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Public Pensions and State and Local Budgets: Can Contribution Rate Cyclicalities Be Better Managed?

Abstract

Pension fund contribution rate volatility has challenged state and local government defined benefit plan sponsors over time. Methods to contain volatility have been used for years but recent experience has placed greater urgency on the search for better solutions. This chapter examines the historical approach to bring stability to employer rates as well as some of the current thinking on the issues. Because both asset and liability changes can affect volatility, governments are looking at both sides of the balance sheet for relief.

Disciplines

Economics

Comments

The published version of this Working Paper may be found in the 2009 publication: *The Future of Public Employee Retirement Systems*.

The Future of Public Employee Retirement Systems

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Chapter 5

Public Pensions and State and Local Budgets: Can Contribution Rate Cyclicity Be Better Managed?

Parry Young

The payment of annual pension contributions is an ongoing concern for government sponsors of pension plans worldwide (Brainard 2008). During every budget cycle, the financial officers of US state and local governments must deal with this issue, as most are sponsors of defined benefit (DB) plans. Unlike more stable, slow-growing costs such as building maintenance or even payroll, employer pension contributions are unpredictable even over the medium term. In an industry like government, which tends to be service-oriented and thus quite labor intensive (almost three-quarters of school district expenses, e.g., may be related to people), benefit costs are a major cost factor.

To make matters even more interesting from a planning perspective, employer pension costs may be volatile in either direction, up or down. The actuarial methods used to determine rates generally aim for rate stability, but they have been unable to contain volatility in recent times due to a confluence of factors. This chapter reviews some of the major strategies used by employers to try to tame such rate fluctuations. Next we look at historical practices and also actions and adjustments made in response to recent pressures. New approaches may provide ideas for employers currently grappling with this issue.

Pension contributions

DB pension plans receive revenues from two principal sources: contributions and investment income earned on those contributions. The contributions come from employees, generally at a fixed rate, and employers, at a rate reset annually. In some cases the employer may pick up the employees' share. The employer contribution rate reflects the Annual Required Contribution (ARC) calculated by the system's actuary. It includes the cost allocated to the current fiscal year plus an amount to amortize unfunded

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actuarial accrued liabilities. In most years the majority of employers contribute 100 percent of the ARC but some employers may pay only 60 or 70 percent (or 0%) of the ARC. A contribution of less than 100 percent of the ARC may reflect a weakness in the employer's current financial position, or specific funding policies or restrictions. In rare instances, a payment may be more than 100 percent of the ARC. Reasons for this 'overpayment' would include a catch-up for underpayments in prior years, for example.

Not paying the full required amount in any one year or over a period of time tends to add to contribution volatility, in that these shortfalls will most likely have to be made up with correspondingly higher payments at some future point. Barrett and Greene (2007) reported that only 50 percent of the state pension funds received the full ARC from their sponsors in 2006. Pension funding statutes, procedures, and policies vary greatly from state to state and even between local systems within a state. For example, in California, the code mandates that the full pension contribution be paid annually by certain counties, including Los Angeles, San Diego, and Sacramento counties. If the county board of supervisors fails to make the appropriation to the retirement system, the county auditor is required to take any available monies from county funds and deposit them with the retirement system (California Government Code Section 31581).

The Recent Record of Contribution Volatility. The experience of US public pension funds over the past decade presents ample evidence of employer contribution rate volatility. Data for state and local government employers shows pension contribution rates declining from a high of 10.5 percent of payroll in fiscal 1997 to a low of 6.8 percent in fiscal 2002, before rising again (see Figure 5-1 and Table 5-1). The compilation covers the 12 fiscal years from 1995 to 2006 (NASRA 2008). For the five fiscal years ended in 2002, rates declined in each year by a mean of 8.3 percent. Even though the average rate never fell below 6.8 percent of payroll, many fund sponsors actually experienced contribution 'holidays' (no employer contribution) during this period. This declining rate trend reflected the strong improvement in funded ratios (the actuarial value of assets divided by the actuarial accrued liabilities) during the 1990s. Driving this improvement were an increased emphasis on equity investments by public funds and very strong investment returns for these public plan assets. Public funds increased their allocation to domestic equities to 45 percent in 2000 from 39 percent in 1992, and international equities to 16 percent from 4 percent during the same period (PPCC 1993, 2001). The average annual increase for the S&P 500 index of domestic equities for fiscal years 1995–2000 was an extremely robust 22.2 percent, more than double historical averages.

While the idea of a pension contribution holiday may sound attractive to an employer, especially if it is experiencing fiscal stress from other quarters,

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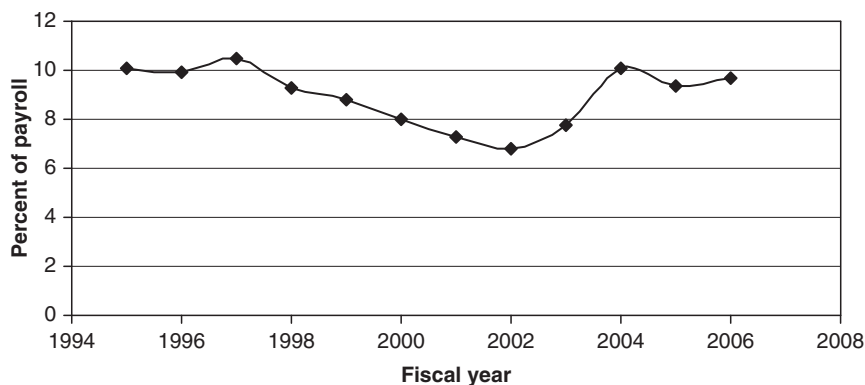


Figure 5-1 Employer contributions as percent of state and local government payroll. *Source:* NASRA (2008).

such a reprieve actually has at least one negative side effect. This danger is that the sponsor falls out of the (good) habit of appropriating for and making pension contributions. When the contribution holiday is over and the time to make contributions comes again, which is inevitable, it seems as if the current pension cost is now a new expense. This new cost will likely cause the sponsor's budget to increase at a faster pace than the normalized one and it tends to be difficult for revenues to keep pace in offsetting the increase.

Employer contribution rates to public plans continued to decline in 2001 and 2002, in spite of reversals in investment returns because it generally

TABLE 5-1 Employer contributions as a percent of state and local government payroll

<i>Fiscal Year</i>	<i>Percent of Payroll</i>	<i>Percent Change</i>
1997	10.5	—
1998	9.3	−11.4
1999	8.8	−5.4
2000	8.0	−9.1
2001	7.3	−8.8
2002	6.8	−6.8
2003	7.8	+14.7
2004	10.1	+29.5
2005	9.4	−6.9
2006	9.7	+3.2

Source: NASRA (2008).

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takes at least a year or two for these changes to be reflected in the actuarial rates. This delay is due to slow reporting and the active methods in place to moderate such swings. In fiscal 2000, the S&P 500 index rose 5 percent, and then it fell dramatically in fiscals 2001 (16%) and 2002 (19%). Such performance contributed to a rapid decline in public plan funding ratios and, subsequently, to the concomitant increases in employer contribution rates. The mean employer rate increases for fiscals 2003 and 2004 were a sizable 14.7 percent and 29.5 percent, respectively (NASRA 2008). For most governmental units such increases represented painful budget hits, underscoring the desire for rate stability.

It may be argued that recent contribution rate volatility is the unintended side effect of the pursuit of higher return-higher risk asset allocation strategies that have evolved over the last two decades. When public pension portfolios were more conservative and consisted largely of fixed income instruments, rate volatility was not a major issue. The more recent, equity-oriented portfolios have increased asset and rate volatility, but they have also added tens of billions of dollars of investment income which would not have been earned under the more conservative strategies. Without that income, funding shortfalls would have required higher contributions, the other revenue source. On a net basis, public pension systems are ahead of the game financially but in exchange they have had to manage wider rate swings. It is unlikely that a switch to a significantly lower investment return policy in return for reduced rate volatility would be widely popular. The resultant loss of income and the negative effect such a change would have on the calculation of plan liabilities and average contributions would be a very high price to pay.

Strategies to modulate rate volatility

Large changes in public pension asset values from investment income variability and their effect on funded ratios must be held responsible for a large part of contribution rate swings over the last 10 years. Asset changes are much more volatile today compared to liability increases which have a history of more predictable growth. Asset peaks and valleys translated into advances and declines in funding ratios ahead of corresponding changes to contribution rates. Most US public funds use some kind of an actuarial smoothing process whereby gains or losses are spread over various periods, generally three to five years, without which methods the recent rate change experience would have been even more volatile. However, existing controls proved to be largely inadequate to the task of reining in contribution rate increases, in most cases.

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Asset Valuation. In response to significant changes in employer contribution rates, the actuarial staff of the California Public Employees Retirement System (CalPERS), the largest US public pension fund with assets of almost \$250 billion, instituted a study of this issue earlier in the decade (Seeling 2008). The objectives of the asset smoothing study included finding the best method which, at the same time, would: minimize the negative impact on the plans' funded status, minimize volatility in employers' contributions, and minimize average future employer contributions. Based on this study, the CalPERS board adopted a new set of policies to address the problem which reduced employer rate volatility by at least 50 percent. These new policies included the spreading of asset gains or losses over 15 years compared to the prior policy of three years. The system also changed the corridor for the actuarial value of assets to a minimum of 80 percent of market value and a maximum of 120 percent compared to the previous corridor of 90 to 110 percent, respectively. Employers who have a funded status of more than 100 percent would now have to make a minimum contribution of the plan's normal cost less a 30-year amortization, whereas under the earlier policies there was no minimum contribution.

The effect that these recommended changes would have on the employer rates for one class of CalPERS employees, school employees, can be seen in Figure 5-2 (see CalPERS 2005). Actual employer rates (round data points) declined sharply after fiscal 1998 and were at 0 percent for four straight fiscal years—1999–2002—and then began a rapid rise. Normal cost (dotted line) increased in fiscal 2002 reflecting the effectiveness of benefit increases. Giving effect to the recommended smoothing methods (triangular data points)—assuming the recommended changes were implemented 10 years earlier—would yield employer rate changes with the same general trends but not as sharp. Note that there would be at least some annual contributions in each year under the proposed new methods.

The 2008 issue paper on smoothing policies by CalPERS' Chief Actuary Ron Seeling provided an update on the topic. He stated that '... about 75 percent of all public agency plans experienced an employer rate change of less than 1 percent of pay between 2005–2006 and 2006–2007. The remaining 25 percent of plans included those that improved benefits and had a planned change in employer rate' (Seeling 2008: 9).

Liability Increases and Employer Rates. While asset changes have been the major factor in contribution volatility of late, increasing liabilities cannot be overlooked as another significant component. In 2008, CalPERS stated that about 80 percent of the decline in its funded status earlier in the decade was the result of the decline in asset values and 20 percent from benefit increases. Any increase in liabilities above assumed amounts (actuarial losses) would put upward pressure on rates. Benefit increases

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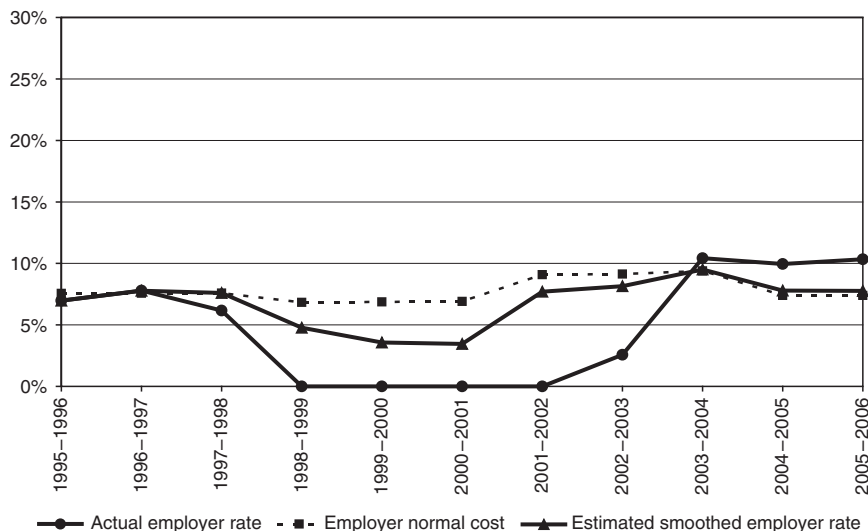


Figure 5-2 Estimated impact of recommended method as if implemented 10 years ago. *Note:* Actual employer contribution rates versus estimated rates under recommended rate stabilization method: schools. *Source:* GALPERS (2005).

have historically been a factor driving this disparity, but certain uncontrollable factors have also been pushing up liabilities in recent years. These factors include plan experience which differs from the expected, including demographic changes such as members living longer. Demographic factors can result in sizable additions to liabilities and may be ongoing (not just one-time). Furthermore, changes to actuarial assumptions can boost liabilities. Any decrease in the investment return assumption would increase liabilities, for example, and recent trends have seen public funds lowering their investment return assumption more than raising it.

Employer contribution rates go up when pension benefits rise (all other things equal), adding to asset change-related rate pressures. Too often benefits have been enhanced without fully vetting the long-term consequences of such a move. Part of the problem of benefit increases is that there is frequently a time period disconnect between the current administration granting the increase, and the future administrations and taxpayers to be charged with the fulfillment of these promises. This may be viewed as the shifting responsibility for benefit enhancements from one group to another. Further, not having a long-term plan for identifying the new revenue source to cover the increased costs in later years places this strategy in the same category as unfunded mandates: requiring funds to be used

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for a specific purpose in the future but with no solid plan to pay for it. New sources for financing new pension benefits are rarely identified, in practice.

Another problem is that pension benefit enhancements have often been made when other alternatives were not then economically feasible. For example, benefits may be increased when management believes its labor's compensation is below where it should be but the budget cannot absorb salary increases at that time. The thought (or hope) is that, by the time that higher contribution rates are required, the government's financial position will have improved to accommodate these increased costs. Misconceptions related to pension funding levels have also led to benefit increases and added to employer rate pressures. This situation can occur when a pension system has a funded ratio of more than 100 percent and is perceived to be 'over-funded' or to have 'excess assets,' two unfortunate terms. In the late-1990s some public pension plans with funding ratios exceeding 100 percent came under pressure to increase benefits based on the fallacy that the assets exceeding accrued liabilities were no longer required by the system and could be allocated to plan members. The investment losses in 2001 and 2002 brought home the fact that the so-called excess funds were actually needed to maintain sound funding levels. Increasing benefits based solely on a point-in-time overfunded position should be strongly discouraged.

Checks on Benefit/Liability Increases. Granting new benefits without fully vetting the ramifications is a potential problem that some governments have sought to correct. For example, the state of Georgia has a constitutional requirement which requires 'actuarial soundness' in pension systems, as follows: 'It shall be the duty of the General Assembly to enact legislation to define funding standards which will assure the actuarial soundness of any retirement or pension system supported wholly or partially from public funds and to control legislative procedures so that no bill or resolution creating or amending any such retirement or pension system shall be passed by the General Assembly without concurrent provisions for funding in accordance with the defined funding standards' (Georgia State Constitution Article III Section X Paragraph V). Georgia state statutes require a minimum period of one year between the introduction of any retirement bill which would have a fiscal impact and its effectiveness. This provision allows for a reasonable amount of time to examine the ramifications of a proposal, preventing changes from being rushed through a busy session. Further, an actuarial investigation must be performed to fully highlight the economics of each proposal. Too often benefits in other jurisdictions are enhanced without adequate study of the full, long-term effects on costs. Before a benefit change bill in Georgia can become effective, it must be concurrently funded.

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Another method used to contain benefit (and rate) increases has been adopted by San Francisco. This city requires that any proposed benefit changes must be approved by voters. This feature carries the implicit understanding that voters, as taxpayers, hold the ultimate responsibility for paying any increased pension costs in employer rates resulting from benefit improvements. Therefore, at least some portion of the citizens on the hook for paying increased contributions must agree to do so. San Francisco's historically strong funded ratio may, at least in part, be attributed to this protective mechanism.

Decreasing Volatility Through Rate Floors. As we have seen, strict implementation of actuarial recommendations can still result in employer rate volatility. For instance, many employers were pleased in the 1990s when their annual actuarial valuations reported that their Annual Required Contribution was in fact zero, due largely to the above average investment return climate. In response, some systems have decided to override the actuarially determined rate when it produces a low or zero contribution result, so as to ease potential contribution shock in the future (the experience of fiscals 2003 and 2004). New York State offers an example. In May 2003, Governor George E. Pataki signed into law a bill requiring the state and local sponsors to make a minimum contribution of 4.5 percent of payroll into the state pension system. At the time of the law's passage, the State Comptroller estimated that, had the bill been implemented in 1998, an additional \$4.8 billion in employer contributions would have been collected which would have resulted in a reduction in fiscal 2004 rates by 2 percentage points.

Automatic Stability: Fixed Rates. Strategies that mitigate rate volatility must include those that outright restrict rate changes. An illustration of this would be establishing a set contribution rate which may not be changed without legislative action. A by-product of such an approach, however, is that if rates cannot be raised to offset actuarial losses, then funding status may suffer. For example, California State Teachers' Retirement System (CalSTRS) Defined Benefit Program has statutory contribution rates for members (6% of earnings) and employers (8.25%). In addition, the state as a non-employer contributor makes a payment (3.3% in 2006), resulting in a total contribution rate of about 17.6 percent. A presentation to the CalSTRS board in 2006 found that the unfunded actuarial obligation for the DB program as of 2005, was \$20.3 billion and did not amortize over any time period (CalSTRS 2006). To achieve full funding, the program would have to attain the equivalent of an increase of 3.753 percent of salaries over 30 years. Earlier, in December 2005, CalSTRS' staff had presented the board with 13 options to address the funding shortfall, including certain changes to benefits, increases in contributions, the sale of pension obligation bonds, and the extension of the amortization period for the

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unfunded obligation. Clearly, the fixing of the contribution rate does not assure funding stability.

Conclusion

Contribution rate volatility is a major concern for public sector DB plans. Rates have increased rapidly in recent years due to a number of factors including significant investment losses, benefit increases, and demographic changes, leaving managers with little time to adapt. As traditional smoothing techniques have not held rates in check, planners have explored, and some have adopted, new strategies to help ease rate swings. These include the extension of period over which asset gains and losses are spread (changed from 3 to 15 years in CalPERS's case) and the implementation of minimum rates (4.5% of payroll in New York State). Others have controlled liability growth by keeping close checks on benefit changes (Georgia requires an actuarial valuation to fully vet costs and San Francisco requires voter approval). No one strategy is a perfect fit for all plans, but financial officers looking for rate volatility solutions can benefit from the experience of those that have made changes in the past.

In spite of the efforts to reduce DB plan contribution rate volatility, some volatility will remain as long as US public pension fund asset allocation strategies continue to emphasize the higher-risk, equity asset classes, which include greater volatility by definition. It is unclear as to how far the principal stakeholders in these systems, including members, employers, taxpayers, and the pension funds themselves, will move down the scale toward a less risky investment profile in exchange for a more stable rate environment. The costs of reduced rate volatility under this scenario include lower investment returns and higher average rates.

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