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A Suggested Program  
of Research



What follows is a report on our survey. The results are cast in the form of a number of research suggestions. They are sketched out with a broad pen. The research suggestions make no pretense either at discussing all of the interesting and important issues raised by pensions or at complete coverage of the areas that are discussed. The literature on pensions is vast; we did not undertake to examine it exhaustively, nor to develop detailed blueprints for research. But we feel that the suggestions offered for consideration in the pages that follow will be helpful as guides to major problems needing investigation, and as showing the broad lines along which, taking account of work already done, further research might proceed.

Our inquiry was limited to organized provision for the aged and for surviving dependents. We did not, therefore, cover the provision that individuals on their own behalf make for retirement or for their survivors, such as annuities, insurance, or savings in other forms. Moreover, we rather arbitrarily excluded from the scope of our survey health insurance, private disability insurance and protection, and profit-sharing plans. These overlap pensions, but we could not take the time to cover them. Finally, we concentrated on the economic aspects of pensions, and did not concern ourselves with matters such as psychological and social adjustments to retirement, physical aspects of aging, etc.

After exploring and reviewing the literature we offer the following sets of suggestions as possibilities for scientific study that may yield fruitful results if pursued energetically, objectively, and with adequate funds. All too frequently inquiries in this field have been either hasty or committed to a point of view. Since the problems raised by pensions are complicated, thorough objective analyses are essential.

Of course, it is entirely possible that we may have neglected some significant questions that would lend themselves to useful research. It is possible, too, that some of our suggestions may be unmanage-

able. It is hard to predict in advance how fruitful a particular research project will be.

Our suggestions are set forth in terms of a number of interdependent projects — more properly, groups of projects. A number of projects feed into and complement one another, and when put together might be expected to provide a rounded picture of many important economic aspects of pensions. This does not mean, however, that it would be practicable for any single organization, much less any individual, to attempt to undertake them all.

The report is organized under five main headings:

Present and future scope and characteristics of pension plans

Impact of present and future pension plans on savings and investment

Relation of present and future pension plans to the level and distribution of national income and product

Pensions and economic stability

The tax treatment of pensions and the aged

The suggested topics are all oriented around pensions per se. It seems feasible and sensible to organize the studies in that way. But it is quite clear, and we wish to emphasize this, that in a number of cases the effect of pensions would, ideally, best be examined within the context of broader studies. Examples may be found in the areas of savings, labor efficiency and mobility, and capital markets, where pensions are only one of a number of factors that have important effects. Thus, one of the points stressed in this report is that future studies of such topics should pay attention to pensions, just as any study of pensions should take cognizance of the broader framework in which they operate.

## I. *Present and Future Scope and Characteristics of Pension Plans*

### A. THE PRESENT

Basic to any investigation of the economic impact of our present pattern of pension programs, and, moreover, a valuable job in and of itself, is the development and analysis of two bodies of data — the present scope and characteristics of pensions and the probable size of the pension structure at some dates in the future, say over the next thirty years. The main concern, naturally, is with the latter. But we need a careful delineation of where we stand today (and also how we got there) before we can even begin to speculate about the future three decades hence.

We have in mind here nothing more subtle or recondite than a carefully prepared answer to questions of this sort for each of the major programs and their composite structure: What is the nature of our present structure of pensions and provision for surviving dependents? How extensive is pension plan coverage; who are covered; what is the level of benefits and contributions; how much of the support of the aged comes from pensions; how large are reserve funds and what do their investments consist of; and other matters of this sort. Provisions for old age are made under a variety of programs; what do they all add up to? Similarly, the record of growth of pension programs would be analyzed: How has coverage grown? How have benefits developed in relation to the aged population and their income, in relation to wage and price levels, in relation to gross national product and disposable income? How have the various pension programs been affected by cyclical fluctuations in economic activity; by sharp changes in price levels? What interrelations have developed among the plans making up the composite pension structure?

This would be primarily a descriptive job, and would rely heavily on materials already available or soon forthcoming. On the whole, a useful summary job could be done with such materials. But as we shall point out, it might be advisable to supplement them in some connections.

#### **PUBLIC PROGRAMS**

In general, there exist a wealth of data on OASI, railroad retirement, and public assistance. Less extensive but still fairly good are the data on the veterans and governmental employee programs.<sup>9</sup> The important job with respect to these five components of the pension structure can therefore be accomplished mainly by tying together existing materials and analyzing them.

Yet even for them more information would be useful. We point in particular here to the need once again for a survey of the income and asset position of the aged, disabled, and survivors, with special attention to the importance of various types of pensions (private as well as public). Data of this type have not been gathered since 1951.<sup>10</sup> Because of significant changes in OASI since that date as well as the further development of other components of the pension structure, a new survey is in order. In addition to providing the current picture, this survey would, together with the 1951 results, make possible comparisons over time and analysis of trends.

#### **PRIVATE PLANS**

With private plans, the picture is different. Here the data are spotty and much less extensive. Within the past few years, however, signifi-

<sup>9</sup>A good deal of information on the veterans programs has recently been published in the twelve Staff Reports of the President's Commission on Veterans' Pensions.

<sup>10</sup>A survey covering the economic position of the aged in the spring of 1952 and their income in 1951 was undertaken by the Bureau of the Census for the Institute of Industrial Relations of the University of California at Berkeley.

Again for 1951, the Bureau of Old-Age and Survivors Insurance conducted a nationwide survey of the economic status of retired workers and widows over 65, who were on the old age and survivors insurance rolls in December 1950. The bureau plans to conduct in 1957 two field surveys of its beneficiaries. The first, to be made in the spring, will be a survey of aged beneficiaries shortly after they are awarded benefits; it will be the starting point of a longitudinal study involving revisits at one- or two-year intervals over ten years or more. The second, planned for the fall of 1957, will be a survey of a cross-section sample of persons aged 65 and over and of younger widows and dependent children on the old age and survivor rolls.

cant additions have come forth,<sup>11</sup> and more will be available in the near future. Moreover, a detailed survey of the scope and characteristics of private pension plans is under serious consideration by the Social Security Administration. With the recent materials and the older sources one can now piece together a more informed and accurate picture of the private pension sector than would have been possible a few years ago.

More specifically, considering the future as well as the present dimensions of private pension programs, we suggest the following studies.

1. *The scope, characteristics, and financial operations of private pension plans*

Important in filling a gap that now exists and necessary as basic information for studies of the economic effects of pensions would be a detailed description of the private industrial pension plan structure. From a careful review and integration of the materials just cited a series of estimates for private pension plans — coverage, income and assets, plan characteristics such as vesting provisions, rate of funding of past service credits, etc. — would be developed.

More information exists on the magnitude than on the underlying characteristics of pension plans. While the study would be designed to use existing materials, it might be advisable to supplement them with a survey of a representative selection of plans including: classes of employees covered; requirements for participation and receipts of

<sup>11</sup>Without attempting an exhaustive listing we cite:

Charles H. Dearing, *Industrial Pensions* (Brookings Institution, 1954).

*Pension and Other Employee Welfare Plans, A Survey of Funds Held by State and National Banks in New York State* (State Banking Department, 1955).

*Selected Employee Benefit Plans, A Report of the Joint State Government Commission to the General Assembly of the Commonwealth of Pennsylvania* (1955).

John J. Corson and John W. McConnell, *Economic Needs of Older People* (Twentieth Century Fund, 1956).

Securities and Exchange Commission, *Survey of Corporate Pension Funds, 1951-1954*, Oct. 1, 1956.

Bankers Trust Company, *A Study of Industrial Retirement Plans, 1956 Edition* (covers 1953-55; five earlier studies deal with 1943-52).

National Industrial Conference Board, *Pension Plans and Their Administration*, Studies in Personnel Policy, No. 149, 1955.

*Welfare and Pension Plans Investigation*, Final Report of the Committee on Labor and Public Welfare, 84th Cong., 2nd Sess.; Senate Report No. 1734.

benefits; provisions for early retirement; disability, death, and survivors benefits; vesting provisions, retirement provisions; and number and average age of those eligible to retire but still on the payroll. (As noted earlier, a thoroughgoing survey of that nature may be undertaken by the Social Security Administration.) It is clear, however, that a good deal could be accomplished just by working with the information currently available.

## 2. *Historical analysis of the growth of private pensions and the factors affecting their growth*

The estimates developed under (1) would constitute a benchmark that could be used as basic raw material for historical analysis of the growth of private pensions, concentrating on the period since 1940. Series for the major pension magnitudes, such as coverage, contributions, other income, beneficiaries, benefits, other disbursements, and reserves would be developed, and an attempt should be made, also, to present the figures by industry and perhaps by asset size of firm, using the *Statistics of Income* data as the starting point.

In addition, the analysis would be strengthened and its results rendered more useful by a close examination of changes in the major magnitudes in a small selection of pension plans of various types and in different size and industry groups. In so far as possible, the plans chosen should reflect differences in such individual firm characteristics as: the proportion of labor to total costs; degree of unionization; age of employees; proportion of women; stability of work force; and retirement policy. Special attention should be given to detailed case studies of the operations of pension plans that have had a fairly long history.

Through such a study we may learn something of the dynamics of private pension plans — i.e., how, typically, such programs have grown and been extended in scope — and this may provide clues useful in speculating about the future dimensions of pensions.

## 3. *Turnover and future benefit payments*

As most plans are now set up, an important determinant of how heavy benefit payments under private pension programs will be is the degree of labor turnover. Dan McGill has estimated, for example, that because turnover is high and the extent of vesting relatively slight, “certainly no more than 50 per cent of employees *presently covered* under private pension plans will ever receive a cash benefit

from the plan."<sup>12</sup> Variations among firms and industries in this respect would be a matter of interest. Moreover, since the degree to which coverage ultimately results in benefit payments will have important effects on the costs of pensions, information on turnover rates and factors affecting workers' job changes is important both for an understanding of existing statistics and for measurement of pension payments at some date in the future.

A definitive study needs to be made of the amount of turnover; changes in the amounts over time; the characteristics of workers, occupations, and industries exhibiting different degrees of turnover; and the factors that might explain these variations. We need to know more than the number of job changes in a specified number of years and more than the number of years of experience in a particular job prior to separation. It would be useful to have information on the number of years worked with each employer and the proportions of workers in different age and sex groups who will remain with the same employer five, ten, fifteen, twenty years and to retirement.

Such data would greatly increase the accuracy of current estimates of the proportion of those presently covered who will eventually receive pension benefits. They would permit the design of eligibility and benefit requirements better adapted to the actual employment experience of those expected to receive pensions under a particular pension plan, and would make possible better cost calculations of alternative vesting provisions. But data cast in precisely this form are not available, and it would be an extremely laborious task to develop them.

Yet what is required might be reasonably approximated from a combination of sources: (a) The BLS series on labor turnover published in *Employment and Earnings*, and OASI employment records. (b) An examination of the assumptions and procedures used by actuaries in planning pension programs. (c) Data obtained from an analysis of representative companies and plans. This latter information on terminations by age, sex, salary and years of service in relation to nonterminations in the same control groupings could be developed retrospectively or for future periods. In either case, it would be a long-range study.

One final suggestion for both public and private plans. We have

<sup>12</sup>Dan M. McGill (ed.), *Pensions: Problems and Trends*, Richard D. Irwin, Inc., 1955, p. 40.

already mentioned the need to learn more about the dynamics of pensions. One way of getting at this is through a close analysis of our own history. We can also illuminate our experience considerably by examining foreign developments. We may learn a good deal by studying the growth and operation of pension plans, private (if the data permit) as well as public, in a number of countries whose institutional structure is fairly similar to ours — for example, England, France, and Canada. Such a study would permit us to follow the growth of pension plans that have had a longer life than our own and their operation in extreme economic circumstances — inflation and depression.

## B. THE FUTURE

With pension programs, both public and private, not yet fully matured and therefore in a stage of rapid growth, and moreover showing a tendency toward increased coverage and liberalization of benefits, great interest attaches to the future size of pensions.<sup>13</sup>

The initial emphasis would be on extending into the future, say for each fifth or tenth year between now and 1985 or 1990, the present provisions of the existing components of our pension structure. But it would also be desirable to take account of possible changes in these provisions and new types of programs, since, as history has shown, maintenance of present scope probably constitutes the floor of the range of assumptions that might be made, rather than the most likely of them. And it might be useful to sketch out the picture even further in the future, albeit in less detail.

The study would not concentrate on obtaining seemingly precise magnitudes, but rather on delineating broad ranges of probability through projections based on recent rates of growth and other rele-

<sup>13</sup>Since 1950 significant extensions of coverage, liberalization of benefits, or both occurred for OASI in 1950, 1952, 1954 and 1956. In 1956, too, federal civil service benefits, public assistance payments, railroad retirement benefits, and payments to survivors of veterans were increased. A majority of the older conventional private pension plans covered in a recent survey by the Bankers Trust Company (cited in note 2 above) revised their benefits upward in the period 1953–55. A study by the Division of the Actuary of the Social Security Administration of 157 group annuity plans amended in 1950–54 concluded that “the most significant characteristic of the revisions is the increase in benefits at a decrease in cost to employees, or at little or no additional cost.” (Actuarial Study No. 44 by Weltha Van Eennam and Martha E. Penman, p. 2.)

vant assumptions and data.<sup>14</sup> The uncertainty attaching to the future precludes any numerical precision in evaluating pension magnitudes thirty years hence — but the contrast between the deep concern with the future “burden” of pensions in some quarters and the calm indifference to this same problem in others, indicates that a spelling out of the range within which the size of the pension structure may fall over the next thirty years would be in the nature of a public service. To command respect and provide some range of values that would be accepted as the basis for discussion and consideration when pension policy is debated, projections of the future size of pensions would have to be made with great care and thoroughness. And they would have to be set up in such a way as to give some clue to the costs of a particular change or possible expansion in each of the major components of the pension structure.

Projections of the size of pension programs in the future cannot be made in the abstract, nor will such magnitudes have meaning in and of themselves. Their demographic and economic basis must be set down, for it is only within a specified framework that the significance of future pension magnitudes can be assessed. The investigation would involve, then, the extrapolation of a set of “reasonable” relations among important economic and demographic variables to suggest their level a number of years hence given certain assumptions, with similarly dated projections of the future size of benefit payments and contributions and reserves (where applicable), under the various pension programs.

A detailed delineation of how such a project might be conducted lies beyond the scope of an exploratory survey, and, as a matter of fact, could not be spelled out without a much closer examination of the problems posed and the materials available than we have made. But there are a number of points that deserve comment.

First, while primary interest focuses on pensions, the future level of important economic magnitudes — labor force, output per man-hour, GNP, the future level of earnings, etc. — would be a necessary concern of the study; for the pension program values must be consistent with the projected values or ranges of values of these key economic variables.<sup>15</sup> That is to say, one must reckon with what the major demographic and economic variables imply for pensions.

<sup>14</sup>Here and in the rest of our report we use the word “projection” to mean values derived from specific assumptions. Projections are not unconditional forecasts; they are estimates of future possibilities that are no better than the assumptions (necessarily imperfect) used in deriving them.

<sup>15</sup>The tie-in with a “model” of the economic future would differentiate these

For example, different assumptions about the average age at which people will retire will have varying effects on projected pension costs.

It is necessary also to deal with, or at least keep in mind, the reverse relation — the implications for the economic and demographic projections of assumptions made about pension programs. For example, different assumptions about pension provisions will have varying effects on the projected average age at which people will retire.

Finally, the assumptions about possibilities of growth in the various pension programs would have to be in “reasonable” relation to one another. For example, an assumption of rapid (or slow) growth in the level of benefits under OASI might be coupled with an assumption of somewhat slower (or more rapid) growth in private plans; and an assumption of a medium rate of growth in the one, with a medium rate of growth in the other.

One stage of the study would provide projections of the future costs of each of the major pension programs and the structure they constitute, assuming maintenance of existing pension arrangements and the provisions presently incorporated in them. Obviously, the findings would have to be presented in terms of ranges of values. Because the history of pension plan developments in the last twenty years suggests that maintenance of existing programs and their present provisions into the future is too static an assumption and, hence, liable to be unrealistic, the study should include a second stage which would cover possible changes in each of the major pension programs and what bearing they might have on future pension costs, and also on the economic “model” of the future.

The assumptions that might be made in the second part of the

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projections from those made for OASI by the Division of the Actuary of the Social Security Administration, in which the emphasis is placed on cost factors and their possible variation, with the “high” and “low” cost projections incorporating the poles of likelihood as regards combinations of cost factors. The project suggested here would be more particularly concerned with the realism and internal consistency of the economic “model.” (See *Long-Range Cost Estimates for Old-Age and Survivors Insurance, 1954*, by Robert J. Myers and Eugene A. Rasor, Department of Health, Education, and Welfare, Social Security Administration, Division of the Actuary, Actuarial Study No. 39; and Ida C. Merriam, *Social Security Financing*, Federal Security Agency, Social Security Administration, Division of Research and Statistics, Bureau Report No. 17, p. 34.) But these projections for OASI are careful and elaborate studies, and anyone interested in the future costs of any of the major pension programs would get much enlightenment and guidance from them, as well as from the techniques and procedures used by actuaries in setting up pension plans.

study are legion. The simplest are those that might be designated as “mechanical” — e.g., an increase of benefits of 10, 20 or 30 per cent; retirement age set at 60 or 70; retirement age for women 5 years lower than for men; growth of early vesting provisions to cover a stipulated fraction of workers; growth of pension benefits to a point where, on the average, they came to  $\frac{2}{3}$  of final wages or average wages. Others would be suggested by current proposals — for example, passage of H.R. 10 or something like it that would provide a tax encouragement for personal provision for retirement.<sup>16</sup> Still others would come from the record of the past in this country — as an example, assuming OASI benefits to grow relative to the price or wage level as in the last twenty years — or from analysis of the developments in countries whose pension history is more extensive than ours.

Still another way of proceeding would use assumptions of the various types indicated above, but the combinations for the major pension programs would be so formulated as to take account of possible complementary relations among the programs. These arrangements of possibilities would tell us something about what the future pension picture might look like should there be a particular emphasis over the next thirty years on one or another of the major pension programs. For example, an assumption of a near-maximum rate of growth for OASI might be combined with the complementary assumption of a reasonable minimum of growth for private pension plans and the public assistance program; an assumption of modest growth for public assistance and OASI might be coupled with the assumption of rapid growth in the private pension field; and the possibility of near-maximum development of public assistance might be paired with the assumption of a reasonable minimum of growth for private pension plans and OASI.<sup>17</sup> The objective would be to select groups of assumptions that provide the most illuminating sets of estimates.

Recently, projections of the size of benefit payments in 1965, 1975, and 1985 under all public pension programs, and of national

<sup>16</sup>Under the most recent versions of such bills, a self-employed person could make payments into a retirement savings program, free of tax, up to 10 per cent of his earned income, the annual limit on the amount exempted from tax being \$5,000 and the lifetime limit \$100,000.

<sup>17</sup>These combinations leave out payments to veterans. Because they are also financed from general revenue, they might be grouped with public assistance programs. Alternatively, veterans payments might be treated as a major component of the pension structure, and a fourth combination of assumptions might be set up.

income at the same dates were published in the Report of the President's Commission on Veterans' Pensions — *Veterans' Benefits in the United States*. They were prepared by the Department of Health, Education, and Welfare and the Commission staff. These projections are useful for illustrative purposes. They suggest one set of possibilities as to the magnitude of pension benefits in the thirty years ahead.<sup>18</sup>

For all programs other than veterans' pensions and compensation payments<sup>19</sup> two sets of values were derived — one based on the assumption that present (1955) laws and benefit rates remain unchanged with the exception of the introduction of cash disability payments under OASI commencing at age 50 as in H.R. 7225, 84th Congress (one of the amendments passed in 1956), and the other assuming that benefit rates would increase at half the rate of increase in productivity per man-hour posited in the national income projection (that is, at one-half of 2.5 per cent annually).

Three estimates are presented for veterans' payments<sup>20</sup> — (1) under existing laws; (2) with general service pensions assumed as follows: pensions of \$100 a month to all present wartime veterans after age 65 and a liberalization of service pensions to surviving widows from \$50.40 to \$65 per month, as well as a 30 per cent increase in payments to minor children; and (3) the same assumption as for (2) but with benefits stepped up at one-half the rate of increase in productivity per man-hour assumed in the projection of national income.

The results are summarized in Table 3, where veterans' and other public pensions are combined as indicated.<sup>21</sup> (Note that since these estimates were prepared, changes that will cause an increase in benefit payments were made in most of the public programs.)

<sup>18</sup>What we have put under the heading of pensions in this connection differs in some respects from the definition used in Table 1. Therefore, Table 3 (below) and Table 1 are not strictly comparable.

<sup>19</sup>That is, OASI, public assistance, railroad retirement, federal civilian and uniformed services retirement, and state and local government employee retirement.

<sup>20</sup>This category includes payments made for service-connected disability and death benefits and non-service-connected pensions to veterans and dependents.

<sup>21</sup>The estimates exclude private plans. Had they been included, larger benefit payments would have been indicated — in 1955 about \$600 million more; in 1965 perhaps something on the order of \$1.8 billion, assuming no liberalizations of benefits. (Challis Hall, in the work cited in footnote 31, estimates benefits at \$1.8 billion for 1964.)

TABLE 3

Public Pension Benefit Payments and National Income:  
Actual, 1940–1955, and Estimated, 1965, 1975, 1985  
(dollar figures in billions)

YEAR	National Income (1)	Change in Rate of National Income over Decade <sup>a</sup> (2)	BENEFIT PAYMENTS		Change in Rate of Benefit Payments over Decade <sup>a</sup> (5)	Change in Benefits as % of National Income (6)
			Amount (3)	As % of National Income (4)		
ACTUAL						
1940	\$ 81.6	—	\$ 1.9	2.3%	—	—
1945	181.2	—	2.5	1.4	—	—
1950	240.0	\$158.4	6.5	2.7	\$ 4.6	2.9%
1955	322.2	141.0	11.5	3.6	9.0	6.4
ESTIMATED :						
(a) Assuming no change in existing law and benefit rates: <sup>b</sup>						
1965	\$414.0	\$ 91.8	\$19.5	4.7%	\$ 8.0	8.7%
1975	571.0	157.0	24.8	4.3	5.3	3.4
1985	756.0	185.0	30.6	4.0	5.7	3.1
(b) Assuming no change in existing law and benefit rates except liberalization of veterans payments as described in text:						
1965	\$414.0	\$ 91.8	\$22.5	5.4%	\$11.0	12.0%
1975	571.0	157.0	28.7	5.0	6.2	3.9
1985	756.0	185.0	36.7	4.9	8.0	4.3
(c) Assuming benefit rates to increase at half the rate of increase in national productivity assumed in projecting national income: <sup>c</sup>						
1965	\$414.0	\$ 91.8	\$25.6	6.2%	\$14.1	15.4%
1975	571.0	157.0	37.9	6.6	12.3	7.8
1985	756.0	185.0	56.9	7.5	19.1	10.3

Source: *Veterans' Benefits in the United States*, pp. 117–18, 124; *Survey of Current Business*, July 1955; *Social Security Bulletin*, September 1953.

<sup>a</sup>The 1950 entry, for example, is the difference between the 1950 and 1940 values.

<sup>b</sup>Except introduction of disability payments at age 50 in OASI (see text).

<sup>c</sup>Estimated by applying to all programs on page 118 of *Veterans' Benefits in the United States* — except the Workmen's Compensation and Unemployment Compensation entries — the rate of increase computed from the table on page 124.

Projections of the type summarized in Table 3 are, admittedly, subject to many reservations. But they do serve to indicate that:

(1) The next thirty years will probably witness a rapid rise in public pension benefit payments.

(2) Because of many factors — the provisions of pension programs, the age composition of the population structure, and a host of others all deserving further analysis — this growth is likely to take place unevenly over time, with a pronounced bulge probably occurring in the next ten years. (Note column 6.)

(3) These considerations as well as those raised earlier suggest that there remains a need for more projections and analysis of future possibilities in connection with the level of pension benefits and their significance.

To know better where we stand today as regards pensions, where we might be in 1985, and what the process of transition to that level might be like will be helpful. But we need to know more. For the operations of pension programs may have important effects on savings, investment, the distribution of income, work incentives, and resource mobility — matters taken up below.

## II. *Impact of Present and Future Pension Plans on Savings and Investment*

The fiscal operations of pension plans are intimately related to a process that lies at the very heart of economic growth and development. Savings, and their distribution among different types of investment, play a large role in determining how rapidly we will be able to turn out goods and services in the future. The effect of pensions on savings and on the various forms in which savings are invested therefore requires careful investigation. While these problems have been widely recognized, and considerable effort has been devoted to them, much remains to be done.

## A. PENSIONS AND SAVING

OASI, railroad retirement, the various pension programs for federal, state, and local government employees, and private plans, all show in their fiscal operations an excess of receipts over outpayments, and this is likely to continue over the next several decades. These funds, therefore, accumulate assets and will continue to do so. The size of the annual additions to their reserves is substantial. The 1955 accumulation of \$6.4 billion has been cited above. It is not unlikely that by 1960 annual additions to pension fund reserves might run on the order of \$8 billion.

Such magnitudes are impressive and suggest that pension plans may have important effects on both the level and composition of savings. Total personal savings (including government insurance and pension reserves as well as private pension funds) were only \$21.5 billion in 1955.<sup>22</sup> Even if the net total of saving were unaffected, the fiscal operations of pensions appear to involve a redirection of the channels through which savings flow: that is, a shift from some types of personal saving and from retained corporate earnings to savings that funnel through an additional financial intermediary — pension funds. The size of the flow and the implications of this redirection both for the composition of savings and the level and composition of investment merit careful investigation. This problem can most conveniently be examined in a context to be described under B below.

What of the effect of pension fund operations on the level of savings? To what extent do pension fund accumulations represent net accretions to the total flow of savings? This seems to be one of the key questions raised by pensions. In so far as pension fund operations augment the flow of savings and these savings are invested, the same programs that build up claims to output on the part of future pensioners will be currently increasing our ability to turn out goods and services in the future, thereby lightening the "burden" of the purchasing power transfers that pension plans will effectuate. In other words, the more pension plans accelerate savings now, the more potential we have for increasing productive capacity, and the less burdensome will the claims exercised by the retired aged be in the future, assuming the savings to be invested.

It is one thing to suggest that the effect of pension plans on the

<sup>22</sup>From source cited in footnote 2.

level of saving is an area that requires research. It is quite another to spell out how to go about it. As a matter of fact, this particular question points up as well as any what was said earlier about the advisability of studying the problems raised by pensions within a broader context than pensions per se. Here the most appropriate framework would be a large-scale survey and study of the savings plans and preferences of individuals and of their asset holdings, in which pension funds (both public and private) would fall into place as one among many forms of saving. Pending such a broad-gauged survey and analysis of personal saving, the forms it takes, and the factors (such as cash income, deferred compensation, and assets) that affect both the level and composition of savings, we may point to a promising project that could be undertaken with presently available materials, and would add to our knowledge of the net effect of pension plan operations on saving.

1. *The net effect of pension program transfer operations on the level of saving*

The whole structure of pensions can be viewed as a mechanism that alters the direction of the flow of income and redistributes it among people.<sup>23</sup> Thus, for example, under private pension plans a portion of the flow into cash wages or corporate profits (and, in connection with both of these, the flow to government in the form of income tax payments) is redirected toward deferred compensation. Or again, in the case of OASI part of the flow of income to individuals is diverted — directly as regards the employee's contribution, and indirectly as regards the employer's share, either via higher prices of goods purchased if the employer's tax is shifted forward or via lower wages if it is shifted backward — and transferred in the form of benefit payments to other individuals and additions to the OASI trust fund. Finally, the taxes that support veterans payments or public assistance take funds from some persons which are transferred to others — the beneficiaries of these programs.

Since the fiscal operations connected with pensions alter the distribution of income, an important set of problems to investigate would be these: On whom does the burden of the various pension

<sup>23</sup>The processes by which this redistribution is accomplished may, of course, by affecting incentive, exert an influence on the level as well as the direction of flow of income. Other sections of our report take up more specifically the effects on mobility and effort. Here we deal with the redirection of income flows.

programs fall? How does the burden differ as among private plans, old age assistance payments, veterans payments, and OASI? Similarly, who benefits from the various sorts of pensions? And how does the benefit pattern differ among the three categories of pension plans? How significantly do the various pension programs alter the distribution of income? These are important problems and we do not intend to overlook them, but they can most conveniently be taken up in a later section — III, B.

To return to the effects of pensions on saving: A change in the distribution of income may effect a change also in the aggregate amount of saving that will be made out of any given level of income receipts, if, at the margin, savings propensities vary among income classes (with some classes experiencing a net “gain” and others a “loss”) or between “losers” and “gainers.” This gives a clue for measuring and analyzing the net effect of pension plan operations on saving, and leads to the following research suggestion:

Basically the project we offer for consideration is an extension of the framework used on several occasions for studying the economic effects of OASI.<sup>24</sup> For each of the major pension programs — OASI, veterans, public assistance, government employees, and private pensions — it would establish a “loss” and “gain” pattern for those involved as contributors and as beneficiaries, arrayed by income classes, and would determine by how much saving has been cut by the “loss,” how much it has been increased by the “gain,” and, therefore, the net effect such transfer operations have exercised on saving.<sup>25</sup>

For example, veterans payments might be considered to be supported by general federal tax revenues, and the fraction of the revenues used for this purpose could be estimated. The “loss” pattern would then consist of each income class’s share of the appropriate fraction; the “gain” pattern would consist of each income class’s share of total benefits paid under the program. Had the “losses” not occurred, saving would have been higher in each class to the

<sup>24</sup>Cf. John J. Carroll, “Fiscal Aspects of Social Security Programs,” Ph.D. Dissertation, University of Michigan, 1953; and S. J. Mushkin, Anne Scitovszky, and Leila N. Small, *Social Insurance Financing in Relation to Consumer Income and Expenditures*, Bureau Memorandum 63, Bureau of Research and Statistics, Social Security Board, Federal Security Agency, 1946.

<sup>25</sup>Our discussion emphasizes saving; the effects on consumption would be equal in amount and opposite in sign to those on saving. Moreover, though we do not stress it here, some students have pointed to the differential effects on various types of consumption due to pension plan redistributions of income as an area worthy of investigation.

degree indicated by the relevant marginal propensity; had the "gains" not transpired, saving would have been lower. The algebraic sum of these net changes for each income class would provide a measure of the effect of veterans payments on saving. Similar calculations would furnish the effect of each of the other programs on saving.

As even this brief description will serve to indicate, a number of conceptual difficulties and ambiguities attach to such a study. It would be subject to all the problems that bedevil analyses of the tax burden and the income class pattern of government benefits.<sup>26</sup> Given the present state of our knowledge of fiscal matters, arbitrary assumptions would have to be made about the incidence of some taxes, at least, and about the effect of employers' contributions under private plans on the price of output, the rewards to factors, and corporate profits and their disposition between dividends and retained earnings. This suggests that a number of alternative calculations would be necessary, and that a range of answers would be the outcome of the study. The necessity for casting the project in this way is reinforced by the fact that directly relevant data are lacking, particularly for receipts of benefits and for estimating the income-class marginal propensities to spend and save.<sup>27</sup> Moreover, the marginal propensities derived from annual data are open to question,<sup>28</sup> and the spending and saving habits of beneficiaries may differ greatly from those of "contributors." All this leads to the general recommendation for care in presenting alternative possibilities and caution in interpreting the results. Imperfect though the answers may be, the study seems worth undertaking — if only to indicate the kinds of assumption involved in coming to a conclusion. For there appears to be general agreement that one of the most important problems posed by pension programs is their net effect on saving.

<sup>26</sup>For a discussion of the problems involved in measuring the tax burden see "Distribution of Tax Payments by Income Groups: A Case Study for 1948," by R. A. Musgrave, J. J. Carroll, L. D. Cook, and L. Frane, *National Tax Journal*, March 1951; comments by R. S. Tucker in the September 1951 and March 1952 issues; comments by G. Colm and H. Wald and a rejoinder to Tucker by Musgrave and Frane in the March 1952 issue.

<sup>27</sup>For the latter purpose, 1950 data are the most recent.

<sup>28</sup>This is not the place to spell out all the complications and qualifications that would attach to the kind of study we are suggesting. But we should mention here the possibility, suggested by Milton Friedman's recent work on the consumption function, that when related to "permanent" income, the marginal propensity to consume tends to be the same among income classes. (Friedman, *A Theory of the Consumption Function*, Princeton University Press for the National Bureau of Economic Research, in press.)

The framework suggested for the project would be least ambiguous and most directly and simply applicable to plans whose fiscal operations are on a "pay-as-you-go" basis, i.e. whose inpayments just equal outpayments. Veterans payments and public assistance may be considered to fall in this category.

But for plans not on a "pay-as-you-go" basis the problem takes on a different form. Consider the case of private plans, particularly those (the majority) whose operations involve or tend toward funding on actuarial principles.<sup>29</sup> Here the participants, to some degree at least, do not suffer an actual decline in disposable income, but a failure of cash income to rise as much as it would have. While in terms of current income flows they may be considered "losers," ideally, during their retirement, they will be "gainers" to the amount of "losses" over their working life.<sup>30</sup> Therefore, for private and government employee pension programs, a modification of the simple framework outlined above may be in order. One method of analysis appropriate to the problem has been developed by Challis Hall.<sup>31</sup> Instead of concentrating on the redistribution among income classes, Hall's analysis develops the differential effect of deferred compensation compared with cash wage payments of the same amount on the savings of three groups — wage and salary recipients, corporations, and government.

Between the pay-as-you-go programs and funded plans lies OASI. Presently contributions under this program exceed benefit payments, but total reserves and annual accretions thereto fall far short of what would be necessary for a full actuarial reserve. Through OASI, both the redistribution among income classes and the transfer from the personal sector to the government trust fund may exercise an effect on saving.

One final qualification. The study we suggest would utilize people's spending and saving proclivities as determined from current

<sup>29</sup>What we say in this connection about private plans is also generally applicable to the various government employee pension programs.

<sup>30</sup>In practice, many workers now covered by plans will have changed employers and jobs before they have acquired benefit rights. (See section I, A, 3.) This lends an element of uncertainty to the individual's equity in a pension plan.

<sup>31</sup>Challis A. Hall, "Retirement Contributions, the Spending Stream, and Growth," in *Federal Tax Policy for Economic Growth and Stability*, Papers Submitted by Panelists Appearing Before the Subcommittee on Tax Policy, Joint Committee on the Economic Report, Washington, D.C., GPO, 1955, pp. 786-97.

cross-section data, but would not take account of any effects that pension programs may have had or might in the future have on these relationships. It is entirely possible, however, perhaps even likely, that the enlarged scale of public and private provisions for the aged, coupled with a growing awareness of such provisions, may change people's spending and saving habits. To determine completely the influence of pensions on saving, one would have to know the nature and magnitude of this effect. At present such information does not exist, and in its absence the study should take account of a number of possibilities in this connection. But the question clearly requires further investigation. It is with this problem that our next suggestion for research is concerned.

## 2. *Pension coverage and people's spending and saving response thereto*

Whether, in fact, and to what degree, savings propensities are changed by equities in pension funds built up on behalf of workers (or merely by the existence of pension programs) is a matter about which we now know very little. But there is general agreement that further knowledge of it would be useful.

At present we can do little more than delineate four general possibilities. People may disregard pension fund accumulations and save in other ways the same amounts as before; they may cut other savings to the full amount of their pro rata share of pension fund reserves or possible pension protection; they may, feeling their old age guarded against, lower the total savings (including pension fund reserve accumulations) that they seek to make; or, finally, because pensions now provide some sort of guaranteed minimum in old age, they may be encouraged to save more than before in order to raise that minimum to a higher level of comfort. (As a further complication, the reaction to pension coverage may be delayed.)

One or another of these responses to pensions will characterize each family. What, on net balance, the effect might be is something we ought to know about. To this end we suggest a special survey designed to investigate that effect.

Its structure might be similar to the surveys undertaken by the Survey Research Center annually for the Federal Reserve Board in which a stratified sample is interviewed.<sup>32</sup> Or it might be set up to

<sup>32</sup>Special tabulations from these data prepared by the Survey Research Center for the Institute of Life Insurance — *Life Insurance Ownership Among American Families* — for 1953 and 1954 provide some rough evi-

cover relatively fewer persons more intensively with longer and more searching interviews. The exact design of the survey can best be specified by those schooled in such undertakings. Basically, it would be set up to isolate, so far as possible, persons similarly circumstanced except as regards one or another aspect of their pension plan status, and to analyze the savings and spendings patterns associated with these differences.

Obviously there would be many features of pension plans germane to such an inquiry: the number of pension programs under which a worker falls (OASI alone, or OASI and a private plan), the size of pension rights being built up, provisions as regards vesting, differences in eligibility requirements, the extent to which employees contribute, the degree to which employees are aware of pension rights accumulating on their behalf, the length of time they have been covered by pensions, etc. The survey would have to cover a large sample. Moreover, it would have to devote considerable effort to ascertaining how much people know about specific features of their pension coverage. For it is not their existence, but workers' awareness of these provisions that will affect behavior. Awareness may be related to age and the length of time individuals have been covered by a plan. Therefore, a breakdown by age groups and length of time under a plan would be significant.

Such a survey might be made to yield a valuable by-product by covering other aspects of peoples' saving behavior and the type of assets that they seek as media for their saving. Fairly complete data of this sort have not been gathered since 1950.

### 3. *Analysis of pension fund accumulations in the context of statistical explanations of the proportion of income saved*

As an additional way of getting at the question of the effect of pen-

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dence on the relation of one kind of saving (life insurance) and pension plan coverage. More detailed information from a recent survey by the Survey Research Center will appear in *The Life Insurance Public*, to be published by the Institute of Life Insurance early in 1957. George Katona has summarized the findings as follows: ". . . Social security and private pension plans are *not* viewed as alternatives to one form of providing for old age which many people pursue on a voluntary basis, namely, buying life insurance. If anything, people having social security or private pension plans carry more life insurance than people without those nonvoluntary provisions for old age." (George Katona, "Attitudes Toward Saving and Borrowing," in *The Problem of Consumer Credit Controls*, proceedings of a conference held by the National Bureau of Economic Research, in press, Board of Governors of the Federal Reserve System).

sions on saving, further exploration of the vast literature on the savings (or consumption) function might be fruitful.

Three approaches seem promising:

(a) Over long periods of time, the ratio of personal saving (including consumer durables) to personal income appears to have been roughly constant. Rough constancy too, has characterized the proportions of total savings made by the personal, corporate, and government sectors respectively, if saving through social security and other governmental trust funds is included in personal saving.<sup>33</sup> This result, over a period of years encompassing significant institutional changes in the economy, may be worth further examination. It suggests that powerful and persistent forces making for constancy in relative shares have been at work, and — if these continue — that pension fund saving might not raise these ratios but rather would displace other forms of saving. How “constant” these ratios have been, the forces that made for constancy, and what this might connote for the net effect of pension fund accumulations on savings should be further investigated.

(b) Recent work on the determinants of the division of income between consumption and saving that places emphasis on long-run income and spending plans and the importance of distinguishing between the permanent and transitory components of income, may afford useful clues for analyzing the effect of pensions on saving.<sup>34</sup> This research suggests that the increasing role of the state in the provision of security may affect the ratio of consumption (and hence, saving) to income.

(c) More generally, the formulae that have been developed to explain saving could be examined to see if and how they take account of pension fund accumulations, and whether the statistical “explanation” and predictive value are enhanced by the addition of a pension variable. Morris Cohen has suggested, for example, that taking account of private pension fund savings improves the prediction.<sup>35</sup>

<sup>33</sup>Raymond W. Goldsmith, *A Study of Saving in the United States*, Volume I, Princeton University Press, 1955, pp. 6–9.

<sup>34</sup>Friedman, *op. cit.*; Franco Modigliani and Richard Brumberg, “Utility Analysis and the Consumption Function: An Interpretation of Cross-Section Data,” in *Post-Keynesian Economics*, ed. by K. Kurihara (New Brunswick, New Jersey, 1954).

<sup>35</sup>Morris Cohen, “Postwar Consumption Functions,” *Review of Economics and Statistics*, 1952, p. 23.

## B. PENSIONS AND INVESTMENT

Investment may be defined in real terms — the purchase of plant and equipment or net additions to inventories; or in a financial sense — the acquisition of securities or other financial assets. Pension funds are large holders and large net purchasers of securities. Our discussion here runs in terms of investment in the financial sense. Moreover, it is concerned with structural changes — effects on the composition of investment.

In recent years pension funds, particularly in terms of their annual purchases, have taken a place among the major institutional investors, and it appears likely, in the years ahead, that they will become increasingly important members of this group. Data showing the increases in their holdings between 1940 and 1955 have been given in Table 2. Also, we may point to Raymond Goldsmith's finding that between 1929 and 1952, when the aggregate assets of all financial intermediaries increased 3.3 times, private noninsured pension funds grew 18 times, and the assets of state and local insurance funds (mainly pensions) increased 14.7 times.<sup>36</sup> (Rates of growth this high, of course, are not likely to prevail in the future.)

The participants in the capital markets consist on the one hand of enterprises that seek funds, and on the other, of institutions or individuals who desire to make funds available. What eventuates in the market for capital is mutually determined by the interaction of the desires and needs of the demanders and suppliers of capital. The scope of the market is as broad or narrow as is convenient for the problem one is seeking to investigate. In a very general sense one can speak of aggregate supply and demand for the capital market as a whole. But, for most problems the investigator must delve below the aggregate and look at its components, particularly the markets for various categories of debts and securities, because it is they that embody the specific requirements and desires of particular lending institutions and borrowing enterprises.

Pension funds, of course, are not all of a piece. Taking account of the objectives set for the investment program, and the legal and institutional conditions under which that program is carried out, we may distinguish four types.

(1) Pension funds set up by the federal government. Currently reserves are accumulated under OASI, railroad retirement, and the

<sup>36</sup>Raymond W. Goldsmith, *Financial Intermediaries in the Savings and Investment Process in the American Economy, 1900-1952*, Princeton University Press for the National Bureau of Economic Research, in press.

federal civil-service retirement and disability program. Their accumulated reserves are large, close to \$32 billion in 1955, and the increase per annum is not inconsiderable — amounting to \$1.8 billion between 1954 and 1955. But because they are required by law to invest only in federal obligations (generally special issues) or bonds guaranteed by the federal government, their role in the capital markets is limited. Apart from the fact that the existence of an annual surplus and the consequent growth of such funds makes it less necessary for the government to borrow from other lenders, the considerations they raise seem to lie closer to technical problems of debt administration than to the broad economic effects with which we are concerned.

(2) Insured private pension plans. The reserves maintained by insurance companies for group annuities and individual policy pension trusts aggregated over \$11 billion by the end of 1955, having increased by \$1.3 billion during the year.<sup>37</sup> These reserves are part and parcel of the total pool of insurance company assets. In any examination of their economic effects, therefore, such funds must be analyzed as part of the life insurance sector of the capital markets. Their role here is substantial. Increases in the policy reserves of insured pension plans represented about 29 per cent of the total amount of net new capital made available by life insurance companies in 1955.<sup>38</sup>

(3) Self-administered (i.e. non-insurance-company) private pension plans. It is these funds that have aroused the most interest and discussion in recent years. They have grown rapidly and have been very heavy purchasers of corporate securities. In 1955 their assets totaled \$13.9 billion, having grown by \$2.1 billion during the year. A breakdown of their investments as of 1954 appears in Table 4. In that year, it has been estimated, they made net purchases of corporate issues aggregating \$1.8 billion, which financed close to 29 per cent of the new capital raised through corporate securities. About 27 per cent of the new money obtained by common stock in 1954 was made available by self-administered pension funds, and they supported 29 per cent of net additions to corporate and quasi-government debt outstanding.<sup>39</sup>

<sup>37</sup>*Tally of Life Insurance Statistics*, May 1956.

<sup>38</sup>I.e., 29 per cent of the increase in total policy reserves. See 1956 *Life Insurance Fact Book*, p. 57.

<sup>39</sup>For the data in this paragraph see: Securities and Exchange Commission, *Survey of Corporate Pension Funds, 1951-1954*, p. 37, and *Statistical Bulletin*, May 1956, p. 19.

TABLE 4

**Assets of Self-Administered Private Pension Funds,  
December 31, 1954, and Change between 1953 and 1954**  
(in billions)

ASSET	AMOUNT, 1954	CHANGE BETWEEN 1953 AND 1954
Cash	\$ 0.3	a
U.S. Government securities	2.1	a
Corporate bonds	6.3	\$+1.1
Preferred stock	0.5	+1.1
Common stock	2.2	+0.6
Other assets	0.5	+0.1
Total	\$11.8 <sup>b</sup>	\$+1.8 <sup>c</sup>

Source: Securities and Exchange Commissions, *Survey of Corporate Pension Funds, 1951-1954*, p. 27.

<sup>a</sup>Less than \$0.05 billion.

<sup>b</sup>Adds to \$11.9 because of rounding.

<sup>c</sup>Adds to \$1.9 because of rounding.

(4) The funds set up in connection with the retirement programs established for the employees of state and local governments. These funds held some \$9.9 billion of assets in 1955, and have been growing at around \$1.2 or \$1.3 billion per annum. A portfolio breakdown as of 1955 is given in Table 5. The funds are heavily concentrated in bonds — both government (federal, state, and local) and corporate, and in recent years nongovernmental securities have constituted the largest net additions to their portfolios.<sup>40</sup>

Clearly pension investments have become an important force in the market for capital. There is need for a broad study of the role of pension funds and the effects they exercise in the capital markets, paying due attention to the various kinds of financial instruments they buy — government bonds, corporate bonds and other debt, corporate stock, and mortgages. The investigation would deal with the differential effects exerted by this particular set of investing entities; that is, it would seek to answer the question: What difference does the growth of pension funds make? It would be concerned, therefore,

<sup>40</sup>The source of the 1955 data is given in Table 5. See also *Cash and Investments of Public Employee Retirement Funds in 1954*, Bureau of the Census, G-SS No. 41.

not only with how pension funds invest but also the investment patterns of the other financial intermediaries, since it is the difference between what does happen and what would have happened without them that constitutes the net effect of pension plans. Pension funds cannot be studied in isolation. The appropriate framework for the study should be pension funds in the setting of the whole group of financial intermediaries.

To this end, ideally one would like to develop series of relations among the sources and uses of funds, the markets for corporate securities and debts, and investing institutions from which there could be determined: the routes that pension fund accumulations take, what the investment pattern would have been in their absence, and, finally, the net effect of pension funds on investment. Data constituting a useful approximation can be obtained from the money-flows accounting structure as developed by Morris Copeland and carried on currently by the Federal Reserve Board,<sup>41</sup> and, more particularly, as it will be extended by the Postwar Capital Markets study now under way at the National Bureau of Economic Research, which promises to add substantially to our knowledge of the structure of relations that make up the markets for capital.

In the course of the Postwar Capital Markets investigation, estimates of savings, investment, and the flow of funds through the capital markets will be developed for a number of financial intermediaries, including state and local retirement programs, government social security funds, and self-administered pension plans.<sup>42</sup> The data will then be used to analyze developments in the three main markets for capital — mortgages, corporate securities and loans, and government bonds.

The Postwar Capital Markets study, by examining the operations of pension funds in the broader framework of all financial intermediaries, can be expected to furnish a rounded statistical picture of their role in the markets for the several kinds of financial assets, their relative importance as a financial institution, and the part they play in the saving-investment process. In so doing, it will help to answer many of the questions that have been raised about pensions in this area. While the precise scope of the project and its findings cannot

<sup>41</sup>Morris A. Copeland, *A Study of Moneyflows in the United States*, National Bureau of Economic Research, 1952; *Flow of Funds in the United States, 1939-1953*, Board of Governors of the Federal Reserve System, 1955.

<sup>42</sup>Insured pension funds will be handled as part of the insurance sector, in accord with the insurance industry's practice of not setting up separate investment accounts for pensions.

TABLE 5

Cash and Security Holdings of State and Local Government  
Employee Retirement Systems: 1955  
(in billions)

ASSET	AMOUNT, 1955 <sup>a</sup>	CHANGE BETWEEN 1954 AND 1955
Cash and deposits	\$0.2	<sup>b</sup>
Federal securities	4.5	+\$0.3
Own government securities	1.6	+0.2
Other state and local government securities	0.9	+0.1
Nongovernmental securities	2.7	+0.7
Total	\$9.9	+\$1.2 <sup>a</sup>

Source: Bureau of the Census, *Summary of Governmental Finances in 1955*, G-GF55, p. 34.

<sup>a</sup>As of end of fiscal year falling in 1955.

<sup>b</sup>Less than \$0.05 billion.

<sup>c</sup>Adds to \$1.3 because of rounding.

be set out at this time, the study will undoubtedly go beyond providing a useful statistical background. It will also furnish some insight into the influence of portfolio policy upon the behavior of the capital markets and the flow of funds into and out of the three sectors — corporate, government, and mortgages.

What kind of questions have been raised about pension funds and the capital markets? A representative sampling follows.

“Will pension funds continue to be invested in government and industrial bonds to the same extent as at present, or will a larger proportion be invested in equities?” “What will be the effect of fund accumulation on the interest rate?” “Will the investment policies of the trustee plans have a stabilizing effect on the stock market?” “Will the additional funds directed into the stock market make for longer-run appraisal of corporate earning power and make for greater price stability over the cycle?” “Will the acquisition of common stocks by large institutional investors do anything to make the stockholder a more potent force in management selection and corporate policy?” “Will the growth of pension funds lead to a relative oversupply of investment-seeking funds in some markets, say corporate securities, and a relative shortage in others, say mortgages?” “Will . . . the investment-for-keeps approach of institutional

investors . . . progressively narrow the floating supply in the stock market as it has already in the bond market?"<sup>43</sup>

It is clear that most of these questions are directly relevant to noninsured pension funds and, perhaps in lesser degree, to the pension plans of state and local governments. Research effort might well concentrate on them. It is clear, too, that in many discussions of pension funds and the effects of their investment policies, not enough attention has been paid to the institutional background surrounding these plans and the fact that they are still in a very early stage of development. They are newcomers among the financial intermediaries. Thus, for example, while it is significant to know that right now they virtually hold no mortgages, it is also important to find out why they do not seek this type of investment, under what conditions they might venture into mortgages, the importance of the New York state statute that prevents trustees from acquiring a part interest in a mortgage, etc.<sup>44</sup>

This suggests that we need to know much more about the investment practices and investment philosophy of pension funds, and the institutional background in which they operate. From existing or forthcoming sources — particularly the New York State Banking Department survey of pension funds, the SEC survey of pension fund holdings, the Federal Reserve Board moneyflows study, the data on pension fund investment operations gathered by the staff of the Senate Committee on Banking and Currency, and, of course, the National Bureau's Postwar Capital Markets study — much could be learned. But it would be necessary, in addition, to follow the operations of selected pension funds over time, preferably on a quarterly basis, and to find out about their investment criteria, degree of control exercised over investment policy, fund operating procedures, their attitude toward inflation hedges and capital gains, etc. In a word, what we are suggesting is a study not only of what pension

<sup>43</sup>The first three questions are quoted from *Pensions in the United States*, A Study Prepared for the Joint Committee on the Economic Report by the National Planning Association, Robert M. Ball, Staff Director (Washington: GPO, 1952), p. 51; the next two from Harry G. Guthmann, "Effect on the Economy of Channelling Savings through Pension Funds," *Journal of Finance*, May 1952, p. 276; the last from Eleanor S. Daniel, "Retirement Funds, Capital Markets and Growth," in *Federal Tax Policy for Economic Growth and Stability*, Papers Submitted by Panelists Appearing before the Subcommittee on Tax Policy, Joint Committee on the Economic Report, Washington, 1955, p. 781.

<sup>44</sup>For a discussion of some of the relevant factors see: Esmond B. Gardner, "Mortgage Investment *Should* Be Attractive for Pension Funds," *Mortgage Banker*, June, 1956, pp. 26-29.

funds do as regards investment now but what they are likely to do in the future — how they will grow and develop. The study should also, of course, concern itself with the probable size of pension funds in the future. Estimates of this sort would be an important part of the project suggested earlier in section I, B, of our report.

It would not be fruitful at this juncture to spell out how the project should proceed and all that it might cover. But it may be helpful to set down for illustrative purposes a few points relevant to the investment operations of pension funds, particularly with respect to their holdings of equities as contrasted with fixed-income securities.

(1) How much of the rise in common stock holdings of pension funds in recent years — from 11 per cent of their total assets in 1951 to 18 per cent by 1954, according to the SEC survey — can be attributed to what would be essentially short-run adjustments to the fact that “Many pension trust agreements were modified during the past five or six years to authorize investment in equities either to an unlimited extent or up to the 35 per cent authorized for fiduciaries in New York State by the 1950 change in the statute”?<sup>45</sup>

(2) Will pension funds’ penchant for stock be reinforced by expectations of inflation over the long pull and management’s desire to minimize the possible cost of pension programs and obtain maximum benefit for its employees per dollar of pension expense?

(3) The rate of return on investment obtained by pension funds over all was about 3.37 per cent in 1954.<sup>46</sup> Should a higher rate of return be desired, they may be impelled to seek higher-yielding issues or those with greater capital gains possibilities.<sup>47</sup>

(4) Then, too, some funds (a minority of the total) value their assets at market rather than cost. In such cases, if they set as an investment objective a given ratio of common stock to total assets, a rising market will lead to a tapering off of stock purchases.<sup>48</sup>

(5) More generally, any analysis of the flow of capital through pension funds and any estimates of its future magnitude should take

<sup>45</sup>Roger F. Murray, “Fresh Look at Pension Funds,” *Trusts and Estates*, November 1955, p. 944.

<sup>46</sup>Securities and Exchange Commission *Corporate Pension Funds, 1951–1954*, pp. 27 and 32.

<sup>47</sup>Roughly, for every quarter of a point increase in the rate of return, costs could be lowered or benefits increased by 6 to 7 per cent. (Lawrence J. Ackerman, “Financing Pension Benefits,” *Harvard Business Review*, September-October 1956, p. 68.)

<sup>48</sup>Murray, *op. cit.*

account of the fact that provision for past service credits, presently an important component of total contributions to pension funds, is likely to tail off over time as the rate of growth of private pension plan coverage continues to decline. In addition, attention should be devoted to the problem of whether the present rate of pension fund asset accumulation is sufficient, inadequate, or more than necessary to meet obligations incurred under pension programs. On the one hand it has been suggested that because of turnover prior to the acquisition of vested rights, pension funds may be building up at a rate more rapid than necessary for the commitments the plans will eventually have to meet. Also, if interest rates should be maintained at a high level for a long period of time and pension valuations are continued at 2½ to 3 per cent, there would be a tendency toward an overfunded condition. On the other hand, factors making for underfunding may be noted — the mortality assumptions in some plans seem to be inadequate; there is a trend toward vesting, and its costs are sometimes underestimated; a tendency has been developing to introduce cash severance benefits as part of pension programs.

### III. *Relation of Present and Future Pensions to the Level and Distribution of National Income and Product*

The operations of pension programs may affect the size of total output and also its distribution.

Pensions may, for example, make for a higher level of savings and therefore of capital formation and so lead to an increase in total output. In the preceding section we have suggested an investigation of the effect of pension plans on the level of savings.

Another path by which pensions may affect the size of output is through their influence on productivity, since, other things equal, total output is determined by the number of persons employed (more accurately, the number of man-hours worked) and the rate at which they produce. As a general rule, the rate of production will be higher, the greater the amount of capital per worker. Sugges-

tions for research bearing on this question have already been made. Also affecting productivity is the freedom with which resources move. In this connection, too, pensions (most particularly non-vested private plans) may be an important influence: directly, if mobility is discouraged by workers' reluctance to give up pension rights attaching to their present occupation or by employers' reluctance to hire older workers whose employment would increase pension costs; and indirectly, through affecting investment, for the mobility of labor may depend to a great degree on the mobility of capital. Pensions may also affect output by influencing individuals to retire earlier than they otherwise would.

Of the redistributive effects of pensions, two seem worthy of special attention — the change in the income-size class distribution of income due to pension plan transfers, and the transfer of claims to goods and services from the working population to the retired aged.

#### A. EFFECT OF PENSIONS ON LABOR MOBILITY

Pensions are only one of a number of factors that may affect the mobility of labor, and ideally their effects should be studied in context. But this does not preclude research specifically focused on pensions. There is room for research on several levels.

This judgment is substantiated by the conclusions of a recent survey and appraisal of research in the area of labor mobility, which we quote:

“Existing pension plans vary in important characteristics, and whether different types of plans affect mobility in different ways should be ascertained. For example, do plans with vested rights encourage greater mobility than those without them? Do plans covering more than one employer restrict mobility less than those for a single employer? How are various eligibility requirements related to the mobility of the covered workers? If private pension plans do in fact impose undue restraint on the mobility of workers, answers to questions of this kind will at least suggest the types of program that exert minimal influence.”<sup>40</sup>

We should not gloss over the difficulties connected with such an analysis. It will serve as useful background for the projects we offer for consideration below (as well as for the study of labor turnover

<sup>40</sup>Herbert S. Parnes, *Research on Labor Mobility: An Appraisal of Research Findings in the United States*, Social Science Research Council, Bulletin 65, 1954, p. 195.

already suggested in section I, A) to elaborate a bit on the complexity of this general problem — the effect of pensions on mobility and turnover — and note particularly the type of data that would be required for investigation of it.

Whether one sets out to study the perhaps narrower problem of labor turnover with reference to its impact on future benefit payments, or the broader issue of mobility as related to pensions, account must be taken of the fact that turnover and mobility are generated by an extremely wide variety of factors.

Out of this welter of forces we want to isolate the actions and reactions of one specific item, pensions.

Accordingly effort should be guided by the following considerations:

(1) Because of the great number of variables involved, such a study is likely to yield meaningful results only if the number of observations is large and the period covered is long. The necessity for a large-scale study, and one continuing over a rather long time period, is underlined by a consideration of the dynamic nature of the variables involved, as functions of changing economic conditions in both product and labor markets — and the rapidly changing extent, scope, and qualification and benefit provisions of pension plans.

(2) Essential information would be:

(a) Composition of employment. It is necessary not only to know the occupational structure of the plant itself, but the age, sex, and length of service distributions of employment.

(b) Conditions of employment. Data should be available on occupational wage differentials, union status, provisions of employment relating to length of service, injury and hazard record. In addition, one would need information on physical conditions, accessibility of the plant, management attitudes, etc. Data on fringe benefits such as health and welfare programs are also necessary.

(c) Reasons for turnover. Distinction must be made, on the basis of interviews — allowing for all of the defects of this technique — between voluntary separations made for job-connected reasons, where pensions may be a consideration, and exodus from the labor force for reasons that rule out any influences of pensions.

(3) Finally, one of the most important problems to be faced in such a study is a method of determining whether workers are aware of pensions at all and what aspects of pensions have the greatest attraction. For example, do workers consider the noncontributory nature of a pension plan more important than a service requirement

of ten years or more? Is vesting more important than higher scheduled benefits? It may be suggested that before undertaking a study on a large scale, considerable research ought to be devoted to working out methods of measuring pension awareness. (See subsection 2 under II, A, where the importance of this range of considerations is pointed out in another connection.)

With the foregoing as necessary background, we suggest the following research project:

1. *A study of the effect of pensions on mobility based on matched samples of firms:*
  - (a) *with and without pension programs*
  - (b) *with pension programs that vary significantly in respect to one or another key characteristic such as amount of benefits and terms on which vested rights are acquired*

The attempt here, simply, would be to find out, first, whether the existence of a pension scheme can be associated with a significantly different rate of mobility or retirement from the labor force, and, secondly, whether variations in important characteristics of pension plans are associated with variations in labor mobility and retirement rates. In addition to all the difficulties already cited as inherent in such studies, the inability to get sufficiently detailed data on a firm level may prove a serious stumbling block. Nonetheless we consider the possibilities of such a project at least worthy of further investigation.

## 2. *Two other studies*

More specific and limited in nature, but with a good chance of adding to our knowledge of the relation between pensions and labor mobility are the projects next suggested briefly.

(a) Analysis, based on group annuity business and other plan experience, of the age and other characteristics of persons entering and retiring under pension plans, compared with the average age at hire and retirement of all workers.<sup>50</sup> The object would be to learn

<sup>50</sup>See, for example, Dan McGill's "Insurance and Pension Costs as a Barrier to the Employment of Older Workers," *Proceedings of the Second Conference on the Problems of Making a Living While Growing Old*, Temple University School of Business Administration, Bureau of Economic and Business Research, and Pennsylvania Department of Labor and Industry, pp. 143-46.

whether the higher pension costs connected with "older" workers have acted seriously to deter their hiring, and whether (and, perhaps, to what extent) the age at which people retire has been affected by pensions.

(b) Historical study of changes in retirement experience under OASI with special reference to change in OASI taxes, benefits, and retirement test (i.e., the provision that persons otherwise eligible for retirement benefits will not receive them if earnings in covered employment exceed a specified amount).

## B. REDISTRIBUTIVE EFFECTS OF PENSIONS

The types of income redistributions that result from the transfer operations of pension programs are legion, being as large as the economic, social, demographic, and geographic groupings into which our population can be classified. We focus on two that appear to be of primary importance.

One of these — the redistribution among income classes — was discussed earlier in another connection. The other — the redistribution of purchasing power from the working population to the retired aged — is considered by many to be one of the most important problems raised by our rapidly growing structure of pension programs.

### 1. *Income class redistribution through pension contributions and benefits: current and future*

In section II we sketched out the general framework of an income class redistribution study, concentrating at that point on the effects of such a redistribution on saving. The information could be put to other uses. For these data cast light also on such obviously important questions as: Who bears the cost of pensions? Who receives the benefits? What is the effect of pensions on the tax structure?

To the best of our knowledge, the only major pension program that has been investigated in this way is OASI, and even that job needs some redoing in the light of the significant changes that have been made in coverage and the level of benefits since 1951, the year that served as the benchmark in the most recent study.<sup>51</sup> Needed, therefore, is an income class analysis of the "burden" and "benefit" pattern of each of the major pension programs — OASI, public assis-

<sup>51</sup>Carroll, *op. cit.* (see note 24, above).

tance, veterans, government employees, and private plans. Because of their growth potential, the study should (as Carroll's did) cover the picture at some dates in the future, as well as the current redistribution.

Quite clearly, the analysis of the income class distribution of "burden" and "benefits" is a study in equity or distributional justice. It bears on economic effects as well. One such effect has been discussed earlier in the section on savings. Another may be the effect on incentive to work. For to the extent that the effort people will put forth is affected by the amount of taxes they have to pay, it is important to know how the tax burden is increased by pensions, what particular segment of the population arrayed by income classes bears the brunt of paying for these programs, etc. This is true of each of the major plans separately as well as of their total. One of the most relevant pieces of information for evaluating a change or an expansion of any pension program is the distribution of the program's costs.

## 2. *Redistribution of purchasing power from the working population to the retired aged*

How large a slice of total output will be transferred to pensioners at some future date, say 1980? Will we be able to afford such a "drain" on resources? Over and over again, in one guise or another, this question comes up in the literature on pensions. It cannot be given a precise answer. Nonetheless, close and careful investigation of the problems it raises is warranted. Concern over this matter is so great that some range of possible values of the future "burden" of pension payments should be set forth.

Moreover, as will be developed below, the concept of "burden" needs further thought and clarification — which is why the word appears within quotation marks throughout this section.

For example, those who consider the total flow of benefit payments indicative of the "burden" imposed by pensions as between generations, may be assuming implicitly that no savings are connected with pension programs. On the other hand, the contention that pensions impose no "burden" seems to rest on the assumption that the build-up of benefit rights is accompanied by an equivalent amount of saving and capital formation.

Again, account must be taken of the fact that had pensions not existed, other arrangements would have been made for the support of the aged. From this point of view pension benefits might be said

to constitute a net "drain" on output available for the working force only to the extent that the purchasing power transfers they set up exceed those that would otherwise have taken place.

In these views, the problem of "burden" raises a question of transfers from workers to nonworkers, i.e., from one generation to another at a point of time. One may view the problem also in terms of the rearrangement of spending and saving of any one generation over time. If we were to follow through the lifetime pattern of spending and saving of an individual under a pension plan, what we might find is more saving during his working life and more consumption in retirement than would have been the case without pension arrangements. Under a funded plan the increased saving plus interest would, on average, just match the increased consumption potential in retirement. In this sense for any given individual pensions may be "burdenless." Further, instead of putting emphasis on the individual, the aggregate experience of a given generation may be considered. Under a funded plan, the generation apparently<sup>52</sup> finances its retirement and this applies to each member of the generation as well. Under a pay-as-you-go plan, say old age assistance payments, each generation supports its predecessors out of tax revenue to an amount equal to what it will receive under this program later. But there is an intra-generation transfer because tax payments and benefits flow in different proportion to different members of the group. Moreover, if the relevant variables — for example, tax rates, benefit levels, number of aged receiving payments, etc. — change, there will be an inter-generation transfer.

These and other considerations raise a veritable hornet's nest of analytical and conceptual difficulties. One example will suffice: Can we simply conclude that funded private plans are "burdenless"? No; because, for one thing, it is questionable whether, on net balance, savings will increase by as much as pension fund assets grow.<sup>53</sup> Moreover, the statement about a correspondence between each individual's abstinence under the plan and the later increase in his possible consumption must be qualified because employer contributions to private plans are deductible from taxable income. Therefore, in part, they are supported out of general government funds, since the other

<sup>52</sup>Apparently, because as we point out below there is some doubt whether net savings are increased by as much as contributions to these plans.

<sup>53</sup>Challis Hall, for one, has estimated that in 1954 the net increase in saving might have been as much as 60 per cent or as little as 7 per cent of the growth in private pension fund reserves, under differing assumptions about other personal saving and government fiscal policy. (Hall, *op. cit.*, pp. 796-97.)

sources of tax revenue have to be more heavily levied on than they otherwise would have been. This same consideration would apply if the employer's contribution, in whole or in part, was recouped by raising selling prices, or cutting dividends or retained earnings. Further, because under most plans pension rights are not vested until after a long period of service, and because labor mobility is great, it is entirely likely that a sizable proportion of workers covered by a given plan will not receive benefits from it.<sup>54</sup> Thus some of the funds ostensibly accumulated on behalf of those covered by private pension plans will never be paid out to them. But this, in turn, must be qualified; under many plans the employer's contribution formula takes this into account either in the form of lower payments into the fund to start with or else downward adjustments in contributions over the course of the plan.

From the individual's point of view, whether something is a "burden" frequently rests on whether it is done voluntarily or not. The idea of compulsion seems closely related to the concept of "burden." For instance, an individual voluntarily participating in a pension plan can hardly find it "burdensome," because if he did he would discontinue his participation. On the other hand if his contributions are made only because he is compelled to make them — under a private plan because he is in effect denied the alternative of a cash wage payment or under a public plan because of the government's exercise of the taxing power — the plan is a "burden" to him, even though his ultimate benefit expectancies may greatly exceed the aggregate amount of his contributions.

This ties in with the question of pension awareness, mentioned in another connection in section II, A, 2. How much do people know about their pension coverage? How accurately do they evaluate both the cost of pensions to them, and the benefits they might get under the programs? Is the individual aware of the indirect costs to himself of employer contributions to a private pension plan? Does he have a reasonable idea of what benefits he might get and the possibility, in many plans, that if he changes jobs, he will receive none? Is he aware of the future tax increases that may be essential to finance benefits under government plans like OASI? Is the general taxpayer cognizant of the fraction of his tax dollar devoted to old age assistance payments or veterans' pensions?<sup>55</sup>

<sup>54</sup>See footnote 12.

<sup>55</sup>Questions designed to elicit information on these points could be included in the survey described in section II, A, 2.

We have raised just a few of the points relevant to any analysis of the "burden" of pensions, points that would have to be kept in mind should this subject be pursued. We need a clarification of just what the "burden" of pensions means and how it differs among the various sorts of pension programs. Moreover, to the extent feasible, it would be desirable to inquire whether the "burden" of pensions can become unduly onerous from an economic standpoint, and, if so, consider the possibility of establishing some warning signs.

These considerations suggest caution in measuring the "burden" of pensions and the need to qualify the results afforded by such measures. They do not, however, imply that a study of the "burden" would be valueless. A project whose purpose would be to throw light on the concept, and on the quantitative dimensions of the "burdens" of our growing structure of pension programs, would be worthwhile. While the current picture is of interest, the prime pre-occupation of the study would be with the "burden" over the next thirty years. For each major program separately and then for the total of pension programs, the estimated flow of benefit payments might be placed in perspective against the background of other relevant economic magnitudes at selected dates in the future, and their significance assessed. As a first approximation pension benefits could be compared with various measures of income or output. There are at least four such measures that would be meaningful in this context — gross national product, net national product, disposable income, and the output of consumption goods.

These measures will constitute a rough approximation only. Some necessary qualifications and further development of them are suggested by the earlier remarks on "burden"; others might be discovered should a theoretical analysis of "burden" be undertaken. We note here as a particular example that, while it would be difficult to do so, the measures used in the "burden" study should make allowance — concerning each of the major programs and the structure they add up to — for the fact that in the absence of pensions some support would have been provided for the aged. Also an attempt might be made to assess the relative "burdensomeness" of different kinds of pension arrangements as determined by the degree to which they accelerate savings (and hence, potentially at least, capital formation). The research suggested under II, A, would be relevant here.

#### IV. *Pensions and Stability*

So far we have not delineated as a separate category for analysis the relation between pensions and economic stability. This matter, however, is implicit in some of the projects already suggested. For example, the effect on the stability of capital markets would be a major question for the study of the role of pension funds in these markets.

One particular link between pensions and stability specially deserves attention. Pensions fall in the class of devices whose fiscal operations tend to buttress or stabilize the level of income and economic activity. In periods of declining economic activity, contributions tend to fall while benefit payments remain steady, at the very least, or rise somewhat. So when the level of income is falling, the operations of pension programs tend to moderate the decline on net balance, making it less severe than it would have been.<sup>56</sup> Similarly, should there be forces raising the level of income, the rise will be moderated by the tendency for contributions to increase and benefit payments to remain steady (or, allowing for their trend, to rise somewhat more slowly than they would have), or perhaps, to fall. (There are, of course, a number of mechanisms that have this attribute, besides pensions.)

How powerful is the stabilizing effectiveness of the pension structure? Several studies of the problem have been made.<sup>57</sup> But addi-

<sup>56</sup>The statement is ambiguous. One of the important problems here is: "Less severe than it would have been" compared to what alternative? The comparison implied as the sentence stands is with no pensions at all. It may be more sensible, however, to take as the base some other kind of pension structure, for example, one in which receipts and outpayments are always matched. For a discussion of the appropriate benchmark to use in measuring the stabilizing effectiveness of fiscal devices see the paper by David Lusher and accompanying comments in *Policies to Combat Depression* (Princeton University Press for the National Bureau of Economic Research, 1956).

<sup>57</sup>Ida C. Merriam: "Social Security Programs and Economic Stability" (*ibid.*), and *Social Security Financing*, Federal Security Agency, Social Security Administration, Division of Research and Statistics, Bureau Report No. 17, 1952. Miriam Civic, "Pension Payments — A Stabilizing Influence," *American Statistical Association, Proceedings of the Business and Economic Statistics Section*, Papers Presented at the 114th Annual Meeting, pp. 7-17.

tional work is in order. In particular, attention should be devoted to: the degree to which personal spending — not merely income receipts — is buttressed by pensions; the stabilizing effect under a variety of economic conditions and changes of various degrees of amplitude; the built-in flexibility and strength as automatic stabilizers of various components of the pension structure; further clarification of the meaning and nature of automatic stabilizers; the possibility of an added cyclical buttress due to variable funding of past service credits under private plans.

## V. *The Tax Treatment of Pensions and the Aged*

The tax provisions and regulations relating to pension plans have had an important influence on the structure of the plans, the methods of employee compensation, and the distribution of the tax burden. Distributional considerations are raised also by a number of special income tax provisions relating to the aged, all fairly recently added to the Internal Revenue Code. In view of these special provisions and a number of other proposals now under consideration by Congress, there is need for a careful study of the economic and equity effects of the present (and proposed) tax treatment of income set aside for retirement purposes during working life and income received after retirement.

Among problems in this area that might be investigated are the following:

(1) The revenue and distributional effects of the special tax provisions applying to the aged: (a) the additional exemption; (b) the special medical deduction; (c) the retirement income credit.<sup>58</sup>

(2) An evaluation of the consistency and relative merits of the various methods used in the income tax law to tax income set aside for retirement and benefits received under various pension arrange-

<sup>58</sup>The magnitudes involved here are sizable. Harry Kahn of the National Bureau of Economic Research has estimated that in 1952 the personal income tax liability of the aged was about \$500 million lower because of their extra exemptions, and their more liberal medical deduction gave them an additional tax saving of around \$100 million.

ments. These include private qualified and nonqualified pension plans, old-age and survivors' insurance and railroad retirement, provisions made by the self-employed for retirement, military pensions, etc. How is the tax structure changing in this general area? Suppose something like H.R. 10 is incorporated in it, what will this do to other provisions? The interest and dividend earnings of insured pension funds are subject to tax, but the receipts of noninsured funds are not. Has this difference in tax treatment been influential in the choice between insured and self-administered plans? Might such a differential influence have important consequences?

(3) What effects have the tax laws had on such methods of employee compensation as stock options, profit-sharing plans, deferred compensation contracts, and insurance? Here Challis Hall's study will be a very useful guide.<sup>59</sup>

(4) The effect of the special provisions for the approval of private pension plans on the size, form, and scope of such plans and on the investment policies of their trustees.

Because of differences and similarities in the way some of these problems are handled in Great Britain and Canada, a comparative analysis of British, Canadian, and American experience would be illuminating.

<sup>59</sup>Challis A. Hall, *Effects of Taxation: Executive Compensation and Retirement Plans*, Graduate School of Business Administration, Harvard University (Boston, 1951).