

# NASRA Issue Brief: Shared-Risk in Public Retirement Plans

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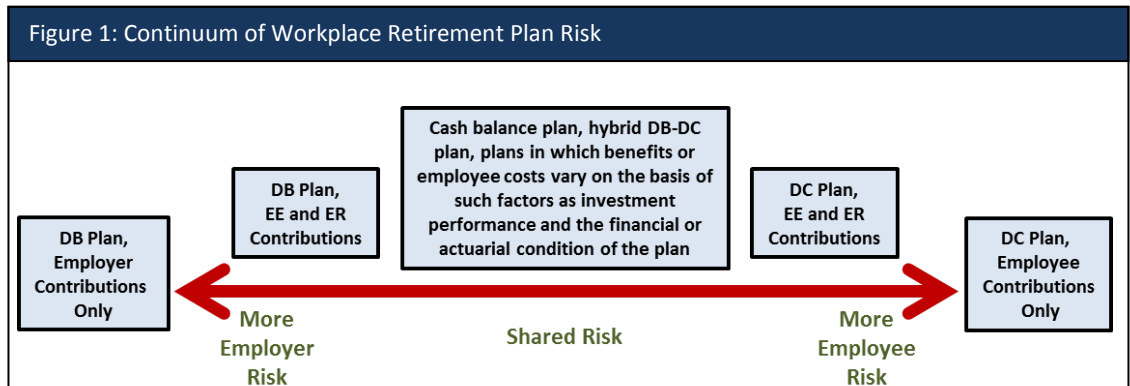
Retirement plan designs feature a variety of risk-bearing arrangements, ranging from an employer maintaining sole responsibility for funding guaranteed benefits, to employees bearing the full obligation to finance their own retirement savings. In plans for state and local government workers, risk sharing falls between these extremes. Although most states offer a defined benefit (DB) plan, the typical DB plan also places some level of financial responsibility and risk on both the employer and the employee. The use of shared-financing and shared-risk have grown in recent years as states have modified required employer and employee contributions, restructured benefits, or both<sup>1</sup> and some states also established so-called “hybrid” plans that combine elements of traditional pensions and individual account plans.

This brief identifies general types of risk present in public sector retirement plans and analyzes longstanding and emergent uses of risk-sharing features enacted by states and designed to meet their specific financing and human resource goals.

## Risk

Retirement plan design can take many forms. Sound retirement plan policy meets distinct stakeholder objectives while preserving core elements of public pension plan design that are known to meet human resource and retirement security policies: mandatory participation, shared financing, pooled investments, benefit adequacy, and lifetime benefit payouts.

In a retirement plan, risk manifests itself primarily in three forms: investment risk, longevity risk, and inflation risk. The degree to which risk is shared between employees and employers varies across differing plan designs.



## Investment Risk

Investment risk refers to the proportionate share of the burden for the investment performance of retirement plan assets. In a typical defined benefit (DB) plan, the employer assumes all or most of the investment risk, as employees are promised a specific benefit regardless of the performance of investments or the amount that is contributed. By contrast, in a typical defined contribution (DC) or individual savings plan, this is reversed: no specific benefit amount is promised; rather, each individual’s final account balance depends on the performance of the investments they select and the amount contributed. In this way, employees in DC plans are exposed to general market risk (the risk that their assets will perform consistent with overall market performance) as well as sophistication risk (the risk associated with the individual’s financial or investment knowledge and experience).

## Longevity Risk

Longevity risk refers to the risk of outliving retirement assets. Most public sector DB plans require participants to receive all or most of their benefit as an annuity paid out over their retired lifetime. In this model, longevity risk is pooled across plan participants, and the employer bears all of the risk that plan assets are sufficient to cover all such distributions. In a

pure DC system, or any plan that provides a lump-sum amount to employees, longevity risk falls on employees individually who bear all of the risk that the amount accumulated will be exhausted over their retired life.

### ***Inflation Risk***

Inflation risk is the potential loss of purchasing power created by the devaluation of money over time. Many sponsors of public defined benefit plans provide retirees with an annual cost-of-living adjustment (COLA) to offset the effects of inflation. Depending on its design, a COLA places a portion of the risk of inflation on the employer. By contrast, defined contribution plans generally do not offer postretirement adjustments, so the employee assumes all inflation risk. Eliminating or reducing inflation risk in a DC plan requires an employee to offset price increases in years when regular income is not produced. Achieving this would require the employee to accumulate a sufficient, but indeterminate, level of assets.

### **Distributing Risk**

Public pensions use a variety of methods to distribute risks between employers and employees. These include policies and practices that share DB plan costs, adjust initial and post-retirement DB benefits, and that increasingly rely on mandatory or automatic enrollment into individual account plans to supplement or supplant primary retirement benefits.

### ***Variable Contributions***

In plans for some or all workers in Arizona, Iowa, Nevada, and Pennsylvania, for example, required employee contributions fluctuate depending upon the plan's actuarial or financial condition, and, in some of these plans, are shared equally. These plans essentially share all three of the types of risk discussed above, as changes to investment returns, longevity and inflation can affect a plan's funding condition.

### ***Variable Benefits***

Other states share risk by altering benefit levels depending on factors such as system funding ratio, investment performance, inflation, or some combination of these.

For example, the funding policy of the South Dakota Retirement System requires the Board to submit recommendations for benefit reductions, contribution increases (or a combination of both) if, in a given year, contributions fall short of actuarial funding requirements, the plan's funded ratio falls below 80 percent, or the system's market value of assets falls below 90 percent of their actuarial value.<sup>2</sup> In 2010 the state legislature approved a reduction in the retiree cost-of-living adjustment in response to the funded ratio falling below 80 percent; the new COLA provision ties the amount of the COLA to the plan's funding level.

Retired members of the Wisconsin State Retirement System (WRS) receive a benefit that is subject to annual adjustment depending on the performance of plan investments. WRS does not provide an annual COLA to retired members; rather, benefits may be adjusted if the fund experiences investment gains, and increases provided in prior years may be adjusted downward or eliminated entirely in years in which investments perform poorly (reductions may never fall below the base benefit). In 2014, WRS announced the first post-retirement benefit increase in five years after a year of strong investment performance.

Additionally, some states provide variable benefits by offering a conditional COLA which is dependent on the plan's investment performance, funding condition, or other external indicator. These cases are described in detail in the [NASRA Issue Brief: Cost-of-Living Adjustments](#).

### ***Use of Multiple Plan Designs***

Increasing reliance on multiple plan designs is one method by which risk is distributed between the employer and employee. Plans such as the Texas Employees Retirement System (ERS), the Georgia Employees Retirement System, and the Virginia Retirement System automatically enroll employees in an individual retirement account, in addition to requiring mandatory participation in and contributions to the primary DB plan. In the case of Texas ERS, auto-enrollment

occurs in a plan that supplements the primary retirement benefit. For Georgia ERS and Virginia, auto-enrollment was installed to offset a reduction made in the primary DB retirement benefit and includes a matching employer contribution to the DC plan. The Rhode Island Employees Retirement system is an example of a retirement plan that requires mandatory employee contributions to both a primary DB plan and an individual account plan, as well as employer contributions to each, to offset a reduction made to the primary DB benefit.

Utah balances employee and employer risk by offering employees a retirement benefit based on a DB plan with a defined contribution component. For employees hired in Utah since July 1, 2011, the employer contributes 10 percent of pay to the employee's choice of a DB or DC plan (plus an amount needed to amortize the unfunded liability of the legacy DB plan). If the cost of the DB plan exceeds 10 percent, the employee must contribute the difference between the cost and the capped employer contribution. The current cost of the DB plan is approximately 8.4 percent; the 1.6 percent difference is directed to each employee's individual DC plan account. (For public safety workers in Utah, the employer contribution is capped at 12 percent of pay; the current cost of the DB plan is 10.91 percent, leaving 1.09 percent to the individual account.)

Additional public sector combination DB/DC plans, as well as cash balance plans, are described in more detail in the standing [NASRA Issue Brief: State Hybrid Retirement Plans](#).

## Formal and De Facto Risk Sharing

Employee and employer risk sharing that is codified in statute or stipulated in policy and known in advance to stakeholders might be considered a *formal risk-sharing plan*. By contrast, benefit reductions or cost increases that are imposed anew upon current employees, retirees, or both, might be described as *de facto risk sharing*. Such *de facto risk sharing* changes have been made in recent years to public retirement plan participants in many states, in the form of higher employee contributions, reduced cost-of-living adjustments, longer vesting periods, a higher age or years of service required to qualify for a retirement benefit, and others.

A key difference between *formal* and *de facto risk-sharing plans* is that in the case of *formal risk-sharing* features, changes to plan benefits and costs are known and understood in advance, whereas *de facto risk-sharing* is introduced after participants already are in the plan. Many of the plan design examples discussed above would be considered formal risk-sharing plans. *De facto* plan changes typically are the outcome of a political or negotiated process involving plan stakeholders, as has occurred in many states in recent years where higher contributions, lower benefits, or both have been imposed on existing plan participants. Colorado, for example, reduced the COLA provision for all participants in the PERA, including current retired members; and raised contributions for all active members. Similarly, Ohio made changes affecting most active plan participants in the state, including reduced retirement benefits and COLA provisions. Many states have raised employee contributions for current working plan members. Considered in this context, essentially every public retirement plan could be considered some form of a risk-sharing plan.

## Conclusion

Most public pension plans share risks between employees and employers. Ultimately, the plan design will dictate the degree to which risk is borne by each group. The diversity of retirement plan design currently in place for public employees reflects the fact that a one-size-fits-all solution does not meet every state's human resources needs, fiscal conditions, and statutory and political frameworks. States have developed a wide range of plan designs that allocate risks between employers and employees, in most cases while continuing to retain core elements of public pension plan design that best meet the needs of all stakeholders: mandatory participation, shared financing, pooled investments, benefit adequacy, and lifetime benefit payouts.

## See Also

National Association of State Retirement Administrators, Issue Brief: State Hybrid Retirement Plans, September 2013, <http://www.nasra.org/hybridbrief>

National Association of State Retirement Administrators, Issue Brief: Cost of Living Adjustments, June 2012, <http://www.nasra.org/colabrief>

National Conference of State Legislators, State Defined Contribution and Hybrid Pension Plans, <http://www.ncsl.org/Portals/1/Documents/employ/StateDC-%20HybridRetirementPlans2010.pdf>

Center for State & Local Government Excellence, *What are Hybrid Retirement Plans?* <http://slge.org/publications/what-are-hybrid-retirement-plans>

Government Finance Officers Association, *Essential Design Elements of Hybrid Retirement Plans* <http://www.nasra.org/Files/Topical%20Reports/Hybrids/HybridPlansFINAL.pdf>

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<sup>1</sup> NASRA, "Costs of Changing Plan Design," <http://www.nasra.org/switching>

<sup>2</sup> Codified Laws of South Dakota, Chapter 3-12-122; [http://legis.sd.gov/Statutes/Codified\\_Laws/DisplayStatute.aspx?Type=Statute&Statute=3-12-122](http://legis.sd.gov/Statutes/Codified_Laws/DisplayStatute.aspx?Type=Statute&Statute=3-12-122)

## Appendix A: Major Employer and Employee Risks in Common Public Retirement Plan Designs\*

The table below describes the distribution of key risks in three types of risk-sharing plans. In a pure defined benefit plan, all risk is borne by the employer, and in a pure defined contribution plan, the employee bears all the risk.

	Cash Balance	Combination Defined Benefit/Defined Contribution	Shared Risk DB Arrangements
Investment risk	Assets are pooled and invested by professionals and specified annual returns are provided on notional participant accounts. The employer bears the risk of meeting the minimum guaranteed return rate.	For the DB component, risk is on the employer to attain the investment return assumption. For the DC component, risk is on the employee.	Assets are pooled and professionally managed, but market risk is shared between employees and employers via contribution rates or cost-of-living adjustments, which can be altered depending on the actuarial and financial condition of the plan.
Longevity Risk	Notional accounts are converted into a lifetime benefit that spreads risk across plan participants. Employer bears risk that accumulated assets will cover required distributions. In plans or options that provide employees with access to a lump-sum benefit, risk is borne by employee.	For DB component, risk on the employer. For DC component, risk is on the employee. Some plans require or allow employees to convert their DC account into a lifetime benefit.	Risk is shared between employees and employers to the extent that contribution rates for each can be altered depending on the actuarial and financial condition of the plan
Inflation Risk	If a COLA is provided, the risk is on the employer. If no COLA is provided, the risk of inflation is borne by the employee.	If the DB component includes a COLA, the employer bears the risk. In the DC component, the risk is borne by the employee. In some cases, DC accounts may be converted into an annuity, in which case, if a COLA is provided, that inflation risk is borne by the employer.	If a COLA is provided, the risk is on the employer; if COLA does not keep up with inflation, the risk is on the employee. Since contribution rates vary for each depending on the actuarial and financial condition of the plan, both bear some of this risk.

\* Generally financed through employer and employee contributions