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II The Characteristics and Financing of Pension Programs, 1940-80

A PENSION, broadly defined, is a regular payment, normally for life, to provide retirement income to the recipient upon completion of his working years. The payments may be made to the worker or his spouse, or for dependent children. If withdrawal from gainful employment is occasioned by accident or ill health, the payments may be called disability benefits, but the distinction is not important. It is really immaterial whether "retirement" is caused by attainment of a specified age or by inability to continue at work. For purposes of economic analysis, the significant elements of the pension structure are not the details of how a person qualifies for the benefits of a public or private program, but rather the nature and financing of commitments to individuals far into the future. Nor is it important whether the contributions are based upon actuarial calculations or a share of profits.

Our interest, then, is in any program, whatever the benefit formula, whatever the source of funds, and whatever the terms and conditions, which serves to maintain income for those who have partially or wholly retired from gainful employment. Private charity and personal gifts, although obviously major voluntary elements in the care of older people, are not within our purview because they do not represent systematic arrangements involving the shifting of group commitments to agencies or institutions which are expected to fulfill them. Individual saving for retirement and old age is less clearly distinguishable from pension programs and must be recognized at certain points, even though it is not a part of the emerging structure for groups of individuals.

In short, we are concerned with those arrangements which are clearly distinguishable from traditional forms of personal saving and expenditure. The questions, as we have seen, relate to the implications of the present and prospective pension structure for the saving and investment process. What difference does it make that we have been creating, and continue to create, an extensive network of arrangements for the systematic provision of retirement incomes to most Americans? What are the new and different factors introduced by this emerging pension structure? What are the implications for economic policy and for the capital markets? The starting point for answers to these and related questions is an identification of the peculiar characteristics of the present and prospective structure.

Public and Private Pension Programs: An Overview

Somewhat arbitrarily, the period from 1940 to 1960 can be considered the period of the development and rapid growth of institutional arrangements. By 1960, the public and private programs had become firmly established, powerful influences in our structure of income distribution. These were the decades of most rapid growth in the creation of promises and expectations for greater financial security in old age.

In contrast, it is possible to view a second twenty-year period from 1960 to 1980 not only as a period of amendment and enlargement but also as years of rapid maturing in the fulfillment of expectations. That is to say, by 1960 the pension structure had come of age. To a greater extent in the future, it will be providing benefits instead of expectations.

It is possible to measure the scope of the emerging pension structure in several ways: the extent of coverage, the number of beneficiaries, the amount of benefits, and the funds being accumulated to pay benefits in the future. Simply to trace developments since 1940 in the whole range of programs to maintain retirement incomes, however, it is helpful to look first at the growth in actual benefits paid (Table 1).

The table traces the income maintenance effects of the whole range of programs at various points in time. It is strikingly apparent that the six programs of the federal government provided 85 per

TABLE 1

Benefit Payments Under Public and Private Programs, 1940–65
(millions of dollars)

Program	1940	1945	1950	1955	1960	1965
OASDI	35	274	961	4,968	11,245	18,311
Railroad retirement	118	147	311	577	962	1,155
Federal civil service	68	94	192	380	816	1,384
Other federal employee	54	76	301	489	779	1,561
Veteran	424	952	2,224	2,746	3,437	4,196
Old-age assistance	475	727	1,478	1,765	2,216	2,615
State and local government	142	193	320	595	1,083	1,780
Private employee	140	220	370	850	1,750	3,180
Total	1,456	2,683	6,157	12,370	22,288	34,182
Percentage of personal income	1.9	1.6	2.7	4.0	5.6	6.4

Source: *Social Security Bulletin*, Statistical Supplement, 1965; *Social Security Bulletin*, April 1967.

cent of all the benefit payments disbursed in 1965. State and local government retirement benefits and those provided by private programs had compound annual growth rates of 10.6 per cent and 13.3 per cent, respectively, for the 1940–65 period, but they were overshadowed by the Old-Age, Survivors, and Disability Insurance system. This reflects, of course, the result of making increases in benefits applicable to present beneficiaries and the different characteristics of the programs.

The unique characteristic of a national social insurance system such as OASDI is the matching, over a span of years, of collections from employers, employees, and self-employed with current benefit payments. As the program matures and as benefits are increased, the rate of tax on earnings will have to rise except as the maximum amount of annual earnings taxable and creditable toward benefits is periodically increased. By 1955, the OASDI system had reached the stage in its evolution at which benefits and administrative expenses were equal to 82 per cent of total income, and by 1960 the proportion was 95 per cent. The initial contingency reserve fund had been accumulated and receipts and disbursements approached an approximate balance.

Other federal programs, such as those for veterans, retired members of the armed forces, and individuals who qualify for old-age assistance on the basis of need, are noncontributory pay-as-you-go programs, in which the cost of benefits is met by current appropriations from general revenues. No attempt is made to anticipate future costs or to create any kind of a reserve fund. Total receipts and the total of benefits and expenses have been rising at the same pace, therefore, and will continue to do so.

In contrast, the usual concept of funding aims to keep the contribution rate unchanged over a long period for a given benefit formula. This sort of "level premium" per dollar of employee compensation, to use the analogy from ordinary life insurance, involves prepayments to be accumulated at interest. The excess of contributions over benefit payments will be relatively large in a new program, in a newly liberalized program, or in the case of a young employee group. The accumulation of these excess receipts is expected to provide the earnings necessary to close the gap between leveling contributions and rising benefit payments as the program matures.

The relation between total contributions and the benefit payments shown in Table 2, for selected programs which are wholly or partially funded, illustrates the lag of benefits behind contributions and the degree of maturity achieved at different points in time.

While the relation between benefits and contributions is affected

TABLE 2

Contributions and Benefits Under Selected Public and Private Programs, 1940–65
(dollars in millions)

Program	1940	1945	1950	1955	1960	1965
Railroad Retirement						
Contributions [a]	130	279	546	588	910	1,113
Benefit payments	118	147	311	577	962	1,155
Benefits as percentage of contributions	91	53	57	98	106	104
Federal civil service						
Contributions	141	541	678	744	1,610	2,197
Benefit payments	68	94	192	380	816	1,384
Benefits as percentage of contributions	48	17	28	51	51	63
State and local government						
Contributions	267	380	905	1,740	2,895	4,220
Benefit payments	142	193	320	595	1,083	1,780
Benefits as percentage of contributions	53	51	35	34	37	42
Private employee						
Contributions	310	990	2,080	3,840	5,480	7,750
Benefit payments	140	220	370	850	1,750	3,180
Benefits as percentage of contributions	45	22	18	22	32	41

Source: Table 1; *Social Security Bulletin*, Statistical Supplement, 1965; Institute of Life Insurance.

[a] After 1954, contributions include transfers from OASDI under the financial interchange arrangement with the Railroad Retirement System.

by a number of factors other than the maturing of the programs (such as changes in employment, extension of coverage, extent of funding, and integration with OASDI), it can be used as a very crude measure of progress toward the maturing of a system.[1] In these terms, we can identify the Railroad Retirement System as having matured in 1955, the Federal Civil Service Retirement System as now in middle age, state and local government retirement systems in vigorous young manhood, and programs covering individuals in private employment as having rapidly outgrown adolescence.

In short, Table 2 verifies the statement that by 1960 the pension structure had come of age. What may lie ahead is discussed in the brief reviews of the major programs which follow.

Old-Age, Survivors, and Disability Insurance

Clearly identified as a social insurance system, OASDI emphasizes the objectives of portability and inclusiveness. The objective of providing a basic level of income to all disabled or retired individuals, their dependents, and survivors is served in the United States essentially by a wage-related benefit, calculated by formula to replace a higher portion of low than high earnings from past employment. The setting of minimum and maximum levels of benefits and small payments to individuals over 72 not otherwise covered gives the program some characteristics of a flat-rate plan, but the wage-related features are deeply embedded in the structure.

With the attainment by 1955 of close to 90 per cent coverage of eligible individuals in paid employment, attention was turned to increasing OASDI benefit provisions and periodic revisions were made to reflect changes in living costs. Because of their applicability

[1] A retirement system is said to be mature when contributions plus interest earnings on fund accumulations equal the sum of benefit payments and administrative expenses. This precise definition of maturity is rarely encountered in a growing economy. More frequently, the transition from extremely rapid growth to a more moderate pace of asset accumulation, the maturing process, takes the form of an increasing proportion of contributions being immediately disbursed in the form of benefits.

to beneficiaries, these changes have been promptly reflected in the amount of benefits distributed. Currently, and in the future, the OASDI system is a major factor in federal fiscal operations. Its impact came largely through transfers of income during the 1957–67 decade, when the trust funds did not grow as holders of federal securities. Table 3 shows the accumulation of the present reserve fund.

TABLE 3

Assets of OASDI Trust Funds, 1940–66
(millions of dollars)

Year End	Old-Age and Survivors Insurance Trust Fund	Disability Insurance Trust Fund	Total
1940	2,031	—	2,031
1945	7,121	—	7,121
1950	13,721	—	13,721
1955	21,663	—	21,663
1960	20,324	2,289	22,613
1965	18,235	1,606	19,841
1966	20,570	1,739	22,308

Source: *Social Security Bulletin,* Statistical Supplement, 1965, and *SSB*, July 1967.

Moderate fluctuations are more likely than substantial growth for the trust fund accumulations in the future. Current projections show sizable additions to assets in future years, but their realization depends, at least in part, upon the assumption of no changes in the law. In reality, the trust funds serve primarily to take care of short-run disparities between payroll tax collections and benefit payments. Also, the interest collected on the government securities held by the funds amply covers the administrative expenses of the system. In any event, changes in the assets of the trust funds are not a measure of the "saving" by covered individuals in the sense that we measure pension saving by adding together the assets of plans funded through life insurance companies, pension trusts, or governmental retirement systems.

A different, but not necessarily appropriate, accounting approach would show monumental totals on a balance sheet which would also reflect, on the asset side, the present worth of income to be received in the future from payroll taxes and interest on the trust fund assets. The corresponding liability item would be the present worth of future benefit payments plus the cost of administering the system. These calculations are not customarily used, except for actuarial purposes to determine actuarial balance, but the claims to future benefits are just as real to the wage earner as an insurance policy or an equity in a private pension plan. That these equities are very large is suggested by the estimate that the survivorship protection of OASI alone had a face value of about $700 billion at the start of 1966.[2]

The OASDI program, nevertheless, operates as a giant mechanism for fulfilling retirement income expectations. The design of supplemental pension plans integrated with OASDI recognizes the reality of this growing equity of the employee in a wide range of prospective benefits. With the attainment of almost universal coverage, social security has become completely integrated into the flow of income and expenditure in the economy. Prospective benefits are the major unrecorded financial asset of a large proportion of American families. Actual monthly benefits are going to more than 23 million individuals, almost 16 million age 65 and over, with the result that the reality of the program is evident to all.

Periodic revisions to take account of rising living costs and living standards will probably be made in the future as they have in the past. Whether, as has been proposed, some adjustments will be made automatically is currently being debated. In any event, even the present program will generate higher levels of benefits as more

[2] Robert M. Ball, "Policy Issues in Social Security," *Social Security Bulletin*, June 1966, p. 4.

individuals qualify for monthly payments closer to the maximum level. Recent cost estimates prepared by Robert J. Myers, Chief Actuary of the Social Security Administration,[3] suggest the following pattern for combined old-age, survivor, and disability benefits (in millions of dollars):

Year	*Low-Cost Estimate*	*High-Cost Estimate*
1965 (actual)	18,310	18,310
1970	23,019	23,498
1980	30,404	31,725

These estimates do not, of course, allow for subsequent revisions in the benefit structure. They simply illustrate that, under any particular formula for determining benefits, the growth in payments is moderate after the initial impact of a change made applicable to present as well as prospective beneficiaries.

As the OASDI system is modified and developed in the years to come, it will continue as the major source of retirement income benefits for as far ahead as one can see.

The Railroad Retirement System

An interesting illustration of the maturing of a pension program is found in the operations of the Railroad Retirement System. Disregarding the active hiring during World War II, covered employment was virtually unchanged at 1.2 million between 1939 and 1956. Since then it has declined by about one-third. As a consequence, the median age of employees rose from 41.5 to 46.2 years between 1950 and 1960, and is continuing to rise. Covered payrolls, the base for financing pension commitments, moreover, showed no net increase between 1950 and 1965. Meanwhile, the

[3] Robert J. Myers and Francisco Bayo, *Long-Range Cost Estimates for Old-Age, Survivors, and Disability Insurance System, 1966,* Social Security Administration, Actuarial Study No. 63, January 1967.

pension rolls, including retirement, disability, and survivor benefits, skyrocketed as shown below.

End of Year	*Number of Beneficiaries (thousands)*
1940	149
1945	177
1950	398
1955	633
1960	809
1965	911

Source: *Social Security Bulletin.*

By the 1960's, therefore, the number of beneficiaries (which includes survivors) began to exceed the number of covered employees, and this condition is likely to continue. Given stable payrolls, the system obviously had to increase the contribution rate sharply to meet the doubling of benefits between 1955 and 1965 (see Table 1) or draw upon the trust fund at a substantial rate. This fund, after reaching $3,374 million in 1954, has grown slowly to $3,946 million at the end of 1965 and cannot support a large excess of benefit payments over receipts. The Railroad Retirement Act Amendments of 1966, in addition to increasing benefits, introduced a tax of 2 cents per hour on employers to cover the current cost of a temporary supplemental program. The regular combined tax rates on employees and employers, exclusive of the cost of hospital insurance, became 15.2 per cent in 1966 and are scheduled to rise to 19.2 per cent by 1973. Even this schedule is estimated by the actuaries to be insufficient to meet promised benefits.

While this industry-wide program is not typical, it illustrates the problems of a social insurance system when the vitality and growth of the economic activity involved begin to erode. The consequences of failing to make provision in previous decades for accruing retirement costs are also evident. It is apparent that railroad employees and the public as consumers of rail transportation services will continue to be the source of growing transfers of income to retired workers and their dependents for many years to come. Since air transportation companies currently provide for full pension costs, their competitive cost position will be enhanced in the future, relative to rail transportation. Thus, the mechanism for handling retirement income payments may have marginal effects upon the allocation of resources among competing forms of transportation.

Federal Employee Retirement Systems

The Federal Civil Service Retirement System was intended to be fully funded, but government contributions have lagged far behind the accrual of benefit costs. The appropriation of additional funds by the Congress to meet full costs apparently ranks low in the order of priorities, in the absence of more serious concern among employees about the fulfillment of the federal government's pension commitments. As a consequence of past and present practices, the accumulation of funds in the Civil Service Retirement Fund has been as shown below.

Year	*Assets (millions of dollars)*
1940	634
1945	2,182
1950	4,202
1955	6,477
1960	10,480
1965	15,981

Source: *Social Security Bulletin.*

By mid-1966, the unfunded liability of the system was more than two and one-half times the size of the trust fund and is continuing to grow even without taking into account the possible increase arising from the cost-of-living adjustment factor.

The trend toward a rising ratio of benefit payments to contributions shown in Table 2 suggests that the accumulation of funds will slow in the years ahead as benefit payments continue to climb.

Other federal employee retirement plans are largely supported from general revenues. One of the major programs of this type is for career military personnel. Benefits will be rising especially rapidly during the next decade, reflecting the large number of entrants into the armed services in the early 1940's who will be retiring. The former practice of adjusting retired pay to new scales adopted for those on active duty and the present arrangements for cost-of-living adjustments are additional factors stimulating the growth of benefits. If we assume that current compensation to members of the armed forces is lower by reason of the retirement benefits, especially those relating to early retirement, it is evident that the cost of the military establishment is materially underestimated by the failure to recognize the cost of future pension commitments as incurred.

The mounting claim on future general revenues is a substantial one. On certain assumptions as to the levels of active-duty compensation, the benefits could rise from $1.6 billion a year in 1966 to $6.0 billion in 1980. The accrued but unrecognized costs to date probably exceed $60 billion, but the actual amount of the commitment is difficult to determine. The variables include the number of career officers and enlisted men, the future pattern of total compensation, and early-retirement provisions. Some estimates suggest that the cost could rise from the current rate of almost 10 per cent of total military pay and allowances to 25 per cent by 1980.

Veterans' Pensions and Old-Age Assistance

Permanent disability and pension benefits are, in effect, interchangeable for the 3.2 million veterans and 1.9 million survivors receiving $4.2 billion of benefits in 1965. The future growth will tend to occur in the payments to veterans over 65 years of age with nonservice-connected disability. Obviously, the size and scope of the program will be determined in the future. Presumably the extensive coverage of social security is meeting a part of the problems of older veterans with limited incomes, and this fact may moderate demands for pensions involving a means test.

The economic effects of veterans' disability benefits are not significantly different from old-age assistance. Both are supported from general revenues and are displaced to some extent by OASDI benefits. By early 1966, over 48 per cent of old-age assistance recipients were receiving OASDI benefits. The proportion of the population over age 65 receiving old-age assistance has continued to fall from 22 per cent in 1950 to about 11 per cent as the proportion receiving social security benefits has increased from 17 per cent to almost 80 per cent.

The displacement of old-age assistance by OASDI has, therefore, proceeded at an orderly pace, yet special problems and individual cases will undoubtedly require the continuation of old-age assistance. In 1964, 17 per cent of all workers awarded retirement benefits received monthly amounts in the range of $32 to $40, and a similar proportion of all retired-worker benefits being paid were at or below the $40 minimum then in effect. Earlier studies indicated that about one-fourth of those receiving minimum benefits were recipients of public assistance.[4]

Lack of recent covered employment and very low covered earnings account for individuals receiving minimum benefits, with farm workers representing a disproportionate fraction of the cases. The continued displacement of old-age assistance by OASDI depends upon providing employment opportunities at minimum wage levels for more men and women of working age, especially among the nonwhite population. If a vigorously growing economy can make equality of productive job opportunities a reality and can improve

[4] Lenore A. Epstein, "Workers Entitled to Minimum Retirement Benefits Under OASDHI," *Social Security Bulletin,* March 1967, pp. 3–13.

the preparation of individuals to hold such jobs, OASDI is well designed to perform its function. Because the benefits are wage-related, they improve rapidly as the individual gains regularity of employment at prevailing wage rates.

A sustained high level of employment and programs to improve the skills of potentially employable individuals would, therefore, gradually reduce the need for old-age assistance. However, future progress cannot retroactively raise the low covered-earnings records of individuals now becoming eligible for benefits. If all goes well, we should expect old-age assistance benefits to continue to grow in absolute amounts but at decreasing rates, as in the 1960–65 period.

State and Local Government Retirement Systems

Rapidly growing retirement systems of state and local governments represent one of the most dynamic elements in the entire pension structure. A measure of the growth, the total wage bill for employees covered by retirement plans, increased from $8 billion in 1950 to $32.2 billion in 1965. The compound annual rate of increase was 9.7 per cent, compared with 6.8 per cent for the similar federal civil service payrolls.[5] Holland's projections assume a 4.7 per cent per annum growth in employment over the next ten or fifteen years, which is close to the rate of growth during the 1950's and early 1960's.

Not only is employment growing rapidly but pension coverage of full-time employment is at an extremely high 95 per cent. The promised benefits are relatively liberal, and the widespread (but not universal) practice of systematically funding them through a broad range of financial assets makes state and local government retirement systems substantially similar to private plans in their impact on the capital markets. The salient features of their past and projected growth are shown in Table 4.

[5] *Social Security Bulletin,* Statistical Supplement, 1965.

TABLE 4

Past and Projected Growth of State and Local Government Retirement Systems, 1940–80

	1940	1945	1950	1955	1960	1965	1970	1975	1980
Covered employees (millions)	1.4	1.8	2.6	3.5	4.5	5.8	7.6	9.6	12.2
Beneficiaries (millions)	0.2	0.2	0.3	0.4	0.7	0.9	0.9	1.1	1.3
Benefit payments (billions of dollars)	0.1	0.2	0.3	0.6	1.1	1.8	2.0	2.6	3.4
Retirement system assets (billions of dollars)	1.6	2.5	5.2	10.6	19.7	33.6	50.7	76.9	114.9

Source: 1940–65, from Social Security Administration and Bureau of the Census; 1970–80, from Holland's projections adjusted to calendar years.

These retirement systems are significantly different from the other tax-supported programs. Substantial saving through the acquisition of financial assets is involved in the relatively high rate of funding in progress and in prospect. Additions to fund assets were 10.5 per cent of covered payrolls in 1965 compared with about 7.4 per cent for the Federal Civil Service Retirement System.

The most significant feature of the state and local government retirement systems is that they are still relatively young and, according to Holland's projections, show no signs of reaching by 1980 that stage in the maturing process when benefit payments are a high proportion of current contributions. That is to say, these programs over the future will make an increasing contribution to personal saving and to capital market flows. If the projected growth in state and local government employment materializes, these retirement systems will emerge as a major financial institution with vigorous growth and influence in the resource allocation process.

A comparison with Holland's projections for private employee pension programs, discussed below, will serve to illustrate the vigor of this growth.

Compound Annual Rates of Growth (in per cent)

	1940–60		*1960–80*	
	State and Local Government	*Private Employee*	*State and Local Government*	*Private Employee*
Covered employees	6.0	8.6	5.1	3.4
Beneficiaries	6.5	11.6	3.1	7.7
Benefit payments	12.7	15.5	5.8	9.3
Fund assets	13.4	16.6	9.2	6.8

Source: Tables 4 and 5. Growth rates are approximate for the 1940–60 period because they are based on rough estimates for the early years for private plans.

Relative to programs covering individuals in private employment, this comparison suggests that a more rapid growth in coverage, combined with a slower rate of growth in beneficiaries and payments to them, will enable the state and local government retirement systems to sustain the higher growth rate in asset holdings which first became apparent in the early 1960's.

Private Pension Plans

The development of private pension programs by business firms, labor unions, and nonprofit organizations has been especially rapid since 1940. Holland's projections are shown in Table 5; they illustrate the extent of the possible maturing of private plans by 1980. The preceding comparison of the principal indicators of growth projected for the 1960–80 period with the record of the preceding twenty years shows evidence of the maturing process. Possibly this comparison overstates the case. Holland took no account of retirement plans for the self-employed and their employees, which may begin to grow from a very small base over the next decade. Annual contributions to such plans in excess of $1 billion might be attained by 1975.[6]

The projected slowdown in the rate of growth of coverage reflects the fact that a high proportion of potentially eligible employees has already been included. Of all employees on nonagricultural payrolls, excluding government, 47.1 per cent had been covered by the end of 1960, compared with only 25.0 per cent at the end of 1950. If this group of employees is further reduced to exclude part-time workers and young workers (under age 25), the coverage ratio approximated 65 per cent in 1960. High coverage already prevails in transportation, public utilities, finance and insurance, mining, and many sectors of manufacturing. In short, the large groups most readily covered by group plans have already been included. Future extensions of coverage will have to come increasingly from mul-

[6] This estimate is based on studies made by the author for testimony before the Committee on Finance of the U.S. Senate regarding the Self-Employed Individuals' Retirement Act. See *Hearings on H.R. 10, 86th Congress, First Session,* June 18, 1959, pp. 210–215, and *Hearings on H.R. 10, 87th Congress, First Session,* July 28, 1961, pp. 144–152.

TABLE 5

Past and Projected Growth of Private Pension Plans, 1940–80

	1940	1945	1950	1955	1960	1965	1970	1975	1980
Covered employees (millions)	4.1	6.4	9.8	15.4	21.2	25.4	32.6	37.2	41.4
Beneficiaries (millions)	0.2	0.3	0.5	1.0	1.8	2.8	4.1	6.0	8.0
Benefit payments (billions of dollars)	0.1	0.2	0.4	0.8	1.8	3.2	4.7	7.3	10.6
Fund assets (billions of dollars)	2.4	5.4	12.0	27.4	52.0	85.4	116.9	155.2	193.1

Source: 1940–65, from Institute of Life Insurance, Social Security Administration, and author's estimates; 1970–80, from Holland's projections.

Note: Because of instances of coverage under more than one plan, it is believed that coverage data for 1965 and previous years may overstate the number of covered employees. See Walter W. Kolodrubetz, "Growth in Employee-Benefit Plans, 1950–65," *Social Security Bulletin*, April 1967, pp. 10–27.

tiemployer and other plans designed to accommodate small employers and small groups of employees.[7]

In addition to this "saturation" factor, trends over the years in pension arrangements have caused some shift of individuals from coverage in active employment to beneficiary status. Increased disability coverage, earlier vesting, greater use of the normal retirement age as a mandatory retirement age, and considerable liberalization of the provisions governing early retirement have been among the major developments.[8] The effect has been to accelerate the maturing of these programs for individuals in private employment.

Since all employees covered under private plans are covered under social security, the future role of OASDI will obviously affect these supplementary arrangements. Flat-benefit plans, which provide a fixed monthly pension for each year of credited service and which are most common among multiemployer and union plans, are not influenced by increases in social security benefits, except as employees may lose interest in bargaining for higher supplements. This has not occurred to date because the supplementary benefits started at low levels. At some point, of course, priority might be given to other elements of total compensation.

In the more typical wage-and-service-related benefit formula characteristic of single-employer plans, the social security benefit is taken into account in determining an attainable objective as to the replacement of some fraction of final compensation. This form of integration with OASDI implies that a higher proportion of compensation above the amount creditable for social security will be replaced by the supplementary plan. The individual's salary progression and the trend of wages and salaries generally will, therefore, have an important influence on the promised retirement income, especially with the trend toward basing pensions on final average compensation.

[7] See Holland's projections, Chapter 2.
[8] See Bankers Trust Company, *1965 Study of Industrial Retirement Plans,* for an analysis of recent trends.

The general assumption underlying Holland's projections is that social security benefits will be increased in the future at about the same pace as in the past. A shift from a "floor of protection" to a "level of adequacy" concept in the determination of OASDI benefits could, therefore, have a pronounced effect upon the projections used in this study: benefit payments might still follow the pattern outlined in Table 4, since they relate to commitments already made, while contributions and fund accumulations would not show the expected rate of growth during the later years of the period.

There are other factors currently at work, however, which could sustain a larger excess of contributions over benefits for a longer period of years than Holland has projected. The most important single influence in this direction might be an acceleration in the pace of increases in money wages, with a related sustained rise in contributions per employee, combined with the trend toward relating benefits to final average compensation. In addition, the inclusion of larger death, disability, survivor, and early retirement benefits in pension arrangements is causing increases in contribution rates. Eventually these trends have the effect of increasing benefit payments, of course, but in the interim the pace of the maturing process is slowed.

The dynamic evolution of pension arrangements during the next decade cannot be plotted with precision. However, the accuracy of projections is not crucial to the analysis of economic effects. The direction and rates of change of income and saving flows are the important elements, rather than the timing of their incidence.

THE PENSION STRUCTURE IN PERSPECTIVE

The preceding review of salient characteristics of the public and private pension structure in being and in evolution suggests certain summary observations:

1. We have come to a pause in the creation of new types of

programs and attention is being devoted primarily to refining, strengthening, and generally improving their operations.

2. During the next decade, the flow of annual benefit payments could increase by at least 60 per cent, just from existing programs. A 100 per cent increase is more likely. In the latter event, benefit payments would represent perhaps 7.6 per cent of personal income, compared with 6.4 per cent in 1965.

3. The irreversible nature of retirement income commitments running far into the future means that we are issuing claims on goods and services to be produced in the future at a rate substantially in excess of the prospective rate of growth in real output.

4. The full implications of this structure of costs and benefits for the distribution of income, consumption and saving, and the functioning of the capital markets need further exploration. (These are the topics of succeeding chapters.)

Systematic efforts, on a group basis, to spread income over the latter segment of the life span, instead of merely over the working years, obviously call for a complicated machinery if they are to be broadly inclusive of a mobile, diverse population like that of the United States. The coordination and integration of various programs have made excellent progress at the level of specific benefit formulas. Can they be related to broad economic objectives as well? Can we establish a more effective framework for the analysis and appraisal of the economic effects of the decisions we are about to make regarding the future structure of pension arrangements?