

Retirement Systems for Public Employees

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Chapter 3

Normal Retirement Benefits

A RETIREMENT SYSTEM exists solely for the purpose of providing benefits. A system's array of benefits may be referred to collectively as its benefit structure. The foundation of that structure is the benefit provided to members of the system when their working careers are completed. Such benefits—the normal retirement benefits—are the subject of this chapter. The next chapter will deal with other types of benefits provided by public employee retirement systems.

In a few plans, everyone who qualifies for normal retirement receives the same benefit amount. However, in order to produce a more equitable pension, most plans use benefit formulas which vary the pension at retirement with the amount of service credited to the retiring employee and with his level of compensation. In some plans a maximum level of benefits is reached by a person who retires after a specified number of years of service, and a proportionately reduced benefit is provided for employees retiring with less service. The same effect is achieved in other plans by accruing units of benefit for each year of credited service up to a specified maximum. In many plans no maximum exists and additional benefit units accrue as long as the employee works.

TYPES OF BENEFIT FORMULAS

One of the earliest public employee retirement systems in the United States was the New York State Employees' System. The benefit structure used by that system at its establishment was followed by many other public employee retirement systems in the United States. The philosophy underlying that structure was summarized in a report of the Commission on Pensions of the State of New York in 1920:

The cost of the system should be concurrently shared by State and employees. . . . Employees should make contributions . . . computed to be adequate to provide approximately one half the service benefit, and . . . the other half of the service benefit should be provided by the State. The . . . contributions of each employee should be held for the sole use of the contributing employee. . . . At retirement, the employee should receive the actuarial equivalent of the contributions made.¹

Later in the report these general statements were converted to specifics, which still govern some of the contributing members of the system:

The retirement allowance granted upon service retirement consists of the pension granted by the State and an annuity provided by the contributions of the employee. The pension and annuity are approximately equal in most cases, and together provide for the average employee a total allowance of about half the final compensation

1. Allowed by the State: A pension of $1/140$ of the final compensation [average compensation of the last five years of service] multiplied by the total number of years of service rendered prior to the date of retirement.
2. Provided by Employee: An annuity of approximately $1/140$ of the final compensation multiplied by the number of years of service rendered while the employee was contributing to the retirement plan.
3. Additional Allowance by the State to Present Employees: An

¹ *State of New York, Report of the Commission on Pensions, March 30, 1920* (Albany, New York: J. B. Lyon Co., 1920), pp. 21-22.

additional pension of $1/140$ of the final compensation multiplied by the number of years of service rendered prior to the establishment of the retirement system. This benefit will provide the annuity which the employee would otherwise have provided by past contributions on account of this service.²

This formula³ resulted in a mixture of what would currently be called a *defined benefit* plan and a form of a *defined contribution* plan (the latter is sometimes called a *money purchase* plan). The annuity⁴ portion of the retirement allowance is derived from the *defined contribution* of the employee, the accumulation of which is converted to its actuarial equivalent in monthly annuity. This annuity is supplemented by a pension, provided by employer money, in an amount directly related to the salary and service of the retiring employee. Thus the pension portion of the formula is categorized as a "defined benefit" plan.

For a substantial majority of employees covered by public employee retirement systems in the U.S. and Canada, retirement benefits are computed on the basis of defined benefit formulas. In many instances, this type of formula has evolved over the years from a defined contribution approach. An example of the evolution is found in the California Public Employees' Retirement System, one of the largest public employee systems, with over 400,000 members.

When originally established in 1931, the California system provided for employee contributions similar to those of the original New York system and the present New Jersey system (see Table 1). The employer portion of the benefit matched in pension what the accumulated contributions of the em-

² Ibid., p. 24.

³ The 1920 New York formula has been phased out in recent years, as a result of changes which caused the New York State Employees' Retirement System to become noncontributory for most of its members.

⁴ Some of the terms used in the New York report have acquired specialized meanings which are now in common use in public employee retirement jargon. Following are some abbreviated definitions:

1. *Pension*: bought by the employer.
2. *Annuity*: bought by the employee.
3. *Retirement allowance*: the sum of pension and annuity.

ployee provided when converted to an annuity. In 1947 the law was amended, leaving the pattern of employee contributions basically unchanged but converting the total retirement allowance to a defined benefit basis. If the goals of the new program were precisely met, the contributions of an employee whose entire service was under the formula would accumulate at retirement to the amount necessary to provide one half of the retirement allowance, the employer being responsible for the balance. However, even if these goals were not met, the total benefit payment was still as scheduled, and the employer had to provide whatever pension was necessary to supplement the benefit provided by the accumulated employee contributions. This might require a contribution of the employer which more than matches the employee's contributions, or it could require less than matching. In any event, the employee could plan his retirement finances around the level of benefit which he had been led to believe would be his. The final stage in the evolution took place in 1971 in connection with an improvement in the benefit level. At that time, the employee contribution rate was changed to a uniform 7 percent of salary from a schedule graded by sex and by age at entry.⁵

The liberalization of benefits referred to in the previous paragraph brought the basic benefit under the California system up to one half of final salary upon retirement at age 60 with 25 years of service. The basic benefit is reduced by \$2.67 per month (or somewhat less for low-paid employees) for each year the retired employee was covered by social security. Anyone with at least 5 years of service can retire at age 60, but if his service is other than 25 years, his benefit will be proportionately increased or reduced. For comparison, the New York system provides a retirement benefit of half salary for an employee of the state who retires at age 55 with 25 years of service, with corresponding reductions for persons with lower periods of service. These two systems cover several

⁵ For employees with social security coverage, the present 7 percent rate applies to salary in excess of \$400 per month, the rate being 4.67 percent on the first \$400 of monthly salary.

hundred thousand employees each and between them provide benefits to about 10 percent of the total nonfederal public employees covered by retirement systems in the United States and Canada. It is important to note that the benefits provided by these two systems are more generous than those of many other public employee retirement systems.

Defined Contribution versus Defined Benefit. The distinction between a defined contribution and defined benefit plan is not always readily apparent but can be of vital importance. The difference between the original California and New York systems illustrates this. Both systems embraced the concept that a portion of the total benefit at retirement would be provided by converting the employee's accumulated contributions into an annuity. The employee contribution rates were set to develop the desired annuity so long as salary growth and interest earnings were experienced as assumed. Both systems also were designed to have the employer purchase a pension of an amount equal to the annuity. In the original California plan, the matching was to be precise.

If the annuity were greater or less than the original objective, the pension would be correspondingly changed. In the original New York plan, on the other hand, the pension was specifically defined to be the desired amount. The difference in results between the two methods occurred when interest earnings or an employee's salary history differed over the years from the levels anticipated in setting his contribution rates. Under such circumstances, the employee's annuity would not equal the amount the program was designed to provide. Despite this, the objective of the original New York formula would still be met by the pension, since it was calculated as a defined benefit; only the annuity, on a defined contribution basis, would stray from the mark. Under the original California system, where the employer-paid pension at retirement was set equal to the annuity provided by the employee's contributions, when the annuity was off (as it nearly always was), so also was the pension.

This example illustrates one clear-cut advantage of a

defined benefit formula: It focuses upon the major purpose of a retirement system—providing benefits. A defined benefit formula fosters employee acceptance and appreciation for a program of retirement benefits, because the projected benefits are easily estimated. In addition, the benefit formula can be more precisely tailored to fit the objectives of the program. For example, many systems use a progressive benefit formula, one which provides a specified percentage of salary as a retirement benefit for each of the first 10 or 15 years, and a higher percentage for each of the subsequent years of service. This type of formula gives a premium for long service with the employer and is only feasible when a defined benefit formula is used. Similarly, only by the use of a defined benefit formula can minimum benefits be provided, to assure that persons meeting certain age and service specifications receive a specified level of benefit regardless of what they would otherwise receive according to the regular benefit formula.

A defined contribution formula also has certain intrinsic advantages. In the first place, insofar as it is applicable to annuities derived from accumulated employee contributions, it is obviously equitable to the employee. Where the employer-purchased pension is also on a defined contribution basis, the employer has a firm fix on his commitments to finance the retirement program. This approach also instills and reinforces a sense of employer-employee partnership in providing the retirement benefits. A defined contribution formula of this sort further facilitates an equitable and understandable provision to vest all or a portion of an employer's contributions upon an employee's termination prior to retirement.

A major disadvantage of a defined contribution formula is that a uniform rate of contributions for all employees is inherently incapable of meeting most benefit goals, such as those of the original New York report with respect to the annuity to be purchased from accumulated contributions. Instead, the contribution rate must vary by age, sex, and sometimes occupational class. A schedule of contributions of

this type is used by the New Jersey Public Employees' Retirement System (Table 1). The need for this type of schedule is not always clear to the employees making the larger contributions but is based on elementary actuarial principles.

Over the years, interest on an employee's contributions is accumulated and added to the contributions themselves. At his retirement, the total is converted to an annuity. The interest portion of the accumulated total contributions for an employee with a long period of participation in the system is relatively large; the interest portion for an employee with a short period of participation is relatively small. This is because the contributions made in each of the earlier years of an employee's career earn more interest than those made near the end. If the annuity is to be directly proportionate to the period of service, as the New York formula calls for, a larger percentage contribution is required for an employee entering service later in life, to make up for the loss of long-term interest on his contributions. Hence, the variation in contribution rates by age.

In converting the accumulated employee contributions at retirement to an annuity, the differences in mortality between men and women (and, occasionally and to a much lesser extent, between occupational classes of employees) may be recognized. Since women have a longer life expectancy than men, a larger fund at retirement is required to support the same annuity benefit. Thus, the variation in contribution rates by sex.

The rates of employee contribution may be geared to produce annuities proportionate to the final salaries of the employees, rather than to their salaries over their entire working career. If this is done, future salary increases should be anticipated. The salaries of clerical employees tend to increase by age and tenure, for example, while wages for hourly employees are largely independent of age. For this reason, the contributions needed from clerical employees in the early years of their careers might represent a higher percentage of earnings than those needed from hourly employees, in order to provide sufficient funds at retirement to

reflect the larger expected salaries of the clerical employees at that time. Consequently, some systems require higher contributions from clerical and administrative employees than from certain other classes of employees, such as laborers.

Career Average versus Final Salary. Many systems, especially smaller ones, use a defined contribution formula for determining a portion of the total retirement allowance. This is accomplished by converting accumulated employee contributions to annuities at retirement. This approach was once quite common but is becoming less popular. For determining the remainder of the retirement allowance, the employer-paid pension, the defined contribution method is even rarer. Its declining popularity in both instances is closely related to its tendency to produce retirement benefits which are disproportionately weighted by the salary history of an employee early in his working career. Because of this, the defined contribution method has characteristics similar to those of a defined benefit formula using a *career average salary* method.

In a typical formula employing career average salaries, a unit of benefit based on the salary earned during that year is credited for each year of service, the total benefit being the sum of such units. While a few public employee retirement systems use such a method, the vast majority use a *final average salary* method. Under the final salary method, the benefit is computed by multiplying the final salary by the product of the benefit percentage and the years of credited service. The final average salary is usually defined as the compensation earned by the retiring member during a relatively short period of years (commonly three or five) either at the end of his working career or at the high point of his earnings. In periods of rapidly rising wages, the shorter the period used for the average, the less the average is brought down by the inclusion of earlier, low salary years. For this reason, in plans using a final salary formula, there is continuing pressure from employee groups for a reduction in the length of the period used in the final salary base, as an indirect means of raising benefits.

Some systems have gone to the extreme of defining final salary as precisely the salary of the employee on his date of termination. This technique is particularly applicable to police and fire systems, where the rank and salary status of an employee is generally clearly defined. Final rank salary certainly reflects final compensation patterns accurately. However, it also risks the artificial inflation of pension benefits by means of substantial promotions given immediately prior to retirement or by the heaping of vacation, overtime, and other supplemental pay into the final salary. Specific legislation has been enacted in New York state to prevent this type of abuse.

Annuity Conversion Rates. In many public employee retirement systems, a participant's contributions, accumulated with interest to his retirement, are converted to monthly annuities which are added to the pension to comprise the total retirement allowance. Where this is the case, the schedule of rates at which the contributions are converted into annuities is a matter of great consequence to the retiring employee. In order to put into focus the issues involved in establishing such a schedule, the criteria to be met by a schedule of conversion rates must be reviewed.

The conversion of accumulated contributions to an annuity is comparable to purchasing an annuity from an insurance company. The conversion or purchase rate for a retiring employee is based on an assumed interest rate and an assumed longevity. This assumed interest rate is usually based on an estimate of the interest rate likely to be earned by the system in the future. The assumed longevity typically varies by age at retirement and by sex. Younger retirees are assumed to live longer than older retirees, and women are assumed to live longer than men. Hence, a conversion rate schedule usually will provide a higher annuity for each \$1000 of accumulated contributions to a retiring man who is age 65 than to one who is age 60, and a higher annuity to a retiring man than to a woman the same age.

An equitable schedule of conversion rates might thus be defined as one which leaves the total funds of the systems in balance before and after converting contributions into

annuities, regardless of the longevity of the retirees or the interest earned on the system's funds. Consider a group of annuitants who retire the same day and whose accumulated contributions are placed in a hypothetical savings account, which is augmented only by interest and depleted only by payment of the group's annuities. Ideally, the aggregate level of annuity payments to the group would be set so that the savings account would be fully depleted by the last payment made to the last surviving annuitant in the group. It is not statistically possible to predict interest and mortality rates with sufficient accuracy to meet such an ideal. Nevertheless, the goal can be met approximately, particularly if adjustments are made in the rates from time to time to correct for previous inaccuracies. The system's funds can be treated much the same as if the system were a mutual life insurance company whose goal is to pay out, in the long run, all of the accumulated employee contributions in the form of annuities.

Unfortunately, certain practical considerations can frustrate the attainment of the ideal. Many systems are too small to achieve the proper spread of risk. The ideal requires statistical records to be maintained in sufficient detail to allow accurate measurement of the appropriateness of the conversion rates. This can be beyond the technical capabilities of some systems. In addition, a change in conversion rates may be resisted simply because of the corresponding change in the total benefit payable. Nevertheless, if conversion rates are to remain equitable, rate changes reducing future annuities will occur if annuitants' life expectancies increase. Additional interest earnings may offset improved longevity on occasion but cannot consistently do so.

Modifications in annuity conversion rates generally affect all subsequent retirements, in order to reflect current experience promptly. In some systems, however, legal restrictions may prevent this practice. In these systems annuity rates cannot be changed with respect to any employee after he enters the system. Under these circumstances, the amount of an employee's annuity may be determined by the mortality

experience of retirees 25 to 40 years or more prior to his retirement. To compound the obvious difficulties of establishing proper rates so far in advance, this type of restriction on changing rates tend to arise as a result of litigation, rather than from explicit statutory direction. The system may be taken by surprise and be unable to allow for future improvements in mortality for an entire generation of members. The resulting losses to the system must either be charged to subsequent generations of annuitants or be made up by the employer.

A less serious, but still significant, problem exists where the conversion rates of annuities are fixed for all contributions made while the rates were in effect. In this situation a system may change its rates with respect to future contributions, but must freeze the rates with respect to all contributions received before the date of change of rate.

BENEFIT ENTITLEMENT

In order to receive retirement benefits, an employee must meet certain requirements as to age, period of credited service with the system, or both. In a private plan, an employee meeting these requirements is called eligible for "normal retirement," or is said to have reached his "normal retirement date." These phrases are not so widely used in this sense among public employee retirement systems.

In public systems the most common phrase used for retirement without special eligibility (such as disability) is "service retirement." This term is inadequate in the usual case where there is a minimum age requirement for retirement. A similar failing exists for the somewhat more descriptive but less common term "age retirement," since most systems have minimum service requirements for retirement. "Superannuation" is the most descriptive word of all but has become obsolescent, perhaps because it seems ponderous. In order to conform to language used in private plans, and to settle upon a single term, the phrase *normal retirement* will be used to refer to an employee's terminating employment

and receiving the regular formula benefits of a retirement system without special qualifications, such as disability. Similarly, *normal retirement date* will be used in defining the earliest possible date an employee can qualify for normal retirement. In this sense, normal retirement will be distinguished from disability retirement or early retirement. The phrases *age retirement* and *service retirement* will be reserved for specific reference to eligibility for benefits dependent only upon age or service, respectively.⁶

Because of the interplay of age and service requirements for normal retirement, in some systems there is no specific age at which retirement is to be expected. This is particularly true in a system where normal retirement is available at a relatively young age and where the employee is also accruing benefits under a federal old-age benefit program. Many employees in this situation will continue to work until eligible for both the local and federal benefit on an unreduced basis. Even where a federal benefit is not available, there will not necessarily be a rush to retire at the earliest possible age, since there will normally be a substantial difference between a retiring employee's salary and his retirement allowance. Thus, an employee's normal retirement date is not the date he is expected to retire, but rather the date he is first eligible for an unreduced benefit.

Age Requirements. The magic number for retirement has long been 65, particularly since the social security systems of the United States and Canada provide their basic benefits at that age. Private pension plans, most of which have had their greatest growth while under the influence of the federal systems, have largely used age 65 as the normal retirement date. In recent years, however, there has been a definite trend toward earlier retirement ages.⁷

⁶ The phrase "normal retirement" is also occasionally used in connection with optional retirement forms to indicate the automatic or standard form, which is generally a lifetime allowance. For additional remarks in the area of terminology, see Municipal Finance Officers Association, *Public Employee Retirement Terminology* (Chicago, 1956).

⁷ Further evidence of the ambiguity of the phrase "normal retirement" is given by a 1970 study by the Bankers Trust Company, New York. Although

In the area of public employment, the availability of unreduced benefits upon retirement at an age earlier than 65 has been prevalent in the United States for some time. In Canada, age 65 still predominates as the youngest age for normal retirement for general employees in public employee retirement systems. In both countries, policemen and firefighters have traditionally become eligible for normal retirement at a significantly younger age than other public employees, primarily because of the strenuous nature of their duties. While a majority of United States systems allow normal retirement for general employees at ages near 60, the earliest age for normal retirement for policemen and firefighters is usually between 50 and 55.⁸

Service Requirements. The concept of benefit entitlement on the sole basis of service, regardless of age, has been accepted for some time in certain sectors of public employment. For example, in both the United States and Canada the military retirement programs define normal retirement in terms of period of service. In similar fashion, a large number of policemen and firefighters have years of service as the primary determinant for their normal retirement date. Among general public employees, although age retirement still predominates, service retirement with an unreduced benefit is often available after 30 or 35 years of credited service.

This type of service retirement, where an unreduced service retirement allowance is available regardless of age, should be distinguished from a requirement that a certain minimum amount of service be completed at normal retirement. An example of the latter is a provision that an employee must

more than 90 percent of the plans of the 201 companies surveyed had a "normal retirement age" of 65, the early retirement provisions of a significant number of these plans provided full accrued benefits to early retirees without reduction. See Bankers Trust Company, *Study of Industrial Retirement Plans* (New York, 1970), pp. 13-17 and 25-26.

⁸ Social Security Administration Research Report No. 15: *State and Local Government Retirement Systems, 1965* and Research Report No. 23: *Retirement Systems for Employees of State and Local Governments, 1966*, and the author's sampling of Canadian systems.

have completed 10 years of service and attained age 60 for normal retirement. For the bulk of the employees, those hired prior to age 50, the governing condition is still the attainment of age 60. Such a combination of both age and service requirement for normal retirement is common, particularly among systems covering general employees, as contrasted with policemen and firefighters.

As noted earlier, in many systems for policemen and firefighters, the normal retirement date is defined in terms of service alone. This is substantially equivalent to a definition using age alone, because participants in these systems tend to enter public employment within a narrow age range in their mid-20s. For example, if most members of such a system should enter within a year of their 24th birthdays, a 30-year service requirement for normal retirement is equivalent to a normal retirement age of 54 or so.

Compulsory Retirement. Most public employees covered by retirement systems are subject to compulsory retirement at some age. Such a provision has the advantage of removing the burden from the employer of determining when employees must retire, thereby improving his relationship with older employees and opening up positions for the younger employees. A compulsory retirement provision may categorically allow no employment beyond a certain age or it may require specific employer approval of continued employment beyond that age. In systems covering elected officials, exceptions to compulsory retirement generally allow the election of any person to office, regardless of age.

FORM OF PAYMENT

The simplest form of retirement allowance is paid monthly to the retiring employee, starting at his retirement and ceasing upon his death. Aside from the possibility of reduction or suspension of benefits during any period of reemployment, the retirement allowance is generally fully vested in the employee upon his retirement.

Retirement systems normally provide several alternate

forms for the receipt of the regular retirement allowance. The monthly amount of the optional benefit is usually at such level that it is the *actuarial equivalent* of the regular benefit it replaces. This means that the optional benefit is generally lower in amount than the regular benefit, the difference being the value, as determined actuarially, of the additional benefit payable because of the option. The election of an alternate form is the prerogative of the employee. However, some systems impose administrative restrictions on the timing of the election, to prevent an employee from choosing an option which could adversely affect the financial condition of the system. For example, an employee might be required to elect his option two years before retirement, so as to keep any employee whose health becomes poor thereafter from choosing an option strictly for the purpose of increasing the total amount of benefit paid to him or his beneficiary. Despite this hazard and the additional benefit cost, many systems have eliminated this type of restriction and allow the election of an option any time prior to retirement. This more generous practice is easier to administer and improves employee acceptance of the retirement program.

Payment for Period Certain and Life. One common form of payment, which may be either the basic benefit of the system or an optional alternative, is a retirement allowance which continues for a certain period of years, whether or not the employee survives that period. If the employee dies within that period, payments continue to the employee's beneficiary for the remainder of the period. If the employee survives beyond that period, the benefit continues thereafter so long as he remains alive. The period may be a specified number of years, such as ten years. Alternatively, it may be of such length as to guarantee that the employee's accumulated contributions at retirement will be returned in total benefit payments or, in some systems, in employee-purchased annuity payments. These alternative forms are called a *modified refund annuity* and *refund annuity* respectively. Frequently, the balance guaranteed is paid after the employee's death as a lump sum instead of as monthly payments.

Continuation to Surviving Beneficiary. Another form of optional benefit widely available in public employee retirement systems allows a retired employee's benefit to be continued to his named beneficiary after his death. The amount of the continued payment is either the same as before the employee's death or a specified fraction of that amount. Payments continue only if the beneficiary survives the employee and then for the beneficiary's lifetime. The most common use of this option is by a husband and wife, to assure that payments continue to the death of the last survivor. This option often provides a pattern for the payment of monthly benefits upon the death of an employee prior to normal retirement.

Standard Form. The form of benefit provided automatically can be an important consideration in comparing the benefit level of two systems. One form of benefit is a life-only allowance, which terminates upon the death of the retired person. A more valuable form of benefit provides that payments will continue after the retiree's death until his accumulated contributions have been returned, either in monthly payments or in cash. The dollar value of the death benefit is generally small—1 or 2 percent of the total value of the retirement allowance, on the average—but its worth to the individual's estate in the event of an early death can be quite substantial. Moreover, this method avoids the personnel and public relations problems which can arise where most of an employee's contributions are forfeited due to early death.

In some systems, particularly in those providing benefits for policemen and firefighters, the automatic form of payment is a lifetime allowance which continues at the same or a related level to the employee's spouse after his death. Although this benefit is generally available as an option in most systems, the price the employee pays for it in terms of reduced monthly allowance can be quite substantial, ranging up to a 30 percent reduction or so. Where the benefit is provided automatically, the value of the basic retirement allowance is correspondingly enhanced.

Suspension during Reemployment. In nearly all systems, benefits are reduced or suspended if the retiree returns to employment within the system or, in some cases, to public employment within the state or province. There appear to be no systems under which a retired employee will adversely affect his retirement benefits by public employment outside the system's state or province, or by private employment anywhere. The restrictions on reemployment within the system, or in other local public employment, vary in severity among the systems. In some systems, such reemployment after retirement is absolutely prohibited. A more generous provision allows reemployment, during which time the benefit is suspended but no additional credit is accrued. Even more generous provisions allow additional benefits to accrue or pensions to continue during reemployment.

Reemployment on a part-time or temporary basis after retirement poses similar problems of equitable treatment. The most common example of this type of reemployment involves retired teachers who are available as substitutes for some period of time after retirement. Reemployment provisions in retirement systems are often designed to accommodate this arrangement, since it is generally to the advantage of both retired teachers and school systems to have retired teachers substitute on a limited scale. A common provision allows a retired teacher to maintain his pension while substituting up to a certain specified number of days during a year, the number often falling in the 45-90 day range, with 60 days being a frequent allowance. In some systems, the restrictions are liberalized as the age or the length of time the teacher has been retired increases, in a manner similar to the work restrictions of United States social security.

Another common provision governing reemployment sets a maximum on the salary which can be earned in employment covered by the system without forfeiting retirement benefits, again paralleling the rules under social security. Utah teachers, for example, are subject to the same earnings limitations for reemployment in positions covered by their retirement system as are used for social security.

POSTRETIREMENT ADJUSTMENTS

The traditional concept of the retirement benefit is one in fixed dollars: Once the employee has retired and the amount of his retirement allowance has been determined, no change in the schedule of monthly payments is contemplated. This concept has probably never been entirely satisfactory. The erosion by inflation of the purchasing power of a fixed dollar pension is well recognized, but it has only been in recent years that positive steps to correct this deficiency have been taken. Public employee retirement systems have been in the forefront of this movement.

As the rest of this chapter will show, many different approaches are being used to ease the effects of inflation on the budgets of retired persons. Most of these methods are designed to keep retirement benefits in step with changes in the cost of living. A more far-reaching program that is occasionally discussed makes adjustments for changes in living standards. Actually neither the term *cost of living* nor the term *living standard* is subject to adequate objective definition, since life styles are continuously changing. For example, at the beginning of this century, public transportation played a large role in determining how people lived, so that ease of access to public transportation was a major determinant of a family's living standard. At the present, access to public transportation has become a minor element in living standards. Its place has been taken by the automobile which has revolutionized transportation and become a major factor in present day living standards. An index using either public transportation or the automobile over this span of time as measures of living cost would have failed to reflect the changing patterns of life style.

One might illustrate the concepts involved as they apply to postretirement adjustments as follows: A 1955 pensioner wishing to replace his black-and-white television set in 1970 might buy a radio if he has had no postretirement adjustments, or buy another black-and-white television if he has

had a cost of living adjustment, or buy a color TV if he has had a living standards adjustment.

Need for Adjustments. The most widely recognized measure of cost of living in the United States and Canada is the consumer price index. Using each country's index as a guide, retirement allowances would have had to be adjusted by the percentages shown in Table 2 in order to provide a benefit in 1970 with the same purchasing power as the pension when it began. Thus a U.S. pensioner drawing \$100 a month at his retirement in 1940 would need \$277 per month in 1970 to obtain the same value in goods and services, as measured by the consumer price index.

The blends of goods and services whose changes in price are measured in the indexes used in Table 2 are not the same

TABLE 2
1970 Consumer Price Index as Percent-
age of Index in Selected Years

<i>Year</i>	<i>United States</i>	<i>Canada</i>
1970	100%	100%
1960	131	131
1950	161	163
1940	277	255
1930	232	223

as those normally required by retired persons. In Canada, the Pension Index was started in 1967 to measure the change in pensioner's living costs. It is used to provide an automatic adjustment in the benefits under the Canada Pension Plan. No comparable index exists in the United States. However, a background study of various possible methods of making automatic adjustments to social security benefits led to the conclusion that a specialized index for retired persons is not currently necessary.⁹ Among other reasons cited for this conclusion was a report showing that "even in a period when larger-than-average price changes tended to be concentrated

⁹ Daniel N. Price and Robert O. Brunner, "Automatic Adjustment of OASDHI Cash Benefits," *Social Security Bulletin* (May 1970), pp. 3-11.

in classes of items which are relatively more important in the spending pattern of older consumers, the total change was not substantially larger for older than young families."¹⁰

An index to show the increase in living standards might follow wage rates or productivity, rather than prices. In his book on postretirement adjustments, John P. Mackin presents a table¹¹ based on several of these types of indexes. This table shows the changes in these indexes of living standards for the decade ending in 1969. These indexes exhibited growth rates in this decade ranging from 39 percent to 68 percent, depending upon the type of index. Since the consumer price index rose 26 percent during the same period, these indexes of living standards increased from 50 percent to 160 percent faster than did the consumer price index during the same period.

Regardless of the index adopted, if any, to measure the change in value of the monthly allowance, the method used to determine the original amount of the allowance is of great significance. A career average-salary formula is probably out of date at retirement, in terms of matching the retiring employee's income needs after retirement to the salaries and the price level at that date. This is particularly likely if a short period of sharply rising wages has occurred within a few years prior to retirement, since the bulk of the average retirement benefit will be based on earnings at earlier lower levels. On the other hand, benefits based on final average salaries will tend to be up-to-date with respect to wage rate changes occurring during the retiree's period of employment. For this reason any postretirement adjustment procedure which attempts to follow an index will meet its objective better when used with a final average salary plan than with a career average plan.

¹⁰ Helen H. Lamale, "The Impact of Rising Prices on Younger and Older Consumers," BLS Report No. 238-2, December 1963.

¹¹ John P. Mackin, *Protecting Purchasing Power in Retirement* (New York: Fleet Academic Editions, Inc., 1971), Table III-8. This book provides a thorough analysis of postretirement programs in public employee retirement systems.

A postretirement adjustment procedure may give rise to an anomaly if the basic benefit to be adjusted is flat; that is, not dependent upon salary. A minimum benefit is often of that nature; for example, \$100 per month for anyone retiring with at least 20 years of service, regardless of salary. The anomaly results if such a benefit for someone already retired is increased, even though a current retiree gets only the unadjusted benefit. This inequity may be avoided either by not making flat benefits subject to postretirement adjustments, or by increasing the benefits for retired lives and making corresponding improvements in the flat benefits provided for those currently retiring.

Scope of Adjustment. The programs of postretirement adjustments in use have a number of variations in their scope. In order to discuss these variations, it will be helpful to define the following terms:

Ad hoc refers to a single increase in the amount of current monthly payments to each affected retired person.

Automatic refers to adjustments in benefits on a recurring regular basis.

An additional concept needed to define the scope of a program of postretirement adjustments is its applicability. The program may cover only retired persons, perhaps even excluding certain types of these, such as those retired for disability. Alternatively, a program may include all employees, both active and retired. Similarly, adjustments may be applicable to the entire retirement allowance, or only to the employer-bought pension or the employee-bought annuity. In another area, the adjustment may be inapplicable to flat benefits or minimum benefits.

Although other combinations are possible, most arrangements for postretirement adjustment of benefits fall into one of the following categories:

1. Ad hoc adjustment of allowances for retired lives without automatic adjustments thereafter.
2. Ad hoc adjustment of allowances for retired lives with automatic adjustments thereafter for them.

3. Ad hoc adjustment of allowances for retired lives with automatic adjustments thereafter both for them and for future retirees.

The first of these categories is probably the most commonly used. Under it, the allowances of some or all of the retired persons under a system, will be adjusted as of the effective date of the governing legislation. After that date, the amounts of all allowances will remain as adjusted without further change. The retirement allowance of any person retiring subsequent to that date would not be affected by the ad hoc adjustment.

The second category is like the first, except that the retirement allowances are subject to automatic adjustments on a regular basis after the ad hoc adjustment is effected. For example, a program of this type might call for an immediate increase of all allowances for presently retired employees of \$2 per month for each year since retirement. In addition, an automatic increase of \$2 per month would be made each year in the future for those same retirees. If the monthly allowance of a person who has been retired ten years is \$100, it would be immediately increased to \$120 under such a program. One year later it would go up to \$122, and be subject to additional increases of \$2 each year thereafter.

The third category has the features of the method just described and also provides for similar adjustments to be made in the retirement allowances of presently active employees upon their retirement. This technique is comprehensive in scope since it provides automatically for the postretirement adjustments to be made in the future.

Programs involving an ad hoc adjustment for retired persons are generally on a nonretroactive basis. Benefits are adjusted after the procedure takes effect, but no lump sum adjustments are made for earlier monthly benefits. This avoids giving a windfall to the retirees and also avoids many administrative problems, particularly with respect to pensioners whose benefits terminated prior to the adjustment.

The ad hoc method of updating has been used frequently

under the U.S. social security program, with obvious political implications. When Congress makes an adjustment in retired life benefits, it creates an aura of goodwill which is not intended to discourage the voter from expressing his gratitude. In the Canada Pension Plan, on the other hand, a continuing form of adjustment for active and retired employees has been in effect since the Plan's inception. In 1972, a similar automatic program was adopted in the United States. Although this method does not generate the same periodic political dividends, it has the advantage of producing orderly and predictable adjustments.

Among public employees' retirement systems, the motivation for the ad hoc method has not been merely political. The financing of any postretirement adjustment program can be a significant consideration in determining whether it should be adopted. With an ad hoc adjustment, the costs can be defined with some precision. Where the proposal involves automatic increases in the future, especially increases related to an index such as the consumer price index, the cost of the adoption of the program of postretirement adjustments can be not only large but also difficult to predict. For this reason, some legislative bodies prefer to make adjustments only after the amount of the adjustment can be spelled out precisely, rather than to adopt a program of automatic adjustments.

In systems where the employee's accumulated contributions are converted into annuities, the adjustment may be limited to the employer-purchased pension. Limiting any increase to the pension portion of the retirement allowance obviously costs less than increasing both the pension and the employee-bought annuity. Where the cost of the adjustment is met by the employer, restricting the adjustment to the pensions may also reflect a philosophy limiting the employer's commitment to the cost of pensions. This philosophy would not contemplate adjustment of annuities without additional employee contribution.

Mechanisms of Adjustment. The term *scope* is used to embrace the concepts just discussed: the applicability of a program of postretirement adjustments, as to both the per-

sons affected and the portions of their allowances modified, and whether benefits are to be adjusted on an ad hoc basis or whether automatic adjustments in the future are contemplated. Another method of classification is what will be termed the *mechanism* of a postretirement adjustment program. The mechanism embodies the method by which the specific amount of adjustment can be determined for each affected person.

Among the mechanisms available, the following are the ones most commonly found in public employee retirement systems:

1. *Nonproportional.* A flat dollar amount is added to each monthly benefit, or deficient benefit amounts are raised to meet a specified minimum based upon the period of active service, or some other similar improvement in benefit is provided.

2. *Percentage increase.* The benefit is increased a certain percent, commonly 1.5 or 2 percent each year. This may be compounded, but is generally not, resulting in the same dollar amount of increase for any particular employee each year.

3. *Index-related.* The benefit is adjusted periodically in the same proportion as the change in an index, such as the consumer price index.

4. *Salary-related.* The benefit is adjusted periodically in the same proportion as the change in the salary of the position held by the pensioner when he retired, either according to his actual rank or position at retirement, or according to a salary average in his general employment classification.

5. *Yield-adjusted.* The benefit is adjusted periodically according to the investment experience of an allocated portion of the assets, generally common stocks, held to support the benefit.

Many programs combine two or more of these mechanisms. For example, an adjustment program used in many large systems provides that the retirement allowance will be increased by 1.5 or 2 percent each year, provided that the consumer price index has increased by at least that amount

during that year. Another method, used by the Idaho and North Carolina public employee retirement systems, adjusts retirement allowances on a continuing basis, based on the consumer price index but subject to a limit of a 3 percent annual increase and only if the assets have grown sufficiently to warrant the increase, as decided by the governing boards. The mechanism is thus a combination of a percentage increase, an index-related and a yield-adjusted method.

The nonproportional category of adjustments includes programs which give to retired persons the benefits of changes in the formulas determining retirement allowances for active members. In such a program, a basic increase in the level of benefit or an increased minimum benefit might be passed along to retired as well as active persons. Although such a practice has obvious merit, its cost can also impede future adjustments in benefits if it establishes a precedent which must be followed.

A program of continuing postretirement adjustments which employs a percentage increase mechanism can match the changes in cost of living only approximately. In a period of rapidly increasing cost of living, a comparison of the adjustments generated by such a program with the increases in the consumer price index might bring pressures for additional postretirement increases. These additional increases may be granted on an ad hoc basis, without affecting the rate of future scheduled increases. Alternatively, the percentage to be used for future annual increases may be changed. This latter method may lead the system into a one-way street, where it is not possible to revert to the original rate of increases when the cost of living levels out. Obviously this type of program could be very expensive in the long run.

An index-related mechanism enjoys the advantage of easy acceptance by the employees, the employers, and the public, particularly where the index is in common use, such as the consumer price index. Since a postretirement adjustment program has as its basic objective the protection of the purchasing power of the retired employee, its success in meeting this objective will often be measured by the use of an index

such as the consumer price index. Accordingly there is a practical advantage in tying the adjustment mechanism to the index that will be used to judge it.

Similarly, salary-related mechanisms are easily understood and widely accepted, particularly among public employees. They tend to be quite costly, however, and this has limited the extent of their adoption. The most prevalent systems using the salary-related mechanism are those covering policemen and firefighters. The benefit is often defined as a specified percentage of the salary attaching to the rank from which the pensioner retired, the retirement benefit varying in amount in the same proportion as does the salary. Thus, the benefits for a group of pensioners will tend to change as the general salary scale in the police or fire department changes. This fact leads to a major disadvantage of this mechanism: Since increases in salaries result in increases in pensions, the budgetary hurdle associated with pay boosts is higher than usual. The postretirement increase program might thus serve to hobble salary adjustments for the active employee.

A yield-adjusted retirement benefit commonly takes the form of a *variable or equity annuity*. Under a program using this mechanism, the benefit rises or falls as the value of a portfolio of securities, generally common stocks, rises or falls. Equity annuities are often provided at the employee's option, as an alternative to a conventional, fixed-benefit annuity. Because of the volatility of common stock portfolios, it is usual for only a portion of the total retirement allowance to be varied, often that portion of the benefit produced by the accumulated employee contributions. The balance of the benefit is generally in a fixed amount. Thus, the combined retirement allowance is not subject to the degree of fluctuation which the equity annuity by itself experiences, and a limit is placed on the risk of the entire benefit's being drastically reduced under poor market conditions. In effect, the employee is "gambling" only his own money, the employer-purchased pension being unaffected by gains and losses of the equity annuity fund.

Under a typical equity annuity program, each participat-

ing employee's contributions are accumulated in the equity portfolio, rather than at the system's fixed rate of interest. His accumulated contributions at retirement are then converted into an equity annuity. If the equity accumulation is larger than the accumulation would have been at the fixed interest rate, the annuitant starts out with a higher annuity. Thereafter, his annuity rises or falls depending on whether the equity portfolio's rate of return is higher or lower than the fixed interest rate. Based on past performances of broad portfolios of common stock, the retired employee with such an equity annuity may expect to receive more over his remaining lifetime from the equity annuity than he would have received from the fixed-dollar annuity it replaces.

Over many extended periods of time, common stock prices have increased more than the cost of living. Since equity annuities follow the trends of common stock values objections to equity annuities are generally few during periods of rising stock values, but more numerous and more vocal when the stock market has been declining. Particularly difficult are those periods when the stock market is declining, while the cost of living is increasing. A related disadvantage of equity annuities is that the employee bears the entire investment risk, at least with respect to the portion of his benefit subject to adjustment. In contrast, the system retains the investment risk under other forms of postretirement adjustment. Additional objections to equity annuities are that they are complicated, and that it is difficult to explain to the average retiring employee the nature of his benefit and the risks he is taking. For this reason, the equity annuity has found its largest acceptance in the more sophisticated groups of public employees, especially teachers.

Another form of yield-adjusted benefit pays to pensioners all or a portion of the excess interest earnings on the system's funds. The payment may be made in the form of increased monthly payments or it may involve a *thirteenth check*, an additional payment at the end of the fiscal year. The excess interest earnings may arise because of capital gains on investments in common stocks or because of interest in excess of

that nominally required to maintain the financial soundness of the system. To the extent that the latter is the case, this method places an undue emphasis upon the somewhat arbitrary decision as to assumed future interest earnings.¹² It might, in fact, impede modernization of the assumptions if such modernization were to result in an increase in the assumed interest rate. Such an increase would decrease future payments of the asset-adjusted type by allocating a larger portion of the actual interest earnings to meeting the assumed interest rate. Moreover, while the provision of increased benefits from capital gains on equities might tend to result in increases related to the cost of living, it would generally be coincidental for excess interest to increase in proportion to the increase in the cost of living.

¹² See p. 93.