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THE 1995 ANNUAL REPORT OF THE BOARD OF  
TRUSTEES OF THE FEDERAL SUPPLEMENTARY  
MEDICAL INSURANCE TRUST FUND

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COMMUNICATION

FROM

THE BOARD OF TRUSTEES, FEDERAL  
SUPPLEMENTARY MEDICAL INSURANCE  
TRUST FUND

TRANSMITTING

THE 1995 ANNUAL REPORT OF THE BOARD OF TRUSTEES OF THE  
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND,  
PURSUANT TO SECTION 1841(b) OF THE SOCIAL SECURITY ACT,  
AS AMENDED



APRIL 3, 1995.—Referred jointly to the Committees on Ways and Means  
and Commerce, and ordered to be printed

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LETTER OF TRANSMITTAL

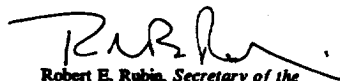
BOARD OF TRUSTEES OF THE  
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND  
Washington, D.C., April 3, 1995

HONORABLE Newt Gingrich  
Speaker of the House of Representatives  
Washington, D.C.

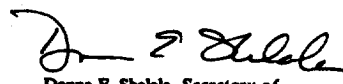
HONORABLE Albert Gore, Jr.  
President of the Senate  
Washington, D.C.

GENTLEMEN: We have the honor of transmitting to you the 1995 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 30th such report), in compliance with the provisions of section 1841(b) of the Social Security Act.

Respectfully,

  
Robert E. Rubin, Secretary of the  
Treasury, and Managing  
Trustee of the Trust Fund.


  
Robert B. Reich, Secretary of Labor,  
and Trustee.

  
Donna E. Shalala, Secretary of  
Health and Human Services,  
and Trustee.

  
Shirley S. Chetani, Commissioner  
of Social Security, and Trustee.

  
Stanford G. Ross, Trustee.

  
David M. Walker, Trustee.

  
Bruce C. Vladeck, 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 persons aged 65 and over and for the long-term disabled. In calendar year (CY) 1994, 35.1 million persons were covered under SMI (31.4 million at ages 65 and over and 3.7 million disabled individuals). General revenue contributions during 1994 amounted to \$36.2 billion, accounting for 65.1 percent of all SMI income. About 31.3 percent of all income resulted from the premiums paid by the enrollees. Interest payments to the SMI trust fund accounted for the remaining 3.6 percent. Of the \$60.3 billion in SMI disbursements, \$58.6 billion was for benefit payments while the remaining \$1.7 billion was spent for administrative expenses. SMI administrative expenses were 2.8 percent of total disbursements.

The SMI program is comparable to yearly renewable term insurance, with financing 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 premiums and matching general revenue income established each year at a level intended to equal the costs for medical care services incurred in that year. The trust fund holds all of the income not currently needed to pay benefits and related expenses. The assets of the trust fund should always be sufficient to cover the claims that have been incurred by enrollees but not yet paid by the program and, also, to provide an appropriate contingency level in case actual costs exceed projected. 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. Monthly actuarial rates are determined for calendar-year periods and are equal to one-half the monthly amounts necessary to finance the SMI program. These rates determine the amount to be contributed from general revenues on behalf of each enrollee. Based on a formula in the law, the Government contribution

### **Overview**

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 total 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 for SMI is closely related to the concept as it applies to many private group insurance plans. As noted, the SMI program is comparable to 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. The actuarial soundness of the SMI program is traditionally evaluated over the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests of actuarial soundness are that: (1) the assets and income for years for which financing has been established should be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) the assets should be sufficient to cover projected liabilities that will have been incurred by the end of that time but that will not have been paid yet. If these tests of actuarial soundness are not met, the program can still 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 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 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 1995 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 that is adequate to cover a reasonable degree of variation between actual costs and

*Summary*

projected costs in case actual costs exceed projected. On this basis, the SMI program is considered actuarially sound.

Although the SMI program is currently actuarially sound, the Trustees note with great concern the past and projected rapid growth in the cost of the program. In spite of the evidence of somewhat slower growth rates in the recent past, overall, the past growth rates have been rapid, and the future growth rates are projected to increase above those of the recent past. Growth rates have been so rapid that outlays of the program have increased 53 percent in aggregate and 40 percent per enrollee in the last 5 years. For the same time period, the program grew 19 percent faster than the economy despite recent efforts to control the cost of the program. As a result, the incurred disbursements of the program are projected to increase from 0.93 percent of the Gross Domestic Product (GDP) in CY 1994 to 4.29 percent of GDP in 2069. Initially, this rapid growth is attributable primarily to assumed continuing rapid growth in the volume and intensity of services billed per beneficiary. Later in the projection period, the changing demographic composition of the population will also have a major influence on the growth in program costs. Given the past and projected cost of the program, the Trustees urge the Congress to take additional actions designed to more effectively control SMI costs through specific program legislation as part of broad-based health care reform. The Trustees believe that prompt, effective, and decisive action is necessary.

To facilitate this effort, the Trustees further recommend legislation to reestablish the Quadrennial Advisory Council for the Medicare program. This action would help provide critical information that will be needed by the Administration and the Congress as they deliberate the future of the SMI program and would help ensure that such information will be available in time to assist the orderly development of legislative solutions. The Trustees believe that prompt action on reestablishing the Advisory Council will help to expedite the legislative process and lead to effective solutions to the rapid growth of the SMI program.

*Overview****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 six members, four of whom serve automatically by virtue of their positions in the Federal Government: the Secretary of the Treasury, the Secretary of Labor, the Secretary of Health and Human Services (HHS), and the Commissioner of Social Security. 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. The terms of Mr. Ross and Mr. Walker began on October 2, 1990, and expire immediately after the publication of this report. The Commissioner of Social Security became a member of the Board effective March 31, 1995, under Public Law 103-296, approved August 15, 1994.

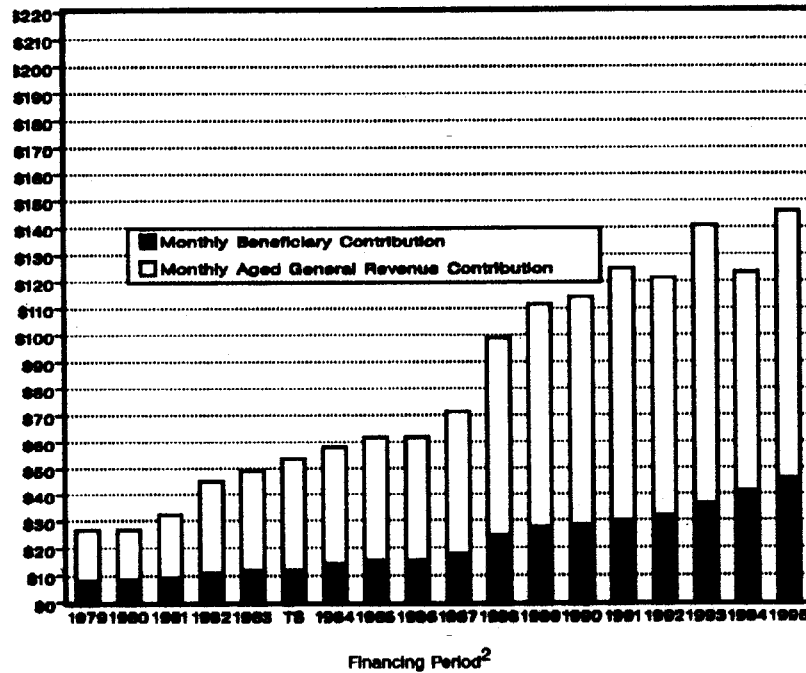
By law, the Secretary of the Treasury is designated as the Managing Trustee, and the Administrator of the Health Care Financing Administration (HCFA) is designated as Secretary of the Board. The Board of Trustees reports to the Congress each year on the operations and status of the trust fund, in compliance with section 1841(b)(2) of the Social Security Act. This annual report, for 1995, is the 30th 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. Figures 1 and 2 present these values for financing periods since 1979. As indicated, general revenue financing is the major source of income for the program.

*Expected Operations*

**FIGURE 1**  
**SUPPLEMENTARY MEDICAL INSURANCE AGED MONTHLY PER CAPITA INCOME<sup>1</sup>**

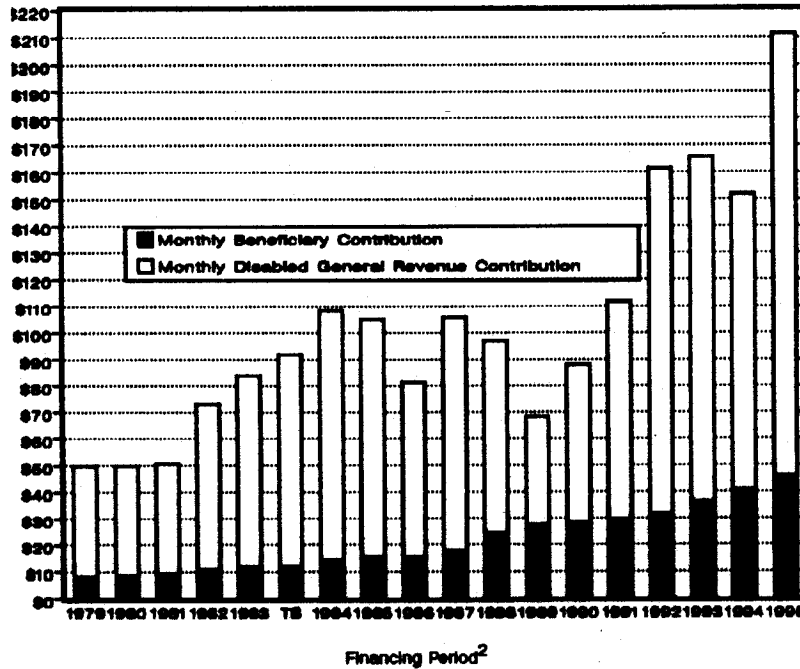


<sup>1</sup>The amounts shown do not include the catastrophic coverage monthly premium rate for 1989.

<sup>2</sup>For 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 and later, the financing period is January 1 through December 31.

## Overview

**FIGURE 2**  
**SUPPLEMENTARY MEDICAL INSURANCE DISABLED MONTHLY PER CAPITA**  
**INCOME<sup>1</sup>**



<sup>1</sup>The amounts shown do not include the catastrophic coverage monthly premium rate for 1989.

<sup>2</sup>For 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 and later, the financing period is January 1 through December 31.

Although standard monthly premium rates and actuarial rates have been set only for periods through December 31, 1995, 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 statutory provisions described in the section II.B "Nature of the Trust Fund." In particular, under present law, the SMI premium rate for aged enrollees will be established at levels sufficient to meet 25 percent of program costs for CY 1996 through 1998. Thereafter, these premiums will be subject to the growth limitations described in section II.B "Nature of the Trust Fund" and will represent a declining share of projected costs. For all years, premiums for

*Expected Operations*

disabled enrollees are set equal to the premiums established for aged enrollees.

The estimates shown in Tables I.C1, I.C2, and I.C3 are based on the Trustees' intermediate set of economic and demographic assumptions. These assumptions are described in detail in the 1995 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. Section II.D "Actuarial Methodology and Principal Assumptions for Cost Estimates for the Supplementary Medical Insurance Program" presents an explanation of the effects of the intermediate assumptions on the estimates in this report.

The January 1, 1995 average update of the allowable fee for physician services is assumed to be 4.7 percent. The intermediate assumptions assume the January 1, 1996 average update to be 1.2 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 purely physician services such as laboratory tests performed in a physician's office, durable medical equipment (DME), ambulance services, and facility costs for services performed in a free-standing ambulatory surgical center. The costs per enrollee for institutional and all other services under the SMI program are projected to increase an average of 14.3 percent for CY 1995 and 13.4 percent for 1996. These increases are due to factors such as price, volume, and intensity.

Table I.C1 shows the estimated operations of the SMI trust fund under the intermediate assumptions on a fiscal-year basis through 2004. Table I.C2 shows the corresponding development on a calendar-year basis. The level of the trust fund decreased in fiscal and calendar year 1994 due to the establishment of actuarial rates for CY 1994 that were intended to reduce assets. At the time that the actuarial rates for 1994 were promulgated, it appeared that the assets were more than sufficient to cover the incurred costs of the program and to provide an appropriate contingency. Therefore the actuarial rates were set to reduce the assets. However, the actual expenditures were lower than those estimated at the time the financing was established for 1994, and, as a result, the assets were not reduced as much as expected when establishing the financing for 1994.



### Overview

The actuarial rates for CY 1995 were promulgated with specific margins to further reduce assets. Based on these actuarial rates and the above economic assumptions, the fund is estimated to decrease to a level of \$17.4 billion by the end of CY 1995 and then increase to \$18.1 billion by the end of 1996.

**TABLE I.C1.—OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) DURING FISCAL YEARS 1967-2004**

[In millions]

Fiscal year <sup>1</sup>	Income				Disbursements			Balance at end of year <sup>4</sup>
	Premium from enrollees	Government contributions <sup>2</sup>	Interest and other income <sup>3</sup>	Total income	Benefit payments	Administrative expenses	Total disbursements	
Historical Data:								
1967	\$647	\$623	\$15	\$1,285	\$664	\$135 <sup>5</sup>	\$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	926	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	3,785	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	1,289	132	1,401	1,239
1977	2,193	5,053	137	7,383	5,867	475	6,342	2,279
1978	2,431	6,386	228	9,045	6,852	504	7,356	3,968
1979	2,635	6,841	363	9,839	8,259	555	8,814	4,994
1980	2,928	6,932	415	10,275	10,144	593	10,737	4,532
1981	3,320	8,747	372	12,439	12,345	883	13,228	3,743
1982	3,831	13,323	473	17,627	14,806	754	15,560	5,810
1983	4,227	14,238	682	19,147	17,487	824	18,311	6,646
1984	4,907	16,811	807	22,525	19,473	899	20,372	8,799
1985	5,524	17,898	1,155	24,577	21,808	922	22,730	10,646
1986	5,699	18,076	1,228	25,003	25,189	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 <sup>6</sup>	30,712	1,022 <sup>6</sup>	43,282 <sup>6</sup>	36,867	1,450 <sup>6</sup>	38,317 <sup>6</sup>	11,412 <sup>6</sup>
1990	11,494 <sup>6</sup>	33,210	1,434 <sup>6</sup>	46,138 <sup>6</sup>	41,498	1,524 <sup>6</sup>	43,022 <sup>6</sup>	14,527 <sup>6</sup>
1991	11,807	34,730	1,629	48,166	45,514	1,505	47,019	15,675
1992	12,748	38,684	1,717	53,149	48,627	1,661	50,288	18,535
1993	14,683	44,227	1,889	60,799	54,214 <sup>7</sup>	1,845	56,059	23,276
1994	16,895	38,355	2,118	57,368	58,006	1,718	59,724	20,919
Intermediate Estimates:								
1995	19,131	36,955	1,822	57,708	64,723	1,682	66,405	12,222
1996	19,178	62,046	1,049	82,273	74,283	1,749	76,032	18,463

*Expected Operations***TABLE I.C1.—OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) DURING FISCAL YEARS 1967-2004**

[in millions]

Fiscal year <sup>1</sup>	Income				Disbursements			Balance at end of year <sup>4</sup>
	Premium from enrollees	Government contributions <sup>2</sup>	Interest and other income <sup>3</sup>	Total income	Benefit payments	Administrative expenses	Total disbursements	
1967	20,585	63,282	1,252	85,119	82,359	1,821	84,180	18,402
1968	22,890	70,057	1,319	94,266	91,298	1,895	93,191	20,477
1969	24,267	78,781	1,397	104,445	101,366	1,972	103,338	21,584
2000	25,362	89,059	1,470	115,891	112,482	2,057	114,539	22,936
2001	26,547	100,716	1,550	128,813	125,184	2,151	127,335	24,414
2002	27,803	113,988	1,637	143,428	139,504	2,252	141,756	26,086
2003	29,179	129,313	1,729	160,221	155,825	2,359	158,284	26,023
2004	30,697	146,867	1,834	179,418	174,751	2,474	177,225	30,216

<sup>1</sup>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 and later cover the interval from October 1 through September 30.

<sup>2</sup>General fund matching payments, plus certain interest-adjustment items.

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

<sup>4</sup>The financial status of the program depends on both the total net assets and the liabilities of the program (see Table I.D2).

<sup>5</sup>Administrative expenses shown include those paid in 1968 and 1967.

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

<sup>7</sup>Includes the impact of the transfer to the HI trust fund of the SMI catastrophic coverage reserve fund on March 31, 1993 as specified in Public Law 102-394. Actual benefit payments for 1993 were \$52,409 million and the amount transferred was \$1,805 million.

**TABLE I.C2.—OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) DURING CALENDAR YEARS 1966-2004**

[in millions]

Calendar year	Income				Disbursements			Balance at end of year <sup>3</sup>
	Premium from enrollees	Government contributions <sup>1</sup>	Interest and other income <sup>2</sup>	Total income	Benefit payments	Administrative expenses	Total disbursements	
Historical Data:								
1966	\$322	\$0	\$2	\$324	\$126	\$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	1,399	37	2,808	2,325	269	2,614	643

## Overview

TABLE LC2.—OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) DURING CALENDAR YEARS 1966-2004

(In millions)

Calendar year	Income				Disbursements			Balance at end of year <sup>3</sup>
	Premium from enrollees	Government contributions <sup>1</sup>	Interest and other income <sup>2</sup>	Total income	Benefit payments	Administrative expenses	Total disbursements	
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	2,846	107	4,873	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	8,287	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 <sup>4</sup>	11,291 <sup>4</sup>	361	15,374	13,113	915	14,028	5,877
1982	3,997 <sup>4</sup>	12,284 <sup>4</sup>	509	16,580	15,455	772	16,227	6,230
1983	4,236	14,861	727	19,824	18,106	878	18,984	7,070
1984	5,167	17,054	959	23,180	19,661	891	20,552	9,698
1985	5,613	18,250	1,243	25,106	22,947	933	23,880	10,924
1986	5,722	17,802	1,141	24,665	28,239	1,080	27,299	8,291
1987	7,409 <sup>5</sup>	23,560 <sup>5</sup>	875	31,844	30,820	920	31,740	8,394
1988	8,761 <sup>5</sup>	26,203 <sup>5</sup>	861	35,825	33,970	1,260	35,230	8,990
1989	12,263 <sup>6</sup>	30,852	1,234 <sup>6</sup>	44,349 <sup>6</sup>	38,294	1,489 <sup>6</sup>	39,783 <sup>6</sup>	13,556 <sup>6</sup>
1990	11,320	33,035	1,558	45,913	42,468	1,519	43,987	15,482
1991	11,934	37,802	1,868	51,224	47,336	1,541	48,877	17,828
1992	14,077 <sup>7</sup>	41,359 <sup>7</sup>	1,801	57,237	49,280	1,570	50,830	24,235
1993	14,193 <sup>7</sup>	41,485 <sup>7</sup>	2,021	57,679	55,784 <sup>8</sup>	2,000	57,784	24,131
1994	17,386	36,203	2,018	55,607	56,618	1,699	60,317	19,422
Intermediate Estimates:								
1995	19,735	46,085	1,100	66,920	67,255	1,898	69,153	17,389
1996	18,992	58,542	1,227	78,761	76,255	1,766	78,021	18,129
1997	21,116	64,861	1,285	87,262	84,519	1,840	86,359	19,032
1998	23,482	71,788	1,368	96,628	93,763	1,913	95,676	19,964
1999	24,529	81,112	1,432	107,073	104,050	1,992	106,042	21,015
2000	25,640	91,708	1,508	118,856	115,572	2,079	117,651	22,220
2001	26,849	103,716	1,592	132,157	128,640	2,175	130,815	23,564
2002	28,121	117,412	1,682	147,215	143,466	2,277	145,743	25,036
2003	29,531	133,279	1,780	164,590	160,478	2,387	162,865	26,761
2004	31,065	151,423	1,861	184,369	179,945	2,503	182,448	28,702

<sup>1</sup>General fund matching payments, plus certain interest adjustment items.<sup>2</sup>Other income includes recoveries of amounts reimbursed from the trust fund which are not obligations of the trust fund and other miscellaneous income.<sup>3</sup>The financial status of the program depends on both the total net assets and the liabilities of the program (see Table LD2).<sup>4</sup>Section 706 of the Social Security Act modifies 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.

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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 1982.

<sup>5</sup>Delivery of benefit checks normally due January, 1988 occurred on December 31, 1987. Consequently, the SMI premiums withheld from the checks (\$892 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 1988 (refer to footnote 4).

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

<sup>7</sup>Delivery of benefit checks normally due January, 1993 occurred on December 31, 1992. Consequently, the SMI premiums withheld from the checks (\$1,089 million) and the general revenue contributions (\$3,175 million) were added to the SMI trust fund on December 31, 1992. These amounts are excluded from the premium income and general revenue income for 1993 (refer to footnote 4).

<sup>8</sup>Includes the impact of the transfer to the HI trust fund of the SMI catastrophic coverage reserve fund on March 31, 1993 as specified in Public Law 102-394. Actual benefit payments for 1993 were \$53,979 million and the amount transferred was \$1,805 million.

Table I.C3 shows the calendar-year average increase in aggregate and per capita benefit payments on a cash basis under the intermediate assumptions through 2004. To reflect the size of the program relative to the economy as a whole, Table I.C3 also shows SMI benefit expenditures on a cash basis as a percent of GDP. During 1994, the program grew 8.6 percent on an aggregate basis, grew 6.8 percent on a per capita basis, and increased from 0.85 to 0.87 percent of GDP. For 1995, the program is expected to grow 14.7 percent on an aggregate basis, to grow 12.9 percent on a per capita basis, and to increase from 0.87 to 0.95 percent of GDP.

**TABLE I.C3.—GROWTH IN TOTAL BENEFITS UNDER THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM (CASH BASIS) THROUGH DECEMBER 31, 2004**

Calendar year	Aggregate benefits [millions]	Percent change	Per capita benefits	Percent change	SMI benefits as a percent of GDP
<b>Historical Data:</b>					
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

*Overview***TABLE I.C3.—GROWTH IN TOTAL BENEFITS UNDER THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM (CASH BASIS) THROUGH DECEMBER 31, 2004**

Calendar year	Aggregate benefits [millions]	Percent change	Per capita benefits	Percent change	SMI benefits as a percent of GDP
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	18,108	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	881.37	12.1	0.61
1987	30,820	17.5	992.69	15.2	0.68
1988	33,970	10.2	1,076.64	8.5	0.69
1989	38,294	12.7	1,195.42	11.0	0.73
1990	42,468	10.9	1,305.14	9.2	0.77
1991	47,338	11.5	1,426.90	9.3	0.83
1992	49,280	4.1	1,455.16	2.0	0.82
1993	53,979	9.6	1,562.96	7.4	0.85
1994	58,618	8.6	1,689.22	8.8	0.87
Intermediate Estimates:					
1995	67,255	14.7	1,885.21	12.9	0.95
1996	76,255	13.4	2,105.50	11.7	1.02
1997	84,519	10.8	2,300.71	9.3	1.07
1998	93,763	10.9	2,520.38	9.5	1.13
1999	104,050	11.0	2,764.13	9.7	1.20
2000	115,572	11.1	3,034.50	9.8	1.26
2001	128,640	11.3	3,340.52	10.1	1.33
2002	143,486	11.5	3,685.51	10.3	1.40
2003	160,478	11.9	4,075.63	10.6	1.48
2004	179,945	12.1	4,515.33	10.8	1.57

Table I.C4 shows the estimated incurred disbursements of the SMI program under the intermediate assumptions expressed as a percentage of GDP, for selected years over the calendar-year period 1994-2069. These estimated incurred disbursements are for benefit payments and administrative expenses combined, unlike the values in Table I.C3 which only express benefit payments on a cash basis as a percentage of GDP. The 75-year projection period fully allows for the presentation of future trends that reasonably may be expected to occur, such as the impact of a large increase in enrollees after the turn of the century. This increase will occur because the relatively large number of persons born during the period between the end of World War II and the

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mid-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 12 years to the same growth 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, this assumption may be considered optimistic. A consequence of this assumption is that 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 would increase rapidly from 0.93 percent in 1994 to 4.09 percent in 2035, decrease slightly to 3.97 percent in 2050, and then would increase to 4.29 percent in 2069.

**TABLE I.C4.—SUPPLEMENTARY MEDICAL INSURANCE DISBURSEMENTS  
(INCURRED BASIS) AS A PERCENT OF THE GROSS DOMESTIC PRODUCT<sup>1</sup>**

Calendar year	SMI Disbursements as a percent of GDP
1994	0.93
1996	0.99
2000	1.30
2006	1.70
2010	2.27
2015	2.81
2020	3.18
2025	3.59
2030	3.92
2035	4.09
2040	4.06
2045	4.01
2050	3.97
2055	4.00
2060	4.12
2065	4.23
2069	4.29

<sup>1</sup> Disbursements are the sum of benefit payments and administrative expenses.

Since future health care usage and cost experience may vary considerably from the intermediate assumptions on which the preceding cost estimates were based, estimates have also been prepared on the basis of two additional alternative sets of assumptions: low cost and high cost. The estimated

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operations of the SMI trust fund during 1994-2004 are summarized in Table I.C5 for all three alternatives. The assumptions underlying the intermediate assumptions 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 the low cost and high cost alternatives are also summarized in this section.

**TABLE I.C5.—ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) UNDER ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1994-2004**

[In billions]

Calendar year	Premiums from enrollees	Other income <sup>1</sup>	Total income	Total disbursements	Balance in fund at end year
<b>Intermediate:</b>					
1994	\$17.4	\$38.2	\$55.6	\$60.3	\$19.4
1995	19.7	47.2	66.9	69.0	17.4
1996	19.0	59.8	78.8	78.0	18.1
1997	21.1	66.1	87.3	86.4	19.0
1998	23.5	73.1	96.6	95.7	20.0
1999	24.5	82.5	107.1	106.0	21.0
2000	25.6	93.2	118.9	117.7	22.2
2001	26.8	105.3	132.2	130.8	23.6
2002	28.1	119.1	147.2	145.7	25.0
2003	29.5	135.1	164.6	162.9	26.8
2004	31.1	153.3	184.4	182.4	28.7
<b>Low Cost:</b>					
1994	17.4	38.2	55.6	60.3	19.4
1995	19.7	47.2	66.9	68.4	17.9
1996	18.6	58.5	77.1	76.4	18.6
1997	20.4	64.0	84.4	83.5	19.5
1998	22.4	69.9	92.3	91.3	20.5
1999	23.4	77.3	100.7	99.7	21.4
2000	24.3	85.4	109.7	108.7	22.5
2001	25.3	94.2	119.5	118.3	23.7
2002	26.3	103.6	130.0	128.7	25.0
2003	27.5	114.4	141.9	140.4	26.5
2004	28.6	126.5	155.1	153.4	28.2
<b>High Cost:</b>					
1994	17.4	38.2	55.6	60.3	19.4
1995	19.7	47.2	66.9	69.6	16.7
1996	19.4	61.0	80.4	79.6	17.5

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**TABLE I.C5.—ESTIMATED OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND (CASH BASIS) UNDER ALTERNATIVE SETS OF ASSUMPTIONS, CALENDAR YEARS 1994-2004**

(in billions)

Calendar year	Premiums from enrollees	Other income <sup>1</sup>	Total income	Total disbursements	Balance in fund at end year
1997	21.9	68.4	90.3	90.3	18.5
1998	25.1	78.0	103.1	102.0	19.5
1999	26.8	90.4	117.2	116.0	20.6
2000	28.8	103.1	131.9	130.7	21.9
2001	30.5	119.9	150.4	148.9	23.4
2002	32.4	140.4	172.8	171.0	25.2
2003	34.4	163.7	198.1	196.0	27.2
2004	36.6	190.5	227.1	224.8	29.6

<sup>1</sup> Other income contains government contributions and interest.

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

The three 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 low and high cost alternatives 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. The most rapid growth would occur under the high cost alternative and the least rapid under the low cost alternative. The alternative projections shown in Table I.C5 illustrate three important aspects of the financial operations of the SMI trust fund:

- First, despite the widely differing assumptions underlying the three alternatives, the balance between SMI income and disbursements remains relatively stable. Under the low cost assumptions, for example, by 2004 both income and disbursements would be approximately 16 percent lower than projected under the intermediate assumptions. Similarly, the corresponding amounts under the high cost assumptions would both be about 23 percent higher than the intermediate estimates.



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This result occurs because the premiums and general revenue contributions underlying the financing for the SMI program are reestablished annually, to match each year's anticipated incurred benefit costs and other expenditures. Thus, program income will automatically track program expenditures fairly closely regardless of the specific economic and other conditions.

- Second, as a result of the close matching of income and disbursements described above, projected trust fund assets show relatively little variation under the three sets of assumptions. Consequently, the annual adjustment of premiums and general revenue contributions permits the maintenance of a trust fund balance that, while relatively small, is sufficient to guard against chance fluctuations.
- Third, under the alternative sets of assumptions, the proportion of total income met from premiums is not constant. By 2004, for example, premium income would represent 18.4 percent of total income under the low cost assumptions, compared to 16.1 percent based on the high cost assumptions. Under present law, after 1998 premium increases are limited to the cost-of-living adjustment (COLA) for monthly Social Security benefits.<sup>1</sup> When SMI costs increase more rapidly than the general Consumer Price Index (CPI) underlying the Social Security COLA, as has generally occurred, premium income will represent a smaller share of total income.

### ***D. ACTUARIAL STATUS OF THE TRUST FUND***

#### **I. 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 is comparable to yearly renewable term insurance, with financing 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

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<sup>1</sup>Originally, 50 percent of the cost of the SMI program was to be met by premium payments and the other 50 percent by general revenue. Over time, the proportion met by premiums dropped to about 25 percent as a result of the increase limitations described. Since then, the Congress has acted for time to time to prevent the share of cost met through premiums from dropping below 25 percent.

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being established should be sufficient to cover the costs of services expected to be rendered during that period (including associated administrative costs), even though payment for some of these services will not be made until after the close of the period. The portion of income required to cover 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 HHS to establish income for a calendar year on the basis of incurred costs (including associated administrative costs) for that year. 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 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 not only the value of incurred but unpaid expenses but also a reasonable degree of variation between actual and projected costs (in case actual costs exceed projected).

The actuarial soundness of the SMI program is traditionally evaluated over the period for which the enrollee premium rates and level of general revenue financing have been established. The primary tests of actuarial soundness are that: (1) the assets and income for years for which financing has been established should be sufficient to meet the projected benefits and associated administrative expenses incurred for that period and (2) the assets should be sufficient to cover projected liabilities that will have been incurred by the end of that time but that will not have been paid yet. If these tests of actuarial soundness are not met, the program can still 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 a reasonable degree of variation between actual and projected costs.

The adequacy of contingency reserves for accommodating higher-than-expected costs is measured by the excess of assets over liabilities. An appropriate target level for this excess depends on numerous factors. The

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most important of these factors are: (1) the difference in prior years between 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 for 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.D1 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 tests, however, such as the comparison to cash outlay data, assure that the estimates are reasonably close.

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**TABLE I.D1.—ESTIMATED INCOME AND DISBURSEMENTS INCURRED UNDER THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM FOR FINANCING PERIODS THROUGH DECEMBER 31, 1995**

(In millions)

Financing period	Income				Disbursements			
	Premium from enrollees	Government contributions	Interest and other income	Total income	Benefit payments	Administrative expenses	Total disbursements	Net operations in year
<b>Historical Data:</b>								
<b>12-month period ending June 30,</b>								
1967	\$647	\$647	\$15	\$1,309	\$1,109	\$123 <sup>1</sup>	\$1,232 <sup>1</sup>	\$77
1968	698	698	21	1,417	1,443	155	1,598	-181
1969	903	903	24	1,830	1,765	198	1,963	-133
1970	936	936	12	1,884	1,929	213	2,142	-258
1971	1,253	1,253	18	2,524	2,090	259	2,349	175
1972	1,340	1,340	29	2,709	2,289	259	2,548	161
1973	1,427	1,426	45	2,898	2,500	302	2,802	96
1974	1,704	2,031	78	3,811	3,174	353	3,527	284
1975	1,887	2,398	105	4,388	3,957	438	4,395	-7
1976	1,951	2,972	109	5,032	4,852	485	5,337	-305
1977	2,156	4,697	157	7,010	5,861	515	6,376	634
1978	2,358	5,991	254	8,603	6,924	511	7,435	1,168
1979	2,601	6,570	365	9,536	8,143	649	8,792	744
1980	2,823	6,627	421	9,871	9,839	645	10,484	-613
1981	3,178	8,219	371	11,768	11,905	692	12,597	-829
1982	3,737	12,488	495	16,720	13,888	728	14,616	2,104
1983	4,202	13,951	686	18,839	16,905	706	17,613	1,226
T.S. <sup>2</sup>	2,120	7,836	374	10,330	9,720	483	10,203	127
<b>Calendar year</b>								
1984	5,167	17,052	962	23,181	20,343	869	21,212	1,969
1985	5,613	18,243	1,248	25,104	22,692	986	23,678	1,226
1986	5,722	17,802	1,141	24,665	26,636	1,000	27,636	-2,971
1987	6,717	21,377	880	28,974	30,810	1,036	31,846	-2,872
1988	9,453	28,342	903	38,698	34,630	1,343	35,973	2,725
1989	12,263 <sup>3</sup>	30,826	1,257 <sup>3</sup>	44,346 <sup>3</sup>	38,214	1,386 <sup>3</sup>	39,600 <sup>3</sup>	4,746 <sup>3</sup>
1990	11,320	33,035	1,558	45,913	42,546	1,541	44,087	1,826
1991	11,934	37,558	1,732	51,224	48,577	1,572	48,149	3,075
1992	12,968	38,158	1,827	52,953	49,647	1,690	51,337	1,636
1993	15,282	44,640	2,021	61,943	55,769 <sup>4</sup>	1,723	57,492 <sup>4</sup>	4,451
1994	17,386	36,203	2,018	55,607	60,673	1,634	62,307	-6,700
<b>Intermediate Estimates:</b>								
1995	19,735	45,961	1,224	66,920	68,700	1,698	70,398	-3,478

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<sup>1</sup>Includes administrative expenses incurred prior to the beginning of the program.

<sup>2</sup>The transition semester (T.S.) in the 6-month period July 1, 1963 to December 31, 1963.

<sup>3</sup>Includes the impact of the Medicare Catastrophic Coverage Act of 1968 (Public Law 100-360).

<sup>4</sup>Includes the impact of the transfer to the HI trust fund of the SMI catastrophic coverage reserve fund on March 31, 1983 as specified in Public Law 102-394. Estimated incurred payments for 1993 are \$53,984 million and the amount transferred was \$1,806 million.

### 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 I.D2. In some years, program assets have not been as large as liabilities. Nonetheless, the fund has remained positive, allowing claims to be paid.

TABLE I.D2.—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, 1995

(Dollar amounts in millions)

	Balance in trust fund	Government contributions due but unpaid	Total assets	Benefits incurred but unpaid	Administrative costs incurred but unpaid	Total liab- ilities	Excess of assets over liabilities	Ratio <sup>1</sup>
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	1,066	-19	1,047	220	0.05
1975	1,424	67	1,491	1,258	14	1,272	219	0.04
1976	1,219	106	1,325	1,436	-29	1,409	-84	-0.01
1977	2,170	91	2,261	1,710	3	1,713	548	0.07
1978	3,786	48	3,834	2,077	40	2,117	1,717	0.20
1979	4,880	2	4,882	2,300	123	2,423	2,459	0.24
1980	4,657	0	4,657	2,623	188	2,811	1,846	0.15
1981	3,801	0	3,801	2,770	13	2,783	1,018	0.07
1982	5,534	1	5,535	2,422	-9	2,413	3,122	0.18
1983	6,780	2	6,782	2,482	-48	2,434	4,348	0.21

*Actuarial Status*

**TABLE I.D2.—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, 1995**

[Dollar amounts in millions]

	Balance in trust fund	Government contributions due but unpaid	Total assets	Benefits incurred but unpaid	Administrative costs incurred but unpaid	Total Incurred liab- ilities	Excess of assets over liabilities	Ratio <sup>1</sup>
<b>As of December 31,</b>								
1983	7,070	1	7,071	2,664	-89	2,595	4,476	0.21
1984	9,698	2	9,700	3,346	-91	3,255	6,445	0.27
1985	10,924	0	10,924	3,291	-38	3,253	7,671	0.28
1986	8,291	0	8,291	3,688	-98	3,590	4,701	0.15
1987	8,394 <sup>2</sup>	0	8,394 <sup>2</sup>	3,678	17	6,565 <sup>2</sup>	1,829	0.05
1988	8,990	3	8,993	4,338	100	4,438	4,555	0.12
1989 <sup>3</sup>	13,556	0	13,556	4,258	-3	4,255	9,301	0.21
1990	15,482	0	15,482	4,336	19	4,355	11,127	0.23
1991	17,828	0	17,828	3,577	50	3,627	14,201	0.28
1992	24,235 <sup>4</sup>	0	24,235 <sup>4</sup>	3,964	170	8,398 <sup>4</sup>	15,837	0.28
1993	24,131	0	24,131	3,949	-107	3,842	20,289	0.33
1994	18,422	0	18,422	6,004	-172	5,832	13,590	0.19
<b>Intermediate Estimates:</b>								
1995	17,389	0	17,389	7,449	-172	7,277	10,112	0.13

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

<sup>2</sup>Section 708 of the Social Security Act modifies 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.

<sup>3</sup>The 1989 transactions of Medicare Catastrophic Coverage Account are included in the assets and liabilities of the trust fund.

<sup>4</sup>Delivery of benefit checks normally due January, 1993 occurred on December 31, 1992. Consequently, the SMI premiums withheld from the checks (\$1,089 million) and the general revenue matching contributions (\$3,175 million) were added to the SMI trust fund on December 31, 1992 and were included in the liabilities (see footnote 2).

Program financing has been established through December 31, 1995. The financing for CY 1995 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 less liabilities for the aged and to increase it for the disabled, as is explained in appendix III.B. As a result, the CY 1995 incurred disbursements are expected to exceed the incurred income by \$3,478

### *Overview*

million, as shown in Table I.D1, and the excess of assets over liabilities is expected to decrease from \$13,590 million at the end of December 1994 to \$10,112 million at the end of December 1995, under the intermediate assumptions, as shown in Table I.D2. This excess as a percent of incurred expenditures for the following year is expected to decrease from 19 percent as of December 31, 1994 to 13 percent as of December 31, 1995.

### **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 of the SMI program could be affected by variations in these assumptions. In order to test the actuarial soundness of the program under varying assumptions, a lower growth range projection and an upper growth range projection were prepared by varying these key assumptions through the period for which the financing has been set. The lower and upper growth range 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 assumptions. These two alternative sets of assumptions are reasonable 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 lower and upper growth range assumptions were determined from a study on the average historical variation in the respective increase factors.

This sensitivity analysis differs from the low cost and high cost 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 (1995 for this report). The low cost and high cost analysis begins the variation in program growth within the year for which financing has been established (1995) and continues throughout the projection period.

Table I.D3 indicates that, under the lower growth range assumptions, trust fund assets would exceed liabilities at the end of December 1995 by a wide margin, equivalent to 22.2 percent of the following year's incurred expenditures. If these lower growth range assumptions 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

*Actuarial Status*

maintain the actuarial soundness of the trust fund. Under the upper growth range assumptions, trust fund assets would still exceed liabilities by the end of December 1995, dropping to a level of 4.6 percent of the following year's incurred expenditures. Therefore, even if these upper growth range 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, as well as the lower growth range (optimistic) and the upper growth range (pessimistic) cost sensitivity scenarios.



## Overview

Table I.D3.—ACTUARIAL STATUS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND UNDER THREE ALTERNATIVE SETS OF ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1995

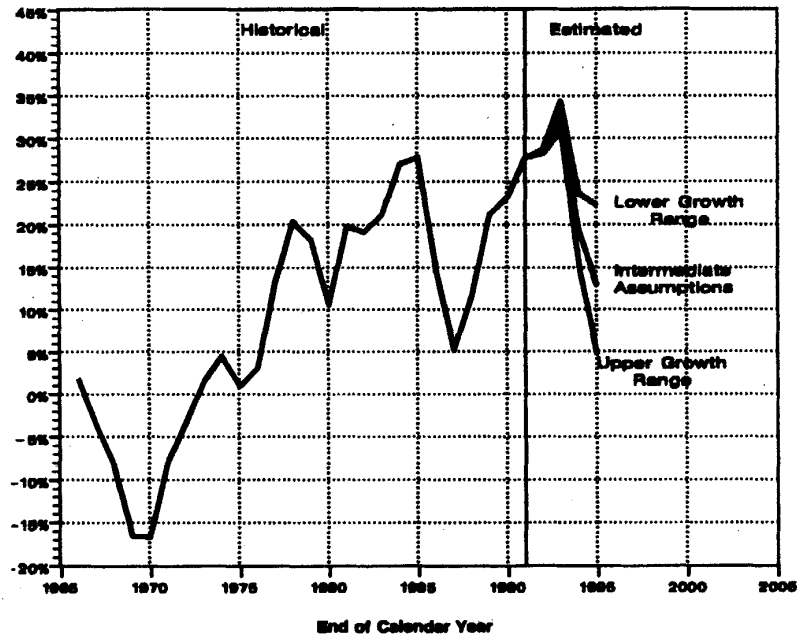
	Intermediate projection			Lower range projection			Upper range projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Projection factors (in percent):									
Physician fees <sup>1</sup>									
Aged	2.7	4.4	2.9	2.6	4.2	1.7	2.8	4.6	4.1
Disabled	2.7	4.4	2.9	2.6	4.2	1.7	2.8	4.6	4.1
Utilization of physician services <sup>2</sup>									
Aged	5.8	5.9	5.9	4.3	4.1	3.7	7.3	7.7	8.1
Disabled	0.9	3.2	3.9	0.1	0.3	0.9	1.8	6.2	6.8
Outpatient hospital services per enrollee									
Aged	9.3	13.1	8.5	5.8	8.7	3.9	12.9	17.5	13.1
Disabled	-0.5	15.5	15.9	-3.8	10.2	10.3	2.8	20.8	21.4
Actuarial status (in millions):									
Assets	As of December 31,			As of December 31,			As of December 31,		
	1993	1994	1995	1993	1994	1995	1993	1994	1995
Assets	\$24,131	\$19,422	\$17,399	\$24,131	\$19,422	\$20,836	\$24,131	\$19,422	\$13,674
Liabilities	3,842	5,832	7,277	3,866	3,661	4,903	4,316	8,037	9,700
Assets less liabilities	\$20,289	\$13,590	\$10,112	\$20,265	\$15,761	\$16,033	\$19,815	\$11,385	\$3,974
Ratio of assets less liabilities to expenditures (in percent) <sup>3</sup>	32.6	19.3	12.8	34.3	23.6	22.2	30.9	15.3	4.8

<sup>1</sup>As recognized for payment under the program.

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

<sup>3</sup>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 1995**



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 1995 by the setting of (1) the standard monthly premium rate (paid by or on behalf of each enrollee) of \$46.10 for CY 1995 and (2) the 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 69 percent of all SMI income during 1995.

Under the intermediate assumptions used in this report, disbursements are estimated to exceed income during CY 1995 by \$2,033 million. Income is composed of premiums paid by the enrollees, general revenue contributions,

### *Overview*

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 \$19.4 billion at the end of 1994 to \$17.4 billion at the end of 1995.

The main reason for the decrease in assets during CY 1995 is that the financing for 1995 was established specifically to reduce assets. As a result, the excess of assets over liabilities is expected to decrease from \$13,590 million at the end of December 1994 to \$10,112 million by the end of December 1995, which would represent 12.8 percent of the following year's projected incurred expenditures. Under more pessimistic assumptions as to program cost increases, assets based on financing already established would still be sufficient to cover outstanding liabilities. Hence, the financing established through December 1995 is considered 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.

Although the SMI program is currently actuarially sound, the Trustees note with great concern the past and projected rapid growth in the cost of the program. In spite of the evidence of somewhat slower growth rates in the recent past, overall, the past growth rates have been rapid, and the future growth rates are projected to increase above those of the recent past. Growth rates have been so rapid that outlays of the program have increased 53 percent in aggregate and 40 percent per enrollee in the last 5 years. For the same time period, the program grew 19 percent faster than the economy despite recent efforts to control the cost of the program. As a result, the incurred disbursements of the program are projected to increase from 0.93 percent of the GDP in CY 1994 to 4.29 percent of GDP in 2069. Initially, this rapid growth is attributable primarily to assumed continuing rapid growth in the volume and intensity of services billed per beneficiary. Later in the projection period, the changing demographic composition of the population will also have a major influence on the growth in program costs. Given the past and projected cost of the program, the Trustees urge the Congress to take additional actions designed to more effectively control SMI costs through specific program legislation as part of broad-based health care reform. The Trustees believe that prompt, effective, and decisive action is necessary.

To facilitate this effort, the Trustees further recommend legislation to reestablish the Quadrennial Advisory Council for the Medicare program. This action would help provide critical information that will be needed by the Administration and the Congress as they deliberate the future of the SMI

*Conclusion*

program and would help ensure that such information will be available in time to assist the orderly development of legislative solutions. The Trustees believe that prompt action on reestablishing the Advisory Council will help to expedite the legislative process and lead to effective solutions to the rapid growth of the SMI program.



## II. TECHNICAL SECTION

### ***A. SOCIAL SECURITY AMENDMENTS SINCE THE 1994 REPORT***

Since the 1994 Annual Report was transmitted to Congress on April 11, 1994, there have been no legislative changes enacted which would have a significant effect on the financial status of the SMI program.

However, the Social Security Independence and Program Improvements Act of 1994 (Public Law 103-296) established the Social Security Administration as an independent agency, effective March 31, 1995. Under the new law, the Commissioner of Social Security is appointed by the President and confirmed by the Senate to serve a 6-year term. The law provides that the Commissioner of Social Security is a member of the Board of Trustees for the Federal SMI Trust Fund.

### ***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.<sup>2</sup> 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. In the early years of the program, fiscal year (FY) 1967 through 1973, when only persons aged 65 and over were covered, the premium rate was set by law to cover 50 percent of program costs. Beginning July 1973, eligibility was extended to disabled individuals under 65. The

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<sup>2</sup>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.

### *Technical Section*

premium rates for FY 1974 and 1975 still were set to cover 50 percent of program costs but only for aged enrollees. As a result, the standard premium rates payable by the disabled enrollees met less than 50 percent of their costs.

Beginning with FY 1976 and extending through June 1983, the percentage increase in the premium rate was limited to the percentage increase in Social Security benefits. During this period, since SMI program costs were increasing faster than increases in Social Security benefits, the portion of program costs covered by the premium steadily declined to approximately 25 percent by June 1983. In January 1984, the financing period changed to a calendar-year basis, and for the transitional period, July 1983 through December 1983, the premium remained frozen. Under legislation enacted periodically during the period 1984 through 1990, the premium was set to cover 25 percent of the program costs for aged enrollees. In 1990, the Congress legislated specific premium rates for 1991 through 1995. For 1996 through 1998, the premium rates will be set to cover 25 percent of the program costs for aged enrollees. For 1999 and later the percentage increase in the premium, again, will be limited to the percentage increase in Social Security benefits.

Beginning July 1973 when eligibility was extended to disabled individuals under 65, in addition to the monthly premium rate, two other monthly rates were established: the actuarial rate for enrollees aged 65 and over and the actuarial rate for disabled enrollees under age 65. The monthly actuarial rate for each of the two respective groups of enrollees equals one-half of the monthly projected cost of benefits and administrative expenses for that group, adjusted to allow for interest earnings on assets in the trust fund and to maintain a sufficient contingency margin. (The contingency margin is an amount appropriate to provide for a moderate degree of variation between actual and projected costs.) For those years when the premium rate is set to cover 25 percent of the program costs for aged enrollees, the premium rate is set to be 50 percent of the actuarial rate for enrollees aged 65 and over.

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 "matching ratio," prescribed in the law for each group, to the amount of premiums received from that group. The ratio is equal to: (1) twice the monthly actuarial rate applicable to the particular group of enrollees, minus the standard monthly premium rate, divided by (2) the standard monthly premium rate.

*Nature of the Trust Fund*

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 1995 are shown in Table II.B1. Actuarial rates in effect from July 1973 and later and the corresponding percentages of program costs covered by the premium rate are also shown. For a detailed discussion of the determination of the actuarial and premium rates, see appendix III.B.

**TABLE II.B1.—STANDARD MONTHLY PREMIUM RATES, ACTUARIAL RATES, AND PREMIUM RATES AS A PERCENT OF PROGRAM COST**

	Standard monthly premium rate	Monthly actuarial rate		Premium rates as a percent of program cost	
		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	—	—	50.0%	—
April 1968 - June 1970	4.00	—	—	50.0	—
12-month period ending June 30 of —					
1971	5.30	—	—	50.0	—
1972	5.60	—	—	50.0	—
1973	5.80	—	—	50.0	—
1974 <sup>1</sup>	6.30	\$6.30	\$14.50	50.0	21.7%
1975	6.70	6.70	18.00	50.0	18.6
1976	6.70	7.50	18.50	44.7	18.1
1977	7.20	10.70	19.00	33.6	18.9
1978	7.70	12.30	25.00	31.3	15.4
1979	8.20	13.40	25.00	30.6	16.4
1980	8.70	13.40	25.00	32.5	17.4
1981	9.60	16.30	25.50	29.4	18.8
1982	11.00	22.60	36.60	24.3	16.0
1983	12.20	24.60	42.10	24.8	14.5
July 1983 - December 1983	12.20	27.00	46.10	22.6	13.2
Calendar year					
1984	14.60	29.20	54.30	25.0	13.4
1985	15.50	31.00	52.70	25.0	14.7
1986	15.50	31.00	40.80	25.0	19.0
1987	17.90	35.80	53.00	25.0	16.9
1988	24.80	49.60	48.60	25.0	25.5
1989	31.90 <sup>2</sup>	55.80	34.30	25.0 <sup>3</sup>	40.7 <sup>3</sup>
1990	28.60	57.20	44.10	25.0	32.4
1991	29.90	62.60	56.00	23.9	26.7



*Technical Section*

**TABLE II.B1.—STANDARD MONTHLY PREMIUM RATES, ACTUARIAL RATES, AND PREMIUM RATES AS A PERCENT OF PROGRAM COST**

	Standard monthly premium rate	Monthly actuarial rate		Premium rates as a percent of program cost	
		Enrollees aged 65 and over	Disabled enrollees under age 65	Enrollees aged 65 and over	Disabled enrollees under age 65
1992	31.80	60.80	80.80	26.2	19.7
1993	36.60	70.50	82.90	26.0	22.1
1994	41.10	61.80	76.10	33.3	27.0
1995	46.10	73.10	105.80	31.5	21.8

<sup>1</sup>In accordance with limitations on the costs of health care imposed under Phase III of the Economic Stabilization program, the standard premium rates for July and August 1973 were set at \$5.80 and \$6.10, respectively. Effective September 1973, the rate increased to \$6.30.

<sup>2</sup>This is the premium paid by most groups. This rate includes the \$4.00 catastrophic coverage monthly premium which was paid by most enrollees under the Medicare Catastrophic Coverage Act of 1988 (subsequently repealed).

<sup>3</sup>The premium rates as a percent of program cost for CY 1988 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 HI and SMI programs. A sizeable portion of the costs of such experiments and demonstration projects are paid out of the HI and SMI trust funds, with the remainder funded through general revenues.

*Nature of the Trust Fund*

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). Investments may also be made in obligations guaranteed as to both principal and interest by the United States, including 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.

*Technical Section***C. SUMMARY OF THE OPERATIONS OF THE TRUST FUND,  
FISCAL YEAR 1994**

A statement of the revenue and disbursements of the Federal SMI Trust Fund in FY 1994 and of the assets of the fund at the beginning and end of the fiscal year is presented in Table II.C1.

**TABLE II.C1.—STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL  
INSURANCE TRUST FUND DURING FISCAL YEAR 1994**

(In thousands)

Total assets of the trust fund, beginning of period .....		<u>\$23,275,577</u>
Revenue:		
Premiums from enrollees:		
Enrollees aged 65 and over .....	\$15,211,744	
Disabled enrollees under age 65 .....	<u>1,682,932</u>	
Total premiums .....		16,894,676
Transfers from general fund of the Treasury:		
Government contributions:		
Supplementary premiums of enrollees aged 65 and over ..	33,481,349	
Supplementary premiums of disabled enrollees under age 65	<u>4,873,181</u>	
Total Government contributions .....		38,354,530
Other .....		1,698
Interest:		
Interest on investments .....	2,116,454	
Interest on amounts of interfund transfers .....	<u>-2,200</u>	
Total interest .....		2,116,254
Total revenue .....		<u>57,367,157</u>
Disbursements:		
Benefit payments .....		58,006,374
Administrative expenses:		
Treasury administrative expenses .....	351	
Salaries and expenses - SSA .....	324,402	
Salaries and expenses - HCFA .....	1,365,286	
Salaries and expenses Office of Secretary .....	14,237	
Pay Assessment Commission .....	630	
Construction - SSA .....	211	
Policy and Research .....	2,314	
Railroad Retirement administrative expenses .....	6,058	
Office of Personnel Management expenses .....	178	
Physicians Payment Review .....	<u>4,171</u>	
Total administrative expenses .....		1,717,840
Total disbursements .....		<u>59,724,214</u>

*Summary of FY 1994 Operations***TABLE II.C1.—STATEMENT OF OPERATIONS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND DURING FISCAL YEAR 1994****[In thousands]**

Net addition to the trust fund .....	-2,357,057
Total assets of the trust fund, end of period .....	20,918,521

<sup>1</sup>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 \$23,276 million on September 30, 1993. During FY 1994, total revenue amounted to \$57,367 million, and total disbursements were \$59,724 million. Total assets thus decreased \$2,357 million during the year to a total of \$20,919 million on September 30, 1994.

Of the total revenue, \$15,212 million represented premium payments by (or on behalf of) enrollees aged 65 and over and \$1,683 million represented premium payments by (or on behalf of) disabled enrollees under age 65. Total premium payments amounted to \$16,895 million, an increase of 15.1 percent over the amount of \$14,683 million for the preceding year. This increase in premiums from enrollees resulted primarily from: (1) the increase from \$36.60 to \$41.10 per month in the standard premium rate that became effective on January 1, 1994 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 \$38,355 million, which accounted for 66.9 percent of total revenue. This amount consisted of \$33,481 million representing contributions relating to premiums paid by enrollees aged 65 and over, and \$4,873 million representing contributions relating to the premiums paid by disabled enrollees under age 65. The remaining \$2,118 million of revenue consisted almost entirely of interest on the investments of the trust fund.

Of the \$59,724 million in total disbursements, \$58,006 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 \$1,718 million of disbursements was for administrative expenses.

### Technical Section

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.C2, the experience with respect to actual amounts of enrollee premiums, Government contributions, and benefit payments in FY 1994 is compared with the estimates for FY 1994 which appeared in the 1993 and 1994 annual reports.

**TABLE II.C2.—COMPARISON OF ACTUAL AND ESTIMATED OPERATIONS  
OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND,  
FISCAL YEAR 1994**

[Dollar amounts in millions]

Item	Comparison of actual experience with estimates for FY 1994 published in —				
	1994 report			1993 report	
	Actual amount	Estimated amount <sup>1</sup>	Actual as percentage of estimate	Estimated amount <sup>1</sup>	Actual as percentage of estimate
Premiums from enrollees	\$16,895	\$16,830	100	\$16,785	101
Government Contributions	38,355	38,188	100	43,778	88
Benefit Payments	58,006	58,192	100	61,333	95

<sup>1</sup> Under the intermediate assumptions (which were called "Alternative II" in the 1993 report).

Table II.C3 shows a comparison of the total assets of the fund and their distribution at the end of FY 1993 and 1994. The assets of the trust fund at the end of 1993 totaled \$23,276 million, consisting of \$23,268 million in the

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form of obligations of the U.S. Government, and an undisbursed balance of almost \$8 million. The assets of the trust fund at the end of 1994 totaled \$20,919 million, consisting of \$21,489 million in the form of obligations of the U.S. Government and an undisbursed balance of -\$570 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.C3.—ASSETS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AT THE END OF FISCAL YEARS 1993 AND 1994<sup>1</sup>**

	September 30, 1993	September 30, 1994
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of indebtedness: .....	\$1,318,676,000.00	\$90,478,000.00
Bonds:		
6 1/4-percent, 1994-2008 .....	4,516,692,000.00	4,056,180,000.00
7 1/4-percent, 1995-2009 .....	0.00	2,135,822,000.00
7 3/8-percent, 1994-2007 .....	2,184,637,000.00	2,036,049,000.00
8 1/8-percent, 1995-2006 .....	3,719,999,000.00	3,265,239,000.00
8 3/8-percent, 2001 .....	444,270,000.00	444,270,000.00
8 3/4-percent, 1994-2005 .....	6,346,364,000.00	5,794,711,000.00
9 3/4-percent, 1995 .....	115,003,000.00	0.00
10 3/8-percent, 1994-2000 .....	1,661,292,000.00	1,397,521,000.00
10 3/4-percent, 1994-98 .....	809,231,000.00	633,111,000.00
13 1/4-percent, 1994-97 .....	1,033,983,000.00	737,856,000.00
13 3/4-percent, 1994-99 .....	1,117,677,000.00	897,447,000.00
Total investments in public-debt obligations .....	23,267,824,000.00	21,488,664,000.00
Undisbursed balance <sup>2</sup> .....	7,753,475.79	-570,163,213.43
Total assets .....	23,275,577,475.79	20,918,520,786.57

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

<sup>2</sup> Negative figure represented extension of credit against securities to be redeemed within the following few days.

The net decrease in the par value of the investments held by the fund during FY 1994 amounted to \$1,779 million. New securities at a total par value of \$419 million were acquired during the fiscal year through the investment of revenue and reinvestment of funds made available from the redemption of

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securities. The par value of securities redeemed during the year was \$417 million. Included in these amounts is \$409 million in certificates of indebtedness that were acquired, and \$410 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, 1994 was 8.34 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 1994 was 7 1/4 percent, payable semiannually.

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

#### **1. Estimates under the Intermediate Assumptions for Aged and Disabled (Excluding End-Stage Renal Disease) Enrollees**

##### ***a. Introduction***

Estimates under the intermediate 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, 1993, for this report) for each category of enrollees 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. First, 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



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tabulations for a sample of beneficiaries are prepared in a manner parallel to those records sent in by carriers. The second stage occurs at the close of a provider's accounting period, when 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.D1 summarizes the incurred reimbursement amounts per enrollee for the various services for each of the 12-month periods ending June 30, through 1993. 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.D2 shows the incurred charges or costs per enrollee corresponding to the reimbursement values shown in Table II.D1.

**TABLE II.D1.—INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE:  
HISTORICAL DATA**

Year ending June 30,	Average enrollment (millions)	All services	Phys- ician	Out- patient hospital	Home health agency <sup>1</sup>	GPPP <sup>2</sup>	Indep- endent 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	1.80	1.66	0.78
1973	20.428	122.39	107.98	9.43	2.17	1.87	0.94
1974	20.968	135.44	117.48	12.38	2.03	2.35	1.20

TABLE II.D1.—INCURRED REIMBURSEMENT AMOUNTS PER ENROLLEE:  
HISTORICAL DATA

Year ending June 30,	Average enrollment [millions]	All services	Phys- ician	Out- patient hospital	Home health agency <sup>1</sup>	GPPP <sup>2</sup>	Indep- endent lab
1975	21.504	161.29	136.28	16.47	3.83	3.07	1.64
1976	22.089	189.65	156.27	22.29	5.20	3.88	2.03
1977	22.604	222.36	179.30	29.65	6.53	4.41	2.47
1978	23.133	255.19	207.05	34.39	6.81	4.02	2.92
1979	23.693	290.21	233.99	41.18	6.86	4.87	3.31
1980	24.287	343.52	277.23	47.60	7.58	7.05	4.06
1981	24.827	407.75	328.14	57.05	8.04	9.13	5.39
1982	25.363	465.27	381.02	66.34	0.52	10.92	6.47
1983	25.873	558.55	456.25	80.67	0.77	13.52	7.34
1984	26.433	636.21	512.94	96.12	0.99	16.85	9.31
1985	26.914	686.35	538.90	111.75	1.05	19.52	15.13
1986	27.453	782.11	594.10	133.89	1.19	31.70	21.23
1987	28.013	905.61	671.19	164.74	0.96	43.13	25.57
1988	28.497	1,022.12	741.17	187.11	1.54	62.21	30.09
1989	28.936	1,115.98	797.93	207.67	1.53	73.87	34.96
1990	29.380	1,210.49	862.97	214.66	2.91	87.91	42.04
1991	29.865	1,336.60	933.48	247.64	2.45	103.56	49.47
1992	30.363	1,395.05	951.00	269.94	2.10	118.35	53.66
1993	30.887	1,445.46	944.30	304.02	3.43	137.65	56.06
Disabled (excluding ESRD):							
1974	1.638	118.34	97.59	15.55	3.45	1.09	0.66
1975	1.817	150.96	125.63	18.84	3.58	1.87	1.06
1976	2.019	180.29	148.31	23.19	5.12	2.20	1.47
1977	2.231	222.31	174.82	36.28	4.79	2.42	2.00
1978	2.423	258.28	202.91	44.75	5.54	2.46	2.60
1979	2.563	303.99	240.74	51.75	5.96	2.06	3.18
1980	2.646	363.76	287.98	61.58	6.06	4.30	3.82
1981	2.691	434.99	340.15	77.71	7.21	5.23	4.69
1982	2.689	513.96	394.87	106.97	0.00	6.25	5.87
1983	2.632	625.90	485.07	126.00	0.00	7.53	7.30
1984	2.597	673.11	529.22	126.60	0.00	8.32	8.97
1985	2.595	706.40	553.05	130.43	0.00	9.25	13.67
1986	2.632	774.14	593.50	148.83	0.00	12.77	19.04
1987	2.681	859.80	657.01	164.18	0.00	16.38	22.23
1988	2.728	927.06	684.68	195.67	0.00	22.15	24.56
1989	2.762	979.03	724.19	201.78	0.00	25.94	27.14
1990	2.804	1,045.86	766.77	220.06	0.00	27.16	31.85
1991	2.867	1,156.94	836.43	252.39	0.00	30.79	37.33
1992	3.012	1,196.97	829.36	293.91	0.00	33.86	41.84
1993	3.194	1,292.11	857.68	347.50	0.00	39.44	47.29

<sup>1</sup> 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

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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.

<sup>2</sup>Group practice prepayment plan

TABLE II.D2.—INCURRED CHARGES OR COSTS PER ENROLLEE:  
HISTORICAL DATA

Year ending June 30,	Average enrollment [millions]	All services	Phys- ician	Out- patient hospital	Home health agency <sup>1</sup>	GPPP <sup>2</sup>	Indep- endent lab
Aged:							
1967	17.750	\$108.58	\$102.70	\$2.45	\$1.37	\$1.54	\$0.52
1968	18.038	128.08	119.02	3.89	2.42	2.18	0.57
1969	18.833	145.18	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	163.89	14.79	3.02	2.94	1.47
1974	20.988	205.52	178.04	19.38	2.54	3.68	1.88
1975	21.504	237.88	201.04	25.03	4.66	4.66	2.49
1976	22.089	273.30	225.28	33.12	6.18	5.73	3.01
1977	22.604	314.45	253.67	43.18	7.60	6.42	3.80
1978	23.133	355.53	288.50	49.28	7.81	5.76	4.18
1979	23.693	399.53	322.10	58.21	7.76	6.88	4.68
1980	24.287	468.39	378.29	66.21	8.44	9.80	5.65
1981	24.827	545.69	438.82	78.16	8.81	12.51	7.39
1982	25.383	628.91	513.49	91.03	0.52	14.99	8.88
1983	25.873	753.67	615.07	109.52	0.77	18.35	9.96
1984	26.433	852.62	687.12	129.31	0.99	22.67	12.53
1985	26.914	911.79	718.53	150.21	1.05	26.24	15.76
1986	27.453	1,031.78	787.36	178.80	1.19	42.33	22.10
1987	28.013	1,186.26	883.24	218.30	0.98	57.15	26.59
1988	28.497	1,341.07	977.03	248.42	1.55	82.60	31.47
1989	28.936	1,446.43	1,039.01	272.48	1.53	96.93	36.48
1990	29.380	1,581.67	1,134.53	284.50	2.95	115.49	44.20
1991	29.865	1,744.36	1,228.19	328.11	2.47	136.27	51.32
1992	30.383	1,808.99	1,240.31	355.43	2.10	155.83	55.32
1993	30.887	1,871.62	1,229.52	399.87	3.43	181.05	57.75
Disabled (excluding ESRD):							
1974	1.636	173.15	142.91	23.44	4.16	1.65	0.99
1975	1.817	214.01	178.14	27.44	4.17	2.72	1.54
1976	2.019	252.06	207.53	33.36	5.89	3.17	2.11
1977	2.231	305.80	240.20	53.97	5.40	3.41	2.82
1978	2.423	352.08	276.27	62.53	6.19	3.46	3.63
1979	2.563	409.13	323.96	71.37	6.58	2.84	4.38
1980	2.646	484.75	383.23	83.84	6.62	5.86	5.20
1981	2.801	573.30	447.56	104.81	7.77	7.04	6.32
1982	2.889	663.15	522.78	144.04	0.00	8.42	7.91
1983	2.632	831.26	643.25	168.21	0.00	10.05	9.75

*Actuarial Methodology***TABLE II.D2—INCURRED CHARGES OR COSTS PER ENROLLEE:  
HISTORICAL DATA**

Year ending June 30,	Average enrollment [millions]	All services	Phys- ician	Out- patient hospital	Home health agency <sup>1</sup>	GPPP <sup>2</sup>	Indep- endent lab
1984	2.597	892.77	701.31	188.46	0.00	11.07	11.83
1985	2.595	932.11	731.63	173.91	0.00	12.34	14.23
1986	2.632	1,016.38	782.05	197.58	0.00	16.95	19.80
1987	2.681	1,122.75	861.32	216.71	0.00	21.62	23.10
1988	2.728	1,215.66	901.37	259.43	0.00	29.37	25.68
1989	2.762	1,272.22	944.62	265.20	0.00	34.09	28.31
1990	2.804	1,371.95	1,010.33	292.36	0.00	35.75	33.50
1991	2.867	1,516.96	1,102.10	335.48	0.00	40.64	38.74
1992	3.012	1,563.57	1,066.74	388.87	0.00	44.80	43.16
1993	3.194	1,678.71	1,119.75	458.22	0.00	52.01	48.73

<sup>1</sup> 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.

<sup>2</sup> 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.

The increase in the average charge per service is one of the most important factors creating the increase in charges per enrollee. The physician fee component of the CPI provides an approximation of the historical increases in submitted charge per service. Increases in this index are shown in the first column of Table II.D3.

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TABLE II.D3.—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		Residual factors <sup>1</sup>	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
Aged:				
1967	7.6	—	—	—
1968	5.9	4.8	10.6	15.9
1969	6.2	4.7	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	5.2	8.6
1975	12.8	8.9	3.7	12.9
1976	11.4	8.2	3.6	12.1
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	3.7	4.5
1986	6.7	0.3	9.3	9.6
1987	7.5	5.4	6.4	12.1
1988	7.2	3.1	7.3	10.6
1989	7.4	1.4	4.9	6.4
1990	7.1	1.0	8.1	9.2
1991	6.9	-1.5	9.7	8.1
1992	5.9	-0.3	1.5	1.2
1993	6.1	0.5	-1.4	-0.9
Disabled (excluding ESRD):				
1974	5.0	—	—	—
1975	12.8	8.9	14.5	24.7
1976	11.4	8.2	7.7	16.5
1977	10.2	9.0	6.2	15.7
1978	8.9	9.0	5.5	15.0
1979	8.6	7.8	8.7	17.2
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	1.6	8.9

**TABLE II.D3.—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		Residual factors <sup>1</sup>	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
1985	6.0	0.8	3.5	4.3
1986	6.7	0.3	6.6	6.9
1987	7.5	5.4	4.5	10.1
1988	7.2	3.1	1.5	4.6
1989	7.4	1.4	3.4	4.8
1990	7.1	1.0	5.9	7.0
1991	6.9	-1.5	10.5	8.8
1992	5.9	-0.3	-1.1	-1.4
1993	6.1	0.5	2.5	3.0

<sup>1</sup>Under Public Law 101-239, physician fee increases include a baseline adjustment for the volume and intensity of services (or residual factors). Due to the transition rules, these adjustments affect price changes in calendar years 1992 through 1996. These adjustments are included in the Medicare Volume Performance Standards (MVP8). The adjustments for the years ending June 30 are: -1.3% in 1992, -1.6% in 1993, -0.7% in 1994, -0.7% in 1995, -0.7% in 1996, and -0.4% in 1997.

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 31. 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.

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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 are based on a resource-based relative value scale. The fee schedule amount is equal to the product of the procedure's relative value, a conversion factor and a geographic adjustment factor. Payments are based on the lower of the actual charge and the fee schedule amount. For the 4-year period from 1992 to 1995, the fee schedule amounts are adjusted to reflect the prevailing charges in each fee screen area.

Certain services included with the physician services are subject to special reimbursement rules. 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 certain other services, including anesthesiology, certified registered nurse anesthetists, and DME.

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.D1 through II.D9 are displayed for the same 12-month basis for all years. This basis is the 12-month period ending June 30.

The average reduction in submitted fees has increased almost every year. The result is that the net increase in allowed fees due to price changes (i.e., the increase in fee levels allowed for reimbursement purposes) has been less than the increase in submitted fees for most years. The second column of Table II.D3 shows this increase in allowed fees 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.D3 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.D3 shows the total increases in charges per enrollee for physician services. It includes the effects of all the items discussed above.

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Projected increases in total allowed charges per enrollee are shown in Table II.D4. It compares with the corresponding historical data shown in Table II.D3. Column 1 of Table II.D4 shows the projected increases in the physician fee component of the CPI in each of the years ending June 30, 1994 through June 30, 2005. 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.D4.—COMPONENTS OF INCREASES IN TOTAL ALLOWED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: INTERMEDIATE ESTIMATES**

[In percent]

Year ending June 30,	Increase due to price changes		Residual factors <sup>1</sup>	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
Aged:				
1994	5.0	2.7	5.8	8.7
1995	4.3	4.4	5.9	10.6
1996	4.8	2.9	5.9	9.0
1997	4.9	1.4	6.3	7.8
1998	5.8	0.6	6.4	7.0
1999	5.8	-0.2	6.8	6.6
2000	5.8	-0.1	6.9	6.8
2001	6.0	0.1	7.1	7.2
2002	6.3	0.6	7.1	7.7
2003	5.9	1.1	6.9	8.1
2004	5.9	1.5	6.8	8.4
2005	5.9	1.7	6.7	8.5
Disabled (excluding ESRD):				
1994	5.0	2.7	0.9	3.6
1995	4.3	4.4	3.2	7.7
1996	4.8	2.9	3.9	6.9
1997	4.9	1.4	4.4	5.9
1998	5.8	0.6	4.0	4.6
1999	5.8	-0.2	3.0	2.8
2000	5.8	-0.1	4.3	4.2
2001	6.0	0.1	8.0	8.1
2002	6.3	0.6	5.8	6.4
2003	5.9	1.1	5.8	6.8
2004	5.9	1.5	5.5	7.1
2005	5.9	1.7	5.4	7.2

<sup>1</sup>See footnote 1 of Table II.D3.



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(2) Institutional and Other Services

The historical increases in charges and costs per enrollee for institutional and other services are shown in Table II.D5, and the projected increases are shown in Table II.D6. 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.D5.—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 agency <sup>1</sup>	Group practice prepayment plan	Independent lab
<b>Aged:</b>				
1968	58.8	76.6	41.6	9.6
1969	74.0	27.3	13.3	12.3
1970	39.3	2.9	-2.8	20.3
1971	26.1	-16.7	-7.9	23.4
1972	12.0	-5.7	16.7	27.4
1973	11.0	21.3	14.0	21.5
1974	31.0	-15.9	25.2	27.9
1975	29.2	63.5	26.6	32.4
1976	32.3	32.6	23.0	20.9
1977	30.3	23.0	12.0	19.6
1978	14.2	2.6	-10.3	16.1
1979	18.1	-0.6	19.4	12.0
1980	13.7	8.8	42.4	20.7
1981	18.0	4.4	27.7	30.8
1982	16.5	-94.1	19.8	20.2
1983	20.3	48.1	22.4	12.2
1984	18.1	28.6	23.5	25.8
1985	16.2	6.1	15.7	25.8
1986	19.0	13.3	61.3	40.2
1987	22.1	-17.6	35.0	20.3
1988	13.8	58.2	44.5	18.4
1989	9.7	-1.3	17.3	15.9
1990	4.4	92.8	19.1	21.2
1991	15.3	-16.3	18.0	16.1
1992	8.3	-15.0	14.4	7.8
1993	12.5	63.3	16.2	4.4
<b>Disabled (excluding ESRD):</b>				
1975	17.1	0.2	64.8	55.6
1976	21.6	41.2	18.5	37.0

*Actuarial Methodology***TABLE II.D5.—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 agency <sup>1</sup>	Group practice prepayment plan	Independent lab
1977	61.8	-8.3	7.6	33.6
1978	15.9	14.6	1.5	26.7
1979	14.1	6.3	-17.9	20.7
1980	17.5	0.6	106.3	18.7
1981	24.8	17.4	20.1	21.5
1982	37.7	-100.0	19.6	25.2
1983	16.8	0.0	19.4	23.3
1984	0.1	0.0	10.1	22.4
1985	3.2	0.0	11.5	19.3
1986	13.6	0.0	37.4	39.1
1987	9.7	0.0	27.6	16.7
1988	19.7	0.0	35.8	11.2
1989	2.2	0.0	16.1	10.2
1990	10.2	0.0	4.9	18.3
1991	14.7	0.0	13.6	15.6
1992	15.9	0.0	10.2	11.4
1993	17.8	0.0	16.1	12.9

<sup>1</sup>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.D6.—INCREASES IN RECOGNIZED CHARGES AND COSTS  
PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES: INTERMEDIATE  
ESTIMATES**

[In percent]

Year ending June 30,	Outpatient hospital	Home health agency <sup>1</sup>	Group practice prepayment plan	Independent lab
<b>Aged:</b>				
1994	9.3	2.0	17.6	-0.3
1995	13.1	15.1	21.8	2.1
1996	8.5	14.5	26.2	7.1
1997	10.0	15.3	17.6	10.4
1998	9.9	15.6	17.5	11.4
1999	13.8	15.9	17.4	11.4
2000	11.3	15.6	17.5	11.6
2001	10.1	15.6	17.5	12.0
2002	10.0	15.9	17.5	12.2

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**TABLE II.D6.—INCREASES IN RECOGNIZED CHARGES AND COSTS  
PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES: INTERMEDIATE  
ESTIMATES**

[In percent]

Year ending June 30,	Outpatient hospital	Home health agency <sup>1</sup>	Group practice prepayment plan	Independent lab
2003	10.0	15.9	17.5	12.4
2004	10.0	15.9	17.5	12.5
2005	10.0	15.9	17.5	12.5
Disabled (excluding ESRD):				
1994	-0.5	0.0	-8.6	-3.2
1995	15.5	0.0	15.8	-0.5
1996	15.9	0.0	31.7	3.5
1997	14.5	0.0	13.6	8.7
1998	12.5	0.0	10.0	12.2
1999	16.4	0.0	9.7	8.4
2000	13.9	0.0	10.0	11.3
2001	15.7	0.0	9.9	17.5
2002	13.2	0.0	10.0	14.3
2003	13.2	0.0	10.0	14.5
2004	13.2	0.0	10.0	14.6
2005	13.2	0.0	10.0	14.6

<sup>1</sup> See footnote 1 of Table II.D5.

**d. Projected Charges and Costs**

Table II.D7 shows projections of per enrollee incurred charges and costs based on the assumptions in Tables II.D4 and II.D6. Table II.D8 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.D7. The aggregate reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

*Actuarial Methodology***TABLE II.D7.—INCURRED CHARGES OR COSTS PER ENROLLEE: INTERMEDIATE ESTIMATES**

Year ending June 30,	All services	Physician	Outpatient hospital	Home health agency <sup>1</sup>	Group practice prepayment plan	Independent lab
<b>Aged:</b>						
1994	\$2,046.66	\$1,335.53	\$437.17	\$3.50	\$212.91	\$57.57
1995	2,293.42	1,477.00	494.36	4.03	259.26	58.75
1996	2,540.93	1,609.82	536.39	4.61	327.18	62.93
1997	2,785.73	1,735.90	590.26	5.32	384.79	69.46
1998	3,043.11	1,858.53	648.89	6.15	452.14	77.40
1999	3,343.16	1,980.44	738.46	7.13	530.89	86.24
2000	3,684.87	2,114.78	821.96	8.24	623.67	96.22
2001	4,022.06	2,267.11	904.93	9.52	732.77	107.73
2002	4,430.47	2,442.30	995.33	11.03	860.95	120.66
2003	4,894.91	2,639.96	1,094.76	12.78	1,011.56	135.85
2004	5,421.23	2,860.94	1,204.13	14.81	1,188.51	152.84
2005	6,014.04	3,104.06	1,324.42	17.16	1,396.42	171.96
<b>Disabled (excluding ESRD):</b>						
1994	1,711.39	1,160.67	456.03	0.00	47.52	47.17
1995	1,879.65	1,250.96	526.71	0.00	55.04	48.94
1996	2,068.45	1,336.94	610.43	0.00	72.48	48.60
1997	2,249.77	1,415.50	699.09	0.00	82.34	52.84
1998	2,417.32	1,481.24	786.25	0.00	90.57	56.26
1999	2,601.36	1,522.74	915.06	0.00	99.34	64.22
2000	2,809.99	1,587.33	1,041.94	0.00	109.23	71.49
2001	3,125.61	1,716.32	1,205.24	0.00	120.04	84.01
2002	3,419.26	1,826.68	1,384.36	0.00	132.02	96.00
2003	3,750.74	1,951.16	1,544.48	0.00	145.19	109.91
2004	4,123.27	2,069.25	1,748.38	0.00	159.68	125.96
2005	4,538.92	2,239.76	1,979.20	0.00	175.81	144.35

<sup>1</sup>See footnote 1 of Table II.D5.**TABLE II.D8.—INCURRED REIMBURSEMENT AMOUNTS: INTERMEDIATE ESTIMATES**

Year ending June 30,	Average enrollment [millions]	Reimbursement amounts	
		Per enrollee	Aggregate [millions]
Aged:			
1994	31.257	\$1,586.40	\$49,586
1995	31.569	1,784.66	56,340

*Technical Section***TABLE II.D8.—INCURRED REIMBURSEMENT AMOUNTS: INTERMEDIATE ESTIMATES**

Year ending June 30,	Average enrollment [millions]	Reimbursement amounts	
		Per enrollee	Aggregate [millions]
1996	31.862	1,984.02	63,215
1997	32.151	2,181.67	70,143
1998	32.375	2,389.71	77,367
1999	32.554	2,632.09	85,685
2000	32.757	2,892.15	94,738
2001	32.986	3,180.97	104,864
2002	33.157	3,511.39	116,427
2003	33.376	3,887.19	129,739
2004	33.642	4,313.03	145,099
2005	33.931	4,792.73	162,622
<b>Disabled (excluding ESRD):</b>			
1994	3.441	1,317.93	4,535
1995	3.695	1,452.23	5,366
1996	3.932	1,803.51	6,305
1997	4.179	1,749.46	7,311
1998	4.440	1,884.46	8,367
1999	4.688	2,032.21	9,527
2000	4.923	2,200.28	10,832
2001	5.143	2,455.57	12,629
2002	5.351	2,692.95	14,410
2003	5.552	2,990.91	16,439
2004	5.747	3,282.40	18,749
2005	5.933	3,569.02	21,353

**2. Estimates under the Intermediate 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 299I of Public Law 92-603). For analytical purposes, those enrollees suffering from ESRD who are also eligible as disability insurance beneficiaries are included in this section because their per enrollee costs are both higher and different in nature from those of most other disabled persons.

The estimates under the intermediate assumptions reflect the unique payment mechanism through which ESRD services are reimbursed under Medicare.

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Also, the estimates assume a continued increase in enrollment. The historical and projected enrollment and costs for SMI benefits are shown in Table II.D9.

**TABLE II.D9.—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
<b>Historical Data:</b>				
1974	4	8	\$48	\$91
1975	7	11	84	131
1976	11	13	137	183
1977	14	15	145	194
1978	16	16	163	231
1979	18	20	206	283
1980	19	22	235	299
1981	20	25	275	336
1982	22	26	317	387
1983	24	31	358	447
1984	27	34	388	476
1985	30	37	430	522
1986	32	40	455	562
1987	34	43	480	592
1988	36	46	546	673
1989	38	51	601	787
1990	40	56	640	908
1991	43	62	726	1,087
1992	46	68	850	1,259
1993	50	73	990	1,424
<b>Intermediate Estimates:</b>				
1994	54	77	1,093	1,526
1995	59	82	1,233	1,667
1996	63	86	1,406	1,842
1997	68	91	1,599	2,026
1998	73	95	1,798	2,212
1999	77	100	2,016	2,406
2000	82	104	2,261	2,620
2001	87	109	2,559	2,885
2002	91	113	2,890	3,178
2003	95	117	3,247	3,487
2004	100	121	3,645	3,829
2005	104	125	4,094	4,209

*Technical Section***3. Summary of Aggregate Reimbursement Amounts on a Cash Basis Under the Intermediate Assumptions**

Table II.D10 shows aggregate historical and projected reimbursement amounts on a cash basis under the intermediate 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.D10.—AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS**  
[In millions]

Fiscal Year <sup>1</sup>	Aged	Disabled [excluding ESRD]	Disabled ESRD and ESRD only	Total
Historical Data:				
1967	\$864	—	—	\$864
1968	1,390	—	—	1,390
1969	1,645	—	—	1,645
1970	1,879	—	—	1,879
1971	2,035	—	—	2,035
1972	2,255	—	—	2,255
1973	2,391	—	—	2,391
1974	2,541	\$191	\$142	2,874
1975	3,289	259	217	3,765
1976	4,042	343	287	4,672
T.O.	1,079	109	82	1,270
1977	5,013	494	360	5,867
1978	5,795	620	437	6,852
1979	6,940	785	534	8,259
1980	8,497	1,026	621	10,144
1981	10,370	1,280	695	12,345
1982	12,418	1,604	784	14,806
1983	14,783	1,817	887	17,487
1984	16,804	1,770	899	19,473
1985	19,077	1,793	938	21,808
1986	22,067	2,091	1,011	25,169
1987	26,350	2,456	1,131	29,937
1988	29,796	2,609	1,277	33,682
1989	32,748	2,678	1,441	36,867
1990	36,837	3,082	1,599	41,498
1991	40,198	3,487	1,829	45,514
1992	42,784	3,767	2,076	48,627
1993	45,731	4,294	2,384	52,409
1994	50,168	5,063	2,775	58,006

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**TABLE II.D10.—AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS**  
 [In millions]

Fiscal Year <sup>1</sup>	Aged	Disabled (excluding ESRD)	Disabled ESRD and ESRD only	Total
Intermediate Estimates:				
1995	56,454	5,427	2,842	64,723
1996	64,603	6,498	3,182	74,283
1997	71,329	7,486	3,544	82,359
1998	78,815	8,567	3,914	91,296
1999	87,279	9,765	4,322	101,366
2000	96,536	11,170	4,776	112,482
2001	106,912	12,929	5,343	125,184
2002	118,768	14,773	5,943	139,504
2003	132,474	16,865	6,566	155,925
2004	148,206	19,218	7,325	174,751

<sup>1</sup>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 1977-2004 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 the high cost and low cost alternatives were developed by examining the cash disbursements under the intermediate assumptions as a percentage of GDP. Beginning in the middle of CY 1995, the rate of growth of cash benefits under the low cost alternative as a percentage of the GDP is assumed to be 2 percent less than the rate of growth of the benefits under the intermediate assumptions as a percentage of the GDP. Similarly, the rate of growth of the cash benefits under the high cost alternative as a percentage of the GDP is assumed to be 2 percent more than the rate of growth of the cash benefits under the intermediate assumptions as a percentage of the GDP. Administrative expenses under the low cost and the high cost alternatives are projected based on their respective wage series growth. Based on the above



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methodology, cash disbursements as a percentage of the GDP were calculated for all three sets of assumptions and are displayed in Table II.D11.

**TABLE II.D11.—SUPPLEMENTARY MEDICAL INSURANCE CASH DISBURSEMENTS  
AS A PERCENT OF THE GROSS DOMESTIC PRODUCT FOR CALENDAR YEARS  
1994-2004<sup>1</sup>**

Calendar year	Intermediate Assumptions	Alternatives	
		Low Cost	High Cost
1994	0.90	0.90	0.90
1995	0.97	0.96	0.99
1996	1.04	1.01	1.10
1997	1.10	1.04	1.15
1998	1.16	1.07	1.23
1999	1.22	1.11	1.36
2000	1.29	1.15	1.43
2001	1.36	1.18	1.52
2002	1.43	1.22	1.64
2003	1.51	1.27	1.77
2004	1.59	1.31	1.91

<sup>1</sup> Disbursements are the sum of benefit payments and administrative expenses.

### III. APPENDICES

#### ***A. MEDICARE INCURRED DISBURSEMENTS AS A PERCENT OF GROSS DOMESTIC PRODUCT FROM CALENDAR YEAR 1994 TO 2069***

Medicare incurred disbursements as a percentage of GDP gives a relative measure of the size of the Medicare program compared to the general economy. For these purposes, incurred disbursements are the sum of the incurred benefit and administrative expenses. The projection of this relative measure of disbursements affords the public an idea of the relative financial resources that will be necessary to pay for Medicare services.

Table III.A1 shows estimated incurred disbursements for the HI and SMI programs under the intermediate assumptions expressed as a percentage of GDP, for selected years over the period 1994-2069. (The percentages for SMI are identical to the values in Table I.C4.) These incurred disbursements assume no change in current law for any specific program legislation or for any comprehensive health care reform. The 75-year projection 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 mid-1960's (known as the "baby boom") will reach retirement age and begin to receive benefits.

**Table III.A1.—HOSPITAL AND SUPPLEMENTARY MEDICAL INSURANCE INCURRED DISBURSEMENTS AS A PERCENT OF GROSS DOMESTIC PRODUCT<sup>1</sup>**

Calendar year	Disbursements as a percent of GDP		
	HI	SMI	Total
1994	1.56	0.93	2.49
1995	1.62	0.99	2.61
2000	1.87	1.30	3.17
2005	2.06	1.70	3.75
2010	2.23	2.27	4.50
2015	2.50	2.81	5.31
2020	2.83	3.18	6.01
2025	3.21	3.59	6.80
2030	3.57	3.92	7.49
2035	3.82	4.09	7.91
2040	3.97	4.08	8.05
2045	4.05	4.01	8.06
2050	4.10	3.97	8.07
2055	4.16	4.00	8.16
2060	4.25	4.12	8.37

*Appendices***Table III.A1.—HOSPITAL AND SUPPLEMENTARY MEDICAL INSURANCE INCURRED DISBURSEMENTS AS A PERCENT OF GROSS DOMESTIC PRODUCT<sup>1</sup>**

Calendar year	Disbursements as a percent of GDP		
	HI	SMI	Total
2005	4.36	4.23	8.59
2069	4.46	4.29	8.75

<sup>1</sup> Disbursements are the sum of benefit payments and administrative expenses.

For HI, program costs beyond the first 25-year projection period are based on the assumption that costs per unit of service will increase at the same rate as average hourly earnings increase. The associated aggregate disbursements are then represented as a percentage of GDP. For SMI, increases in the costs per enrollee during the initial 25-year period are assumed to gradually decline in the last 12 years to the same rate as GDP per capita and then to 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 Medicare disbursements as a percent of GDP are assumed to increase rapidly from 2.49 percent in 1994 to 7.91 percent in 2035 and then to increase gradually to 8.75 percent in 2069. After 2035, while Medicare disbursements as a percent of GDP increase more slowly, the HI percentage grows steadily while the SMI percentage decreases slightly to about 2050 and then increases again to 2069.

**B. 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 1995<sup>3</sup>**

**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.B1 summarizes the estimated actuarial status of the trust fund as of the end of the financing period for 1993 through 1994.

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<sup>3</sup>This statement appeared in the Federal Register on December 1, 1994. 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.

### Appendices

**TABLE III.B1.—ESTIMATED ACTUARIAL STATUS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND AS OF THE END OF THE FINANCING PERIODS, JAN. 1, 1993 - DEC. 31, 1994**

[In billions of dollars]

Financing Period Ending	Assets	Liabilities	Assets less Liabilities
Dec. 31, 1993	\$24.131	\$3.494	\$20.637
Dec. 31, 1994	\$19.100	\$4.557	\$14.543

#### 2. Monthly Actuarial Rate for Enrollees Age 65 and Older

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

The monthly actuarial rate for enrollees age 65 and older for CY 1995 was determined by projecting per-enrollee cost for the 12-month periods ending June 30, 1995 and June 30, 1996, 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, 1992, 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.B2. Those per-enrollee values are then adjusted to apply to a calendar year period. The projected values for financing periods from January 1, 1992, through December 31, 1995, are shown in Table III.B3.

## 1995 Financing Rates

**TABLE III.B2.—PROJECTION FACTORS<sup>1</sup>**  
**12-MONTH PERIODS ENDING JUNE 30 OF 1992-1996**  
 [In percent]

12-month period ending June 30,	Physicians' services		Outpatient hospital services	Home health agency services <sup>4</sup>	Group practice prepayment plans	Independent lab services
	Fees <sup>2</sup>	Residual <sup>3</sup>				
Aged:						
1992	-1.6	2.8	8.2	-14.2	14.5	7.8
1993	0.5	-1.5	12.8	63.2	15.7	7.3
1994	2.6	3.4	10.9	15.2	18.0	-5.7
1995	4.4	3.5	11.8	16.1	21.4	8.4
1996	3.0	4.4	11.8	15.3	18.4	8.5
Disabled:						
1992	-1.6	0.3	15.5	0.0	9.5	11.4
1993	0.5	4.1	17.2	0.0	13.3	5.3
1994	2.6	1.4	6.2	0.0	-3.5	-1.1
1995	4.4	1.4	12.7	0.0	19.6	7.6
1996	3.0	2.6	16.8	0.0	26.0	4.9

<sup>1</sup>All values are per enrollee.

<sup>2</sup>As recognized for payment under the program.

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

<sup>4</sup>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.B3.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER FINANCING PERIODS ENDING DECEMBER 31, 1992 THROUGH DECEMBER 31, 1995**

	Financing Periods			
	CY 1992	CY 1993	CY 1994	CY 1995
<b>Covered services (at level recognized):</b>				
Physicians' reasonable charges	\$51.40	\$52.71	\$56.45	\$60.84
Outpatient hospital and other institutions	15.72	17.56	19.55	21.86
Home health agencies	0.12	0.15	0.18	0.21
Group practice prepayment plans	7.02	8.21	9.84	11.79
Independent lab	2.39	2.40	2.43	2.64
<b>Total services</b>	<b>\$76.65</b>	<b>\$81.03</b>	<b>\$88.45</b>	<b>\$97.34</b>

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**TABLE III.B3.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER FINANCING PERIODS ENDING DECEMBER 31, 1992 THROUGH DECEMBER 31, 1995**

	Financing Periods			
	CY 1992	CY 1993	CY 1994	CY 1995
Cost-sharing:				
Deductible	-3.60	-3.60	-3.62	-3.63
Coinurance	-13.85	-14.68	-16.12	-17.82
Total benefits	\$59.20	\$62.75	\$68.71	\$75.89
Administrative expenses	1.98	1.99	1.99	2.06
Incurred expenditures	\$61.18	\$64.74	\$70.70	\$77.95
Value of interest	-2.20	-2.45	-2.28	-1.58
Contingency margin for projection error and to amortize the surplus or deficit	1.82	8.21	-6.62	-3.27
Monthly actuarial rate	\$60.80	\$70.50	\$61.80	\$73.10

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 1995 is \$77.95. The monthly actuarial rate of \$73.10 provides an adjustment of -\$1.58 for interest earnings and -\$3.27 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

## 1995 Financing Rates

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.B2). 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.B4.

**TABLE III.B4.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR DISABLED ENROLLEES FINANCING PERIODS ENDING DECEMBER 31, 1992 THROUGH DECEMBER 31, 1995**

	Financing Periods			
	CY 1992	CY 1993	CY 1994	CY 1995
Covered services (at level recognized):				
Physicians' reasonable charges	\$58.79	\$61.48	\$64.39	\$68.04
Outpatient hospital and other institutions	37.77	40.08	42.26	45.84
Home health agencies	0.00	0.00	0.00	0.00
Group practice prepayment plans	1.90	1.98	2.14	2.63
Independent lab	2.52	2.60	2.69	2.85
<b>Total services</b>	<b>\$100.98</b>	<b>\$106.12</b>	<b>\$111.48</b>	<b>\$119.36</b>
Cost-sharing:				
Deductible	-3.42	-3.42	-3.43	-3.44
Coinurance	-18.92	-19.91	-20.94	-22.47
<b>Total benefits</b>	<b>\$78.64</b>	<b>\$82.79</b>	<b>\$87.11</b>	<b>\$93.45</b>
Administrative expenses	2.64	2.63	2.53	2.53
<b>Incurred expenditures</b>	<b>\$81.28</b>	<b>\$85.42</b>	<b>\$89.64</b>	<b>\$95.98</b>
Value of interest	-2.41	-2.34	-1.80	-1.58
Contingency margin for projection error and to amortize the surplus or deficit	1.83	-0.18	-11.74	11.40
<b>Monthly actuarial rate</b>	<b>\$80.80</b>	<b>\$82.90</b>	<b>\$76.10</b>	<b>\$105.80</b>

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for CY 1995 is \$95.98. The monthly actuarial rate of \$105.80 provides an adjustment of -\$1.58 for interest earnings and a \$11.40 for a contingency margin. Based on current estimates, it appears that assets alone are not sufficient to cover the amount



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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.B2), and increases in physician fees as constrained by the program's physician fee schedule that began implementation January 1, 1992. Two alternative sets of assumptions and the results of those assumptions are shown in Table III.B5. 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.B5 are the same as in Table III.B2.

Table III.B5 indicates that, under the assumptions used in preparing this report, the monthly actuarial rates will result in an excess of assets over liabilities of \$13.088 billion by the end of December 1995. This amounts to 17 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 deficit of \$1.198 billion by the end of December 1995, which amounts to 1.4 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 \$26.283 billion by the end of December, 1995, which amounts to 38.4 percent of the estimated total incurred expenditures for the following year.

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Table N.B.5.—ACTUARIAL STATUS OF THE SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND UNDER THREE SETS OF ALTERNATIVE ASSUMPTIONS FOR FINANCING PERIODS THROUGH DECEMBER 31, 1995

	This projection			Low cost projection			High cost projection		
	12-Month			12-Month			12-Month		
	1994	1995	1996	1994	1995	1996	1994	1995	1996
Projection factors (in percent):									
Physician fees <sup>1</sup>									
Aged	2.6	4.4	3.0	2.0	2.4	0.9	3.2	6.4	5.1
Disabled	2.6	4.4	3.0	2.0	2.4	0.9	3.2	6.4	5.1
Utilization of physician services <sup>2</sup>									
Aged	3.4	3.5	4.4	1.8	1.1	1.9	5.0	5.9	7.0
Disabled	1.4	1.4	2.6	-1.5	-1.7	-0.1	4.2	4.5	5.3
Outpatient hospital services per enrollee									
Aged	10.9	11.8	11.8	5.9	6.3	6.7	15.8	17.3	18.9
Disabled	6.2	12.7	16.8	1.0	7.4	11.2	11.4	18.0	22.5
Actuarial status (in billions):									
Assets	\$24,131	\$19,100	\$18,994	\$24,131	\$22,739	\$26,397	\$24,131	\$15,238	\$7,601
Liabilities	3,494	4,557	5,906	1,211	2,070	3,114	5,819	7,102	8,799
Assets less liabilities	\$20,637	\$14,543	\$13,088	\$22,920	\$20,669	\$23,283	\$18,312	\$8,136	-\$1,198
Ratio of assets less liabilities to expenditures (in percent) <sup>3</sup>	33.6	21.1	17.0	39.7	33.2	38.4	28.0	10.7	-1.4

<sup>1</sup>As recognized for payment under the program.

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

<sup>3</sup>Ratio of assets less liabilities at the end of the year to the total incurred expenditures during the following year, expressed as a percent.

*Appendices***5. Premium Rate**

Section 4301 of OBRA '90 added section 1839(e)(1)(B)(v) to the Act, which provides that the monthly premium rate for 1995, for both aged and disabled enrollees, is \$46.10.

**C. GLOSSARY**

**Actuarial rates.** One half the expected 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 the Department of 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, which are paid from the SMI trust fund, include expenditures for contractors to determine costs of and make payments to providers as well as salaries and expenses of HCFA.

**Advisory Council on Social Security.** Prior to the enactment of the Social Security Independence and Program Improvements Act of 1994 (Public Law 103-296) on August 15, 1994, the Social Security Act provided for the appointment of an Advisory Council every 4 years to study and review the financial status of the OASDI and Medicare programs. The most recent Advisory Council was appointed on June 9, 1994, and is currently reviewing the financial status of the OASDI program. Under the provisions of Public Law 103-296, this is the last Advisory council to be appointed.

**Aged enrollee.** An individual, age 65 or over, who is enrolled in the SMI program.

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

**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.

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**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) The low cost alternative with relatively rapid economic growth, low inflation, and favorable (from the standpoint of program financing) demographic conditions.
- (2) The intermediate assumptions represent the Trustees best estimates of likely future economic and demographic conditions.
- (3) The high cost alternative 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. See also "Aged enrollee" and "Disabled enrollee."

**Benefit payments.** The amounts disbursed for covered services after the 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 six members, four of whom serve automatically by virtue of their positions in the Federal government: the Secretary of the Treasury, who is the Managing Trustee, the Secretary of Labor, the Secretary of HHS, and the Commissioner of Social Security. The other two members are appointed by the President and confirmed by the Senate to serve as public representatives. Stanford G. Ross and David M. Walker began serving 4-year terms that began on October 2, 1990. They have continued serving through the issuance of this report under the provision of the Social Security Act that allows a public representative whose term has expired to continue in the position until the earlier of the time at which a successor takes office or the Board's next annual

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report is issued. The Commissioner of Social Security became a member of the Board effective March 31, 1995, under Public Law 103-296, approved August 15, 1994. 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 group of goods and services. In this report, all references to the CPI relate to the CPI for Urban Wage Earners and Clerical Workers (CPI-W).

**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.** Services for which SMI pays, as defined and limited by statute. Covered services are provided for most physician services, care in

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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 2 years and who is enrolled in the SMI program.

**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).** 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 1995 began October 1, 1994 and will end September 30, 1995.

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**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).

**High cost alternative.** See "Assumptions."

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

**Hospital Insurance (HI).** The Medicare program which covers specified inpatient hospital services, posthospital skilled nursing, home health services, and hospice care for aged and disabled individuals who meet the eligibility requirements. Also known as Medicare Part A.

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

**Independent laboratories.** A free-standing clinical laboratory meeting conditions for participation in the Medicare program and billing through a carrier.

**Interest.** A payment for the use of money during a specified period.



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**Intermediary.** A private or public organization, under contract to HCFA, to determine costs of and make payments to providers for HI and certain SMI services.

**Intermediate assumptions.** See "Assumptions."

**Low cost alternative.** See "Assumptions."

**Medicare.** A nationwide, federally administered health insurance program authorized in 1965 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).** 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 considered in connection with the update factor for the physician fee schedule.

**Medicare Volume Performance Standard (MVPS).** A system for establishing goals for the rate of growth in expenditures for physicians' services.

**Old-Age, Survivors, and Disability Insurance (OASDI).** The Social Security programs which pay for (1) monthly cash benefits to retired-worker (old-age) beneficiaries and their spouses and children and to survivors of deceased insured workers (OASI) and (2) monthly cash benefits to disabled-worker beneficiaries and their spouses and children and for providing rehabilitation services to the disabled (DI).

**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.

**Part A.** The Medicare Hospital Insurance program.

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**Part B. The Medicare Supplementary Medical Insurance program.**

**Performance standard factor.** A legislated reduction to the volume and intensity factor of the MVPS.

**Provider.** Any organization, institution, or individual who provides health care services to the Medicare beneficiaries. Physicians, ambulatory surgical centers, and outpatient clinics are some of the providers of services covered under Medicare Part B.

**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.

**Social Security Act.** Public Law 74-271, enacted August 14, 1935 with subsequent amendments. The Social Security Act consists of 20 titles, of which four 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 and other Federal trusts 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 Medicare program which pays for 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. Also known as Part B.

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

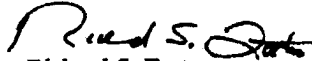
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**Term insurance.** A type of insurance which is in force for a specified period of time.

**Trust fund.** Separate accounts in the United States Treasury mandated by Congress whose assets may only be used for a specified purpose. For the SMI trust fund, monies not withdrawn for current benefit payments and administrative expenses are invested in interest-bearing Federal securities, as required by law; the interest earned is also deposited in the trust fund.

*Statement of Actuarial Opinion***D. STATEMENT OF ACTUARIAL OPINION**

It is my opinion that (1) the techniques and methodology used herein to evaluate the financial status of the Federal Supplementary Medical Insurance Trust Fund are based upon sound principles of actuarial practice and are generally accepted within the actuarial profession; and (2) the assumptions used and the resulting actuarial estimates are, in the aggregate, reasonable for the purpose of evaluating the financial status of the trust fund, taking into consideration the experience and expectations of the program.



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