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ISSUE BRIEF
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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 2005 Medicare Trustees' Report, Medicare's financial status is about the same as projected in the 2004 report. The HI trust fund, which pays for hospital services, will be depleted one year later than previously expected, but HI expenditures now exceed HI non-interest income. 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 2005 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 started exceeding HI non-interest income in 2004. By 2020, when trust fund assets are projected to be depleted, tax revenues would cover only 79 percent of program costs, and this share will decrease rapidly thereafter. The trust fund depletion date is projected to arrive one year later than projected last year, due in part to slightly lower hospital expenditures, and slightly higher payroll tax revenues.*

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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 2005 Medicare Trustees' Report and preparing the 2005 edition of this issue brief.

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- *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, will increase rapidly.*

- *Medicare expenditures as a share of GDP and of total federal revenues will also increase rapidly, thereby threatening Medicare's long-term sustainability.*

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

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 2014. As a result, the HI trust fund fails the test of short-range financial adequacy.

LONG-TERM FINANCING OF MEDICARE

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 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; 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 2005 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 in 2004, however, HI expenditures exceeded HI non-interest income. And beginning in 2012, 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 2020, HI trust fund assets are projected to be depleted. At that time, tax revenues are projected to cover only 79 percent of program costs, with the share decreasing further thereafter. The HI trust fund depletion date is one year later than that projected in the 2004 Medicare Trustees' Report, due in part to slightly lower hospital expenditures and slightly higher payroll tax revenues.

- The value in today's dollars of the HI deficit over the next 75 years is $8.8 trillion, or 3.1 percent of taxable payroll over the same time period. Projections over an infinite time horizon would increase the shortfall to $24.1 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.[1] 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.

Table 1 reports the HI income shortfall and the general revenue contribution to the SMI program in 2004 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 2004, Medicare expenditures already exceeded public

Table 1

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

	HI Trust Fund			SMI Trust Fund	HI Income Shortfall Plus SMI General Revenue Contribution
Calendar Year	Income†	Expenditures	Shortfall	General Revenue Contribution††	
2004	*$168.7*	*$170.6*	*$1.9*	*$100.9*	*$102.8*
2005	*179.9*	*182.5*	*2.7*	*123.2*	*125.8*
2006	*191.2*	*194.5*	*3.3*	*194.1*	*197.4*
2007	*202.7*	*208.0*	*5.3*	*201.4*	*206.7*
2008	*214.3*	*219.4*	*5.0*	*210.9*	*215.9*
2009	*225.9*	*233.3*	*7.4*	*234.9*	*242.3*
2010	*237.2*	*248.5*	*11.3*	*224.6*	*235.8*
2011	*250.6*	*264.8*	*14.2*	*251.9*	*266.1*
2012	*264.6*	*283.2*	*18.7*	*275.2*	*293.9*
2013	*278.2*	*303.2*	*25.1*	*304.3*	*329.4*
2014	*292.0*	*323.9*	*31.9*	*335.7*	*367.6*
Total					
2005-2014	*$2,336.6*	*$2,461.3*	*$124.8*	*$2,356.2*	*$2,481.0*

† HI receipts exclude interest income.
†† SMI general revenue contribution includes Part B and Part D general revenue contributions.
Source: American Academy of Actuaries' tabulations based on 2005 Medicare Trustees' Report Tables III.B5 and III.C1 (Intermediate Projection).

receipts by $103 billion. This amount is expected to grow throughout the period. Over the next 10 years the cumulative difference between Medicare expenditures and public receipts will total $2.5 trillion.

Beginning in 2012, 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 2020, 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 2005 to more than 10 percent of GDP in 2079. This will increase considerably the pressures on the federal budget, unless HI income shortfalls or SMI general revenue contributions are reduced.

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 is required to recommend ways to reduce this percentage. 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 2005 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 could be triggered as soon as 2007.

Table 2

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

Calendar Year	HI Shortfall	SMI General Revenue Contribution†	HI Income Shortfall and SMI General Revenue Contribution
2005	*0.00%*	*0.95%*	*0.95%*
2010	*0.06*	*1.41*	*1.47*
2020	*0.42*	*2.29*	*2.70*
2030	*1.04*	*3.17*	*4.21*
2040	*1.66*	*3.75*	*5.41*
2050	*2.15*	*4.23*	*6.38*
2060	*2.67*	*4.83*	*7.50*
2070	*3.34*	*5.53*	*8.87*
2079	*3.97*	*6.17*	*10.14*

†SMI general revenue contribution includes Part B and Part D general revenue contributions.
Source: Social Security and Medicare Boards of Trustees Summary of the 2005 Annual Reports, Chart E.

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 a greater share of GDP over time. In 2004, total Medicare spending was 2.6 percent of GDP. This share is expected to increase to 3.3 percent in 2006, due in large part to the addition of the prescription drug benefit. It is expected to rise to 6.8 percent of GDP in 2030 and 10.5 percent of GDP in 2060. (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.)

Table 3

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

Calendar Year	Medicare	Social Security	Medicare Plus Social Security
2004	*2.6%*	*4.3*	*6.9%*
2005	*2.7*	*4.3*	*7.0*
2006	*3.3*	*4.2*	*7.5*
2007	*3.4*	*4.2*	*7.5*
2008	*3.4*	*4.2*	*7.6*
2009	*3.4*	*4.2*	*7.7*
2010	*3.5*	*4.3*	*7.8*
2020	*5.0*	*5.2*	*10.2*
2030	*6.8*	*6.1*	*12.9*
2040	*8.1*	*6.3*	*14.4*
2050	*9.2*	*6.2*	*15.5*
2060	*10.5*	*6.3*	*16.8*
2070	*12.1*	*6.4*	*18.5*

Source: American Academy of Actuaries' tabulations based on 2005 Medicare Trustees' Report (plot points for Figure II.D.1) and 2005 Social Security Investors' 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 exceeds that of Social Security in 2024. Combined, Medicare and Social Security expenditures equaled 6.9 percent of GDP in 2004. This share of GDP will increase considerably to a projected 12.9 percent in 2030 and 16.8 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 2004. 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 such 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

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 past year, the HI trust fund is expected to be depleted as soon as 2020. 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 2005 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."

* * *

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 *Medicare: Next Steps, 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.

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 10 percent of total Part D costs in 2006. State payments on behalf of certain beneficiaries will cover about 11 percent of costs and general revenues will cover the remaining 78 percent of costs.

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.

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