



**PRESENT VALUES
OF OASDI
BENEFITS IN
CURRENT-PAYMENT
STATUS**

1979

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FOREWORD

Social security benefits are financed on essentially a pay-as-you-go basis, with relatively small trust funds held as a reserve against contingencies and fluctuations. Those who have studied the OASDI program in detail have concluded that such pay-as-you-go financing is appropriate for social security. We should recognize, however, that its suitability for financing other public or private pension plans is doubtful. The financial soundness of OASDI thus relies almost entirely upon anticipated future tax revenues to pay all future benefits. Nevertheless, it is instructive to examine the magnitude of the financial commitments that OASDI has made to present beneficiaries under present law.

Generally it is not possible to predict long-range costs with a low degree of variability because of the many uncertainties inherent in forecasting future events. In assessing the costs of social security benefits in current-payment status, however, fewer assumptions are needed and these involve significantly reduced variability, thus yielding a narrower range of acceptable values.

It is hoped that the actuarial calculations presented in this study will prove helpful to the many analysts of social security and enable them to attain greater insight into the financial status of the OASDI program.

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A. Introduction

This study provides estimates of the present values^{1/} of benefits in current-payment status under the Old-Age, Survivors, and Disability Insurance system (OASDI) as of the ends of selected years during the period 1940 through 1979. It is a sequel to Actuarial Study No. 66 which covered the OASI program for the years 1940-68 and to Actuarial Study No. 67 which covered the DI program for the years 1957-68.

The present study is limited to benefits currently being paid and potential benefits for current beneficiaries, such as potential widow's or widower's benefits for those now receiving spouse's benefits and lump sum death payments for currently retired or disabled beneficiaries. Benefits payable to disabled workers and to their dependents include the old-age, dependents, and survivors monthly benefits that are payable from the Old-Age and Survivors Insurance (OASI) Trust Fund, if these benefits are a continuation of the benefits payable from the Disability Insurance (DI) Trust Fund. This means, for example, that old-age benefits are attributed to disabled workers to the extent that they survive and continue as disabled to age 65. Deferred spouse's and widow(er)'s benefits in respect to persons for whom benefits were not in current-payment status have been omitted.

The values presented in this study do not include the indirect benefit payments that will be made through the railroad interchange provisions to some beneficiaries who are entitled to Railroad Retirement annuities. Nor does this study include benefit payments to the closed group of "Prouty" beneficiaries (who have most of their benefits paid out of the General Fund of the U.S. Treasury).

The total accrued obligations of a benefit system can be defined as the present value of all future benefits which have been "earned" to date. A portion of those accrued obligations refers to benefits that are already being paid. The remainder of such obligations refers to benefits already earned, but which will not start to be paid until some time in the future. This latter portion, because of its indefinite nature, is very difficult to calculate for the OASDI system. The system's rules for determining eligibility to benefits are rather complex and are affected by future events in ways that cannot be readily projected. It should be recognized, however, that the financing of a national, permanent, compulsory OASDI system does not necessarily require the immediate funding of such obligations. The comparisons made in this study of the present values of benefits in current-payment status with the trust funds on hand are for illustrative purposes. They offer an alternative way of measuring the adequacy of the level of the trust funds. It must, however, be borne in mind that any relationship between the present values of benefits in current-payment status as of a specified date and the then-existing amount in the trust funds has no direct bearing on the actuarial soundness of the system. Accordingly, any excess of present values of benefits in current-payment status over the amount in the trust funds does not by itself imply that the system is not in "actuarial balance."

^{1/} The term "present value" is the lump sum amount at the designated time that is equivalent in value to a specified series of future installments. It is determined by discounting such installments by assumed rates of interest, mortality, and other pertinent contingencies.

B. Factors Involved, Assumptions, and Methodology

Rate of Interest

The determination of an appropriate rate of interest for discounting monthly benefits can be considered simultaneously with the automatic benefit increase provisions in the present law under which monthly benefits are increased annually according to increases in the Consumer Price Index (CPI).

Under the intermediate set of assumptions (Alternative II) of the 1979 Annual Report of the Board of Trustees of the OASDI Trust Funds, an annual nominal interest rate of 6.6 percent and an ultimate annual increase in CPI of 4.0 percent were assumed. One can think of the nominal interest rate as containing two components: (1) an assumed ultimate annual inflation rate of 4 percent and (2) a residual component or "real interest rate" of 2 1/2 percent.^{2/} We here assume a real interest rate of 2 1/2 percent and static benefits, which simplify calculations significantly and yield an accurate approximation to estimates that would directly reflect a nominal 6.6 percent interest rate and dynamic benefits increasing at a 4 percent annual rate.

It should be noted that the interest and inflation assumptions used represent expected long-term average results and that in any given year actual future rates can vary substantially from this assumed average. The use of a long-term rate is necessary, since benefits to many current beneficiaries may well continue to be paid for as many as fifty or more years in the future. The present value estimates are sensitive to the choice of real interest rate and would be considerably greater if a lower rate were used (and conversely, present values based on higher interest rates would be smaller). The 2 1/2 percent rate used in the Trustees Report assumptions represents a long-term average. It is consistent with past experience and we believe that it is reasonable.

Mortality Rates

Because OASDI monthly benefits are payable only if the beneficiary survives from month to month, the probability of a beneficiary's survival must be taken into account in computing present values. Mortality rates have decreased more or less steadily for many years and will likely continue to decrease in the future. In this study, however, non-disabled beneficiaries are assumed to be subject to the death rates of the 1969-71 White United States Life Tables. Because mortality has declined since then and probably will continue to decline in the future, this assumption tends to understate the present values of benefits in current-payment status. A further understatement is caused by the fact that the death rates of the 1969-71 White United States Life Tables are based on the experience of the total white population, including disabled lives. In order to offset, at least in part, this understatement, the lower mortality pertaining to white persons was applied to all non-disabled beneficiaries.

^{2/} The assumed annual nominal interest rate of 6.6 percent was obtained by compounding (i.e., multiplying) the assumed annual rate of inflation of 4 percent by the real interest rate of 2 1/2 percent. Thus $1.066 = (1.04) \times (1.025)$.

Technically, a better choice of mortality rates would have been the rates in the intermediate set of assumptions (Alternative II) in the 1979 Trustees Report. Such choice, however, involves varying death rates through time which makes for inconvenient actuarial functions. The difference between the results of the two choices is believed to be moderate.

Remarriage Rates of Surviving Spouses

Since the rights to some surviving spouse benefits terminate upon remarriage^{3/}, this contingency also must be included. For this study, the remarriage rates for surviving spouse beneficiaries were taken from tables 15 and 16 of the article entitled "Mortality and Remarriage Experience for Widow Beneficiaries under OASDI" by Francisco R. Bayo (Transactions of the Society of Actuaries, Volume XXI, Part I). Table 15 shows select and ultimate remarriage rates for widowed mother beneficiaries, while table 16 shows select and ultimate remarriage rates for aged widow beneficiaries. The two tables of remarriage rates were connected by merging the widowed mother beneficiary remarriage rates into the aged widow beneficiary remarriage rates.

The published remarriage rates for both widowed mother beneficiaries and aged widow beneficiaries were based on 1960-62 OASI experience, that being the most recent data available for remarriage rates. Widowed father beneficiaries and aged widower beneficiaries were assumed to have the same pattern of remarriage as widowed mother beneficiaries and aged widow beneficiaries, respectively. This procedure should overstate the values for young surviving spouse benefits, because remarriage rates are currently higher than the 1960-62 experience, but would understate the aged spouse benefits because few of their benefits are terminated because of remarriage.

Rates of Disability Termination

Since disabled lives experience different mortality trends than those experienced by non-disabled lives, a different life table must be used to compute annuities for disabled lives. For this study, the annuities for disabled workers and disabled widows were computed based on tables 17 and 18 from Actuarial Study No. 75 entitled "Experience of Disabled-Worker Benefits under OASDI, 1972-76." Tables 17 and 18 were based on 1973-76 OASDI experience and are the most recent such tables that have been published.

One problem with tables 17 and 18 is that they are five-year select tables in which the selecting event is entitlement to disability benefits. Since the basic beneficiary data are in terms of numbers of beneficiaries and average monthly benefit amounts in current-payment status of various durations, some assumption concerning the average duration since the date of entitlement to disability benefits must be made before the select tables can be used. Weighted averages of the life table values of tables 17 and 18 were computed, using as weights unpublished estimates of the number of disabled workers currently entitled at each age and duration since entitlement.

^{3/} Under the Social Security Amendments of 1977, after 1978, remarriage of a surviving spouse would not reduce an aged widow's or aged widower's benefit. Before the 1977 Amendments, benefits to surviving spouses would either terminate or be reduced upon remarriage.

The patterns of disability termination for disabled child beneficiaries differ from those for disabled worker beneficiaries. The graduated total termination rate (i.e., resulting from combining deaths, marriages, and recoveries from disability) that appear in table 5 of Actuarial Note No. 98 entitled, "Termination Experience of Disabled-Child Benefits under the Old-Age, Survivors, and Disability Insurance (OASDI) Program" were used to compute annuity values for disabled child beneficiaries. The underlying experience is that of the OASDI program in 1975-76.

Methodology

The first monthly benefit awards under the OASI program were made in January 1940, and the first valuation of benefits in current-payment status was as of December 31, 1940. The first benefits under the DI program were payable for July 1957, but at that time only disabled workers were eligible for benefits. Benefits to dependents became payable in October 1958. The first valuation of benefits in current-payment status under the DI program in this study was as of December 31, 1960. For the OASI program, subsequent valuations were made as of the end of 1945, 1950, 1955, 1960, 1965, 1970, and every single year thereafter through 1977, with preliminary valuations as of the ends of 1978 and 1979. For the DI program, the series of valuations started as of the end of 1960 and then included the same points in time as the OASI program series. It should be mentioned that valuations as of points in time before December 31, 1965 were computed in previous studies under assumptions that vary by valuation date. Valuations at points in time on or after December 31, 1965 are computed in the present study under uniform assumptions for each point in time. The basic data used are those shown in the Annual Statistical Supplements to the Social Security Bulletin.

In performing the needed calculation, first, the total amount of monthly benefits for each attained age distinguished by sex and type of benefit was obtained by multiplying the average benefit by the number of lives in current-payment status on each valuation date. Then, all benefits of the same type, sex, and attained age were valued as a group by multiplying the total amount of monthly benefits in each group by the appropriate annuity factor (the present value of \$1 per month discounted at interest, with life contingencies, and if necessary, remarriage probabilities, rates of disability onset and termination, etc.). For instance, a life annuity of \$1 per month to a man aged 66 last birthday (i.e., average age 66½) is, using continuous annuity functions, worth \$120.26 on the basis of the United States White Male Life Tables for 1969-71 at 2 1/2 percent real interest. This factor, applied to the rate of monthly benefits for those males age 66 receiving old-age benefits at the end of 1977 (649,310 men at an average monthly benefit of \$283.40), yielded a present value of \$22,130 million for this group. This would be the amount necessary at that date to meet all direct benefit payments to this group if the experience followed that of the assumptions stated. Lump sum, survivor, and dependent benefits for this group were valued separately.

The form of the annuities in this study is that of annuities payable continuously because this form gives a close approximation to annuities payable monthly. All benefits in current-payment status were assumed to be payable until death, recovery from disability, or prior termination (such as marriage of the beneficiary in the case of mother's benefits, or attainment of age 18 in the case of minor child's benefits). For the student child benefits, it was assumed that 80% of such beneficiaries in current-payment status at attained ages 18-21 continue receiving benefits until age 22. It was also assumed that half of the minor child beneficiaries at attained ages 0-17 continue receiving benefits until age 22. Since there do not exist any direct data concerning the probability of minor child beneficiaries to continue as student child beneficiaries or the probability of student child beneficiaries to continue in such status until age 22, it is hoped that the above simplifying assumptions are fairly realistic.

In the case of OASI aged spouse benefits, such benefits are only paid if the primary worker remains alive. For this reason, an annuity based on the condition of both worker and spouse remaining alive must be computed for valuing OASI spouse benefits. Further, some assumption concerning the relative ages of the primary worker and spouse must be made. In this study, the worker was assumed to be three years older than the spouse in valuing OASI spouse benefits. This was assumed because most OASI spouse beneficiaries are in fact OASI wife beneficiaries, and on the average the wife is about three years younger than her husband.

In the case of OASI young wife benefits, some assumptions must be made concerning the duration of the young wife's benefit period since such benefit is payable only while the young wife is caring for a non-student child beneficiary. It was assumed that the older the OASI young wife beneficiary is, the older her youngest eligible non-student child beneficiary is likely to be, and so the shorter the duration of her benefit period is likely to be. Hence, the duration of benefits for OASI young wife beneficiaries was assumed to be seventeen years for very young beneficiaries and was assumed to decrease gradually with increasing ages of young wife beneficiaries until the duration of benefits is only two years when the OASI young wife beneficiary is between the ages of 62-64 inclusive.

Benefits to disabled workers, to their spouses, and to their children are payable from the DI Trust Fund while the worker is under age 65 and disabled. At age 65, the disabled worker benefit is converted to an OASI retired worker benefit, the spouse's and child's benefits (if they also remain in current-payment status) are then payable from the OASI Trust Fund. Alternatively, if the disabled worker does not survive until age 65, any surviving spouse and/or child benefits are payable from the OASI Trust Fund. In this study, the valuations relating to disabled workers, to their spouses, and to their children include the additional benefits caused by such conversions from DI payable benefits to OASI payable benefits.

Since the basic data does not correlate the age of the disabled worker to the age of the worker's spouse, the average age of a disabled worker beneficiary with a spouse beneficiary of any age was assumed to be age 50, based on supplementary data. Annuity factors reflecting the joint survival of a disabled worker at assumed age 50 and a spouse at his or her tabulated age were used to value the spouse of disabled worker benefits. Based on some other supplementary data, the average age of a disabled worker with a child beneficiary was assumed to be 47. Annuity factors reflecting the joint survival of a disabled worker aged 47 and children at their tabulated ages were used to value the child of disabled worker benefits.

It should be borne in mind that while a family is receiving the maximum family benefit, there can be a redistribution of benefits upon termination of payment to any of the beneficiaries. For minor and student child beneficiaries of deceased or disabled workers and for young spouse beneficiaries of deceased or disabled workers, the present values of benefits were increased slightly to reflect the situation.

In valuing the OASDI program, certain contingent benefits were included. They are: (1) aged spouse's contingent widow(er) benefit; (2) young OASI spouse's contingent aged spouse benefit; (3) young OASI spouse's contingent widow(er) benefit; (4) young OASI spouse's contingent mother or father benefit; (5) mother's and father's contingent aged widow(er) benefit; (6) disabled worker's contingent retired worker benefit; and (7) dependent's of disabled worker contingent survivor and dependent benefits. In each case, the appropriate life contingency annuity was computed. Unlike the contingent benefits calculated for disabled workers and for their dependents, periods in which the beneficiary does not receive a benefit were allowed to occur for OASI beneficiaries. For example, an OASI young wife beneficiary whose youngest child reaches 18 when she is age 52 was assumed to have a contingent aged spouse benefit and a contingent aged widow benefit starting at age 65, allowing a lag between benefits of 13 years. In the case of disabled workers and their dependents, only the contingent benefits caused by the immediate conversion from a DI Trust Fund payable benefit to an OASI Trust Fund payable benefit without interruption of benefits were considered.

It was also assumed that benefits are not suspended because of subsequent employment of the beneficiary and that benefits are not reduced or eliminated because the surviving beneficiary earns old-age benefits in his/her own right. No allowance was made for persons on the roll but not receiving benefits because they are in substantial employment in the month of valuation (such persons are "entitled" but not in current-payment status). It was assumed that these "ins" and "outs" balance at any time.

C. Present Value of Benefits in Current-Payment Status

The liability for benefits in current-payment status was valued as of December 31 of each year based on the then-applicable provisions in the law. Any changes in liability due to future ad hoc modifications were taken into account only in valuations made after the modifications became effective. In using the benefits in current-payment status in a balance sheet comparison, it should be understood that they did not include the liability for the following items:

- a) insured workers who were not yet eligible for benefits;
- b) eligible persons whose claims were pending;
- c) eligible persons who received awards but were not currently receiving benefits; and
- d) dependents and survivors of insured workers who would become eligible to benefits upon attainment of the required minimum age.

Table 1 presents monthly amounts in current-payment status by type of benefit at the end of each quinquennial year from 1940 to 1970 and at the end of each single year thereafter. In analyzing the table, we should keep in mind the fact that in 1960 the age-50 requirement for disabled-worker benefits was removed, bringing about a sharp increase in the number of beneficiaries in all DI categories, particularly for dependents, since young workers are likely to have children under 18. In 1965, student children aged 18-21 became eligible for benefits. In 1967, disabled widows aged 50-59 became eligible for benefits of at most 82 1/2 percent of primary insurance amount (PIA). In 1972, all unreduced aged widow benefits were increased from 82 1/2 percent of PIA to 100 percent of PIA. It should also be pointed out that there were general increases in benefit levels throughout this time period which increased the monthly amounts shown in table 1.

Table 2 shows present values of OASDI benefits in current-payment status. It may be noted that the assumptions regarding interest and mortality (i.e., 2 1/2 percent real interest, 1969-71 U.S. White Life Tables for non-disabled lives, etc.) were held constant for valuation dates of December 31, 1965 and later. This allows for more comparability of the valuations. As in all the tables, estimates for valuation dates prior to December 31, 1965 were not actually computed for the present study but were taken directly from previous studies.^{4/}

Table 3 shows the percentage distribution of the present values of the various types of benefits in current-payment status. The trend in these percentages indicates that dependent and survivor benefits were more significant in the early years, whereas the liability for old-age and disabled worker benefits has become relatively more important with time.

^{4/} For OASI values, Actuarial Study No. 66, entitled "Present Values of OASI Benefits in Current Payment Status, 1968" was used. For DI values, Actuarial Study No. 67, entitled "Present Values of DI Benefits in Current Payment Status, 1968" was used.

D. Average Valuation Factors

Table 4 shows average valuation factors, determined from the present values of benefits in current-payment status. For monthly benefits, these factors represent the lump sum present value of \$1 per month payable until termination of benefit (by death, remarriage, attainment of age 18, recovery from disability, etc.). These factors were determined by dividing the total present value of each type of benefit by the total monthly amount of benefits in current-payment status.^{5/} In this sense, they represent the weighted average of the present values of future possible monthly benefits.

The average valuation factors fluctuate through time for several reasons. One reason is that the average valuation factor for a given benefit category is dependent upon the age distribution of the beneficiaries in current-payment status on the valuation date. The age distribution, while more or less constant, is not exactly the same at successive points in time. Another reason why the average valuation factors fluctuate is that throughout the time period in question (1940-1979) there have been substantial changes in the law concerning liberalized benefit levels or liberalized eligibility rules for some benefit categories. For example, in 1972, the law was changed to give aged widow(er)s a basic benefit of 100 percent of PIA instead of the previous 82 1/2 percent of PIA. For this reason, the average valuation factors for OASI spouses and mothers (which include contingent aged widow benefits) increased substantially between December 31, 1971 and December 31, 1972. Another example exists in the case of child beneficiaries. In 1965, the law was changed to allow benefits to full-time student children aged 18-21 of retired, deceased, and disabled workers. For this reason, the average valuation factor for children shows a considerable increase (at least for OASI children) between the 1960 and 1965 valuation dates.

The average valuation factors computed in this study for OASI retired workers, spouses, children, widow(er)s, and mothers include the contingent benefits that were discussed in an earlier section of this study. This partly explains the difference between the levels of the average valuation factors computed in this study and those calculated in earlier studies. The other explanation is the different interest, mortality, and methodology assumptions employed in previous studies.

^{5/} There are no average valuation factors shown for the lump sum benefits payable on the deaths of retired or disabled workers. The present values of these lump sum benefits were included with the present values of retired worker benefits for the purpose of calculating the average valuation factors for retired workers.

E. Comparison of Present Values of Benefits in Current-Payment
Status with the Trust Fund Balance

Table 5 compares the levels of the OASI and DI Trust Funds with the present values of benefits in current-payment status for various years. It can be seen that between December 31, 1965, and December 31, 1979, the ratio of the balance of the OASDI Trust Funds to the present value of OASDI benefits in current-payment status declined from about 11 percent to about 3 percent. This indicates that if funding were measured by this ratio, the OASDI program has been moving closer to "pay-as-you-go" financing. The decline in this ratio should not be taken as an indication of the long-range financial soundness of the program. The financial stability of the OASDI program does not depend upon the level of this ratio. The long-range actuarial soundness of the program has generally been measured on the basis of a comparison of the expected future income and the expected future outgo.

TABLE 1

Monthly Amount of OASI and DI Benefits in Current-Payment Status
(in millions)

End of Year	OASI								DI					OASDI Total
	Retired-Worker		Spouse	Widow(er)	Mother	Child	Parent	OASI Total	Disabled-Worker		Spouse	Child	DI Total	
	Male	Female							Male	Female				
1940	\$ 2	\$ <u>1/</u>	\$ <u>1/</u>	\$ <u>1/</u>	\$ <u>1/</u>	\$ 1	\$ <u>1/</u>	\$ 4	-	-	-	-	-	\$ 4
1945	11	1	2	2	2	5	<u>1/</u>	24	-	-	-	-	-	24
1950	67	11	12	11	6	19	1	127	-	-	-	-	-	127
1955	216	61	39	34	13	46	1	412	-	-	-	-	-	412
1960	427	170	88	89	24	84	2	884	\$ 33	\$ 8	\$ 3	\$ 5	\$ 48	932
1965	632	300	114	175	34	153	3	1,410	75	22	7	18	121	1,531
1970	1,004	573	163	328	49	265	3	2,386	148	48	12	34	242	2,628
1971	1,162	679	184	381	56	303	3	2,768	182	59	14	40	296	3,064
1972	1,477	886	230	479	68	378	4	3,522	248	81	19	54	401	3,923
1973	1,571	985	238	572	74	392	3	3,835	278	91	21	58	449	4,284
1974	1,824	1,179	271	664	84	442	4	4,467	343	117	25	71	557	5,024
1975	2,087	1,350	302	748	93	493	4	5,077	418	144	31	87	680	5,757
1976	2,333	1,526	331	827	101	536	4	5,658	486	169	35	101	790	6,448
1977	2,608	1,730	365	915	110	584	4	6,316	558	195	39	115	907	7,223
1978 <u>2/</u>	2,895	1,936	392	1,006	120	621	4	6,974	615	215	42	125	997	7,971
1979 <u>2/</u>	3,330	2,252	444	1,154	133	685	4	8,002	684	241	46	136	1,106	9,108

1/ The monthly amount is less than \$500 thousand.

2/ The values in this line are preliminary.

Table 2

Present Values of OASI and DI Benefits in Current-Payment Status
(in billions)

End of Year	OASI									DI					OASDI Total
	Retired-Worker			Widow(er)	Mother	Child	Parent	Lump Sum	OASI Total	Disabled-Worker			DI Total		
Male	Female	Spouse	Male							Female	Spouse	Child		Total	
Based on Various Mortality and Interest Assumptions ^{1/}															
1940	\$ 2/	\$ 2/	\$ 2/	\$ 2/	\$ 2/	\$ 2/	\$ 2/	\$ 2/	\$ 2/	-	-	-	-	-	\$ 2/
1945	1	2/	2/	2/	2/	2/	2/	2/	2	-	-	-	-	-	2
1950	6	1	1	1	2/	1	2/	2/	12	-	-	-	-	-	12
1955	20	7	5	4	1	3	2/	1	41	-	-	-	-	-	41
1960	41	19	12	9	1	5	2/	1	90	\$ 2	\$ 2/	\$ 2/	\$ 2/	\$ 2	93
Based on U.S. White Life Tables for 1969-71 and 2½% Interest															
1965	65	39	19	21	6	13	2/	2	165	6	2	2/	1	9	174
1970	104	73	27	38	9	22	2/	2	275	12	4	1	2	18	293
1971	121	87	30	44	10	25	2/	2	320	15	5	1	2	22	342
1972	156	114	43	55	14	31	2/	2	414	20	7	1	3	31	445
1973	168	126	44	64	15	32	2/	2	452	22	8	1	3	34	486
1974	197	151	50	74	17	36	2/	3	528	28	10	2	3	43	571
1975	227	174	56	83	19	39	2/	3	601	34	13	2	4	53	654
1976	255	196	62	91	21	43	2/	3	671	40	15	2	5	62	732
1977	287	221	68	101	23	46	2/	3	750	46	18	2	5	71	821
1978 ^{3/}	318	247	73	110	25	50	2/	3	826	50	19	3	6	78	905
1979 ^{3/}	364	286	83	127	27	55	2/	3	946	56	22	3	6	87	1033

^{1/} The values in the 1940, 1945, and 1950 lines are based on U.S. White Life Tables for 1939-41 and 2½% interest; those in the 1955 line are based on U.S. White Life Tables for 1949-51 and 2½% interest; and those in the 1960 line are based on U.S. White Life Tables for 1949-51 and 3% interest.

^{2/} The amount is less than \$500 million.

^{3/} The values in this line are preliminary.

Table 3

Percentage Distribution of Present Values of OASI and DI Benefits in Current-Payment Status

End of Year	OASI									DI				
	Retired-Worker		Spouse	Widow(er)	Mother	Child	Parent	Lump Sum	OASI Total	Disabled-Worker		Spouse	Child	DI Total
Male	Female	Male								Female				
Based on Various Mortality and Interest Assumptions ^{1/}														
1940	57.0%	7.1%	11.7%	2.4%	6.3%	12.9%	0.2%	2.4%	100.0%	--	--	--	--	--
1945	45.5	6.4	11.5	8.7	6.9	18.5	0.3	2.2	100.0	--	--	--	--	--
1950	50.9	9.2	12.6	9.8	3.0	12.5	0.4	1.6	100.0	--	--	--	--	--
1955	49.6	16.8	12.8	8.7	2.1	8.1	0.3	1.6	100.0	--	--	--	--	--
1960	45.4	21.5	13.5	10.4	1.6	5.9	0.2	1.4	100.0	65.5%	18.4%	5.6%	10.4%	100.0%
Based on U.S. White Life Tables for 1969-71 and 2½% Interest														
1965	39.3	23.6	11.5	12.6	3.8	8.1	0.1	1.0	100.0	65.3	20.5	4.5	9.6	100.0
1970	37.7	26.5	9.8	13.9	3.3	7.9	0.1	.8	100.0	64.6	22.5	4.0	8.8	100.0
1971	37.9	27.1	9.5	13.8	3.2	7.7	0.1	.7	100.0	65.0	22.7	3.9	8.4	100.0
1972	37.7	27.4	10.3	13.3	3.4	7.4	0.1	.6	100.0	65.1	22.9	3.8	8.2	100.0
1973	37.1	27.9	9.8	14.2	3.4	7.0	0.1	.5	100.0	65.0	23.3	3.8	7.9	100.0
1974	37.2	28.6	9.5	14.1	3.3	6.7	0.1	.5	100.0	64.6	24.1	3.6	7.7	100.0
1975	37.7	28.9	9.3	13.8	3.2	6.5	<u>2/</u>	.4	100.0	64.5	24.4	3.5	7.6	100.0
1976	38.0	29.2	9.2	13.6	3.1	6.4	<u>2/</u>	.4	100.0	64.4	24.6	3.4	7.5	100.0
1977	38.3	29.5	9.1	13.4	3.0	6.2	<u>2/</u>	.4	100.0	64.4	24.8	3.4	7.4	100.0
1978 ^{3/}	38.5	29.9	8.8	13.4	3.0	6.0	<u>2/</u>	.4	100.0	64.5	24.9	3.3	7.3	100.0
1979 ^{3/}	38.5	30.3	8.7	13.4	2.9	5.9	<u>2/</u>	.3	100.0	64.6	25.0	3.2	7.2	100.0

^{1/} The values in the 1940, 1945, and 1950 lines are based on U.S. White Life Tables for 1939-41 and 2½% interest; those in the 1955 line are based on U.S. White Life Tables for 1949-51 and 2½% interest; and those in the 1960 line are based on U.S. White Life Tables for 1949-51 and 3% interest.

^{2/} The percent is less than 0.05 percent.

^{3/} The values in this line are preliminary.

Table 4

Average Valuation Factors Determined from Present Values of OASI and DI Benefits in Current-Payment Status 1/

End of Year	OASI							DI			
	Retired-Worker <u>2/</u>		Spouse	Widow(er)	Mother	Child	Parent	Disabled-Worker		Spouse	Child
	Male	Female						Male	Female		
Based on Various Mortality and Interest Assumptions <u>3/</u>											
1940	105.92	102.40	132.90	110.14	63.70	78.98	89.37	-	-	-	-
1945	94.64	108.05	125.86	103.19	63.86	84.67	86.06	-	-	-	-
1950	91.25	104.45	123.46	99.60	61.55	75.69	81.92	-	-	-	-
1955	95.63	114.11	132.24	104.03	63.94	70.57	86.82	-	-	-	-
1960	91.75	111.71	138.94	105.51	60.98	62.34	80.81	48.46	59.14	52.20	54.37
Based on U.S. White Life Tables for 1969-71 and 2½% Interest											
1965	104.12	131.50	166.43	118.74	185.39	86.53	86.84	80.80	87.74	61.23	49.76
1970	104.79	128.85	164.87	116.11	186.29	81.71	82.29	80.67	87.06	61.14	47.13
1971	105.60	128.81	165.08	115.50	186.29	81.01	81.86	80.81	87.36	61.07	46.77
1972	106.64	129.13	185.27	114.92	205.93	80.83	81.19	80.69	87.41	61.06	46.54
1973	107.66	129.08	185.71	112.64	206.33	80.32	80.56	80.84	87.96	61.09	46.20
1974	108.57	129.08	185.88	111.96	206.63	80.44	79.70	81.28	88.79	61.11	46.23
1975	109.44	129.36	186.31	111.28	206.63	79.83	78.97	82.12	89.93	61.11	45.99
1976	110.04	129.12	186.56	110.56	206.50	79.39	78.15	82.43	90.52	61.10	45.89
1977	110.71	128.64	186.70	110.11	205.93	79.50	77.66	82.56	90.98	61.07	45.82
1978 <u>4/</u>	110.39	128.28	186.44	109.79	205.93	80.45	77.55	82.51	90.83	61.09	45.98
1979 <u>4/</u>	109.89	127.75	186.36	109.66	205.80	81.00	77.57	82.54	90.98	61.07	46.06

1/ Average valuation factors are the estimated present values of future benefits until death or termination of benefit per \$1 of present monthly benefits in current-payment status.

2/ Retired-workers average valuation factors include the estimated values of lump-sum benefits payable on the death of the beneficiary.

3/ The values in the 1940, 1945, and 1950 lines are based on U.S. White Life Tables for 1939-41 and 2½% interest; those in the 1955 line are based on U.S. White Life Tables for 1949-51 and 2½% interest; and those in the 1960 line are based on U.S. White Life Tables for 1949-51 and 3% interest.

4/ The values in this line are preliminary.

TABLE 5

Comparison of OASI and DI Trust Fund Balances with the Present Values of OASI and DI Benefits
in Current-Payment Status
(amounts in billions)

<u>End of Year</u>	<u>OASI Trust Fund</u>	<u>Present Value of OASI Benefits in Current Pay</u>	<u>Trust Fund as a Percent of Present Value</u>	<u>DI Trust Fund</u>	<u>Present Value of DI Benefits in Current Pay</u>	<u>Trust Fund as a Percent of Present Value</u>	<u>OASDI Trust Funds</u>	<u>Present Value of OASDI Benefits in Current Pay</u>	<u>Trust Funds as a Percent of Present Value</u>
Based on Various Mortality and Interest Assumptions <u>1/</u>									
1940	\$ 2	\$ 2/	495%	-	-	-	\$ 2	\$ 2/	495%
1945	7	2	319	-	-	-	7	2	319
1950	14	12	117	-	-	-	14	12	117
1955	22	41	53	-	-	-	22	41	53
1960	20	90	22	\$ 2	\$ 2	94%	23	93	30
Based on U.S. White Life Tables for 1969-71 and 2½% Interest									
1965	18	165	11	2	9	18	20	174	11
1970	32	275	12	6	18	31	38	293	13
1971	34	320	11	7	22	30	40	342	12
1972	35	414	9	7	31	24	43	445	10
1973	36	452	8	8	34	23	44	486	9
1974	38	528	7	8	43	19	46	571	8
1975	37	601	6	7	53	14	44	654	7
1976	35	671	5	6	62	9	41	732	6
1977	32	750	4	3	71	5	36	821	4
1978 <u>3/</u>	28	826	3	4	78	5	32	905	4
1979 <u>3/</u>	25	946	3	6	87	6	30	1,033	3

1/ The values in the 1940, 1945, and 1950 lines are based on U.S. White Life Tables for 1939-41 and 2½% interest; those in the 1955 line are based on U.S. White Life Tables for 1949-51 and 2½% interest; and those in the 1960 line are based on U.S. White Life Tables for 1949-51 and 3% interest.

2/ The amount is less than \$500 million.

3/ The values on this line are preliminary.