Public Employees Defined Benefit Plan Design

A Valuable Benefit at a Reasonable Cost: A Case Study

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Recent headlines have sensationalized poor defined benefit (DB) plan designs that result in funding volatility for public employers (taxpayers). Proposed solutions fail to address long-term cost/benefit analysis. I will not attempt to address the entire scope of long-term costs/benefits. The intent of this paper is to identify DB plan design principles that provide valuable employee benefits at reasonable costs. Although I believe these principles apply equally to the private sector, this paper will focus on public-sector issues, including stable annual budget expenditures.

I use the New Mexico Public Employees Retirement Association (NMPERA) throughout this paper as an example of how these principles can be adopted. Or, in some instances, why the principles have not yet been adopted.

Basic actuarial formulas for calculating benefits and contributions needed to fund those benefits are based on many assumptions—individual life expectancies, employee and employer contributions, investment returns, salary growth, inflation, etc. In a perfect world, actual experience would equal actuarial assumptions, current plan assets would equal current accrued plan benefits (liabilities), and there would be no unfunded accrued liabilities. However, in our world we need good plan design principles.

Design Principle #1: **Contribution rates (both employee and employer) must be fixed and must not fluctuate based on short-term investment market performance.**

Fixed contribution rates provide a stable yearly budget amount for both employers and employees. During positive market cycles (actual investment return greater than assumed actuarial investment return), higher actual investment returns and fixed contribution rates allow assets to accumulate sooner than projected. These assets will be needed to weather negative market cycles (actual investment return less than assumed actuarial investment return) in which sufficient assets are not accumulated as projected in the short run. Variable contribution rates should not be used to attempt to average the positive and negative market cycles.

Case study: New Mexico Public Employees Retirement Association (NMPERA) contribution rates are fixed by statute based on actuarial calculations. Contributions are paid into the trust fund consistently each year during both positive and negative market cycles. There were no contribution increases during the recent negative market cycle. The recent negative market cycle reduced the plan funded status, but fixed contributions received into the plan during positive market cycles significantly lessened the overall impact. NMPERA was able to weather the negative market cycle.

Year Funded	Percentage Period (Yrs)	Financing
1999	99	9
2000	106	4
2001	105	7
2002	103	10
2003	97	17
2004	93	21

Notes: NMPERA uses four-year smoothing for actuarial asset values. Even though NMPERA actual investment returns were less than our actuarial investment return assumption (8 percent) for certain years, these actual returns were better than our targets and many of our public fund peer plans. This also contributed significantly to weathering the storm.

Increasing contributions during negative market cycles and lowering (or temporarily eliminating) contributions during positive market cycles is counterintuitive. During negative market cycles, public employer budgets are challenged by decreasing revenues and can least afford large increases in contributions. Personal employee budgets are also challenged by small (if any) salary increases. Conversely, during positive market cycles, both employers, as a result of increased revenues, and employees, as a result of higher salary increases, are better able to make fixed contributions.

Case study: Prior to the 2001 legislative session, NMPERA was approached by legislative staff to reduce employee contributions, thereby providing employees more net take-home pay because no salary increases were proposed. NMPERA staff indicated this would cause significant problems with long-term funding status. Legislation to reduce the employee contribution was never introduced. NMPERA employees are willing to forego short-term net pay increases to maintain long-term retirement benefits. These difficult choices have been made on numerous occasions by NMPERA employees.

Design Principle #2: **Costs for current accrued benefits (liabilities) must not be passed on to future generations of taxpayers and employees.**

Do not allow benefit enhancements for past service. Benefit enhancements must be for future benefits only and must be funded by increased contributions beginning on the effective date of the enhancement. Employees' benefits must be blended based on yearly accrued benefits in place in the plan at time of service.

Other past service costs resulting in differences between actual results versus actuarial assumptions must be amortized over a period that will not pass those costs on to future generations of taxpayers and employees, that is, a period not to exceed the minimum number of service credit years needed for normal retirement. For example, a 20-year public safety retirement plan must amortize these costs over a period *not to exceed* 20 years.

Design Principle #3: **Do not provide disability retirement benefits without a cost/benefit analysis. Disability benefits could be provided as an employee benefit by an independent third-party insurer outside the retirement plan, if appropriate.**

There needs to be a cost/benefit analysis for each situation to determine whether the disability benefit should be provided inside the retirement plan versus outside the retirement plan by a third-party insurer.

Design Principle #4: "**Full funding" must be redefined to cover total statutory obligations (current actuarial accrued liabilities plus future normal costs) rather than covering current actuarial accrued liabilities only due to the uncertainty and volatility of the actual results that affect these calculations.**

Here is a new "full funding" definition: current actuarial value of assets equal to or greater than total statutory obligations**.** If "asset smoothing" methodology is used to calculate the actuarial value of assets, the smoothing period should not exceed five years. If the current asset market value *is less than* the "smoothed" actuarial value of assets, the current market value should be used for calculations and reporting. This would be called the "lower of smoothed actuarial value of assets or current market value of assets" valuation method. This is a more conservative approach that decision makers should use to evaluate plan performance.

Design Principle #5: **Reporting should be done over a range of possible outcomes based on the actuarial assumptions used, for example, investment returns, salary increases, etc.**

Attribution analysis needs to be developed to determine how each actual result affects plan performance versus the actuarial assumptions (e.g., actual investment return versus actuarial investment return assumption, actual salary increases versus projected salary increases, etc.) for both current and cumulative periods (1-, 5-, 10-, 15-, 20-, 25-year periods). Also, "what if" analysis should be developed to report on a range of future possible outcomes.

In summary, NMPERA fixed annual contribution rates significantly reduced the impact of the recent negative market cycle and helped NMPERA weather the storm. NMPERA has an opportunity to improve DB plan design by adopting other principles outlined in this paper. Although the NMPERA board has yet to adopt design principle #2, it is still being considered. However, NMPERA was fortunate that no major unfunded benefit enhancements were adopted prior to the recent negative market cycle. Minor unfunded benefit enhancements (particularly related to past service enhancements) were adopted. These still represent fairness and funding issues for NMPERA but not to the extent experienced by other public DB plans. NMPERA currently has a disability benefit, but there has never been a cost/benefit analysis done to determine if this insurance benefit is more effectively provided outside the DB retirement plan. We must provide better education to fiduciaries and decision makers regarding full funding and how assumptions and the volatility of actual results affect good plan design and decisions. A start in the right direction is to develop attribution analysis reporting and flexible reporting based on a range of potential outcomes.

The current NMPERA DB plan provides a very valuable benefit at a very reasonable cost to both taxpayers and employees. The largest portion of benefits are funded by the employees and by better-than-average investment returns managed by a professional staff and monitored by an independent Board of Trust Fiduciaries.

On a personal note, I am continually amazed as I read about poor plan design but even more concerned by the short-term political compromise solutions being proposed rather than addressing long-term cost/benefit and design issues. If we continue to mismanage the present, it will have a significant impact on future solvency due to the shortsightedness of the current generation.