INDUSTRIAL RELATIONS COUNSELORS, INC., ROCKEFELLER CENTER, NEW YORK CITY

Pensions

(1949)

Industrial Relations Memos

August 8, 1949: Number 111

PENSION PLANNING IN THE LIGHT OF CURRENT TRENDS—I

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PENSION PLANNING IN THE LIGHT OF CURRENT TRENDS—I

A. INTRODUCTION

In 1933 Industrial Relations Counselors, Inc., published what has become almost a classic in its field, "Industrial Pension Systems in the United States and Canada" by Murray W. Latimer, who was then a staff member of the organization. This basic study was supplemented by a study of 347 plans in 1938, the results of which appeared as "Trends in Industrial Pensions" by Murray W. Latimer and Karl Tufel (1940). The war interfered with plans to continue this series, but a third study was undertaken in 1948. A lapse of ten years, which spanned the postdepression recovery, the war period and the postwar readjustment, warranted re-examination of company practice.

This third study is much less concerned than the earlier two with the growth or development of the pension movement. Its primary concern is with the current trends in a developed movement. In the light of these trends we try to set forth in nontechnical language the basic problems in pension planning.

When Latimer analyzed 466 plans in 1933, there was every reason to suppose that he had covered substantially all existing or discontinued plans of any significance. With their number increased today to between 8,000 and 10,000,[1] any study must be limited to a select group. As stated in our earlier memo of this series—No. 103 on "Extra Pension Payments"—which was released first as dealing with the most urgent problem in the field of company pensions, this study is based on an analysis of 1,400 plans. We report, however, only on 550 plans in those companies which furnished experience data, in addition to the bare provisions of their plans. For purposes of this study, companies having separate plans for different groups of personnel are regarded as having a single pension program. In analyzing plan provisions, however, the separate plans of a company are necessarily segregated when the provisions differ. For this reason, and because some companies did not report certain types of data, the number of plans appearing in a few of the tabular analyses is sometimes more, or in other instances less, than 550.

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[1] As of August 31, 1946, the Bureau of Internal Revenue had approved 6,862 plans with nearly 3,300,000 participating employees.

The characteristics of the 550 plans do not differ from those of the larger group, and the group reported on apparently includes most of the important companies and plans. In fact, these plans have nearly 2,500,000 participating employees, which is about 75 per cent of the total number estimated as participating in all pension plans in the United States. The general character of the group has already been described in the tables included in Memo No. 103, according to the date of plan establishment, industry, and size of company.

This is the first of two, or possibly more, memorandums reporting basic trends. It deals with coverage and eligibility, type of plan (contributory or noncontributory) and method of funding (trusteed, insured, etc.). It will be followed by a report on contribution and benefit provisions, age and other retirement conditions, and vesting, withdrawal and termination arrangements.

The method of presentation is (1) to give the analysis of the basic provisions of the plans in the present group, (2) to compare these results with those of the 1938 group, and then (3) to test the reality of any apparent trend by reference, first, to the changes made in any of these plans since 1938, and, second, to the characteristics of the sixty-three most recent plans established from 1946 to 1948. In connection with certain questions, reference is also made to the provisions of the 161 new plans installed between 1942 and 1945.

B. SHOULD THE PENSION PLAN COVER ALL EMPLOYEES?

In designing a pension plan one of the first necessary decisions is to determine whether it is intended to cover all employees or only a selected group, such as executives or salaried employees or employees earning more than a specified amount.

After the passage of the Social Security Act, one of the common efforts to adjust private plans to the new federal system was to exclude employees earning $3,000 or less per year from then existing plans and to limit new plans to employees earning over $3,000. This development was based on what quickly proved to be a mistaken assumption that the federal system would provide satisfactory pensions based on the first $3,000 of annual earnings and that private plans would be needed, therefore, only to supplement federal benefits with pensions based on the excess over $3,000. There was also some tendency during the war to use such plans as substitutes for salary increases, which under the wage and salary stabilization program were somewhat more difficult to obtain, especially for higher paid executives, than increases in wage rates for hourly paid employees. If it had not been for this special fillip, the trend toward such so-called "excess plans" probably would have run its course, as managements realized the discriminatory effect of such plans. Since 1942 the relevant Treasury regulations also may have stimulated managements to seek "integration" of the federal and private plans, by so designing their contribution and benefit formulas that the result is relatively equitable treatment for all employees, when social security taxes and benefits are taken into account.

Current prevailing practice is clearly to provide pension coverage for all employees, in the sense that no groups are excluded from possible eligibility to participate. Of the 550 plans studied, 81 per cent cover all employees and account for 91 per cent of the employees covered by these plans, as shown in the tabulation on the following page. Only 7 per cent are restricted to salaried employees and only 5 1/2 per cent to salaried or other employees earning $3,000 or over per year.

Fifty-eight plans, or about 10 per cent of the total are restricted to employees receiving specified minimum salaries or earnings; fifty-two of them also prescribe minimum service conditions.[1]

Since 1938, fifteen companies extended the coverage of their plans: six, to all employees instead of only salaried employees, selected classes of salaried employees or salaried employees earning $3,000 per year or over;

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[1] Many plans which do not limit coverage or eligibility on an earnings basis have contribution and benefit formulas which give differential treatment to different salary or earnings brackets.

Basis of Coverage	Pension Plans		Participating Employees	
	Number	Per Cent	Number	Per Cent
All employees.................	445	80.9	2,192,575	90.9
Salaried employees only.......	38	6.9	64,561	2.7
All employees with annual earnings of—				
$ 600......................	6	1.1	17,210	0.7
601—1,200..............	4	0.7	5,616	0.2
1,201—1,500...............	9	1.6	5,752	0.3
1,501—2,999...............	7	1.3	4,847	0.2
3,000 or over.............	22	4.0	78,661	3.3
Salaried employees with annual earnings over—				
$ 600......................	2	0.4	288	[a]
3,000......................	8	1.5	36,873	1.5
Other variations..............	9	1.6	5,027	0.2
Total.....................	550	100.0	2,411,410	100.0

[a] Less than 0.05 per cent.

nine, to all salaried employees instead of certain salaried employees, chiefly those earning $3,000 per year or over. Of the sixty-three plans established from 1946 to 1948 fifty-four of them, or 86 per cent, covered all employees.

From the point of view of sound industrial relations policy there can be little justification for singling out the executive or salaried class for special treatment, and since 1942 certain types of discrimination in favor of more highly paid executives or employees have been prohibited in pension plans for which favorable tax treatment is desired. Neither can there be much justification for excluding any group of employees, because their inclusion would pose special technical problems. Management should assume the responsibility for devising a pension program that will both fit its particular situation and adequately achieve the objectives of a sound retirement policy.

Coverage, however, does not mean participation. Although all employees may be "covered," they may actually participate in the plan only after meeting certain eligibility requirements established for administrative, legal or financial reasons. These conditions are related usually to length of service or age, or both.

C. WHAT SHOULD BE THE ELIGIBILITY REQUIREMENTS?

Minimum length of service or age requirements are entirely defensible when they are so set as to defer participation until employees attain the age or length of service that makes it probable their employment will be permanent and their participation in the pension plan worth while. By thus excluding the age or service groups among which turnover most frequently occurs a company avoids the administrative inconvenience and expense of opening and closing individual accounts, collecting and refunding contributions, and dealing with other details for a changing group of workers who will never benefit from the plan. Under contributory plans, in which participation is voluntary, an age requirement is sometimes established in consideration of the fact, apart from the possibility of turnover, that very young employees are less likely to be interested in making provision for their old age.

Such reasonable restrictions on eligibility may sometimes be required to make a plan qualify for favorable tax treatment. During the war period especially, when profits and taxes were high, the Bureau of Internal Revenue did not look with favor on an employer getting tax credits with respect to his contributions for short-service employees. The thought was that when their employment subsequently terminated such contributions (or withdrawal credits) would be applied, at a time when profits and tax rates might both be lower, toward pensions for the older, long-service and presumably higher paid employees. Under Treasury pressure, therefore, a five-year service requirement, designed to exclude temporary war workers, became customary.

Age and service requirements, however, also affect the generosity of a plan to employees and the cost to the employer, and must be considered in relation to the other terms of the plan. A liberal benefit formula may be offset by restrictive eligibility requirements, or vice versa. Some companies can bring pension costs down to amounts they can afford only by setting minimum age or service restrictions that exclude substantial periods of employment and thus eliminate contributions for those periods. These restrictions also serve, of course, to limit the expense—which the company alone bears—of providing pensions for service rendered prior to the adoption of the plan (commonly referred to as "past service benefits"). A long service period for eligibility of, say five years, is a very effective medium in reducing costs, since five years of past service is deducted from each participant's actual service. This makes for substantial savings in the case of older employees for whom premium costs are high. Age restrictions produce less savings, as most of the employees affected are at ages for which premium costs are relatively low.

At the other end of the scale, maximum age requirements in some plans exclude employees above specified ages from participation. This form of limitation may be reasonable in its application to workers who are hired above the specified maximum age, since their possible years of subsequent service may be too few to enable them to build up a significant pension before the normal or any delayed retirement date. Such exclusions may in fact be desirable, as tending to reduce slightly one factor that leads to reluctance to hire older workers. But to exclude from participation older employees of long company service would defeat the very purpose for which pension plans are established. However, it is sometimes found impracticable to include such workers, especially in insured plans, because of the heavy initial financial burden of having to have their annuities fully paid for at the time of retirement. Many companies which exclude older personnel from the formal plan, by maximum age restrictions, make special provision for them, based on the terms of the formal plan, although outside its requirements.

The diversity of eligibility requirements and of combinations of such requirements is set forth in the following tabulation:

Kind of Eligibility Requirements	Plans		Participating Employees	
	Number	Per Cent	Number	Per Cent
None....................	45	8.2	1,276,444	52.9
Service only...........	197	35.7	562,841	23.3
Service combined with—				
Minimum age..........	126	22.9	178,724	7.4
Maximum age..........	31	5.6	40,878	1.7
Minimum and maximum age..............	35	6.3	39,793	1.7
Earnings and service...	39	7.1	62,906	2.6
Earnings, service and age..............	40	7.3	99,519	4.1
Minimum age only.......	9	1.6	23,444	1.0
Maximum age only.......	8	1.4	89,827	3.7
Other variations.......	22	4.0	37,034	1.5
Total..............	552[a]	100.0	2,411,410	100.0

[a] Includes an additional plan of each of two companies whose pension programs embrace plans with different eligibility provisions.

That the forty-five plans with no eligibility requirements—constituting 8 per cent of the total—account for more than half of the participating employees is explained by the fact that they include twenty-seven noncontributory plans, among which are several old, very large, trusteed plans. The administrative problems and costs which eligibility conditions are designed to avoid are less important under noncontributory trusteed plans. When contributions are not collected from employees and the plan is self-administered through a trust, no individual accounts need to be set up until

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retirement, there is no administrative problem of refunding contributions to employees who withdraw and, of course, no surrender charge, such as insurance companies assess on withdrawals. The absence of eligibility conditions does not, however, imply that a plan is necessarily more generous or will eventually provide a larger proportion of employees with pensions. Plans without eligibility requirements for participation often require employees to have from ten to twenty-five years of service to qualify for a pension, regardless of the age at which the employees enter the plan.

What constitutes a reasonable set of eligibility requirements, from the viewpoint either of an employer or his employees, depends on the nature of the employment, especially its stability, as well as the characteristics of the employee group, especially as to age, sex and length of service. As would be expected, therefore, and as suggested by the great diversity in these requirements, there can be no generally recommended standard.

1. Service Requirements

The simplest and most common eligibility requirement, that based on service only, is used in 197, or 36 per cent, of the plans. Almost equally common is some combination of age and service requirements, used in 192, or 35 per cent, of the plans. The combination of age and service requirements is apparently growing more common. It is used in 34 per cent of the contributory plans in this analysis as compared with only 15 per cent in the 1938 study.

As shown in the tabulation below, a majority of the participating employees are included in plans which have no service requirement. In the other plans which use service alone or in combination with other factors, one year of service is required in 216, or nearly 40 per cent, of the total; five years in 101, or 18 per cent. One year of service or less is required in 336, or 61 per cent, of the plans, having 87 per cent of the participating employees.

Service Requirement	Plans		Participating Employees	
	Number	Per Cent	Number	Per Cent
None............	69	12.5	1,408,359	58.4
6 months or less	51	9.2	124,409	5.2
1 year..........	216	39.1	563,928	23.4
2 years.........	56	10.2	85,868	3.6
3 years.........	50	9.1	68,782	2.8
4 years.........	4	0.7	3,174	0.1
5 years.........	101	18.3	152,130	6.3
Other variations	5	0.9	4,760	0.2
Total.......	552	100.0	2,411,410	100.0

The record of plan changes since 1938 showed no consistent trend in service requirements. Five companies added and seventeen raised this requirement; one removed and eight lowered it. This experience reflects the tendency previously mentioned to stiffen eligibility requirements to exclude temporary war workers. The current trend to less restrictive service requirements is indicated by the provisions of the sixty-three plans established 1946-1948, of which twenty-seven, or 43 per cent, had a requirement of one year or less; twenty, or 32 per cent, required five years.

2. Age Requirements

When a minimum age requirement is prescribed it is usually used to supplement a service limitation. The 196 plans with this combination of requirements (with or without other factors) are distributed as follows:

Minimum Age Requirements	Plans Also Requiring Service of—							
	Six Months or Less	One Year	Two Years	Three Years	Four Years	Five Years	Other Variations	Total
21 years....	1[a]	8	3[b]	1	..	..	..	13
25 years....	1	19	2	9[c]	..	7	..	38
30 years....	4[d]	41[e]	16[f]	11	1	24	..	97
35 years....	3[g]	15[h]	2[h]	3	..	19[g]	2	44
40 years....	..	1	..	1	..	2	..	4
Total...	9	84	23	25	1	52	2	196

[a] Age twenty under this plan.

[b] Age eighteen for women, under one plan.

[c] Age thirty for women, under one plan.

[d] Age twenty-five for women, under two plans.

[e] Age twenty-five for women, under three plans.

[f] Age twenty-five for women, under one plan.

[g] Age thirty for women, under two plans.

[h] Age thirty for women, under one plan.

In 148, or 75 per cent, of these 196 plans the age requirement is thirty years or less. When we consider that forty-five plans have no eligibility provisions at all and 197 base eligibility only on years of service, it appears that significantly restrictive age requirements (over thirty years of age) are found only in a very small minority of plans. If the minimum age requirement is high many employees with substantial service after being hired at early ages will view this provision as discriminatory, which of course it is. For example, if the minimum age is thirty-five, no contributions are payable for employment prior to that age. An employee of about that age when a plan is established would, therefore, get little or no benefit credits for his past service, despite the fact that he might have had fifteen years' service, while another employee then aged forty but with much less service could get as much as five years' past service credit.

Since 1938, minimum age requirements were added or raised in fourteen of the plans and were lowered or removed in ten. In the sixty-three 1946-1948 plans fifty-six, or 89 per cent, had a minimum age requirement of thirty years or less, among which are twenty-three without any age requirement.

Maximum age requirements are found in only ninety-seven, or 17 per cent, of the plans. The exclusion from a pension plan of employees who have passed a given maximum age, coupled with a normal retirement age, is tantamount to requiring a fixed period of membership in the plan before retirement. Some plans specifically include such a requirement. The tabulation below shows those eighty-eight plans which have such provisions, either explicitly or by using a maximum age at entry, and sometimes in combination with service requirements for eligibility. To allow for variations in the normal retirement date the maximum age of eligibility for entrance into the plan is subtracted from the normal retirement age to give years of possible service until retirement. Thus a maximum age of fifty-five under a plan with sixty-five as the normal retirement age is treated the same as age sixty under a plan with seventy as the retirement age.

Period of Plan Membership Required	Plans Also Requiring Service of—							
	Six Months or Less	One Year	Two Years	Three Years	Four Years	Five Years	Other Variations	Total
5 years..	2	20	3	5	1	6	..	37
10 years..	..	14[a]	6	10	..	5	1	36
15 years..	..	1	4	2	..	1	..	8
20 years..	2	1	..	2	..	1	..	6
25 years..	1	..	..	..	..	..	..	1
Total.	5	36	13	19	1	13	1	88

[a] Includes one plan requiring ten years' service for males, five for females.

As previously indicated, only special circumstances would justify the effective inclusion of a maximum age requirement, except to exclude new employees hired at advanced ages. This type of eligibility condition is not characteristic of typical plans, except those which use individual policies for which the underwriting rules of the insurance carriers usually specify age limitations. Since 1938 five plans added or raised the maximum age requirement, and five lowered or removed it. Of the 1946-1948 plans, eighteen, or 29 per cent, included this type of requirement.

3. Voluntary Versus Compulsory Participation

Under noncontributory plans, participation subject to the eligibility conditions, if any, is automatic. Under contributory plans it may be voluntary or compulsory for all eligible employees. Most of the early contributory plans were compulsory, more particularly for employees hired after the effective date of the plan. The trend to voluntary participation, clearly evident in 1938, has continued; participation is compulsory in only seventy, or 17 per cent, of the total of 416 contributory plans and in three of the forty-four contributory plans established from 1946 to 1948. In the 1938 study, participation was still compulsory in 30 per cent of the plans, although only in 16 per cent of those established in the second half of 1937 and 1938. Compulsion is not only undesirable in itself but should be unnecessary. Experience has demonstrated that whenever a proper effort is made to explain the terms of a reasonably adequate plan to employees, well over 90 per cent of those eligible will elect to join.

A closely associated question is whether, once an employee has elected to participate in a contributory plan, he may thereafter withdraw his contributions or discontinue further contributions either temporarily or permanently while continuing in the service of the company. The right of withdrawal, and to a less extent of suspension, tends to defeat the purpose of a plan. If employees know they can withdraw their accumulated contributions at any time, even at the cost of loss of credit for employer contributions on their behalf, they may regard the plan as a savings depository to be used not for retirement purposes but for other possible emergency needs.

Most companies, fearful of discouraging initial participation by making the decision to join irrevocable, have evaded the issue. Only thirty-three of the booklets describing the 345 contributory plans in which participation is voluntary state specifically that contributions may be withdrawn or suspended, seventeen permitting only suspension. Still fewer state that withdrawals or suspensions are prohibited. Apparently most companies hope to defer the determination of policy until the problem in fact arises. Other information, however, indicates that the majority of companies, regardless of plan provisions do permit individual withdrawals but rely on persuasion to discourage them.

The divergence of opinion among insurance carriers about the proper solution to this small but perplexing problem is indicated by the fact that the standard group annuity contracts written by two of the largest companies usually permit voluntary withdrawals from plan membership, while those of two others, equally large, usually do not permit such withdrawals.

Sound policy would seem to be to encourage the use of credit unions or other devices to furnish any necessary financial relief for employees, who should not be permitted to let temporary difficulties, real or imaginary, defeat their long-run interest by interfering with the systematic accumulation of retirement income.

4. Effect of Eligibility Provisions on Participation

Some indication of the combined effect of coverage and eligibility exclusions on actual participation is shown in the following tabulation, which gives, by industry and type of plan, the percentage that participating employees were of total personnel and that the payroll for participants was of total payroll, in the 534 companies that reported payroll information:

Industry	Percentage Ratio of— Pension Participants to Total Employees: Contributory Plans	Noncontributory Plans	Both Types	Payroll for Participants to Total Payroll: Contributory Plans	Noncontributory Plans	Both Types
Manufacturing						
Food and kindred products......	40.0	72.0	52.2	40.2	72.1	52.3
Textile mill products..........	35.5	7.1	32.3	39.6	26.5	37.9
Paper and allied products......	47.1	63.9	52.9	56.4	67.7	59.7
Printing and publishing........	34.5	52.0	35.5	49.4	60.8	50.2
Chemicals and allied products..	44.4	91.0	66.9	45.7	92.3	69.1
Petroleum products.............	79.8	94.0	83.2	81.0	88.2	82.7
Stone, clay and glass products.	28.9	10.0	25.3	26.5	16.9	24.6
Iron and steel, metal products and machinery.............	40.2	82.7	59.0	44.7	88.5	63.7
Transportation equipment.......	12.1	59.1	18.3	18.8	55.9	25.3
Transportation and communications	41.9	91.1	85.7	47.9	81.7	86.5
Electric light, power, gas and water.....................	67.7	80.0	73.0	74.7	85.6	79.3
Wholesale and retail trade.......	10.7	48.7	19.4	28.9	52.3	35.4
Finance, insurance, and real estate....................	62.6	71.1	63.8	69.5	78.1	70.9
Business, professional and personal services..........	40.8	21.2	24.8	45.0	38.4	40.3
Miscellaneous..................	21.6	84.2	43.0	28.8	84.9	51.7
Total......................	39.0	82.4	57.2	45.4	84.3	61.7

Fifty-seven per cent of the total employees in the reporting companies are participating in their companies' plans. The most striking fact that under contributory plans only 39 per cent of the total employees participate, as compared to 82 per cent under noncontributory plans, reflects the general practice under noncontributory plans, as previously mentioned, of placing practically no restrictions on initial participation. Only a very small part of the experience with contributory participation can be explained by voluntary election of employees not to join the plans. Neither does the difference in extent of actual membership in the two types of plans imply that a larger proportion of employees may eventually draw pensions under noncontributory than under contributory plans.

The industries with the highest participation are transportation and communications (86 per cent), petroleum products (83 per cent), electric light, power, gas and water (73 per cent), and chemicals (67 per cent). This ranking probably reflects the relative stability of employment and greater than average length of service in the first three of these industries, together with the fact that transportation and communications and chemicals rank first and second, respectively, in having the greatest proportion of employees (94 and 66 per cent), covered by noncontributory plans. It is of interest that the petroleum industry, in which 72 per cent of the employees are covered by contributory plans, achieves almost the same level of high participation as transportation and communications. This may be attributable in part to the liberal provisions of the typical plan in that industry. The lowest proportion of employee participation—18 per cent in the manufacture of transportation equipment—may be explained by the infrequency of pension plans for hourly rated employees in the automobile industry. Apart from these extreme cases not too much significance can be attached to the variations between industries in the ratios of participation.

Large discrepancies are apparent between the proportions of employees participating and the ratio of their payrolls to total payrolls—as in wholesale and retail trade, in which 35 per cent of the payroll is for the 18 per cent who participate. These discrepancies indicate the effect of coverage or eligibility restrictions that limit the application of the plans to longer service and higher paid employees.

D. SHOULD EMPLOYEES CONTRIBUTE?

When it is decided what employees a plan is designed to benefit and what the standards of eligibility shall be, one of the next decisions is whether or not the employees should contribute to the cost of the plan. This decision cannot be made by itself, of course, but must be related to other factors, such as the method of funding and the benefit structure.

Before 1925 most private pension plans were noncontributory. Subsequently, there developed an increasingly strong trend toward contributory plans. The situation in 1948 is summarized in the tabulation below:

Type of Plan[a]	Plans		Participating Employees	
	Number	Per Cent	Number	Per Cent
Contributory...	407	74.0	931,238	38.6
Noncontributory	134	24.4	1,452,448	60.2
Composite[b].....	9	1.6	27,724	1.2
Total	550	100.0	2,411,410	100.0

[a] For convenience of reference the difference between contributory and noncontributory plans is referred to in this memo as a difference in type of plan.

[b] In these plans the companies meet the entire cost of a certain minimum pension and give the employees the opportunity to pay for an added benefit. For most subsequent purposes this type of plan will be treated as contributory.

Nearly 76 per cent of the plans are contributory but they account for only 40 per cent of participating employees. In 1938 about the same proportion of plans then active, 75 per cent, were contributory but they represented a smaller proportion, only 29 per cent, of participating employees. The general trend toward requiring some employee contributions has clearly continued. It was somewhat interrupted during the war, when wage stabilization and tax considerations led many companies to adopt noncontributory pension plans as nonwage concessions to employees, for which the net cost after taxes would be negligible. This interruption is evidenced in the record of plan changes since 1938, when five plans changed from a noncontributory to a contributory basis but fifteen shifted from contributory to noncontributory. During the period, sixty-five of the 161 new plans, or 44 per cent, were noncontributory. After the war, however, the trend toward employee contributions reasserted itself, since only nineteen, or 30 per cent, of the sixty-three plans established in 1946-1948 were noncontributory.

The disparity between contributory and noncontributory plans, in that the latter represent 24 per cent of the total number of plans but account for 60 per cent of the participants, is due to the fact that contributory plans are more usual in small companies and in such industries as printing, banking and business services, in which the typical unit of operation is small. On the other hand, the coverage of noncontributory plans is heavily weighted by a few long-established plans in the chemicals, iron and steel, and communications industries.[2]

There is no necessary connection between the size of a company and whether or not its pension plan should be contributory. It happens, however, that the average number of employees in contributory plans is about 2,300, as compared with over 10,000 in noncontributory plans. About 10 per cent of the contributory plans, but over 20 per cent of the noncontributory plans, have more than 5,000 participants.

Apparently there is a relationship between the type of plan and the method of funding. The tabulation shown on the following page suggests that when employees are required to contribute, there is a tendency to give them the sense of security that comes from insuring the plan. Of the contributory plans, 334, or 80 per cent, are funded by group annuity contracts. Putting it the other way, 84 per cent of the group annuity contracts are contributory, and cover 81 per cent of the employees under such contracts, as shown in the tabulation on the following page; on the other hand, 52 per cent of trusteed plans are noncontributory and cover 80 per cent of the participants.

Prevailing practice and current trends both support the position of those who favor the contributory type of plan. Nevertheless, the question remains one of the most controversial in the field of pension planning and may become even more so as collective bargaining about pensions spreads.

The matter is clouded by ignorance and differences of opinion about where the cost of a pension plan finally falls. Over the long run the cost must be met from the receipts from sale of the products and services of each company and must, in some sense and in some degree at least, be borne by the consumer, no matter how employers and employees appear to share it initially. In the short run, the incidence of costs may well vary according to the economic circumstances of companies and industries, raising prices in some, reducing profits and the return to investors in others, and (whether or not paid directly by employees) reducing wages or the frequency of wage increases in still others. In a company which sells its entire output to the government, for example, who bears the cost of a nominally contributory plan when in installing the plan the company granted a wage increase equal to the employee contribution rate?

Since decisions cannot be deferred until theoretical uncertainties are resolved, the major arguments in favor of each type of plan are briefly summarized here.

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[2] The seven largest noncontributory trusteed plans account for over 1,000,000 participants.

Method of Funding	Total Number	Contributory		Noncontributory	
		Number	Percentage Distribution	Number	Percentage Distribution
		Plans			
Group annuities.....	398	334	83.9	64	16.1
Trust funds.........	102	49	48.0	53	52.0
Combination funding[a]	26	26	100.0	..	..
Individual annuities	10	5	50.0	5	50.0
Miscellaneous.......	14	2	14.3	12	85.7
Total..........	550	416	75.6	134	24.4
		Participating Employees			
Group annuities.....	544,098	443,107	81.4	100,991	18.6
Trust funds.........	1,503,903	305,563	20.3	1,198,340	79.7
Combination funding[a]	201,912	201,912	100.0	..	..
Individual annuities	6,654	5,818	87.4	836	12.6
Miscellaneous.......	154,843	2,562	1.7	152,281	98.3
Total..........	2,411,410	958,962	39.8	1,452,448	60.2

[a] Past service benefits are trusteed and current service benefits are provided under a group annuity contract.

1. Arguments in Favor of Noncontributory Plans

1. The majority of participants in private pension plans are in the noncontributory type.

2. The average employee, especially those who most need the protection of a pension plan, cannot afford to contribute.

3. The employer should bear the full cost and recoup the expense in the price of his product just as he does, or tries to, with respect to the cost of depreciation of equipment.

4. The return to the employer in the increased employee efficiency that pension plans are supposed to produce justifies his bearing the full cost.

5. Noncontributory plans make participation automatic. They cover substantially all employees and avoid certain administrative inconveniences and costs, such as employee solicitation and payroll deductions.

6. Employers can charge contributions against taxes as a cost of doing business, but employees are subject to tax on that part of their wages deducted for contributions. At present tax rates, therefore, it costs the employee about $1.20 to buy the same amount of pension that can be bought with an employer net contribution of about 60 cents.[3]

2. Arguments in Favor of Contributory Plans

1. Regardless of long-range possibilities of shifting the cost, there are limits to the fixed commitments that prudent managements can afford to make at any given time for retirement purposes. Employee contributions as an immediate practical matter assure larger pensions than would be possible if the employer in the first instance had to absorb the total cost.

2. Employee contributions emphasize the truth that pensions have to be produced, earned and paid for by someone; that neither employers nor governments have any magic formula to provide benefits entirely free of cost. Employee contributions may thus give some protection against future demands for increased benefits unless employees are also willing to increase their contributions.

3. Employee contributions reinforce the fact that employees who qualify can claim their pensions as a matter of right not of grace. It is only in the noncontributory plans that there survive the traditional provisions that the management or pension committee may deny or discontinue a pension if they dislike the conduct of an individual.

4. A co-operative contributory plan elicits greater employee interest and thus produces greater industrial relations values, than one for which the company pays the total cost. When participation is voluntary, the company is forced to do a job of explanation, employee education and salesmanship, without which the industrial relations values of a plan cannot be secured and which, by the new requirement to bargain collectively in these matters, has become even more necessary in order to forestall unreasonable demands based on misunderstanding and misinformation.

5. Employee contributions impose an obligation on the employer to make adequate funding arrangements, but the necessity of funding is so universally accepted that this argument needs little emphasis, except as a possible reminder at a time when, as in bituminous coal mining, collective bargaining in disregard of actuarial principles may lead to the adoption of unfunded plans.

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[3] In Canada employers' and employees' contributions to an approved superannuation or pension fund are both allowable as deductions from taxable income up to an amount of $900 per year per employee.

E. HOW SHOULD THE PLAN BE FUNDED?

Early pension plans were little more than expressions of good intentions to give employees a retirement income. They gave employees no contractual right to pensions and were usually paid out of current earnings. Insolvency and disillusionment were frequent. Even as recently as 1928, Latimer found that only 35 per cent of the noncontributory pension plans had accumulated any funds for the payment of future benefits, and in most of these the accumulation took the form of balance sheet reserves. Total accrued liabilities of all industrial pension plans were not more than from 13 to 16 per cent covered.

Today the situation is entirely changed. It is now accepted almost as axiomatic that funding arrangements under which each year's approximate pension credit is set aside during the year in which it is earned constitute an indispensable element of any sound pension plan. Financing on this basis provides for the orderly accumulation during the productive life of employees of the necessary moneys with which to pay their pensions, regardless of the fortunes of the company, and thus assure that thereafter such funds cannot be used for any other purpose. In the 1938 study only 4 per cent, in this study only 2 per cent, of the plans was totally unfunded. Only one of the sixty-three plans established in 1946-1948 was unfunded.

Despite general acceptance of the necessity of funding, there are wide and apparently irreconcilable differences of opinion about the relative merits of different methods of funding. A brief description of the different methods is, therefore, in order.

1. Trust Funds

This is the oldest and was originally the only available method of funding. Contributions are paid to and invested by a trustee, usually a bank or trust company. The trust agreement may give the trustee from full to very limited discretion to determine investment policy. The trustee may be required to make investments in accordance with directions from a pension committee. An independent actuary employed by the employer from time to time evaluates the fund in relation to the liabilities accrued and recommends any changes necessary to maintain solvency or avoid overfinancing. When an employee becomes entitled to a pension it is paid directly by the trustee out of the trust funds. A possible variation combines some of the advantages of the trust and insured methods when the trustee instead of paying pensions directly buys each pensioner an annuity from an insurance company.

2. Group Annuities

This method of funding became readily available only from about 1925. Contributions are transmitted to an insurance company which guarantees to pay the specified pensions which have been purchased. Under the typical arrangement, the contributions on behalf of each participant each year constitute the premium which buys for him a deferred annuity payable if and when he becomes eligible to retire. The sum of the several annuities thus bought over the years constitutes his pension. Premium rates are usually fixed for a period of five years after which they are subject to readjustment but for future purchases only. A not too common variation, deposit administration, combines some of the features of the insured and trust methods. Contributions are deposited with the insurance company but not immediately used to purchase annuities. The insurance company acts as a sort of trustee to accumulate the funds against the ultimate purchase of annuities. For a stipulated period it guarantees both the rate of interest to be earned by the fund and, for the same or a different period, the applicable annuity premium rates. When an employee retires, the insurance company charges the fund with the single premium cost of the annuity he will immediately begin to draw each month (referred to as "immediate annuities"). Annuities for individual employees may also be purchased in advance of the actual retirement date (termed "deferred annuities"), if required by the vesting or other provisions of the plan.

3. Individual Policies

As a method of providing retirement income for employees, the use of individual policies became common only in the middle thirties. Contributions are used to buy for each participant one or more individual insurance and/or annuity policies of almost any standard type in an amount that will provide the stipulated pension. The typical policy utilized for the purpose is the "retirement income" policy providing about $1,000 of life insurance for each unit of $10 monthly annuity purchased. The policies issued on the life of each participant are usually held by a trustee until they are vested in the employee by retirement or otherwise. Physical examinations are necessary for policies which include life insurance, unless obtained on a medical waiver basis. Medical examinations can be avoided by a fairly new variant, group permanent insurance, most readily described as a combination of group life insurance and annuities.

4. Current Methods of Funding

The methods of funding used by the 550 companies are shown in the tabulation on the following page.

Group annuities are the most common method of funding but, because of the size of a few large trusteed plans, this method of funding applies to a disproportionately small percentage of participants. There may be a trend toward trusteed rather than group annuity methods as might be expected, in view of the vigor with which certain banks and trust companies began to solicit this business about 1938 or 1940. In the 1938 study 90 per cent of plans used group annuities, as compared with 72 per cent in this study. Of the twelve companies that changed their methods of funding since 1938, nine companies went to trust funds, five of them from unfunded plans, four from group annuities. In two of these last four the trustees must use the trust funds to buy annuities at retirement. Only two companies changed from trust funds to group annuities, one of them only with respect to current service.

Method of Funding	Plans		Participating Employees	
	Number	Per Cent	Number	Per Cent
Group annuities.....	398	72.4	544,098	22.5
Trust funds.........	102	18.5	1,503,903	62.4
Combination funding[a]	26	4.7	201,912	8.4
Individual policies.	10	1.8	6,654	0.3
Miscellaneous[b]......	14	2.6	154,843	6.4
Total...........	550	100.0	2,411,410	100.0

[a] Past service benefits are trusteed and current service benefits are provided under a group annuity contract.

[b] Includes nine unfunded plans and five with funds managed otherwise than by trustees.

Of the 161 plans established from 1942-1945, 106, or 66 per cent, were group annuities, forty-one, or 26 per cent, were trusteed. Of the sixty-three 1946-1948 plans, fifty-one, or 80 per cent, were group annuities; only seven, or 10 per cent, were trusteed, three used individual policies, one used a trust for past service but group annuities for current service and one was unfunded. The high proportion of group annuity plans in these two groups of recent plans may indicate some imminent reversal of the trend mentioned above. However, this may result chiefly from the fact that a majority of these new plans are in small companies.

An obvious relationship is evident between the size of a plan and the method of funding. There apparently is some minimum size, under which, from the points of view of diversification of investment and assumption of mortality risks, the trust fund method would be unsound, but authorities differ as to where the dividing line falls, referring to as few as 2,000 or as many as 10,000 lives as the requisite minimum for a trusteed plan. Individual policies would seem most appropriate in small companies, especially those having less than the minimum number, usually fifty, for which group annuity contracts are written. The tabulation on the following page gives the distribution of types of funding among plans of various sizes as measured by the number of participants. As would be expected, the greater the coverage of the plans the smaller is the number of them which are funded by group annuities and the larger the proportion which is trusteed.

5. Advantages and Disadvantages of Various Methods

Before attempting to summarize the arguments in the major controversy—that about the relative advantages of group annuities and trusteed plans—it may be advisable to discuss plans based on individual policies, although they are relatively unimportant in pension planning. Their major advantages are that they can combine life insurance and retirement protection in a single policy and that they are available to firms whose employees

Number of Participants	Percentage Distribution of Plans According to Method of Funding					
	Group Annuity	Trust Fund	Combi-nation	Indi-vidual Policies	Miscel-laneous	Total
Under 100......	89.4	5.3	..	5.3	..	100
100—499.......	83.7	10.3	2.0	2.0	2.9	100
500—999.......	81.4	13.3	2.7	1.3	1.2	100
1,000—1,999...	69.3	22.6	6.5	..	1.8	100
2,000—4,999...	54.5	36.4	6.1	1.5	1.1	100
5,000—9,999...	35.7	42.9	14.3	..	8.6	100
10,000 and over	26.8	41.5	19.5	..	7.3	100

are too few to justify trusteed financing or to interest an insurance company in developing a group annuity contract. Further, their premium rates and other terms are guaranteed for the life of each contract and, except for dividends that may be paid by mutual companies, the cost of any given future pension for an employee is known in advance, if increases in his earnings are disregarded. Upon termination of employment before retirement, the employee can often take over the policy in whole or part (depending on the vesting provisions) and continue it at the premium rate in force at the time it was issued. Minor disadvantages are the awkwardness in adjusting pensions by buying additional policies (but only in units of not less than $5 or $10 a month, as salaries increase) and the necessity of continuing premium payments during periods of layoff. Their major disadvantage, apart from a usually higher cost, is that premium rates include the high commissions on individual policies—typically about 35 per cent for the first year, as compared to 3 per cent or less for group annuities. Under the typical individual policy, therefore, the cash surrender values payable when an employee terminates employment or otherwise withdraws are less than the contributions paid on his behalf for about the first ten years of coverage. Under group annuity contracts the total contributions on behalf of an employee are usually refunded upon withdrawal with interest but subject to a slight surrender change.

Some favor individual policies because employees fail to understand that group life insurance on a strictly term basis creates neither cash surrender nor paid-up values. But this point presents a problem in employee education rather than a conclusive argument for basing pensions on individual policies. Dual protection against death and old age can almost invariably be bought more cheaply by a combination of group life insurance and group annuities or trusteed pensions than by individual policies.

It does not do very much violence to the facts to say that pension plans based on individual policies were developed as programs designed chiefly to benefit senior executives and that they sometimes involved elements of tax avoidance that played an important role in stimulating the restrictions imposed by the Internal Revenue Act of 1942 and subsequent Treasury regulations.

Except for very small companies, they are outside the main current of pension planning, although prospective commissions may tempt some insurance salesmen to continue to promote them.

The controversy between the advocates of trust funds, on the one hand, and group annuities, on the other, can be understood only with reference to how the cost estimates of a pension plan are computed.

a. Pension Costs and Outlays: It may be said bluntly that the actual costs of a pension plan cannot be accurately forecast, if only because no one can gainsay the fact that pension costs will continue until the last pensioner has died. The best that one can do is to estimate costs on the basis of certain assumptions, the relative accuracy of which only the passage of time can determine. Given the assumptions, costs can be computed with beautiful mathematical precision, but inevitable variations in the basic facts which have been assumed make the mathematical accuracy, if not spurious, at least subject to discount. Disregarding intangible returns, the cost of a pension plan is simply the amount paid out in benefits plus the cost of administration. The outlay for a plan is the amount of money that a company has to pay out at a given time or over a given period. It is the manner in which the costs incurred are met over time. Given the basic provisions of a plan the cost, though uncertain, is a fixed factor but the outlay can be modified by varying methods of financing the plan. The cost, for example, of past service benefits is determined largely by the number of years for which credit will be given and the amount of benefit credit given for each year. However, provision to meet this cost could be made by a single payment, or by payments as encouraged by Treasury regulations over about ten years, or over a much longer period, by what might be called a level premium program, or by a variety of other methods. But regardless of how and when the company lays out its money the real cost of the selected past service benefits remains the same.

The cost of a pension plan is often defined as the benefits paid out, plus the cost of administration, minus the net earnings on fund investments. This is a convenient definition to emphasize the importance of funding and the way in which the powerful force of compound interest can be used to facilitate the meeting of future costs, but it is probably more accurate to regard interest rates, which make all actuarial calculations seem mysterious, as affecting outlay rather than cost. They determine what outlays at what times are necessary to meet certain estimated costs.

Given the basic provisions of a pension plan and the age, sex, length of service and earnings characteristics of the covered employees, four other main factors are involved in estimating outlay and cost: (1) mortality, (2) turnover, (3) interest rates, and (4) administrative costs. Mortality determines how many employees will live to reach retirement age and how long they will survive and draw benefits thereafter. Turnover affects the number who will continue in employment until retirement age. Interest rates affect the amounts that must be set aside to meet estimated future costs, i.e., the extent to which earnings on invested funds will help to meet such costs. Costs of administration obviously include such items as clerical expense for record keeping, and the fees for legal, actuarial and trust services, many of which are lumped together in the loading that insurance companies add to their pure premium rates.

A rather simplified example may illustrate the process of computation or estimate, which would be somewhat as follows for those employees of a company who are aged thirty-five:

1. The company has 100 male employees aged thirty-five.

2. Mortality tables show that only seventy-two of them will live until sixty-five,[4] the normal and compulsory retirement age.

3. But it is assumed that twenty-two will quit or be fired before reaching the age.

4. Pensions will have to be provided, therefore, only for fifty.

5. The fifty who continue in employment until the retirement age will have had thirty years of service at that time.

6. Mortality tables show that on the average they will live and draw pensions for 14.4 years.

7. It is estimated that their average earnings will be $2,000 per year.

8. If the plan provides a benefit of 1 per cent of earnings for each year of service each pension will average 30 per cent of $2,000, or $600 per year.

9. In thirty years' time funds must be available to pay fifty pensions of $600 per year for 14.4 years.

10. Up to this point we have estimated—with reference to mortality (or survival), turnover, and benefit rates in relations to wages—the amount of money that will have to be paid out in due course to this group of pensioners. How much will have to be set aside to assure these payments depends in large part on the rate of interest. If the rate of interest then is 3 per cent, a total capital sum of about $357,000, or $7,140 per pensioner, would be required at that time to provide these pensions, disregarding administrative costs. If the interest rate were 2 per cent the total capital sum required would be $380,000, or $7,600 per pensioner. If the interest rate were 4 per cent the requirement would be reduced to $337,000, or $6,740 per pensioner.[5]

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[4] Using the 1937 Standard Annuity Mortality Table.

[5] Assume for simplicity that pensions are payable at the beginning of each year and that interest is compounded annually. At one of the prevailing premium rates for group annuities, based on interest rates of 2 1/4 per cent, the cost at that time would be $396,000 (including "loading" of about $32,000), or $7,912 per pensioner.

11. The required capital sum of, say, $380,000 can be built up in any number of different ways, the only requirement being that it should be available when required thirty years hence. There are three obvious methods of assuring this availability: (1) by the immediate deposit of a single capital sum that will accumulate at interest to the required amount, (2) by regular annual payments increasing each year as the group ages, or (3) by the regular annual payments of uniform amounts. If the interest rate were 2 1/4 per cent the first method would require a single payment of $195,000. Under the second method payments would start at $5,000 for the first year, rise gradually to $9,000 in the fifteenth year and end with $16,200 in the thirtieth. Under the third there would be a regular annual payment of about $9,000. The first method is seldom used. The second is customary under group annuities and would result in uniform total annual payments for this and other age groups only if the average age of the total covered work force remained constant. The third is the typical method of leveling out the premium for individual annuity policies and is used under some trusteed plans. Except for possible changes in the rate of interest and tax considerations, all these methods would cost the same, although they would involve differences in the outlay that would have to be made at different times.

If similar computations were made for each age and sex group, the cost and the outlay at different times for a given level of pensions for all employees based on current service would be determined. The same general type of calculation would provide an estimate of the cost and outlay for service prior to plan establishment.

It would seem to follow from the foregoing that the cost of a pension plan can be affected by the method of funding only if the method itself affects the earnings rate on investments or the cost of administration or irrevocable commitments based on estimates of mortality. The outlay can be effected only as the method affects the flexibility of financing, the earnings rate, or the validity of assumptions about mortality or turnover.

The major argument in favor of group annuity plans is that the financial reputation of insurance companies gives employees a sense of security and certainty that their promised pensions will in fact be paid and thus maximizes the possible industrial relations values of a pension plan. A promise to pay a pension involves an element of life insurance. It can best be handled, therefore, by an agency which specializes in the carrying of life insurance risks.

The contentions in favor of trusteed plans are that the cost of pension plans can be reduced and the outlay for such plans can be more readily adapted to the circumstances of each company. Trusteed plans can cut costs basically only if they can either administer plans at less cost than insurance companies or earn a larger rate of return on their investments.

The insurance companies load or increase their pure premium rates by about 8 per cent to cover administrative costs and contingency reserves. The administrative costs of trusteed plans are often not fully accounted for (some may be absorbable as using excess capacity in a clerical staff) and are often irregular, in that actuarial fees are not always assessed periodically. There is no evidence that insurance company assessment of costs and, therefore, of profits is excessive and no reason to assume that the large-scale procedures of insurance companies are more expensive than the necessarily smaller scale procedures of trustees. Trusteed plans could cut both costs and outlay if they could earn a higher rate of return on their investments than insurance companies. It would be a bold trustee who would guarantee this under a conservative investment policy.

Insurance companies base their mortality assumptions on overall figures; they merge the experience of the ABC steel company or the XYZ oil company with that of the general population. Trusteed plans can be based on estimates of mortality rates for individual companies. If a company's mortality rate is more "favorable" than that of the general population, i.e., if its employees die at earlier than average ages, a trusteed plan based on this assumption can of course save money since the cost is in fact reduced. The cost would be equally reduced under a group annuity plan, but the company would not benefit immediately, since group annuity rates do not take account of individual company mortality experience in setting rates. It would probably receive "dividends" (or retroactive rate reductions) at some later date based indeed on its experience, but this experience would be "smoothed" to eliminate unusual fluctuations. Only an unusual company could have any reason to assume that its mortality experience would "favorably" depart from the average. As to this factor the advocates of trusteed plans then have to fall back on a questionable contention that insurance companies base their rates on unrealistic and unduly conservative mortality tables.

b. Conclusions: In summary, trusteed plans can reduce real costs, as compared with group annuity plans, only on the basis of three generally improbable conditions: (1) that they can earn a larger rate of return than insurance companies on the funds intrusted to their care, (2) that their overall administrative costs, including those of periodic actuarial evaluation, are less than insurance company loadings, and (3) that their mortality experience actually proves to be more favorable than average or their mortality estimates more accurate than those of insurance companies.

Trusteed plans can, however, affect a company's outlay. Subject to slight qualification arising from rights to suspend contributions, standard group annuity contracts call upon the company to make a fixed commitment to pay current service premiums regularly. They require past service to be funded in full for each individual at his retirement age. Financing under a trust in this and several other respects can be more flexible, but flexibility of course implies the assumption of certain risks.

The major difference between trusteed and group annuity plans is in their treatment of turnover. Under trusteed plans, turnover is usually estimated and contribution rates set accordingly. In actuarial jargon, trusteed plans are discounted for turnover. Under group annuity plans turnover is disregarded in setting original contribution rates but when employees are terminated contributions on their behalf are refunded minus a surrender charge (on the employer's contributions only) of about 4 per cent. Discounts for turnover, therefore, affect outlay rather than cost. In the earlier hypothetical illustration, a group annuity plan would set rates on the assumption that seventy-two employees would qualify for pensions. A trusteed plan would set rates on the assumption that fifty would qualify. The difference in rates, however, would be largely difference in outlay rather than cost. If turnover proved to be less than estimated, trusteed plan contribution rates would have to be increased. If it proved greater than estimated, trusteed plan contribution rates could be decreased. Whatever the estimate, actual withdrawals from the plan under a group annuity contract would mean equivalent refunds to the employer, except for surrender charges.

Obviously, turnover is the least predictable of the factors which affect cost.[6] It may fluctuate within very wide limits as economic conditions or industrial relations policies and practices change. Changes in interest rates and actual mortality experience occur only gradually, but the total change during the lifetime of a pension system may be substantial and may greatly affect costs. It is necessary, therefore, to emphasize again that pension costs, like any future event, can be no more than estimated. Estimates can, of course, be based on more or less conservative assumptions.

In short, in buying a pension plan a company must pay for what it gets and can get only what it pays for. Given any set of assumptions the cost of a given plan would be identical whether financed under a trust or by group annuities. Trust plans may be established on the basis of assumptions that insurance companies are unwilling to make, but they can reduce costs only if in fact they prove to have more efficient investors or administrators or can use simpler procedures than insurance companies. Trusteeing plans can affect outlay, that is, the distribution of costs over time. This method can permit more flexible financing, with whatever may be the attendant risks.

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[6] The other major factor of uncertainty in estimating costs is changes in the level of wage rates.