APPENDIX B

STATEMENT OF ACTUARIAL ASSUMPTIONS AND BASES EMPLOYED IN DETERMINING THE MONTHLY ACTUARIAL RATES AND THE STANDARD MONTHLY PREMIUM RATE FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM BEGINNING JULY 1983 *

1. Actuarial Status of the Supplementary Medical Insurance Trust Fund

The law requires that the SMI program be financed on an incurred basis. That is, program income during the 12-month period for which the actuarial rates are effective must be sufficient to pay for services furnished during that period (including associated administrative costs) even though payment for some of these services will not be made until after the close of the period. The portion of income required to cover benefits not paid until after the close of the 12-month period is added to the trust fund until needed. Thus, the assets in the trust fund at any time should be no less than benefit and administrative costs incurred but not yet paid.

Because the rates are established prospectively, they are subject to projection error. As a result, the income to the program may not equal incurred costs. Therefore, trust fund assets should be maintained

*This statement appeared in the Federal Register of December 30, 1982. Projections shown in this statement differ from the projections shown in the rest of the report because of minor changes in assumptions since the rates were announced. In addition, Public Law 98-21 changed the financing basis for the SMI program to a calendar year basis, effective January 1, 1984. The monthly premium for the period July 1, 1983 through December 31, 1983 was frozen at $12.20 (the premium applicable for June 1983). The actuarial rates promulgated in this notice would apply to this 6-month period.

TABLE 1--ACTUARIAL STATUS OF THE SMI TRUST FUND
12-MONTH PERIOD ENDING JUNE 30 OF 1981-1983
(In Millions)

12-Month Period Ending June 30,	Assets	Liabilities	Assets Less Liabilities
1981	$3,801	$3,470	$ 331
1982	5,535	3,887	1,648
1983	6,736	4,670	2,066

at a level that is adequate to cover a moderate degree of projection error in addition to the amount of incurred but unpaid expenses. Table 1 summarizes the estimated actuarial status of the trust fund as of June 30 for each of the years 1981 through 1983.

2. Monthly Actuarial Rate for Enrollees Age 65 and Older

The monthly actuarial rate is one-half the monthly projected cost of benefits and administrative expenses for each enrollee age 65 and older, adjusted to allow for interest earnings on assets in the trust fund and a contingency margin. The contingency margin is an amount appropriate to provide for a moderate degree of projection error and to amortize unfunded liabilities.

The monthly actuarial rate for enrollees age 65 and older for the 12-month period ending June 30, 1984, was determined by projecting per-enrollee costs for the 12-month period ending June 30, 1981, by type of service. The projected costs for the 12-month periods ending June 30 of 1981-1984 are shown in Table 2. The values for the 12-month period ending June 30, 1981, were established from program data. Subsequent periods were projected using a combination of program data and data from external sources. The projection factors used are shown in Table 3.

TABLE 2.--DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER
12-MONTH PERIODS ENDING JUNE 30 OF 1981-1984

	1981	1982	1983	1984
Covered services (at level recognized):				
Physicians' reasonable charges	$17.22	$21.13	$24.86	$28.37
Radiology and pathology	.96	1.01	1.02	1.03
Outpatient hospital and other institutions	3.25	3.74	4.30	4.90
Home health agencies	.39	.02	.01	.01
Group practice prepayment plans	.52	.65	.81	1.01
Independent lab	.31	.32	.37	.43
Total services	22.65	26.87	31.37	35.75
Cost sharing:				
Deductible	-1.88	-2.29	-2.48	-2.50
Coinsurance	-3.89	-4.74	-5.73	-6.65
Total benefits	16.88	19.84	23.16	26.60
Administrative expenses	1.01	1.04	1.09	1.15
Incurred expenditures	17.89	20.88	24.25	27.75
Value of interest on fund	-.30	-.42	-.58	-.66
Contingency margin for projection error and to amortize unfunded liabilities	-1.29	2.14	.93	-.09
Monthly actuarial rate	$16.30	$22.60	$24.60	$27.00

TABLE 3.--PROJECTION FACTORS 1/
12-MONTH PERIODS ENDING JUNE 30 OF 1982-1984
(In percent)

12-month period ending June 30,	Physicians' services		Radiology and pathology	Outpatient hospital services	Home health agency services	Group practice prepayment plans	Independent lab services
	Fees 2/	Residual 3/					
Aged:							
1982	10.8	10.8	6.0	15.1	-94.4	25.0	5.0
1983	9.6	7.4	.9	14.9	-62.3	25.0	15.0
1984	7.4	6.3	.5	13.7	10.0	25.0	15.0
Disabled:							
1982	10.8	15.2	15.0	41.3	-100.0	25.0	5.0
1983	9.6	11.1	1.3	30.3	0.0	25.0	15.0
1984	7.4	9.4	.5	24.9	0.0	25.0	15.0

1/ All values are per enrollee. Also, some values for 1982 and 1983 differ significantly from those contained in last year's notice due to an additional year's data which support the current values and due to the implementation of the provisions of the Tax Equity and Fiscal Responsibility Act of 1982, Public Law 97-248.
2/ As recognized for payment under the program.
3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for enrollees age 65 and over for the 12-month period ending June 30, 1984, is $27.75. The monthly actuarial rate of $27.00 provides an adjustment for interest earnings and $-.09 for a contingency margin. This margin is negative since there is already a more than moderate excess of assets over liabilities for the program as a whole.

3. Monthly Actuarial Rate for Disabled Enrollees

Disabled enrollees are those persons enrolled in SMI because of entitlement to disability benefits for not less than 24 months or because of entitlement to Medicare under the end-stage renal disease program. Projected monthly costs for disabled enrollees (other than those suffering from end stage renal disease) are prepared in a fashion exactly parallel to projections for the aged, using appropriate actuarial assumptions (see Table 3). Costs for the end-stage renal disease program are projected using using a different computer model because of the complex demographic problems involved. The combined results for all disabled enrollees are shown in Table 4.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for the 12-month period ending June 30, 1984, is $53.60. The monthly actuarial rate of $46.10 provides an adjustment for interest earnings and $-4.47 for a contingency margin. This margin is negative since there is already a more than moderate excess of assets over liabilities for the disabled.

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TABLE 4.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES
12-MONTH PERIODS ENDING JUNE 30 OF 1981-1984

	1981	1982	1983	1984
Covered services (at level recognized):				
Physicians' reasonable charges	$21.02	$26.38	$31.58	$36.39
Radiology and pathology	.96	1.11	1.12	1.13
Outpatient hospital and other institutions	18.02	22.01	25.42	27.92
Home health agencies	.34	.00	.00	.00
Group practice prepayment plans	.30	.37	.46	.58
Independent lab	.39	.42	.47	.53
Total services	41.03	50.29	59.05	66.55
Cost Sharing:				
Deductible	-1.64	-2.09	-2.31	-2.34
Coinsurance	-7.62	-9.44	-11.29	-12.83
Total benefits	31.77	38.76	45.45	51.38
Administrative expenses	1.90	2.03	2.13	2.22
Incurred expenditures	33.67	40.79	47.58	53.60
Value of interest and other income on fund	-2.95	-3.26	-3.09	-3.03
Contingency margin for projection error and to amortize unfunded liabilities	-5.22	-.93	-2.39	-4.47
Monthly actuarial rate	$25.50	$36.60	$42.10	$46.10

4. Sensitivity Testing

Several factors contribute to uncertainty about future trends in medical care costs. In view of this, it seems appropriate to test the adequacy of the rates announced here using alternative assumptions. The most unpredictable factors that contribute significantly to future costs are outpatient hospital costs, physician residual (measured indirectly and reflecting the use of more visits per enrollee, the use of more expensive services, and other factors not explained by simple price per service increases), and increases in physician fees as constrained by the program's reasonable charge screens and economic index. Two alternative sets of assumptions and the results of those assumptions are shown in Table 5. All assumptions not shown in Table 5 are the same as in Table 3.

Table 5 indicates that, under the assumptions used in preparing this report, the monthly actuarial rates will result in an excess of assets over liabilities of $1,723 million by the end of June 1984. This amounts to 7.0 percent of the estimated total incurred expenditures for the following year. Assumptions which are somewhat more pessimistic, and therefore which indicate the degree that assets can accommodate projection errors, produce a deficit of $1,057 million by the end of June 1984, which amounts to a deficit of 3.8 percent of the estimated total incurred expenditures for the following year. Under fairly optimistic assumptions, the monthly actuarial rates will result in an excess of $4,426 million, which amount to 20.0 percent of the estimated total incurred expenditures for the following year.

TABLE 5.—PROJECTION FACTORS AND THE ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER ALTERNATIVE SETS OF ASSUMPTIONS
12-MONTH PERIODS ENDING JUNE 30 OF 1982-1984

	This Projection			Low Cost Projection			High Cost Projection		
	1982	1983	1984	1982	1983	1984	1982	1983	1984
Projection factors (in percent): 1/									
Physician services-fees 2/									
Aged	10.8	9.6	7.4	10.3	9.1	6.9	11.3	10.1	7.9
Disabled	10.8	9.6	7.4	10.3	9.1	6.9	11.3	10.1	7.9
Physician services-residual 3/									
Aged	10.8	7.4	6.3	9.8	5.4	4.3	11.8	9.4	8.3
Disabled	15.2	11.1	9.4	13.2	6.1	4.4	17.2	16.1	14.4
Outpatient hospital services									
Aged	15.1	14.9	13.7	12.1	7.9	3.7	18.1	21.9	23.7
Disabled	41.3	30.3	24.9	33.3	20.3	14.9	49.3	40.3	34.9
Actuarial status (in millions):									
Assets	$5,535	$6,736	$7,042	$5,535	$7,430	$9,234	$5,535	$6,029	$4,800
Liabilities	3,887	4,670	5,319	3,657	4,321	4,808	4,117	5,027	5,857
Assets less liabilities	$1,648	$2,066	$1,723	$1,878	$3,109	$4,426	$1,418	$1,002	$-1,057
Ratio of assets less liabilities to expenditures (in percent) 4/	9.1	9.8	7.0	10.8	15.9	20.0	7.5	4.4	-3.8

1/ All values are per enrollee. Also, some values for 1982 and 1983 differ significantly from those contained in last year's notice due to an additional year's data which support the current values and due to the implementation of the provisions of the Tax Equity and Fiscal Responsibility Act of 1982, P.L. 97-248.
2/ As recognized for payment under the program.
3/ Increase in the number of services received per enrollee and greater relative use of more expensive services.
4/ Ratio of assets less liabilities at the end of the year to total incurred expenditures during the following year, expressed as a percent.

5. Standard Premium Rate

For the 12-month periods ending June 1984 and June 1985, the law provides that the standard monthly premium rate for both aged and disabled enrollees shall be 50 percent of the monthly actuarial rate for enrollees age 65 and older. Therefore, the standard monthly premium rate for both aged and disabled enrollees for the period July 1, 1983, through June 30, 1984, is $13.50, 50 percent of this monthly actuarial rate ($27.00).

APPENDIX C

STATEMENT OF ACTUARIAL OPINION

It is my opinion that (1) the methodology used herein is based upon sound principles of actuarial practice and (2) all the assumptions used and the resulting cost estimates are in the aggregate reasonable for the purpose of evaluating the actuarial and financial status of the Federal Supplementary Medical Insurance Trust Fund, taking into account the experience and expectations of the program.

Roland E. King
Fellow of the Society of Actuaries
Member of the American Academy of
Actuaries
Director, Office of Financial and
Actuarial Analysis
Health Care Financing Administration

SOCIAL SECURITY

Old-Age, Survivors, and Disability Insurance Program

SUMMARY OF THE 1983 TRUSTEES REPORT

JUNE 24, 1983

OFFICE OF THE ACTUARY
SOCIAL SECURITY ADMINISTRATION

(63)

SUMMARY OF THE 1983 SOCIAL SECURITY TRUSTEES REPORT: OLD-AGE, SURVIVORS, AND DISABILITY INSURANCE PROGRAM

EXECUTIVE SUMMARY

The Social Security Amendments of 1983 have restored the financial integrity of the Social Security cash benefit program for many years into the future. The program is now estimated to be adequately financed during this decade based on all four sets of actuarial assumptions used in the 1983 Trustees Report. On the basis of all but the most pessimistic of the four sets of assumptions used, the program is now estimated to be financially sound over the next 75 years.

This year's short-range projections are in marked contrast to those of the last three years, which indicated that the largest of the Social Security trust funds—the Old-Age and Survivors Insurance Trust Fund—was rapidly nearing a point at which benefits could not be paid on time. Before enactment of the 1983 amendments, the fund assets were adequate to pay OASI benefits through June 1983 only because of temporary legislative changes, including interfund borrowing authority under which loans were made from the Disability Insurance and Hospital Insurance Trust Funds in the latter part of 1982.

As a result of the 1983 amendments, actuarial projections now show that benefits can be paid on time throughout the 1980's and for many years thereafter. However, the trust fund levels are projected to be relatively low through 1987. Thus if economic conditions during the next few years are worse than those projected under the pessimistic set of assumptions, it is possible for Social Security again to experience financial difficulties in the near future. After 1987 the program's ability to withstand economic downturns is projected to improve steadily. The interfund loans that were made in 1982 are expected to be repaid before 1990 as required by law.

This year's long-range projections are in marked contrast to those of the last decade, which indicated substantial deficits over the 75-year projection period. On the basis of all but the most pessimistic of the four sets of assumptions used to develop the projections, the average yearly income rate would exceed the average yearly cost rate as a percentage of taxable payroll over the next 75 years.

The OASDI program now is in long-range actuarial balance on the basis of the intermediate-B assumptions. This actuarial balance reflects substantial year-by-year surpluses developed during the first half of the 75-year projection period, which slightly outweigh substantial deficits later on. The actuarial balance is a moving average that is recomputed each year, and continuing review of OASDI financing is necessary.

1. INTRODUCTION

Two separate parts of the Social Security cash benefit program pay monthly benefits to workers and their families:

(1) **Old-Age and Survivors Insurance** (OASI) pays benefits after a worker retires or dies.

(2) **Disability Insurance** (DI) pays benefits after a worker becomes disabled.

The two parts, OASI and DI, together are referred to as OASDI.

The Social security program is financed essentially on a pay-as-you-go basis. That is, taxes paid into the program currently are used to pay benefits to current beneficiaries. However, Social Security does maintain trust funds that hold all assets not needed currently to pay benefits and administrative expenses. Social Security funds may not be used for any other purpose.

The Secretaries of the Treasury, Labor, and Health and Human Services now serve as trustees of the Social Security trust funds. They report annually to the Congress on the condition of each fund and on projected future results.

The 1983 Annual Report for the OASI and DI Trust Funds is summarized here. The figures given in this summary, on a calendar year basis, are for the program as it is now structured following enactment of the Social Security Amendments of 1983.

Single copies of the complete annual report for OASDI can be obtained without charge from the Social Security Administration, Office of Public Inquiries, 4100 Annex, Baltimore, Maryland 21235.

OASDI Income and Trust Funds

Most OASDI revenue comes from payroll taxes paid by employees, their employers, and the self-employed. (Additional payroll taxes go into a separate trust fund for the Hospital Insurance (HI) part of Medicare. Because this summary focuses on OASDI, it does not discuss Medicare except in the context of interfund borrowing.)

Table 1 shows the OASDI payroll tax rates for employers and employees, as established by law. Taxes at these rates are paid on each worker's earnings up to $35,700 in 1983. In future years, this Social Security earnings base will rise as average wages increase. For the self-employed, the 1983 OASDI tax rate is about 1½ times the rate for employees, and after 1983 it is the same as the combined employer-employee rate.

During 1984 a tax credit is allowed to employees to offset the increase of 0.3 percentage points over the 1983 OASDI tax rate. Certain tax credits are also allowed to the self-employed over the next few years to provide a transition to the new higher rates, and thereafter to provide parity with employees on an after-tax basis.

Table 1.—Payroll Tax Schedule

Year	Contribution rates (percent of taxable earnings) payable by employer and employee, each		
	OASI	DI	Total
1983	4.775	0.625	5.40
1984-87	5.200	0.500	5.70
1988-89	5.530	0.530	6.06
1990-99	5.600	0.600	6.20
2000 & later	5.490	0.710	6.20

The trust funds serve as a contingency reserve to absorb temporary fluctuations in income and outgo. When income exceeds outgo, the excess builds up the trust funds. When outgo exceeds income, the trust funds are drawn down. The trust funds are invested in U.S. government securities bearing rates of interest similar to those for long-term securities issued to the general public.

The exact timing of income and outgo can be important under pay-as-you-go financing. In order to match OASDI income with outgo more closely, in May 1983 the so-called normalized crediting of taxes took effect. This provides that Treasury advances to the Social Security funds each month's payroll tax receipts at the beginning of the month when benefits are paid. The Social Security funds pay interest to Treasury for the extra days the funds have the money.

After 1983, taxation of benefits will provide another significant source of Social Security income. This tax is to be collected by Treasury throughout each year, and paid in advance from Treasury to the Social Security funds every calendar quarter.

The law also permits limited interfund borrowing among the OASI, DI and HI funds through 1987; such loans must be repaid with interest before 1990. Also, OASDI tax rates were recently reallocated between OASI and DI to put both funds in approximately the same financial condition.

2. SOCIAL SECURITY AMENDMENTS OF 1983

During the past year several new laws were enacted that changed the Social Security program. By far the most important of these was the Social Security Amendments of 1983, which followed closely the recommendations of the National Commission on Social Security Reform that had been appointed by the President to find ways to strengthen Social Security financing. The main provisions of the 1983 amendments are listed below.

1. Coverage of newly hired Federal employees.
2. Coverage of employees of nonprofit employers.
3. Ban on termination of coverage of State and local government employees.
4. Six-month delay in cost-of-living adjustments.
5. Modification of cost-of-living increases during periods of low trust fund balances (stabilizer provision).
6. Normalized tax transfers.
7. Extension of interfund borrowing authority.
8. Elimination of windfall benefits (for workers receiving pensions from noncovered employment).
9. Increase in normal retirement age after the year 2000.
10. Increase in delayed retirement benefits.
11. Reduced withholding rate under the retirement test.
12. Taxation of Social Security benefits.
13. Changes in tax rate schedule.
14. Acceleration of State and local tax collections.
15. Increase in benefits for certain surviving, divorced and disabled spouses.
16. Change in financing basis of noncontributory military service wage credits.
17. Reimbursement of Social Security funds for uncashed checks.
18. Change in public pension offset (for spouses with pensions from noncovered employment).
19. Taxation of contributions under salary reduction plans.
20. Suspension of benefits to certain nonresident aliens.
21. Expanded use of death certificates.
22. Other changes without significant cost impact, including provision for two more OASDI trustees from outside the government.

3. RECENT FINANCIAL RESULTS

Table 2 presents a summary of 1982 financial results for OASDI, including the cash income (or revenue), outgo (or disbursements or cost), and changes in assets during 1982, with 1981 results shown for comparative purposes.

Table 2.—Results of Financial Operations During 1982
[Billions]

	1982 Results			1981 OASDI Results
	OASI	DI	OASDI	
Trust Fund assets on January 1	$21.5	$3.0	$24.5	$26.5
Income during year:				
Payroll taxes	123.7	22.0	145.7	139.4
Interest	0.8	0.5	1.4	2.2
General fund reimbursements	0.7	0.2	0.9	0.8
Total income	125.2	22.7	147.9	142.4
Outgo during year:				
Benefit payments	138.8	17.4	156.2	141.0
Administration, including rehabilitation	1.5	0.6	2.1	1.7
Transfer to Railroad Retirement Account	1.8	(1)	1.8	1.6
Total outgo	142.1	18.0	160.1	144.4
Interfund loans: amounts received	17.5	-5.1	12.4	—
Net change in Trust Fund during year	0.6	-0.4	0.2	-1.9
Trust Fund assets on December 31	22.1	2.7	24.8	24.5

[1]Less than $0.05 billion.

Note: Components may not add to totals due to rounding.

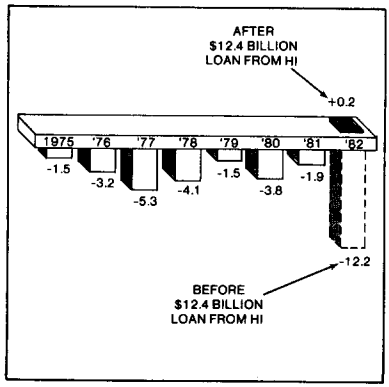
In 1982 interfund borrowing was used for the first time, with OASI borrowing $17.5 billion from DI and HI in order to pay the November and December 1982 benefits, and to continue all benefit payments through mid-1983.

Administrative expenses for OASDI in 1982 were 1.3 percent of outgo.

Chart A shows that 1982 was the first year since 1974 that the combined OASDI funds increased. However, the 1982 increase of $0.2 billion includes a $12.4 billion loan from the HI fund; without this loan the OASDI funds would have decreased by about $12 billion, or 1 percent of taxable payroll.

CHART A

OASDI DEFICITS & SURPLUS, 1975-82
($ Billions)



4. ACTUARIAL COST PROJECTIONS

The annual report contains 75-year projections of each fund's estimated financial operations and status. Because precise prediction of the future is not possible, alternative sets of reasonable assumptions are used to make short- and long-range estimates that indicate the trend and general range of future costs. Future costs could, however, fall outside the range indicated by these assumptions.

Assumptions Used

Future OASDI income and outgo will depend on mortality, fertility, unemployment, inflation and other economic and demographic factors. Demographic factors affect the numbers of people paying Social Security taxes and receiving benefits, while economic factors affect the levels of these people's wages and Social Security benefits.

This year's cost projections are prepared using four alternative sets of assumptions regarding these factors, called "optimistic", "intermediate-A", "intermediate-B", and "pessimistic" sets of assumptions.

Intermediate-A assumes future economic performance resembling the experience in periods of more robust economic growth, while intermediate-B assumes less robust economic growth. Both intermediate projections use the same demographic assumptions.

Appendix A shows selected values of several assumptions used in the four basic projections, and describes these assumptions more fully.

Measures of Actuarial Status

In analyzing the financing status of the program, several measures of actuarial status are commonly used.

The **fund ratio** is the amount in the trust fund at the beginning of a year expressed as a percentage of that year's expenditures. For example, a fund ratio of 25 percent means that the amount in the fund is one-fourth of annual outgo (or enough to pay benefits for about three months in the absence of any income). At the beginning of 1983, the fund ratios for OASI and DI were both 15 percent. Of course, the ratio for any year can only be estimated before the year is completed and the amount of expenditures is known. A fund ratio below 8 percent would represent less than one month's benefit outgo, and thus would usually imply inability to pay benefits on time. In practice, to assure payment of benefits in the short range, higher levels would be needed because OASDI income and outgo fluctuate during the year, and because unforeseen changes in the economy may cause the trust funds to drop unexpectedly. A new stabilizer provision takes effect at the end of 1984 to help avoid the need for hasty legislative action to assure payment of benefits on time; should the trust fund ratio fall below 15 percent (20 percent after 1988), annual benefit increases will be based on the lower of wage or price increases, instead of on price increases alone, with provision for higher benefit increases later to catch up with price increases.

The **cost rate** is the annual outgo or disbursements as a percentage of taxable payroll. Also, the **total income rate** (or simply the **income rate**) is the combined OASDI employee-employer payroll tax rate scheduled in the law plus the rate of income from taxation of benefits, expressed as a percentage of taxable payroll. Over a period of time, the average cost and income rates can be compared directly to measure the adequacy of financing. For the entire long-range projection period of 75 years, the **actuarial balance** is the difference between the average income rate and the average cost rate. If this actuarial balance is positive, the system is said to have an actuarial surplus, and if negative, an actuarial deficit. Such a deficit is a warning that long-range financing may need to be strengthened, although it does not give a complete picture without the other measures of financing discussed here. The program is in "**close actuarial balance**" over the long-range period if the average income rate is between 95 percent and 105 percent of the average cost rate.

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5. SHORT-RANGE FINANCING (1983-87)

Projections over the next 5 years are used by the Congress and the Administration to monitor OASDI financing. In this short-range picture, the numbers of persons receiving OASDI benefits can be forecast closely. However, changes in the national economy can have major effects on outgo and income, and are difficult to predict.

This year's report shows that under all four projections OASDI can pay benefits on time throughout this 5-year period. This is in marked contrast to the situation shown in recent years' reports, which indicated that reserves were rapidly being depleted.

Chart B shows the year-by-year OASDI surplus projected during 1983-90 by the intermediate-B assumptions. The amounts shown are lower than they would otherwise be because of repayment during these years of the $12.4 billion borrowed from HI by the OASDI funds.

CHART B

OASDI SURPLUS, 1983-90
($Billions, Projected by Intermediate-B Assumptions)

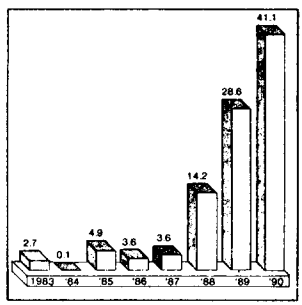
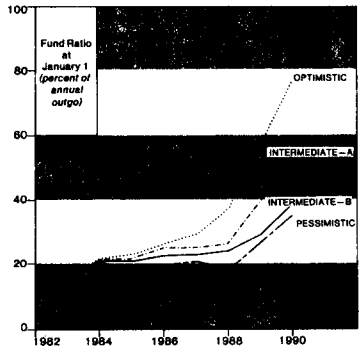


Chart C shows the projected progress of OASDI fund ratios under all four sets of assumptions during 1982-90. As of January 1, 1983, the ratio was 15 percent for OASDI. (Both the OASI and DI fund ratios also were 15 percent.) During 1983 the fund ratio jumps to the 21-22 percent level, reflecting both the normalized crediting of taxes and a lump sum payment to OASDI for military service credits. Then for several years the OASDI fund ratio is projected to grow slowly, reaching 30 percent between 1988 and 1990. After that, reserves are projected to build up more rapidly, reflecting higher payroll tax rates. Thus during the next few years margins of safety are thin; thereafter the funds are less vulnerable to the adverse effects of an economic downturn.

CHART C

OASDI FUND RATIOS
(Using alternative sets of assumptions)



Under all four sets of assumptions the $5.1 billion borrowed from the DI fund would be fully repaid, with interest, in 1988 or 1989. The $12.4 billion borrowed from the HI fund would be fully repaid, with interest, in 1987 or 1988; under the pessimistic assumptions this loan would be repaid in 1987 when needed by the HI fund to pay benefits.

6. LONG-RANGE FINANCING (1983-2057)

Long-range cost estimates for OASDI over the next 75 years, although sensitive to variations in the assumptions, give the best available indication of the trend and general range of the program's future cost. In this long-range period Social Security costs should tend to respond largely to demographic conditions. Most of the beneficiaries during the next 75 years have already been born, so that their numbers are projected mainly from the present population. The numbers of workers involved in these projections, however, depend on future birth rates, which are subject to more variability. Several important long-range demographic trends, already under way, are anticipated to raise the proportion of the aged in the population in the next 75 years:

(1) Because of the large number of persons born shortly after World War II, rapid growth is expected in the aged population after the turn of the century.

(2) At the same time, low birth rates would hold down the number of young people.

(3) Projected improvements in mortality also would increase the numbers of aged persons.

Table 3 illustrates the improvement in life expectancies that is anticipated, based on the intermediate assumptions.

Table 3.—Past and Projected Life Expectancies[1]

Year	At birth		At age 65	
	Male	Female	Male	Female
1940	60.9	65.3	11.9	13.4
1960	66.6	73.2	12.9	15.9
1980	69.8	77.5	14.0	18.3
2000	73.4	81.0	15.7	20.8
2020	74.4	82.2	16.4	21.7
2040	75.4	83.3	17.2	22.6
2060	76.3	84.4	17.9	23.6

[1]Life expectancy is the average number of years of life remaining, based on the death rates at each age in the year shown. Rates are based on census data up to 1980, projected beyond 1980 by the intermediate assumptions.

Chart D shows fertility rates from 1940 on, projected over the next 75 years by the three sets of demographic assumptions. The post-World War II baby boom shows up clearly, followed by the historically low fertility rates of recent years.

CHART D

TOTAL FERTILITY RATES
(Actual and projected)

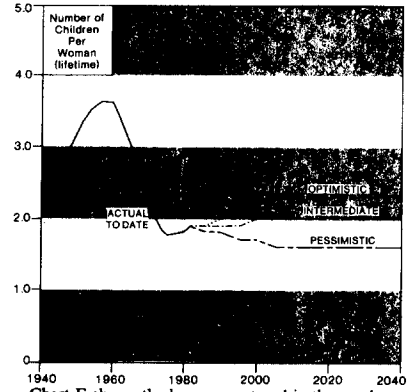


Chart E shows the long-range trend in the number of covered workers for each OASDI beneficiary, based on the three sets of demographic assumptions. ("Beneficiaries" includes not only retired workers, but also disabled workers, spouses, children and survivor beneficiaries.) This ratio has fallen from 5.1 in 1960 to 3.2 currently. It is estimated to reach a level of about 2 by the middle of the next century, as the number of beneficiaries increases more rapidly than the number of covered workers.

CHART E

NUMBER OF WORKERS PER OASDI BENEFICIARY

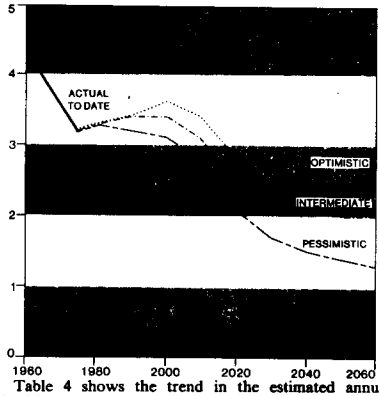


Table 4 shows the trend in the estimated annual OASDI cost rate (outgo as a percentage of taxable payroll) under each of the four sets of assumptions during the next 75 years. Under each set of assumptions, the cost rate increases rapidly after the turn of the century. Under the intermediate and optimistic sets of assumptions, the outgo in relation to taxable payroll is fairly level or decreasing after 2030, while under the pessimistic assumptions the outgo is still increasing at the end of the 75-year period.

Table 4.—Estimated Long-Range OASDI Cost Rates
[Percentage of Taxable Payroll]

Year	Optimistic	Intermediate -A	Intermediate -B	Pessimistic
1983	11.46	11.49	11.49	11.62
1990	10.15	10.70	11.27	11.38
2000	8.14	9.32	10.08	11.25
2010	8.22	9.57	10.31	11.93
2020	10.02	11.91	12.76	15.43
2030	11.00	13.71	14.73	19.17
2040	10.60	14.05	15.17	21.71
2050	10.16	14.13	15.27	23.82
2057	10.07	14.28	15.42	25.08

Chart F shows the estimated OASDI cost rates and income rates over the next 75 years based on the intermediate-B assumptions. During the first half of this period the projection shows that income will generally exceed outgo, developing a substantial surplus each year. After about 2020 the reverse is true, with outgo exceeding income and thus generating substantial deficits. Over the entire period such surpluses and deficits are approximately in balance.

After 1990, when the scheduled employee-employer payroll tax rate has leveled off at 12.4 percent, the income rate continues to rise slightly as a result of taxation of benefits—from 12.7 percent in 1990 to 13.2 percent in 2060 under the intermediate-B assumptions.

CHART F

INCOME RATES VS. COST RATES (Intermediate—B assumptions)

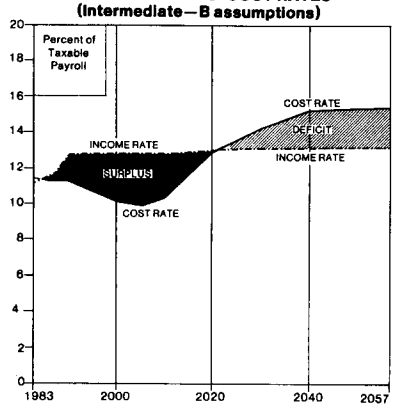


Table 5 compares the estimated OASDI cost rates and income rates for the next 75 years under the four alternative sets of assumptions. The estimated average annual income rate for the entire 75-year projection period exceeds the average annual cost rate for the period by 0.84 percent of taxable payroll under intermediate-A and 0.02 percent under intermediate-B. Thus under intermediate-B the OASDI program now is in close actuarial balance, and has eliminated the large deficit that was projected a year ago.

Table 5.—Estimated 75-Year Average OASDI Cost Rates, Income Rates, Actuarial Balance
[Percentage of Taxable Payroll]

Set of assumptions	Income rate	Cost rate[1]	Actuarial balance[2]
Optimistic	12.73	9.81	2.92
Intermediate-A	12.83	11.99	0.84
Intermediate-B	12.87	12.84	0.02
Pessimistic	13.04	16.56	-3.51

[1]Cost rate is the estimated outgo as a percentage of taxable payroll.

[2]Actuarial balance is the difference between the income rate and the cost rate before rounding.

Appendix B is an index to certain key tables in the complete annual report for 1983. Other tables in the report give technical data and results by fiscal years.

APPENDICES

APPENDIX A

Economic and Demographic Assumptions

The table below shows selected values of several assumptions used in the 1983 OASDI Trustees Report.

Year	Percentage increase over previous year in average annual— Real GNP[1]	Wages in covered employment	Consumer price index	Average percentage unemployed	Total fertility rate[2]
		Optimistic Assumptions			
1983	3.4	4.3	2.5	10.0	1.9
1984	5.7	5.2	3.3	8.6	1.9
1985	5.1	5.3	3.7	7.5	1.9
1995	3.8	4.5	2.0	4.0	2.1
2005 & later	3.6	4.5	2.0	4.0	2.3
		Intermediate-A Assumptions			
1983	3.1	4.3	2.7	10.0	1.9
1984	4.8	5.0	3.6	8.8	1.9
1985	4.1	4.8	4.0	7.9	1.9
1995	3.3	5.0	3.0	5.0	1.9
2005 & later	3.1	5.0	3.0	5.0	2.0
		Intermediate-B Assumptions			
1983	2.4	4.6	3.1	10.1	1.9
1984	4.1	4.6	4.4	9.1	1.9
1985	3.7	5.5	5.3	8.3	1.9
1995	2.6	5.5	4.0	5.5	1.9
2005 & later	2.6	5.5	4.0	5.5	2.0
		Pessimistic Assumptions			
1983	0.5	3.9	3.3	10.5	1.8
1984	1.7	4.6	6.4	10.5	1.8
1985	3.9	7.4	7.7	9.5	1.8
1995	2.1	6.0	5.0	6.5	1.7
2005 & later	2.1	6.0	5.0	6.5	1.6

[1]Gross National Product (the total output of goods and services) expressed in constant dollars. The percentage increase in real GNP is assumed to change after the year 2005. The values for the year 2060 are 3.2, 2.3, 1.9 and 0.6 percent for the optimistic, intermediate-A, intermediate-B, and pessimistic assumptions, respectively.

[2]The number of children who would be born to a woman in her lifetime based on the birth rates at each age in the year shown (if she were to survive the entire child-bearing period).

APPENDIX B

Guide To Key Tables in the 1983 Trustees Report for OASDI

Summary of the 1983 Annual Reports of the Medicare Board of Trustees

Prepared by the Health Care Financing Administration
Bureau of Data Management and Strategy
June, 1983

1

INTRODUCTION

This summary presents an overview of the information contained in the annual reports of the trustees required under Title XVIII of the Social Security Act - Health Insurance for the Aged and Disabled, commonly known as Medicare. There are two basic programs under Medicare:

(1) Hospital Insurance (HI) which pays for inpatient hospital care and other related care of those aged 65 and over and of the long-term disabled, and

(2) Supplementary Medical Insurance (SMI) which pays for physicians' services, outpatient hospital services and other medical expenses of those aged 65 and over and of the long-term disabled.

The HI program is financed primarily by payroll taxes, with the taxes paid by current workers used to pay benefits to current beneficiaries. However, the HI program maintains a trust fund that provides a small reserve against fluctuations. This type of financing is generally known as pay-as-you-go financing. By contrast, the SMI program is financed on an accrual basis with a contingency margin. This means that the SMI trust fund should always be somewhat greater than the claims that have been incurred by enrollees but not yet paid by the program. The trust funds hold all of the income not currently needed to pay benefits and related expenses. The assets of the funds may not be used for any other purpose; however, they may be invested in certain interest-bearing obligations of the U.S. Government.

The Secretaries of Treasury, Labor, and Health and Human Services serve as trustees of the HI and SMI trust funds. The Secretary of Treasury is the managing trustee. The Administrator of the Health Care Financing Administration, the agency charged with administering the Medicare program, is the Secretary of the Board of Trustees.

Copies of the complete 1983 HI and SMI annual reports can be obtained from the Health Care Financing Administration, Office of Public Affairs, Room 658 East High Rise, 6325 Security Boulevard, Baltimore, Maryland, 21235.

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HOSPITAL INSURANCE TRUST FUND

As mentioned in the introduction, the HI trust fund is financed primarily by payroll taxes. The HI contribution rates applicable to taxable earnings in each of the calendar years 1981 and later are shown in Table 1. The maximum taxable amounts of annual earnings are shown for 1981 through 1983. After 1983, the automatic increase provisions in section 230 of the Social Security Act determine the maximum taxable amount.

TABLE 1.--CONTRIBUTION RATES AND MAXIMUM TAXABLE AMOUNT OF ANNUAL EARNINGS

Calendar year	Maximum taxable amount of annual earnings	Contribution rate (Percent of taxable earnings) Employees and employers, each	Self-Employed
1981	$29,700	1.30	1.30
1982	32,400	1.30	1.30
1983	35,700	1.30	1.30
Changes scheduled in present law:			
1984	Subject to	1.30	2.60
1985	automatic	1.35	2.70
1986 & later	increase	1.45	2.90

The Social Security Act was amended during 1982 by the Tax Equity and Fiscal Responsibility Act (TEFRA) and during 1983 by the Social Security Admendments of 1983 (Public Law 98-21). The major provisions among the many affecting the HI program were:

(1) TEFRA changed the method by which Medicare reimburses hospitals by replacing the previous per diem limits on routine inpatient

costs by limits on total inpatient costs per admission and limits on increases in total inpatient costs per admission. These limits are effective for cost reporting periods beginning on or after October 1, 1982. The limits on increases in total inpatient costs per admission expire for cost reporting periods beginning on or after October 1, 1985.

(2) Medicare coverage is extended to Federal employees, who are required to pay the hospital insurance portion of the FICA tax as of January 1, 1983.

(3) Medicare will temporarily cover hospice care for beneficiaries having a life expectancy of six months or less. This provision is effective November 1, 1983, and expires October 1, 1986.

(4) Public Law 98-21 changes the method by which Medicare makes payments to hospitals. Hospitals will no longer be reimbursed on a reasonable cost basis for their inpatient operating costs. Hospitals will be paid a prospectively determined price per discharge using diagnosis related groups. This provision is effective for hospital fiscal years beginning on or after October 1, 1983.

(5) Social Security coverage is mandated for employees of non-profit organizations. Terminations of coverage are not permitted as of March 31, 1983. Also, no terminations of coverage by State and local governments or entities will be permitted after April 20, 1983. Such entities now outside the system will be permitted to rejoin. This provision is effective upon enactment.

(6) Interfund borrowing among the OASI, DI and HI trust funds (authorized in 1981) is extended through 1987 with repayment to be made during 1988-1989 in 24 equal monthly payments. Beginning June 1983, loans would be repayable when the fund ratio of the borrowing fund exceeds 15 percent.

Operations of the HI Program

At the end of 1982, 26 million people over age 65 and 3 million disabled people under age 65 were covered under HI, financed primarily by the contributions of 116 million workers through payroll taxes. Payroll taxes during 1982 amounted to $34.6 billion, accounting for 90.9% of all HI income. About 2.7% of all income resulted from reimbursements from the general fund of the Treasury for military service credit and benefits for certain uninsured persons. Interest payments to the HI fund amounted to 5.4% of all HI income for 1982. The remaining 1.0% was contributed through premiums paid by voluntary enrollees and taxes collected from railroad workers. Of the $36.1 billion in HI disbursements, $35.6 billion was for benefit payments while the remaining $0.5 billion was spent for administrative expenses. HI administrative expenses were 1.4% of total disbursements.

Table 2 displays the HI fund operations for calendar years 1970-1982. In most years, the HI fund has increased. However, the fund ratio (the fund at the beginning of the year divided by disbursements during the year) has declined every year from its peak of 79 percent in 1975 to

45 percent in 1981. The fund ratio increased slightly at the beginning of 1982 primarily due to the increase in the contribution rate in 1981.

TABLE 2.--HI FUND OPERATIONS
CALENDAR YEARS 1970-1982
(Amounts in Billions)

Calendar year	Total income	Total disbursements	Interfund Borrowing Transfers	Net increase in fund	Fund at end of year	Ratio at beginning of year
1970	$ 6.0	$ 5.3		$ 0.7	$ 3.2	47%
1971	5.7	5.9		-0.2	3.0	54
1972	6.4	6.5		-0.1	2.9	47
1973	10.8	7.3		3.5	6.5	40
1974	12.0	9.4		2.7	9.1	69
1975	13.0	11.6		1.4	10.5	79
1976	13.8	13.7		0.1	10.6	77
1977	15.9	16.0		-0.2	10.4	66
1978	19.2	18.2		1.0	11.5	57
1979	22.8	21.1		1.8	13.2	54
1980	26.1	25.6		0.5	13.7	52
1981	35.7	30.7		5.0	18.7	45
1982	38.0	36.1	$-12.4	-10.5	8.2	52

NOTE: Components may not add to totals due to rounding.

Actuarial Status of the Trust Fund

The Board of Trustees has adopted the general financing principle that annual income to the hospital insurance program should be approximately equal to annual outlays of the program plus an amount to maintain a balance in the trust fund equal to one-half year's disbursements. Due to the $12.4 billion loan to the OASI fund at the end of 1982, the trust fund was far below this desired level. Projections were made under four alternative sets of assumptions: optimistic, two intermediate sets (alternatives

II-A and II-B), and pessimistic. Under both sets of intermediate assumptions, the trust fund ratio is projected to remain around 20 to 30 percent in most years until the late 1980's and then decline rapidly with complete exhaustion of the fund around 1990.

Under the more optimistic set of assumptions (alternative I), the trust fund is projected to grow until about 1988, then to decline steadily until the fund is completely exhausted in 1996. Under the more pessimistic set of assumptions (alternative III), the trust fund is projected to decrease steadily with complete exhaustion of the fund by 1988.

Table 3 summarizes the estimated operations of the HI trust fund under the four alternative sets of assumptions. Figure 1 shows historic trust fund ratios for recent years and projected ratios under the four sets of assumptions.

The adequacy of the financing of the HI program on a long-range basis is measured by comparing on a year-by-year basis the actual tax rates specified by law with the corresponding total costs of the program, expressed as percentages of taxable payroll. The actuarial balance is defined to be the excess of the average tax for the 25-year valuation period (1983-2007) over the average cost of the program expressed as a percent of taxable payroll. The average tax rate for the 25-year period

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TABLE 3.--ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1982-96, UNDER ALTERNATIVE SETS OF ASSUMPTIONS
(Dollar amounts in billions)

Calendar Year	Total Income	Total disbursements	Interfund borrowing transfers 1/	Net increase in fund	Fund at end of year	Ratio of assets to disbursements 2/ (percent)
			ALTERNATIVE I (Optimistic)			
1982 3/	$38.0	$ 36.1	$-12.4	$-10.6	$ 8.2	52%
1983	44.8	41.2		3.6	11.8	20
1984	46.0	46.2	1.0	0.9	12.6	26
1985	52.0	51.1	1.6	2.5	15.2	25
1986	59.1	55.7	9.1	12.5	27.6	27
1987	63.6	60.5	0.7	3.8	31.4	46
1988	68.0	65.9		2.1	33.5	48
1989	71.9	70.8		1.1	34.6	47
1990	76.8	77.1		-0.4	34.2	45
1991	80.8	82.4		-1.6	32.6	42
1992	86.1	89.1		-3.1	29.5	37
1993	90.1	95.8		-5.7	23.9	31
1994	95.3	102.8		-7.6	16.3	23
1995	99.4	110.2		-10.8	5.5	15
1996	104.5	117.6		-13.2	4/	5
			ALTERNATIVE II-A (Intermediate)			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.6	11.7	20
1984	45.8	46.5	0.6	-0.1	11.6	25
1985	51.3	51.8		-0.5	11.2	22
1986	58.2	57.1	4.8	5.9	17.1	20
1987	61.9	62.6	6.8	6.1	23.2	27
1988	65.7	68.9	0.2	-3.0	20.3	34
			ALTERNATIVE II-B (Intermediate)			
1982 3/	38.8	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.5	11.7	20
1984	45.6	46.6	0.5	-0.5	11.2	25
1985	51.3	52.3		-1.0	10.2	21
1986	58.4	58.0	1.1	1.5	11.8	18
1987	62.5	64.1	2.4	0.8	12.6	18
1988	66.0	71.0	8.4	3.5	16.1	18
1989	70.0	78.4		-8.4	7.8	21
1990	73.9	86.6		-12.6	6/	9
			ALTERNATIVE III (Pessimistic)			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.4	41.2		3.2	11.4	20
1984	44.5	46.8		-2.3	9.1	24
1985	50.5	54.1		-3.6	5.5	17
1986	58.2	61.9		-3.7	1.8	9
1987	62.6	70.5	12.4	4.5	6.3	3
1988	66.5	80.4		-13.9	7/	8

1/ A loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted from the HI fund balance. A negative amount is a loan to the OASI trust fund. A positive amount is a repayment of principal to the HI trust fund.

2/ Ratio of assets in the trust fund at the beginning of the year to disbursements during the year.

3/ Figures for 1982 represent actual experience.

4/ Trust fund depleted in calendar year 1996.

5/ Trust fund depleted in calendar year 1991.

6/ Trust fund depleted in calendar year 1990.

7/ Trust fund depleted in calendar year 1988.

NOTE: Totals do not necessarily equal the sum of rounded components.

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TABLE 3.--ESTIMATED OPERATIONS OF THE HOSPITAL INSURANCE TRUST FUND DURING CALENDAR YEARS 1982-96, UNDER ALTERNATIVE SETS OF ASSUMPTIONS
(Dollar amounts in billions)

Calendar Year	Total Income	Total disbursements	Interfund borrowing transfers 1/	Net increase in fund	Fund at end of year	Ratio of assets to disbursements 2/ (percent)
			ALTERNATIVE I (Optimistic)			
1982 3/	$38.0	$ 36.1	$-12.4	$-10.6	$ 8.2	52%
1983	44.8	41.2		3.6	11.8	20
1984	46.0	46.2	1.0	0.9	12.6	26
1985	52.0	51.1	1.6	2.5	15.2	25
1986	59.1	55.7	9.1	12.5	27.6	27
1987	63.6	60.5	0.7	3.8	31.4	46
1988	68.0	65.9		2.1	33.5	48
1989	71.9	70.8		1.1	34.6	47
1990	76.8	77.1		-0.4	34.2	45
1991	80.8	82.4		-1.6	32.6	42
1992	86.1	89.1		-3.1	29.5	37
1993	90.1	95.8		-5.7	23.9	31
1994	95.3	102.8		-7.6	16.3	23
1995	99.4	110.2		-10.8	5.5	15
1996	104.5	117.6		-13.2	4/	5
			ALTERNATIVE II-A (Intermediate)			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.6	11.7	20
1984	45.8	46.5	0.6	-0.1	11.6	25
1985	51.3	51.8		-0.5	11.2	22
1986	58.2	57.1	4.8	5.9	17.1	20
1987	61.9	62.6	6.8	6.1	23.2	27
1988	65.7	68.9	0.2	-3.0	20.3	34
1989	69.8	75.8		-6.0	14.3	27
1990	73.9	83.5		-9.6	4.7	17
1991	77.5	91.5		-14.0	5/	5
			ALTERNATIVE II-B (Intermediate)			
1982 3/	38.8	36.1	-12.4	-10.6	8.2	52
1983	44.7	41.2		3.5	11.7	20
1984	45.6	46.6	0.5	-0.5	11.2	25
1985	51.3	52.3		-1.0	10.2	21
1986	58.4	58.0	1.1	1.5	11.8	18
1987	62.5	64.1	2.4	0.8	12.6	18
1988	66.0	71.0	8.4	3.5	16.1	18
1989	70.0	78.4		-8.4	7.8	21
1990	73.9	86.6		-12.6	6/	9
			ALTERNATIVE III (Pessimistic)			
1982 3/	38.0	36.1	-12.4	-10.6	8.2	52
1983	44.4	41.2		3.2	11.4	20
1984	44.5	46.8		-2.3	9.1	24
1985	50.5	54.1		-3.6	5.5	17
1986	58.2	61.9		-3.7	1.8	9
1987	62.6	70.5	12.4	4.5	6.3	3
1988	66.5	80.4		-13.9	7/	8

1/ A loan to the OASI trust fund would still be an asset of the HI trust fund. However, since these assets are not immediately available for payment of HI benefits, they are subtracted from the HI fund balance. A negative amount is a loan to the OASI trust fund. A positive amount is a repayment of principal to the HI trust fund.

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4/ Trust fund depleted in calendar year 1996.

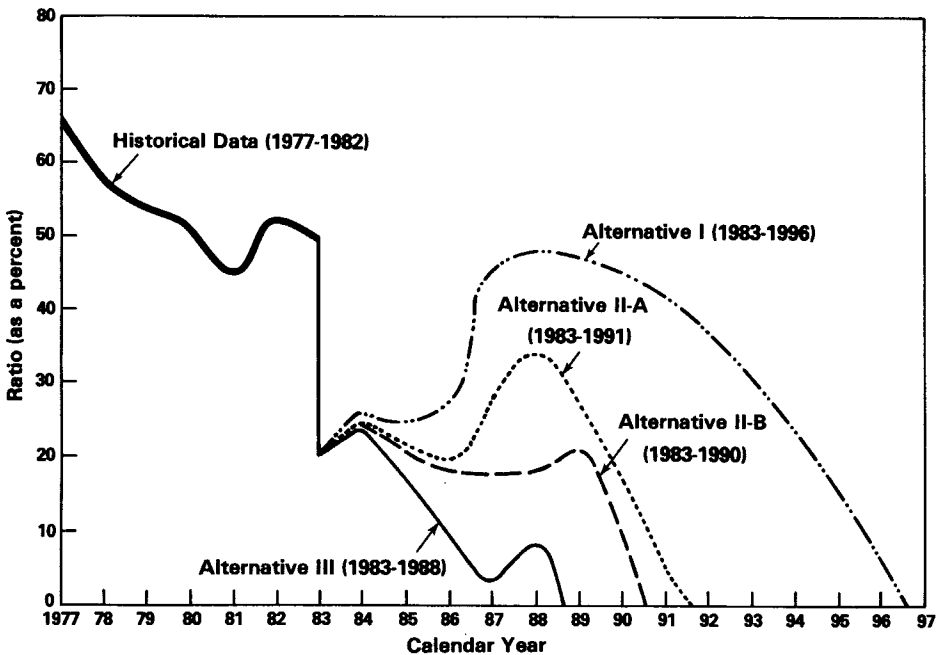
5/ Trust fund depleted in calendar year 1991.

6/ Trust fund depleted in calendar year 1990.

7/ Trust fund depleted in calendar year 1988.

NOTE: Totals do not necessarily equal the sum of rounded components.

Figure 1
Short Term HI Trust Fund Ratios



Note: The trust fund ratio is defined as the ratio of assets in the trust fund at the beginning of the year to disbursements during the year.

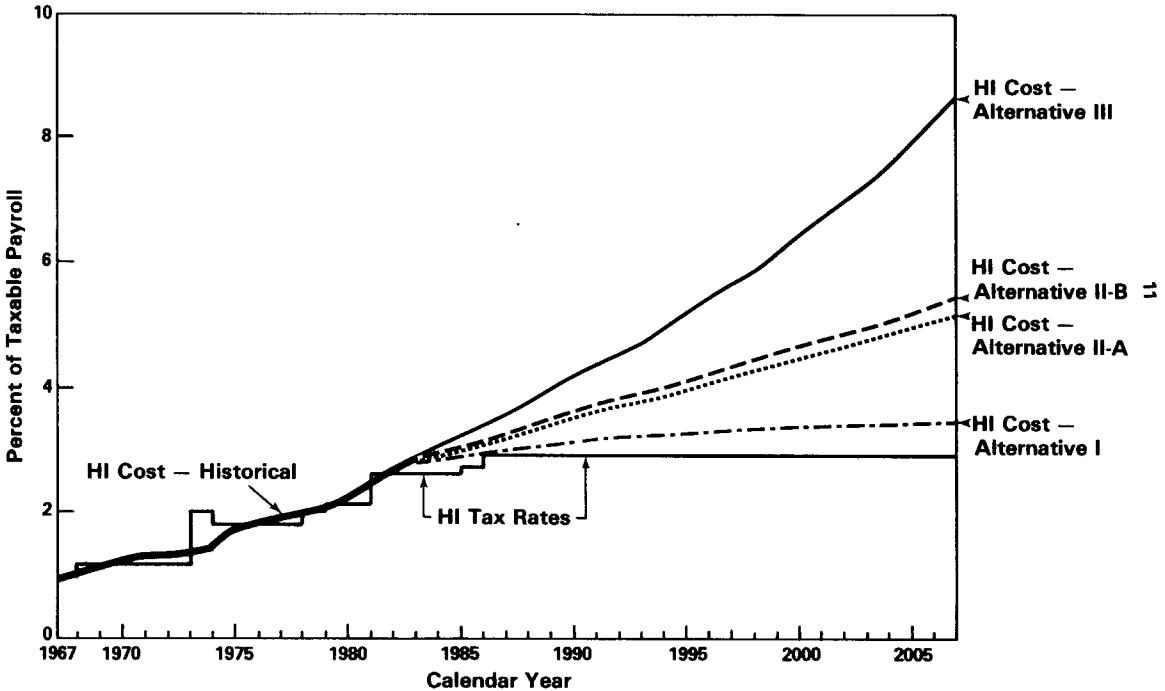
1983-2007 is 2.87 percent. The average cost of the program under alternatives II-A and II-B is 3.97 and 4.11 percent of taxable payroll, respectively. Table 4 compares the actuarial balance under each of the four sets of assumptions. Figure 2 shows the year-by-year costs as a percent of taxable payroll for each of the four sets of assumptions, as well as the scheduled tax rates. The cost figures in Table 4 and Figure 2 include amounts for building and maintaining the trust fund at the level of a half year's disbursements as recommended by the Board of Trustees. Figure 2 emphasizes the inadequacy of the financing of the HI program by illustrating the divergence of the program costs and scheduled tax rates under each set of assumptions.

TABLE 4.--ACTUARIAL BALANCE OF THE HOSPITAL INSURANCE PROGRAM, UNDER ALTERNATIVE SETS OF ASSUMPTIONS

	Alternative			
	I	II-A	II-B	III
Average contribution rate, scheduled under present law 1/	2.87%	2.87%	2.87%	2.87%
Average cost of the program, for expenditures and for trust fund building and maintenance 2/	3.21	3.97	4.11	5.38
Actuarial balance 3/	-0.34	-1.10	-1.24	-2.51

1/ Average for the 25-year period 1983-2007.
2/ Average for the 25-year period 1983-2007, expressed as a percent of taxable payroll. Taxable payroll is adjusted to take into account the lower contribution rates on self-employment income in 1983, on tips, and on multiple-employer "excess wages" as compared with the combined employer-employee rate.
3/ The actuarial balance of the hospital insurance program is defined to be the excess of the average tax rate for the 25-year valuation period over the average cost of the program, expressed as a percent of taxable payroll, for the same period.

Figure 2
Estimated HI Cost and Tax Rates



It is noteworthy that under all four sets of assumptions used in the 1983 report, the outlook for the hospital insurance trust fund is slightly more optimistic than it was in the 1982 report. This is primarily the result of the major legislation during 1982 and 1983 which will help curtail the rapid increase in hospital costs. Table 5 below presents a comparison of the projected experience in the 1982 and 1983 reports.

TABLE 5.--STATUS OF THE HOSPITAL INSURANCE TRUST FUND

Alternative Assumptions	Year in which the trust fund is exhausted as published in the		Actuarial Balance of the HI program 1/ as published in the	
	1982 Report	1983 Report	1982 Report	1983 Report
I (Optimistic)	1991	1996	-0.86	-0.34
II-A (Intermediate)	1989	1991	-1.63	-1.10
II-B (Intermediate)	1987	1990	-2.07	-1.24
III (Pessimistic)	1986	1988	-3.73	-2.51

1/The actuarial balance of the hospital insurance program is defined to be the excess of the average tax rate for the 25-year valuation period over the average cost of the program, expressed as a percent of taxable payroll, for the same period.

13

Conclusion

The present financing schedule for the hospital insurance program is barely adequate to ensure the payment of benefits through the end of this decade if the assumptions underlying the estimates are realized. The trust fund is exhausted in 1991 and 1990 under alternatives II-A and II-B, respectively. Under the more pessimistic assumptions, the fund is exhausted in 1988. Even under the more optimistic alternative I, the present financing schedule will result in the fund being exhausted in 1996. In order to bring the hospital insurance program into close actuarial balance, either disbursements of the program will have to be reduced by 30 percent or financing will have to be increased by 43 percent. Despite the short-term uncertainties, the enactment of TEFRA in 1982 and Public Law 98-21 in 1983 has substantially reduced the long range deficit of the HI fund. More importantly, the prospective payments provisions of Public Law 98-21 have made the outlays of the HI program potentially less vulnerable to excessive rates of growth in the hospital industry by providing the Secretary of Health and Human Services with some discretion over the level of payments to hospitals.

The quadrennial Advisory Council on Social Security, appointed by the Secretary, will be addressing the financial status of the hospital insurance trust fund. The council's report is due by the end of 1983. The Board recommends that Congress study carefully the advisory council's recommendations as it takes further action to curtail the rapid growth in the cost of the hospital insurance program which has occurred in recent years and which is anticipated in the future.

14

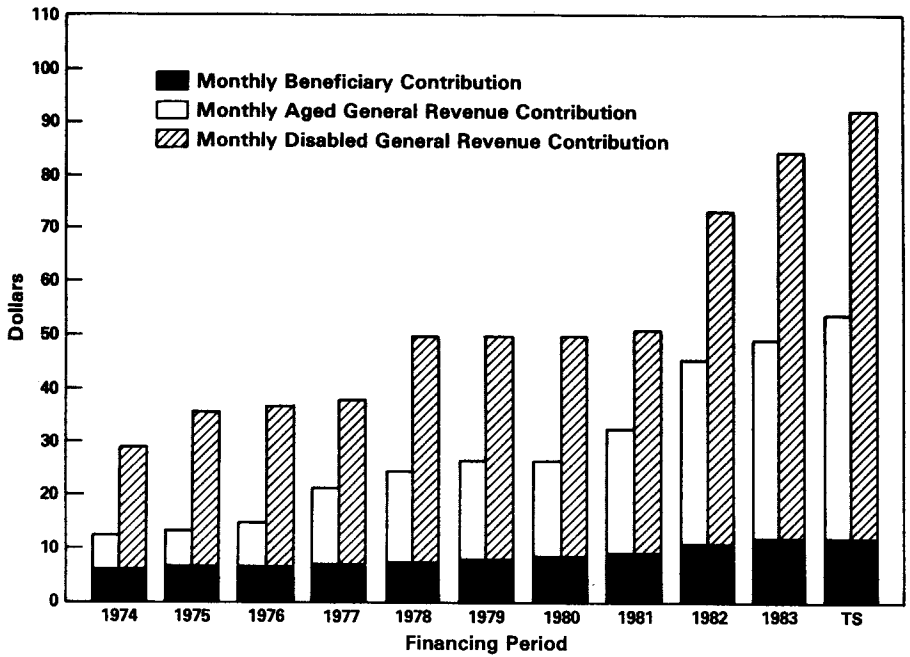
SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

Financing for the supplementary medical insurance program is established annually on the basis of standard monthly premium rates (paid by or on behalf of all participants) and monthly actuarial rates determined separately for aged and disabled beneficiaries (on which general revenue contributions are based). Prior to the 6-month transition period (July 1, 1983 through December 31, 1983) these rates were applicable to the 12-month periods ending June 30. Beginning January 1, 1984, the annual basis will change to the 12-month periods ending December 31. Monthly actuarial rates are equal to one-half the monthly amounts necessary to finance the SMI program. These rates determine the amount to be contributed from general revenues on behalf of each enrollee. Based on the formula in the law, the government contribution effectively makes up the difference between twice the monthly actuarial rates and the standard monthly premium rate. Figure 3 presents these values for financing periods since 1974. The extent to which general revenue financing is becoming the major source of income for the program is clearly indicated in this figure.

Standard monthly premium rates and monthly actuarial rates have been announced for periods through December 31, 1983. For the 6-month period ending December 31, 1983 (transitional semester (TS)), the standard monthly premium rate is $12.20, and the monthly actuarial rates are $27.00 and $46.10 for the aged and disabled, respectively.

The Social Security Act was amended during 1982 and 1983. The major provisions among the many affecting the SMI program were:

Figure 3
SMI Monthly Per Capita Income



Financing Period:
For periods 1983 and earlier, the financing period is July 1 through June 30.
For the transitional semester (TS), the financing period is July 1, 1983 through December 31, 1983.

(1) The premium rate applicable July 1, 1983 through December 31, 1983 is frozen at the rate which applied June 1983. Some general revenues shall be added from July through December to compensate for keeping the smaller June 1983 premium for that period. From January 1984 through December 1985, the monthly SMI premium is set at one-half of the actuarial rate for aged enrollees. After December 1985 the determination of the premium rate will revert to the method used before enactment of this provision and future increases shall apply on a calendar year basis.

(2) Medicare becomes the secondary payor for employees aged 65 through 69 (and their spouses of the same age) who are covered by health plan benefits of an employer.

(3) The basis upon which provider-based physicians are reimbursed are to be prescribed in regulations which distinguish between (a) professional component, and (b) provider component.

Operations of the SMI Program

In fiscal year 1982, 28.2 million people were covered under SMI. General revenue contributions during 1982 amounted to $13.3 billion, accounting for 75.6% of all SMI income. About 21.7% of all income resulted from the premiums paid by the participants, with interest payments to the SMI fund accounting for the remaining 2.7%. Of the $15.6 billion in SMI disbursements, $14.8 billion was for benefit payments while the remaining $0.8 billion was spent for administrative expenses. SMI administrative expenses were 4.8% of total disbursements. The historical operations of

the SMI trust fund since fiscal year 1977, as well as the projected operations of the fund for fiscal years through 1985, for both alternative II-A and alternative II-B are shown in table 6. As can be seen, income has exceeded disbursements for most of the historical years and the trust fund balance is projected to continue to increase through fiscal year 1985. However, as the report notes, the financial status of the program depends on both the total net assets and liabilities. It is, therefore, necessary to examine the incurred experience of the program since it is this experience which is used to determine the actuarial rates discussed above and which forms the basis of the concept of actuarial soundness as it relates to the SMI program.

TABLE 6.--SMI FUND OPERATIONS
FISCAL YEARS 1977-1985
(In Billions)

Fiscal Year	Total income	Total disbursements	Net increase in fund	Fund at end of year
1977	$ 7.4	$ 6.3	$ 1.0	$2.3
1978	9.0	7.4	1.7	4.0
1979	9.8	8.8	1.0	5.0
1980	10.3	10.7	-0.5	4.5
1981	12.4	13.2	-0.8	3.7
1982	17.6	15.6	2.1	5.8
Alternative II-A:				
1983	19.1	18.3	0.7	6.5
1984	22.4	21.3	1.1	7.6
1985	25.3	24.5	0.8	8.5
Alternative II-B:				
1983	19.1	18.3	0.7	6.5
1984	22.4	21.3	1.1	7.6
1985	25.5	24.6	0.9	8.5

Note: Components may not add to totals due to rounding.

18

Actuarial Soundness of the SMI Program

The concept of actuarial soundness, as it applies to the supplementary medical insurance program, is closely related to the concept as it applies to private group insurance. The supplementary medical insurance program is essentially yearly renewable term insurance intended to be self-supporting from premium income paid by the enrollees and from income contributed from general revenue in proportion to premium payments.

In testing the actuarial soundness of the supplementary insurance program, it is not appropriate to look beyond the period for which the enrollee premium rate and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that (1) income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities which will have been incurred by the end of that time but will not have been paid yet. Even if these tests of actuarial soundness are not met, the program can continue to operate if the trust fund remains at a level adequate to permit the payment of claims as presented. However, to protect against the possibility that cost increases under the program will be higher than assumed, assets should be sufficient to cover the impact of a moderate degree of projection error.

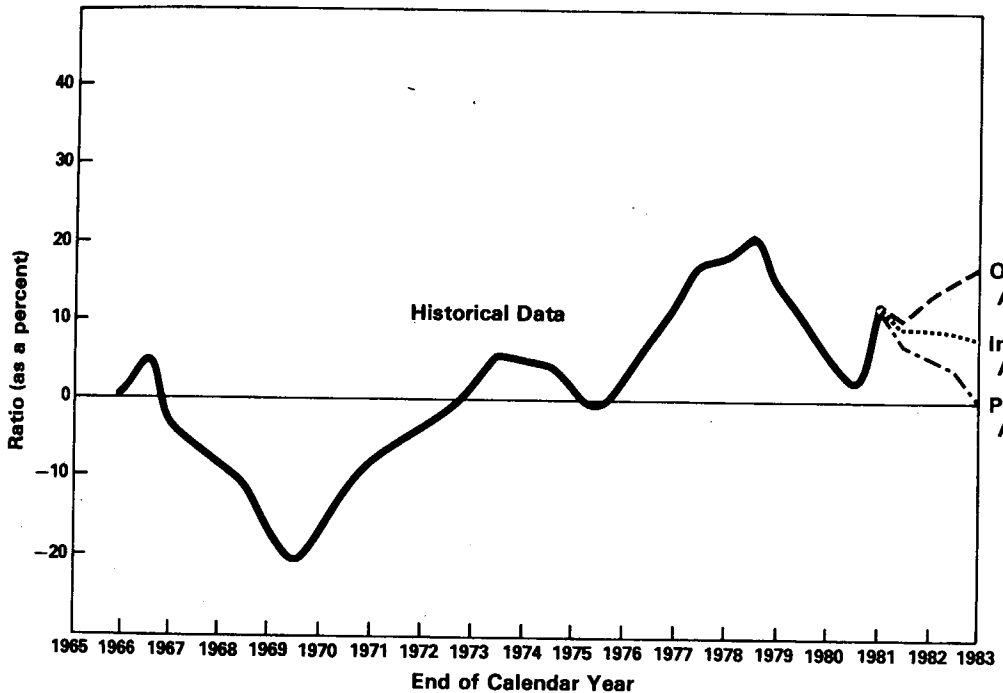
The initial tests for actuarial soundness and trust fund adequacy can be viewed by direct examination of absolute dollar levels. In providing an appropriate contingency or margin for error, however, there must

be some relative measure. The relative measure or ratio used for this purpose is the ratio of net surplus or deficit to the following year's incurred expenditures. Figure 4 shows this ratio for historical years and for projected years under the intermediate assumptions (alternative II-B), as well as high and low cost sensitivity scenarios.

Financing for the 12-month period ending June 30, 1983 was established to maintain assets at the same level relative to program expenditures which existed prior to June 30, 1982. The resulting excess of assets over liabilities as of June 30, 1983 represents 9.4% of the projected incurred expenditures for the following 12-month period.

The actuarial rates for the 6-month period ending December 31, 1983, as implemented, will reduce this excess to a more appropriate level. Under more pessimistic assumptions as to cost increases, assets based on financing already established will be insufficient to cover outstanding liabilities. However, the trust fund would remain positive allowing claims to be paid.

Figure 4
Actuarial Status of the SMI Trust Fund



Note: The actuarial status of the SMI trust fund is measured by the ratio of the end of year surplus or deficit to the following year's incurred expenditures.

Conclusion

The financing established through December 1983 is sufficient to cover projected benefit and administrative costs incurred through that time period and to build a level of trust fund assets which is adequate to cover the impact of a moderate degree of projection error. Thus, the SMI program can be said to be actuarially sound.

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