Estimated Amount of Life Insurance in Force as Survivor Benefits under OASI-1955

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FOREWORD

This study is another in the series presenting the results of analysis as to the "amount of life insurance in force" as survivor benefits under the Old-Age and Survivors Insurance program. Since the previous investigation (Actuarial Study No. 37, as of the end of 1952), the amount of life insurance in force has increased because of several factors: the new benefit computation method of the 1954 Amendments including their provision for "drop-out" of years of low earnings; the liberalized "retirement test" of the 1954 Amendments; the increase in the wage level in 1952-54 and the increase in the number of insured workers.

Although the amount of life insurance in force under the OASI program is analogous to the amount in force under private insurance contracts, there are certain important points of difference. Generally, the amount of insurance under a private contract is definitely known or easily determinable. However, under the OASI program, conditions for receipt of benefit are not based solely on life contingencies but also on elements more readily under the control of the individual beneficiary, such as marriage, employment, retirement, etc. Therefore, the concept of insurance in force under the OASI program is open to several interpretations and must necessarily be presented on a range basis.

The importance of the OASI system in the national economy is indicated by the fact that the amount of insurance in force under the more restrictive concept of the net estimate is about $350 billion at the present time. This is approximately equal to that in all private insurance organizations combined.

The "cost of insurance" is also examined. This represents the aggregate value of the survivor protection provided by the life insurance in force under the OASI program and can be compared with the contributions paid by the covered persons. Because of the relatively low contribution rates applicable in the past (for 1937-49, only $\frac{1}{4}$ of the ultimate scheduled rate, for 1950-53, less than $\frac{1}{2}$ of the ultimate rate, and since 1953, $\frac{1}{2}$ of the ultimate rate), employee contributions have in the aggregate been less than the value of the survivor benefits.

In general, then, it can be fairly said that as a group, individuals covered during the past received sufficient value as survivor benefit protection to at least offset the employee contributions made. This is, of course, true only on a group basis since younger individuals with large families and older individuals with wives above or near age 65 received far more in survivor protection than their contributions, while, on the other hand, young single individuals received less. Moreover, any comparison of benefit protection with employee contributions might well consider the retirement protection that was furnished to individuals age 65 and over, some of whom took advantage of it by retiring and others of whom had potential protection which they did not use because they continued at work.

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This study has been prepared for the use of the staff of the Social Security Administration and for limited circulation to other persons in administration, insurance, and research concerned with the subject treated. It has not been submitted to the Commissioner of Social Security for official approval.

ESTIMATED AMOUNT OF LIFE INSURANCE IN FORCE AS SURVIVOR BENEFITS UNDER OASI--1955

A. Introduction

The purpose of this study is to present an estimate of the amount of life insurance in force as of January 1, 1955, as survivor insurance benefits under the Old-Age and Survivors Insurance system. This amount may then be compared with the amount of life insurance in force on the lives of policyholders in private insurance organizations and on the lives of servicemen and veterans under the insurance systems of the Veterans Administration.

Actuarial Study No. 16 was the pioneer study in this field and gave the results for 1940 under the 1939 Amendments on the basis of the rather meager data available at that time. Actuarial Study No. 29 was a similar study, estimating the amount of life insurance in force as of January 1, 1946 and January 1, 1947 under the 1939 Amendments. Actuarial Study No. 31 estimated the amount of insurance as of January 1, 1951 after the 1950 Amendments effected an increase in benefits through the conversion table and liberalized eligibility conditions. Actuarial Study No. 37 presented an estimate of the amount of insurance as of January 1, 1953 just after the 1952 Amendments produced a further increase through modification of the conversion table and liberalization of the benefit formula. The present estimate reflects the further changes incorporated in the 1954 Amendments.

The amount of life insurance in force at any time under the old-age and survivors insurance program in any individual case is the present value of monthly survivor benefits and lump-sum payments available if death occurred at that time. Monthly benefits are payable on the basis of the wage credits of insured workers to widows aged 65 and over, to widowed mothers with children under age 18, to children under age 18 orphaned by the death of the insured father or mother, to dependent aged parents, and to dependent aged widowers1/. Herein no account is taken of insurance benefits to the relatively minor categories, dependent parents and dependent widowers.

1/ For more complete details as to beneficiary categories, amounts of benefits, etc., under the 1954 Amendments, see Actuarial Study No. 41, "Analysis of Benefits, Old-Age and Survivors Insurance Program, 1954 Amendments".

The present study includes in the amount of life insurance in force under OASI that arising from railroad employment, all of which is assumed to be OASI employment. This is in accordance with the 1951 Amendments to the Railroad Retirement Act; under the financial interchange provisions, the OASI Trust Fund is to be placed in the same position in which it would have been if railroad service had always been covered under OASI. This study also includes the amount (or increased amount) of life insurance in force on the lives of veterans and servicemen by virtue of the presumed wage credits of $160 per month while in military or naval service.

Chart 1 serves to clarify the meaning of "amount of insurance" by type of benefit. It shows the amount of insurance in force for a typical family from age 22 to age 80 of an insured worker. The illustration covers the case of a man entering covered employment on January 1, 1955 at age 22 earning $300 per month and remaining so employed until retirement. Various marital and parental assumptions are made over the period, as shown on the chart, and the amount of insurance has been calculated by type of benefit on a 3% interest assumption and under specified mortality and remarriage rates. The illustration assumes that the program as amended in 1954 remains unchanged, although the system has now been in operation 19 years and has already undergone four major changes.

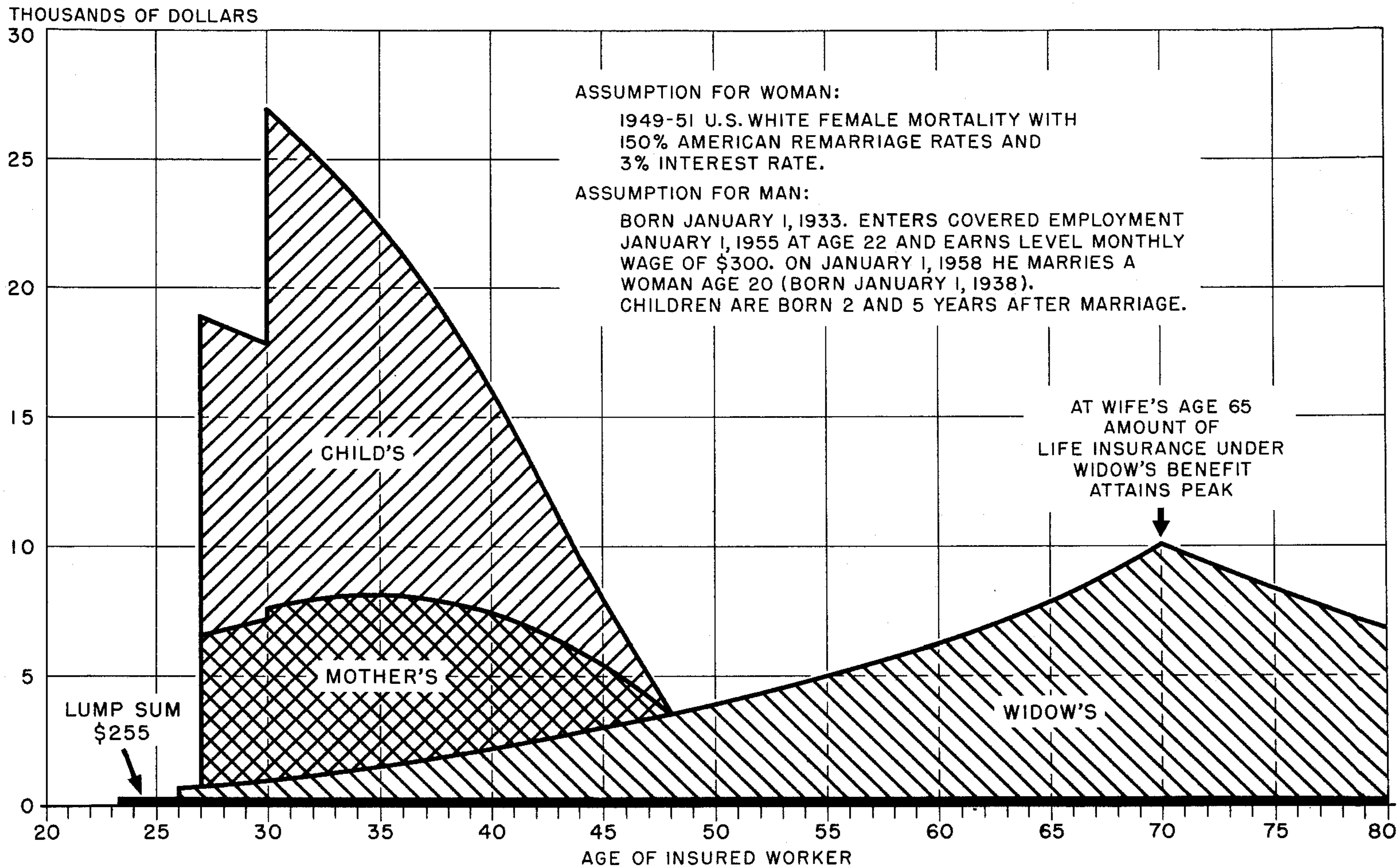
In the sixth calendar quarter of employment, the worker becomes "insured". At that time the amount of insurance under the lump-sum death payment is the maximum lump-sum payment of $255 (since 3 times his $98.50 primary insurance amount exceeds this maximum). The lump-sum is available upon death of the insured man regardless of whether he leaves dependents eligible for immediate monthly benefits.

One year after his marriage in January 1958 the amount of insurance is increased by the present value of the widow's benefit of $73.90 per month. The equivalent amount of life insurance under the widow's benefit is the present value of these monthly payments which begin at age 65 of the widow (or immediately, if she is 65 or over when the husband dies). Since the amount of life insurance depends on the duration and period of deferment of monthly benefits as well as on the interest rate and on the probability of surviving unremarried, the amount under the widow's benefit increases until her age 65 and thereafter decreases.

Mother's and child's insurance protection is in force from the time the first child is born (when the man is age 27) until the youngest child attains age 18. In terms of the primary insurance amount, the combined mother's and child's monthly benefits

Chart 1.

LIFE INSURANCE IN FORCE FOR HYPOTHETICAL FAMILY BY TYPE OF BENEFIT



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are as follows[2]: 150%, or $147.80, after the first child is born; 200%, or $197.10, after the second child is born; 150%, or $147.80, after the first child becomes age 18; and nothing after the second child becomes age 18. When the first child is born, the amount of insurance increases greatly. There is another big jump in the amount of insurance when the second child is born (when the man is age 30). At this point the amount of insurance attains a peak of nearly $27,000 but decreases rapidly thereafter as the children grow older and their period of dependency to age 18 becomes shorter.

For persons with higher wages, the amount of insurance may be considerably greater than the above amounts. The maximum amount would be the very rare and improbable case of man with an average monthly wage of $350 or more and with a wife age 47 and four children age 0, at which time the amount of life insurance in force under the 3% interest rate basis is about $38,320. A more likely case involving considerable survivor insurance protection would be if the wife were age 40 and had two children aged 0 and 1, for which the corresponding figure is $34,210.

2/ The indicated percentages are not exact because of rounding of each individual benefit to the next higher multiple of 10 cents.

B. Factors Involved

Since a large proportion of survivor benefits is payable in monthly instalments over long periods of time, the calculation of the equivalent amount of life insurance protection in force involves an interest rate. Just what interest rate should be assumed in discounting monthly benefits payable over periods which may extend 50 or 60 years into the future is a difficult question to answer. Perhaps one realistic answer is the current yield rate under very long-term Government bonds (currently close to 3%), or else the average interest rate earned on the OASI trust fund (approximately 2.3% as of July 1955). Another possible basis is the rate on the widely-held Series E bonds, now bearing 3% compounded semiannually. Actuarial Study No. 37 used both 2% and 3% (both the rate then used in the long-range cost estimates and the OASI trust fund rate at that time falling within this range). It is evident that the higher the assumed interest rate, the lower will be the discounted values and the equivalent amount of insurance. Private insurance companies generally guarantee an interest rate varying from 2½% to 3% on policies currently issued, and currently the net average rate earned (and payable to beneficiaries through participating provisions) is about 3¼%. Accordingly, the present estimates of the amount of life insurance in force have been computed at both 2% and 3%.

Calculation of the equivalent amount of insurance also involves mortality rates, which have been decreasing and may be expected to continue to decrease in the future. Mortality of widow survivor beneficiaries was assumed to follow the death rates of the U.S. White Females 1949-51 Life Table. This mortality table tends to understate the amount of life insurance in force, because mortality has improved since 1951 and continued improvement may be expected in the future; the use of a mortality table based on white lives throughout tends to some extent to correct for this understatement. Mortality of children has a negligible effect on these estimates, and is accordingly ignored.

Since the rights to both widow's and mother's insurance benefits terminate on remarriage, this contingency must be measured. The estimates assume remarriage rates of widows equal to 150% of those under the American Remarriage Table (which was based on experience of 1921-29). This assumption was made because remarriage rates have increased considerably, and recent OASI experience indicates that the aggregate remarriage rate of widows is approximately at this level3/.

3/ Myers, Robert J., "Further Remarriage Experience," Proceedings, Casualty Actuarial Society, Vol. XXXVI, 1950.

If a beneficiary has not attained age 72 and earns more than $1,200 in a year in any employment, one month's benefit is withheld for each $80 (or fraction thereof) of earnings in excess of $1,200 4/. Many "eligible" beneficiaries such as mothers, widows under age 72, and older orphan children engage in covered employment, earn over $1,200 in a year, and thus have benefits withheld for some months. In times of full employment like the present, a job with wages may be more attractive than the benefits. Thus the effect of employment on benefit receipt is variable and depends to a great degree on fluctuations of the business cycle.

The "gross" estimate does not take into consideration the effect of employment on benefit receipt; thus, this amount of life insurance is the maximum potential amount available if eligible survivor beneficiaries under age 72 take full advantage of their benefit rights and do not engage in any employment with earnings exceeding $1,200 in a year. The gross estimate also includes another element of duplication. Female covered workers include a considerable number of widows of insured workers. Many of these widows have become, or will become, entitled to old-age insurance benefits in their own right. If their primary insurance amount is greater than the widow's benefit, the latter is not payable; if less, only the excess of the widow's benefit over the primary insurance amount is payable. Here again is an indeterminate area which does not readily yield to accurate estimation, particularly as to the breakdown between survivor and retirement benefits.

The "net" estimate allows for reduction of the amount of insurance, both to allow for the effect of employment on current benefit receipt and for possible "forfeiture" of widow"s benefits because of old-age insurance benefits earned by the widow in her own right. Reduction factors have been applied to the gross estimate by type of benefit as a basis for the net estimate. These reduction factors are 17% for the widow's benefits, 22% for mother's benefits, 2% for child's benefits, and 1% for lump-sum death payments (the latter to allow for the relatively few cases of payments to other than spouses where the reimbursable funeral expenses are less than 3 times the primary insurance amount or $255 if lower). These reduction factors are based on OASI claims statistics, with the reduction factor for the widow's benefit being based on the long-range cost estimates data and methodology.

Under certain conditions presumptive wages (in addition to wages, if any, actually paid) of $160 per month for military or naval service during World War II and thereafter to March 31, 1956

4/ In no case, however, are benefits withheld for any month in which the beneficiary's remuneration as an employee was $80 or less and in which he rendered no substantial services in self-employment.

are credited. This provision has increased the number of insured workers included herein. The estimated extent of this increase was based on an analysis by age of the number of veterans, the total population, and the number insured under OASI, and under the Railroad Retirement system.

C. Methodology

The amount of insurance in force at any time on the life of an insured worker is the present value of the equivalent amount of all survivor benefits which would be payable in the event of his death. The present value of the widow's benefit, whether deferred to her age 65 or payable immediately if that age has been attained, takes into account both survivor and remarriage contingencies.

The present value of the mother's insurance benefit was similarly calculated. This benefit also terminates on attainment of age 18 of her youngest child or on death or marriage of the last child under 18. The present value of the child's benefit was calculated as though the monthly payments terminate on attainment of age 18 without considering the contingencies of the child's death or marriage prior to age 18 (both of which are negligible). However, in cases where the maximum family benefit is payable, an allowance was made for an increase in the child's benefit on death or remarriage of the mother or, in any event, when other children attain age 18. The years of dependency to age 18 of children were based on the data of the Family Composition Study of 1935-36 5/. Data on married working mothers with children were drawn from recent census data and 1953 OASI Substantive Claims Statistics.

One of the most difficult factors to arrive at is the average primary insurance amount. This statistic was estimated from data on 1954 survivor benefit awards under the 1954 Amendments.

It should be recalled throughout that only survivor benefits are considered in determining the amount of life insurance in force; retirement benefits of workers and supplementary benefits to their spouses do not belong in the category of life insurance that matures at death of an insured worker. However, the fully insured group age 65 and over considered herein properly includes those who are old-age beneficiaries (on whose death survivor benefits become payable).

This study includes the "cost of insurance" concept which has previously been discussed in <u>Actuarial Study No. 16</u> and <u>Actuarial Study No. 37</u>. As used herein it is a measure of the equivalent present value of death claims arising in a year under the insurance in force January 1, 1955.

5/ Federal Security Agency, Social Security Board, Bureau of Research and Statistics, <u>Statistics of Family Composition in Selected Areas of the United States 1934-36</u>, Volume II, The Urban Sample.

D. Analysis of Results

In considering the results of this study, allowance should be made for the limitations of the data. For instance, the assumption that the family composition as to children parallels that of the Family Composition Study is subject to criticism, even though these data are the best available6/. We would expect that the relative proportion of younger children has increased due to the heavy birth rates of the last decade as compared with the low birth rates of the 1930's.

Table 1 summarizes the estimated amount of life insurance in force as of January 1, 1955 by type of benefit and by sex of the insured worker under the gross and net estimates. Under the gross estimate, the amount of insurance in force is $422 billion on the 2% interest rate assumption and $383 billion on the 3% interest rate assumption. The net estimates are $379 billion and $345 billion respectively, or about 10% less than the gross estimates. The 3% interest rate assumption decreases the amount of insurance by an average of about 9% below the 2% interest basis--more for the longer deferred widow's benefits, and less for the more immediate mother's and child's benefits. The amount of insurance on the net estimate (the more realistic basis) on a 3% interest basis is distributed roughly by type of benefit as follows: 19% for widow's, 21% for mother's, 56% for child's, and 4% for the lump-sum death payment (on the 2% interest rate basis, the widow's benefit proportion is increased, and the other proportions are decreased).

Men account for 91-92% of the total insurance in force. The 8-9% in respect to women is a much greater proportion than the corresponding 4% before the 1950 Amendments were enacted. This increase occurred primarily because the 1950 Amendments provided child's survivor benefits on the wage records of currently insured married women, even though the husband is living, working, and insured. As far as the total amount of life insurance is concerned, the protection has been taken as additive in regard to children protected under the wage records of both the insured father and the insured mother7/.

6/ It should be noted, however, that the proportions of families having children were based on OASI claims data for 1953. The Family Composition Study was used only to estimate the distributions of family size and ages of childrenfor families with one or more children.

7/ Since the child cannot get benefits on both wage records (but in effect only the larger benefit if both die), there is a slight element of overstatement in combining the amounts for men and women.

Table 1

SUMMARY OF ESTIMATED AMOUNT OF LIFE INSURANCE IN FORCE
AS OASI SURVIVOR BENEFITS, JANUARY 1, 1955
(In billions)

Type of Benefit	Gross Estimate[a/] 2% Interest	Gross Estimate[a/] 3% Interest	Net Estimate[b/] 2% Interest	Net Estimate[b/] 3% Interest
Total				
Widow's	$101	$78	$84	$65
Mother's	99	95	77	74
Child's	207	196	203	192
Lump-Sum	14	14	14	14
Total	422	383	379	345
Men				
Widow's	101	78	84	65
Mother's	99	95	77	74
Child's	180	170	176	167
Lump-Sum	10	10	10	10
Total	390	353	347	315
Women				
Child's	27	26	27	26
Lump-Sum	4	4	4	4
Total	32	30	31	29

a/ The gross estimate does not take into consideration the effect of employment; it also fails to eliminate the duplication between widow's benefits and primary benefits that widows may earn in their own right.

b/ The net estimate takes into account both the effect of employment and the payment of only the excess if the widow's benefit is greater than her primary insurance amount.

Note: See text for description of methodology, concepts and assumptions. All figures are individually rounded and, in some instances, do not add exactly to totals shown.

The estimated "cost of insurance" is calculated on the basis of the net estimate of life insurance in force on January 1, 1955. The present value of benefits arising from a year's death claims is \$2.8 billion under the 2% interest assumption or \$2.5 billion on the 3% interest basis. Thus, the cost of insurance is approximately equal to the total amount of the contributions paid in 1954 by employees and self-employed persons (i.e. excluding employer taxes)--namely, about \$2.7 billion. This indicates that insured workers in the aggregate currently get their money's worth in survivor insurance. The same relationship prevailed in 1952. In 1940 the total cost of insurance was $\frac{2}{3}$ greater than the total employee contributions. Thus, it may be concluded that survivor benefits have had, on the average, a greater value than the employee tax since monthly benefits began in 1940. It is conceivable that, if the future brings still lower mortality and higher tax rates, this relationship will no longer hold, but employees will still get their money's worth in survivor and old-age benefits.

Table 2, for the gross estimate, and Table 3, for the net estimate, show the amount of insurance by age, sex, and type of benefit. Under widow's benefits, nearly $\frac{3}{4}$ of the life insurance in force is on insured workers age 35-64. Under mother's and child's benefits, the peak occurs at ages 30-34, since this is the period where child dependency is greatest, and in this age-group the greatest amount of total insurance is found.

Table 4 shows the total number insured and the total amount of insurance in force by sex for Actuarial Study No. 16, Actuarial Study No. 29, Actuarial Study No. 31, Actuarial Study No. 37, and this study, all under the gross estimate on the 3% interest basis. Both the number insured and the total amount of insurance have increased substantially over the period since 1940.

During the 2-year interval between January 1, 1953 and January 1, 1955, the gross estimate of the amount of insurance increased by 12%, and the net estimate by 16%.

Several factors contributed to this increase. The number of insured workers increased about 4% during the 2-year period. The average primary insurance amount applicable to all living insured workers increased by about 9%, due in part to the rising wage level, and in part to the more liberal benefit formula and the provision for "drop-out" of years of low earnings incorporated in the 1954 Amendments. The use of a more recent mortality table has further increased the estimates. This affects only widow's and mother's benefits (since the estimates for child's benefits ignore the small chance of the child's death before reaching age 18), the former being increased about 14%, and the latter about 2%. As a result the

Table 2

ESTIMATED AMOUNT OF LIFE INSURANCE IN FORCE BY AGE AND TYPE OF BENEFIT, GROSS ESTIMATE
(In billions)

Age of Insured	Widow's	Mother's	Child's Insurance Men	Child's Insurance Women	Lump-Sum Men	Lump-Sum Women	Total
			2% Interest				
Under 20	*	*	*	*	*	*	*
20-24	$1	$6	$14	$4	$1	$1	$26
25-29	4	16	37	5	1	1	64
30-34	7	22	44	8	1	1	84
35-39	10	22	37	5	1	1	75
40-44	12	17	25	3	1	*	59
45-49	13	10	14	1	1	*	39
50-54	13	4	6	*	1	*	25
55-59	13	2	2	*	1	*	17
60-64	11	*	1	*	1	*	12
65-69	10	*	*	*	*	*	11
70-74	5	*	*	*	*	*	6
75 and over	2	*	*	*	*	*	3
Total	101	99	180	27	10	4	422
			3% Interest				
Under 20	*	*	*	*	*	*	*
20-24	1	5	13	3	1	1	24
25-29	2	16	34	5	1	1	59
30-34	5	21	41	8	1	1	77
35-39	7	21	35	5	1	1	69
40-44	9	16	24	3	1	*	54
45-49	10	9	13	1	1	*	35
50-54	10	4	6	*	1	*	22
55-59	10	2	2	*	1	*	15
60-64	9	*	1	*	1	*	11
65-69	9	*	*	*	*	*	9
70-74	5	*	*	*	*	*	5
75 and over	2	*	*	*	*	*	2
Total	78	95	170	26	10	4	383

* Less than $500 million.

Note: See text for description of methodology, concepts and assumptions. All figures are individually rounded and, in some instances, do not add exactly to totals shown.

Table 3

ESTIMATED AMOUNT OF LIFE INSURANCE IN FORCE BY AGE AND TYPE OF BENEFIT, NET ESTIMATE
(In billions)

Age of Insured	Widow's	Mother's	Child's Insurance		Lump-Sum		Total
			Men	Women	Men	Women	
2% Interest							
Under 20	*	*	*	*	*	*	*
20-24	$1	$4	$14	$3	$1	$1	$24
25-29	3	13	36	5	1	1	59
30-34	6	18	43	8	1	1	77
35-39	8	17	36	5	1	1	68
40-44	10	13	25	3	1	*	53
45-49	11	8	13	1	1	*	35
50-54	11	4	6	*	1	*	22
55-59	10	1	2	*	1	*	15
60-64	9	*	1	*	1	*	10
65-69	8	*	*	*	*	*	9
70-74	4	*	*	*	*	*	5
75 and over	2	*	*	*	*	*	2
Total	84	77	176	27	10	4	379
3% Interest							
Under 20	*	*	*	*	*	*	*
20-24	1	4	13	3	1	1	23
25-29	2	12	34	5	1	1	54
30-34	4	17	41	8	1	1	71
35-39	5	16	34	5	1	1	63
40-44	7	12	24	3	1	*	48
45-49	8	7	13	1	1	*	31
50-54	9	3	6	*	1	*	19
55-59	9	1	2	*	1	*	13
60-64	8	*	1	*	1	*	9
65-69	7	*	*	*	*	*	8
70-74	4	*	*	*	*	*	4
75 and over	2	*	*	*	*	*	2
Total	65	74	167	26	10	4	345

* Less than $500 million.

Note: See text for description of methodology, concepts and assumptions. All figures are individually rounded and, in some instances, do not add exactly to totals shown.

Table 4

COMPARISON OF SUMMARY RESULTS OF THIS STUDY AND PREVIOUS STUDIES

Sex of Insured Worker	Actuarial Study No. 16 1940	No. 29 1947	No. 31 1951	No. 37 1953	This Study January 1, 1955
	Number Insured (in millions)				
Men	18.2	27.6	39.5	44.9	45.8
Women	5.7	14.0	22.0	25.0	26.7
Total	24.0	41.6	61.5	69.9	72.5
	Amount of Insurance in Force (in billions)				
Men	$41	$64	$168	$320	$353
Women	1	3	23	22	30
Total	42	67	191	342	383

Note: The dollar figures are on a 3% basis. Figures for this Study, for *Actuarial Study No. 37*, and for *Actuarial Study No. 31* are the gross estimate, those for *Actuarial Study No. 29* are the high (or gross) estimate and those for *Actuarial Study No. 16* are the low estimate, which is fairly comparable to the high (or gross) estimate in later studies.

net estimate of total survivor insurance is increased about 3%. On the other hand, the maximum family benefit provisions in the 1954 Amendments have had the effect of reducing, on the average, the ratio of survivor benefits to the primary insurance amount, as compared with the situation under the 1952 Amendments. This change, if considered alone, would decrease the net estimate of insurance in force by about 1%.

During the next two years a substantial further increase is to be expected in the amount of insurance in force as survivor benefits. The number of insured workers should increase about 10%, as many of the workers to whom coverage was extended by the 1954 Amendments acquire insured status. A further rise will result from the increase in the wage base from $3,600 to $4,200, effective January 1, 1955, as this will produce a higher wage for workers having annual earnings of more than $3,600 in years subsequent to 1954. Also, the average monthly wages used in the benefit computations will be somewhat higher, being based more on the higher current earnings levels. Thus, the net estimate of insurance in force as survivor benefits on the 3% interest assumption may be expected to reach about $400 to $425 billion by January 1, 1957.

E. Comparison With Other Life Insurance

The amount of insurance under the Old-age and survivors insurance system may be compared with the amount of insurance in private organizations and in the Veterans Administration as follows:

AMOUNT OF LIFE INSURANCE IN FORCE, JANUARY 1, 1955
(in billions)

Old-Age and Survivors Insurance System 1/	$345
Veteran's Administration 2/	43
Private Insurance 3/	346
Total	734

1/ Based on the net estimate of this Study and 3% interest rate assumption.

2/ U.S. Government Life Insurance (World War I), $2 billion; National Service Life Insurance (World War II), $39 billion; and Veteran's Special Term Insurance (Korean Conflict) and Service-Disabled Veteran's Insurance (Korean Conflict), $2 billion.

3/ Ordinary, industrial, and group insurance, $334 billion; savings bank insurance, $1 billion; fraternal insurance, $10 billion; and assessment life insurance, $2 billion. Does not include death benefits under annuities.

The above comparison does not include an estimated $10-15 billion of life insurance in force as survivor benefits under Civil Service Retirement; other public retirement systems have perhaps $2 billion more. Private pension plans also have a considerable amount of survivor protection in force (mostly in the form of potential refunds of employee contributions), although their primary purpose is providing retirement benefits.

In comparing the amount of insurance under the old-age and survivors insurance system with that in private organizations, it may be mentioned that the former includes a large proportion of decreasing term insurance, since the survivor protection is concentrated where it is most needed--at the younger ages of the insured workers, where the greatest number of minor children is found. Since the cost of insurance is relatively low at these ages, the current annual cost of insurance in force under OASI would be substantially less than for the aggregate of all private insurance.

Actuarial Studies Available from the Division of the Actuary*

9. An Analysis of the Costs of Duplicating the Benefits under Title II by the Use of Insurance Company Contracts — July 1938.

10. Various Methods of Financing Old-Age Pension Plans—September 1938.

14. An Analysis of the Benefits and Costs under Title II of the Social Security Act Amendments of 1939 — December 1941.

15. Comparison of Cost Estimates of the Committee on Economic Security with Actual Experience Data — July 1940.

16. Estimated Amount of Life Insurance Value in Force under Survivors Benefits of the Old-Age and Survivors Insurance System — January 1941.

17. New Cost Estimates for the OASI System, with the Assumption of a Static Future Wage Level — December 1942.

19. OASI 1943-44 Cost Studies — May 1944.

21. Analysis of Long-Range Cost Factors — September 1946.

22. Cost Study for Complete Coverage Program of Old-Age, Survivors and Disability Insurance — August 1945.

23. Long-Range Cost Estimates for OASI, 1946 — April 1947.

24. Illustrative U.S. Population Projections, 1946—January 1948.

26. Present Values of OASI Benefits Awarded and in Current Payment Status, 1940-46 — May 1948.

28. Long-Range Cost Estimates for Expanded Coverage and Liberalized Benefits Proposed to the OASI System by H.R. 2893 — February 1949.

29. Estimated Amount of Life Insurance in Force as Survivor Benefits under OASI System — April 1949.

30. Analysis of the Benefits under Title II of the Social Security Act Amendments of 1950 — February 1951.

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* Numbers not listed are out of print.

31. Estimated Amount of Life Insurance in Force as Survivor Benefits under Social Security Act Amendments of 1950 -- September 1951.

32. Analysis of 346 Group Annuities Underwritten in 1946-50 -- October 1952.

33. Illustrative U.S. Population Projections, 1952 -- November 1952.

34. Analysis of the Benefits under the OASI Program as Amended in 1952 -- December 1952.

35. Present Values of OASI Benefits in Current Payment Status 1940-52 -- May 1953.

36. Long-Range Cost Estimates for OASI 1953 -- June 1953.

37. Estimated Amount of Life Insurance in Force as Survivor Benefits under Social Security Act Amendments of 1952--August 1953.

38. Long-Range Cost Estimates for Changes Proposed in the OASI System by H.R. 7199, with Supplementary Estimates for Universal Coverage -- March 1954.

39. Long-Range Cost Estimates for OASI 1954 -- December 1954.

40. The Financial Principle of Self-Support in the OASI System-- April 1955.

41. Analysis of Benefits, OASI Program, 1954 Amendments -- May 1955.

42. Present Values of OASI Benefits in Current Payment Status 1940-54 -- July 1955.

43. Estimated Amount of Life Insurance in Force as Survivor Benefits under OASI -- 1955 -- September 1955.