The Evolution of Public Pension Plans

Past, Present and Future

National Conference on Public Employee Retirement Systems

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Preface

This document presents an overview of how pension plans in the public sector have evolved. For most of the last century public plans were defined benefit (DB) plans, considered by the majority of public sector employees to be the most valuable benefit received during a long career in public service. Although public sector pay has historically lagged that of private sector employees, pension benefits have been an effective way for governments to attract and retain good public employees.

Over the last decade, however, public sector DB plans have increasingly come under attack. In an effort to cut costs, due in part to global competition, many corporations have frozen or terminated their DB plans and replaced them with defined contribution (DC) plans. Some public officials have applied similar logic to state and local governments, and have sought to replace public sector DB plans with DC plans. Although the results of this change would likely have significantly negative consequences for taxpayers and public employees, as pointed out in the NCPERS research report "The Top Ten Advantages of Maintaining Defined Benefit Pensions," these efforts have been successful in a few states and municipalities.

However, demographic and economic pressures have led some public DB plans to reexamine their plan designs, and consider blending DB and DC plan features. For example, the median age of the public sector workforce is about 45, meaning half of current public employee will likely retire in the next 15 to 20 years. To replace them, state and local governments will need to provide benefits that are attractive to younger, more mobile workers. DB plans, designed more for long-term employees, have lacked the portability that younger workers desire.

In addition, the stock market volatility over the past decade has increased the awareness of public employers and employees regarding the potential risks and rewards of the financial markets. While the markets are up, as during the late 1990s, there was growing pressure on the part of employees to participate in DC plans. However, when the stock market declined from 2000 through 2002, many workers saw the value of their DC accounts decline by 50% or more, causing many to reevaluate the attractiveness of DC plans. The stock market decline also increased DB plan costs, causing the governmental plan sponsors to look for ways of more equitably sharing market risks.

To gain a better understanding of the ongoing evolution of plan design, NCPERS initially prepared a report titled "The Evolution of Public Sector Pension Plans" in 2002 and has updated it. In it we describe the characteristics of DB and DC plans maintained by public sector employers and then detail five examples of innovative plan designs that offer variations to traditional DB plans. We also review the issues that have driven the discussion of DC plans, as well as the adoption of hybrid plan designs. Finally, we discuss the economic factors that have influenced the development of public sector plans. The evolution of public pension plans continues.

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CHAPTER 1.

Public Sector Plan Design

Public sector retirement plans for state and local government employees date back over a century to the late 1800s. These plans were developed by government employers to provide retirement benefits for employees who were in public service. In many cases the plans were offered to make public employment competitive with employment in the private sector, which often paid higher wages. The reasoning was that although an employee earned less money working for a government, their retirement benefits were guaranteed. This guarantee protected employees and family members throughout their retirement years.

Plans Yesterday

The first law creating retirement benefits for public employees was passed in New York State in 1857, which provided a lump sum payment to New York City police officers injured in the line of duty. In 1878, the plan was revised to provide a lifetime pension for police officers at age 55 after completing 21 years of service.[1] This same coverage was afforded New York City's firefighters in 1866.

The earliest municipal plan for teachers was established in New York's borough of Manhattan in 1894. Six state teacher retirement systems date back to the beginning of the twentieth century: North Dakota and California established plans in 1913, followed by Massachusetts in 1914, Connecticut and Pennsylvania in 1917 and New Jersey in 1919.

To provide retirement protection for their workers, many state and local governments developed their own retirement plans.

The first state employee retirement system for general service employees was established by Massachusetts in 1911. By 1930, 12% of the larger state-administered pension systems currently in existence had been established.[2]

After 1935, the number of public plans grew rapidly. The Social Security Act, which passed in 1935, excluded state and local government employees, due to concerns over constitutional issues related to the federal taxation of states and their political subdivisions. To provide retirement protection for their workers, many state and local

[1] U.S. Congress, *Task Force Report,* p. 61. See Bibliography for full references.

[2] Task Force Report, p. 61.

governments developed their own retirement plans. Between 1935 and 1950, roughly half of the larger state and local government plans in the United States were established.[3]

As originally designed, many earlier public retirement plans consisted of two parts: (1) a lifetime pension funded by the employer based on the employee's salary and years of service at retirement, and (2) an annuity based on the value of accumulated employee contributions. For example, when it was established in 1920, the New York State Employees' System promised a benefit of 1/140th (0.71%) of final compensation (averaged over the last 5 years of employment) times years of service, funded by the State. In addition, it provided an annuity, based on employee contributions, intended to roughly match the State-provided benefit.[4]

Although ERISA does not apply to public sector plans, many governments incorporated the prudent person rule in their investment standards.

However, in order for employees hired at different ages to match the employer's benefit at retirement, different employee age-based contributions rates were often required, complicating the system's administration. Consequently, by the 1970s, most public sector plans had simplified their benefit designs to provide lifetime benefits based solely on age, service and salary at retirement. Although employee contributions were typically still required, they were generally set at a fixed rate and the retirement benefit did not depend on accumulated employee contributions.

In addition to changes in benefit design, public sector plans have evolved in other ways. Perhaps one of the most significant changes that plans have made over the last three decades relates to investment policy. Before the 1980s, many plans restricted plan investments using "legal lists" specifying the portion of plan assets that could be invested in various securities. Often these legal lists restricted the percent of plan assets held in common stock to 35% or less.[5] However, starting in the 1980s, many public plans began applying the "prudent person" rule to govern investments. This rule was codified in the Employee Retirement Income Security Act (ERISA) of 1974 and allowed assets to be invested in a wide range of securities, as long as the investments were prudent and diversified. Although ERISA does not apply to public sector plans, many governments incorporated the prudent person rule in their investment standards. As a result, the proportion of plan assets invested in equities grew rapidly, as did their investment earnings.[6]

[3] Task Force Report, p. 61.

[4] Bleakney, p. 34. For those employed before the system was established, an additional benefit was provided based on prior service in order to make up for the benefit that would otherwise have been funded through employee contributions.

[5] Task Force Report, p. 132.

[6] Mitchell, p. 15.

Plans Today

The U.S. Census Bureau reports that there were 2,654 state and local government employee retirement systems in 2006, covering 14.5 million active employees and 7.3 million retirees and beneficiaries.[7] The Bureau estimates that state and local governments paid $152 billion in retirement benefits in 2006, averaging $20,800 per retiree/beneficiary.[8] According to the Federal Reserve's *Flow of Funds* report, the collective financial assets of state and local retirement systems reached a record high of $3.2 trillion in 2007.[9]

According to the U.S. Bureau of Labor Statistics (BLS), nearly all (98%) full-time employees of state and local governments participated in one or more employer-sponsored retirement plans in 1998. (This is the most recent year for which data are available.) As shown in Table 1, 90% of these employees were covered by defined benefit (DB) plans and 14% were covered by defined contribution (DC) plans (with some employees covered by more than one plan). DB plans typically provide benefits at retirement based on an employee's final average salary and years of service. DC plans, on the other hand, provide benefits based solely on accumulated employer and employee contributions plus investment gains and losses. (Chapter 2 provides a more detailed comparison of these two plan designs.)

TABLE 1. PUBLIC SECTOR RETIREMENT PLANS

Type of Plan	Percentage of Full-Time Employee Participation				
	1987	1990	1992	1994	1998
Defined Benefit	93%	90%	87%	91%	90%
Defined Contribution	9%	9%	9%	9%	14%

Source: Bureau of Labor Statistics, 1998. (These numbers may not add to 100% because some employees either lacked any coverage or participated in more than one plan.)

Over the last 10 years, however, public sector retirement systems have begun to explore ways of combining DB and DC features into "hybrid" plan designs. The key features of DB, DC, and hybrid plan designs are discussed in the next chapter.

[7] U.S. Census Bureau, 2006. Table 5a.

[8] U.S. Census Bureau, 2006. Table 1.

[9] Board of Governors of the Federal Reserve, 2007. Table L.119.

CHAPTER 2.

Characteristics of Defined Benefit, Defined Contribution, and Hybrid Plans

Generally, employers provide retirement benefits as a means of attracting and retaining the employees needed to deliver the goods or services provided by the employer. For this purpose, different plan designs are better at meeting different workforce needs. If the employer's workforce is young and highly mobile, a plan design that quickly gives employees a right to their benefits and allows them to take the benefits with them when they change employers will be attractive to such workers. Rapid vesting and broad portability are key advantages of DC plan designs. However, while this design may attract workers, it is less likely to retain them. If the employer needs a workforce that is more mature and has the skills and experience required to effectively provide the goods and services, then a better retirement plan design would be one that rewards long-term service. This is a key advantage of DB plans.

If the employer needs a workforce that is more mature and has the skills and experience required to effectively provide the goods and services, then a better retirement plan design would be one that rewards long-term

Defined Benefit Plans

DB plans provide employees with retirement benefits using a predetermined formula, typically based on the participant's salary and years of service at retirement. Although formulas vary widely, a fairly typical retirement benefit is 2% of final average salary times years of service, with salary averaged over the last three to five years of service. Under this formula, the annual benefit for an employee who retired after 20 years of service with a final average salary of $50,000 would be $20,000 (i.e., 2% x $50,000 x 20 years). Employees can, therefore, predict their retirement benefit by approximating how long they intend to work and what they estimate their salary will be at retirement.

An employee's right to receive a benefit from a DB plan (i.e., to "vest" in the plan) typically takes 5 years or longer. By contrast, DC plans often have shorter vesting periods, enabling short-term employees to withdraw or rollover their assets when they change employment. For most state and local government DB plans, the benefit earned for vested service to date is legally guaranteed under the state's constitution or statutes.

The promised DB benefit is funded through employer contributions, investment earnings and, for the vast majority of public sector plans, employee contributions. Unlike in the private sector, where very few DB plans require employee contributions, employee contributions are required in 78% of public sector plans.[10]

The DB benefit at retirement is usually paid in the form of a monthly annuity (i.e., a series of monthly payments made over the employee's lifetime). However, an increasing number of plans offer a partial lump-sum distribution, where a portion of the member's total accrued benefit is paid in a single distribution, and the remaining annuity is reduced as a result. Many public plans also provide for cost-of-living adjustments (COLAs), early retirement, death, disability and survivor benefits. Table 2 presents the major features of state and local DB plans, as surveyed by the U.S. Bureau of Labor Statistics.

Ultimately, the individual's retirement benefit is determined by accumulated contributions and investment income, less investment management fees and operating expenses.

Defined Contribution Plans

DC plans provide benefits through individual accounts established for each employee. In DC plans, the employer contribution made on behalf of each participant is defined, or stipulated, in the plan. Often employees contribute as well, either on a mandatory or voluntary basis (or both). Typically, the accounts are managed by an independent, third-party administrator, and employees direct how their accounts are invested among a variety of funds. Federal income taxes on contributions and investment earnings are deferred until the funds are distributed to the employee.

Ultimately, the individual's retirement benefit is determined by accumulated contributions and investment income, less investment management fees and operating expenses. At retirement, the benefit may be paid in a lump sum (the most common form of distribution) or as an annuity or as a combination of the two, as permitted by plan design or current tax law. Once the employee retires or otherwise leaves employment, the employer is no longer responsible for contributing to or otherwise providing the benefit.

Hybrid Plans

Hybrid plans combine DB and DC plan features. While a change from a pure DB plan shifts a portion of the risks (and potential rewards) to employees, the hybrid approach typically provides a tax-advantaged means for employees to contribute towards their retirement and to invest in diversified funds. In addition, when used in the public sector, the hybrid approach typically allows employees to convert their DC accounts to an annuity, which adds to the employees' lifetime benefits.

[10] U.S. Bureau of Labor, 1998. Table 125.

TABLE 2. DEFINED BENEFIT PLANS: SUMMARY OF PLAN PROVISIONS

Provision	All employees	White-collar employees, except teachers	Teachers	Blue-collar and service employees
Number (in thousands) with defined benefit plans	12,983	5,312	3,523	4,148
Percent				
Total with defined benefit plan	100	100	100	100
Basic Provisions				
Employee contribution required	78	74	88	75
Benefits based on earnings	99	100	100	98
Benefits integrated with Social Security	7	7	5	9
Benefits subject to maximum	22	21	18	27
Early retirement benefits available	87	89	92	81
Disability retirement benefits available	97	96	97	98
Portability provisions	43	43	41	46
Availability of lump sum benefits at retirement	7	7	7	7
Automatic cost-of-living adjustments	53	59	51	53
Other Provisions				
Normal retirement supplement available	4	4	2	5
Early retirement supplement available	3	3	2	3
Minimum benefits provision	3	2	-	5
Early retirement requires employer approval	3	4	-	3
Deferred vested benefits available prior to normal retirement	85	86	83	86
Lump-sum postretirement survivor benefits	15	17	12	16
Lump-sum preretirement survivor benefits	13	17	7	13
Full pension restored if spouse predeceases retiree	44	43	47	42
Survivor benefits for children	20	22	11	25

Source: Bureau of Labor Statistics, 1998. Table 107.

In the public sector, hybrid plans are often designed around an approach that uses separate, but coordinated, DB and DC plans. The DB plan is typically funded by the employer and provides benefits based on a low multiplier (e.g., 1.0% or 1.25%) applied to final average salary times years of service. Vesting, eligibility for retirement, and distribution options typically mirror those of the traditional DB plan. The DC plan is financed through tax-deferred employee contributions, often set at minimum mandatory level (e.g., 6%), although additional voluntary employee contributions are often allowed. Employees are able to choose from a variety of investment options. Upon retirement, the DC account balance can be taken as a lump sum or rolled over into an IRA or similar plan. In many cases, but not always, the DC account can also be converted to an annuity.

Another type of hybrid design used by public sector plans is the "cash balance" approach, which is popular in the private-sector. Under this design, individual accounts are established for employees and credited with a set percentage of the employee's pay (e.g., 6%) plus interest at a rate established by the plan. The amounts accumulate over time and, at retirement, are payable either in a lump sum or an equivalent annuity, at the election of the employee. In the private sector, these plans are typically funded entirely by the employer. In the public sector, the plans are often funded through both employee and employee contributions.

Tables 3 and 4 enumerate the specific differences between DB, DC, and hybrid plans, from both the employer and employee perspectives.

Allocation of Risks in DB, DC, and Hybrid Plans

Different plan designs allocate retirement risks in different ways between the employer and employees. These risks include:

- Longevity risk
- Investment risk
- Inflation risk
- Disability and survivor risk, and
- Regulatory risk

Longevity risk is the risk that the employee will live longer than expected. In a DC plan, this risk falls on the employee, since the employee is responsible for ensuring that the benefits provided by the account balance will last his or her potential lifetime (i.e., to their mid-90s). In a DB plan, this risk ultimately falls on the plan sponsor, but is mitigated because longevity risks are pooled (i.e., averaged) over the plan members (employees, retirees, and their beneficiaries). Consequently, the plan only needs to fund benefits over the average life-expectancy for the group (i.e., to their mid-80s). According to Gabriel, Roeder, Smith & Company research, the pooling of longevity risk can reduce the cost of providing lifetime benefits by over 20%.[11] In a hybrid plan, the longevity risk falls on the

[11] Gabriel, Roeder, Smith & Company, 2006.

TABLE 3. BENEFIT PLANS: SUMMARY OF EMPLOYER PERSPECTIVES

Objective	Defined Benefit	Defined Contribution	Hybrid
Funding Certainty	Plan liabilities change based on actuarial experience (e.g., future salary increases, investment earnings, employee turnover).	Plan liabilities are fulfilled annually as contributions are made to employee accounts based on a percentage of payroll.	Plan liabilities are reduced to the extent the benefit multiplier is reduced.
Predictable Contribution Costs	Annual contribution may vary from year to year, based on actuarial experience (see above). Rates may be set by statute to increase predictability.	Annual employer contributions are more predictable because they are based on a set percentage of employee salaries.	Annual employer contributions will continue to vary from year to year, but at a lower percent of payroll.
Recruitment Tool	Effective for recruiting and retaining long-term employees.	Effective for recruiting short-term employees. May result in unexpected retention of employees if account assets are insufficient to ensure adequate retirement.	Effectiveness will depend on mix of DB and DC features.
Rewards for Career Employees	Benefits are typically based on final average salary, rewarding career employees.	Benefits are based on accumulated contributions and earnings.	A portion of the benefit will be based on final average salary and service.
Expenses	Expenses include actuarial valuation and investment fees (including record-keeping and investment management).	Some plan expenses may be lower. However, employee education costs may be higher.	Plan expenses will likely be higher and include the actuarial valuation, investment fees, and employee education costs.
Investment Risk	Investment risk is assumed by the employer. Contributions may be lowered by earnings that exceed assumed rates of return.	The employee assumes investment risk and will likely pay higher investment fees.	Investment risk will be shared by the employer and employees.

TABLE 4. BENEFIT PLANS: SUMMARY OF EMPLOYEE PERSPECTIVES

Objective	Defined Benefit	Defined Contribution	Hybrid
Benefit Potential	Benefits paid at retirement are for life and are guaranteed by the plan's benefit formula. Cost-of-living increases are common.	Benefits paid at retirement are based on contributions and earnings. The final retirement benefit can be eroded by pre-retirement distributions.	A smaller portion of benefits paid at retirement are for life and guaranteed by the plan's benefit formula. Cost-of-living increases are potentially available.
Understandable Benefits	Benefits require explanation because they are based on a set of variables, e.g., future earnings and years of service at retirement. There are no separate accounts.	Benefits are based on accumulated contributions plus earnings at the time of retirement. Market fluctuations make it difficult to predict retirement benefit.	Understanding benefits will be more complicated. Explanation will involve communication of both the DB and DC portions of the benefit.
Access to Benefits While Employed	Benefits may not be withdrawn while actively employed before normal retirement age. Loans can be made, provided IRS guidelines are followed, but are rare.	Benefits may be withdrawn or loaned under certain circumstances, provided IRS guidelines are followed, and depending on plan type (e.g., 401(a), 403(b), 401(k) and 457).	Depending on the type of DC plan used, the portion of the benefit held in the DC account will be subject to employee access in the same manner as provided by the IRS.
Rewards for Career Employees	Benefits are typically based on final average salary, rewarding career employees.	Benefits are based on accumulated contributions and earnings, tending to reward all employees equally.	Benefits will provide less reward for career employees than a traditional DB plan, but more than a DC plan.
Portability	Benefits have limited portability.	Benefits are portable.	Benefits are less portable than a DC plan, but more portable than a DB plan.
Expenses	The plan pays administrative and investment fees.	Employee pays administrative and investment fees.	Employee pays the portion of administrative and investment fees attributable to the DC portion.
Investment Risk	Investment risk is assumed by the employer.	Investment risk is assumed by the individual and bears a direct relationship to the retirement benefit.	Investment risk is shared by the employer and employee.

employer to the extent the benefit is provided as an annuity funded through the DB plan. It falls on the employee to the extent the benefit is paid from the employee's DC account balance or is taken as a lump sum.

Investment risk is the risk that investment earnings (minus investment management fees) will be less than required to finance the benefits. In a DC plan, investment risk falls entirely on the employee, since the employee is responsible for allocating the investments and paying the fees. In a DB plan, the investment risk ultimately falls on the plan sponsor, but again is mitigated by the plan's very long time horizon. In a DB plan, investment selection is done by professionals and assets are diversified over a broad range of investments. Moreover, DB plans are often able to negotiate investment management fees that are significantly lower than the fees paid by DC plan participants. In a hybrid plan, investment risk falls on the employer to the extent the benefit is funded through the DB plan or investment return is guaranteed on employee accounts. Otherwise, it falls on the employee.

DB plans are often able to negotiate investment management fees that are significantly lower than the fees paid by DC plan participants.

Inflation risk is the risk that the purchasing power of retirement benefits will decline over time due to inflation. In a DC plan, this risk falls on the employee, although a modest case can be made that the investment returns earned on the employee's DC account provide some protection from inflation. In a DB plan, the risk ultimately falls on the employer sponsoring the plan to the extent the plan provides post-employment cost-of-living adjustments. Again, however, a case can be made that the plan's investment returns provide some protection against this risk for the plan sponsor. In a hybrid plan, the risk falls on the employer to the extent to plan provides post-employment cost-of-living adjustments; otherwise, it falls on the employee.

Disability and survivor risk is the risk that the disability or death of the employee will significantly reduce or eliminate the employee's income or the income of the employee's surviving spouse. In a DC plan, this risk falls on the employee and surviving spouse, because the benefit paid by a DC plan due to disability or death is limited to the accumulated account balance. In a DB plan, the risk usually falls on the plan sponsor, since most DB plans also provide disability and survivor benefits. Again, by pooling the risks across plan members, the plan is able to mitigate these risks and lower their costs. Since most hybrid plans provide DB disability and survivor benefits, most of the risk falls on the employer.

Regulatory risk is the risk that laws and regulations governing plan design and operation may change in ways that add complexity to plan administration or potentially curtail benefits. Often regulatory risk is borne by the plan sponsor (whether DB, DC, or hybrid plan) in the form of added legal and administrative costs. However, this risk can also affect plan participants. For example, as a result of the 2006 Pension Protection Act, Congress changed the rules related to cash-balance and similar hybrid plans. This was done to clarify how such benefits can accrue in ways that are not age discriminatory.[12] As a result of the legislation and related IRS regulations, the interest that is credited on cash-balance and other similar accounts may generally not exceed the rates earned on

[12] See § 701 of the 2006 Pension Protection Act, IRS Notice 2007-6, and the Proposed Regulations issued at 72 Fed. Reg. 736800.

long-term, investment-grade corporate bonds. For cash balance and similar hybrid plans that credited interest at higher rates before this rule was enacted, this change may lower benefits for plan participants.

Portability and Preservation of Benefits

One of the major distinctions between DB and DC plans is the portability of plan assets. In public sector DB plans, some portability is provided through the purchase of service credit. This option was enhanced by the Economic Growth and Tax Relief Reconciliation Act of 2001 (EGTRRA), which permits assets from governmental DC plans (including 403(b) and 457(b) governmental plans) to be used to purchase permissive service credits under governmental DB plans. In addition, governmental plans can accept in-service direct trustee-to-trustee transfers or post-service direct rollovers from 401(a) DC and 401(k) plans to purchase service credit or buy back service. However, participants in DB plans generally cannot draw on the value of their accrued retirement benefits until they retire without forfeiting their right to a retirement benefit later.

By contrast, employees who participate in DC plans have a greater range of choices when they separate from service. They may elect to receive their account balance immediately, leave accumulated assets in the plan, or roll them over to another qualified plan. However, if they are younger than age 55 when they separate from service (or age 50 for public safety employees), they will be subject to a 10% early distribution penalty if they choose an immediate lump sum distribution. In addition, if they spend these assets rather than investing them, they will reduce the amount available for retirement, including potential future investment earnings.

CHAPTER 3.

The Politics of Plan Design

For most Americans, retirement benefits are provided through a combination of three sources: Social Security, employer-sponsored retirement plans, and personal savings. Although about one-quarter of public sector employees are not covered by Social Security, their retirement plans are generally structured to provide comparable benefits.

As noted in Chapter 1, the vast majority of public sector employees are covered by DB plans. These plans have evolved over time and have long been favored over DC plans for a number of reasons:

- DB plans enhance the ability of state and local governments to attract qualified employees and retain them throughout their careers. This is especially important for occupations where the effective delivery of public services is based on special training and experience, such as with public safety and education.
- DB plans provide secure retirement benefits based on salary and service, thereby rewarding employees for long-term service and providing a lifetime retirement benefit.
- DB plans are an efficient way of pooling longevity risks and lowering investment management fees, thereby lowering the cost per unit of benefit. Investment earnings that are above the actuarially assumed rate of return help to offset future employer contributions.
- DB plans can provide disability and survivor benefits, typically at lower costs than those charged by a third party provider in cases where such benefits supplement DC accruals.
- DB plans can accommodate early retirement features and cost-of-living increases.

Shifting Demographics

However, during the last two decades, questions have been raised as to whether the design of DB plans was responsive to the needs of the changing workforce. Younger workers entering the public sector changed jobs more frequently and were willing to take risks in investing their retirement assets. Spurred on by positive growth in the equities markets, some of these workers believed they could achieve a higher ultimate retirement benefit if their retirement earnings could be invested aggressively and be fully portable. As a result, these workers tended to favor DC plans.

Although the influence of the younger, more mobile workers on plan design is significant, an equally important influence comes from baby boomers, many of whom will reach retirement age over the next 10 to 20 years. A 2001 Segal Company report, titled *The Aging of Aquarius: the Baby Boom Generation Matures,* observes that "the boomers' maturation and aging will, in many ways, shape American life, especially the workplace, during the first decades of the twenty-first century."[13] The study notes that a maturing baby boom generation, coupled with a significantly smaller succeeding generation (Generation X), is resulting in a changing workplace. In 1980, half of American workers were under 35 years of age. In 2007, the median age of American workers is about 41, and the median age of the public sector workforce is about 45. Older workers (age 55 and older) prefer DB plans over DC plans by a wide margin, which translates into employers needing flexibility in retirement benefit plans.

At the same time the workforce is aging, the annual growth rate of the labor force is slowing, resulting in the need to retain older workers.

At the same time the workforce is aging, the annual growth rate of the labor force is slowing, resulting in the need to retain older workers. Employers are beginning to recognize the need to retain older workers in creative and cost-effective ways. One example is the Deferred Retirement Option Plan (DROP). This type of plan permits employees to initiate a retirement benefit while they continue to work. Pension payments are paid into an escrow account until the employee stops working, when he or she may receive the DROP money in a lump sum, role it over into an IRA, or use other options that the plan provides, in addition to receiving regular pension benefits.

Financially Preparing Workers for Retirement

The Employee Benefit Research Institute's 2007 *Retirement Confidence Survey* contains several disarming statistics regarding workers' confidence in their retirement security. Even though workers' confidence has remained relatively high, it also appears many workers do not fully understand how their retirement systems have been changing, at least in the private-sector. Consequently, the survey reports that many workers may fail to act constructively to secure their retirement.[14]

For example, 70% of workers responding to the 2007 survey said they are "very confident" or "somewhat confident" about having enough money to live comfortably during retirement. Moreover, 62% said that they expect to receive income from their retirement plan throughout retirement. However, only 41% indicate that they or their spouse have a defined benefit plan. Consequently, about 20% are expecting benefits they are unlikely to receive.

[13] The Segal Company, 2001.

[14] *EBRI Issue Brief* No. 304, p. 1.

Plan Design, Considerations and Trends

Public sector retirement systems in the twenty-first century must consider all these factors as they review their pension plans and benefits:

- Although the workforce is aging, younger employees are more mobile and are willing to take greater risks in the investment of their retirement assets.
- Equity markets are in flux.
- There is concern that Social Security benefits will not maintain their current value.
- Slowing growth in the labor force will encourage employers to retain older workers, possibly through retirement plan features such as DROPs.

Initially, state and local governments saw their retirement plan design options as either DB or DC. However, as individual jurisdictions debated the pros and cons of both types of plans, some designed new plans that combined elements of each, often adopting different plans for employees based on length of service.

In 2001, the Colorado Public Employees' Retirement Association, in coordination with the National Association of State Retirement Administrators, completed a study of current trends among 76 large public employee pension plans in several benefit areas.[15] Major findings of this study reflect the fact that although the majority of public sector plans are still DB plans, they are becoming more flexible by incorporating features of DC plans to reflect workforce changes. The study's findings include:

- There is a trend toward incorporating elements of DC plans into existing DB plans. A number of these DB plans have features that offer greater portability of benefits and more flexible retirement options (e.g., supplemental DC plan accounts and employer matching contributions to tax-deferred savings plans).
- Five retirement systems have enacted legislation that allows or will allow a DB or DC option for all employees, in some cases limiting the option according to length of service.
- Retirement systems have continued to adopt a variety of innovative provisions that offer increased portability of benefits to vested and non-vested members.

The next chapter provides several case studies summarizing variations on innovative plan designs.

[15] NASRA, April 2001.

CHAPTER 4.

Innovative Plan Design

As noted in Chapter 1, many state and local retirement plans were originally established to provide retirement benefits in two parts: (1) a lifetime benefit provided by the employer based on the participant's salary and length of service; and (2) an annuity benefit based on accumulated employee contributions and investment returns.

Over time, the complexities involved in administering the separate plans and, in many cases, managing employee contribution rates based on age and gender, prompted plans to simplify their designs and led to broad application of the DB plan approach. By the late 1970s, most public plans were DB plans. Although employee contributions were still required for the majority of public plans, the benefit promised did not depend on accumulated employee contributions.

More recently, however, the demographic, economic, and political pressures discussed in Chapter 3 have led some state and local governments to consider alternatives to the DB approach. While a few governments have switched to DC plans, more governments have been reluctant to shift completely away from DB plans, and have combined DB and DC plan features. To illustrate the various hybrid plans provided by governments, the remainder of this chapter presents five short case studies, each describing a hybrid approach:

- Municipal Employees' Retirement System of Michigan
- Texas Municipal Retirement System
- Ohio Public Employees Retirement System
- Washington State Teachers' Retirement System, and
- Colorado Public Employees' Retirement Association

Municipal Employees' Retirement System of Michigan

The Municipal Employees' Retirement System of Michigan (MERS) is a statutory, non-profit, public corporation that acts as an instrumentality of its participating governments and provides retirement and health care benefits to local governments within the state. As a tax-qualified retirement plan, MERS provides retirement benefits to over 680 jurisdictions covering approximately 38,000 active governmental employees, and 22,000 retirees and beneficiaries. Participation in MERS is voluntary and each participating employer is responsible for funding its own separate plan. The vast majority of members are covered under DB plans, although several jurisdictions participate in DC plans offered by MERS.

Effective October 1, 2006, MERS unveiled its hybrid plan, consisting of DB and DC plan components. The plan was designed to help local governments control the costs of providing retirement benefits without having to switch to a pure DC plan. For the DB benefit, participating employers may select one of three benefit multipliers: 1.0%, 1.25%, and 1.5%, applied to average 3-year final compensation for employees in the covered group. Employees vest in the benefit after 6 years and become eligible to begin receiving benefits at age 60 (with no option for early retirement). The plan also provides disability and in-service death benefits, but does not provide postemployment cost-of-living increases. The DB benefit is funded by employer contributions.

The DC benefit is financed through pre-tax employee contributions made to individual accounts managed by MERS's third-party administrator (TPA). Employers may also contribute to the accounts, if they so choose. Additional, voluntary employee contributions are also allowed, up to the IRS limits. Employees direct their investments, selecting from a variety of funds offered by the TPA. In addition, participants may invest in the MERS Total Market Fund, which is the same fund that MERS uses for its defined benefit portfolio, and which MERS offers at a low investment fee. Distributions from the DC account can be taken as a lump sum or as an annuity purchased from an insurance carrier. If taken as a lump sum, the amount can be rolled over into another qualified plan.

Texas Municipal Retirement System

The Texas Municipal Retirement System (TMRS) is a statewide multiple-employer public retirement system created by law in 1947 to offer retirement and disability benefits to the employees of member cities. Each participating municipality (827 at the end of 2007) has its own retirement plan within the general framework of the Texas Municipal Retirement System Act and selects available plan options according to its own needs. All permanent full-time and part-time employees of a participating employer are eligible to participate. In 2006, there were 132,927 employee accounts and 30,089 retired members.

TMRS is a modified DB retirement plan that credits annual interest on contributions, but does not guarantee the ultimate benefit amount. The employee contribution rate and employer matching credit are adopted by the governing body of each municipality participating in TMRS. Each month, participating cities withhold a percentage of each employee's gross salary and deposit it into a TMRS account held for the employee. The amount withheld is 5%, 6% or 7% of gross salary, as determined by each city. (A few cities are grandfathered at the 3% contribution level.) All member contributions are tax-deferred. Employer matching credits are set at 100%, 150%, or 200%. Interest is credited on the employee's account annually at a rate determined by the TMRS Board based on the System's investment income.

TMRS is a modified DB retirement plan that credits annual interest on contributions, but does not guarantee the ultimate benefit amount.

In most TMRS cities, employees become vested once they have five years of service credit (a few cities have elected to maintain a 10-year vesting provision). Once vested, if employment is terminated, but member contributions are not withdrawn, membership in TMRS continues and member contributions continue to earn interest until retirement. Employees may retire at age 60 or older with 5 years of service credit (or 10 years for a few cities) or at any age with 20 or 25 years of service credit, depending on their city's option.

At retirement, member contributions and credited interest are combined with the city's matching funds and other granted credits. TMRS then calculates a monthly retirement annuity based on these amounts and estimated life expectancy at retirement. Plan members have multiple annuity options from which to choose, including single-life annuities, joint and survivor annuities, and partial lump-sum options, all guaranteeing a monthly payment for the retiree's life.

It is important to note that, under this plan design, the contribution made by the employer is not simply the match on employee contributions. Rather the employer's contribution is determined annually by an actuarial valuation. The employer rate is based on the mortality and service experience of all employees covered by the fund, rates of return on plan assets, and the demographics of each municipality's workforce.

Ohio Public Employees Retirement System

The Ohio Public Employees Retirement System (OPERS) is a multiple-employer retirement plan for Ohio state and local government employees who are not covered by another retirement system. OPERS was established in 1935, and currently provides benefits to more than 3,700 public employers covering over 382,000 active members and 161,000 retirees and beneficiaries. Employees covered by the plans include general employees, public safety employees, and law enforcement officers.

Prior to 2000, OPERS provided a DB plan to all members based on salary and years of service. In 2000, the Ohio legislature enacted legislation that established two new retirement plans. As a result, OPERS now provides benefits to employees through a choice of three plans: the Traditional Plan, the Member-Directed Plan, and the Combined Plan.

The Traditional Plan is a DB plan providing benefits based on 2.2% of final average salary times the first 30 years of service and 2.5% for years of service over 30. Final average salary is averaged over the three highest years. Members are eligible for full retirement benefits at age 60 with 5 years of service, age 55 with 25 years of service, or any age with 30 years of service. Members retiring before age 65 with less than 30 years of service receive a reduced benefit. Payment options include single and joint life annuities, period certain annuities and partial lump sum options. Benefits also include an annual 3% cost-of-living adjustment, based on the original benefit. A portion of employer contributions are credited to a partially pre-funded retiree health plan.

The Member-Directed Plan is a DC plan in which employer and employee contributions are made to the members' individual accounts and invested at the members' direction. A portion of the employer contribution is credited to a retiree medical account which vests gradually over a 10 year period. Employer and employee contributions are mandatory and made at the same rates as contributions to the Traditional Plan. Employees vest immediately in their own contributions and vest in employer contributions over a 5-year period. Members select investments from nine professionally managed investment options. At retirement, members can convert their accumulated account balance into an annuity (using the same payment options as provided through the Traditional Plan), or can leave their account with OPERS and draw it down at a later date. If taken as an annuity, the retiree will receive the same annual cost-of-living adjustments provided through the Traditional Plan.

The Combined Plan provides a DB benefit of 1.0% of final average salary times all years of service, with final average salary defined in the same manner as the Traditional Plan. The eligibility conditions for retirement benefits are the same as for the Traditional Plan, as are the benefit payment options. The DB portion of the Combined Plan is funded entirely through employer contributions, made at the same rate as for the Traditional Plan. The DC portion is managed in the same way as for the Member-Directed Plan, but only receives member contributions.

Washington State Teachers' Retirement System

In 1995, the Washington State Legislature created a third retirement plan for members of the Teachers' Retirement System (TRS), effective for all public school teachers hired after July 1, 1996. Under the plan, known as Plan 3, member contributions finance a DC component, and employer contributions finance a DB component. The plan covers persons qualified to teach and who are employed by a public school in an instructional, administrative, or supervisory position.

Teachers hired before July 1996, who were in TRS Plan 2 (a full DB plan) were given the option of transferring from Plan 2 to Plan 3 by January 1, 1998. Approximately 70% of eligible members made the initial transfer. For a member who elected the transfer, the amount transferred to the DC plan included the member's accumulated contributions plus interest. In addition, the member received a transfer payment of 65% on their accrued contributions.

Several factors were considered in the adoption of this hybrid plan. Adding a DC component gave TRS members greater portability for their retirement assets as well as control over both contribution rates and investment decisions. The DB component was retained to give a level of security to the overall plan, providing a guaranteed benefit funded by employer contributions. Creating a hybrid plan was seen as a way of adding flexibility and portability to the existing retirement plan, while maintaining a level of financial security.

Under the DB portion of Plan 3, the retirement benefit is based on 1.0% of average final compensation times years of service credit. Average final compensation is the monthly average of the member's 60 consecutive highest-paid service creditable months. To receive full benefits from the DB plan, members must be age 65 and have at least 10 years of service credit. Members who transferred from Plan 2 to Plan 3 and had 5 years of service at the time of transfer were immediately vested in the DB portion. Actuarially reduced benefits are available between the ages of 55 and 65. Members who separate from service with 20 years of service credit, but who are ineligible to retire, will have their benefit increased by 3% a year until they attain retirement or early retirement age.

Under the DC component of Plan 3, employee contributions are mandatory and vest immediately. Members choose from six contribution rate options, ranging from 5% to 15% of pay, with several options allowing variations based on age (e.g., 5% up to age 35, 6% for ages 35 through 44, and 7.5% for ages 45 and older). New TRS members have 90 days to select an option; otherwise, Option A (5% of pay at all ages) automatically applies. Employees may elect to have their DC plan contributions invested by either the Washington State Investment Board (WSIB) or through a self-directed investment program managed by a third party administrator. Contributions invested by the WSIB are placed into the WSIB's total allocation portfolio and valued based on the performance of all the investments in the portfolio. In the self-directed investment program, members can choose to invest in a single investment fund, split their contributions among several fund types, or select one of three preset portfolios composed of various mixes of the investments.

Initially, Plan 3 offered a gain-sharing feature. When earnings for the state retirement fund averaged more than 10% over a 4-year period, the amount in excess of the 10% was declared "extraordinary gains." A portion of these gains was paid to members of Plan 3 who met certain service credit and DC account level requirements. The gain-sharing payments were made in January of even-numbered years. However, in 2007, the state legislature repealed the gain-sharing feature. The last payment was made to Plan 3 members on January 1, 2008, amounting to about $270.69 per year of service per member.

Employees may elect to have their DC plan contributions invested by either the Washington State Investment Board (WSIB) or through a self-directed investment program managed by a third party administrator.

Beginning July 1, 2007, newly hired teachers have the choice of selecting the full DB plan (Plan 2) or the DB/DC plan (Plan 3). This change was put into effect by the same legislation that repealed gain sharing.

Colorado Public Employees' Retirement Association

The Colorado Public Employees' Retirement Association (PERA) was established in 1931 by the state legislature and provides retirement and other benefits to employees of more than 400 government agencies and public entities in the state. It covers approximately 193,400 active employees, including general state employees, most teachers, local government employees, judges, state troopers, and others. It also provides retirement benefits to more than 78,000 retirees and other benefit recipients. Participation in PERA by local governments is optional.

Beginning in 1995, PERA began providing benefits through a hybrid retirement plan. Under this plan, employees at retirement may receive the higher of the DB benefit or the "money purchase" benefit. The DB benefit is 2.5% of the member's highest three-year average salary times years of service (up to 100% of highest average salary). Unreduced DB benefits are available to members at ages 55-64 if years of age plus service equal 85 or more, or at age 65 with at least 5 years of service.

The PERA money purchase benefit is similar to a DC plan, but with several differences. Like a DC plan, employee contributions (currently 8% of pay) are credited to individual member accounts. However, unlike a DC plan, the interest on the contributions is credited at a rate determined by the PERA Board, limited to an annual maximum of 5%. The money purchase benefit is determined by combining the member's accumulated account balance at retirement (including contributions plus interest) with a 100% match by the employer, and converting this total amount into an equivalent lifetime benefit.

Employees who terminate service upon reaching retirement eligibility receive the higher of their DB formula benefit or the money purchase benefit. Employees who terminate service and withdraw their account before retirement eligibility receive their contributions with interest plus a 50% employer match on the total amount.

The PERA hybrid plan was adopted for several reasons. It offers better benefits for shorter-term members who separate from service many years before retirement. It also helps members make a more informed choice about their benefits, by allowing them to choose between a DB or DC benefit at the time they separate from service or retire, rather than when they begin employment. Members are also rewarded for leaving their money in the retirement system until retirement, and they receive a 5% rate of interest, not subject to market fluctuations. Moreover, lifetime retirement benefits paid by PERA receive annual cost-of-living increases.

CHAPTER 5.

Conclusions

The retirement plans of state and local governments have evolved over the last century as a result of the changing financial, demographic, administrative, and political environment in which they operate. These pressures continue and will influence public plan design well into the future.

However, the decision to change plan design is complicated and should be made only after a careful consideration of the long-term costs and risks, especially with regard to:

- The government's ability to attract and retain qualified employees in order to provide citizens with necessary public services, such as public safety and education;
- The plan's ability to provide long service members with adequate income throughout retirement. Such benefits help sustain the local economy and prevent retired public employees from having to rely on public income assistance programs funded with future taxpayer dollars.

In addition, the plan design should pool longevity risks in order to lower the cost of providing lifetime benefits to the average cost of the covered group. Moreover, the plan design should mitigate investment risks and costs by broadly diversifying investments and negotiating investment management fees.

In short, decisions should be based on a clear understanding of what outcomes the current design influences and how it allocates costs and risks. Retirement plan design represents a significant public policy. Therefore, the plan sponsor contemplating change must understand the policy implications of any new proposal as well as those of the current retirement plan design. To better understand the policy implications, plan sponsors are encouraged to consider the following actions:

- Survey active and retired members of the current retirement plan.
- Measure the satisfaction and confidence of those members.
- Understand the needs of retirement system employers and members.
- Understand comparative private sector plans and their goals.
- Adopt a formal policy for the retirement system plan design reflecting the plan sponsor's objectives and those of the active and retired members.
- Develop any retirement plan changes consistent with objectives.

With the proper analysis and an understanding of the needs of a changing population, carefully considered plan design changes can produce excellent results for all stakeholders.

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