Pensions in the Public Sector

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Chapter 3
State Employee Pension Plans

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This chapter explores and evaluates key characteristics of the major state retirement systems in the United States. Our goal is to offer comparisons of public and private plans with regard to history, structures, and essential features.[1]

U.S. Public and Private Retirement Programs Since World War II

Pensions in the United States began as a personnel tool to recruit and retain employees. State and local pension programs began prior to World War II, during which time many pension programs were based on defined contribution features. However, low investment returns during the first half of this century were followed by high inflation after retirement, impelling many public pensions to move to the defined benefit form. Private sector plans were uncommon until World War II, when they began to be used to attract employees during a time of tight labor markets, wage controls and a strong union influence.

In the private sector, defined benefit (DB) plans[2] remained the norm until the 1980s, when three major changes in the pension environment made defined contribution (DC) plans more attractive than DB plans. One factor was the 1974 Employee Retirement Income Security Act (ERISA), which established complex regulations for private employer retirement programs. By contrast, public plans remained exempt from many of the ERISA changes to the IRS tax code, in particular, regarding funding rules (Crane this volume). Additional changes to ERISA rules in subsequent years made the private pension regulatory environment even more complex. The second factor was booming stock markets, which over the last two decades produced significant investment gains in pension systems. ERISA funding rules have restricted the extent to which private employers can make tax-deductible

contributions to their DB pensions, leading employers to seek other ways to provide additional benefits and to receive relief from some of the more complex ERISA requirements. The third factor was a change in the degree to which corporate America adopted a paternalistic approach to employees. Corporate downsizing, increased labor mobility, and the end of lifetime jobs meant that pensions were no longer seen as a deterrent to turnover, but rather as more of a tax-deferred saving device. The paternalism of the old DB plan began to give way to the flexibility of the DC pension (Sass 1997).

These developments, and particularly the burgeoning stock market, boosted the growth of so-called 401(k) plans in the private sector. Public employers could not offer these plans after 1986, but they were permitted to offer regular 401(a) DB pensions. In addition, teacher systems may have 403(b) plans as well; these are tax-sheltered annuity plans, not available to private sector employees. Public employees may also be eligible for deferred compensation programs under Section 457 of the IRS Code.

Public and Private Pension Plans Today

Over the late 1990's, few private sector employers have established a traditional defined benefit plan; newer companies tend to have a 401(k) plan as their sole pension if they offer a plan at all. Older large private employers tend to have both a traditional, noncontributory defined benefit program, and also a 401(k) plan for employee contributions and voluntary supplemental retirement savings. In addition, a pension program known as a "cash balance" plan is being adopted by many private sector employers (Rappaport et al. 1997). By contrast, most state and local retirement systems still maintain a traditional defined benefit plan as their primary pension plan. Nevertheless, there are some signs of change here too. Recently a few systems have made the transition to a defined contribution plan, or have added defined contribution features to their existing defined benefit program (Fore this volume).

An important difference between private and public retirement programs today pertains to who pays for the plan. In the public sector, employees usually are required to contribute toward their DB retirement programs, generally on a pretax basis (under IRS Code 414[h]), whereas in the private sector DB plans are rarely contributory. By contrast, DC plans are more similar across public and private sectors in that both allow pretax contributions, though the circumstances differ somewhat. For private employees, 401(k) rules allow workers to contribute if they choose to do so on a pretax basis. In the public sector, regulations are somewhat different. IRS Section 414(h) permits employee contributions to be "picked up" by the employer and treated as employer contributions for federal tax purposes, but if they are, the employee no longer has the choice of either receiving the amounts

directly or as a pretax contribution to the plan. Therefore, all picked-up contributions must be mandatory and of the same amount for all employees. In this way, employee contributions are treated differently for private and public DC plans.

As a result of the different employee contribution rules in public plans, a number of issues arise regarding equity, refund payments, and loss of accrued benefits that tend not to arise in the private plan arena. For instance, public plans often require employee contributions of at least 25 percent, but usually less than 50 percent, of total contributions. Many systems initially required a 50–50 cost split and paid benefits based on accumulated employee contributions matched with employer funds.[3] As benefit improvements were given retroactively, employer contributions tended to rise. Of course, recent market gains have cut employers' actuarially computed contribution rates and it remains to be seen whether these gains are reflected only in employer rates (as losses usually are), or whether employee rates are permitted to fall as well. Most public systems have employee contributions rates fixed by state statute which cannot be changed except by legislation.[4]

Private and public plan sector plans also differ in terms of their ability to change and terminate existing pension programs. ERISA and IRS rules require private sector employers to guarantee that no employee will lose any *already earned* benefit entitlement, but an employer is permitted to modify or terminate *future* accruals to both current and new employees. By contrast, in the public arena, it is much more difficult—if not impossible—to change future benefit accruals for existing employees. Thus if changes in a public retirement program are desired, it might be necessary to permit all current employees to remain under the current program, and then to apply the changes in plan design solely to new hires. This commonly leads to two-tier plans within the same employer group, a rare occurrence in the private sector.

Another key difference lies in the authority of the fiduciary group that administers plans across the two sectors. Private sector employers are comparatively free to make system changes as long as the proposed change meets ERISA and IRS requirements. If the plan is subject to collective bargaining, the union must also be permitted to bargain over changes. Private employees often have little voice regarding a change in their pension structure. By contrast, in a governmental plan, changes must generally be approved by a legislative group, and changes are subject to public disclosures, hearings, and discussions that accompany the political process. In addition, unions frequently play a role. For instance, there are thirteen states where only some employees have bargaining rights, and fourteen states where no bargaining rights exist; in others, retirement benefits may or may not be included in the bargaining process. But even when unions do not directly negotiate over pensions, these groups can be quite vocal in supporting or opposing pro-

TABLE 1. Key Differences Between Public and Private Retirement Programs

Features	*Private plans*	*Public plans*
Type of main program	Combined defined contribution and defined benefit	Defined benefit
Employee contributions		
To primary program	No	Yes
Mandatory	No	Yes
To supplemental program	Yes	Yes
Pretax basis	Yes	Yes
Covered under ERISA provisions	Yes	Only a few
IRS funding and deductibility concerns	Yes	No
Plan provisions	Legal document prepared by attorneys	Contained in legislative statutes
Contributions are expressed as	Dollar amounts	Percentage of payroll
Advanced funding of future benefits	ERISA required	by state provisions by state provisions
COLA provisions	Rare or ad hoc	Common, may be automatic

Source: Author's compilation.

posed legislation affecting retirement benefits and pension funding. Table 1 briefly summarizes several of the key differences between private and public sector retirement programs.

Benefit Features of Public Pension Plans

Despite these differences across public and private sector pension plans, the plans do share some key attributes. Most importantly, fundamental funding and design principles apply to all pension systems. Specifically, the cash flowing into a pension program must come from one of three sources: (1) contributions, (2) other new money coming in, and (3) net investment returns on assets invested in financial securities. This relationship may be summarized as $C + I = B + E$, where C refers to employee and employer contributions and other sources of noninvestment income, I refers to investment income, B refers to benefit payments, and E refers to fund expenses. Irrespective of what type of program is set up, this fundamental formula cannot be changed. Another way of looking at it is that all monies coming into the program must eventually be accounted for, and all monies to be paid by a retirement program must arise from some source.

What makes retirement programs much different from other entitlement programs or benefits is the considerable length of time between when the funds are deposited into the account, and when the benefits are actually paid out. For a new employee at age 25, benefits earned based on a year of service now will not be eligible for payment for up to forty years into the future at age 65. Then if annual pension payments are made, it may be another twenty years or more before the pension system is no longer obligated to make any further payments to the employee or beneficiary. Thus, the average time horizon for an employee entering a retirement program is generally at least twenty and often sixty or more years. This period is substantially longer than the commonly expected "long-term" horizon found, say, in the area of investments.

Core Benefits

Most benefit obligations promised to members of state retirement systems are associated with what are known as "core benefits." These refer to the benefit payable at the *normal* retirement age, covering work during a lifetime career with the covered employer group. This normal benefit is usually the reference for other benefit types, including the early and deferred benefits, as well as disability, survivor, and postretirement benefits.

Normal benefits. As outlined by Mitchell et al. (this volume), public plan retirement ages tend to be much younger than age 65; in fact, the public sector "normal" retirement age is usually age 60 or 62. The age 65 benchmark has been considered the "normal" retirement age for workers covered by social security though it was raised for baby boomers under the 1983 amendments. Public plans also tend to provide full "unreduced" benefits based on service or a combination of age plus service, such that the public employee may receive full, unreduced retirement benefits after thirty years of service, for example, regardless of age (or even as low as after twenty years of service in some plans; see Mitchell et al. this volume).

A typical benefit formula for normal retirement might equal a member's number of years of service times his or her final average salary, times a benefit percentage factor. For example, the Pennsylvania Employee Retirement System provides 2 percent per year of service, such that a member with thirty years of service and a final average salary of $45,000 would be entitled to a normal retirement benefit of 60 percent of $45,000, or $27,000. Over time, the percentage factor for public sector plans has risen; thus a 1.5 percent factor was common twenty years ago, but is rare today. Higher factors are generally found in public systems where members are not covered by social security; some 25 percent of all public plan members today are in this group. In the public sector, integrated benefit formulas are rare.[5]

Another factor important in computing normal retirement benefits is the

averaging period used to determine the salary base to which the percentage factor is applied. Until recently, the most commonly used period was the highest five-year average. This is still the most common averaging period found in private sector plans. Recent benefit improvements in the public sector plans now have almost half of the public plans using a three year average period and less than a fifth using a five-year period (State of Wisconsin 1996). Some public safety plans base benefits on the final salary without averaging.[6] The shorter the period, the more likely a final retirement benefit will replace net preretirement income; that is, a benefit equal to 50 percent of average salary provides less than half of the final salary. Since salaries usually rise over the worklife, a shorter averaging period increases benefits. In addition, the shorter the period, the more likely an opportunity for antiselection arises. This happens when an employee artificially boosts compensation for the period of time just prior to retirement by working extra hours, taking on extra duties, etc. This "salary spiking" issue is of concern when determining the financial cost of providing benefits.

Early benefits. Once the base formula for the normal retirement benefit has been established, a member can often elect to retire earlier, but perhaps with a financial penalty. This early benefit tends to be reduced to account for the fact that the benefit will be paid to the member over a longer period of time, since payments are starting before the normal retirement age. If the reduction equals the increase in value for the earlier commencement of the benefit payments, the reduction is said to be "actuarially equivalent." Many private plans still require "full" actuarial reduction for early retirement benefits, while others have adopted a step reduction, such as 5 percent for the first five years of early retirement and 8 percent thereafter. If these reductions track the true actuarial reduction benefits are not subsidized; however smaller reductions create subsidized early retirement benefits. Public sector plans often provide subsidized early retirement benefit amounts.

Maximum benefits. Public plans may have maximum benefit limitations regarding the amount of the benefit to be accrued when expressed as a percentage of the final average salary. For example, a plan may pay "full unreduced" benefits after thirty years of service, but may prohibit the accrual of additional benefit credits after thirty years. In such plans, the only increase for the member's continued employment would be due to the increase in the average final salary due to pay increases. Such maximum benefit limitations are common in public safety plans, where unreduced benefits are seen as encouraging earlier retirement in light of the substantial physical demands for this type of work. It is interesting that some plans continue to collect employee contributions from members even after they reach the maximum benefit ceiling as a condition of continued employment.

Post-retirement benefit adjustments. Once retirement occurs and benefits have begun, they may be changed in recognition of changes in the cost of living.

Referred to as COLAs, or cost-of-living adjustments, the yearly increases are usually fixed, such as two percent per year, or may be tied to an outside index such as the Consumer Price Index. Regular increases are one option, but many only give "ad-hoc" increases made when a system can afford to pay for the increased benefits. Nearly all state-level public plans have either automatic or ad hoc COLAs, whereas less than half of private plans offer such benefits at all and those that are offered are almost all ad hoc in nature (Mitchell et al. this volume). The high cost of automatic COLAs, coupled with employer concerns regarding their ability to consistently provide such increases on an affordable basis, makes some public systems avoid what may appear to be a desirable plan feature.

For this reason, some plans undertake occasional benefit improvements to restore all or a portion of the lost economic value of the benefit due to inflation. Over time, members retired the longest will have lost the most purchasing power; these members also tend to be the oldest and therefore the least expensive candidates for a benefit increase. For this reason, when a system has a limited budget to improve benefits, a "restoration" COLA is often popular. There is also a new type of COLA adjustment, called the "excess interest" COLA. It occurs only periodically as with the ad hoc increases, but it is based on a fixed formula and is then guaranteed to be paid as long as the formula produces an amount in excess of certain criteria. Another alternative is illustrated by the Washington State Retirement System, which recently adopted a "gain-sharing" COLA. Here excess investment returns were split, providing both increased COLA benefits to retired members and also reducing the period over which the unfunded pension liability is amortized.

Noncore Benefits

The core benefits discussed above typically cost over three-quarters of the benefit budget, but several other types of benefits provided by state retirement systems are also worth mentioning.

Deferred vested benefits. Most retirement systems offer some benefits to employees who no longer work for the employer, but have earned enough credits to receive a retirement benefit. This is known as a deferred or a vested retirement benefit. ERISA requires private pension plans to provide vested retirement benefits after a minimum of five years, and there is no way for an employee to forfeit the vested earned benefit. Public plans differ in two critical ways when providing for benefits to vested members. One is that the vesting schedule, which indicates how many years of service the participant needs to be fully vested, can be much longer, taking as long as ten years. Older uniformed systems may even require full career service, such as twenty years, not granting any retirement benefit for termination prior

to that time. Second, public employees leaving employment may elect to forfeit earned benefit rights by withdrawing their contributions when they leave, a practice known as a "refund." Sometimes a provision may be made for the member to restore his lost accrued benefit by repaying the refund amount with interest if he or she subsequently becomes reemployed and covered by the same retirement system.

Depending on the age and years of service of the member at the time of termination, the value of the accrued vested benefit in current dollars (the present value of the deferred benefit) may be less than the total dollars, plus interest, contributed by the member prior to termination of employment. Thus, any employer dollars contributed while the member was working may not necessarily add to the value of that particular member's earned benefit, but may be assigned to other members for purposes of benefit payments. This practice of benefit assignment within a DB plan gives rise to substantial misunderstanding in the public arena, and provides some impetus for the current trend toward DC plans in the public sector.

Death benefits. Nearly all state retirement systems provide for some type of benefit upon death while in active service. This benefit often takes the form of the benefit the member's spouse or beneficiary might have received had the member retired just prior to death. This is similar to the ERISA/REA (Retirement Equity Act) required benefits for private plans.

Disability benefits. Many, but not all, public plans provide retirement benefits payable if the member is disabled and no longer able to continue working. These disability benefits are usually related to the normal accrued retirement benefit, but can use a lower benefit percentage factor in computing the benefit, say 1.50 percent when the normal formula uses 2 percent. Some systems actually provide a subsidized benefit to disabled members, at least over the period that the member would have otherwise been working. In practice, disability benefits are often geared to replace some fraction of a member's income (e.g., 60 percent of average compensation) or provide a benefit equal to what the member would have earned had employment continued and the member had earned the full number of years of service to the normal retirement age. Some public systems have recently contemplated eliminating the disability benefit from their retirement system, instead providing this form of insurance outside the system. The financial impact of this can vary by system and may depend on whether or not the retirement agency is able to administer the program (deciding who qualifies for and meets the definitions of disablement to receive the benefit). Outsourcing the benefit determination process may occur with a third-party administrator, where the retirement system continues to pay benefits. This approach keeps disability benefit financing within the system but reduces the sometimes-difficult fiduciary issues that arise when reviewing individual situations.

Disability benefits are usually coordinated with worker's compensation

and social security payments, in both the public and private sectors. Duty-related benefits may not require a service requirement, but non-duty related benefits may require five or ten years of employment, as well as satisfaction of the definition of disablement. The definition of disablement can vary, from disablement from any type of gainful employment to only disablement from the employee's own occupation. More disability benefits are paid to public safety officers than to other public employees. One reason may be the hazardous nature of the job, plus some duty-disability benefits payable to public safety members may be excludable from those individuals' taxable federal income. This may lead to an incentive to provide benefits under the disability rules rather than as a normal service retirement.

Optional forms of payments. Regular retirement benefits are usually payable as a monthly annuity, starting at retirement and stopping upon the member's death with no further payments to be made, regardless if death occurs one month or thirty years after retirement. Optional forms of payment are frequently available, usually set to be actuarially equivalent to the system's regular retirement benefit. Unisex factors are required by law, and simplified factors that reflect the overall actuarial values may be used. The monthly amount for an optional benefit is generally lower than for the regular benefit, to account for the financial impact of potentially greater total benefit payments paid by the retirement system due to the option's features. With the exception of the pop-up joint and survivor options, all options are found in both the private and the public sector.

Guaranteed payments. This form of benefit affords some type of guarantee to the member that a minimum number of benefit payments will be made; the larger the guarantee, the greater the reduction from the regular form of payment. There are two common types of guarantees: a period certain, and a refund annuity. Turning first to the *period certain* form, this ensures that a total number of benefit payments is guaranteed, regardless of when the member dies. If the member dies before all guaranteed payments have been made, the same monthly benefit amount will continue to a beneficiary until all guaranteed payments have been made to the member prior to death, or subsequently to the beneficiary. If the member lives beyond the guaranteed period, the monthly benefit payments usually continue until death.[7]

The *refund annuity* form is found in contributory retirement plans, and it guarantees that a member's accumulated contributions are repaid with interest, determined at time of retirement. The difference, if any, between the benefits paid and the guaranteed amount, is payable upon the member's death, either as a lump sum or as continued monthly payments to a beneficiary. When the total benefit payments equals the accumulated contributions with interest, the form is known as the refund annuity; this feature may be built into the normal form of payment for some public contributory plans and ensures that the amount payable upon death is an employer

paid death benefit, rather than an optional form of payment with a reduced benefit. By contrast, if the employee-purchased portion (the annuity portion) of the sum of the total benefit payments is guaranteed to equal the accumulated contributions with interest, the form is known as the *modified refund annuity* form of payment.

Continuation to a survivor. These options ensure that if a named beneficiary is still living upon a member's death, the reduced benefit (or a portion of it) is paid to the beneficiary for the remainder of the beneficiary's lifetime. The beneficiary may be limited to only the spouse. This form of payment is called a *joint and survivor* form of payment, with the portion of the continuation commonly included in the name, such as a joint and 50 percent survivor option. A less common form of payment reduces upon the first death of either the member or the beneficiary. A different form, called the *joint and survivor with pop-up,* has become popular of late in public retirement plans. This is a variation of the joint and survivor form of payment. Under the pop-up option, if the beneficiary dies before the member, the member's benefit payment pops up to what it would have been had the member not elected the joint and survivor feature. Under the normal joint and survivor option, the member elects a reduced monthly benefit in order to provide protection to a beneficiary. When the beneficiary dies before the member, the protection is of no further value, yet the member's benefit is still reduced. In a sense, the member has paid for something that will not be received. Under the pop-up version, the member's benefit is restored once the protection is no longer needed. The reduction for the joint and survivor with pop-up option is greater than for the normal joint and survivor option, again to cover the financial cost of providing additional benefits. In a few systems, the benefit pops up upon divorce as well as upon the beneficiary's death. One variant found in the public sector (but rarely in the private sector) permits a retiree to direct survivor benefits to a new beneficiary upon remarriage.

Level income option. This option allows a member who retires prior to the normal social security age (SSA) to receive retirement benefits that are modified so that the combined income from the retirement system and from social security remains level throughout the member's lifetime. This means the pension system's payments are higher before social security payments begin, and they fall after social security begins. Depending on the retirement and the estimated social security benefit payment, it is possible that no retirement benefits would be payable after social security begins. Although the theory is that the member's income stream will be level, often it proves not to be in practice. This is because social security, and often the pension system as well, makes postretirement adjustments that upset the original "leveling out" feature of this option. This option is sometimes combined with the features of a guaranteed payment or a continuation to survivor form of pay-

ment. It may be feasible, within certain tax limitations, to provide a similar modified payment stream that is not dependent on expected social security payments.

DROP plans. "Deferred retirement option plans," or DROPs, refer to a public plan feature where members are allowed to effectively begin receiving retirement payments while remaining on the job.[8] These plans originated in fire and police plans where members could retire with full benefits at a comparatively young age, say after twenty years of service. Many cities could not afford to lose the experience and training of these seasoned officers and used the DROP programs to entice members to continue working.

These plans are relatively new and raise many concerns that include tax consequences to the member, benefit limitations under Section 415, and higher marginal tax rates that may apply to the pension payments. Benefit consultants tend to recommend that a private letter ruling be requested from the IRS before implementing any specific DROP plan. The DROP option is especially attractive if the system provides for no additional accruals after twenty years of service, and they provide public employers with the ability to predict with more accuracy future employment vacancies. Under a DROP plan, a member who would otherwise be eligible to retire and commence benefit payments, instead "freezes" the amount of retirement benefit payable and then continues to work in active employment. The benefit payments that would have been made instead accumulate in a tax-qualified fund accumulating interest (and sometimes additional member contributions). At actual retirement, the previously frozen monthly benefit payments are then paid to the member rather than to the accumulated fund account, and the member receives the accumulated fund balance as a lump-sum payment. Members like the advantages of receiving the lump sum payment at time of retirement. When a member elects to participate in the DROP, for purposes of the retirement plan, she or he is considered to have retired. But for all other employment purposes the member continues working and receiving a salary and full nonretirement benefits. The amount of the member's monthly retirement payment is frozen based on final compensation and service credits determined as of the date the DROP option is elected. The member continues to work while the DROP is in effect, but the continued employment has no effect on the amount of the member's retirement benefit.

At first glance it may appear that no financial cost is associated with this type of plan, since the system would have been making the payments had the member actually retired from service, the cost could range from no cost to 1 percent or more of pay. A number of different features and issues can affect whether this option is actually cost-neutral for the public system. In addition to the benefit features mentioned above, other factors affecting whether

to offer a DROP include its impact on member beneficiaries, the desire to have members continue working longer, the complexity of the program, and whether other benefit improvements are more desirable.

Postretirement health benefit plans. Few public plans provide postretirement health benefits, but several have set up financial systems where some type of benefit is available to offset the cost of the insurance premiums for retired members. For example, both Wisconsin and Idaho provide for unused sick leave to be credited to an account at retirement, which is then used to pay for the employee's health premiums after retirement. However, once the account is depleted, the member must make premium payments from another source—usually from the monthly retirement benefit payment.

Reemployment after retirement. Many public sector retirement systems terminate or stop making payments to retired members if they return to work after retirement. Returning to work within the same retirement program may occur in the public sector for several reasons. First, government workers may have an experience base, which makes them more attractive to call back rather than hiring a new employee. Second, public members can retire earlier than private sector employees, so there is a greater potential for reentry into the workforce.

Portability. The concept of portable benefits has become an attractive goal for both private and public plans, and the advent of individual retirement accounts (IRAs) has greatly enhanced the portability of DC benefits. However, in the DB arena, few private sector plan participants can shift their assets or benefits across plans. By contrast, public sector plans have made some progress in permitting DB plan mobility.

One reason that portability has been seen as a problem in DB plans has to do with the benefit formula: vested accrued benefits depend on the final average salary at the time of termination, yet if an employee moves around and has several accrued DB benefits, the total of all vested benefits is much less than if the benefits had all been earned under one system (Fore, this volume). If true DB portability were to occur, the final average salary used for all vested benefits would have to be based on the final compensation at the last employer, which in turn boosts the value of the vested benefits left with the prior employers. A method of approaching this problem in the public sector is permitting employees to purchase "service credits" as they enter a new system, thus raising benefits payable by the new employer. This provision may require a mobile public sector employee to deposit employee contributions (or both employee and employer contributions) that the new system would have made on behalf of the member for the period of time the service was earned with the prior employer. Less often, a public plan allows service to be purchased based on employment with a previous *nongovernmental* employer; such purchases not directly related to prior service are called "permissive service credits."

Even with these "past contributions," it is unlikely the additional contributions will be sufficient to cover the increased value of the benefits because most members do not make such contributions unless it is to their financial advantage to do so. Also, because of the generous early retirement provisions in public plans, additional years of "purchased" service increase, not only the amount of the benefit to be paid, but the value of the entire early retirement benefit. Thus, the true cost to the system for the purchase of additional service needs to cover both the cost of the increased benefit directly attributable to the additional service and the cost of paying the benefit accrued without the additional service at an earlier age. This type of portability of benefits in the public sector is most commonly found among teacher plans on a state plan basis and plans within a local area. For instance, the Washington State Retirement Systems provide portability of service credits for determining retirement eligibility but not for benefit amounts between the major city retirement systems within the state.

The Legal Basis of Public Retirement Systems

A public plan is established and modified through the legislating body and approved, if necessary, by the executive. For a state retirement system, this is the state legislature and governor. The retirement plan documents, which contain all the provisions of the program, are included in complete detail within the state's legal statutes. The pension program is usually implemented and administered by a public agency and governing board.

Federal constraints: ERISA. Compared to private plans, fewer limitations are placed on public plans.[9] Except for the IRS qualification rules, members of public plans were exempted from the legal protection afforded to private plans under ERISA. Much of this relates back to the constitutional issue of states' rights and the ability of the federal government to place limits or restrictions on a state's activities. At the time ERISA was drafted, it was uncertain as to what impact the new law would have on public plans. The main concern for a state retirement system is to be able to retain its qualified plan status under the IRS code.[10] Without the qualification status, both the employer and the employee could incur undesirable tax liabilities. General nondiscrimination requirements has limited some plan design features, where it may be of interest to provide a higher or special benefit to only a selected group of employees such as judges or legislators. As long as no discrimination (higher benefits) is made toward the highly compensated groups, there are not many restrictions as to the ability to provide different benefits to, say, teachers, than to general government employees.

Federal constraints: contract rights. While public plan members may not have the rigorously defined protection of ERISA rules, the courts have served to define a much higher degree of protection in certain states. Commonly re-

ferred to as the contract rights protection, several state supreme courts have ruled that, due to a federal constitutional standard relating to contracts, the public employer is prevented from modifying the pension promise. Approximately half of the states have either a state constitutional provision or a statutory provision describing this contract right, or have past court cases that have inferred the existence of a contract with respect to the retirement program, and thus coverage under the U.S. Constitution. In the remaining states, the characterization of the pension benefits right as a contract is not well defined, or may have been rejected.

It should be noted that the promise is what cannot be modified or diminished. This means any employee hired under a retirement program has the right to earn benefits under the promise for as long as his/her employment continues. Clause 1, Article 1, Section 10 of the U.S. Constitution limits certain state powers; among these, the section provides: "No state shall . . . pass any . . . law impairing the obligation of contracts." Retirement system benefits have been interpreted as being under this contract concept. Thus, if any significant changes are to occur in a public pension plan, they usually result in a new layer of benefits applicable only to new hires, or to existing employees solely on a voluntary basis. Generally, "significant change" is interpreted to mean any reduction in future accruals, elimination of optional forms or otherwise to modify existing benefits rights without an offsetting comparable advantage.

In 1995, the Retirement Board of the Kentucky Employees Retirement System sued to try to force the General Assembly to mandate the amount of the state's contribution to the plan, and to set the contribution rate as recommended by the board based on an actuarial valuation. Their case was based on the impairment of contract theory. The Kentucky Supreme Court rejected the position that the budget bill adopted and set by the state impaired the members' benefit rights. The court acknowledged that the members had a contractual right to the benefits they were promised upon retirement, but there had been no showing that the benefits promised would be infringed by the General Assembly's failure to adopt the board's contribution recommendations.

Federal constraints: excess benefit plans. Public plans are restricted as to the size of the benefit payable by the plan, by the IRS maximum benefit limits under Code Section 415. Public plans have always had special Section 415 provisions that differed from those applied to private plans. Except in a few situations, the limitations allow higher benefits than what the private sector plans can provide. The Small Business Job Protection Act of 1996 permitted for the first time, a public agency to pay benefits in excess of the 415 limits by establishing an "excess benefit plan." Private sector employers have had this ability for quite some time.

The former Section 415 limits of 100 percent of the three-year average

compensation were eliminated for public plans in the same act. Now, only the §415 limitations for defined benefit plans remain. The maximum permitted annual benefit for 1999 is $130,000 at age 62, an amount unlikely to impact very many government-paid employees. The dollar limitation does reduce for earlier retirement ages, but the most common group that used to bump into the limitation was the public safety group, where full unreduced retirement is available as early as age 45 under a 20-year and out provision.[11]

However, after 1996, no reduction is made in the $130,000 limitation for public safety members, regardless of age. But some public plans found that the §415 limits would not permit them to provide the full benefit required under their plan provisions (state statutes), and sought federal relief which was granted by permitting public plans to elect a special grandfather provision, protecting benefits for current members, but only if they applied the lower private sector §415 limits to all new hires in the governmental plan.

Public policy influence. The political atmosphere in which governmental plans operate is another aspect of plan design that private plans rarely deal with. As with any legislative process, a well-informed group of individuals can propose and promote changes in public retirement policies, which may or may not lead to change.

Sometimes proposed changes in the public sector come from special interest groups rather than as a suggestion or recommendation from the administrative staff or the retirement board. On the other hand, the retirement board may not be in a position to recommend any changes unless they are administrative in nature. In that case, the larger issue of plan design and adequacy is left to the legislative change process. It is for this reason that many plan changes are backed by special lobbying groups, often representing employees or retirees, which results in the plan design evolving based on employee requests rather than from employer needs. This rarely occurs in the private sector, except for negotiated plans.

Of course, as with private sector plans, changes usually come with an associated price tag. Employer groups or the states themselves may not be in a position to accept the financial cost of the proposed changes. Any increase in benefits will lead to a corresponding increase in costs because of the formula introduced above, namely, $C + I = B + E$. Higher benefits increase contributions. This is sometimes overlooked when what may seem like a reasonable but small adjustment to the system at present, can later result in a significant increase in costs over the long term for all future employees. This is particularly of concern in the DB arena for two reasons. In a defined benefit plan, an increase in contributions impacts not only the current fiscal budget but all future years' budgets as well. This long-term impact can sometimes be overlooked or given less weight, with elected officials who do not look much farther than the end of their term or the next election. And where private plan sponsors can change their minds if finances are lacking

to support increased benefits, public plans rarely can reduce benefits. And because increased pension spending must come from constituent tax dollars, solving pension problems by raising contributions is generally seen as a result to be avoided if possible.

Public Pension Plan Administration

Public retirement programs are administered via governmental agencies that are typically independent of other agencies. The fiduciary responsibility for the program's administration is held by a board. The board is made up of elected, appointed and ex-officio members, and it manages the retirement program (see Useem and Hess this volume). The board usually has control over the investment policy and the actuarial assumptions. It hires the executive director, and perhaps other key staff, who in turn manages the agency staff that performs the tasks needed to administer the retirement benefits. The board may establish rules for the administration and operations of the retirement system, will approve all expenditures of the system, and have reports prepared and submitted to meet legal and other requirements. The retirement board is also the body that selects consultants and retirement staff. These include investment advisors and managers, legal and actuarial professionals, and medical advisors to assist in determining disability benefits. There have been some recent concerns expressed over real or perceived conflicts between retirement board members and vendors working for the system. Some states have implemented very strict rules on what board members and staff members may be able to accept in the form of meals and travel or other gifts from both existing and potential vendors. On the reverse side, some board members have solicited political contributions from vendors, implying support may be withheld to continue the vendor relationship, if contributions are not made.

Public Pension Plan Funding

Sources of income. Public retirement systems are financed by employer and employee contributions. As mentioned earlier, it is rare for employees to contribute to a private sector defined benefit plan, but in a state plan, the state may contribute not only for its own employees, but may also make a contribution toward the benefits of other non-state employees such as teachers. In that situation, the teachers' benefits may be supported from their contributions, the school district's contributions to the state retirement system, and the state's contributions to the retirement system. Public sector plan contributions are usually expressed as a percentage of salary rather than as a dollar amount, as is usual in private pension plans.

Governmental Accounting Standards Board (GASB) rules require an ac-

tuarial valuation of public pension funding status every two years, after which required contribution targets are set as either a fixed rate or a variable rate, based on the results of the actuarial valuation. When a system has both fixed benefits (a defined benefit program) and fixed contribution rates, the flexibility and recognition of experience fluctuations from year to year is usually absorbed by varying the length of time needed to pay for the benefit obligations. Employee contribution rates are fixed or may be tied to the employer contribution rate.

In addition to contributions, some public pension plans receive income from fees or earmarked levies. For example, judges' retirement benefits may be funded by a portion of the court filing fees. Some firefighter programs receive a portion of their income from fire insurance premiums received by the state. In such cases, income expressed as a percentage of salary is not a reliable measurement, as the source of those funds is not related to employee salaries.

Funding methods and assumptions. An actuarial valuation is performed to determine the funding adequacy of a defined benefit retirement program. In a defined contribution plan, the benefits are dependent on the contributions and the investment income, so there is no need to determine funding adequacy (in a DC program funding is the contribution; for more detail see Hustead this volume).

For a defined benefit program, the sponsor needs to be sure that the contributions and investment income will be sufficient to pay the benefits that have been promised. If this year's contributions exceed the benefits and expenses for this year, then the excess contributions can be retained in the plan's fund for future benefit payments. If no excess occurs and the cash inflow is only sufficient to cover the cash outgo, then the plan is said to be funded on a "pay-as-you-go basis." If an excess occurs and is invested, then additional income is derived from assets through investment return. If the excess contributions are computed to be sufficient to create enough assets to provide for benefits in the future, then the plan is advance funded. Nearly all public retirement programs are advance funded. However, a few supplemental benefits may be funded on a pay-as-you-go basis. Private plans under ERISA are required to be advance funded.

The most common advance funding method used in state retirement programs is the "entry age cost method."[12] Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit. The portion of this actuarial present value allocated to a valuation year is called the "normal cost." The portion of this actuarial present value not provided for at a valuation date by the sum of (a) the actuarial value of the assets and (b) the actuarial present value of future normal costs, is called the "unfunded actuarial lia-

bility." The unfunded actuarial liability is amortized as a level percentage of the projected salaries of present and future members of the system. Under this method, contributions expressed as a percentage of salary, are expected to remain stable over time, from one generation of taxpayers to another. PENDAT (1997) reports that 63 percent of the reporting public plans used the entry age cost method.

When both benefits and contribution rates are fixed, the entry age cost method allows for the experience fluctuations to be reflected in the amortization period required to fund the unfunded actuarial liability. Another cost method, the "aggregate cost method," allocates the present value of benefits not already funded by the current actuarial assets, over the expected working lives of the active members, which is usually between ten and fifteen years. Under this method, the contribution rates vary, reflecting the experience of the system since the last valuation. Another method used less in the public than in the private sector, is the "projected unit credit method." Under this funding method, the projected benefit is allocated to each valuation year by a consistent formula. Under this method the experience gains and losses reduce the unfunded actuarial liability.

Actuarial assumptions are used to project the value of benefits that will be paid in the future to active members upon their retirement, as well as how long the benefits currently being paid to retired members will continue. The economic assumptions regarding the future investment income and future salary increases can produce the greatest variation in results. The assumptions related to the movement of employees in and out of the system, the demographic assumptions, are dependent on the particular system and will not be based on as much subjectivity as are the economic assumptions. Usually, an actuarial valuation makes no projection of benefits for future employees, but focuses on the liabilities associated only with the current employees and annuitants. Those employees are assumed to then terminate employment, retire, die, or become disabled. In addition, the actuary must assume at what rate the members' salaries will increase, what postretirement increases to benefits will be, if any, and perhaps the probabilities of marriage or having dependent children. All of these assumptions are common in a private pension plan valuation as well as a public plan valuation.

One assumption related to a contributory plan is the probability a terminating member will elect a refund of his or her contributions, and thereby forfeit any rights to any accrued retirement benefits. Since private plans are not contributory, this assumption is somewhat unique to public plans. If a private sector plan did require employee contributions, ERISA requirement would guarantee some minimal employer paid benefit payment.

Another assumption more commonly found for public than for private plans has to do with the expanded retirement assumption. Since public plans often provide unreduced benefits at more than one retirement age,

or offer subsidized early retirement benefits at younger ages, there may be more than one retirement age at which a member can be expected to retire. A greater degree of flexibility and variation in the retirement patterns is experienced in the public sector. The private sector does not see as much of this, as their reduced benefits may be closer to the actuarial equivalent of the benefit paid at the normal retirement age.

The economic assumptions, the future rate of investment earnings and the expected salary increases for both individual members and the total covered payroll of the system have an important impact on the valuation of the costs and liabilities for a system. Assumptions should not be considered independently of each other, but viewed together as a group. The interrelationship of assumptions should be consistent, particularly with respect to economic assumptions. ERISA and professional standards require all actuaries to use assumptions that are reasonable and which represent the actuary's best estimate of anticipated experience.

Accounting disclosures—GASB requirements. For fiscal years beginning after mid-1996, new GASB reporting standards have been required for defined benefit pension plans reporting and disclosures. Statement no. 25 establishes standards for the measurement, recognition and display of pension expenditure/expense and related liabilities, assets, note disclosure, and, if applicable, required supplementary information in the financial reports of state and local governmental employers.

The requirements for Statement no. 25 include certain supplementary information to the financial statements regarding the funding of the pension plan. These include a schedule of funding progress, and a schedule of employer contributions. The schedule of funding progress compares the amount of unfunded actuarial liability (UAL) from year to year, and measures the progress of the employer's contributions in reducing this amount. Under most acceptable funding methods there is a UAL, however, under the aggregate actuarial cost method there is no UAL and a schedule of funding progress is not needed. The required schedule of employer contributions compares the employer contributions required based on the actuarial required contribution, or ARC, with employer contributions actually made.

GASB Statement No. 27 is effective for fiscal years beginning after mid-1997, and it is required for pension accounting by state and local governmental employers. The disclosures include the measurement of an annual pension cost (APC). The APC is equal to the employer's annual required contributions (ARCs), as actuarially determined by the funding methods and assumptions for pension benefits used for GASB purposes and an adjustment to account for prior year contributions. If the employer is required to make a contribution (APC) and does not make a contribution equal to the APC, then a net pension obligation (NPO) account is established and the computation of the APC reflects adjustments made to the NPO account, as

well as the ARC. For GASB purposes, the ARC must be calculated based on certain parameters required for disclosure purposes. The acceptable actuarial funding methods under these parameters all require the retirement benefits to be funded by the time a member exits the retirement program. Actual employer contributions based on a plan's funding policy may be different than those computed for GASB disclosure purposes, and the determination of the NPO at the end of the year should be determined based on the actual amounts received by the fund.

The UAL and the percentage funded by the actuarial value of the assets is shown in the schedule of funding progress, as well as the UAL expressed as a percentage of payroll. The schedule of employer contributions compares the ARC to the contribution amount received by the plan's fund for the plan year. Additional disclosures regarding the actuarial assumptions and methods and other items of significance are also required by Statement no. 25 for the plan's reporting.

Statement no. 27 reports on the employer's required contributions and the funded status of the plan. Notes to the employer's financial statements include the plan description and the funding policy. Except for cost-sharing plans, the disclosures also require a development of the APC and the NPO balance for the year, and a comparison of the actual employer contributions made to the APC for the last three years. Thus the changes in a plan's NPO balance from year to year can be used to measure whether or not a plan's funding status has either improved or declined during the period reported, based on the GASB parameters.

As a result of these accounting standards, two new funding measurements are now available for those reviewing a public plan's funding status. First, the funding ratio (the ratio of the actuarial assets to the UAL) is being used more and more as a funding measurement tool. Second, the NPO balance, while not as common, can also be monitored. Since most statewide pension plans are cost sharing plans, where all benefit costs are pooled among a group of employers, the APC and NPO computations are not required, and do not result in a uniform measurement tool. A plan is not a cost sharing plan if there is a single employer sponsor, or if under a pooled investment arrangement each employer has its share of the assets allocated to and its own pension costs determined separately from the other employers (nonshared).

Measurement of funding status. Regardless of the GASB reporting, consideration should always be given to how well a plan is following its own funding policy. Many state plans have funding requirements or minimum /maximum contribution rates. For example, a plan's funding policy may be to achieve a one-year reduction in the amortization period of the UAL. This is what would be expected to occur if actual experience is close to the actuarially expected experience. Almost always, the actual experience will be differ-

ent than assumed. The treatment of these differences between actual and expected experiences should be addressed in the funding policy. If the contribution rates are fixed, the only acceptable method is to adjust the amortization period of the UAL. However, the funding policy or state statute may require that while fixed contribution rates are desired, if the amortization period exceeds a certain period, say, thirty years, then the rates must be increased. Likewise, if the contribution rates reflect the experience, the funding policy will usually require the UAL to be measured over a certain period in determining how to adjust the contribution rates to reflect the changes.

Pension obligation bonds. A pension obligation bond is a debt instrument sold by a governmental employer for a special pension related purpose as in the New Jersey case discussed elsewhere in this volume (Bryan, this volume). Usually, the proceeds of the bond are used by the employer to fund all or a portion of the UAL for the pension plan. In return for using the proceeds to fund the UAL, the employer may have some special funding agreements put into place to recognize the large deposit of funds into the plan's assets. Usually, this arrangement will make a modification to the UAL contributions otherwise payable by the employer, and will recognize a portion of the investment return on the plan's funds as an additional means of income to meet future required employer contributions. The gain or loss to the employer or the pension plan benefit depends on the level of future investment returns. These arrangements are favorable to the employer when the rate on the bond debt is less than the discount rate used to determine the pension plan's UAL payments. But these cost savings can only be estimated, because the future investment returns on the plan's assets cannot be fixed. There is also the risk that the UAL may reoccur or increase due to future benefit increases, higher than expected inflation, lower actual investment returns, and other factors. A certain amount of flexibility is also lost since the debt payments are fixed, whereas the pension payments may be adjusted. The cost of issuing the bonds must also be considered. These bonds have been issued by relatively few public sector employers.

Caution is needed to avoid the appearance of arbitrage, which can lead to unfavorable tax treatment by the IRS, when compared to other governmental bonds. Some states may prohibit the issuance of a pension obligation bond. Another consideration is if the actuarial assumptions change over the period of the bond debt, which is likely over a period of time, will the changes adversely impact the decision to issue a pension obligation bond? In recent years, the market returns have caused a number of public plans to become fully funded, meaning the actuarial assets now exceed the accrued liabilities and no UAL remains. Thus, interest in these funding vehicles has decreased in popularity.

Investment Policy

The investment policy of any particular public pension plan generally depends on what the plan's objectives are, what if any statutory restrictions exist, and how much control the board has over the funds' investment decisions (see Peskin, this volume). Typically a public plan board has a fairly broad policy, based on reasonable investments given the fiduciary nature of the plan to its members. Certain states have statutes limiting the amount of the total fund assets that may be invested in equities or nontraditional investments such as venture capital (Munnell and Sunden, this volume). However, some state plans have all investment decisions handled by either a separate investment board, which may invest other state funds as well as the pension funds, or by a single trustee—the state treasurer or similar elected position. The resulting investment policy can vary depending on who actually makes the investment decisions.

Where the retirement board has full exclusive authority on making investments, within any statutory limitations, the political pressure from within government may be somewhat reduced if the same governmental official is also a fiduciary to the pension plan. In times of financial distress, state and local governments have been known to look to the public pension fund as a source of relief. This may come in the form of less than the recommended contributions, thus decreasing the funds to the pension plans and freeing up more governmental funds for what are seen as more important needs. This situation has less immediate impact due to the long term nature of pensions than, say, reducing a public service that is required on a regular basis today. In most cases, the lowering of contributions now would not impact the actual payment of members benefit payments until far into the future. The new GASB reporting rules serve to focus and highlight wherever an employer might be using this approach.

Another sometimes politically motivated approach is to have the pension plan's trust fund invest in government securities. One such example is described by Clark et al. (this volume); another example occurred during the late 1970s when the New York State legislature attempted to have the trustees invest in New York City bonds. This direct approach has not been seen much during the past decade. More recently economically targeted investments have been used, as described by Useem and Hess (this volume) and Munnell and Sunden (this volume).

Conclusion

In this chapter we have described U.S. state and local public pension systems and compared them to private plans with regard to history, structures, and key features. There are many similarities between private and public

sector retirement programs, but the significant differences also need to be recognized. On the one hand, the ultimate goal in both cases is to provide a retirement benefit. On the other hand, public plans have unique and unusual characteristics that can make analogies to private plans incomplete. Plan design features that perform essential functions for private sector plans do not always apply to the public sector.

Notes

1. In this chapter we offer certain generalizations with the understanding that there are always many exceptions to the rule. We note important exceptions where relevant.

2. A defined benefit plan is one where the benefit provided by the retirement program is a definitely determinable benefit, usually a lifetime annuity based on a formula using years of service and salary.

3. A tabulation of public service retirement plans indicates most pension formulas were based on an annuity from employee accumulated contributions and a matching pension amount funded by employer contributions, with some type of minimum or maximum benefit (1928 Seattle Public Library, Municipal Reference Division).

4. A recent survey by CalPERS indicated 17 of 66 responding public retirement systems have contribution rates set by state statute.

5. The integration of benefits allows employers to recognize the level of benefit earned under the social security program and provides a greater amount to higher paid employees, such that the combined benefits are level. A significant number of private plans still have integrated formulas but the fraction is declining due to recent changes in IRS compliance rules.

6. The term "public safety members" generally refers to police and fire employees, but may include other employees considered to be employed in hazardous duty types of employment and can sometimes include prison guards or other uniformed officers.

7. In a form rarely used, benefit payments cease once the guaranteed number of payments have been made, even if the member is still living. This is known as a "period certain only" form of payment.

8. Private pension plans are subject to certain ERISA provisions that make DROPs less attractive than in the public sector.

9. A discussion of federal legal and tax limitations on governmental plans appears in Crane (this volume).

10. A tax qualified plan is one that has meet all the applicable requirements of IRS Section 401(a) and is permitted to defer taxation of the accrual of benefits for employees and to exempt the fund's investment income from U.S. tax. One such qualification requirement is that the benefits do not discriminate in favor of the highly compensated employees IRS Code Section 401(a)(4).

11. When an employee is eligible to retire regardless of age, but dependent only on the number of years of service earned, for example, twenty years, the retirement eligibility is sometimes referred to as a "twenty year and out" retirement provision.

12. A method under which the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age(s). The portion of this actuarial present value allocated to a valuation year is called the

normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is called the actuarial accrued liability. See GASB (1994). The description of this method should state the procedures, including whether the allocation is based on earnings or service; where aggregation is used in the calculation process; how entry age is established; what procedures are used when different benefit formulas apply to various periods of service; and a description of any other method used to value a portion of the pension plan's benefits. Under this method, the actuarial gains (Losses), as they occur, reduce (increase) the unfunded actuarial accrued liability.

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