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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 2004 Medicare Trustees' Report, Medicare's financial status has deteriorated considerably since last year. The HI trust fund, which pays for hospital services, will be depleted earlier than previously expected and HI expenditures are projected to 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 2004 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.
- The HI trust fund also fails to meet the test of long-range actuarial balance. HI expenditures are projected to start exceeding HI non-interest income this year. By 2019, when trust fund assets are projected to be depleted, tax revenues would cover only about 80 percent of program costs, and this share will decrease rapidly thereafter. The trust fund depletion date is projected to arrive seven years sooner than projected last year, due in part to higher hospital expenditures, lower payroll taxes, and the increased payments to rural hospitals and private health plans enacted

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*under the new Medicare legislation. Notably, the new prescription drug program does not impact the HI trust fund, because it is included in the SMI trust fund.*

- *The SMI trust fund, which includes spending for the newly enacted Medicare prescription drug benefit, 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.*
- *Without payroll tax increases or benefit decreases, Medicare's demand on the federal budget, measured as the HI income shortfall and the general revenue contribution to SMI, is increasing rapidly.*
- *Medicare expenditures as a share of GDP and of total federal revenues are also increasing rapidly, especially when considered in conjunction with Social Security expenditures, thereby threatening Medicare's long-term sustainability.*

*We recommend that policymakers 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 in 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 fundamental long-range financing problems of three kinds:

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 expenditure numbers cited in this issue brief include the impact of the new Medicare prescription drug plan and other changes to be 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 and Supplementary Medical Insurance (SMI) pays primarily for physician and outpatient care, as well as the new Medicare 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 2004 Medicare Trustees' Report highlights the long-term financing problems facing the program:

- The HI program is funded primarily through earmarked payroll taxes. Over the last several years, HI payroll taxes and other non-interest income have exceeded benefits paid, and the trust fund has been

accumulating assets. Beginning this year, however, HI expenditures are projected to exceed HI non-interest income. And 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 2019, HI trust fund assets are projected to be depleted. At that time, tax revenues are projected to cover only about 80 percent of program costs, with the share decreasing further thereafter. The HI trust fund depletion date is seven years earlier than that projected in last year's trustees report, due in part to higher hospital expenditures, lower payroll taxes, and the increased payments to rural hospitals and private health plans enacted under the new Medicare legislation.<sup>1</sup> Notably, the new prescription drug program does not impact the HI trust fund, because it is included in the SMI trust fund.
- The value in today's dollars of HI shortfalls over the next 75 years is \$8.2 trillion, or 3.1 percent of taxable payroll over the same time period. For the first time, the 2004 Medicare Trustees' Report includes projections over an infinite time horizon, which increases the shortfall to \$21.8 trillion, or 5.3 percent of taxable payroll. Nevertheless, given the uncertainty of projections 75 years into the future, extending these projections into the infinite future can only increase the uncertainty, so that these results can have only limited value for policymakers.
- The SMI program is financed through beneficiary premiums that cover about a quarter of the cost. Federal general tax revenues covers the remaining three quarters. 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 its outlays to the public. Under this approach, income from general revenues to the SMI program, which are essentially intragovernmental transfers between the general fund and the Medicare trust funds, are ignored. 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.

Table 1 reports the HI income shortfall and the general revenue contribution to the SMI program in 2003 and over the next 10 years. In 2003, the HI trust fund ran a surplus (i.e. a negative shortfall) that offset to some extent the general revenue financing of SMI. (Recall that the SMI program is designed such that three-quarters of its expenditures are funded through general revenues.) Nevertheless, Medicare expenditures already exceeded public receipts by \$81 billion in 2003. Beginning this year, however, HI expenditures are expected to exceed HI public receipts by about \$8 billion, and this HI shortfall plus the SMI general revenue contribution is expected to total \$111 billion. Over the next 10 years the cumulative difference between Medicare expenditures and public receipts will total \$2.3 trillion.

Table 1

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

Calendar Year	HI Trust Fund			SMI Trust Fund	HI Income
	Income <sup>1</sup>	Expenditures	Shortfall	General Revenue Contribution <sup>2</sup>	Shortfall Plus SMI General Revenue Contribution
2003	\$160.0	\$154.6	-\$5.4	\$86.4	\$81.0
2004	166.1	173.8	7.7	103.2	110.9
2005	180.5	188.3	7.8	128.1	135.9
2006	190.7	200.8	10.1	182.0	192.1
2007	201.2	212.6	11.4	192.9	204.3
2008	212.7	225.4	12.7	207.0	219.7
2009	224.3	239.2	14.9	221.1	236.0
2010	235.6	253.2	17.6	236.1	253.7
2011	248.8	268.8	20.0	252.5	272.5
2012	262.7	285.9	23.2	274.4	297.6
2013	276.0	304.8	28.8	300.0	328.8
Total					
2004-2013	\$2,198.6	\$2,352.8	\$154.2	\$2,097.3	\$2,251.5

<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 2004 Medicare Trustees' Report Tables II.B5 and II.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 2019, 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 less than 1 percent of GDP in 2004 to more than 10 percent of GDP in 2078. 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)

Calendar Year	HI Shortfall	SMI General Revenue Contribution <sup>1</sup>	HI Income Shortfall and SMI General Revenue Contribution
2004	0.02%	0.90%	0.92%
2010	0.10	1.54	1.64
2020	0.42	2.35	2.77
2030	1.06	3.26	4.32
2040	1.76	3.85	5.61
2050	2.29	4.33	6.62
2060	2.82	4.95	7.77
2070	3.53	5.66	9.19
2078	4.14	6.22	10.36

<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 2004 Annual Reports, Chart E.

(Although an appendix in the trustees report includes a discussion of the impact of the Medicare trust funds on the federal budget, the long-term projections of the HI income shortfall and SMI general revenue contribution are available only in the Social Security and Medicare Boards of Trustees' summary of the 2004 annual reports. It would be useful if the projections were also presented in the Medicare trustees report.)

The new Medicare law includes a provision intended to address these financial challenges. Basically, if general funding sources account for more than 45 percent of Medicare spending within the next seven years, the administration will be required to recommend ways to reduce this share.<sup>2</sup> Options would include reducing benefits, raising beneficiary premiums, or raising payroll taxes. Congress could then implement the recommendations, but would not be required to do so.

This provision draws attention to the need to manage the demand Medicare places on the federal budget, and sets the stage for future congressional debate over corrective action to limit the burden the program places on general tax revenues. Congressional action is not guaranteed, however, and other financing problems remain.

The 2004 Medicare Trustees' Report projects that the 45 percent threshold will first be reached in 2012, more than seven years into the projection period. Therefore, the administration requirement would not be triggered this year, but could be as soon as two years from now.

### ***Medicare Will 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 will consume greater shares of GDP over time. In 2003, total Medicare spending was 2.6 percent of GDP. This share is expected to increase to 3.4 percent in 2006, due in large part to the addition of the prescription drug benefit. It is expected to rise to 7.0 percent of GDP in 2030 and 10.9 percent of GDP in 2060.

(Notably, the Centers for Medicare and Medicaid Services (CMS) estimate that Medicare pays for only about half of the total health spending of the elderly and disabled. As a result, this measure understates the share of the economy devoted to total health spending among these groups.)

Table 3

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

Calendar Year	Medicare	Social Security	Medicare Plus Social Security
2003	2.6%	4.4%	7.0%
2004	2.7	4.3	7.0
2005	2.8	4.3	7.0
2006	3.4	4.3	7.7
2007	3.5	4.2	7.7
2008	3.6	4.2	7.8
2009	3.6	4.3	7.9
2010	3.7	4.3	8.0
2020	5.1	5.3	10.4
2030	7.0	6.3	13.3
2040	8.4	6.5	15.0
2050	9.6	6.5	16.0
2060	10.9	6.5	17.4
2070	12.5	6.6	19.1

Source: American Academy of Actuaries' tabulations based on 2004 Medicare Trustees' Report (plot points for Figure 1.E.1) and 2004 Social Security Trustees' Report (plot points for Figure II.D.5).

Considering Medicare spending in conjunction with Social Security's 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 by 2030, Medicare spending exceeds that of Social Security. Combined, Medicare and Social Security expenditures equaled 7.0 percent of GDP in 2003. This share of GDP will increase considerably to a projected 13.3 percent in 2030 and 17.4 percent in 2060.

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, about 40 percent of all federal revenues were used to pay Medicare and Social Security benefits in 2003. If no changes are made to either program and federal revenues remain at 19 percent of GDP, this share is expected to increase to 70 percent in 2030, and by 2070, Medicare and Social Security spending would about equal 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 funds for other federal programs. It is unclear whether the nation will be willing to make these tradeoffs in the future.

If we are to avoid this strain, 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 of the elderly and disabled is reduced—not just the share borne by 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 may reduce federal outlays for Medicare, but it will not reduce the share of the economy devoted to health expenditures.

## **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 expected to start falling short of outlays this year, the HI trust fund is expected to be depleted as soon as 2019, seven years earlier than projected last year. 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 policymakers implement changes to improve Medicare's financial outlook. We agree with the 2004 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...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. Recent Academy issue briefs include *How Is Medicare Financed?* and *What Is the Role of the Medicare Actuary?* In addition, *Evaluating the Fiscal Soundness of Medicare*, an Academy monograph, outlines how several reform measures could address Medicare's long-term financing problems. The monograph concludes that promising options to improve Medicare's financing problems include increased cost sharing by beneficiaries and increased use of managed care and competitive bidding. Less promising options include lowering payments to providers and increasing the eligibility age for Medicare. These and other Academy publications are available at [www.actuary.org/medicare/index.htm](http://www.actuary.org/medicare/index.htm).

## ENDNOTES

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<sup>1</sup> According to the 2004 Medicare Trustees' Report, 2.0 years of the change are attributable to the new Medicare law, 2.0 years to higher spending and lower tax revenues, 1.5 years to assumption adjustments, 1.0 year to improved data on the health status of beneficiaries in HMOs, and 0.5 years to model refinements for certain hospital payments.

<sup>2</sup> More specifically, a determination of "excess general funding" is triggered if 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.



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