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1985 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

COMMUNICATION

From

THE BOARD OF TRUSTEES, FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

Transmitting

THE 1985 ANNUAL REPORT OF THE BOARD, PURSUANT TO SECTION 1841(b) OF THE SOCIAL SECURITY ACT, AS AMENDED

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Supplementary Medical Insurance Trust Fund
Washington, D.C, March 28, 1985

HONORABLE THOMAS P. O'NEILL, JR.
Speaker of the House of Representatives
Washington, D.C.

HONORABLE GEORGE BUSH
President of the Senate
Washington, D.C.

GENTLEMEN:

We have the honor of transmitting to you the 1985 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 20st such report), in compliance with the provisions of section 1841(b) of the Social Security Act.

Respectfully,

JAMES A. BAKER, III,
Secretary of the Treasure, and
Managing Trustee of the Trust Fund

FORD B. FORD,
Under Secretary of Labor,
and Acting Trustee

MARGARET M. HECKLER,
Secretary of Health and
Human Services and Trustee

MARY F. FULLER,
Trustee

SUZANNE D. JAFFE,
Trustee

CAROLYNE K. DAVIS, Ph.D.,
Administrator of the Health Care Financing
Administration, and Secretary,
Board of Trustees

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THE BOARD OF TRUSTEES

The Federal Supplementary Medical Insurance Trust Fund, established on July 30, 1965, is held by the Board of Trustees under the authority of section 1841 (b) of the Social Security Act, as amended. The board has five members. Three serve in an ex officio capacity. These members are the Secretary of the Treasury, the Secretary of Labor, and the Secretary of Health and Human Services. Two public members are provided for by the Social Security Amendments of 1983 (Public Law 98-21, enacted into law on April 20, 1983). The two public members were nominated by the President for a term of four years, and were confirmed by the Senate.

By law, the Secretary of the Treasury is designated as the Managing Trustee and the Administrator of the Health Care Financing Administration is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operation and status of the trust fund, in compliance with section 1841(b)(2) of the Social Security Act. This is the 1985 annual report, the twentieth such report.

HIGHLIGHTS

(a) Disbursements of the supplementary medical insurance trust fund increased 11.3 percent in fiscal year 1984 over 1983. Most of this increase resulted from higher physician fees recognized by the program and the use of more physician services by program enrollees.

(b) Income to the trust fund increased 17.6 percent in fiscal year 1984 over 1983. This resulted from increased actuarial rates which determine the general revenue contribution and from increased enrollment in the program. During fiscal year 1984, premiums from participants accounted for 22 percent of income, general revenue contributions accounted for 75 percent of income, and the remaining income was derived from earnings on investments.

(c) The trust fund increased $2,153 million to $8,799 million during fiscal year 1984.

(d) In September of 1984, the Secretary of Health and Human Services promulgated a standard monthly premium rate of $15.50 and actuarial rates of $31.00 for the aged enrollees and $52.70 for the disabled enrollees for calendar year 1985.

SOCIAL SECURITY AMENDMENTS SINCE THE 1984 TRUSTEES REPORT

Public Law 98-369, the "Deficit Reduction Act of 1984," which was enacted July 18, 1984, contained several provisions having an impact on the Federal Supplementary Medical Insurance Trust Fund. They include:

(1) The Medicare secondary payor provision for workers and their spouses aged 65 to 69 who are covered by an employer' a group health insurance is extended to cases where the employee has not reached age 65 and has a spouse age 65 through 69. Effective January 1, 1985 ·

(2) The monthly SMI premium for calendar years 1986 and 1987 will be set at one half the actuarial rate for aged enrollees. This provision is an extension of a temporary provision that set the monthly SMI premium similarly for calendar years 1984 and 1985. In addition, for each enrollee, the dollar increase in the SMI premium may not exceed the dollar amount of the Social Security COLA. Effective January 1, 1986.

(3) The Secretary is required to establish fee schedules for diagnostic laboratory tests on a statewide, regional, or carrier-wide basis for the fee screen year beginning July 1, 1984. For independent laboratories, physicians, and hospital laboratories furnishing tests to non-hospital patients, the fee schedule is set initially at 60 percent of prevailing charges; for hospital laboratories serving .hospital outpatients, the initial level is 62 percent of prevailing charges. The fee schedules will be adjusted annually to reflect increases or decreases in the Consumer Price Index. After three years, payment for lab services furnished by independent laboratories, physicians and hospital laboratories serving non-hospital patients is to be made on the basis of a national fee schedule. At that time, hospital lab services to outpatients would revert back to being reimbursed on a reasonable cost basis. Effective July 1, 1984.

(4) For fifteen months beginning July 1, 1984, Medicare customary and prevailing charges for physician services are frozen at the levels that were in effect for the twelve-month period ending June 30, 1984. In addition, a participating physician system is established under which physicians may voluntarily agree to accept assignment for all services to Medicare patients. Participating physicians are allowed normal increases in their actual charges to Medicare patients during the freeze period. These normal increases will be recognized in future calculations of customary charges of participating physicians. After this fifteen month period, customary and prevailing charges will be updated each October 1. Effective July 1, 1984.

(5) The mean or mode test for establishing customary charges for teaching physicians who do not have an outside practice is expanded by placing a floor on customary physicians at a particular teaching hospital agree to take assignment for all Medicare patients they serve in that hospital, their customary charges will be set at 90 percent of the prevailing charges in that locality. The new provision also gives the Secretary discretion in defining teaching physicians. Effective July 1, 1984.

(6) Coverage of hepatitis B vaccine is provided to individuals who are at high or intermediate risk of contracting hepatitis B. The provision permits separate payment for vaccines for end stage renal disease patients who receive dialysis at or through a facility. The provision gives the Secretary discretion in developing payment amounts that reflect the general cost of efficiently providing such services. Effective September 1, 1984.

(7) The Secretary will deny coverage for the debridement of mycotic toenails if performed more frequently than once every 60 days. Exceptions will be authorized if medical necessity is documented by the billing physician. Effective upon enactment.

Public Law 98-460, the "Social Security Disability Benefits Reform Act of 1984," which was enacted October 9, 1984 contains one provision having an impact on the Federal Supplementary Medical Insurance Trust Fund. It reauthorizes until June 1988 (permanently for SSI disability recipients) an expired provision permitting individuals notified of termination to elect to have disability benefits and Medicare coverage continued through the Administrative Law Judge level of appeal. If the judgment is upheld, however, disability benefit payments are subject to recovery. Recoupment cannot be made for Medicare benefits. Effective upon enactment.

NATURE OF THE TRUST FUND

The Federal Supplementary Medical Insurance Trust Fund was established on July 30, 1965, as a separate account in the United States Treasury. All the financial operations of the supplementary medical insurance program are handled through this fund.

The major sources of receipts of the trust fund are (1) contributions of the Federal Government that are authorized to be appropriated and transferred from the general fund of the Treasury, end (2) premiums paid by eligible persons who are voluntarily enrolled in the program. Eligible persons aged 65 and over have been able to enroll in the program since its inception in July 1966. Since July 1973, disabled persons under age 65, who meet certain eligibility requirements, have also been able to enroll in the program.

The premiums paid by participants are based on the standard monthly premium rate, which is the same for participants aged 65 and over and for disabled participants under age 65. Premiums paid for fiscal years 1967 through 1973 were matched by an equal amount of Government contributions. Beginning July 1973, the amount of Government contributions corresponding to premiums paid by each of the two groups of participants is determined by applying a ratio (known as the matching rate), prescribed in the law for each group, to the amount of premiums received from that group of participants. The ratio is equal to (1) twice the amount of the monthly actuarial rate applicable to the particular group of participants, minus the amount of the standard monthly premium rate, divided by (2) the amount of the standard monthly premium rate.

Standard monthly premium rates and actuarial rates are promulgated each year by the Secretary of Health and Human Services. The standard monthly premium rates in effect from the beginning of the program, July 1966 through June 1983, the rate for July 1983 through December 1983, and the rates for calendar years 1984 and 1985, are shown in table 1. Actuarial rates and the corresponding matching rates in effect from July 1973 through June 1983, the rates applicable for July 1983 through December 1983, and the rates for calendar years 1984 and 1985 are also shown.

TABLE 1.—STANDARD MONTHLY PREMIUM RATES, ACTUARIAL RATES, AND MATCHING RATIOS

		Monthly actuarial rate		Matching ratio	
	Standard monthly premium rate	Enrollees aged 65 and over	Disabled enrollees under age 65	Enrollees aged 65 and over	Disabled enrollees under age 65
July 1966 - March 1968	$3.00	—	—	—	—
April 1968 - June 1970	4.00	—	—	—	—
12-month period ending June 30 of -					
1971	5.30	—	—	—	—
1972	5.60	—	—	—	—
1973	5.80	—	—	—	—
1974[1]	6.30	$6.30	$14.50	1.0000	3.6032
1975	6.70	6.70	18.00	1.0000	4.3731
1976	6.70	7.50	18.50	1.2388	4.5224
1977	7.20	10.70	19.00	1.9722	4.2778
1978	7.70	12.30	25.00	2.1948	5.4935
1979	8.20	13.40	25.00	2.2683	5.0976
1980	8.70	13.40	25.00	2.0805	4.7471
1981	9.60	16.30	25.50	2.3958	4.3125
1982	11.00	22.60	36.60	3.1091	5.6545
1983	12.20	24.60	42.10	3.0328	5.9016
July 1983 - December 1983	12.20	27.00	46.10	3.4262	6.5574
Calendar year					
1984	14.60	29.20	54.30	3.0000	6.4384
1985	15.50	31.00	52.70	3.0000	5.8000

[1]In accordance with limitations on the costs of health care imposed under phase III of the Economic Stabilization program, the standard premium rate tor July and August 1973 was set at $5.80 and $6.10, respectively. Effective September 1973, the rate increased to $6.30.

Another source from which receipts of the trust fund are derived is interest received on investments held by the fund. The investment procedures of the fund are described later in this section.

Section 201(i) of the Social Security Act authorizes the managing Trustee to accept and deposit in the trust fund unconditional money gifts or bequests made for the benefit of the fund or for any activity financed through the fund.

Expenditures for benefit payments and administrative expenses under the program are paid out of the trust fund. All expenses incurred by the Department of Health and Human Services and by the Department of the Treasury in carrying out the supplementary medical insurance provisions of title XVIII of the Social Security Act are charged to the trust fund. The Secretary of Health and Human Services certifies benefit payments to the Managing Trustee, who makes the payments from the trust fund in accordance therewith.

Prior to October 1, 1983, hospitals, at their option, were permitted to combine their billing for both hospital costs and physician components of radiology and pathology services rendered hospital inpatients by hospital-based physicians. Where hospitals elected this billing procedure, payments were made initially from the hospital insurance trust fund, with reimbursement later to it from the supplementary medical

insurance trust fund. The reimbursements so made were on a provisional basis and are subject to adjustment, with appropriate interest allowances, as the actual experience develops and is analyzed.

The Social Security Amendments of 1967 and 1972 authorize the Secretary of Health and Human Services to develop and conduct a broad range of experiments and demonstration projects designed to determine various methods of increasing efficiency and economy in providing health care services, while maintaining the quality of such services, under the hospital insurance and supplementary medical insurance programs. A sizeable portion of such costs of such experiments and demonstration projects are paid out of the hospital insurance and supplementary medical insurance trust funds, with the remainder funded through general revenues.

Congress has authorized expenditures from the trust funds for construction, rental, and lease or purchase contracts of office buildings and related facilities for use in connection with the supplementary medical insurance program. Both the capital costs of construction financed directly from the trust fund and the rental, lease, or purchase contract costs of acquiring facilities are included in trust fund expenditures. In 1972-75, construction of several large facilities was authorized under purchase contract authority, wherein initial capital costs were borne by the private sector. Under this method of facilities acquisition, trust fund expenditures for use and ultimate Government ownership of a facility are made over periods of from 10 to 30 years. Whatever the manner of acquisition, the net worth of facilities and other fixed capital assets is not carried in the statement of the assets of the trust fund presented in this report. This is because the value of fixed capital assets does not represent funds available for benefit or administrative expenditures and, therefore, is not viewed as being a consideration in assessing the actuarial status of the funds.

That portion of the trust fund which, in the judgment of the Managing Trustee, is not required to meet current expenditures for benefits and administration is invested in interest-bearing obligations of the U.S. Government (including special public-debt obligations described below), in obligations guaranteed as to both principal and interest by the United States, or in certain federally sponsored agency obligations that are designated in the laws authorizing their issuance as lawful investments for fiduciary and trust funds under the control and authority of the United States or any officer of the United States. Obligations of these types may be acquired on original issue at the issue price or by purchase of outstanding obligations at their market price.

The Social Security Act authorizes the issuance of special public-debt obligations for purchase exclusively by the trust fund. The law requires that such special public-debt obligations shall bear interest at a rate based on the average market yield (computed on the basis of market

quotations as of the end of the calendar month next preceding the date of such issue) on all marketable interest-bearing obligations of the United States forming a part of the public debt which are not due or callable until after the expiration of 4 years from the end of such calendar month.

SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1984

A statement of the income and disbursements of the Federal Supplementary Medical Insurance Trust Fund in fiscal year 1984 and of the assets of the fund at the beginning and end of the fiscal year is presented in table 2.

TABLE 2.—STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND DURING FISCAL YEAR 1984

(In thousands)

Total assets of the trust fund, beginning of period		$6,646,303
Receipts:		
Premiums from enrollees:		
Participants aged 65 and over	$4,463,264	
Disabled enrollees under age 65	444,022	
Total premiums		4,907,286
Transfers from general fund of the Treasury:		
Government contributions:		
For premiums received from participants aged 65 and over	13,861,208	
For premiums received from disabled participants under age 65	2,949,802	
Total Government contributions		16,811,010
Other		-501
Interest		
Interest on Investments		807,838
Interest on amounts of interfund transfers[1]		-674
Total receipts		22,524,956
Disbursements:		
Benefit payments		19,472,577
Administrative expenses:		
Treasury administrative expenses	2,435	
Salaries and expenses – SSA	200,718	
Salaries and expenses – HCFA	686,796	
Salaries and expenses Office of Secretary	3,272	
Construction[2]	6,778	
Professional Standard review Organization	-3,613	
Public Health Service	157	
Reimbursement of SSA expenses[3]	0	
Reimbursement of HCFA expenses[3]	2,339	
Pay Assessment Commission	225	
Office of Personnel Management expenses	271	
Total administrative expenses		899,377
Total disbursements		20,371,954
Net addition to the trust fund		2,153,003
Total assets of the trust fund, end of period		$8,799,305

[1]A positive figure represents a transfer of interest to the supplementary medical insurance trust fund from the other trust funds. A negative figure represents a transfer of interest from the supplementary medical Insurance trust fund to the other trust funds.
[2]Includes 6,630 for data processing purchases.
[3]A positive figure represents a transfer from the supplementary medical insurance trust fund to the other trust funds. A negative figure represents a transfer to the supplementary medical insurance trust fund from the other trust funds.

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

The total assets of the trust fund amounted to $6,646 million on September 30, 1983. During fiscal year 1984, total receipts amounted to $22,525 million, and total disbursements were $20,372 million. Total assets thus increased $2, 153 million during the year to a total of $8,799 million on September 30, 1984.

Of the total receipts, $4,463 million represented premium payments by (or on behalf of) participants aged 65 and over, and $444 million represented premium payments by (or on behalf of) disabled participants under age 65. Total premium payments amounted to $4,907 million, an increase of 16.1 percent over the amount of $4,227 million for the preceding year. This increase in premiums from participants resulted primarily from (1) the growth in the number of persons enrolled in the supplementary medical insurance program and (2) the increase from $12.20 to $14.60 per month in the standard premium rate that became effective on January 1, 1984.

Contributions received from the general fund of the treasury amounted to $16,811 million, which accounted for 75 percent of total receipts. This amount consisted of $13,861 million representing contributions relating to premiums paid by participants aged 65 and over, and $2,950 million representing contributions relating to the premiums paid by disabled participants under age 65.

The remaining $807 million of receipts consisted almost entirely of interest on the investments of the trust fund.

Of the $20,372 million in total disbursements, $19,473 million represented: (1) benefits paid directly from the trust fund for health services covered under Title XVIII of the Social Security Act, (2) transfers made to the hospital insurance trust fund to adjust for the loss of interest caused by the delay in transferring payments for the costs of radiology and path- ology services that were paid initially from the hospital insurance trust fund but that were liabilities of the supplementary medical insurance trust fund, and (3) for costs of experiments and demonstration projects in pro- viding health care services.

The remaining $899 million of disbursements was for net administrative expenses. Administrative expenses are allocated and charged directly to each of the four trust funds--old-age and survivors insurance, disability insurance, hospital insurance, and supplementary medical insurance—on the basis of provisional estimates. Similarly, the expenses of administering other programs of the Health Care Financing Administration are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, the allocations of administrative expenses and costs of construction for prior periods are adjusted by interfund transfers. This adjustment includes transfers between the

hospital insurance and supplementary medical insurance trust funds and the program management general fund account, with appropriate interest allowances.

In table 3, the experience with respect to actual amounts of participants' premiums, Government contributions, and benefit payments in fiscal year 1984 is compared with the estimates for fiscal year 1984 which appeared in the 1983 and 1984 annual reports.

TABLE 3.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, FISCAL YEAR 1984

(Dollar amounts in millions)

Item	Actual amount	Comparison of actual experience with estimates for FY 1984 published in -			
		1984 report		1983 report	
		Estimated amount	Actual as percentage of estimate	Estimated amount	Actual as percentage of estimate
Premiums from Participants	$4,907	$4,914	100	$4,936	99
Government Contributions	16,811	16,811	100	16,769	100
Benefit Payments	19,473	20,420	95	20,422	95

The assets of the trust fund at the end of fiscal year 1983 totaled $6,646 million, consisting of $6,958 million in the form of obligations of the U.S. Government and, as an offset, an extension of credit of $312 million against securities to be redeemed. The assets of the trust fund at the end of fiscal year 1984 totaled $8,799 million, consisting of $9,117 million in the form of obligations of the U.S. Government and, as an offset, an extension of credit of $318 million against securities to be redeemed. Table 4 shows a comparison of the total assets of the fund and their distribution at the end of fiscal year 1983 and at the end of fiscal year 1984. A comparison of assets of the trust fund with liabilities for incurred but unpaid benefits (and related administrative expenses) is shown in a later section.

TABLE 4.—ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AT THE END OF FISCAL YEARS 1983 AND 1984[1]

	September 30, 1983	September 30. 1984
Investments in public-debt obligations sold only to this fund (special Issues):		
Certificates of Indebtedness:		
11 7/8-percent, 1984	$445,187,000.00	—
12 7/8-percent, 1985	—	$577,173,000.00
13 3/4-percent, 1985	—	456,583,000.00
Bonds:		
7 1/8-percent, 1985	56,245,000.00	—
7 1/8-percent, 1986	56,245,000.00	56,245,000.00
7 1/8-percent, 1987	56,245,000.00	56,245,000.00
7 1/8-percent, 1988	56,245,000.00	56,245,000.00
7 1/8-percent, 1989	56,245,000.00	56,245,000.00
7 1/8-percent, 1990	56,246,000.00	56,246,000.00
7 1/8-percent, 1991	56,246,000.00	56,246,000.00
7 1/8-percent, 1992	137,816,000.00	137,816,000.00
7 3/8-percent, 1985	11,546,000.00	—
7 3/8-percent, 1986	11,547,000.00	11,547,000.00
7 3/8-percent, 1987	11,547,000.00	11,547,000.00
7 3/8-percent, 1988	11,547,000.00	11,547,000.00
7 3/8-percent, 1989	11,547,000.00	11,547,000.00
7 3/8-percent, 1990	73,510,000.00	73,510,000.00
7 1/2-percent, 1985	8,061,000.00	—
7 1/2-percent, 1986	8,061,000.00	8,061,000.00
7 1/2-percent, 1987	8,061,000.00	8,061,000.00
7 1/2-percent, 1988	8,061,000.00	8,061,000.00
7 1/2-percent, 1989	8,061,000.00	8,061,000.00
7 1/2-percent, 1990	8,060,000.00	8,060,000.00
7 1/2-percent, 1991	81,570,000.00	81,570,000.00
7 5/8-percent, 1985	61,964,000.00	—
7 5/8-percent, 1986	61,963,000.00	61,963,000.00
7 5/8-percent, 1987	61,963,000.00	61,963,000.00
7 5/8-percent, 1988	61,963,000.00	61,963,000.00
7 5/8-percent, 1989	61,963,000.00	61,963,000.00
8 1/4-percent, 1985	115,978,000.00	—
8 1/4-percent, 1986	115,978,000.00	115,978,000.00
8 1/4-percent, 1987	115,978,000.00	115,978,000.00
8 1/4-percent, 1988	115,978,000.00	115,978,000.00
8 1/4-percent, 1989	115,978,000.00	115,978,000.00
8 1/4-percent, 1990	115,978,000.00	115,978,000.00
8 1/4-percent, 1991	115,978,000.00	115,978,000.00
8 1/4-percent, 1992	115,978,000.00	115,978,000.00
8 1/4-percent, 1993	253,794,000.00	253,794,000.00
8 3/4-percent, 1985	72,935,000.00	—
8 3/4-percent, 1986	72,934,000.00	72,934,000.00
8 3/4-percent, 1987	72,934,000.00	72,934,000.00
8 3/4-percent, 1988	72,934,000.00	72,934,000.00
8 3/4-percent, 1989	72,934,000.00	72,934,000.00
8 3/4-percent, 1990	72,934,000.00	72,934,000.00
8 3/4-percent, 1991	72,934,000.00	72,934,000.00
8 3/4-percent, 1992	72,934,000.00	72,934,000.00
8 3/4-percent, 1993	72,934,000.00	72,934,000.00
8 3/4-percent, 1994	326,728,000.00	326,728,000.00
9 3/4-percent, 1995	115,003,000.00	115,003,000.00
10 3/4-percent, 1985	88,061,000.00	—
10 3/4-percent, 1986	88,061,000.00	88,061,000.00
10 3/4-percent, 1987	88,061,000.00	88,061,000.00
10 3/4-percent, 1988	88,061,000.00	88,061,000.00
10 3/4-percent, 1989	88,060,000.00	88,060,000.00
10 3/4-percent, 1990	88,060,000.00	88,060,000.00
10 3/4-percent, 1991	88,060,000.00	88,060,000.00
10 3/4-percent, 1992	88,060,000.00	88,060,000.00
10 3/4-percent, 1993	88,060,000.00	88,060,000.00
10 3/4-percent, 1994	88,060,000.00	88,060,000.00

TABLE 4.—ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AT THE END OF FISCAL YEARS 1983 AND 1984[1]

	September 30, 1983	September 30. 1984
10 3/4-percent, 1995	88,060,000.00	88,060,000.00
10 3/4-percent, 1996	88,061,000.00	88,061,000.00
10 3/4-percent, 1997	88,061,000.00	88,061,000.00
10 3/4-percent, 1998	456,989,000.00	456,989,000.00
13 1/4-percent, 1984	115,275,000.00	—
13 1/4-percent, 1985	42,200,000.00	—
13 1/4-percent, 1986	42,201,000.00	42,201,000.00
13 1/4-percent, 1987	42,201,000.00	42,201,000.00
13 1/4-percent, 1988	42,201,000.00	42,201,000.00
13 1/4-percent, 1989	42,201,000.00	42,201,000.00
13 1/4-percent, 1990	42,201,000.00	42,201,000.00
13 1/4-percent, 1991	42,201,000.00	42,201,000.00
13 1/4-percent, 1992	42,201,000.00	42,201,000.00
13 1/4-percent, 1993	42,201,000.00	42,201,000.00
13 1/4-percent, 1994	42,201,000.00	42,201,000.00
13 1/4-percent, 1995	253,926,000.00	253,926,000.00
13 1/4-percent, 1996	368,928,000.00	368,928,000.00
13 1/4-percent, 1997	368,928,000.00	368,928,000.00
13 3/4-percent, 1985	—	143,720,000.00
13 3/4-percent, 1986	—	110,114,000.00
13 3/4-percent, 1987	—	110,114,000.00
13 3/4-percent, 1988	—	110,114,000.00
13 3/4-percent, 1989	—	110,115,000.00
13 3/4-percent, 1990	—	110,115,000.00
13 3/4-percent, 1991	—	110,115,000.00
13 3/4-percent, 1992	—	110,115,000.00
13 3/4-percent, 1993	—	110,115,000.00
13 3/4-percent, 1994	—	110,115,000.00
13 3/4-percent, 1995	—	110,115,000.00
13 3/4-percent, 1996	—	110,115,000.00
13 3/4-percent, 1997	—	110,115,000.00
13 3/4-percent, 1998	—	110,114,000.00
13 3/4-percent, 1999	—	567,103,000.00
Total investments in public-debt obligations	6,958,312,000.00	9,116,930,000.00
Undisbursed balance	-312,009,194.35[2]	-317,624,564.14[2]
Total assets	6,646,302,805.65	8,799,305,435.86

[1]The assets are carried at par value, which is the same as book value.
[2]The negative figure represented an extension of credit which was covered by redemptions of securities on the first day of the following month.

The net increase in the par value of the investments held by the fund during fiscal year 1983 amounted to $1,084 million. New securities at a total par value of $20,572 million were acquired during the fiscal year through the investment of receipts and reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $19,487 million. Included in these amounts is $18,881 million in certificates of indebtedness that were acquired, and $19,146 million in certificates of indebtedness that were redeemed, within the fiscal year.

The net increase in the par value of the investments held by the fund during fiscal year 1984 amounted to $2,159 million. New securities at a total par value of $25,054 million were acquired during the fiscal year through the investment of receipts and reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $22,896 million. Included in these

amounts is $22,903 million in certificates of indebtedness that were acquired, and $22,315 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the supplementary medical insurance trust fund the 12 months ending on June 30, 1984, was 10.2 percent. (This period is used because interest on special issues is paid semiannually on June 30 and December 31.) The interest rate on special issues purchased by the trust fund in June 1984 was 13 3/4 percent, payable semiannually.

EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND DURING THE PERIOD OCTOBER 1, 1984 TO DECEMBER 31, 1987

Financing for the supplementary medical insurance program is established annually on the basis of standard monthly premium rates (paid by or on behalf of the participants) and actuarial rates (on which general revenue contributions are based). Prior to June 30, 1983, these rates were applicable to 12-month periods ending June 30. Beginning January 1, 1984, Public Law 98-21 changed the annual basis to the 12-month periods ending December 31. For the 6-month period July 1, 1983 through December 31, 1983 (hereafter also called the transition semester), the standard monthly premium rate was frozen at the June 1983 rate, and the actuarial rates were set at the rates promulgated in December 1982 for the 12-month period ending June 30, 1984.

Standard premium rates and actuarial rates have been set for periods through December 31, 1985· It has been assumed in this report that financing after that time will be established to cover the incurred expenses of the program as provided by the provisions described in the "Nature of the Trust Fund" section.

The projections shown in the following tables are based on two sets of economic assumptions labeled alternative A and alternative B. These alternatives reflect two different levels of expectation of future performance of the economy. Appendix A presents an explanation of the effects of alternative A and alternative Bon the projections in this report.

Prior to the passage of Public Law 98-369, allowable fee limits for physicians' services were updated July 1 of every year. However, for the 15-month period from July 1, 1984 through September 30, 1985, Public Law 98-369 froze all fees for physicians' services at the same levels as in effect during the second quarter of 1984. Additionally, Public Law 98-369, changed the date for updating these allowable fee limits from July 1 to October 1 of each year, beginning on October 1, 1985.

Under both sets of projections, it is assumed that allowable fees for physicians' services, including some services unconstrained by Public

Law 98-369, will increase an average of 1.9 percent for the 12-month period ending September 30, 1985, and will increase an average of 5.4 percent for the 12-month period ending September 30, 1986. The costs per enrollee for institutional and other services under SMI are projected to increase an average of 18.9 percent for the 12-month period ending September 30, 1985, and 15.2 percent for the 12-month period ending September 30, 1986.

Table 5 shows the projected operations of the trust fund on a fiscal year basis through fiscal year 1987. Table 6 shows the corresponding development on a calendar year basis. The trust fund balance was $8.8 billion at the end of fiscal year 1984. The actuarial rates applicable to calendar year 1984 were promulgated with margins to maintain assets at an appropriate level. However, the developing experience indicated that assets were more than sufficient to cover the incurred costs and to provide an appropriate contingency. Therefore, the actuarial rates for calendar year 1985 were promulgated with specific margins to reduce assets to a more desirable level. Based on these actuarial rates and the above economic assumptions, the fund is projected to increase to 10.9 billion under both alternatives by the end of fiscal year 1985, and then decrease to 10.0 billion by the end of fiscal year 1986.

TABLE 5.—ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) FISCAL YEARS 1985-1987 AND ACTUAL DATA FOR 1967-1984

(In millions)

	Income				Disbursements			
Fiscal Year[1]	Premiums from participants	Government contribu-tions[2]	Interest and Other Income[3]	Total Income	Benefit payments	Adminis-trative expenses	Total disburse-ments	Balance in fund at end of year[4]
Historical Data:								
1967	$647	$623	$15	$1,285	$664	$135[5]	$799	$486
1968	698	634	21	1,353	1,390	142	1,532	307
1969	903	984	24	1,911	1,645	195	1,840	378
1970	936	928	12	1,876	1,979	217	2,196	57
1971	1,253	1,245	18	2,516	2,035	248	2,283	290
1972	1,340	1,365	29	2,734	2,255	289	2,544	481
1973	1,427	1,430	45	2,902	2,391	246	2,637	746
1974	1,704	2,029	76	3,809	2,874	409	3,283	1,272
1975	1,887	2,330	105	4,322	3,765	405	4,170	1,424
1976	1,951	2,939	104	4,994	4,672	528	5,200	1,219
T.Q.	539	878	4	1,421	1,269	132	1,401	1,239
1977	2,193	5,053	137	7,383	5,867	475	6,342	2,279
1978	2,431	6,386	228	9,045	6,852	504	7,356	3,968
1979	2,635	6,841	363	9,839	8,259	555	8,814	4,994
1980	2,928	6,932	415	10,275	10,144	593	10,737	4,532
1981	3,320	8,747	372	12,439	12,345	883	13,228	3,743
1982	3,831	13,323	473	17,627	14,806	754	15,560	5,810
1983	4,227	14,238	682	19,147	17,487	824	18,311	6,646
1984	4,907	16,811	807	22,525	19,473	899	20,372	8,799
Projected:								
Alternative A:								
1985	5,476	17,898	1,078	24,452	21,436	879	22,315	10,936
1986	5,821	18,513	1,148	25,482	25,531	923	26,454	9,964
1987	6,469	20,145	1,039	27,653	28,226	975	29,201	8,416
Alternative B:								
1985	5,476	17,898	1,078	24,452	21,436	879	22,315	10,936
1986	5,821	18,513	1,151	25,485	25,537	923	26,460	9,961
1987	6,469	20,201	1,043	27,713	28,275	980	29,255	8,419

[1]For 1967 through 1976, fiscal years cover the Interval from July 1 through June 30; the three-month Interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.", the transition quarter; fiscal years 1977-87 cover the interval from October 1 through September 30.
[2]The payments shown as being from the general fund of the Treasury Include certain interest-adjustment Items.
[3]Other Income Includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.
[4]The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 8).
[5]AdmInlstrative expenses shown include those paid in FY 1966 and 1967.

TABLE 6.— ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) CALENDAR YEARS 1985-1987 AND ACTUAL DATA FOR 1967-1984

(In millions)

Calendar Year	Income				Disbursements			Balance at end of year[3]
	Premium from participants	Government contribu-tions[1]	Interest and Other Income[2]	Total Income	Benefit payments	Adminis-trative expenses	Total disburse-ments	
Historical Data:								
1966	$322	$0	$2	$324	$128	$75	$203	$122
1967	640	933	24	1,597	1,197	110	1,307	412
1968	832	858	21	1,711	1,518	184	1,702	421
1969	914	907	18	1,839	1,865	196	2,061	199
1970	1,096	1,093	12	2,201	1,975	237	2,212	188
1971	1,302	1,313	24	2,639	2,117	260	2,377	450
1972	1,382	1,389	37	2,808	2,325	289	2,614	643
1973	1,550	1,705	57	3,312	2,526	318	2,844	1,111
1974	1,804	2,225	95	4,124	3,318	410	3,728	1,506
1975	1,918	2,648	107	4,673	4,273	462	4,735	1,444
1976	2,060	3,810	107	5,977	5,080	542	5,622	1,799
1977	2,247	5,386	172	7,805	6,038	467	6,505	3,099
1978	2,470	6,287	299	9,056	7,252	503	7,755	4,400
1979	2,719	6,645	404	9,768	8,708	557	9,265	4,902
1980	3,011	7,455	408	10,874	10,635	610	11,245	4,530
1981	3,722[4]	11,291[4]	361	15,374	13,113	915	14,028	5,877
1982	3,697[4]	12,284[4]	599	16,580	15,455	772	16,227	6,230
1963	4,236	14,861	727	19,824	18,106	878	18,984	7,070
1984	5,167	17,054	959	23,180	19,661	891	20,552	9,698
Projected:								
Alternative A:								
1985	5,585	18,157	1,121	24,863	22,630	887	23,517	11,044
1986	5,899	18,549	1,112	25,560	26,168	935	27,103	9,501
1987	6,659	20,676	929	28,264	29,137	988	30,125	7,640
Alternative B:								
1985	5,585	18,157	1,121	24,863	22,630	887	23,517	11,044
1986	5,899	18,549	1,116	25,564	26,181	935	27,116	9,493
1987	6,659	20,751	932	28,342	29,210	994	30,204	7,631

[1]The payments shown as being from the general fund of the Treasury include certain interest-adjustment Items.

[2]Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous Income.

[3]The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 8).

[4]Sectlon 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated delivery day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January, 1982 occurred on December 31, 1981. Consequently the SMI premiums withheld from the checks ($264 million) and the general revenue matching contributions ($883 million) were added to the SMI trust fund on December 31, 1981. These amounts are excluded from the premium Income and general revenue Income for CY 1982.

ACTUARIAL STATUS OF THE TRUST FUND

1. Actuarial Soundness of the Supplementary Medical Insurance 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 essentially is yearly renewable term insurance financed from premium income paid by the enrollees and from income contributed from general revenue in proportion to premium payments. The law requires the Secretary of Health and Human Services to establish income on the basis of incurred costs; that is, the income to the program during a 12-month period for which financing is being established must be sufficient to pay for services (including associated administrative costs) expected to be rendered during that period 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 those benefits not paid until after the close of the year is added to the trust fund until needed. Thus, the amount of assets in the trust fund at any time should be no less than the costs of the benefits and administration incurred but not yet paid. Since the income per enrollee (premium plus Government contribution rate) is established prospectively, it is subject to projection error. As a result, the income to the program may not be equal to incurred costs; therefore, trust fund assets should be maintained at a level which is adequate to cover the impact of a moderate degree of projection error, as well as the value of incurred but unpaid expenses.

In testing the actuarial soundness of the supplementary medical 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.

2. INCURRED EXPERIENCE OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

The tests of actuarial soundness of the supplementary medical insurance program noted above rely on the incurred experience of the

program. Cash disbursements for benefits and administrative expenses by themselves are misleading, due to the relatively large liabilities outstanding at any time for benefits and processing costs that must be paid for services already performed. These liabilities result from the lag between the time that services are performed and the time that payments for them are made.

The experience of the program is substantially more difficult to determine on an incurred basis than on a cash basis. Payment for some services is reported only on a cash basis, and the incurred experience must be inferred from the cash payment information. For recent time periods, the tabulations of bills are incomplete due to normal processing delays. Finally, since bills are tabulated only for a sample of beneficiaries, the data is subject to bias and random fluctuation inherent in the sampling process.

Table 7 shows the estimated transactions of the trust fund on an incurred basis. For the reasons stated above, the incurred experience must be viewed as an estimate even for historical years. Various checks, such as cash outlay data, assure that the estimates are reasonably close, however.

TABLE 7.—ESTIMATED INCOME AND DISBURSEMENTS INCURRED UNDER SUPPLEMENTARY MEDICAL INSURANCE PROGRAM FOR FINANCING PERIODS THROUGH DECEMBER 31, 1985

(In millions)

Financing period	Premiums from participants	Government Contri-butions	Interest and other Income	Benefit payments	Adminis-trative expenses	Net operations in year
Historical Data:						
12-Month period ending June 30,						
1967	$647	$647	$15	$1,108	$123[1]	$78
1968	698	698	21	1,443	155	-181
1969	903	903	24	1,766	198	-134
1970	936	936	12	1,930	213	-259
1971	1,253	1,253	18	2,090	259	175
1972	1,340	1,340	29	2,289	259	161
1973	1,427	1,426	45	2,499	302	97
1974	1,704	2,031	76	3,123	353	335
1975	1,887	2,396	105	3,904	438	46
1976	1,951	2,972	109	4,792	485	-245
1977	2,156	4,697	157	5,835	515	660
1978	2,358	5,991	254	6,918	511	1,174
1979	2,601	6,570	365	8,150	649	737
1980	2,823	6,627	421	9,873	645	-647
1981	3,178	8,219	371	11,959	692	-883
1982	3,737	12,488	495	13,978	728	2,014
1983	4,202	13,949	686	16,962	708	1,167
Transition Semester[2]	2,121	7,838	371	9,684	494	152
Calendar year						
1984	5,167	17,052	962	20,430	855	1,896
Projected:						
Calendar year						
Alternative A:						
1985	5,585	18,155	1,125	23,018	887	960
Alternative B:						
1985	5,585	18,155	1,126	23,018	887	961

[1]Includes administrative expenses Incurred prior to the beginning of the program.
[2]The transition semester is the 6-month period July 1, 1983 to December 31, 1983.

3. ACCUMULATED EXCESS OF ASSETS OVER LIABILITIES

The liability outstanding at any time for the cost of services performed for which no payment has been made is referred to as "benefits incurred but unpaid." Estimates of the amount of benefits incurred but unpaid as of the end of each financing period, and of the administrative expenses related to processing these benefits, appear in table 8. For some years of the program, assets have not been as large as outstanding liabilities. Nonetheless, the fund has remained positive, allowing claims to be paid.

Program financing has been established through December 31, 1985. The financing established for calendar year 1985 was designed to reduce the excess of assets over liabilities to a more appropriate level. However, the developing experience indicates that this excess will be greater than expected at the time the calendar year 1985 financing was determined. As a result, the excess of assets over liabilities is expected to increase from $6,349 million at the end of December 1984 to $7,307 million under

alternative A and to $7,308 million under alternative Bat the end of December 1985. This excess as a percent of incurred expenditures for the following year is expected to increase from 26.6% as of December 31, 1984, to 27.0% as of December 31, 1985 ·

TABLE 8.—SUMMARY OF ESTIMATED ASSETS AND LIABILITIES OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM AS OF THE END OF THE FINANCING PERIOD, FOR PERIODS THROUGH DECEMBER 31, 1985

(Dollar amounts in millions)

	Balance in trust fund	Government contributions due but unpaid	Total assets	Benefits incurred but unpaid	Administrative cost incurred but unpaid	Total liab-ilities	Excess of assets over liabilities	Ratio[1]
Historical Data								
As of June 30,								
1967	$486	$24	$510	$444	$-12	$432	$78	0.05
1968	307	88	395	497	1	498	-103	-0.05
1969	378	7	385	618	4	622	-237	-0.11
1970	57	15	72	569	0	569	-497	-0.21
1971	290	22	312	624	11	635	-323	-0.13
1972	481	-3	478	658	-19	639	-161	-0.06
1973	746	-7	739	766	37	803	-64	-0.02
1974	1,272	-5	1,267	1,015	-19	996	271	0.06
1975	1,424	67	1,491	1,154	14	1,168	323	0.06
1976	1,219	106	1,325	1,274	-29	1,245	80	0.01
1977	2,170	91	2,261	1,520	3	1,523	738	0.10
1978	3,786	48	3,834	1,881	40	1,921	1,913	0.22
1979	4,880	2	4,882	2,111	123	2,234	2,648	0.25
1980	4,657	0	4,657	2,468	188	2,656	2,001	0.16
1981	3,801	0	3,801	2,669	13	2,682	1,119	0.08
1982	5,534	1	5,535	2,411	-9	2,402	3,133	0.18
1983	6,780	0	6,780	2,528	-48	2,480	4,300	0.21
As of December 31,								
1983	7,070	-1	7,069	2,674	-58	2,616	4,453	0.21
1984	9,698	0	9,698	3,443	-94	3,349	6,349	0.27
Projected:								
Alternative A:								
1985	11,044	0	11,044	3,831	-94	3,737	7,307	0.27
Alternative B:								
1985	11,045	0	11,045	3,831	-94	3,737	7,308	0.27

[1]Ratio of the excess assets over liabilities to the following year's total incurred expenditures.

4. SENSITIVITY TESTING

Some of the assumptions underlying the projections presented in this report are highly uncertain, and variations in these assumptions would have a substantial impact on expenditures. In order to test the future status of the program under varying assumptions, a low cost projection and a high cost projection were prepared by varying these key assumptions. The low and high cost alternative sets of assumptions are intended to reflect growth rates for the various components of program costs which are more favorable and adverse, respectively, than those of the intermediate projections (alternatives A and B)and which are not unreasonable themselves in light of the nature and historical experience of the program. As such, they provide a range of financial outcomes

within which the actual experience of the program might reasonably be expected to fall.

Table 9 indicates that, under the low cost assumptions, trust fund assets would exceed liabilities significantly by the end of December 1985 (the period through which financing has been established), reaching a level of 40 percent of the following year's incurred expenditures. If these low growth rates were actually to materialize, then subsequent financing rates would be adjusted downward in order to lower the excess of assets over liabilities to more appropriate levels. Even under the high coat assumptions, trust fund assets would still substantially exceed liabilities by the end of December 1985.

Table 9.—ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1985

	Alternative B projection			Low cost projection			High cost projection		
	Physicians' Fee Screen Year[1]			Physicians' Fee Screen Year			Physicians' Fee Screen Year		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Projection factors (in percent):[2]									
Physician fees[3]									
Aged	7.2	1.9	5.4	6.7	1.4	4.9	7.7	2.5	5.9
Disabled	7.2	1.9	5.4	6.7	1.4	4.9	7.7	2.5	5.9
Utilization of physician services[4]									
Aged	3.0	3.5	3.5	1.5	1.6	1.8	4.5	5.3	5.2
Disabled	3.9	5.1	5.6	0.9	0.9	1.8	6.9	9.4	9.3
Outpatient hospital services per enrollee									
Aged	21.2	18.2	16.0	16.2	10.4	8.7	26.2	26.1	23.0
Disabled	14.6	21.3	17.8	8.6	10.0	6.8	20.6	32.8	28.0
	As of December 31,			As of December 31,			As of December 31,		
	1983	1984	1985	1983	1984	1985	1983	1984	1985
Actuarial status (in millions):									
Assets	$7,069	$9,698	$11,045	$7,069	$9,698	$12,648	$7,069	$9,698	$9,327
Liabilities	2,616	3,349	3,737	2,394	2,361	2,644	2,840	4,361	4,863
Assets less liabilities	$4,453	$6,349	$7,308	$4,675	$7,337	$10,004	$4,229	$5,337	$4,464
Ratio of assets less liabilities to expenditures (In percent)[5]	20.9	26.6	27.0	22.8	32.9	40.4	19.2	20.8	15.1

[1]The physician fee screen year is the 12-month period ending June 30, through June 30, 1984·Thereafter, the physician fee screen year is the 12-month period ending September 30.

[2]Because of the manner in which alternative economic assumptions affect the projected operations of the supplementary medical insurance program, there is not a substantial difference in the projections based upon the two sets of assumptions. Therefore only one projection, alternative B, is presented here. Appendix A presents an explanation or the effects of alternative A and B on the projections in the report

[3]As recognized for payment under the program.

[4]Increase in the number of services received per enrollee and greater relative use of more expensive services.

[5]Ratio of assets less liabilities at the end of the year to the total Incurred expenditures during the following year, expressed as a percent.

CONCLUSION

The financing of the supplementary medical insurance program has been established through December 1985, by the setting of standard monthly premium rates (paid by or on behalf of each enrollee)of $15.50 for calendar year 1985 and of actuarial rates which determine the amount to be contributed from general revenue on behalf of each enrollee.

Under both seta of intermediate assumptions used in this report, income, composed of premiums paid by the participants, general revenue contributions and interest earned by the trust fund, is projected to exceed disbursements during FY 1985. During FY 1986, disbursements are expected to exceed income due to financing which will be determined to reduce the trust fund to a more appropriate level. As a result, the assets in the trust fund, on a cash basis, are projected to increase from $8.8 billion at the end of fiscal year 1984 to an estimated $10.9 billion at the end of fiscal year 1985 and then to decrease to an estimated $10.0 billion at the end of fiscal year 1986.

Program assets exceeded liabilities by approximately $6,349 million at the end of December 1984 representing 26.6 percent of the projected incurred expenditures for the following 12-month period. The financing for calendar year 1985 was established to reduce assets to a more appropriate level relative to expected program expenditures. However, as experience baa developed, it appears that the calendar year 1985 financing will result in an increase in the excess of assets over liabilities for that time period. Assets are projected to exceed liabilities at the end of December 1985 by $7,307 million under alternative A, and by $7,308 million under alternative B, representing 27.0 percent of the projected incurred expenditures. Under more pessimistic assumptions as to cost increases, assets based on financing already established will be more than sufficient to cover outstanding liabilities. Hence, the financing established through December 1985 is more than sufficient to cover projected benefit and administrative costs incurred through that time period and to maintain a level of trust fund assets which is adequate to cover the impact of projection error. In the future, financing will be set at a level to reduce the excess of assets over liabilities to a more appropriate amount.

Although the supplementary medical insurance program is financially sound, the Board notes with concern the rapid growth in the cost of the program. The Board recommends that Congress continue to work to curtail the rapid growth in the supplementary medical insurance program.

APPENDIX A

ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR COST ESTIMATES FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM[1]

1. Estimates for Aged and Disabled (Excluding ESRD) Enrollees

a. Introduction

Estimates for aged and disabled enrollees—excluding disabled persons with end stage renal disease (ESRD)—are prepared by establishing, as accurately as possible, reasonable charges incurred per enrollee in a recent year (the 12-month period ending June 30, 1983, for this report) and projecting these charges through the estimating period. The per enrollee charges are then converted to reimbursement amounts by subtracting the per enrollee values of the deductible and coinsurance. Aggregate reimbursement amounts are calculated by multiplying the per enrollee reimbursement amounts by the projected enrollment. In order to estimate cash disbursements, an allowance is made for the delay between receipt of service and payment therefor.

Disabled persons with ESRD have per enrollee costs which are higher and quite different in nature from those of most other disabled persons. Hence, program costs for them have been excluded from the analysis in this section and are included in a later section.

b. Establishing a Projection Base

(1) Physician Services

Reimbursement amounts for physician services (and relatively small amounts for other services) are paid through organizations acting for the Health Care Financing Administration, referred to as carriers. The carriers determine whether billed services are covered under the program and determine the reasonable charges for the services. A record of the amount reimbursed after reduction for coinsurance and the deductible is transmitted to the central office in the form of a "payment record."

Payment records for 0.1 percent of aged beneficiaries and 1.0 percent of disabled beneficiaries are tabulated by date of service, thus providing a data base which is constructed on an incurred basis. Certain minor adjustments are made to the tabulated sample data to correct for biases and random fluctuation inherent in the sampling process. Having the

[1]Prepared by the Division of Medicare Cost Estimates, Office of the Actuary, Health Care Financing Administration

data on an incurred basis is necessary to meet the statutory requirement that the program be financed on this basis; it also makes possible a comparison of program experience with non-program data sources.

As a check on the validity of the projection base, incurred reimbursement amounts are compared with cash expenditures reported by the carriers through an independent reporting system. In a program with continuously increasing incurred reimbursement amounts, cash payments are expected to be slightly lower than incurred expenses (except in the first year of coverage of a service or group of beneficiaries, when the difference should be substantial). These differences between cash and incurred reimbursement amounts occur because of the lag between receipt of services and payment therefor.

(2) Institutional and Other Services

Reimbursement amounts for institutional services under the supplementary medical insurance program are paid by the same fiscal intermediaries that pay for hospital insurance services. The principal institutional services covered under the supplementary medical insurance program are outpatient hospital care services.

Reimbursements for institutional services occur in two stages. Provider bills are submitted to the intermediaries, and interim payments are made on the basis of these bills. The bills are then submitted to the central office, and tabulations for a sample of beneficiaries are prepared in a manner parallel to that for payment records.

At the close of a provider's accounting period, a cost report is submitted and lump-sum payments or recoveries are made to correct for the difference between interim payments made to the provider and the retroactively determined reasonable cost for providing covered services (net of coinsurance and deductible amounts). The amounts of these retroactive settlements are reported on a cash basis, and approximations are necessary to allocate these payments to the time of service.

Group practice plans which are not reimbursed through carriers are reimbursed directly by the Health Care Financing Administration on a reason- able cost or on a capitation basis. Comprehensive data on such direct reimbursements are available on a cash basis. Certain approximations must be made to allocate expenses to the period when services were rendered.

(3) Summary of Historical Data

Table A1 summarizes the incurred reimbursement amounts per enrollee for the various services for each of the 12-month periods ending June 30, through 1983. Also shown are average enrollment figures for these years. In order to analyze the historical trends in prices and use of services, these reimbursement amounts are converted to the reasonable

charges or reasonable costs on which reimbursement was based. This process is necessary largely because the fixed deductible becomes a smaller percentage of charges each year and thus causes reimbursement to rise faster than charges or costs. Table A2 shows the reasonable charges or costs per enrollee corresponding to the reimbursement values shown in table A1.

TABLE A1.—INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Inpatient radiology and pathology[1]	Outpatient hospital	Home health Agency	Group practice prepayment plan	Independent lab
Aged:								
1967	17.750	$62.43	$59.03		$1.42	$.79	$.89	$.30
1968	18.038	80.05	72.56	$1.89	2.41	1.49	1.35	.35
1969	18.833	93.72	79.06	6.57	4.23	1.92	1.54	.40
1970	19.312	99.90	82.84	7.14	5.93	2.00	1.51	.48
1971	19.664	106.26	87.80	7.21	7.56	1.68	1.40	.61
1972	20.043	114.22	94.82	6.77	8.58	1.61	1.66	.78
1973	20.428	122.38	100.95	6.99	9.45	2.17	1.88	.94
1974	20.988	134.39	109.97	7.44	11.37	2.03	2.37	1.21
1975	21.504	160.24	127.48	8.72	15.48	3.84	3.08	1.64
1976	22.089	188.61	145.30	10.89	21.30	5.21	3.88	2.03
1977	22.605	221.38	167.01	12.21	28.72	6.54	4.42	2.48
1978	23.133	254.13	192.23	14.74	33.42	6.82	4.00	2.92
1979	23.693	289.46	217.50	16.33	40.57	6.87	4.88	3.31
1980	24.287	340.90	256.26	18.70	47.29	7.50	7.12	4.03
1981	24.826	403.97	301.85	22.91	56.71	7.90	9.26	5.34
1982	25.363	462.05	354.18	24.18	65.53	.39	11.36	6.41
1983	25.873	553.77	431.39	22.38	78.31	.48	14.07	7.14
Disabled (excluding ESRD):								
1974	1.636	116.80	90.13	7.54	13.92	3.46	1.09	.66
1975	1.813	149.71	117.41	8.40	17.37	3.59	1.88	1.06
1976	2.015	179.09	138.49	10.03	21.75	5.13	2.22	1.47
1977	2.229	220.60	161.86	13.03	36.50	4.80	2.41	2.00
1978	2.420	256.76	188.98	14.23	42.85	5.55	2.55	2.60
1979	2.561	301.91	223.85	17.09	50.59	5.13	2.07	3.18
1980	2.638	364.29	269.13	19.80	61.10	6.02	4.40	3.84
1981	2.682	435.31	317.75	23.14	77.26	7.10	5.35	4.71
1982	2.681	517.76	372.28	24.48	108.62	.00	6.49	5.89
1983	2.624	630.76	460.89	23.63	131.32	.00	7.60	7.32

[1]Includes services on payment records and those using combined billing; amounts shown are for April 1968 and later when combined billings are authorized. Inpatient radiology and pathology charges were reimbursed at 100 percent through September 30, 1982.

TABLE A2.—INCURRED REASONABLE CHARGES OR COSTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Inpatient radiology and pathology[1]	Outpatient hospital	Home health Agency	Group practice prepayment plan	Independent lab
Aged:								
1967	17.750	$108.51	$102.61		$2.47	$1.37	$1.54	$.52
1966	18.038	128.63	117.66	$1.89	3.90	2.42	2.19	.57
1969	18.833	145.66	126.17	6.57	6.75	3.07	2.46	.64
1970	19.312	154.02	131.18	7.14	9.39	3.16	2.39	.76
1971	19.664	162.49	137.65	7.21	11.85	2.63	2.20	.95
1972	20.043	173.15	146.83	6.77	13.28	2.49	2.57	1.21
1973	20.428	186.53	157.39	6.99	14.74	3.01	2.93	1.47
1974	20.988	204.60	171.35	7.44	17.71	2.53	3.69	1.88
1975	21.504	237.08	193.10	8.72	23.45	4.65	4.67	2.49
1976	22.089	272.61	215.25	10.89	31.55	6.17	5.75	3.00
1977	22.605	313.95	242.45	12.21	41.69	7.59	6.41	3.60
1978	23.133	354.85	274.67	14.74	47.75	7.80	5.72	4.17
1979	23.693	399.66	306.79	16.33	57.23	7.75	6.89	4.67
1980	24.287	464.21	355.99	18.70	65.70	8.33	9.89	5.60
1981	24.826	542.40	413.22	22.91	77.63	8.65	12.68	7.31
1982	25.363	627.51	486.58	26.10	90.03	.39	15.61	8.80
1983	25.873	749.77	586.97	26.91	106.56	.48	19.14	9.71
Disabled (excluding ESRD):								
1974	1.636	171.29	135.93	7.54	21.00	4.18	1.65	.99
1975	1.813	213.42	171.21	8.40	25.33	4.19	2.74	1.55
1976	2.015	251.10	198.69	10.03	31.20	5.89	3.18	2.11
1977	2.229	304.14	228.05	13.03	51.43	5.41	3.40	2.82
1978	2.420	350.84	263.49	14.23	59.74	6.19	3.56	3.63
1979	2.561	407.90	308.26	17.09	69.67	5.65	2.85	4.38
1980	2.638	486.60	365.97	19.80	83.08	6.55	5.98	5.22
1981	2.682	575.34	427.17	23.14	103.87	7.64	7.19	6.33
1982	2.681	691.01	501.57	26.42	146.34	.00	8.75	7.93
1983	2.624	839.98	616.08	28.41	175.54	.00	10.16	9.79

[1]Includes services on payment records and those using combined billing; amounts shown are for April 1968 and later when combined billings are authorized. Inpatient radiology and pathology charges were reimbursed at 100 percent through September 30, 1982.

c. Per Enrollee Increases

(1) Physician Services

Per enrollee charges for physician services are affected by a variety of factors. Some of these can be identified explicitly. Others can be recognized only by the fact that the explicitly quantifiable factors do not explain all of the increase in per enrollee charges year-to-year.

Increases in average charge per service are one of the most important elements creating increasing charges per enrollee. The physician fee component of the consumer price index provides an estimate of the historical increases in average charge per service. Increases in this index are shown in the first column of table A3.

TABLE A3.—COMPONENTS OF INCREASES IN TOTAL RECOGNIZED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: HISTORICAL

(in percent)

	Increase due to price changes				Increase Due to Residual Factors			
		Reduction due to fee screens						
Year ending June 30,	Increase in physician fee component of CPI	Cumulative effect	Yearly changes	Net increase in reasonable charges	Gross residual factors	Effect of denials	Net residual factors	Total increase in recognized charges per enrollee
Aged:								
1967	7.6	-2.6						
1968	5.9	-3.6	-0.6	5.3	10.8	-1.4	9.4	14.7
1969	6.2	-5.0	-1.5	4.7	2.9	-0.4	2.5	7.2
1970	6.7	-7.5	-2.8	3.9	3.2	-3.1	0.1	4.0
1971	7.5	-10.1	-3.0	4.5	3.6	-3.2	0.4	4.9
1972	5.2	-11.2	-1.2	4.0	2.3	0.4	2.7	6.7
1973	2.6	-11.7	-0.5	2.1	5.7	-0.6	5.1	7.2
1974	5.0	-13.2	-1.6	3.4	6.1	-0.6	5.5	8.9
1975	12.8	-16.2	-3.6	9.2	3.8	-0.3	3.5	12.7
1976	11.4	-18.6	-2.9	8.5	2.9	0.1	3.0	11.5
1977	10.2	-19.5	-1.0	9.2	3.3	0.1	3.4	12.6
1978	8.9	-19.4	0.5	9.4	3.8	0.1	3.9	13.3
1979	8.6	-20.0	-0.5	8.1	3.9	-0.3	3.6	11.7
1980	11.5	-22.1	-2.4	9.1	6.8	0.1	6.9	16.0
1981	11.1	-24.5	-2.8	8.3	7.1	0.7	7.8	16.1
1982	9.9	-23.9	1.5	11.4	5.9	0.5	6.4	17.8
1983	8.2	-23.4	1.6	9.8	10.9	-0.1	10.8	20.6
Disabled (excluding ESRD):								
1974	5.0	-13.2						
1975	12.8	-16.2	-2.5	10.3	16.0	-0.3	15.7	26.0
1976	11.4	-18.6	-2.5	8.9	7.1	0.1	7.2	16.1
1977	10.2	-19.5	-0.7	9.5	5.2	0.1	5.3	14.8
1978	8.9	-19.4	0.6	9.5	5.9	0.1	6.0	15.5
1979	8.6	-20.0	-0.1	8.5	8.8	-0.3	8.5	17.0
1980	11.5	-22.1	-2.2	9.3	9.3	0.1	9.4	18.7
1981	11.1	-24.5	-2.7	8.4	7.6	0.7	8.3	16.7
1982	9.9	-23.9	1.4	11.3	5.6	0.5	6.1	17.4
1983	8.2	-23.4	1.8	10.0	12.9	-0.1	12.8	22.8

Bills submitted to the carriers during a specified 12-month period, known as the fee screen year, are subject, by statute, to certain limitations on the level of fees to be r cognized by the program for reimbursement purposes. Prior to the passage of Public Law 98-369, the fee screen year was the 12-month period ending July 30. Public Law 98-369 changed the fee screen year to the 12-month period ending September 30, effective on October 1, 1985 · The fee level recognized for a particular service by a physician is subject to reduction if it exceeds the median charge that the physician assessed for the same service in the base period. Public Law 98-369 changed the base period from the preceding calendar year to the preceding 12-month period ending March 31. This median charge is called the "customary" charge. Fees are subject to further reduction if they exceed the "prevailing" charges for the locality. The prevailing charge is defined as the 75th percentile of customary charges for a particular service in a particular locality. Since July 1, 1975, the rate of increase in prevailing charges has been limited

further by the application of an "economic index." The customary and prevailing charge 1imits maintained by the carriers are called "fee screens. Reasonable charges are charges on which reimbursement is based, after they have been reduced by the fee screens.

The average reduction in submitted fees has increased almost every year due both to administrative actions and to differentials in the rate of increase in fees between the period in which the fee screens are established and the period in which the screens are applied. The result is that the net increase in per enrollee charges due to price changes (i.e., the increase in fee levels recognized for reimbursement purposes) has been less than the increase in submitted fees. The second column of table A3 shows the reduction of charges due to the impact of the fee screen operation to date. The year-to-year changes in this impact are shown in the third column.

Per enrollee charges also have increased each year as a result of more physician visits per enrollee, increasing use of specialists and more expensive techniques, and other factors. The fifth column of table A3 shows the increase in charges per enrollee resulting from these residual causes. Because the measurement of increased recognized charges per service is subject to error, this error is included implicitly under residual causes.

The proportion of charges that has been denied as non-covered care has increased in most years. To the extent that this increase in denials reflects the effect of administrative actions defining covered services, it will cause a non-recurring distorting effect on the increase due to net residual factors. The gross residual factor is adjusted for the impact of changes in denials as shown in the sixth column of table A3. This column is used in the projection to indicate the amount of cost increases to be expected in the future from residual causes. The seventh column shows the net increase due to residual factors.

The last column of table A3 shows the total increase in charges per enrollee for physician services. It includes the effects of all the items discussed above.

Projected increases in total recognized charges per enrollee are shown in table A4. Column 1 of table A4 shows the projected average increase in customary charges in each of the fee screen years ending June 30, 1984 through September 30, 1988. As described above, each of these increases depends on the increases in fees actually submitted during the base period. Thus, this column represents actual and projected average increases in physicians' fees for calendar year 1982, year ending March 31, 1984 through year ending March 31, 1987, respectively. In principle, further adjustments should be made for the fact that, of necessity, some fees are not screened in exactly the manner described (e.g., when new categories of services arise for which there is

no historical data base). The impact on year-to-year increases in reasonable charges of this factor is treated as negligible. The effects of the economic index on the average charge increase is shown in column 2. The projected net increase in reasonable charges is shown in column 3; this compares with the corresponding historical data shown in column 4 of table A3.

The projection of residual factors assumes no further changes in the proportion of claims denied consistent with the very small changes observed in the last few years (see table A3).

TABLE A4.—COMPONENTS OF INCREASES IN TOTAL RECONGNIZED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: PROJECTED

(in percent)

Physician fee screen year[1]	Increase before effect of economic index	Reduction due to economic index	Net increase in reasonable charges	Gross residual factors	Effects of denials	Net residual factors	Total increase in recognized charges per enrollee
Alternative A:							
Aged:							
1984	8.8	-1.6	7.2	3.2	0.0	3.2	10.4
1985	7.6	-5.7	1.9	3.6	0.0	3.6	5.5
1986	6.5	-1.1	5.4	3.7	0.0	3.7	9.1
1987	5.2	-0.6	4.6	3.9	0.0	3.9	8.5
1988	5.9	-1.4	4.5	3.8	0.0	3.8	8.3
Disabled (excluding ESRD):							
1984	8.8	-1.6	7.2	4.2	0.0	4.2	11.4
1985	7.6	-5.7	1.9	5.3	0.0	5.3	7.2
1986	6.5	-1.1	5.4	5.8	0.0	5.8	11.2
1987	5.2	-0.6	4.6	6.0	0.0	6.0	10.6
1988	5.9	-1.4	4.5	5.8	0.0	5.8	10.3
Alternative B:							
Aged:							
1984	8.8	-1.6	7.2	3.2	0.0	3.2	10.4
1985	7.6	-5.7	1.9	3.6	0.0	3.6	5.5
1986	6.5	-1.1	5.4	3.7	0.0	3.7	9.1
1987	5.5	-0.6	4.9	3.8	0.0	3.8	8.7
1988	6.8	-1.7	5.1	3.8	0.0	3.8	8.9
Disabled (excluding ESRD):							
1984	8.8	-1.6	7.2	4.2	0.0	4.2	11.4
1985	7.6	-5.7	1.9	5.3	0.0	5.3	7.2
1986	6.5	-1.1	5.4	5.9	0.0	5.9	11.3
1987	5.5	-0.6	4.9	5.9	0.0	5.9	10.8
1988	6.8	-1.7	5.1	5.8	0.0	5.8	10.9

[1]Through June 30, 1984, the physician fee screen year is the 12-month period ending June 30. Thereafter, the physician fee screen year is the 12-month period ending September 30.

(2) Institutional and Other Services

The historical and projected increases in charges or costs per enrollee for institutional and other services are shown in table A5. The year-to-year changes in some services have been quite erratic. Because these series provide only a rough indication of future trends in costs, identical series of increase factors are used for alternative A and alternative B.

TABLE A5.—INCREASES IN RECOGNIZED CHARGES AND COSTS PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES

(In percent)

Physician fee screen year[1]	Inpatient radiology and pathology	Outpatient hospital	Home health agency	Group practice Prepayment plan	Independent lab
Aged:					
Historical:					
1968		57.9	76.6	42.2	9.6
1969	-13.1[2]	73.1	26.9	12.3	12.3
1970	8.7	39.1	2.9	-2.8	18.7
1971	1.0	26.2	-16.8	-7.9	25.0
1972	-6.1	12.1	-5.3	16.8	27.4
1973	3.2	11.0	20.9	14.0	21.5
1974	6.4	20.1	-15.9	25.9	27.9
1975	17.2	32.4	83.8	26.6	32.4
1976	24.9	34.5	32.7	23.1	20.5
1977	12.1	32.1	23.0	11.5	20.0
1978	20.7	14.5	2.8	-10.8	15.8
1979	10.8	19.9	-0.6	20.5	12.0
1980	14.5	14.8	7.5	43.5	19.9
1981	22.5	18.2	3.8	28.2	30.5
1982	13.9	16.0	-95.5	23.1	20.4
1983	3.1	18.4	23.1	22.6	10.3
Projected:					
1984	-3.6	21.2	18.1	28.3	-9.7
1985	3.3	18.2	10.2	19.4	58.9
1986	8.8	16.0	9.2	20.0	7.8
1987	9.5	15.5	11.3	19.9	8.7
1988	9.3	18.3	7.6	18.6	8.9
Disabled (excluding ESRD):					
Historical:					
1975	11.4	20.6	0.2	66.1	56.6
1976	19.4	23.2	40.6	16.1	36.1
1977	29.9	64.8	-8.1	6.9	33.6
1978	9.2	16.2	14.4	4.7	28.7
1979	20.1	16.6	-8.7	-19.9	20.7
1980	15.9	19.2	15.9	109.8	19.2
1981	16.9	25.0	16.6	20.2	21.3
1982	14.2	40.9	-100.0	21.7	25.3
1983	7.5	20.0	0.0	16.1	23.5
Projected:					
1984	-4.5	14.6	0.0	26.0	-0.6
1985	3.7	21.3	0.0	28.8	62.8
1986	8.8	17.8	0.0	30.4	7.8
1987	10.2	15.4	0.0	30.8	8.8
1988	9.9	18.2	0.0	26.8	8.8

[1]Through June 30, 1984, the physician fee screen year is the 12-month period ending on June 30. Thereafter, the physician fee screen year is the 12-month period ending September 30.
[2]Percentage change over prior year annualized value.

d. Projected Charges and Costs

Table A6 shows projections of per enrollee incurred charges and costs based on the assumptions in tables A4 and A5. Table A7 shows the total reimbursement amounts per enrollee that result from subtracting the average amounts of copayment per enrollee from the total covered charges in table A6. The aggregate reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

TABLE A6.—INCURRED REASONABLE CHARGES OR COSTS PER ENROLLEE: PROJECTED

(In percent)

Physician fee screen year[1]	All Services	Physician	Inpatient radiology and pathology	Outpatient hospital	Home health agency	Group practice Prepayment plan	Independent lab
Alternative A:							
Aged:							
1984	$837.25	$648.25	$25.94	$129.15	$0.57	$24.57	$8.77
1985	925.99	690.69	26.91	159.84	0.65	30.75	17.15
1986	1,024.00	753.26	29.28	185.37	0.71	36.90	18.48
1987	1,128.36	817.15	32.06	214.03	0.79	44.25	20.08
1988	1,248.22	884.70	35.05	253.30	0.85	52.46	21.86
Disabled (excluding ESRD):							
1984	937.52	686.62	27.14	201.23	0.00	12.80	9.73
1985	1,069.86	746.44	28.29	257.69	0.00	17.66	19.78
1986	1,208.94	830.27	30.78	303.54	0.00	23.02	21.33
1987	1,355.31	917.94	33.92	350.25	0.00	30.11	23.09
1988	1,527.65	1,012.47	37.28	413.98	0.00	38.79	25.13
Alternative B:							
Aged:							
1984	837.25	648.25	25.94	129.15	0.57	24.57	8.77
1985	925.99	690.69	26.91	159.84	0.65	30.75	17.15
1986	1,024.31	753.57	29.28	185.37	0.71	36.90	18.48
1987	1,130.62	819.41	32.06	214.03	0.79	44.25	20.08
1988	1,255.82	892.30	35.05	253.30	0.85	52.46	21.86
Disabled (excluding ESRD):							
1984	937.52	686.62	27.14	201.23	0.00	12.80	9.73
1985	1,069.86	746.44	28.29	257.69	0.00	17.66	19.78
1986	1,209.28	830.61	30.78	303.54	0.00	23.02	21.33
1987	1,357.85	920.48	33.92	350.25	0.00	30.11	23.09
1988	1,536.39	1,021.21	37.28	413.98	0.00	38.79	25.13

[1]Through June 30, 1984, the physician fee screen year is the 12-month period ending on June 30. Thereafter, the physician fee screen year is the 12-month period ending September 30.

TABLE A7.—INCURRED REIMBURSEMENT AMOUNTS: PROJECTED

Physician fee screen year[1]	Average enrollment (millions)	Reimbursement amounts	
		Per enrollee	Aggregate (millions)
Alternative A:			
Aged:			
1984	26.433	$621.62	$16,431
1985	27.161	696.21	18,910
1986	27.865	774.65	21,586
1987	28.513	858.51	24,479
1988	29.124	954.63	27,803
Disabled (excluding ESRD):			
1984	2.592	705.59	1,829
1985	2.611	815.59	2,130
1986	2.627	926.49	2,434
1987	2.613	1,043.43	2,726
1988	2.615	1,181.84	3,091
Alternative B:			
Aged:			
1984	26.433	621.62	16,431
1985	27.161	696.21	18,910
1986	27.865	774.90	21,593
1987	28.513	860.33	24,531
1988	29.124	960.71	27,980
Disabled (excluding ESRD):			
1984	2.592	705.59	1,829
1985	2.611	815.59	2,130
1986	2.627	926.77	2,435
1987	2.613	1,045.73	2,732
1988	2.615	1,188.81	3,109

[1]Through June 30, 1984, the physician fee screen year is the 12-month period ending on June 30. Thereafter, the physician fee screen year is the 12-month period ending September 30.

2. Estimates for Persons Suffering from ESRD

Certain persons suffering from end stage renal disease (ESRD) have been eligible to enroll for SMI coverage since July 1973 (under Section 299I of Public Law 92-603). For analytical purposes those enrollees suffering from ESRD who are also eligible as disability insurance beneficiaries are included in this section because their per enrollee costs are both higher and different in nature from those of most other disabled persons.

The estimates assume that charges for SMI ESRD services under Medicare will increase at an average of 3.8 percent per year over the projection period (October 1, 1983 through September 30, 1988). The estimates also assume a continued increase in enrollment. The historical and projected enrollment and costs are shown in table A8.

TABLE A8.—INCURRED REIMBURSEMENT FOR END-STAGE RENAL DISEASE

	Disabled ESRD and ESRD only			ESRD only
		Reimbursement amounts		Reimbursement amounts
Physician fee screen year[1]	Average enrollment (thousands)	Per enrollee	Aggregate (millions)	Aggregate (millions)
1974	14	$7,929	111	$78
1975	21	8,905	187	127
1976	27	9,815	265	173
1977	31	10,968	340	213
1978	35	11,943	418	255
1979	40	12,975	519	310
1980	47	13,447	632	398
1981	54	14,111	762	466
1982	58	15,017	871	475
1983	63	15,556	980	509
1984	66	16,667	1,100	551
1985	69	17,203	1,187	565
1986	70	17,957	1,257	594
1987	72	18,333	1,320	624
1988	73	18,959	1,384	654

[1]Through June 30, 1984, the physician fee screen year is the 12-month period ending on June 30. Thereafter, the physician fee screen year is the 12-month period ending September 30.

3. Summary of Aggregate Reimbursement Amounts on a Cash Basis

Table A9 shows aggregate historical and projected reimbursement amounts on a cash basis, by type of beneficiary. The difference between reimbursement amounts on a cash basis and incurred reimbursement amounts results from the lag between the time of service and the time of payment.

TABLE A9.—AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS

(In millions)

Fiscal Year[1]	Aged	Disabled (excluding ESRD)	Disabled ESRD and ESRD only	Total
Historical:				
1967	$664			$664
1968	1,390			1,390
1969	1,645			1,645
1970	1,979			1,979
1971	2,035			2,035
1972	2,255			2,255
1973	2,391			2,391
1974	2,538	$189	$147	2,874
1975	3,296	275	194	3,765
1976	4,045	355	272	4,672
T.Q.	1,080	110	79	1,269
1977	5,016	513	338	5,867
1978	5,798	625	429	6,852
1979	6,943	785	531	8,259
1980	8,495	984	665	10,144
1981	10,370	1,204	771	12,345
1982	12,404	1,492	910	14,806
1983	14,783	1,726	978	17,487
1984	16,561	1,839	1,073	19,473
Projected:				
Alternative A:				
1985	18,208	2,050	1,178	21,436
1986	21,819	2,462	1,250	25,531
1987	24,208	2,704	1,314	28,226
1988	27,395	3,048	1,378	31,821
Alternative B:				
1985	18,208	2,050	1,178	21,436
1986	21,825	2,462	1,250	25,537
1987	24,253	2,708	1,314	28,275
1988	27,554	3,064	1,378	31,996

[1]For 1967 through 1976, fiscal years cover the Interval from July 1 through June 30; the three month interval from July 1. 1976, through September 30.1976, is labeled "T.Q." the transition quarter; fiscal years 1977·1989 cover the interval from October 1 through September 30.

4. Administrative Expenses

The ratio of administrative expenses to benefit payments has been approximately 5 percent in recent years and is projected to decline in future years. Projections of administrative costs are based on estimates of changes in average annual wages.

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 January 1985 [2]

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 calendar year for which the actuarial rates are effective must be sufficient to pay for services furnished during that year (including associated administrative costs), even though payment for some of these services will not be made until after the close of the year. The portion of income required to cover benefits not paid until after the close of the calendar year 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 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 the end of the financing period for periods from 1983 through 1984.

TABLE 1.—ESTIMATED ACTUARIAL STATUS OF THE SMI TRUST FUND AS OF THE END OF THE FINANCING PERIODS, JUNE. 1, 1983 -·DECEMBER. 31, 1984

(In millions of dollars)

Financing Period Ending [1]	Assets	Liabilities	Assets less liabilities
June 30, 1983	$6,781	$3,973	$2,808
December 31, 1983	7,070	4,273	2,797
December 31, 1984	8,641	4,968	3,673

[1]Prior to July 1, 1983, the financing periods were the 12-month periods ending June 30. For the transitional period, the financing period is July 1, 1983, through December 31, 1983. After December 31, 1983, the financing periods are the calendar year periods ending December 31.

[2] This statement appeared in the *Federal Register* of September 28, 1984. Projections shown in this statement differ from the projections shown in the rest of the report because of changes in assumptions since the rates were announced.

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 calendar year 1985 was determined by projecting per-enrollee cost for the 12-month periods ending June 30, 1985, and June 30, 1986, by type of service. Although the actuarial rates are now applicable for calendar years, projections of per-enrollee costs are determined on a July to June period, consistent with the July 1 annual fee screen update used for benefits prior to the passage of Pub. L. 98-369. The values for the 12-month period ending June 30, 1982, 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 2. These per-enrollee values are then adjusted to apply to a calendar year period. The projected values for financing periods from July 1, 1982, through December 31, 1985, are shown in Table 3.

TABLE 2.—PROJECTION FACTORS[1]
12-MONTH PERIODS ENDING JUNE 30 OF 1983-1986

(In percent)

12-month period ending June 30,	Physicians' services		Radiology and pathology	Outpatient hospital services	Home health agency services[4]	Group practice prepayment plans	Independent lab services
	Fees[2]	Residual[3]					
Aged:							
1983	8.9	14.0	3.0	15.0	15.0	20.0	1.0
1984	7.1	3.4	-14.5	15.6	4.2	20.0	-7.6
1985	0.5	9.0	-0.9	22.3	15.1	20.2	94.2
1986	5.8	5.0	9.6	22.2	7.6	24.8	6.1
Disabled:							
1983	8.9	12.5	6.0	15.0	0.0	20.0	19.0
1984	7.1	5.6	-13.3	22.4	0.0	24.8	-4.8
1985	0.5	10.5	0.0	23.7	0.0	26.3	148.1
1986	5.8	7.2	9.4	26.8	0.0	34.0	4.9

[1]All values are per enrollee.
[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.

TABLE 3.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER FINANCING PERIODS ENDING DECEMBER 31, 1983 THROUGH DECEMBER 31, 1986

	Financing Periods			
	July 1, 1982 through June 30, 1983	July 1, 1983 through December 31, 1983	January 1, 1984 through December 31, 1984	January 1, 1985 through December 31, 1985
Covered services (at level recognized):				
Physicians' reasonable charges	$25.28	$27.32	$29.34	$32.37
Radiology and pathology	1.11	.99	.95	.99
Outpatient hospital and other institutions	4.43	4.95	5.70	6.96
Home health agencies	.03	.03	.03	.03
Group practice prepayment plans	.77	.88	1.01	1.24
Independent lab	.37	.35	.51	.69
Total services	31.99	34.52	37.54	42.28
Cost-sharing:				
Deductible	-2.49	-2.51	-2.52	-2.53
Coinsurance	-5.86	-6.39	-6.93	-7.81
Total benefits	23.64	25.62	28.09	31.94
Administrative expenses	.99	1.11	1.13	1.18
Incurred expenditures	24.63	26.73	29.22	33.12
Value of Interest	-.65	-.65	-.79	-.85
Contingency margin for projection error and to amortize the surplus or deficit	.62	.92	.77	-1.27
Monthly actuarial rate	$24.60	$27.00[1]	$29.20	$31.00

[1]This rate, although originally promulgated for the 12-month period ending June 30, 1984, was modified by Pub.L.98-21 to apply only to the 6-month period ending December 31, 1983.

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 calendar year 1985 is $33.12. The monthly actuarial rate of $31.00 provides an adjustment for interest earnings end $-1.27 for a contingency margin. A negative margin is needed to begin to reduce the surplus which is developing in 1984 to a more appropriate level.

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 2). Costs for the end-stage renal disease program are projected using a different computer model because of the complex demographic problems involved. The combined results for all disabled enrollees are shown in Table 4.

TABLE 4.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES FINANCING PERIODS ENDING DECEMBER 31, 1983 THROUGH DECEMBER 31, 1986

	Financing Periods			
	July 1, 1982 through June 30, 1983	July 1, 1983 through December 31, 1983	January 1, 1984 through December 31, 1984	January 1, 1985 through December 31, 1985
Covered services (at level recognized):				
Physicians' reasonable charges	$29.38	$31.85	$34.32	$38.23
Radiology and pathology	1.14	1.02	0.98	1.03
Outpatient hospital and other institutions	25.17	26.61	28.50	32.19
Home health agencies	0.00	0.00	0.00	0.00
Group practice prepayment plans	0.44	0.52	0.62	.81
Independent lab	0.55	.53	.80	1.11
Total services	56.68	60.53	65.22	73.37
Cost-sharing:				
Deductible	-2.27	-2.30	-2.33	-2.36
Coinsurance	-10.85	-11.64	-12.50	-14.02
Total benefits	43.56	46.59	50.39	56.99
Administrative expenses	1.98	1.99	2.03	2.11
Incurred expenditures	45.54	48.58	52.42	59.10
Value of Interest	-3.51	-3.61	-4.39	-5.00
Contingency margin for projection error and to amortize the surplus or deficit	.07	1.13	6.27	-1.40
Monthly actuarial rate	$42.10	$46.10[1]	$54.30	$52.70

[1]This rate, although originally promulgated for the 12-month period ending June 30, 1984, was modified by Pub.L.98-21 to apply only to the 6-month period ending December 31, 1983.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for calendar year 1985 is 59.10. The monthly actuarial rate of $52.70 provides an adjustment for interest earnings and $-1.40 for a contingency margin. A negative margin is needed to begin to reduce the surplus which is developing in 1984 to a more appropriate level.

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 (as defined in Table 2), 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 2.

Table 5.—PROJECTION FACTORS AND THE ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER ALTERNATIVE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1985

	This projection			Low cost projection			High cost projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1984	1985	1986	1984	1985	1986	1984	1985	1986
Projection factors (in percent):[1]									
Physician services - fees[2]									
Aged	7.1	0.5	5.8	6.6	0.0	5.1	7.6	1.0	6.5
Disabled	7.1	0.5	5.8	6.6	0.0	5.1	7.6	1.0	6.5
Physician services - Residual[3]									
Aged	3.4	9.0	5.0	1.9	7.3	2.7	4.9	10.7	7.3
Disabled	5.6	10.5	7.2	1.6	5.5	0.2	9.6	15.5	14.2
Outpatient hospital services									
Aged	15.6	22.3	22.2	10.6	15.3	12.2	20.6	29.3	32.2
Disabled	22.4	23.7	26.8	16.4	13.7	11.8	28.4	33.7	41.8
	As of December 31,			As of December 31,			As of December 31,		
	1983	1984	1985	1983	1984	1985	1983	1984	1985
Actuarial status (in millions):									
Assets	$7,070	$8,641	$8,490	$7,070	$9,375	$10,932	$7,070	$7,886	$5,896
Liabilities	$4,273	$4,968	$5,762	$4,041	$4,624	$5,231	$4,506	$5,316	$6,321
Assets less liabilities	$2,797	$3,673	$2,728	$3,029	$4,751	$5,701	$2,564	$2,570	$-425
Ratio of assets less liabilities to expenditures (In percent)[4]	12.7	14.4	9.5	14.3	20.0	21.3	11.2	9.4	-1.3

[1]All values are per enrollee.
[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 the total Incurred expenditures during the following year, expressed as a percent.

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 $2,728 million by the end of December 1985. This amounts to 9.3 percent of the estimated total incurred expenditures for the following year. Assumptions which are somewhat more pessimistic and, therefore, which indicate the adequacy of the assets to accommodate projection errors, produce a deficit of $425 million by the end of December 1985, which amounts to -1.3 percent of the estimated total incurred expenditures for the following year. Under fairly optimistic assumptions, the monthly actuarial rates will result in a surplus of $5,701 by the end of December 1985, which amounts to 21.3 percent of the estimated total incurred expenditures for the following year.

5. PREMIUM RATE

For calendar years 1984 through 1987, 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 calendar year 1985 is $15.50, which is 50 percent of the monthly actuarial rate for this period ($31.00).

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.

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