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**1990 ANNUAL REPORT OF
THE BOARD OF TRUSTEES OF THE
FEDERAL SUPPLEMENTARY MEDICAL
INSURANCE TRUST FUND**

COMMUNICATION

From

**THE BOARD OF TRUSTEES,
FEDERAL SUPPLEMENTARY MEDICAL
INSURANCE TRUST FUND**

Transmitting

**THE 1990 ANNUAL REPORT OF THE BOARD,
PURSUANT TO
SECTION 1841(b) OF THE SOCIAL SECURITY ACT,
AS AMENDED**

Board of Trustees of the
Federal Supplementary Medical Insurance Trust Fund
Washington, D.C, April 18, 1990

HONORABLE THOMAS S. FOLEY
Speaker of the House of Representatives
Washington, D.C.

HONORABLE DAN QUALE
President of the Senate
Washington, D.C.

GENTLEMEN:

We have the honor of transmitting to you the 1990 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 25th such report), in compliance with the provisions of section 1841(b) of the Social Security Act.

Respectfully,

NICHOLAS F. BRADY,
*Secretary of the Treasury, and
Managing Trustee of the Trust Fund*

ELIZABETH DOLE,
Secretary of Labor, and Trustee

LOUIS W. SULLIVAN, M.D.,
*Secretary of Health and
Human Services and Trustee*

PUBLIC TRUSTEE
Vacant

PUBLIC TRUSTEE
Vacant

GAIL R. WILENSKY, PhD.,
*Administrator of the Health Care
Financing Administration,
and Secretary, Board of Trustees*

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**1990 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF
THE FEDERAL SUPPLEMENTARY MEDICAL INSURANCE
TRUST FUND**

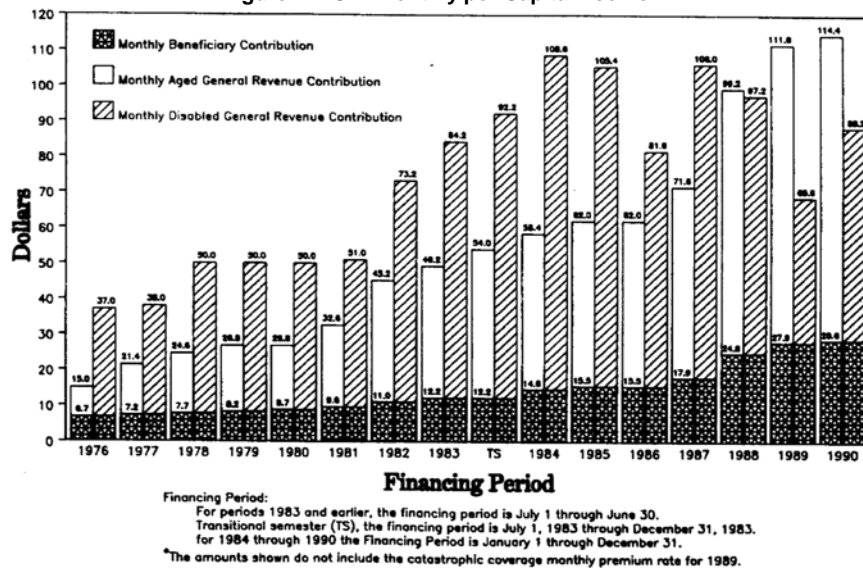
EXECUTIVE SUMMARY

The supplementary medical insurance (SMI) program pays for physician services, outpatient hospital services, and other medical expenses for both aged 65 and over and for the long-term disabled. In calendar year (CY) 1989, 32.0 million persons were covered under SMI. General revenue contributions during 1989 amounted to \$30.9 billion, accounting for 69.6 percent of all SMI income. About 27.7 percent of all income resulted from the premiums paid by the enrollees including the income from the catastrophic coverage monthly premiums. Interest payments to the SMI fund accounted for the remaining 2.7 percent. Of the \$39.8 billion in SMI disbursements, \$38.3 billion was for benefit payments while the remaining was spent for administrative expenses. SMI administrative expenses were 3.7 percent of total disbursements.

The SMI program essentially is yearly renewable term insurance financed from premium income paid by the enrollees and from income contributed from general revenue. This means that the SMI program is financed on an accrual basis with a contingency margin, and, therefore, 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 may be invested in certain interest-bearing obligations of the U.S. Government.

Financing for the non-catastrophic portion of the SMI 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 annual basis 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 1976. This figure clearly indicates the extent to which general revenue financing is the major source of income for the program.

Figure 1.—SMI Monthly per Capita Income*



Financing for the catastrophic portion of the SMI program was established annually by the Medicare Catastrophic Coverage Act of 1988 on the basis of the catastrophic coverage monthly premium rates (paid by or on behalf of all participants) and the supplemental catastrophic coverage premium rates. The enactment of the Medicare Catastrophic Coverage Repeal Act of 1989 repealed the catastrophic coverage monthly premium rates effective January 1, 1990 and the supplemental catastrophic coverage premium rates retroactively to January 1, 1989.

Operations of the SMI Program

Historical and projected operations of the fund through 1992 are shown in Tables 5 and 6 in this report. As can be seen, income has exceeded disbursements for most of the historical years. The financing for CY 1990 was established to maintain aged assets and to decrease disabled assets while reducing the assets overall. As a result, in CY 1990, disbursements are projected to exceed income, and the trust fund balance is projected to decrease through CY 1990.

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 that 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.

Actuarial Soundness of the SMI Program

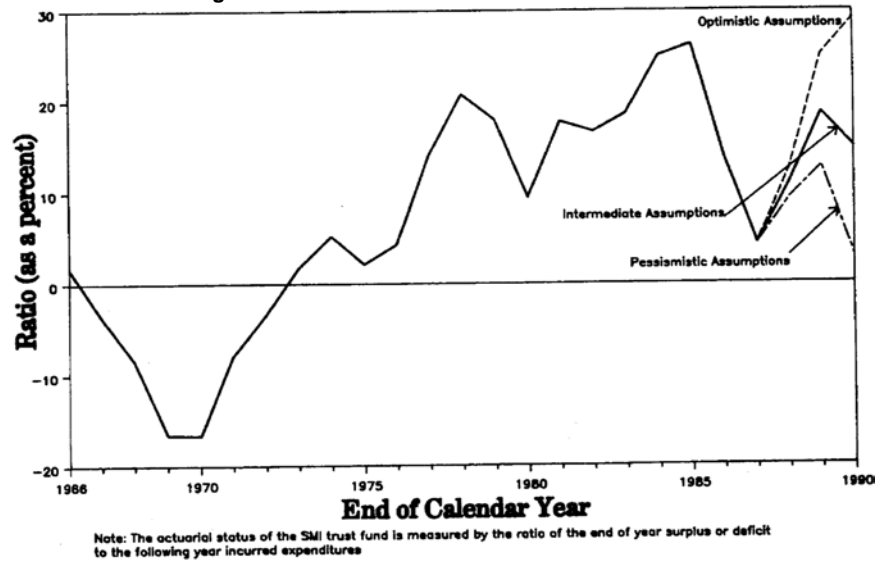
The concept of actuarial soundness, as it applies to the SMI program, is closely related to the concept as it applies to private group insurance.

The SMI program is essentially yearly renewable term insurance financed from premium income paid by the enrollees, from income contributed from general revenue, and from interest payments on the trust fund assets.

In testing the actuarial soundness of the SMI program, it is not appropriate to look beyond the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that: (1) assets and income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities 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 variation between actual and projected costs.

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 variation, 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 B), as well as high (pessimistic) and low (optimistic) cost sensitivity scenarios.

Figure 2.—Actuarial Status of the SMI Trust Fund



Financing CY 1990 was established to maintain aged assets and to decrease disabled assets while reducing the overall relative level of the excess of assets over liabilities. In addition, the Omnibus Budget Reconciliation Act of 1989 was enacted on December 19, 1989 after the financing had been established for CY 1990. As a net result, the excess of assets over liabilities is expected to decrease by December 31, 1990.

Conclusion of the Board of Trustees

The financing established through December 1990 is sufficient to cover projected benefits and administrative costs through that time period. This financing is sufficient to maintain a level of trust fund assets which is adequate to cover the impact of a moderate degree of variation between actual costs and projected costs. The SMI program can thus be said to be actuarially sound.

Although the SMI 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 nearly doubled in the last 5 years. For the same time period, the program grew 40 percent faster than the economy as a whole. This growth rate shows no sign of significantly 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 SMI program.

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Although the SMI program is actuarially 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 nearly doubled in the last 5 years. For the same time period, the program grew 37 percent faster than the economy as a whole. This growth rate shows little or no sign of significantly abating despite recent efforts to control the cost of the program, including the recent changes enacted in OBRA 90. The Board recommends that Congress continue to work to curtail the rapid growth in the cost of the SMI program.

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 currently has three members. They 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. The Board also includes positions for two members of the public as Trustees. The last two Public Trustees served under recess appointments which expired when Congress adjourned on November 22, 1989.

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 annual report, for 1990, is the 25th such report.

SOCIAL SECURITY AMENDMENTS SINCE THE 1989 REPORT

Since the 1989 Annual Report was transmitted to Congress, two laws affecting the SMI program (also known as Medicare Part B) have been enacted. The more important legislative changes, from an actuarial standpoint, are described below.

The Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234) was enacted on December 13, 1989; this legislation repealed the major Medicare coverage provisions which had been enacted under the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360) including the Part B benefits which were to be effective January 1, 1990. The provision for a supplemental catastrophic coverage premium was repealed retroactive to January 1, 1989. The provision for a catastrophic

coverage monthly premium was repealed effective January 1, 1990. This monthly premium of \$4.00 for the majority of beneficiaries, which was collected during 1989, will remain in the SMI trust fund.

The Omnibus Budget Reconciliation Act of 1989 (OBRA 89, Public Law 101-239) was enacted December 19, 1989, and contained the following changes:

- (1) Payments were reduced by 2.092 percent from October 17 through the end of the fiscal year as a result of a Presidential sequester. OBRA 89 limited the time frame for this decrease for most Part B services to March 31, 1990. From April 1 through September 30, payments are reduced by 1.42 percent. For payments to Health Maintenance Organizations (HMOs) and Group Practice Prepayment Plans (GPPPs), OBRA 89 limited the time frame for this decrease to December 31, 1989 with no reduction for the remainder of the fiscal year.
- (2) Beginning with 1992, payments to physicians are to be made under a fee schedule based on a resource-based relative value scale. This fee schedule will be phased-in over the years 1992 - 1996. New limits on actual charges will be phased-in beginning in 1991 so that the limit will equal 115 percent of the non-participating physician fee schedule amount by 1993.

By January 1, 1992 and yearly thereafter, the Secretary of Health and Human Services (HHS) is required to provide for a national fee schedule for payment of physicians services in all localities. Payment under the fee schedule is equal to the product of the conversion factor for the year for each category of physician services, a relative value for each service, and a geographic adjustment factor.

Physician services are divided into 3 components: work, practice expense, and malpractice. The work component is that portion of the resources used in furnishing the service that reflects physician time and intensity. It includes activities before and after patient contact. For surgical procedures, the term includes both pre- and post-operative services. The practice expense component includes that portion of the resources used in furnishing the service that reflects the general categories of expenses (such as office rent and wages of personnel). The malpractice component refers to the portion of the resources associated with malpractice expenses. The Secretary of HHS will develop a methodology for combining the work, practice expense and malpractice relative value units for each service to produce a single relative value for that service in each locality.

- (3) Certain procedures which are overpriced by at least 10 percent have had a reduction in payment. The amount of the reduction equals one-third of the difference between the 1989 prevailing charge amount and the locally-adjusted reduced prevailing amount up to a maximum of 15 percent.
- (4) There is a reduction in payments to radiologists for 1990. The 1989 rates continue to be effective through March 31, 1990; however, after that time, the fee schedules are reduced by 4 percent. Nuclear medicine and portable X-ray services are exempted from the freeze and reduction. In addition, after April 1, there is an increase for nuclear-medicine payments for 1990.
- (5) Updates for physician allowed charges and the maximum allowable actual charges are delayed from January 1, 1990 to April 1, 1990. After that time, primary care services will receive the Medicare Economic Index (MEI) update. The prevailing charge increase will be 0 percent for radiology services, anesthesia services, and overpriced procedures and 2 percent for all other services.
- (6) Payments for surgery, radiology, and diagnostic physician services are limited to the prevailing charge or fee schedule for that specialty of physicians who nationally furnish the service most frequently.
- (7) Effective January 1, 1990, for clinical diagnostic laboratory tests, there is a ceiling on fee schedule payments of 93 percent of the national median for a particular test. In addition, it eliminates the requirement for a nationwide fee schedule.
- (8) The legislation delays the price update for most durable medical equipment and supplies until January 1, 1991.
- (9) Prior to the passage of OBRA 89, payment for clinical psychologists services was made only if the services were performed on site at a community health center. If they were performed elsewhere, payment could be made only if they were performed off site because of the patient's inability to travel to the community center. Effective July 1, 1990, this restriction on payment for clinical psychologists is eliminated. Clinical psychologists will be reimbursed for the same services that are already covered when performed by a physician.

Effective July 1, 1990, clinical social worker services will be covered, with reimbursement set at 80 percent of the lesser of actual charges or 75 percent of the amount which would be paid to a psychologist.

For expenses incurred in 1990 and thereafter, the dollar limitation of \$1,375 per year for outpatient mental health services is eliminated.

- (10) The legislation maintains the current end-stage renal disease (ESRD) composite rate until October 1, 1990. In addition, the amount of payment based on any reimbursement mechanism other than the single composite weighted formula will not exceed the median payment that would have been made under the formula for hospital-based facilities.
- (11) The Part B premium amount is continued to be set at 25 percent of program costs for the aged in CY 1990.

Detailed information regarding these changes and other less significant changes can be found in documents prepared by and for the Congress.

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 SMI 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. The premiums paid by eligible persons in 1989 include both those specified by the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360) and those needed to finance the non-catastrophic benefits. With the enactment of the Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234), there will be no catastrophic premiums after 1989. Therefore the discussion in the remainder of this section will deal only with non-catastrophic coverage. 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 enrollees are based on the standard monthly premium rate, which is the same for enrollees aged 65 and over and for disabled enrollees under age 65. Premiums paid for Fiscal Years (FY) 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 enrollees 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 enrollees. The ratio is equal to: (1) twice the amount of the monthly actuarial rate applicable to the particular group of enrollees, 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 HHS. The standard monthly premium rates in effect from July 1966 through June 1983, the rate for July 1983 through December

1983, and the rates for CY 1984 through 1990 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 CY 1984 through 1990 are also shown. For a detailed discussion of the determination of the actuarial and premium rates, see Appendix B.

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

	Standard monthly premium rate	Monthly actuarial rate		Matching ratio	
		Enrollees aged 65 and over	Disabled enrollees under age 65	Enrollees aged 65 and over	Disabled enrollees under age 65
July 1966 - March 1968	\$3.00	—	—	—	—
April 1968 - June 1970	4.00	—	—	—	—
12-month period ending June 30 of -					
1971	5.30	—	—	—	—
1972	5.60	—	—	—	—
1973	5.80	—	—	—	—
1974 ¹	6.30	\$6.30	\$14.50	1.0000	3.6032
1975	6.70	6.70	18.00	1.0000	4.3731
1976	6.70	7.50	18.50	1.2388	4.5224
1977	7.20	10.70	19.00	1.9722	4.2778
1978	7.70	12.30	25.00	2.1948	5.4935
1979	8.20	13.40	25.00	2.2683	5.0976
1980	8.70	13.40	25.00	2.0805	4.7471
1981	9.60	16.30	25.50	2.3958	4.3125
1982	11.00	22.60	36.60	3.1091	5.6545
1983	12.20	24.60	42.10	3.0328	5.9016
July 1983 - December 1983	12.20	27.00	46.10	3.4262	6.5574
Calendar year					
1984	14.60	29.20	54.30	3.0000	6.4384
1985	15.50	31.00	52.70	3.0000	5.8000
1986	15.50	31.00	40.80	3.0000	4.2645
1987	17.90	35.80	53.00	3.0000	4.9218
1988	24.80	49.60	48.60	3.0000	2.9194
1989	31.90 ²	55.80	34.30	3.0000 ³	1.4588 ³
1990	28.60	57.20	44.10	3.0000	2.0839

¹In 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.

²This is the premium paid by most groups. This rate includes the \$4.00 catastrophic coverage monthly premium which was paid by most enrollees.

³The matching ratios for CY 1989 apply to the non-catastrophic portion of the standard monthly premium rate.

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 HHS and by the Department of the Treasury in carrying out the SMI provisions of Title XVIII of the Social Security Act are charged to the trust fund. The Secretary of HHS certifies benefit payments to the Managing Trustee, who makes the payments from the trust fund in accordance therewith.

The Social Security Amendments of 1967 and 1972 authorize the Secretary of HHS 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 (HI) and SMI programs. A sizeable portion of such costs of such experiments and demonstration projects are paid out of the HI and SMI 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 SMI 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 1989

A statement of the income and disbursements of the Federal Supplementary Medical Insurance Trust Fund in FY 1989 and of the assets of the fund at the beginning and end of the fiscal year is presented in Table 2.

**TABLE 2.—STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL
INSURANCE TRUST FUND DURING FISCAL YEAR 1989**

(In thousands)

Total assets of the trust fund, beginning of period.....		\$6,447,411
Receipts:		
Premiums from enrollees:		
Enrollees aged 65 and over.....	\$9,486,519	
Disabled enrollees under age 65	944,702	
Catastrophic Coverage monthly premium.....	1,116,575	
Total premiums		11,547,795
Transfers from general fund of the Treasury:		
Government contributions:		
Supplementary premiums of enrollees aged 65 and over.....	29,009,382	
Supplementary premiums of disabled enrollees under age 65.....	1,702,618	
Total Government contributions		30,712,000
Other.....		0
Interest		
Interest on Investments	1,032,631	
Interest on amounts of interfund transfers ¹	-10,870	
Total Interest.....		1,021,761
Total revenue.....		43,281,557
Disbursements:		
Benefit payments		36,866,508
Administrative expenses:		
Treasury administrative expenses	2,454	
Salaries and expenses – SSA.....	221,480	
Salaries and expenses – HCFA	1,202,830	
Salaries and expenses Office of Secretary.....	11,457	
Construction	6,147	
Public Health Service	2,351	
Pay Assessment Commission.....	543	
Office of Personnel Management expenses.....	86	
Physicians Payment Review	3,022	
Total administrative expenses		1,450,370
Total disbursements.....		38,316,878
Net addition to the trust fund.....		4,964,679
Total assets of the trust fund, end of period.....		11,412,088

¹A positive figure represents a transfer of interest to the SMI trust fund from the other trust funds. A negative figure represents a transfer of interest from the SMI trust fund to the other trust funds.

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

The total assets of the trust fund amounted to \$6,447 million on September 30, 1988. During FY 1989, total receipts amounted to \$43,282 million, and total disbursements were \$38,317 million. Total assets thus increased \$4,965 million during the year to a total of \$11,412 million on September 30, 1989.

Of the total receipts, \$9,487 million represented premium payments by (or on behalf of) enrollees aged 65 and over, \$945 million represented premium payments by (or on behalf of) disabled enrollees under age 65, and \$1,117 million represented catastrophic coverage monthly premium payments. Total premium payments amounted to \$11,548 million, an increase of 31.9 percent over the amount of \$8,756 million for the preceding year. This increase in premiums from enrollees resulted primarily from: (1) the increase from \$24.80 to \$31.90 per month in the standard premium rate that became effective on January 1, 1989 and (2) the growth of the number of persons enrolled in the SMI program.

Contributions received from the general fund of the treasury amounted to \$30,712 million, which accounted for 71.0 percent of total receipts. This amount consisted of \$29,009 million representing contributions relating to premiums paid by enrollees aged 65 and over, and \$1,703 million representing contributions relating to the premiums paid by disabled enrollees under age 65. The remaining \$1,022 million of receipts consisted almost entirely of interest on the investments of the trust fund.

Of the \$38,317 million in total disbursements, \$36,867 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 \$1,450 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, HI, and SMI--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 HI and SMI trust funds and the program management general fund account, with appropriate interest allowances.

In Table 3, the experience with respect to actual amounts of enrollee premiums, Government contributions, and benefit payments in FY 1989 is compared with the estimates for FY 1989 which appeared in the 1988 and 1989 annual reports.

TABLE 3.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, FISCAL YEAR 1989

(Dollar amounts in millions)

Item	Actual amount	Comparison of actual experience with estimates for FY 1989 published in -			
		1989 report		1988 report	
		Estimated amount	Actual as percentage of estimate	Estimated amount	Actual as percentage of estimate
Premiums from enrollees	\$11,548 ¹	\$11,614	99	\$10,341 ²	112
Government Contributions	30,712	30,712	100	31,137	99
Benefit Payments	36,867	37,402	99	38,356 ³	96

¹The FY 1989 premium contribution from enrollees included a catastrophic coverage monthly premium of \$4.00 (for most individuals), which was mandated by the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360). The one-year contribution due to that premium was \$1,117 million.

²The 1988 estimate for fiscal year 1989 enrollee premium contributions was completed prior to enactment of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360). If the resulting receipt of \$1,117 million that was collected based on the \$4.00 catastrophic coverage monthly premium had been known at the time, then the 1988 estimate for fiscal year 1989 enrollee premium contribution would have been \$11,458 million—within one percent of the actual amount.

Table 4 shows a comparison of the total assets of the fund and their distribution at the end of FY 1988 and at the end of FY 1989. The assets of the trust fund at the end of FY 1988 totaled \$6,447 million, consisting of \$6,326 million in the form of obligations of the U.S. Government, and an undisbursed balance of \$121 million. The assets of the trust fund at the end of FY 1989 totaled \$11,412 million, consisting of \$11,397 million in the form of obligations of the U.S. Government and an undisbursed balance of \$15 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.

TABLE 4.—ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AT THE END OF FISCAL YEARS 1988 AND 1989¹

	September 30, 1988	September 30, 1989
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of Indebtedness:	\$8,558,000.00	\$345,777,000.00
Bonds:		
8 3/8-percent, 2001	444,270,000.00	444,270,000.00
8 3/4-percent, 1990-2004	—	4,743,765,000.00
9 1/4-percent, 1991-93	1,136,139,000.00	1,126,519,000.00
9 3/4-percent, 1995	115,003,000.00	115,003,000.00
10 3/8-percent, 1994-2000	1,661,292,000.00	1,661,292,000.00
10 3/4-percent, 1994-98	809,231,000.00	809,231,000.00
13 1/4-percent, 1994-97	1,033,983,000.00	1,033,983,000.00
13 3/4-percent, 1994-99	1,117,677,000.00	1,117,677,000.00
Total investments in public-debt obligations	6,326,153,000.00	11,397,517,000.00
Undisbursed balance ²	121,258,054.76	14,571,382.00
Total assets	6,447,411,054.76	11,412,088,382.00

¹The assets are carried at par value, which is the same as book value.

The net increase in the par value of the investments held by the fund during FY 1989 amounted to \$5,071 million. New securities at a total

par value of \$49,160 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 \$44,427 million. Included in these amounts is \$43,618 million in certificates of indebtedness that were acquired, and \$43,619 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the SMI trust fund for the 12 months ending on June 30, 1989 was 10.2 percent. This period is used because interest on special issues is paid semiannually on June

30 and December 31. The interest rate on special issues purchased by the trust fund in June 1989 was 8 3/4 percent, payable semiannually.

EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND

Financing for the SMI program is established annually on the basis of standard monthly premium rates (paid by or on behalf of the enrollees) and actuarial rates on which general revenue contributions are based. Beginning January 1, 1984, the annual basis has been the calendar year. For 1989, only, the financing was established also on the basis of the catastrophic coverage monthly premium rate. With the enactment of the Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234), the financing for 1990 and beyond will no longer be established on the basis of catastrophic coverage premium rates.

Although standard monthly premium rates and actuarial rates have been set only for periods through December 31, 1990, projections are presented through December 31, 1992 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 in accordance with 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. The economic and demographic assumptions underlying the alternative projections are described in detail in the 1990 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. Appendix A presents an explanation of the effects of alternative A and alternative B on the projections in this report. For the projection period shown in this report, the variation in economic performance between alternative A and alternative B does not significantly affect the operations of the SMI program.

The January 1, 1990 update of the allowable fee limits for physician services was delayed until April 1, 1990 by Public Law 101-239. Under both sets of projections, it is assumed that the April 1, 1990 increase will be 2.5 percent. Alternative A has the January 1, 1991 update as 3.6 percent and the alternative B as 3.7 percent. The costs per enrollee for institutional and other services under the SMI program are projected to increase an average of 15.5 percent for CY 1990 and 15.6 percent for CY 1991. These increases represent price increases and increases due to other factors.

Table 5 shows the projected operations of the trust fund on a fiscal-year basis through FY 1992. Table 6 shows the corresponding development on a calendar-year basis. The level of the trust fund increased in FY 1989 and CY 1989 for three reasons. First, the actuarial rates for this period were set to allow an increase in the assets. Second, actual expenditures were lower than the estimate at the time of promulgation, and the assets increased more than expected. Third, the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360) established the Medicare Catastrophic Coverage Account as of January 1, 1989. For CY 1989 the SMI-related transactions of this account were primarily income transactions since SMI catastrophic benefits were not effective until January 1, 1990.

TABLE 5.—ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) FISCAL YEARS 1990-1992 AND ACTUAL DATA FOR 1967-1989

(In millions)

Fiscal Year ¹	Income				Disbursements			Balance at end of year ⁴
	Premium from enrollees	Government contribu- tions ²	Interest and Other Income ³	Total Income	Benefit payments	Adminis- trative expenses	Total disburse- ments	
Historical:								
1967	\$647	\$623	\$15	\$1,285	\$664	\$135 ⁵	\$799	\$486
1968	698	634	21	1,353	1,390	142	1,532	307
1969	903	984	24	1,911	1,645	195	1,840	378
1970	936	928	12	1,876	1,979	217	2,196	57
1971	1,253	1,245	18	2,516	2,035	248	2,283	290
1972	1,340	1,365	29	2,734	2,255	289	2,544	481
1973	1,427	1,430	45	2,902	2,391	246	2,637	746
1974	1,704	2,029	76	3,809	2,874	409	3,283	1,272
1975	1,887	2,330	105	4,322	3,765	405	4,170	1,424
1976	1,951	2,939	104	4,994	4,672	528	5,200	1,219
T.Q.	539	878	4	1,421	1,269	132	1,401	1,239
1977	2,193	5,053	137	7,383	5,867	475	6,342	2,279
1978	2,431	6,386	228	9,045	6,852	504	7,356	3,968
1979	2,635	6,841	363	9,839	8,259	555	8,814	4,994
1980	2,928	6,932	415	10,275	10,144	593	10,737	4,532
1981	3,320	8,747	372	12,439	12,345	883	13,228	3,743
1982	3,831	13,323	473	17,627	14,806	754	15,560	5,810
1983	4,227	14,238	682	19,147	17,487	824	18,311	6,646
1984	4,907	16,811	807	22,525	19,473	899	20,372	8,799
1985	5,524	17,898	1,155	24,577	21,808	922	22,730	10,646
1986	5,699	18,076	1,228	25,003	25,169	1,049	26,218	9,432
1987	6,480	20,299	1,018	27,797	29,937	900	30,837	6,392
1988	8,756	25,418	828	35,002	33,682	1,265	34,947	6,447
1989	11,548 ⁶	30,712	1,022 ⁶	43,282 ⁶	36,867	1,450 ⁶	38,317 ⁶	11,412 ⁶
Projected:								
Alternative A:								
1990	11,380 ⁶	32,879	1,275 ⁶	45,534 ⁶	42,502	1,479 ⁶	43,981 ⁶	12,965 ⁶
1991	11,617	35,477	1,267	48,361	47,226	1,522	48,748	12,578
1992	12,250	41,120	1,152	54,522	54,170	1,607	55,777	11,323
Alternative B:								
1990	11,380 ⁶	32,879	1,275 ⁶	45,534 ⁶	42,502	1,479 ⁶	43,981 ⁶	12,965 ⁶
1991	11,617	35,483	1,267	48,367	47,236	1,519	48,755	12,577
1992	12,279	41,152	1,152	54,583	54,229	1,601	55,830	11,330

¹For 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; FY 1977-92 cover the interval from October 1 through September 30.

²The payments shown as being from the general fund of the Treasury include certain interest-adjustment items.

³Other Income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.

⁴The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 9).

⁵Administrative expenses shown include those paid in FY 1966 and 1967.

⁶Includes the impact of the Medicare catastrophic coverage Act of 1988 (Public Law 100-360).

TABLE 6.—ESTIMATED PROGRESS OF SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) CALENDAR YEARS 1990-1992 AND ACTUAL DATA FOR 1967-1989
(In millions)

Calendar Year	Income				Disbursements			Balance at end of year ³
	Premium from enrollees	Government contribu- tions ¹	Interest and Other Income ²	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 ⁴	11,291 ⁴	361	15,374	13,113	915	14,028	5,877
1982	3,697 ⁴	12,284 ⁴	599	16,580	15,455	772	16,227	6,230
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
1987	7,409 ⁵	23,560 ⁵	875	31,844	30,820	920	31,740	8,394
1988	8,761 ⁵	26,203 ⁵	861	35,825	33,970	1,260	35,230	8,990
1989	12,263 ⁶	30,852	1,219 ⁶	44,334 ⁶	38,294	1,489 ⁶	39,783 ⁶	13,541 ⁶
Projected:								
Alternative A:								
1990	11,125	32,455	1,285	44,865	43,643	1,460	45,103	13,303
1991	11,781	36,485	1,216	49,482	48,938	1,543	50,481	12,304
1992	12,406	42,664	1,076	56,146	55,862	1,628	57,490	10,960
Alternative B::								
1990	11,125	32,455	1,285	44,865	43,643	1,460	45,103	13,303
1991	11,781	36,492	1,216	49,489	48,956	1,539	50,495	12,297
1992	12,445	42,705	1,076	56,226	55,940	1,622	57,562	10,961

¹The payments shown as being from the general fund of the Treasury include certain Interest adjustment items.

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

³The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 9).

⁴Section 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 contributions (\$883 million) were added to the SMI trust fund on December 31, 1981. These amounts are excluded from the premium income and general revenue income for CY 1982.

⁵Delivery of benefit checks normally due January, 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks (\$692 million) and the general revenue contributions (\$2,178 million) were added to the SMI trust fund on December 31, 1987. These amounts are excluded from the premium income and general revenue income for CY 1988 (Refer to footnote 4).

⁶Includes the impact of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

The actuarial rates for CY 1990 were promulgated with specific margins to maintain aged assets and to continue to reduce disabled assets. Based on these actuarial rates, the repeal of catastrophic coverage, and the above economic assumptions, the fund is projected to

decrease to \$13.3 billion under both alternatives by the end of CY 1990 and then decrease again to \$12.3 billion by the end of CY 1991.

Table 7 shows the calendar year average increase in aggregate and per capita benefit payments through CY 1992. To reflect the size of the program relative to the economy as a whole, Table 7 also shows SMI benefit expenditures as a percent of Gross National Product (GNP). During CY 1989, the program grew 12.7 percent on an aggregate basis, grew 11.1 percent on a per capita basis, and increased from .70 to .73 percent of GNP.

TABLE 7.—GROWTH IN TOTAL CASH BENEFITS UNDER THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM THROUGH DECEMBER 31, 1992

Calendar year	Aggregate benefits (millions)	Percent change	Per capita benefits	Percent change	SMI benefits as a percent of GDP
Historical:					
1967	\$1,197	—	\$66.97	—	0.15
1968	1,518	26.8	82.27	22.8	0.17
1969	1,865	22.9	97.86	19.0	0.19
1970	1,975	5.9	101.30	3.5	0.19
1971	2,117	7.2	106.68	5.3	0.19
1972	2,325	9.8	114.91	7.7	0.19
1973	2,526	8.6	122.02	6.2	0.19
1974	3,318	31.4	144.47	18.4	0.23
1975	4,273	28.8	179.96	24.6	0.27
1976	5,080	18.9	207.39	15.2	0.29
1977	6,038	18.9	239.27	15.4	0.30
1978	7,252	20.1	279.58	16.8	0.32
1979	8,708	20.1	326.86	16.9	0.35
1980	10,635	22.1	389.87	19.3	0.39
1981	13,113	23.3	471.15	20.8	0.43
1982	15,455	17.9	545.55	15.8	0.49
1983	18,106	17.2	627.79	15.1	0.53
1984	19,661	8.6	670.77	6.8	0.52
1985	22,947	16.7	768.25	14.5	0.57
1986	26,239	14.3	861.37	12.1	0.62
1987	30,820	17.5	992.69	15.2	0.68
1988	33,970	10.2	1,078.41	8.6	0.70
1989	38,294	12.7	1,197.96	11.1	0.73
Projected:					
Alternative A:					
1990	43,643	14.0	1,346.38	12.4	0.79
1991	48,938	12.1	1,490.42	10.7	0.82
1992	55,862	14.1	1,680.52	12.8	0.88
Projected:					
Alternative B:					
1990	43,643	14.0	1,346.38	12.4	0.79
1991	48,956	12.2	1,490.97	10.7	0.83
1992	55,940	14.3	1,682.86	12.9	0.89

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 SMI program, is closely related to the concept as it applies to private group insurance. The SMI program essentially is yearly renewable term insurance financed from premium income paid by the enrollees and from income contributed from general revenue. Consequently, the income to the program during a 12-month period for which financing is being established should 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 should be 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.

The law requires the Secretary of HHS to establish income on the basis of incurred costs (including associated administrative costs) for the 12-month period for which financing is being established. Financing on an incurred basis means that income should be sufficient to cover the cost of services rendered during the period. However, since the income per enrollee (premium rate plus Government contribution) is established prospectively, it is subject to projection error. Additionally, legislation enacted after the financing has been established but effective for the period for which financing has been set, may affect program costs. 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 variation between actual and projected costs, as well as the value of incurred but unpaid expenses.

In testing the actuarial soundness of the SMI program, it is not appropriate to look beyond the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests of actuarial soundness, then, are that: (1) assets and income for years for which financing has been established be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) assets be sufficient to cover projected liabilities 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 include

contingency levels to cover the impact of a moderate degree of variation between actual and projected costs.

Contingency levels to accommodate cost increases that may be higher than expected are measured by the excess of assets over liabilities. An appropriate target level for this excess depends on numerous factors. The most important of these factors are: (1) the difference from prior years in the actual performance of the program and the estimates made at the time financing was established and (2) the expected relationship between incurred and cash expenditures. Ongoing analysis is made of the former as trends in the differences vary over time.

2. INCURRED EXPERIENCE OF THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

The tests of actuarial soundness of the SMI 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 biases and random fluctuations inherent in the sampling process.

Table 8 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 8.—ESTIMATED INCOME AND DISBURSEMENTS INCURRED UNDER
SUPPLEMENTARY MEDICAL INSURANCE PROGRAM FOR FINANCING PERIODS
THROUGH DECEMBER 31, 1990**

(In millions)

Financing period	Premiums from enrollees	Government Contri- butions	Interest and other Income	Benefit payments	Adminis- trative expenses	Net operations in year
Historical Data:						
12-Month period ending June 30,						
1967	\$647	\$647	\$15	\$1,109	\$123 ¹	\$77
1968	698	698	21	1,443	155	-181
1969	903	903	24	1,765	198	-133
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	2,500	302	96
1974	1,704	2,031	76	3,149	353	309
1975	1,887	2,396	105	3,928	438	22
1976	1,951	2,972	109	4,818	485	-271
1977	2,156	4,697	157	5,861	515	634
1978	2,358	5,991	254	6,948	511	1,144
1979	2,601	6,570	365	8,171	649	716
1980	2,823	6,627	421	9,938	645	-712
1981	3,178	8,219	371	12,055	692	-979
1982	3,737	12,488	495	14,054	728	1,938
1983	4,202	13,951	686	17,075	708	1,056
Transition Semester ²	2,120	7,836	374	9,734	483	113
Calendar year						
1984	5,167	17,052	962	20,309	869	2,003
1985	5,613	18,243	1,248	22,806	986	1,342
1986	5,722	17,802	1,141	26,551	1,000	-2,886
1987	6,717	21,377	880	30,733	1,036	-2,795
1988	9,453	28,342	903	34,562	1,307	2,829
1989	12,263	30,826	1,241	38,691	1,538	4,101
Projected:						
Calendar year						
Alternative A:						
1990	11,125	32,455	1,285	44,216	1,460	-811
Alternative A:						
1990	11,125	32,455	1,285	44,216	1,460	-811

¹Includes administrative expenses incurred prior to the beginning of the program.

²The 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 9. 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.

**TABLE 9.—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, 1990**

(Dollar amounts in millions)

	Balance in trust fund	Government contributions due but unpaid	Total assets	Benefits incurred but unpaid	Administrative cost incurred but unpaid	Total liab- ilities	Excess of assets over liabilities	Ratio ¹
Historical:								
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	618	4	622	-237	-0.11
1970	57	15	72	568	0	568	-496	-0.21
1971	290	22	312	623	11	634	-322	-0.13
1972	481	-3	478	657	-19	638	-160	-0.06
1973	746	-7	739	766	37	803	-64	-0.02
1974	1,272	-5	1,267	1,041	-19	1,022	245	0.06
1975	1,424	67	1,491	1,204	14	1,218	273	0.05
1976	1,219	106	1,325	1,350	-29	1,321	4	0.00
1977	2,170	91	2,261	1,622	3	1,625	636	0.09
1978	3,786	48	3,834	2,013	40	2,053	1,781	0.20
1979	4,880	2	4,882	2,264	123	2,387	2,495	0.24
1980	4,657	0	4,657	2,686	188	2,874	1,783	0.14
1981	3,801	0	3,801	2,983	13	2,996	805	0.05
1982	5,534	1	5,535	2,801	-9	2,792	2,743	0.15
1983	6,780	2	6,782	3,031	-48	2,983	3,799	0.19
As of December 31,								
1983	7,070	1	7,071	3,227	-69	3,158	3,913	0.19
1984	9,698	2	9,700	3,875	-91	3,784	5,916	0.25
1985	10,924	0	10,924	3,734	-38	3,696	7,228	0.26
1986	8,291	0	8,291	4,046	-98	3,948	4,343	0.14
1987	8,394 ²	0	8,394 ²	4,959	17	6,846 ²	1,548	0.04
1988	8,990	3	8,993	4,552	64	4,616	4,377	0.11
1989 ³	13,541	0	13,541	4,949	113	5,062	8,479	0.19
Projected:								
Alternative A:								
1990	13,303	0	13,303	5,522	113	5,635	7,568	0.15
Alternative B:								
1990	13,303	0	13,303	5,522	113	5,635	7,568	0.15

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

²Section 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January, 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks (\$692 million) and the general revenue matching contributions (\$2,178 million) were added to the SMI trust fund on December 31, 1987 and were included in the liabilities.

³The transactions of Medicare Catastrophic Coverage Account are included in the assets and liabilities of the trust fund.

Program financing has been established through December 31, 1990. The financing for CY 1990 for the aged was designed with specific margins to maintain the excess of assets over liabilities as a percent of incurred expenditures for the following year. For the disabled the financing for CY 1990 was designed to reduce the excess of assets over liabilities. In addition, Public Law 101-239 was enacted on December 19, 1989 after the financing had been established for CY 1990. As a net result of these measures, the excess of assets over liabilities is expected to decrease from \$8,479 million at the end of December 1989 to \$7,668 million at the end of December 1990 under both alternative A

and alternative B. This excess as a percent of incurred expenditures for the following year is expected to decrease from 18.6 percent as of December 31, 1989 to 14.8 percent as of December 31, 1990.

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 projected 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 variation in the respective increase factors.

Table 10 indicates that, under the low cost assumptions, trust fund assets would exceed liabilities by the end of December 1990 (the period through which financing has been established), reaching a level of 29.0 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 an appropriate level to maintain the actuarial soundness of the trust fund. Under the high cost assumptions, trust fund assets would still exceed liabilities by the end of December 1990, reaching a level of 2.9 percent of the following year's incurred expenditures. Therefore, even if these high growth rates were to occur, assets would still be sufficient to cover outstanding liabilities.

Table 10.—ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1990

	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,		
	1989	1990	1991	1989	1990	1991	1989	1990	1991
Projection factors (in percent): ¹									
Physician fees ²									
Aged	2.5	1.8	3.7	2.4	1.0	2.6	2.9	2.6	4.8
Disabled	2.5	1.8	3.7	2.4	1.0	2.6	2.9	2.6	4.8
Utilization of physician services ³									
Aged	5.4	6.7	6.9	3.5	5.1	3.8	7.2	8.4	10.0
Disabled	3.7	6.0	6.0	-0.4	1.5	1.0	7.9	10.6	10.9
Outpatient hospital services per enrollee									
Aged	9.3	16.0	15.2	3.8	7.6	7.8	14.7	24.5	22.5
Disabled	-6.2	10.5	14.5	-10.7	-2.0	0.4	-1.7	23.0	28.6
	As of December 31,			As of December 31,			As of December 31,		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Actuarial status (in millions):									
Assets	\$8,993	\$13,541	\$13,303	\$8,993	\$13,541	\$16,609	\$8,993	\$13,541	\$9,741
Liabilities	4,616	5,062	5,635	4,154	2,970	3,287	5,080	7,210	8,070
Assets less liabilities	\$4,377	\$6,479	\$7,668	\$4,839	\$10,571	\$13,322	\$3,913	\$6,331	\$1,671
Ratio of assets less liabilities to expenditures (in percent) ⁴	10.9	18.6	14.8	12.5	25.0	29.0	9.3	12.8	2.9

¹Because of the manner in which alternative economic assumptions affect the projected operations of the SMI program, there is not a substantial difference in the projections based upon the three sets of assumptions. Therefore only one projection, alternative B, is presented here. Appendix A presents an explanation of the effects of alternative A and alternative B on the projections in the report.

²As recognized for payment under the program.

³Increase in the number of services received per enrollee and greater relative use of more expensive services.

⁴Ratio of assets less liabilities at the end of the year to the total incurred expenditures during the following year, expressed as a percent.

CONCLUSION

The financing for the SMI program has been established through December 1990 by the setting of the standard monthly premium rate (paid by or on behalf of each enrollee) of \$28.60 for CY 1990 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 72.3 percent of all SMI income during CY 1990.

Under both sets of intermediate assumptions used in this report, disbursements are projected to exceed income during CY 1990 and CY 1991. Income is composed of premiums paid by the enrollees, 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 \$13.5 billion at the end of CY 1989 to an estimated \$13.3 billion at the end of CY 1990 and then to decrease to an estimated \$12.3 billion at the end of CY 1991.

The financing for CY 1990 was established to maintain aged assets and to decrease disabled assets while reducing the overall relative level of the excess of assets over liabilities. In addition, Public Law 101-239 was enacted on December 19, 1989 after the financing had been established for CY 1990. As a net result of these measures, the excess of assets over liabilities is expected to decrease from \$8,479 million at the end of December 1989 to \$7,668 million under both alternative A and alternative B, by the end of December 1990, representing 14.8 percent of the projected incurred expenditures. Under more pessimistic assumptions as to cost increases, assets based on financing already established will still be sufficient to cover outstanding liabilities. Hence, the financing established through December 1990 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 moderate degree of variation between actual and projected costs.

Although the SMI 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 nearly doubled in the past five years. For the same time period, the program grew 40 percent faster than the economy as a whole. This growth rate shows no sign of significantly abating despite recent efforts to control the cost of the 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 calculating allowed charges incurred per enrollee in a recent year (the 12-month period ending June 30, 1988, 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 allowed 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 fluctuations 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 SMI program are paid by the same fiscal intermediaries that pay for HI services. The principal institutional services covered under the SMI 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 1988. 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 allowed 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 incurred charges or costs per enrollee corresponding to the reimbursement values shown in Table A1.

**TABLE A1.—INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE:
HISTORICAL**

Year ending June 30,	Average enrollment (millions)	All services	Physician	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	93.74	85.67	4.21	1.92	1.54	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	122.39	107.98	9.43	2.17	1.87	0.94
1974	20.988	134.38	117.48	11.32	2.03	2.35	1.20
1975	21.504	160.26	136.28	15.45	3.83	3.06	1.64
1976	22.089	188.60	156.27	21.26	5.19	3.86	2.02
1977	22.604	221.38	179.30	28.68	6.52	4.41	2.47
1978	23.133	254.19	207.05	33.38	6.82	4.02	2.92
1979	23.693	289.55	233.99	40.51	6.86	4.87	3.32
1980	24.287	343.02	277.24	47.10	7.58	7.04	4.06
1981	24.827	407.45	328.14	56.75	8.04	9.13	5.39
1982	25.363	465.33	381.02	66.40	0.52	10.92	6.47
1983	25.873	559.57	456.25	81.69	0.77	13.53	7.33
1984	26.433	637.34	512.95	97.23	0.99	16.85	9.32
1985	26.914	687.11	538.89	112.68	1.05	19.37	15.12
1986	27.453	785.11	595.93	135.49	1.19	31.22	21.28
1987	28.013	907.43	672.14	166.53	0.98	42.15	25.63
1988	28.467	1,027.89	747.15	188.04	1.53	61.44	29.73
Disabled (excluding ESRD):							
1974	1.638	116.65	97.59	13.88	3.45	1.08	0.65
1975	1.817	149.42	125.62	17.31	3.57	1.86	1.06
1976	2.019	178.77	148.31	21.69	5.12	2.19	1.46
1977	2.231	220.45	174.81	36.44	4.79	2.41	2.00
1978	2.423	256.27	202.91	42.76	5.53	2.47	2.60
1979	2.563	301.57	240.73	50.49	5.13	2.05	3.17
1980	2.644	363.08	288.20	60.65	6.09	4.31	3.83
1981	2.691	434.40	340.15	77.10	7.22	5.24	4.69
1982	2.689	514.14	394.86	107.11	0.00	6.30	5.87
1983	2.630	629.06	485.44	128.74	0.00	7.57	7.31
1984	2.596	676.09	529.41	129.33	0.00	8.38	8.97
1985	2.594	708.55	553.22	132.41	0.00	9.24	13.68
1986	2.630	777.20	593.57	151.81	0.00	12.62	19.20
1987	2.679	861.48	654.79	167.82	0.00	16.07	22.80
1988	2.729	915.28	672.64	194.05	0.00	23.23	25.36

TABLE A2.—INCURRED 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
1966	18.038	128.08	119.02	3.89	2.42	2.18	0.57
1969	18.833	145.18	132.22	6.77	3.08	2.47	0.64
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	186.21	163.99	14.79	3.02	2.94	1.47
1974	20.988	204.19	178.33	17.75	2.54	3.69	1.88
1975	21.504	236.59	201.27	23.51	4.66	4.66	2.49
1976	22.089	272.01	225.46	31.62	6.18	5.74	3.01
1977	22.604	313.23	253.83	41.77	7.60	6.43	3.60
1978	23.133	354.26	288.64	47.86	7.82	5.76	4.18
1979	23.693	398.80	322.19	57.28	7.76	6.88	4.69
1980	24.287	465.76	376.35	65.52	8.44	9.80	5.65
1981	24.827	545.32	438.85	77.76	8.81	12.51	7.39
1982	25.363	628.98	513.48	91.11	0.52	14.99	8.88
1983	25.873	754.95	614.98	110.89	0.77	18.36	9.95
1984	26.433	854.01	687.04	130.78	0.99	22.67	12.53
1985	26.914	910.49	716.27	151.61	1.05	26.06	15.50
1986	27.453	1,029.06	782.95	181.33	1.19	41.79	21.80
1987	28.013	1,177.73	873.15	221.34	0.98	56.02	26.24
1988	28.467	1,325.11	963.78	248.26	1.53	81.12	30.42
Disabled (excluding ESRD):							
1974	1.638	171.06	143.27	20.99	4.17	1.64	0.99
1975	1.817	212.07	178.40	25.25	4.17	2.71	1.54
1976	2.019	250.18	207.77	31.24	5.90	3.16	2.11
1977	2.231	303.48	240.42	51.43	5.41	3.40	2.82
1978	2.423	349.58	276.50	59.80	6.19	3.45	3.64
1979	2.563	406.70	324.15	69.68	5.66	2.83	4.38
1980	2.644	483.89	383.58	82.60	6.63	5.87	5.21
1981	2.691	572.56	447.51	103.80	7.78	7.05	6.32
1982	2.689	683.40	522.78	144.23	0.00	8.48	7.91
1983	2.630	835.24	643.57	171.82	0.00	10.10	9.75
1984	2.596	896.49	701.37	172.04	0.00	11.15	11.93
1985	2.594	932.45	729.44	176.67	0.00	12.33	14.01
1986	2.630	1,013.69	775.32	201.92	0.00	16.79	19.66
1987	2.679	1,114.29	847.51	222.17	0.00	21.28	23.33
1988	2.729	1,180.20	867.46	256.13	0.00	30.66	25.95

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 increase in the average charge per service does not explain all of the increase in per enrollee charges year-to-year.

The increase in the average charge per service is one of the most important factors creating the increase in charges per enrollee. The physician fee component of the CPI provides an approximation of the historical increases in submitted charge per service. Increases in this index are shown in the first column of Table A3.

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

(in percent)

Year ending June 30,	Increase due to price changes		Residual factors	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
Aged:				
1967	7.6	—	—	—
1968	5.9	4.8	10.6	15.9
1969	6.2	4.6	6.2	11.1
1970	6.7	3.9	0.4	4.3
1971	7.5	4.5	0.3	4.8
1972	5.2	3.9	2.0	6.0
1973	2.6	2.0	5.0	7.1
1974	5.0	3.2	5.4	8.8
1975	12.8	8.9	3.6	12.8
1976	11.4	8.2	3.5	12.0
1977	10.2	9.0	3.3	12.6
1978	8.9	9.0	4.3	13.7
1979	8.6	7.8	3.6	11.7
1980	11.5	8.6	7.6	16.8
1981	11.1	7.7	8.3	16.6
1982	9.9	10.8	5.6	17.0
1983	8.2	8.9	10.0	19.8
1984	7.5	7.2	4.2	11.7
1985	6.0	0.8	3.4	4.2
1986	6.7	0.0	9.3	9.3
1987	7.5	5.4	5.8	11.5
1988	7.2	3.1	7.0	10.3
Disabled (excluding ESRD):				
1974	5.0	—	—	—
1975	12.8	8.9	14.3	24.5
1976	11.4	8.2	7.6	16.4
1977	10.2	9.0	6.2	15.7
1978	8.9	9.0	5.5	15.0
1979	8.6	7.8	8.8	17.3
1980	11.5	8.6	9.0	18.3
1981	11.1	7.7	8.3	16.6
1982	9.9	10.8	5.4	16.8
1983	8.2	8.9	13.0	23.1
1984	7.5	7.2	1.6	8.9
1985	6.0	0.8	3.2	4.0
1986	6.7	0.0	6.3	6.3
1987	7.5	5.4	3.7	9.3
1988	7.2	3.1	-0.8	2.3

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 allowed 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 June 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 allowed 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 the MEI. The customary and prevailing charge limits maintained by the carriers are called “fee screens.” Allowed charges are charges after they have been reduced by the fee screens and are the charges on which reimbursement is based.

Public Law 101-239 provides for the replacement of customary and prevailing charges with fee schedules for physician services starting in CY 1992. The fee schedules will be based on a resource-based relative value scale. The fee schedule amount will be equal to the product of the procedure’s relative value, a conversion factor and a geographic adjustment factor. Payments will be based on the lower of the actual charge and the fee schedule amount. For the four-year period from 1992 to 1995, the fee schedule amounts will be adjusted to reflect the prevailing charges in each fee screen area.

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 allowed charge screens from the preceding fee-screen year as adjusted by an inflation factor. Effective January 1, 1989 charges for durable medical equipment, prosthetics and orthotics are determined on the basis of a fee schedule updated 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 AS 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 allowed for reimbursement purposes) has been

less than the increase in submitted fees. The second column of Table A3 shows this increase in per enrollee charges due to price changes.

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 third column of Table A3 shows the increases in charges per enrollee resulting from these residual causes. Because the measurement of increased allowed charges per service is subject to error, this error is included implicitly under residual causes.

The last column of Table A3 shows the total increases in charges per enrollee for physician services. discussed above. It includes the effects of all the items Projected increases in total allowed charges per enrollee are shown in Table A4. It compares with the corresponding historical data shown in Table A3. Column 1 of Table A4 shows the projected increases in the physician fee component of the CPI in each of the years ending June 30, 1989 through June 30, 1993. It represents an estimate of projected increases in the charges for all physician services (not only Medicare services). Column 2 shows the projected net increases in allowed charges, and column 3 shows the increases due to residual causes.

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

(in percent)

Year ending June 30,	Increase due to price changes		Residual factors	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
Alternative A:				
Aged:				
1989	7.4	2.6	5.4	8.1
1990	7.3	1.8	6.7	8.6
1991	8.0	3.7	6.9	10.9
1992	6.6	2.8	7.3	10.3
1993	7.2	2.2	6.9	9.3
Disabled (excluding ESRD):				
1989	7.4	2.6	3.7	6.4
1990	7.3	1.8	6.0	7.9
1991	8.0	3.7	6.0	9.9
1992	6.6	2.8	6.7	9.7
1993	7.2	2.2	6.2	8.5
Alternative B:				
Aged:				
1989	7.4	2.6	5.4	8.1
1990	7.5	1.8	6.7	8.6
1991	8.5	3.7	6.9	10.9
1992	7.2	2.9	7.3	10.4
1993	7.8	2.4	6.9	9.5
Disabled (excluding ESRD):				
1989	7.4	2.6	3.7	6.4
1990	7.5	1.8	6.0	7.9
1991	8.5	3.7	6.0	9.9
1992	7.2	2.9	6.7	9.8
1993	7.8	2.4	6.2	8.7

(2) Institutional and Other Services

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

**TABLE A5.—INCREASES IN INCURRED CHARGES AND COSTS PER ENROLLEE
FOR INSTITUTIONAL AND OTHER SERVICES: HISTORICAL**

(In percent)				
Year ending June 30,	Outpatient hospital	Home health agency	Group practice Prepayment plan	Independent lab
Aged:				
Historical:				
1968	58.8	76.6	41.6	9.6
1969	74.0	27.3	13.3	12.3
1970	39.3	2.9	-2.8	20.3
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	20.0	-15.9	25.5	27.9
1975	32.5	83.5	26.3	32.4
1976	34.5	32.6	23.2	20.9
1977	32.1	23.0	12.0	19.6
1978	14.6	2.9	-10.4	16.1
1979	19.7	-0.8	19.4	12.2
1980	14.4	8.8	42.4	20.5
1981	18.7	4.4	27.7	30.8
1982	17.2	-94.1	19.8	20.2
1983	21.7	48.1	22.5	12.0
1984	17.9	28.6	23.5	25.9
1985	15.9	6.1	15.0	23.7
1986	19.6	13.3	60.4	40.6
1987	22.1	-17.6	34.1	20.4
1988	12.2	56.1	44.8	15.9
Projected:				
1989	9.3	27.9	16.9	16.6
1990	16.0	17.1	13.6	17.6
1991	15.2	15.7	15.4	19.7
1992	15.2	15.6	14.8	20.9
1993	14.8	15.4	15.0	20.2
Disabled (excluding ESRD):				
Historical:				
1975	20.3	0.0	65.2	55.6
1976	23.7	41.5	16.6	37.0
1977	64.6	-8.3	7.6	33.6
1978	16.3	14.4	1.5	29.1
1979	16.5	-8.6	-18.0	20.3
1980	18.5	17.1	107.4	18.9
1981	25.7	17.3	20.1	21.3
1982	38.9	0.0	20.3	25.2
1983	19.1	0.0	19.1	23.3
1984	0.1	0.0	10.4	22.4
1985	2.7	0.0	10.6	17.4
1986	14.3	0.0	36.2	40.3
1987	10.0	0.0	26.7	18.7
1988	15.3	0.0	44.1	11.2
Projected:				
1989	-6.2	0.0	23.5	13.0
1990	10.5	0.0	14.2	15.8
1991	14.5	0.0	15.3	17.0
1992	13.9	0.0	15.2	17.4
1993	13.3	0.0	13.9	19.0

d. Projected Charges and Costs

Table A6 shows projections of per enrollee incurred charges and costs based on the assumptions in Tables A4 and A5. Table A7 shows the total reimbursement amounts per enrollee that result from subtracting the

average amounts of copayment per enrollee from the total covered charges in Table A6. The aggregate reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

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

Year ending June 30,	All services	Physician	outpatient hospital	Home health agency ¹	Group practice prepayment plan	Independent lab
Alternative A:						
Aged:						
1989	\$1,445.89	\$1,042.35	\$271.25	\$1.96	\$94.87	\$35.46
1990	1,598.55	1,132.06	314.74	2.30	107.75	41.70
1991	1,794.12	1,254.77	362.46	2.66	124.30	49.93
1992	2,008.27	1,384.64	417.70	3.07	142.68	60.18
1993	2,231.79	1,512.77	479.64	3.54	164.02	71.82
Disabled (excluding ESRD):						
1989	1,231.12	923.67	240.26	0.00	37.86	29.33
1990	1,339.52	996.80	265.52	0.00	43.22	33.98
1991	1,488.78	1,095.19	304.01	0.00	49.83	39.75
1992	1,651.18	1,201.13	346.12	0.00	57.40	46.53
1993	1,817.08	1,304.43	392.24	0.00	65.40	55.01
Alternative B:						
Aged:						
1989	1,445.89	1,042.35	271.25	1.96	94.87	35.46
1990	1,598.55	1,132.06	314.74	2.30	107.75	41.70
1991	1,794.12	1,254.17	362.46	2.66	124.30	49.93
1992	2,009.92	1,386.12	417.70	3.07	142.68	60.35
1993	2,236.61	1,516.90	479.64	3.54	164.02	72.51
Disabled (excluding ESRD):						
1989	1,231.12	923.67	240.26	0.00	37.86	29.33
1990	1,339.52	996.80	265.52	0.00	43.22	33.98
1991	1,488.78	1,095.19	304.01	0.00	49.83	39.75
1992	1,652.59	1,202.42	346.12	0.00	57.40	46.65
1993	1,821.15	1,308.00	392.24	0.00	65.40	55.51

TABLE A7.—INCURRED REIMBURSEMENT AMOUNTS: PROJECTED

Year ending June 30,	Average enrollment (millions)	Reimbursement amounts	
		Per enrollee	Aggregate (millions)
Alternative A:			
Aged:			
1989	28.870	\$1,127.29	\$32,545
1990	29.296	1,252.94	36,706
1991	29.684	1,414.47	41,987
1992	30.055	1,593.05	47,879
1993	30.415	1,777.87	54,074
Disabled (excluding ESRD):			
1989	2.771	957.78	2,654
1990	2.808	1,047.01	2,940
1991	2.843	1,170.59	3,328
1992	2.878	1,304.73	3,755
1993	2.913	1,441.81	4,200
Alternative B:			
Aged:			
1989	28.870	1,127.29	32,545
1990	29.296	1,252.94	36,706
1991	29.684	1,414.47	41,987
1992	30.055	1,594.41	47,920
1993	30.415	1,781.88	54,196
Disabled (excluding ESRD):			
1989	2.771	957.78	2,654
1990	2.808	1,047.01	2,940
1991	2.843	1,170.59	3,328
1992	2.878	1,305.77	3,758
1993	2.913	1,445.25	4,210

2. Estimates for Persons Suffering from End-Stage Renal Disease

Certain persons suffering from ESRP have been eligible to enroll for SMI coverage since July 1973 (under Section 2991 of Public Law 92-603). For analytical purposes, those enrollees suffering from ESRD who are also eligible as disability insurance beneficiaries are included in this section because their per enrollee costs are both higher and different in nature from those of most other disabled persons.

The estimates reflect the unique payment mechanism through which ESRD dialysis services are reimbursed under Medicare. Also, the estimates assume a continued increase in enrollment. The historical and projected enrollment and costs for SMI benefits are shown in Table A8.

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

Year ending June 30,	Average enrollment (thousands)		Reimbursement (millions)	
	Disabled ESRD	ESRD only	Disabled ESRD	ESRD only
1974	4	8	\$40	\$96
1975	7	11	68	144
1976	11	13	101	190
1977	14	15	137	229
1978	16	16	173	273
1979	18	20	216	322
1980	19	23	240	408
1981	20	25	300	470
1982	22	28	394	475
1983	25	32	450	491
1984	27	35	456	397
1985	30	38	445	389
1986	32	42	446	404
1987	34	45	482	444
1988	36	50	547	505
1989	37	54	563	551
1990	40	56	703	719
1991	43	59	773	784
1992	45	62	830	852
1993	48	66	902	934

3. Summary of Aggregate Reimbursement Amounts on a Cash Basis

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

TABLE A9.—AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS

(In millions)

Fiscal Year ¹	Aged	Disabled (excluding ESRD)	Disabled ESRD and ESRD only	Total
Historical:				
1967	\$664	—	—	\$664
1968	1,390	—	—	1,390
1969	1,645	—	—	1,645
1970	1,979	—	—	1,979
1971	2,035	—	—	2,035
1972	2,255	—	—	2,255
1973	2,391	—	—	2,391
1974	2,537	\$200	\$137	2,874
1975	3,289	263	213	3,765
1976	4,037	350	285	4,672
T.Q.	1,078	110	81	1,269
1977	5,005	499	363	5,867
1978	5,785	625	442	6,852
1979	6,929	792	538	8,259
1980	8,485	994	665	10,144
1981	10,362	1,193	790	12,345
1982	12,404	1,466	936	14,806
1983	14,783	1,725	979	17,487
1984	16,803	1,795	875	19,473
1985	19,080	1,886	842	21,808
1986	22,070	2,173	926	25,169
1987	26,353	2,560	1,024	29,937
1988	29,797	2,752	1,133	33,682
1989	32,746	2,886	1,234	36,867
Projected:				
Alternative A:				
1990	38,066	3,009	1,427	42,502
1991	42,331	3,417	1,478	47,226
1992	48,678	4,000	1,492	54,170
Alternative B:				
1990	38,066	3,009	1,427	42,502
1991	42,339	3,418	1,479	47,236
1992	48,731	4,005	1,493	54,229

¹For 1967 through 1976, fiscal years cover the Interval from July 1 through June 30; the 3-month Interval from July 1, 1976, through September 30, 1976, is labeled "T.Q." the transition quarter; fiscal years 1977-1992 cover the interval from October 1 through September 30.

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.

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 1990 ¹

1. Actuarial Status of the Supplementary Medical Insurance Trust Fund

Under the law, the starting point for determining the monthly premium is the amount that would be necessary to finance the SMI program for non- catastrophic expenses on an incurred basis, i.e., the amount of income that would be sufficient to pay for non-catastrophic 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 and used when needed.

The rates are established prospectively and are therefore subject to projection error. Additionally, legislation enacted after the financing has been established, but effective for the period for which the financing has been set, may affect program costs. 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 variation between actual and projected costs 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 1988 through 1989.

**TABLE 1.—ESTIMATED ACTUARIAL STATUS OF THE SMI TRUST FUND AS OF THE
END OF THE FINANCING
PERIODS, JAN. 1, 1988 --DEC. 31, 1989**

(In millions of dollars)

Financing Period Ending	Assets	Liabilities	Assets less liabilities
Dec. 31, 1988	\$8,990	\$4,905	\$4,085
Dec. 31, 1989	\$12,401	\$6,045	\$6,356

¹ This statement appeared in the *Federal Register* of October 27, 1989. However, since the publication of this notice, two laws affecting the SMI program were enacted that modified the premium rates announced in this notice. The Medicare Catastrophic Coverage Repeal Act of 1989 (Public Law 101-234) was enacted on December 13, 1989. Also, the Omnibus Budget Reconciliation Act of 1989 (Public Law 101-239) was enacted on December 19, 1989. A statement is being prepared that will appear in a future *Federal Register* which will announce the revised premium rate of \$28.60. Projections shown in this statement differ from the projections shown in the rest of the report because of changes in assumptions since the rates were announced.

2. MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OLDER

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

The monthly actuarial rate for enrollees age 65 and older for calendar year 1990 was determined by projecting per-enrollee non-catastrophic cost for the 12-month periods ending June 30, 1990 and June 30, 1991 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 before the passage of section 2306(b) of Pub. L. 98-369. The values for the 12-month period ending June 30, 1987 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 are then adjusted to apply to a calendar year period. The projected values for financing periods from January 1, 1987, through December 31, 1990, are shown in Table 3.

TABLE 2.—PROJECTION FACTORS¹
12-MONTH PERIODS ENDING JUNE 30 OF 1987-1991

(In percent)

Physicians' services			Outpatient hospital services	Home health agency services ⁴	Group practice prepayment plans	Independent lab services
12-month period ending June 30,	Fees ²	Residual ³				
Aged:						
1987	4.4	7.0	22.2	-17.6	34.0	20.4
1988	3.7	6.6	12.8	65.4	44.4	18.9
1989	2.5	4.7	10.2	16.0	17.1	10.5
1990	3.2	6.2	18.2	16.0	20.7	24.1
1991	4.1	6.9	19.6	16.0	21.5	25.0
Disabled:						
1987	4.4	5.0	10.8	0.0	26.7	19.0
1988	3.7	5.9	17.2	0.0	44.9	15.3
1989	2.5	4.2	6.0	0.0	22.9	6.9
1990	3.2	5.9	15.5	0.0	20.1	22.4
1991	4.1	6.8	17.1	0.0	21.0	23.7

¹All values are per enrollee.

²As recognized for payment under the program.

³Increase in the number of services received per enrollee and greater relative use of more expensive services.

⁴Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare hospital insurance (HI) program. However, for those SMI enrollees not entitled to HI, the coverage of these services is provided by the SMI program. Since all SMI disabled enrollees are entitled to HI, their coverage of these services is provided by the HI program.

**TABLE 3.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65
AND OVER FINANCING PERIODS ENDING DECEMBER 31, 1987 THROUGH
DECEMBER 31, 1990**

	Financing Periods			
	CY 1987	CY 1988	CY 1989	CY 1990
Covered services (at level recognized):				
Physicians' reasonable charges	\$38.35	\$41.74	\$45.32	\$50.10
Outpatient hospital and other institutions	9.81	10.93	12.51	14.88
Home health agencies	0.05	0.07	0.08	0.10
Group practice prepayment plans	2.85	3.66	4.36	5.28
Independent lab	1.20	1.37	1.61	2.01
Total services	\$52.26	\$57.77	\$63.88	\$72.37
Cost-sharing:				
Deductible	-2.70	-2.71	-2.72	-2.73
Coinsurance	-9.13	-10.12	-11.22	-12.75
Total benefits	\$40.43	\$44.94	\$49.94	\$56.89
Administrative expenses	1.32	1.36	1.41	1.47
Incurred expenditures	\$41.75	\$46.30	\$51.35	\$58.36
Value of Interest	-0.42	-0.54	-0.98	-1.32
Contingency margin for projection error and to amortize the surplus or deficit	-5.53	3.84	5.43	\$0.16
Monthly actuarial rate	\$35.80	\$49.60	\$55.80	\$57.20

The projected monthly rate required to pay for one-half of the total of non-catastrophic benefits and administrative costs for enrollees age 65 and over for calendar year 1990 is \$58.36. The monthly actuarial rate of \$57.20 provides an adjustment of -\$1.32 for interest earnings and \$0.16 for a contingency margin. Based on current estimates, it appears that with respect to enrollees age 65 and over the assets are sufficient to cover the amount of incurred but unpaid expenses and to provide for a moderate degree of variation between actual and projected costs. Thus, only a small positive contingency margin is needed to maintain assets at an appropriate level.

An appropriate level for assets depends on numerous factors. The most important of these factors are: (1) the difference from prior years in the actual performance of the program and estimates made at the time financing was established and (2) the expected relationship between incurred and cash expenditures. Ongoing analysis is made of the former as the trends in the differences vary over time.

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 more than 24 months or because of entitlement to Medicare under the end-stage renal disease program. Projected monthly non-catastrophic 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). Non-

catastrophic 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.

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for calendar year 1990 is \$68.76. The monthly actuarial rate of \$44.10 provides an adjustment of -\$3.43 for interest earnings and -\$21.23 for a contingency margin. Based on current estimates, it appears that the disabled assets are more than sufficient to cover the amount of disabled incurred but unpaid expenses and to provide for a moderate degree of variation between actual and projected costs. Thus, a negative contingency margin is needed to reduce disabled assets to more appropriate levels.

TABLE 4.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES FINANCING PERIODS ENDING DECEMBER 31, 1987 THROUGH DECEMBER 31, 1990

	Financing Periods			
	CY 1987	CY 1988	CY 1989	CY 1990
Covered services (at level recognized):				
Physicians' reasonable charges	\$41.12	\$44.71	\$48.26	\$53.00
Outpatient hospital and other institutions	22.93	24.81	26.07	28.07
Home health agencies	0.00	0.00	0.00	0.00
Group practice prepayment plans	1.05	1.39	1.69	2.03
Independent lab	1.24	1.37	1.56	1.87
Total services	\$66.34	\$72.28	\$77.58	\$84.97
Cost-sharing:				
Deductible	-2.42	-2.43	-2.44	-2.45
Coinsurance	-12.09	-13.19	-14.15	-15.49
FY 1991 Sequester	\$51.83	\$56.66	\$60.99	\$67.03
Total benefits	1.69	1.72	1.73	1.73
Administrative expenses	\$53.52	\$58.38	\$62.72	\$68.76
Incurred expenditures	-8.84	-7.09	-6.19	-3.43
Value of Interest	8.32	-2.69	-22.23	-21.23
Contingency margin for projection error and to amortize the surplus or deficit	\$53.00	\$48.60	\$34.30	\$44.10
Monthly actuarial rate	\$41.12	\$44.71	\$48.26	\$53.00

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 variation between actual and projected increases in the respective increase factors. All assumptions not shown in Table 5 are the same as in Table 2.

Table 5 indicates that, under the assumptions used in preparing this report, the monthly actuarial rates will result in an excess of non-catastrophic assets over liabilities of \$4,922 million by the end of December 1990. This amounts to 9.1 percent of the estimated total incurred non-catastrophic expenditures for the following year. Assumptions which are somewhat more pessimistic (and, therefore, test the adequacy of the assets to accommodate projection errors) produce a non-catastrophic deficit of \$7,277 million by the end of December 1990, which amounts to 11.6 percent of the estimated total non-catastrophic incurred expenditures for the following year. Under these more pessimistic assumptions, assets will be insufficient to cover outstanding liabilities. However, the cash balances in the Trust Fund should remain positive, allowing claims to be paid. Under fairly optimistic assumptions, the monthly actuarial rates will result in a non-catastrophic surplus of \$15,997 million by the end of December 1990, which amounts to 33.9 percent of the estimated total incurred non-catastrophic expenditures for the following year.

5. PREMIUM RATE

Beginning with calendar year 1990, section 1839(a)(3) of the Act provides that the standard monthly premium rate, for both aged and disabled enrollees, is the lesser of:

1. The actuarial rate for enrollees aged 65 and older; or
2. The current standard monthly premium, increased by the same percentage that the level of old-age, survivors, and disability insurance (OASDI) benefits has been increased since the November preceding the promulgation (and rounded to the nearest multiple of ten cents).

The standard monthly premium rate for calendar year 1989 is \$27.90. The OASDI benefit table increased 4.0 percent in December 1988. The \$27.90 rate, increased by 4.0 percent and rounded to the nearer ten-cent multiple, is \$29.00. Since this is less than the aged actuarial rate, the standard premium rate is \$29.00 for calendar year 1990.

Table 5.—ACTUARIAL STATUS OF THE SMI TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1990

	This projection			Low cost projection			High cost projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1989	1990	1991	1989	1990	1991	1989	1990	1991
Projection factors (in percent):									
Physician fees ¹									
Aged	2.5	3.2	4.1	1.7	2.1	2.9	3.3	4.	5.2
Disabled	2.5	3.2	4.1	1.7	2.1	2.9	3.3	4.	5.2
Utilization of physician services ²									
Aged	4.7	6.2	6.9	3.0	3.1	3.7	6.3	9.4	10.0
Disabled	4.2	5.9	6.8	-0.3	1.0	1.8	8.8	10.9	11.7
Outpatient hospital services per enrollee									
Aged	10.2	18.2	19.6	1.8	10.9	12.2	18.7	25.6	27.0
Disabled	6.0	15.5	17.1	-6.5	1.3	2.9	18.5	29.6	31.2
	As of December 31,			As of December 31,			As of December 31,		
	1988	1989	1990	1988	1989	1990	1988	1989	1990
Actuarial status (in millions):									
Assets	\$8,990	\$12,401	\$11,558	\$8,990	\$15,334	\$20,109	\$8,990	\$9,250	\$2,016
Liabilities	4,905	6,045	6,636	3,004	3,863	4,132	6,854	8,308	9,293
Assets less liabilities	\$4,085	\$6,356	\$4,922	\$5,986	\$11,471	\$15,997	\$2,136	\$942	-\$7,277
Ratio of assets less liabilities to expenditures (In percent) ³	10.0	13.5	9.1	15.9	27.6	33.9	4.8	1.8	-11.6

¹As recognized for payment under the program.

²Increase in the number of services received per enrollee and greater relative use of more expensive services.

³Ratio of assets less liabilities at the end of the year to the total Incurred expenditures during the following year, expressed as a percent.

APPENDIX C.

STATEMENT OF ACTUARIAL OPINION

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

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