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1992 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 1992 ANNUAL REPORT OF THE BOARD, PURSUANT TO SECTION 1841(b) OF THE SOCIAL SECURITY ACT, AS AMENDED

BOARD OF TRUSTEES OF THE
FEDERAL HOSPITAL INSURANCE TRUST FUND
Washington, D.C, April 2, 1992

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 1992 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 27th such report),in compliance with the provisions of section 1841(b) of the Social Security Act.

Respectfully,

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

LYNN MARTIN,
Secretary of Labor, and Trustee

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

STANFORD G. ROSS
Trustee

DAVID M. WALKER
Trustee

J. MICHAEL HUDSON,
Acting Administrator of the Health Care
Financing Administration, and
Secretary, Board of Trustees

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I. OVERVIEW

A. SUMMARY

1. Operations of the Supplementary Medical Insurance Program

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) 1991, 33.1 million persons were covered under SMI. General revenue contributions during 1991 amounted to $37.6 billion, accounting for 73.4 percent of all SMI income. About 23.3 percent of all income resulted from the premiums paid by the enrollees. Interest payments to the SMI fund accounted for the remaining 3.3 percent. Of the $48.8 billion in SMI disbursements, $47.2 billion was for benefit payments while the remaining was spent for administrative expenses. SMI administrative expenses were 3.2 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 by the federal government. 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 federal government.

Financing for 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. Pursuant to 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.

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.

The concept of actuarial soundness, as it applies to the SMI program, is closely related to the concept as it applies to many private group insurance plans. 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 appropriate to look only to the periods 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 reasonable 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.

2. Conclusion of the Board of Trustees

The financing established through December 1992 is sufficient to cover projected benefits and administrative costs incurred 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 reasonable degree of variation between actual costs and projected costs. On this basis, the SMI program can thus be said to be actuarially sound.

Although the SMI program is currently actuarially sound, the Trustees note with concern the past and projected rapid growth in the cost of the program. Growth rates have been so rapid that outlays of the program have increased 80 percent in aggregate and 66 percent per enrollee in the last 5 years. For the same time period, the program grew 36 percent faster than the economy despite recent efforts to control the cost of the program. As a result, the program is projected to increase from

0.88 percent of the Gross Domestic Product (GDP) in CY 1991 to 4.75 percent of GDP in CY 2065. This rapid growth is attributable primarily to the inability to control the rapid growth in (1) the volume of services billed per beneficiary and (2) the reported case mix intensity (the reporting of services which receive higher reimbursement). Given the past and projected cost of the program, the Trustees urge the Congress to take additional actions designed to control SMI costs either through specific program legislation or as a part of enacting more comprehensive health care reform.

B. THE BOARD OF TRUSTEES

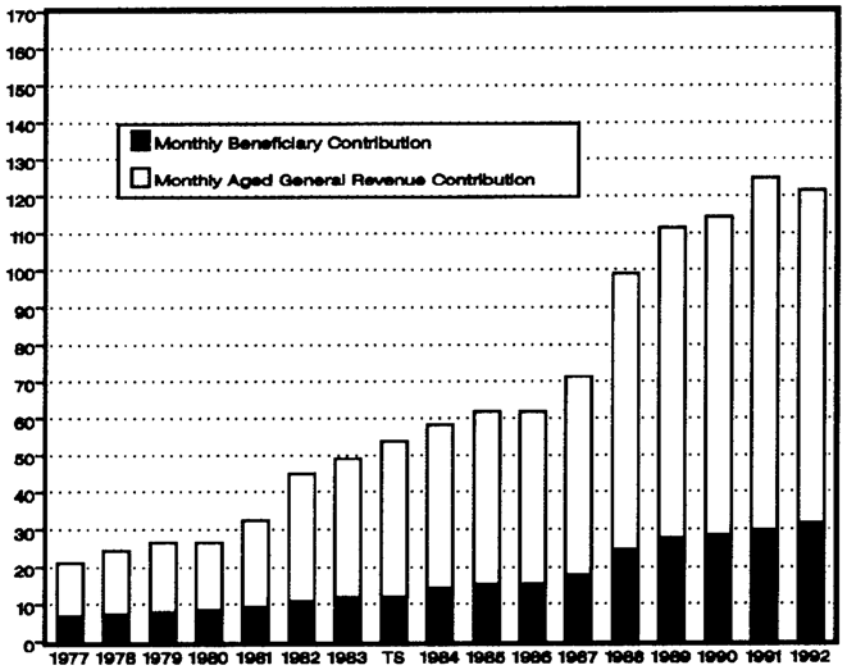
The Federal Supplementary Medical Insurance Trust Fund, established on July 30, 1965, is held by the Board of Trustees under the authority of section 1841(b) of the Social Security Act, as amended. The Board is composed of five members, three of whom serve in an ex officio capacity: the Secretary of the Board, the Secretary of Labor, and the Secretary of Health and Human Services. The President nominated and the Senate confirmed Stanford G. Ross and David M. Walker to be the other two members, who serve as representatives of the public. Mr. Ross and Mr. Walker are serving 4-year terms that began on October 2, 1990.

By law, the Secretary of the Treasury is designated as the Board Chairperson and the Managing Trustee, and the Administrator of the Health Care Financing Administration (HCFA) is designated as Secretary of the Trustees. 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 1992, is the 27th such report.

C. EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND

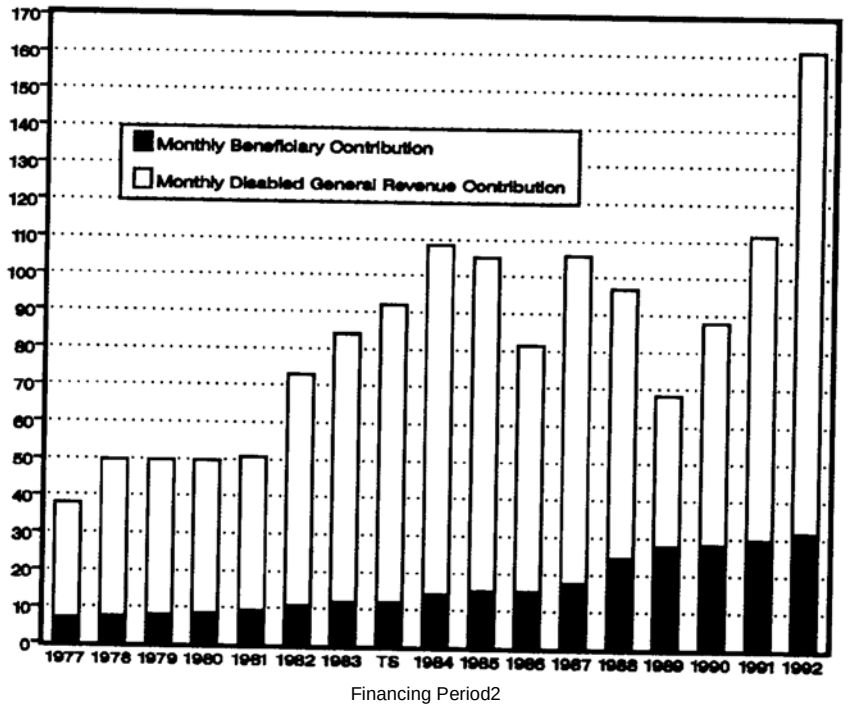
Financing for the SMI program is established annually on the basis of standard monthly premium rates (paid by or on behalf of the enrollees) and actuarial rates on which general revenue contributions are based. Beginning January 1, 1984, the annual basis has been the calendar year. For 1989, only, the 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. Figures 1 and 2 present these values for financing periods since 1977. These figures clearly indicate the extent to which general revenue financing is the major source of income for the program.

FIGURE 1.
SUPPLEMENTARY MEDICAL INSURANCE AGED MONTHLY PER CAPITA INCOME[1]



[1]The amounts shown do not include the catastrophic coverage monthly premium rate for 1989.
[2]For periods 1983 and earlier, the financing period Is July 1 through June 30. For the transitional semester (T.S.), the financing period is July 1, 1983 through December 31, 1983. For 1984 through 1992 the financing period is January 1 through December 31.

FIGURE 2.
SUPPLEMENTARY MEDICAL INSURANCE DISABLED MONTHLY PER CAPITA INCOME[1]



[1]The amounts shown do not include the catastrophic coverage monthly premium rate for 1989.
[2]For periods 1983 and earlier, the financing period is July 1 through June 30. For the transitional semester (T.S.), the financing period is July 1, 1983 through December 31, 1983. For 1984 through 1992 the financing period is January 1 through December 31.

Although standard monthly premium rates have been set for periods through December 31, 1995 and actuarial rates have been set for periods through December 31, 1992, estimates in the report are presented for periods beyond those times. It has been assumed in this report that financing for those periods will be established in accordance with the provisions described in the section II.B. "Nature of the Trust Fund."

The estimates shown in Tables I.C.1, I.C.2, and I.C.3 are based on the economic assumptions labeled "alternative II." The economic and demographic assumptions underlying the alternative II estimates are described in detail in the 1992 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. The section D.O. "Actuarial Methodology and Principal Assumptions for Cost Estimates for the Supplementary Medical Insurance Program" presents an explanation of the effects of the alternative II assumptions on the estimates in this report.

The January 1, 1992 average update of the allowable fee for physician services is assumed to be 2.4 percent. Alternative II assumes the January 1, 1993 average update to be 1.1 percent. This average update

is a weighted average of the updates of the allowed fees for various goods and services included in the "physician" category. Besides physician services, the "physician" category also includes some goods and services not considered to be physician such as laboratory tests performed in a physician's office, durable medical equipment (DME), ambulance services, and services performed in a free-standing ambulatory surgical center. The costs per enrollee for institutional and other services under the SMI program are projected to increase an average of 15.3 percent for CY 1992 and 15.6 percent for CY 1993. These increases represent price increases and increases due to other factors such as volume and intensity.

Table I.C.1shows the estimated operations of the trust fund for alternative II on a fiscal-year basis through FY 1994. Table I.C.2 shows the corresponding development on a calendar-year basis. The level of the trust fund increased in FY 1991 and CY 1991 mainly due to the passage of Public Law 101-508 after the financing for CY 1991 had been established. Public Law 101-508 reduced expenditures beginning in CY 1991. For CY 1992, the actuarial rates were promulgated with specific margins to reduce aged assets and to increase disabled assets. Based on these actuarial rates and the above economic assumptions, the fund is estimated to decrease to a level of $13.6 billion by the end of CY 1992 and then decrease to $13.4 billion by the end of CY 1993.

TABLE I.C.1.—OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) DURING FISCAL YEARS 1967-1994

(In millions)

	Income				Disbursements			
Fiscal Year[1]	Premium from enrollees	Government contribu-tions[2]	Interest and Other Income[3]	Total Income	Benefit payments	Adminis-trative expenses	Total disburse-ments	Balance at end of year[4]
Historical Data:								
1967	$647	$623	$15	$1,285	$664	$135[5]	$799	$486
1968	698	634	21	1,353	1,390	142	1,532	307
1969	903	984	24	1,911	1,645	195	1,840	378
1970	936	928	12	1,876	1,979	217	2,196	57
1971	1,253	1,245	18	2,516	2,035	248	2,283	290
1972	1,340	1,365	29	2,734	2,255	289	2,544	481
1973	1,427	1,430	45	2,902	2,391	246	2,637	746
1974	1,704	2,029	76	3,809	2,874	409	3,283	1,272
1975	1,887	2,330	105	4,322	3,765	405	4,170	1,424
1976	1,951	2,939	104	4,994	4,672	528	5,200	1,219
T.Q.	539	878	4	1,421	1,269	132	1,401	1,239
1977	2,193	5,053	137	7,383	5,867	475	6,342	2,279
1978	2,431	6,386	228	9,045	6,852	504	7,356	3,968
1979	2,635	6,841	363	9,839	8,259	555	8,814	4,994
1980	2,928	6,932	415	10,275	10,144	593	10,737	4,532
1981	3,320	8,747	372	12,439	12,345	863	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	21,008	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]
1990	11,494[6]	33,210	1,434[6]	46,138[6]	41,498	1,524[6]	43,022[6]	14,527[6]
1991	11,807	34,730	1,629	48,166	45,514	1,505	47,019	15,675
Estimates:								
1992	12,616	38,684	1,489	52,789	52,850	1,623	54,473	13,991
1993	14,523	45,964	916	61,403	59,958	1,694	61,652	13,742
1994	16,679	52,110	869	69,658	67,868	1,774	69,642	13,758

[1]For 1967 through 1976, fiscal years cover the Interval from July 1 through June 30; the three-month Interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.", the transition quarter; FY 1977-94 cover the interval from October 1 through September 30.
[2]The payments shown as being from the general fund of the Treasury Include certain interest-adjustment Items.
[3]Other Income Includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.
[4]The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 1.D.2).
[5]AdmInIstrative expenses shown Include those paid In FY 1966 and 1967.
[6]Includes the impact of the Medicare catastrophic coverage Act of 1988 (Public Law 100-360).

TABLE I.C.2.—OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) DURING CALENDAR YEARS 1966-1994
(In millions)

	Income				Disbursements			
Calendar Year	Premium from enrollees	Government contribu-tions[1]	Interest and Other Income[2]	Total Income	Benefit payments	Adminis-trative expenses	Total disburse-ments	Balance at end of year[3]
Historical Data:								
1966	$322	$0	$2	$324	$128	$75	$203	$122
1967	640	933	24	1,597	1,197	110	1,307	412
1968	832	858	21	1,711	1,518	184	1,702	421
1969	914	907	18	1,839	1,865	196	2,061	199
1970	1,096	1,093	12	2,201	1,975	237	2,212	188
1971	1,302	1,313	24	2,639	2,117	260	2,377	450
1972	1,382	1,389	37	2,808	2,325	289	2,614	643
1973	1,550	1,705	57	3,312	2,526	318	2,844	1,111
1974	1,804	2,225	95	4,124	3,318	410	3,728	1,506
1975	1,918	2,648	107	4,673	4,273	462	4,735	1,444
1976	2,060	3,810	107	5,977	5,080	542	5,622	1,799
1977	2,247	5,386	172	7,805	6,038	467	6,505	3,099
1978	2,470	6,287	299	9,056	7,252	503	7,755	4,400
1979	2,719	6,645	404	9,768	8,708	557	9,265	4,902
1980	3,011	7,455	408	10,874	10,635	610	11,245	4,530
1981	3,722[4]	11,291[4]	361	15,374	13,113	915	14,028	5,877
1982	3,697[4]	12,284[4]	599	16,580	15,455	772	16,227	6,230
1963	4,236	14,861	727	19,824	18,106	878	18,984	7,070
1984	5,167	17,054	959	23,180	19,661	891	20,552	9,698
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	1,234[6]	44,349[6]	38,294	1,489[6]	39,783[6]	13,556[6]
1990	11,320	33,035	1,558	45,913	42,468	1,519	43,987	15,482
1991	11,934	37,602	1,688	51,224	47,229	1,541	48,870	17,935
Estimates:								
1992	12,864	37,889	1,129	51,882	54,603	1,640	56,243	13,574
1993	15,076	47,482	871	63,429	61,873	1,712	63,585	13,418
1994	17,213	53,652	869	71,734	70,033	1,794	71,827	13,325

[1]The payments shown as being from the general fund of the Treasury include certain Interest adjustment Items.
[2]Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous Income.
[3]The financial status of the program depends on both the total net assets and the liabilities of the program (See Table 1.D.2).
[4]Sectlon 708 of Title VII of the Social Security Act modified the provisions for the delivery of Social Security benefit checks When the regularly designated delivery day falls on a Saturday, Sunday, or legal public holiday. Delivery of benefit checks normally due January, 1982 occurred on December 31, 1981. Consequently the SMI premiums withheld from the checks ($264 million) and the general revenue 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.
[5]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 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).
[6]Includes the impact of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

Table I.C.3 shows the calendar-year average increase in aggregate and per capita benefit payments on a cash basis under alternative II through CY 1994. To reflect the size of the program relative to the economy as a whole, Table I.C.3 also shows SMI benefit expenditures on a cash basis as a percent of GDP. During CY 1991, the program grew 11.2 percent on an aggregate basis, grew 9.2 percent on a per capita basis, and increased from 0.77 to 0.83 percent of GDP. For CY 1992, there was no legislation

enacted in the preceding year to limit program growth as occurred for CY 1990 and 1991. As a result, during CY 1992, the program is expected to grow 15.6 percent on an aggregate basis, to grow 13.5 percent on a per capita basis, and to increase from 0.83 to 0.92 percent of GDP.

TABLE I.C.3.—GROWTH IN TOTAL CASH BENEFITS UNDER THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM THROUGH DECEMBER 31, 1994

Calendar year	Aggregate benefits (millions)	Percent change	Per capita benefits	Percent change	SMI benefits as a percent of GDP
Historical Data:					
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	0.20
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	0.31
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	0.61
1987	30,820	17.5	992.69	15.2	0.68
1968	33,970	10.2	1,078.41	8.6	0.69
1989	38,294	12.7	1,197.55	11.0	0.73
1990	42,468	10.9	1,307.27	9.2	0.77
1991	47,229	11.2	1,427.38	9.2	0.83
Estimates:					
1992	54,603	15.6	1,619.79	13.5	0.92
1993	61,873	13.3	1,802.51	11.3	0.99
1994	70,033	13.2	2,006.68	11.3	1.05

Table I.C.4 shows the estimated incurred disbursements of the SMI program under alternative II, expressed as a percentage of GDP, for selected years over the 75-year period 1992-2066. These estimated incurred disbursements are for benefit payments and administrative expenses combined unlike the values in Table I.C.3 which only express benefit payments on a cash basis as a percentage of GDP. The 75-year period fully allows for the presentation of future contingencies that reasonably may be expected to occur, such as the impact of a large increase in enrollees which occurs after the turn of the century. This large increase in enrollees occurs because the relatively large number of persons born during the period between the end of World War II and the early 1960's (known as the "baby boom") will reach retirement age and begin to receive benefits. Increases in the costs per enrollee during the initial 25-year period are assumed to gradually decline in the last 15 years to the same rate as GDP per capita and then continue at the same rate as GDP per capita in the last 50 years. Given the historical

experience of SMI costs per enrollee increasing faster than GDP per capita, the assumption of the increases in costs per enrollee declining to the same rate as GDP per capita may be considered optimistic because changes in the last 50 years of the estimation period reflect only the impact of the changing demographic composition of the population. Based on these assumptions, incurred SMI disbursements as a percentage of GDP increase rapidly from 0.88 percent in CY 1991 to 4.59 percent in CY 2036, decrease slightly to 4.44 percent by CY 2051, and then increases to 4.77 percent by CY 2066.

TABLE I.C.4.—SUPPLEMENTARY MEDICAL INSURANCE INCURRED DISBURSEMENTS AS A PERCENT OF THE GROSS DOMESTIC PRODUCT[1]

Calendar year	SMI Disbursements as a percent of GDP
1991	0.88
1992	0.97
1993	1.03
1994	1.10
1995	1.17
2000	1.61
2005	2.19
2010	2.74
2015	3.20
2020	3.58
2025	4.03
2030	4.40
2035	4.57
2040	4.56
2045	4.49
2050	4.44
2055	4.48
2060	4.62
2065	4.75

[1]Disbursements are the sum of benefit payments and administrative expenses.

Since future health care usage and cost experience may vary considerably from the intermediate set of assumptions (alternative II) on which the cost estimates were based, estimates have also been prepared on the basis of two additional alternative sets of assumptions: alternative I and alternative III. The estimated operations of the SMI trust fund during CY 1991-2001 are summarized in Table I.C.5 for all three alternatives. The assumptions underlying alternative II are presented in substantial detail in the section II.D. "Actuarial Methodology and Principal Assumptions for Cost Estimates for the Supplementary Medical Insurance Program." The assumptions used in preparing estimates under alternative I and III are also summarized in this section.

TABLE I.C.5.—ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) DURING CALENDAR YEARS 1991-2001

(In billions)

Calendar year	Premiums from enrollees	Other Income[1]	Total Income	Total disburse-ments	Balance in fund at end year
Alternative I:					
1991	11.9	41.1	53.0	48.8	17.9
1992	12.9	39.0	51.9	56.2	13.6
1993	15.1	47.5	62.6	62.8	13.4
1994	17.2	52.4	69.6	69.8	13.2
1995	19.6	59.2	78.8	77.6	14.5
1996	20.5	67.2	87.7	86.3	15.8
1997	21.3	75.9	97.1	95.6	17.3
1998	22.1	85.3	107.4	105.8	19.0
1999	23.0	95.8	118.8	117.0	20.8
2000	23.9	107.7	131.7	129.8	22.9
2001	24.9	121.4	146.3	144.0	25.2
Alternative II:					
1991	11.9	41.1	53.0	48.8	17.9
1992	12.9	39.0	51.9	56.2	13.6
1993	15.1	48.4	63.4	63.6	13.4
1994	17.2	54.5	71.7	71.8	13.3
1995	19.6	63.1	82.7	81.4	14.6
1996	20.6	73.3	93.9	92.4	16.1
1997	21.6	84.7	106.3	104.6	17.6
1998	22.7	97.6	120.3	118.4	19.7
1999	23.9	112.5	136.3	134.2	21.8
2000	25.0	129.8	154.9	152.4	24.3
2001	26.3	149.9	176.2	173.3	27.1
Alternative III:					
1991	11.9	41.1	53.0	48.8	17.9
1992	12.9	39.0	51.9	56.2	13.6
1993	15.1	51.2	66.3	66.4	13.5
1994	17.2	60.1	77.3	77.4	13.4
1995	19.6	70.3	89.9	88.5	14.9
1996	21.1	82.8	104.0	102.4	16.5
1997	22.6	98.7	121.4	119.5	18.4
1998	23.9	116.5	140.4	136.3	20.6
1999	25.3	137.4	162.7	160.1	23.1
2000	26.8	162.2	189.0	186.0	26.1
2001	28.4	191.6	220.1	216.6	29.6

[1]Other income contains government contributions and Interest.

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

The three alternative sets of assumptions were selected in order to indicate the general range in which the cost of the program reasonably might be expected to fall. The alternative I assumptions are somewhat more optimistic than the alternative II assumptions, resulting in a lower average expenditure growth over the estimation period. The alternative III assumptions are somewhat more pessimistic than alternative II assumptions, resulting in a higher average expenditure growth over the estimation period. Alternatives I and III provide for a fairly wide range of possible experience. Actual experience is expected to fall within the range, but no assurance can be given that this will be the case, particularly in light of the wide variations in experience that have occurred since the beginning of the program.

SMI expenditures are estimated to grow faster than the GDP under all three alternatives, with the most rapid growth occurring under alternative III assumptions and the least rapid under alternative I assumptions. Table I.C.5 indicates that by CY 2001 total disbursements for alternative I and for alternative III will be 17 percent lower and 25 percent higher, respectively, than for alternative D. Similarly, for CY 2001 total income for alternative I and for alternative III will be 17 percent lower and 25 percent higher, respectively, than for alternative II. However, the trust fund balances for alternative I and III do not display this divergence. The CY 2001 trust fund balance under alternative I is 7 percent lower than the trust fund balance for alternative II, and the trust fund balance for alternative III is 9 percent higher than under alternative II. The reason the trust fund balances show much smaller variations under the three alternatives is that the financing has only been fully established through CY 1992. It is assumed that financing for years beyond 1992 will be established to adequately finance the expenditures, irrespective of the underlying economic assumptions.

D. 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 many private group insurance plans. The SMI program essentially is yearly renewable term insurance financed from premium income paid by the enrollees and from income contributed from general revenue by the federal government. 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 is added to the trust fund. Thus, the assets in the trust fund at any time should be no less than the costs of the benefits and the administrative expenses incurred but not yet paid.

The law requires the Secretary of Health and Human Services (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 reasonable 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 appropriate to look only to the periods 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 costs under the program will be higher than assumed, assets should be sufficient to include contingency levels to cover the impact of a reasonable degree of variation between actual and projected costs.

Contingency levels to accommodate costs 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 I.D.1 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 I.D.1.—ESTIMATED INCOME AND DISBURSEMENTS INCURRED UNDER THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM FOR FINANCING PERIODS THROUGH DECEMBER 31, 1992

(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	3,170	353	288
1975	1,887	2,396	105	3,953	438	-3
1976	1,951	2,972	109	4,847	485	-300
1977	2,156	4,697	157	5,694	515	601
1978	2,358	5,991	254	8,988	511	1,104
1979	2,601	6,570	365	8,202	649	685
1980	2,823	6,627	421	9,975	645	-749
1981	3,178	8,219	371	12,068	692	-992
1982	3,737	12,488	495	14,041	728	1,951
1983	4,202	13,951	686	17,057	708	1,074
T.S.[2]	2,120	7,836	374	9,718	483	129
Calendar year						
1984	5,167	17,052	962	20,306	869	2,006
1985	5,613	18,243	1,248	22,881	986	1,237
1986	5,722	17,802	1,141	26,886	1,000	-3,021
1987	6,717	21,377	880	30,827	1,036	-2,889
1988	9,453	28,342	903	34,619	1,343	2,736
1989	12,263[3]	30,826	1,257[3]	38,406	1,546[3]	4,394[3]
1990	11,320	33,035	1,558	42,361	1,518	2,034
1991	11,934	37,558	1,732	48,142	1,572	1,510
Estimates:						
1992	12,864	37,875	1,143	55,596	1,640	-5,354

[1]Includes administrative expenses Incurred prior to the beginning of the program.
[2]The transition semester (T.S.) is the 6-month period July 1, 1983 to December 31, 1983.
[3]Includes the Impact of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

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 1.D.2. For some years of the program, assets have not been as large as liabilities. Nonetheless, the fund has remained positive, allowing claims to be paid.

TABLE I.D.2.—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, 1992

(Dollar amounts in millions)

	Balance in trust fund	Government contributions due but unpaid	Total assets	Benefits incurred but unpaid	Administrative cost incurred but unpaid	Total liab-ilities	Excess of assets over liabilities	Ratio[1]
Historical Data								
As of June 30,								
1967	$486	$24	$510	$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	1,062	-19	1,043	224	0.05
1975	1,424	67	1,491	1,250	14	1,264	227	0.04
1976	1,219	106	1,325	1,425	-29	1,396	-71	-0.01
1977	2,170	91	2,261	1,730	3	1,733	528	0.07
1978	3,786	48	3,834	2,161	40	2,201	1,633	0.18
1979	4,880	2	4,882	2,443	123	2,566	2,316	0.22
1980	4,657	0	4,657	2,902	188	3,090	1,567	0.12
1981	3,801	0	3,801	3,212	13	3,225	576	0.04
1982	5,534	1	5,535	3,017	-9	3,008	2,527	0.14
1983	6,780	2	6,782	3,229	-48	3,181	3,601	0.18
As of December 31,								
1983	7,070	1	7,071	3,049	-69	3,340	3,731	0.18
1984	9,698	2	9,700	4,054	-91	3,963	5,737	0.24
1985	10,924	0	10,924	3,988	-38	3,950	6,974	0.25
1966	8,291	0	8,291	4,435	-98	4,337	3,954	0.12
1987	8,394[2]	0	8,394[2]	4,442	17	7,329[2]	1,065	0.03
1988	8,990	3	8,993	5,092	100	5,192	3,801	0.10
1989[3]	13,556	0	13,556	5,204	157	5,361	8,195	0.19
1990	15,482	0	15,482	5,097	156	5,253	10,229	0.21
1991	17,935	0	17,935	6,010	187	6,197	11,738	0.21
Estimates:								
1992	13,574	0	13,574	7,003	187	7,190	6,384	0.10

[1]Ratio of the excess assets over liabilities to the following year's total incurred expenditures.
[2]Sectlon 708 of Title VII of the Social security .Act modified the provisions for the delivery of Social Security benefit checks when the regularly designated 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.
[3]The 1989 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, 1992. The financing for CY 1992 was designed with specific margins to reduce the excess of assets over liabilities as a percent of incurred expenditures for the following year. However, this was accomplished by including specific margins to decrease the excess of assets over liabilities for the aged and to increase it for the disabled. As a result, for CY 1992, incurred disbursements are expected to exceed incurred income by $5,354 million, as shown in Table I.D.1, and the excess of assets over

liabilities is expected to decrease from $11,738 million at the end of December 1991 to $6,384 million at the end of December 1992 for alternative II, as shown in Table I.D.2. This excess as a percent of incurred expenditures for the following year is expected to decrease from 21 percent as of December 31, 1991 to 10 percent as of December 31, 1992.

4. Sensitivity Testing

Some of the assumptions underlying the estimates presented in this report are highly uncertain, and variations in these assumptions would have a substantial impact on estimated expenditures. Since the financing rates are set prospectively, the actuarial soundness depends on the variations in these assumptions. In order to test the actuarial soundness of the program under varying assumptions, a low cost projection and a high cost projection were prepared by varying these key assumptions through the period for which the financing has been set. 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 estimates (alternative II) 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 low and high assumptions were determined from a study on the average historical variation in the respective increase factors.

This sensitivity analysis differs from the alternative I and III analysis discussed in the section I.C. "Expected Operations and Status of the Trust Fund." This analysis examines the variation in the projection factors through the period for which the financing has been established (1992 for this report). The alternative I and III analysis begins the variation in program growth with the first year after the year for which financing has been established (1993 for this report).

Table I.D.3 indicates that, under the low cost assumptions, trust fund assets would exceed liabilities by the end of December 1992 (the period through which financing has been established), reaching a level of 19.0 percent of the following year's incurred expenditures. If these low costs 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 1992, dropping to a level of 2.0 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. Figure 3 shows this ratio for historical

years and for projected years under the intermediate assumptions (alternative II), as well as high (pessimistic) and low (optimistic) cost sensitivity scenarios.

Table I.D.3.—ACTUARIAL STATUS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND UNDER THREE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1992

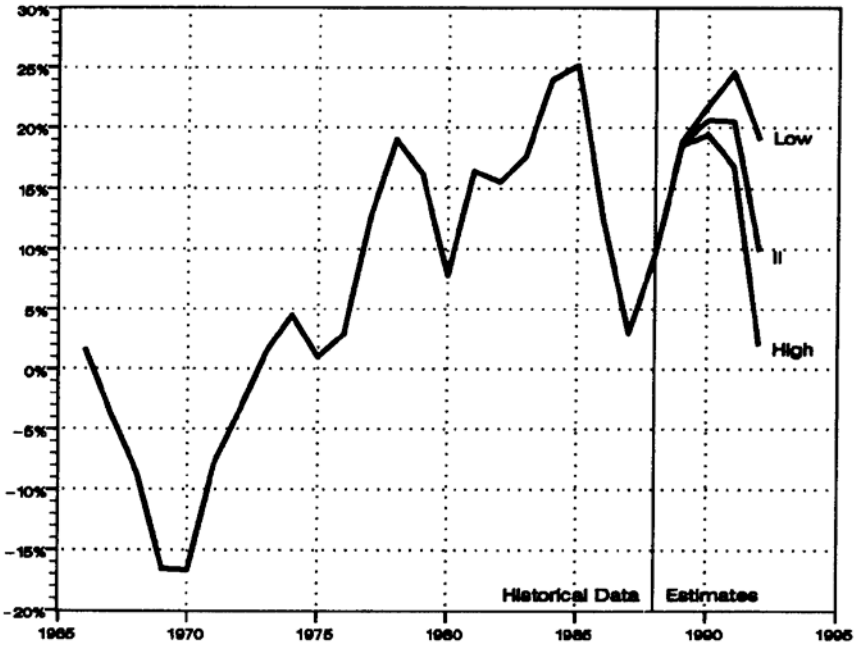
	Alternative II projection			Low cost projection			High cost projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1991	1992	1993	1991	1992	1993	1991	1992	1993
Projection factors (in percent):									
Physician fees[1]									
Aged	-1.6	-0.3	1.7	-1.9	-1.1	0.7	-1.3	0.5	2.7
Disabled	-1.6	-0.3	1.7	-1.9	-1.1	0.7	-1.3	0.5	2.7
Utilization of physician services[2]									
Aged	5.6	14.6	7.6	5.1	13.1	3.8	6.1	16.1	11.4
Disabled	6.8	11.3	5.9	5.0	8.6	2.5	8.6	14.0	9.3
Outpatient hospital services per enrollee									
Aged	15.5	14.3	14.3	10.8	9.9	11.6	20.2	18.8	17.0
Disabled	15.1	10.8	11.4	10.2	4.6	4.7	20.0	17.0	18.0
	As of December 31,			As of December 31,			As of December 31,		
	1990	1991	1992	1990	1991	1992	1990	1991	1992
Actuarial status (in millions):									
Assets	$15,482	$17,935	$13,574	$15,482	$17,935	$16,530	$15,482	$17,935	$10,480
Liabilities	5,253	6,197	7,190	4,944	4,622	5,347	5,562	7,802	9,080
Assets less liabilities	$10,229	$11,738	$6,384	$10,538	$13,313	$11,183	$9,920	$10,133	$1,400
Ratio of assets less liabilities to expenditures (In percent)[3]	20.6	20.5	9.9	21.8	24.6	19.0	19.4	16.8	2.0

[1]As recognized for payment under the program.

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

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

FIGURE 3.
ACTUARIAL STATUS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND THROUGH CALENDAR YEAR 1992



End of Calendar Year

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

E. CONCLUSION

The financing for the SMI program has been established through December 1992 by the setting of the standard monthly premium rate (paid by or on behalf of each enrollee) of $31.80 for CY 1992 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 73.0 percent of all SMI income during CY 1992.

Under alternative II assumptions used in this report, disbursements are estimated to exceed income during CY 1992 by $4,361 million. 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 estimated to decrease from $17.9 billion at the end of CY 1991 to $13.6 billion at the end of CY 1992.

The main reason for the decrease in assets during CY 1992 is that the financing for CY 1992 was established specifically to reduce assets. As a result, the excess of assets over liabilities is expected to decrease from

$11,738 million at the end of December 1991 to $6,384 million by the end of December 1992 representing 9.9 percent of the following year's 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 1992 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 reasonable degree of variation between actual and projected costs.

Even though the projections under alternative II in this report show that the financing is adequate through 1992, the lack of experience under the newly implemented physician fee schedule contributes to greater uncertainty of the projections. If volume and intensity of services increase by more than expected, then SMI assets could be reduced more than projected, possibly to an unacceptably low level.

Although the SMI program is currently actuarially sound, the Trustees note with concern the past and projected rapid growth in the cost of the program. Growth rates have been so rapid that outlays of the program have increased 80 percent in aggregate and 66 percent per enrollee in the last 5 years. For the same time period, the program grew 36 percent faster than the economy despite recent efforts to control the cost of the program. As a result, the program is projected to increase from 0.88 percent of the GDP in CY 1991 to 4.75 percent of GDP in CY 2065. This rapid growth is attributable primarily to the inability to control the rapid growth in (1) the volume of services billed per beneficiary and (2) the reported case mix intensity (the reporting of services which receive higher reimbursement). Given the past and projected cost of the program, the Trustees urge the Congress to take additional actions designed to control SMI costs either through specific program legislation or as a part of enacting more comprehensive health care reform.

II. TECHNICAL

A. SOCIAL SECURITY AMENDMENTS SINCE THE 1991 REPORT

Since the 1991 Annual Report was transmitted to Congress on May 17, 1991, there have been no legislative changes enacted which would have a significant effect on the financial status of the SMI program.

B. NATURE OF THE TRUST FUND

The Federal SMI 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 revenue 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 are 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 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 ratio), 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 1992 are shown in Table II.B.1. Actuarial rates and the corresponding matching

ratios in effect from July 1973 through June 1983, the rates and ratios applicable for July 1983 through December 1983, and the rates and ratios for CY 1984 through 1992 are also shown. For a detailed discussion of the determination of the actuarial and premium rates, see Appendix A.

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

		Monthly actuarial rate		Matching ratio	
	Standard monthly premium rate	Enrollees aged 65 and over	Disabled enrollees under age 65	Enrollees aged 65 and over	Disabled enrollees under age 65
July 1966 - March 1968	$3.00	—	—	—	—
April 1968 - June 1970	4.00	—	—	—	—
12-month period ending June 30 of -					
1971	5.30	—	—	—	—
1972	5.60	—	—	—	—
1973	5.80	—	—	—	—
1974[1]	6.30	$6.30	$14.50	1.0000	3.6032
1975	6.70	6.70	18.00	1.0000	4.3731
1976	6.70	7.50	18.50	1.2388	4.5224
1977	7.20	10.70	19.00	1.9722	4.2778
1978	7.70	12.30	25.00	2.1948	5.4935
1979	8.20	13.40	25.00	2.2683	5.0976
1980	8.70	13.40	25.00	2.0805	4.7471
1981	9.60	16.30	25.50	2.3958	4.3125
1982	11.00	22.60	36.60	3.1091	5.6545
1983	12.20	24.60	42.10	3.0328	5.9016
July 1983 - December 1983	12.20	27.00	46.10	3.4262	6.5574
Calendar year					
1984	14.60	29.20	54.30	3.0000	6.4384
1985	15.50	31.00	52.70	3.0000	5.8000
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
1991	29.90	62.60	56.00	3.1873	2.7458
1992	31.80	60.80	80.80	2.8239	4.0618

[1]In accordance with limitations on the costs of health care imposed under phase III of the Economic Stabilization program, the standard premium rate tor July and August 1973 was set at $5.80 and $6.10, respectively. Effective September 1973, the rate increased to $6.30.
[2]Thls is the premium paid by most groups. This rate includes the $4.00 catastrophic coverage monthly premium which was paid by most enrollees.
[3]The matching ratios for CY 1989 apply to the non-catastrophic portion of the standard monthly premium rate.

Another source from which revenue of the trust fund is 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.

C. SUMMARY OF THE OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1991

A statement of the revenue and disbursements of the Federal SMI Trust Fund in FY 1991 and of the assets of the fund at the beginning and end of the fiscal year is presented in Table II.C.1.

TABLE II.C.1.—STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND DURING FISCAL YEAR 1991

(in thousands)

Total assets of the trust fund, beginning of period		$14,527,379
Revenue:		
Premiums from enrollees:		
Enrollees aged 65 and over	$10,740,743	
Disabled enrollees under age 65	1,066,445	
Total premiums		11,807,188
Transfers from general fund of the Treasury:		
Government contributions:		
Supplementary premiums of enrollees aged 65 and over	32,223,689	
Supplementary premiums of disabled enrollees under age 65	2,506,482	
Total Government contributions		34,730,170
Other		1,358
Interest		
Interest on Investments	1,634,279	
Interest on amounts of interfund transfers[1]	-6,804	
Total Interest		1,627,475
Total revenue		48,166,191
Disbursements:		
Benefit payments		45,514,191
Administrative expenses:		
Treasury administrative expenses	4,043	
Salaries and expenses – SSA	252,295	
Salaries and expenses – HCFA	1,225,259	
Salaries and expenses Office of Secretary	15,433	
Public Health Service	258	
Construction	515	
Policy and Research	2,357	
Pay Assessment Commission	581	
Office of Personnel Management expenses	93	
Physicians Payment Review	3,778	
Total administrative expenses		1,504,613
Total disbursements		47,018,804
Net addition to the trust fund		1,147,386
Total assets of the trust fund, end of period		15,674,765

[1]A 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 $14,527 million on September 30, 1990. During FY 1991, total revenue amounted to $48,166 million, and total disbursements were $47,019 million. Total

assets thus increased $1,147 million during the year to a total of $15,675 million on September 30, 1991.

Of the total revenue, $10,741 million represented premium payments by (or on behalf of) enrollees aged 65 and over and $1,066 million represented premium payments by (or on behalf of) disabled enrollees under age 65. Total premium payments amounted to $11,807 million, a increase of 2.7 percent over the amount of $11,494 million for the preceding year. This increase in premiums from enrollees resulted primarily from: (1) the increase from $28.60 to $29.90 per month in the standard premium rate that became effective on January 1, 1991 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 $34,730 million, which accounted for 72.1 percent of total revenue. This amount consisted of $32,224 million representing contributions relating to premiums paid by enrollees aged 65 and over, and $2,506 million representing contributions relating to the premiums paid by disabled enrollees under age 65. The remaining $1,629 million of revenue consisted almost entirely of interest on the investments of the trust fund.

Of the $47,019 million in total disbursements, $45,514 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 $1,505 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 (OASI), disability insurance (DI), HI, and SMI-on the basis of provisional estimates. Similarly, the expenses of administering other programs of HCFA 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 II.C.2, the experience with respect to actual amounts of enrollee premiums, Government contributions, and benefit payments in FY 1991 is compared with the estimates for FY 1991 which appeared in the 1990 and 1991 annual reports.

TABLE II.C.2.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND, FISCAL YEAR 1991

(Dollar amounts in millions)

Item	Actual amount	Comparison of actual experience with estimates for FY 1991 published in -			
		1991 report[1]		1990 report[1]	
		Estimated amount	Actual as percentage of estimate	Estimated[2] amount	Actual as percentage of estimate
Premiums from enrollees	$11,807	$11,671	101	$11,617	102
Government Contributions	34,730	34,730	100	35,483	98
Benefit Payments	45,514	47,767	99	47,236	96

[1]Under Alternative II.
[2]Under Alternative IIB.

Table II.C.3 shows a comparison of the total assets of the fund and their distribution at the end of FY 1990 and at the end of FY 1991. The assets of the trust fund at the end of FY 1990 totaled $14,527 million, consisting of $14,286 million in the form of obligations of the U.S. Government, and an undisbursed balance of $241 million. The assets of the trust fund at the end of FY 1991 totaled $15,675 million, consisting of $16,241 million in the form of obligations of the U.S. Government and an undisbursed balance of -$566 million. A comparison of assets of the trust fund with liabilities for incurred but unpaid benefits (and related administrative expenses) is shown in the section I.D "Actuarial Status of the Trust Fund."

TABLE II.C.3.—ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AT THE END OF FISCAL YEARS 1990 AND 1991[1]

	September 30, 1990	September 30. 1991
Investments in public-debt obligations sold only to this fund (special Issues):		
Certificates of Indebtedness:	$460,590,000.00	$0.00
Bonds:		
8 1/8-percent. 1994-2006	0.00	3,947,379,000.00
8 3/8-percenl, 2001	444,270,000.00	444,270,000.00
8 3/4-percenl, 1992-2005	7,645,809,000.00	6,715,745,000.00
9 1/4-percenl, 1992-93	998,054,000.00	396,568,000.00
9 3/4-percenl, 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	14,285,909,000.00	16,241,148,000.00
Undisbursed balance[2]	241,489,924.28	-566,382,643.54
Total assets	14,527,378,924.28	15,674,765,356.46

[1]The assets are carried at par value, which is the same as book value.
[2]Negative figures represented extension of credit against securities to be redeemed within the following few days.

The net increase in the par value of the investments held by the fund during FY 1991 amounted to $1,955 million. New securities at a total par value of $51,589 million were acquired during the fiscal year through

the investment of revenue and reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $48,651 million. Included in these amounts is $47,038 million in certificates of indebtedness that were acquired, and $47,499 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, 1991 was 9.6 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 1991 was 8 1/8 percent, payable semiannually.

D. ACTUARIAL METHODOLOGY AND PRINCIPAL ASSUMPTIONS FOR COST ESTIMATES FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM

1. Estimates under Alternative II Assumptions for Aged and Disabled (Excluding End-Stage Renal Disease) Enrollees

a. Introduction

Estimates under alternative II assumptions 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, 1990, 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, DME and supplies) are paid through organizations acting for HCFA, 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.

These records for 0.1 percent of aged beneficiaries and 5.0 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 those records sent in by carriers.

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 and final settlement amounts for providing covered services (net of coinsurance and deductible amounts). The difference is reported on a cash basis, and approximations are necessary to adjust to the time of service.

Group practice prepayment plans, which are not reimbursed through carriers, are reimbursed directly by HCFA 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 II.D.1 summarizes the incurred reimbursement amounts per enrollee for the various services for each of the 12-month periods ending June 30, through 1990. 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 II.D.2 shows the incurred charges or costs per enrollee corresponding to the reimbursement values shown in Table II.D.1.

TABLE II.D.1.—INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE: HISTORICAL DATA

Year ending June 30,	Average enrollment (millions)	All services	Physician	Out-patient hospital	Home health Agency[1]	GPPP[2]	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	135.24	117.48	12.18	2.03	2.35	1.20
1975	21.504	161.10	136.28	16.28	3.83	3.07	1.64
1976	22.089	189.46	156.27	22.10	5.20	3.86	2.03
1977	22.604	222.21	179.30	29.49	6.53	4.42	2.47
1978	23.133	255.02	207.05	34.22	6.81	4.02	2.92
1979	23.693	290.11	233.99	41.08	6.66	4.87	3.31
1980	24.287	343.47	277.24	47.54	7.58	7.05	4.06
1981	24.827	407.72	328.14	57.02	8.04	9.13	5.39
1982	25.363	465.28	381.02	66.35	0.52	10.92	6.47
1983	25.873	558.61	456.24	80.74	0.77	13.52	7.34
1984	26.433	636.18	512.88	96.15	0.99	16.85	9.31
1985	26.914	684.27	538.73	111.77	1.05	19.62	15.10
1986	27.453	784.02	596.01	133.87	1.19	31.69	21.26
1987	28.013	906.49	672.56	164.69	0.98	42.64	25.62
1988	28.467	1,022.30	741.93	187.25	1.55	61.48	30.09
1989	28.870	1,119.37	801.29	208.15	1.53	73.36	35.04
1990	29.311	1,226.85	880.83	213.76	2.80	87.32	42.14
Disabled (excluding ESRD):							
1974	1.638	118.07	97.59	15.27	3.46	1.09	0.66
1975	1.817	150.74	125.62	18.61	3.58	1.87	1.06
1976	2.019	180.08	148.31	22.98	5.12	2.20	1.47
1977	2.231	222.06	174.81	38.04	4.79	2.42	2.00
1978	2.423	258.02	202.91	44.49	5.54	2.48	2.60
1979	2.563	303.61	240.74	51.67	5.96	2.06	3.18
1980	2.644	364.04	288.20	61.62	6.08	4.31	3.83
1981	2.691	434.97	340.14	77.10	7.21	5.23	4.69
1982	2.690	513.77	394.72	106.93	0.00	6.25	5.87
1983	2.632	625.90	485.07	125.99	0.00	7.54	7.30
1984	2.597	673.18	529.21	126.67	0.00	8.33	8.97
1985	2.595	706.49	553.05	130.43	0.00	9.34	13.67
1986	2.832	774.04	593.48	148.77	0.00	12.75	19.04
1987	2.680	859.85	657.25	164.17	0.00	16.20	22.23
1988	2.731	925.25	683.62	195.43	0.00	21.64	24.36
1989	2.771	974.75	721.29	201.02	0.00	25.42	27.02
1990	2.813	1,055.83	776.14	218.21	0.00	29.85	31.63

[1]Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare 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.
[2]Group practice prepayment plan

TABLE II.D.2.—INCURRED CHARGES OR COSTS PER ENROLLEE: HISTORICAL DATA

Year ending June 30,	Average enrollment (millions)	All services	Physician	Out-patient hospital	Home health Agency[1]	GPPP[2]	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	205.27	178.10	19.07	2.54	3.68	1.88
1975	21.504	237.64	201.08	24.75	4.66	4.66	2.49
1976	22.089	273.07	225.30	32.85	6.18	5.73	3.01
1977	22.604	314.26	253.70	42.93	7.60	6.43	3.60
1978	23.133	355.31	288.52	49.04	7.81	5.76	4.18
1979	23.693	399.50	322.11	58.07	7.76	6.88	4.68
1980	24.287	466.32	376.30	66.13	8.44	9.80	5.65
1981	24.827	545.65	438.82	78.12	8.81	12.51	7.39
1982	25.363	628.92	513.49	91.04	0.52	14.99	8.88
1983	25.873	753.75	615.06	109.61	0.77	18.35	9.96
1984	26.433	852.57	687.04	129.35	0.99	22.67	12.52
1985	26.914	909.22	715.79	150.27	1.05	26.38	15.73
1986	27.453	1,034.05	789.67	178.75	1.19	42.31	22.13
1987	28.013	1,187.14	884.78	218.24	0.98	56.50	26.64
1988	28.467	1,341.39	978.00	248.60	1.56	81.63	31.60
1989	28.870	1,450.56	1,043.16	272.96	1.53	96.21	36.70
1990	29.311	1,600.98	1,156.35	282.84	2.84	114.53	44.42
Disabled (excluding ESRD):							
1974	1.638	172.81	142.97	23.04	4.17	1.64	0.99
1975	1.817	213.71	178.18	27.10	4.17	2.72	1.54
1976	2.019	251.80	207.57	33.06	5.89	3.17	2.11
1977	2.231	305.50	240.22	53.65	5.40	3.41	2.82
1978	2.423	351.75	276.30	62.17	6.19	3.46	3.63
1979	2.563	409.03	323.97	71.26	6.58	2.84	4.38
1980	2.644	485.10	383.50	83.90	6.62	5.87	5.21
1981	2.691	573.29	447.56	104.60	7.77	7.04	6.32
1982	2.690	682.92	522.60	143.99	0.00	8.42	7.91
1983	2.632	831.26	643.25	168.20	0.00	10.06	9.75
1984	2.597	892.87	701.30	168.55	0.00	11.09	11.93
1985	2.595	932.23	731.63	173.91	0.00	12.46	14.23
1986	2.632	1,016.16	781.92	197.51	0.00	16.93	19.80
1987	2.680	1,122.62	861.41	216.72	0.00	21.39	23.10
1988	2.731	1,213.70	900.03	259.13	0.00	28.96	25.58
1989	2.771	1,264.99	939.55	263.78	0.00	33.35	28.31
1990	2.813	1,381.41	1,019.87	289.01	0.00	39.19	33.34

[1]Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare 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.
[2]Group practice prepayment plan

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.

Technical

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 Consumer Price Index (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 II.D.3.

TABLE II.D.3.—COMPONENTS OF INCREASES IN TOTAL ALLOWED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: HISTORICAL DATA

(in percent)

Year ending June 30,	Increase due to price changes: Increase in physician fee component of CPI	Increase due to price changes: Net increase in allowed fees	Residual factors	Total increase in allowed charges per enrollee
Aged:				
1967	7.6	—	—	—
1968	5.9	4.8	10.6	15.9
1969	6.2	4.7	6.2	11.2
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	0.3	10.0	10.3
1987	7.5	5.4	6.3	12.0
1988	7.2	3.1	7.2	10.5
1989	7.4	1.4	5.2	6.7
1990	7.1	1.0	9.7	10.8
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	8.4	16.7
1982	9.9	10.8	5.4	16.8
1983	8.2	8.9	13.0	23.1
1984	7.5	7.2	1.7	9.0
1965	6.0	0.8	3.5	4.3
1986	6.7	0.3	6.5	6.8
1987	7.5	5.4	4.5	10.1
1988	7.2	3.1	1.3	4.4
1989	7.4	1.4	3.0	4.4
1990	7.1	1.0	7.5	8.6

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. The fee-screen-year period has changed over the history of the program. For 1984 and

earlier, the fee-screen year was the 12-month period ending June 30. Beginning with 1987, the fee- screen year is on the calendar-year basis. Fee-screen years 1985 and 1986 were each 15-month periods allowing for the transition of the fee-screen years from the 12-month periods ending June 30 to the 12-month periods ending December 30. 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, the 12-month period ending 6 months prior to the beginning of the fee-screen year. 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 Medicare Economic Index. 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. Beginning July 1, 1984 a unique fee schedule was established for laboratory tests performed in physician offices and independent laboratories. Since that time other unique fee schedules or reimbursement mechanisms have been established for other services. The list of the services includes radiology, anesthesiology, certified registered nurse anesthetists, and OME.

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 II.D.1 through II.D.9 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 II.D.3 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 II.D.3 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 II.D.3 shows the total increases in charges per enrollee for physician services. It includes the effects of all the items discussed above.

Projected increases in total allowed charges per enrollee are shown in Table II.D.4. It compares with the corresponding historical data shown in Table II.D.3. Column 1 of Table II.D.4 shows the projected increases in the physician fee component of the CPI in each of the years ending June 30, 1991 through June 30, 2002. 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 II.D.4.—COMPONENTS OF INCREASES IN TOTAL ALLOWED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: ESTIMATES

(in percent)

Year ending June 30,	Increase due to price changes: Increase in physician fee component of CPI	Increase due to price changes: Net increase in allowed fees	Residual factors	Total increase in allowed charges per enrollee
Aged:				
1991	6.9	-1.6	5.6	3.9
1992	5.7	-0.3	14.6	14.3
1993	5.8	1.7	7.6	9.4
1994	6.6	0.7	7.6	8.4
1995	7.2	0.8	7.8	8.7
1996	7.4	1.3	7.7	9.1
1997	7.1	1.8	7.9	9.6
1998	7.1	1.8	7.8	9.7
1999	7.0	1.9	7.8	9.8
2000	7.3	2.2	7.7	10.1
2001	6.5	2.4	7.6	10.2
2002	6.2	2.5	7.6	10.3
Disabled (excluding ESRD):				
1991	6.9	-1.6	6.6	5.1
1992	5.7	-0.3	11.3	11.0
1993	5.8	1.7	5.9	7.7
1994	6.6	0.7	6.9	7.6
1995	7.2	0.8	7.2	8.1
1996	7.4	1.3	9.3	10.7
1997	7.1	1.6	7.9	9.6
1998	7.1	1.8	7.1	9.0
1999	7.0	1.9	7.1	9.1
2000	7.3	2.2	7.0	9.4
2001	6.5	2.4	6.9	9.5
2002	6.2	2.5	6.9	9.6

(2) Institutional and Other Services

The historical increases in charges and costs per enrollee for institutional and other services are shown in Table II.D.5, and the projected increases are shown in Table II.D.6. The year-to-year changes in some services have been quite erratic. At best, these series provide only a rough indication of future trends in costs.

TABLE II.D.5.—INCREASES IN RECOGNIZED CHARGES AND COSTS PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES: HISTORICAL DATA

(in percent)

Year ending June 30,	Outpatient hospital	Home health ageney[1]	Group practice Prepayment plan	Independent lab
Aged:				
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	28.1	-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	28.9	-15.9	25.2	27.9
1975	29.8	83.5	26.6	32.4
1976	32.7	32.6	23.0	20.9
1977	30.7	23.0	12.2	19.6
1978	14.2	2.8	-10.4	16.1
1979	18.4	-0.6	19.4	12.0
1980	13.9	8.8	42.4	20.7
1981	18.1	4.4	27.7	30.8
1982	16.5	-94.1	19.8	20.2
1983	20.4	48.1	22.4	12.2
1984	18.0	28.6	23.5	25.7
1985	16.2	6.1	16.4	25.6
1986	19.0	13.3	60.4	40.7
1987	22.1	-17.6	33.5	20.4
1988	13.9	59.2	44.5	18.6
1989	9.8	-1.9	17.9	16.1
1990	3.6	85.6	19.0	21.0
Disabled (excluding ESRD):				
1975	17.6	0.0	65.9	55.6
1976	22.0	41.2	16.5	37.0
1977	62.3	-8.3	7.6	33.6
1978	15.9	14.6	1.5	28.7
1979	14.6	6.3	-17.9	20.7
1980	17.7	0.6	106.7	18.9
1981	24.7	17.4	19.9	21.3
1982	37.7	-100.0	19.6	25.2
1983	16.8	0.0	19.5	23.3
1984	0.2	0.0	10.2	22.4
1985	3.2	0.0	12.4	19.3
1986	13.6	0.0	35.9	39.1
1987	9.7	0.0	26.3	16.7
1988	19.6	0.0	35.4	10.7
1989	1.8	0.0	15.2	10.7
1990	9.6	0.0	17.5	17.8

[1]Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare 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 II.D.6.—INCREASES IN RECOGNIZED CHARGES AND COSTS PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES: ESTIMATES

(in percent)

Year ending June 30,	Outpatient hospital	Home health ageney[1]	Group practice Prepayment plan	Independent lab
Aged:				
1991	15.5	3.7	18.1	20.7
1992	14.3	12.3	17.0	19.3
1993	14.3	12.3	17.0	22.8
1994	14.5	12.4	17.1	21.8
1995	15.7	12.4	17.2	22.1
1996	17.0	12.9	17.1	21.9
1997	14.6	12.5	17.2	22.2
1998	14.5	12.2	17.1	22.2
1999	14.5	12.7	17.1	22.2
2000	14.5	12.7	17.1	22.1
2001	14.5	12.7	17.1	22.1
2002	14.5	12.7	17.1	22.1
Disabled (excluding ESRD):				
1991	15.1	0.0	16.3	18.2
1992	10.8	0.0	9.6	13.2
1993	11.4	0.0	10.8	17.9
1994	12.5	0.0	15.4	18.5
1995	13.6	0.0	14.8	18.7
1996	17.1	0.0	21.0	20.8
1997	13.3	0.0	16.2	19.6
1998	12.6	0.0	14.6	18.4
1999	12.6	0.0	14.7	22.4
2000	12.6	0.0	14.7	22.3
2001	12.6	0.0	14.7	22.3
2002	12.6	0.0	14.7	22.3

[1]Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare 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.

d. Projected Charges and Costs

Table II.D.7 shows projections of per enrollee incurred charges and costs based on the assumptions in Tables II.D.4 and II.D.6. Table II.D.8 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 II.D.7. The aggregate reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

TABLE II.D.7.—INCURRED CHARGES OR COSTS PER ENROLLEE: ESTIMATES

Year ending June 30,	All services	Physician	outpatient hospital	Home health agency[1]	Group practice prepayment plan	Independent lab
Aged:						
1991	$1,719.83	$1,201.35	$326.64	$2.95	$135.28	$53.61
1992	1,971.52	1,372.50	373.51	3.31	158.24	63.96
1993	2,196.38	1,502.11	426.89	3.72	185.15	78.51
1994	2,432.71	1,627.34	488.75	4.18	216.85	95.59
1995	2,709.81	1,768.75	565.55	4.70	254.11	116.70
1996	3,036.35	1,929.44	661.82	5.31	297.54	142.24
1997	3,402.44	2,115.59	758.37	5.98	348.71	173.79
1998	3,817.95	2,322.54	868.01	6.71	408.35	212.34
1999	4,289.94	2,551.13	993.61	7.56	478.17	259.47
2000	4,830.87	2,808.12	1,137.39	8.52	559.93	316.91
2001	5,448.76	3,094.46	1,301.97	9.60	655.67	387.06
2002	6,153.60	3,411.90	1,490.36	10.82	767.78	472.74
Disabled (excluding ESRD):						
1991	1,489.08	1,071.47	332.64	0.00	45.56	39.41
1992	1,652.19	1,189.14	368.52	0.00	49.92	44.61
1993	1,798.76	1,280.45	410.39	0.00	55.31	52.61
1994	1,965.94	1,378.29	461.50	0.00	63.83	62.32
1995	2,160.45	1,488.74	524.47	0.00	73.29	73.95
1996	2,440.53	1,648.29	614.21	0.00	88.68	89.35
1997	2,713.47	1,807.51	696.03	0.00	103.05	106.88
1998	2,999.69	1,971.55	783.52	0.00	118.11	126.51
1999	3,324.23	2,151.93	882.06	0.00	135.43	154.81
2000	3,691.39	2,353.77	992.99	0.00	155.29	189.34
2001	4,104.95	2,577.44	1,117.87	0.00	178.06	231.58
2002	4,569.79	2,823.93	1,258.45	0.00	204.17	283.24

[1]Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare 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 II.D.8.—INCURRED REIMBURSEMENT AMOUNTS: ESTIMATES

Year ending June 30,	Average enrollment (millions)	Reimbursement amounts	
		Per enrollee	Aggregate (millions)
Aged:			
1991	29.792	1,319.48	39,310
1992	30.266	1,529.54	48,293
1993	30.701	1,712.48	52,575
1994	31.106	1,905.10	59,260
1995	31.467	2,131.12	67,060
1996	31.790	2,397.51	76,217
1997	32.056	2,696.72	66,446
1996	32.255	3,036.60	97,952
1999	32.412	3,423.64	110,967
2000	32.580	3,867.62	126,007
2001	32.767	4,375.47	143,371
2002	32.957	4,955.76	163,327
Disabled (excluding ESRD):			
1991	2.884	1,138.70	3,284
1992	3.017	1,274.44	3,845
1993	3.206	1,393.01	4,466
1994	3.397	1,529.00	5,194
1995	3.576	1,687.36	6,034
1996	3.743	1,914.51	7,166
1997	3.901	2,136.63	8,335
1996	4.059	2,369.55	9,618
1999	4.224	2,634.94	11,130
2000	4.393	2,935.35	12,895
2001	4.558	3,274.68	14,926
2002	4.730	3,656.66	17,296

2. Estimates under Alternative II Assumptions for Persons Suffering From End-Stage Renal Disease

Certain persons suffering from ESRD 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 alternative II estimates reflect the unique payment mechanism through which ESRO 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 II.D.9.

TABLE II.D.9.—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	$46	$91
1975	7	11	84	131
1976	11	13	137	163
1977	14	15	181	194
1978	16	16	231	231
1979	18	20	262	290
1980	19	23	303	368
1981	20	25	340	434
1982	22	27	374	483
1983	24	31	411	545
1984	27	34	369	493
1985	30	37	399	539
1986	32	40	431	582
1987	34	44	470	630
1988	36	48	509	719
1989	38	53	546	817
1990	39	58	587	915
1991	42	63	664	1032
1992	44	67	730	1126
1993	47	71	795	1229
1994	49	74	863	1333
1995	51	78	933	1441
1996	53	81	1013	1561
1997	55	83	1101	1692
1998	56	86	1190	1826
1999	57	88	1286	1965
2000	59	89	1388	2119
2001	59	91	1501	2285
2002	60	92	1632	2493

3. Summary of Aggregate Reimbursement Amounts on a Cash Basis Under Alternative II Assumptions

Table II.D.10 shows aggregate historical and projected reimbursement amounts on a cash basis under alternative II assumptions, 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 II.D.10.—AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS

(In millions)

Fiscal Year[1]	Aged	Disabled (excluding ESRD)	Disabled ESRD and ESRD only	Total
Historical Data:				
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	$193	$144	2,874
1975	3,289	259	217	3,765
1976	4,037	346	289	4,672
T.Q.	1,078	109	82	1,269
1977	5,005	491	371	5,867
1978	5,785	616	451	6,852
1979	6,929	781	549	8,259
1980	8,485	971	688	10,144
1981	10,362	1,197	786	12,345
1982	12,404	1,497	905	14,806
1983	14,783	1,735	969	17,487
1984	16,803	1,772	898	19,473
1985	19,080	1,798	930	21,808
1986	22,070	2,069	1,030	25,169
1987	26,353	2,430	1,154	29,937
1988	29,799	2,606	1,277	33,682
1989	32,751	2,727	1,389	36,867
1990	36,840	3,092	1,566	41,498
1991	40,200	3,524	1,790	45,514
Estimates:				
1992	47,038	3,918	1,894	52,850
1993	53,358	4,549	2,051	59,958
1994	60,341	5,300	2,227	67,868
1995	68,344	6,193	2,411	76,948
1996	77,613	7,303	2,612	87,528
1997	88,016	8,493	2,829	99,338
1996	99,725	9,812	3,056	112,593
1999	113,037	11,356	3,294	127,687
2000	128,388	13,151	3,555	145,094
2001	146,096	15,226	3,844	165,166

[1]For 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 1977·2001 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.

5. Cash Disbursements as a Percent of the Gross Domestic Product

Cash disbursements (benefit payments and administrative expenses) for alternative I and III assumptions were developed by examining the alternative II cash disbursements as a percentage of GDP. Alternative I and III cash disbursements are assumed to be the same as alternative II through CY 1992. Beginning in CY 1993, the rate of growth of the

alternative I cash benefits as a percentage of the GDP is assumed to be 2 percent less than the rate of growth of the alternative II benefits as a percentage of the GDP. Similarly, the rate of growth of the alternative III cash benefits as a percentage of the GDP is assumed to be 2 percent more than the rate of growth of the alternative II cash benefits as a percentage of the GDP. Administrative expenses for alternatives I and III are projected based on the same percentage of the total benefits as alternative II. Based on the above methodology, cash disbursements as a percentage of the GDP were calculated for all three alternatives and are displayed in Table II.D.11.

TABLE II.D.11.—SUPPLEMENTARY MEDICAL INSURANCE CASH DISBURSEMENTS AS A PERCENT OF THE GROSS DOMESTIC PRODUCT FOR CALENDAR YEARS 1991-2001[1]

Calendar year	Alternatives		
	I	II	III
1991	0.86	0.86	0.86
1992	0.94	0.95	0.97
1993	0.99	1.02	1.06
1994	1.03	1.08	1.14
1995	1.08	1.15	1.22
1996	1.12	1.23	1.35
1997	1.17	1.31	1.46
1998	1.22	1.39	1.58
1999	1.27	1.48	1.72
2000	1.33	1.58	1.87
2001	1.40	1.69	2.04

[1]Disbursements are the sum of benefit payments and administrative expenses.

III. APPENDICES

A. STATEMENT OF ACTUARIAL ASSUMPTIONS AND BASES EMPLOYED IN DETERMINING THE MONTHLY ACTUARIAL RATES AND THE MONTHLY PREMIUM RATE FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM BEGINNING JANUARY 1992 [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 on an incurred basis; that is, the amount of income that would be sufficient to pay for services furnished during that year (including associated administrative costs) even though payment for some of these services will not be made until after the close of the year. The portion of income required to cover benefits not paid until after the close of the calendar year is added to the trust fund 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 III.A.1 summarizes the estimated actuarial status of the trust fund as of the end of the financing period for 1990 through 1991.

TABLE III.A.1.—ESTIMATED ACTUARIAL STATUS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AS OF THE END OF THE FINANCING PERIODS, JAN. 1, 1990 -·DEC. 31, 1991

(In millions of dollars)

Financing Period Ending	Assets	Liabilities	Assets less liabilities
Dec. 31, 1990	$15,482	$5,061	$10,421
Dec. 31, 1991	$17,933	$5,796	$12,135

2. Monthly Actuarial Rate for Enrollees Age 65 and Older

The monthly actuarial rate is one-half of the monthly projected cost of benefits and administrative expenses for each enrollee age 65 and older,

[1] This statement incorporates the announcement that appeared in the Federal Register of November 15, 1991 with the announcement that appeared in the Federal Register of December 13, 1991. The November 15 announcement contained a typographical error in one of the tables, and the December 13 statement announced the correction. Projections shown in this statement differ from the projections shown in the rest of the report because of changes in assumptions since the preparation of this statement.

adjusted to allow for interest earnings on assets in the trust fund and a contingency margin. The contingency margin is an amount appropriate to provide for a moderate degree of variation between actual and projected costs and to amortize unfunded liabilities.

The monthly actuarial rate for enrollees age 65 and older for CY 1992 was determined by projecting per-enrollee cost for the 12-month periods ending June 30, 1992 and June 30, 1993, 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 annual fee screen update used for benefits prior to the passage of section 2306(b) of Pub. L. 98-369. The values for the 12-month period ending June 30, 1989, 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 III.A.2. Those per-enrollee values are then adjusted to apply to a calendar year period. The projected values for financing periods from January 1, 1989, through December 31, 1992, are shown in Table III.A.3.

TABLE III.A.2.—PROJECTION FACTORS[1]
12-MONTH PERIODS ENDING JUNE 30 OF 1989-1993

(In percent)

	Physicians' services[2]					
12-month period ending June 30,	Fees[3]	Residual[4]	Outpatient hospital services	Home health agency services[5]	Group practice prepayment plans	Independent lab services
Aged:						
1989	1.5	5.1	11.6	-0.6	17.5	16.1
1990	0.9	6.9	9.6	85.0	17.8	19.2
1991	-1.9	11.0	6.7	11.0	20.2	19.3
1992	-1.3	9.7	12.5	9.4	17.0	19.3
1993	1.2	6.5	14.7	9.9	16.9	20.1
Disabled:						
1989	1.5	2.5	3.5	0.0	15.8	10.3
1990	0.9	4.3	15.1	0.0	18.4	17.1
1991	-1.9	10.5	7.1	0.0	18.1	16.1
1992	-1.3	6.9	7.7	0.0	10.9	14.0
1993	1.2	5.2	11.5	0.0	13.1	17.1

[1]All values are per enrollee.
[2]The fee and residual values do not Include the impacts of the resource based relative value scale (RBRVS) fee schedule which will be effective January 1, 1992. While the RBRVS fee schedule has an Impact on both the fee and residual values, the Impacts are offsetting producing no net Impact.
[3]As recognized for payment under the program.
[4]Increase in the number of services received per enrollee and greater relative use of more expensive services.
[5]Since July 1, 1981, home health agency services have been almost exclusively provided by the Medicare 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 III.A.3.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER FINANCING PERIODS ENDING DECEMBER 31, 1989 THROUGH DECEMBER 31, 1992

	Financing Periods			
	CY 1989	CY 1990	CY 1991	CY 1992
Covered services (at level recognized):				
Physicians' reasonable charges	$45.21	$49.03	$53.26	$57.34
Outpatient hospital and other institutions	12.01	12.98	14.24	16.18
Home health agencies	0.09	0.13	0.14	0.15
Group practice prepayment plans	4.34	5.17	6.13	7.16
Independent lab	1.68	2.00	2.39	2.86
Total services	$63.33	$69.31	$76.16	$83.69
Cost-sharing:				
Deductible	-2.72	-3.03	-3.41	-3.48
Coinsurance	-11.94	-13.15	-14.03	-15.24
Total benefits	$48.67	$53.13	$58.72	$64.97
Administrative expenses	1.96	1.90	1.94	2.02
Incurred expenditures	$50.63	$55.03	$60.66	$66.99
Value of Interest	-1.14	-1.81	-2.15	-2.08
Contingency margin for projection error and to amortize the surplus or deficit	6.31	3.98	4.09	-4.11
Monthly actuarial rate	$55.80	$57.20	$62.60	$60.80

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for enrollees age 65 and over for CY 1992 is $66.99. The monthly actuarial rate of $60.80 provides an adjustment of -$2.08 for interest earnings and -$4.11 for a contingency margin. Based on current estimates, it appears that the assets are more than sufficient to cover the amount of incurred but unpaid expenses and to provide for a moderate degree of projection error. Thus, a negative contingency margin is needed to reduce assets toward a more 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 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 III.A.2). Costs for the end-stage renal disease program are projected differently because of the different nature

of services offered by the program. The combined results for all disabled enrollees are shown in Table III.A.4.

TABLE III.A.4.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES FINANCING PERIODS ENDING DECEMBER 31, 1989 THROUGH DECEMBER 31, 1992

	Financing Periods			
	CY 1989	CY 1990	CY 1991	CY 1992
Covered services (at level recognized):				
Physicians' reasonable charges	48.60	52.25	56.28	59.93
Outpatient hospital and other institutions	27.22	29.93	32.34	34.68
Home health agencies	0.00	0.00	0.00	0.00
Group practice prepayment plans	1.52	1.80	2.05	2.29
Independent lab	1.75	2.01	2.28	2.60
Total services	79.09	85.99	92.95	99.50
Cost-sharing:				
Deductible	-2.44	-2.73	-3.11	-3.21
Coinsurance	-15.22	-16.64	-17.61	-18.69
Total benefits	61.43	66.62	72.23	77.60
Administrative expenses	2.47	2.39	2.39	2.41
Incurred expenditures	63.90	69.01	74.62	80.01
Value of Interest	-6.35	-3.86	-1.54	-0.80
Contingency margin for projection error and to amortize the surplus or deficit	-23.25	-21.05	-17.08	1.59
Monthly actuarial rate	$34.30	$44.10	$56.00	$80.80

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for CY 1992 is $811.01. The monthly actuarial rate of $80.80 provides an adjustment of -$0.80 for interest earnings and a $1.59 for a contingency margin. Based on current estimates, it appears that assets alone are not 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, a positive contingency margin is needed to build assets to more appropriate levels.

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 III.A.2), and increases in physician fees as constrained by the program's physician fee schedule that is to be implemented beginning January 1, 1992 and by the program's economic index. Two alternative sets of assumptions and the results of those assumptions are shown in Table IIIA.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 III.A.5 are the same as in Table III.A.2.

Table III.A.5 indicates that, under the assumptions used in preparing this report, the monthly actuarial rates will result in an excess of assets over liabilities of $9,221 million by the end of December 1992. This amounts to 15.1 percent of the estimated total incurred expenditures for the following year. Assumptions which are somewhat more pessimistic (and, therefore, test the adequacy of the assets to accommodate projection errors) produce a surplus of $4,863 million by the end of December 1992, which amounts to 7.1 percent of the estimated total incurred expenditures for the following year. Under fairly optimistic assumptions, the monthly actuarial rates will result in a surplus of $13,371 million by the end of December, 1992, which amounts to 24.5 percent of the estimated total incurred expenditures for the following year.

Table III.A.5.—ACTUARIAL STATUS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND UNDER THREE SETS OF ALTERNATIVE ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1992

	Intermediate projection			Lower range projection			Upper range projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1991	1992	1993	1991	1992	1993	1991	1992	1993
Projection factors (in percent):									
Physician fees[1]									
Aged	-1.9	-1.3	1.2	-2.7	-2.3	-0.7	-1.1	-0.2	3.0
Disabled	-1.11	-1.3	1.2	-2.7	-2.3	-0.7	-1.1	-0.2	3.0
Utilization of physician services[2]									
Aged	11.0	9.7	6.5	9.5	5.9	2.6	12.5	13.5	10.4
Disabled	10.5	6.9	5.2	7.8	3.6	3.0	13.2	10.3	7.5
Outpatient hospital services per enrollee									
Aged	6.7	12.5	14.7	2.2	9.8	10.4	11.2	15.2	19.0
Disabled	7.1	7.7	11.5	0.9	1.1	8.7	13.3	14.4	14.4
	As of December 31,			As of December 31,			As of December 31,		
	1990	1991	1992	1990	1991	1992	1990	1991	1992
Actuarial status (in millions):									
Assets	$15,482	$17,933	$15,518	$15,482	$20,455	$17,727	$15,482	$15,274	$13,186
Liabilities	5,081	5,798	6,297	3,639	4,170	4,356	8,506	7,465	8,323
Assets less liabilities	10,421	$12,135	$9,221	$11,843	$18,285	$13,371	$8,976	$7,809	$4,863
Ratio of assets less liabilities to expenditures (In percent)[3]	21.2	22.1	15.1	25.5	32.6	24.5	17.3	12.9	7.1

[1]As recognized for payment under the program.

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

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

5. Premium Rate

Section 4301 of Pub. L. 101-508 added section 1839(e)(1)(B)(ii) to the Act, which provides that the monthly premium rate for 1992, for both aged and disabled enrollees, is $31.80.

B. GLOSSARY

Accrual basis. An incurred basis.

Actuarial rates. One half the expected average monthly cost of the SMI program for each aged enrollee (for the aged actuarial rate) and one half of the expected monthly cost for each disabled enrollee (for the disabled actuarial rate) for the duration the rate is in effect.

Actuarial soundness. A measure of the adequacy of the financing as determined by the actuarial status at the end of the periods for which financing was established.

Actuarial status. The difference between the assets and the liabilities. Administrative expenses. Expenses incurred by HHS and the Department of the Treasury in administering the SMI program and the provisions of the Internal Revenue Code relating to the collection of contributions. Such administrative expenses include expenditures for contractors to determine costs of and make payments to physicians and other providers of service as well as salaries and expenses of HCFA.

Advisory Council on Social Security. Under the Social Security Act, an Advisory Council is appointed every four years to study and review the financial status of the OASDI and Medicare programs. The most recent Advisory Council was appointed in 1989 and issued its reports in 1991.

Aged enrollee. An individual, age 65 or over, who has been enrolled in the Medicare program.

Allowed charge. Individual charge determined by a carrier for a covered SMI medical service or supply.

Alternative I, II, or III. See "Assumptions."

Amortization. Process of the gradual retirement of an outstanding debt by making periodic payments to the trust fund.

Assets. Treasury notes and bonds guaranteed by the Federal government and cash held by the trust funds for investment purposes.

Assumptions. Values relating to future trends in certain factors which affect growth of the trust funds. Demographic assumptions include fertility, mortality, net immigration, marriage, divorce, retirement patterns, disability incidence and termination rates, and changes in the labor force. Economic assumptions include unemployment, average earnings, inflation, interest rates, and productivity. Three sets of economic assumptions are presented in the Trustees Report.

(1) Alternative I is characterized as an "optimistic" set-it assumes relatively rapid economic growth, low inflation, and favorable (from the standpoint of program financing) demographic conditions.
(2) Alternative II is the "intermediate" set of assumptions, with "best estimates" of future economic and demographic conditions.
(3) Alternative III is more "pessimistic," with slow economic growth, more rapid inflation, and financially disadvantageous demographic conditions.

Average market yield. A computation which is made on all marketable interest-bearing obligations of the United States. It is computed on the basis of market quotations as of the end of the calendar month next preceding the date of such issue.

Baby boom. The period from the end of World War II through the mid-1960s marked by unusually high birth rates.

Beneficiary. A person enrolled in the SMI program.

Benefit payments. The amounts disbursed for covered services after deductible and coinsurance amounts have been deducted.

Board of Trustees. A Board established by the Social Security Act to oversee the financial operations of the Federal SMI Trust Fund. The Board is composed of five members, three of whom serve automatically by virtue of their positions in the Federal government: the Secretary of the Treasury, the Secretary of Labor, and the Secretary of HHS. The other two members are appointed by the President as public representatives: Stanford G. Ross and David M. Walker are currently serving 4-year terms that began on October 2, 1990. The Administrator of HCFA serves as Secretary of the Board of Trustees.

Bond. A certificate of ownership of a specified portion of a debt due by the Federal government to individual holders, bearing a fixed rate of interest.

Carrier. A private or public organization, under contract to HCFA, to administer the SMI benefits under Medicare. Also referred to as "contractors," these organizations determine coverage and benefit amounts payable and make payments to physicians, suppliers, and beneficiaries.

Cash basis. The costs of the service at the point payment was made rather than when the service was performed.

Certificate of indebtedness. A short-term certificate of ownership of 12 months or less of a specified portion of a debt due by the Federal government to individual holders, bearing a fixed rate of interest.

Coinsurance. Portion of the SMI costs paid by the beneficiary after meeting the annual deductible.

Consumer Price Index (CPI). A measure of the average change in prices over time in a fixed market basket of goods and services.

Contingency. Funds included in the trust fund to serve as a cushion in case actual expenditures are higher than those projected at the time financing was established. Since the financing is set prospectively, actual experience may be different than the estimates used in setting the financing.

Contingency margin. An amount included in the actuarial rates to provide for changes in the contingency level in the trust fund. Positive margins increase the contingency level and negative margins decrease it.

Covered services. Most physician services, care in outpatient departments of hospitals, diagnostic tests, DME, ambulance services, and other health services which are not covered by the HI program.

Deductible. The annual amount payable by the beneficiary for covered services before Medicare makes reimbursement.

Demographic assumptions. See "Assumptions."

Disability. For Social Security purposes, the inability to engage in substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or to last for a continuous period of not less than 12 months. Special rules apply for workers age 55 or older whose disability is based on blindness. The law generally requires that a person be disabled continuously for 5 months before he or she can qualify for a disabled-worker cash benefit. An additional 24 months is necessary to qualify under Medicare.

Disabled enrollee. An individual under age 65 who has been entitled to disability benefits under Title II of the Social Security Act or the Railroad Retirement System for at least two years and who is now enrolled under Medicare.

Durable medical equipment (DME). Items such as iron lungs, oxygen tents, hospital beds, wheelchairs, and seat lift mechanisms which are used in the patient's home and are either purchased or rented.

Economic assumptions. See "Assumptions."

Economic stabilization program. A legislative program during the early 1970s that limited price increases.

End-stage renal disease (ESRD). A disease involving irreversible and permanent kidney failure.

Fee-screen year. A specified period of time in which SMI recognized fees pertain. The fee-screen year period has changed over the history of the program.

Fiscal year (FY). The accounting year of the United States Government. Since 1976, each fiscal year has begun on October 1 of the prior calendar year and ended the following September 30. For example, fiscal year 1992 began October 1, 1991 and will end September 30, 1992.

General fund of the Treasury. Funds held by the Treasury of the United States, other than revenue collected for a specific trust fund (such as SMI) and maintained in a separate account for that purpose. The majority of this fund is derived from individual and business income taxes.

General revenue. Income to the SMI trust fund from the general fund of the Treasury.

Gross Domestic Product (GDP). The total dollar value of all goods and services produced in a year in the United States, regardless of who supplies the labor or property.

Group practice prepayment plan (GPPP). An organization which has a formal arrangement with three or more full-time physicians to provide certain health services to the plan's members who, through the advance payment of premiums, have contributed toward the cost of services. The most prevalent arrangement is a Health Maintenance Organization (HMO).

Home health agency (HHA). A public agency or private organization which is primarily engaged in providing skilled nursing services and other therapeutic services, such as physical, occupational, or speech therapy, in the home.

Hospital Insurance (HI). The Medicare program which covers specified hospital inpatient services, posthospital extended care, and home health services.

Incurred costs. The costs based on when the service was performed rather than when the payment was made.

Independent laboratories. A free-standing clinical laboratory, not associated with a hospital, meeting conditions for participation in the Medicare program.

Interest. A payment for the time value of money during a specified period. Intermediary. A private or public organization, under contract to HCFA, to administer HI and certain SMI benefits under Medicare. Also referred to as "contractors," these organizations make payments for institutional services.

Intermediate assumptions. See "Assumptions."

Medicare. A nationwide, federally administered health insurance program authorized in1965 to cover the cost of hospitalization, medical care, and some related services for most people over age 65. In 1972, coverage was extended to people receiving Social Security Disability Insurance payments for 2 years, and people with ESRD. Medicare consists of two separate but coordinated programs-Part A (hospital insurance, HI) and Part B (supplementary medical insurance, SMI). Almost all persons aged 65 or over or disabled entitled to HI are eligible to enroll in the SMI program on a voluntary basis by paying a monthly premium. Health insurance protection is available to Medicare beneficiaries without regard to income.

Medicare Economic Index (MEI). This is an index which is often used in the calculation of the increases in the prevailing charge levels that help to determine allowed charges for physician services. In 1992 and later, this index will be used in connection with the update factor for the physician fee schedule.

Optimistic assumptions. See "Assumptions."

Outpatient hospital. Part of the hospital providing services covered by SMI including services in an emergency room or outpatient clinic, ambulatory surgical procedures, medical supplies, such as splints, laboratory tests billed by the hospital, etc.

Pessimistic assumptions. See "Assumptions."

Provider. Any organization or individual who is involved in providing health care services to the Medicare population. The provider list includes hospitals, physicians, ambulatory surgical centers, outpatient clinics, etc.

Residual factors. Factors other than price which include volume of services, intensity of services, and age/sex changes.

Resource-based relative value scale. A scale of national uniform relative values for all physicians' services. The relative value of each service must be the sum of relative value units representing physician work, practice expenses net of malpractice expenses, and the cost of professional liability insurance.

Sequester. The reduction of funds to be used for benefits or administrative costs from a Federal account based on the requirements specified in the Gramm-Rudmann-Hollings Act.

Social Security Act. Public Law 74-271, enacted August 14, 1935 with subsequent amendments. The Social Security Act consists of 20 titles, of which 4 have been repealed. The HI and SMI trust funds are authorized by Title XVIII of the Social Security Act.

Special public debt obligation. Securities of the United States Government issued exclusively to the OASI, DI, HI, and SMI Trust Funds. Section 1841(a) of the Social Security Act provides that the public-debt obligations issued for purchase by the SMI Trust Fund shall have maturities fixed with due regard for the needs of the funds. The usual practice in the past has been to spread the holdings of special issues, as of each June 30, so that the amounts maturing in each of the next 15 years are approximately equal. Special public-debt obligations are redeemable at par at any time.

Supplementary Medical Insurance (SMI). The insurance program used for paying a portion of the costs of physician's services, outpatient hospital services, and other related medical and health services for voluntarily insured aged and disabled individuals.

SMI premium. Monthly premium paid by those individuals who have enrolled in the voluntary SMI program.

Term Insurance. A type of insurance which is in force for a specified period of time.

Trust fund. Separate accounts in the United States Treasury mandated by Congress whose assets may only be used for a specified purpose. Funds Dot withdrawn for current monthly or service benefits, the financial interchange, and administrative expenses are invested in interest-bearing Federal securities, as required by law; the interest earned is also deposited in the trust funds.

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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