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# ISSUE BRIEF

AMERICAN ACADEMY *of* ACTUARIES

## Medicare's Financial Condition: Beyond Actuarial Balance

Each year, the Boards of Trustees of the Federal Hospital Insurance (HI) and Supplementary Medical Insurance (SMI) Trust Funds report to Congress on the trust funds' financial condition. Together, these programs make up the Medicare program for the elderly and for certain disabled Americans. The Trustees' Report is the primary source of information on the financial status of the Medicare program, and the American Academy of Actuaries proudly recognizes the contribution that members of the actuarial profession have made in preparing the report and educating the public about this important issue.

According to the projections in the 2006 Medicare Trustees' Report, Medicare's financial status has deteriorated somewhat since the 2005 report. The HI trust fund, which pays for hospital services, will be depleted two years earlier than previously projected, and HI expenditures will exceed HI non-interest income this year. In addition, Medicare expenditures will continue to consume an increasing share of federal outlays and GDP. The trustees conclude that "the projections shown in [the] report continue to demonstrate the need for timely and effective action to address Medicare's financial challenges—both the long-range financial imbalance facing the HI trust fund and the heightened problem of rapid growth in expenditures."

This issue brief examines more closely the findings of the Trustees' Report. The American Academy of Actuaries' Medicare Steering Committee concludes that the Medicare program faces serious short-term and long-term financing problems. As highlighted in the 2006 Medicare Trustees' Report:

▲ The HI trust fund fails to meet the test of short-range financial adequacy because HI trust fund assets will fall below annual expenditures within the next 10 years.

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The Committee would like to express appreciation for the work of John Wandishin and Cori Uccello who played a key role in reviewing the 2006 Medicare Trustees' Report and preparing the 2006 edition of this issue brief.



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- ▲ *The HI trust fund also fails to meet the test of long-range actuarial balance. HI expenditures will exceed HI non-interest income this year. By 2018, when trust fund assets are projected to be depleted, tax revenues would cover only 80 percent of program costs, and this share will decrease rapidly thereafter. The trust fund depletion date is projected to arrive two years earlier than projected last year, due in part to slightly higher hospital costs in 2005 than previously estimated and some upward revisions in the short-range assumptions about utilization of HI services.*
- ▲ *The value in today's dollars of the HI deficit over the next 75 years is \$11 trillion. Eliminating this deficit would require an immediate 121 percent increase in payroll taxes or an immediate 51 percent reduction in benefits, or some combination of the two. Delaying action would require more drastic tax increases or benefit reductions.*
- ▲ *The SMI trust fund includes accounts for the Part B program which covers physician and outpatient hospital costs and for the Part D program which covers the new prescription drug benefit enacted in 2003. The SMI trust fund is expected to remain solvent, but only because its financing is reset each year to meet projected future costs. Projected increases in SMI expenditures, therefore, will require increases in beneficiary premiums and general revenue contributions over time.*
- ▲ *Medicare's demand on the federal budget, measured as the HI income shortfall and the general revenue contribution to SMI, is projected to increase rapidly.*
- ▲ *Medicare expenditures as a share of GDP and of total federal revenues are also projected to increase rapidly, thereby threatening Medicare's long-term sustainability.*
- ▲ *The increasing costs of the Medicare program reflect the increasing costs of the health care system as a whole.*

*We recommend that policy-makers implement changes to improve Medicare's financial outlook. The sooner such corrective measures are enacted, the more flexible the approach and the more gradual the implementation can be. Failure to act now may necessitate far more onerous actions later.*

## Short-term Financing of Medicare

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To assure short-range financial adequacy of the HI trust fund, the Medicare trustees recommend that trust fund assets equal or exceed annual expenditures for each of the next 10 years. This level would serve as an adequate contingency reserve in the event of adverse economic or other conditions. For the next several years, the trust fund assets are expected to significantly exceed annual expenditures. However, trust fund assets are projected to fall below annual expenditures during 2012. As a result, the HI trust fund fails the test of short-range financial adequacy.

## Long-term Financing of Medicare

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The Medicare program has three fundamental long-range financing problems:

1. HI trust fund income will soon become inadequate to fund the HI portion of Medicare benefits;
2. Medicare's demands on the federal budget are increasing; and
3. Paying currently promised Medicare benefits will place an increasing strain on the U.S. economy.

Each of these problems is discussed in more detail below. Note that the expenditures cited in this issue brief include the impact of the new Medicare prescription drug plan and other changes implemented under the Medicare Prescription Drug, Improvement, and Modernization Act of 2003.

### ***Medicare HI Trust Fund Income Will Soon Become Inadequate to Fund HI Benefits***

In terms of trust fund accounting, Medicare consists of two parts, each of which is financed separately. Hospital Insurance (HI) pays primarily for inpatient hospital care; Supplementary Medical Insurance (SMI) pays primarily for physician and outpatient care, as well as the new Medicare Part D prescription drug benefit. Like the Social Security program, Medicare makes use of trust funds to account for all income and expenditures, and the HI and SMI programs operate separate trust funds. Taxes, premiums, and other income are credited to the trust funds, and are used to pay benefits and administrative costs. Any unused income is added to the trust fund assets, which are invested by law in U.S. government securities for use in future years.

The 2006 Medicare Trustees' Report highlights the long-term financing problems facing the program:

- ▲ The HI program is funded primarily through earmarked payroll taxes. From 1999 through 2003, HI payroll taxes and other non-interest income have exceeded HI expenditures, and the trust fund accumulated assets. In 2004, however, HI non-interest income fell below HI expenditures. Although non-interest income exceeded expenditures in 2005 due to large positive adjustments to payroll tax receipts, expenditures will again exceed non-interest income in 2006. Beginning in 2010, HI expenditures are projected to exceed all HI income, including interest. At that point, the HI trust fund will need to begin redeeming its assets—U.S. government securities—in order to pay for benefits. If the federal government is experiencing unified budget deficits at the time these securities need to be redeemed, either additional taxes will need to be levied to fund the redemptions, or additional money will need to be borrowed from the public, thereby increasing the public debt.
- ▲ By 2018, HI trust fund assets are projected to be depleted. At that time, tax revenues are projected to cover only 80 percent of program costs, with the share decreasing further thereafter. The HI trust fund depletion date is projected to arrive two years earlier than projected in the 2005 Medicare Trustees' Report, due in part to slightly higher hospital costs in 2005 than previously estimated and some upward revisions in the short-range assumptions about the utilization of HI services.
- ▲ The value in today's dollars of the HI deficit over the next 75 years is \$11.0 trillion, or 3.4 percent of taxable payroll over the same time period. Eliminating this deficit would require an immediate 121 percent increase in payroll taxes or an immediate 51 percent reduction in benefits, or some combination of the two. Delaying action would require more drastic tax increases or benefit reductions. Projections over an infinite time horizon would increase the shortfall to \$28.1 trillion, or 5.8 percent of taxable payroll. Given the uncertainty of projections 75 years into the future, however, extending these projections into the infinite future can only increase the uncertainty, so that these results can have only limited value for policy-makers.
- ▲ The SMI program is financed through beneficiary premiums that cover about a quarter of the cost. Federal general tax revenues cover the remaining three quarters.<sup>1</sup> The SMI trust fund is expected to remain solvent, but only because its financing is reset each year to meet projected future costs. Projected increases in SMI expenditures, therefore, will require increases in beneficiary premiums and general revenue contributions over time.

### ***Medicare's Demand on the Federal Budget Is Increasing***

Another way to gauge Medicare's financial condition is to view it from a federal budget perspective. In particular, this assessment determines whether Medicare receipts from the public (e.g. payroll taxes, beneficiary premiums) exceed or fall short of outlays to the public. Under this approach, interest income on the HI trust fund assets and contributions from general revenues to the SMI program are ignored, because they are essentially intragovernmental transfers between the general fund and the Medicare trust funds. As a result, the difference between public receipts and public expenditures for Medicare reflects any HI income shortfall and the general revenue share of SMI.

1. Part B beneficiaries pay monthly premiums covering about 25 percent of program costs; general revenues cover the remaining 75 percent of costs. Part D premiums will be set at about 25 percent of Part D costs. However, because of low-income premium subsidies, beneficiary premiums will cover only about 9 percent of total Part D costs in 2006. State payments on behalf of certain beneficiaries will cover about 13 percent of costs and general revenues will cover the remaining 78 percent of costs.

Table 1 reports the HI income shortfall and the general revenue contribution to the SMI program in 2005 and projections over the next 10 years. Recall that the SMI program is designed such that about three-quarters of its expenditures are funded through general revenues. In 2005, Medicare expenditures already exceeded public receipts by \$118 billion. This amount is expected to grow throughout the period. Over the next 10 years the cumulative difference between Medicare expenditures and public receipts is projected to total \$2.8 trillion.

**Table 1**

**HI Income Shortfall and SMI General Revenue Contribution  
(Billions of Dollars)**

Calendar Year	HI Trust Fund			SMI Trust Fund General Revenue Contribution <sup>2</sup>	HI Income Shortfall Plus SMI General Revenue Contribution
	Income <sup>1</sup>	Expenditures	Shortfall		
2005	\$184.0	\$182.9	-\$1.0	\$119.2	\$118.1
2006	194.8	200.5	5.6	178.9	184.6
2007	203.5	213.1	9.6	200.3	209.9
2008	217.7	226.6	8.9	210.1	219.0
2009	229.8	242.6	12.9	233.6	246.5
2010	241.5	259.2	17.7	222.0	239.7
2011	255.2	276.9	21.7	252.3	274.0
2012	269.1	296.5	27.3	272.1	299.5
2013	282.3	317.7	35.4	294.1	329.5
2014	295.9	339.6	43.7	317.1	360.8
2015	309.9	362.5	52.6	342.8	395.4
Total 2006-2015	\$2,499.8	\$2,735.3	\$235.4	\$2,523.3	\$2,758.7

<sup>1</sup> HI receipts exclude interest income.

<sup>2</sup> SMI general revenue contribution includes Part B and Part D general revenue contributions.

Source: American Academy of Actuaries' tabulations based on 2006 Medicare Trustees' Report Tables III.B4 and III.C1 (Intermediate Projection).

Beginning in 2010, when HI expenditures are projected to exceed HI public receipts plus interest income on trust fund assets, the HI trust fund will need to begin drawing down its assets, further increasing Medicare's demand on the federal budget. Unless payroll taxes are increased or benefits reduced, HI trust fund assets are projected to be depleted in 2018, and there is no current provision allowing for general fund transfers to cover HI expenditures in excess of payroll tax revenues.

For a longer-term view of Medicare's demand on the federal budget, Table 2 reports the HI income shortfall and the SMI general revenue contribution over the next several decades, as a share of GDP. The HI income shortfall and SMI general revenue contribution are projected to grow dramatically—from 1.4 percent of GDP in 2006 to 8.0 percent of GDP in 2080. This will increase considerably the pressures on the federal budget, unless HI income shortfalls or SMI general revenue contributions are reduced.

**Table 2****HI Income Shortfall and SMI General Revenue Contribution  
(Percentage of GDP)**

<b>Calendar Year</b>	<b>HI Shortfall</b>	<b>SMI General Revenue Contribution<sup>1</sup></b>	<b>HI Income Shortfall and SMI General Revenue Contribution</b>
2006	0.02 %	1.34 %	1.36 %
2010	0.10	1.37	1.47
2020	0.49	2.01	2.50
2030	1.23	2.80	4.03
2040	1.97	3.37	5.34
2050	2.45	3.75	6.20
2060	2.82	4.09	6.91
2070	3.18	4.37	7.55
2080	3.45	4.55	8.00

<sup>1</sup> SMI general revenue contribution includes Part B and Part D general revenue contributions.

Source: Social Security and Medicare Boards of Trustees Summary of the 2006 Annual Reports, Chart E.

The new Medicare law includes a provision intended to address these financial challenges. Basically, if general funding sources are projected to account for more than 45 percent of Medicare spending within the next seven years, the administration is required to recommend ways to reduce this percentage.<sup>2</sup> Options would include reducing spending (e.g., benefit cuts, delayed eligibility, reduced provider payments), increasing revenues (e.g., raising payroll taxes, raising beneficiary premiums), or some combination. Congress could then implement the recommendations, but would not be required to do so.

The 2006 Medicare Trustees' Report projects that the 45 percent threshold will first be reached in 2012, within seven years. Therefore, the requirement could be triggered next year. The imminent triggering of this provision draws attention to the need to manage the demand Medicare places on the federal budget, and provides policy-makers the opportunity to address the financial situation of the program and to limit the burden the program places on the federal budget. Congressional action is not guaranteed, however, and depending on what action, if any, is taken, other financing problems could remain. For instance, reducing general revenue funding might not have an impact on HI solvency.

### ***Medicare Is Projected To Place Increasing Strains on the Economy***

A broader issue related to Medicare's financial condition is whether the economy can sustain Medicare spending in the long run. To gauge the future sustainability of the Medicare program, we examine the share of GDP that will be consumed by Medicare. As shown in Table 3, total Medicare spending is projected to consume a greater share of GDP over time. In 2005, total Medicare spending was 2.7 percent of GDP. This share is expected to increase to 3.2 percent in 2006, due in large part to the addition of the prescription drug benefit. It is expected to rise to 6.5 percent of GDP in 2030 and 11.0 percent of GDP in 2080. (Notably, this measure understates the share of the economy devoted to health spending among the elderly and disabled, because Medicare imposes cost sharing and does not cover all health products and services utilized.)

2. More specifically, a determination of "excess general funding" is triggered if for two consecutive trustees' reports the difference between Medicare outlays and dedicated financing sources (HI payroll taxes, HI share of income taxes on Social Security benefits, Part D state transfers, and beneficiary premiums) exceeds 45 percent of Medicare outlays within seven years of the projection.

**Table 3****Medicare and Social Security Expenditures as a Share of GDP  
(Percentage)**

<b>Calendar Year</b>	<b>Medicare</b>	<b>Social Security</b>	<b>Medicare Plus Social Security</b>
2005	2.7 %	4.2 %	7.0 %
2006	3.2	4.3	7.5
2007	3.3	4.3	7.5
2008	3.4	4.2	7.6
2009	3.5	4.3	7.7
2010	3.5	4.3	7.8
2020	4.7	5.3	9.9
2030	6.5	6.2	12.7
2040	8.0	6.4	14.3
2050	9.0	6.3	15.2
2060	9.8	6.3	16.0
2070	10.5	6.3	16.8
2080	11.0	6.3	17.3

Source: American Academy of Actuaries' tabulations based on 2006 Medicare Trustees' Report (plot points for Figure II.D.1) and 2006 Social Security Trustees' Report (plot points for Figure II.D.5).

Considering Medicare spending in conjunction with Social Security spending further highlights the strain these programs place on the economy. Social Security spending as a share of GDP increases more modestly than Medicare over the next several decades, and as a result, Medicare spending is expected to exceed that of Social Security in 2028. Combined, Medicare and Social Security expenditures equaled 7.0 percent of GDP in 2005. This share of GDP is expected to increase considerably to a projected 12.7 percent in 2030 and 17.3 percent in 2080.

Medicare and Social Security expenditures are even more striking when considered relative to total federal revenues. The trustees report that total federal revenues have historically averaged about 19 percent of GDP. Using this average, nearly 40 percent of all federal revenues in 2006 will be used to pay Medicare and Social Security benefits. If no changes are made to either program and federal revenues remain at 19 percent of GDP, this share is expected to increase to 75 percent in 2040, and by 2070, Medicare and Social Security spending would equal nearly 90 percent of total federal revenues.

These projections highlight the increasing strains that Medicare, especially in conjunction with Social Security, will place on the U.S. economy. Moreover, increased spending for Medicare may crowd out the share of funds available for other federal programs.

If we are to avoid this trend, reforms must be made to address the rapid growth in Medicare expenditures. It is important to recognize, however, that unless the growth in total health expenditures is reduced—not just the share maintained through the Medicare program—health expenditures will continue to consume a large and growing share of the economy. Shifting more program costs to workers through increased payroll taxes or to beneficiaries through higher premiums or increased cost sharing could reduce federal outlays for Medicare, but would increase private outlays. The share of the economy devoted to total health expenditures would not be reduced.

## Conclusion

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The American Academy of Actuaries' Medicare Steering Committee continues to be very concerned about Medicare's long-range financing problems. With HI non-interest income already falling short of outlays this year, the HI trust fund is projected to be depleted as soon as 2018. In addition, Medicare will likely exact increasing demands on the federal budget, even with the recently enacted provision that alerts Congress when the program's reliance on general revenue sources is becoming unduly large. The program's sustainability is also in question as currently promised benefits will make up increasing shares of both GDP and total federal revenues.

We recommend that policy-makers implement changes to improve Medicare's financial outlook. We agree with the 2006 trustees, who state in their report:

"The sooner the solutions are enacted, the more flexible and gradual they can be. Moreover, the early introduction of reforms increases the time available for affected individuals and organizations - including health care providers, beneficiaries, and taxpayers - to adjust their expectations."

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*The Academy is ready to provide the analysis and technical expertise of our member health actuaries in responding to issues regarding the future of the Medicare system. Other Academy publications include Medicare: Next Steps, How Is Medicare Financed? What Is the Role of the Medicare Actuary? and Evaluating the Fiscal Soundness of Medicare. These and other Academy publications are available at [www.actuary.org/medicare/index.htm](http://www.actuary.org/medicare/index.htm).*



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