

Interim Study:

Funding Policies for Fixed-Rate Pension Plans

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Executive Summary

Despite a nearly 10-year bull market following the 2008 market downturn, the unfunded liabilities of many public retirement systems both across the country and in Texas continue to rise. In 2012, the Governmental Accounting Standards Board (GASB) issued statement 68, which requires plan sponsors to report a pension plan's funded status on their balance sheets.¹ This change has brought increased scrutiny from credit rating agencies, with pension debt and related costs directly impacting sponsors' bond ratings and therefore the cost of borrowing money.

Today, volatile investment markets, dampened future market projections, and lower mortality rates are placing additional pressure on retirement systems' ability to reduce their unfunded liabilities. Given these pressures, strong funding policies are a necessity for public pensions to help ensure that over time unfunded liabilities do not continue to grow but rather are reduced or eliminated. In addition, solid funding policies can help assure rating agencies that pension debt is being proactively managed.²

Recognizing the many challenges facing Texas plans and in accordance with its *Pension Funding Guidelines*, the Texas Pension Review Board (PRB or the Board) at its November 16, 2017 meeting directed staff to research and identify the role that funding policies could play in helping plans meet their funding objectives.³ The Board asked staff to focus on how systems with fixed-rate contribution structures could benefit from adopting funding policies. Contributions to fixed-rate plans do not automatically adjust to address negative experience like those plans that are funded using actuarially determined contributions. Fixed-rate plans make up nearly 75% of Texas public pension plans. The PRB conducted this interim study as part of the agency's mandate to include recommendations of any legislation relating to public retirement systems that the Board finds advisable through its Biennial Report to the Legislature and Governor.

Staff began by analyzing the contribution structures of Texas plans and comparing the average funded ratios over time. The average funded ratio of systems with actuarially determined contributions (ADCs) was higher overall than that of fixed-rate systems and has reversed its decline after the 2008 financial crisis, while fixed-rate systems' average funded ratio has continued a downward trajectory. Staff then reviewed funding policies from Texas systems as well as systems in other states and evaluated the benefits of adopting those policies. Finally, staff worked to identify essential components that a sound funding policy should include as well as various approaches that could be provided as examples for Texas systems.

As a result of the study, the PRB recommends that all Texas public retirement systems, including fixed-rate plans, adopt and maintain a written funding policy that fully funds the plan over as brief a period as possible, as recommended in the *PRB Pension Funding Guidelines*. The funding period should be a finite, or closed, period, and the funding policy should be established in conjunction with the plan sponsor if possible. The PRB staff is available to provide technical assistance to systems throughout the process.

¹ Pension Standards for State and Local Governments. *Governmental Accounting Standards Board*. www.gasb.org/jsp/GASB/Page/GASBSectionPage&cid=1176163528472

² Example: Houston, Texas' credit rating from Moody's Investors Service was upgraded after pension reforms, including the establishment of a funding policy. "City of Houston, Texas Rating Action: Moody's Assigns Aa3 to Houston's POBs; Stable Outlook." Moody's Investors Service. November 29, 2017.

³ *PRB Pension Funding Guidelines* can be found in Appendix A.

Introduction

As of January 2019, there were 99 actuarially funded defined benefit plans registered with the PRB. They included multi-billion-dollar statewide plans, large municipal plans, local firefighter plans, and special district plans such as hospital districts and transportation authorities. Their total net assets were approximately \$272 billion, and total membership was more than 2.7 million members.

The Texas Pension Review Board is mandated to oversee all Texas public retirement systems, both state and local, to monitor their actuarial soundness and compliance with state law. The agency's mission is to provide the state of Texas with the necessary information and recommendations to ensure that its 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.

State law establishes the PRB's core duties, which include recommending policies, practices, and legislation to public retirement systems and appropriate governmental entities. In November 2017, the Board directed staff to research and identify the role that funding policies could play in helping plans meet their funding objectives. In particular, the Board asked staff to focus on how systems with fixed-rate contribution structures could benefit from adopting funding policies, in line with the PRB *Pension Funding Guidelines* which recommend that retirement systems should adopt a funding policy.

The study is organized as follows. Section I discusses Texas pension plans' contribution structure, which is predominantly comprised of systems that receive an annual contribution that is a fixed percentage of payroll. Section II discusses the unique challenges presented by fixed-rate contribution structures. Section III presents ways adopting a funding policy can help address some of these challenges. Section IV details the necessary components of a strong funding policy, and Section V provides examples of funding policies adopted by plans with fixed-rate contribution structures. The paper concludes with the recommendation that all plans, including fixed-rate plans, should adopt a funding policy, in conjunction with their sponsor whenever possible.

What is a Funding Policy?

Three Pension Funding Goals, Explained

Benefit security: sufficient assets will be available to pay all benefits when they come due.

Contribution stability: low volatility in contributions from year to year, helping employers maintain budgetary stability.

Intergenerational equity: each generation of taxpayers bear the cost of benefits for the employees who provide services to those taxpayers, rather than deferring those costs to future taxpayers.

For the purposes of this paper, a funding policy is considered a written statement of guiding principles and strategy to fully fund the long-term costs of promised benefits.⁴

A funding policy helps a system achieve the three fundamental goals of public pension funding: benefit security, contribution stability, and intergenerational equity.⁵ While different pension plans and their governmental sponsors may prioritize these goals differently, the funding policy should strive to balance the three goals so that member benefits are secure, employers and members are afforded some level of contribution predictability from year to year, and

liabilities are managed so that future taxpayers are not burdened with costs associated with a previous generation's workers.

The fundamental equation governing pension financing is $C+I=B+E$.⁶ The inputs to the pension fund are contributions and investment income, while outputs from the fund are benefits and expenses (administrative costs and investment fees). Therefore, these are the four levers that may be adjusted to affect overall plan financing.⁷ A funding policy should establish a clear link between all four components to ensure the equation balances and the pension's long-term health is sound. If contributions are fixed, then other components such as benefits must be flexible to bring the equation back into balance to address any negative experience.

The Fundamental Equation of Pension Plan Financing

$$(C)ontributions + (I)ntestments = (B)enefits + (E)xpenses$$

I. Public Pension Contribution Structures

Pension funding approaches can be conceptualized in two basic categories:

Actuarially Determined Contribution

An actuarially determined contribution (ADC) structure requires the payment of an ADC rate. GASB defines ADC as the target or recommended contribution to a defined benefit plan, determined in conformity with Actuarial Standards of Practice (ASOPs), standards set forth and maintained for

⁴ Link, Jim et al. Implementing a Pension Funding Plan. GFOA 108th Annual Conference. May 18-21, 2014. Slide 19.

⁵ *Issue Brief: Objectives and Principles for Funding Public Sector Pension Plans*. American Academy of Actuaries. February 2014, p. 3.

⁶ For more information on the $C+I=B+E$ equation, please see the PRB's white paper, *Understanding the Basics of Actuarial Methods*.

⁷ Benefit modifications are generally constrained for many systems which operate within a legal framework that prevents decreases in benefit levels for past accrued service.

professional actuaries by the Actuarial Standards Board. In this paper, the ADC is defined as the cost of benefits earned by workers in the current year (the normal cost) plus an amortization payment calculated over a closed period on any unfunded liability.

Funding according to the ADC satisfies the pension funding goals of retirement security and intergenerational equity, as long as actuarial assumptions and the amortization period are reasonable, because the ADC calculation balances the fundamental equation of pension financing discussed above. ADC contribution structures inherently adjust to the plan's changing funded status to maintain the overall trajectory towards fully funding benefit promises. However, this responsiveness to realized plan cost can result in contribution volatility and create budgetary challenges for plan sponsors. Contribution volatility under ADC funding can be mitigated using a number of smoothing techniques either on the inputs (e.g., asset smoothing) or the outputs (e.g., direct contribution rate smoothing), as well as establishing other cost containment methods.

ADC Contribution Structure Examples

CPS Energy of San Antonio – As of 2017, CPS Energy's funding policy requires payment of an annually calculated ADC that amortizes the existing unfunded liability over a closed, 30-year period with future gains/losses amortized over their own closed, 30-year period (i.e. a layered amortization approach).

TMRS/TCDRS – Texas has two agent multiple-employer retirement systems: Texas Municipal Retirement System (TMRS) and Texas County & District Retirement System (TCDRS). Combined, these two systems have over 1,400 participating employers, which consist of municipalities, counties and special districts. Both systems have statutory requirements and established funding policies that require the participating employers to fund the ADC for their plans each year. Both funding policies define the actuarial cost method, the asset smoothing method and the amortization policy that is used to determine the ADC for each participating employer. They also utilize a level percent-of-pay basis with a layered approach where different amortization bases are established and amortized over varying periods in accordance with several factors. For example, both amortization policies have stricter funding requirements for underfunded plans (closed, layered approach) versus overfunded plans (open amortization approach) and have shorter amortization periods for benefit enhancements than actuarial gains and losses.^{8,9}

Tennessee (local plans) – In 2014, Tennessee passed a bill to require political subdivisions with pension plans that are not part of the Tennessee Consolidated Retirement System to adopt funding policies. The funding policies must include a statement that the political subdivision's budget shall include funding of at least 100% of the ADC, which is defined as the normal cost plus amortization of the unfunded liability to the extent that one exists for a particular year. The policy must also specify the maximum amortization period over which any unfunded liabilities will be paid.

⁸ "Actuarial Funding Policy." Texas Municipal Retirement System, 31 Dec. 2015, www.tmrs.com/down/board/12-31-2015%20Actuarial%20Funding%20Policy.pdf.

⁹ "TCDRS Funding Policy." Texas County & District Retirement System, 25 June 2015, https://www.tcdrs.org/governance/tcdrs%20funding%20policy_2015.pdf

Non-Actuarially Determined Contribution

Fixed-Rate Funding

Nearly 75% of Texas plans have fixed contribution rates. Under a fixed-rate funding structure, the contribution rate is a set percentage of payroll specified in statute/ordinance or local bargaining agreements rather than the ADC. As such, a fixed-rate contribution does not change from valuation to valuation unless proactive steps are taken. Such contribution structures do not inherently adjust to cover liability losses or gains and may not reflect the plan's expected cost. Thus, fixed-rate contributions may not be sufficient to move toward the goal of full funding. This is especially true when a plan experiences significant actuarial or investment losses.

While contributions based on a fixed percentage of pay provide the highest degree of contribution stability in the short-term, this approach increases the likelihood of not achieving the other two goals, retirement security and intergenerational equity. Without close monitoring and pro-active adjustment of the fixed contribution rate, the amount contributed to the plan may not be adequate, resulting in a poorly funded plan which provides for a lower degree of benefit security and defers necessary contributions, placing the burden of funding current plan costs on future plan members and taxpayers through increased contributions and/or benefit reductions.

Other

In Texas, a small number of firefighter plans peg their sponsor contribution to the rate at which the city contributes to its municipal employees plan within the Texas Municipal Retirement System (TMRS). Such an approach can be problematic because the contribution rate for the municipal plan, while actuarially determined for that plan, has no bearing on the actual cost of the firefighter plan in cases where there is a different benefit structure and a separate pool of assets.

II. Challenges Associated with Fixed-Rate Contributions

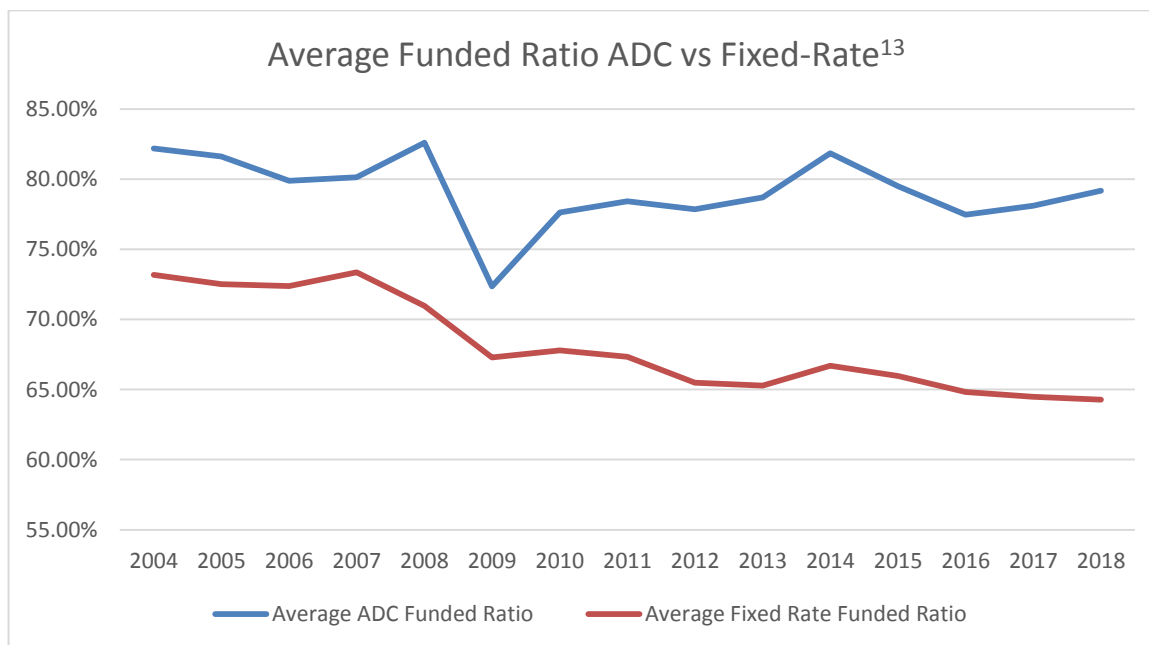
As discussed above, by definition, a fixed-rate contribution plan does not automatically respond to plan experience deviating from actuarial assumptions. Fixed-rate funding approaches may ensure that contributions do not swing dramatically from year to year, and thereby allow sponsors to plan ahead for budgetary reasons. However, they also may bear little to no relation to the actual cost of plan benefits, leaving plans more vulnerable to sharp increases in unfunded liability, therefore requiring future contribution increases and benefit reductions.¹⁰

Comparison of Funded Ratios by Contribution Structure

Over the last 15 years, information provided to the PRB shows that the average funded ratio for ADC-funded plans has been higher than that of plans with fixed-rate contribution structures. While ADC-funded plans' funded ratios appear to have stabilized since 2008-09, funded ratios for fixed-rate plans on average have continued to fall, indicating a much higher degree of difficulty recovering from the market crisis of 2008. Plans with "Other" contribution structures or which have recently changed

¹⁰ Link, Jim, et al. "Implementing a Pension Funding Plan." *GFOA 108th Annual Conference*. May 18-21, 2014. Slide 13.

contribution type were omitted from this analysis. The complete data behind the line graph below may be found in Appendix B.



Potential Future Impact of the Fixed-Rate Funding Approach

The PRB has expressed concern regarding the fiscal health of fixed-rate contribution plans and the broader effects of increased unfunded liabilities on a plan and its sponsor.

- The graph above shows that the average funded ratio of fixed-rate contribution plans has been declining despite experiencing over nine years of a bull market. Flat or negative market returns will only worsen these ratios and must be anticipated.
- In recent years, key actuarial assumptions, such as the investment return assumption, have failed to match actual plan experience, and fixed contribution rates are not flexible enough to quickly respond to the resulting funding shortfalls.
- Contributions consistently lower than the ADC can result in long-term negative amortization where annual contributions are insufficient to cover the current year's cost plus *just the interest* on the plan's unfunded liability. Thus, no progress is made toward paying off the unfunded liability, which continues to grow as the unpaid interest compounds over time, and contribution increases and/or benefit reductions will ultimately be required (jeopardizing the goals of contribution stability and retirement security). Negative amortization runs contrary to the pension prefunding concept and the goal of intergenerational equity in which the current generation pays for its own future benefits.

¹¹ Chart does not include closed/frozen plans, plans with "other" contribution structures, or plans with known contribution structure changes in the past 15 years.

- Life expectancy generally is increasing and the soon-to-be-completed Society of Actuaries Survey of Public Pension Mortality indicates both public safety and teacher pension liabilities should be even higher as a result of retirees living longer.
- Pension liabilities are increasingly considered by credit rating agencies, putting at risk a sponsoring governmental entity's ability to issue debt cost-effectively.

III. Benefits of a Funding Policy for Fixed-Rate Plans

Benefits of a Funding Policy

All plans, regardless of size or funding type, benefit from having written funding policies. If a plan is receiving a fixed-rate contribution rather than one based on an ADC, a funding policy is even more crucial since contributions do not adjust to changes in the realized cost of the plan. Going back to the fundamental equation, $C+I=B+E$, if (C)ontributions are fixed, other components in the equation must be flexible for the pension financing equation to balance, and therefore, for a plan's financing framework to be sound.

The funding policy should address how and under what circumstances contribution and (B)enefit levels will be adjusted to bridge any gaps between actuarial expectations and actual experience over time. The policy should be closely linked to (I)ntestment and (E)xpense policies. The funding policy should be jointly developed by the plan's governing board and the sponsoring governmental entity. A funding policy of this nature can provide a roadmap to full funding and increase transparency by clearly setting forth the steps to be taken under different experience scenarios such that plan members, policymakers, taxpayers and other stakeholders are aware in advance of such action being taken. The following section discusses the specific benefits of adopting a strong, forward-looking funding policy.

Governance. Just the act of developing a funding policy is likely to benefit a plan because the process requires the governing board to ask itself fundamental questions regarding its current funding approach and future funding goals.¹² For example, boards should discuss questions such as, "How do we define full funding?" and "Under what funding conditions should benefit enhancements be made? Should a cost-of-living adjustment (COLA), benefit enhancement, or reduction in employer contribution ever occur when the plan is not fully funded?"¹³ These conversations allow the board to openly discuss funding approaches and establish what mechanisms they, as plan fiduciaries, are comfortable adopting to guide the plan through both positive and negative experience.¹⁴

Funding Discipline. A funding policy memorializes the retirement system's funding goals and helps provide increased discipline regarding funding decisions.¹⁵ When facing stakeholder pressure for benefit enhancements, a written funding policy can help trustees by shifting the conversation away from the merits of the potential benefit increase to whether or not such an increase can be implemented within

¹² "Guideline No. 7 Pension Plan Funding Policy Guidelines." *Canadian Association of Pension Supervisory Authorities*. 2011.

¹³ Interview with City of Austin Employees' Retirement System, Executive Director and Deputy Director, July 10, 2018, Austin, TX.

¹⁴ Link, Jim, et al. "Implementing a Pension Funding Plan." *GFOA 108th Annual Conference*. May 18-21, 2014. Slide 57.

¹⁵ "Guideline No. 7 Pension Plan Funding Policy Guidelines." *Canadian Association of Pension Supervisory Authorities*. 2011.

the parameters of the system's funding policy.¹⁶ For example, although a board may desire to grant a cost-of-living adjustment, a funding policy might state that such action may not be considered if the plan's funded status would dip below a specific level after the COLA, thereby ensuring continued progress towards the plan's stated funding goals. A funding policy may also support funding discipline on the employer contribution side by laying out the specific circumstances under which contributions would need to be increased or decreased.

Downside Protection and Transparency. Downside protections include specific steps to be taken under adverse conditions, such as policies that spread downside risk equitably. Some examples include tying employer and employee contributions to investment returns, requiring consideration of benefit adjustments given certain conditions, etc. Including downside protection provisions in a funding policy can allow plans to make necessary corrections quickly and smoothly to protect against economic downturns because such plans have been adopted in advance through a transparent process. Even just the process of developing downside protections can be beneficial because it allows governing boards to carefully consider how to respond to market declines or other contingencies ahead of time, rather than in a crisis state.

In the absence of a written, formal risk-sharing plan developed in advance, de facto risk-sharing ultimately occurs through ad-hoc changes that often disproportionately affect certain groups of employees or taxpayers.¹⁷ In contrast, a formal cost- or risk-sharing policy can distribute unexpected cost increases between taxpayers and employees in a predetermined, fair and transparent manner.¹⁸ Thus, a written funding policy can help make clear ahead of time to pension trustees, plan members, tax payers and other stakeholders the role that these various groups will play in absorbing the risk involved in public pension structures.

Sponsor Credit Ratings. Governments closely monitor their credit ratings since these ratings directly impact borrowing costs. Underfunded pensions contribute to a state or local government's overall liabilities and can have a negative impact on its bond ratings, increasing the entity's borrowing costs.¹⁹ Credit rating agencies particularly consider funding ratios and risks associated with the plan when determining a local government's credit rating.²⁰ A funding policy can help assure rating agencies that pension liabilities are being proactively managed, leading to an improvement in credit rating.^{21,22}

IV. Funding Policy Components

As previously discussed, the primary purpose of a funding policy is to help plans meet the three goals of intergenerational equity, contribution stability, and benefit security. The following components should

¹⁶ Interview with City of Austin Employees' Retirement System, Executive Director and Deputy Director, July 10, 2018, Austin, TX.

¹⁷ "NASRA Issue Brief: Shared-Risk in Public Retirement Plans." NASRA. June 2014, p. 2.

¹⁸ *Cost-Sharing Features of State Defined Benefit Pension Plans: Distributing Risk Can Help Preserve Plans' Fiscal Health*. The Pew Charitable Trusts. January 2017, p. 1.

¹⁹ "How Do Public Pension Plans Impact Credit Ratings?" *Aon Hewitt Retirement & Investment*. December 2017, p. 2.

²⁰ "Local Government Pension Analysis Special Report". *Fitch Ratings*. April 8, 2013. p. 1.

²¹ "How Do Public Pension Plans Impact Credit Ratings?" *Aon Hewitt Retirement & Investment*. December 2017, p. 2.

²² "City of Houston, Texas Rating Action: Moody's Assigns Aa3 to Houston's POBs; Stable Outlook." Moody's Investors Service. November 29, 2017.

be featured in a comprehensive funding policy to ensure a plan is achieving the three goals or is at least on the path to doing so:

Establishing Clear and Concrete Funding Objectives

Perhaps the most important element of a funding policy is to establish the funding objectives of the retirement system. Funding policies should aim to achieve full funding of benefit promises and should include a specific funded ratio and amortization period target, such as achieving 100% funding over a closed 10-25-year period. Plans should establish different closed-period amortization bases for each year's realized experience, frequently referred to as layered amortization.

Selecting Actuarial Methods

The primary role of a funding policy is to set boundaries on what is allowable for actuarial calculations. At a minimum, the three actuarial methods that should be included in a funding policy for a fixed-rate plan include the actuarial cost method, the asset-smoothing method and the amortization policy.

Actuarial Cost Method

An actuarial cost method is a procedure for allocating the actuarial present value of projected benefits to time periods, usually in the form of an actuarial accrued liability (AAL) and normal cost (NC).²³ In other words, the cost method determines when pension liabilities are accrued on the plan's books as workers earn benefits. At minimum, the funding policy should address the desired goals and purpose of the cost method if it does not also specify the exact cost method to be used. The most common actuarial cost method used in Texas, and the cost method required by GASB for financial reporting disclosures, is the entry age normal (EAN) method. Under the EAN method, benefits are assumed to accrue as a level percentage of pay over the period from the member's entry into the plan until the assumed termination or retirement.

Asset Smoothing Method

Asset smoothing techniques can help keep contributions stable and more predictable over time. A five-year smoothing period where 20% of any gain or loss is recognized in each subsequent year is typically used in Texas. Corridors may be added to the smoothing period to keep asset values closer to the market value. The funding policy should specify the amount of return subject to smoothing (i.e. how much is deferred), the time period of the deferral and if the smoothed value is subject to a corridor.

Amortization Policy

The unfunded liability is the actuarial accrued liability (AAL) less the actuarial value of plan assets. An amortization method determines the timing and pattern of contributions to pay off the unfunded liability.²⁴ A fixed-rate contribution structure does not have an explicit amortization method; instead, the effective amortization period is a by-product of the expected contributions and plan experience. Creating an amortization policy provides an opportunity for fixed-rate plans to discuss an appropriate funding period, including the impact of benefit enhancements as well as the degree and length of any

²³ ASOP No. 4

²⁴ Actuarial Standard of Practice (ASOP) No. 4 Measuring Pension Obligations and Determining Pension Plan Costs or Contributions

negative amortization period. Negative amortization occurs when contributions are insufficient to cover the cost of benefits accrued and the interest accrued on the unfunded liability during the year. Plans must consider how negative amortization affects the total contribution requirements over the long-term as an important part of their amortization policy.

Developing a Roadmap to Achieve Funding Objectives

Funding policies should provide a clear plan detailing how the stated funding goals will be met. Methods a plan can use to ensure they stay on track may include the following.

Target Contribution Rates

The first step for a fixed-rate plan to monitor its funding progress is to establish a target contribution rate, in consultation with the plan's actuary, that is designed to achieve the stated funding goals, but that also reacts to the changing condition of the plan. The Conference of Consulting Actuaries Public Plans Community recommends that a pension plan's current, fixed contribution rate should be compared to the ADC.²⁵ As the current fixed-rate contribution rate moves away from the ADC, plans will need to begin to take steps to mitigate the differences.

Benefit and Contribution Change Parameters

Funding policies should include elements designed to impede deviation from progress toward funding goals. This may be done by establishing parameters under which future benefit increases and contribution reductions can be considered. For example, a funding policy might state that benefit enhancements can be made only if the funded ratio would remain at a certain level after the increase or contribution reductions may only occur if a minimum amortization period is maintained.

Contribution Smoothing

The asset smoothing methods discussed briefly above are one approach to try to smooth the volatility inherent in an ADC. In addition to or instead of smoothing the inputs into the calculation (such as assets), funding policies may utilize contribution smoothing to directly achieve this result. Contribution smoothing is an approach that limits the amount the required contribution increases or decreases from one year to the next by setting rules around when and how much the actual contribution will change based on changes in the ADC.

Adopting Actions to Address Actual Experience that Diverges from Assumptions

Funding policies develop predetermined policies for how a plan should respond to both positive and negative experiences that are different than the plan's assumptions. A funding policy should identify key risks faced by the plan and how those risks, and their associated costs, will be distributed between the employer and employees. Often when there is no formal risk-sharing policy, benefit reductions or cost increases are imposed on employees, retirees or both *after* the plan's condition has deteriorated, rather than proactively, in advance, and in a manner transparent to members and stakeholders.²⁶

²⁵ Conference of Consulting Actuaries Public Plans Community. "Actuarial Funding Policies and Practices for Public Pension Plans." October 2014, p. 6.

²⁶ Brainard, Keith, and Alex Brown. *Shared-Risk in Public Retirement Plans*. National Association of State Retirement Administrators, June 9, 2014, *Shared-Risk in Public Retirement Plans*.

According to $C+I=B+E$, costs can be shared between parties by altering either contribution rates or benefit levels. On the contribution side, funding policies can include provisions governing how contribution increases will be used to make up for unexpected costs. A funding policy should outline when it is appropriate for employer or employee contributions, or both, to be increased or decreased. Caps or limits may be placed on contribution changes to limit volatility, which provides the employer with some assurance of future costs. A cap or limit may, however, also necessitate adjustment in benefit levels. A contribution corridor may be used, which is an acceptable

Risk-Sharing – Defined

Risk- or cost-sharing refers to the distribution of risks across employers and employees.²⁶ Risk-sharing prevents one party from bearing all the risk in a pension funding policy. For example, if investment returns are not as high as projected, the associated costs will need to be covered by additional contributions or benefit reductions. Risk-sharing would prevent one party (i.e., only the employees or employer) from being responsible for bearing the entire cost.

range in the deviation of the actual contribution rate from the target contribution rate. For example, the Houston pension plans' reform package created a corridor around the target contribution rate to help limit the ongoing overall cost increases of the plans. The plans and the City are required to take corrective action, including negotiating benefit reductions, if the actual contribution falls outside of the corridor.

A funding policy may also establish when benefit adjustments will occur, if necessary, to balance the fundamental equation. For example, a policy may include provisions prescribing when COLAs may occur or stipulating that they can be granted only if the plan's financial condition will not be affected. Caps may also be placed on maximum COLAs, or COLAs can be tied to inflation, to manage plan costs. For instance, both the City of Austin Employees' Retirement System and the South Dakota Retirement System's target a 120% funded ratio for consideration of benefit improvement recommendations.

Contributions and benefits can also be made variable upon certain factors such as investment returns or funded levels. For example, Pennsylvania has tied employee contribution levels to investment returns, while Wisconsin's State Retirement system has tied benefits to investment performance.²⁸ The South Dakota Retirement System requires the Board to submit a report to the Governor and Legislature specifying recommendations for corrective action, including benefit changes, if its fixed, statutory contributions fall short of actuarial funding requirements, or if the fair value funded ratio is under 100%.²⁹ The Maine Public Employee Retirement System also has tied COLAs to investment returns.³⁰

Experiences may sometimes deviate from the assumptions in a positive way, leaving the plan with an unanticipated increase in assets. A funding policy should have provisions in place to specify how both positive and negative experience will be addressed. For example, plans may allow for increased benefits or an increased COLA as a result of a positive deviation, but plans will need to ensure they are able to consistently meet the new funding demands of the changes.

²⁷ Brainard, Keith, and Alex Brown. *Shared-Risk in Public Retirement Plans*. National Association of State Retirement Administrators, June 9, 2014, *Shared-Risk in Public Retirement Plans*, p. 2.

²⁸ Ibid.

²⁹ Codified Laws of South Dakota, Chapter 3-12-122;

http://sdlegislature.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Type=Statute&Statute=3-12-122

³⁰ "Summary: PLD Plan Changes." *Maine Public Employees Retirement System*, www.maineopers.org/Pensions/PLD%202018-Summary.htm.

V. Funding Policies Examples

Many pension plans across the United States have already adopted a funding policy, including several within the state of Texas. Highlighted below are two examples of funding policies from Texas plans and one example from outside the state. The featured funding policies are all from fixed-rate plans. Two are written policies adopted by the plans, while one was placed in state law. However, they all contain components to help guide the plan towards achieving benefit security, intergenerational equity, and contribution stability.

Houston Pension Plans

In 2017, the 85th Texas Legislature enacted Senate Bill 2190, which created a contribution corridor for all three City of Houston pension plans – Houston Firefighters’ Relief & Retirement Fund (HFRRF), Houston Municipal Employees’ Pension System (HMEPS), and Houston Police Officers Pension System (HPOPS).³¹ Prior to the reform legislation, HFRRF contributions were set in its governing statute, and HMEPS and HPOPS contributions were established through meet and confer agreements with the City of Houston. The bill established a statutory funding policy that set a target contribution rate for the City based on the ADC and developed a corridor around the City’s target contribution rate. Should the annually calculated contribution move outside the corridor, which encompasses rates equal to +/- 5% of the target rate (projected midpoint), certain steps must be taken, highlighted in the excerpt below.

“If a Risk Sharing Valuation Study determines the City Contribution Rate differs from the Midpoint, in most cases, steps are taken to bring the Rate back toward the Midpoint. In a falling-cost environment, gains are used to accelerate the payoff of unfunded liabilities or reduce the interest rate. In a rising-cost environment, adjustments are made to the amortization period, employee contributions, or benefits to reduce the City Contribution Rate.”

- *City of Houston HMEPS Pension Reform Cost Analysis*. Retirement Horizons Incorporated, 2017, *City of Houston HMEPS Pension Reform Cost Analysis*, p. 10.

City of Austin Employee Retirement System

The City of Austin developed a supplemental funding plan for the City of Austin Employee Retirement System (COAERS) in 2005, which was amended in 2010.³² In 2014, COAERS’ board of trustees adopted a funding policy that built upon the supplemental funding plan. Highlights from the COAERS funding policy include:

- The first priority is to sufficiently fund the plan to pay the promised benefits to current and future generations.
- A COLA may be adjusted when:
 - the adjustment can be financially supported;

³¹ A summary of the funding policies for the three City of Houston pension plans is in Appendix C.

³² A copy of COAERS’ funding policy is in Appendix D.

- the funded ratio of the plan is greater than or equal to 80% after incorporating the COLA;
 - the amortization period is 20 years or less after incorporating the COLA; and
 - the actual employer contribution rate is greater than or equal to the ADC but no more than 18% after incorporating the COLA.
- Employer contribution rate reductions should be considered only when annual COLA adjustments are built into funding assumptions and the funded ratio will remain greater than or equal to 105% after the reduction.
 - All other benefit enhancements will be considered only when: a) annual COLA adjustments are built in to funding assumptions; b) the funded ratio will be at least 120% after the enhancement; and c) the actuarially determined employer contribution rate is less than or equal to the statutory employer contribution rate.

South Dakota Retirement System

The South Dakota Retirement System (SDRS), while not a Texas plan, is a fixed-rate plan with a solid funding policy and a long track record of remaining fully-funded or nearly so. The SDRS funding policy is a written document put forth by their Board of Trustees which incorporates elements in its statute.³³

SDRS' Funding and System Management Policy is divided into three major sections: Funding Objectives, Consideration of Benefit Improvements, and Required Corrective Action Recommendations.³⁴ SDRS requires a fair value funded ratio of over 120% before considering any benefit improvements and must retain a funded ratio of over 120% after fully funding a benefit improvement. Per South Dakota statute, SDRS requires that an annual funding report be submitted to the South Dakota Governor and Retirement Laws committee.³⁵

Per state statute and its own funding policy, SDRS is dedicated to keeping its plan well-funded. Should the funded ratio of the fund fall below 100% or if the fixed contribution rates are not sufficient to meet the actuarial requirement, the retirement system is required to detail in their annual report what corrective actions it will take. In 2016, SDRS lowered several key actuarial assumptions, including the investment return assumption. After incorporating those changes, SDRS determined it would not meet its funding policy objectives without corrective action, and the board recommended legislative changes to bring the system back into actuarial balance. These changes included modifying the COLA design to reflect a lower rate of expected inflation and changing the compensation definitions and calculations to reduce the effect of large, late-career pay increases.³⁶

³³ *The South Dakota Perspective on Public Employee Retirement Benefits and the South Dakota Retirement System (SDRS)*. South Dakota Retirement System, sdrs.sd.gov/docs/SDPerspective.pdf.

³⁴ A copy of SDRS' 2017 revised funding and system management policy is located in Appendix E.

³⁵ Codified Laws of South Dakota, Chapter 3-12-122;

http://sdlegislature.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Type=Statute&Statute=3-12-122

³⁶ Managing SDRS for Sustainability. South Dakota Retirement System. December 2016. Slide 26, <https://sdrs.sd.gov/docs/ManagingSDRSforSustainability.pdf>

Conclusion and Recommendation

A contribution structure that requires the payment of an ADC is best suited to achieve the three primary goals of benefit security, contribution stability, and intergenerational equity. Contribution volatility associated with paying an ADC can be mitigated through contribution smoothing and other methods. Fixed-rate contribution structures necessitate strong funding policies with flexible mechanisms to make up for the inflexibility of contributions.

A pension funding policy should be designed to guide retirement systems to full funding and to help them achieve the three goals. A funding policy also should include clear and concrete funding objectives, the actuarial methods to be used, and a pathway to achieve the stated funding goals. Additionally, the funding policy should outline how the plan will address setbacks that occur when experience diverges from actuarial assumptions or assumption changes result in losses.

The PRB recommends that all Texas public retirement systems, including fixed-rate plans, adopt and maintain a written funding policy that fully funds the plan over as brief a period as possible, as recommended in the *PRB Pension Funding Guidelines*. The funding period should be a finite, or closed, period. The funding policy should be established in conjunction with the plan sponsor whenever possible and should work together with a plan's other policies such as benefit and investment policies. The PRB staff is available to provide guidance to plans as they develop their funding policies.

Appendix A – PRB Pension Funding Guidelines

Pension Review Board
Pension Funding Guidelines
(Adopted 01/26/17; Effective 06/30/17)

The purpose of the Pension Review Board's Pension Funding Guidelines is to provide guidance to public retirement systems and their sponsoring governmental entities in meeting their long-term pension obligations. The Guidelines are intended to foster communication between plans and their sponsors as they determine a reasonable approach to responsible funding, whether the contribution rate is fixed or actuarially determined.

Public retirement systems should develop a funding policy, the primary objective of which is to fund the obligations over a time frame that ensures benefit security while balancing the additional, and sometimes competing, goals of intergenerational equity and a stable contribution rate.

1. The funding of a pension plan should reflect all plan obligations and assets.
2. The allocation of the normal cost portion of the contributions should be level or declining as a percentage of payroll over all generations of taxpayers, and should be calculated under applicable actuarial standards.
3. Funding of the unfunded actuarial accrued liability should be level or declining as a percentage of payroll over the amortization period.
4. Actual contributions made to the plan should be sufficient to cover the normal cost and to amortize the unfunded actuarial accrued liability over as brief a period as possible, but not to exceed 30 years, with 10 - 25 years being the preferable target range.* For plans that use multiple amortization layers, the weighted average of all amortization periods should not exceed 30 years.* Benefit increases should not be adopted if all plan changes being considered cause a material increase in the amortization period and if the resulting amortization period exceeds 25 years.
5. The choice of assumptions should be reasonable, and should comply with applicable actuarial standards.
6. Retirement systems should monitor, review, and report the impact of actual plan experience on actuarial assumptions at least once every five years.

*Plans with amortization periods that exceed 30 years as of 06/30/2017 should seek to reduce their amortization period to 30 years or less as soon as practicable, but not later than 06/30/2025.

Appendix B – Retirement Systems by Contribution Type

Retirement Systems by Contribution Type

Plan Name	Actual ER Cont Type	Effective Date	Effective Amort Period	Funded Ratio %	ER Rec Cont	Actual ER Cont	Percent of Rec Cont Paid
University Health System Pension Plan	Actuarial	1/1/2016	28.0	66.4	6.14%	5.82%	95%
Dallas Co. Hospital Dist. Retirement Income Plan	Actuarial	1/1/2017	27.0	73.8	4.89%	4.58%	94%
Houston MTA Non-Union Pension Plan	Actuarial	1/1/2017	26.0	63.8	23.74%	23.86%	101%
San Antonio Metropolitan Transit Retirement Plan	Actuarial	10/1/2015	26.0	60.4	14.90%	18.58%	125%
Texas Municipal Retirement System	Actuarial	12/31/2016	19.7	86.3	12.63%	13.05%	103%
Plano Retirement Security Plan	Actuarial	12/31/2015	19.0	99.2	3.62%	3.12%	86%
Dallas/Fort Worth Airport Board DPS Retirement Plan	Actuarial	1/1/2017	18.0	75.6	30.71%	30.71%	100%
Dallas/Fort Worth Airport Board Retirement Plan	Actuarial	1/1/2017	18.0	80.3	37.49%	37.49%	100%
Texas County & District Retirement System	Actuarial	12/31/2016	13.5	88.4	11.19%	12.10%	108%
Colorado River Municipal Water Dist. Pension Trust	Actuarial	1/1/2017	9.1	89.9	13.34%	13.54%	101%
Corpus Christi Regional Transportation Authority	Actuarial	1/1/2017	7.0	93.2	11.16%	16.38%	147%
Employees Retirement System of Texas	Fixed	8/31/2017	Infinite	70.1	10.12%	11.51%	114%
Fort Worth Employees' Retirement Fund	Fixed	12/31/2017	Infinite	57.8	25.07%	19.98%	80%
Galveston Firefighter's Relief & Retirement Fund	Fixed	12/31/2016	Infinite	68.0	17.64%	14.00%	79%
Law Enforcement & Custodial Officer Sup. Ret. Fund	Fixed	8/31/2017	Infinite	66.0	2.51%	1.59%	63%
Beaumont Firemen's Relief & Retirement Fund	Fixed	12/31/2016	104.0	67.5	20.17%	15.00%	74%
Orange Firemen's Relief & Retirement Fund	Fixed	1/1/2017	69.3	49.9	19.86%	14.00%	70%
Judicial Retirement System of Texas Plan Two	Fixed	8/31/2017	63.0	90.8	16.63%	15.81%	95%
Harlingen Firemen's Relief & Retirement Fund	Fixed	9/30/2017	59.1	66.1	15.60%	18.07%	116%
Marshall Firemen's Relief & Retirement Fund	Fixed	12/31/2016	56.4	42.0	22.50%	19.05%	85%
Longview Firemen's Relief & Retirement Fund	Fixed	12/31/2016	50.7	45.5	26.84%	17.11%	64%
Cleburne Firemen's Relief & Retirement Fund	Fixed	12/31/2016	49.6	65.4	23.50%	24.40%	104%
Wichita Falls Firemen's Relief & Retirement Fund	Fixed	1/1/2017	49.4	62.5	17.27%	12.35%	72%
Galveston Employees' Retirement Plan for Police	Fixed	1/1/2017	48.7	42.1	16.46%	12.00%	73%
Odessa Firemen's Relief & Retirement Fund	Fixed	1/1/2018	47.1	43.1	25.00%	20.33%	81%
Midland Firemen's Relief & Retirement Fund	Fixed	12/31/2015	44.7	65.8	24.73%	22.20%	90%
Dallas Police & Fire Pension System-Combined Plan	Fixed	1/1/2017	44.0	49.4	79.03%	32.68%	41%
Paris Firefighters' Relief & Retirement Fund	Fixed	12/31/2016	41.9	35.6	12.00%	12.00%	100%
McAllen Firemen's Relief & Retirement Fund	Fixed	10/1/2016	41.4	69.1	13.00%	13.50%	104%
San Angelo Firemen's Relief & Retirement Fund	Fixed	12/31/2015	38.5	65.7	23.69%	20.23%	85%
Greenville Firemen's Relief & Retirement Fund	Fixed	12/31/2016	38.0	47.7	22.20%	16.43%	74%
Big Spring Firemen's Relief & Retirement Fund	Fixed	1/1/2017	36.2	54.9	12.54%	13.80%	110%
Brownwood Firemen's Relief & Retirement Fund	Fixed	12/31/2015	36.1	44.6	21.30%	20.00%	94%
Amarillo Firemen's Relief & Retirement Fund	Fixed	12/31/2015	34.5	81.8	20.22%	18.99%	94%
Lubbock Fire Pension Fund	Fixed	12/31/2016	33.5	72.6	21.73%	21.73%	100%
Lufkin Firemen's Relief & Retirement Fund	Fixed	12/31/2016	33.1	46.7	25.72%	21.98%	85%
El Paso Police Pension Fund	Fixed	1/1/2016	33.0	81.1	26.45%	18.16%	69%
Irving Firemen's Relief & Retirement Fund	Fixed	12/31/2015	33.0	74.9	19.01%	15.65%	82%
Teacher Retirement System of Texas	Fixed	8/31/2017	32.2	80.5	7.94%	7.99%	101%
Plainview Firemen's Relief & Retirement Fund	Fixed	12/31/2015	31.6	37.3	28.12%	24.68%	88%
Abilene Firemen's Relief & Retirement Fund	Fixed	10/1/2015	31.5	56.6	19.69%	13.20%	67%
Conroe Fire Fighters' Retirement Fund	Fixed	12/31/2015	31.4	61.5	16.28%	15.00%	92%
Austin Employees' Retirement System	Fixed	12/31/2016	31.0	67.5	19.84%	18.04%	91%
Corsicana Firemen's Relief & Retirement Fund	Fixed	12/31/2016	28.9	53.1	14.00%	14.00%	100%
Atlanta Firemen's Relief & Retirement Fund	Fixed	12/31/2016	28.4	82.1	13.64%	14.68%	108%
Temple Firemen's Relief & Retirement Fund	Fixed	9/30/2016	28.4	75.1	15.97%	15.21%	95%
Laredo Firefighters Retirement System	Fixed	9/30/2016	28.0	59.3	22.42%	20.10%	90%
Texas City Firemen's Relief & Retirement Fund	Fixed	12/31/2016	28.0	50.4	16.43%	16.00%	97%
Sweetwater Firemen's Relief & Retirement Fund	Fixed	12/31/2016	27.5	70.0	19.76%	16.52%	84%
Austin Police Retirement System	Fixed	12/31/2016	27.3	66.2	22.49%	20.96%	93%
Denison Firemen's Relief & Retirement Fund	Fixed	12/31/2015	27.1	74.4	15.00%	15.00%	100%
El Paso Firemen's Pension Fund	Fixed	1/1/2016	26.0	79.2	21.81%	18.79%	86%
Waxahachie Firemen's Relief & Retirement Fund	Fixed	10/1/2016	25.4	66.9	14.92%	15.33%	103%
Corpus Christi Fire Fighters' Retirement System	Fixed	12/31/2016	23.1	62.1	20.78%	20.78%	100%
Killeen Firemen's Relief & Retirement Fund	Fixed	9/30/2016	22.8	69.7	13.00%	13.13%	101%
San Benito Firemen Relief & Retirement Fund	Fixed	12/31/2015	21.7	60.5	11.07%	15.87%	143%

Retirement Systems by Contribution Type

Plan Name	Actual ER Cont Type	Effective Date	Effective Amort Period	Funded Ratio %	ER Rec Cont	Actual ER Cont	Percent of Rec Cont Paid
El Paso City Employees' Pension Fund	Fixed	9/1/2016	17.0	79.2	10.41%	15.73%	151%
Texarkana Firemen's Relief & Retirement Fund	Fixed	12/31/2015	16.3	87.4	19.50%	19.50%	100%
Austin Fire Fighters Relief & Retirement Fund	Fixed	12/31/2016	16.2	88.3	19.13%	18.33%	96%
Weslaco Firemen's Relief & Retirement Fund	Fixed	9/30/2016	14.1	68.5	7.96%	12.30%	155%
San Antonio Fire & Police Pension Fund	Fixed	1/1/2017	13.1	87.9	18.22%	24.64%	135%
Galveston Employees' Retirement Fund	Fixed	12/31/2017	11.6	79.6	9.00%	9.01%	100%

Appendix C – Houston Plans’ Corridors: Rising Cost/Falling Cost Scenarios

Houston Plans – Rising Cost Scenario

HFRRF – Municipal Contribution Rate When Estimated Municipal Contribution Rate Lower than Corridor Midpoint, Authorization for Certain Adjustments (Sec 13E)	
If funded ratio is less than 90%	Municipal Contribution Rate = Corridor Midpoint
If funded ratio is equal to or greater than 90%	<p>If municipal contribution rate is equal to or greater than the minimum contribution rate</p> <p style="text-align: center;">Estimated contribution rate = Municipal Contribution Rate</p> <hr/> <p>If municipal contribution rate is less than the minimum contribution rate for corresponding fiscal year</p> <p style="text-align: center;">Municipal Contribution Rate = Minimum Contribution Rate Achieved in accordance with subsection c.</p> <p>SUBSECTION c (Adjustments):</p> <ul style="list-style-type: none"> • First, adjust AVA to = MVA, if making adjustment causes municipal contribution rate to increase • Second, under written agreement (not later than April 30 before the first day of the next fiscal year), reduce assumed rate of return • Third, under written agreement (not later than April 30), prospectively restore all or part of any benefit reductions or reduce increased employee contributions, in each case made after the year 2017 effective date • Fourth, accelerate the payoff year of the existing liability loss layers, including the legacy liability, by accelerating the oldest liability loss layers first, to an amortization period that is not less than 10 years from the first day of the fiscal year beginning 12 months after the date of the risk sharing valuation study in which the liability loss layer is first recognized.
If funded ratio is equal to or greater than 100%	<ul style="list-style-type: none"> • All existing liability layers, including the legacy liability, are considered fully amortized and paid • The applicable fiscal year is the payoff year for the legacy liability • For each fiscal year subsequent, the corridor midpoint shall be determined as provided by Section 13C(g) of the article
If funded ratio is greater than 100%	<p>In a written agreement between the municipality and the fund, the fund may reduce member contributions or increase pension benefits if, as a result of the action:</p> <ul style="list-style-type: none"> • the funded ratio is not less than 100 percent, and • the municipal contribution rate is not more than the minimum contribution rate

Houston Plans – Rising Cost Scenario

HPOPS – City Contribution Rate When Estimated City Contribution Rate Lower than Corridor Midpoint, Authorization for Certain Adjustments (Sec 9D)	
If funded ratio is less than 90%	City Contribution Rate = Corridor Midpoint
If funded ratio is equal to or greater than 90%	<p>If city contribution rate is equal to or greater than the minimum contribution rate</p> <p style="text-align: center;">Estimated contribution rate = City Contribution Rate</p> <hr/> <p>If city contribution rate is less than the minimum contribution rate for corresponding fiscal year</p> <p>City Contribution Rate = Minimum Contribution Rate Achieved in accordance with Subsection (c).</p> <p>Subsection (c) (Adjustments):</p> <ul style="list-style-type: none"> • First, adjust AVA to = MVA, if making adjustment causes city contribution rate to increase • Second, under written agreement (not later than April 30 before the first day of the next fiscal year), reduce assumed rate of return • Third, under written agreement (not later than April 30), prospectively restore all or part of any benefit reductions or reduce increased employee contributions, in each case made after the year 2017 effective date • Fourth, accelerate the payoff year of the existing liability loss layers, including the legacy liability, by accelerating the oldest liability loss layers first, to an amortization period that is not less than 10 years from the first day of the fiscal year beginning 12 months after the date of the RSVS in which the liability loss layer is first recognized.
If funded ratio is equal to or greater than 100%	<ul style="list-style-type: none"> • All existing liability layers, including the legacy liability, are considered fully amortized and paid • The applicable fiscal year is the payoff year for the legacy liability • For each fiscal year subsequent, the corridor midpoint shall be determined as provided by Section 9B(g) of the article
If funded ratio is greater than 100%	<p>In a written agreement between the city and the board, the fund may reduce member contributions or increase pension benefits if, as a result of the action:</p> <ul style="list-style-type: none"> • the funded ratio is not less than 100 percent, and • the municipal contribution rate is not more than the minimum contribution rate

Houston Plans – Rising Cost Scenario

HMEPS – City Contribution Rate When Estimated City Contribution Rate Lower than Corridor Midpoint, Authorization for Certain Adjustments (Sec 8E)	
If funded ratio is less than 90%	City Contribution Rate = Corridor Midpoint
If funded ratio is equal to or greater than 90%	<p>If city contribution rate is equal to or greater than the minimum contribution rate</p> <p style="text-align: center;">Estimated Contribution Rate = City Contribution Rate</p> <hr/> <p>If city contribution rate is less than the minimum contribution rate for corresponding fiscal year</p> <p>City Contribution Rate = Minimum Contribution Rate achieved in accordance with subsection c.</p> <p>Subsection (c) (Adjustments):</p> <ul style="list-style-type: none"> • First, adjust AVA to = MVA, if making adjustment causes city contribution rate to increase • Second, under written agreement (not later than April 30), prospectively restore all or part of any benefit reductions or reduce increased employee contributions, in each case made after the year 2017 effective date • Third, accelerate the payoff year of the legacy liability by offsetting the remaining legacy liability by the amount of the new liability loss layer, provided that during the accelerated period the city will continue to pay the city contribution amount as scheduled in the initial RSVS • Fourth, accelerate the payoff year of existing liability loss layers, excluding the legacy liability, by accelerating the oldest liability loss layers first, to an amortization period not less than 20 years from the first day of the fiscal year beginning 12 months after the date of the RSVS in which the liability loss layer is first recognized • Fifth, under a written agreement (not later than the 30th day before the first day of the next fiscal year), the city and pension board may agree to reduce the assumed rate of return
If funded ratio is equal to or greater than 100%	<ul style="list-style-type: none"> • All existing liability layers, including the legacy liability, are considered fully amortized and paid • The city contribution amount may no longer be included in the city contribution under 8A • The city and the pension system may mutually agree to change assumptions in a written agreement
If funded ratio is greater than 100%	<p>In a written agreement between the city and the board, the fund may reduce member contributions or increase pension benefits if, as a result of the action:</p> <ul style="list-style-type: none"> • the funded ratio is not less than 100 percent, and • the city contribution rate is not more than the minimum contribution rate

Houston Plans – Falling Cost Scenario

HFRRF – Municipal Contribution Rate When Estimated Municipal Contribution Rate Equal to or Greater than Corridor Midpoint, Authorization for Certain Adjustments (Sec 13F)	
If estimated municipal contribution rate is less than or equal to maximum contribution rate	Estimated Municipal Contribution Rate = Municipal Contribution Rate
If municipal contribution rate is greater than maximum contribution rate for corresponding fiscal year	<p>Municipal Contribution Rate = Corridor Midpoint Achieved in accordance with Subsection (c).</p> <p>Subsection (c) (Adjustments):</p> <ul style="list-style-type: none"> • First, if payoff year of the legacy liability was accelerated previously (falling cost scenario), extend the payoff year of existing liability loss layers, by extending the most recent loss layers first, to a payoff year not later than 30 years for the first day of the fiscal year beginning 12 months after the date of the RSVS in which the liability loss layer first recognized • Second, adjust AVA to current MVA, if making the adjustment causes the municipal contribution rate to decrease
If municipal contribution rate after adjustment by Subsection (c) is greater than the third quarter line rate	<p>Municipal Contribution Rate = Third Quarter Line Rate</p> <ul style="list-style-type: none"> • To the extent necessary to comply with the statute, the City and System shall enter into a written agreement to increase member contributions and make other benefit or plan changes not otherwise prohibited by applicable federal law or regulations • If an agreement is not reached on/before April 30 before the first day of the next fiscal year, before the start of the next fiscal year to which the municipal contribution rate would apply, the board, to the extent necessary to set the municipal contribution rate equal to the third quarter line, shall: <ul style="list-style-type: none"> ○ Increase member contributions and decrease cost-of-living adjustments; ○ Increase normal retirement age; or ○ Any combination of the two
If municipal contribution rate remains greater than corridor midpoint in the third fiscal year after adjustments	<p>In third fiscal year, Municipal Contribution Rate = Corridor Midpoint achieved in accordance with Subsection (g).</p> <p>Subsection (g):</p> <p>Municipal contribution rate must be set at corridor midpoint by:</p> <ul style="list-style-type: none"> • In RSVS for third fiscal year, adjust AVA to MVA, if making the adjustment causes the municipal contribution rate to decrease

Houston Plans – Falling Cost Scenario

	<ul style="list-style-type: none"> • Under written agreement between City and board: <ul style="list-style-type: none"> ○ Increase member contributions ○ Make any other benefit or plan changes not otherwise prohibited by applicable federal law or regulations • If an agreement is not reached on/before April 30 before the first day of the next fiscal year, before the start of the next fiscal year, the board, to the extent necessary to set the municipal contribution rate equal to the corridor midpoint, shall: <ul style="list-style-type: none"> ○ Increase member contributions and decrease cost-of-living adjustments; ○ Increase normal retirement age; or ○ Any combination of the two
HPOPS – City Contribution Rate When Estimated City Contribution Rate Equal to or Greater Than Corridor Midpoint, Authorization for Certain Adjustments (Sec 9F)	
If estimated City contribution rate is less than or equal to maximum contribution rate	Estimated City Contribution Rate = City Contribution Rate
If City contribution rate is greater than maximum contribution rate for corresponding fiscal year	<p>City Contribution Rate = Corridor Midpoint achieved in accordance with Subsection (c).</p> <p>Subsection (c) (Adjustments):</p> <ul style="list-style-type: none"> • First, if payoff year of the legacy liability was accelerated previously (falling cost scenario), extend the payoff year of existing liability loss layers, by extending the most recent loss layers first, to a payoff year not later than 30 years for the first day of the fiscal year beginning 12 months after the date of the RSVS in which the liability loss layer first recognized • Second, adjust AVA to current MVA, if making the adjustment causes the city contribution rate to decrease
If city contribution rate after adjustment by Subsection (c) is greater than the third quarter line rate	<p>City Contribution Rate = Third Quarter Line Rate</p> <ul style="list-style-type: none"> • To the extent necessary to comply with the statute, the City and board shall enter into a written agreement to increase member contributions and make other benefit or plan changes not otherwise prohibited by applicable federal law or regulations • If an agreement is not reached on/before April 30 before the first day of the next fiscal year, before the start of the next fiscal year to which the city contribution rate would apply, the board, to the extent necessary to set the city contribution rate equal to the third quarter line, shall:

Houston Plans – Falling Cost Scenario

	<ul style="list-style-type: none"> ○ Increase member contributions and decrease cost-of-living adjustments; ○ Increase normal retirement age; or ○ Any combination of the two
If city contribution rate remains greater than corridor midpoint in the third fiscal year after adjustments	<p>In third fiscal year, City Contribution Rate = Corridor Midpoint achieved in accordance with Subsection (g).</p> <p>Subsection (g): City contribution rate must be set at corridor midpoint by:</p> <ul style="list-style-type: none"> • In RSVS for third fiscal year, adjust AVA to MVA, if making the adjustment causes the city contribution rate to decrease • Under written agreement between City and board: <ul style="list-style-type: none"> ○ Increase member contributions ○ Make any other benefit or plan changes not otherwise prohibited by applicable federal law or regulations • If an agreement is not reached on/before April 30 before the first day of the next fiscal year, before the start of the next fiscal year, the board, to the extent necessary to set the city contribution rate equal to the corridor midpoint, shall: <ul style="list-style-type: none"> ○ Increase member contributions and decrease cost-of-living adjustments; ○ Increase normal retirement age; or ○ Any combination of the two
HMEPS – City Contribution Rate When Estimated City Contribution Rate Equal to or Greater Than Corridor Midpoint, Authorization for Certain Adjustments (Sec 8F)	
If estimated City contribution rate is less than or equal to maximum contribution rate	Estimated City Contribution Rate = City Contribution Rate
If City contribution rate is greater than maximum contribution rate for corresponding fiscal year	<p>City Contribution Rate = Corridor Midpoint achieved in accordance with Subsection (c).</p> <p>Subsection (c) (Adjustments):</p> <ul style="list-style-type: none"> • First, adjust AVA to current MVA, if making the adjustment causes the city contribution rate to decrease • Second, if payoff year of the legacy liability was accelerated previously (falling cost scenario), <ul style="list-style-type: none"> ○ extend the payoff year of the legacy liability by the amount of the new liability gain layer to a maximum amount

Houston Plans – Falling Cost Scenario

	<ul style="list-style-type: none"> ○ during extended period, the city shall continue to pay the city contribution amount for the extended period • Third, if the payoff year of a liability loss layer other than legacy liability was previously accelerated(falling cost scenario), extend the payoff year of existing liability loss layers, excluding legacy liability, by extending the most recent loss layers first, to a payoff year not later than 30 years from the first day of the fiscal year beginning 12 months after the date of the RSVS in which the liability loss layer first recognized
If city contribution rate after adjustment by Subsection (c) is greater than the third quarter line rate	<p style="text-align: center;">City Contribution Rate = Third Quarter Line Rate</p> <ul style="list-style-type: none"> • To the extent necessary to comply with the statute, the City and board shall enter into a written agreement to increase member contributions and make other benefit or plan changes not otherwise prohibited by applicable federal law or regulations • Gains resulting from adjustments made as the result of a written agreement may not be used as a direct offset against the city contribution amount in any fiscal year • If an agreement is not reached on/before the 30th day before the first day of the next fiscal year, before the start of the next fiscal year to which the city contribution rate would apply, the board, to the extent necessary to set the city contribution rate equal to the third quarter line, shall: <ul style="list-style-type: none"> ○ Increase member contributions and decrease cost-of-living adjustments; ○ Increase normal retirement age
If city contribution rate remains greater than corridor midpoint in the third fiscal year after adjustments	<p>In third fiscal year, City Contribution Rate = Corridor Midpoint achieved in accordance with Subsection (h).</p> <p>Subsection (h): City contribution rate must be set at corridor midpoint by:</p> <ul style="list-style-type: none"> • In RSVS for third fiscal year, adjust AVA to MVA, if making the adjustment causes the city contribution rate to decrease • Under written agreement between City and board: <ul style="list-style-type: none"> ○ Increase member contributions ○ Make any other benefit or plan changes not otherwise prohibited by applicable federal law or regulations • If an agreement is not reached on/before the 30th day before the first day of the next fiscal year, before the start of the next fiscal year, the board, to the extent necessary to set the city contribution rate equal to the corridor midpoint, shall: <ul style="list-style-type: none"> ○ Increase member contributions ○ decrease cost-of-living adjustments

Appendix D – COAERS Funding Policy



**City of Austin Employees' Retirement System
Board Approved Policy**


Policy: F-2

Subject: Funding Policy and Guidelines

Review Committee: Benefits & Services Committee

Date Implemented: November 25, 2014

Date Updated:

Signature of Chair: 
Sam Jones

City of Austin Employees' Retirement System Funding Policy and Guidelines

I. PURPOSE AND SCOPE

This Funding Policy establishes appropriate actuarial methodologies and memorializes the long-term funding goals for COAERS. COAERS is formally adopting certain baseline actuarial measurements to provide guidance for actuarial valuations performed on and after December 31, 2013. The Board of Trustees has also used this opportunity to establish guidelines to ensure that the Plan is well funded into the future and specifies under what conditions benefit enhancements will be considered by the Board of Trustees.

II. DEFINITIONS

"Board of Trustees" means the Board of Trustees of the City of Austin Employees Retirement System as defined by Vernon's Ann.Texas Civ.St. Art. 6243n.

"Funding period" means the length of time required to eliminate the Plan's unfunded liability.

"Cost of living adjustment" means an adjustment which is added to the current monthly payment of the retirement annuities, pensions, or allowances of each retired member and beneficiary to help counteract the erosion of purchasing power caused by inflation.

"Funded ratio" means the value of a Plan's assets, expressed as a percentage of the plan's actuarial liability

"Actuarial value of plan assets" means the Plan's assets determined in accordance with the Asset Valuation Method outlined in Section III of this Policy.

"Actuarial liability" means the actuarial accrued liability determined in accordance with the Actuarial Cost Method outlined in Section III of this Policy.

"Unfunded liability" means the actuarial liability in excess of the actuarial value of plan assets.

"Plan" means the City of Austin Employees' Retirement System and the provisions found in Vernon's Ann.Texas Civ.St. Art. 6243n.

"Actuarially determined employer contribution rate" means the employer's periodic contribution to the Plan which is required to properly fund the Plan, which should be sufficient to eliminate the unfunded liability over a period not to exceed 25 years (based on the Texas Pension Review Board's Guidelines for Actuarial Soundness).

“Statutory employer contribution rate” means the employer contribution rate as defined by Vernon's Ann.Texas Civ.St. Art. 6243n, which is currently eight percent (8%) of base compensation.

“Actual employer contribution rate” means the actual employer contribution paid by the City of Austin currently under the Amended Supplemental Funding Plan or by agreement.

“Benefit enhancement” means any change to the promised benefits for retired, active, vested, and nonvested members of the City of Austin Employees Retirement System which increases the actuarially determined employer contribution rate, or increases the amortization period, or decreases the funded ratio of the Plan. Examples include, but are not limited to: benefit formula multiplier increases; reductions in eligibility for benefits, or lump-sum additional benefit payments to retired members or beneficiaries.

III. ACTUARIAL METHODS FOR VALUATIONS

The Board of Trustees has adopted the following actuarial methods for the purposes of actuarial valuations occurring on and after December 31, 2013 and for plan funding purposes:

- A. Asset Valuation Method - Five year Smoothing with Direct Offset of Gains/(Losses) and 20% Soft Corridor,
- B. Actuarial Cost Method – Entry Age Normal (Individual), and
- C. Funding Period – Determined based on an open group projection.

IV. STATEMENT OF PRIORITIES

The first obligation of the Board of Trustees is to fund the Plan sufficiently to preserve the ability to reliably pay benefits promised under the Plan to current and future generations. However, the Board believes that an ideal benefit design should include annual cost of living adjustments to help counteract the erosion of purchasing power caused by inflation. Other benefit enhancements should be considered only after cost-of-living adjustments have been incorporated and only if the actuarially determined employer contribution rate is less than or equal to the statutory employer contribution rate.

V. GUIDELINES FOR FUTURE COST OF LIVING ADJUSTMENTS

The Board of Trustees believes that it is best to consider supporting cost of living adjustments only when the following conditions exist:

- A. The adjustment can be financially supported on a regular, periodic basis preferably on an annual basis but no less frequently than every five years.

- B. The funded ratio of the Plan is greater than or equal to 80% after incorporating the cost of living adjustment, assuming it to be regular and periodic; and
- C. The amortization period for unfunded liabilities is less than or equal to 20 years after incorporating the cost of living adjustments, assuming it to be regular and periodic; and
- D. The actual employer contribution rate is greater than or equal to the actuarially determined contribution rate but not more than 18% after incorporating the cost of living adjustments, assuming it to be regular and periodic.

VI. GUIDELINES FOR FUTURE REDUCTIONS IN EMPLOYER CONTRIBUTION RATES

The Board of Trustees believes that it is best to consider supporting a reduction in the actual employer contribution rate only when the following conditions exist:

- A. Annual cost of living adjustments are built into funding assumptions; and
- B. The funded ratio will remain greater than or equal to 105% subsequent to any reduction in the actual employer contribution rate.

The actual employer contribution rate should not go down by more than 1% of pay per year.

VII. GUIDELINES FOR FUTURE BENEFIT ENHANCEMENTS

For all other benefit enhancements not specifically mentioned above, the Board of Trustees believes that it is best to support such enhancements only when the following conditions exist:

- A. Annual cost of living adjustments are built into funding assumptions; and
- B. The funded ratio is equal to or greater than 120% after incorporating the benefit enhancement, and
- C. The actuarially determined employer contribution rate is less than or equal to the statutory employer contribution rate.

VIII. AMENDED SUPPLEMENTAL FUNDING PLAN

- A. This Policy is to be implemented consistently with City of Austin Resolution No. 20100913-008 as known as the Amended Supplemental Funding Plan.
- B. So long as the Amended Supplemental Funding Plan remains in effect, any future benefit enhancements or cost of living adjustments otherwise permitted under the Plan's governing documents will require recommendation from the City Manager and approval by the City Council. Any such recommendation by the City Manager should include a projection and actuarial analysis by the COAERS and its actuaries of the effect of the requested enhancement or adjustment on the Plan and the level of employer contributions to the Plan, including projections under scenarios simulating volatile market returns.

IX. EMPLOYEE CONTRIBUTIONS

In order to fund the Plan, regular full-time employee members may increase the employee contribution rate by a majority vote of all such members voting at an election to consider an increase in contributions.

X. MONITORING AND EVALUATION

- A. The Board of Trustees and its actuary will monitor the Plan's progress towards the guidelines in this Policy.
- B. If a cost of living adjustment is provided, future cost of living adjustments are not necessarily guaranteed and are subject to meeting the guidelines in this Policy, the process for reviewing cost of living adjustments established by the Amended Supplemental Funding Plan, and other factors that the Board of Trustees and the City of Austin may choose to consider.

Appendix E – South Dakota Retirement System Funding and System Management Policy

SDRS FUNDING AND SYSTEM MANAGEMENT POLICIES

– Managing SDRS Based on Fixed, Statutory Contributions –

FUNDING OBJECTIVES	CONSIDERATION OF BENEFIT IMPROVEMENTS	REQUIRED CORRECTIVE ACTION RECOMMENDATIONS
<ul style="list-style-type: none"> • A Fair Value Funded Ratio (Fair Value of Assets ÷ Actuarial Accrued Liability*) of 100% or more • A fully funded system with no Unfunded Liabilities under the Entry Age Normal Cost method • Actuarially determined benefits that are variable and can be supported by fixed, statutory contributions 	<ul style="list-style-type: none"> • A Fair Value Funded Ratio of over 120% is required before considering benefit improvement recommendations • The cost to fully fund the recommended benefit improvement is also limited to the net accumulated actuarial investment gains and losses, with gains recognized over a five-year period and losses recognized immediately • After fully funding the cost of the benefit improvement, the Fair Value Funded Ratio must be at least 120% and all funding objectives must continue to be met • Proposed benefit improvement must be consistent with both the Board's long-term benefit goals and sound public policy with regard to retirement practices 	<ul style="list-style-type: none"> • The annual report to Governor and Retirement Laws Committee will include corrective action recommendations if SDRS does not meet both of the following conditions: <ul style="list-style-type: none"> ○ Fixed, statutory contributions sufficient to meet the actuarial requirement, and ○ Fair Value Funded Ratio of 100% or more • The report shall include recommendations for the circumstances and timing for any benefit changes, contribution changes or any other corrective action, or any combinations of actions to improve the funding conditions

The Entry Age Normal cost method is used to calculate Normal Cost and Actuarial Liability

*The Actuarial Accrued Liability and Normal Cost at each July 1 will be based on the baseline COLA assumption or the restricted maximum COLA, as applicable under the SDRS variable COLA structure