

Choice of Funding Medium

5

IN IMPLEMENTING his decision to install a funded pension plan, arrived at unilaterally or in response to union demand, an employer must exercise his judgment with respect to several fundamental aspects of the plan. The decisions which he must make in this situation are interdependent and should be made in proper sequence and with an awareness of the interrelationships involved.

The first decision in point of time should relate to the benefit structure of the plan. The benefit pattern may rule out certain funding methods and media, thus narrowing the area of choice with respect to the latter.

Once the benefit pattern is established, a choice should be made between allocated and unallocated funding methods. This decision, which is greatly influenced by the benefit structure and the desire for flexibility in funding, determines whether or not contributions are to be allocated to individual employees prior to retirement. Allocated funding is an inherent feature of individual, group permanent, and deferred group annuity contracts, while unallocated funding is normally followed under deposit administration, immediate participation guarantee, and self-administered trustee plans. Throughout this Chapter, unless otherwise indicated, allocated funding media will refer to individual, group permanent, and deferred group annuity contracts, whereas unallocated funding media will refer to the other three forms of financing.

The final broad decision, which should be made only after the foregoing issues have been settled, is whether to fund through an insurance contract or through a trust.

The purpose of this Chapter is to discuss in a general fashion each major factor that has a bearing on the choice of a funding medium

160 Choice of Funding Medium

and then to indicate the impact of that factor on each specific medium. The combination plan, whether in the form of an individual contract pension trust plus a trustee auxiliary fund, or a group permanent contract plus an auxiliary fund on a deposit administration basis, is not treated as an independent funding medium for the purpose of this critique. Whatever is said about the basic forms applies to the combination plan to the extent that the principles of the former are embodied in the latter.

COST

Of critical importance to the employer in the adoption of a pension plan, and the choice of a funding medium, is the cost that will be incurred. The basic determinant of the cost, of course, is the benefit structure of the plan. As is generally recognized, the gross cost of a pension plan in the long run is equal to the benefits paid out, plus the costs of administration, less the earnings on any funds set aside for the payment of the benefits. This is an obvious oversimplification in that it ignores the factors that determine the magnitude of benefit disbursements and makes no allowance for possible differences in administrative expenses and fund earnings that might be traceable to the use of a particular funding mechanism. To arrive at the net or "true" cost of a pension plan, consideration would have to be given to the economic gains accruing to the employer from reduced labor turnover, retirement of inefficient employees, improved morale, and other factors. Because of the difficulty of measuring these indirect but nonetheless tangible benefits of a pension plan, the net financial outlay is generally assumed to represent the cost of the plan.

The factors that determine the net financial outlay under a pension plan, with a given set of benefits, are analyzed in the following sections.

MORTALITY

Effect of Mortality.—The mortality that will be experienced by the group of covered employees is a most significant determinant of the cost of a pension plan. The rate of mortality among active employees, in combination with the rate of withdrawal, determines the

number of employees who will become entitled to benefits. The lower the death rate among the active employees, the higher, other things being equal, will be the cost of the retirement benefits. This does not necessarily mean, however, that the over-all cost of the plan would be increased. If the plan provides death benefits prior to retirement, the savings in death benefits resulting from lower mortality might more than offset the added cost of retirement benefits. The net effect of an improvement in mortality would depend upon the relative magnitude of death and retirement benefits and the relative improvement at the various ages.

The rate of mortality among retired lives is even more significant than that among active employees, since it determines the average period over which benefits will be paid. The impact of improved longevity is direct, and there are no significant offsetting factors. Every year that is added to the life expectancy of a retired employee produces a substantial increase in the cost of his pension. A period of guaranteed installments would lessen, to some extent, the consequences of such an improvement in mortality, but in many cases the benefits would be extended beyond the period of the guarantee.

Assumptions as to Mortality.—The rate of mortality varies among different types of lives, and an organization whose operations are concerned with life contingencies must utilize that body of mortality experience which appears to be most appropriate for its purpose. It has been found, for example, that the mortality among individuals who purchase life insurance tends to be higher, age for age, than that of persons who purchase annuities. This impels the insurance companies to adopt a mortality table for the underwriting of annuities different from that used for the writing of life insurance. This practice is dictated not only by the lower death rates among annuitants but by the necessity or desirability of providing a margin of safety in the mortality assumptions. Such a margin is provided in a life insurance mortality table by the use of death rates which are higher than those that are likely to be experienced, while the converse is true with respect to an annuity mortality table. That is, a conservative annuity mortality table shows lower death rates than those actually expected. Thus, the same table cannot be conservative for both life insurance and annuity purposes.

It has also been found that the mortality among employee groups is lower than that experienced by the general population.¹ This is attributable to the fact that the general population embraces persons in varying conditions of health, including many in an impaired state of health, while a minimum standard of health is required for participation in the active labor force. This superior vitality presumably carries over into retirement, which suggests that an annuity mortality table used for the underwriting of a private pension plan should lean heavily on the mortality experience of employed lives and those retired from active employment.

Finally, it is a matter of common knowledge that females live longer, on the average, than males. This superior longevity appears to flow from a better biological heritage,² but it may be due, in some measure, to the relatively greater stresses and strains to which the male population is exposed. The superiority of the female has been so pronounced in recent years that the death rates among female lives has conformed rather closely to that of male lives four to five years younger. As a result, it has been possible to use the same annuity table for male and female lives by assuming that the female is four or five years younger than her actual age, a device known as a setback or "rating down."

In the recent past, the mortality table most frequently used as a basis for pension cost projections has been the 1937 Standard Annuity Mortality Table. In the process male ages have sometimes been set back one or two years, depending upon the judgment of the actuary, and female ages an additional five years. At ages below sixty, this table is based on the experience of clerical employees covered under group life insurance contracts during the period 1932-36, while the death rates at ages 60 and above reflect the mortality among individual annuitants for the same period. No margin of safety was provided other than that implicit in the use of individual annuitant experience, which is assumed to be subject to a high degree of adverse selection, and group life clerical experi-

1. Ray M. Peterson, "Group Annuity Mortality," *Transactions of the Society of Actuaries*, Vol. IV, 1952, p. 255. See also, Louis O. Shudde, *ibid.*, Vol. III, 1951, p. 202.

2. Dublin, Lotka, and Spiegelman, *Length of Life*, Revised Edition (New York: Ronald Press Co., 1949), pp. 129-34.

ence, which reflects a sizable proportion of female lives.³ Apart from this margin, no specific provision was made for future improvement in mortality.

Trend of Annuitant Mortality.—Substantial improvement in mortality has taken place since the construction of the 1937 Standard Annuity Table, particularly at the younger ages. This, of course, is only a continuation of the secular trend toward lower death rates which has produced such a striking extension in life expectancy during the last half-century. Studies of the mortality experience of various groups of the population point up the magnitude of the improvement. The experience of three representative groups for the approximate period 1940 to 1948 is presented in Table 9. Limitations of data restrict the exhibit to ages 25-64.

TABLE 9

AVERAGE ANNUAL RATE OF DECREASE IN MORTALITY AT AGES 25-64
(GEOMETRICAL BASIS)

Age Group	<i>Intercompany Group Life (Clerical) From 1939-40 to 1946-47</i>	<i>White Industrial Policyholders (Metro- politan Life Ins. Co.) From 1939-40 to 1948</i>		<i>United States White Population From 1939-40 to 1947</i>	
	<i>Male and Female Combined</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
25-34	4.8%	4.6%	5.9%	3.6%	5.9%
35-44	3.3	2.6	4.0	2.2	3.9
45-54	1.4	1.3	3.0	0.9	2.9
55-64	1.6	1.3	3.1	0.6	2.8

Source: Jenkins and Lew, "A New Mortality Basis for Annuities," *Transactions of the Society of Actuaries*, Vol. I, 1949, p. 383.

The table shows the average annual rates of decrease that were registered in the death rates of the three groups between the dates indicated. The percentages were derived on a geometrical basis, i.e., with a new base each year, but the over-all decrease for the periods under consideration can be ascertained fairly accurately by multiplying the annual rate of decrease by the number of years

3. It is generally assumed that a minimum of 25 per cent of the employees in a typical clerical group are females, with the percentage ranging as high as 50 per cent in some groups.

164 Choice of Funding Medium

involved. Thus, the total decrease in the death rates among the 25-34 age group of group life insurance policyholders between the two periods of observation was roughly 28 per cent. The greatest improvement was shown at the younger ages, specifically 25-34, which undoubtedly reflects the increasing control over infectious diseases, with the percentages declining with advancing age. Females display a greater percentage of improvement than males, which means that the divergence between male and female mortality is growing wider. The experience for group life insurance policyholders was not tabulated separately for males and females.

Similar studies of earlier experience indicate that mortality has been improving since 1920 at approximately the same rate as that shown in Table 9.⁴

This improvement in mortality has not been confined to ages below 65. All available evidence indicates that the improvement has extended into the more advanced age groups. The evidence from three important areas of experience is presented in Table 10.

The rates in Table 10 display some erratic behavior, which in the case of group annuity female experience is undoubtedly attributable

TABLE 10
AVERAGE ANNUAL RATE OF DECREASE IN MORTALITY AT AGES 66-85
(GEOMETRICAL BASIS)

Age Group	<i>Intercompany Group Life (Clerical) From 1939-40 to 1946-47</i>	<i>Federal Civil Service Retirement Plan From 1935-40 to 1945-50</i>		<i>Intercompany Group Annuity From 1938-40 to 1946-50</i>	
	<i>Male and Female Combined</i>	<i>Male</i>	<i>Female</i>	<i>Male</i>	<i>Female</i>
66-70	2.3%	-0.2%*	2.4%	1.0%	6.1%
71-75	2.3	1.3	1.9	2.4	-1.5*
76-80	2.0	1.3	2.8	1.7	2.7
81-85	2.0	1.6	2.4	-0.2*	-†

* Increase in mortality.

† No data available.

Source: Ray M. Peterson, "Group Annuity Mortality," *Transactions of the Society of Actuaries*, Vol. IV, 1952, p. 266.

4. Jenkins and Lew, "A New Mortality Basis for Annuities," *Transactions of the Society of Actuaries*, Vol. I, 1949, p. 399.

to the meagerness of the data and which with respect to male ages 66-70 of the Federal Civil Service Retirement Plans reflects changes in retirement policy. In general, the picture is one of significant decreases at all ages, with females again exhibiting a greater rate of decrease than that of males. Studies of the experience of the United States white population, the white industrial policyholders of the Metropolitan Life Insurance Company, and certain large self-administered pension plans, during the same general period substantiate the evidence of Table 10.⁵

As a result of these decreases, the 1937 Standard Annuity Table no longer portrays accurately the mortality among annuitants. The table overstates the mortality of annuitants at all ages up to 70 or 75 and understates it beyond that point. The extent and pattern of the divergence may be observed by reference to Table 11.

Table 11 presents a comparison between the death rates per 1,000 of the 1937 Standard Annuity Table and the Group Annuity Table for 1951. The latter table, whose construction and characteristics are discussed in Appendix D, is regarded as conservatively representative of the mortality rates among group annuitants during the year 1951. Separate rates are shown for males and females, with the rates for females under the 1937 Standard Annuity Table being those of males five years younger. Rates at the two extremities are not shown since such rates were derived by a mathematical formula, a process known as extrapolation, and do not necessarily represent the actual death rates at those ages.

Perhaps the most striking feature of the table is the great disparity between the male and female death rates in the Group Annuity Table for 1951. Nevertheless, the disparity between the death rates of the same sex in the two tables is almost as striking. At some ages the death rates of the 1937 Standard Annuity Table are more than double those of the Group Annuity Table for 1951. In general, the overstatement of female mortality is more pronounced than that of males, even with female ages set back five years in the earlier table. The male death rates of the 1937 Standard Annuity Table are higher than those of the Group Annuity Table for 1951 up to age 73,

5. *Ibid.*, pp. 383 and 393; Society of Actuaries, "Report of Special Committee on Experience Under Self-Administered Retirement Plans," 1953.

TABLE 11

COMPARISON OF MORTALITY RATES OF THE 1937 STANDARD ANNUITY
TABLE AND GROUP ANNUITY TABLE FOR 1951*

Age	Males		Females	
	1937 Standard Annuity	1951 Group Annuity	1937 Standard Annuity†	1951 Group Annuity
25	1.56	0.76	1.33	0.50
30	2.07	0.99	1.56	0.67
35	2.98	1.37	2.07	0.93
40	4.36	2.00	2.98	1.34
45	6.36	3.58	4.36	1.99
50	9.29	6.48	6.36	3.07
55	13.55	10.44	9.29	4.65
60	19.75	15.56	13.55	7.84
65	28.75	24.42	19.75	13.60
70	41.76	39.30	28.75	23.10
75	60.46	62.43	41.76	44.31
80	87.16	99.68	60.46	74.15
85	124.84	146.85	87.16	112.32
90	177.14	200.59	124.84	164.33
95	248.06	268.03	177.14	241.34

* Mortality rates are rates per 1,000.

† Female rates are those of male ages five years younger.

whereas the female death rates converge around age 71. Above those ages, the more recent table shows higher death rates for both males and females.

Not only does the 1937 Standard Annuity Table overstate mortality at the present time, except for the older age brackets, but if recent mortality trends continue, the disparity will become even greater. With respect to future mortality behavior, there seems to be general agreement that the rate of decrease in mortality at the younger ages, under 45 for example, must inevitably slacken since the area for improvement is constantly shrinking. On the other hand, medical and population authorities expect further significant reductions in death rates at ages over 45. Such a development can be expected from not only future advances in the treatment and prevention of disease, but also more intensive application of existing knowledge.⁶

6. For a detailed survey of medical and scientific opinion of this subject, see Jenkins and Lew, *op. cit.*, pp. 407-13.

The inference to be drawn from these mortality developments is that the cost of providing any given set of retirement benefits can be expected to increase in the future. Not only will more employees survive to normal retirement age, but the survivors will live longer after retirement.⁷ While there are some factors that may lessen the impact of this reduction in mortality, particularly during the period prior to retirement, it has been authoritatively predicted that a pension plan with a fixed retirement age of 65 should experience, solely by reason of mortality improvement, a 5 per cent increase in costs every ten years.⁸

There is a belief in some quarters that such increase in costs will be offset by a gradual extension in the age at which retirement occurs. Some have even predicted that plans in the future will prescribe an age beyond 65 at which retirement with full benefits will be permitted. In this connection, it is interesting to note that an increase in the normal retirement age from 65 to 66, with no increase in benefits, is generally assumed to reduce the over-all cost of a typical plan by about 8 per cent. A normal retirement age of 67 is assumed to cost approximately 15 per cent less than one of 65. If the prolongation of service results in higher benefits, the saving to the employer would be reduced and under certain types of benefit formula might be completely offset. The feasibility of this approach depends upon many factors, including nature of the industry, economic conditions, vitality of older workers, and employee attitudes.

Significance of Funding Medium.—It hardly seems necessary to point out that the various forces which are operating to lengthen the life expectancy of the American population are not influenced by the financial or legal arrangements adopted to provide retirement benefits to a particular segment of that population. The rate of mortality among a specific group of employees will be the same, whether their retirement benefits are to be provided through the intermediacy of an insurance company or a trust company. If the facilities of a trust company are used, the entire cost of the increased benefits resulting from greater longevity will inevitably fall upon the employer—and employees, if the plan is contributory—

7. See Appendix D.

8. Ray M. Peterson, *Proceedings of the Equitable Society Pension Forum*, The Equitable Life Assurance Society of the United States, 1953, p. 23.

168 Choice of Funding Medium

since no possibility exists for the transfer of a portion of the costs to another agency. If, on the other hand, the plan is underwritten by an insurance company, a possibility exists that a portion of the cost can be shifted to the insurance company, the likelihood depending upon the size of the group and the type of contract chosen.

In this connection, it is pertinent to observe that the mortality among a group of employees may vary from that on which cost calculations were based either because the group is too small to develop an average experience or because the general level of mortality has shifted. The larger the group of employees, the greater the probability that the actual mortality experience will conform to the average. The small employer cannot be sure of an average experience. In order to protect himself against the risk that his particular employees will live longer than average, the small employer can avail himself of the rate guarantees of the insurance company. The plan of insurance normally appropriate for such circumstances is the individual contract which provides a lifetime guarantee for any given set of benefits and, if issued by a mutual company, pays dividends on the basis of company-wide experience. The premiums may prove to be more than adequate to provide the benefits under the plan or they may turn out to be inadequate. In the latter instance, the employer, in effect, transfers a portion of his costs to the insurance company. The insurance company, through the pooling technique, spreads such a loss over the contracts that develop a favorable experience and expects to break even on its total volume of business. The lifetime guarantees protect the employer not only against the possibility of fluctuations from average experience but also against the financial consequences of future improvement in mortality. In the case of the small employer, the former is the paramount consideration. The group permanent contract also provides a lifetime guarantee of rates for any given set of benefits but is usually experience rated.

With respect to the larger insured plans—those utilizing some form of group contract—the expectation is that each plan will in the long run pay its own way. If the plan continues in perpetuity, there is no question that it will bear the entire cost of its benefits. This conclusion is based on the fact that group annuity rates, after the expiration of the original five-year guarantee, are subject to revision at periodic intervals, as a rule annually, and, in addition, the dividend formula functions in such a manner that the insurance com-

pany can recoup any losses that may have developed, or are anticipated, under earlier rate guarantees. Should a group plan terminate, there is a possibility that the insurance company might sustain a loss as the experience of the plan emerges. The probability that this would happen depends upon the safety margin in the rates, the size of the contingency reserve, and the pattern of future mortality. With the development of more reliable estimates of the trend of future mortality and the increasing attention devoted to methods of coping with the trend, the prospects that a large employer can shift any part of his ultimate pension burden to the insurance company are becoming increasingly remote.

INTEREST

A second factor that exerts a fundamental influence on the cost of a pension plan is the interest rate earned on funds set aside for the payment of future benefits. Any earnings on such funds naturally reduce the amount of money that would otherwise be necessary to provide a given set of benefits. From the employer's standpoint, the savings thus made possible constitute one of the prime advantages of advance funding.

Effect of the Interest Factor.—The significance of the interest factor can be appreciated from the fact that a dollar invested at 3 per cent compound interest will double itself in 24 years. Thus, at that rate, past service benefits could be purchased for an employee age 40 at only half the cost that would be entailed if the interest earnings were not available. Furthermore, sums set aside at a uniform rate over the next 25 years for the purchase of future service benefits would increase by 50 per cent because of interest, or, conversely, the benefits would cost one-third less. Even greater discounts would be available at ages younger than 40. Lower interest yields would produce smaller discounts, but a dollar invested at 2½ per cent interest will double itself in 35 years.

The impact of the interest factor in a particular plan depends upon the age distribution of the employees and the degree of advance funding. In a typical plan, however, a variation of one-fourth of 1 per cent in the rate of interest could be expected to produce a differential of 6 or 7 per cent in the long-run cost of the plan. It can be seen, therefore, that the choice of a financing medium may well hinge on the prospects for future interest earnings.

170 Choice of Funding Medium

Earnings Potential of Insurance and Trust Companies.—It seems to be a fair generalization that if insurance and trust companies place their funds in the same general types of investments their over-all investment results should be roughly similar, inasmuch as no basis exists for assuming significant differences in the quality of the investment staffs of the two institutions. The only way that any substantial difference could arise would be for the two agencies to invest consistently in different channels or under significantly different circumstances. It would seem desirable, therefore, to inquire as to any differences that might exist between the two agencies in those respects.

In the first place, there is a difference with respect to the manner in which the pension funds are held by insurance and trust companies. All funds held by a life insurance company, regardless of their source, are pooled and invested as a unit. This means that each insured pension plan owns a fractional interest in the *total* portfolio of the insurance company and will share on a pro rata basis any gains or losses that may flow from the company's investment activities. It means also that the funds of each pension plan, irrespective of size, enjoy the same degree of diversification that exists in the entire investment portfolio.

In contrast, trust companies operate under the principle of segregation. The assets of each trust are set apart and administered as a unit. There is no sharing of experience, each trust enjoying the full and immediate benefit of favorable investment of its funds and, by the same token, bearing alone the full effect of unfavorable developments. In some states, at the direction of the grantor, trust funds not in excess of a specified sum, typically \$50,000 or \$100,000, can be pooled with other small trusts and administered as a common trust, thus providing the basis for greater diversification. Virtually all pension plans accumulate funds in excess of such limits, however, so that, for all practical purposes, a trustee pension fund will enjoy only the degree of diversification that can be obtained through the investment operations of that particular fund.⁹

9. The Girard Trust Corn Exchange Bank of Philadelphia, with special permission from supervisory authorities, recently (November, 1954) established a common trust fund, called the Girard Diversified Pension Fund, for the exclusive use of pension plans, with no limit on the extent of participation. Thirty per cent of the Fund is to be invested in common stocks. Other banks may be expected to establish such funds.

A second difference exists with respect to the latitude with which the funds can be invested. In this connection, it should be observed that the funds of life insurance companies are invested within the framework of strict statutory regulation. The insurance codes of the various states not only specify the types of investments which are legal for insurance companies but also prescribe certain qualitative standards which must be met. Investment in common stock is severely restricted, being prohibited altogether in a few states and permitted only on a very limited scale in the other states. The New York insurance code, for example, permits a company to invest in common stock to the extent of 3 per cent of its admitted assets or one-third of its surplus, whichever is the lesser. Less restrictive limitations are imposed on preferred stock. Investment in real estate has traditionally been restricted to that required for the conduct of the company's business or that acquired in foreclosure proceedings, the company being under obligation to dispose of the latter within a reasonable period of time. In recent years, however, many states have liberalized their laws to permit limited investment in income-producing real estate under carefully prescribed conditions.

The bulk of insurance company investments is in government bonds (Federal, state, and local), high-grade corporate bonds, and real estate mortgages, with lesser amounts in real estate, policy loans, and stocks, preferred and common. The companies rely on real estate mortgages, privately-placed corporate securities, and income-producing real estate to raise the yield on their portfolios above that obtainable on governments and public issues of high-grade corporate bonds. Stocks account for only 3.6 per cent of insurance company investments, common stock comprising about a third of the total.

The funds of trustee pension plans may also be subject to statutory investment restrictions. Statutes have been enacted in all states to govern the investment of fiduciary funds, and in the absence of a provision in the trust agreement to the contrary, such statutes apply with full force to trustee pension plans. Under the fiduciary investment statutes of a few states, the trustee is limited to a list of government and corporate bonds promulgated by the banking commissioner or comparable official or to bonds and mortgages that can meet the qualitative standards prescribed by statute. A large number of states have adopted the Prudent Man type of statute which

172 Choice of Funding Medium

requires only that the trustee observe the principles that govern a prudent man in the investment of his own funds when his objective is a reasonable income and the preservation of his capital. In any state, however, the grantor, by an express provision in the trust agreement, can exempt the trust from the operation of the governing investment statute and give the trustee broad latitude in the investment of the trust assets. In practice, the investment provisions of the pension trust agreement are generally drafted jointly by the employer and trustee to fit the circumstances of the case, and it is customary for the trustee to be granted considerable discretion. Under such circumstances, the amount of statutory control is nominal.

With or without statutory restraints, trustees until recently have generally followed traditional practices in the investment of pension funds. Primary emphasis has been placed on government obligations and high-grade corporate debt securities. Real estate mortgages and privately placed securities, which are major and highly attractive outlets for life insurance funds, have played minor roles in trust company investment operations. In recent years, common stocks have attracted considerable attention as an outlet for trustee pension funds. Investment in equities has been urged on the grounds that (1) it permits wider diversification, since many strong companies, including virtually all banks and insurance companies, have no securities outstanding other than common stock, and (2) it offers the possibility of a higher yield than that of fixed-income investments, particularly when dividends and capital gains are combined. The latter prospect has been viewed as a partial hedge against secular increases in the price level. As a result, trustee pension funds are flowing into equities in increasing quantities. Many trustee plans have adopted programs calling for equity investments to the extent of 25 to 35 per cent of the portfolio.

A final matter that has a bearing on the relative earning capacity of insurance and trust companies is the income tax status of the investment earnings. The Internal Revenue Code of 1954 provides that "A trust . . . forming part of a stock bonus, pension, or profit-sharing plan of an employer for the exclusive benefit of his employees or their beneficiaries shall be exempt from the Federal income tax."¹⁰ Therefore, if a trustee pension plan meets the general standards of qualification prescribed by Section 401(a) of the

10. Sections 501(a) and 401(a).

Code, its investment earnings are not subject to Federal income taxation.

Insured pension plans do not enjoy this exemption. Life insurance companies pay a special Federal income tax of 6½ per cent on their net investment earnings,¹¹ including that portion attributable to the investment of pension reserves. At the current level of insurance company investment earnings, the tax reduces the yield on pension reserves by about 0.20 per cent, with the practical effect of increasing the cost of an insured pension plan by roughly 5 per cent.¹² This difference in tax treatment of trustee and insured pension reserves, stemming from a technical distinction between a trust and an insurance contract which has not been observed in Section 404 of the Code or, for that matter, throughout Section 401(a), seems to represent a definite discrimination in the application of the tax laws. There is a strong likelihood that future legislation will equalize the tax status of insured and trustee plans, through either the imposition of a tax on trust earnings or, what is more likely, the exclusion of insurance company investment earnings attributable to pension reserves.

Advocates of the insured and trustee approaches to pension funding disagree as to the implications of the differences just described. Insurance partisans see unique advantages in the principle of commingling. They point out that the insurance company need not be concerned with the liquidity of an isolated pension plan but can integrate the requirements of that plan with those of other pension plans and, in fact, of the company's entire business. Since an insurance company's total income, including premiums, investment earnings, and maturing investments, normally exceeds its disbursements by a large margin,¹³ the company enjoys an unusual degree of liquidity. The company is in a position to place the

11. More accurately, the companies pay a Federal income tax of 3½ per cent of the first \$200,000 of net investment income and 6½ per cent on amounts in excess of \$200,000.

12. Statement of D. N. Wartens before the Subcommittee on the Taxation of Life Insurance Companies of the Committee on Ways and Means, House of Representatives, 82nd Congress, December 13, 1954, pp. 2-3.

13. In 1932, the year of heaviest withdrawals, the aggregate income of the life insurance companies exceeded their disbursements, including cash surrenders, by approximately \$655 million. This figure does not reflect funds made available through maturing investments. *Proceedings of the National Association of Insurance Commissioners*, 1952, p. 240. Individual companies, of course, may have suffered a shortage of cash resources.

174 Choice of Funding Medium

bulk of its funds in long-term investments, thus taking advantage of the higher yields associated with the longer maturities. The liquidity requirements of a segregated trustee plan are pictured as much higher than those of the typical insurance company. A single trust, it is argued, cannot depend on a flow of new money, adequate under all circumstances to meet cash demands, particularly in the case of a contributory plan which is subject to the hazard of heavy withdrawals of employee contributions during periods of unemployment. To avoid the possibility of having to liquidate securities in an unfavorable market, the trustee must hold substantial sums in short-term securities, thus reducing the yield on the over-all fund.

The pooling technique is conducive to higher investment returns in another respect, according to insurance advocates. The regular—and predictable—flow of new money enables the insurance company to invest its funds with a minimum lag, thus narrowing or eliminating altogether the spread between gross and net yields stemming from investment delays. The irregular flow of new money into a trustee pension fund is alleged to complicate the trustee's job and make more difficult the avoidance of delays.

In addition to promoting higher yields, the pooling principle enhances the safety of the funds, say the insurance proponents. The funds of the smallest insured pension plan are invested with the same degree of diversification as that obtaining in the composite portfolio of the insurance company. Comparable diversification is found only among the largest trustee plans. Investment losses, which are inevitable under both types of funding agency, are spread pro rata over all interests, including pension plans, in the case of an insurance company, while in the case of a trust company they fall on the particular interest or interests involved.

Partisans of the trustee approach deny that the liquidity requirements of a trustee plan are greater than those of a plan underwritten by a life insurance company. They argue that, to the contrary, the demand nature of surrender values, loan values, and certain deposits held by life insurance companies require them to place greater emphasis on liquidity, repayment features, and early maturities than is found necessary under the typical pension trust. Any advantage gained by mingling insured pension funds is lost, trust adherents claim, by merging the funds with other insurance company assets and exposing them to the uncertainties of the com-

pany's other business. As to investment delays, trust officers point out that contributions are received monthly from the large majority of pension trusts, enabling the trustee to estimate with precision the amount of money to be invested and minimizing the possibility of lags.

Trust advocates see no virtue in commingling from the standpoint of capital preservation. They point to the obvious fact that the quality of the assets determines the amount of losses and rest their case on the claim that the quality of pension trust assets is superior to that of life insurance company assets. Moreover, they assert, it is a matter of individual preference whether an employer wishes to bear only the losses that are sustained by his particular trust fund or whether he wishes to have a share in all losses, including those arising from the investment of assets accumulated for purposes unrelated to pensions. While conceding that small trust funds cannot be adequately diversified and, hence, should be pooled, trust company spokesmen hold that the great majority of trustee pension funds are large enough to permit of adequate diversification.

More controversial than the issue of pooling versus segregation is the growing trend toward inclusion of substantial amounts of common stock in the investment portfolio of trustee pension funds. Trust companies have advocated the inclusion of common stock as a means of raising the yield on the portfolio and thereby reducing the cost of the pension plan to the employer. They have pointed to the favorable performance of common stocks in recent years, as well as to the hypothetical results that could have been obtained by adherence to a long-run program of common stock investment. They argue that a pension fund, with a steady flow of new money and relatively low liquidity requirements, particularly during the early years of its existence, is in an ideal position to realize the maximum potential of common stock earning power. The peculiar adaptability of pension funds to common stock investment has been described by a proponent in the following terms:

Employee Pension Funds will steadily expand in size over a period of years. Payments into the fund, whether contributory or noncontributory, may be expected to far exceed benefit payments until such time as a large percentage of the employees entitled to benefits has retired.

As a result, the ability to liquidate the bulk of the investments of a pension fund without loss at a specific time is not an important objective.

176 Choice of Funding Medium

Unlike banks and like life insurance companies, pension funds do not require a high degree of liquidity in their investments.

Moreover, employee pension funds will receive money for investment in moderate amounts year after year. Hence, in the acquisition of investments they automatically resort to "dollar averaging"; that is, investing about the same number of dollars year after year so that they acquire more of a security when prices are low than when they are high. The "dollar averaging" principle results in reducing the average cost of an investment well below its average selling price over a period of years.¹⁴

Those who oppose the inclusion of common stock in the portfolio of pension funds regard equities as too speculative for pension purposes. They cite the potentially higher yield of common stock as proof that they are inherently more risky than the fixed income type of investment. They assert that there is not only greater uncertainty that the anticipated yield will materialize but also less certainty that the principal will remain intact. They caution against hedging a fixed dollar obligation with assets that promise neither definiteness of yield nor return of the purchase price.

The same skeptics warn against overly optimistic assumptions regarding common stock performance. Virtually all pension trust equity investment programs have been initiated within the last few years, under the most favorable economic conditions, and have shown generally good results. The long-run success of such a program, however, will depend to a great extent on (1) the liquidity requirements that arise under less favorable economic conditions, and (2) the ability of the trustee, acting on behalf of and under instructions from the employer, to ignore the current behavior of the stock market and adhere unwaveringly to a fixed policy of common stock investment, such as that represented by the principle of dollar averaging. The merits of a common stock investment program can be evaluated only in retrospect, it is argued, not on the basis of expectations.

The Record to Date.—Statistics are available as to the performance of the insurance companies. As a group, the life insurance companies domiciled in the United States earned 3.36 per cent on their mean ledger assets in 1953.¹⁵ This figure represents the net investment income, after deducting all expenses allocable to investment

14. Jules I. Bogen, Editorial in the *Journal of Commerce*, May 5, 1950, p. 4.

15. Institute of Life Insurance, *Life Insurance Fact Book*, 1954, p. 53.

operations but before deduction of Federal income taxes. The yield after taxes was 3.15 per cent. Neither figure reflects capital gains and losses.

The yield after taxes was about 38 per cent less than the companies were able to earn during the 1920's and early 1930's. The average earning rate for the decade of the 1920's was 5.07 per cent, but with the decline in the general level of interest rates the yield dropped to 4.10 per cent in the 1930's and to 3.16 per cent in the 1940's.¹⁶ The low point was reached in 1947 when the yield declined to 2.88 per cent, and the upturn which began in 1948 has continued to the present. The reversal of the trend has been due partly to portfolio changes and the development of new outlets for funds and partly to a general rise in interest levels since the end of World War II.

A statistic which is more meaningful for pension purposes is the net rate of interest credited to funds held by life insurance companies under group annuity contracts. Fortunately, a composite rate is available on an annual basis for the twelve-year period 1942-1953 for the seven companies writing the bulk of the group annuity business. That information is presented in Table 12.

The rates shown in Table 12 were derived from investment data that were tabulated on a comparable basis and weighted according to the investment income of the companies involved. They represent net earnings after taxes. Capital gains and losses are reflected, which accounts for the wide fluctuations from year to year and the fact

TABLE 12

COMPOSITE RATE OF INTEREST CREDITED TO GROUP ANNUITY
ACCOUNTS BY SEVEN LEADING COMPANIES 1942-1953

<i>Year</i>	<i>Rate Credited</i>	<i>Year</i>	<i>Rate Credited</i>
1942	3.14%	1948	2.93%
1943	3.86	1949	3.03
1944	3.99	1950	3.12
1945	4.08	1951	2.95
1946	3.08	1952	3.11
1947	2.90	1953	3.10

Source: Kenneth Black, Jr., *op. cit.*, p. 172.

16. *Ibid.*, p. 54.

178 Choice of Funding Medium

that in some years the rate of interest credited to annuity reserves greatly exceeded the yield on mean ledger assets for the industry as a whole.

Information on trust company performance is fragmentary. Trust companies are under no obligation to report the earnings of the trusts administered by them, and most are reluctant to divulge such data even on a confidential basis. Nevertheless, one large firm of pension consultants has compiled the earnings experience of a number of trustee plans of various sizes and ages and has kindly made the exhibit available, with company identification withheld. Excerpts from the exhibit are presented in Table 13.

Only plans with assets of \$1 million or more are included in the table, the plans being classified into four categories by size and listed in the order of yield in 1953—the last year for which information is available. The assets represented by these thirty plans aggregate more than \$2 billion or about 20 per cent of the estimated \$10 billion held under all trustee plans, which should provide a fairly reliable sample of trust fund performance in the recent past. In general, the earnings rate for trusts with fewer than \$1 million in assets is lower than that of the larger trusts.

The earnings reflect capital gains and losses but, in accordance with trust company accounting practice, have not been adjusted for trustee fees. The reduction in yield because of trustee fees will amount to as much as $\frac{1}{4}$ per cent in the case of the smaller funds and to as little as $\frac{1}{20}$ per cent in the case of the largest funds. In the case of extremely small funds (under \$100,000, for example), trustee charges may equal $\frac{1}{2}$ per cent of the fund.

The record is one of constantly improving investment performance. In 1948, 21 out of 26 plans had earnings of less than 3 per cent, with 18 experiencing yields of less than 2.75 per cent. Eight plans had yields of less than 2.50 per cent, one going as low as 1.69 per cent. One year later, 19 out of 28 plans recorded earnings of less than 3 per cent, with 16 showing a yield of less than 2.75 per cent. During 1950, 18 plans out of 30 earned less than 3 per cent and 10 plans less than 2.75 per cent. By 1951, only 14 plans failed to earn 3 per cent, and only 8 failed to earn 2.75 per cent. In 1952, all plans except 7 earned more than 3 per cent, 6 of the 7, however, earning less than 2.75 per cent. Finally, in 1953, only five trusts earned less than 3 per cent, assuming that the fund reflected in line 4 was still earning less than 3 per cent.

Analyzed in another manner, the 1948 earnings of only five trustee plans equaled the composite rate of interest credited to group annuity contracts in that year, but the earnings in those five cases were greatly in excess of the insurance companies' rate. In subsequent years, the number of trustee plans whose earnings equaled or exceeded the composite rate credited to group annuity contracts in those years rose to 9, 11, 16, 18 and 20 in that order.

If a generalization may be ventured from this sample, it might

TABLE 13
INVESTMENT EARNINGS OF THIRTY TRUSTEED
PENSION PLANS 1948-1953

Line	Size of Fund	1948	1949	1950	1951	1952	1953
1		4.97%	4.09%	4.65%	4.30%	4.17%	4.40%
2	Over	2.49	2.57	2.70	3.09	3.28	3.33
3	\$50,000,000	2.60	2.71	2.80	2.67	2.69	2.98
4		1.69	2.26	2.39	2.48	2.79	—
5		9.60	8.63	10.44	8.90	7.79	6.55
6	\$25,000,000	8.25	5.66	8.55	7.07	6.08	—
7	to	4.01	4.99	6.73	9.37	4.63	4.49
8	\$50,000,000	2.08	1.98	2.52	2.12	2.18	2.89
9	\$10,000,000	2.59	2.64	2.08	2.94	3.09	3.35
10	to	2.63	2.77	2.73	2.90	3.03	3.22
11	\$25,000,000	2.98	2.99	2.99	3.01	3.00	3.00
12		2.87	4.16	4.89	5.72	4.56	4.64
13		—	—	2.78	4.18	3.77	3.68
14		2.56	2.60	3.01	3.02	3.06	3.64
15		—	3.53	3.33	3.11	3.28	3.61
16		2.51	2.73	2.81	3.34	3.47	3.59
17		2.81	3.16	3.60	3.05	3.53	3.52
18		2.74	2.67	3.47	3.18	3.13	3.44
19		2.40	2.62	3.55	2.30	4.10	3.37
20	\$ 1,000,000	—	—	2.78	3.50	3.19	3.28
21	to	2.74	3.12	2.90	2.96	3.77	3.23
22	\$10,000,000	2.55	2.69	2.80	2.76	3.17	3.17
23		3.09	3.52	4.03	3.80	3.37	3.16
24		2.55	2.71	2.78	2.70	2.74	3.11
25		2.64	2.81	3.14	3.55	3.51	3.07
26		—	2.69	2.73	2.85	3.12	3.07
27		2.25	2.23	2.18	2.37	2.53	3.05
28		2.04	2.24	2.46	2.28	3.04	3.03
29		1.88	2.38	2.42	2.10	2.57	2.60
30		2.21	2.62	2.57	2.51	2.51	2.56

Source: Adapted from an exhibit prepared by a well-known firm of pension consultants.

180 Choice of Funding Medium

be concluded that through 1950, the insurance companies had a far more impressive record than that of the trust companies. There were wide variations among the various trusts, reflecting basic differences in investment policy, and a few plans showed returns greatly in excess of the composite rate earned by the seven leading group annuity companies. By 1951, a definite trend toward common stock investments was under way, and the results are unmistakably apparent in the earnings exhibit. Those trusts which do not engage in any equity investment show a yield below the standards of the insurance companies, while those that do pursue a common stock investment policy record a yield substantially better than that of the insurance companies, the margin of superiority depending upon the extent of equity investment and the emphasis placed on capital gains. Unusually high yields generally reflect a special situation such as investment in the common or preferred stock of the employer.

EXPENSES

A third factor that has a bearing on the cost of a pension plan is that of expenses. In neither insured nor trustee plans can expenses be regarded as a major element of cost, with the exception of individual insurance and annuity contracts. Interestingly, greater differences in the expense element exist among the various types of insured plans than between trustee plans and their closest insurance counterpart—the group annuity contracts.

Expense Element in Insured Plans.—The expenses incurred in connection with insured pension plans may be broadly classified as (1) acquisition costs, (2) administrative costs, and (3) taxes.

The most significant item among the acquisition costs is the commissions paid to the field forces for the development and servicing of the business. In this area arise the principal differences in the expense element of the various plans. In the case of an individual contract plan, the commission is the same as that payable on a contract which is not part of a pension trust, unless a special contract is used for pension purposes, in which case the commission would probably be lower. The commission normally varies with the type of contract and the size of the premium. A typical first-year commission payable on a retirement income contract issued at age 45,

the average age of issue in many pension trusts, might be 25 per cent of the first year gross premium, with the percentage being smaller at ages above 45 and larger at ages below 45. A renewal commission of 5 per cent of the gross premium for the next nine years would constitute a typical pattern of renewal commissions.

The commissions on group permanent contracts are normally much smaller than those payable on individual contracts. The scale used by one of the leading companies in the group permanent field for the basic group permanent contract—retirement endowment at 60 or 65—is as follows:

<i>Portion of Annual Premiums</i>	<i>Commissions as Percentage of Adjusted Gross Premiums</i>		
	<i>1st year</i>	<i>Next 9 years</i>	<i>Next 10 years</i>
First \$ 5,000	20%	4.5%	2.25%
Next \$ 20,000	16	3.75	1.875
Next \$ 50,000	12	3.0	1.5
Next \$ 75,000	9	2.5	1.25
Next \$100,000	6	2.0	1.0

The commission paid on that portion of the annual premium in excess of \$250,000 is adjusted to fit individual circumstances. The foregoing scale appears to be representative of those used by other important group permanent companies.

The smallest commissions are payable under group annuity contracts. Once more it seems preferable to present typical scales rather than to attempt a generalization. One large company, extremely active in the group annuity field, provides commissions according to the following scale:

<i>Portion of Annual Premiums</i>	<i>Commissions as Percentage of Gross Premiums</i>	
	<i>1st year</i>	<i>2nd to 10th year</i>
First \$ 20,000	7.0%	1.5%
Next \$ 30,000	3.0	1.5
Next \$450,000	1.0	0.6
Over \$500,000	0.4	0.3

Another company, equally active in the group annuity field, pays according to the following scale:

182 Choice of Funding Medium

<i>Portion of Annual Premiums</i>	<i>Commissions as Percentage of Gross Premiums</i>	
	<i>1st year</i>	<i>2nd to 10th year</i>
First \$100,000	3.0%	1.0%
Next \$400,000	1.0	0.5
Over \$500,000	0.4	0.2

The principal difference between the two scales lies in the treatment of small cases, although there is a difference, small but relatively significant, in the renewal commissions at all levels.

Other acquisition costs include commissions or comparable payments to field supervisors, salaries of home office representatives who assist in the installation of the plans, fees for medical examinations, where required, expense of constructing initial records, and the cost of issuing the necessary contracts and certificates. Premium taxes on first year premiums might well be considered an acquisition expense but, in view of their importance, have been separately classified.

The administrative expenses of an insured pension plan are basically those attributable to the record-keeping and actuarial functions. In this category are expenses connected with premium accounting, reserve valuation, dividend calculation, benefit payments, and similar functions. In this area, also, the per unit expenses of group permanent and group annuity contracts are much lower than those of individual insurance and annuity contracts because of bulk handling. This is particularly true of noncontributory deposit administration and immediate participation guarantee contracts under which no accounts are established by the insurance company for individual employees until the benefits vest or until the employees retire. Investment expenses are normally charged against investment income and are not treated as administrative expenses. Each pension plan must bear its pro rata share of the insurance company's overhead, which falls in the category of administrative expense.

Life insurance companies are subject to the usual types of taxes, such as Federal and state income taxes, Social Security taxes, transfer taxes, and the like, but, in addition, they are subject to a special tax on premiums levied by the various states. While most states levy a tax on ordinary insurance premiums, at least those of companies

domiciled in other states, only seventeen states tax annuity premiums on any basis. These taxes on annuity premiums range from $\frac{1}{2}$ per cent in South Dakota to 3 per cent in Idaho, the most common being 2 per cent. Neither New York nor Pennsylvania taxes annuity premiums. In the aggregate, less than 1 per cent of group annuity premiums has been absorbed by state premium taxes, but such taxes have consistently accounted for a third or more of all group annuity expenses.

In order to meet these expenses, and for other purposes, the insurance companies add a special charge, called loading, to their net premiums to arrive at the gross premium paid by the policyholder. The loading, however, does not necessarily, and in fact usually does not, measure the additional cost to the policyholder attributable to expenses, since a portion of the loading may be returned in the form of dividends or may be used to accumulate a contingency reserve which would otherwise have had to come out of the net premium or from surplus. It is more accurate to state that, in the normal case, the loading represents the maximum potential expense that may be incurred under the contract. It is conceivable that under certain old policies, expenses may currently exceed the loading element, the deficiency being offset by mortality savings and excess interest, but under normal circumstances expenses can be assumed to be considerably less than the loading.

With this explanation, it may be pointed out that the loading on a retirement annuity or retirement income contract, one of which is likely to be used with an individual policy pension trust, while varying among companies and possibly with age of issue, might be in the neighborhood of 20 per cent of the net premium. The loading on group permanent contracts, like commissions, is lower than that of individual contracts, typically amounting to 12 or 13 per cent of the gross premium. The loading on group annuity contracts, 5 to 8 per cent of the gross premium, is the lowest of all. Even so, the loading under the group annuity contract is grossly redundant, except for small cases. The greater portion of the loading is not used to meet current expenses but is allocated to the accumulation of a contingency fund or returned to the employer in the form of dividends.

The actual expenses incurred by an insurance company under group annuity contracts are reported separately in the annual

184 Choice of Funding Medium

statements filed with the state insurance departments. The twelve-year record of such expenses for the seven leading group annuity companies is presented in Table 14.

TABLE 14
GROUP ANNUITY EXPENSES AS A PERCENTAGE OF PREMIUMS
WEIGHTED AVERAGE FOR SEVEN LEADING COMPANIES FOR PERIOD
1942-1953

<i>Year</i>	<i>Total Expenses</i>	<i>Commissions</i>	<i>Taxes*</i>	<i>All Other</i>
1942	2.83%	.53%	.94%	1.36%
1943	2.78	.50	.95	1.33
1944	2.50	.49	.88	1.13
1945	2.54	.48	.72	1.34
1946	2.69	.42	.83	1.44
1947	2.69	.43	.80	1.46
1948	2.61	.38	.80	1.43
1949	2.87	.40	1.02	1.45
1950	2.40	.32	.84	1.24
1951	2.56	.33	.90	1.33
1952	2.57	.32	.98	1.27
1953	2.57	.31	.75	1.51

* Does not include Federal income taxes.

Source: Kenneth Black, Jr., *op. cit.*, p. 172.

In the table, group annuity expenses are broken down into commissions, taxes, and "all other," and expressed as a percentage of premiums. It will be noted that, in the aggregate, commissions constitute an insignificant cost of doing business. In 1953, they amounted to only .31 of 1 per cent of the premiums collected by the companies. The percentage has declined as renewal commissions exert an ever-stronger influence, and the trend may be expected to continue as renewal commissions expire on the older plans. Taxes have been a far more significant item, in later years being about 2½ times as large as commissions. At no time during the twelve-year period did total expenses exceed 2.87 per cent of premiums and in the latest year they amounted to only 2.57 per cent.

The foregoing expense ratios reflect the composite expense rates of seven companies for all types of group annuity contracts, including the deposit administration and immediate participation guarantee forms, and for all cases, irrespective of size or duration. Yet the

expense rate varies significantly with the size of the case and, to a lesser extent, with the species of group annuity contract. The influence of size and duration can be observed in Table 15.

TABLE 15
ESTIMATED EXPENSES OF DEFERRED GROUP ANNUITY
CONTRACT BY SIZE AND DURATION OF PLAN^a

<i>Annual Premiums or Purchase Payments</i>	<i>Number of Eligible Lives</i>			
	100	500	1000	2500
<i>First Ten Years of Contract</i>				
\$ 25,000	7.22%	— ^c	— ^c	— ^c
50,000	5.07	7.21	— ^c	— ^c
100,000	3.66	4.74	5.98	— ^c
250,000	2.56	2.99	3.40	4.99
500,000	2.20	2.41	2.66	3.41
1,000,000	— ^b	1.90	2.03	2.40
<i>Sixth Through Fifteenth Years</i>				
\$ 25,000	4.90	— ^c	— ^c	— ^c
50,000	3.17	5.12	— ^c	— ^c
100,000	2.21	3.19	4.32	— ^c
250,000	1.64	2.03	2.48	3.84
500,000	1.45	1.64	1.87	2.55
1,000,000	— ^b	1.40	1.51	1.85
<i>Eleventh Through Twentieth Years</i>				
\$ 25,000	4.34	— ^c	— ^c	— ^c
50,000	2.63	4.58	— ^c	— ^c
100,000	1.84	2.81	3.94	— ^c
250,000	1.36	1.75	2.20	3.56
500,000	1.20	1.40	1.62	2.30
1,000,000	— ^b	1.22	1.33	1.67

a Based on the expense studies of one of the largest group annuity companies; expenses expressed as a percentage of the premium or purchase payments during each of the periods indicated. Investment expenses not included.

b Combinations not found in practice.

c Combinations not acceptable to the company because of the small average premium per life.

Table 15 shows for certain combinations of active lives and annual premiums the expenses which will be incurred during three different periods of a deferred group annuity contract, according to the expense analysis of one of the oldest and largest group annuity com-

186 Choice of Funding Medium

panies. The expenses are expressed as a percentage of the total premium payments under the contract during each of the three periods studied. Only prospective *actual* expenses are reflected, no allowance being made for amounts set aside to meet expenses that will arise beyond the twenty-year period, which amounts would become a part of the reserve for future expenses.

For any given number of lives the expense ratio declines as the premium volume increases, while for any given premium volume the expense rate increases with the number of lives, a reflection of the expense of record maintenance. Furthermore, for any specific combination of lives and premiums the expense ratio declines with each successive period. The latter phenomenon is primarily traceable to the fact that renewal commissions for any given set of premiums expire at the end of ten years and thereafter only premium taxes and administrative expenses are reflected in the expense estimates. The expenses of the first period are strongly influenced by first-year commissions and other acquisition expenses, while the second period reflects no first-year commissions and renewal commissions for only five years. No commissions nor acquisition expenses are reflected in the data for the third period.

During the first ten years the expenses range from a high of 7.22 per cent in a case of 100 lives and an annual premium of \$25,000, to a low of 1.90 per cent in a case of 500 lives and an annual premium of \$1,000,000—an unusual combination. With respect to cases below 100 lives, the expense rate goes above the high of 7.22 per cent shown in the table, rising to 11 per cent for plans covering only ten lives, when account is taken of the special administrative charge levied in such cases. According to the projections, the expense ratio during the second ten years may go as low as 1.20 per cent with the 100 lives and \$500,000 premium combination, or to 1.67 per cent in the much more plausible combination of 2500 lives and \$1,000,000 of premiums.

Comparable prospective expense ratios for deposit administration contracts issued by the same company are given in Table 16. This table reflects the savings in administrative expense attributable to unallocated funding, since commissions and premium taxes—the other major elements of expense—are identical to those incurred under the deferred group annuity contract. For all combinations the expense ratios under the deposit administration contract are lower

TABLE 16
ESTIMATED EXPENSES OF DEPOSIT ADMINISTRATION
CONTRACT BY SIZE AND DURATION OF PLAN^a

<i>Annual Premiums of Purchase Payments</i>	<i>Number of Eligible Lives</i>				
	100	500	1000	2500	10,000
<i>First Ten Years of Contract</i>					
\$ 25,000	6.22%	— ^c	— ^c	— ^c	— ^c
50,000	4.55	5.40	— ^c	— ^c	— ^c
100,000	3.37	3.79	4.17	— ^c	— ^c
500,000	2.08	2.17	4.24	2.46	— ^c
1,000,000	— ^b	1.75	1.79	1.89	2.42
2,000,000	— ^b	— ^b	1.56	1.61	1.87
<i>Sixth Through Fifteenth Years</i>					
\$ 25,000	3.98	— ^c	— ^c	— ^c	— ^c
50,000	2.70	3.52	— ^c	— ^c	— ^c
100,000	1.94	2.36	2.72	— ^c	— ^c
500,000	1.34	1.42	1.50	1.71	— ^c
1,000,000	— ^b	1.25	1.29	1.40	1.90
2,000,000	— ^b	1.17	1.19	1.24	1.49
<i>Eleventh Through Twentieth Years</i>					
\$ 25,000	3.43	— ^c	— ^c	— ^c	— ^c
50,000	2.15	2.98	— ^c	— ^c	— ^c
100,000	1.57	1.98	2.35	— ^c	— ^c
500,000	1.09	1.18	1.25	1.46	2.48
1,000,000	— ^b	1.08	1.11	1.22	1.73
2,000,000	— ^b	1.03	1.05	1.10	1.35

^a Based on the expense studies of the same company whose findings were reported in Table 15.

^b Combinations not found in practice.

^c Combinations not acceptable to the company because of the small average premium per life.

than their counterparts under the deferred group annuity contract.

It is well to remember that these cost projections are based on current expense levels and are therefore subject to modification if the expense components undergo a change in the future.

In addition to the foregoing expenses which are incurred by the insurance company and passed on to the employer, the latter incurs some administrative expenses within his own organization and, occasionally under deposit administration and IPG contracts, fees to actuarial consultants.

Expense Element in Trusteed Plans.—The expenses incurred under trustee plans are of three types: (1) actuarial fees, (2) trustee fees, and (3) employer administrative costs.

Trust companies do not provide actuarial facilities as a part of their pension service. The employer, therefore, must retain his own actuarial consultant and compensate him independently of any fees paid to the trustee. Charges will be incurred for two types of service: (1) those incident to the establishment of the plan and (2) those related to the year-to-year operations of the plan. These charges will vary with the nature and magnitude of the services provided, as well as among actuarial firms, but it is possible to indicate the general range of fees. The fee for establishment of the plan, including the so-called development fee, will generally fall within a range of \$5,000-\$15,000, while the annual fee for valuation, preparation of Treasury reports, and other normal actuarial services will usually run around 50 per cent of the installation charge or within a range of \$2,500 to \$7,500. For extremely small cases, the fees will fall below those indicated, while for the exceptionally large cases the fees will run considerably higher than those indicated above.

The principal charge levied by the trustee is the fee for investment services. This charge is levied annually and is based on the size of the fund. There is no standard scale of charges, but competition has produced fees that are roughly comparable. A representative fee among the banks in the New York area is $\frac{1}{4}$ per cent of the first \$1,000,000 in the pension fund, $\frac{1}{10}$ per cent of the next \$4,000,000, and $\frac{1}{20}$ per cent of the excess over \$5,000,000. Banks in other areas tend to charge somewhat higher rates. A typical scale of charges among Midwestern banks, for example, is $\frac{1}{2}$ per cent of the first \$50,000, $\frac{1}{4}$ per cent of the next \$1,950,000, $\frac{6}{40}$ per cent of the next \$2,000,000, $\frac{1}{10}$ per cent of the next \$2,000,000, and $\frac{3}{40}$ per cent of the next \$2,000,000, and $\frac{1}{20}$ per cent of the excess over \$8,000,000. Some banks specify a limit beyond which the charge will be subject to negotiation. Smaller banks tend to charge a higher fee than larger banks. Since the investment fee is based on total accumulations under the plan, it tends to constitute an increasing percentage of annual contributions.

If the trustee prepares and mails the checks to retired employees, an additional charge is made. The charge is usually a specified

amount per check, subject to a minimum annual charge. The New York banks tend to charge ten cents per check, with a minimum annual charge of \$250, while a typical scale in the Midwest is seventy-five cents per check on the first 100 checks, twenty-five cents per check on the next 1,900 checks, and fifteen cents per check on the excess above 2,000 checks. Any special administrative services performed by the trust company, such as the preparation of booklets or other explanatory material, are subject to additional charges.

The employer also incurs certain administrative expenses within his own organization. He must maintain the basic personnel records from which he can certify to the trustee the benefits to be paid to each employee, as well as the time when the payments are to be made. For purposes of employee relations or for other reasons, the employer may handle the check-writing function. He may also have to make decisions with respect to actuarial assumptions, investment policies, and other broad matters affecting the plan. The investment function in particular may make heavy demands on the executive staff, since a pension committee of the employer is frequently given the responsibility of approving all investments made by the trustee.

To a large extent, the administrative functions of the employer are the same whether the plan be insured or trustee. While the relative magnitude of employer administrative expenses under insured and trustee plans is a subject of considerable controversy and wide disagreement, the broader responsibility of the employer under a trustee plan should logically entail greater demands on the executive staff than under an insured plan. Any differences, however, should be relatively insignificant in the total cost picture.

Comparison of Expenses Under Insured and Trustee Plans.—Precise quantitative comparisons of expenses of insured and trustee pension plans are difficult, if not impossible, to develop because of differences in the nature, incidence, and accounting treatment of the expenses involved. It seems preferable, therefore, to restrict the analysis to a statement of principles.

In the interest of clarity and consistency, investment expenses should be treated as deductions from gross investment earnings rather than as expenses per se. This procedure is dictated by the basic differences in insurance and trust company investment practices which may be reflected in both gross yield and investment

190 Choice of Funding Medium

expenses. A prime example is the insurance company emphasis on real estate mortgages which combine a relatively high gross yield with relatively heavy acquisition and servicing costs.

A valid expense analysis, therefore, involves a balancing of (1) acquisition expenses (primarily commissions), (2) premium taxes, (3) insurance company administrative expenses, and (4) employer administrative and legal expenses incurred under insured plans against (1) fees of actuarial consultants and (2) employer administrative and legal expenses incurred under trustee plans.

Employer administrative and legal fees might well offset each other under the two types of plan, but it is more likely that they will be higher under the trustee plan. The offsetting items to the fees of actuarial consultants are insurance company acquisition and administrative expenses. In general, the latter will exceed the former, the margin being wide in the case of individual contract plans and narrowing down to less than one percentage point in the case of some group annuity contracts. In fact, over a period of twenty or thirty years the expenses of a deposit administration contract, exclusive of premium taxes and investment expenses, might conceivably run as low as the fees of the actuarial consultant for the same period. This would not be true, of course, if the employer retains a consulting actuary in connection with his deposit administration plan, which is occasionally the case. On the other hand, the trust company also incurs acquisition expenses which, it must be assumed, will be passed on to the employer in one form or another. At the present time such expenses appear to be inconsequential.

The premium tax levied on insured plans has no counterpart among trustee plans and is a penalty the employer pays for electing an insured plan. All insured plans, however, do not pay such tax, since only seventeen states levy a tax on group annuity premiums. Some companies pro rate the taxes paid on group annuity premiums over all group annuity policyholders, irrespective of the location of the employees, while others assess the tax of a particular state against only those policyholders having covered employees in that state. Therefore, if an employer has no employees in a state which taxes group annuity premiums and is insured by a company which does not pro rate such taxes, he would avoid the tax. On the other hand, an employer insured by a company which does not pro rate would, in most of the seventeen states, pay a tax of 2 per cent of contributions.

It is essential in comparing expenses of insured and trustee plans to keep in mind that the expenses of insured plans are prefunded. The loading contained in an insurance premium is designed to take care of all expenses incurred at any time in connection with the benefit purchased by the premium. Therefore, if an insured plan should be terminated at any point, the accumulated reserves would be adequate to absorb any expenses incurred in the future, as well as to provide all benefits purchased to that point. In other words, the loading represents the maximum potential expenses under the plan.

Expenses under a trustee plan, on the other hand, are financed on a pay-as-you-go basis. The benefits may be funded in advance, but the expenses are almost always handled on a current basis. If a trustee plan should terminate, the employer would continue to incur expenses for whatever period the trust would have to be administered. To compare the loading under an insured plan with the reported expenses of a trustee plan is to compare the total potential expenses, past and future, of the former with only the past expenses of the latter. Such a comparison is improper and misleading.

TURNOVER

The effect of turnover on the cost of a pension plan has been discussed in a previous chapter. It was pointed out that the rate of turnover is a major determinant of cost, although its influence may be modified to some extent by the vesting provisions of the plan, as well as by the eligibility requirements. In a typical plan only a small percentage of the employees who qualify for coverage will ever qualify for benefits. This is true whether the plan be of the insured or trustee variety. Moreover, there is no reason to believe that the rate of turnover will be influenced to any measurable degree by the type of financing adopted. Nevertheless, the funding medium does determine the time when the turnover factor exerts its influence, as well as the manner in which the influence is exerted.

Under plans which use allocated funding, no allowance is made in the premiums for anticipated turnover, credit being given as the turnover occurs. Under unallocated funding media, turnover is often discounted in advance, adjustments being made only for variations of actual from projected experience. The practical significance of this difference in procedure is that a larger initial outlay is required

192 Choice of Funding Medium

under those plans which do not discount for turnover. Only if the lowest initial outlay is a matter of paramount concern should turnover be a factor in the choice of funding medium.

As a matter of practice, turnover undoubtedly wields a stronger influence among trustee plans than among insured plans. This is due to the fact that trustee plans usually contain less liberal vesting provisions and less stringent requirements for coverage than insured plans. The turnover factor, therefore, has a larger area in which to operate. This is clearly a function of the plan provisions, however, and not of the funding medium.

DEFERRED RETIREMENT

Contributions to pension plans are calculated on the assumption that the employees will retire at a specified age, or according to a schedule of retirement ages. It may happen, however, that some employees will not retire at the scheduled time but will continue to work beyond such date. Under some plans, such an employee would receive his retirement benefits as if he had retired, with no reduction in salary, while under others he would not be entitled to benefits as long as he worked but upon retirement would receive the actuarial equivalent of the benefit to which he was entitled at normal retirement age. In neither case would the employer profit by the delayed retirement. Under many plans, however, retirement benefits are deferred until actual retirement, with no actuarial adjustment, and the employer is credited with the benefits which would have gone to the employee had he retired at the scheduled age. When this latter procedure is followed, the employer's cost is obviously reduced.

As is true of turnover, the number of employees who defer their retirement beyond normal retirement is unaffected by the financing vehicle utilized. However, the same type of plan which discounts for turnover may also take credit in advance for anticipated postponements of retirement. This likewise reduces the initial outlay of the employer.

EMPLOYEE CONTRIBUTIONS

It is obvious that, with a given scale of benefits, the cost of a pension plan to the employer can be reduced through employee participation in the financing. It is necessary to make the reservation

concerning the scale of benefits since in some cases employee contributions are reflected in higher benefits for the employees rather than in a reduction of the employer's outlay.

Even with the same scale of retirement benefits, however, the employer's outlay is not reduced dollar for dollar by employee contributions. In the typical insured plan, employer contributions are used to purchase annuities which provide no refund in the event that the employee should die before retirement. If employees are required to participate in the financing, justice dictates that their contributions should be returned to their estates, with or without interest, in the event of death before retirement. The result is that, on the average, the employer's cost is reduced about seventy cents by each dollar contributed by the employees, the remaining 30 per cent of employee contributions being used to defray the cost of employee death benefits.¹⁷

All funding media do not lend themselves equally well to employee participation in financing. Some insurance companies will not administer employee contributions under deposit administration and immediate participation guarantee contracts. If contributions are to be made by employees, such companies would apply them to the purchase of regular deferred annuities. Employee contributions may be made under trustee plans, but if common stock investments are contemplated, a separate trust may be established for employee money which would be invested in fixed-income securities, or if a single trust is used employee contributions may be earmarked for fixed-income securities.

SUMMARY OF COST FACTORS

It is apparent from the foregoing that only two elements of cost—investment earnings and expenses—are affected in the long run by the choice of funding medium. The other factors—mortality, turnover, age of retirement, and employee contributions—exert an influence on ultimate costs which is unaffected by the funding medium. The incidence or timing of the costs, however, which may be an important consideration in itself, will vary with the funding medium.

17. William W. Fellers, "Pension Costs and Cost Experience," *Pensions and Profit-Sharing* (Washington, D. C.: Bureau of National Affairs, 1953), p. 157.

With respect to investment earnings, it would appear from past performance that life insurance companies will earn a somewhat higher net rate of return than a trust fund invested exclusively in government bonds and high-grade corporate bonds and a much higher rate than one invested wholly in government bonds. If a substantial portion of the trust fund is invested in a diversified list of common stocks, however, the trust fund is likely to show a higher yield, on the basis of current common stock performance, than that of a typical life insurance company, the margin of superiority depending upon the proportion of the fund invested in equities. Most pension fund trustees consider 35 per cent to be the upper limit for common stock holdings, but in recent years this has been more than adequate to yield a return on the total fund in excess of that earned by life insurance companies with their fixed-income investments. Whether or not this situation will prevail throughout the indefinite future is in the realm of conjecture.

With respect to expenses, a fair conclusion might be that under most circumstances a trustee plan should reflect lower expenses, any differences being attributable—but not necessarily equal to—commissions and premium taxes paid by insurance companies. Under any type of funding medium, with the exception of individual contract plans, expenses tend to be a relatively minor item of cost.

SECURITY OF BENEFITS

The cost of a pension plan is a matter which concerns the employer primarily, the employees secondarily, if at all. The security of benefits, on the other hand, is a matter with which both the employer and the employees are vitally concerned. The employees are concerned for the obvious reason that the benefits promised under the plan will, in the usual case, represent the difference between financial security and financial insecurity in old age. The employer's concern is rooted not only in humanitarian impulses but in the desire to realize the business objectives underlying the establishment of the plan.

The security behind pension promises can be measured in terms of three factors: (1) a third-party guarantee, (2) a segregated pension fund, and (3) the general financial resources and good faith of the employer. These factors are not mutually exclusive, but the

classification serves to emphasize some significant points that are pertinent to the discussion.

THIRD-PARTY GUARANTEE

For all practical purposes, only one type of third-party guarantee is available for the safeguarding of pension benefits and that is the guarantee of a life insurance company. With the exception of the immediate participation guarantee contract, every dollar that is paid to an insurance company under a pension plan carries with it the company's unconditional guarantee that a benefit of a specified amount will be paid pursuant to the terms of the plan. For the purpose of exposition, the insurance company's guarantee may be analyzed from the standpoint of mortality, interest, expenses, and the other factors that enter into the cost of a pension plan, but the paramount consideration from the point of view of the employer and employees is the *composite* guarantee—the company's promise to pay a specified benefit for each dollar contributed. The company may lose under one of its basic assumptions and gain under another, but its commitment remains fixed. The nature and significance of the guarantee should not be obscured by the fact that the *rate schedules* for future contributions may not be guaranteed or may be guaranteed only for a limited period. That is a matter which relates to prospective cost, not security. Whether the rate schedule is guaranteed for the lifetime of the contract or only for a limited period, a dollar, once paid over to the insurance company, immediately becomes entitled to a rate guarantee that will remain with it until it is converted into a retirement benefit. Thus, the security of benefits already purchased is precisely the same, whether they are to be paid under an individual insurance or annuity contract, a group permanent contract, a deferred group annuity, or a deposit administration group annuity. It should be recalled, however, that under deposit administration plans, only employee contributions, if any, are applied to the purchase of benefits for active employees, so that only retired employees enjoy the type of security available under conventional insurance contracts. No benefits are ever purchased under an immediate participation guarantee contract, and the only guarantee provided by the insurance company is the limited rate guarantee offered by a few companies. In effect, however, retired employees

196 Choice of Funding Medium

enjoy the same security of benefits available under other types of insured plans through an insurance company requirement that a fund of minimum size be maintained. That, however, becomes a function of adequacy of the pension fund, which is the next source of security to be considered.

The arrangement under which a trust company administers the funds of an uninsured plan does not give rise to a third-party guarantee, since the obligation of the trust company is limited to the investment and disbursement of funds turned over to it by the employer.

SEGREGATED PENSION FUND

The significance of a third-party guarantee diminishes as a segregated fund, irrevocably committed to the payment of pension benefits, approaches and is maintained at the level conservatively estimated to be sufficient to liquidate the accrued liability of the plan, including that arising out of credited past service. In the same vein, the guarantee provided under insured plans is effective only as to benefits already purchased, or monies paid in, under the plan. Under any type of plan, therefore, the level of funding, or the extent to which funds have been accumulated, is of crucial importance.

The level of funding under any type of pension plan is a function of two variables: (1) the conservatism of the cost projections, and (2) the rate at which the sums estimated to be required—whatever the basis of the estimates—are accumulated. Under the allocated funding types of insured plan, the insurance company dictates both the conservatism of the cost projections and the rate of accumulation. The cost projections are reflected in the premiums and the rate of funding in the requirement that all benefits—those relating to both past and current service—be purchased in full before the employee retires.

The employee who reaches retirement while the plan is still in operation is assured, therefore, that he will receive all the benefits to which he is entitled. If the plan should terminate before a particular employee reaches retirement, he is assured that all benefits for service after the plan was established have been purchased in full. The same cannot be said of past service benefits. Benefits for past service would not have been purchased in full under an individual contract or group permanent plan, the unpurchased portion

depending upon the number of years the contract had to run. The status of such benefits under a deferred group annuity would depend upon the funding policy pursued by the employer. The benefits could have been purchased in full, in part, or to no extent. However, under any of these three types of contracts, whatever portion of past service benefits has been purchased up to the point of termination is definitely credited to the individual employees and, of course, guaranteed.

In connection with deposit administration and immediate participation guarantee group annuities, only the retired employees are assured of receiving all the benefits to which they are entitled under the plan. The position of the active employees depends upon the status of the unallocated fund. The rate at which the active life fund is accumulated is determined, within Treasury regulations, by the employer and his actuarial consultant. Treasury regulations require, as a minimum, that contributions equal to current service costs and interest on the initial past service liability be made, but the employer is accorded considerable leeway in formulating his current service costs. For example, the employer may discount his contributions for death, interest, turnover, and delayed retirement, using any reasonable assumptions. Whether the fund would be adequate, as of any given time, to purchase benefits for all service, past and current, would depend upon the employer's funding policy and the skill and conservatism with which cost projections were made. There is no assurance that the fund would be adequate even to purchase all current service benefits in full. In any case, the rights of a particular employee are subject to the formula for allocation prescribed by the plan, and many plans assign priority to certain classes of employees or classes of benefits. Some employees may receive their benefits in full, while others receive nothing.

Under a trustee pension plan, all employees, active and retired, must look to the solvency of the trust fund for the security of their benefits, since no outside agency is lending its guarantee to the promise of the employer. The funding policy of the trustee plan, therefore, is particularly significant.

The trustee plan is subject to the same Treasury regulations on funding as are applicable to insured plans, but in each case these regulations are aimed primarily at the prevention of *overfunding* rather than *underfunding*. Treasury approval of a pension plan

198 Choice of Funding Medium

carries with it no assurance that the employer's funding policy is adequate to provide the benefits promised under the plan. Contributions under a trustee plan must be adequate to cover the normal cost of the plan plus interest on the initial accrued liability, but, as in the case of deposit administration and immediate participation guarantee contracts, the employer has wide discretion in estimating his costs. Liberal assumptions are frequently made with respect to such cost-reducing factors as mortality, interest, turnover, and delayed retirement.

Wide variations exist among trustee plans as to the rate of funding. Some are funding at the maximum rate permitted under Treasury regulations, while others are funding at the minimum rate. Still others—perhaps the majority—are pursuing a middle course of meeting the normal cost and amortizing the accrued liability over a period of 20 or 30 years.

Inasmuch as the retired employees are usually given a prior lien on the assets of a terminated plan, they are virtually assured of receiving their benefits under a plan which has been funded beyond the minimum level. Even under minimum funding conditions, the accumulated fund should be adequate after a number of years to provide benefits in full to the retired group of employees. As under any unallocated funding medium, however, active employees have no assurance of receiving the benefits for which they have qualified.

It is sometimes said in regard to the security of benefits that a trustee plan is not permitted to accumulate a contingency reserve. The basis for such a statement is the fact that *in any one tax year* gains from experience more favorable than the assumptions must be credited against the employer's contributions for the following year. Yet it is possible for the plan to accumulate the equivalent of a contingency reserve by methods which are entirely acceptable to the Treasury. The most obvious method is through the use of assumptions less favorable than the experience is likely to be, particularly with respect to interest earnings and turnover. Some plans assume no turnover. While the gains in any particular year, as stated above, must be recognized and credited against the employer's contribution for the following year, the liabilities of all future years are presumably overstated, resulting in the creation of excess reserves. The same result can be achieved through conservative valuation of assets, particularly common stocks.

It should be observed, however, that excess reserves in the form of conservative assumptions are held by life insurance companies, *in addition* to contingency reserves.

GENERAL FINANCIAL RESOURCES

In one sense, the financial resources of the employer are the primary source of security in any pension plan, since, if the employer retains the will and ability to meet the obligations of the plan into the indefinite future, he could dispense with the other two safeguards. The employer does just that under a disbursement or pay-as-you-go plan, and, as a consequence, the employees are totally dependent upon the future resources of the employer. Even in the case of a fully funded plan, the employees must rely on the financial ability of the employer for benefits arising out of service to be performed in the future. However, with respect to benefits which have accrued as a result of past service, using the term in its broadest sense, the financial resources of the employer are important, in the case of insured plans, only if all benefits have not been purchased, and, in the case of trustee plans, only if the accumulated fund, plus future interest earnings, should prove inadequate to provide the benefits promised under the plan.

As long as a plan is a going concern, it is generally assumed that the employer, with the support of employee contributions, will eventually make the contributions to provide all benefits in full. If the plan should terminate, the primary source of reliance would be the accumulated fund, supplemented in the case of insured plans, by the insurance company's guarantee. Should the fund prove inadequate, supplemental contributions by the employer would then become a matter of paramount consideration.

A realistic appraisal of the situation leads to the conclusion that the prospects of supplementary employer contributions are not too bright. Until a plan has been in effect for ten years without a substantive amendment, it can be terminated without retroactive tax penalties only for reasons of "business necessity," the most common of which is inability to meet the financial obligations of the plan. If the employer can prove to the Treasury that he lacks the financial resources to continue the plan, it seems unlikely that he would voluntarily assume the obligation of making good a deficiency in the

200 Choice of Funding Medium

fund. If a plan remains in operation for more than ten years, it would become such an integral phase of the employer's personnel policy that one must assume that it would be terminated only for the most compelling financial reasons. In some cases, of course, an employer may terminate a plan in order to avoid the creation of additional liabilities, with the full intention of meeting those which have been created in the past.

A question may well be raised at this point as to the legal obligation of the employer to make up any deficit in the pension fund. The answer seems clear in the case of a voluntary unilateral plan in which the employer customarily reserves the right to terminate the plan at any time, and specifically limits his legal obligation to the funds already contributed. With respect to this type of plan, an eminent legal authority has stated: "... Under ... a funded unilateral company plan the employees qualifying for pensions may obtain vested rights to pension benefits, [but] they can look only to the trustee or to the insurance company, to whom the pension fund has been entrusted, for the payment of their pension benefits. If that fund should prove inadequate, the employees normally have no legal recourse against the company itself to compel additional contributions or to require the company to assume direct liability for the payment of the pensions."¹⁸

The answer is not so clear with respect to negotiated bilateral plans. The employer's obligation depends upon the terms of the particular collective bargaining agreement. Under one general type of agreement, the employer assumes a legal obligation to provide life-time benefits in the appropriate amount to all employees who retire during the term of the labor contract.¹⁹ The obligation under this type of agreement is to *pay pensions* rather than to make a definite *contribution to a pension fund*. However, if insufficient funds are contributed during the term of the labor contract to provide life-time benefits to all employees who retire during that period, the employer presumably could be compelled to make the necessary additional contributions. The employer owes no liability to those employees who do not qualify for benefits—and actually retire—

18. Arthur H. Dean, "Accounting for the Cost of Pensions—A Lien on Production," *Harvard Business Review*, Vol. XXVIII, No. 4, July, 1950, p. 33.

19. *Ibid.*, pp. 34-35.

during the term of the contract and need not make any contributions on their behalf.

Under another common type of bilateral pension agreement, the employer's obligation is couched in terms of funding requirements. Some of the agreements require terminal funding, while others specify that the employer shall make contributions sufficient to keep the plan "actuarially sound." It is not clear whether compliance with such funding requirements will relieve the employer of any further liability under the contract.

To the present, the employer's liability under bilateral pension agreements is purely a matter of conjecture, since the issue has not come before the courts.

FLEXIBILITY

Another factor that must be considered in evaluating the relative merits of the various media of financing is that of flexibility. The advocates of trustee plans tend to emphasize the importance of flexibility, while the proponents of insured plans are inclined to play down its significance. In an effort to cast some light on the issue, this section points out the areas in which the need for flexibility may exist and then indicates the extent to which the required flexibility can be provided under each of the available funding media. The topic can be discussed under the two general headings of benefit structure and funding procedure.

BENEFIT STRUCTURE

The broad problem in this area is that of adapting the funding medium to the specifications of the plan. If the benefit provisions of the plan follow the normal or conventional pattern, the benefits can be provided satisfactorily under any of the available financing forms. Certain types of provisions may be incorporated into a plan, however, which will require a degree of flexibility not available under all forms of financing.

For example, a plan which provides that OASI benefits are to be deducted, in full or in part, from the benefits that would otherwise be payable requires a more flexible funding medium than one whose benefits are independent of OASI. The same is true when the benefit

202 Choice of Funding Medium

formula of a plan is subject to periodic change, as is the case under negotiated bilateral plans. A provision which permits early retirement with full benefits would create complications for some types of insured plans. Finally, the payment of disability benefits other than those available under conventional early retirement provisions would not be feasible under some insurance contracts.

With respect to the adaptability of the various funding media, it can be said that the trustee approach lends itself to any of the specifications outlined above plus any others that might be desired. By the very nature of the arrangement, a trustee plan is capable of providing any type of benefit which the employer is willing to provide. This is one of the strong appeals of the trustee method. In general, however, the flexibility of the trustee plan is matched by the deposit administration and immediate participation guarantee contracts, although a more involved procedure might be entailed in some instances. Theoretically, the deferred group annuity can be adapted to any set of specifications, but, as a general practice, it is confined to plans which provide a unit of benefit for each year of service with no complicated adjustments. It is not unusual, however, to find the deferred group annuity used with final pay plans. Disability benefits could be provided only on a pay-as-you-go basis or through the facilities of a separate fund. Individual and group permanent contracts are wholly unsuited to plans which contain unusual benefit specifications, although disability benefits are available under the group permanent contracts of some companies.

FUNDING PROCEDURE

In one sense, the entire question of flexibility is concerned with the funding process, since any set of benefits can be provided so long as a means can be found of predicting and accumulating the sums of money that will be required. The unusual types of benefit specifications mentioned in the preceding section are troublesome only because they create a problem of estimating how much money will be needed to provide the benefits. The funding medium must permit the necessary degree of flexibility in projecting the costs and accumulating the funds. Yet flexibility with respect to the two functions of projection and accumulation may be desirable in connection with any set of benefit specifications, whether simple or complex.

Flexibility with respect to cost projections is primarily a question of whether advance recognition is to be given to the factors of turnover, disability, delayed retirement, and salary changes or whether recognition will be accorded only as the experience develops. Latitude also exists with respect to the basic assumptions relating to mortality, interest, and expenses. Costs may be estimated with a reasonable margin of safety or they may be calculated with no allowance for possible adverse experience.

The employer and his actuarial consultant have complete latitude, within the limits of Treasury regulations, in estimating the costs that will be incurred under a trustee plan. As has been indicated previously, credit is commonly taken for anticipated turnover and delayed retirement. Moreover, the consulting actuary is likely to assume a higher rate of investment earnings than that assumed by a life insurance company. There is a possibility that he will assume a higher rate of mortality among both active and retired employees than would an insurance company actuary. Finally, no allowance will generally be made for future expenses, the assumption being that these will be handled on a pay-as-you-go basis.

This method of estimating costs always produces a figure lower than the costs projected by an insurance company, sometimes 20 to 25 per cent lower. It must be remembered, however, that such cost projections are estimates in every sense of the word and may be quite different from the costs that finally emerge. Every factor that can affect the original estimate and the ultimate true cost is subject to fluctuation as events develop in the future. While it must be assumed that the cost estimates are prepared in good faith and in accordance with the best judgment of the consulting actuary, it must be said, in all fairness, that the actuary assumes no financial responsibility in connection with his estimates.

Complete latitude also exists under deposit administration and immediate participation guarantee contracts with respect to benefits accruing to active employees. The cost estimates may be prepared by an independent actuary or by the insurance company, but in either case it is customary to discount for turnover and delayed retirement. A less conservative set of assumptions relating to mortality, interest earnings, and expenses may also be used. The whole effect is to reduce the initial outlay and possibly reduce to some

204 Choice of Funding Medium

extent the security underlying the accrued benefits of the active employees.

The employer has no latitude with respect to benefits payable to retired employees under the deposit administration and immediate participation guarantee contracts or in connection with any benefits payable under the other types of insured plans. The costs are calculated according to the insurance company assumptions, and no account of turnover, disability, and delayed retirement is taken until the events occur. The situation is quite different here since the insurance company guarantees its estimate of costs and places its entire resources behind its guarantee. Under such circumstances, it is to be expected that the cost estimate would be higher than one prepared by an independent actuary but the true cost, in either case, will depend upon actual experience. Advocates of trustee plans view this inflexibility of insured plans as a major disadvantage, while insurance company representatives regard it as one of the strongest assurances that the employees will receive the benefits which they have earned.

Once the cost estimates for a particular set of benefits have been developed, flexibility may exist as to the *rate* at which the sums estimated to be needed are accumulated. Sufficient flexibility to permit an employer to take optimum advantage of tax deductions and to adjust his contributions to his earnings experience is regarded as a desirable objective so long as it does not impair the "will to fund" and, hence, the solvency of the plan.

The minimum rate of funding is dictated by the Treasury requirement that contributions equal current costs plus interest on the initial past service liability. Beyond this point, however, considerable flexibility may be permitted under many forms of financing.

As might be surmised, the employer, under a trustee plan, can set his own pace in funding. He may "freeze" his past service liability and never fund it. If, however, he is amortizing the past service liability, he may decide to forego his past service contribution in some year or years. In fact, after the initial past service liability has been partially amortized, he may skip all contributions, including those for current service, for a year or several years.

Apart from the insurance company requirement that sufficient funds be on hand at all times to provide benefits in full to those employees who have retired, the employer enjoys the same latitude

in funding under the deposit administration and immediate participation guarantee contracts that he does under the trustee approach. The same disadvantages attend the too liberal exercise of the privilege of foregoing contributions.

Under a deferred group annuity, the employer is usually required to meet all current service costs, even though a portion of the past service liability has been liquidated. Considerable flexibility can be achieved, however, in the rate at which the past service liability is liquidated. Many companies will permit an employer to amortize the past service liability over a period of twenty or thirty years. Furthermore, if a portion of the past service liability has been funded, subsequent contributions for that purpose can be omitted in particular years. Under some contracts, contributions for both current and past service may be temporarily suspended, with or without the insurance company's consent, so long as the benefits to be paid under the contract are not affected at any time and the unfunded past service does not exceed the initial past service liability.

No flexibility exists relative to individual and group permanent contracts other than that obtainable under normal reinstatement privileges and—in the case of individual contracts—a possible automatic premium loan feature. The special “stop and go” provision found in some group permanent contracts is, of course, a source of flexibility but is administratively complicated.

A final and broader aspect of flexibility relates to the facility with which a change in funding agencies can be accomplished. Such a step normally has serious implications, and it should be taken only after a careful and dispassionate consideration of all pertinent factors, including the impact on the employee group. The employees may question the change in funding agency if it appears that the employer is merely attempting to reduce his pension outlays, without passing along any part of the anticipated savings to the employees in the form of more liberal benefits.

Under a trustee plan the employer normally reserves the right to change trustees at any time, subject, of course, to a reasonable notice, or to terminate the trust and transfer the plan to an insurance company. It should be noted that the latter transfer involves only a termination of the *trust* and not of the *plan*. Adequate precautions must be taken in such a maneuver to avoid the possibility that the tax authorities will rule that a termination of the plan has occurred.

206 Choice of Funding Medium

If the employer exercises his right to change funding agencies, the assets comprising the trust property can be transferred intact to the new trustee, if the trust is to be continued, or, if the trust is to be terminated in favor of an insured plan, such of the assets as are legally and financially acceptable to the insurance company could presumably be credited against the premium obligations of the plan, the remainder of the fund, if any, being converted into cash and applied as premiums. No specific charge is levied for termination, since the trustee is compensated on a current basis for its services.

As a matter of practice, many insurance companies will accept only cash. In any event, a transfer of trust assets would be of little advantage to the employer, since the insurance company would hardly accept the assets at any value greater than current market value.

Funds cannot be transferred with such facility under insured plans. Under no circumstances will the insurance company relinquish responsibility for payment of benefits to those employees who have already retired. Under some group annuity contracts, particularly those of the deposit administration and IPG types, funds accumulated for employees not yet retired can be transferred to another agency at the request of either the insurance company or the employer. Even though such contracts contain no reference to the right of transfer, it is usually understood that, should the occasion arise, a transfer of funds could be arranged on a negotiated basis.

In the event of a transfer of funds under a group annuity contract, the insurance company assesses a liquidation charge. The charge may be contractual or it may be adjusted to individual circumstances, but in either case it would not normally exceed 5 per cent of the fund. The liquidation charge is intended to cover not only the expenses incident to the transfer itself, which should be relatively insignificant unless investment losses are sustained, but also all expenses, including commissions and premium taxes, incurred on amounts paid into the fund. In addition, restrictions are normally imposed on the rate at which the money can be withdrawn, a ten-year period of liquidation frequently being stipulated. This right may not be invoked, however.

A contractual right of transfer exists under individual insurance and annuity contracts in the form of cash surrender and loan values.

When an employer wishes to transfer an individual contract plan to another agency he can either surrender the policies for cash or exercise the loan privilege, the liquidation charge being determined by the manner in which the nonforfeiture values are calculated. The loan privilege would normally be exercised only where the plan contained a restriction on cash surrenders. A change in funding medium that is to be effective only as to future benefits can be accomplished by a transfer of the individual contracts, with the transferee continuing premium payments on the original basis.

SERVICE

A final factor to be considered is that of service. While this factor does not lend itself to precise delineation and rigorous analysis, broadly speaking it can be said to embrace those functions associated with the installation of the plan, periodic valuations, disbursement of pension monies, and routine record keeping.

An evaluation of this factor must concern itself with the quantity and quality of the services provided by agencies other than the employer. In the case of insured plans, the services are normally provided by the insurance company, although some services may be performed by independent actuaries, particularly during the exploratory or developmental stage of the plan. In the case of trustee plans, the services are provided by the trustee and the consulting actuary.

Generalizations as to the range and calibre of services provided by the various funding media are of doubtful value because of the extreme variations in practices among even the same type of funding agencies. It appears, however, that less variation exists among insurance companies than among the agencies servicing trustee plans. For example, the range and quality of actuarial services provided by a particular firm of consulting actuaries might greatly surpass those furnished by an insurance company under typical circumstances, while the services of another might not approach the minimum standard of a life insurance company. Nevertheless, any differences that might exist in this area are not attributable to the funding mechanism, as such, but to the choice of consulting actuary.

In connection with the disbursement function, however, the insurance companies appear to enjoy a definite advantage. This is

attributable to their superior facilities for keeping track of persons who have retired and those who have left the service of the employer with deferred benefits. Trust companies operate in a limited geographical area and must rely heavily on their correspondent banks in playing the role of paymaster to a constantly increasing group of pensioners scattered throughout the country. Their difficulties are compounded when benefits are vested and many years elapse between the termination of the employee's service and the commencement of his retirement income.

Life insurance companies, on the other hand, tend to operate over a wide area and those engaged in pension underwriting have representatives in every community of any consequence. They are in a position to render personalized service to their body of pensioners, wherever they might be located. Their far-flung agency system is of especial significance in connection with a plan which provides vested benefits.

CONCLUSION

It must be apparent at this juncture that no funding medium is inherently superior to all others. Each has its peculiar advantages and disadvantages. A particular funding medium might be ideal for one set of circumstances and completely unsuitable for another. Plan specifications, particularly the benefit formula, will have a strong influence on the employer's choice of medium. So will cost considerations, especially the anticipated return on invested funds. In the final analysis, however, the decision is likely to hinge on the relative importance which the employer attaches to the related factors of flexibility and responsibility.

Varying degrees of flexibility can be obtained among the available funding media, but one of the inexorable facts of pension life is that control is always accompanied by responsibility. As the degree of employer control over the financing and administration of a pension plan increases, so does his responsibility for the functioning of the plan. Under the individual contract pension trust, for example, the employer has very little flexibility but, by the same token, his responsibilities are virtually limited to the payment of premiums. He enjoys freedom from investment worries and uncertainty over the magnitude of the financial obligations he has as-

sumed. Under other types of insured plans the employer gains more flexibility but assumes more direct responsibility for the success of the plan, the ultimate in both flexibility and responsibility being represented by the IPG group annuity. Finally, under a self-administered trustee plan the employer has almost complete control over the provisions, financing, and administration of the plan, the only limitations being found in the governing tax laws and the terms of a labor-management agreement, if any; in exchange for this control, however, the employer inherits full responsibility for the operation of the plan.

Increasing numbers of employers are placing flexibility and control ahead of freedom from responsibility. This is especially true of the larger employers who feel that they can afford to assume all risks inherent in a pension undertaking. The desire to control the investment of the pension fund and particularly to take advantage of common stock investments, is frequently the decisive factor. Small and medium-sized firms tend to prefer the lower order of responsibility identified with insured plans, especially those of the allocated funding type, notwithstanding the accompanying restrictions on the employer's freedom of action. Underlying the choice in each case should be an appreciation of the employees' interest and an acceptance of the premise that having established a pension plan an employer is morally obligated to provide the benefits which it promises. Only on the basis of such a philosophy can the private pension movement become a significant force in mankind's perennial quest for old-age security.