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**1987 ANNUAL REPORT OF THE BOARD OF TRUSTEES
OF THE FEDERAL SUPPLEMENTARY MEDICAL IN-
SURANCE TRUST FUND**

COMMUNICATION

FROM

**THE BOARD OF TRUSTEES, FEDERAL SUPPLE-
MENTARY MEDICAL INSURANCE TRUST FUND**

TRANSMITTING

**THE 1987 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND,
PURSUANT TO 42 U.S.C. 401(c)(2), 1395i(b)(2), 1395t(b)(2)**



**MARCH, 31, 1987.—Referred jointly to the Committee on Ways and Means
and Energy and Commerce, and ordered to be printed.**

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1987 ANNUAL REPORT OF THE BOARD OF
TRUSTEES OF THE FEDERAL SUPPLEMENTARY
MEDICAL INSURANCE TRUST FUND

COMMUNICATION

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THE BOARD OF TRUSTEES, FEDERAL
SUPPLEMENTARY MEDICAL INSURANCE
TRUST FUND

Transmitting

THE 1987 ANNUAL REPORT OF THE BOARD, PURSUANT TO
SECTION 1841(b) OF THE SOCIAL SECURITY ACT
AS AMENDED

Prepared by

THE OFFICE OF THE ACTUARY
HEALTH CARE FINANCING ADMINISTRATION

LETTER OF TRANSMITTAL

Board of Trustees of the
Federal Supplementary Medical Insurance Trust Fund
Washington, D.C., March 30, 1987

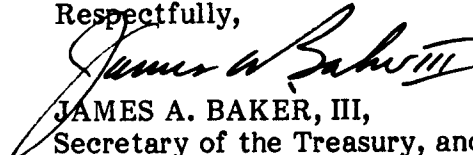
HONORABLE JAMES C. WRIGHT, JR.
Speaker of the House of Representatives
Washington, D.C.

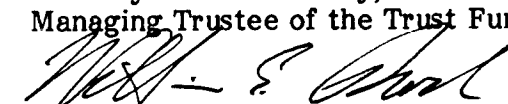
HONORABLE GEORGE BUSH
President of the Senate
Washington, D.C.


GENTLEMEN:


We have the honor of transmitting to you the 1987 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 22nd such report), in compliance with the provisions of section 1841(b) of the Social Security Act.

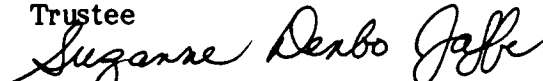
Respectfully,



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


WILLIAM E. BROCK,
Secretary of Labor,
and Trustee


OTIS R. BOWEN, M.D.,
Secretary of Health and
Human Services, and Trustee


MARY FALVEY FULLER,
Trustee


SUZANNE DENBO JAFFE,
Trustee


WILLIAM L. ROPER, M.D.,
Administrator of the Health Care Financing
Administration, and Secretary,
Board of Trustees

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1987 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF
THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND

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, Mary Falvey Fuller and Suzanne Denbo Jaffe, 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 1987 annual report, the twenty-second such report.

EXECUTIVE SUMMARY

The supplementary medical insurance (SMI) program pays for physicians' services, outpatient hospital services, and other medical expenses for both those aged 65 and over and for those long term disabled. In calendar year 1986, 30.5 million people were covered under SMI. General revenue contributions during 1986 amounted to \$17.8 billion, accounting for 72.2 percent of all SMI income. About 23.2 percent of all income resulted from the premiums paid by the participants, with interest payments to the SMI fund accounting for the remaining 4.6 percent. Of the \$27.3 billion in SMI disbursements, \$26.2 billion was for benefit payments while the remaining \$1.1 billion was spent for administrative expenses. SMI administrative expenses were 3.9 percent of total disbursements.

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 fund holds all of the income not currently needed to pay benefits and related expenses. The assets of the fund may not be used for any other purpose; however, they are invested in certain interest-bearing obligations of the U.S. Government.

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

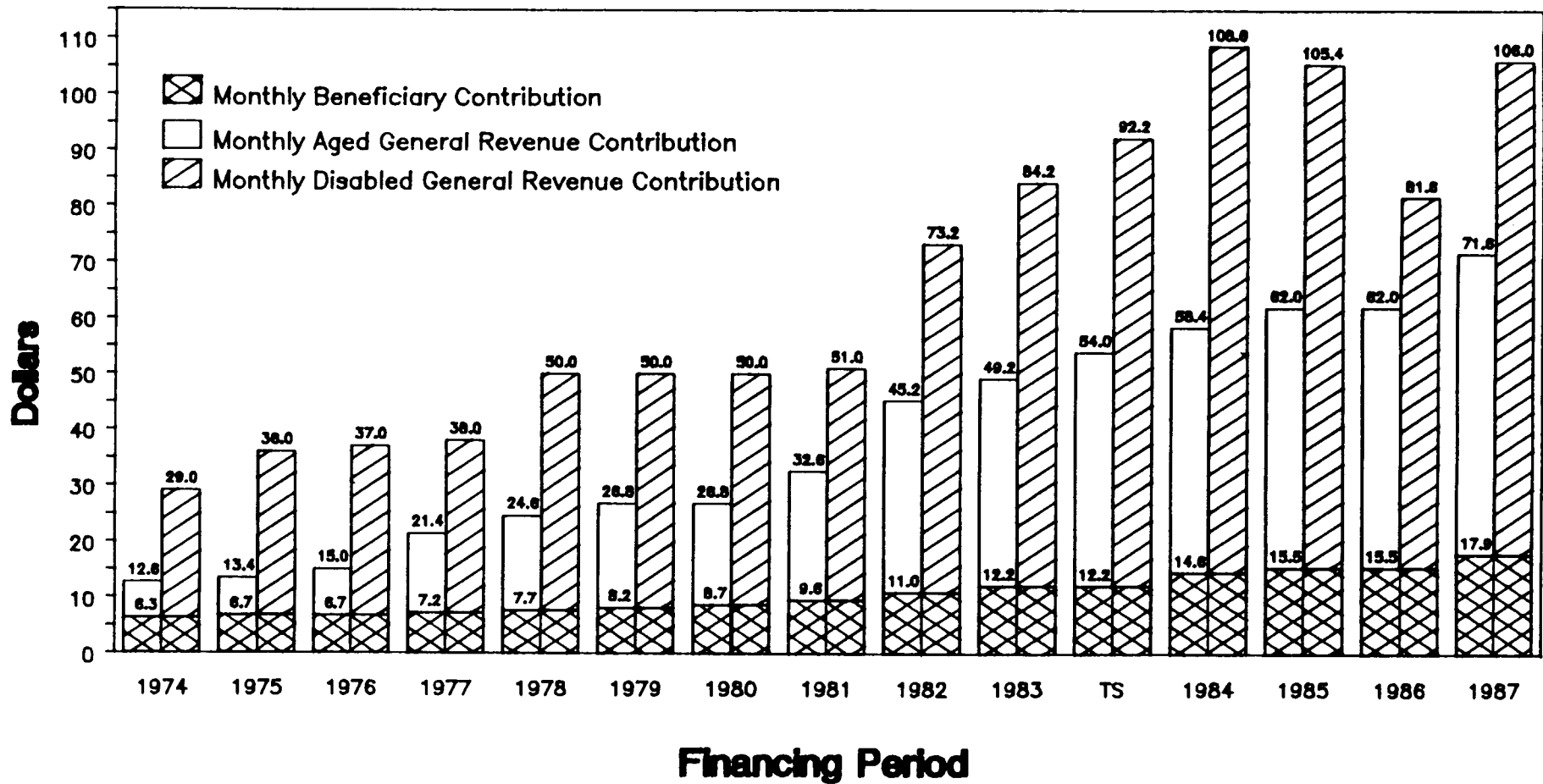
the 6-month transition period (July 1, 1983 through December 31, 1983), these rates were applicable in the 12-month periods ending June 30. Beginning January 1, 1984, the period for which rates were applicable was changed to calendar years. Monthly actuarial rates are equal to one-half the monthly amounts 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 1 presents these values for financing periods since 1974. This figure clearly indicates the extent to which general revenue financing is the major source of income for the program.

Operations of the SMI Program

Historical and projected operations of the fund through 1989 are shown in tables 5 and 6 in this report. As can be seen, income has exceeded disbursements for most of the historical years. However, at the time that financing was being established for calendar year 1987, assets appeared to be more than sufficient to cover the incurred costs and an appropriate contingency. Therefore, the financing was established to reduce the assets to the level necessary to maintain the actuarial soundness of the program. As a result, in calendar year 1987 disbursements are projected to exceed income, and the trust fund balance is projected to decrease through calendar year 1987. 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.

Figure 1

SMI Monthly Per Capita Income



Financing Period:

For periods 1983 and earlier, the financing period is July 1 through June 30.

Transitional semester (TS), the financing period is July 1, 1983 through December 31, 1983.

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 financed from premium income paid by the enrollees, from income contributed from general revenue in proportion to premium payments, and from interest payments on the trust fund assets.

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) assets 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 that 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 primary 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 also be some relative measure. The relative measure or ratio used for this purpose is the ratio of the assets less liabilities to the following year's incurred expenditures. Figure 2 shows this ratio for historical years and for projected years under the intermediate assumptions (alternative II-B), as well as high (pessimistic) and low (optimistic) cost sensitivity scenarios.

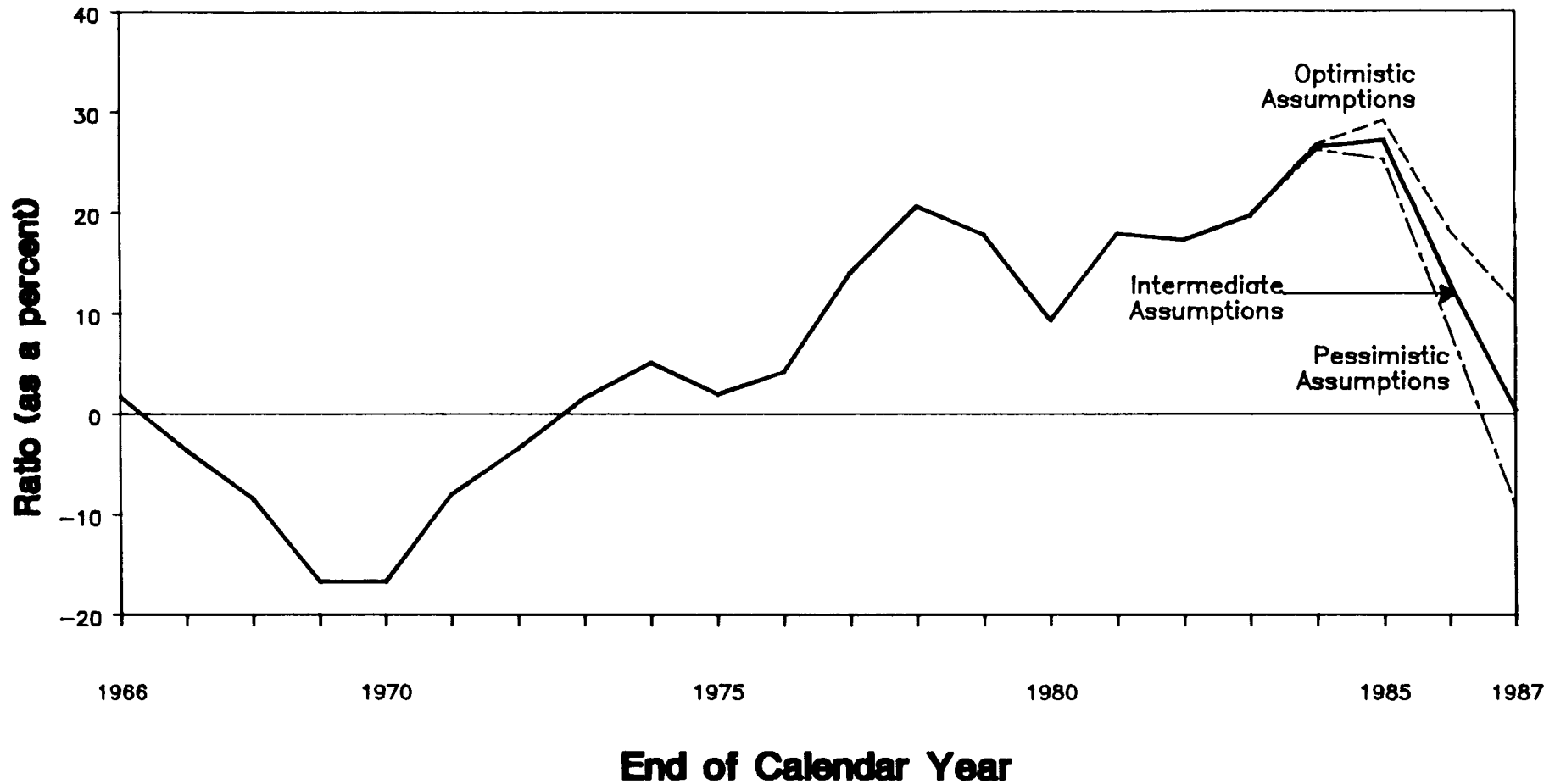
Financing for calendar year 1987 was established to reduce the excess of assets over liabilities to the appropriate level to maintain the actuarial soundness of the trust fund. As a result, the excess of assets over liabilities is expected to decrease by December 31, 1987.

Conclusion of the Board of Trustees

The financing established through December 1987 is sufficient to cover projected benefits 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 a small degree of projection error. The SMI program can thus be said to be actuarially sound.

Although the supplementary medical insurance program is financially sound, the Board notes with concern the rapid growth in the cost of the program. Growth rates have been so rapid that outlays of the program have doubled every five to six years, and this growth rate shows no sign of abating despite recent efforts to control the cost of the program. The Board recommends that Congress continue to work to curtail the rapid growth in the supplementary medical insurance program.

Figure 2
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 assets less liabilities to the following year incurred expenditures.

SOCIAL SECURITY AMENDMENTS SINCE THE 1986 TRUSTEES REPORT

Public Law 99-272, the "Consolidated Omnibus Budget Reconciliation Act of 1985", was enacted April 7, 1986 and contained several provisions that have an impact on the Federal Supplementary Medical Insurance Trust Fund. The major changes include:

(1) The physician payment methodology is revised as follows:

- the freeze on customary and prevailing charges and nonparticipating physicians' actual charges is extended through April 30, 1986.
- the updates for the period May 1 through December 31, 1986 are as follows:

Participating physicians receive full customary and prevailing charge updates that would have been provided October 1, 1985. One percent is added to the Medicare Economic Index (MEI), for this period only.

Nonparticipating physicians have the freeze on customary and prevailing charges continued through this period. The freeze on actual charges at the April - June 1984 base period levels is also extended.

Drop-out physicians receive customary charge update only. The actual charges are frozen at the April - June 1984 level.

- For calendar years beginning 1987, participating physicians will receive customary charge and prevailing charge updates on January 1.
- Nonparticipating physicians will receive customary charge updates on January 1, but will be subject to prevailing charge level applied to participating physicians in the previous year. There is a permanent one year lag.
- The freeze on actual charges expires on December 31, 1986.

These changes became effective May 1, 1986.

- (2) Medicare is made secondary payor for all workers age 65 and over and their spouses who elect to be covered by employment-based health insurance through an employer with 20 or more employees. This change became effective May 1, 1986.
- (3) The portion of Part B costs which are financed by enrollee premium must equal 25 percent of program costs of aged beneficiaries through calendar year 1988. This extension became effective for Part B premiums for calendar year 1988.
- (4) The Chief Actuary of the Health Care Financing Administration is permitted to comment on the economic assumptions underlying the Annual Report of the Board of Trustees. This change is effective upon enactment.

- (5) Other provisions which revised Title XVIII but which did not have a major financial impact on the program include determinations of inherent reasonableness of charges and customary charges for certain physicians; limitation on payment for post-cataract surgery; and payment for assistants at surgery for certain operations.

Public Law 99-509, the "Omnibus Budget Reconciliation Act of 1986", was enacted October 21, 1986 and contained several provisions having an impact on the Federal Supplementary Medical Insurance Trust Fund. The major changes include:

- (1) The economic index for participating physicians will increase by 3.2 percent, and the economic index for nonparticipating physicians will be 96 percent of the index for participating physicians. This will be effective January 1, 1987. In future years, the percent increase in the Medicare Economic Index (MEI) will be applied to the prevailing charges in effect on December 31 of the previous year. The differential in the prevailing charges between participating and nonparticipating physicians is now permanent.

There is a limit on actual charges for nonparticipating physicians, the "maximum allowable actual charge" (MAAC). If the weighted average actual charge was equal to or greater than 115 percent of the current year's prevailing charge, the MAAC is increased by one percent. If the weighted average actual charge was less than 115 percent of the current

year's prevailing charge, the MAAC is increased by a fraction of the difference between 115 percent of the current year prevailing charge and the previous year MAAC.

These changes became effective January 1, 1987.

- (2) The maximum allowable prevailing charges for cataract surgery will be reduced by 10 percent in 1987 and an additional 2 percent in 1988. The reduced amount may not be lower than 75 percent of the weighted national average prevailing charge amounts. Nonparticipating physicians are limited to 125 percent of the reduced prevailing charges plus, in 1987, one half of the differences between the limit and the physician's actual charge in the previous year. This change became effective January 1, 1987.
- (3) The base rates for dialysis treatment are reduced by \$2.00 for the period October 1, 1986 to October 1, 1987. Outpatient immunosuppressive drugs furnished to transplant patients are covered for one year after the transplant. The payment provision is effective upon enactment. The payment for immunosuppressive drugs became effective January 1, 1987.
- (4) Vision care services performed by an optometrist are now covered if the services are already covered by Medicare and if the optometrist is legally authorized to perform as a doctor of optometry in the State in which the services are performed. Coverage became effective April 1, 1987.

- (5) Prompt payment provisions require carriers to pay at least 95 percent of all "clean" claims by a given number of calendar days after receipt. Prompt payment requirements became effective November 1, 1986.
- (6) Occupational therapy services are now covered if performed in a skilled nursing facility (when Part A coverage has been exhausted), clinic, rehabilitation agency or public health agency. Reimbursement is based on reasonable costs. These services are also covered if furnished by an independently practicing therapist; however, reimbursement is 80 percent of reasonable charges, with no more than \$500 in incurred expenses eligible for a calendar year. Coverage became effective July 1, 1987.
- (7) Medicare is now secondary payor for all disabled Medicare beneficiaries who elect to be covered by employment-based health insurance as a current employee (or family member of such employee) of a large employer (at least 100 employees). Coverage is effective from January 1, 1987 through December 31, 1991.
- (8) A Cost of Living Adjustment (COLA) will be provided for old age, survivors, and disability insurance benefits in any year that there is an increase in the Consumer Price Index (CPI) during the specified base period. This provision affects the level of the Part B premium. This change is effective with enactment.

- (9) Other provisions which revised Title XVIII but which did not have a major financial impact on the program include the repeal of the 2 for 1 conversion requirement for certain Health Maintenance Organizations (HMOs); limitation of payment for home health services; standards for organ procurement agencies; payment for nurse anesthetists; payment for clinical diagnostic lab tests; payment rate for parenteral and enteral nutrition supplies and equipment; coverage of a physician assistant services; and payment rates for ambulatory surgery.

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 and (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 have met 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 through 1987 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 through 1987 are also shown. For a detailed discussion of the determination of the actuarial and premium rates, see Appendix B.

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.

Table 1.--STANDARD MONTHLY PREMIUM RATES, ACTUARIAL RATES, AND MATCHING RATES

	Standard monthly premium rate	Monthly actuarial rate		Matching rate	
		Participants aged 65 and over	Disabled participants under age 65	Participants aged 65 and over	Disabled participants 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*	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
1986	15.50	31.00	40.80	3.0000	4.2645
1987	17.90	35.80	53.00	3.0000	4.9218

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

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 and 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 1986

A statement of the income and disbursements of the Federal Supplementary Medical Insurance Trust Fund in fiscal year 1986 and of the assets of the fund at the beginning and end of the fiscal year is presented in table 2.

The total assets of the trust fund amounted to \$10,646 million on September 30, 1985. During fiscal year 1986, total receipts amounted to \$25,004 million, and total disbursements were \$26,217 million. Total assets thus decreased \$1,214 million during the year to a total of \$9,432 million on September 30, 1986.

Of the total receipts, \$5,200 million represented premium payments by (or on behalf of) participants aged 65 and over, and \$500 million represented premium payments by (or on behalf of) disabled participants under age 65. Total premium payments amounted to \$5,699 million, an increase of 3.2 percent over the amount of \$5,524 million for the preceding year. This increase in premiums from participants resulted primarily from: (1) the growth of the number of persons enrolled in the supplementary medical insurance program and (2) the increase from \$14.60 to \$15.50 per month in the standard premium rate that became effective on January 1, 1985.

Contributions received from the general fund of the treasury amounted to \$18,076 million, which accounted for 72 percent of total receipts. This amount consisted of \$15,696 million representing contributions relating to premiums paid by participants aged 65 and over, and \$2,381 million representing contributions relating to the premiums paid by disabled participants under age 65.

Table 2.--STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE
TRUST FUND DURING FISCAL YEAR 1986
(In thousands)

Total assets of the trust fund, beginning of period.....		\$10,645,667
Receipts:		
Premiums from participants:		
Participants aged 65 and over.....	\$5,199,503	
Disabled participants under age 65.....	<u>499,901</u>	
Total premiums.....		5,699,404
Transfers from general fund of the Treasury:		
Government contributions:		
Supplementary premiums of participants aged 65 and over.....	15,695,562	
Supplementary premiums of disabled participants under age 65	<u>2,380,622</u>	
Total Government contributions.....		18,076,184
Other.....		19
Interest:		
Interest on investments.....		1,229,374
Interest on amounts of interfund transfers <u>1/</u>		<u>-1,411</u>
Total receipts		25,003,570
Disbursements:		
Benefit payments.....		25,168,954
Administrative expenses:		
Treasury administrative expenses.....	6,151	
Salaries and expenses - SSA.....	196,032	
Salaries and expenses - HCFA.....	811,485	
Salaries and expenses Office of Secretary.....	13,229	
Construction.....	5,808	
Professional Standard Review Organization.....	-1	
Public Health Service.....	157	
Reimbursement of SSA expenses <u>2/</u>	0	
Reimbursement of HCFA expenses <u>2/</u>	15,139	
Pay Assessment Commission.....	415	
Office of Personnel Management expenses.....	<u>104</u>	
Total administrative expenses.....		<u>1,048,519</u>
Total disbursements.....		<u>26,217,473</u>
Net addition to the trust fund.....		<u>-1,213,903</u>
Total assets of the trust fund, end of period.....		9,431,764

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/ 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 remaining \$1,228 million of receipts consisted almost entirely of interest on the investments of the trust fund.

Of the \$26,217 million in total disbursements, \$25,169 million represented: (1) benefits paid directly from the trust fund for health services covered under Title XVIII of the Social Security Act and (2) costs of experiments and demonstration projects in providing health care services.

The remaining \$1,049 million of disbursements was for 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 1986 is compared with the estimates for fiscal year 1986 which appeared in the 1985 and 1986 annual reports.

Table 4 shows a comparison of the total assets of the fund and their distribution at the end of fiscal year 1985 and at the end of fiscal year 1986. The assets of the trust fund at the end of fiscal year 1985 totaled \$10,646 million, consisting of \$10,736 million in the form of obligations of the U.S. Government, offset by an extension of credit of \$91 million against securities to be redeemed. The assets of the trust fund at the end of fiscal year 1986 totaled \$9,432 million, consisting of \$9,424 million in the form of obligations of the U.S. Government and an undisbursed balance of \$7 million. 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.

The net decrease in the par value of the investments held by the fund during fiscal year 1986 amounted to \$1,312 million. New securities at a total par value of \$29,681 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 \$30,993 million. Included in these amounts is \$28,372 million in certificates of indebtedness that were acquired, and \$28,604 million in certificates of indebtedness that were redeemed, within the fiscal year.

Table 3.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS
OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND,
FISCAL YEAR 1986
(Dollar amounts in millions)

<u>Item</u>	<u>Actual amount</u>	Comparison of actual experience with estimates for fiscal year 1986 published in--			
		<u>1986 report</u>		<u>1985 report</u>	
		<u>Estimated amount</u>	<u>Actual as percentage of estimate</u>	<u>Estimated amount</u>	<u>Actual as percentage of estimate</u>
Premiums from participants	\$ 5,699	\$ 5,658	101	\$5,821	98
Government contributions	18,076	17,973	101	18,513	98
Benefit payments	25,169	25,754	98	25,537	99

TABLE 4.—ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND,
AT THE END OF FISCAL YEARS 1985 AND 1986 1/

	September 30, 1985	September 30, 1986
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of indebtedness:		
10 5/8-percent, 1986.....	\$231,460,000.00	
Bonds:		
7 1/8-percent, 1987.....	56,245,000.00	
7 1/8-percent, 1988.....	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, 1987.....	11,547,000.00	
7 3/8-percent, 1988.....	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, 1987.....	8,061,000.00	
7 1/2-percent, 1988.....	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, 1987.....	61,963,000.00	
7 5/8-percent, 1988.....	61,963,000.00	
7 5/8-percent, 1989.....	61,963,000.00	61,963,000.00
8 1/4-percent, 1987.....	115,978,000.00	
8 1/4-percent, 1988.....	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 3/8-percent, 2001.....		444,270,000.00
8 3/4-percent, 1987.....	72,934,000.00	
8 3/4-percent, 1988.....	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 3/8-percent, 1987.....	166,084,000.00	
10 3/8-percent, 1988.....	166,084,000.00	
10 3/8-percent, 1989.....	166,084,000.00	166,084,000.00
10 3/8-percent, 1990.....	166,084,000.00	166,084,000.00
10 3/8-percent, 1991.....	166,084,000.00	166,084,000.00
10 3/8-percent, 1992.....	166,084,000.00	166,084,000.00
10 3/8-percent, 1993.....	166,084,000.00	166,084,000.00
10 3/8-percent, 1994.....	166,083,000.00	166,083,000.00
10 3/8-percent, 1995.....	166,083,000.00	166,083,000.00
10 3/8-percent, 1996.....	166,083,000.00	166,083,000.00
10 3/8-percent, 1997.....	166,083,000.00	166,083,000.00
10 3/8-percent, 1998.....	166,084,000.00	166,084,000.00
10 3/8-percent, 1999.....	166,084,000.00	166,084,000.00
10 3/8-percent, 2000.....	733,187,000.00	733,187,000.00
10 3/4-percent, 1986.....	88,061,000.00	
10 3/4-percent, 1987.....	88,061,000.00	
10 3/4-percent, 1988.....	88,061,000.00	29,562,000.00
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
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, 1986.....	42,201,000.00	
13 1/4-percent, 1987.....	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.....		
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	110,114,000.00
13 3/4-percent, 1989.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1990.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1991.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1992.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1993.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1994.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1995.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1996.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1997.....	110,115,000.00	110,115,000.00
13 3/4-percent, 1998.....	110,114,000.00	110,114,000.00
13 3/4-percent, 1999.....	567,103,000.00	567,103,000.00
Total investments in public-debt obligations....	10,736,461,000.00	9,424,396,000.00
Undisbursed balance.....	-90,794,287.45 2/	7,368,140.25
Total assets.....	10,645,666,712.55	9,431,764,140.25

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 the redemption of securities on the first day of the following month.

The effective annual rate of interest earned by the assets of the supplementary medical insurance trust fund for the 12 months ending on June 30, 1986, was 10.5 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 1986 was $8 \frac{3}{8}$ percent, payable semiannually.

EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND
DURING THE PERIOD OCTOBER 1, 1986 TO DECEMBER 31, 1989

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.

Although standard premium rates and actuarial rates have been set only for periods through December 31, 1987, projections are presented through December 31, 1989 to conform with the requirements of section 1841(b) of the Social Security Act. 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 B on the projections in this report. As the projections indicate, the performance of the economy does not significantly affect the operations of the supplementary medical insurance program.

Prior to the passage of Public Law 98-369, allowable fee limits for physician 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 physician 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.

Public Law 99-272 extended the freeze on physician services from October 1, 1985 to April 30, 1986. During this extended period, physician services were reimbursed at the same levels as in effect during the second quarter of 1984. Public Law 99-272 also changed the date for updating the allowable fee limits from October 1 to January 1 of each year, beginning on January 1, 1987.

Under both sets of projections, it is assumed that allowable fees for physician services will increase an average of 6.1 percent for the 12-month period ending September 30, 1987, and will increase an average of 3.9 percent for the 12-month period ending September 30, 1988. The costs per enrollee for institutional and other services under the SMI program are projected to increase an average of 17.7 percent for the 12-month period ending September 30, 1987, and 18.1 percent for the 12-month period ending September 30, 1988.

Table 5 shows the projected operations of the trust fund on a fiscal year basis through fiscal year 1989. Table 6 shows the corresponding development on a calendar year basis. The trust fund balance was \$9.4 billion at the end of fiscal year 1986. The actuarial rates for calendar years 1986 and 1987 were promulgated with specific margins to reduce assets to the appropriate levels to maintain the actuarial soundness of the trust fund. Based on these actuarial rates and the above economic assumptions, the fund is projected to decrease to \$6.5 billion under both alternatives by the end of fiscal year 1987, and then decrease to \$5.5 billion by the end of fiscal year 1988.

Table 5.—ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
FISCAL YEARS 1987-1989 AND ACTUAL DATA FOR 1967-1986
(In millions)

Fiscal year <u>1/</u>	Income				Disbursements			Balance in fund at end of year <u>4/</u>
	Premiums from participants	Government contribu- tions <u>2/</u>	Interest and other income <u>3/</u>	Total income	Benefit payments	Adminis- trative expenses	Total disburse- ments	
Historical:								
1967	\$ 647	\$ 623	\$ 15	\$1,285	\$ 664	\$ 135 <u>5/</u>	\$ 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
1985	5,524	17,898	1,155	24,577	21,808	922	22,730	10,646
1986	5,699	18,076	1,228	25,004	25,169	1,049	26,217	9,432
Projected:								
Alternative A:								
1987	6,418	20,251	940	27,609	29,487	1,060	30,547	6,494
1988	8,536	25,152	540	34,226	34,079	1,112	35,191	5,531
1989	9,522	32,665	551	42,738	39,029	1,170	40,199	8,070
Alternative B:								
1987	6,418	20,251	940	27,609	29,488	1,055	30,543	6,498
1988	8,536	25,152	540	34,228	34,089	1,104	35,193	5,533
1989	9,551	32,697	556	42,804	39,091	1,159	40,250	8,087

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 1977-89 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/ Administrative expenses shown include those paid in fiscal years 1966 and 1967.

Table 6.—ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS)
CALENDAR YEARS 1987-1989 AND ACTUAL DATA FOR 1966-1986
(In millions)

Calendar year	Income				Disbursements			Balance in fund at end of year <u>3/</u>
	Premiums from participants	Government contribu- tions <u>1/</u>	Interest and other income <u>2/</u>	Total income	Benefit payments	Adminis- trative expenses	Total disburse- ments	
Historical:								
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 <u>4/</u>	11,291 <u>4/</u>	361	15,374	13,113	915	14,028	5,877
1982	3,697 <u>4/</u>	12,284 <u>4/</u>	599	16,580	15,455	772	16,227	6,230
1983	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
1985	5,613	18,250	1,243	25,106	22,947	933	23,880	10,924
1986	5,722	17,802	1,141	24,665	26,239	1,060	27,299	8,291
Projected:								
Alternative A:								
1987	6,668	21,122	686	28,476	30,605	1,072	31,677	5,090
1988	9,159	28,043	495	37,697	35,312	1,125	36,437	6,350
1989	9,643	32,658	637	42,938	40,276	1,184	41,460	7,828
Alternative B:								
1987	6,668	21,122	686	28,476	30,607	1,065	31,672	5,095
1988	9,159	28,045	496	37,700	35,332	1,117	36,449	6,346
1989	9,682	32,697	650	43,029	40,364	1,173	41,537	7,838

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/ Section 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 calendar year 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 maintain assets at a level 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 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) assets 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 that 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. Outstanding 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, 1987
(In millions)

Financing period	Premiums from participants	Government contributions	Interest and other income	Benefit payments	Administrative expenses	Net operations in year
Historical:						
12-month period ending June 30,						
1967	\$ 647	\$ 647	\$ 15	\$1,109	\$123 ^{1/}	\$ 77
1968	698	698	21	1,443	155	-181
1969	903	903	24	1,766	198	-134
1970	936	936	12	1,929	213	-258
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	3,150	353	308
1975	1,887	2,396	105	3,930	438	20
1976	1,951	2,972	109	4,822	485	-275
1977	2,156	4,697	157	5,863	515	632
1978	2,358	5,991	254	6,950	511	1,142
1979	2,601	6,570	365	8,172	649	715
1980	2,823	6,627	421	9,941	645	-715
1981	3,178	8,219	371	12,057	692	-981
1982	3,737	12,488	495	13,997	728	1,995
1983	4,202	13,951	686	16,926	708	1,205
Transition semester ^{2/}	2,120	7,836	374	9,700	483	147
Calendar year						
1984	5,167	17,052	962	20,147	873	2,161
1985	5,613	18,243	1,248	22,788	989	1,327
1986	5,722	17,802	1,141	27,033	1,023	-3,391
Projected:						
Calendar year						
Alternative A:						
1987	6,668	21,122	686	31,541	1,072	-4,137
Alternative B:						
1987	6,668	21,122	686	31,543	1,065	-4,132

^{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, 1987. The financing established for calendar year 1987 was designed to reduce the excess of assets over liabilities to the appropriate level to maintain the actuarial soundness of the trust fund. As a result, the excess of assets over liabilities is expected to decrease from \$4,234 million at the end of December 1986 to \$96 million under alternative A and to \$102 million under alternative B at the end of December 1987. This excess as a percent of incurred expenditures for the following year is expected to decrease from 13.0% as of December 31, 1986, to 0.3% as of December 31, 1987.

**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, 1987**
(Dollar amounts in millions)

	Balance in trust fund	Government contributions due and unpaid	Total assets	Benefits incurred but unpaid	Administrative costs incurred but unpaid	Total liabilities	Excess of assets over liabilities	Ratio 1/
Historical:								
As of June 30,								
1967	\$ 486	\$ 24	\$ 510	\$ 445	\$-12	\$ 433	\$ 77	0.05
1968	307	88	395	498	1	499	-104	-0.05
1969	378	7	385	619	4	623	-238	-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	1,042	-19	1,023	244	0.06
1975	1,424	67	1,491	1,207	14	1,221	270	0.05
1976	1,219	106	1,325	1,357	-29	1,328	-3	0.00
1977	2,170	91	2,261	1,631	3	1,634	627	0.08
1978	3,786	48	3,834	2,024	40	2,064	1,770	0.20
1979	4,880	2	4,882	2,276	123	2,399	2,483	0.24
1980	4,657	0	4,657	2,701	188	2,889	1,768	0.14
1981	3,801	0	3,801	3,000	13	3,013	788	0.05
1982	5,534	1	5,535	2,761	-9	2,752	2,783	0.16
1983	6,780	2	6,782	2,842	-48	2,794	3,988	0.20
As of December 31,								
1983	7,070	1	7,071	3,004	-69	2,935	4,136	0.20
1984	9,698	2	9,700	3,490	-87	3,403	6,297	0.26
1985	10,924	0	10,924	3,331	-31	3,300	7,624	0.27
1986	8,291	0	8,291	4,125	-68	4,057	4,234	0.13
Projected:								
Alternative A:								
1987	5,090	0	5,090	5,061	- 67	4,994	96	0.00
Alternative B:								
1987	5,095	0	5,095	5,061	-68	4,993	102	0.00

1/ Ratio of the excess of 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. The values for the alternative assumptions were determined from a study on the average historical error in the respective increase factors.

Table 9 indicates that, under the low cost assumptions, trust fund assets would exceed liabilities by the end of December 1987 (the period through which financing has been established), reaching a level of 11 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 the appropriate level to maintain the actuarial soundness of the trust fund. Under the high cost assumptions, trust fund liabilities would exceed assets by the end of December 1987, reaching a level of 9 percent of the following year's incurred expenditures. If these high growth rates were to occur, the subsequent financing rates would have to be adjusted upward in order to generate more appropriate levels for the excess of assets over liabilities.

Table 9.--ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS
THROUGH DECEMBER 31, 1987

	Alternative B 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,		
	1986	1987	1988	1986	1987	1988	1986	1987	1988
Projection factors (in percent): <u>1/</u>									
Physicians' fees <u>2/</u>									
Aged	0.4	6.9	4.2	0.0	6.4	3.5	0.8	7.4	4.9
Disabled	0.4	6.9	4.2	0.0	6.4	3.5	0.8	7.4	4.9
Utilization of physicians' services <u>3/</u>									
Aged	11.0	7.9	5.4	9.5	6.2	3.1	12.5	9.6	7.7
Disabled	11.2	8.3	4.7	8.2	4.3	0.7	14.2	12.3	8.7
Outpatient hospital services per enrollee									
Aged	31.3	17.6	18.2	26.3	10.6	8.2	36.3	24.6	28.2
Disabled	34.0	16.3	17.0	28.0	6.3	2.0	40.0	26.3	32.0
Actuarial status (in millions):									
	As of December 31,			As of December 31,			As of December 31,		
	1985	1986	1987	1985	1986	1987	1985	1986	1987
Assets	\$10,924	\$8,291	\$5,095	\$10,924	\$8,291	\$7,254	\$10,924	\$8,291	\$2,780
Liabilities	3,300	4,057	4,993	3,027	2,769	3,519	3,572	5,370	6,510
Assets less liabilities	\$7,624	\$4,234	\$102	\$7,897	\$5,522	\$3,735	\$7,352	\$2,921	-\$3,730
Ratio of assets less liabilities to expenditures (in percent) <u>4/</u>	27.2	13.0	0.3	29.2	18.2	11.0	25.3	8.3	-9.2

1/ 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 of the effects of alternatives A and B on the projections in the report.

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.

CONCLUSION

The financing of the supplementary medical insurance program has been established through December 1987, by the setting of standard monthly premium rates (paid by or on behalf of each enrollee) of \$17.90 for calendar year 1987 and of actuarial rates that determine the amount to be contributed from general revenue on behalf of each enrollee. General revenue contributions are expected to account for 74.2 percent of all SMI income during calendar year 1987.

Under both sets of intermediate assumptions used in this report, disbursements are projected to exceed income during fiscal year 1987 and fiscal year 1988. Income is composed of premiums paid by the participants, general revenue contributions and interest earned by the trust fund. As a result, the assets in the trust fund on a cash basis are projected to decrease from \$9.4 billion at the end of fiscal year 1986 to an estimated \$6.5 billion at the end of fiscal year 1987 and then to decrease to an estimated \$5.5 billion at the end of fiscal year 1988.

Program assets exceeded liabilities by approximately \$4,234 million at the end of December 1986 representing 13.0 percent of the projected incurred expenditures for the following 12-month period. The financing for calendar year 1987 was established to reduce assets to the appropriate levels to maintain the actuarial soundness of the trust fund. Assets are projected to exceed liabilities at the end of December 1987 by \$96 million under alternative A, and by \$102 million under alternative B, representing 0.3 percent of the projected incurred expenditures. 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 should remain positive allowing claims to be paid. Hence, the

financing established through December 1987 is sufficient to cover projected benefit and administrative costs incurred through that time period, and to maintain a level of trust fund assets adequate to cover the impact of a small degree of projection error.

Although the supplementary medical insurance program is financially sound, the Board notes with concern the rapid growth in the cost of the program. Growth rates have been so rapid that outlays of the program have doubled every five to six years, and this growth rate shows no sign of abating despite recent efforts to control 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. 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, 1985, 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 smaller amounts for other services such as laboratory tests, durable medical equipment and supplies) 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 data on an incurred basis is necessary to meet the statutory requirement that the program be financed on this basis.

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). However, the cost of laboratory tests in outpatient departments of hospitals is no longer determined on a reasonable-cost basis but on a fee-schedule basis. 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 reasonable 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 1985. 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.

c. Per Enrollee Increases

(1) Physician Services

Per enrollee charges for physician services are affected by a variety of factors. One factor, increase in average charge per service, can be identified explicitly. Others can be recognized only by the fact that the explicitly quantifiable factor does 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 A1.--INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:							
1967	17.750	\$62.51	\$59.12	\$1.41	\$0.79	\$0.89	\$0.30
1968	18.038	80.06	74.47	2.40	1.49	1.35	0.35
1969	18.833	93.71	85.47	4.31	1.96	1.57	0.40
1970	19.312	99.91	90.03	5.91	1.99	1.50	0.48
1971	19.664	106.25	95.05	7.53	1.67	1.40	0.60
1972	20.043	114.22	101.63	8.55	1.60	1.66	0.78
1973	20.428	122.38	107.98	9.42	2.17	1.87	0.94
1974	20.988	134.47	117.48	11.32	2.03	2.44	1.20
1975	21.504	160.42	136.28	15.45	3.83	3.22	1.64
1976	22.089	188.80	156.27	21.26	5.19	4.06	2.02
1977	22.605	221.61	179.29	28.68	6.52	4.65	2.47
1978	23.133	254.45	207.05	33.38	6.82	4.28	2.92
1979	23.693	289.77	233.99	40.52	6.86	5.09	3.31
1980	24.287	343.45	277.24	47.06	7.58	7.51	4.06
1981	24.826	407.95	328.15	56.69	8.03	9.69	5.39
1982	25.363	464.29	381.02	64.65	0.50	11.65	6.47
1983	25.873	555.06	454.88	77.74	0.77	14.33	7.34
1984	26.433	636.34	512.35	96.26	0.99	17.61	9.13
1985	26.914	681.13	535.19	109.69	1.03	19.93	15.29
Disabled (excluding ESRD):							
1974	1.638	115.88	97.48	13.89	3.45	0.31	0.75
1975	1.816	148.45	125.50	17.32	3.58	0.80	1.25
1976	2.018	177.47	148.10	21.70	5.12	0.81	1.74
1977	2.231	218.79	174.48	36.44	4.79	0.75	2.33
1978	2.423	254.76	202.59	42.76	5.54	0.95	2.92
1979	2.563	299.87	240.40	50.49	5.12	0.35	3.51
1980	2.641	360.66	288.17	60.72	6.08	1.51	4.18
1981	2.687	431.25	340.16	77.15	7.21	1.59	5.14
1982	2.685	509.98	394.80	106.90	0.00	1.79	6.49
1983	2.628	621.91	484.74	127.06	0.00	1.98	8.13
1984	2.593	665.96	527.21	126.92	0.00	1.96	9.87
1985	2.593	697.79	550.60	129.55	0.00	2.51	15.13

Table A2.--INCURRED REASONABLE CHARGES OR COSTS PER ENROLLEE: HISTORICAL

Year ending June 30,	Average enrollment (millions)	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:							
1967	17.750	\$108.58	\$102.70	\$2.45	\$1.37	\$1.54	\$0.52
1968	18.038	128.08	119.02	3.89	2.42	2.18	0.57
1969	18.833	145.17	131.91	6.93	3.15	2.53	0.65
1970	19.312	153.63	137.86	9.43	3.17	2.40	0.77
1971	19.664	162.10	144.41	11.89	2.64	2.21	0.95
1972	20.043	172.75	153.15	13.32	2.49	2.58	1.21
1973	20.428	186.20	163.99	14.78	3.02	2.94	1.47
1974	20.988	204.30	178.31	17.75	2.54	3.82	1.88
1975	21.504	236.78	201.23	23.50	4.66	4.90	2.49
1976	22.089	272.26	225.42	31.61	6.18	6.04	3.01
1977	22.605	313.51	253.78	41.76	7.60	6.77	3.60
1978	23.133	354.59	288.61	47.85	7.82	6.13	4.18
1979	23.693	399.08	322.16	57.28	7.76	7.20	4.68
1980	24.287	466.29	376.29	65.46	8.44	10.45	5.65
1981	24.826	545.95	438.81	77.67	8.80	13.28	7.39
1982	25.363	627.73	513.63	88.73	0.50	15.99	8.88
1983	25.873	749.28	613.47	105.60	0.77	19.47	9.97
1984	26.433	853.03	686.61	129.47	0.99	23.68	12.28
1985	26.914	900.50	709.47	147.85	1.03	26.86	15.29
Disabled (excluding ESRD):							
1974	1.638	170.09	143.28	21.02	4.18	0.47	1.14
1975	1.816	210.84	178.39	25.28	4.18	1.17	1.82
1976	2.018	248.50	207.63	31.28	5.91	1.17	2.51
1977	2.231	301.42	240.18	51.48	5.41	1.06	3.29
1978	2.423	347.69	276.23	59.84	6.20	1.33	4.09
1979	2.563	404.58	323.87	69.72	5.66	0.49	4.84
1980	2.641	480.87	383.75	82.74	6.63	2.06	5.69
1981	2.687	568.64	447.87	103.93	7.77	2.14	6.93
1982	2.685	678.22	523.03	144.04	0.00	2.41	8.74
1983	2.628	826.35	643.11	169.73	0.00	2.65	10.86
1984	2.593	884.39	699.62	169.01	0.00	2.61	13.15
1985	2.593	915.78	724.13	173.16	0.00	3.36	15.13

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

Year ending June 30,	Increase Due to Price Changes				Increase Due to Residual Factors			Total increase in recognized charges per enrollee
	Increase in physician fee component of CPI	Reduction due to fee screens		Net increase in reasonable charges	Gross residual factors	Effect of denials	Net residual factors	
		Cumulative effect	Yearly changes					
Aged:								
1967	7.6	-2.6						
1968	5.9	-3.6	-1.0	4.8	12.2	-1.4	10.6	15.9
1969	6.2	-5.0	-1.5	4.7	6.3	-0.4	5.9	10.8
1970	6.7	-7.5	-2.6	3.9	3.8	-3.1	0.6	4.5
1971	7.5	-10.1	-2.8	4.5	3.6	-3.2	0.3	4.8
1972	5.2	-11.2	-1.2	3.9	1.7	0.4	2.1	6.1
1973	2.6	-11.7	-0.6	2.0	5.6	-0.6	5.0	7.1
1974	5.0	-13.2	-1.7	3.2	5.9	-0.6	5.3	8.7
1975	12.8	-16.2	-3.5	8.9	3.9	-0.3	3.6	12.8
1976	11.4	-18.6	-2.9	8.2	3.4	0.1	3.5	12.0
1977	10.2	-19.5	-1.1	9.0	3.2	0.1	3.3	12.6
1978	8.9	-19.4	0.1	9.0	4.2	0.1	4.3	13.7
1979	8.6	-20.0	-0.7	7.8	3.9	-0.3	3.6	11.7
1980	11.5	-22.1	-2.6	8.6	7.5	0.1	7.6	16.8
1981	11.1	-24.5	-3.1	7.7	7.5	0.7	8.3	16.6
1982	9.9	-23.9	0.8	10.8	5.2	0.5	5.7	17.1
1983	8.2	-23.4	0.7	8.9	9.8	-0.1	9.7	19.5
1984	7.5	-23.6	-0.3	7.2	5.0	-0.6	4.4	11.9
1985	3.9*	-25.9	-3.0	0.8	3.9	-1.3	2.5	3.3
Disabled (excluding ESRD):								
1974	5.0	-13.2						
1975	12.8	-16.2	-3.5	8.9	14.6	-0.3	14.3	24.5
1976	11.4	-18.6	-2.9	8.2	7.5	0.1	7.6	16.4
1977	10.2	-19.5	-1.1	9.0	6.0	0.1	6.1	15.6
1978	8.9	-19.4	0.1	9.0	5.4	0.1	5.5	15.0
1979	8.6	-20.0	-0.7	7.8	9.1	-0.3	8.8	17.3
1980	11.5	-22.1	-2.6	8.6	9.0	0.1	9.1	18.5
1981	11.1	-24.5	-3.1	7.7	7.5	0.7	8.3	16.6
1982	9.9	-23.9	0.8	10.8	5.0	0.5	5.5	16.9
1983	8.2	-23.4	0.7	8.9	13.0	-0.1	12.9	23.0
1984	7.5	-23.6	-0.3	7.2	2.1	-0.6	1.5	8.8
1985	3.9*	-25.9	-3.0	0.8	4.1	-1.3	2.7	3.5

*The actual increase in the physician fee component of the CPI was 6.0 percent. However, the Deficit Reduction Act of 1984 froze the actual charges, as recognized by Medicare, for nonparticipating physicians resulting in a net increase of 3.9 percent for Medicare services.

Bills submitted to the carriers during a specified period, the fee screen year, are subject, by statute to certain limitations on the level of fees to be recognized 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, and Public Law 99-272 changed the fee screen year to a calendar year basis effective January 1, 1987. 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, and Public Law 99-272 changed the base period to the preceding 12-month period ending June 30. 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 limits 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.

Certain services included with the physician services are not subject to the same fee-screen reduction process as described above. Effective October 1, 1985 there is an additional screen considered for nonphysician services, supplies, and equipment. After applying the customary and prevailing charge screens, fees are further reduced if they exceed the inflation-indexed charge (IIC). The IIC

represents the lowest of the reasonable charge screens from the preceding fee screen year as adjusted by an inflation factor. Effective July 1, 1984 charges for laboratory tests performed in physician offices and independent laboratories are determined by fee schedules. These fee schedules are updated at the beginning of the fee screen year by an inflation adjustment factor.

Since legislation has twice changed the time span of the fee screen year, and since the two transitional fee screen years (1985 and 1986) cover 15-month periods, data presented in tables A1 through A8 will be displayed for the same 12-month basis for all years. This basis will be the 12-month periods ending June 30.

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 reductions 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 capita charges also have increased each year as a result of a number of possible factors including more physician visits per enrollee, the aging of the Medicare enrollment, greater use of specialists and more expensive techniques, and certain administrative actions. The fifth column of table A3 shows the increases 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. The seventh column shows the net increases due to residual factors. That column is used in the projection to indicate the amount of cost increases to be expected in the future from residual causes.

The last column of table A3 shows the total increases 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 increases in customary charges in each of the years ending June 30, 1986 through June 30, 1990. As described above, each of these increases depends on the increases in fees actually submitted during the base period. 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 are shown in column 2. The projected net increases in reasonable charges are shown in column 3; this compares with the corresponding historical data shown in column 4 of table A3.

Table A4.—COMPONENTS OF INCREASES IN TOTAL RECOGNIZED CHARGES
PER ENROLLEE FOR PHYSICIAN SERVICES: PROJECTED
(In percent)

Year ending June 30,	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:							
1986	8.1	-7.1	0.4	11.0	0.0	11.0	11.4
1987	6.0	0.8	6.9	7.9	0.0	7.9	15.3
1988	5.4	-1.1	4.2	5.4	0.0	5.4	9.8
1989	5.6	-2.6	2.9	5.1	0.0	5.1	8.1
1990	5.6	-1.9	3.6	5.1	0.0	5.1	8.9
Disabled (excluding ESRD):							
1986	8.1	-7.1	0.4	11.2	0.0	11.2	11.6
1987	6.0	0.8	6.9	8.3	0.0	8.3	15.8
1988	5.4	-1.1	4.2	4.7	0.0	4.7	9.1
1989	5.6	-2.6	2.9	5.7	0.0	5.7	8.8
1990	5.6	-1.9	3.6	6.0	0.0	6.0	9.8
Alternative B:							
Aged:							
1986	8.1	-7.1	0.4	11.0	0.0	11.0	11.4
1987	6.1	0.8	6.9	7.9	0.0	7.9	15.3
1988	5.9	-1.6	4.2	5.4	0.0	5.4	9.8
1989	6.6	-3.4	3.0	5.1	0.0	5.1	8.3
1990	6.5	-2.4	3.9	5.1	0.0	5.1	9.2
Disabled (excluding ESRD):							
1986	8.1	-7.1	0.4	11.2	0.0	11.2	11.6
1987	6.1	0.8	6.9	8.3	0.0	8.3	15.8
1988	5.9	-1.6	4.2	4.7	0.0	4.7	9.1
1989	6.6	-3.4	3.0	5.7	0.0	5.7	8.9
1990	6.5	-2.4	3.9	6.0	0.0	6.0	10.1

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).

(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.

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.

2. ESTIMATES FOR PERSONS SUFFERING FROM END STAGE RENAL DISEASE

Certain persons suffering from end stage renal disease 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

Table A5.—INCREASES IN RECOGNIZED CHARGES AND COSTS
PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES
(In Percent)

Year ending June 30,	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Aged:				
Historical:				
1968	58.8 ^{1/}	76.6	41.6	9.6
1969	78.1	30.2	16.1	14.0
1970	36.1	0.6	-5.1	18.5
1971	26.1	-16.7	-7.9	23.4
1972	12.0	-5.7	16.7	27.4
1973	11.0	21.3	14.0	21.5
1974	20.1	-15.9	29.9	27.9
1975	32.4	83.5	28.3	32.4
1976	34.5	32.6	23.3	20.9
1977	32.1	23.0	12.1	19.6
1978	14.6	2.9	-9.5	16.1
1979	19.7	-0.8	17.5	12.0
1980	14.3	8.8	45.1	20.7
1981	18.7	4.3	27.1	30.8
1982	14.2	-94.3	20.4	20.2
1983	19.0	54.0	21.8	12.3
1984	22.6	28.6	21.6	23.2
1985	14.2	4.0	13.4	24.5
Projected:				
1986	31.3	9.3	19.7	16.6
1987	17.6	13.5	19.9	15.0
1988	18.2	9.0	20.2	15.8
1989	18.2	10.3	19.9	15.3
1990	18.0	9.0	20.1	16.9
Disabled (excluding ESRD):				
Historical:				
1975	20.3	0.0	148.9	59.6
1976	23.7	41.4	0.0	37.9
1977	64.6	-8.5	-9.4	31.1
1978	16.2	14.6	25.5	24.3
1979	16.5	-8.7	-63.2	18.3
1980	18.7	17.1	320.4	17.6
1981	25.6	17.2	3.9	21.8
1982	38.6	-100.0	12.6	26.1
1983	17.8	0.0	10.0	24.3
1984	-0.4	0.0	-1.5	21.1
1985	2.5	0.0	28.7	15.1
Projected:				
1986	34.0	0.0	35.9	18.1
1987	16.3	0.0	9.6	16.3
1988	17.0	0.0	9.0	16.9
1989	18.4	0.0	7.3	16.1
1990	17.9	0.0	6.2	17.6

^{1/} Percentage change over prior year's annualized value.

Table A6.--INCURRED REASONABLE CHARGES OR COSTS PER ENROLLEE: PROJECTED

Year ending June 30,	All services	Physician	Outpatient hospital	Home health agency	Group practice prepayment plan	Independent lab
Alternative A:						
Aged:						
1986	1,036.48	791.25	194.12	1.13	32.15	17.83
1987	1,201.00	912.42	228.25	1.28	38.54	20.51
1988	1,343.41	1,002.16	269.78	1.40	46.32	23.75
1989	1,487.08	1,083.77	318.91	1.54	55.56	27.30
1990	1,656.02	1,179.57	376.35	1.68	66.74	31.68
Disabled (excluding ESRD):						
1986	1,063.44	809.01	232.00	0.00	4.57	17.86
1987	1,231.50	935.95	269.78	0.00	5.01	20.76
1988	1,366.56	1,021.30	315.55	0.00	5.46	24.25
1989	1,518.45	1,110.84	373.68	0.00	5.86	28.07
1990	1,698.72	1,219.22	440.53	0.00	6.22	32.75
Alternative B:						
Aged:						
1986	1,036.48	791.25	194.12	1.13	32.15	17.83
1987	1,201.00	912.42	228.25	1.28	38.54	20.51
1988	1,343.51	1,002.25	269.78	1.40	46.32	23.76
1989	1,488.76	1,085.35	318.91	1.54	55.56	27.40
1990	1,661.75	1,184.94	376.65	1.68	66.74	32.04
Disabled (excluding ESRD):						
1986	1,063.44	809.01	232.00	0.00	4.57	17.86
1987	1,231.50	935.95	269.78	0.00	5.01	20.76
1988	1,366.67	1,021.40	315.55	0.00	5.46	24.26
1989	1,520.18	1,112.46	373.68	0.00	5.86	28.18
1990	1,704.65	1,224.77	440.53	0.00	6.22	33.13

Table A7.—INCURRED REIMBURSEMENT AMOUNTS: PROJECTED

Year ending June 30,	Average enrollment (millions)	Reimbursement amounts	
		Per enrollee	Aggregate (millions)
Alternative A:			
Aged:			
1986	27.453	789.93	21,686
1987	28.071	925.47	25,979
1988	28.645	1,043.64	29,895
1989	29.203	1,160.43	33,888
1990	29.760	1,297.98	38,628
Disabled (excluding ESRD):			
1986	2.675	803.36	2,149
1987	2.681	939.57	2,519
1988	2.696	1,049.33	2,829
1989	2.733	1,170.51	3,199
1990	2.782	1,314.52	3,657
Alternative B:			
Aged:			
1986	27.453	789.93	21,686
1987	28.071	925.47	25,979
1988	28.645	1,043.74	29,898
1989	29.203	1,161.83	33,929
1990	29.760	1,302.69	38,768
Disabled (excluding ESRD):			
1986	2.675	803.36	2,149
1987	2.681	939.57	2,519
1988	2.696	1,049.33	2,829
1989	2.733	1,172.34	3,204
1990	2.782	1,319.55	3,671

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 3.0 percent per year over the 5-year period (July 1, 1985 through June 30, 1990). The estimates also assume a continued increase in enrollment. The historical and projected enrollment and costs are shown in table A8.

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.

4. ADMINISTRATIVE EXPENSES

The ratio of administrative expenses to benefit payments has been under 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.

Table A8.--INCURRED REIMBURSEMENT AMOUNTS FOR
END STAGE RENAL DISEASE

Year ending June 30,	Disabled ESRD and ESRD only			ESRD only	
	Reimbursement amounts			Reimbursement amounts	
	Average enrollment (thousands)	Per enrollee	Aggregate (millions)	Aggregate (millions)	
1974	12	\$11,333	\$ 136	\$ 96	
1975	18	11,778	212	144	
1976	24	12,125	291	190	
1977	29	12,621	366	229	
1978	32	13,938	446	273	
1979	38	14,158	538	322	
1980	44	14,727	648	408	
1981	49	15,735	771	471	
1982	54	15,778	852	465	
1983	59	15,780	931	485	
1984	65	12,969	843	392	
1985	69	11,043	762	351	
1986	73	11,452	836	379	
1987	75	11,947	896	412	
1988	78	12,359	964	443	
1989	80	12,738	1,019	473	
1990	83	13,108	1,088	504	

Table A9.—AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS
(In millions)

Fiscal years*	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	2,555	187	132	2,874
1975	3,312	251	202	3,765
1976	4,064	332	276	4,672
T.Q.	1,083	108	78	1,269
1977	5,035	483	349	5,867
1978	5,821	602	429	6,852
1979	6,964	770	525	8,259
1980	8,512	974	658	10,144
1981	10,382	1,177	786	12,345
1982	12,404	1,462	940	14,806
1983	14,783	1,716	988	17,487
1984	16,845	1,772	856	19,473
1985	19,075	1,940	793	21,808
1986	22,180	2,181	808	25,169
Projected:				
Alternative A:				
1987	26,084	2,516	887	29,487
1988	30,223	2,866	990	34,079
1989	34,703	3,280	1,046	39,029
1990	39,497	3,744	1,107	44,348
Alternative B:				
1987	26,085	2,516	887	29,488
1988	30,233	2,866	990	34,089
1989	34,759	3,286	1,046	39,091
1990	39,657	3,760	1,107	44,524

* 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 1977-1990 cover the interval from October 1 through September 30.

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 1987*

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 cost 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 1985 through 1986.

* This statement appeared in the Federal Register of October 2, 1986. 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.

TABLE 1--ESTIMATED ACTUARIAL STATUS OF THE SMI TRUST FUND
AS OF THE END OF THE FINANCING PERIODS,
JANUARY 1, 1985--DECEMBER 31, 1986
(In Millions of Dollars)

Financing Period Ending	Assets	Liabilities	Assets Less Liabilities
December 31, 1985	\$10,924	\$3,237	\$7,687
December 31, 1986	8,715	3,660	5,055

2. Monthly Actuarial Rate for Enrollees Age 65 and Older

The monthly actuarial rate is one-half of 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 1987 was determined by projecting per-enrollee cost for the 12-month periods ending June 30, 1987, and June 30, 1988, by type of service. Although the actuarial rates are now applicable for calendar years, projections of per-enrollee costs were determined on a July to June period, consistent with the July 1 annual fee screen update used for benefits prior to the passage of section 2306(b) of Pub. L. 98-369. The values for the 12-month period ending June 30, 1984, 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. Those per-enrollee values

TABLE 2--PROJECTION FACTORS 1/
12-MONTH PERIODS ENDING JUNE 30 OF 1984-1988
(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:							
1984	7.2	4.7	-12.3	22.7	28.6	22.3	23.3
1985	0.8	4.6	1.8	17.2	1.5	12.8	111.2
1986	0.1	7.3	13.5	22.3	8.0	21.5	13.1
1987	5.1	2.4	13.4	18.2	10.7	22.0	11.8
1988	5.1	2.7	13.7	16.9	12.3	22.3	16.3
Disabled:							
1984	7.2	3.7	-11.5	-2.0	0.0	4.9	20.2
1985	0.8	6.6	-0.3	9.2	0.0	29.7	113.1
1986	0.1	8.7	14.5	21.7	0.0	12.5	12.7
1987	5.1	4.5	14.4	18.1	0.0	11.1	12.7
1988	5.1	4.7	14.2	17.1	0.0	15.7	15.8

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.

are then adjusted to apply to a calendar year period. The projected values for financing periods from January 1984, through December 31, 1987, are shown in Table 3.

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 1987 is \$39.02. The monthly actuarial rate of \$35.80 provides an adjustment for interest earnings and -\$2.86 for a contingency margin. Based on current estimates, it appears that the assets are more than sufficient to cover the amount of incurred but unpaid expenses and to provide for a moderate degree of projection error. Thus, a negative margin is needed to reduce assets to a more appropriate level.

3. Monthly Actuarial Rate for Disabled Enrollees

Disabled enrollees are those persons enrolled in SMI because of entitlement (before age 65) 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 projection for the aged, using appropriate actuarial assumptions (see Table 2). Costs for the end-stage renal disease program are projected differently because of the complex demographic problems involved. The combined results for all disabled enrollees are shown in Table 4.

TABLE 3--DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER
FINANCING PERIODS ENDING DECEMBER 31, 1984 THROUGH DECEMBER 31, 1987

	Financing Periods			
	CY 1984	CY 1985	CY 1986	CY 1987
Covered services (at level recognized):				
Physicians' reasonable charges	\$28.00	\$29.81	\$32.05	\$34.54
Radiology and pathology	0.99	1.07	1.21	1.38
Outpatient hospital and other institutions	5.88	7.06	8.47	9.95
Home health agencies	0.04	0.04	0.05	0.05
Group practice prepayment plans	1.03	1.21	1.47	1.80
Independent lab	0.79	1.15	1.29	1.47
Total services	<u>36.74</u>	<u>40.33</u>	<u>44.54</u>	<u>49.19</u>
Cost-Sharing:				
Deductible	-2.50	-2.51	-2.51	-2.52
Coinsurance	-6.73	-7.33	-8.14	-9.03
Total benefits	<u>27.51</u>	<u>30.50</u>	<u>33.89</u>	<u>37.64</u>
Administrative expenses	<u>1.17</u>	<u>1.31</u>	<u>1.33</u>	<u>1.38</u>
Incurred expenditures	<u>28.68</u>	<u>31.81</u>	<u>35.21</u>	<u>39.02</u>
Value of interest	<u>-0.96</u>	<u>-1.16</u>	<u>-0.92</u>	<u>-0.35</u>
Contingency margin for projection error and to amortize the surplus or deficit	<u>1.47</u>	<u>0.36</u>	<u>-3.29</u>	<u>-2.86</u>
Monthly actuarial rate	\$29.20	\$31.00	\$31.00	\$35.80

TABLE 4--DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES
FINANCING PERIODS ENDING DECEMBER 31, 1984 THROUGH DECEMBER 31, 1987

	Financing Periods			
	CY 1984	CY 1985	CY 1986	CY 1987
Covered services (at level recognized):				
Physicians' reasonable charges	\$33.47	\$36.44	\$40.10	\$44.46
Radiology and pathology	1.02	1.09	1.24	1.42
Outpatient hospital and other institutions	19.73	21.87	24.56	27.41
Home health agencies	0.00	0.00	0.00	0.00
Group practice prepayment plans	0.26	0.31	0.34	0.39
Independent lab	<u>1.06</u>	<u>1.48</u>	<u>1.67</u>	<u>1.91</u>
Total services	<u>55.54</u>	<u>61.19</u>	<u>67.91</u>	<u>75.59</u>
Cost-Sharing:				
Deductible	-2.26	-2.27	-2.27	-2.26
Coinsurance	<u>-10.54</u>	<u>-11.54</u>	<u>-12.86</u>	<u>-14.36</u>
Total benefits	<u>42.74</u>	<u>47.38</u>	<u>52.78</u>	<u>58.97</u>
Administrative expenses	<u>1.83</u>	<u>2.05</u>	<u>2.09</u>	<u>2.18</u>
Incurred expenditures	<u>44.57</u>	<u>49.43</u>	<u>54.87</u>	<u>61.15</u>
Value of interest and other income	<u>-5.40</u>	<u>-7.47</u>	<u>-7.42</u>	<u>-6.70</u>
Contingency margin for projection error and to amortize the surplus or deficit	<u>15.13</u>	<u>10.74</u>	<u>-6.65</u>	<u>-1.45</u>
Monthly actuarial rate	\$54.30	\$52.70	\$40.80	\$53.00

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for calendar year 1987 is \$61.15. The monthly actuarial rate of \$53.00 provides an adjustment for interest earnings and a -\$1.45 for a contingency margin. As in the determination of the monthly actuarial rate for aged enrollees, a negative margin is needed to reduce the surplus 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. One set represents increases that are lower and is, therefore, more optimistic than the current estimate. The other set represents increases that are higher and is, therefore, more pessimistic than the current version. The values for the alternative assumptions were determined from a study on the average historical error in the respective increase factors. 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, 1987

	This Projection			Low Cost Projection			High Cost Projection		
	12-month periods ending June 30,			12-month periods ending June 30,			12-month periods ending June 30,		
	1986	1987	1988	1986	1987	1988	1986	1987	1988
Projection Factors (in percent): <u>1/</u>									
Physician services - fees <u>2/</u>									
Aged	0.1	5.1	5.1	-0.4	4.6	4.4	0.6	5.6	5.8
Disabled	0.1	5.1	5.1	-0.4	4.6	4.4	0.6	5.6	5.8
Physician services - Residual <u>3/</u>									
Aged	7.3	2.4	2.7	5.8	0.7	0.4	8.8	4.1	5.0
Disabled	8.7	4.5	4.7	4.7	-0.5	-0.3	12.7	9.5	9.7
Outpatient hospital services									
Aged	22.3	18.2	16.9	17.3	11.2	6.9	27.3	25.2	26.9
Disabled	21.7	18.1	17.1	13.7	8.1	7.1	29.7	28.1	27.1
	As of December 31,			As of December 31,			As of December 31,		
	1985	1986	1987	1985	1986	1987	1985	1986	1987
Actuarial status (in millions):									
Assets	\$10,924	\$8,715	\$3,379	\$10,924	\$9,695	\$6,588	\$10,924	\$7,694	4/
Liabilities	\$ 3,237	\$3,660	\$4,116	\$ 2,949	\$3,285	\$3,610	\$ 3,528	\$4,043	\$4,644
Assets Less Liabilities	\$ 7,687	\$5,055	-\$737	\$ 7,975	\$6,410	\$2,978	\$ 7,396	\$3,651	4/
Ratio of assets less liabilities to expenditures (in percent) <u>5/</u>	28.3	16.5	-2.1	30.5	22.5	9.4	26.2	11.1	4/

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/ The trust fund will be depleted by December 31, 1987 under this set of assumptions.

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

Table 5 was prepared based on the assumption that there will be no cost-of-living increase under section 215(i) of the Act for December 1986.* Current information indicates that it is unlikely that the applicable increase in the consumer price index would exceed the three percent required by section 215(i) of the Act for any cost-of-living increase to take effect. The assumptions that there will be no cost-of-living increase under section 215(i) of the Act has two impacts on the trust fund for 1987. First, section 1839(f)(1) of the Act freezes the SMI premium for 1987 at \$15.50 for all SMI enrollees, except for those individuals subject to section 1839(b) of the Act. Second, section 1844(a)(1) of the Act allows for general revenue transfers to be made based on the premium rate determined by section 1839(a)(3) or 1839(e) of the Act (\$17.90) and not by the rate determined by section 1839(f)(1) of the Act (\$15.50). Consequently for 1987 the income to the trust fund, and, therefore, the assets of the trust fund, will be less than what they would have been if there had been a cost-of-living increase. Furthermore, based on the general revenue determination of section 1844(a)(1) of the Act, this loss of assets in 1987 will be the same regardless of the margins included in the actuarial rates, provided that the aged actuarial rate for 1987 exceeds the rate for 1986.

With regard to the above, 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 -\$737 million by the end of December 1987.

* This statement appeared in the Federal Register on October 2, 1986 prior to the enactment of Pub. L. 99-509, the Omnibus Budget Reconciliation Act of 1986. Section 9001 of Pub. L. 99-509 removed from section 215(i) of the Act the minimum requirement of a three percent increase in the consumer price index for any cost-of-living increase to take effect. Consequently, the cost-of-living adjustment in social security benefits payable in 1987 was 1.3 percent, the SMI premium for 1987 increased to \$17.90, and the two impacts on the trust fund for 1987 as stated in this paragraph no longer apply.

This amounts to -2.1 percent of the estimated total incurred expenditures for the following year. Assumptions which are somewhat more pessimistic (and, therefore, test the adequacy of the assets to accommodate projection errors) deplete the trust fund by the end of December 1987. Under fairly optimistic assumptions, the monthly actuarial rates will result in a surplus of \$2,978 million by the end of December 1987, which amounts to 9.4 percent of the estimated total incurred expenditures for the following year.

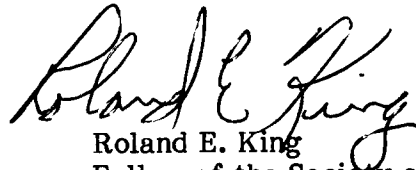
5. Standard Premium Rate

For calendar years 1984 through 1988, 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 1987 is \$17.90, which is 50 percent of the monthly actuarial rate for this period (\$35.80).

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.

A handwritten signature in black ink, appearing to read "Roland E. King". The signature is fluid and cursive, with the first name "Roland" being more prominent than the last name "King".

Roland E. King
Fellow of the Society of Actuaries
Member of the American Academy of
Actuaries
Chief Actuary,
Health Care Financing Administration