

PUBLIC PENSION RESOURCE GUIDE Strong Public Pensions For Today and Tomorrow

Most state and local government employers offer a defined benefit (DB) pension plan as the primary retirement plan for their employees. The prevalence of DB pension plans in the public sector reflects the appeal of these plans to employees, employers, and taxpayers. From the employee perspective, DB plans are well suited to provide employees with an adequate, predictable retirement benefit that cannot be outlived. DB plans are also very effective in helping public employers recruit and retain skilled employees. Finally, DB plans can be a highly efficient way to provide retirement benefits, thanks to the group nature of these plans. In other words, DB plans make good use of taxpayer dollars.

But the crisis that gripped global financial markets in 2008 has brought heightened attention and concern about how to ensure the long-term health and vitality of retirement arrangements of all types, including public pensions. All plan stakeholders—employees, employers, and taxpayers—share a common interest in seeing that public pensions are adequately funded and prudently financed over the long haul. For plans to serve the long-term interests of all stakeholders well, each aspect of DB pension plan management-the funding policy that describes how contributions to the plan will be made, the investment policy that dictates how contributions are invested, and the benefit policy that governs how employees earn benefits in the plan-should be tightly linked to the other. If these policies are uncoordinated, problems can develop. For instance, if the plan's funding policy does not require contributions to cover all of the benefits the plan promises, the plan may be unable to meet its commitments in the future. If the plan's funding policy fails to reflect the most likely outcomes of the plan's investment policy (either overestimating or under-estimating expected investment returns) there will be a mismatch between contributions and the longterm economic needs of the plan. And finally, if the plan's investment policy fails to take into account the structure and timing of the plan's schedule of benefit payouts, the portfolio allocation may not be optimal to meet the plans needs.

Fortunately, over the years, experts on public pensions have identified practices and articulated specific policies that can support the integration of funding, investment, and benefit policies, and thus enhance the long-term sustainability of public pension plans. While a comprehensive discussion is beyond the scope of this review, examples of how various aspects of plans' benefit, funding, and investment policies can support or detract from long-term pension health are explored.

Figure 1. The Interdependence of Pension Plan Benefit, Funding, & Investment Policies



FUNDING POLICY

THE IMPORTANCE OF A DISCIPLINED FUNDING POLICY TO LONG-TERM FINANCIAL HEALTH

According to the Government Finance Officers Association (GFOA), "The fundamental financial objective of a state or local government employee retirement system is to fund the long-term cost of promised benefits to the plan participants."¹ Thus, a plan's funding policy is necessarily intertwined with its benefit policy. To achieve this "fundamental financial objective," a pre-funded DB plan must establish a funding policy that outlines how contributions from employers and employees will be made. These contributions will be invested and the corresponding investment earnings will help finance the benefits that will ultimately be paid.² Thus, funding policies and investment policies are also necessarily intertwined.

In order to ensure that the plan will be able to meet its financial commitments when they are due, a funding program should have certain features. Among other things, it should aim to achieve full funding over a reasonable period of time. Full funding is defined as a funded ratio (assets divided by liabilities) of at least 100 percent. It should ensure that all benefits that can reasonably be anticipated to be paid in the future are properly measured, in accordance with accepted accounting standards. And the policy should require contributions to be made on a periodic basis, with the contribution amount determined by the results of a recent actuarial valuation of the system.³

Funding the ARC

A critical measure for any funding effort is the "annual required contribution" (ARC). Plan actuaries calculate the ARC in accordance with actuarial standards and accounting standards set by the Government Accounting Standards Board. The ARC includes the "normal cost" of the plan (the cost of benefits currently being earned this year), and also may include another amount that may be required to pay for a portion of benefits earned in past years, which have not been funded (the unfunded actuarial accrued liability or UAAL). If the plan receives contributions equal to the full ARC each year, it will make progress toward full-funding (assuming it is not already fully funded). If contributions are insufficient to cover the full amount of the ARC, the unfunded liability of the plan is likely grow. If this occurs repeatedly, the problem is likely to only worsen over time, the funded status of the plan will continue to deteriorate and each year the ARC will escalate.⁴ In other words, failure to pay the ARC only shifts costs into the future.

This dynamic is why GFOA (and other pension experts) emphasize the importance of a disciplined approach to funding and ensuring that the ARC is collected on a timely basis. In practice, though, enforcing a funding policy is not always completely within the power of a retirement system. In a study of 126 public pension plans, researchers at Boston College found that in 2006, just over half of plans received sufficient contributions from their government sponsors to cover the full amount of the ARC. Almost three-quarters of plans received contributions that covered at least 80% of the ARC. The most common reason for the failure of government sponsors to contribute the full ARC was that contribution rates were set by statute, and not by the economic needs of the plan, as determined by the actuarial valuation.⁵ Young also reports that the extent to which the annual required contributions are truly "required" varies greatly by jurisdiction. In California, for example, state statute requires certain counties to make their full pension contribution annually. If the county board of supervisors fails [to do so], the county auditor is required to take any available monies from county funds and deposit them with the retirement system.⁶

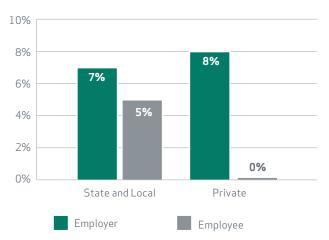
GFOA recommends that when contributions fall short of the ARC, the board of trustees "consider preparing a report that analyzes what effect the underfunding has on the system" and sharing this report with all stakeholders.⁷ This type of reporting is designed to ensure that stakeholders have a clear understanding of the consequences of pushing pension costs into the future.

Affordability and Shared Responsibility for Funding

Whereas the primary objective of a funding policy is to ensure that the plan will be able to pay promised benefits when they are due, other important objectives come into play as well. For instance, taxpayers and employees who finance retirement benefits have an interest in contributions that are affordable.

The common practice in the public sector of requiring employers *and* employees to make contributions to their pension programs is one that contributes to long-term pension sustainability. This shared responsibility model spreads the financial burden of providing benefits. This approach can be contrasted with the situation in the private sector, where DB plans rely virtually exclusively on employer contributions.⁸ Significant employee contributions may be one factor adding to the resilience of DB pensions in the public sector, where they continue to be the dominant type of retirement plan, as compared with the trend in the private sector, where DB coverage has been gradually declining over the past three decades.⁹

Figure 2. Employer and Employee Contributions as a Percentage of Payroll, by Sector



Source: Munnel, A., Aubry, J., and Muldoon, D. 2008. The Financial Crisis and State/Local Defined Benefit Plans. Chestnut Hill, MA: Center for Retirement Research at Boston College.

Public opinion research indicates that Americans look favorably on the shared responsibility approach to public pension financing. In a recent national poll, 85% of Americans agreed that preparing for retirement should be a shared responsibility among the individuals, employers, and government.¹⁰

HOW FUNDING AND INVESTMENT POLICIES CAN SUPPORT THE GOALS OF PREDICTABILITY AND INTERGENERATIONAL EQUITY

All stakeholders have an interest in ensuring that contributions to support pensions will be adequate and affordable. But two other related goals are predictable contributions and equity across generations in funding. Employers appreciate costs that are fairly predictable, as this helps to stabilize public budgets. And all stakeholders have an interest in ensuring that each generation pays their fair share for public services they enjoy. The interplay between funding and investment policies bears directly on these objectives.

DB pension plans in state and local government are prefunded. Pension contributions from employers and employees are invested and the corresponding investment earnings help to finance the benefits that will ultimately be paid. In fact, the lion's share of pension system revenues, about 70% to be exact, came from investment earnings, not contributions, between the years 1993 and 2006.¹¹ Thus, funding policies and investment policies are necessarily intertwined, since contribution requirements are based, in part, on the expected return on investment earnings are, the fewer contributions must be made to finance any given level of benefits.

Predictable Contributions

One challenge to predictable, stable contribution rates is the cyclical nature of investment returns and the counter-cyclical funding burdens that can result. Rising asset prices and interest rates tend to occur alongside economic expansions, when public revenues also tend to be healthy. Robust investment returns boost the funded status of a pension plan, and can do so to such a degree that the plan becomes fully-funded—in other words, the plan's assets are more than sufficient to pay for all future benefit obligations. When a plan is flush, the employer may be able to enjoy a "contribution holiday," that is, to cease making contributions to the fund. Indeed this occurred for many employers in the late 1990s and early 2000s, as the S&P 500 index was growing at 22% per year.¹² But when the economy enters a recession, asset prices and interest rates typically plummet, and public coffers are starved for revenue.

Investment losses may require additional contributions, just at the time when employers (and employees) are least able to afford these.¹³ In other words, the burden of contributions can be counter-cyclical—burdens are lowest when the economy is at a cyclical peak, and burdens are greatest at the economy's nadir. Pension contributions can become very unpredictable if they are determined using a process that quickly and directly transmits the ups and downs of the stock market into decreases and increases in contribution requirements.

However, certain features of the funding policy may contribute to a greater predictability in pension contributions. Common actuarial practices like "smoothing" asset values and amortizing investment gains and losses over a period of time can help to reduce volatility in contribution rates. In other words, rather than using the market value of a fund's assets in determining the ARC, actuaries will calculate an actuarial value of assets, by taking, say, a five year average of assets. This can help to smooth out contribution rates, making them higher than they would otherwise be in "good years" (when employers can better afford contributions) and lower than they would otherwise be in "bad years" (when employers' ability to pay is compromised). Of course, this practice is consistent with long-run sustainability only if there is the discipline during both good *and* bad years to stick to the funding plan.

Another approach to encouraging stable, predictable contribution rates is to set a floor below which contributions may not fall, even when the plan is very well funded. For instance, employers may be required to fund at least the "normal cost" of the plan each year—that is the cost of benefits that are accruing in the current year—regardless of how well-funded the plan may be.¹⁴ This approach avoids contribution holidays and will have the effect of creating a reserve or buffer that can help the fund and the employer navigate through rough economic conditions. This approach also has the benefit of encouraging contributions when employers (and taxpayers) can most afford to make them. New York is one example, where a law passed in 2003 set a minimum contribution rate of 4.5%, even in years when robust investment returns might result in a lower actuarially-determined contribution.¹⁵

A similar tactic is taken in Florida, which, in effect, protects "excess" assets in a type of reserve. When the plan is funded in excess of 100%, only a small portion of the surplus can be used to offset contributions. This type of policy implicitly recognizes that overfunding can often be attributed to abnormal positive investment returns that are not likely to persist. Florida also has policies in place that limit when benefit improvements may be adopted.¹⁶ As a result, the Florida Retirement System has been one of the better-funded public retirement systems, even after experiencing two extreme downturns in the stock market in a single decade.

Intergenerational Equity

As important as predictable and stable contributions are for public budgeting, they also promote a third objective intergenerational equity. The principles of accrual accounting require that the cost of public services be recognized in the period when they are delivered. This approach promotes equity across generations, since it means that those who enjoy public services at one point in time pay the costs associated with providing those services. Extreme fluctuations in pension contributions mean that one generation might "under-pay," passing costs along to another generation, causing them to "over-pay."¹⁷ Predictable, smooth pension contributions promote intergenerational equity by keeping costs as a percentage of payroll approximately level from generation to generation. A critical method of maintaining roughly level contributions is the use of long-term projected rates of return in calculating pension costs.¹⁸ Because investment returns in any given year are inherently uncertain, when determining contribution rates, actuaries apply their best estimate of long-term expected returns, based on a plan's underlying portfolio. This approach ensures that contribution rates are based on what the plan anticipates actually earning, as opposed to an arbitrary benchmark, such as the interest rate on long-term bonds.¹⁹ (Of course, if the plan's assets are actually invested entirely in long-term bonds, then such a rate *would* accurately reflect expected earnings.)

Public pension plans, like other institutional investors, tend to hold a diversified portfolio of assets including stocks, corporate bonds, government bonds, real estate, private equities, etc. As Table 1 shows, the average asset allocation for public pensions is quite similar to that of DB plans in the private sector. According to a survey of the nation's largest public pensions, the median expected rate of return for state and local pension plans is 8%.²⁰ Private pension plan sponsors expect to earn a slightly higher rate of return of 8.25%, according to a study by Mercer LLC, a leading human resources consulting firm.²¹

Table 1. Assets Held in Public and Private Sector Pension Plans, 2007 (as a % of total)

	Cash and Liquid ssets	Treasury & Agency Debt	Corporate & Foreign Bonds	Stocks	Mutual funds	Other Investments	Total
Public Plans	2%	17%	8%	63%	9%	1%	100%
Private DB Plans	2%	11%	9%	63%	10%	5%	100%

Source: Board of Governors, Federal Reserve System. 2007. Flow of Funds Accounts of the United States. Washington, DC: Board of Governors. Stocks include both foreign and domestic equities.

Accurately assessing expected returns is important, because if contribution rates are based on an interest rate that is either above or below the rate that is most likely to be earned on investments, in the future there is likely to be a mismatch between the size of the plan's assets and the size of a plan's obligations. If contribution rates are based on an overlyoptimistic estimate of long term returns, contributions will be set too low and pension costs will effectively be shifted from today's taxpayers and employees to future taxpayers and employees. If overly-pessimistic estimates are used, contributions will be set too high, and the current generation of taxpayers and employees will be "over-paying" with future generations likely to receive windfalls. In either case, the principle of intergenerational equity would be violated.²² The use of long-term expected returns accurately based on the system's investment portfolio to determine contributions, then, supports predictability promotes equity across generations and thereby supports the long-term health of DB plans.

KEY CONSIDERATIONS IN BENEFIT POLICY

When it comes to designing the benefits a plan will offer to employees, there are multiple considerations that come into play. Employers have a particular interest in the incentives built into the plan design that aid recruitment, retention, and, at the appropriate time, retirement of personnel. For employees, the adequacy of the retirement benefit in meeting retirement income needs is a primary concern. All stakeholders, employees, public employers, and taxpayers alike, are interested in ensuring that a plan's benefits are transparent and fair. A comprehensive benefit policy that is integrated with funding and investment policies will address this of range of concerns and support long-term sustainability.

Recruitment and Retention

Public employers approach the design of pension benefits with human resources management as a central concern. Specifically, they are interested in designing a benefit policy that supports the recruitment, retention, and retirement goals for their workforces. The various elements of pension plan design vesting and service requirements, the rate at which benefits accrue, incentives for early retirement, the return of employee contributions for workers who separate before retirement, and more—offer myriad possibilities for plan sponsors to create incentives to remain with an employer, or at the appropriate time, to exit employment.

Because of their deferred nature, retirement benefits can have the effect of encouraging employee commitment to the employer. For instance, the final-average-pay based DB plan that is prevalent in the public sector is one where long-tenured workers earn benefits more rapidly the longer they stay on the job. This design would be expected to encourage retention, and indeed, empirical research on the link between pension coverage and turnover supports this.²³

Employers' needs and priorities may evolve over time, along with changes in the overall labor market, increased longevity, and other factors. As a result, employers may find that periodically updating benefit design is consistent with achieving their human resource management objectives and/ or budgetary constraints. But for such changes to be consistent with the long-term health of the pension system, the cost (or savings) associated with such changes must be integrated with the plan's funding policy. The Government Finance Officers Association recommends that all benefit enhancements be actuarially valued *before* they are adopted in order to ensure that stakeholders have a complete understanding of their long-term financial impacts.²⁴

Some states have policies that go even further and require that before any benefit improvement may be adopted, a plan to fund those improvements must be in place. For instance, Georgia law requires that retirement legislation with a fiscal effect may not leave its committee or be considered by the House or Senate unless its actuarial cost has been determined. Additionally, it also requires that first-year funding for retirement bills with a fiscal effect must be appropriated in that year, or the bill becomes null and void.²⁵ The Constitution of the state of Florida prohibits plans from increasing benefits, without making provision for funding those improvements "on a sound actuarial basis."²⁶

With the recent decline in the stock market, few employers at this time are actively considering benefit enhancements.

Rather, a number of states and localities have begun to consider changes like requiring longer service for retirement eligibility, higher retirement ages, and limits on cost of living adjustments as a way to control long-term pension costs. However, it is notable that public employers across the board are electing to make modifications *within* the existing DB plan structure, as opposed to making a wholesale change to another type of plan, like a defined contribution plan. In 2009, no state created a new defined contribution plan to replace a DB plan.²⁷ This pattern speaks to the flexibility of the DB model in accommodating changing conditions.

Benefit Adequacy

All Americans strive to be independent and take care of their own needs in retirement, but in order to accomplish this, they need the opportunity to accumulate adequate financial resources during their careers to pay for expenses in old age. Workers who retire without sufficient sources of income may face a range of unattractive choices. Going back to work may be the first alternative, but if that is not an option due to bad health, lack of appropriate job opportunities or other factors, retirees may become dependent on family or even public assistance programs to meet financial needs. So, ensuring that retirees will be able to achieve an "adequate" income in retirement is an important concern.

An "adequate" retirement income is often defined as one that will allow a retired household to enjoy roughly the same standard of living as it did before retirement.²⁸ Researchers typically rely on the "replacement ratio" (or replacement rate) as a measure of determining retirement income adequacy. This ratio compares a household's post-retirement income from all sources (Social Security, pensions, and savings) to its income before retirement. Take for instance a couple whose income just before retirement was \$80,000. After retiring, this couple receives \$64,000 a year in income from Social Security, pensions, and savings. Dividing the retirement income of \$64,000 by the pre-retirement income of \$80,000 yields a replacement ratio of 80%.

Because some expenditures (payroll taxes, commuting costs, job-related expenses, etc.) disappear from a household's budget after retirement, many researchers find that it is possible to maintain a middle-class standard of living with a replacement ratio of less than 100%. According to this research, a replacement ratio of anywhere from 65% to 85% of pre-retirement income might be deemed "adequate."²⁹

While these rules of thumb can be helpful as a guideline, in practice, assessments as to benefit adequacy must also take into other factors, including tax considerations, the availability of healthcare benefits, and workforce-specific characteristics. For instance, some researchers have found that a replacement ratio in excess of 100% might be necessary to maintain preretirement living standards, depending on one's healthcare arrangements. This is because healthcare expenditures tend to escalate rapidly as individuals age and some retirees (especially those under the age of 65) may not have access to employer- or government-subsidized health benefits.30 Also, retirement benefits may need to be higher for some professions. Occupations that take a heavy physical toll on workers are typically associated with earlier retirement ages and sometimes higher replacement ratios to address greater healthcare needs.

Most public pensions provide benefits that, in combination with Social Security and personal savings, meet generallyaccepted standards of benefit adequacy for a career employee. In 2006, for example, the median benefit for a Social Securityeligible public employee with a final average salary of \$50,000 and 30 years of service would be \$27,750. This means that the pension replaces 55.5% of the employee's pre-retirement earnings.31 This amount alone would probably not be sufficient for an employee to maintain his or her pre-retirement standard of living, but in combination with Social Security benefits and personal savings, a typical retiree could achieve an adequate retirement income. The median benefit for an employee with the same final average salary and years of service, but who was not Social Security eligible, would be \$33,000. This translates into a replacement ratio of 66%.³² Again, on its own, this benefit may not be sufficient for a retiree to maintain his pre-retirement standard of living. But in combination with personal savings or other sources of income, such a pension should enable many workers to achieve an adequate retirement income after a full career.

It should also be noted that a retirement benefit that may appear adequate at retirement may become inadequate over time, if its value erodes due to rising prices or inflation. Even a modest rate of inflation can significantly erode purchasing power over time. Figure 3 illustrates the impact of 3% annual inflation on the purchasing power of an initial \$2,000 monthly retirement benefit. In the absence of any type of cost of living adjustment (COLA), a woman who retires at age 62 will see the value of her benefit cut in half by the time she reaches her

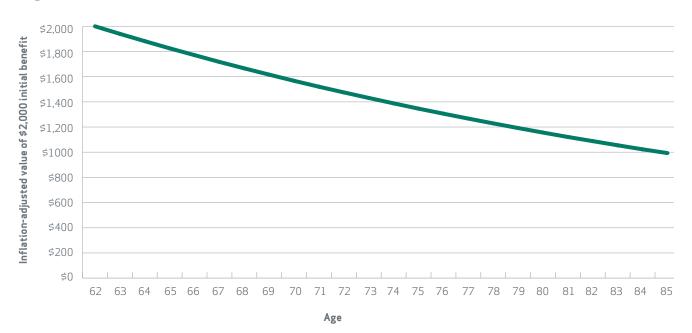


Figure 3. The Effect of 3% Inflation on a \$2,000 Initial Benefit

average life expectancy of age 85. A longer-lived retiree would experience even greater reductions. Because of the damaging effects of inflation, most public retirement systems (though not all) offer cost-of-living-adjustments.³³ These adjustments may be prescribed (say a fixed 3% per year or an amount tied to increases in the Consumer Price Index), providing retirees with the security that their benefits will maintain value in the face of inflation. Or, adjustments may be ad-hoc in nature, giving the employer the advantage of financial flexibility to provide COLAs when revenues are growing and withholding them when revenues are fixed or declining. COLAs are an especially important feature for plans where employees do not participate in Social Security, which has indexed benefits for inflation since the mid-1970s.

While COLAs provide important protections for retirees, they do cost money. One current concern about COLAs that has arisen recently is the extent to which these are fully accounted for and pre-funded among state and local retirement systems. The Government Accounting Standards Board (GASB) is looking into this question and sought out public comment on the question early in 2009. One response to this Invitation to Comment featured an example of the negative consequences that could result when there is a misalignment between a plan's benefit policy and funding policy vis a vis COLAs. The Texas Municipal Retirement System used an actuarial cost method from the late 1940s until 2007 which did not account for projected annually repeating COLAs and other benefit accruals. As a result, contribution rates were set too low. When the system changed its method to fully account for these benefits, the employer contribution rate rose to about 15% of payroll from about 10% of payroll and the plan's funded status dropped to 74% from 82%. According to the authors of this letter, "This experience highlights the fiscal impact of the delayed decision to project annually repeating COLAs (which most TMRS employers provide), and future salary increases on benefit accruals."³⁴ In other words, delaying the funding of benefits that will be due only results in increased costs in the future.

Transparency and Fairness

It is important for all plan stakeholders — employees, employers, and taxpayers alike — to have confidence that the benefits offered by a pension plan fairly reward employees for their service and offer neither disproportionate advantages nor disadvantages to some groups or individuals within the workforce. Americans overwhelmingly agree that all workers, including those in public service, should have access to a pension plan so they can be independent and self-reliant in retirement.³⁵ But it may be equally reasonable for taxpayers to seek assurances that pension benefits are not "overly generous." To address this concern, pension systems in about 25 states place some type of cap on the pension benefit that can be paid.³⁶ For example, employees in Nevada PERS cannot receive a benefit in excess of 75% of their final average salary, regardless of their length of service. In other states the cap is 100%, to ensure that a retiree does not collect more in retirement than he or she earned while working. Depending on the specific design of benefits under a plan, a limitation of this nature may or may not be appropriate.

A related issue is the problem of "pension spiking" which has drawn increased attention in some areas of the country.³⁷ Pension spiking occurs where an employee is able to inflate his pension benefit by steeply increasing his pay at the end of his career, for example by working an unusual amount of over-time, "selling back" unused sick leave or vacation time, or receiving a larger than normal salary increase. Plans that base benefits on only the employee's final year of pay can be more susceptible to spiking than plans that base benefits on the final three or five years' pay, or that rely on career earnings. Far less common variations of "spiking" include awarding pension credit for volunteer work, or the "one-day rule," which awards a full year of pension credit after working just one day that year.

Spiking is considered abusive because pension contributions, which are made incrementally over a career, are based on projections that pay will increase in a predictable way over that career. When pay escalates rapidly at the end of the career, unexpectedly boosting the pension benefit, the contributions that had been made over the career to cover that benefit may prove to be insufficient. The boost to benefits that results from spiking essentially creates a new unfunded liability and the unexpected cost will have to be made up by someone else.³⁸

Although instances of spiking represent the exception and not the rule, stakeholders representing various interests legislators, employee representatives, employer representatives, and plan professionals—have expressed concern that the negative headlines that result from such abuses paint a misleading picture and may undermine public confidence in these systems. Many are in agreement that appropriate steps should be taken to address such problems, even though they may not be widespread.

For example, the National Association of State Retirement Administrators calls for "adequate funding of promised benefits and efforts to ensure the financial integrity of public employee retirement systems including: safeguarding against abusive benefit enhancements or manipulation..."³⁹ The Government Finance Officers Association calls for "vigilance against ethical violations and benefit calculation abuse" in its recommended practices.⁴⁰

As a way to address these issues, many states have tightened loopholes and implemented anti-spiking measures.⁴¹ Some pension systems have adopted policies that limit the yearover-year increase in salary that can be applied to the pension calculation. For instance, newly-hired employees in Georgia will not be able to apply any pay increase in excess of 5% in their final year of work to their pension benefit, pursuant to a new law passed in 2009.⁴² Pension systems in Colorado, Iowa, and Louisiana have also recently implemented similar "antispiking" provisions.⁴³

The spiking issue highlights once again the importance of coordination between the plan's benefit design and its funding policy. Regardless of the specific benefit design, any pension plan must be able to ensure that it will have the funds to pay promised benefits when they are due. Contributions that come into the plan, when added to the investment earnings on these contributions over time, must be sufficient for the plan to pay all benefits that have been earned. This makes integration of the plan's benefit, funding, and investment policies and practices a key to long-run pension sustainability.

CONCLUSION

Recent turmoil in financial markets has presented investors of all stripes with new challenges, including public pension funds. The experience of two "once in a lifetime" bear markets in the course of a single decade has emphasized as never before the importance of prudent benefit, funding, and investment policies to the long-term health and sustainability of these plans.

The good news is that there are common-sense approaches and practices that can support these objectives. DB plans work best when the benefit, funding, and investment policies under which the plan operates all support the goal of longterm sustainability. When these various policies are working hand-in-hand, the opportunity to achieve the goals of all pension stakeholders—secure benefits, predictable costs, and affordable contributions—is enhanced. It is also important to emphasize that while this brief review highlights selected practices that may contribute to the longrun health and viability of pension plans, the process of transitioning to new practices should be carefully considered and measured. Pension systems, as entities with a long-term orientation, best serve their stakeholders when decisions are made with forethought and deliberation that avoids knee-jerk reactions.

In a short document like this, it is not possible to offer a comprehensive treatment of every helpful practice or good idea. In addition, what may be appropriate for one jurisdiction may not mesh with the legal, economic, and institutional realities of another. Rather, this exploration of core themes and discussion of broad principles is intended to highlight general directions that may be helpful to states and localities in charting their own path forward.

ENDNOTES

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- 18 Jones, N., B. Murphy and P. Zorn. 2009. "Actuarial Methods and Public Pension Funding Objectives: An Empirical Examination" *Society of Actuaries Public Pension Finance Symposium*. Schaumberg IL: Society of Actuaries.
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