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

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

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

[In thousands]

Total assets of the trust fund, beginning of period		$14,527,379
Revenue:		
Premiums from enrollees:		
Enrollees aged 65 and over	$10,740,743	
Disabled enrollees under age 65	1,066,445	
Total premiums		11,807,188
Transfers from general fund of the Treasury:		
Government contributions:		
Supplementary premiums of enrollees aged 65 and over	32,223,689	
Supplementary premiums of disabled enrollees under age 65	2,506,482	
Total Government contributions		34,730,170
Other		1,358
Interest:		
Interest on investments	1,634,279	
Interest on amounts of interfund transfers[1]	-6,804	
Total interest		1,627,475
Total revenue		48,166,191
Disbursements:		
Benefit payments		45,514,191
Administrative expenses:		
Treasury administrative expenses	4,043	
Salaries and expenses - SSA	252,295	
Salaries and expenses - HCFA	1,225,259	
Salaries and expenses Office of Secretary	15,433	

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

[In thousands]

Public Health Service	258	
Construction	515	
Policy and Research	2,357	
Pay Assessment Commission	581	
Office of Personnel Management expenses	93	
Physicians Payment Review	3,778	
Total administrative expenses		1,504,613
Total disbursements		47,018,804
Net addition to the trust fund		1,147,386
Total assets of the trust fund, end of period		15,674,765

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

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

The total assets of the trust fund amounted to $14,527 million on September 30, 1990. During FY 1991, total revenue amounted to $48,166 million, and total disbursements were $47,019 million. Total assets thus increased $1,147 million during the year to a total of $15,675 million on September 30, 1991.

Of the total revenue, $10,741 million represented premium payments by (or on behalf of) enrollees aged 65 and over and $1,066 million represented premium payments by (or on behalf of) disabled enrollees under age 65. Total premium payments amounted to $11,807 million, a increase of 2.7 percent over the amount of $11,494 million for the preceding year. This increase in premiums from enrollees resulted primarily from: (1) the increase from $28.60 to $29.90 per month in the standard premium rate that became effective on January 1, 1991 and (2) the growth of the number of persons enrolled in the SMI program.

Contributions received from the general fund of the treasury amounted to $34,730 million, which accounted for 72.1 percent of total revenue. This amount consisted of $32,224 million representing contributions relating to premiums paid by enrollees aged 65 and over, and $2,506 million representing contributions relating to the premiums paid by disabled enrollees under age

65. The remaining $1,629 million of revenue consisted almost entirely of interest on the investments of the trust fund.

Of the $47,019 million in total disbursements, $45,514 million represented: (1) benefits paid directly from the trust fund for health services covered under Title XVIII of the Social Security Act and (2) costs of experiments and demonstration projects in providing health care services. The remaining $1,505 million of disbursements was for administrative expenses. Administrative expenses are allocated and charged directly to each of the four trust funds — old age and survivors insurance (OASI), disability insurance (DI), HI, and SMI — on the basis of provisional estimates. Similarly, the expenses of administering other programs of HCFA are also allocated and charged directly to the general fund of the Treasury on a provisional basis. Periodically, as actual experience develops and is analyzed, the allocations of administrative expenses and costs of construction for prior periods are adjusted by interfund transfers. This adjustment includes transfers between the HI and SMI trust funds and the program management general fund account, with appropriate interest allowances.

In Table II.C.2, the experience with respect to actual amounts of enrollee premiums, Government contributions, and benefit payments in FY 1991 is compared with the estimates for FY 1991 which appeared in the 1990 and 1991 annual reports.

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

[Dollar amounts in millions]

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

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

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

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

	September 30, 1990	September 30, 1991
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of indebtedness:	$460,590,000.00	$0.00
Bonds:		
8 1/8-percent, 1994-2006	0.00	3,947,379,000.00
8 3/8-percent, 2001	444,270,000.00	444,270,000.00
8 3/4-percent, 1992-2005	7,645,809,000.00	6,715,745,000.00
9 1/4-percent, 1992-93	998,054,000.00	396,568,000.00
9 3/4-percent, 1995	115,003,000.00	115,003,000.00
10 3/8-percent, 1994-2000	1,661,292,000.00	1,661,292,000.00
10 3/4-percent, 1994-98	809,231,000.00	809,231,000.00
13 1/4-percent, 1994-97	1,033,983,000.00	1,033,983,000.00
13 3/4-percent, 1994-99	1,117,677,000.00	1,117,677,000.00
Total investments in public-debt obligations	14,285,909,000.00	16,241,148,000.00
Undisbursed balance[2]	241,469,924.28	-566,382,643.54
Total assets	14,527,378,924.28	15,674,765,356.46

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

The net increase in the par value of the investments held by the fund during FY 1991 amounted to $1,955 million. New securities at a total par value of $51,589 million were acquired during the fiscal year through the investment of revenue and reinvestment of funds made available from the redemption of securities. The par value of securities redeemed during the year was $48,651 million. Included in these amounts is $47,038 million in certificates of indebtedness that were acquired, and $47,499 million in certificates of indebtedness that were redeemed, within the fiscal year.

The effective annual rate of interest earned by the assets of the SMI trust fund for the 12 months ending on June 30, 1991 was 9.6 percent. This period is used because interest on special issues is paid semiannually on June 30 and December 31. The interest rate on special issues purchased by the trust fund in June 1991 was 8 1/8 percent, payable semiannually.

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

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

a. Introduction

Estimates under alternative II assumptions for aged and disabled enrollees — excluding disabled persons with end-stage renal disease (ESRD) — are prepared by calculating allowed charges incurred per enrollee in a recent year (the 12-month period ending June 30, 1990, for this report) and projecting these charges through the estimating period. The per enrollee charges are then converted to reimbursement amounts by subtracting the per enrollee values of the deductible and coinsurance. Aggregate reimbursement amounts are calculated by multiplying the per enrollee reimbursement amounts by the projected enrollment. In order to estimate cash disbursements, an allowance is made for the delay between receipt of service and payment therefor.

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

b. Establishing a Projection Base

(1) Physician Services

Reimbursement amounts for physician services (and smaller amounts for other services such as laboratory tests, DME and supplies) are paid through organizations acting for HCFA, referred to as "carriers." The carriers determine whether billed services are covered under the program and determine the allowed charges for the services. A record of the amount reimbursed after reduction for coinsurance and the deductible is transmitted to the central office.

These records for 0.1 percent of aged beneficiaries and 5.0 percent of disabled beneficiaries are tabulated by date of service, thus providing a data base which is constructed on an incurred basis. Certain minor adjustments are made to the tabulated sample data to correct for biases and random fluctuations

inherent in the sampling process. Having the data on an incurred basis is necessary to meet the statutory requirement that the program be financed on this basis.

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

(2) Institutional and Other Services

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

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

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

Group practice prepayment plans, which are not reimbursed through carriers, are reimbursed directly by HCFA on a reasonable cost or on a capitation basis. Comprehensive data on such direct reimbursements are available on a cash basis. Certain approximations must be made to allocate expenses to the period when services were rendered.

(3) Summary of Historical Data

Table II.D.1 summarizes the incurred reimbursement amounts per enrollee for the various services for each of the 12-month periods ending June 30, through 1990. Also shown are average enrollment figures for these years. In order to analyze the historical trends in prices and use of services, these reimbursement amounts are converted to the allowed charges or reasonable costs on which reimbursement was based. This process is necessary largely because the fixed deductible becomes a smaller percentage of charges each year and thus causes reimbursement to rise faster than charges or costs. Table II.D.2 shows the incurred charges or costs per enrollee corresponding to the reimbursement values shown in Table II.D.1.

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

Year ending June 30,	Average enrollment [millions]	All services	Physician	Outpatient hospital	Home health agency[1]	GPPP[2]	Independent lab
Aged:							
1967	17.750	$62.51	$59.12	$1.41	$0.79	$0.89	$0.30
1968	18.038	80.06	74.47	2.40	1.49	1.35	0.35
1969	18.833	93.74	85.67	4.21	1.92	1.54	0.40
1970	19.312	99.91	90.03	5.91	1.99	1.50	0.48
1971	19.664	106.25	95.05	7.53	1.67	1.40	0.60
1972	20.043	114.22	101.63	8.55	1.60	1.66	0.78
1973	20.428	122.39	107.98	9.43	2.17	1.87	0.94
1974	20.988	135.24	117.48	12.18	2.03	2.35	1.20
1975	21.504	161.10	136.28	16.28	3.83	3.07	1.64
1976	22.089	189.46	156.27	22.10	5.20	3.86	2.03
1977	22.604	222.21	179.30	29.49	6.53	4.42	2.47
1978	23.133	255.02	207.05	34.22	6.81	4.02	2.92
1979	23.693	290.11	233.99	41.08	6.86	4.87	3.31
1980	24.287	343.47	277.24	47.54	7.58	7.05	4.06
1981	24.827	407.72	328.14	57.02	8.04	9.13	5.39
1982	25.363	465.28	381.02	66.35	0.52	10.92	6.47
1983	25.873	558.61	456.24	80.74	0.77	13.52	7.34
1984	26.433	636.18	512.88	96.15	0.99	16.85	9.31
1985	26.914	684.27	536.73	111.77	1.05	19.62	15.10
1986	27.453	784.02	596.01	133.87	1.19	31.69	21.26
1987	28.013	906.49	672.56	164.69	0.98	42.64	25.62
1988	28.467	1,022.30	741.93	187.25	1.55	61.48	30.09
1989	28.870	1,119.37	801.29	206.15	1.53	73.36	35.04
1990	29.311	1,226.85	880.83	213.76	2.80	87.32	42.14

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

Year ending June 30,	Average enrollment [millions]	All services	Physician	Outpatient hospital	Home health agency[1]	GPPP[2]	Independent lab
Disabled (excluding ESRD):							
1974	1.638	118.07	97.59	15.27	3.46	1.09	0.66
1975	1.817	150.74	125.62	18.61	3.58	1.87	1.06
1976	2.019	180.08	148.31	22.98	5.12	2.20	1.47
1977	2.231	222.06	174.81	38.04	4.79	2.42	2.00
1978	2.423	258.02	202.91	44.49	5.54	2.48	2.60
1979	2.563	303.61	240.74	51.67	5.96	2.06	3.18
1980	2.644	364.04	288.20	61.62	6.08	4.31	3.83
1981	2.691	434.97	340.14	77.70	7.21	5.23	4.69
1982	2.690	513.77	394.72	106.93	0.00	6.25	5.87
1983	2.632	625.90	485.07	125.99	0.00	7.54	7.30
1984	2.597	673.18	529.21	126.67	0.00	8.33	8.97
1985	2.595	706.49	553.05	130.43	0.00	9.34	13.67
1986	2.632	774.04	593.48	148.77	0.00	12.75	19.04
1987	2.680	859.85	657.25	184.17	0.00	16.20	22.23
1988	2.731	925.25	683.62	195.43	0.00	21.84	24.36
1989	2.771	974.75	721.29	201.02	0.00	25.42	27.02
1990	2.813	1,055.83	776.14	218.21	0.00	29.85	31.63

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

[2]Group practice prepayment plan

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

Year ending June 30,	Average enrollment [millions]	All services	Physician	Outpatient hospital	Home health agency[1]	GPPP[2]	Independent lab
Aged:							
1967	17.750	$108.58	$102.70	$2.45	$1.37	$1.54	$0.52
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	163.99	14.79	3.02	2.94	1.47
1974	20.988	205.27	178.10	19.07	2.54	3.68	1.88
1975	21.504	237.64	201.08	24.75	4.66	4.66	2.49
1976	22.089	273.07	225.30	32.85	6.18	5.73	3.01

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

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

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

[2]Group practice prepayment plan

c. Per Enrollee Increases

(1) Physician Services

Per enrollee charges for physician services are affected by a variety of factors. One factor, increase in average charge per service, can be identified explicitly. Others can be recognized only by the fact that the increase in the average charge per service does not explain all of the increase in per enrollee charges year-to-year.

The increase in the average charge per service is one of the most important factors creating the increase in charges per enrollee. The physician fee component of the Consumer Price Index (CPI) provides an approximation of the historical increases in submitted charge per service. Increases in this index are shown in the first column of Table II.D.3.

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

[In percent]

Year ending June 30,	Increase due to price changes		Residual factors	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
Aged:				
1967	7.6	—	—	—
1968	5.9	4.8	10.6	15.9
1969	6.2	4.7	6.2	11.2
1970	6.7	3.9	0.4	4.3
1971	7.5	4.5	0.3	4.8
1972	5.2	3.9	2.0	6.0
1973	2.6	2.0	5.0	7.1
1974	5.0	3.2	5.4	8.8
1975	12.8	8.9	3.6	12.8
1976	11.4	8.2	3.5	12.0
1977	10.2	9.0	3.3	12.6
1978	8.9	9.0	4.3	13.7
1979	8.6	7.8	3.6	11.7
1980	11.5	8.6	7.6	16.8
1981	11.1	7.7	8.3	16.6
1982	9.9	10.8	5.6	17.0
1983	8.2	8.9	10.0	19.8
1984	7.5	7.2	4.2	11.7
1985	6.0	0.8	3.4	4.2
1986	6.7	0.3	10.0	10.3

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

[In percent]

Year ending June 30,	Increase due to price changes		Residual factors	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
1987	7.5	5.4	6.3	12.0
1988	7.2	3.1	7.2	10.5
1989	7.4	1.4	5.2	6.7
1990	7.1	1.0	9.7	10.8
Disabled (excluding ESRD):				
1974	5.0	—	—	—
1975	12.8	8.9	14.3	24.5
1976	11.4	8.2	7.6	16.4
1977	10.2	9.0	6.2	15.7
1978	8.9	9.0	5.5	15.0
1979	8.6	7.8	8.8	17.3
1980	11.5	8.6	9.0	18.3
1981	11.1	7.7	8.4	16.7
1982	9.9	10.8	5.4	16.8
1983	8.2	8.9	13.0	23.1
1984	7.5	7.2	1.7	9.0
1985	6.0	0.8	3.5	4.3
1986	6.7	0.3	6.5	6.8
1987	7.5	5.4	4.5	10.1
1988	7.2	3.1	1.3	4.4
1989	7.4	1.4	3.0	4.4
1990	7.1	1.0	7.5	8.6

Bills submitted to the carriers during a specified period, the fee-screen year, are subject by statute to certain limitations on the level of fees to be allowed by the program for reimbursement purposes. The fee-screen-year period has changed over the history of the program. For 1984 and earlier, the fee-screen year was the 12-month period ending June 30. Beginning with 1987, the fee-screen year is on the calendar-year basis. Fee-screen years 1985 and 1986 were each 15-month periods allowing for the transition of the fee-screen years from the 12-month periods ending June 30 to the 12-month periods ending December 30. The fee level allowed for a particular service by a physician is subject to reduction if it exceeds the median charge that the physician assessed for the same service in the base period, the 12-month period ending 6 months prior to the beginning of the fee-screen year. This median charge is called the "customary charge." Fees are subject to further reduction if they exceed the

prevailing charges for the locality. The prevailing charge is defined as the 75th percentile of customary charges for a particular service in a particular locality. Since July 1, 1975, the rate of increase in prevailing charges has been limited further by the application of the Medicare Economic Index. The customary and prevailing charge limits maintained by the carriers are called "fee screens." Allowed charges are charges after they have been reduced by the fee screens and are the charges on which reimbursement is based.

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

Certain services included with the physician services are not subject to the same fee-screen reduction process as described above. Beginning July 1, 1984 a unique fee schedule was established for laboratory tests performed in physician offices and independent laboratories. Since that time other unique fee schedules or reimbursement mechanisms have been established for other services. The list of the services includes radiology, anesthesiology, certified registered nurse anesthetists, and 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.D.1 through II.D.9 will be displayed for the same 12-month basis for all years. This basis will be the 12-month periods ending June 30.

The average reduction in submitted fees has increased almost every year due both to administrative actions and to differentials in the rate of increase in fees between the period in which the fee screens are established and the period in which the screens are applied. The result is that the net increase in per enrollee charges due to price changes (i.e., the increase in fee levels allowed for reimbursement purposes) has been less than the increase in submitted fees. The second column of Table II.D.3 shows this increase in per enrollee charges due to price changes.

Technical

Per capita charges also have increased each year as a result of a number of possible factors including more physician visits per enrollee, the aging of the Medicare enrollment, greater use of specialists and more expensive techniques, and certain administrative actions. The third column of Table II.D.3 shows the increases in charges per enrollee resulting from these residual causes. Because the measurement of increased allowed charges per service is subject to error, this error is included implicitly under residual causes.

The last column of Table II.D.3 shows the total increases in charges per enrollee for physician services. It includes the effects of all the items discussed above.

Projected increases in total allowed charges per enrollee are shown in Table II.D.4. It compares with the corresponding historical data shown in Table II.D.3. Column 1 of Table II.D.4 shows the projected increases in the physician fee component of the CPI in each of the years ending June 30, 1991 through June 30, 2002. It represents an estimate of projected increases in the charges for all physician services (not only Medicare services). Column 2 shows the projected net increases in allowed charges, and column 3 shows the increases due to residual causes.

TABLE II.D.4.—COMPONENTS OF INCREASES IN TOTAL ALLOWED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: ESTIMATES

[In percent]

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

TABLE II.D.4.—COMPONENTS OF INCREASES IN TOTAL ALLOWED CHARGES PER ENROLLEE FOR PHYSICIAN SERVICES: ESTIMATES

[In percent]

Year ending June 30,	Increase due to price changes		Residual factors	Total increase in allowed charges per enrollee
	Increase in physician fee component of CPI	Net increase in allowed fees		
Disabled (excluding ESRD):				
1991	6.9	-1.6	6.8	5.1
1992	5.7	-0.3	11.3	11.0
1993	5.8	1.7	5.9	7.7
1994	6.6	0.7	6.9	7.6
1995	7.2	0.8	7.2	8.1
1996	7.4	1.3	9.3	10.7
1997	7.1	1.6	7.9	9.6
1998	7.1	1.8	7.1	9.0
1999	7.0	1.9	7.1	9.1
2000	7.3	2.2	7.0	9.4
2001	6.5	2.4	6.9	9.5
2002	6.2	2.5	6.9	9.6

(2) Institutional and Other Services

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

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

[In percent]

Year ending June 30,	Outpatient hospital	Home health agency[1]	Group practice prepayment plan	Independent lab
Aged:				
1968	58.8	76.6	41.6	9.6
1969	74.0	27.3	13.3	12.3
1970	39.3	2.9	-2.8	20.3
1971	26.1	-16.7	-7.9	23.4

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

[In percent]

Year ending June 30,	Outpatient hospital	Home health agency[1]	Group practice prepayment plan	Independent lab
1972	12.0	-5.7	16.7	27.4
1973	11.0	21.3	14.0	21.5
1974	28.9	-15.9	25.2	27.9
1975	29.8	83.5	26.6	32.4
1976	32.7	32.6	23.0	20.9
1977	30.7	23.0	12.2	19.6
1978	14.2	2.8	-10.4	16.1
1979	18.4	-0.6	19.4	12.0
1980	13.9	8.8	42.4	20.7
1981	18.1	4.4	27.7	30.8
1982	16.5	-94.1	19.8	20.2
1983	20.4	48.1	22.4	12.2
1984	18.0	28.6	23.5	25.7
1985	16.2	6.1	16.4	25.6
1986	19.0	13.3	60.4	40.7
1987	22.1	-17.6	33.5	20.4
1988	13.9	59.2	44.5	18.6
1989	9.8	-1.9	17.9	16.1
1990	3.6	85.6	19.0	21.0
Disabled (excluding ESRD):				
1975	17.6	0.0	65.9	55.6
1976	22.0	41.2	16.5	37.0
1977	62.3	-8.3	7.6	33.6
1978	15.9	14.6	1.5	28.7
1979	14.6	6.3	-17.9	20.7
1980	17.7	0.6	106.7	18.9
1981	24.7	17.4	19.9	21.3
1982	37.7	-100.0	19.6	25.2
1983	16.8	0.0	19.5	23.3
1984	0.2	0.0	10.2	22.4
1985	3.2	0.0	12.4	19.3
1986	13.6	0.0	35.9	39.1
1987	9.7	0.0	26.3	16.7
1988	19.6	0.0	35.4	10.7
1989	1.8	0.0	15.2	10.7
1990	9.6	0.0	17.5	17.8

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

TABLE II.D.6.—INCREASES IN RECOGNIZED CHARGES AND COSTS PER ENROLLEE FOR INSTITUTIONAL AND OTHER SERVICES: ESTIMATES

[In percent]

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

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

d. Projected Charges and Costs

Table II.D.7 shows projections of per enrollee incurred charges and costs based on the assumptions in Tables II.D.4 and II.D.6. Table II.D.8 shows the total reimbursement amounts per enrollee that result from subtracting the average amounts of copayment per enrollee from the total covered charges in

Technical

Table II.D.7. The aggregate reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

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

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

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

TABLE II.D.8.—INCURRED REIMBURSEMENT AMOUNTS: ESTIMATES

Year ending June 30,	Average enrollment [millions]	Reimbursement amounts	
		Per enrollee	Aggregate [millions]
Aged:			
1991	29.792	1,319.48	39,310
1992	30.266	1,529.54	46,293
1993	30.701	1,712.48	52,575
1994	31.106	1,905.10	59,260
1995	31.467	2,131.12	67,060
1996	31.790	2,397.51	76,217
1997	32.056	2,696.72	86,446
1998	32.255	3,036.80	97,952
1999	32.412	3,423.64	110,967
2000	32.580	3,867.62	126,007
2001	32.767	4,375.47	143,371
2002	32.957	4,955.76	163,327
Disabled (excluding ESRD):			
1991	2.884	1,138.70	3,284
1992	3.017	1,274.44	3,845
1993	3.206	1,393.01	4,466
1994	3.397	1,529.00	5,194
1995	3.576	1,687.36	6,034
1996	3.743	1,914.51	7,166
1997	3.901	2,136.63	8,335
1998	4.059	2,369.55	9,618
1999	4.224	2,634.94	11,130
2000	4.393	2,935.35	12,895
2001	4.558	3,274.68	14,926
2002	4.730	3,656.66	17,296

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

Certain persons suffering from ESRD have been eligible to enroll for SMI coverage since July 1973 (under Section 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.

Technical

The alternative II estimates reflect the unique payment mechanism through which ESRD services are reimbursed under Medicare. Also, the estimates assume a continued increase in enrollment. The historical and projected enrollment and costs for SMI benefits are shown in Table II.D.9.

TABLE II.D.9.—ENROLLMENT AND INCURRED REIMBURSEMENT FOR END-STAGE RENAL DISEASE

Year ending	Average enrollment [thousands]		Reimbursement [millions]	
June 30,	Disabled ESRD	ESRD only	Disabled ESRD	ESRD only
1974	4	8	$46	$91
1975	7	11	84	131
1976	11	13	137	163
1977	14	15	181	194
1978	16	16	231	231
1979	18	20	262	290
1980	19	23	303	368
1981	20	25	340	434
1982	22	27	374	483
1983	24	31	411	545
1984	27	34	369	493
1985	30	37	399	539
1986	32	40	431	582
1987	34	44	470	630
1988	36	48	509	719
1989	38	53	546	817
1990	39	58	587	915
1991	42	63	664	1032
1992	44	67	730	1126
1993	47	71	795	1229
1994	49	74	863	1333
1995	51	78	933	1441
1996	53	81	1013	1561
1997	55	83	1101	1692
1998	56	86	1190	1826
1999	57	88	1286	1965
2000	59	89	1388	2119
2001	59	91	1501	2285
2002	60	92	1632	2493

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

Table II.D.10 shows aggregate historical and projected reimbursement amounts on a cash basis under alternative II assumptions, by type of beneficiary. The difference between reimbursement amounts on a cash basis

and incurred reimbursement amounts results from the lag between the time of service and the time of payment.

TABLE II.D.10.—AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS

[In millions]

Fiscal Year[1]	Aged	Disabled [excluding ESRD]	Disabled ESRD and ESRD only	Total
Historical Data:				
1967	$664	—	—	$664
1968	1,390	—	—	1,390
1969	1,645	—	—	1,645
1970	1,979	—	—	1,979
1971	2,035	—	—	2,035
1972	2,255	—	—	2,255
1973	2,391	—	—	2,391
1974	2,537	$193	$144	2,874
1975	3,289	259	217	3,765
1976	4,037	346	289	4,672
T.Q.	1,078	109	82	1,269
1977	5,005	491	371	5,867
1978	5,785	616	451	6,852
1979	6,929	781	549	8,259
1980	8,485	971	688	10,144
1981	10,362	1,197	786	12,345
1982	12,404	1,497	905	14,806
1983	14,783	1,735	969	17,487
1984	16,803	1,772	898	19,473
1985	19,080	1,798	930	21,808
1986	22,070	2,069	1,030	25,169
1987	26,353	2,430	1,154	29,937
1988	29,799	2,606	1,277	33,682
1989	32,751	2,727	1,389	36,867
1990	36,840	3,092	1,566	41,498
1991	40,200	3,524	1,790	45,514
Estimates:				
1992	47,038	3,918	1,894	52,850
1993	53,358	4,549	2,051	59,958
1994	60,341	5,300	2,227	67,868
1995	68,344	6,193	2,411	76,948
1996	77,613	7,303	2,612	87,528
1997	88,016	8,493	2,829	99,338

TABLE II.D.10.—AGGREGATE REIMBURSEMENT AMOUNTS ON A CASH BASIS

[In millions]

Fiscal Year[1]	Aged	Disabled [excluding ESRD]	Disabled ESRD and ESRD only	Total
1998	99,725	9,812	3,056	112,593
1999	113,037	11,356	3,294	127,687
2000	128,388	13,151	3,555	145,094
2001	146,096	15,226	3,844	165,166

[1]For 1967 through 1976, fiscal years cover the interval from July 1 through June 30; the three month interval from July 1, 1976, through September 30, 1976, is labeled "T.Q.," the transition quarter; fiscal years 1977-2001 cover the interval from October 1 through September 30.

4. Administrative Expenses

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

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

Cash disbursements (benefit payments and administrative expenses) for alternative I and III assumptions were developed by examining the alternative II cash disbursements as a percentage of GDP. Alternative I and III cash disbursements are assumed to be the same as alternative II through CY 1992. Beginning in CY 1993, the rate of growth of the alternative I cash benefits as a percentage of the GDP is assumed to be 2 percent less than the rate of growth of the alternative II benefits as a percentage of the GDP. Similarly, the rate of growth of the alternative III cash benefits as a percentage of the GDP is assumed to be 2 percent more than the rate of growth of the alternative II cash benefits as a percentage of the GDP. Administrative expenses for alternatives I and III are projected based on the same percentage of the total benefits as alternative II. Based on the above methodology, cash disbursements as a percentage of the GDP were calculated for all three alternatives and are displayed in Table II.D.11.

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

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

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

III. APPENDICES

A. STATEMENT OF ACTUARIAL ASSUMPTIONS AND BASES EMPLOYED IN DETERMINING THE MONTHLY ACTUARIAL RATES AND THE MONTHLY PREMIUM RATE FOR THE SUPPLEMENTARY MEDICAL INSURANCE PROGRAM BEGINNING JANUARY 1992 [1]

1. Actuarial Status of the Supplementary Medical Insurance Trust Fund

Under the law, the starting point for determining the monthly premium is the amount that would be necessary to finance the SMI program on an incurred basis; that is, the amount of income that would be sufficient to pay for services furnished during that year (including associated administrative costs) even though payment for some of these services will not be made until after the close of the year. The portion of income required to cover benefits not paid until after the close of the calendar year is added to the trust fund and used when needed.

The rates are established prospectively and are therefore subject to projection error. Additionally, legislation enacted after the financing has been established, but effective for the period for which the financing has been set, may affect program costs. As a result, the income to the program may not equal incurred costs. Therefore, trust fund assets should be maintained at a level that is adequate to cover a moderate degree of variation between actual and projected costs in addition to the amount of incurred but unpaid expenses. Table III.A.1 summarizes the estimated actuarial status of the trust fund as of the end of the financing period for 1990 through 1991.

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

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

[In millions of dollars]

Financing Period Ending	Assets	Liabilities	Assets less liabilities
Dec. 31, 1990	$15,482	$5,061	$10,421
Dec. 31, 1991	$17,933	$5,798	$12,135

2. Monthly Actuarial Rate for Enrollees Age 65 and Older

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

The monthly actuarial rate for enrollees age 65 and older for CY 1992 was determined by projecting per-enrollee cost for the 12-month periods ending June 30, 1992 and June 30, 1993, by type of service. Although the actuarial rates are now applicable for calendar years, projections of per-enrollee costs were determined on a July to June period, consistent with the July annual fee screen update used for benefits prior to the passage of section 2306(b) of Pub. L. 98-369. The values for the 12-month period ending June 30, 1989, were established from program data. Subsequent periods were projected using a combination of program data and data from external sources. The projection factors used are shown in Table III.A.2. Those per-enrollee values are then adjusted to apply to a calendar year period. The projected values for financing periods from January 1, 1989, through December 31, 1992, are shown in Table III.A.3.

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

[In percent]

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

[1]All values are per enrollee.

[2]The fee and residual values do not include the impacts of the resource based relative value scale (RBRVS) fee schedule which will be effective January 1, 1992. While the RBRVS fee schedule has an impact on both the fee and residual values, the impacts are offsetting producing no net impact.

[3]As recognized for payment under the program.

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

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

TABLE III.A.3.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER FINANCING PERIODS ENDING DECEMBER 31, 1989 THROUGH DECEMBER 31, 1992

	Financing Periods			
	CY 1989	CY 1990	CY 1991	CY 1992
Covered services (at level recognized):				
Physicians' reasonable charges	$45.21	$49.03	$53.26	$57.34
Outpatient hospital and other institutions	12.01	12.98	14.24	16.18
Home health agencies	0.09	0.13	0.14	0.15
Group practice prepayment plans	4.34	5.17	6.13	7.16

TABLE III.A.3.—DERIVATION OF MONTHLY ACTUARIAL RATE FOR ENROLLEES AGE 65 AND OVER FINANCING PERIODS ENDING DECEMBER 31, 1989 THROUGH DECEMBER 31, 1992

	Financing Periods			
	CY 1989	CY 1990	CY 1991	CY 1992
Independent lab	1.68	2.00	2.39	2.86
Total services	$63.33	$69.31	$76.16	$83.69
Cost-sharing:				
Deductible	-2.72	-3.03	-3.41	-3.48
Coinsurance	-11.94	-13.15	-14.03	-15.24
Total benefits	$48.67	$53.13	$58.72	$64.97
Administrative expenses	1.96	1.90	1.94	2.02
Incurred expenditures	$50.63	$55.03	$60.66	$66.99
Value of interest	-1.14	-1.81	-2.15	-2.08
Contingency margin for projection error and to amortize the surplus or deficit	6.31	3.98	4.09	-4.11
Monthly actuarial rate	$55.80	$57.20	$62.60	$60.80

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

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

3. Monthly Actuarial Rate for Disabled Enrollees

Disabled enrollees are those persons enrolled in SMI because of entitlement (before age 65) to disability benefits for more than 24 months or because of entitlement to Medicare under the end-stage renal disease program. Projected monthly costs for disabled enrollees (other than those suffering from end-stage renal disease) are prepared in a fashion exactly parallel to projection for the aged, using appropriate actuarial assumptions (see Table III.A.2). Costs for the end-stage renal disease program are projected differently because of the different nature of services offered by the program. The combined results for all disabled enrollees are shown in Table III.A.4.

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

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

The projected monthly rate required to pay for one-half of the total of benefits and administrative costs for disabled enrollees for CY 1992 is $80.01. The monthly actuarial rate of $80.80 provides an adjustment of -$0.80 for interest earnings and a $1.59 for a contingency margin. Based on current estimates, it appears that assets alone are not sufficient to cover the amount of incurred but unpaid expenses and to provide for a moderate degree of variation between actual and projected costs. Thus, a positive contingency margin is needed to build assets to more appropriate levels.

4. Sensitivity Testing

Several factors contribute to uncertainty about future trends in medical care costs. In view of this, it seems appropriate to test the adequacy of the rates announced here using alternative assumptions. The most unpredictable factors that contribute significantly to future costs are outpatient hospital costs, physician residual (as defined in Table III.A.2), and increases in physician fees as constrained by the program's physician fee schedule that is to be implemented beginning January 1, 1992 and by the program's economic index. Two alternative sets of assumptions and the results of those assumptions are shown in Table III.A.5. One set represents increases that are lower and is, therefore, more optimistic than the current estimate. The other set represents increases that are higher and is, therefore, more pessimistic than the current version. The values for the alternative assumptions were determined from a study on the average historical variation between actual and projected increases in the respective increase factors. All assumptions not shown in Table III.A.5 are the same as in Table III.A.2.

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

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

	This projection			Low cost projection			High cost projection		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1991	1992	1993	1991	1992	1993	1991	1992	1993
Projection factors (in percent):									
Physician fees[1]									
Aged	-1.9	-1.3	1.2	-2.7	-2.3	-0.7	-1.1	-0.2	3.0
Disabled	-1.9	-1.3	1.2	-2.7	-2.3	-0.7	-1.1	-0.2	3.0
Utilization of physician services[2]									
Aged	11.0	9.7	6.5	9.5	5.9	2.6	12.5	13.5	10.4
Disabled	10.5	6.9	5.2	7.8	3.6	3.0	13.2	10.3	7.5
Outpatient hospital services per enrollee									
Aged	6.7	12.5	14.7	2.2	9.8	10.4	11.2	15.2	19.0
Disabled	7.1	7.7	11.5	0.9	1.1	8.7	13.3	14.4	14.4
	As of December 31,			As of December 31,			As of December 31,		
	1990	1991	1992	1990	1991	1992	1990	1991	1992
Actuarial status (in millions):									
Assets	$15,482	$17,933	$15,518	$15,482	$20,455	$17,727	$15,482	$15,274	$13,186
Liabilities	5,061	5,798	6,297	3,639	4,170	4,356	6,506	7,465	8,323
Assets less liabilities	$10,421	$12,135	$9,221	$11,843	$16,285	$13,371	$8,976	$7,809	$4,863
Ratio of assets less liabilities to expenditures (in percent)[3]	21.2	22.1	15.1	25.5	32.6	24.5	17.3	12.9	7.1

[1] As recognized for payment under the program.

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

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

5. Premium Rate

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

B. GLOSSARY

Accrual basis. An incurred basis.

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

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

Actuarial status. The difference between the assets and the liabilities.

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

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

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

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

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

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

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

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

(1) Alternative I is characterized as an "optimistic" set—it assumes relatively rapid economic growth, low inflation, and favorable (from the standpoint of program financing) demographic conditions.

(2) Alternative II is the "intermediate" set of assumptions, with "best estimates" of future economic and demographic conditions.

(3) Alternative III is more "pessimistic," with slow economic growth, more rapid inflation, and financially disadvantageous demographic conditions.

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

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

Beneficiary. A person enrolled in the SMI program.

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

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

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

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

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

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

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

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

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

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

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

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

Demographic assumptions. See "Assumptions."

Disability. For Social Security purposes, the inability to engage in substantial gainful activity by reason of any medically determinable physical or mental impairment that can be expected to result in death or to last for a continuous

period of not less than 12 months. Special rules apply for workers age 55 or older whose disability is based on blindness.

The law generally requires that a person be disabled continuously for 5 months before he or she can qualify for a disabled-worker cash benefit. An additional 24 months is necessary to qualify under Medicare.

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

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

Economic assumptions. See "Assumptions."

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

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

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

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

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

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

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

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

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

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

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

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

Interest. A payment for the time value of money during a specified period.

Intermediary. A private or public organization, under contract to HCFA, to administer HI and certain SMI benefits under Medicare. Also referred to as "contractors," these organizations make payments for institutional services.

Intermediate assumptions. See "Assumptions."

Medicare. A nationwide, federally administered health insurance program authorized 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). This is an index which is often used in the calculation of the increases in the prevailing charge levels that help to determine allowed charges for physician services. In 1992 and later, this index will be used in connection with the update factor for the physician fee schedule.

Optimistic assumptions. See "Assumptions."

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

Pessimistic assumptions. See "Assumptions."

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

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

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

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

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

Special public debt obligation. Securities of the United States Government issued exclusively to the OASI, DI, HI, and SMI Trust Funds. Section 1841(a)

of the Social Security Act provides that the public-debt obligations issued for purchase by the SMI Trust Fund shall have maturities fixed with due regard for the needs of the funds. The usual practice in the past has been to spread the holdings of special issues, as of each June 30, so that the amounts maturing in each of the next 15 years are approximately equal. Special public-debt obligations are redeemable at par at any time.

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

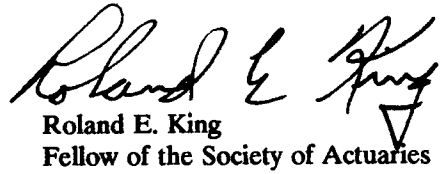
SMI premium. Monthly premium paid by those individuals who have enrolled in the voluntary SMI program.

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

Trust fund. Separate accounts in the United States Treasury mandated by Congress whose assets may only be used for a specified purpose. Funds not withdrawn for current monthly or service benefits, the financial interchange, and administrative expenses are invested in interest-bearing Federal securities, as required by law; the interest earned is also deposited in the trust funds.

C. STATEMENT OF ACTUARIAL OPINION

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



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