries, enhancing long-term pension sustainability. The final menu submitted to the Council included 110 policy recommendations, down from nearly 300 alternatives submitted by members for the initial review.

Alternatives listed below were excluded from the final document submitted to the COH Council because they were perceived by the gate-keepers to be threatening to the status quo, beneficial to them as well as the constituencies they represented.

Each policy proposal related to pension governance incurred resistance from pension fund and employee union representatives as not material, long-term and financial. At the same time, "how the rules are made impacts the outcome."[17]

Attendance was critical to which policy proposals stayed on the agenda. Distribution of preferences of attendees was rather bimodal. To the extent that employee organizations and pension boards representatives and a Council member who was a current beneficiary always voted unanimously to preserve the status quo (seven members), the attendance of other members of the task force was crucial to whether some governance proposals were defeated by the majority vote. Since attendance of several task force members varied, so did the success or failure of several reform proposals.

Items excluded from the final report to Mayor related to: 1) adopting specific legal provisions to exclude any decision-maker at the state or local level who might have a personal or professional conflict of interest from having a meaningful say in the pension policy; 2) adding the structural/institutional design of Meet and Confer to the firefighter fund statute which allows the COH to negotiate directly with pension funds without interference of the state; and 3) allow the COH more local control over benefit design and implementation.

These policy options would have enabled the COH to regain local control over funding decisions for one of the pension systems as well as over benefit design for all three of them. Including these items on the Mayor's and City Council without any guarantee they were going to be implemented was threatening enough for the current policy beneficiaries to work hard to discredit them and vote them down.

Without these reforms, public pension policy in the COH to this day remains fragmented between the state and local level. At the same time, the state has zero responsibility for

[17] Comment by the task force Chairman Michael Nichols in response to the motion to remove the proposal creating meet and confer agreement between the COH and firefighters

funding local pensions, leading to a misaligned cost and benefit stricture, with the COH legally bound to pay for pensions over the design of which it has little power. Further, in the case of the firefighter pensions, the state and not the COH, also has the final authority to determining appropriate levels of funding, without any regard to the state of local finances.

At the same time, the state has very little political accountability at the local level for the pension related decisions, with the local taxpayers largely deprived of the right to determine the pension structure of their local employees. Inclusion of the state adds an unnecessary degree of organizational complexity to pension decision-making, further blending the paths of public accountability for decisions on pensions and blurring policy transparency.

Excluded Item: Conflict of Interest

Conflict of interest relates to a situation when main actors engaged in policy making may also personally benefit, either politically or financially, as a result of this policy outcomes. Conflict of interest is likely to bias policy making, since public benefits or costs from the policy in question may no longer be evaluated objectively clouded by potential personal interest.

The following policy recommendation relating to the conflict of interest was voted down to be excluded from the final report to Mayor:

No elected officials (City, State, and County) can lobby for City business (including enterprise funds or pensions) or be employees of City: contractor, subcontractor or counsel – Governance

This proposal aimed to eliminate conflicts of interest between main actors to ensure that state, county or city officials are impartial in their policy making rather than pass legislation to score favors with selected COH departments or pension systems for personal gain. This provision would be even more important for COH, because its pension governance and

benefit design are written in state statutes. It is thus possible for pension funds to go "venue shopping" and secure legislation at the state level that would limit flexibility of COH to negotiate with the funds at the local level.

The best example of capturing the pension policy process at the state level is the COH's failed attempts to negotiate with its firefighter pension system. The COH conducts two types of negotiations with its three employee systems: collective bargaining on salary contracts governed by federal statutes and separate meet-and-confer negotiations related to pensions with its police and municipal systems (but not firefighters) established by state law. To date, the COH has been unsuccessful in lobbying the state to establish a meet-and-confer channel with firefighters primarily as a result of successful lobbying efforts by the firefighter pension system itself to prevent meet-and-confer they publicly oppose.

COH public employee pension systems have long enjoyed legislative support at the state level, backed by the most senior Democratic Senator John Whitmire (Houston). At the same time, the longest serving "Dean of the Senate" is of counsel for Locke Lord, a political lobbying firm advertising on its website its "unique government relations team that has extensive contacts at every level of government and knowledge of how public processes work".

While Sen. Whitmire is of counsel to the Houston team representing local and federal clients, he is also actively involved in all state pension policy making directly affecting several of the firm's major local clients – Dallas Police and Fire Pension System, Houston Firefighters' Relief and Retirement Fund, Houston Municipal Employees Pension System and Houston Police Officers' Pension System. Senator Whitmire has also been a serving member on the Texas Pension Review Board since 1996.

To date, Senator Whitmire has supported policies at the state level that preserve the pension status quo – also the preferred position of the pension funds his employer Locke

Lord represents. This blurring of business and political incentives has frequently put the top state policy-maker in the spot light for potential conflict of interest (Root, 2013).

The above proposal would have made this and similar business arrangements impossible, helping separate business from politics, and likely resulting in a more comprehensive and less biased political process and its outcomes.

Excluded Item: Meet and Confer with Firefighters

Existence of a direct negotiation channel on pensions between the COH and its firefighters would have created an institutional setting to decide this policy with a direct impact on local finances at the local level. The policy recommendation read as follows:

Establish Meet and Confer with firefighters (similar to municipal and police) – Governance

Ms. Celeste Fatheree, a firefighters' association representative, introduced a motion to remove this policy proposal, seconded by Mr. Todd Clark, the firefighter pension representative. The COH firefighters' opposition to establishing a meet and confer channel for negotiation of pensions between them and the COH is well known. Firefighters are comfortable with pension policy decided at the state level – the venue they were able to successfully capture, as described above.

The meet and confer proposal was struck down by a majority vote on the grounds of not being "material, long-term and financial". In fact contractual agreements resulting from meet and confer negotiations – similar to those negotiated through collective bargaining agreements – all have material, long-lasting impact which is significant for the budget in dollar terms as well as percentage of payroll.

Today there is a series of misperceptions that: 1) the firefighters' pension system may be sustainable regardless of what happens to the COH finances; and 2) any negotiations between the COH and the firefighter pensions are likely to deprive firefighters of benefits.

These concerns are reflected in the post below by Mr. Todd Clark from the HFRRF board of trustees in response to a recent *Houston Chronicle* article arguing for more pension transparency and for instituting a meet and confer process with the COH firefighters:

"*The reason [Meet and Confer] is a destructive process is because the COH has not paid the full actuarial required contribution rate (ARC) to [the municipal and police] funds in over 15 years. This action by the City has been the cause of the underfunding problem they are experiencing…*

We all see what the COH has done to the other two funds because of M&C. Here is how it works, first the rate the city contributes is reduced which underfunds the system, then the COH calls and says by the way, you are underfunded so we have to reduce your benefits… Just to be clear, the COH pays 20 percent of the retirees' benefits, the Firefighters' and income from investments pay the remaining percent.

Why in the world would we choose to go down that same road when at the end of the day, the Firefighters' pension system would be harmed and damaged because of the action by the City? The [state] Lawmakers have realized that Meet and Confer is not a positive move… I would like to see the other two funds remove themselves totally from this destructive cycle and get back on track…

This manufactured attack against the Firefighters' is strictly political in nature. We do not have Meet and Confer and…we are the strongest and best funded pension system… [Meet and confer] harms the pension systems and the employees. I see no positive reason to enter into any type of M&C process with the COH."[18]

[18] From the public comment by Mr. Todd Clark to the article "A Start on Pensions but More is Needed", *Houston Chronicle*, March 28, 2013, accessed April 3, 2013.

In reality, Meet and Confer institutional channel would provide a venue for firefighters and the COH officials to get together at the same table at the local level – without engaging the state – to negotiate for the benefit of both the COH and the pension system as parts of the same entity. Meet and Confer channels would improve the perception that the COH and its pension systems – including the firefighters – are parts of the whole. Working together towards a collective sustainable interest at the citywide level would raise local awareness of issues important to and improve the financial sustainability of all its member systems.

Meet and Confer would also award the COH a role in conducting firefighter pension negotiations, preventing unilateral requests by firefighters for funds that exceed actuarially required amounts.

To sum up, aside from defining statutes, the state has no financial obligation to ensure adequate funding of local pension systems, with ultimate responsibility resting with the COH. At the same time, financial sustainability of the COH three pension systems hangs on the extent to which the COH itself is financially solvent. And finally, establishing a Meet and Confer with firefighters would bring local pension policy to the local level – eliminating the need for state approval – tracing accountability for decisions on pensions to local leaders rather than the state.

Excluded Item: Local Control of Pensions

Fragmented pension governance leads to misaligned costs and benefits when any one party to the process has veto powers without incurring any costs of these decisions – political or financial. Reaping political or financial rewards from a policy related to resource utilization without being publically accountable – politically or financially – for it is a recipe for creating unsustainable resource systems.

This is exactly the case for the COH pensions where all benefit design is signed into the state while the COH is solely responsible for paying pension bills. A policy proposal submitted to the Chair and subsequently removed from the final roster of alternatives read as follows:

Introduce pension legislation for local control – Governance

The policy suggestion would have brought real decision power back to the local level. Today the state controls benefit rates and their administration without any responsibility to fund them. State politicians routinely reap political rewards for taking positions while avoiding any fiscal pains at the local level. This is a classic example of incongruent costs and benefits, which is inconsistent with design principles of financially sustainable organizations.

To become sustainable, the organization of the COH pension systems needs reforming to make sure participants making decisions also experience the costs of respective policy choices. While the state may wish to retain an advisory role in this debate, there is no reason why it should be involved in – or even block – pension negotiations at the local level unless state funding is earmarked to pay off the COH unfunded liability.

Such fragmented decision-making is also conducive to venue shopping and to crafting sympathetic legislation by state sponsors who stand to incur no tangible costs while securing political support.

Another policy alternative similarly aimed at aligning costs and benefits between the COH and its pension systems was also scratched off the agenda:

Mandate that the retirement plans have to choose between 1) management of assets, or 2) continued funding of plans by the COH. In other words, if the COH takes responsibility for payments and future funding, it should have responsibility for asset control and management - Governance

A financially sustainable system would have transparent reporting and would allow the plan sponsor responsible for full funding to provide oversight and control of the pension plan investment strategy. Today this power is reserved to the funds themselves by state legislation. However, in the event this investment strategy backfires, the funds themselves carry little responsibility, while the COH is presented with a large bill to pay.

A policy proposal to prevent pension fund trustees from giving the thirteenth check never made it to the final menu of alternatives either. Thirteenth check relates to an extra payment beneficiaries may get in any given year if the board of trustees believes the fund is financially healthy enough to warrant such payment. Today, the COH has no say in this decision entirely left to the funds.

Boards of trustees consider their ability to write the thirteenth check as an "integrity issue" whereby the COH needs to "honor its prior obligations".[19] Nevertheless, given the dire necessity to divert additional resources to amortization of unfunded liabilities, abolishing the thirteenth check practice would seem reasonable to improve long-term financial sustainability of the COH pension systems.

The COH pension funds allocate sufficient resources to lobby state legislators to pass favorable laws. In the prior legislative cycle, lobbying expenses were estimated between $300,000 and $400,000.[20] In many cases, the funds lobby for legislation in direct conflict with the preferences of the COH, as is the case with firefighters and meet and confer, for example. The proposal to limit the ability of the funds to lobby state legislature was also

[19] Based on task force comments by Mr. Ralph Marsh from the Houston Police Officers' Pension System

[20] Estimated by the COH Chief Pensions Officer Craig Mason

struck down by a majority vote on the grounds that "lobbying is not an expense to the COH but to the fund" and that funds routinely lobby also on tax issues.[21]

Proposals Included in the Final Report - Power of the Agenda

The following are related highlights from the agenda submitted to the Mayor and the COH Council on February 7, 2013. Although these recommendations made to the final roster, to date the Council is yet to vote on any of these alternatives. This is despite their potential to help reverse the ballooning unfunded pension liabilities contributing to structural deficits at the COH, as illustrated below.

Lack of Oversight Reduces Pension Transparency

Absence of transparent pension policy process reduces public accountability for financial decisions. Centralization of financial decision-making, including pensions, is likely to lead to more streamlined, publicly accountable – and thus better scrutinized – financial decisions, in line with the recommendation below:

Centralize all finance employees so they report directly to the Finance Department. Include enterprise funds so that finance director is aware of all department finances. This creates transparency for long-term fiscal responsibility – Governance and Transparency

The fact that the COH Department of Finance now has little visibility into separate departments' financial practices makes for an incoherent financial policy at the citywide level. Consolidating financial reporting would also improve financial transparency by tracking each employee's work history – and ensuring consistency between salaries and pension payments. Truncated financial reporting likely encourages "pockets of inefficiencies" conducive to spiking of pension benefits at the time of retirement as discussed below.

[21] Based on task force comments

Consolidating financial reporting into a citywide system would deprive the COH departments of their parochial powers to supervise initial calculations of pensions and as such was vehemently opposed by respective pension funds. Discussion would turn downright ugly each time department's – or pension funds' – authority was questioned, with one pension fund representative noting to the COH Chief Pension Officer "You are not on this task force, zip it up!"

Pension funds representatives would oppose any effort at oversight by the COH under the pretext that the funds are separate independently operated entities. Mrs. Barbara Chelette from the municipal retirement fund pointed out that it is the "funds [and not the COH that] write the pension check" and as such the COH "cannot audit" them. Nevertheless, it is the COH that makes regular transfers into the pension system and is legally responsible for making the funds full in case of shortages.

Ms. Celeste Fatheree from the professional firefighter association contended that "the point [was for the state] to put boundaries to the City [by locking the fund at the state level]." When talking about the firefighters' pension fund, Ms. Fatheree also argued that the financial condition of the fund "is stronger than the City" as a result of this independent design.[22]

This illustrates an overarching misperception that pension funds are able to exist in a vacuum independent of their sponsoring government's financial condition. This is an erroneous assumption, since pension funds rely on regular transfers from plan sponsors and those are only as good as the sponsor's financial ability – and in some cases willingness --

[22] Based on task force comments

to make these payments. Chairman Michael Nichols summed it up aptly as “pension fund is only as strong as the City.”[23]

Notably, financial analysts are moving in the direction of evaluating sponsoring governments’ pension liabilities in tandem with other types of indebtedness, including other post-employment benefits (OPEBs) as well as long-term debt. Specifically, Moody’s communicated in its recent comment that the rating agency intends to treat unfunded pension obligations as debt-like instruments because “pension liabilities impinge on budgetary and financial flexibility of respective government sponsors” (Van Wagner and Blake, 2012).

Just like the general credit quality deteriorates with strained financial flexibility of a borrowing government entity, the financial strength of a pension system is most certainly likely to suffer if its plan sponsor is in financial dire straits. Thus divorcing financial resilience of pension funds from the financial strength of the plan sponsor is mistakable.

Current governance design of the COH pension systems is flawed because the COH is responsible for funding benefits without an ability to audit them and/or without much day-to-day insight into the workings of its individual departments. This creates “pockets of inefficiencies” conducive to a capture by departments of the power to calculate initial retirement benefits inconsistent with the work history of respective employees. Because these “bonus” benefits were never accounted for actuarially and thus never prefunded, they contribute directly to the size of the unfunded liability.

Reliable Metrics Improve Pension Transparency

Today the compensation of public employees in the COH is truncated to the extent that once public employees retire data regarding their individual pension compensation

[23] Based on task force comments

(individual accounts) is unavailable to the COH finance staff. Ironically, the COH finance department has only a vague idea regarding the benefits which former employees are receiving. The following policy proposal aims to address this:

Require the director of Human Resources Department and the directors of the pension boards to provide any material necessary for the director of the Finance Department to calculate and report annually to City Council the total costs of all current and post-employment benefits including, but not limited to, payroll, health benefits, sick leave, pension obligations, accrued vacation time, and accrued compensation time - Transparency

Implementation of this proposal would allow for a seamless transition from compensation during active employment to compensation in retirement. Currently, decisions about these two types of compensation – for the same work completed during the same period by the same employee – are disjointed and accomplished in a truncated fashion. Moreover, the COH finance department has no clear insight into whether and how sick leave, vacation payouts, etc. factor into individual calculations of pensions. Only aggregate data is available per groups of employees. As a result, the COH is unable to relate prior salary at the time of employment to respective post-retirement benefit payments.[24] Furthermore, the three funds were unresponsive to the official efforts by the COH Council to access individual retirement data.[25]

Financial transparency at the moment an active employee becomes a retiree would help prevent "spiking" and ensure pension payouts are adequate, fair and equitable. Spiking benefits refers to inflating original pension payouts due to calculating pensions including overtime and sick leave, and/or being able to choose as a basis for calculation a period of

[24] Based on an interview with the COH Chief Pensions Officer Craig Mason

[25] Based on an interview with the COH Councilwoman Anne Clutterbuck, one of the original sponsors of the budget amendment to create task force

time with unusually high payouts. While some pension systems allow to calculate pension benefits based on the last several years of employment (HMEPS post 2008 reform), others, such as HFRRF, allow to select the highest several years and include overtime.

At the very least, it is reasonable to expect that a pension annuity would equal a fixed percentage of an employee's compensation over a given period of employment (which varies by the fund). Anecdotes persist of public retirees being able to cash out pensions that exceed their salaries, which is not sustainable and was never a goal of DB plans. Disclosing beneficiary pensions to the plan sponsor or actuary as a percentage of respective base salaries would either put these anecdotes to rest or necessitate corrections, depending on the findings.

For example, until 2004 COH police employees were allowed to retire with pensions calculated based on the best two weeks of pay, including overtime.[26] This would lead to actual pension payouts well above the percentage of average salary, and in some cases exceeding regular salaries. This provision was eliminated in the 2004 Meet & Confer Agreement between the COH and HPOPS whereby the definition of compensation for pension purposes was changed to a three year average excluding overtime and bonuses. But a cohort of police employees was allowed to retain their bloated pensions, undoubtedly contributing to the unfunded liability in HPOPS.

The National Institute on Retirement Security (NIRS) condemns spiking as "harmful to the financial benefit of the plan" and "unfair to other participants and tax payers" (Oakley, 2011). During the recent round of reforms, COH municipal and police pension funds implemented anti-spiking provisions going forward, such as calculating benefits on the final three year

[26] Based on interviews with members of the task force

average compensation, excluding overtime and other non-regular forms of pay (Mason, 2013).

While this is a positive step towards long-term plan sustainability, current municipal and police retirees who continue to receive "spiked" pensions are responsible for draining financial resources from these two systems. This is because their actual pensions exceed the amounts that have been actuarially computed and budgeted for. By contrast, there is no budgeting for spiking and ad hoc benefit enhancements and any such move adds directly to the unfunded liability, bankrupting the systems.

For example, HFRRF benefits are calculated based on the highest average of any three years on non-consecutive compensation, including overtime (Mason, 2013). The firefighter system remains unwilling to change their formula for benefit computing. At the same time, Deferred Retirement Option Plan (DROP) accounts discussed in more detail below are becoming financially a bigger issue than spiking.

The following policy alternatives on the final menu submitted to the COH Council explicitly target spiking as a practice harmful to long-term pension sustainability:

- *Move all vacation and sick day benefits to "use or lose it" after 10 weeks of accrued vacation and 36 weeks of accrued sick days.*
- *Cease rolling over sick and vacation time.*
- *In no event should vacation [and sick] days be allowed to accrue in one period and be used or compensated for in future periods.*
- *Pay out all accumulated sick days at the end of every year.*

Allowing the Director of Human Services access to retiree records is a threat to current employees who took – or hope to be able to take - advantage of legal loopholes and receive spiked pensions. In fact, Mr. Todd Clark, the firefighter pension fund representative,

introduced a motion to remove the reporting requirement from the menu of alternatives, under the pretext that “this is reporting, this is not financial.” Mrs. Barbara Chelette, the municipal fund representative, supported the move stating that “reporting in a different format [does not] make it financial”.

Councilman Brad Bradford, a retired COH police officer, summed up the position of pension funds on pension transparency with a question: “How does who gets what affect the bottom line?” In the end, representatives of all three funds and Council Bradford voted as a block to have this policy alternative removed but were outnumbered by the rest of the task force members present on that day.

Notably, the three pension funds continue to keep individual level pension data secret, most recently having refused access to a COH appointed independent actuary to conduct a state mandated review of the funds’ financial condition. But in several other states lawsuits resulted in disclosing the excesses of spiking and double-dipping which is indicative of what one might expect to find when the COH data becomes available.

In one well-publicized case, New Jersey politicians secured payouts in hundreds of thousands known as “boat money” (because this sum could pay for a nice boat) as a result of accrued vacation time and sick leave paid out at the highest rate towards the end of their career. While these same politicians capped payouts to future employees at $15,000, they kept their own benefits intact. Likewise, in the City of Bell, CA, public employees amassed hundreds of thousands of pension dollars in exchange for serving on bogus committees and due to spiking and sick and vacation leave payouts.

Boards of Trustees Are Biased Gate Keepers of Pension Policy

Two policy proposals on the final menu are intended to increase the COH's influence on its three pension systems by expanding its representation on the boards of the respective retirement systems:

Require that the COH have equal representation on the three pension boards. The mayor shall appoint half of the trustees of the pension boards, and, *require that the COH appoint a majority of pension plan trustees – Governance*

Notably, this proposal barely stayed on the agenda, since the vote was evenly split between its seven supporters and seven opponents, with Chairman Mike Nichols voting to break the tie in favor of keeping the alternative on the agenda. Nevertheless, a related proposal to have an equal representation of the COH on all committees and subcommittees of the boards was struck down by a majority vote.

This is important because a lot of specialized policy "crafting" on legislative, investment and other relevant topics occurs at this sublevel of governance which remains completely inaccessible to the COH representatives. Chief Pension Officer Craig Mason specifically expressed concern that despite his formal role on all three boards as a COH representative he had been routinely denied access to attending subcommittee discussions and votes.[27] Likewise, other COH representatives routinely have failed to obtain data from the funds – and or committees -- after making several formal attempts.[28]

This demonstrates the contentious nature of any effort to reform the governing mechanism of the boards of trustees. This is because this body is a major policy gate keeper, currently under a disproportionate control of major policy beneficiaries. The funds are wary that given

[27] Based on task force comments

[28] Based on an interview with Councilwoman Anne Clutterbuck

increased access to controlling pension systems, the COH will "raid the funds"[29] although this would be impossible by law. At the same time, the COH is frustrated with lack of transparency of its pension funds. The COH would like to have equal representation on its pension boards since it guarantees full payment of benefits without adequate say in their administration and/or control of assets. In the words of Councilman Steven Costello "this does not fly well with the general public".[30]

Boards of trustees tend to include a disproportionately large number of beneficiaries, raising the question of whether key decisions such as determination of the discount rate, investment allocations, recommended benefits enhancements, and the like receive a fair consideration by all key stakeholders in the process. Modifying the composition of the boards to make them more representative would be a major step towards long-term sustainability since main stake-holders would have a say regarding pension funding, plan design and investment strategy.

This would dramatically modify the current composition of the COH pension boards where the majority of trustees have a personal interest in the pension plan administered by each board as seen below:

[29] Based on task force comments

[30] Based on task force comments

Figure 33: COH Board of Trustees

	HMEPS	HPOPS	HFRRF
- Elected active beneficiaries	4	3	5
- Elected retired beneficiaries	2	2	1
- Appointed by:			
○ Mayor	1	1	1
○ City Council	2		
○ City Controller	1		
○ City Finance Director		1	1
○ Elected trustees	1		2
- Total trustees	11	7	10

Source: (Mason and Moncur, 2010)

As seen above, beneficiaries comprise at least 64 precent of HMEPS (municipal employee) board members, at least 71 percent of HPOPS (police) board members and at least 60 percent of HFRRF (firefighter) board members. In reality, the two trustees appointed by the other HFRRF elected trustees vote in lock step with the beneficiaries who appointed them, ensuring the plan beneficiaries have a de facto 80 percent representation on the board.[31] The public and the sponsoring entity are clearly underrepresented in the pension policy-making process and, likely, in its outcomes. At the same time, this status quo is the preferred position of beneficiaries as expressed by Todd Clark from the HFFRF "we have two out of ten [trustees] and it has been more than enough".[32]

Another key constituency completely absent within current institutions is new employees, who have seen their benefits cut, sometimes dramatically. While trimming benefits for future employees does nothing to attack unfunded liabilities, it is much more palatable politically.

[31] Based on an interview with the COH Chief Pensions Officer Craig Mason

[32] Based on comments during task force discussions

Moreover, it has an appearance of tackling the problem without addressing the underlying systemic issues. By contrast, current employees and beneficiaries whose retirement benefits are major drivers behind unfunded liabilities have been largely shielded from reform or any type of audit.

This is hardly surprising, considering that boards of trustees are heavily weighted towards the preferences of current retirees and vested beneficiaries. While many younger employees are increasingly frustrated with the status quo of subsidizing vested beneficiaries while losing their own benefits there is little they can do within the current institutional context favoring the older generations of beneficiaries. The comment below sums up this frustration and the feeling of powerlessness this under-represented constituency feels on an ongoing basis:

"What infuriated me was when the TRS [Texas Retirement System] board members voted to modify our pension plan for those ages 50 and under. Obviously all the board members were over 50 and biased in sucking the wealth from the younger working employees."[33]

Current pension systems need new employees to contribute into defined benefit plans, to survive financially and help amortize this liability. If current defined benefit systems are closed to new employees, most will likely go bankrupt without the infusion of the new money. Since new employees are vital to defined benefit pension survival, they require adequate representation at the negotiation table.

Furthermore, one of major criteria of sustainable financial systems is their ability to provide for multiple generations of resource users. Current lopsided representation in the critical governing body of pension boards creates perverse incentives – and opportunities – to allow present generations of retirees to divert resources from future generations of retirees. This is

[33] From the blog of the Hobby Center for Public Policy available at http://blog.chron.com/insidepolicy/ accessed on April 2, 2013

unsustainable, generationally inequitable and morally dishonest. A most efficient way to reverse this direction would be to alter composition of the boards to allow for inclusion of not only taxpayers but also of future retirees into decision making.

DROP is an Expensive Retirement Benefit

DROP (Deferred Retirement Option Plan) is a service retention tool available to the COH police employees hired prior to 2004 and municipal pension employees hired prior to 2008. While this benefit is still offered to all cohorts of firefighters, DROP is no longer available to the new hires in the police and municipal systems.

DROP accounts are for employees who reach retirement age but choose to remain employed. These employees continue to work while their pensions together with additional credits discussed below are deposited into a safe interest bearing account. At the time of retirement, the initial pension annuity is adjusted for COLAs for the number of years DROP has been active, and an additional lump sum, often in the hundreds of thousands of dollars, is available to the retiree.

How do DROP accounts work and why might they represent a problem to the overall pension system sustainability? And why is it that according to a COH employees' insider joke, DROP stands for "Double your Retirement Option Plan"?

Employees who choose to go into DROP have their annuity benefit regularly deposited into an individual account in the name of the respective employee. This annuity is adjusted for automatic annual COLAs, as if employees were retired.

As employees continue to work, they also continue to make regular pension contributions as a fixed percentage of their salary. Except for once employees enter into DROP, these contributions are no longer deposited into the pension fund to generate interest on

investments for the benefit of the system. Rather they are now deposited into respective individual DROP accounts in the name of the employees.

This design feature of DROP accounts represents a major problem for the overall pension system sustainability. This is because by diverting individual contributions into DROP accounts, the pension fund is starved of extra assets during the working life of respective employees. Foregone assets today mean foregone returns on these assets over time, directly growing unfunded liabilities. Nevertheless, these employees – and their dependents – will expect to receive future pension annuities upon retirement paid by the pension funds even though retirement plans may be underfunded as a direct result of the DROP benefit design.

But it gets even more interesting. Employee pension annuities, annual COLA adjustments **and** individual pension contributions are all credited an annual interest in a specified amount that varies by the fund. Most recently, this interest equaled five percent for the firefighter fund.

This is a true double whammy for the pension system – diverted individual contributions cannibalize the retirement fund and also earn interest paid by this fund.

In addition, the annual interest credited to DROP accounts is guaranteed regardless of the actual market conditions. In this respect, DROP accounts are dramatically different from 401-K type accounts, since an attractive return on investments in the former is guaranteed (the plan sponsor and taxpayers assume all market risk) while individual retirement accounts are exposed to market fluctuations. While the broad market has been effectively flat over the last decade, a hypothetical COH DROP account would have earned 55 percent simply due to the power of the compound interest (excluding COLA adjustments and employee contributions).

By contrast, in the 2008 market collapse the firefighter pension system lost a quarter of its asset base, with most holders of 401-K accounts seeing similar size losses in their portfolios. Notably, current unfunded liabilities for the firefighter and police systems were recently estimated at respective $336 million and $770 million at the 8.5 percent discount rate.

Employees who choose the DROP option – and it is correct to assume that most if not all do because it is in their best interest to do so – end up with higher pensions they would otherwise receive for simply staying on the job (McClearly, 2010). DROP represents a vivid example of overharvesting financial resources by current retirees at the expense of the overall fund solvency and livelihood of future retirees.

Despite this obvious material and significant financial impact of DROP accounts on pension systems, during the task force Ms. Barbara Chelette from the municipal employee pension system openly questioned why DROP was even being discussed, since pension boards routinely refer to DROP as a “revenue neutral retention vehicle”.

A Hypothetical Example of How DROP Inflates Pensions

In COH, all police (until recently) and fire employees had an option of choosing to “go into the DROP” after twenty years of active service. They would continue to work in their respective jobs, while 50 percent of their salary – equal to the pension benefit they would be eligible for if retired – would be deposited into a separate DROP account. For a hypothetical employee making $75,000 at retirement, this lifetime annuity would equal $37,500 (Mason, 2010).

The employee who went into DROP would receive annual salary increases of three percent per year. The respective DROP account would be also credited with an annual cost-of-living

adjustment (COLA), employee contributions of nine percent of pay per year and guaranteed interest of five percent.

When this hypothetical employee retires ten years later with thirty years of service, the annual salary at the time would equal $100,794 and the accumulated value of the DROP account would be $624,640. The twenty year service annual pension adjusted for COLA would be $45,000, while the annual lifetime annuity of the DROP account would total $44,617. Altogether, the total pension annuity the employee would be entitled to would equal $89,617, or 90 percent of salary, in contrast to an annuity equal to 80 percent of salary the employee would be eligible for without the DROP (Mason, 2010).

In the example above, the DROP account inflated the hypothetical employee's pension by over ten percent over ten years. It is thus incorrect to speak of DROP accounts as revenue neutral benefit options, discussed in further detail below.

Financial Sensitivity Analysis of Freezing Future DROP Benefit Accruals

Numbers in Figure 34 below represent the financial impact from halting future DROP accruals for the COH three pension systems as projected by the COH Pensions Officer Mr. Craig Mason:

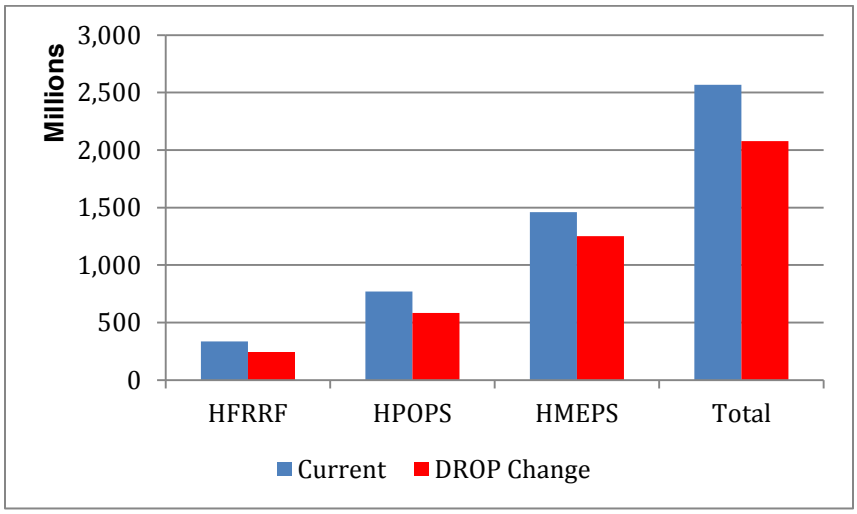
Figure 34: Estimated Impact of Replacing Future DROP Accruals with Basic Formula Accruals ($ M)

	Current			DROP Change		
		Actuarially Determined City Contribution FY2013			Actuarially Determined City Contribution FY2013	
	Unfunded Accrued Liability	$ Amount	% of Payroll	Unfunded Accrued Liability	$ Amount	% of Payroll
HFRRF	$ 336	$ 73	26.9%	$ 245	$ 62	23.9%
HPOPS	$ 770	$ 127	32.7%	$ 584	$ 81	20.9%
HMEPS	$ 1,461	$ 130	23.8%	$ 1,250	$ 116	21.2%
Totals	$ 2,567	$ 330		$ 2,079	$ 259	

(Source: Mason, 2013)

Stopping future DROP accruals would reduce the unfunded liability by nearly one third (27 percent) for firefighters, nearly by one quarter for police (24 percent) and by 14 percent for the municipal pension system. Total unfunded liability would drop a whopping 20 percent simply by eliminating future DROP accruals, as seen in Figure 35 below:

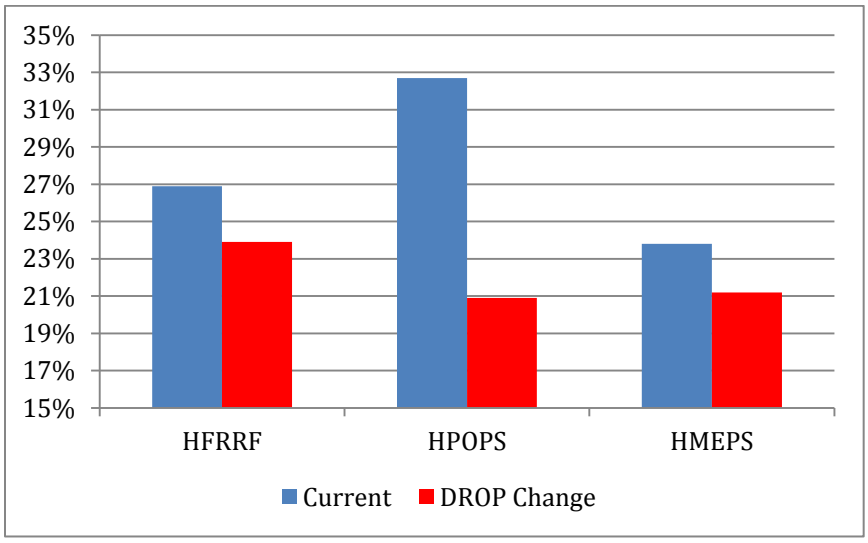
Figure 35: Estimated Impact of Replacing Future DROP Accruals with Basic Formula Accruals on Unfunded Pension Liability



Adapted from: (Mason, 2013)

Elimination of future DROP accruals would dramatically reduce by one third the police pension system actuarially computed contributions as a percentage of payroll. Since ARC as percentage of total resources is a prominent measurement of financial sustainability, the financial draw on resources that DROP benefit represents must be acknowledged. In no instance may DROP be considered a “revenue neutral” benefit, as it is commonly advertised by pension system beneficiaries. While its impact is less dramatic than that for the police system, freezing future DROP accruals also reduces ARC contributions as a percentage of payroll for the firefighter and municipal systems as seen in Figure 36:

Figure 36: Estimated Impact of Replacing Future DROP Accruals with Basic Formula Accruals on ARC as Percentage of Payroll



Adapted from: (Mason, 2013)

With future DROP accruals, the firefighter pension ARC and municipal pension ARC are expected to equal respective 27 percent and 24 percent of payroll. Even if reduced from its current 33 percent to 21 percent of payroll by stopping future DROP accruals, the ARC payment required by the police pension system is still significant.

Policy Proposal to Improve DROP Transparency Included on the Final List of Recommendations

Given the material, long-term effect DROP accounts have on local finances, respective plan sponsors should at least have the ability to know which employees entered DROP, for how many years, under what conditions, etc.

Regardless, the COH today has limited visibility into DROP accounts. The funds provide only summary data regarding how many eligible employees are in DROP and at what average pay. The exact mechanism of calculating the initial annuity is unclear as is distribution of DROP account balances and/or their relationship to the prior work history.

Thus, the following policy proposal was introduced to gain a better understanding of the COH's DROP account liability:

Require pension boards to notify the COH when employees enter and leave DROP. Also require the pension plans to notify the COH of how much benefits and liabilities change (without naming individual retirees) –Transparency

Despite its relevance, the COH Council has chosen not to address this proposal, like most if not all others submitted to it.

Aggressive Discount Rates Understate Pension Liabilities

Discussions regarding the discount rate took center stage during the task force deliberations. The final recommendation included the following language:

Lower the 8.5 percent investment return target to 7 percent in all pension systems – Rules

The COH three pensions systems were $2.57 billion underfunded in fiscal 2012 at a discount rate of 8.5 percent. This discount rate was significantly higher than the national average of 7.65 percent weighted by the size of the plan (Mason, 2013). The COH discount rate was also higher than rates for comparable funds from the National Institute for Retirement Security (NIRS) "best practices" study (Oakley, 2011). Out of the six well-managed funds identified by NIRS, two use 7.25 percent, one uses 7.5 percent and three use 8 percent rates to discount their pension liabilities.

COH pension systems base their discount rate assumption of 8.5 percent on the historical long-term investment returns for the three systems. Figure 37 represents historical investment return rates for the three pension systems for the years ending June 30, 2012:

Figure 37: Historical Investment Return Rates Achieved by COH Plans

	HFRRF		HMEPS		HPOPS	
No. of years	Reported by Pension board	Actuarial Rate	Reported by Pension board	Actuarial Rate	Reported by Pension board	Actuarial Rate
1	1.9%	1.6%	-0.4%	-0.9%	3.0%	2.8%
5	3.4%	3.1%	2.7%	1.3%	3.1%	2.9%
10	8.9%	8.5%	8.2%	7.2%	8.2%	8.0%
15	7.4%	7.1%	6.8%	6.0%	7.4%	7.3%
20	9.3%	8.7%	8.4%	8.1%	9.1%	8.9%

Source: (Mason, 2013)

Historical returns above reported by pension boards exclude fund expenses. Actuarial rates are net of pension fund expenses, representing a more accurate measure of net fund returns. Two of the three COH funds were historically able to meet their assumed 8.5 percent rate over a twenty year investment horizon, which included asset bubbles and the Great Recession. Thus they – and their actuaries – argue that they can continue to base their long-term discount rate on the long-term investment target of 8.5 percent.

Assuming that long-term investment target represents an appropriate discount rate for municipalities that are assumed to exist in perpetuity, are pension funds likely to continue to generate high investment returns on their assets going forward? A sizeable group of economists and finance professionals are arguing today for a “New Normal” investment climate characterized by lower returns on investments where generating high returns on pension assets without taking excessive risks may prove challenging (Mauldin, 2013).

In any case, the COH may consider lowering its 8.5 percent target rate to bring it more in line with the average in the public pension fund industry. In addition, several high profile pension reforms also incorporated reductions in respective discount rates, indicating an industry trend. For example CALPERS – the statewide California pension system representing the stronghold of pensions nationally – reduced its discount rate to 7.5 percent

from a two decade old target of 7.75 percent. Rhode Island lowered its discount rate to 7.5 percent from 8.25 percent.

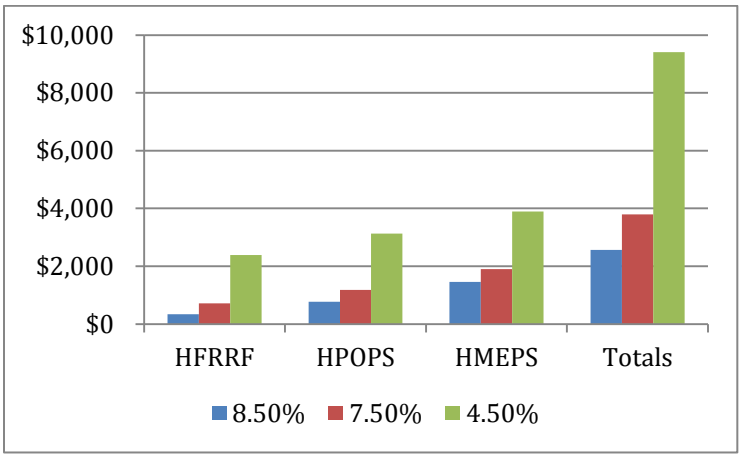
The COH Finance Director Kelly Dowe summed up the conversation regarding the discount rate as follows: “assumptions do not change the liability”. This meant that the COH had already incurred this “soft debt” in the form of pensions and OPEBs. Playing with assumptions to make this liability shrink on paper would not reduce the actual payments due to the employees.

But what impact would lowering the discount rate have on the COH’s unfunded pension liabilities? The COH Chief Pension Officer Craig Mason ran several sensitivity scenarios discounting the COH’s pension liabilities first at 7.5 percent and then at 4.5 percent. The discount rate of 7.5 percent was based on a projected target rate for long-term investment returns for public pension funds in line with the industry averages.

The discount rate of 4.5 percent was separate from the long-term investment returns target and was instead linked to the risk assessment of the pension payments. It was a proxy for a high quality corporate bond rate, required for measuring liabilities of private sector pension plans (Mason, 2013).

Amounts discounted at 8.5 percent were from the funds’ actuarial valuations as of July 2011. Amounts at 7.5 percent and 4.5 percent were estimated based on imputed data from published information to the 8.5 percent amounts. Figure 37 below presents COH’s liabilities calculated at these different discount rates:

Figure 38: Estimated Impact of Changes in Investment Return Assumptions on the COH Funded Ratios ($ M)

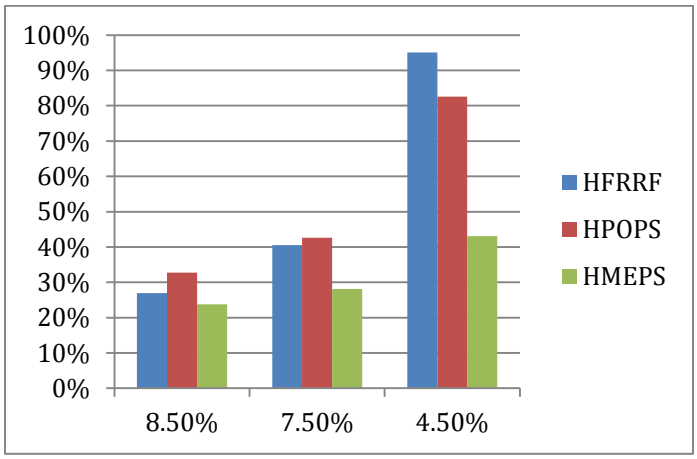


Source: (Mason, 2013)

As expected, applying a lower discount rate to value pension liabilities increased their unfunded portion dramatically.

Figure 39 below illustrates the actuarially determined contribution for the COH for fiscal 2013 as a percentage of payroll given the same alternative discount rates:

Figure 39: Estimated Impact of Changes in Investment Return Assumption on the COH ARC (% of Payroll)



Source: (Mason, 2013)

At the discount rate of 4.5 percent, the COH may be expected to pay as much for funding firefighter pensions as it would for current firefighter salaries (pension payments would equal 95 percent of payroll). In other words, the cost of total compensation to firefighters (pension plus salary) would be double that of current salaries. Including health benefits, total amount required would likely to be higher.

In dollar amounts, the firefighter ARC would increase 253 percent to $258 million compared to current $73 million computed at the discount rate of 8.5 percent. Given a series of structural deficits drawing down on reserves until fiscal 2012, the COH simply would not appear to have adequate budget flexibility to accommodate such hefty price tag for firefighter pensions, making current pension scheme unsustainable.

Annually required contributions to fund police and municipal benefits would also likely increase to equal over 82 percent and 43 percent of payroll, respectively. In dollar terms, discounting pension liabilities at the 4.5 percent rate based on high-quality bond index returns at the time would result in police pension contributions going up to $321 million from $127 million (a 153 percent increase) and municipal pension contributions expanding to

$236 from $130 million (an 82 percent increase). Both would put significant pressure on the COH budget.

Today the COH pensions are in the red even when retirement liabilities are discounted at an 8.5 percent rate, which is already high relative to most of its peers. Discounting pension liabilities at this rate may underestimate the true present value of public post-employment benefits. Prompted by the new GASB reporting requirements, the COH will have to report its pension liabilities discounted at a blended discount rate likely to be lower than the current 8.5 percent as early as fiscal 2015. This is likely to result in higher unfunded liabilities on its books, prompting further budgetary discussions regarding how the COH would meet its incurred obligations.

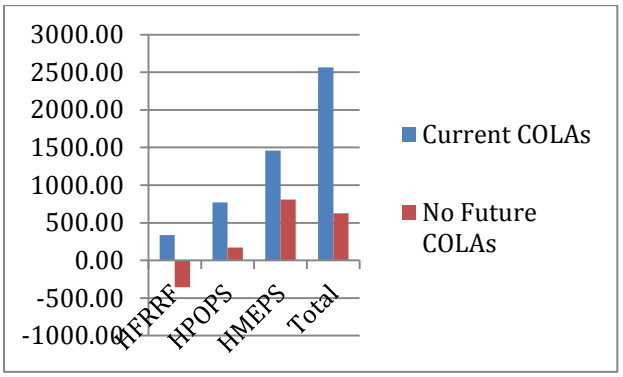
Automatic COLAs Represent an Expensive Retirement Benefit

COLAs refer to automatic increases to compensate retirees for overtime loss of annuity value as a result of inflation. COLAs are automatically granted annually in COH plans, but they differ in calculations as follows:

- HPOPS: COLAs are based on 80 percent of CPI, minimum 2.4 percent, maximum 8 percent, compounded
- HFRRF in DROP: COLAs result in an up to 20 percent increase in annuity at retirement and are compounded at an annual 3 percent
- HFRRF not in DROP: COLAs of 3 percent per year, compounded
- HMEPS: COLAs of 3 percent (2 percent if hired between January 1, 2005 and January 1, 2008), not compounded; pensions for employees hired after January 1, 2008 are not eligible for COLAs (Mason, 2013)

COLAs may result in a significant commitment of financial resources, especially if they are automatically compounded. Eliminating future automatic COLAs would significantly reduce the COH's unfunded pension liability as seen in Figure 40:

Figure 40: Estimated Impact of Eliminating Future Automatic COLAs on COH's Unfunded Pension Liabilities ($ M)



Source: (Mason, 2013)

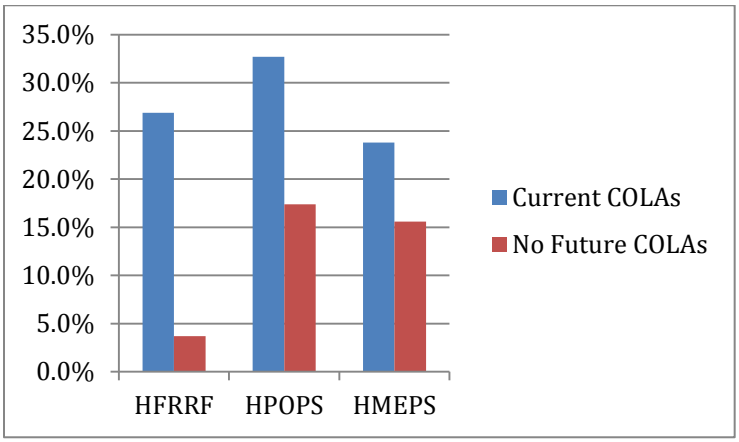
As the numbers above show, automatic COLAs are the primary drivers of unfunded pension liabilities for the COH's firefighter pension plan. Eliminating accruals of *future* COLAs would result in a $355 million *surplus* in the HFRRF in contrast to its current deficit of $336 million.

Automatic COLAs are also responsible for the lion share of the HPOPS pension worries. Eliminating *future* COLA accruals would result in a 78 percent drop of HPOPS unfunded liabilities from $770 million to $171 million.

The impact is the least dramatic for HMEPS but this is because pensions of employees hired after 2008 are already ineligible for COLAs. Nevertheless, eliminating future accruals for the other two tiers of employees would cut the HMEPS unfunded pension liability by a whopping 45 percent. The HMEPS unfunded pension liability of $1.46 billion accounts for 60 percent of the total COH's unfunded liability of $2.6 billion. Thus, reforming the current COLAs structure would result in significant savings for the COH's pension systems.

The impact on payroll from eliminating COLAs' is as dramatic and is shown in Figure 41:

Figure 41: Estimated Impact of Eliminating Future Automatic COLAs on COH's Payroll (%)



Source: (Mason, 2013)

Nearly 86 percent of current payroll for firefighters is reserved to fund future COLA accruals for retirees. Nearly half (47 percent) of the police payroll and 35 percent of municipal payroll is reserved for respective future COLA accruals. In other words, automatic COLAs are an expensive benefit feature which needs to be granted responsibly and properly valued.

To this end, the following policy proposal was introduced for the final report to the COH Council and the Mayor:

Reduce and/or stop automatic Cost of Living Adjustments (COLAs) for pensions – Rules

It is yet to be considered by the Council.

Minority Report

On February 7, 2012 the six members of the task force representing public employee unions and pension systems submitted to the Mayor and the COH Council a separate minority report in disagreement with the general policy proposals above. This minority report is an

important variable since it represents a policy manifesto by the representatives of public unions and pension systems, or an official statement of these constituencies' preferences post-discussions during the task force meetings.

In summary, the minority report argued that a disproportionate amount of the task force time was spent on pensions rather than addressing other structural financial issues with the COH, such as long-term debt, suboptimal COH governance, and the like. Pensions were painted to be a small (9 percent of the budget) and insignificant component of larger problems the COH faces.

In truth, the 9 percent of the budget often quoted by public employees understates the true financial burden pensions place on the COH. These ongoing contributions are inadequate to fund pensions for two main reasons. First, actual contributions are insufficient to amortize the existing funding liability. Second, current contributions are computed based on an unrealistic rate of 8.5 percent.

If the COH is unable today to fully fund its pensions at these overly optimistic assumptions, it will most certainly fail to do so when true cost of pensions becomes known. And once this this happens fully funding pensions will likely require a much larger portion of the budget than the currently allocated 9 percent.

Further, the minority report discarded the need to alter pension governance structures, such as making boards of trustees more representative of main stakeholders and delegating pension decision-making to the local level from the state. As discussed in prior sections, current pension beneficiaries profit from the status quo arrangement of rules and power structures and, as such, are likely to defend them. Unable to keep several governance related policy alternatives off the agenda, beneficiary participants of the task force resorted to issuing the minority report to state that governance reform is unnecessary.

Likewise, the minority report authors defended the continued use of the 8.5 percent to discount pension liabilities. Discounting pensions at higher rates makes them appear more affordable on paper and opens the door to discussing further benefit enhancements, such as the thirteenth check, COLAs, and others. Valuing pensions at true costs highlights the need to allocate additional money to pensions – their actual financial burden - and increases public scrutiny of this benefit. As a result, public employees' preferred position reverts to making the pension price tag appear smaller than it is, rolling the unfunded liability forward. This is unlikely to contribute to long-term sustainability.

Authors of the minority report also discredited any efforts to make pension plans more transparent to the City, citing privacy concerns. They defended DROP accounts and underplayed the relevant discussion of whether – or how much - spiking of benefits may occur at retirement. This is also consistent with the preferred position of plan beneficiaries.

All in all, the minority report provides ample evidence – in the beneficiaries' own words – of how little if any impact task force discussions had on altering preferences of this key stakeholder group of beneficiaries. Pension plan beneficiaries are continuously informed by their personal self-interest, discounting new data or alternative points of view. They are likely to defend the status quo, of which they are direct beneficiaries.

Summary

It is fair to say that, in the context of the COH task force, self-interest trumped learning and collaboration, raising doubts regarding the effectiveness and efficiency of this and similar task forces as a tool to help municipalities and states tackle their unfunded liabilities. Actors routinely discounted information coming from others impeding learning. Participants in the task force maintained their preferred positions. No one reversed their viewpoint. To the contrary, some actors seemed to solidify their positions in line with their original preferences.

Thus the solution to the pension crisis is unlikely to come from dissemination of additional information alone. At the same time, it may come from changing the system of incentives guiding pensions by aligning costs and benefits of the system across key participants.

As seen from the task force transcripts, actors pledge allegiance to their group preferences first and worry about the collective good second – if at all. Vested beneficiaries value short-term gains from raiding taxable wealth for the benefit of current retirees -- to the detriment of future retirees -- higher than efforts to moderate in the near-term to ensure pension systems are sustainable over multiple generations. Preferences of the majority of pension trustees (identical to those of vested beneficiaries) routinely take precedence over those of taxpayers and younger employees.

In their testimony to the COH Council in January 2013, Mr. Ralph Marsh, an elected trustee and Chairman of the HPOPS board, and Mr. John Lawson, the executive director of HPOPS, publicly acknowledged that "pension trustees have a fiduciary duty to beneficiaries [to the exclusion of all other parties]". Notably, pension boards fail to equate long-term financial health of the plan sponsor – COH – with a long-term interest of multiple generations of plan beneficiaries.

They fail to acknowledge – intentionally or unintentionally - that maximizing benefits at all costs today is likely to bankrupt the systems tomorrow. Since vested beneficiaries tend to be overrepresented in pension governance, many pension systems nationwide are going bankrupt as well, not unlike those in COH.

Recently hired employees who tend to get no representation in the bargaining process are dealt the worst card: they are asked to fund the systems in exchange for ephemeral pensions promised but never funded and, as such, unlikely to be available by the time they retire. All the while, recent employees' own contributions provide cash payout to current retirees instead of being applied towards their own retirement investments. Without

contributions by the younger cohorts of employees most defined benefit plans today – including those for COH – are unsustainable.

Aided by its robust, growing economy, it may take COH longer than some of its peers to realize that its unfunded liabilities may never be fully funded, but whether this occurs is a matter of when not if. Until that point, unfunded pensions will be slowly draining the COH budget of funds necessary for investments in the infrastructure, public safety equipment, and community enhancements as well for additional personnel required to care for the needs of a rapidly expanding modern city.

Chapter 7: Conclusion

As Houston has steadily evolved into a vibrant national and international economic hub it faces multiple opportunities as well as a number of challenges. The poster child of the "Texas miracle" of growth and prosperity, Houston has been blessed with robust population and tax-base expansion, weathering the economic storm better than many other regions in the U.S. In fiscal 2012, for which the latest audited numbers are available, growth in property taxes accelerated and sales tax collections exceeded the high pre-2008 and 2009 crisis levels.

As a result of this healthy revenue stream and cost cutting measures implemented earlier, Houston was able to add $26 million to its undesignated fund balance reserves equaling approximately 8 percent of fiscal 2012 revenues, or $153 million. Unaudited financial projections for fiscal 2013, which ended in June, indicate another good revenue year, although it appears that the overall reserves position has declined somewhat.

The fifth most populous area in the nation, Houston MSA has added more than a million residents over the last 10 years, and this population influx is expected to continue aided by creation of jobs in the energy, transportation and distribution, as well as nationally and internationally renowned medical sectors, and the general quality of life.

But with this growth comes much responsibility, as Houston needs to expand its municipal and public service offering and continue to invest in its infrastructure network to accommodate additional businesses and residents who are not only tax payers, but also consumers of public services. Accomplishing this will take more than a miracle – but rather steady political will – to tackle local pension related indebtedness before it risks derailing Houston's remarkable success. Does Houston have the necessary budgetary flexibility to

grow its operational budgets while honoring its long-term statutory commitments like pension and health care obligations?

The COH is already wrestling with a gargantuan $2.6 billion unfunded pension liability as a result of legacy pension decisions, not to mention a separate $2 billion unfunded healthcare obligation. Taken together, these liabilities are 2.5 times as large as total audited fiscal 2012 revenues of $1.8 billion. Applying a more conservative valuation methodology, the price tag for the COH's legacy pensions is even higher.

These mandatory categories are expected to grow faster than revenue sources. It will take careful attention to these structural pressures that exist in the budget, which, if left unaddressed, might take some of the steam out of an otherwise very impressive success story.

Lack of system transparency, public accountability and representation during key decisions regarding pension policy are largely responsible for this dismal policy outcome. Any pension reform will be incomplete without addressing systemic biases in favor of vested pension beneficiaries, short-term electoral horizons of politicians and overall lack of pension system transparency as well fragmented control over pension policy that distorts pension decision-making as discussed in sections below.

The "Big Challenge" of pension policy-making relates to finding a balanced compromise between honoring retirement promises to generations of public employees without mortgaging public budgets to the point where governments may no longer be able to provide services to their constituencies, or pensions to their employees. The most dramatic example of such government failure to date is the bankruptcy filing by the City of Detroit in July 2013.

Detroit became financially crippled as a result of its chronic structural budgetary imbalance and ballooning multiple debt obligations, including pensions and healthcare for its

employees. Detroit politicians and employee unions failed to achieve a compromise to address the underlying roots of the city's fiscal problems – exploding mandatory expenses in the form of benefits due to actives and retirees – at a time the regional economy was contracting.

By attempting instead to tax and borrow itself out of the budgetary hole, Detroit missed multiple opportunities to find the political will to strike a deal. As a result, Detroit was in bankruptcy as of 2013, and its public employees and retirees were facing a financially uncertain retirement with dramatic cuts to their benefits likely to follow. This was truly a "lose-lose" scenario for all parties involved.[34]

The "Big Challenge" of public pension policy is discussed in more detail below.

Can Unfunded Pension Liabilities be Resolved?

A truly sustainable pension benefit reform is unlikely to happen in a vacuum but must occur in the context of a broader approach to public employee compensation and must be aided by a sweeping change of institutions and governance structures largely responsible for the current system insolvency. Neither politicians, nor public officials appointed by them, nor public benefit recipients seem likely to self-moderate or be motivated by public service alone. A correct system of incentives must be put in place to guide individual and collective choices regarding pensions that would support long-term pension system sustainability.

[34] Read "How Detroit went broke: The answers may surprise you - and don't blame Coleman Young" for a great narrative regarding a string of erroneous policy choices that aggravated the fiscal condition of Detroit and contributed to its eventual bankruptcy filing at http://www.freep.com/article/20130915/NEWS01/130801004/Detroit-Bankruptcy-history-1950-debt-pension-revenue accessed on September 25, 2013

Simply lowering benefits – for current and/or future employees – without reforming current institutions will leave pension systems vulnerable to the same overconsumption excesses given the first opportunity. At the same time, the following structural obstacles are likely to hinder successful reform of legacy pensions and prevent misallocation of pension system resources.

Short-term Electoral Horizons of Self-Interested Politicians Inhibit Public Accountability

Short-term electoral horizons of the Mayor and City Council members discourage local politicians from spending their valuable political capital to address unpopular social reform issues like pensions.

Three two-year terms and inability to run for local office again represent too short of a time-horizon for most politicians, since political costs of attempting to reform public pensions are immediate and often painful, while benefits from reform accrue over the long-run.

Quite the opposite, politicians like to take immediate credit for enhancing public benefits, while their cost of funding may be successfully pushed forward towards future administrations. As a result, policy makers are most of the time not held politically accountable for running up pension bills.

Two four-year terms would eliminate the need for the COH to continuously be running for office and instead let them shift attention to policy-making rather than worrying about taking public positions to maintain their electoral coalition. This would allow self-interested politicians to disconnect (at least partially) from campaign politics and be more willing to tackle long-term issues such as benefit reform.

An alternative to changing statutory term limits could be shifting more of employee compensation towards increasing salaries funded out of current budgets and away from pensions due many years from now.

Increasing salaries makes sense because salaries and pensions are elements of total compensation, so any pension benefit reduction is a de facto reduction in total compensation. It may also be easier for public employees to stomach a decrease in benefits if it is offset by higher salaries where necessary to bring public compensation in line with that for private peers.

At the same time, salaries are funded out of current budgets. Lines of public accountability for funding salaries can be easily traced to politicians in office, holding them politically accountable and personally responsible for each budget cycle. It will make it impossible to promise a benefit and postpone its funding into the future.

Fragmented Decision-making Authority is a Recipe for Lack of Sustainability

Houston is unlikely to accomplish any benefit reform without state involvement, since the City shares control over its local pensions with the state legislature. This represents the second challenge for local pension reform. To date Houston has largely failed to assemble a successful coalition at the state level to address either benefit levels or pensions governance structures.

Divided control over local pension issues is a recipe for a dysfunctional pension system, since state politics distorts local decision-making without the state's having any financial obligation to pay local pension bills. Houston must be able to deal with its pension issues locally in order to restore its pension systems to solvency.

As the ultimate sponsor of its employee pensions, the COH should be able to audit its funds and make recommendations as to the reporting formats. Nevertheless, the COH is currently limited in its oversight authority by state statutes. Such policy design introduces an unnecessary element of fragmented authority where the decision making power is split

between the state, the local government and the bureaucratic agency of the pension funds, breeding institutional inefficiencies.

Fragmented supervising authority is a mismatch against the COH statutory mandate to fund pensions. This is a textbook example of misaligned costs and benefits. State politicians enjoy political benefits from controlling pensions, while the COH solely incurs financial – and to some extent political costs – from having to deal with an insolvent pension system.

Lack of Pension Transparency and Oversight Promotes Misallocation of Resources

The third challenge is lack of pension data transparency, which impedes the matching of employee benefit data to their respective working history to prevent pockets of inefficiency, such as benefit spiking. The COH pension boards have frequently withheld some important beneficiary data from city officials. On other occasions the COH appointed actuary has been denied by the funds access to pension data to conduct an actuarial audit of either pension system, despite state statutory requirements for pension boards to comply with such audit.

Thus, Houston today is expected to pay its pension bills without complete understanding of the bills origin, which is incompatible with long-term sustainability.

HB 13: Towards Pension Transparency in Texas

In May 2013 Texas Governor Rick Perry signed into law HB 13 to improve pension transparency in the state. HB 13's stated goal was to enhance pension transparency and place Texas's state and local pension schemes on a firm sustainable footing to ensure their long-term survival.

While a critical element of this proposed legislation was enabling the Pension Review Board (PRB) to conduct a financial health study of pension schemes throughout the state, the bill fell short of allowing PRB's designated actuary to have access to individual level data to audit pension funds. While this is a structural shortcoming of HB 13, the bill was likely written

as such on purpose to make it less threatening to the public pension fund bureaucracies who tend to resist any encroachment on their bureaucratic turf. In the past, pension funds objected to other state initiatives aimed at making access to personal beneficiary data easier.

For the pension transparency bill to have some real teeth it would need to empower PRB with the right to access individual level data for actuarial purposes. This is critical, especially for heavily insolvent systems, to match benefit payouts to the salary history and to ensure benefits are provided in a fair, sustainable fashion. At the same time, refusal to disclose this data to designated actuarial firms would raise its own questions about the integrity of pension schemes at the time DB systems themselves have come under criticism nationwide.

Only after sponsoring entities and taxpayers have been assured of system integrity and equity would it be possible to discuss closing unfunded liability gaps with additional revenues. Until then, allocating additional funds to pension systems to close the funding gap would be akin to pouring water into a cracked jar – the system would never be fully funded and it would be unclear where the money is going.

Nevertheless, HB 13 did a stellar job at zeroing in on real returns generated by state and local pension systems to be able to make informed decisions on whether projected future return rates are realistic. This information is currently not disclosed fully and not for all state and local pension systems.

The training requirement for the boards had the least impact because boards which are today composed for the most part of beneficiaries have an inherent conflict of interest and no training is likely to affect this. Altering composition of the board to make these governing bodies more representative would have been likely to have more effect long-term than training current members. One cannot train policy insiders out of their own self-interest.

Transparent pension systems would also feature a dynamic actuarial reporting design, including multiple scenarios under different assumptions (at the very least varying discount rates and/or expected market returns). This would allow decision makers at the state and local level to consider a full range of outcomes and their probabilities for all decisions related to employee benefits and their funding.

Misaligned Costs and Benefits

Policy beneficiaries are unlikely to self-moderate, especially in an environment where policy benefits, such as public pensions, are highly concentrated to a smaller group of public employees while policy costs are dispersed across a wider population of taxpayers. The hurdles of collective action lead to a situation where policy beneficiaries who stand much to gain are well organized and politically active in lobbying politicians at both state and local level.

Further, fragmented pension policy making process blurs lines of public accountability, which makes it difficult to assign political blame for short-sighted pension policy – or reward relevant politicians for making important albeit sometimes painful decisions now to harvest system efficiencies later.

Fragmented policy-making also allows for policy venue shopping, with beneficiary groups targeting state or local level of politics, depending on where they are more likely to succeed. Since the COH pension funds have been very successful at building winning political coalitions at the state level, it is likely they will continue to resist delegation of power to control pensions locally where they and their constituencies may be more vulnerable.

Lack of self-moderation is likely to lead to resource depletion over the long-run, in this case to pension plan sponsor's insolvency or even bankruptcy, as was recently demonstrated by a number of high-profile municipal bankruptcies. Instead, institutions must be strengthened

to allow for pension transparency, clear lines of political accountability and local control of pensions.

Differentiated Effects of Policy Change

A big assumption often made is that public employees as a group are homogeneous. Instead it is appropriate to speak of generational differences (employee tiers) with more senior (vested) employees often eligible for much more generous benefits that their younger peers.

Anecdotal evidence that came from beneficiary data disclosed in response to court orders in different localities, such as the City of Bell, CA also suggests that the senior echelon that have access to changing rules may disproportionately benefited from their ability to increase their own and their immediate constituency benefits. Lack of transparency and public accountability in the system allows this to happen for years before it is made public (if ever).

This would mean that pension reform may affect different tiers of employees somewhat differently. Some of these intra-constituency differences are reflected in Figure 42 to the extent possible:

Figure 42: Impact of Pension Reforms on Individual Beneficiaries and Government Sponsor

	Sponsoring Community	
Individual	**Positive**	**Negative**
Positive	Win-Win (I) Provision of sustainable, transparent benefits and regular full funding of actuarially determined contributions	Win-Lose (II) Preservation of legacy pensions in full and reducing benefits/increasing copays for new employees
Negative	Lose-Win (IV) Reduction of legacy pensions and/or stopping future accruals like COLAs, DROP, etc. for current retirees/employees to preserve some benefit for all, including future retirees	Lose-Lose (III) Adherence to the status quo: pretending no benefit and/or contribution adjustment is necessary and jeopardizing benefits for both current and future retirees as well as overall fiscal health of plan sponsor

I. Transparent, publicly accountable processes to determine and administer benefits would include: 1) full disclosure of benefit histories by the funds to sponsoring entities to ensure their adequacy based on work history, intergenerational equity and intersystem equity; and 2) full ongoing funding of accrued benefits by plan sponsors based on the actuarially determined requirement. At the very minimum, these two steps are likely to significantly enhance long-term solvency of most pension plans to the benefit of all parties. Increasing

salaries while decreasing pensions would also keep public employment attractive while eliminating investment and longevity risk from government plan sponsors.

II. Leaving frequently bloated legacy pensions intact and cutting benefits for new employees have a differentiated effect of disproportionately hurting the new cohorts while doing nothing to enhance long-term sustainability of defined benefit plans. This also makes public employment less attractive as a career choice for younger workers. Constitutional protection of vested benefits is now being tested in the Federal bankruptcy courts.

III. Younger cohorts are likely to lose from joining non-transparent underfunded DB plans, since their benefits are often reduced, contributions increased, and long-term solvency of respective DB plans is questionable where large unfunded liabilities persist. Younger employees would likely benefit from making contributions into DC plans in this case. Without reform and/or closing the unfunded gap, older cohorts of employees may also find their benefits reduced over time as well. Without reform, governments are likely to find their pension bills increasing as a share of payroll even with higher market returns.

IV. Vested employees are likely to resent examination of their accrued benefits, especially if transparent audits would reveal excessive benefits or non-uniform distribution of benefits. However, elimination of any system abuse for personal gain when calculating retirement benefits is a necessary step if DB plans are to be preserved as a solvent retirement tool.

There are multiple reasons why pension reforms to date have for the most part spared retirees and midcareer workers, instead realizing future savings from rolling back benefits and increasing contributions for future employees. Although such reforms normally do nothing to address current unfunded liabilities due for legacy pensions, policy makers resort to reducing benefits and/or increasing contributions for new employees because it is often the only politically palatable or legally available option.

Pension benefits generally enjoy strong statutory or constitutional protection of accrued/vested benefits, although strength of legal protection varies for COLAs and some other future accruals. In some cases (Colorado) attempts to curtail COLAs were also contested in court.

In addition, new employees may be stomaching most of the cost for pension reform because they are underrepresented in the political process that informs pension policy and in the main governing policy-making institutions. Looking at the composition of the boards of trustees heavily skewed in favor of current retirees and vested beneficiaries it becomes apparent why there may be little interest in protecting financial interests of future employees. Their lack of organization and representation deprives them of political clout.

In the context of Houston, firefighters are a notable exception to this rule. Firefighters have always resisted drawing distinction between current and future employees. Arguably, this is because they had the luxury of not having to negotiate with local decision makers, since their benefit is exclusively controlled at the state level, which presents its own problems of cost/benefit congruence discussed above.

The Role of Information, Misinformation and Symbols

Information asymmetries disrupt information flow to the general public about the true cost of public benefits. The staff of many large pension funds consists of true industry and policy experts, collecting and retaining vast amounts of highly technical, specialized and privileged information that they may choose to selectively disclose, even when required to do so by statute. Smaller pension funds may be more parochial in nature, with much variance across the funds in terms of expertise. But all pension funds are the same in that they want to preserve their unique bureaucratic power over exclusive access to pension data. However,

this lack of system transparency is an unsustainable design principle, promoting internal system inefficiencies.

In addition, the highly technical nature of this debate also makes it extremely difficult for the general public to draw independent conclusions on the topic making it necessary for intermediary experts to interpret relevant issues. However, most frequently these experts are not neutral and instead become opinion makers promoting a particular political agenda, further confusing an already complex technical issue. As a result, many people still struggle to make an informed opinion, and simply distributing more information seldom seems to result in a better public education due to biased perception.

In addition, social construction of certain employee groups as “more deserving” makes it difficult to have an educated debate about how much compensation in the form of pension and salary is appropriate. Everybody loves firefighters for their unwavering service to respective communities – and rightfully so. Most also agree that firefighters and other public safety personnel need to be appropriately compensated for the daily risks they take and the personal sacrifices they make.

However, this does not preclude that public safety compensation structures need to be transparent, publicly accountable and in line with comparable compensation structures for jobs with similar risks profiles locally, nationally and privately available. Socially constructed images often get in the way of such rational, logical discussions.

Consistent Plan Funding

Consistent funding schedule for the transparent, balanced benefits is a cornerstone of financial sustainability. To assist plan sponsors with funding decisions, the national associations representing state and local governments established a Pension Funding Task

Force to develop policy guidelines. Among initial recommendations of this task force are the following:

- Base pension funding policy on actuarially determined ARC
- Be disciplined about funding so that promised benefits can be paid
- Maintain intergenerational equity
- Manage employer costs so they are a consistent percentage of payroll
- Have clear reporting that shows how and when plans will be fully funded (SLGE).

As seen, pension transparency and responsible plan governance are among main cornerstones of sustainable public pension systems.

Next Steps

Public pensions constitute an important element of the total compensation structures of public employees. Total compensation packages need to be assessed for fairness in comparison to those for private peers, as well as other public peers in other localities, adjusted for the cost of living.

Going forward, pension benefits are likely to be reduced and/or changed overtime nationwide, if recent economic conditions of low growth and global economic uncertainty persist. However, any reductions in benefits, such as increased copay, reduced survivor benefit, etc., need to be accompanied by a parallel reform of total compensation (salary increase or the like) for different groups of employees to ensure public compensation packages are competitive locally and nationally to retain qualified workforce.

The following trends are likely to put ongoing pressure to phase out public DB plans in their current form:

Government sponsored DB pension plans today carry the **investment risk** from actual market returns that may underperform compared to the assumed actuarial rate. This may be especially true if the “new normal” economic environment characterized by lower investment returns persists. This may threaten the ability of plan sponsors to shrink unfunded pension liabilities. DC plans by design are more transparent since sponsoring government only need to budget employer contributions to employee accounts. DC plans also travel well across different jobs, allowing public employees to switch between different jobs/careers.

Governments also would like to reduce the **longevity risk**, which is increasing as a result of a demographic shift towards a more aging population. This is likely to negatively affect local finances through both longer periods over which annuity payments are projected as well as skyrocketing health care costs in areas where employers also provide subsidized healthcare.

DB plans are also likely to face more scrutiny as a result of the **industry trends** towards market-based valuation of plan assets and liabilities. All major rating agencies have recently updated their rating methodology to incorporate market-based discount rates as well as fair value of plan assets. In addition, Moody’s, S&P and Fitch continue to consider “soft” debt from pension and healthcare obligations as an important element of overall government sustainability.

GASB recommendations incorporate calculating the present value of pensions based on a blended discount rate and reporting the fair value of pension assets. New GASB standards call for reporting of government liabilities, including unfunded pension obligations, on the balance sheet together with other assets and liabilities, as opposed to in the footnotes to the financial statements, which used to be standard.

This will literally bring unfunded liabilities “forth” in the financial statement, and quite a few localities are in for a sticker shock once the newly formatted financial statements are produced.

Using a lower discount rate to price pension liabilities - either as a result of assuming lower investment return targets or due to switching to the blended rate to satisfy GASB’s reporting requirements – is likely to inflate the price tag of some pension obligations. This has direct policy implications.

For years, an assumed high rate of return made pensions appear more affordable. In the case of the COH this was used to justify benefit enhancements. All the while the true costs of benefits were pushed forward to future administrations and generations of taxpayers and employees. If present value of pension were to go up as a result of adopting a lower discount rate, would that jumpstart further benefit reform in the COH?

The recent market rally may have removed some urgency for pension policy change, potentially closing the “window of opportunity” for some policy makers and restoring “politics as usual” of politicians’ promising generous retirement benefits yet never really funding them. At the same time, lack of reform would place long-term solvency of public pensions in jeopardy.

Pension will remain insolvent short of changing **current incentives structures and rules** allowing policy insiders to design and implement pension benefits advantageous to themselves and their constituencies with little public scrutiny and oversight. This is financially detrimental to the broader community.

Only **transparent, publicly accountable institutions and rules** that guard both pension benefit design and implementation may preserve DB pensions for the future. Otherwise, current retirees and vested employees are likely to be near-term winners receiving their

benefits until public system are cannibalized. New employees are likely to be long-term policy losers, unless their contributions are diverted into personal pension accounts or unless DB plans are restored to solvency with transparent and representative processes and potentially additional contributions.

Adjustments to pension benefits need to be viewed in the broader context of total compensation. A shift towards a more transparent, financially sustainable public compensation system would potentially imply an increase in salary compensation to be accounted for in the current budget cycle to accompany any reduction in DB payments.

Bibliography

Angelo, Paul. 2010. “Proposed GASB Standards Would Alter the Meaning of Pension Expense.” *Pension and Benefits Daily*, 135 PBD, 07/16/2010.

Apostolou, Barbara, Nicholas G. Apostolou, and Jack W. Dorminey. “Bridging the Government Pension Gap: The Effects of New GASB Standards on Government Pension Accounting.” *The CPA Journal*. August 2013.

Bachrach, Peter, and Morton S. Baratz. “Two Faces of Power” *APSR* 56(4): pp. 947-952.

Baker, Dean. 2011. “The Origins and Severity of the Public Pension Crisis”. *Center for Economic and Policy Research*. February.

Benton, Douglas, Ted Hampton, Jack Dorer, Robert Kurtter, and Ted Damutz. 2009. “Employee Pension Costs Pressure State and Local Governments: Ratings for Some Municipalities May Be Affected.” *Special Comment*, Moody’s Investors Service.

Biggs, Andrew G. 2012. “Public Sector Pensions: How Well Funded are They, Really?” *State Budget Solutions*. July.

Boivie, Ilana. 2012. “Pensionomics 2012: Measuring the Economic Impact of DB Pension Expenditures.” *National Institute on Retirement Security*. March.

Buchanan, James M. 1979. *Cost and Choice: An Inquiry in Economic Theory.* University of Chicago Press.

Combs, Susan. “Your Money and Pension Obligations.” *Texas Comptroller of Public Accounts*, December 2012.

Corkery, Michael. “Pensions Bet Big With Private Equity.” *Wall Street Journal*, January 24, 2013.

Craig, Steven. “Economic Impact of City Government Fiscal Decisions.” Presentation to the COH Long-Range Financial Management Task Force on November 28, 2011.

Craig, Steven, John Diamond, and Ramon Fernandez. 2011. “Pension Panel Lacks Credibility.” *Houston Chronicle*, August 28.

“Defined Benefits Plans: Recent Developments Highlight Challenges of Hedge Fund and Private Equity Investing.” *GAO*, February 2012.

Downs, Anthony. 1957. “An Economic Theory of Political Action in a Democracy.” The Journal of Political Economy 65(2): 135-150.

Evangel, Chris, Gary Mescher, Linda Ebrahim, Jeffrey Kaufmann, Robert Stanley and Steve Levine. 1999. “Northeast Focus on Pension Obligation Bonds and Unfunded Pension Liability Issues: Pension Fund Performance and Important Rating Factor.” *Moody’s Investors Service Special Comment*.

Feiock, Richard C. 2007. “Rational Choice and Regional Governance.” Journal of Urban Affairs 29:49-65.

Feiock, Richard C. 2010. *Self-Organizing Federalism: Collaborative Mechanisms to Mitigate Insitutional Collective Action Dilemmas.* Cambridge: 2010, ed. By Richard C. Feiock and John T. Scholz.

Fornia, William B. 2011. “Analysis of Defined Benefit Plan Efficiency.” July 25.

“Funds Boost Private Equity Investing By 38%.” *Pensions & Investing*, February 7, 2011.

Hampton, Ted, Edith F. Behr, Robert A. Kurtter, Gail Sussman, and Ken Kurtz. 2008. “Pension Funding May Suffer From 2008 Stock Market Declines: Near Tern Credit Effects for U.S. Public Finance Governmental Issuers Will Be Limited.” *Special Comment,* Moody’s Investors Service.

Hardin, Garrett. 1968. “The Tragedy of the Commons.” *Science* 162(3859): 1243-1248.

Jorion, Philippe. 1995. *Big Bets Gone Bad: The Largest Municipal Failure in U.S. History.* Academic Press.

Ingram, Helen, Anne L. Schneider, and Peter Deleon. 2007. “Social Construction and Policy Design” in *Theories of the Policy Process*, Westview Press, pp. 93-126.

“Investment Return Assumptions for Public Funds: The Historical Record.” *Callan Investments Institute Research*. June 2010.

Kibler, Ann and Chris Mier. 2010. “Pension Accounting Controversy Gains Focus.” *Special Commentary*, Loop Analytical Services.

Lambert, Lisa. 2013. “U.S. Public Pension Investments Jump, Costs Surge, too.” Available from http://www.reuters.com/article/2013/09/23/us-usa-states-pensions-idUSBRE98M15720130923 accessed on September 25, 2013.

Long, Cate. 2013. “Pain for Stockton Taxpayers.” *Muniland* blog. April 7. Accessed July 26, 2013.

Mason, Craig. 2011. “Long-Range Financial Management Task Force: Review of Pension Systems.” Presentation on November 7.

Mason, Craig. 2011. “Status of the City of Houston Pension Systems.” Report to the Finance Department.

Mason, Craig. 2010. “Example of How DROP Can Change the Game.” *White Paper.*

Mason, Craig. 2010. “Providing Pension Benefits for Municipal Employees Recommended Best Practices.” *White Paper*.

Mason, Craig, and Jim Moncur. 2010. “City of Houston Addressing Pension Challenges: Presentation to Greater Houston Partnership.” August 19.

Mauldin, John. 2013. “Unrealistic Expectations.” *INvestorInsight.com* available from http://www.investorsinsight.com/blogs/thoughts_from_the_frontline/archive/2013/09/07/unrealistic-expectations.aspx accessed on September 25, 2013.

McCleary, Mary. 2010. “Dipped in Gold: Upper Management Police and Fire Retirees Become Public Service Millionaires.” *The Buckeye Institute for Public Policy Solutions*.

McCourt, Stephen P. 2006. “Defined Benefit and Defined Contribution Plans: A History, Market Overview and Comparative Analysis.” *Benefits and Compensation Digest.* February, available at www.ifebp.org

McDaniels, Mickey G. 2011. “Public Retirement Systems: Traditional Actuarial Valuation Model.” Presentation to the City of Houston Financial Management Task Force, December 12.

Moran, Chris. 2012. “Some Employees’ Pensions Exceed Salaries, City Exec Finds.” *The Houston Chronicle*. June 12.

Munnell, Alicia H., Thad Calabrese, Ashby Monk, and Jean-Pierre Aubry. 2010. “Pension Obligation Bonds: Financial Crisis Exposes Risk.” *Center for Retirement Research* at Boston College.

National Conference on Public Employee Retirement Systems. 2011. “The Top Ten Advantages of Maintaining Defined Benefit Pension Plans.” January.

Newton, Joseph P. 2008. “10,000 Leagues Under the Sea: Understanding Actuarial Fundamentals.” Presentation to the *GFOAT* Fall Conference, Dallas, TX.

“Liability Driven Investing: Evaluating a Pension’s Plan Assets in the Context of Liabilities. 2005. *Northern Trust*.

Novy-Marx, Robert, and Joshua D. Rauh. 2009. “Public Pension Promises: How Big Are They and What Are They Worth.” Available from http://ssrn.com/abstract=1352608

Nuschler, Dawn, Alison M. Shelton, John J. Topoleski. 2011. “Social Security: Mandatory Coverage of New State and Local Government Employees.” *CRS Report for Congress*. July 25.

Oakley, Diane. 2011. “Defined Benefit Pension Policy and Efficiencies: Houston Long Range Financial Management Task Force.” *National Institute on Retirement Security.*

Oakley, Diane et al. 2011. “Lessons from Well-funded Public Pensions: An Analysis of Six Plans that Weathered the Financial Storm.” *National Institute on Retirement Security*.

Olson, Mancur. 1965. *The Logic of Collective Action.* Cambridge: Harvard University Press.

Ostrom, Elinor. 2007. “Institutional Rational Choice: An Assessment of the Institutional Analysis and Development Framework” in *Theories of the Policy Process* edited by Paul A. Sabatier.

Ostrom, Elinor, 2000. “Collective Action and the Evolution of Social Norms.” *The Journal of Economic Perspectives* 14(3): 137-158.

Payne, James L. 1991. *The Culture of Spending: Why Congress Lives Beyond Our Means.* Institute for Contemporary Studies.

Pierson, Paul. 2000. “Increasing Returns, Path Dependence, and the Study of Politics.” *APSR* 94(2): 251-267.

Pierson, Paul. 1993. “When Effect Becomes Cause: Policy Feedback and Political Change,” *World Politics* 45(4): pp. 595-628.

Pierson, Paul, and Theda Skocpol. 2002. “Historical Institutionalism in Contemporary Political Science” in *Political Science, the State of the Discipline*.

Polski, Margaret M. 2003. *The Invisible Hand of U.S. Commercial Banking Reform.* Kluwer Academic Publishers.

Poteete, Amy R., Marco A, Janssen and Elinor Ostrom. 2010. *Collective Action, the Commons, and Multiple Methods in Practice.*

Skocpol, Theda. 1995. *Protecting Soldiers and Mothers: The Political Origins of Social Policy in the United States*, First Harvard University Press.

Ostrom, Vincent and Ostrom, Elinor. 1971. "Public Choice: A Different Approach to the Study of Public Administration." *Public Administration Review* 31(2): 203-216.

Pierson, Paul. 1993. "When Effect Becomes Cause: Policy Feedback and Political Change." World Politics 45(4): 595-628.

Rauh, Joshua. 2010. "Are State Public Pensions Sustainable? Why the Federal Government Should Worry About State Pension Liabilties?" *National Tax Journal*, May 15. Available at http://ssrn.com/abstract=1596679.

Ruggerio, Dominick J., Dennis L. Algiere, Daniel DaPonte, Louis P. DiPalma and John J. Tassoni, Jr. *Senate Municipal Pensions Study Commission*, Final Report. February 15, 2011.

Schneider, Anne Larson, and Helen Ingram. 1997. "Social Constructions of Target Populations: Degenerative Policy Designs" in *Policy Design for Democracy*, pp. 102-105.

Spiotto, James E. "Historical and Legal Strength of State and Local Government Debt Financing: In Good Times and Bad Times, Financial Challenges Past, Present and Future." Chapman and Cutler LLP. November 2010.

"Stock Market Crash of 2008." About.com: U.S. Economy. Accessed on January 30, 2013.

Teacher Retirement System of Texas. "Pension Benefit Design Study." September 1, 2012.

Urahn, Susan K. 2010. “The Trillion Dollar Gap: Underfunded State Retirement Systems and the Roads to Reform.” The Pew Center on the States.

“U.S. Publics: Seeking Less Correlation and Better Execution.” 2012. *Pyramis Global Institutional Investor Survey.* Pyramis Global Advisors.

Van Wagner, and Timothy Blake. 2013. “Adjustments to US State and Local Government Reported Pension Data.” *Moody’s Investors Service*, April 17.

Van Wagner, and Timothy Blake. 2012. “Adjustments to US State and Local Government Reported Pension Data.” *Moody’s Investors Service*, July 2.