

# The Cost of Stability: A Case Study

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## **Introduction**

The funding policy described in this paper is a simplified version of a funding policy currently used in a large statewide public retirement system. The funding policy is consistent with many of the practices in *Actuarial Funding Policies and Practices for Public Pension Plans* (the “CCA White Paper”). The rationale section will describe both strengths and weaknesses found in the policy over its years of application. This funding policy is not new, but it is innovative and can form a case study for others to learn from. The funding policy was designed for and is currently used in multiple-employer cost-sharing pension plans but works equally well for a single-employer plan such as the hypothetical pension scenario.

## **Funding Policy Description**

### **Cost Method**

The cost method used is Entry Age Normal, level percent of salary.

### **Asset Smoothing Method**

Asset gains and losses are smoothed over five years, with a 20% corridor around the market value of assets.

### **Amortization Policy**

If the plan is below 100% funded status, experience gains and losses, assumption changes, and benefit changes will be amortized on a 20-year, closed, level-dollar layered amortization basis. A new 20-year layer is formed each year for the additional gain or loss occurring in that year. Prior amortization layers remain until fully amortized.

If the plan is above 100% funded status, the surplus will be amortized on a 30-year, open, level-dollar single-layer amortization basis. Each year that the plan remains in surplus, this base is cleared and restarted with a new 30-year, level-dollar amortization of the updated surplus amount.

If the plan transitions from below 100% funded to above 100% funded or vice versa, the prior amortization layers are removed, and the amortization restarts according to the above rules.

### **Contribution Policy**

Employer contribution rates are expressed as a percent of payroll. The employer contribution rate must always be at least the Actuarially Determined Contribution (ADC). The ADC is equal to the normal cost rate of the plan plus any unfunded or surplus amortization. The final employer contribution rate remains at the greater of the most recent ADC or the prior year’s rate until the plan reaches 105% funded. Once the plan reaches 105% funded, the contribution rate will decrease 25% of the difference between the prior year’s contribution rate and the current year’s ADC.

## Other Features and Transition Rules

- As the plan is transitioning to this policy:
  - Any existing asset smoothing method should be recalculated according to the policy above.
  - Any existing level-dollar amortization bases may continue, but any existing percent-of-pay amortization bases should be converted into a 20-year fresh start amortization base.
- For a plan with a sufficiently short duration, e.g., a plan closed many years ago, the amortization period when under 100% funded may be reduced.
- Because of the time needed to prepare actuarial valuation results and to communicate the contribution rate to the plan sponsor, there is a one-year delay between the valuation results and the implementation of the new contribution rate.

## Rationale

The policy being presented in this paper is a simplified version of an existing funding policy in a large, statewide retirement system. The policy was first adopted in early 2014 and has undergone revisions because of actual and anticipated experience. For simplicity, only the current iteration of the policy is presented, but some of the lessons learned are contained in this rationale section.

This policy was originally modeled based on recommendations from the California Actuarial Advisory Panel's *Actuarial Funding Policies and Practices for Public Pension and OPEB Plans and Level Cost Allocation Model*. Many of these recommendations were also affirmed in the CCA White Paper and its Level Cost Allocation Model (LCAM). The cost method and asset smoothing method are LCAM model practices, while the amortization policy is an LCAM acceptable practice with conditions. The contribution policy design is not covered in either paper's direct rate smoothing discussion.

This funding policy was adopted in a fiscally conservative environment. It applies to four of the system's plans, and each of those plans was above 75% funded at its adoption. The employers' fiscal health was also moderately strong, and the plans were open to new entrants. The workers entering the plan would have similar demographic profiles to existing workers, and the populations are not expected to change materially in the foreseeable future. This policy may require additional transition rules or may not be appropriate in situations with materially lower funding levels, weaker employer fiscal health, or plans with expected future demographic shifts such as closed funds.

The fiscally conservative nature of the system board of trustees led them to deviate from the CCA White Paper's model practices on amortization policy, which specifies level percent of pay amortization and different amortization periods based on the source of the gain or loss. A smooth and orderly funding of any unfunded liabilities was important to the board of trustees, and a level-dollar amortization policy will never have negative amortization<sup>1</sup>. The funding policy uses 20-year smoothing for all sources of gains or losses, while the CCA White Paper recommends shorter periods for plan amendments and early retirement incentives. The constant amortization

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<sup>1</sup> Negative amortization occurs when the interest accruing on the unfunded actuarial accrued liability exceeds the required payments towards it, resulting in an expected growth of the unfunded actuarial accrued liability.

period was elected both for simplicity and because large liability increases due to plan amendments were rare in this system's history.

The system uses layered amortization when less than 100% funded to both pay off the unfunded actuarial accrued liability in an appropriate timeframe and to track the sources of gains and losses over time. When in surplus, only a single 30-year open amortization layer is maintained, as the source of the surplus is of less concern. Together, these two methods result in timely funding when underfunded and a gradual movement towards 100% funding when in surplus.

The highest priority for this funding policy is to meet benefits when due, which is accomplished by always contributing at least the ADC. However, under this policy a plan must be well-funded to have a contribution rate decrease, which leads to lower contribution rate volatility. The board established a threshold of 105% funded before an employer contribution rate decrease occurs. This funding policy routinely leads to contribution rates that are above the latest ADC, which is framed as the cost of employer contribution rate stability. Setting employer contributions above the ADC causes some imbalance in intergenerational equity, as the current generation of taxpayers bears more of the burden than the ADC would require.

By statute, the system board has the authority to set contribution rates for the affected employers. Employers must pay this rate, and if they do not the system can intercept the employer's state funding to pay the omitted contributions. Employers also have limited ability to leave plans in which they participate. In cases where the employer can stop participating in a plan, the employer must first pay a board-determined amount to cover any remaining liability in the plan. The board uses an actuarial calculation for this purpose, but it is outside the scope of the funding policy.

Since its inception in 2014, the funding policy accomplished its goal of controlling contribution rate volatility. The policy applies to four of the system's plans, and of those four plans, from 2014 to 2020 there have only been three contribution rate changes, one of which was forced by legislation and would not have otherwise occurred. This legislation demonstrates a risk of a policy that maintains an employer contribution rate above the ADC and is discussed below.

By contributing more than the ADC, these plans' funding is accelerated over funding only what the ADC requires. Since this funding policy's inception, three of the four funds have seen an increase in funded status, while one has had a decline. The funded status changes are a result of many factors but contributing more than the ADC has resulted in a stronger funded status than only contributing at the level of the ADC.

Analysis on this funding policy shows that it is biased towards achieving funded statuses over 100%. Stochastic analyses of future asset returns regularly show unreasonably high levels of funding in the upper percentiles and median funded statuses above 100%. While some of the plans under this policy have achieved funded statuses over 100%, plan amendments, assumption changes, and experience have brought them below 100% in subsequent years.

A periodic objection from some stakeholders is that the contribution rate policy is overcharging employers because the employer contribution rate is above the associated ADC. These objections

are addressed through regular education about the value of stability and demonstrating the contribution rate risk without this stabilizing feature. The system has completed both formal and informal surveys of its employers, and the majority favor the contribution rate stability over a more volatile but lower contribution rate.

Changing the parameters of this policy may help alleviate some of the stakeholder concerns above. Prior to the enactment of this funding policy in 2014, the board had adopted a contribution rate policy to not lower contribution rates until a plan reached 100% funded. That parameter was amended to 105% when the complete funding policy was adopted to support contribution rate stability. The specific parameters around the contribution policy are an active area of study. Analysis has shown that the projected plan funding levels are most sensitive to the funded status threshold at which the contribution rate begins to decline (105%, currently), and less sensitive to the rate of decline (25% of the difference in the current rate and the ADC).

One challenge of the contribution rate policy has been communicating the cost of plan benefit improvements. Because the contribution rates are routinely above their associated ADC, plan benefit improvements can occur with no immediate effect on the employer contribution rate. In effect, the insulating buffer designed to absorb regular volatility around the contribution rate has also been used to insulate the sponsor from plan benefit improvement costs. This creates a risk that benefit improvements may be seen as having no cost, because employer contribution rates do not always change when benefits are improved. System staff uses the ADC and liability measures rather than the effect on the employer contribution rate to communicate the actual cost of the plan benefit improvement to stakeholders.

The policy is posted on the system's public-facing website and regularly discussed at public board meetings, allowing it to be seen transparently by all stakeholders. The system staff regularly engages with and educates stakeholders to avoid undue influence on the contribution rates, particularly where the employer contribution rate is higher than the ADC.

Overall, this funding policy demonstrates one way to balance the competing goals of funding a public pension plan. It prioritizes benefit security and contribution rate stability, which is accomplished with a strong ADC determination and employer contribution rates that are frequently above the ADC. The portion of the employer contribution above the ADC is the cost of stability.

### **Authors and Biographical Information**

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Andy Blough is the Chief Actuary of the Indiana Public Retirement System (INPRS). At INPRS, Andy routinely provides subject matter expertise on retirement actuarial matters to system staff, members of the INPRS Board of Trustees, state legislators, and others in the Indiana government. Andy also serves as the Vice Chair of the American Academy of Actuaries' Public Pensions Committee and is a member of the Society of Actuaries' Retirement Plans Experience Committee. Before joining INPRS, Andy was a consulting actuary with Buck focusing on single-employer private-sector pension plans. Andy has a B.A. in Mathematics and Economics from Ball State University.

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