Retirement Systems for Public Employees

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Retirement systems come in many sizes and shapes, from small programs designed solely to provide normal retirement benefits to complex systems providing protection against nearly any adverse contingency that could befall an employee during his working career. In the latter portion of this chapter, various criteria will be given for evaluating such benefit structures, including broad comparisons of benefits provided by public employee retirement systems and plans in the private sector. Earlier, the chapter will consider elements of the benefit structure other than normal retirement, to complement the discussion of the previous chapter.

Employee Rights Prior to Normal Retirement

Over the years that public employee retirement systems have been in existence, normal retirement benefits have been augmented by other related benefits. Most public employee programs presently include provisions for cash payments or monthly income benefits in the event of disablement (occup-
pational or nonoccupational), death (either before or after retirement), or other severance of employment.

Disability Benefits. Protection against disability is almost universally available to public employees covered by retirement systems, once certain age and service requirements have been met. In fact, about four out of five employees have become eligible for this coverage when they have ten years of service, and about one third in the police and fire category in the United States are immediately eligible.¹

Not only do policemen and firefighters become protected by disability benefits very early in their careers, but often they are provided pensions with disablements that are not as severe as required for pensions to be paid to other classes of employees. Moreover, in many systems where a more generous benefit is provided if disability is related to duty causes, policemen or firefighters suffering such illnesses as heart disease, hernia, pneumonia, and tuberculosis are classified as duty-disabled. The difference in treatment between the police and fire employment category and other classifications of public employees has been rationalized in terms of the physical demands made upon policemen and firefighters.

Very commonly, the formulas employed to compute benefits payable following disablement are patterned after normal retirement formulas. However, disability formulas often involve additional complexities, primarily since disability retirement benefits are awarded over a much wider range of age and service than normal retirement benefits. Although an employee disabled with a relatively short period of service will probably receive a smaller benefit than one with more service, the differential is often small and occasionally nil. As an example of the latter, some systems give credit for the projected period of service from the disability date to the normal retirement date. Another method, having similar implications for an employee disabled at a relatively young

age, provides a disability retirement allowance equal to a flat percentage of salary, regardless of length of service.

The disability benefit provisions of the California Public Employees' Retirement System include an example of the latter approach. The retirement allowance for a disabled employee is generally his final average salary multiplied by 1½ percent for each year of his credited service or 331/3 percent, whichever is greater. For certain employees with limited service, only the first of these two formulas is used. In no event, however, may the disability benefit exceed the normal retirement allowance the employee would receive if he were to continue to work until age 60 with no change in his final average salary.

The disability benefits provided by the New York State Employees' Retirement System are similar to those in California, but the New York program has one feature which is not available to most California employees. This is the provision for a larger disability benefit if the disablement results from occupational causes. In such a case, a member's benefit is three quarters of his final average salary, decreased by the workmen's compensation payable to him, but increased by an annuity provided by his own accumulated contributions and by any other contributions made on his behalf by his employer under the special "take-home-pay" provisions of the New York law.

Under the New York system, a member must be unable to perform the duties of his position to qualify for the disability retirement allowance. This general type of definition covers the majority of public employees in the United States and Canada. A more stringent requirement—the inability to perform the duties of any position—is found in California and

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2 For illustrative purposes, specific reference will be made in this chapter to the benefit provisions for general employees (other than policemen, firefighters, and other special employees) covered by the California and New York state systems, the two largest nonfederal public employee retirement systems in North America. To augment the descriptions given here as to the California system, it will be helpful to refer to a description of its benefits as distributed to its members, which is reprinted in a somewhat condensed form in Appendix B.
some other systems. Some systems leave the definition of disability to the discretion of the board without further guidelines.

Regardless of the particular definition a system might have for disability, the question of whether or not a member is disabled often remains subject to differing judgments. For this reason, the disability provisions of a system are in many ways the most difficult to administer. If the decision is made by a board also having certain fiscal responsibilities for the system, a balance between respect for the funds of the system and sympathy for the member can be expected. However, if the determination of disability is made by individuals or boards whose primary association is with the membership, with little or no responsibility for the fiscal integrity of the system, overly generous benefits may be awarded. Obviously, the more clearly the definition of the disability is drawn in the governing legislation, the smaller is the problem of administrative leeway in interpretation of the law.

Death Benefits. Essentially all public employee retirement systems will refund an employee's accumulated contributions upon his death. The payment is made to a beneficiary either named by him or designated in the system's laws and regulations. Although not quite so prevalent as disability benefits, provisions for additional death benefits are widespread. These benefits may take the form either of a lump-sum payment supplementing the member's accumulated contributions or of a monthly retirement allowance to the spouse or other beneficiary of the deceased member.

The lump-sum payment may be strictly related to salary, similar to group life insurance coverage. On the other hand, a significant number of systems provide a lump-sum payment which is related to and often matches the accumulated amount of the employee's contributions at the time of death. In several systems, in lieu of taking a lump-sum payment including the accumulated employee contributions, the beneficiary may elect to receive a monthly benefit.

The provision of a monthly benefit to the beneficiary of a deceased member evolves logically from the normal retire-
ment provisions. As mentioned in the previous chapter, most systems allow a retiring member to choose a reduced monthly amount instead of his regular retirement allowance so that a benefit will continue to his beneficiary following his death. For an employee who is in ill health at the time of retirement, this provision is of substantial value. Many systems recognize this value and make available a modification of the provision prior to retirement. If a member of such a system dies while eligible for normal retirement, his benefit is computed as if he had actually retired. If he had elected an optional benefit to be continued to his beneficiary, payment is made to the beneficiary in accordance with the option. In some systems, the continuation option is automatic when a member dies in such an instance; the beneficiary has the right to monthly payments even if the employee did not elect that option. In such an instance the spouse of the employee is often designated the beneficiary by statute, so that this type of benefit is often called a spouse's benefit or widow's benefit. The age or service boundary at which the employee becomes eligible for this benefit can prove severe in some instances, causing some systems to extend this provision to members who are not otherwise eligible for normal retirement. In most systems the beneficiary must forgo the lump-sum payment otherwise payable in order to receive the monthly benefit. Since the monthly benefit is related to the total benefit the employee has accrued, it is generally worth considerably more than the lump-sum payment, which usually is merely the employee's contributions accumulated with interest.

The California Public Employees' Retirement System provides examples of many of the forms of death benefit available under public employee systems. The basic death benefit payable in behalf of all active members is a lump sum equal to one month's salary for each year of contributing service, up to a maximum payment of six months' salary. To this is added the member's contributions accumulated with interest. In lieu of this basic death benefit, the beneficiary of an active member who dies after age 55 with 5 years of credited
service may choose a monthly allowance of one half of the normal retirement allowance the member would have received had he retired immediately prior to his death. In addition, a death benefit of $500 is provided for retired members.

For members of the California system not covered by social security, an additional survivor benefit is provided. This benefit is similar to the social security family benefit paying specific monthly amounts to widows and dependent widowers, children and parents. This benefit requires from each employee an additional $2 of monthly contributions which cannot be refunded, paralleling the nonrefundability of the social security tax. The coverage was made available in 1959 to many California employees not then covered for social security. Those who chose the California coverage could not later drop it nor could those refusing it later be covered. The coverage has been mandatory for all employees hired more recently into many positions not covered by social security.

There is no benefit under the New York State Employees' Retirement System which compares with the United States social security family benefit program. In other respects, however, there are similarities between the death benefits under the New York and California systems. The lump-sum benefits payable on behalf of deceased members in New York are computed by essentially the same formula as that used by the California system. A benefit is also available to the beneficiary of an employee who dies while eligible for service retirement. Some aspects of the death benefit provisions are more generous in New York than in California. The usual lump-sum benefit in New York is $20,000 or three times the deceased employee's annual salary, whichever is smaller. In addition, the New York system provides a larger benefit to the beneficiary of an employee who dies from injuries sustained on his job. The beneficiary of such an employee receives a pension equal to one half of the employee's final average salary, reduced by any workmen's compensation payable. In addition, the beneficiary receives a cash
payment of the member's accumulated contributions and any employer contributions accumulated in the employee's behalf under the system's "take-home pay" provisions.

**Early Retirement.** Most retirement systems are oriented to providing a certain level of benefit for employees upon their "normal retirement." While an explicit statement to this effect may not be made, the concept of a date at which a full benefit is available, using the basic retirement formula of the system, is often implied. In some instances, no retirement benefits are available prior to this date except in the event of disability. More commonly, though, provisions are made for early retirement, allowing the employee the right to a reduced benefit commencing prior to the date he would have been eligible for the full retirement allowance.

In most situations, an employee who takes advantage of an early retirement provision will not have earned the full benefit to which he would be entitled at his normal retirement date. Under most early retirement formulas, the benefit he has actually accrued will be further reduced to make the amount payable actuarially equivalent in value to the accrued benefit, the latter value being calculated as if payments were to commence at the date he would first be eligible for normal retirement. For example, under the California system, a man who has accrued a benefit of $100 per month, to start at age 60, would receive only $70.62 per month if he retires at age 55. In some systems the factors used for this reduction are set arbitrarily and are not necessarily tied to the basis adopted by the actuary for valuing the retirement benefits.

Where more precise actuarial equivalents are used, however, the factors for men and women will generally differ. In the example given in the previous paragraph, a woman retiring at age 55 would receive $73.02. It is easy to reach the erroneous conclusion that the woman should get less than the man, rather than more, owing to her expected longer life. However, the relative values of the benefits commencing

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3 See p. 43.
immediately and those deferred 5 years are what govern. For a woman, with a longer life expectancy, the payment of 5 additional years of benefits does not add as much, proportionately, to the expected total period over which payments will be made as such an addition does for a man. Therefore, the percentage reduction for a woman need not be as large as it is for a man.

To qualify for early retirement benefits, an employee must meet certain requirements as to age, period of service, or both. Common requirements in this respect are age 55 and 25 years of service, but many variations exist. The California system, as an example, makes early retirement available at age 55 for an employee who has 5 years of service. It is important to understand the close relationship that exists between vested benefits (see below) and early retirement benefits. Where both are available to an employee, the two are essentially identical in value so long as the method of calculating the early retirement benefit approximates an actuarial reduction of the accrued benefit. The basic difference is that a vested benefit provides for a deferred commencement of monthly payments while the early retirement benefit provides equivalent, and therefore reduced, monthly payments starting immediately.

Vested Benefits. Only a very small percentage of employees remain on the payroll of their first employer until they retire. Those who become eligible for participation in the organization's retirement system but terminate employment before becoming eligible for retirement benefits would forfeit any retirement benefits which might have accrued unless a provision is made to avoid the forfeiture. Such a provision is called a vesting provision.

In rare instances vesting will result in an immediate benefit, such as a lump-sum payment of employer contributions in an amount matching the accumulated employee contributions. More commonly the vested benefit is a retirement allowance commencing at the normal retirement date in the amount accrued to the date of severance of service. If the normal retirement benefit is based on final salary at retire-
ment, the vested benefit is generally based on a correspond-
ing final salary determined at the date of termination of
employment. To be eligible for a vested benefit, an employee
must meet certain requirements as to age, service, or both.
For example, an employee must have worked for five years
under the California Public Employees' Retirement System
to qualify. Under the New York State Employees Retirement
System, ten years of service, including five years of member-
ship service, are required before vested benefits are available.

In several provinces of Canada, pension benefit acts are in
effect which, among other things, require vesting for employ-
ees who are age 45 and have 10 years of service. One signifi-
cant change has been brought about in the vesting provisions
of Canadian plans as a result of this legislation. Where these
laws apply, an employee who has qualified for vesting in a
contributory plan cannot withdraw his contributions upon
termination of employment and thereby forfeit his vested
rights. Without this restriction, contributory plans generally
have conditional vesting, vesting which occurs only if the
employee leaves his accumulated contributions with the sys-
tem at termination of employment. Any measurement of the
financial effect of a vesting provision is thus substantially
affected by the likelihood of forfeiture of vesting by with-
drawal of accumulated contributions.

In this regard, a study made of the United States Civil
Service Retirement System showed that over three quarters
of those eligible for vesting forfeited their rights to a deferred
benefit by withdrawing their contributions upon termination
of employment. A large number of these forfeitures were of
relatively minor amounts of accrued benefits, since the Civil
Service System requires only 5 years of service for vesting.
Nevertheless, even among those with 20 years of service, over
one third of the terminating employees took their contribu-
tions instead of a future benefit. Their proclivity for taking
the "bird in the hand" was further shown in a separate study

4 Joseph Krislov, "Forfeiture of Civil Service Retirement Benefits," Social
of the same system which revealed that among the latter group—those with 20 years of service at termination of employment—the value of the pension forfeited by withdrawing contributions was about twice the amount of employee contributions withdrawn. 5

A form of vesting that is receiving increasing attention involves an employee’s transfer from one public employer to another. In states and provinces having conglomerate systems encompassing many public employers, coverage will automatically continue without change if both the old and the new employer are in the system. Even where the employers are in different systems, it is not uncommon for systems within any one state to have reciprocity agreements in effect. Thus, an employee changing his employment and moving between two systems having such an agreement maintains his credits in the original system, regardless of his age and service, provided his contributions are not withdrawn. In systems covering public teachers, similar provisions allow teachers the opportunity to acquire credit in some states’ systems for previous service as a teacher in another state.

Most of the reciprocity agreements described above will not provide an employee with retirement benefits comparable to what he would have been granted had all his service been with either system or had the systems been consolidated. Where benefits earned in a previous system are frozen under a reciprocal arrangement, they are commonly based on the final salary of the employee prior to his leaving the system, a salary nearly always lower than his final salary in the system from which he ultimately retires. Thus, an employee transferring between two systems with identical benefit formulas would have a smaller total benefit than if he had worked entirely in one or the other of the systems. In rare instances steps have been taken to correct this inequity, but the vast majority of reciprocal arrangements suffer the shortcoming illustrated. In a larger sense, this same shortcoming is found

in nonreciprocal situations, where an employee’s benefits at retirement become the sum of two or more independently earned vested benefits, only the last of which reflects his true final salary.  

A similar problem arises where a benefit formula has a graduated feature. For example, one type of benefit formula provides 1 percent of final salary for the first ten years of service, 1.5 percent of final salary for the next ten years, and 2 percent for the balance. If an employee has broken service with two or three systems having similar programs, his total benefit will always be less than the amount that he would have received had he remained with one system for the entire period.

Various solutions have been proposed for these problems. One is for each system to calculate a benefit according to its own benefit formula, assuming all the employee’s service had been in that system. Each system then pays a benefit equal to its calculated total benefit multiplied by the percentage of the employee’s total service which was spent in that system. Thus, if the benefit structures of all of the systems are identical, the employee receives as a final benefit the same amount he would have received had he remained with any of the systems for his entire career. Also the cost of the benefits would automatically be apportioned among the systems according to the periods served with each.

An obvious alternative to such an elaborate scheme is the conglomeration of the systems involved so that transfer of employment between the given employers will not require that an employee change from one retirement system to another. A related advantage of conglomeration is that it reduces the likelihood of an employee’s retiring with a full benefit under a system designed to allow retirement at a young age, and then earning a second retirement benefit in another system.  

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6 For an expanded treatment of this question, See Dan M. McGill, Preservation of Pension Benefit Rights (Homewood, Ill.: Richard D. Irwin, Inc., 1972), Chapter 7.

7 See p. 20 for other comments on conglomerate systems.
Termination of Employment without Vesting. Essentially all public employee retirement systems provide for return of an employee's contributions with interest if his employment is terminated before he becomes eligible for a vested benefit.

Occasionally the interest portion is not paid to employees who do not meet certain service requirements. In even rarer instances employee contributions are only partially returned or not returned at all, in accordance with the provisions defining the system's benefit structures.

**BENEFIT COMPARISONS**

The objective of any retirement program should be to provide benefits which, along with a retiree's other retirement income, will be adequate for his postretirement needs. The key word is "adequate." There is no consensus as to the level which brings about adequacy. Beneficiaries and potential beneficiaries seldom accept existing levels as "adequate," so there is a constant striving to increase the level of benefit. For the employer, a prime consideration is the fiscal requirement the plan will entail. Perhaps the only objective guide available is an analysis of what is being done by other plans of a comparable nature.

The principal element of such an analysis will be a comparison of normal retirement benefits. A complete analysis, however, will also include comparisons of the other forms of benefits discussed earlier in this chapter, and of the provisions for membership qualifications and employee contributions discussed in Chapter 2. Any comparisons between public employee retirement systems and private plans must be made with proper recognition of the intrinsic differences between the two types of employment. These differences include the lack of federal old-age benefits for many public employees, the limited extent of collective bargaining in public employment, the preponderance and compulsory nature of contributory plans in public systems, the effect of civil service on tenure of employment, the special hazards of firefighting and police work, and the unavailability to public
employees of stock options, profit-sharing, and like benefits.

Many other considerations affect benefit comparisons in general. Some benefits are simply not comparable in the same frame of reference. For example, comparisons between benefit formulas involving career average salaries and final salaries are most difficult.\(^8\) The availability of social security is a major factor, and its effect on the total benefit package is difficult to measure in objective terms. A similar complication arises when benefits such as group life insurance and disability income insurance are provided outside the retirement program. The degree to which a benefit is utilized can vary significantly between groups of employees, causing one type of benefit, such as a vested benefit, to be far more valuable in one group than another. Finally the comparisons must be constantly monitored to reflect the ever-changing benefit structures under review. This last comment is particularly true of the comparisons to be made in the balance of this chapter, which were developed from statistics chosen to present a snapshot of benefit status in the mid-1960s. Trends since that time have undoubtedly altered some of the relationships and will continue to do so.

Retirement Benefits. The most obvious feature to compare in pension plans is the amount of benefit paid to a person who is retiring. Unfortunately, it is difficult to make such comparisons on a precise basis, primarily because the benefit amount is the end result of many variables, such as the benefit formula, the salary base from which benefits are calculated, and the eligibility requirements for retirement. Nevertheless, some statistics are available to make a rudimentary comparison.

In 1965, the Social Security Administration made a study of 151 retirement systems covering over three million public employees in the United States, most of whom were also

\(^8\) This problem is discussed in some detail and a solution presented in "Pension Formula Summarization: An Emerging Research Technique" by Arnold Strasser, *Monthly Labor Review*, April 1971, pp. 49-56. Other aspects of statistical comparisons of retirement benefits are also discussed in this article.
covered for social security benefits. This study disclosed that the median retirement benefit available from the systems to their participants with 30 years of service and with final salaries in the $300–$500 per month range was 36–38 percent of salary. A study of 50 selected private pension plans for salaried employees in the United States at about the same time showed a median benefit for employees with a $400 monthly salary of $120, or 30 percent of salary. A similar study was made by a leading management consulting firm in 1965, covering 490 companies in 33 major industries in the United States. This study revealed that the median employee at the clerical level received a pension of 32.5 percent of his final salary. Where only contributory plans were considered, the median benefit for the clerical employees was 34.5 percent of salary. In both instances, this was after 35 years of service when a larger benefit would be expected than after 30 years of service. For the salary and service range covered, then, it appears that a somewhat larger benefit is paid to a public employee upon retirement than to his private counterpart.

The results are much more conclusive when the comparison includes retirement systems for those United States public employees not covered for old-age benefits under social security. Under the governing federal statutes, political units have the option of choosing social security coverage or not, including the option to terminate coverage once it has been elected. A survey by the U.S. Census Bureau in 1967 indicated that approximately 4.4 million out of a total of 7.1 million employees of state and local governments, or about


12 It should be emphasized that only benefits are being compared, not the relative generosity of the employers. If the latter were considered, one of the factors that would have to be weighed is the fact that nearly all public employee retirement systems are contributory, while the employer pays all the cost in most private plans in the United States. The wage levels may also be different.
five of every eight employees, were then covered by the federal Social Security Act. 13

A study by the Social Security Administration of public employee retirement systems covering employees who were mostly ineligible to accrue social security benefits 14 indicated a level of benefits under these systems significantly higher than the benefits under systems for employees having social security coverage. The range of median benefits for public employees in groups excluded from social security, including policemen and firefighters, was 54–58 percent of final compensation. The corresponding range given earlier for groups largely covered by social security was 36–38 percent. Although the employees in the former category (and their employers) are saved the expense of meeting the social security payroll tax during their public employment, they are also prevented from earning the corresponding social security benefits. For the typical employee at this salary level, the old-age benefits under social security would exceed the differences in the medians given—if retirement occurs at age 65. However, social security benefits are not available at age 60 or earlier, when most policemen and firefighters are eligible for normal retirement. A further complication in such a comparison of benefits is the significant percentage of public employees who gain social security coverage by means of a second job occurring concurrently with their public employment (moonlighting) or after retirement from public service. 15

Comparable figures are not available for the Canadian private sector. However, based on a sampling conducted by the author, Canadian public employees accrue a significantly

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15 A 1971 survey showed persons whose primary employment was in state and local public administration to have the highest multiple jobholding rate (two or more jobs) of all the industry groups classified. United States Bureau of Labor Statistics, Multiple Jobholding in 1970 and 1971; Special Labor Force Report 139, 1972.
higher level of benefits under their retirement systems than is
provided in the United States. The median benefits in
Canada comparable to the figures given earlier in this section
are about 60 percent of final salary.

Disability Benefits. In contrast to the nearly universal
availability of disability benefits in public employee retire­
ment systems, about one third of the group of 490 corporate
pension plans surveyed in 1965 did not provide this benefit.
The separate study of 50 very large private plans showed
more than one fourth of the plans without disability benefits,
tending to substantiate the discrepancy between public and
private plans. Moreover, this latter study showed that where
disability coverage was provided in the private plans, a longer
period of service usually was required before an employee
was protected than was the case for employees of public sys­
tems. For example, only 22 percent of the 50 private plans
provided disability benefits when a 25-year-old entrant
reaches 35, compared with a coverage of more than 80 per­
cent of the corresponding public employees. In all instances,
these comparisons are of the retirement programs themselves,
and do not take account of any disability benefits provided by
separate insurance arrangements.

Survivors' Benefits. The difference between private and
public employee systems is even more pronounced in the area
of monthly benefits for surviving dependents of active em­
ployees. The survey of 490 private plans indicated that less
than 15 percent of the plans provided some form of monthly
pension to the surviving dependent of a deceased employee.
Similarly, of the 50 large corporate plans in the separate
study, only 24 percent offered this type of benefit.

On the other hand, provision for monthly allowances to
beneficiaries of deceased employees is widespread among
public employee retirement systems in the United States and
Canada. More than 70 percent of the participants in such
systems are in systems providing benefits in the form of
monthly payments to the survivors of active employees. How­
ever, the age and service requirements to be met as a condi­
tion of payment of such benefits are substantially less
stringent among employees not covered by social security. Thus, while only about 10 percent of the public employees in the United States who are covered by social security and have 15 years of service are also eligible for survivors' benefits under their own systems, those who are not covered by social security are almost universally provided survivors' protection under their systems after that much service. This same high level of protection is also provided for Canadian public employees.

**Vested Benefits.** Although a large majority of public employees are in systems which provide for vesting prior to normal retirement if age and service requirements are met, a relatively low percentage of police and fire retirement systems offer this coverage. Specifically, less than 40 percent of the policemen and firefighters in the United States and Canada are in systems providing vested rights prior to normal retirement. In contrast, over 70 percent of all other public employees qualify for vested benefits after 20 years of service, the figure rising about 85 percent with 25 years of service. It is difficult to pinpoint the reasons for this distinction, but certainly a primary one is the career concept inherent in the work of a policeman or firefighter. Career-oriented employee groups occasionally object to vesting provisions, contending that vested benefits credited to employees who terminate before retirement are costing the employer money that should be saved and added to the benefits of the employees who remain until normal retirement. This factor, coupled with relatively young retirement ages, may make vesting provisions less important in a system covering police and fire personnel than in one for general employees.

The general subject of vesting and its availability, especially in private plans, has received considerable attention in recent years. A number of legislative proposals in the U.S. Congress have been made which would, in one form or another, establish certain requirements as to vesting for private plans. With this activity as a backdrop, vesting has become increasingly available to employees covered under private pension plans in the United States. Statistics indicat-
ing the prevalence of vesting are somewhat incomplete, but those available appear to indicate that private plans have caught up with and passed public employee retirement systems, which had a substantial head start in this respect. As an indication of this, Table 3 provides a comparison of statistics from various sources. The figures given in this table for Canada are probably low, particularly in the area of private plans. This is because they were largely based upon statistics gathered before the full effect was felt of recent provincial legislation imposing mandatory vesting provisions.

### TABLE 3

*Employees Eligible for Full Vesting, Mid-1960s*

<table>
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<tr>
<th>Years of Service</th>
<th>U.S.: Public Systems</th>
<th>Private Plans</th>
<th>Canada: Public Systems</th>
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<td>81</td>
<td>70</td>
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Source: Public Systems: Social Security Administration Research Reports No. 15 and No. 23. These figures assume employees enter service at age 30.

U.S. Private Plans: Griffin & Trowbridge, *Status of Funding under Private Pension Funds* (Homewood, Ill.: Richard D. Irwin, Inc., 1969), Table 3–8. These figures may overstate the availability of vesting somewhat, since joint labor-management plans with less prevalent vesting are underrepresented.