Private Pension Plans, 1950—74

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During the past quarter century, private pension plans have enjoyed a healthy growth Although the rate of growth has slackened somewhat during recent years, the private pension movement is now a major contributor to the income maintenance needs of the American worker during retirement The passage of pension reform legislation in 1974 offers an appropriate milestone year for measuring the current status of pension plans and the progress that has been made to date

THE OVERWHELMING majority of the 30 million workers in private retirement plans are covered under pension plans, as distinguished from deferred profit-sharing plans The latter are plans in which the company's payments into the retirement fund are partly or wholly dependent on annual profits, and thus neither contributions nor benefits can be known in advance Major public interest is centered on pension plans, designed generally to provide to qualified workers determinable cash benefits for life that are financed through regular contributions by employers and in some cases by employees

About half the 30 million workers in private retirement plans are covered under collectively bargained plans that have been negotiated between management and unions The substantial number of workers belonging to negotiated plans reflects to a large extent the membership of multiemployer plans, which cover almost half the workers under collectively bargained plans Multiemployer plans are particularly important in construction, mining, apparel, motor and water transportation, wholesale and retail trade, and service industries, which are characterized by seasonal or irregular employment, small establishments, and frequent job changes Under these plans, all employers contribute into a pooled central pension fund from which their employees, who may have shifted from one employer to another in the industry, draw pensions Such plans covered fewer than 1 million workers before 1950 In the late fifties they were extended in many industries, and by 1960 they covered more than 3 million persons About 8 million workers are now in these plans

Although commercial insurance carriers underwrite the majority of pension plans, insured plans cover less than one-third of the employees in pension plans and deferred profit-sharing plans (table 1) More than two-thirds of the employees are under noninsured plans, among which are classified nearly all the multiemployer plans, union-financed plans (with no employer participation), unfunded or "pay-as-you-go" plans, plans of most nonprofit organizations, and deferred profit-sharing plans

Insured pension plans can take many forms Annuities may be purchased through a single master contract, which is usually issued to an employer for the benefit of his employees The unit type of group annuity provides for the purchase each year of a paid-up deferred annuity for each member of the group, the total amount received by the member at retirement is equal to the sum of deferred annuities The most popular type of group annuity currently used, however, is the deposit-administration plan, in which contributions are accumulated in a pooled account, out of which money is withdrawn to buy an annuity when the employee retires Group-annuity pension plans account for about 75 percent of the persons covered under insured pension plans [1]

Most of the remaining employees under insured plans are covered by individual-policy trusts This type of plan—often used by small firms—generally involves the purchase of a whole life, endowment, or retirement-income policy for each person under the plan

Under a trusteed pension plan, amounts are paid into a trust—usually managed by a bank or trust company, which holds and invests the funds and pays benefits in accordance with the terms of the trust and the plan provisions Most plans have some sort of advance funding arrangement under which reserves are accumulated to meet future liabilities Plans without advance funding that meet all benefit payments out of

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[1] Institute of Life Insurance, *Pension Facts 1975*, pages 26–27

TABLE 1 —Private pension and deferred profit-sharing plans [1] Estimated coverage, contributions, beneficiaries, benefit payments, and reserves, 1940–74

Year	Coverage [2] end of year (in thousands)			Employer contributions (in millions)			Employee contributions (in millions)			Number of beneficiaries end of year (in thousands)			Amount of benefit payments (in millions)			Reserves, book value, end of year (in billions)		
	Total, net	Insured, gross	Noninsured, gross	Total	Insured	Noninsured	Total	Insured	Noninsured	Total	Insured	Noninsured	Total [3]	Insured	Noninsured [3]	Total	Insured	Noninsured
1940	4 100	-	-	180	-		130	-	- -	160			140	-	-	2 4	1 0	1 4
1945	6 400		-	830	-		160			310			220		-	5 4	2 6	2 8
1950	9,800	2 600	7 200	1 750	720	1,030	330	200	130	450	150	300	370	80	290	12 1	5 6	6 5
1951	10 800	2 900	8 100	2 280	820	1 460	380	210	170	540	170	370	450	100	350	14 5	6 6	8 0
1952	11 300	3 200	8,500	2,540	910	1 630	430	240	190	650	200	450	520	120	400	17 3	7 7	9 6
1953	12,600	3 400	9,800	2,990	1 010	1 980	485	260	225	750	230	520	620	140	480	20 5	8 8	11 7
1954	13 400	3 600	10,600	3,000	1 030	1,970	515	270	245	880	270	610	710	160	550	23 8	10 0	13 8
1955	14 200	3 800	11 600	3 280	1 100	2 180	560	280	280	980	290	690	850	180	670	27 5	11 3	16 1
1956	15 500	4,100	12,800	3,600	1,110	2 490	625	290	335	1,090	320	770	1,000	210	790	31 4	12 5	18 9
1957	16,700	4,400	13,700	4 030	1,220	2 810	690	300	390	1,240	370	870	1,140	240	900	36 1	14 1	22 0
1958	17 200	4 500	14,300	4,100	1 250	2 850	720	310	410	1 400	430	970	1,290	290	1,000	40 9	15 6	25 3
1959	18 200	4 800	15 100	4 590	1 330	3 260	770	330	440	1 590	500	1 090	1 540	340	1 200	46 6	17 6	29 1
1960	18,700	4,900	16 300	4 710	1,190	3 520	780	300	480	1,780	540	1,240	1,720	390	1 330	52 0	18 8	33 1
1961	19,200	5 100	17,100	4,830	1 180	3 650	780	290	490	1,910	570	1,340	1,970	450	1 520	57 8	20 2	37 5
1962	19,700	5,100	17,900	5,200	1 240	3 960	830	310	520	2 100	630	1,470	2,330	510	1 820	63 5	21 6	41 9
1963	20,300	5 400	18,400	5,560	1,390	4,170	860	300	560	2 280	690	1,590	2,590	570	2 020	69 9	23 3	46 6
1964	20 900	6 000	18 600	6 370	1,520	4,850	910	310	600	2 490	740	1 750	2 990	640	2,350	77 7	25 2	52 4
1965	21,800	6 200	19,100	7,370	1 770	5 600	990	320	670	2,750	790	1,960	3 520	720	2 800	86 5	27 3	59 2
1966	22 700	6,900	19 400	8 210	1 850	6 360	1 040	330	710	3,180	870	2,310	4 190	810	3 380	95 5	29 3	66 2
1967	24,300	7,700	19,800	9,050	2 010	7 040	1 130	340	790	3 460	930	2,530	4,790	910	3 880	106 1	31 9	74 2
1968	24 800	7 900	20,100	10 020	2,320	7,700	1 230	340	890	3 920	1 010	2 810	5,530	1,030	4,500	117 8	34 7	83 1
1969	26 000	8 700	21 300	11 390	2,900	8,490	1,360	350	1,010	4,180	1,070	3 110	6 450	1,160	5 290	127 8	37 2	90 6
1970	26 100	9 300	22 000	12 580	2,860	9 720	1,420	350	1 070	4,740	1,220	3 520	7 360	1 330	6 030	137 1	40 1	97 0
1971	26 400	9,600	22 700	15 150	3 830	11 320	1,490	370	1 120	5,180	1,300	3 880	8 590	1 510	7 080	151 4	45 0	106 4
1972	27 500	10,300	23 200	16 940	4 200	12 740	1,600	400	1,200	5 550	1 350	4,200	10 000	1,700	8,300	167 8	50 3	117 5
1973	29 200	11 300	24 100	19 390	5 020	14,370	1 710	440	1 270	6,080	1 480	4 600	11 220	1,910	9 310	180 2	53 7	126 5
1974	29 800	11 700	24 400	23 020	6 050	16,970	2 000	540	1 460	6,390	1 550	4 840	12 930	2,190	10 740	191 7	58 0	133 7

[1] Includes pay-as-you go, multiemployer, and union administered plans, those of nonprofit organizations, and railroad plans supplementing the Federal railroad retirement program Excludes pension plans for Federal, State and local government employees as well as pension plans for the self-employed Insured plans are underwritten by insurance companies, noninsured plans are, in general, funded through trustees

[2] Excludes beneficiaries

[3] Includes refunds to employees and their survivors and lump sums paid under deferred profit-sharing plans

Source Compiled by the Social Security Administration from data furnished primarily by the Institute of Life Insurance and the Securities and Exchange Commission

current revenues are often called pay-as-you-go plans

TRENDS

The grand totals of coverage, contributions, beneficiaries, benefit payments, and reserves under private retirement plans have moved upward without interruption during the 25-year period reviewed in table 1 As the following tabulation shows, however, year-to-year percentage changes

Item	Average annual rate (percent) of growth		
	1950–60	1960–70	1970–74
Coverage	6 7	3 4	3 4
Contributions	10 2	9 8	15 6
Beneficiaries	14 7	10 3	7 8
Benefits	16 6	15 6	15 1
Assets	15 7	10 2	8 7

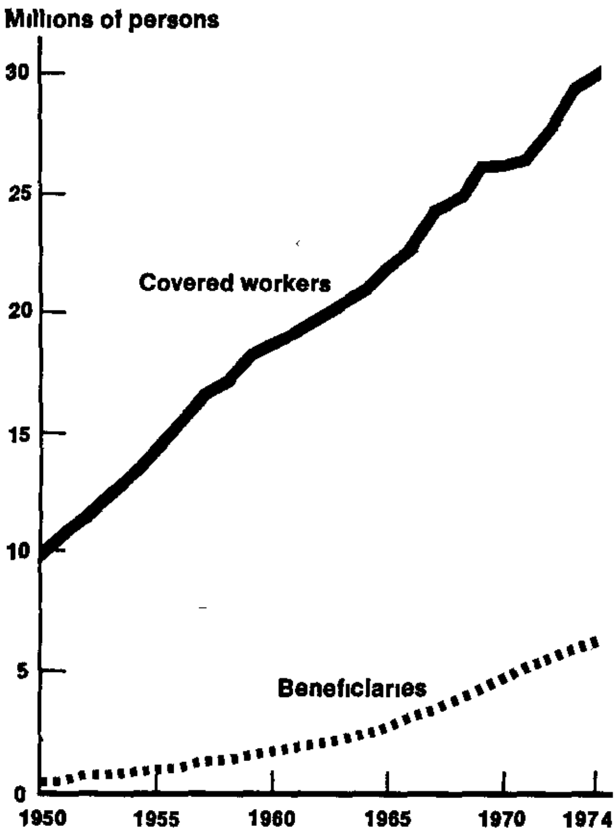
in these aggregates for the most part show a more robust pattern of growth in the 1950's than in the 1960's and the 1970's

Nevertheless, the growth pattern has been impressive Since 1950, when pension plans first became a major issue in collective bargaining, coverage has tripled (chart 1) and the annual growth has exceeded the growth in the labor force By the end of 1974, workers covered by private pension and deferred profit-sharing plans equaled about 44 percent of the private employed wage and salary labor force, reflecting an average annual increase of one percentage point from the 22 percent recorded in 1950 This growth rate has leveled off in the past 15 years since a high proportion of the most accessible groups has already been covered

The flow of persons into beneficiary status has also been substantial Reflecting the general maturing of the private pension movement and liberalized eligibility provisions of many plans, the number of persons receiving private retirement benefits at the end of 1974—6 4 million—was 14 times greater than the 450,000 in 1950 During this period, the beneficiary-worker ratio rose from less than 1 out of 20 to 1 out of 5

Partly because of inflationary factors, benefit outlays and contributions have shown much higher rates of growth than data involving indi-

CHART 1.—Covered workers and beneficiaries under private pension and deferred profit-sharing plans, at end of year, 1950–74



viduals (chart 2) Benefit outlays of $12 9 billion in 1974 were about 35 times larger than those of 1950 Since 1970, benefit outlays have increased an average of 15 percent a year, twice the growth rate in the number of beneficiaries The annual benefit outlays per beneficiary thus went from $1,650 in 1970 to $2,074 in 1974[2] When these figures are adjusted for price changes, however, the increase is more than wiped out

As chart 2 shows, contributions have more or less matched the outlay in benefit payments, showing extraordinary growth during the 1970's Combined employer-employee contributions per covered worker rose from $537 in 1970 to $848 in 1974 The employer share has been moving steadily upward—from 84 percent in 1950 to 88 percent in 1965 and to 92 percent in 1974.

Assets accumulated for current and future benefit commitments were 16 times greater in 1974 than in 1950 The average reserve per covered worker continues to rise, though not quite as spectacularly as contributions In 1974, this average was $6,498, compared with $5,263 in 1970

CHARACTERISTICS OF RETIREMENT PLANS

The major event relating to private retirement plans in 1974 was the enactment of the Employee Retirement Income Security Act (ERISA) on September 2, 1974[3] This reform legislation requires private pension plans to conform to minimum Federal vesting, funding, and participation standards designed to provide greater assurance that a worker will receive the benefits due him Through the creation of an employer-financed, Government-operated insurance system, a worker is guaranteed payment of certain vested benefits even though they are not fully funded when a plan is terminated Most of the new standards went into effect on January 1, 1976

This legislation ushers in a new era in the development of private retirement plans, as practically every plan will have to be revised to meet the standards It is therefore timely to examine the status and characteristics of private retirement plans before ERISA became fully effective and thus provide a benchmark for future analysis of changes brought about by the legislation

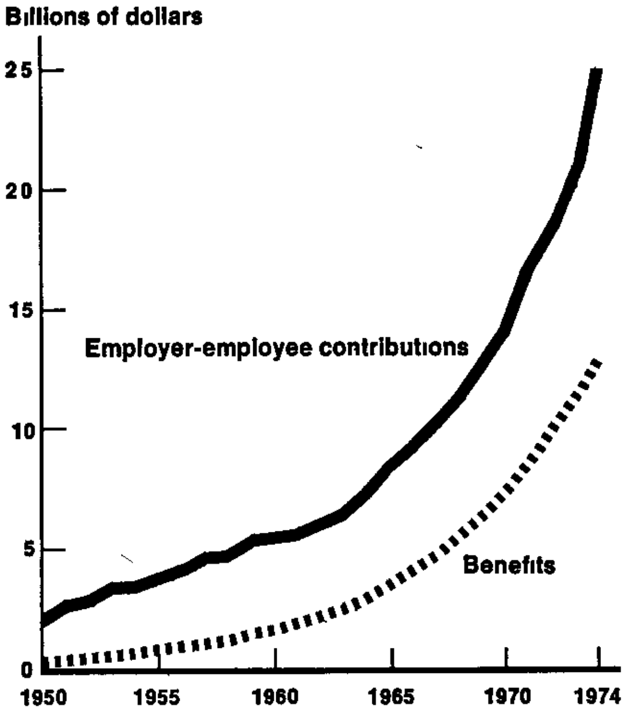
Several studies permit this overlook One is a recently released study by the Bankers Trust Company on pension practices in employer-administered plans amended or newly adopted in the period 1970–74[4] Some indication of trends is obtained by comparing its findings with the results of similar earlier studies, generally con-

[2] These averages are not precise and overrepresent the average amount of monthly or annual pension paid because they are derived from data for benefits in table 1 that include and beneficiary data that exclude lump-sum payments under noninsured plans These payments consist chiefly of (1) refunds of employee contributions to individuals who withdraw from plans before retirement and before accumulating vested deferred rights, (2) payments of the unpaid amount of contributions to survivors of pensioners who die before they receive in retirement benefits an amount equal to their contributions, and (3) lump-sum payments made under deferred profit-sharing plans

[3] For description of law, see Alfred M Skolnik, "Pension Reform Legislation of 1974," *Social Security Bulletin*, December 1974, pages 35–42

[4] Bankers Trust Company of New York, *1975 Study of Corporate Pension Plans*, 1975

CHART 2—Employer and employee contributions and benefits paid under private pension and deferred private-sharing plans, 1950–74



ducted at 5-year intervals[5] The latest study, which reports on 271 plans, is confined to plans with at least 200 employees but typically many more Plans in 56 industries, covering 8 4 million employees, are represented

Pension plans in these studies are divided into two types—"pattern" and "conventional" The "pattern" plans are those negotiated by certain international unions with individual companies or groups of companies Traditionally, the pension provided under these plans is a flat dollar amount varying with years of service but not with the employee's compensation rate Recently, however, several plans—primarily in the automobile and aerospace industries—have incorporated flat dollar amounts that also vary to a degree with compensation "Conventional" plans are those that provide benefits varying with both years of service and compensation and are generally nonnegotiated

The Bankers Trust Company studies exclude multiemployer plans It is therefore necessary to go to certain Bureau of Labor Statistics (BLS) studies, based on reports filed under the Welfare and Pension Plans Disclosure Act, which covers plans with 26 or more workers A BLS study on multiemployer plans describes the characteristics and benefit structure of 1,900 such plans in 1973 (with 7 5 million participants as of 1970), using a systematically stratified probability sample[6] An earlier 1960 BLS study of multiemployer plans also permits some comparisons[7]

Another BLS study, which includes information on multiemployer as well as other types of pension plans, describes benefit and financing changes from mid-1970 to mid-1974[8] Although the study is confined to 150 selected large pension plans regularly summarized by the BLS in its pension plan digest[9] and does not purport to be representative of all programs, these plans are considered to reflect current trends in provisions

An additional source of data is the Conference Board study of employee-benefit practices in late 1972 and 1973[10] About 1,600 companies responded to the retirement pay questionnaire The survey results for manufacturing may be compared with those from an earlier Conference Board study[11] The firms in the later study were generally the largest (having in most cases 500 or more employees) except for financial institutions, hotels, restaurants, construction firms, and small manufacturers Separate data were obtained for office and nonoffice employees and for union and nonunion plans

All the studies mentioned were conducted before the provisions of ERISA became fully effective Nevertheless, it is thought that many of the pension plan changes that have taken place in

[5] Bankers Trust Company of New York, *A Study of Industrial Retirement Plans*, 1956, 1960, 1965, and 1970 editions The size and composition of the sample have shifted from period to period, how many plans were common to more than one study is not known

[6] Harry E Davis, "Multiemployer Pension Plan Provisions in 1973," *Monthly Labor Review*, October 1974, pages 10–16

[7] Walter W Kolodrubetz, *Multiemployer Pension Plans Under Collective Bargaining, Spring 1960* (BLS Bulletin 1326), 1962

[8] Evan L Hodgens, "Key Changes in Major Pension Plans," *Monthly Labor Review*, July 1975, pages 22–27

[9] U S Bureau of Labor Statistics, *Digest of Selected Pension Plans, 1973 Edition* (including supplements), 1974–75

[10] Mitchell Meyer and Harland Fox, *Profile of Employee Benefits*, Conference Board Report No 645, 1974

[11] The Conference Board, "Personnel Practices in Factory and Office Manufacturing," *Studies in Personnel Policy*, No 194, 1964

recent years were made in anticipation of legislation, especially in the areas of vesting, age and service requirements, and survivor benefits

It should be noted that practically all the data from the above sources are available only in terms of the number of plans affected Information gathered in earlier years indicates that the prevalence of certain characteristics of pension plans may differ significantly when presented in terms of the number of workers affected This limitation in the data presented here applies with more force to the absolute figures than to the trend analysis

Normal Retirement

Almost all pension plans require that the worker attain a specified age, usually 65, to be eligible for normal retirement benefits In addition, most plans require a minimum number of years of service, usually 10 under union-negotiated plans and 5–10 under other plans A few plans concentrated in the auto industry now permit retirement at any age after a specified number of years of service (such as 30)

There has been a definite trend toward reducing the minimum service requirements that an employee must meet to qualify for full benefits Half the conventional plans in the Bankers Trust Company study reported in 1955 that less than 10 years of service (or no years of service) were required for a normal retirement benefit By 1974, as the following tabulation shows, the ratio had increased to 71 percent The proportion having no

Year	Percent requiring less than 10 years service	
	Pattern	Conventional
1955	7	50
1959	10	56
1964	8	60
1969	16	61
1974	23	71

service requirements at all rose from 13 percent in 1955 to 32 percent in 1974 Among pattern plans the proportion requiring less than 10 years of service were at a substantially lower level—7 percent in 1955 and 23 percent in 1974 The BLS multiemployer study reported that 38 percent of the workers in multiemployer plans in 1973 required 10 or less years of service for normal retirement benefits

A growing number of plans have adopted provisions making normal retirement with unreduced benefits possible before age 65—generally at age 62, when reduced benefits under the old-age, survivors, disability, and health insurance (OASDHI) program become available For technical reasons related to other benefits, some of these plans may still term age 65 as the "normal retirement age" The BLS study of 150 pension plans reported that by the fall of 1974, more than half the plans (up from a third in 1970) made retirement with a full normal benefit before age 65 available to at least some of their members The BLS multiemployer study found that almost one-fifth of the workers in 1973 were in plans that provided for normal retirement before age 65; in 1960, the ratio was about one-sixth

The BLS study of 150 plans found that 3 out of 5 plans in late 1974 had mandatory retirement provisions requiring retirement at or after the normal retirement age Among negotiated plans, the ratio was 1 out of 2, in nonnegotiated ones, it was nearly 3 out of 4 Mandatory retirement provisions were least common among multiemployer plans

The mandatory retirement provisions can take the form of (1) an automatic retirement provision, which compels all workers without exception to retire upon reaching a specified age, usually several years after the normal retirement age, or (2) a compulsory retirement provision that permits the company to allow the worker to continue working beyond a stipulated age, usually 65 The latter arrangement is more widespread, though there has been some shift from compulsory toward automatic retirement provisions, as the following data drawn from two BLS studies indicate [12]

[12] Department of Labor, *The Older American Worker Age Discrimination in Employment, Research Materials*, June 1965, pages 27–29, and Harry E Davis, "Pension Provisions Affecting the Employment of Older Workers," *Monthly Labor Review*, April 1973 pages 41–45 Both studies were based on reports by pension plans filed with the Department of Labor under the Welfare and Pension Plans Disclosure Act and exclude deferred profit-sharing plans, plans of nonprofit organizations, and those with fewer than 26 workers For data on the extent to which these provisions are applied in practice, see Virginia P Reno, "Compulsory Retirement Among Newly Entitled Workers Survey of New Beneficiaries," *Social Security Bulletin*, March 1972, pages 3–15

Type of retirement provision	Percent of workers covered	
	1963	1971
No provision for mandatory retirement	37	42
Automatic retirement only	12	17
Compulsory retirement only	44	34
Compulsory and automatic retirement	7	7

Early Retirement

The overwhelming majority of pension plans permit retirement before attainment of normal retirement age with an immediate benefit, commonly at the employee's election. Twenty years ago, early-retirement provisions were not so common among union-negotiated plans. The situation changed in the 1960's, however, as union-management negotiations gave priority to early-retirement provisions as a means of easing work-force reductions caused by shutdowns, automation, or other technological or economic changes.

The increase in early-retirement provisions has been most striking among multiemployer plans. The BLS studies of these plans show that the proportion of employees covered by early-retirement provisions rose from 23 percent in 1960 to 82 percent in 1973.

In reviewing all types of pension plans filed with the Department of Labor under the Welfare and Pension Plans Disclosure Act, the BLS reported that the proportion of workers covered by early-retirement provisions rose from three-fourths in 1962 to more than nine-tenths in 1971.[13]

Early retirement traditionally was dependent upon the employer's approval, but this practice is becoming a thing of the past. According to the Bankers Trust Company studies, only 4 percent of the pattern plans and 12 percent of the conventional plans with early retirement provisions in 1974 required company consent. Twenty years ago, 3 out of 5 plans required company consent, and, as recently as 1971 according to the BLS study, half the workers under pension plans reported for purposes of the disclosure legislation had to get company approval.

To qualify for early retirement, most plans require the attainment of a specified age (usually age 55), plus 10–15 years of service. At one time, negotiated plans rarely diverged from the use of an age-and-service requirement, and a significant number of nonnegotiated plans used an age requirement only. In the past decade a shift has taken place, as the following tabulation based on data from the Bankers Trust Company studies indicates.

Year	Percent with early retirement provisions					
	Age-and-service requirement		Service-only requirement		Age-only requirement	
	Pattern	Conventional	Pattern	Conventional	Pattern	Conventional
1964	100	64	0	3	0	33
1969	79	68	19	2	2	30
1974	63	74	32	3	5	23

Among collectively bargained plans, service-only provisions have grown in popularity, largely attributable to the adoption of "30 years and out" options in the automobile, steel, aluminum, container, and copper negotiations. One-third of the pattern plans in the 1974 Bankers Trust Company study were categorized as having a service-only provision; 10 years earlier none had been reported. Among multiemployer plans, however, all but a few plans continue to require age-and-service requirements in 1973.

In contrast, conventional plans have increased their use of age-and-service requirements and moved away from an age-only requirement. In 1964, 64 percent of the conventional plans had age-and-service requirements, by 1974, it was 74 percent.

In plans requiring both age and service requirements, the shift downward to age 55 continues. Among conventional plans surveyed by the Bankers Trust Company, the proportion specifying attainment of age 55 rose from three-fifths in 1964 to four-fifths in 1974. Three-fourths of the pattern plans in 1964 had an age-60 requirement, the rest had an age-55 or other requirement. By 1974, the ratio had reversed—more than 7 out of 10 plans with age requirements used an age-55 requirement. Among multiemployer plans, almost three-fifths of the workers in 1973 were in plans permitting retirement before age 59, according to the BLS.

As for the service component of the formula, a predominance of plans continue to require 15 years, though a tendency towards adoption of a

[13] Harry E. Davis, *Early Retirement Provisions of Pension Plans, 1971* (BLS Report 429), 1974.

10-year requirement is evident, especially among nonnegotiated plans The 1973 Conference Board study found that 37 percent of the plans surveyed required 10 years and 29 percent specified 15 years The 1971 BLS study of early-retirement provisions found that 15 years or more of service were required for early retirement for three-fifths of the workers in plans with age-and-service requirements [14]

Benefits for early retirement have usually been paid at a lower level than normal benefits for equivalent service, on the basis of an actuarial formula designed to compensate for the increased cost This is no longer the case, as most plans now pay a benefit greater than the actuarial equivalent but less than the full accrued pension The Bankers Trust Company found that only 10 percent of the pattern plans and 15 percent of the conventional plans with early-retirement provisions in 1974 paid only the actuarial equivalent at the earliest retirement date possible As recently as 1969, those proportions were 48 percent and 53 percent, respectively Among pattern plans, a shift has developed toward paying the full accrued pension upon retirement, largely as the result of negotiations in the mass-production industries that allow retirement after 30 years' service at full pension

Fifty-six percent of the pattern plans surveyed by the Bankers Trust Company in 1974 supplement, under certain conditions, the regular early-retirement benefit with a special benefit to age 65 or when reduced OASDHI benefits begin One-third of these plans require the employer's consent These plans are often structured so that the worker receives a level income throughout retirement—initially from the private pension alone and then from his combined pension and social security The BLS multiemployer study found that 16 percent of the participants in multiemployer plans with an early-retirement provision had this option in 1973—about the same proportion as in 1960

Special early-retirement benefits under which workers could receive double the normal benefits until they reached normal retirement age were negotiated in the mass-production manufacturing industries in the early 1960's This type of provision has not shown much expansion since then

[14] Harry E Davis, *op cit*, page 6

Disability Retirement

Another form of early retirement occurs when a worker is retired prematurely because of total and permanent disability The union-negotiated plans have generally contained formal provisions for disability retirement Such provisions have been less common among nonnegotiated plans but are growing in importance, as the following data from the Bankers Trust Company studies show

Year	Percent with disability provisions	
	Pattern	Conventional
1955	80	46
1959	84	59
1964	94	73
1969	93	71
1974	97	75

In the Conference Board study, 47 percent of the office-worker plans and 62 percent of the non-office plans in 1973 had disability provisions The BLS study of 150 plans reported that 85 percent had disability retirement provisions in late 1974

Unlike early retirement provisions, those for disability generally require an employee to serve a specified period of time before qualifying for benefits, not necessarily in combination with an age requirement The trend toward elimination of an age requirement is shown by the following figures from the Bankers Trust Company studies

Year	Percent with disability provisions					
	Age-and service requirement		Service-only requirement		No requirement	
	Pattern	Conventional	Pattern	Conventional	Pattern	Conventional
1955	39	30	61	50	0	20
1959	35	39	65	42	0	19
1964	21	29	78	54	0	15
1969	10	19	86	60	4	17
1974	11	9	87	56	1	33

In 1974, only about one-tenth of the pattern plans with disability provisions had an age requirement, compared with four-tenths in 1955 Among conventional plans, not only were age requirements becoming fewer but growth was seen in the number and proportion of plans that permit disability retirement at any time without any age or service requirements One in every 3 plans providing disability benefits was in this category in 1974, compared with less than 1 out of 6 in 1965 The majority of such plans, however, link eligibility for cash payments with eligibility for OASDHI cash disability benefits

For plans with service requirements, the most common requirement is 10 years, though a requirement of 15 years was more prevalent in earlier years, according to the figures from the Bankers Trust Company studies that follow In 1974, 68

Year	Percent with disability provisions requiring 15 years or more of service	
	Pattern	Conventional
1959	98	79
1964	63	67
1969	38	52
1974	31	33

percent of the pattern plans and 55 percent of the conventional plans required 10 years of service

The 1973 Conference Board study showed a similar pattern Only a service requirement is specified in 60 percent of the plans for nonoffice employees and in 49 percent of the plans for office employees. The plans are about evenly split between those requiring 10 years of service and those requiring 15 years In 1961, most plans required 15 years' service

Disability benefits, usually payable after a 6-month waiting period, are generally related to the amount of normal pension that the employee has accrued, based on his service to the date of his disability retirement The vast majority of plans pay the full accrued pension—that is, the full normal retirement benefit for equivalent service and earnings Among collectively bargained plans, an additional benefit, or special benefit independent of the accrued pension, is commonly paid until age 65 or until eligibility for a retirement benefit under OASDHI is established, at which time the full accrued pension becomes payable

Among nonnegotiated plans, this practice is less common as many plans use their separate long-term disability plans to provide the basic payments before age 65, with the disability benefits under the pension plan either supplementing the long-term disability benefits or not commencing until age 65 The Bankers Trust Company found that among conventional plans paying disability benefits before age 65 or the start of OASDHI benefits, only one-fifth paid a benefit greater than the full accrued pension in 1974 It was noted, however, that, where disability pension benefits did not commence until age 65, a trend toward paying a benefit greater than the full accrued pension was apparent For computation purposes, plans frequently assumed that the disabled employee had been in service until age 65

Disability benefits are frequently reduced by the amount of disability benefits received under a public program such as OASDHI or workmen's compensation The Bankers Trust Company found that 46 percent of the pattern plans and 25 percent of the conventional plans used an offset in 1974—proportions little changed from 1969, though for pattern plans reduced somewhat from the 1964 percentages

Death Benefits

Of growing importance in pension plans is the preretirement death benefit, often known as "survivor's benefit" Such benefits, which can take the form of either lump-sum payments or installment benefits, are automatically payable to a worker's widow or widower (and sometimes minor children), usually as a supplement to the group life insurance coverage that most companies provide They are designed in most cases for the employee who dies when he is approaching retirement age, having met specified age and service requirements (commonly age 55 with 10–15 years of service)

The benefits generally equal a specified percentage of the pension the employee had accrued before death, sometimes subject to a specified minimum They are generally paid for life, but in some cases they may cease at age 62 or upon the spouse's remarriage They may also be subject to a reduction because of such factors as an age difference between spouse and worker

The Conference Board reports that approximately 45 percent of the pension plans in the 1973 study had a spouse's pension, compared with less than 10 percent of some 1,200 pension plans analyzed by the Conference Board in 1964 The Bankers Trust Company reports a similar growth —from 28 percent in 1964 to 63 percent in 1974 Data from their studies, as presented in the following tabulation, indicate that the prevalence of such provisions among conventional plans has

Year	Percent with preretirement death benefit provisions	
	Pattern	Conventional
1964 [1]	13	33
1969	54	52
1974	61	63

[1] Includes joint-and-survivor options

been about the same as among pattern plans since 1969

In terms of workers rather than plans, the incidence of survivor pensions was much lower, according to a special 1971 BLS study based on a sample of all pension plans with 26 or more workers filing reports under the disclosure act [15] This study reported that about 1 out of 5 participants were in plans with such pensions Among multiemployer plans, the ratio was 1 in 10 workers The rapid emergence of this benefit may, however, have pushed the ratios up since 1971

The following figures indicate that, as for other benefits, combined age-and-service requirements

Year	Percent with preretirement death benefit provisions					
	Age and-service requirement		Service-only requirement		Age-only requirement	
	Pattern	Conventional	Pattern	Conventional	Pattern	Conventional
1964	77	44	23	16	0	[1] 40
1969	81	63	13	15	6	[1] 22
1974	41	59	52	19	7	[1] 22

[1] Includes some plans with no requirement (usually with lump sum payment) 25 percent in 1964, 8 percent in 1969, and 9 percent in 1974

for survivor benefits, though still common, are giving way to service-only requirements Service-only requirements were found, for example, in about half the pattern plans with survivor pensions in 1974, compared with one-fourth of the plans 10 years earlier The shift was less marked among conventional plans The service requirement has also shifted from 15 years to 10 years

Postretirement death benefits are a common feature of pension plans, with an employee usually permitted to elect an actuarially reduced pension upon retirement so that his beneficiary can continue to receive some or all of the reduced pension after his death These joint-and-survivor option benefits involve little, if any, added cost to the employer, but a growing number of plans are providing death benefits that require additional cost These benefits generally take the form of a pension payable for life or for a specified period (often at a rate of 50 percent of the decedent's pension), a lump-sum payment, or a greater than actuarial equivalent joint-and-survivor benefit

[15] Evan L Hodgens, "Survivor's Pensions An Emerging Employee Benefit," *Monthly Labor Review*, July 1973, pages 31–34

Benefit Formulas

Computation methods—Benefits under pension plans are generally computed in one of the following ways (1) They may be related to the worker's earnings and length of credited service, (2) they may be related to the length of credited service only, or (3) a uniform (flat) benefit may be provided to all workers who fulfill specified service requirements In the past decade a fourth formula has emerged—primarily in the automobile industry—that provides a flat dollar benefit that varies to a degree with the employee's level of compensation and years of service

Under the first formula, which is characteristic of most salaried-worker plans and some collectively bargained plans, the annual benefit is expressed as a proportion of the compensation earned while the worker is in the plan or in the employer's service—for example, 1 percent, 1½ percent, or 2 percent of annual earnings for each year of service Frequently the cumulative percentage is applied to the average compensation in the most recent or highest 5–10 years of service —a final-pay rather than career-average basis Many plans use a step-rate formula under which a smaller percentage—say, 1 percent—is applied to part or all of the earnings covered by social security, usually the OASDHI maximum taxable wage base at the time the formula was adopted A larger percentage, which may be 2 percent, is then applied to the earnings above this breakpoint A variation, called an excess-type formula, excludes employees earning less than the breakpoint and applies the percentage only to earnings above the ceiling

The other benefit formulas are most frequently found in collectively bargained plans The Conference Board and BLS studies found that 3 out of 5 negotiated plans specify such formulas

Under the second formula—the most prevalent among negotiated plans—the benefit is expressed in terms of a flat dollar amount (such as $7 00 or $9 75 a month) for each year of service, based most commonly on the employee's entire service, less frequently on a specified maximum number of years (35, for example) A variation of this type of formula is the provision for a flat benefit that increases for specified periods of service ($9 a month for first 10 years of service, for example, $10 a month for next 10 years, etc)

The third formula, found mainly in multiemployer plans, provides a flat uniform benefit—$100 or $150 a month, for example—after a specified period of credited service The fixed amount is both the minimum and the maximum regardless of years of service This formula is becoming less common Among multiemployer plans in 1960, 48 percent of the workers were governed by the third formula, by 1973, only 28 percent The remainder of the multiemployer plans were almost exclusively covered by the second formula

The fourth formula provides basically a flat dollar amount for each year of service but includes a provision for higher pension credits for workers in the higher wage classifications The Bankers Trust Company found that 19 percent of the pattern plans were of this nature in 1974, compared with 3 percent in 1964

Many pension plans, especially those calculating benefits as a percent of earnings, guarantee a minimum pension (similar to the OASDHI minimum) to workers qualifying for normal retirement benefits The minimum benefit is planned to provide a higher benefit than the amount that would result from applying the basic formula to individuals with low earnings and long service Plans typically specify a flat minimum amount or a minimum that is partly related to earnings for those who qualify on the basis of their length of service

Integration with OASDHI benefits—The integration of private pensions and OASDHI benefits has gone through various stages When pension plans were first negotiated in the major manufacturing industries in the early 1950's, they generally provided for deducting all or part of the OASDHI basic benefit from the amount calculated under the private pension formula Under many of these formulas, subsequent changes in the primary OASDHI amount had the effect of decreasing the amount paid by the plan Criticism of these arrangements led to the elimination, reduction, or freezing of the offset amounts and by 1974 only a handful of collectively bargained agreements still contained offset provisions (about 6 percent of the pattern plans surveyed by the Bankers Trust Company)

Among nonnegotiated plans, the offset method was never as common as the step-rate or "excess" method for integrating OASDHI and private pensions Since the 1960's, however, there has been an upswing in the use of an offset formula, in most cases replacing the step-rate method This trend has occurred in conjunction with the move toward final-pay plans, which are more likely to integrate benefit formulas through the use of an offset The Bankers Trust Company studies reported that 31 percent of the conventional plans in 1974 used an offset provision, compared with 11 percent in 1964 The Conference Board found that 40 percent of the final-pay plans in its survey included an OASDHI offset

The vast majority of formulas with offsets deduct a maximum of one-half the primary OASDHI amount Only 12 percent of the offset formulas surveyed by the Bankers Trust Company in 1974 reduced the benefit by more than 50 percent, compared with 43 percent in 1969 An emerging trend is the graduating of the offset according to the employee's years of service, so that the length of service for which the maximum offset is applied may be as long as 40 years

Another sign of the changing times is the greater use of breakpoints in the step-rate formula that adjust automatically with changes in the OASDHI tax base More than 2 out of 5 step-rate plans studied by the Bankers Trust Company had such automatic provisions in 1974, compared with 1 out of 5 in the 1969 study

A special survey in 1974 by the Congressional Research Service[16] gives further insight on the characteristics of plans integrated with OASDHI

[16] Raymond Schmitt, *Integration of Private Pension Plans with Social Security*, U S Congress, Joint Economic Committee, 93d Congress, 2d Session (Studies in Public Welfare, Paper No 18), 1974 This study was based on a systematic random sample of retirement plans reporting to the Department of Labor under the Welfare and Pension Plans Disclosure Act, supplemented by a second sample of plans with fewer than 26 participants drawn from life insurance company records

benefits Such plans were estimated to account for 25–30 percent of pension-plan participants

The study showed that more than twice as many of the smaller plans (covering fewer than 26 participants) directly take into account OASDHI benefits than do larger plans—64 percent, compared with 29 percent Among retirement plans with OASDHI integration, the type that uses some kind of step-rate formula is most common Fifty-seven percent of the larger plans are of this type, 21 percent use the excess formula, and 21 percent use offsets Among the smaller plans, the step-rate is even more prevalent, accounting for 77 percent, the offset type makes up only 3 percent of the plans The study also found that most plans using step-rate and excess methods (more than 80 percent) set their integration levels far below the maximum permitted under the Internal Revenue Code—the OASDHI taxable wage base

Benefit Levels

With inflation so pervasive and extended, pension levels have been rising sharply, especially in plans providing flat dollar benefits For pattern plans that gear benefits to length of employment alone, the Bankers Trust Company reports that the 1974 median flat dollar benefit credited for each year of service was $108, an increase of 80 percent over the $60 median in 1969 The median was $33 60 in 1964 and $20 in 1955 In the BLS multiemployer studies, the average monthly benefit payable was $158 under the provisions in effect in 1973, compared with $68 in 1960 [17]

The wage-related pension formulas provide a readier basis for appraising real improvements in the system The Bankers Trust Company study of such conventional plans reveals that, at any given salary level, benefits as a percentage of preretirement earnings have shown no significant change in the past 5 years The median wage-replacement for final-pay plans, for example, ranged from 33 percent to 41 percent for workers with final average compensation of $8,000–40,000 in 1974 [18] In 1969, the range was from 32 percent to 42 percent The study shows, however, that the higher the salary, the higher the replacement ratio (because of such features as step-rate formulas), so that an employee moving into a higher salary bracket receives a higher replacement rate

The Bankers Trust study also notes a significant movement toward the conversion of career-average pay plans to final-pay formulas, in an effort to compensate for the effects of inflation up to the point of retirement As the following tabulation shows, the proportion of conventional

Year	Conventional plans with final pay formulas (percent)	Percent with final-pay formulas using average of—	
		5 years or less	More than 5 years [1]
1955	38	32	68
1959	44	53	47
1964	55	57	43
1969	65	78	22
1974	78	95	5

[1] 10 years' average used by most of these plans

plans basing benefits in whole or in part on compensation in the terminal years of service rose from 38 percent in 1955 to 78 percent in 1974 Furthermore, these plans also show a tendency to shorten from 10 years to 5 years the period over which final pay is averaged Ninety-three percent of the final-pay plans in 1974 were using a final 5-year average as the compensation basis, in 1964 the proportion was 57 percent, with 37 percent using a 10-year average The Conference Board study also found that only 20 percent of the office-worker plans in 1973 used the career-average base exclusively

An alternate method of calculating wage-replacement rates assuming a 5-percent annual rate of increase in earnings was used by the Bankers Trust Company to ascertain what an employee who retired at the beginning of 1975 after 30 years' service would actually receive under past-service and current-service formulas for both career and average-pay plans

Under this method, an employee who earned $9,000 in 1974 would have received from the median private plan a benefit equal to 29 percent of his final year's compensation, an employee who earned $25,000, would get 35 percent This pension, when combined with an OASDHI benefit, calculated in the same fashion, would have brought the total retirement income of a $9,000

[17] The benefit was computed for a worker retiring at age 65 after 30 years of service assuming average career earnings of $4,800 per year with earnings rising at an annual rate of 4 percent

[18] These calculations are based on current-service benefit formulas assuming 30 years of service at a constant salary

worker to 68 percent of final pay and that of a $25,000 worker to 50 percent

The rapid rate of inflation has focused attention on the problem of keeping the retirement income of pensioners up to date with spiraling living costs Sample studies have shown that few pension plans have formally come to grips with the problem The Conference Board reported that, as of 1973, only 4 percent of its office-worker plans and 2 percent of its non-office-worker plans have adopted cost-of-living adjustments that vary pensions with changes in consumer prices The Bankers Trust Company reports such arrangements for about 6 percent of the conventional plans it surveyed in 1974

Recently, cost-of-living increases for retirees have received an impetus from union-management negotiations In the aluminum and container industries, automatic escalator increases were negotiated in 1974 providing for increases on February 1 in 1976 and 1977 that amounted to 65 percent of the annual increase in the BLS Consumer Price Index during the preceding 12 months In the basic steel and transportation equipment industries, provisions in 1974 were made for a deferred increase of 5 percent, effective August 1976, in anticipation of future rises in the cost of living The auto industry in the 1963–64 negotiations followed the same pattern of allowing for future fixed increases in pensions

Some plans have experimented with the variable-annuity approach under which pensions fluctuate with the investment experience of a common stock portfolio The Conference Board reported that 17 percent of the office plans and 12 percent of the nonoffice plans surveyed in 1973 provide for variable annuities According to the Bankers Trust Company, 11 percent of the conventional plans it surveyed in 1974 had such provisions For the most part, pension plans have relied on ad hoc increases, with a trend toward formulas that take into account the number of years a pensioner has been on the retirement rolls

Vesting

The term "vesting" refers to the right of an employee to terminate his employment before retirement without forfeiting the accrued pension resulting from his employer's contributions[19] The vested benefit is generally based on his accrued pension credited up to the time his employment terminates, not the pension he would have received had he stayed on to retirement

The pension is usually deferred until normal retirement age or optional earlier retirement age Sometimes the worker has the option of an immediate cash payment of all the employer's contributions to his account

Vesting is usually conditioned upon the completion of a stated period of service or participation (5–20 years), the attainment of a specified age (40–60), or both Vesting may be full or it may be graded Under deferred full vesting, the employee has an unqualified right to a full share of all of his accrued pension credits after a particular age or length of service has been attained With graded vesting, only a percentage of these credits are vested—50 percent after 15 years, for example, with 100 percent to be achieved in steps as employment continues

All of the pattern plans included in the 1974 Bankers Trust Company study provided some form of vesting but only 41 percent of those in the 1955 study, as indicated in the following tabulation that shows the proportion of plans having such provisions

Year	Percent with vesting provisions	
	Pattern	Conventional
1955	41	74
1959	82	90
1964	94	97
1969	99	98
1974	100	100

Vesting is much less prevalent among multiemployer plans, partly because the portability of credited service among participating employers provides to some extent the same sort of protection as the vesting provision in a single-employer plan The 1973 BLS multiemployer study found that 57 percent of the workers were in plans with vesting provisions, nevertheless, the growth of these provisions among such plans was striking, since the proportion in 1960 had been 18 percent

[19] When a worker has contributed to the plan, he is invariably permitted to withdraw his own contributions, sometimes with and sometimes without interest, on termination of employment

Conventional plans, especially the insured plans, have had a longer history of giving vested rights to employees According to the Bankers Trust Company studies, the proportion of such plans with vesting rose from 74 percent in 1955 to 100 percent in 1974

The 1974 BLS study of 150 pension plans in 1974 reported that 9 out of 10 plans provided nonforfeitable pension rights The Conference Board study for 1973 shows that, in manufacturing, 90 percent of the plans reported some vesting for both office and nonoffice employees—up from 73 percent for the office plans and 57 percent for the nonoffice plans in 1963

There has been a distinct trend away from vesting after both age and service requirements have been met toward vesting after a period of service only According to the data from the Bankers Trust Company studies in the tabulation that follows, the proportion of conventional plans with

Year	Percent with vesting provisions					
	Age-and-service requirement		Service-only requirement			
			All		Requiring 10 years service or less	
	Pattern	Conventional	Pattern	Conventional	Pattern	Conventional
1964	88	65	12	32	91	40
1969	54	52	45	44	77	50
1974	32	40	68	58	82	67

vesting provisions having service-only requirements doubled from 1964 to 1974, while that of pattern plans was almost six times larger Conventional plans have also shown an obvious shift toward a 10-year service provision

Forty-four percent of the workers under multiemployer plans covered by vesting provisions in 1973 had no age requirement, according to the BLS study A service requirement of more than 10 years was generally required, however

For all pension plans together, the Conference Board study found that somewhat more than three-fifths of the plans in its 1973 survey had age-and-service requirements The Bankers Trust Company survey of 1974 reported that one-third of the pattern plans and two-fifths of the conventional plans had age-and-service requirements Except for multiemployer plans, which generally have a minimum age requirement of 50 or over, the usual requirements are age 40 with 10–15 years of service

Deferred full vesting is becoming much more common than deferred graded vesting The 1974 BLS study of 150 pension plans reported that fully 9 out of 10 plans with a vesting provision provided deferred full vesting The 1973 Conference Board study reported that 78 percent of the nonoffice worker plans and 65 percent of the office worker plans had deferred full vesting The BLS multiemployer study showed that, among such plans with a vesting provision, 74 percent of the participants had deferred full vesting in 1973 and the others were in plans with deferred graded vesting In 1960, the ratio was 55 to 45

Financing

Historically, union-negotiated plans have generally been noncontributory—that is, completely financed by employers and nonnegotiated plans have generally required employee contributions The Bankers Trust Company study found that, as recently as 1959, 54 percent of the conventional plans required employees to contribute The tabulation that follows shows that, by 1974, however,

[Percent]

Year	Noncontributory	Contributory	
		Mandatory	Voluntary
1959	45	54	1
1964	50	39	11
1969	56	28	16
1974	67	14	19

67 percent of the conventional plans neither required nor permitted any employee contributions Plans with mandatory employee contribution provisions, declined significantly—from 39 percent in 1964 to 14 percent in 1974 The sharp decrease in such provisions has coincided with a slight increase in voluntary contribution features

The proportion of plans with mandatory contributions that base contributions on all compensation has also declined—from three-fifths in 1964 to one-half in 1974 The other plans base mandatory contributions on compensation in excess of some break-point

According to the Conference Board study, both the office-employee and nonoffice-employee plans in manufacturing report increases in the proportion that are noncontributory—rising from 65 percent in 1964 to 74 percent in 1973 for office workers and from 76 percent to 82 percent for nonoffice workers

With all types of pension plans considered, the BLS study of 150 plans found that the proportion of plans financed solely by employers was 86 percent in 1974, up from 84 percent in 1970

Tables 2 and 3 tell what retirement plans have been costing individual employers, on the average, in terms of their payroll These data come from the surveys conducted by the Chamber of Commerce of the United States and by the BLS

Table 2 shows the employer cost of pension plans (excluding deferred profit-sharing plans) as a percentage of gross payroll for a selected group of manufacturing and nonmanufacturing companies—generally the largest companies—sampled by the Chamber of Commerce in its biennial studies of fringe benefits The percentages relate only to those companies with pension plans

A review of the table reveals that pension costs have fluctuated during the 20-year period 1953–73, dropping off during the 1960's to a low of 4 4 percent of gross payroll in 1965, and then rising in the 1970's to reach 5 7 percent in 1973—far in excess of the levels in the 1950's Nonmanufacturing firms reported pension expenditures that absorbed a much higher percentage of payroll than those of manufacturing firms

The BLS studies based on a probability sample of establishments of all sizes were confined initially to measuring employer costs for production workers in manufacturing industries In 1966, they were expanded to include the entire private nonfarm economy and to include all employees

TABLE 2—Average employer costs for retirement benefits as percent of gross payroll for pension plans[1] paying such benefits, selected years, 1953–73

Year	All industries	Manufac turing	Nonmanu facturing
1953	4 7	3 5	6 2
1955	5 1	3 8	6 9
1957	5 1	3 9	7 0
1959	5 0	3 9	6 9
1961	4 9	4 0	6 7
1963	4 6	3 7	6 1
1965	4 4	3 4	6 0
1967	4 8	3 9	6 0
1969	4 8	4 0	6 1
1971	5 5	4 6	6 6
1973	5 7	4 8	6 7

[1] Excludes deferred profit sharing plans
Source Chamber of Commerce of the United States, *Fringe Benefits*, biennial surveys

TABLE 3—Average employer expenditures for retirement plans as percent of total compensation of employees in establishments with such plans,[1] selected years, 1959–72

Year	All employees			Production workers in manufacturing
	All industries	Manufac turing	Nonmanu facturing	
1959	-	-		3 2
1962	-	- -		3 1
1966	3 7	3 7	3 7	3 4
1968	3 8	3 6	4 0	3 3
1970	4 0	3 6	4 2	3 5
1972	4 3	4 1	4 5	3 9

[1] Includes deferred profit-sharing plans
Source Bureau of Labor Statistics, *Employee Compensation in the Private Nonfarm Economy*, 1966, 1968, 1970, 1972 surveys (Bulletin Nos 1627, 1722, 1770, 1873) and special estimates for 1959 and 1962 provided by BLS

Table 3 presents data on expenditures by employers with retirement plans (including deferred profit-sharing plans) as a percentage of total employee compensation These proportions are smaller than those in table 2, chiefly because they are based on total compensation, which includes (in addition to gross payroll) employer expenditures for the social security program, for private retirement plans, for life insurance and health benefit programs, and for unemployment benefit programs

The absolute figures in the two surveys show some differences, especially in the nonmanufacturing sector, because of the differences in concept just mentioned, and in sampling and study procedures The trend is clear, however Expenditures for retirement purposes have experienced an upward movement since the mid-1960's

It should be observed that the relative level of expenditures for retirement benefits, from one period to another and from industry to industry, would be affected if employee contributions were taken into consideration The BLS study indicates, for example, that employers generally make a smaller contribution when their employees are also contributing[20] In 1972, employers with contributory plans expended 3 0 percent of payroll and those with noncontributory plans spent 4 1 percent of payrolls for nonoffice employees For office employees the respective figures were 4 2 percent and 5 4 percent

The Bankers Trust Company study of 1974 found that the average employee contribution as a percentage of compensation ranged from a low

[20] Bureau of Labor Statistics, *Employee Compensation in the Private Nonfarm Economy, 1972* (Bulletin No 1873), 1975, table 24

of 1 2 percent for the $9,000-a-year employee to a high of 2 3 percent for the $25,000-a-year employee

Technical Note

The estimates appearing in table 1 are derived mainly from two sources For the insured plans, the data are based on the annual sample surveys of the Institute of Life Insurance as reported in the Institute's *Pension Facts* and *Tally of Life Insurance Statistics* For the noninsured plans, the financial data come from the annual sample surveys of private noninsured pension funds by the Securities and Exchange Commission (SEC) The data on coverage and beneficiaries under noninsured plans are estimated by the Social Security Administration, using various relationships derived from data collected by the Institute, the SEC, and the Bureau of Labor Statistics

Coverage—The historical series on coverage has been revised in accordance with the concepts discussed in the October 1975 issue of the BULLETIN [21] A new concept of net coverage under private pension and deferred-profit sharing plans has been developed which is designed to limit the estimates to active civilian wage and salary workers in private industry who are building up private pension credits on their present job Thus, the series excludes the self-employed, annuitants, and those who are no longer "employed" within the scope of the plan, even though they still have vested pension credits The series also corrects for duplication for employees who are covered by more than one type of retirement plan or who are covered twice as the result of having deferred vested rights from a previous job, while also being covered on their current job

The estimates of coverage for the insured and noninsured plans are presented in table 1 on a gross basis, before adjustments for duplication The insured plan estimates provided by the Institute of Life Insurance, however, are adjusted to exclude persons with tax-sheltered annuities, most of whom are working in the public sector and the self-employed with Keogh plans

[21] See "Revised Coverage Estimates for Employee-Benefit Plan Series," *Social Security Bulletin*, October 1975, pages 18–20

The noninsured coverage plan estimates are derived by the Social Security Administration from several sources Benchmark data on coverage in the 1960's were calculated with the use of Bureau of Labor Statistics studies based on reports filed under the Welfare and Pension Plans Disclosure Act [22] To these data were added estimates for deferred profit-sharing plans, plans with fewer than 26 participants, and plans of nonprofit organizations not covered by the disclosure act

Coverage estimates for subsequent years were based on trends indicated by the financial data and worker-beneficiary relationships reported by the Institute and the SEC These estimates were modified by the results of the special household survey of pension coverage conducted in conjunction with the Current Population Survey for April 1972 [23]

Financial data—As with the coverage data, the Institute data on contributions, benefits, and reserves under insured plans are adjusted to exclude tax-sheltered annuities and the self-employed The financial data on noninsured plans are from the SEC exclusively

Contributions under insured pension plans are on a net basis, with dividends and refunds deducted Contributions under noninsured plans are, for the most part, on a gross basis, and refunds appear as benefit payments Estimates of per capita contributions and per capita reserves are derived by dividing total annual contributions and reserves by the average number of employees covered during the year

Beneficiaries—The number of beneficiaries under pension plans relates to those receiving periodic payments at the end of the year and thus excludes those who received lump sums during the year Again, the Institute data on insured-plan beneficiaries are adjusted to exclude tax-sheltered annuities and the self-employed The beneficiary data under noninsured plans are estimated from the trend data derivable from the Institute's relationship of beneficiaries to annual benefit payments under insured plans

[22] See, for example, Harry E Davis and Arnold Strasser, "Private Pension Plans, 1960 to 1969—An Overview," *Monthly Labor Review*, July 1970, page 46

[23] See Walter W Kolodrubetz and Donald M Landay, "Coverage and Vesting of Full-Time Employees Under Private Retirement Plans," *Social Security Bulletin*, November 1973, pages 20–36