

REVISED COST ESTIMATES FOR PROPOSED PLAN AC-13

(These tables are preliminary and subject to revision
and are not intended for general distribution)

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NOTE

This actuarial study is now obsolete, since it refers to certain amendments (which were only proposed but not enacted) to the old-age insurance system of the Social Security Act of 1935 which has now been superseded by the old-age and survivors insurance system set up by the 1939 Amendments. The study, therefore, possesses only historical significance.

COST ESTIMATES FOR PROPOSED PLAN AC-13

The purpose of this report is to present summary cost estimates for Plan AC-13 as compared with those for the present Title II. Data is presented only for benefit payments in terms of dollars rather than also showing the number of individuals concerned. The calculations are made on "full-time individuals" (with some allowance for "in and out movement") so that any display of numbers of persons would be misleading since it would not adequately portray the number of different individual people who were actually receiving benefits.

The calculations have followed, insofar as possible, all the assumptions adopted by the Committee on Economic Security in its cost estimates for the present Title II. However, in such a plan as AC-13 many additional assumptions have to be made in order to determine the costs for survivorship benefits (widows and dependent children), allowances for wives and invalidity benefits. All of the assumptions made have seemed quite reasonable and consistent, but it is obvious that there are great uncertainties in estimating marital and dependency conditions in the far-distant future as well as in estimating the proportion of women who will be or will have been gainfully occupied. Previous estimates are probably of a higher degree of reliability since they involve less empirical factors. Thus, to an even greater degree than heretofore, the estimates of the progress of reserve from 1937 to 1980 should be taken only as yardsticks by means of which comparisons are possible, rather than as representing either the final truth or even the best estimates of probable results.

This report differs from Actuarial Study No. 11 in that here the estimates based on revised assumptions have been made with definite assumptions as to changes in the various cost factors. These changes are the same as those used in Actuarial Study No. 12 which presented revised cost estimates for the present Title II. The previous estimates for revised assumptions in Actuarial Study No. 12 were based on arbitrary increasing percentages applied to appropriations and benefit payments (by 1980 5% and 30%, respectively).

The changes assumed in the various factors are as follows:

<u>Factor</u>	<u>Original</u>	<u>Revised</u>
Initial Coverage	25,337,000	32,000,000
Average Wage	\$1100	\$900
Retirement Age	67½	66
Population Basis	COES	NRC*

* National Resources Committee

These changes are identical with those used in Actuarial Study No. 12. In addition, for the invalidity benefits there was assumed an increase in cost equal to one-half the improvement in mortality as shown by the National Resources Committee "medium" estimate. This amounted to a 20% increase by 1980. It is a recognized fact that mortality and invalidity are inversely correlated.

RESERVES AND FEDERAL SUBSIDIES UNDER PLAN AC-13 AS COMPARED TO THOSE UNDER PRESENT TITLE II
ACCORDING TO TWO ESTIMATES^{a/}

(All figures in millions of dollars)

Calendar Year	Estimate Based on Original Assumptions			Estimate Based on Revised Assumptions		
	Present Title II	AC-13, with Invalidity Cost Low	High	Present Title II	AC-13, with Invalidity Cost Low	High
Balance in Reserve						
1940	2,337	2,209	2,188	2,425	2,205	2,188
1950	14,732	8,449	6,975	14,645	7,070	5,441
1960	30,066	12,576	8,400	27,730	8,500	5,700
1970	41,625	12,500	8,400	32,322	8,500	5,700
1980	46,641	12,500	8,400	32,322	8,500	5,700
Federal Subsidy ^{b/}						
1955	--	--	---	--	---	258
1960	--	--	346	--	516	937
1970	--	655	1,123	104	1,730	2,221
1980	--	1,399	1,891	2,193	3,256	3,784
Federal Subsidy as Percent of Payroll						
1955	--	--	---	---	---	.74%
1960	--	--	.99%	---	1.40%	2.54
1970	--	1.72%	2.96	.26%	4.23	5.43
1980	--	3.53	4.77	5.31	7.62	8.85
Level ^{c/}	--	1.48	2.19	1.95	3.48	4.26

^{a/} First estimate is based on original assumptions of the Committee on Economic Security. Second estimate is based on revised assumptions as to mortality, invalidity, average wage, retirement age, and coverage.

^{b/} A Federal subsidy is introduced when the reserve begins to decline from its maximum point (for practical purposes it is allowed to decline to the nearest round number).

^{c/} Level percent of payroll from 1937 into perpetuity which is equivalent to the Federal subsidies.

Table 1

BENEFIT PAYMENTS UNDER PLAN AC-13 ACCORDING TO TYPE OF BENEFIT.
ESTIMATES BASED ON ORIGINAL ASSUMPTIONS^{a/}

Calendar Year	Old-Age Annuitants ^{b/}	Wives of	Widows Benefits ^{c/}	Orphans Benefits ^{d/}	Funeral Benefits ^{e/}	Invalidity Annuitants ^{f/}	
		Old-Age Annuitants				Low Cost ^{g/}	High Cost ^{g/}
Benefit Payments (in millions of dollars)							
1940	181	24	1	16	22	32	53
1945	317	39	32	146	54	176	298
1950	543	63	100	221	74	264	468
1960	1,138	104	319	254	104	372	673
1970	1,725	126	524	250	130	440	785
1980	2,457	100	605	244	155	472	841
1937-80	48,142	3,718	12,837	8,947	4,123	13,800	24,589
Benefits as Percentage of Payroll							
1940	.61%	.08%	--	.05%	.07%	.11%	.18%
1945	1.05	.13	.11%	.48	.18	.58	.99
1950	1.71	.20	.31	.69	.23	.83	1.47
1960	3.25	.30	.91	.73	.30	1.06	1.92
1970	4.54	.33	1.38	.66	.34	1.16	2.07
1980	6.20	.25	1.53	.62	.39	1.19	2.12
Level ^{h/}	3.66	.22	.91	.56	.28	.91	1.62

- ^{a/} Original assumptions made by the Committee on Economic Security.
- ^{b/} Including only benefits based on actual earned wages. Excluding any widows' benefits which are based on husbands' coverage. For invalidity annuitants attaining 65 only annuity payments based on actual wage credits are included in this column, any excess being included in invalidity annuitants disbursements.
- ^{c/} Payments to widows over age 65, based on wage credits inherited from husband.
- ^{d/} Including allowance for mother.
- ^{e/} Benefit of 3½% of total wages, maximum of \$300, for widows under 65 who have no dependent children or to be paid for last illness expenses where no widow or children are present.
- ^{f/} Including allowances for wives and dependent children, but excluding benefits for widows and orphans of invalidity annuitants and also excluding all benefits after the invalidity annuitants have attained age 65 which they would be entitled to at that time as old-age annuitants.
- ^{g/} The distinction between low and high cost estimates arises from varied credence given to the factors entering into the cost estimates - based on an analysis of German and British social insurance and American disability experiments.
- ^{h/} Level percent required to "support the benefits into perpetuity".

Table 2

BENEFIT PAYMENTS UNDER PLAN AC-13 ACCORDING TO TYPE OF BENEFIT.
ESTIMATES BASED ON REVISED ASSUMPTIONS^{a/}

<u>Calendar Year</u>	<u>Old-Age Annuitants^{b/}</u>	<u>Wives of Old-Age Annuitants</u>	<u>Widows Benefits^{c/}</u>	<u>Orphans Benefits^{d/}</u>	<u>Funeral Benefits^{e/}</u>	<u>Invalidity Annuitants^{f/}</u> <u>Low Cost^{g/} High Cost^{g/}</u>	
Benefit Payments (in millions of dollars)							
1940	264	35	2	18	16	28	45
1945	445	55	36	151	38	186	325
1950	736	86	106	220	58	291	518
1960	1,664	153	334	225	74	427	764
1970	2,761	202	549	199	86	518	925
1980	4,275	174	643	182	100	574	1,018
1937-80	75,552	5,714	13,488	7,844	2,875	15,965	28,407
Benefits as Percentage of Payroll							
1940	.87%	.11%	.01%	.06%	.05%	.09%	.15%
1945	1.43	.18	.12	.48	.12	.60	1.04
1950	2.23	.26	.32	.67	.18	.88	1.57
1960	4.50	.41	.90	.61	.20	1.16	2.07
1970	6.75	.49	1.34	.49	.21	1.27	2.26
1980	10.00	.41	1.50	.43	.23	1.34	2.38
Level ^{h/}	5.67	.34	.91	.45	.18	1.01	1.79

^{a/} Revised assumptions as to mortality, invalidity, average wage, retirement age, and coverage (same as in Actuarial Study No.12).

^{b/} - ^{h/} Same as in the preceding Table 1.

Table 3

**TOTAL BENEFIT PAYMENTS UNDER PLAN AC-13 AS COMPARED TO THOSE UNDER PRESENT TITLE II
ACCORDING TO TWO ESTIMATES^{a/}**

Calendar Year	Total Benefit Payments ^{b/}			Benefits as % of Payroll			Increase in Cost ^{d/} for	
	Present Title II	AC-13, Invalidity ^{c/} Low	AC-13, Invalidity ^{c/} High	Present Title II	AC-13, Invalidity ^{c/} Low	AC-13, Invalidity ^{c/} High	AC-13, with Invalidity ^{c/} Low	AC-13, with Invalidity ^{c/} High
Estimate Based on Original Assumptions								
1940	48	276	297	.17%	.92%	.99%	e/	e/
1945	218	764	886	.73	2.53	2.94	247%	303%
1950	538	1,265	1,469	1.71	3.97	4.61	132	170
1960	1,430	2,291	2,592	4.18	6.55	7.41	57	77
1970	2,355	3,195	3,540	6.38	8.41	9.32	32	46
1980	3,576	4,033	4,402	9.35	10.18	11.11	9	19
1937-80	62,289	91,567	102,356	5.06 ^{f/}	6.54 ^{f/}	7.25 ^{f/}	29	43
Estimate Based on Revised Assumptions								
1940	46	363	380	.16%	1.19%	1.25%	e/	e/
1945	269	911	1,050	.87	2.93	3.37	237%	287%
1950	684	1,497	1,724	2.10	4.54	5.23	116	149
1960	1,850	2,877	3,214	5.13	7.78	8.69	52	69
1970	3,336	4,315	4,722	8.41	10.55	11.54	25	37
1980	5,515	5,948	6,392	13.36	13.91	14.95	4	12
1937-80	87,466	121,438	133,880	7.03 ^{f/}	8.56 ^{f/}	9.34 ^{f/}	22	33

^{a/} First estimate is based on original assumptions of the Committee on Economic Security. Second estimate is based on revised assumptions as to mortality, invalidity, average wage, retirement age, and coverage.

^{b/} In millions of dollars.

^{c/} The distinction between low and high cost estimates arises from varied credence given to the factors entering into the cost estimates - based on an analysis of German and British social insurance and American disability experiments.

^{d/} Relative increase in cost as percentage of payroll for Plan AC-13 as compared to that for present Title II.

^{e/} Figures for present Title II and Plan AC-13 are not comparable for 1940 since annuity payments begin in 1940 for AC-13 and not until 1942 for Title II.

^{f/} Level percent required to "support the benefits into perpetuity".