

**1998 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**

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**Transmitting**

**THE 1998 ANNUAL REPORT OF THE BOARD,  
PURSUANT TO  
SECTION 1841(b) OF THE SOCIAL SECURITY ACT,  
AS AMENDED**



**LETTER OF TRANSMITTAL**

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**BOARD OF TRUSTEES OF THE  
FEDERAL SUPPLEMENTARY MEDICAL INSURANCE TRUST FUND  
Washington, D.C., April 28, 1998**

HONORABLE J. Dennis Hastert  
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 1998 Annual Report of the Board of Trustees of the Federal Supplementary Medical Insurance Trust Fund (the 33rd such report), in compliance with the provisions of section 1841(b) of the Social Security Act.

Respectfully,

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

/S/  
Alexis M. Herman, *Secretary of Labor,  
and Trustee.*

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

/S/  
Kenneth S. Apfel, *Commissioner  
of Social Security, and Trustee.*

/S/  
Stephen G. Kellison, *Trustee.*

/S/  
Marilyn Moon, *Trustee.*

/S/  
Nancy-Ann Min DeParle, *Administrator  
of the Health Care Financing  
Administration, and Secretary,  
Board of Trustees.*



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## I. OVERVIEW

### A. INTRODUCTION

The Supplementary Medical Insurance (SMI) program, or Medicare Part B, pays for physician, outpatient hospital, home health, and other services for the aged and disabled. The SMI program is financed primarily by transfers from the general fund of the U.S. Treasury and by monthly premiums paid by beneficiaries. Income not currently needed to pay benefits and related expenses is held in the SMI trust fund, and invested in U.S. Treasury securities.

The Board of Trustees was established under the Social Security Act to oversee the financial operations of the SMI trust fund. The Board is composed of six members. Four members serve 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 Health and Human Services, and the Commissioner of Social Security. The other two members are appointed by the President and confirmed by the Senate to serve as Public Trustees. Stephen G. Kellison and Marilyn Moon began serving on July 20, 1995. The Administrator of the Health Care Financing Administration (HCFA) is designated as Secretary of the Board.

The Social Security Act requires that the Board report to the Congress annually on the financial and actuarial status of the SMI trust fund. This 1998 report is the 33rd to be submitted. Due to uncertainty about the future, the financial condition of the SMI trust fund is examined under three alternative sets of assumptions: "low cost," "intermediate," and "high cost." These alternatives are intended to illustrate a reasonable range of possible outcomes. The intermediate assumptions represent the Trustees' best estimate of the expected future economic and demographic trends. The financial adequacy of the SMI program is evaluated for calendar year 1998. The report describes both the near term financial outlook and the longer term outlook throughout a 75-year valuation period.

## *Overview*

### ***B. HIGHLIGHTS***

The major findings of this report are summarized below. Unless otherwise noted, all estimates are based on the intermediate assumptions.

- The Balanced Budget Act of 1997 contained numerous provisions affecting the Medicare program. One of the most important provides for SMI premiums to be permanently established at a level of 25 percent of program expenditures. Many others are designed to help contain SMI cost increases through the implementation of new payment mechanisms and reduced fee updates for health care providers. However, the resulting reductions in SMI costs are more than offset by increases due to (1) the transfer of a substantial portion of home health care services from the Hospital Insurance (HI) program to the SMI program, (2) the introduction of certain new preventive care benefits, and (3) the correction of an excessive level of beneficiary coinsurance on outpatient hospital services. As a result, SMI costs in 1998 and later will exceed those that would have occurred in the absence of the Balanced Budget Act.
- In 1997, the SMI program provided protection against the costs of physician and other medical services to 36 million people. Approximately 87 percent of these individuals received medical services covered by SMI during the year and total SMI benefits on their behalf amounted to \$72.8 billion.
- Using current income and a small portion of accumulated assets, the SMI program is expected to be able to meet all benefit and administrative obligations throughout calendar year 1998. The SMI trust fund is adequately financed for calendar year 1998 under all three sets of assumptions.
- The SMI trust fund is expected to remain adequately financed into the indefinite future, but only because current law provides for the establishment of program financing each year based on an updated calculation of expected cost per SMI beneficiary.
- SMI benefits have been growing rapidly. Outlays have increased 48 percent over the past 5 years (37 percent on a per-beneficiary basis). During this period the program grew about 14 percent faster than the economy as a whole, despite efforts to control SMI costs.
- SMI expenditures are expected to continue to grow faster than the economy as a whole. SMI outlays were less than 1 percent of the Gross Domestic Product (GDP) in 1997 and are projected to grow to about 3.3 percent by 2070. This projection is slightly lower than that

## *Highlights*

shown in the 1997 annual report. Relative to the estimates for 1997, SMI expenditures increased more slowly and GDP increased more rapidly. The impact of these favorable events on the projections slightly outweighs the increased costs associated with the Balanced Budget Act.

- We note with great concern the past and projected rapid growth in the cost of the program. The Balanced Budget Act established a National Bipartisan Commission on the Future of Medicare. We believe the work of the Commission will be of critical importance and we urge its members to develop and recommend additional means of controlling SMI costs. Prompt, effective, and decisive action is necessary.

### **Key SMI Data for Calendar Year 1997:**

- SMI covered about 32 million aged and 4 million disabled persons who chose to enroll in the program. The total number of SMI enrollees increased by 0.9 percent in 1997, and by 17.2 percent over the past 10 years.
- SMI benefits amounted to \$72.8 billion, about a 6 percent increase over the prior year. Average benefits per SMI enrollee increased by 5 percent to \$1,999.
- Administrative costs were \$1.4 billion or less than 2 percent of program expenditures.
- Summary of SMI trust fund operations in 1997 (in billions):

Fund Balance (12/31/96)	\$28.3
Income	81.9
Expenditures	74.1
Fund Balance (12/31/97)	36.1
Net Change in Balance	7.8

- General revenue accounted for about 73 percent of income. Premiums were the second largest source of income, accounting for about 24 percent of the total. Interest and other miscellaneous income accounted for the remainder, or about 3 percent of income.
- Payments for the costs of physician and other professional services represented 61 percent of SMI benefits. Payments to facilities accounted for another 24 percent and managed care plans accounted for the final 15 percent.

*Overview*

***C. 1997 TRUST FUND FINANCIAL OPERATIONS***

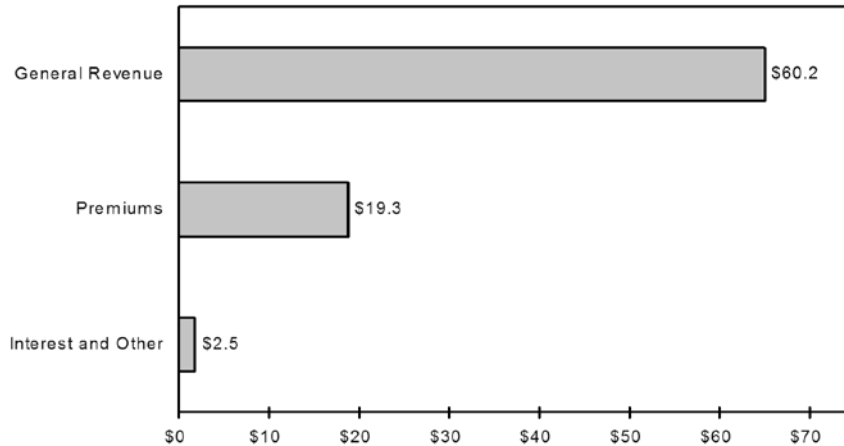
SMI income in calendar year 1997 was \$81.9 billion and total expenditures were \$74.1 billion. The fund balance therefore increased by a net total of \$7.8 billion. As of December 31, 1997 the SMI trust fund had a balance of \$36.1 billion.

**1. Income**

The \$81.9 billion in income received by the SMI program last year was derived from the following sources:

- General revenue. Transfers from the general fund of the Treasury were the largest source of income, accounting for \$60.2 billion or about 73 percent of total SMI income in calendar year 1997. The general revenue contribution is determined, based on expected cost per beneficiary less expected premium collections, following a statutory formula. In effect, general revenue approximately makes up the difference between premium collections plus other income and expected total program costs. The statutory formula also allows for the maintenance of a small reserve to cover any unforeseen contingencies.
- Premiums. Premium collections amounted to \$19.3 billion or about 24 percent of calendar year 1997 income. Premium rates are set annually, based on a method specified in the law. In calendar year 1997 the SMI premium was \$43.80 per month.
- Interest. Interest income on the U.S. Treasury securities held by the trust fund plus a very small amount of other income amounted to \$2.5 billion or about 3 percent of total SMI income in calendar year 1997.

Figure I.C1.—SMI Income in Calendar Year 1997  
[In billions]



## 2. Expenditures

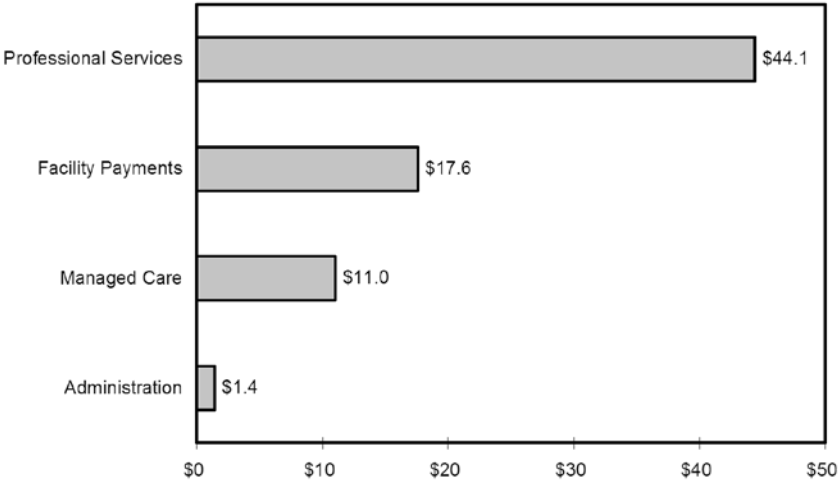
The SMI program spent \$74.1 billion last year. The major expenditures were:

- Benefit payments. More than 98 percent of SMI outlays in calendar year 1997 were for benefit payments to providers of services and managed care plans. Managed care payments were \$11 billion, or about 15 percent of all benefit payments. This represented a 24 percent increase over the corresponding figure for 1996, reflecting rapid growth in the number of beneficiaries choosing to join Health Maintenance Organizations (HMOs). Within the fee-for-service sector, \$44.1 billion was paid for physician and other professional services last year, the largest type of benefit payment, making up 61 percent of total benefits. These payments grew only 2 percent over the previous year, reflecting the net effect of higher per-person costs but fewer beneficiaries receiving care on a fee-for-service basis. Finally, payments to facilities (\$17.6 billion), such as outpatient facilities and skilled nursing facilities increased about 6 percent from 1996 to 1997 and made up about 24 percent of total SMI benefit outlays in 1997.
- Administrative expenses. About \$1.4 billion, or less than 2 percent of SMI program outlays during calendar year 1997, paid the administrative expenses of the program, which included funds to support the Medicare carriers and intermediaries (generally

*Overview*

insurance companies) who assist in administering SMI as well as funds for federal salaries and related expenses.

**Figure I.C2.—SMI Expenditures in Calendar Year 1997**  
[In billions]



**D. ECONOMIC AND DEMOGRAPHIC ASSUMPTIONS**

Actual future costs of benefits under the SMI program will depend on a number of factors, apart from any possible changes in law and regulations. These factors include the size and composition of the population eligible for benefits, the volume and intensity of SMI covered services used per beneficiary, and changes in the price per service. Similarly, expected premium income will depend on the number of beneficiaries enrolled in SMI, among other factors, and interest income to the trust fund will depend on future interest rates.

To take account of the uncertainty inherent in forecasting many of these factors, projections of SMI income and costs have been developed under three alternative scenarios, known as “low cost”, “intermediate”, and “high cost.” For simplicity of presentation, much of the analysis in this overview centers on the projections under intermediate assumptions. However, it is important to recognize that actual conditions are very likely to differ from that scenario or any other specific set of assumptions.

Some of the key demographic and economic variables that determine SMI costs and income are common to the Old-Age, Survivors, and Disability Insurance (OASDI) program and the HI program and are explained in detail in the report of the Board of Trustees of the OASDI program. As shown in table I.D1 below, these include Consumer Price Index (CPI) change, real interest rates, fertility rates, and life expectancy. (“Real” indicates that the effects of inflation have been removed, allowing better comparisons across time periods.) The assumptions vary, in most cases, from year to year during the first 5 to 25 years before reaching their so-called “ultimate” values for the remainder of the 75-year projection period. These ultimate values are shown in the table below.

**Table I.D1.—Ultimate Assumptions**

	Intermediate	Low Cost	High Cost
Annual percentage change in:			
Consumer Price Index (CPI) . . . . .	3.5	2.5	4.5
Real interest rate (percent) . . . . .	2.8	3.5	2.0
Fertility rate (children per woman) . . . . .	1.9	2.2	1.6
Life expectancy at birth in 2075 (combined average for men and women, in years) . . . . .	81.7	78.8	85.6

Other assumptions are specific to the SMI program. These SMI assumptions include rates at which beneficiaries will use particular

### *Overview*

types of services, the amount of the physician fee update, and the rates at which eligible elderly and disabled persons will enroll in SMI.

While it is reasonable to assume that actual trust fund experience will fall within the range defined by the three alternative sets of assumptions, no definite assurance can be given in light of the wide variations in experience that have occurred since the beginning of the program. In general, a greater degree of confidence can be placed in the assumptions and estimates for the earlier years than for the later years. Nonetheless, even for the earlier years, the estimates are only an indication of the expected trend and the general range of future program experience.



### ***E. ACTUARIAL ESTIMATES***

The financial status of the SMI program and how it is evaluated differ fundamentally from the OASDI and HI programs. These differences arise from the nature of the financing for SMI. In particular, the SMI premium and the corresponding income from general revenues are established annually at a level sufficient to cover the following year's expenditures. Thus, the SMI program is automatically in financial balance under present law, in contrast to OASDI and HI where financing established many years earlier may prove significantly higher or lower than subsequent actual costs. Moreover, the SMI program is voluntary (whereas OASDI and HI are generally compulsory) and income is not based on payroll taxes. These differences result in a financial assessment that differs in some respects from those for OASDI and HI, as described in the following sections.

#### **1. Financial Adequacy in Calendar Year 1998**

The SMI program is traditionally considered to have met the primary tests of financial adequacy if the financing established for a given period (e.g., through the end of calendar year 1998) is sufficient to fund all services provided through that period and associated administrative expenses. Further, to protect against the possibility that cost increases under the program will be higher than assumed, the program needs assets adequate to cover a reasonable degree of variation between actual and projected costs. These traditional tests of adequacy reflect, in part, the similarity of SMI to some private sector group health insurance plans.

According to these tests, the financing established through December 1998, together with a small amount of trust fund assets, is estimated to be sufficient to cover benefits and administrative costs incurred through that time period. The tests of financial adequacy are met under intermediate assumptions as well as lower range and upper range projections. Planned program 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 projected costs.

During each of the last few years, SMI expenditures have increased somewhat more slowly than expected when financing was established. As a result, income from premiums and general revenues exceeded program costs and trust fund assets grew to a level somewhat above what is generally considered adequate for a contingency reserve for the SMI program. Accordingly, the financing for 1998 was set below the

## *Overview*

level estimated to fully cover costs, with the expectation that a small portion of trust fund assets would be used in 1998 to make up the difference. This procedure, which resulted in maintaining the 1998 monthly premium at \$43.80, the same level as in 1997, is intended to gradually bring trust fund assets in line with the lower level that is adequate for contingency purposes.

The amount of the contingency reserve needed in SMI is much smaller (both in absolute dollars and as a fraction of annual program costs) than in the HI or OASDI programs. This is so because the SMI premium rate and corresponding general revenue transfers are determined annually based on estimated future costs while the HI and OASDI payroll tax rates are set in law and are therefore much more difficult to adjust should circumstances change.

## **2. SMI Trust Fund Outlook After Calendar Year 1998**

Table I.E1 shows the estimated operations of the SMI trust fund under the intermediate assumptions during calendar years 1997 through 2007. This table shows that both income and expenditures are estimated to grow at about 10 percent per year for most of the ten-year period. Income and outgo would remain in balance, as a result of the annual adjustment of premium and general revenue income to match program costs. Assets held in the trust fund are projected to decrease slightly in 1998 and 1999, as part of the effort to adjust asset levels to better match the program's contingency needs (as noted above). After 1999, assets held in the fund are projected to increase sufficiently to maintain an adequate contingency reserve for the program. Similar projections under the low cost and high cost assumptions are shown in section II of this report. Under all assumptions, the SMI program would grow rapidly but would remain adequately financed into the indefinite future because of the automatic financing on a year-to-year basis.

**Table I.E1.—Estimated Operations of the SMI Trust Fund Under Intermediate Assumptions, Calendar Years 1997-2007**

[Dollar amounts in billions]

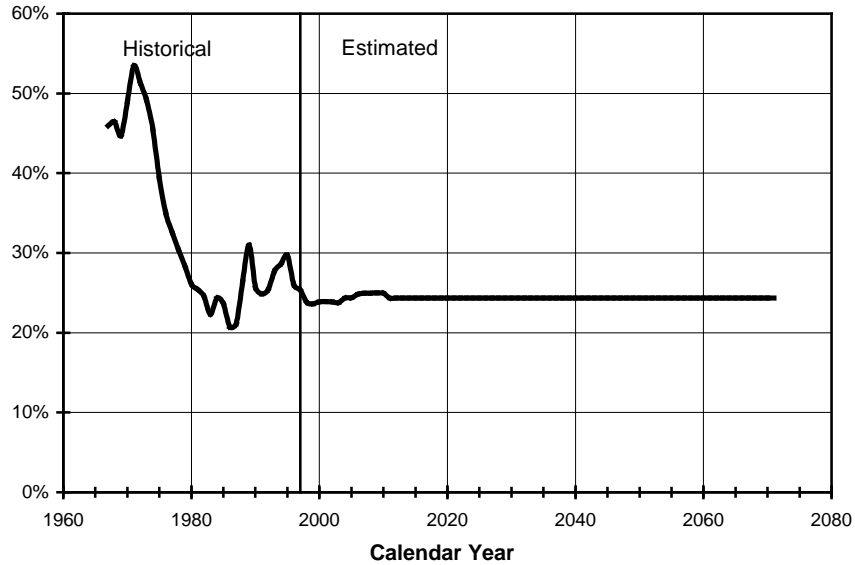
Calendar year	Total income	Total expenditures	Change in fund	Fund at year end
1997 <sup>1</sup>	\$81.9	\$74.1	\$7.8	\$36.1
1998	80.6	82.6	-2.0	34.2
1999	88.1	88.4	-0.3	33.9
2000	97.5	97.5	0.0	34.0
2001	107.6	107.3	0.3	34.2
2002	118.6	118.0	0.6	34.8
2003	131.3	129.9	1.4	36.3
2004	143.3	142.4	0.9	37.2
2005	156.3	155.4	0.9	38.1
2006	173.3	169.3	4.0	42.1
2007	190.9	185.6	5.3	47.4

<sup>1</sup>Figures for 1997 represent actual experience.

The Balanced Budget Act of 1997 made numerous changes to the Medicare program, many of them quite substantial. One of the most important provides for the monthly SMI premium to be permanently established at the level of 25 percent of program expenditures as shown in figure I.E1. Prior to this legislation, premiums would have represented a steadily declining share of costs. Other provisions in the Balanced Budget Act include a new prospective payment system for outpatient hospital services under Medicare and coverage of several new preventive or “screening” benefits. In addition, annual payment updates for all SMI health care providers are constrained and a problem with beneficiary coinsurance for outpatient hospital services will be corrected. Finally, the majority of home health care services are reclassified as an SMI benefit, shifting the cost of such services over a 6-year period from the HI trust fund to the SMI trust fund. Section II.A of this report contains more detailed information on these provisions.

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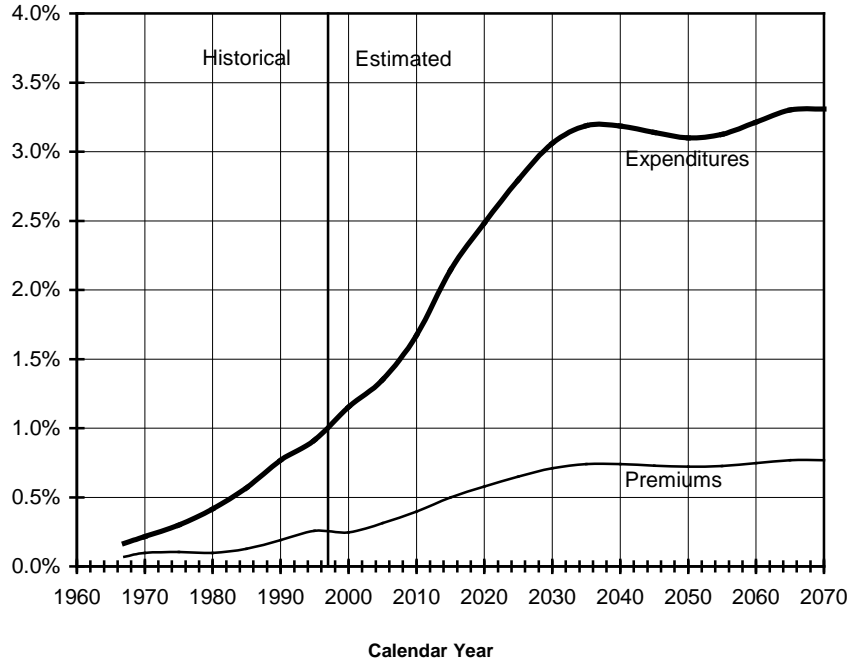
Figure I.E1.—Premium Income as a Percent of SMI Expenditures



Collectively, the SMI benefit provisions in the Balanced Budget Act result in a net increase in costs. However, the estimated costs in the 1998 annual report are lower than those in the 1997 annual report. The lower estimates are a result of (1) actual benefit payments for 1997 being lower than the estimates in the 1997 annual report, (2) the recent experience indicating that rates of growth for some SMI services have slowed from those expected in the 1997 annual report, and (3) lower assumed rates of general inflation. The impact of these factors more than compensates for the increase in the costs due to the Balanced Budget Act. However, in spite of the lower estimates for program costs in the 1998 annual report, costs are expected to continue to increase faster than the economy as a whole. Thus, even though the SMI program is considered adequately financed by traditional standards, the continuing trend of rapid cost increases remains a source of great concern.

Figure I.E2 shows past SMI expenditures and premium income as a percent of GDP and projections through 2070 based on intermediate assumptions. Under these assumptions, annual SMI expenditures would grow from less than 1 percent of GDP in 1997 to about 3 percent of GDP within 30 years. Similarly, on a combined basis, Medicare (both HI and SMI) would grow from less than 3 percent of GDP in 1997 to almost 7 percent of GDP by 2070.

Figure I.E2.—SMI Expenditures and Premiums as a Percent of GDP



Projecting forward 75 years is difficult, given the many uncertainties about future performance of the economy and other variables, but it has the advantage of allowing for the presentation of future trends that may reasonably be expected to occur. Most importantly, this forecast reflects: (1) continuing growth in the volume and intensity of services provided per beneficiary over the next decade; and (2) the impact of a large increase in SMI beneficiaries after the turn of the century as the “baby boom” generation (those born between 1945 and 1965) turns age 65 and begins to receive benefits.

In this intermediate projection, increases in the cost per beneficiary during the initial 25-year period are assumed to decline gradually in the last 12 years of that period to the same growth rate as GDP per capita and then to continue at the same rate as GDP per capita for the following 50 years. Therefore, changes in the last 50 years of the period are attributable only to demographic change in the population. This assumption may seem at odds with historical experience, since SMI costs per beneficiary have generally increased faster than GDP per capita since the inception of the program. However, assuming a continuation of the historical trend for another 75 years would result in

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an SMI program so large as a percent of GDP that it would be implausible given other demands on those resources. Thus the intermediate projection can be viewed as a middle ground between assuming the continuation of historical trends and assuming that there will be moderation of growth in the health care sector of the national economy and in particular in the Medicare program.

Even with the assumed moderation of expenditure growth described above, the projected cost of the SMI program under present law would place steadily increasing demands on beneficiaries and society at large. Over time, the SMI premiums and coinsurance amounts paid by beneficiaries would represent a growing share of their total income. In 1997, for example, about 6 percent of a typical 65-year-old's Social Security benefit was withheld to pay the monthly SMI premium of \$43.80. Twenty years later, under the intermediate assumptions, the same beneficiary's premium would require 14 percent of such income. Similarly, SMI general revenues in fiscal year 1997 were equivalent to 6.5 percent of the personal and corporate Federal income taxes collected in that year. If such taxes remain at their current level, relative to the national economy, then SMI general revenue financing in 2070 would represent roughly 23 percent of total income taxes.

## ***F. CONCLUSION***

The financing established for the SMI program for calendar year 1998 is estimated to be sufficient to cover program expenditures for that year and to preserve an adequate contingency reserve in the SMI trust fund. Moreover, trust fund income is projected to equal expenditures for all future years—but only because beneficiary premiums and government general revenue contributions are set to meet expected costs each year.

We note that two of our key recommendations from the 1997 Report were implemented through the Balanced Budget Act of 1997: First, the SMI premium has been permanently established at the level of 25 percent of expenditures. Under prior law, premium revenues would have represented a steadily declining share of SMI costs. Second, the Act established the National Bipartisan Commission on the Future of Medicare to review the long-term financial condition of Medicare and to make recommendations concerning the program's financing, benefit structure, and related issues. We believe the work of the Bipartisan Commission will be of critical importance to the Administration, the Congress, and the American public.

The most pressing problem remains to be addressed. As in past reports, we note with great concern that program costs have generally grown faster than the GDP and that this trend is expected to continue under present law. The projected increases are initially attributable in part to assumed continuing growth in the volume and intensity of services provided per beneficiary. Many of the provisions in the Balanced Budget Act are designed to help address this issue by constraining cost increases through the implementation of new payment mechanisms and limits on fee updates for health care providers. However, the expenditure reductions under the Balanced Budget Act are more than offset by the increases in SMI costs arising from (1) the transfer of a substantial portion of home health care services from the HI program to the SMI program, (2) the introduction of certain new preventive care benefits, and (3) the correction of an excessive level of beneficiary coinsurance on outpatient hospital services. Starting in 2010, the retirement of the post-World War II baby boom generation will also have a major influence on the growth in program costs. As a result, we continue to be very concerned by the rate of growth in SMI expenditures.

In 1997, SMI expenditures increased more slowly and GDP increased more rapidly than we had estimated previously. The impact of these favorable events slightly outweighs the net increase in SMI costs

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associated with the Balanced Budget Act. Consequently, the SMI costs as a percent of GDP shown in this report are slightly lower than those shown in our 1997 annual report. This improvement, while welcome, is not sufficiently large to materially affect our concern with expenditure growth.

As described in our accompanying report on the HI trust fund, prior to the Balanced Budget Act, HI assets were projected to be exhausted in the very near future. The urgency of this situation prompted considerable attention and led directly to the provisions in the Act to slow HI expenditure growth. In contrast, the automatic financing provisions for SMI prevent such crises. As a result, there has been substantially less attention directed toward the financial status of the SMI program than to the HI program—even though SMI expenditures have increased faster than HI expenditures in most years and are expected to continue to do so in the future.

Given the past and projected cost of the program, we urge the Bipartisan Commission to consider and recommend effective means of controlling SMI costs in the near term. We further urge the Congress to act on such recommendations at the earliest opportunity. For the longer term, the Congress should develop legislative proposals to address the large increases in SMI costs associated with the baby boom's retirement through the same process used to address HI cost increases caused by the aging of the baby boom. We believe that prompt, effective, and decisive action is necessary.



## II. ACTUARIAL ANALYSIS

### *A. MEDICARE AMENDMENTS SINCE THE 1997 REPORT*

Since the 1997 Annual Report was transmitted to Congress on April 24, 1997, one law affecting the SMI program in a significant way has been enacted. The Balanced Budget Act of 1997 (Public Law 105-33, enacted on August 5, 1997) included a number of provisions affecting the SMI program. The more important provisions, from an actuarial standpoint, are described in the following paragraphs. Certain provisions with a relatively minor financial impact on the SMI program, but which are important from a policy standpoint, are described as well.

- The SMI premium is permanently set at 25 percent of program costs.
- An expanded set of options for the delivery of health care under Medicare, referred to as “Medicare+Choice,” has been established. All Medicare beneficiaries can receive their Medicare benefits through the original fee-for-service program. In addition, most beneficiaries can choose instead to receive their Medicare benefits through one of the following Medicare+Choice plans: (1) coordinated care plans (such as health maintenance organizations, provider-sponsored organizations, and preferred provider organizations); (2) Medical Savings Account (MSA)/High Deductible plans (through a demonstration available to up to 390,000 beneficiaries); or (3) private fee-for-service plans. Except for MSA plans, all Medicare+Choice plans are required to provide the current Medicare benefit package (excluding hospice services) and any additional health services required under the adjusted community rate (ACR) process. MSA plans provide Medicare benefits after a single high deductible is met, and enrollees receive an annual deposit in the Medical Savings Account.
- In general, beginning in 1998, Medicare capitation rates paid to the plans will be the greater of: (1) a blend of the area-specific rate and an input-price adjusted national rate, further adjusted as necessary to meet budget neutrality requirements; (2) a minimum payment amount; or (3) a minimum percentage increase over the prior year’s payment rates. Between 1998 and 2002, medical education payments will be removed from the area-specific rate, on the following schedule: 20 percent in 1998, 40 percent in 1999, 60 percent in 2000, 80 percent in 2001, and 100 percent in 2002 and later. The update factor for the area-specific rate and the minimum payment is the national average per capita Medicare growth rate reduced by 0.8 percentage points for 1998, and by 0.5 percentage points for 1999

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through 2002. The capitation rates are to be announced by March 1 of the year before the year to which they apply.

- By May 1, all plans must submit information on enrollment capacity, premium rates, and other information to the Secretary of HHS for approval. Transition rules for the current Medicare HMO program are also provided for by the Balanced Budget Act.
- Home health services not associated with a hospital or skilled nursing facility stay for individuals enrolled in both the HI and SMI programs are transferred from the HI program to the SMI program, effective January 1998. The HI program will continue to cover the first 100 visits following a hospital stay of at least 3 consecutive days or a skilled nursing facility stay. The cost to the SMI trust fund of the transferred services will phase in over a 6-year period, while the cost of the home health services will phase into the SMI premium over 7 years.
- For physicians' services, a single conversion factor for calendar year 1998 has been established. The factor is based on the 1997 primary care conversion factor, updated to 1998 by the Secretary's estimate of the weighted average of the three separate updates that would occur in the absence of legislation. (For anesthesia services, a separate conversion factor has been established at 46 percent of the single conversion factor for other physicians' services.) For 1999 and later, the conversion factor is to be updated by the Medicare Economic Index (MEI), adjusted to match spending under a sustainable growth rate (SGR) mechanism. The adjustment could not exceed the MEI by more than 3 percentage points, nor be more than 7 percentage points less than the MEI. The SGR is replacing the Medicare Volume Performance Standard, and for fiscal years 1998 and later is to be comprised of four factors: (1) the estimate of the weighted average percentage changes in fees for all physicians' services in the fiscal year; (2) the estimated percentage change in the average number of SMI beneficiaries (other than those enrolled in Medicare+Choice) over the previous fiscal year; (3) the Secretary's estimate of the percentage growth in real GDP per capita from the previous fiscal year; and (4) the Secretary's estimate of the percentage change in expenditures for all physicians' services in the fiscal year that result from changes in law and regulations (excluding changes in the volume and intensity resulting from changes in the update to the conversion factor). The Secretary must publish the SGR not later than August 1 before each fiscal year (except that the SGR for fiscal year 1998 was to be published by November 1, 1997).

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- For physicians' services, the implementation of resource-based practice expense relative value units (RVUs) is delayed one year, until 1999. RVUs will be phased in during the 4-year period 1999 through 2002, using a blend of current practice expense RVUs and resource-based practice RVUs. In 2002, practice expense RVUs would be entirely resource-based.
- Physicians or practitioners are permitted to sign private contracts with Medicare beneficiaries for which no claim is to be submitted to Medicare and for which the physician or practitioner receives no reimbursement from Medicare directly, on a capitated basis, or from an organization which receives reimbursement under Medicare for the item or service. Services provided under private contracts would not be covered by Medicare. Physicians or practitioners entering into private contracts must file an affidavit with the Secretary providing that the physician or practitioner will not submit any claim to Medicare for any item or service provided to any beneficiary for 2 years.
- A prospective payment system (PPS) for hospital outpatient department services will be implemented January 1, 1999. Services included under the PPS will be (1) hospital outpatient department services designated by the Secretary of HHS (but not including therapy services and ambulance services, which will be paid on the basis of fee schedules) and (2) services covered under SMI that are provided to hospital inpatients who have exhausted HI benefits or are not entitled to HI. The PPS fee schedule amounts for each group of services will be updated by the hospital market basket, except that for 2000, 2001, and 2002, the update will be equal to the market basket reduced by 1 percentage point. An "unadjusted copayment amount" will be established for each PPS group of services to be the greater of 20 percent of the estimated 1999 national median of the charges furnished in that group and 20 percent of the PPS fee schedule amount for the group. In each year, the unadjusted copayment amount for each group will remain unchanged until the copayment amount for the group equals 20 percent of the fee schedule amount. At that time, the copayment amount will be maintained each year at 20 percent of the fee schedule amount for the group.
- The "formula-driven overpayments" that hospitals now receive for surgery, radiology, and other diagnostic services furnished in outpatient departments are eliminated, by allowing Medicare to

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deduct the full amount of beneficiary coinsurance payments from the Medicare payment amount.

- Two provisions that would otherwise expire at the end of 1998 are extended through calendar year 1999. These provisions are (1) the 10 percent reduction in payments for hospital outpatient capital, and (2) the 5.8 percent reduction for hospital outpatient services paid on a cost basis.
- The Secretary of HHS is directed to establish a fee schedule for ambulance services through negotiated rulemaking by January 1, 2000. Payment updates are limited to the CPI-U index minus 1 percentage point prior to implementation of the fee schedule, and payment in 2000 may not exceed the aggregate payment that would have been made that year without the fee schedule. Payment updates under the fee schedule are limited to the CPI-U index minus 1 percentage point for 2001 and 2002, and will reflect the percentage increase in the CPI-U for subsequent years.
- Beginning on January 1, 1999, an annual beneficiary limit of \$1,500 will apply to all outpatient physical therapy services except for services furnished by a hospital outpatient department. A separate \$1,500 limit will also apply to outpatient occupational therapy services, except for services furnished by hospital outpatient departments. Beginning with 2002, these caps will be increased by the percentage increase in the Medical Economic Index.
- The restriction on settings and services furnished by nurse practitioners, clinical nurse specialists, and physician assistants is removed, for services furnished on or after January 1, 1998. Payment will be equal to 80 percent of the lesser of the actual charge or 85 percent of the physician fee schedule.
- The payment updates for durable medical equipment are reduced to 0 percent for each of the years 1998 through 2002. The updates for prosthetics and orthotics are reduced to 1 percent for each of the years 1998 through 2002. Payments for parenteral and enteral nutrients are frozen at 1995 levels for the period 1998 through 2002, and are updated in 2003 based on the CPI-U index. For 1998, the national payment limit for oxygen and oxygen equipment is the 1997 limit reduced by 25 percent. For 1999 and each subsequent year, the national payment limit is the 1997 limit reduced by 30 percent.

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- The freeze on updates for clinical laboratory tests is extended through 2002, and the national payment cap is reduced from 76 percent to 74 percent of the median of all fee schedules. The Secretary is also directed to establish up to 5 regional carriers for processing laboratory claims, and to adopt national coverage and administrative policies for lab tests through negotiated rulemaking.
- For each of fiscal years 1998 through 2002, the increase in payment for services provided by ambulatory surgical centers will be equal to the percentage increase in the CPI-U reduced by 2 percentage points (but not below zero).
- Payment for drugs and biologicals not paid on a cost or prospective rate basis is set to equal the lesser of the actual charge or 95 percent of the average wholesale price. If payment is made to a licensed pharmacy approved to dispense drugs and biologicals under SMI, a dispensing fee (less applicable deductible and coinsurance amounts) is authorized, if determined appropriate. The Secretary of HHS is to study the effect of this provision on average wholesale prices and report the study's results to Congress by July 1, 1999.
- The provision making Medicare the secondary payer for disabled beneficiaries in large group health plans, which was previously scheduled to expire after September 30, 1998, has been made permanent. The provision making Medicare secondary payer for the first 12 months of entitlement due to end-stage renal disease (ESRD), which had been extended on a temporary basis (through September 30, 1998) to include the first 18 months of entitlement, has been extended, permanently, to include the first 30 months of entitlement on the basis of ESRD. Recovery of Medicare secondary payer amounts can now be sought within 3 years after the date of service, notwithstanding any other claims filing time limits under an employer group health plan.
- Annual screening mammograms are covered for female beneficiaries age 40 and over. The SMI deductible is waived for screening mammography.
- Coverage is provided for a screening pap smear and pelvic exam (including a clinical breast exam) every three years (or annually for those beneficiaries at higher risk). The SMI deductible is waived for screening pap smears and pelvic exams.

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- Annual prostate cancer screening is covered for male beneficiaries over age 50, effective January 1, 2000.
- Coverage is provided for colorectal screening procedures, including fecal-occult blood tests and flexible sigmoidoscopies for beneficiaries age 50 and over, colonoscopy for beneficiaries at high risk for colorectal cancer, and other procedures (including screening barium enemas) as the Secretary determines appropriate. (The Secretary subsequently published a notice announcing that screening barium enemas will be covered under certain circumstances.)
- Coverage is provided for diabetes outpatient self-management training to include services furnished in non-hospital based programs. (This was previously covered in hospital-based programs only). Coverage is provided for blood glucose monitors and testing strips for all diabetics. (This was previously provided for insulin-dependent diabetics only.) These provisions are effective July 1, 1998.
- Coverage is provided for procedures to identify bone mass, detect bone loss, or determine bone quality for certain qualified beneficiaries, at frequencies determined by the Secretary of HHS, effective July 1, 1998.
- States are required to pay for SMI premium assistance for new groups of low-income Medicare beneficiaries. Costs of this program are financed through funds transferred to the States from the SMI trust fund.
- States are permitted to limit the payments they must make for Medicare deductibles and coinsurance for qualified Medicare beneficiaries (QMBs) to amounts that, when added to the amount paid by Medicare, equal the amounts that the State pays for the same service when provided to Medicaid beneficiaries who are not entitled to Medicare. Providers under both Medicaid and Medicare must consider these payment amounts as payment in full.
- A Medicare Payment Advisory Commission has been established, to review and make recommendations on Medicare payment policies and to report on issues affecting the Medicare program. The Physician Payment Review Commission has been abolished.
- A commission to conduct a study on long-term reform and the financing challenges facing the Medicare program has been

### *Nature of the Trust Fund*

established. This National Bipartisan Commission on the Future of Medicare must report their findings and recommendations to the President and the Congress by March 1, 1999.

Detailed information regarding these changes and other less significant changes can be found in documents prepared by and for the Congress. The actuarial estimates shown in this report reflect the anticipated effects of these changes.

### **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. 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 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 premium rates for fiscal year 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 fiscal year 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

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remained frozen. Under legislation enacted periodically from 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. These premium amounts for 1992 through 1995 were intended to cover approximately 25 percent of costs during this period. Actual SMI expenditures, however, increased less rapidly than assumed (in part as a result of subsequent legislation to reduce costs). Consequently, the premium rates legislated for 1992 through 1995 covered more than 25 percent of program costs.

For 1996 and later, the premium rates are set to cover 25 percent of the program costs for aged enrollees. However, the Balanced Budget Act of 1997 modified the determination of the premium rates for 1998 through 2003 to phase in the impact of the transfer of some home health expenditures from the HI program to the SMI program. The transfer of the costs associated with these home health services will occur over a 6-year period with an additional 1/6 being transferred each year. However, for purposes of determining the premium, program costs for aged enrollees will be determined as if the transfer will occur over a 7-year period with an additional 1/7 being transferred each year. Accordingly, the premium rates for 1998 through 2003 will cover less than 25 percent of actual program costs.

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.)

Premiums paid for fiscal years 1967 through 1973 were matched by an equal amount of Government contributions. Beginning July 1973, the amount of Government contributions corresponding to premiums paid by each of the two groups of 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,



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minus the standard monthly premium rate, divided by (2) the standard monthly premium rate.

Standard monthly premium rates and actuarial rates are promulgated each year by the Secretary of Health and Human Services (HHS). The standard monthly premium rates in effect since the beginning of the SMI program 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. Estimated future premium amounts under the intermediate set of assumptions are shown in section 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	15.0
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
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
1996	42.50	84.90	105.10	25.0	20.2

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**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
1997	43.80	87.60	110.40	25.0	19.8
1998	43.80	87.90	97.10	24.9	22.6

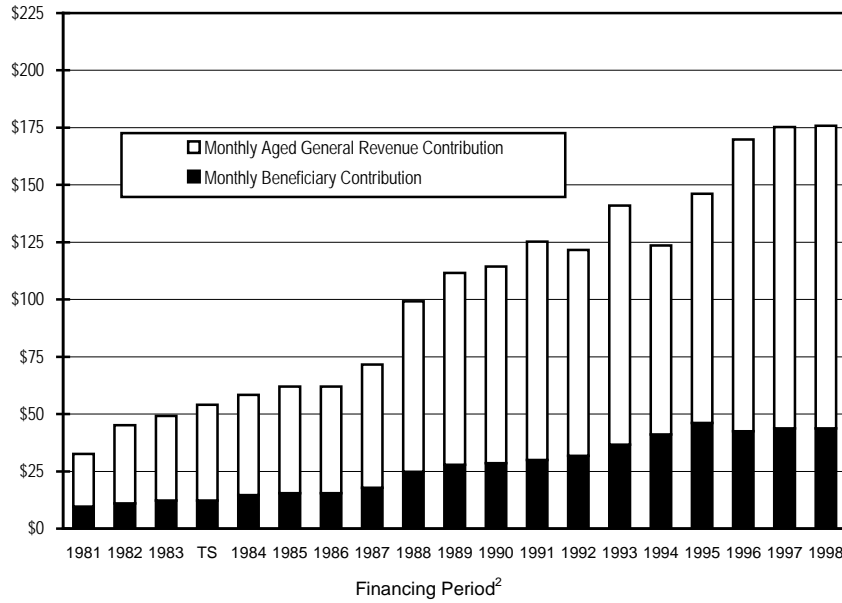
<sup>1</sup>In accordance with limitations on the costs of health care imposed under Phase III of the Economic Stabilization program, the standard premium rates for July and August 1973 were set at \$5.80 and \$6.10, respectively. Effective September 1973, the rate increased to \$6.30.

<sup>2</sup>This 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 calendar year 1989 apply to the non-catastrophic portion of the standard monthly premium rate.

Figures II.B1 and II.B2 are graphic representations of the monthly per capita financing rates, for financing periods since 1981, for enrollees aged 65 and over and for disabled individuals under age 65, respectively. The graphs show the portion of the financing contributed by the beneficiaries and by general revenues. As indicated, general revenue financing is the major source of income for the program.

**Figure II.B1.—SMI Aged Monthly Per Capita Income<sup>1</sup>**

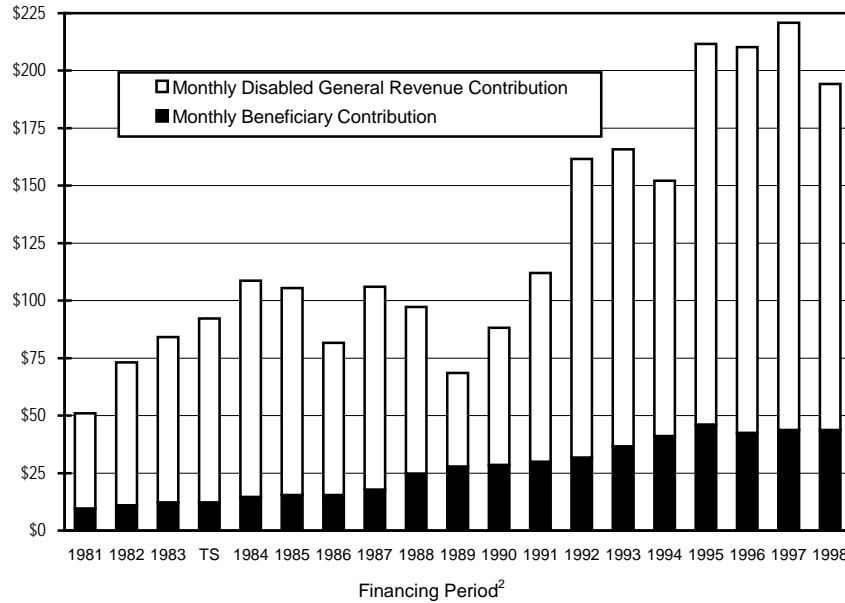


<sup>1</sup>The amounts shown do not include the catastrophic coverage monthly premium rate for 1989.

<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.

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Figure II.B2.—SMI Disabled Monthly Per Capita Income<sup>1</sup>



<sup>1</sup>See footnote 1 of figure II.B1.

<sup>2</sup>See footnote 2 of figure II.B1.

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, the Social Security Administration (SSA), 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.

The Social Security Act authorizes 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. The costs of such

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experiments and demonstration projects are paid out of the HI and SMI trust funds.

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 administration of 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. Whatever the manner of acquisition, the net worth of facilities and other fixed capital assets is not carried in the statement of 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 considered 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. These obligations 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 immediately 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. Since the inception of the SMI program, the assets have always been invested in special public-debt obligations.

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**C. OPERATIONS OF THE TRUST FUND, FISCAL YEAR 1997**

A statement of the revenue and disbursements of the Federal SMI Trust Fund in fiscal year 1997 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 SMI Trust Fund During Fiscal Year 1997**  
[In thousands]

Total assets of the trust fund, beginning of period . . . . .		<u>\$26,953,238</u>
Revenue:		
Premiums from enrollees:		
Enrollees aged 65 and over . . . . .	\$16,983,654	
Disabled enrollees under age 65 . . . . .	<u>2,157,711</u>	
Total premiums. . . . .		19,141,365
Transfers from general fund of the Treasury:		
Government contributions:		
Enrollees aged 65 and over . . . . .	51,081,605	
Disabled enrollees under age 65 . . . . .	<u>8,389,822</u>	
Total Government contributions . . . . .		59,471,427
Other . . . . .		1,058
Interest:		
Interest on investments . . . . .	2,191,251	
Interest on amounts of interfund transfers <sup>1</sup> . . . . .	<u>620</u>	
Total interest . . . . .		<u>2,191,872</u>
Total revenue . . . . .		<u><u>80,805,722</u></u>
Disbursements:		
Benefit payments . . . . .		71,132,798
Administrative expenses:		
Treasury administration expenses. . . . .	307	
Salaries and expenses, HCFA <sup>2</sup> . . . . .	1,032,801	
Salaries and expenses, Office of the Secretary, HHS . . . . .	5,918	
Salaries and expenses, SSA. . . . .	372,076	
Prospective Payment Assessment Commission. . . . .	489	
Railroad Retirement administrative expenses. . . . .	5,486	
Office of Personnel Management expenses. . . . .	115	
Physician Payment Review Commission . . . . .	<u>3,263</u>	
Total administrative expenses . . . . .		<u>1,420,455</u>
Total disbursements. . . . .		<u><u>72,553,253</u></u>
Net addition to the trust fund . . . . .		<u>8,252,469</u>
Total assets of the trust fund, end of period. . . . .		<u>35,205,707</u>

<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.

<sup>2</sup>Includes administrative expenses of the carriers and intermediaries.

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

### *Operations of the Trust Fund*

The total assets of the trust fund amounted to \$26,953 million on September 30, 1996. During fiscal year 1997, total revenue amounted to \$80,806 million, and total disbursements were \$72,553 million. Total assets thus increased \$8,252 million during the year to \$35,206 million on September 30, 1997.

Of the total revenue, \$19,141 million represented premium payments by (or on behalf of) aged and disabled enrollees, an increase of 1.1 percent over the amount of \$18,931 million for the preceding year. This increase resulted primarily from the increase from \$42.50 to \$43.80 per month in the standard premium rate that became effective on January 1, 1997.

Contributions received from the general fund of the treasury amounted to \$59,471 million, which accounted for 73.6 percent of total revenue. The remaining \$2,193 million of revenue consisted almost entirely of interest on the investments of the trust fund.

Of the \$72,553 million in total disbursements, \$71,133 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 \$1,420 million of disbursements was for administrative expenses. Administrative expenses are allocated and charged 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 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.

Table II.C2 compares the actual experience in fiscal year 1997 with the estimates presented in the 1996 and 1997 annual reports. The estimates for premiums from enrollees and government contributions in the 1996 and 1997 reports were very close to actual experience. However actual SMI benefit payments in fiscal year 1997 were significantly lower than estimated in the 1996 annual report, primarily as a result of (1) lower increases in allowed fees, and (2) lower increases in the volume and intensity of services used than had been estimated. Actual benefit payments were somewhat lower than the estimates in the 1997 report for similar reasons.

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**Table II.C2.—Comparison of Actual and Estimated Operations of the SMI Trust Fund, Fiscal Year 1997**

[Dollar amounts in millions]

Item	Comparison of actual experience with estimates for fiscal year 1997 published in—				
	Actual amount	1997 report		1996 report	
		Estimated amount <sup>1</sup>	Actual as percentage of estimate	Estimated amount <sup>1</sup>	Actual as percentage of estimate
Premiums from enrollees	\$19,141	\$18,982	101	\$19,090	100
Government contributions	59,471	59,203	100	59,529	100
Benefit payments	71,133	73,275	97	77,277	92

<sup>1</sup>Under the intermediate assumptions.

Table II.C3 shows a comparison of the total assets of the SMI trust fund and their distribution at the end of fiscal year 1996 and 1997. The assets of the fund at the end of 1996 totaled \$26,953 million, consisting of \$27,175 million in the form of obligations of the U.S. Government, and an undisbursed balance of -\$222 million. The assets of the trust fund at the end of 1997 totaled \$35,206 million, consisting of \$34,464 million in the form of obligations of the U.S. Government and an undisbursed balance of \$741 million. A comparison of assets of the trust fund with liabilities for incurred but unpaid benefits (and related administrative expenses) is shown in section II.E.



*Expected Operations*

**Table II.C3.—Assets of the SMI Trust Fund at the End of Fiscal Years 1996 and 1997<sup>1</sup>**

	September 30, 1996	September 30, 1997
Investments in public-debt obligations sold only to this fund (special issues):		
Certificates of Indebtedness:		
7 1/8-percent, 1997 . . . . .	\$3,949,334,000.00	—
6 3/4-percent, 1998 . . . . .	—	\$879,134,000.00
6 5/8-percent, 1998 . . . . .	—	\$1,637,922,000.00
Bonds:		
6 1/4-percent, 2002 . . . . .	—	—
6 1/4-percent, 2003-2008 . . . . .	2,674,644,000.00	2,674,644,000.00
6 7/8-percent, 1999-2012 . . . . .	—	9,606,392,000.00
7-percent, 1998-2011 . . . . .	11,440,437,000.00	10,555,686,000.00
7 1/4-percent, 2003-2009 . . . . .	1,853,149,000.00	1,853,149,000.00
7 3/8-percent, 2003-2007 . . . . .	1,590,285,000.00	1,590,285,000.00
8 1/8-percent, 2003-2006 . . . . .	1,900,955,000.00	1,900,955,000.00
8 3/4-percent, 2002-2005 . . . . .	3,766,224,000.00	3,766,224,000.00
Total investments in public-debt obligations . . . . .	27,175,028,000.00	34,464,391,000.00
Undisbursed balance <sup>2</sup> . . . . .	-221,790,053.43	741,315,993.38
Total assets . . . . .	26,953,237,946.57	35,205,706,993.38

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

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

The effective annual rate of interest earned by the assets of the SMI trust fund for the 12 months ending on December 31, 1997 was 6.9 percent. 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 1997 was 6.875 percent, payable semiannually.

***D. EXPECTED OPERATIONS AND STATUS OF THE TRUST FUND***

Future operations of the trust fund are projected using the Trustees' economic and demographic assumptions, as detailed in the OASDI Trustees Report, as well as other assumptions unique to the SMI program. Section II.F presents an explanation of the effects of the Trustees' intermediate assumptions and the other assumptions unique to SMI on the estimates in this report. Although financing rates have been set only through December 31, 1998, it has been assumed that financing for future periods will be set according to the statutory provisions described in section II.B. In addition, benefit expenditure estimates assume current statutory provisions are maintained.

### *Actuarial Analysis*

Table II.D1 shows the estimated operations of the SMI trust fund under the intermediate assumptions on a fiscal-year basis through 2007. Table II.D2 shows the corresponding development on a calendar-year basis. These estimated operations reflect the transfer of certain home health services from the HI program to the SMI program, as specified by the Balanced Budget Act of 1997. Beginning January 1998, for individuals enrolled in both HI and SMI, the HI program will cover the first 100 home health visits following a hospital or skilled nursing facility stay of at least 3 days, and coverage of all other home health services for these individuals will be transferred from the HI program to the SMI program. Therefore, all benefit payments for those services being transferred will be paid out of the SMI trust fund beginning January 1998. However, for the 6-year period 1998 through 2003, sums of money will also be transferred from the HI trust fund to the SMI trust fund to phase in the financial impact of the transfer of these services. The sums of money to be transferred will be determined so that the net additional expenditures of the SMI trust fund will be 1/6 of the cost of the services being transferred in 1998, incremented by an additional 1/6 of the cost each year thereafter. The benefit payments for 1998 through 2003 shown in tables II.D1 and II.D2 and elsewhere in this section and in section II.E represent aggregate SMI benefit payments less the funds transferred from the HI trust fund.

*Expected Operations*

**Table II.D1.—Operations of the SMI Trust Fund (Cash Basis) During Fiscal Years 1970-2007**  
[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:								
1970	\$936	\$928	\$12	\$1,876	\$1,979	\$217	\$2,196	\$57
1975	1,887	2,330	105	4,322	3,765	405	4,170	1,424
1980	2,928	6,932	415	10,275	10,144	593	10,737	4,532
1985	5,524	17,898	1,155	24,577	21,808	922	22,730	10,646
1986	5,699	18,076	1,228	25,003	25,169	1,049	26,218	9,432
1987	6,480	20,299	1,018	27,797	29,937	900	30,837	6,392
1988	8,756	25,418	828	35,002	33,682	1,265	34,947	6,447
1989	11,548 <sup>5</sup>	30,712	1,022 <sup>5</sup>	43,282 <sup>5</sup>	36,867	1,450 <sup>5</sup>	38,317 <sup>5</sup>	11,412 <sup>5</sup>
1990	11,494 <sup>5</sup>	33,210	1,434 <sup>5</sup>	46,138 <sup>5</sup>	41,498	1,524 <sup>5</sup>	43,022 <sup>5</sup>	14,527 <sup>5</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>6</sup>	1,845	56,059	23,276
1994	16,895	38,355	2,118	57,368	58,006	1,718	59,724	20,919
1995	19,244	36,988	1,937	58,169	63,491	1,722	65,213	13,874
1996	18,931	61,702	1,392	82,025	67,176	1,771	68,946	26,953
1997	19,141	59,471	2,193	80,806	71,133	1,420	72,553	35,206
Intermediate Estimates:								
1998	19,241	59,375	2,423	81,039	76,824 <sup>7</sup>	1,411	78,235	38,011
1999	20,548	63,431	2,287	86,266	84,878 <sup>7</sup>	1,460	86,338	37,939
2000	22,752	70,187	2,246	95,185	93,536 <sup>7</sup>	1,509	95,045	38,079
2001	25,134	77,739	2,224	105,097	105,682 <sup>7</sup>	1,565	107,247	35,929
2002	27,626	86,009	2,216	115,851	111,148 <sup>7</sup>	1,622	112,770	39,010
2003	30,496	95,423	2,226	128,145	125,194 <sup>7</sup>	1,682	126,876	40,279
2004	33,975	104,070	2,270	140,315	137,513	1,748	139,261	41,333
2005	37,315	113,453	2,295	153,063	150,275	1,822	152,097	42,299
2006	41,264	125,408	2,342	169,014	167,842	1,900	169,742	41,571
2007	45,516	138,378	2,553	186,447	179,667	1,982	181,649	46,369

<sup>1</sup>Fiscal years 1970 and 1975 consist of the 12 months ending on June 30 of each year; fiscal years 1980 and later consist of the 12 months ending on September 30 of each year.

<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 assets and the liabilities of the program (see table II.E2).

<sup>5</sup>Includes the impact of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

<sup>6</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.

<sup>7</sup>Benefit payments less monies transferred from the HI trust fund for home health agency costs, as provided for by the Balanced Budget Act of 1997.

Actuarial Analysis

**Table II.D2.—Operations of the SMI Trust Fund (Cash Basis) During Calendar Years 1970-2007**  
[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:								
1970	\$1,096	\$1,093	\$12	\$2,201	\$1,975	\$237	\$2,212	\$188
1975	1,918	2,648	107	4,673	4,273	462	4,735	1,444
1980	3,011	7,455	408	10,874	10,635	610	11,245	4,530
1985	5,613	18,250	1,243	25,106	22,947	933	23,880	10,924
1986	5,722	17,802	1,141	24,665	26,239	1,060	27,299	8,291
1987	7,409 <sup>4</sup>	23,560	875	31,844	30,820	920	31,740	8,394
1988	8,761 <sup>4</sup>	26,203	861	35,825	33,970	1,260	35,230	8,990
1989	12,263 <sup>5</sup>	30,852	1,234 <sup>5</sup>	44,349 <sup>5</sup>	38,294	1,489 <sup>5</sup>	39,783 <sup>5</sup>	13,556 <sup>5</sup>
1990	11,320	33,035	1,558	45,913	42,468	1,519	43,987	15,482
1991	11,934	37,602	1,688	51,224	47,336	1,541	48,877	17,828
1992	14,077 <sup>6</sup>	41,359 <sup>6</sup>	1,801	57,237	49,260	1,570	50,830	24,235
1993	14,193 <sup>6</sup>	41,465 <sup>6</sup>	2,021	57,679	55,784 <sup>7</sup>	2,000	57,784	24,131
1994	17,386	36,203	2,018	55,607	58,618	1,699	60,317	19,422
1995	19,717	39,007	1,582	60,306	64,972	1,627	66,599	13,130
1996	18,763	65,035	1,811	85,609	68,598	1,810	70,408	28,332
1997	19,289	60,171	2,464	81,924	72,757	1,368	74,124	36,131
Intermediate Estimates:								
1998	19,276	59,060	2,284	80,620	81,163 <sup>8</sup>	1,426	82,589	34,162
1999	20,972	64,887	2,270	88,129	86,913 <sup>8</sup>	1,472	88,385	33,906
2000	23,345	71,953	2,231	97,529	95,950 <sup>8</sup>	1,522	97,472	33,963
2001	25,729	79,668	2,218	107,615	105,768 <sup>8</sup>	1,579	107,347	34,231
2002	28,258	88,123	2,215	118,596	116,374 <sup>8</sup>	1,636	118,010	34,817
2003	31,242	97,856	2,246	131,344	128,167 <sup>8</sup>	1,697	129,864	36,297
2004	34,885	106,141	2,284	143,310	140,678	1,765	142,443	37,164
2005	38,125	115,890	2,307	156,322	153,544	1,841	155,385	38,101
2006	42,310	128,581	2,430	173,321	167,424	1,920	169,344	42,078
2007	46,584	141,643	2,696	190,923	183,634	2,002	185,636	47,365

<sup>1</sup>See footnote 2 of table II.D1.

<sup>2</sup>See footnote 3 of table II.D1.

<sup>3</sup>See footnote 4 of table II.D1.

<sup>4</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 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.

<sup>5</sup>See footnote 5 of table II.D1.

<sup>6</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>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 \$53,979 million and the amount transferred was \$1,805 million.

<sup>8</sup>See footnote 7 of table II.D1.

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The actuarial rates for calendar year 1998 were promulgated with specific margins to decrease slightly the size of the contingency level of the fund as a percentage of program expenditures. As a result, based on these actuarial rates and the above economic assumptions, the fund is estimated to decrease to a level of \$34.2 billion by the end of calendar year 1998 and then to continue to decrease to \$33.9 billion by the end of 1999. For subsequent years, contingency margins are assumed to be set in such a way that the ratio of assets minus liabilities to program expenditures will gradually decline to the preferred level in 2005 and then maintain that level thereafter.

The amount and rate of growth of benefit payments has been a source of some concern for many years. In table II.D3, amounts of payments are considered in the aggregate, on a per capita basis, and relative to the GDP. Rates of growth are shown historically and for the next 10 years, based on the intermediate set of assumptions. During 1997, program benefits grew 6.1 percent on an aggregate basis, grew 5.1 percent on a per capita basis, and remained at 0.90 percent of GDP. These rates of growth are among the lowest ever experienced by the SMI program. For 1998, the program is expected to grow 11.6 percent on an aggregate basis, to grow 10.7 percent on a per capita basis, and to increase from 0.90 to 0.97 percent of GDP. These larger increases are due primarily to the provisions included in the Balanced Budget Act of 1997.

**Table II.D3.—Growth in Total Benefits Under the SMI Program (Cash Basis) Through December 31, 2007**

Calendar year	Aggregate benefits [millions]	Percent change	Per capita benefits	Percent change	SMI benefits as a percent of GDP
Historical Data:					
1967	\$1,197	—	\$66.97	—	0.14
1968	1,518	26.8	82.27	22.8	0.17
1969	1,865	22.9	97.87	19.0	0.19
1970	1,975	5.9	101.30	3.5	0.19
1971	2,117	7.2	106.68	5.3	0.19
1972	2,325	9.8	114.90	7.7	0.19
1973	2,526	8.6	122.02	6.2	0.18
1974	3,318	31.4	144.47	18.4	0.22
1975	4,273	28.8	179.96	24.6	0.26
1976	5,080	18.9	207.38	15.2	0.28
1977	6,038	18.9	239.27	15.4	0.30
1978	7,252	20.1	279.58	16.8	0.32
1979	8,708	20.1	326.86	16.9	0.34
1980	10,635	22.1	389.87	19.3	0.38
1981	13,113	23.3	471.15	20.8	0.42
1982	15,455	17.9	545.55	15.8	0.48
1983	18,106	17.2	627.78	15.1	0.52
1984	19,661	8.6	670.78	6.8	0.50
1985	22,947	16.7	768.26	14.5	0.55
1986	26,239	14.3	861.38	12.1	0.59

*Actuarial Analysis*

**Table II.D3.—Growth in Total Benefits Under the SMI Program (Cash Basis) Through December 31, 2007**

Calendar year	Aggregate benefits [millions]	Percent change	Per capita benefits	Percent change	SMI benefits as a percent of GDP
1987	30,820	17.5	992.69	15.2	0.66
1988	33,970	10.2	1,076.64	8.5	0.67
1989	38,294	12.7	1,195.41	11.0	0.70
1990	42,468	10.9	1,305.12	9.2	0.74
1991	47,336	11.5	1,426.91	9.3	0.80
1992	49,260	4.1	1,454.85	2.0	0.79
1993	53,979	9.6	1,562.65	7.4	0.82
1994	58,618	8.6	1,669.87	6.9	0.84
1995	64,973	10.8	1,823.15	9.2	0.89
1996	68,599	5.6	1,901.88	4.3	0.90
1997	72,756	6.1	1,998.68	5.1	0.90
Intermediate Estimates:					
1998	81,163 <sup>1</sup>	11.6	2,213.09	10.7	0.97
1999	86,913 <sup>1</sup>	7.1	2,352.24	6.3	0.99
2000	95,950 <sup>1</sup>	10.4	2,574.53	9.4	1.05
2001	105,768 <sup>1</sup>	10.2	2,811.86	9.2	1.11
2002	116,374 <sup>1</sup>	10.0	3,064.01	9.0	1.17
2003	128,167 <sup>1</sup>	10.1	3,337.68	8.9	1.22
2004	140,678	9.8	3,619.66	8.4	1.28
2005	153,544	9.1	3,900.12	7.7	1.33
2006	167,424	9.0	4,192.94	7.5	1.37
2007	183,634	9.7	4,522.23	7.9	1.43

<sup>1</sup>See footnote 7 of table II.D1.

Even though the provisions in the Balanced Budget Act of 1997 are expected to increase program expenditures, the estimated expenditures in the 1998 annual report are lower than those in the 1997 annual report. The lower estimates are a result of (1) actual benefit payments for 1997 being lower than the estimates in the 1997 annual report, and (2) the recent experience indicating that rates of growth for some SMI services have slowed from those expected in the 1997 annual report. The lower expenditures for 1997 provide for a lower projection base, and, therefore, estimated expenditures for subsequent years would be lower even if the same growth rates were assumed as in the 1997 annual report. Moreover, the lower growth rates assumed for some services in the 1998 annual report further lower estimated expenditures. The impact of these two factors more than compensates for the increase in program expenditures due to the Balanced Budget Act. However, in spite of the lower estimates for program expenditures in the 1998 annual report, program expenditures are still expected to increase faster than the GDP, as indicated in table II.D3.

Since future economic, demographic, and health care usage and cost experience may vary considerably from the intermediate assumptions on which the preceding cost estimates were based, estimates have also

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been prepared on the basis of two additional alternative sets of assumptions: low cost and high cost. The estimated operations of the SMI trust fund during 1997-2007 are summarized in table II.D4 for all three alternatives. The assumptions underlying the intermediate assumptions are presented in substantial detail in section II.F. The assumptions used in preparing estimates under the low cost and high cost alternatives are also summarized in that section.

**Table II.D4.—Estimated Operations of the SMI Trust Fund (Cash Basis) Under Alternative Sets of Assumptions, Calendar Years 1997-2007**  
[In billions]

Calendar year	Premiums from enrollees	Other income <sup>1</sup>	Total income	Total disbursements	Balance in fund at end of year
<b>Intermediate:</b>					
1997 <sup>2</sup>	\$19.3	\$62.8	\$82.1	\$74.1	\$36.1
1998	19.3	61.3	80.6	82.6 <sup>3</sup>	34.2
1999	21.0	67.2	88.1	88.4 <sup>3</sup>	33.9
2000	23.3	74.2	97.5	97.5 <sup>3</sup>	34.0
2001	25.7	81.9	107.6	107.3 <sup>3</sup>	34.2
2002	28.3	90.3	118.6	118.0 <sup>3</sup>	34.8
2003	31.2	100.1	131.3	129.9 <sup>3</sup>	36.3
2004	34.9	108.4	143.3	142.4	37.2
2005	38.1	118.2	156.3	155.4	38.1
2006	42.3	131.0	173.3	169.3	42.1
2007	46.6	144.3	190.9	185.6	47.4
<b>Low Cost:</b>					
1997 <sup>2</sup>	19.3	62.8	82.1	74.1	36.1
1998	19.3	61.4	80.7	79.7 <sup>3</sup>	37.1
1999	19.8	62.9	82.6	83.0 <sup>3</sup>	36.9
2000	21.6	68.0	89.6	89.6 <sup>3</sup>	36.8
2001	23.4	73.3	96.6	96.5 <sup>3</sup>	37.0
2002	25.2	79.1	104.3	103.8 <sup>3</sup>	37.6
2003	27.3	85.6	112.9	112.1 <sup>3</sup>	39.0
2004	29.9	93.5	123.4	121.9	39.7
2005	31.9	99.5	131.4	130.6	40.5
2006	34.7	108.0	142.7	138.9	44.3
2007	37.3	116.2	153.5	148.5	49.3
<b>High Cost:</b>					
1997 <sup>2</sup>	19.3	62.8	82.1	74.1	36.1
1998	19.3	61.3	80.6	82.9 <sup>3</sup>	33.9
1999	22.0	70.8	92.9	89.1 <sup>3</sup>	37.6
2000	25.4	81.4	105.9	102.4 <sup>3</sup>	42.1
2001	28.9	93.0	121.9	116.7 <sup>3</sup>	47.3
2002	32.3	104.6	137.0	130.9 <sup>3</sup>	53.4
2003	36.7	119.3	156.0	148.4 <sup>3</sup>	60.9
2004	42.3	134.0	176.2	168.5	68.7
2005	47.4	150.5	197.9	189.1	77.5
2006	53.8	170.4	224.2	211.5	90.2
2007	60.6	192.1	252.7	237.6	105.3

## *Actuarial Analysis*

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

<sup>2</sup>Figures for 1997 represent actual experience.

<sup>3</sup>Disbursements include benefit payments and administrative expenses less monies transferred from the HI trust fund for HHA costs, as provided for by Public Law 105-33.

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 II.D4 illustrate two 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 2007 both income and disbursements would be around 25 percent lower than projected under the intermediate assumptions. The corresponding amounts under the high cost assumptions would both be around 30 percent higher than the intermediate estimates.
- 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 gradual, steady growth under all three sets of assumptions. 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.

Table II.D5 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 1997-2070.



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These estimated incurred disbursements are for benefit payments and administrative expenses combined, unlike the values in table II.D3 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 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 decline gradually in the last 12 years of that period to the same growth rate as GDP per capita and then to continue at the same rate as GDP per capita in the last 50 years. Therefore, changes in the last 50 years of the period are attributable only to demographic changes in the population. Given the historical experience of SMI costs per enrollee generally increasing faster than GDP per capita, this assumption may be considered optimistic. However, assuming a continuation of the historical trend for another 75 years would result in an SMI program so large as a percent of GDP that it would be implausible given other demands on those resources. Thus this projection can be viewed as a middle ground between assuming the continuation of historical trends and assuming that there will be moderation of growth in the health care sector of the national economy and in particular in the Medicare program. Based on these assumptions, incurred SMI disbursements as a percentage of GDP would increase rapidly from 0.93 percent in 1997 to 3.19 percent in 2035, decrease slightly to 3.10 percent in 2050, and then would increase to 3.31 percent in 2070.

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**Table II.D5.—SMI Disbursements (Incurred Basis) as a Percent of the Gross Domestic Product<sup>1</sup>**

Calendar year	SMI Disbursements as a percent of GDP
1997	0.93
1998	0.97
2000	1.07
2005	1.35
2010	1.67
2015	2.14
2020	2.48
2025	2.80
2030	3.06
2035	3.19
2040	3.19
2045	3.14
2050	3.10
2055	3.12
2060	3.21
2065	3.30
2070	3.31

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

***E. ACTUARIAL STATUS OF THE TRUST FUND***

**I. Actuarial Status of the Supplementary Medical Insurance Program**

The traditional concept of financial adequacy, 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 somewhat similar 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 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

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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 status or financial adequacy 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 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 as of the end of the period that have not yet been paid. If these adequacy tests 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 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 financial adequacy 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

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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 II.E1 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.

**Table II.E1.—Estimated Income and Disbursements Incurred Under the SMI Program for Financing Periods Through December 31, 1998**  
[In millions]

Financing period	Income				Disbursements			Net operations in year
	Premium from enrollees	Government contributions	Interest and other income	Total income	Benefit payments	Administrative expenses	Total disbursements	
Historical Data:								
12-month period ending June 30,								
1970	\$936	\$936	\$12	\$1,884	\$1,928	\$213	\$2,141	-257
1975	1,887	2,396	105	4,388	3,957	438	4,395	-7
1980	2,823	6,627	421	9,871	9,840	645	10,485	-614
Calendar year								
1985	5,613	18,243	1,248	25,104	22,750	986	23,736	1,368
1986	5,722	17,802	1,141	24,665	26,637	1,000	27,637	-2,972
1987	6,717	21,377	880	28,974	30,787	1,036	31,823	-2,849
1988	9,453	28,342	903	38,698	34,472	1,343	35,815	2,883
1989	12,263 <sup>1</sup>	30,826	1,257 <sup>1</sup>	44,346 <sup>1</sup>	38,237	1,386 <sup>1</sup>	39,623 <sup>1</sup>	4,723 <sup>1</sup>
1990	11,320	33,035	1,558	45,913	42,578	1,541	44,119	1,794
1991	11,934	37,558	1,732	51,224	46,375	1,572	47,947	3,277
1992	12,988	38,158	1,827	52,973	49,414	1,690	51,104	1,869
1993	15,282	44,640	2,021	61,943	55,156 <sup>2</sup>	1,713	56,869	5,074
1994	17,386	36,203	2,018	55,607	59,137	1,620	60,757	-5,150
1995	19,717	45,743	1,739	67,199	64,863	1,607	66,470	729
1996	18,763	58,068	1,885	78,716	68,906	1,807	70,713	8,003
1997	19,289	60,169	2,466	81,924	74,057	1,367	75,424	6,500
Intermediate Estimates:								
1998	19,276	59,060	2,284	80,620	79,809 <sup>3</sup>	1,426	81,235	-615

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<sup>1</sup>Includes the impact of the Medicare Catastrophic Coverage Act of 1988 (Public Law 100-360).

<sup>2</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. Estimated incurred payments for 1993 are \$53,351 million and the amount transferred was \$1,805 million.

<sup>3</sup>See footnote 7 of table II.D1.

### 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 II.E2. In some years, program assets have not been as large as liabilities. Nonetheless, the fund has remained positive, allowing claims to be paid.

**Table II.E2.—Summary of Estimated Assets and Liabilities of the SMI Program as of the End of the Financing Period, for Periods through December 31, 1998**  
[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 liabilities	Excess of assets over liabilities	Ratio <sup>1</sup>
Historical Data:								
As of June 30,								
1970	\$57	\$15	\$72	\$567	\$0	\$567	-495	-0.21
1975	1,424	67	1,491	1,257	14	1,271	220	0.04
1980	4,657	0	4,657	2,621	188	2,809	1,848	0.15
As of December 31,								
1985	10,924	0	10,924	3,142	-38	3,104	7,820	0.28
1986	8,291	0	8,291	3,540	-98	3,442	4,849	0.15
1987	8,394 <sup>2</sup>	0	8,394 <sup>2</sup>	3,507	17	6,394 <sup>2</sup>	2,000	0.06
1988	8,990	3	8,993	4,009	100	4,109	4,884	0.12
1989 <sup>3</sup>	13,556	0	13,556	3,952	-3	3,949	9,607	0.22
1990	15,482	0	15,482	4,062	19	4,081	11,401	0.24
1991	17,828	0	17,828	3,101	50	3,151	14,677	0.29
1992	24,236 <sup>4</sup>	0	24,236 <sup>4</sup>	3,255	170	7,689 <sup>4</sup>	16,547	0.30
1993	24,131	0	24,131	2,627	-117	2,510	21,621	0.36
1994	19,422	0	19,422	3,146	-196	2,950	16,472	0.25
1995	13,130	6,893 <sup>5</sup>	20,023	3,036	-216	2,820	17,203	0.24
1996	28,332	0	28,332	3,343	-219	3,124	25,208	0.32
1997	36,131	0	36,131	4,644	-220	4,424	31,707	0.39
Intermediate Estimates:								
1998	34,162	0	34,162	3,290	-220	3,070	31,092	0.35

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<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).

<sup>5</sup>This amount includes both the principal of \$6,736 million and the accumulated interest through December 31, 1995 for the shortfall in the fiscal year 1995 appropriation for Government contributions. Normally, this transfer would have been made on December 31, 1995 and, therefore, would have been reflected in the trust fund balance. However, due to absence of funding, the transfer of the principal and the appropriate interest was made on March 1, 1996.

Program financing has been established through December 31, 1998. The financing for calendar year 1998 was designed with specific margins to slightly reduce the excess of assets over liabilities as a percent of incurred expenditures for the following year. This was accomplished by including specific margins to slightly reduce the excess of assets less liabilities for both aged and disabled enrollees. As a result, the calendar year 1998 incurred income is expected to be less than incurred disbursements by \$615 million, as shown in table II.E1, and the excess of assets over liabilities is expected to decrease from \$31,707 million at the end of December 1997 to \$31,092 million at the end of December 1998, under the intermediate assumptions, as shown in table II.E2. This excess as a percent of incurred expenditures for the following year is expected to decrease from 39 percent as of December 31, 1997 to 35 percent as of December 31, 1998.

### **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 status of the SMI program could be affected by variations in these assumptions. In order to test the status 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

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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 projections discussed in the section II.D. This analysis examines the variation in the projection factors through the period for which the financing has been established (1998 for this report). The low cost and high cost projections begin the variation in program growth starting with the preceding year (1997) and continue such variation throughout the projection period.

Table II.E3 indicates that, under the lower growth range scenario, trust fund assets would exceed liabilities at the end of December 1998 by a wide margin, equivalent to 45.6 percent of the following year's incurred expenditures. If this lower growth range scenario were actually to materialize, then subsequent financing rates would be adjusted downward in order to lower the excess of assets over liabilities to an appropriate level to maintain the adequacy of the trust fund. Under the upper growth range scenario, trust fund assets would still exceed liabilities by the end of December 1998, dropping to a level of 25.1 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 II.E1 shows this ratio for historical years and for projected years under the intermediate scenario, as well as the lower growth range (optimistic) and the upper growth range (pessimistic) cost sensitivity scenarios.

**Table II.E3.—Actuarial Status of the SMI Trust Fund Under Three Cost Sensitivity Scenarios for Financing Periods Through December 31, 1998**

	Intermediate scenario			Lower range scenario			Upper range scenario		
	12-Month period ending June 30,			12-Month period ending June 30,			12-Month period ending June 30,		
	1997	1998	1999	1997	1998	1999	1997	1998	1999
Projection factors (in percent):									
Physician fees <sup>1</sup>									
Aged	0.5	1.0	1.3	0.4	0.8	0.2	0.6	1.3	2.5
Disabled	0.5	1.0	1.3	0.4	0.8	0.2	0.6	1.3	2.5
Utilization of physician services <sup>2</sup>									
Aged	0.5	2.1	0.0	-1.0	0.3	-2.2	2.0	3.9	2.2
Disabled	1.4	3.2	-2.8	0.5	0.3	-5.7	2.2	6.1	0.2
Outpatient hospital services per enrollee									
Aged	4.2	1.0	1.3	0.6	-3.4	-3.2	7.8	5.4	5.9
Disabled	3.8	-2.5	-1.9	0.5	-7.8	-7.4	7.1	2.9	3.7
Actuarial status (in millions):									
Assets	\$28,332	\$36,131	\$34,162	\$28,332	\$36,131	\$38,035	\$28,332	\$36,131	\$30,030
Liabilities	3,124	4,424	3,070	2,532	1,825	298	3,718	7,066	5,897
Assets less liabilities	\$25,208	\$31,707	\$31,092	\$25,800	\$34,306	\$37,737	\$24,614	\$29,065	\$24,133
Ratio of assets less liabilities to expenditures (in percent) <sup>3</sup>									
	32.2	39.0	34.9	33.8	44.4	45.6	30.7	34.0	25.1

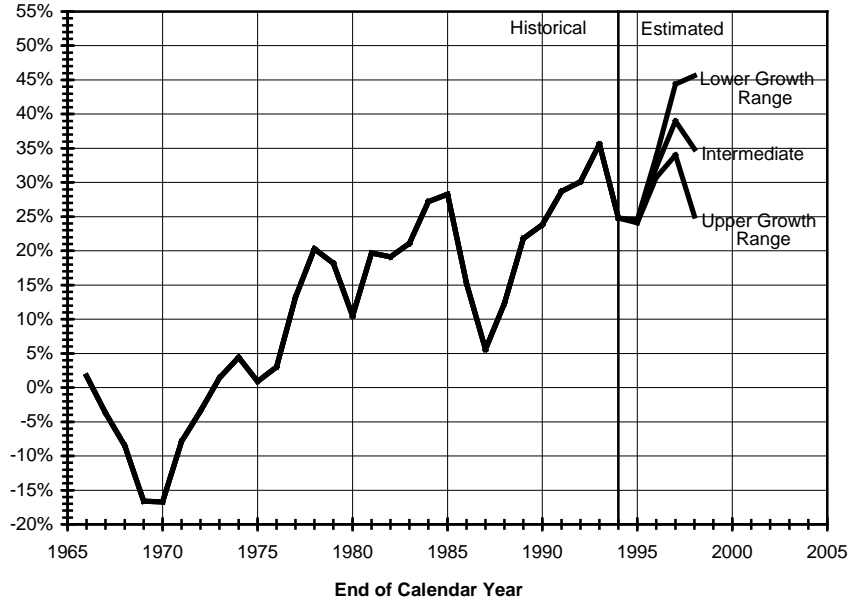
<sup>1</sup>As recognized for payment under the program.

<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 II.E1.—Actuarial Status of the SMI Trust Fund Through Calendar Year 1998



Note: The actuarial status of the SMI trust fund is measured by the ratio of (i) assets minus liabilities at the end of the year to (ii) the following year's incurred expenditures.

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

**1. Estimates under the Intermediate Assumptions for Aged and Disabled 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, 1996, 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

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

#### ***b. Establishing a Projection Base***

##### (1) Physician Services

Reimbursement amounts for physician services (and smaller amounts for other services such as laboratory tests, durable medical equipment (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 covered services. A record of the amount reimbursed after reduction for coinsurance and the deductible is transmitted to HCFA.

A sample of records is drawn for 0.1 percent of aged beneficiaries and 5.0 percent of disabled beneficiaries and 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 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 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). Tabulations of a sample of the provider bills are prepared by date of service and the lump-sum settlements, which are reported on a cash basis, are adjusted (using approximations) to allocate them to the time of service.

Group practice prepayment plans, which are not reimbursed through carriers, are reimbursed directly by HCFA on either a reasonable cost or 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.F1 summarizes the incurred reimbursement amounts per enrollee for the various services for selected 12-month periods ending June 30, through 1996. 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.F2 shows the incurred charges or costs per enrollee corresponding to the reimbursement values shown in table II.F1.

**Table II.F1.—Incurred Reimbursement Amounts Per Enrollee: Historical Data**

Year ending June 30,	Average enrollment [millions]	All services	Physician	Outpatient hospital	Home health agency <sup>1</sup>	GPPP <sup>2</sup>	Independent lab
Aged:							
1970	19.312	\$99.90	\$90.02	\$5.91	\$1.99	\$1.50	\$0.48
1975	21.504	161.29	136.28	16.47	3.83	3.07	1.64
1980	24.287	343.55	277.24	47.62	7.58	7.05	4.06
1985	26.914	686.30	538.90	111.70	1.05	19.52	15.13

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**Table II.F1.—Incurred Reimbursement Amounts Per Enrollee: Historical Data**

Year ending June 30,	Average enrollment [millions]	All services	Physician	Outpatient hospital	Home health agency <sup>1</sup>	GPPP <sup>2</sup>	Independent lab
1986	27.453	771.82	583.88	133.84	1.19	31.68	21.23
1987	28.013	915.81	681.41	164.70	0.98	43.15	25.57
1988	28.509	1,009.82	728.93	187.05	1.54	62.21	30.09
1989	28.927	1,114.55	795.94	207.62	1.53	74.47	34.99
1990	29.382	1,210.89	862.98	214.62	2.89	88.49	41.91
1991	29.883	1,339.19	936.20	247.49	2.44	103.83	49.23
1992	30.384	1,387.45	942.09	269.79	2.11	118.41	55.05
1993	30.889	1,456.89	954.69	303.74	3.43	137.97	57.06
1994	31.246	1,555.31	1,008.83	325.26	3.55	160.79	56.88
1995	31.547	1,730.15	1,092.25	384.30	6.47	189.36	57.77
1996	31.834	1,821.89	1,137.89	387.00	7.38	236.08	53.54
Disabled (excluding ESRD):							
1975	1.817	150.98	125.63	18.84	3.58	1.87	1.06
1980	2.646	363.80	287.98	61.61	6.08	4.30	3.83
1985	2.595	706.65	553.33	130.38	0.00	9.27	13.67
1986	2.632	774.26	593.50	148.77	0.00	12.95	19.04
1987	2.681	859.54	656.98	164.13	0.00	16.21	22.22
1988	2.732	926.93	684.72	195.65	0.00	22.18	24.38
1989	2.772	1,000.09	745.13	201.74	0.00	26.07	27.15
1990	2.811	1,048.64	767.52	220.18	0.00	27.50	33.44
1991	2.886	1,141.04	818.43	252.07	0.00	30.37	40.17
1992	3.012	1,187.91	815.75	293.46	0.00	33.86	44.84
1993	3.203	1,266.30	839.28	341.21	0.00	38.40	47.41
1994	3.453	1,336.79	887.34	357.63	0.00	41.70	50.12
1995	3.689	1,499.38	997.62	398.46	0.00	47.71	55.59
1996	3.893	1,576.70	1,028.35	437.99	0.00	54.78	55.57

<sup>1</sup>From July 1, 1981 to December 31, 1997, 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. During that time, 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.F2.—Incurred Charges or Costs Per Enrollee: Historical Data**

Year ending June 30,	Average enrollment [millions]	All services	Physician	Outpatient hospital	Home health agency <sup>1</sup>	GPPP <sup>2</sup>	Independent lab
Aged:							
1970	19.312	\$153.63	\$137.87	\$9.43	\$3.17	\$2.40	\$0.76
1975	21.504	237.88	201.04	25.03	4.66	4.66	2.49
1980	24.287	466.42	376.29	66.24	8.44	9.80	5.65
1985	26.914	911.56	718.35	150.16	1.05	26.24	15.76
1986	27.453	1,018.81	774.28	178.90	1.19	42.34	22.10
1987	28.013	1,198.73	896.03	218.12	0.98	57.14	26.46
1988	28.509	1,325.49	961.22	248.51	1.55	82.65	31.56
1989	28.927	1,444.50	1,036.20	272.44	1.53	97.72	36.61
1990	29.382	1,581.38	1,133.99	284.48	2.93	116.26	43.72
1991	29.883	1,746.20	1,228.05	327.97	2.46	136.64	51.08
1992	30.384	1,798.17	1,227.92	355.39	2.11	155.98	56.77
1993	30.889	1,884.35	1,241.34	399.42	3.43	181.43	58.73
1994	31.246	2,008.09	1,308.50	426.36	3.55	210.77	58.91

**Table II.F2.—Incurred Charges or Costs Per Enrollee: Historical Data**

Year ending June 30,	Average enrollment [millions]	All services	Physician	Outpatient hospital	Home health agency <sup>1</sup>	GPPP <sup>2</sup>	Independent lab
1995	31.547	2,227.33	1,412.81	501.32	6.47	247.02	59.71
1996	31.834	2,345.32	1,470.84	503.96	7.38	307.43	55.71
Disabled (excluding ESRD):							
1975	1.817	214.01	178.14	27.44	4.17	2.72	1.54
1980	2.646	484.80	383.23	83.88	6.62	5.86	5.21
1985	2.595	932.25	731.81	173.85	0.00	12.36	14.23
1986	2.632	1,016.35	781.85	197.51	0.00	17.19	19.80
1987	2.681	1,122.26	861.20	216.67	0.00	21.40	22.99
1988	2.732	1,215.58	901.18	259.42	0.00	29.41	25.57
1989	2.772	1,298.22	970.68	264.90	0.00	34.23	28.41
1990	2.811	1,374.40	1,010.78	292.52	0.00	36.21	34.89
1991	2.886	1,495.20	1,077.92	335.44	0.00	40.14	41.70
1992	3.012	1,548.36	1,068.64	388.61	0.00	44.84	46.27
1993	3.203	1,645.58	1,095.54	450.52	0.00	50.70	48.82
1994	3.453	1,734.38	1,156.40	471.11	0.00	54.93	51.94
1995	3.689	1,938.09	1,295.98	522.11	0.00	62.51	57.49
1996	3.893	2,036.93	1,334.67	572.75	0.00	71.64	57.86

<sup>1</sup>See footnote 1 of table II.F1.

<sup>2</sup>See footnote 2 of table II.F1.

***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 an important factor 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.F3. The second column shows the increase in fees allowed under SMI for reimbursement. For the reasons discussed below, the allowed increases in physician fees have almost always been significantly lower than the increases in submitted charges.

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**Table II.F3.—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 <sup>1</sup>
	Increase in physician fee component of CPI	Net increase in allowed fees		
Aged:				
1970	6.7	3.9	0.4	4.3
1975	12.8	8.9	3.7	12.9
1980	11.5	8.6	7.6	16.9
1985	6.0	0.8	3.7	4.5
1986	6.7	0.3	7.5	7.8
1987	7.5	5.4	9.8	15.7
1988	7.2	3.1	4.0	7.2
1989	7.4	1.4	6.3	7.8
1990	7.1	1.0	8.3	9.4
1991	6.9	-1.5	9.9	8.3
1992	5.9	-0.3	0.3	0.0
1993	6.1	0.5	0.6	1.1
1994	5.0	1.5	3.8	5.4
1995	4.4	4.9	2.9	7.9
1996	4.2	2.2	1.9	4.1
Disabled (excluding ESRD):				
1975	12.8	8.9	14.5	24.7
1980	11.5	3.2	14.7	18.4
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	1.5	4.6
1989	7.4	1.4	6.2	7.7
1990	7.1	-7.4	12.5	4.2
1991	6.9	7.4	-0.7	6.6
1992	5.9	-0.3	-0.6	-1.0
1993	6.1	0.5	2.0	2.5
1994	5.0	1.5	4.0	5.6
1995	4.4	4.9	6.8	12.0
1996	4.2	2.2	0.8	3.0

<sup>1</sup>Equals combined increases in allowed fees and residual factors.

Prior to calendar year 1992, bills submitted to the carriers during a specified “fee-screen year” were subject by statute to certain limitations on the level of fees to be allowed by the program for reimbursement purposes. The fee level allowed for a particular service by a physician was subject to reduction if it exceeded the median charge that the physician assessed for the same service in a prior base period. This median charge was called the “customary charge.” Fees were subject to further reduction if they exceeded the prevailing charges for the locality (defined as the 75th percentile of customary charges for a particular service in a particular locality). Starting July 1, 1975, the rate of increase in prevailing charges was limited further by the application of

the Medicare Economic Index (MEI). The customary and prevailing charge limits maintained by the carriers were called “fee screens.” Allowed charges were charges after application of the fee screens and were the charges on which reimbursement was based.

Public Law 101-239 provided for the replacement of customary and prevailing charges with fee schedules for physician services starting in calendar year 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 were adjusted to reflect the prevailing charges in each fee screen area, to phase in the new payment system. Increases in physician fees are based on growth in the MEI, plus a “bonus” or “penalty” reflecting whether past growth in the volume and intensity of services met specified targets. As a result of the Balanced Budget Act of 1997, beginning in 1999, the MEI is adjusted to match spending under a sustainable growth rate (SGR) mechanism.

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.

Per capita charges also have increased each year as a result of a number of other factors besides fee increases, 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.F3 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.F3 shows the total increases in allowed charges per enrollee for physician services. It includes the effects of all the items discussed above and is the compound product of the second and third columns.

Projected increases in total allowed charges per enrollee are shown in table II.F4. It compares with the corresponding historical data shown

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in table II.F3. Column 1 of table II.F4 shows the projected increases in the physician fee component of the CPI in each of the years ending June 30, 1997 through June 30, 2008. It represents an estimate of projected increases in the charges for all physician services (not only Medicare services) and, as such, represents the increase in submitted fees. Column 2 shows the projected net increases in allowed charges, and column 3 shows the increases due to residual causes. The last column is the compound product of columns 2 and 3.

**Table II.F4.—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	Total increase in allowed charges per enrollee <sup>1</sup>
	Increase in physician fee component of CPI	Net increase in allowed fees		
Aged:				
1997	3.2	0.5	0.5	1.0
1998	2.7	1.0	2.1	3.1
1999	3.5	1.3	0.0	1.3
2000	3.9	-0.9	-1.4	-2.3
2001	4.2	-0.3	1.9	1.6
2002	4.7	0.0	4.2	4.2
2003	4.8	0.6	3.7	4.3
2004	4.9	1.1	3.5	4.6
2005	4.9	1.2	3.7	4.9
2006	5.0	1.1	4.0	5.1
2007	5.1	1.4	4.1	5.6
2008	5.1	2.0	4.0	6.1
Disabled (excluding ESRD):				
1997	3.2	0.5	1.4	1.9
1998	2.7	1.0	3.2	4.2
1999	3.5	1.3	-2.8	-1.5
2000	3.9	-0.9	-5.9	-6.7
2001	4.2	-0.3	-0.3	-0.6
2002	4.7	0.0	7.3	7.3
2003	4.8	0.6	3.9	4.5
2004	4.9	1.1	2.9	4.0
2005	4.9	1.2	3.0	4.2
2006	5.0	1.1	3.4	4.5
2007	5.1	1.4	4.0	5.5
2008	5.1	2.0	3.9	6.0

<sup>1</sup>See footnote 1 of table II.F3.

It should be noted that the SGR process enacted as part of the Balanced Budget Act of 1997 contains technical deficiencies that would cause unstable bonuses and penalties for physician fee updates in 1999 and later. The estimates shown in this report assume that the instability is corrected prior to 1999.



(2) Institutional and Other Services

The historical increases in charges and costs per enrollee for institutional and other services are shown in table II.F5, and the projected increases are shown in table II.F6. The increases shown in table II.F6 reflect the impact of the provisions in the Balanced Budget Act of 1997. These include the transfer of a majority of home health agency services from the HI trust fund to the SMI trust fund starting in 1998 and implementation of a prospective payment system for services performed in the outpatient department of a hospital starting in 1999. All benefit payments for those home health agency services being transferred will be paid out of the SMI trust fund beginning January 1998. However, for the 6-year period 1998 through 2003, sums of money will also be transferred from the HI trust fund to the SMI trust fund to phase in the financial impact of the transfer of these services. It should be noted that in table II.F6, and elsewhere in this section with the exception of table II.F11, the estimates for home health agency costs for 1998 through 2003 are those associated with the payment of benefits and are not adjusted for the funds transferred from the HI trust fund.

**Table II.F5.—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
Aged:				
1970	39.3	3.3	-2.8	18.7
1975	29.2	83.5	26.6	32.4
1980	13.8	8.8	42.4	20.7
1985	16.2	6.1	15.7	25.8
1986	19.1	13.3	61.4	40.2
1987	21.9	-17.6	35.0	19.7
1988	13.9	58.2	44.6	19.3
1989	9.6	-1.3	18.2	16.0
1990	4.4	91.5	19.0	19.4
1991	15.3	-16.0	17.5	16.8
1992	8.4	-14.2	14.2	11.1
1993	12.4	62.6	16.3	3.5
1994	6.7	3.5	16.2	0.3
1995	17.6	82.3	17.2	1.4
1996	0.5	14.1	24.5	-6.7
Disabled (excluding ESRD):				
1975	17.1	0.2	64.8	55.6
1980	17.5	17.2	107.1	18.9
1985	3.3	0.0	11.6	19.3
1986	13.6	0.0	39.1	39.1
1987	9.7	0.0	24.5	16.1

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**Table II.F5.—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
1988	19.7	0.0	37.4	11.2
1989	2.1	0.0	16.4	11.1
1990	10.4	0.0	5.8	22.8
1991	14.7	0.0	10.9	19.5
1992	15.9	0.0	11.7	11.0
1993	15.9	0.0	13.1	5.5
1994	4.6	0.0	8.3	6.4
1995	10.8	0.0	13.8	10.7
1996	9.7	0.0	14.6	0.6

<sup>1</sup>From July 1, 1981 to December 31, 1997, 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. During that time, since all SMI disabled enrollees are entitled to HI, their coverage of these services is provided by the HI program. The extreme variation in SMI home health cost increases is largely attributable to random fluctuations in a service used by relatively few beneficiaries (see table II.F2).

**Table II.F6.—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
Aged:				
1997	4.2	5.4	22.0	-2.3
1998	1.0	<sup>2</sup>	41.1	2.3
1999	1.3	95.5 <sup>2</sup>	31.4	-0.6
2000	3.4	-1.7	28.6	-1.7
2001	7.0	1.5	19.0	2.1
2002	8.9	7.5	5.6	4.4
2003	8.9	7.1	7.2	5.0
2004	9.3	6.4	10.9	5.9
2005	9.7	6.3	11.9	6.4
2006	9.9	6.1	8.8	6.8
2007	10.0	5.8	8.8	7.0
2008	10.0	5.8	10.0	7.0
Disabled (excluding ESRD):				
1997	3.8	0.0	87.5	2.9
1998	-2.5	<sup>2</sup>	45.5	4.0
1999	-1.9	98.5 <sup>2</sup>	32.2	-1.2
2000	0.7	-1.3	23.4	-5.3
2001	6.9	1.8	20.6	3.0
2002	14.6	7.6	12.1	12.9
2003	10.9	6.6	11.5	9.8
2004	11.1	5.9	15.0	9.1
2005	11.7	5.5	15.7	9.6
2006	11.9	5.1	12.8	10.4
2007	12.2	4.5	12.8	10.8
2008	12.2	4.6	12.8	10.8

<sup>1</sup>See footnote 1 of table II.F5.

<sup>2</sup>Effective January 1, 1998, the coverage of a majority of home health agency services for those individuals entitled to HI and enrolled in SMI will be transferred from the HI program to the SMI program. As a result, as of January 1, 1998, there will be a large increase in SMI expenditures for these services for the aged enrollees, and SMI coverage for these services will resume for disabled enrollees.

*d. Projected Charges and Costs*

Table II.F7 shows projections of per enrollee incurred charges and costs based on the assumptions in tables II.F4 and II.F6. Table II.F8 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.F7. The aggregate reimbursement amounts shown are derived by multiplying average enrollment by average reimbursement per enrollee.

**Table II.F7.—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
Aged:						
1997	\$2,447.42	\$1,485.13	\$525.06	\$7.78	\$375.02	\$54.43
1998	2,807.50	1,531.98	530.33	160.38	529.15	55.66
1999	3,153.89	1,552.18	537.46	313.53	695.42	55.30
2000	3,328.95	1,515.71	555.98	308.26	894.63	54.37
2001	3,566.39	1,538.80	595.00	312.86	1,064.24	55.49
2002	3,769.51	1,603.53	648.18	336.48	1,123.39	57.93
2003	4,005.04	1,673.64	706.02	360.29	1,204.27	60.82
2004	4,305.72	1,750.38	771.54	383.43	1,335.98	64.39
2005	4,654.49	1,837.57	846.56	407.49	1,494.39	68.48
2006	4,994.22	1,931.92	930.61	432.19	1,626.37	73.13
2007	5,366.85	2,038.81	1,023.47	457.16	1,769.13	78.28
2008	5,803.21	2,164.66	1,125.59	483.70	1,945.46	83.80
Disabled (excluding ESRD):						
1997	2,148.61	1,360.05	594.67	0.00	134.36	59.52
1998	2,438.02	1,418.49	579.92	182.20	195.52	61.89
1999	2,647.94	1,397.64	568.98	361.70	258.49	61.13
2000	2,609.24	1,302.68	572.81	356.97	318.90	57.88
2001	2,715.02	1,294.93	612.34	363.56	384.57	59.62
2002	2,981.16	1,389.63	701.99	391.13	431.11	67.30
2003	3,202.87	1,452.73	778.66	416.87	480.72	73.89
2004	3,450.94	1,510.65	865.23	441.62	552.84	80.60
2005	3,735.41	1,575.32	966.04	465.89	639.86	88.30
2006	4,037.58	1,647.35	1,081.48	489.73	721.57	97.45
2007	4,383.39	1,736.43	1,212.98	511.99	814.02	107.97
2008	4,774.23	1,840.92	1,360.47	535.40	917.82	119.62

<sup>1</sup>See footnote 1 of table II.F5 and footnote 2 of table II.F6.

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**Table II.F8.—Incurred Reimbursement Amounts: Intermediate Estimates**

Year ending June 30,	Average enrollment [millions]	Reimbursement amounts	
		Per enrollee	Aggregate [millions]
Aged:			
1997	32.047	\$1,902.27	\$60,962
1998	32.214	2,220.90	71,544
1999	32.369	2,528.31	81,839
2000	32.543	2,666.78	86,785
2001	32.756	2,857.77	93,609
2002	32.956	3,025.49	99,708
2003	33.183	3,219.33	106,827
2004	33.456	3,465.33	115,936
2005	33.749	3,750.07	126,561
2006	34.078	4,027.91	137,263
2007	34.483	4,332.28	149,390
2008	35.061	4,688.11	164,370
Disabled (excluding ESRD):			
1997	4.054	1,665.76	6,753
1998	4.159	1,934.12	8,044
1999	4.255	2,137.25	9,094
2000	4.360	2,103.90	9,173
2001	4.487	2,189.66	9,825
2002	4.617	2,409.57	11,125
2003	4.769	2,593.42	12,368
2004	4.933	2,798.09	13,803
2005	5.111	3,031.89	15,496
2006	5.296	3,280.02	17,371
2007	5.478	3,563.34	19,520
2008	5.647	3,882.59	21,925

**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 with 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. Also, the estimates assume a continued increase in enrollment. The historical and projected enrollment and costs for SMI benefits are shown in table II.F9.

**Table II.F9.—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
Historical Data:				
1975	7	11	\$84	\$131
1980	19	22	235	299
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	742	1,028
1992	46	68	857	1,077
1993	55	69	949	1,153
1994	61	73	1,106	1,222
1995	66	76	1,283	1,338
1996	70	79	1,414	1,444
Intermediate Estimates:				
1997	75	84	1,537	1,567
1998	80	90	1,659	1,687
1999	85	95	1,779	1,804
2000	90	100	1,906	1,930
2001	95	106	2,054	2,081
2002	100	112	2,233	2,264
2003	106	117	2,431	2,468
2004	111	123	2,645	2,695
2005	117	129	2,887	2,929
2006	123	133	3,156	3,157
2007	129	138	3,451	3,401
2008	135	142	3,770	3,667

### 3. Summary of Aggregate Reimbursement Amounts on a Cash Basis Under the Intermediate Assumptions

Table II.F10 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. Over time this lag has been decreasing.

**Table II.F10.—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:				
1970	\$1,979	—	—	\$1,979
1975	3,289	\$259	\$217	3,765
1980	8,497	1,020	627	10,144
1985	19,077	1,788	943	21,808

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**Table II.F10.—Aggregate Reimbursement Amounts on a Cash Basis**  
[In millions]

Fiscal Year <sup>1</sup>	Aged	Disabled [excluding ESRD]	Disabled ESRD and ESRD only	Total
1986	22,067	2,070	1,032	25,169
1987	26,350	2,459	1,127	29,937
1988	29,796	2,632	1,255	33,682
1989	32,748	2,732	1,390	36,867
1990	36,837	3,065	1,588	41,498
1991	40,198	3,497	1,847	45,514
1992	42,792	3,820	2,015	48,627
1993	45,639	4,444	2,326	52,409
1994	50,112	5,233	2,661	58,006
1995	54,594	6,007	2,890	63,491
1996	57,323	6,800	3,055	67,178
1997	60,343	7,389	3,400	71,132
Intermediate Estimates:				
1998	72,706	8,098	3,525	84,329
1999	82,615	9,129	3,602	95,346
2000	88,103	9,338	3,900	101,341
2001	96,987	10,155	4,292	111,434
2002	98,725	11,242	4,577	114,544
2003	108,568	12,611	5,035	126,214
2004	117,912	14,099	5,486	137,497
2005	128,472	15,816	5,971	150,259
2006	143,324	17,941	6,561	167,826
2007	152,636	19,961	7,053	179,650

<sup>1</sup>Fiscal years 1970 and 1975 consist of the 12 months ending on June 30 of each year; fiscal years 1980 and later consist of the 12 months ending on September 30 of each year.

**4. Administrative Expenses**

The ratio of administrative expenses to benefit payments has been well 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. Projections of Cash Disbursements Under Alternative Assumptions**

Cash disbursements (benefit payments and administrative expenses less monies transferred from the HI trust fund for home health agency costs) for the low cost and high cost alternatives were developed by examining the incurred and cash disbursements under the intermediate assumptions. Beginning in the middle of calendar year 1997, the low cost and high cost incurred benefits for the first 12-month period reflect some variation in the incurred benefits under the intermediate assumptions for that period. Thereafter, the low cost and high cost alternatives contain assumptions which result in incurred benefits

increasing, relative to GDP, 2 percent less rapidly and 2 percent more rapidly, respectively, than the results under the intermediate assumptions. The low cost and high cost cash benefits reflect the same relationship to the cash benefits under the intermediate assumptions as the respective incurred benefits do to the incurred benefits under the intermediate assumptions. Administrative expenses under the low cost and the high cost alternatives are projected based on their respective wage series growth. Under the low cost and the high cost alternatives, the sums of money that will be transferred from the HI trust fund from 1998 through 2003 for home health agency services are projected to be the same as those under the intermediate assumptions. Based on the above methodology, cash disbursements as a percentage of the GDP were calculated for all three sets of assumptions and are displayed in table II.F11.

**Table II.F11.—SMI Cash Disbursements as a Percent of the Gross Domestic Product for Calendar Years 1997-2007<sup>1</sup>**

Calendar year	Intermediate assumptions	Alternatives	
		Low Cost	High Cost
1997	0.92	0.92	0.92
1998	0.99	0.95	1.00
1999	1.02	0.96	1.04
2000	1.06	0.98	1.10
2001	1.12	1.02	1.17
2002	1.18	1.05	1.28
2003	1.24	1.07	1.36
2004	1.29	1.10	1.45
2005	1.34	1.12	1.53
2006	1.39	1.14	1.62
2007	1.44	1.16	1.72

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





### III. APPENDICES

#### ***A. LONG-RANGE ESTIMATES OF MEDICARE INCURRED DISBURSEMENTS AS A PERCENTAGE OF GROSS DOMESTIC PRODUCT***

Expressing Medicare incurred disbursements as a percentage of the gross domestic product (GDP) gives a relative measure of the size of the Medicare program compared to the general economy. The projection of this measure 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 1997-2071. 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.—HI and SMI Incurred Disbursements as a Percent of Gross Domestic Product<sup>1</sup>**

Calendar year	Disbursements as a percent of GDP		
	HI	SMI	Total
1997	1.69	0.93	2.62
1998	1.69	0.97	2.65
2000	1.61	1.07	2.68
2005	1.65	1.35	3.00
2010	1.78	1.67	3.46
2015	1.97	2.14	4.12
2020	2.22	2.48	4.70
2025	2.52	2.80	5.31
2030	2.79	3.06	5.85
2035	2.99	3.19	6.18
2040	3.10	3.19	6.29
2045	3.16	3.14	6.30
2050	3.19	3.10	6.29
2055	3.21	3.12	6.33
2060	3.26	3.21	6.47
2065	3.33	3.30	6.63
2070	3.41	3.31	6.71

<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

### *Actuarial Analysis*

the same rate as average hourly earnings. 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.

Based on these assumptions, incurred Medicare disbursements as a percent of GDP are projected to increase rapidly from 2.62 percent in 1997 to 6.18 percent in 2035 and then to increase gradually to 6.71 percent in 2070. After 2035, while Medicare disbursements as a percent of GDP increase more slowly, the HI percentage grows steadily while the SMI percentage decreases slightly through 2050 and then increases again through 2070.

***B. MEDICARE COST SHARING AND PREMIUM AMOUNTS***

HI beneficiaries who use covered services may be subject to deductible and coinsurance requirements. A beneficiary is responsible for an inpatient hospital deductible amount, which is deducted from the amount payable by the HI program to the hospital, for inpatient hospital services furnished in a spell of illness. When a beneficiary receives such services for more than 60 days during a spell of illness, he or she is responsible for a coinsurance amount equal to one-fourth of the inpatient hospital deductible, for each of days 61-90 in the hospital. After 90 days in a spell of illness each individual has 60 lifetime reserve days of coverage. The coinsurance amount for these days is equal to one-half of the inpatient hospital deductible. A beneficiary is responsible for a coinsurance amount equal to one-eighth of the inpatient hospital deductible for each of days 21-100 of skilled nursing facility services furnished during a spell of illness.

Most persons age 65 and older and many disabled individuals under age 65 are insured for Medicare Hospital Insurance benefits without payment of any premium. The Social Security Act provides that certain aged and disabled persons who are not insured may voluntarily enroll, subject to the payment of a monthly premium. In addition, since 1994, voluntary enrollees may qualify for a reduced premium if they have at least 30 quarters of covered employment.

Under SMI, all enrollees are subject to a monthly premium. Most SMI services are subject to an annual deductible and coinsurance. The annual deductible and the coinsurance percentage (percent of costs that the enrollee must pay) are set by statute. The coinsurance percentage has remained at 20 percent since the inception of the program.

Table III.B1 shows the historical levels of HI and SMI deductibles, HI coinsurance, and HI and SMI premiums, as well as projected values for future years based on the intermediate set of assumptions used in estimating the operations of the trust funds. Certain anomalies in these values resulted from specific program features in particular years (e.g., the effect of the Medicare Catastrophic Coverage Act of 1988 on 1989 values). The amounts of the HI and SMI premiums and the HI deductibles and coinsurance are required to be announced in the Federal Register in September of each year for the upcoming year. The values listed in the table for future years are estimates, and actual amounts are likely to be somewhat different as experience emerges.

Appendices

Table III.B1.—Medicare Cost Sharing and Premium Amounts

Year	HI					SMI		
	Inpatient coinsurance <sup>1</sup>			SNF coinsurance days <sup>1</sup>	Monthly premium		Monthly premium <sup>2</sup>	Annual deductible <sup>1</sup>
	Inpatient hospital deductible <sup>1</sup>	Days 61-90	Lifetime reserve days		Standard <sup>2</sup>	Reduced <sup>1</sup>		
Historical Data:								
1967	\$40	\$10	—	\$5.00	—	—	\$3.00	\$50
1968	40	10	\$20	5.00	—	—	4.00	50
1969	44	11	22	5.50	—	—	4.00	50
1970	52	13	26	6.50	—	—	4.00	50
1971	60	15	30	7.50	—	—	5.30	50
1972	68	17	34	8.50	—	—	5.60	50
1973	72	18	36	9.00	\$33	—	5.80	60
1974	84	21	42	10.50	36	—	6.30	60
1975	92	23	46	11.50	40	—	6.70	60
1976	104	26	52	13.00	45	—	6.70	60
1977	124	31	62	15.50	54	—	7.20	60
1978	144	36	72	18.00	63	—	7.70	60
1979	160	40	80	20.00	69	—	8.20	60
1980	180	45	90	22.50	78	—	8.70	60
1981	204	51	102	25.50	89	—	9.60	60
1982	260	65	130	32.50	113	—	11.00	75
1983	304	76	152	38.00	113	—	12.20	75
1984	356	89	178	44.50	155	—	14.60	75
1985	400	100	200	50.00	174	—	15.50	75
1986	492	123	246	61.50	214	—	15.50	75
1987	520	130	260	65.00	226	—	17.90	75
1988	540	135	270	67.50	234	—	24.80	75
1989 <sup>3</sup>	560	—	—	25.50	156	—	31.90	75
1990	592	148	296	74.00	175	—	28.60	75
1991	628	157	314	78.50	177	—	29.90	100
1992	652	163	326	81.50	192	—	31.80	100
1993	676	169	338	84.50	221	—	36.60	100
1994	696	174	348	87.00	245	\$184	41.10	100
1995	716	179	358	89.50	261	183	46.10	100
1996	736	184	368	92.00	289	188	42.50	100
1997	760	190	380	95.00	311	187	43.80	100
1998	764	191	382	95.50	309	170	43.80	100
Intermediate Estimates:								
1999	776	194	388	97.00	310	171	47.30	100
2000	792	198	396	99.00	312	172	52.20	100
2001	812	203	406	101.50	320	176	57.00	100
2002	836	209	418	104.50	331	182	62.00	100
2003	872	218	436	109.00	346	190	67.80	100
2004	912	228	456	114.00	365	201	74.80	100
2005	956	239	478	119.50	384	211	80.70	100
2006	1,004	251	502	125.50	405	223	88.30	100
2007	1,056	264	528	132.00	425	234	95.60	100
2008	1,108	277	554	138.50	446	245	103.00	100

<sup>1</sup>Amounts shown are effective for calendar years.

<sup>2</sup>Amounts shown for 1967-1982 are for the 12-month periods ending June 30; amounts shown for 1983 are for the period July 1, 1982 through December 31, 1983; amounts shown for 1984 and later are for calendar years.

<sup>3</sup>Anomalies in the 1989 values are due to the Medicare Catastrophic Coverage Act of 1988. Most of the provisions of the Act were repealed the following year.

### *Cost Sharing and Premiums*

In 1998 there will be an estimated 9.1 million deductibles paid at \$764 each, about 2.8 million days subject to coinsurance at \$191 per day (for hospital days 61 through 90), about 1.3 million lifetime reserve days subject to coinsurance at \$382 per day, and about 25.0 million extended care days subject to coinsurance at \$95.50 per day. Similarly, in 1997 there were an estimated 8.9 million deductibles paid at \$760 each, about 2.7 million days subject to coinsurance at \$190 per day (for hospital days 61 through 90), about 1.3 million lifetime reserve days subject to coinsurance at \$380 per day, and about 24.6 million extended care days subject to coinsurance at \$95.50 per day. Therefore, the estimated total increase in cost to beneficiaries is about \$260 million (rounded to the nearest \$10 million), due to (1) the increase in the deductible and coinsurance amounts and (2) the change in the number of deductibles and daily coinsurance amounts paid.

*Appendices*

**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 status.** A measure of the adequacy of the financing as determined by the difference between assets and liabilities at the end of the periods for which financing was established.

**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 required 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 its report on the financial status of the OASDI program was submitted on January 6, 1997. 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.

**Assumptions.** Values relating to future trends in certain key factors which affect the balance in 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 immediately 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. Stephen G. Kellison and Marilyn Moon began serving 4-year terms on July 20, 1995. 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.

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**Bond.** A certificate of ownership of a specified portion of a debt due by the federal government to 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 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.** 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 1998 began October 1, 1997 and will end September 30, 1998.

**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.

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**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.

**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."

**Managed care.** Includes Health Maintenance Organizations (HMO), Competitive Medical Plans (CMP), and other plans that provide health services on a prepayment basis which is either based on cost or risk depending on the type of contract they have with Medicare. See also “Medicare+Choice”.

**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+Choice.** An expanded set of options for the delivery of health care under Medicare established by the Balanced Budget Act of 1997. Most Medicare beneficiaries can choose to receive benefits through the original fee-for-service program or through one of the following Medicare+Choice plans: (1) coordinated care plans (such as health maintenance organizations, provider sponsored organizations, and preferred provider organizations); (2) Medical Savings Account (MSA)/High Deductible plans (through a demonstration available to up to 390,000 beneficiaries); or (3) private fee-for-service plans.

**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 is considered in connection with the update factor for the physician fee schedule.

**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,

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ambulatory surgical procedures, medical supplies, such as splints, laboratory tests billed by the hospital, etc.

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

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

**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 (RBRVS).** 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 programs 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 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 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.

**Sustainable Growth Rate.** A system for establishing goals for the rate of growth in expenditures for physicians' services.

**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.

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***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.

Richard S. Foster  
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