

Nicholas H. Greenia and Daniel A. Rosa, Internal Revenue Service

Statistics produced on private sector pension and welfare plans have heretofore been scant at best and otherwise unreliable or nonexistent. This paper tries to fill part of the gap by reporting on the 1977 Employee Benefit Plan Study conducted by the Internal Revenue Service (IRS) for the Department of Labor (DOL) as a result of the 1974 Employee Retirement Income Security Act (ERISA).

INTRODUCTION

An employee benefit plan is a pension plan, welfare plan, or some combination of both. A pension plan provides deferred compensation; a welfare plan provides such benefits as health insurance, life insurance, supplemental unemployment payments, and similar services. Typically, a pension plan can be categorized as either a defined benefit plan or a defined contribution plan. A defined benefit plan defines or specifies the future benefits to be tendered; plan contributions thus must be whatever is necessary to fund such benefits and can vary over time. In contrast, a defined contribution plan defines or specifies the contributions to be made, and future benefits are simply whatever such contributions buy.

In 1974 Congress passed the Employee Retirement Income Security Act (ERISA). ERISA sought to afford qualified employees the right to participation in a corporate or self-employed deferred compensation plan, and created the Individual Retirement Arrangement [1] for people to whom corporate or self-employed plans were unavailable.

A central theme stressed by ERISA was the accountability of plan sponsors and administrators to plan participants and the constant need for comprehensive, available information concerning a plan's financial health, as well as a precise description of the plan's activities, benefit formulas, and circumstances under which a participant can expect to receive or lose plan benefits. Towards this end an annual information return or report based largely upon section 103 of Title I and segments of Titles II and IV was required to be filed with both the Department of Labor and the Internal Revenue Service, agencies charged with primary responsibility for enforcing most of the Act's provisions.

The return itself, Form 5500 series, was designed by three agencies: the Department of Labor (DOL), the Internal Revenue Service (IRS), and the Pension Benefit Guaranty Corporation (PBGC). A fourth agency, the Social Security Administration (SSA) is responsible for Schedule SSA--a document created principally to enumerate individual participants separated from a plan with deferred vested benefits and the only one of the forms not open to public inspection. The return was required of most plan sponsors (see "Plan Year 1977 Statistics") and contained information on type of plan, funding, partici-

paton, assets, liabilities, income, and expenses. Sponsors could be corporations, partnerships, unions, tax-exempt organizations, self-employed individuals, or some combination.

Prior to Plan Year 1977 (plan years ending in the range December 1977 through November 1978), returns were filed with both DOL and IRS. The result was that in many cases plan sponsors were required to duplicate their return filing and neither DOL nor IRS had a complete employee benefit plan data file. To ameliorate this situation, DOL and IRS signed a memorandum of understanding on April 28, 1977, whereby filing of returns was thenceforth required only with IRS beginning with Plan Year 1977. IRS in turn agreed to provide return data on magnetic tape and microfiche to DOL on a reimbursable basis.

Under section 513 of ERISA, the Secretary of Labor was instructed to undertake research studies involving the compilation and analysis of data on employee benefit plans in order to report annually to Congress the impact of the Act on employee benefit plans and their relative success in meeting the Nation's retirement needs. The Secretary was authorized to negotiate whatever contractual agreements deemed necessary to provide these data and analyses, and, accordingly, one of the components of the reimbursable work to be performed by IRS for DOL was the development of an annual data base for statistical purposes. Results of this first data base development, discussed below, were provided DOL on computer tape in September 1980.

PLAN YEAR 1977 PROCESSING

For Plan Year 1977 a sample of 83,545 returns was selected from approximately 1.1 million records received and initially processed by IRS. This initial or mainline processing occurred for all records, but the abstraction of data did not need to be as complete nor the perfection of the data as thorough as for the later, statistical processing. Three types of returns were sampled (see Table 1).

From July 1, 1978, through June 30, 1979, returns were computer-selected for the Plan Year 1977 study using the Employer Identification Number (EIN) system also employed in the sampling of partnership and corporation returns by Statistics Division. Virtually all items on the return forms were abstracted at DOL's request. At the ten IRS service centers, data from the returns were abstracted onto "edit" sheets using a coding scheme for most responses except financial and certain identity information. Returns requiring extensive correction (e.g., the reallocation of assets per financial attachments [2]) were sent to the Division for review. Over 1,200 such returns were eventually analyzed, revised, and returned to the service centers for transcription. Data from the edit sheets were then transcribed and subjected to limited computer verification of

valid code ranges and certain arithmetic tests permitting larger tolerances than allowed by later, more intensive testing.

Table 1.--Plan Year 1977 Population and Sample Through June 30, 1979

Type of Plan	Population [3]	Sample
Total	1,123,827	83,545
Form 5500:		
Pension plans (with 100 or more participants)	30,292	30,292
Welfare plans (with 100 or more participants)	42,300	14,527
Form 5500-C:		
Pension plans (with fewer than 100 participants)	375,130	12,393
Welfare plans (with fewer than 100 participants)	4,148	391
Form 5500-K:		
Pension plans for sole proprietorships and partnerships (with fewer than 100 participants and at least one owner-employee [4])	671,957	25,942

Preliminary tapes received at the IRS Data Center were merged, purged of duplicates, and subjected to an extensive series of tests to ensure the consistency of responses throughout each record. This consistency testing was performed from February through June of 1980 and detected an error rate of approximately 40 percent (30,000 of the 79,396 non-duplicate records input). Error resolution clerks were instructed to refer to the Statistics Division specific error cases which had previously been determined to require higher level analysis or extensive correction procedures. Ultimately, over 2,000 of these error records were received, resolved, and returned by the Statistics Division to the Data Center during this stage of processing.

In July 1980 information listings of records deserving further scrutiny were produced subsequent to consistency testing and helped identify 90 more error cases which were corrected and returned to the Data Center. In August an accepted file of 79,396 records was completed, weighted, and, in September, delivered to DOL, OTA, and the Joint Committee on Taxation. In addition, all three organizations received a file containing records rejected from the sample and a file (untested) containing all data from each Schedule A (Insurance Information) attached to the sampled returns.

The return data described herein were obtained from the Statistics of Income (SOI) perfected and weighted sample file of Plan Year 1977 (plan year ending date within the range December 1977 through November 1978) Form 5500 Series returns processed by IRS from July 1, 1973, through June 30, 1979. Therefore, although these data attempt to depict the entire filing population (i.e., all Plan Year 1977 returns--regardless of when received and processed by IRS), they are not completely successful, in that returns received or processed by IRS after June 30, 1979,--due to late filing, correspondence with the filer, etc.--were not subjected to sampling. Nevertheless, these figures are substantially representative of the filing population in the IRS Employee Plan Master File (EPMF), a magnetic tape file containing data for every employee benefit plan return processed by the IRS, recorded as of July 7, 1980.

In fact, the forms received by the sampling period's end seem to account for, if anything, a somewhat higher percentage of EPMF plan data. This conclusion seems supported by the fact that EPMF data for participants and assets as of August 6, 1979, (approximately the end of the SOI sampling period) accounted for a larger portion of EPMF data for those items as of July 7, 1980, than did number of returns over the same time.

Following are the number of returns by form type in the SOI universe expressed as a percentage of those in the EPMF as of July 7, 1980 (July 7, 1980, was the last time EPMF data were cumulatively tabulated from Plan Year 1977 records): Form 5500, 77.5%; Form 5500-C, 75.9%; Form 5500-K, 99.1%.

Filing of Returns

Filing a Form 5500 Series annual return was required for most employee benefit plans. The plan administrator or employer maintaining a pension plan was required to file a return whether or not the plan purported to qualify for tax purposes under Internal Revenue Code section 401(a) and even if benefits had ceased to accrue--a so-called "frozen plan" or "wasting trust". In addition, the administrator of a welfare plan generally was required to file a return.

Number of Returns

The number of employee benefit plan returns represented by the 1977 Study is 1,057,313 (see Table 2). Of these, 1,012,493, or 95.8%, were pension plans; 43,950 were welfare plans; and 870 were some combination of pension and welfare plans.

Of the 1,012,493 pension plans, 646,796, or 63.9%, were Keogh or self-employed plans filing Form 5500-K; yet they represented only 896,202 or 1.8% of the total reported 49,139,977 pension plan participants and only \$6.4 billion or, 2.4%, of the total \$269.2 billion in reported pension

Table 2.--Returns for All Employee Benefit Plans:
Asset and Participant Information by
Type of Form and Plan

Type of Plan	Returns (Thousands)	Assets (Millions)	Participants (Thousands)
Total	1,057.3	\$278,493.2	128,123.1
Form 5500	69.9	237,906.1	123,128.2
Pension	28.9	228,866.9	44,254.6
Welfare	40.9	7,620.1	78,727.1
Combination	.1	1,419.1	146.5
Form 5500-C	340.6	34,190.1	4,098.6
Pension	336.8	33,983.3	3,989.2
Welfare	3.1	115.9	97.8
Combination	.8	90.9	11.7
Form 5500-K			
Pension	646.8	6,397.0	896.2

assets. Of the remaining 365,697 pension plans, 336,759 filed Form 5500-C; but again, the percentages of assets and participants represented were small: 3,989,203, or 8.1%, of total reported pension participants and \$34.0 billion or 12.6% of total reported pension assets.

Of the 43,950 welfare plan returns, 3,069 or 7.0% filed Forms 5500-C representing only 97,760 or 0.1% of the total reported 79,159,567 welfare plan participants and only \$115 million or 1.5% of the total \$7.7 billion in reported welfare plan assets.

Thus, although only 28,938 or 2.9% of all pension plans filed Form 5500, they accounted for over 90% of reported pension plan participants and 85% of reported pension plan assets. In addition, 40,881 or 93.0% of all welfare plans filed Form 5500, representing 73,727,131 or 99.5% of reported welfare plan participants and \$7.6 billion or 98.5% of total reported welfare plan assets.

Understandably, of all forms, Form 5500 presents probably the most significant financial data, and, since 36,959 or 84.1% of all welfare plan returns and approximately 33,876 or 86.4% of all Form 5500 welfare plans reported zero assets [5], pension plans filing Form 5500 are the focus of attention for most studies on employee benefit plan assets. Curiously, some 49,560 or 13.6% of pension plans [6] reported no assets but most of these--approximately 95.0%--filed Form 5500-C. It is quite probable that a secondary explanation for such statistics, in addition to that of fully insured status, is plan termination; of the total 14,027 plans [6] reporting termination, 6,509 also reported zero assets--a logical consequence. A third explanation is that Forms 5500 and 5500-C filed for government plans and plans for churches not electing coverage under Internal Revenue Code section 410 (d) were not required to contain any asset information at all.

Since only 2,473, or 5.0%, of total plans [6] reporting zero assets and only 384 or 2.7% of total plans [6] reporting termination had at least 100 participants, the zero asset and the termination problems seem to be restricted for the most part to Forms 5500 C; that is, smaller pension plans. The point remains, however, that, while most pension plans were small in terms of participants, almost 9% of those reporting at least 100 participants also reported no assets.

Assets (Form 5500-K and Pension/Welfare Combination Plans Are Excluded From This Discussion)

The idea of concentration of significant information in a few plans continues to be the salient one uniting the preponderance of data. As previously asserted, most welfare plans reported no assets, and of pension plans which did, most were small both in terms of assets and participants represented. This trend of concentration is next most marked in the distribution of Form 5500 and 5500-C pension plan assets by asset category, investment category, and size of total assets.

As already noted, pension plans accounted for the lion's share of both reported assets and participants. In Table 3 and Figure 1, the degree of concentration is defined: over half of pension plans [6] reporting assets each reported assets of less than \$100,000, accounting for less than 3% of total reported assets. In fact, 99.1% of pension plans reporting assets had less than 30% of total reported pension assets. Less than 3,000 or approximately 1% of pension plans reporting assets controlled over 70% of reported pension assets. While this statistic is tempered by the fact that over 50% of reported participants were also represented by these plans, the top 0.1% of plans nevertheless accounted for 26% of reported pension participants but over 45% of reported pension assets--accentuating the skewed character of the distribution.

As Tables 4 and 5 illustrate, most pension assets were reported as non-party-in-interest investments; the bulk of these was in corporate stocks and bonds.

If Plan Year 1977 total pension assets were projected (assuming that the remaining 25% of Form 5500 and Form 5500-C pension plans did indeed account for 25% of their respective assets), a figure of approximately \$360 billion could be obtained: \$307 billion for Form 5500 pensions, \$46 billion for Form 5500-C pensions, and \$7 billion for Form 5500-K pensions. When this \$360 billion amount is compared to that of \$181 billion provided by the Securities and Exchange Commission (SEC), a considerable difference is manifested. Since the SEC figure excludes pension plan assets held as either allocated or unallocated insurance contracts, this qualification should be considered. However, even if the \$100 billion estimate of these contracts [7] is added to the SEC figure, a difference of some \$80 billion remains--and this amount does not allow for the allocated insurance contract assets excluded from the IRS Statistics Division figure.

Figure 1.--RETURNS FOR ALL PENSION PLANS REPORTING ASSETS -- EXCEPT FORM 5500-K:
PERCENTAGE OF PLANS, PARTICIPANTS, AND TOTAL ASSETS BY SIZE OF TOTAL ASSETS

[All figures are estimates based on samples]

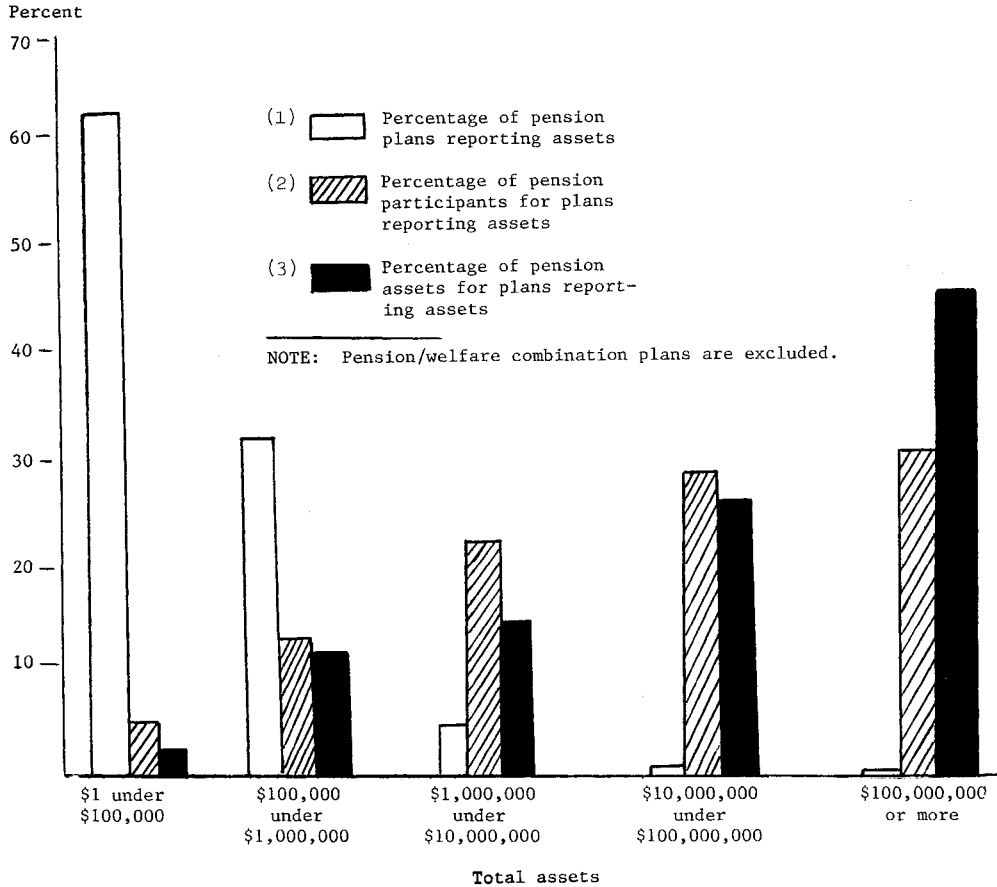


Table 3.--Returns for All Pension Plans a--Except Form 5500-K: Asset and Participant Information by Size of Total Assets

[All figures are estimates based on samples--money amounts are in thousands of dollars]

Size of total assets	Total plans	Percent total plans	Total participants	Percent total participants	Total assets	Percent total assets	Total investments	Percent total investments
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
All pension plans.....	365,697	100.0	48,243,775	100.0	262,850,170	100.0	204,651,142	100.0
Zero or not reported.....	49,560	13.6	7,831,418	16.2	-	-	-	-
\$1 under \$50,000.....	136,341	37.4	999,944	2.1	3,014,431	1.1	1,412,123	1.0
\$50,000 under \$100,000.....	60,782	16.6	753,255	1.6	4,354,219	1.7	2,606,436	1.3
\$100,000 under \$500,000.....	89,269	24.4	3,313,862	6.9	18,614,083	7.1	12,357,495	6.0
\$500,000 under \$1,000,000.....	13,263	3.6	1,814,342	3.8	9,077,024	3.5	6,455,094	3.2
\$1,000,000 under \$5,000,000.....	11,673	3.2	5,813,751	12.1	24,640,094	9.4	17,889,516	8.7
\$5,000,000 under \$10,000,000....	2,029	1.0	3,325,701	6.9	14,212,075	5.4	10,574,401	5.2
\$10,000,000 under \$50,000,000...	2,087	1.0	7,640,400	15.8	45,130,083	17.2	35,312,658	17.3
\$50,000,000 under \$100,000,000...	347	0.1	4,191,780	8.7	24,573,476	9.3	18,970,478	9.3
\$100,000,000 or more.....	346	0.1	12,559,322	26.0	119,234,686	45.4	99,072,943	48.4

a/ Excludes pension/welfare combination plans.

NOTE: Total may not equal detail due to rounding.

Table 4.--Returns for All Pension Plans a/--
Other Than Form 5500-K: Percent of
Assets and Investments by Investment
Category

Category of Investment b/	Amount (Millions)	Percent Total Investments	Percent Total Assets
Total	\$204,651.1	100.0	77.9
Government securities	30,059.4	9.8	7.6
Pooled funds and mutual funds	32,478.7	15.9	12.4
Corporate debt and equity instru- ments	122,670.8	59.9	46.7
Real estate and mort- gages	6,014.1	2.9	2.3
Other	23,428.2	11.4	8.9

NOTE: Total may not equal detail due to rounding.

a/ Excludes pension/welfare combination plans.

b/ Includes party-in-interest investments.

Table 5.--Returns for Form 5500 Pension Plans:
Percent of Form 5500 Pension Assets by
Asset Category

Asset Category	Amount (Millions)	Percent of Form 5500 Pension Assets
Total assets	\$228,866.9	100.0
Cash and net receivables	13,084.2	5.7
Non party-in- interest investments	160,093.1	70.0
Party-in-inter- est invest- ments	21,734.5	9.5
Unallocated insurance contracts	31,154.4	13.6
Other assets a/	2,800.8	1.2

NOTE: Excludes pension/welfare combination plans.

a/ Includes buildings and other depreciable assets.

Participants (Form 5500-K and Pension/Welfare
Combination Plans Are Excluded From This
Discussion)

Just as assets were concentrated in a few pension plans and asset sizes, so were participants--with some noteworthy qualifications. Double-counting presented some difficulties [8] in attaining accurate representations, but some valid observations can still be made.

First, Table 3 shows that, while the top 1.2% of pension plans [6] controlled 75% of reported pension investments and over 70% of reported pension assets, they accounted for only a little over 50% of participants--in other words, a disproportionately high percentage of assets per participant. As is also manifested, 54% of pension plans represented an even more lop-sided 3.7% of pension plan participants.

Second, pension plan vesting (plan participants' rights to employer contributions) percentages behaved similarly to assets and total participants. Fully vested participants as a percentage of total active participants was lowest for Form 5500-C plans at 31.5% and highest for Form 5500 at 42.3%.

Keogh or Self-Employed Plans

The "Self-Employed Individuals Tax Retirement Act" of 1962 (H.R. 10) entitled the self-employed to establish and participate in what became known as Keogh or H.R. 10 retirement plans; in 1974 ERISA increased the contribution limits and otherwise amended requirements for these plans.

Filing requirements differed for Keogh plans depending on whether they were for the owner-employee self-employed or the non owner-employee self-employed. Only owner-employee Keogh plans were required to file Form 5500-K; non owner-employee Keogh plans and those for professional corporations theoretically were required to file either Form 5500 or Form 5500-C, though, in practice, probably few did.

Over 25% of Form 5500-K returns reported assets between \$10,000 and \$50,000 and accounted for more than half of reported Form 5500-K assets and over 30% of reported Form 5500-K participants. These statistics are less than complete, however, when one considers that almost as many plans reported no assets whatsoever, and only 16,184 of these were terminated. Unlike those for Forms 5500 and 5500-C, Form 5500-K instructions did not ask filers to omit financial information if their plans were fully insured through allocated insurance contracts, so that this explanation seems inadequate. It is more likely that, since Form 5500-K required reporting of plan net assets but had no separate line item for plan total assets, a number of administrators may have calculated plan net assets to be zero, figuring accrued future benefits as liabilities to negate current total assets.

Because 682,329 of the total reported 889,899 active Keogh participants were also

self-employed participants, it is safe to say that the vast majority of Keogh plan participants were 100% vested.

FUTURE DEVELOPMENTS

As mentioned already above, some 25% of the employee benefit plan filing population for 1977 Forms 5500 and 5500-C have yet to be included in the aggregate estimates. Again, this shortage is due to the fact that returns received or processed by the IRS after June 30, 1979, were not subjected to sampling. Current strategy would seek to complete the 1977 Study file and future ones in the following manner.

After the successive plan year study (for Plan Year 1977, the 1978 study) is perfected or consistency-tested, all previous plan year records would be separated and transferred to the preceding plan year's file. For the 1978 study, such a split would mean that all records with a plan year ending date prior to December 1978 would be transferred to the 1977 Study file. Tabulations derived from these later or remnant returns would then be used to supplement those already existing, and thus complete the data picture for that plan year.

In an attempt to depict the total statistical relationship between employee benefit plans, their non-profit and commercial sponsors (tax-exempt organizations, corporations, partnerships, sole proprietorships), individual participants, and relevant regulatory government agencies, increased efforts will go towards linking appropriate records from their respective files. Actually, such efforts have already begun; one example is the attempted match of 1977 Forms 1120 with giant asset size (corporations recorded on Statistics Division's Name Control List) and Forms 5500 from the 1977 Employee Benefit Plan Study file with giant assets or giant participant size. Results were promising.

Another such attempt involved linking multi-employer plans obtained from PBGC's Form PBGC-1 tape extract with multi-employer plans on the 1977 Employee Benefit Plan Study file in order to better define the multi-employer and single employer plan universe required to pay PBGC insurance premiums. It is hoped that as the comparability of data among the myriad forms filed increases, so, too, will the frequency of such link studies.

ACKNOWLEDGEMENTS

The authors are grateful to Clementine Brittain and Vicki Pazulski for checking the data tables; to June Marino and Sandy McDowell for programming the tables; and to Sylvia Grigg, Dorothy Hassler, and Mike Leszcz for their invaluable help in nurturing the systems necessary to produce the data from which the tables grew. Special thanks go to Jim Berkemeyer and Joe Middough for their supportive efforts during data processing and to Doug Brooks and Cathy Robinson for typing the paper. Numerous helpful

observations and suggestions were offered by Ross Summers, Wendy Alvey, Beth Kilss, John DiPaolo, and Jack Blacksin. All the preceding people are with the Internal Revenue Service.

NOTES AND REFERENCES

- [1] See Statistics of Income, Supplemental Report--1976 Individual Retirement Arrangements, Internal Revenue Service, Washington, D.C., 1980.
- [2] By far the most significant problem of this study, overreporting of financial data was attributable to the fact that many plans, though separate entities, shared a common trust as a vehicle for asset retention, investment, and distribution. Financial data reported for each of these plans should have shown only the particular plan's financial interest in the trust, but, in many cases, the entire trust's financial data were reported for each plan. Editing and consistency testing experience indicated that any plan with assets greater than \$25,000 per participant was likely to contain such a trust asset error. Once such a plan was identified, its financial data were fractionally reallocated using the plan's share of assets.
- [3] Universe sampled from July 1, 1978, through June 30, 1979. Returns filed later or held for correspondence with the filer by IRS were not included in this population.
- [4] An owner-employee was defined as (a) a sole proprietor (an individual owning 100% of an unincorporated trade or business), or (b) a partner owning more than 10% of either the capital interest or the profits interest in the partnership. A pension plan for ten equal ownership partners was required to file Form 5500-C, or Form 5500 for 100 or more participants.
- [5] This phenomenon is apparently explained by the fully insured aspect of many welfare plans, which simply indicated their status on the balance sheet of the form and did not report asset information, in accordance with return instructions. Zero assets due to plan termination is not too likely a reason here, since only 760 welfare plans reported such an occurrence.
- [6] Excluding Form 5500-K and pension/welfare combination plans.
- [7] American Council of Life Insurance, 1980 Life Insurance Fact Book.
- [8] Because a plan sponsor could maintain more than one pension or welfare plan but had to file a separate return for each pension plan, it was possible for it to report duplicated participant information. Moreover, the same participant could have belonged to two or more different employee benefit plans offered by different sponsors. Since a general dearth of microdata on individual plan participants made it impossible to determine the number of unique plan participants, such double-counting during tabulations was unavoidable.