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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 Medicare program's financial condition. The Medicare program provides health coverage for the aged and for certain individuals with disabilities. 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 2007 Medicare trustees' report, Medicare's financial status has improved slightly since the 2006 report. The HI trust fund, which pays for hospital services, will be depleted one year later than previously projected. Nevertheless, 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, "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 2007 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.*

Members of the Medicare Steering Committee include: Thomas F. Wildsmith, FSA, MAAA, Chairperson; Lynette L. Trygstad, FSA, MAAA, Vice Chairperson; Joseph A. Applebaum, FSA, MAAA; David V. Axene, FSA, MAAA, FCA; John M. Bertko, FSA, MAAA; Janet M. Carstens, FSA, MAAA, FCA; Michael V. Carstens, FSA, MAAA; April S. Choi, FSA, MAAA; Barton H. Clennon, FSA, MAAA; Randall S. Edwards, FSA, MAAA; Patrick J. Fleming, FSA, MAAA; Alan D. Ford, FSA, MAAA; P. Anthony Hammond, ASA, MAAA; Dennis J. Hulet, FSA, MAAA, FCA; Curtis E. Huntington, FSA, MAAA, FCA; Joel C. Kabala, ASA, MAAA; Laura Beth Lieberman, FSA, MAAA; Mark E. Litow, FSA, MAAA; James J. Murphy, FSA, MAAA, FCA; Donna C. Novak, ASA, MAAA, FCA; Anna M. Rappaport, FSA, MAAA, EA; John Sardelis, MAAA; John J. Schubert, ASA, MAAA, FCA; Paul A. Schultz, FSA, MAAA; Robert D. Shapiro, FSA, MAAA; Michael V. Smith, FSA, MAAA; Harry L. Sutton, FSA, MAAA, FCA; Michael J. Thompson, FSA, MAAA; Thomas S. Tomczyk, ASA, MAAA, FCA; Gordon R. Trapnell, FSA, MAAA; Cori E. Uccello, FSA, MAAA, FCA, MPP; George B. Wagoner, FSA, MAAA, FCA; and John A. Wandishin, FSA, MAAA.

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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 2019, 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 higher projected payroll tax income and slightly lower expenditures than previously estimated.*
- *The value in today's dollars of the HI deficit over the next 75 years is $12 trillion. Eliminating this deficit would require an immediate 122 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 that began last year. 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 significant 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.*
- *For the second year in a row, the difference between Medicare outlays and dedicated revenues exceeds 45 percent within the next seven years, thereby triggering the Medicare funding warning. As a result, the president must propose legislation to reduce this share within 15 days of the next budget submission. Congressional action is not guaranteed, however, and depending on what action, if any, is taken, other financing problems could remain.*
- *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. Efforts to control spending in the Medicare program should be considered within the broader context of the entire health care system.*

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

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 2013. 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. Income to the HI trust fund 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 (Part A); Supplementary Medical Insurance (SMI) pays primarily for physician and outpatient care (Part B), as well as the new Medicare prescription drug benefit (Part D). 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, which are used to pay benefits and administrative costs. Any unused income is added to the trust fund assets, which are invested, as required by law, in U.S. government securities, for use in future years. Note, however, that the trust fund assets represent loans to the U.S. Treasury's general fund. As a result, the buildup of Medicare trust funds is essentially used to fund other government spending.

The 2007 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 2004, HI payroll taxes and other non-interest income exceeded HI expenditures, and the trust fund accumulated assets. In 2005, however, HI non-interest income fell below HI expenditures. Non-interest income exceeded expenditures in 2006 but expenditures will again exceed non-interest income in 2007. Beginning in 2011, 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 79 percent of program costs, with the share decreasing further thereafter. The HI trust fund depletion date is projected to arrive one year later than projected in the 2006 Medicare trustees' report, due in part to slightly higher projected payroll tax income and slightly lower expenditures than previously estimated.
- The value in today's dollars of the HI deficit over the next 75 years is $11.6 trillion, or 3.5 percent of taxable payroll over the same time period. Eliminating this deficit would require an immediate 122 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 $29.5 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 policymakers.
- 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.

[1] Part B beneficiaries pay monthly premiums covering about 25 percent of program costs (beginning in 2007, Part B premiums are now income-related, with higher income enrollees paying more than 25 percent of 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 8 percent of total Part D costs in 2007. State payments on behalf of certain beneficiaries will cover about 13 percent of costs and general revenues will cover the remaining 79 percent of costs.

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 2006 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 2006, Medicare expenditures already exceeded public receipts by $168 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 Income[1]	HI Trust Fund Expenditures	HI Trust Fund Shortfall	SMI Trust Fund General Revenue Contribution[2]	HI Income Shortfall Plus SMI General Revenue Contribution
2006	$195.8	$191.9	-$3.8	$171.9	$168.1
2007	207.5	208.2	0.8	178.4	179.2
2008	217.7	224.2	6.4	194.8	201.3
2009	230.9	240.7	9.9	218.2	228.1
2010	243.6	257.7	14.1	207.9	222.0
2011	257.1	275.1	18.0	238.5	256.5
2012	270.6	293.9	23.3	259.6	282.9
2013	284.2	314.5	30.2	280.4	310.7
2014	298.1	336.4	38.3	304.0	342.3
2015	312.7	359.8	47.1	350.0	397.1
2016	328.1	385.4	57.2	339.3	396.5
Total 2007-2016	$2,650.6	$2,895.8	$245.2	$2,571.2	$2,816.5

[1] HI receipts exclude interest income.

[2] SMI general revenue contribution includes Part B and Part D general revenue contributions.

Source: American Academy of Actuaries' tabulations based on 2007 Medicare Trustees' Report Tables III.B4 and III.C1 (Intermediate Projection).

Beginning in 2011, 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 1.3 percent of GDP in 2007 to 8.3 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)

Calendar Year	HI Shortfall	SMI General Revenue Contribution[1]	HI Income Shortfall and SMI General Revenue Contribution
2007	0.01 %	1.29 %	1.30 %
2010	0.08	1.29	1.37
2020	0.46	1.99	2.45
2030	1.20	2.83	4.03
2040	1.94	3.40	5.34
2050	2.43	3.80	6.23
2060	2.83	4.19	7.02
2070	3.24	4.50	7.74
2080	3.54	4.71	8.25

[1] SMI general revenue contribution includes Part B and Part D general revenue contributions.

Source: Social Security and Medicare Boards of Trustees Summary of the 2007 Annual Reports, Chart E.

A provision of the *Medicare Prescription Drug, Improvement, and Modernization Act of 2003* (MMA) intends to address these financial challenges. Basically, if in two consecutive trustees reports, 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.[2] 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. President Bush's proposal must come within the 15 days of the next budget submission and Congress must consider the proposal on an expedited basis. There is no requirement, however, that any legislation be enacted.

The 2007 Medicare trustees' report projects that the 45 percent threshold will first be reached in 2013. Because last year's report also projected that the threshold would be reached within seven years, the requirement is triggered this year. The triggering of this provision draws attention to the need to manage the demand Medicare places on the federal budget, and provides policymakers 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.

[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.

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 2006, total Medicare spending was 3.1 percent of GDP. This share is expected to rise to 6.5 percent of GDP in 2030 and 11.3 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.)

Table 3

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

Calendar Year	Medicare	Social Security	Medicare Plus Social Security
2006	3.1 %	4.2 %	7.3 %
2007	3.2	4.3	7.5
2008	3.3	4.2	7.5
2009	3.3	4.3	7.6
2010	3.4	4.3	7.7
2020	4.6	5.3	9.9
2030	6.5	6.2	12.7
2040	8.0	6.3	14.3
2050	9.0	6.2	15.2
2060	9.9	6.2	16.1
2070	10.7	6.3	17.0
2080	11.3	6.3	17.6

Source: American Academy of Actuaries' tabulations based on 2007 Medicare Trustees' Report (plot points for Figure II.D.1) and 2007 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 7.3 percent of GDP in 2006. This share of GDP is expected to increase considerably to a projected 12.7 percent in 2030 and 17.6 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 18 percent of GDP. Using this average, about 40 percent of all federal revenues in 2007 will be used to pay Medicare and Social Security benefits. If no changes are made to either program and federal revenues remain at 18 percent of GDP, this share is expected to increase to 80 percent in 2040, and by 2080, Medicare and Social Security spending would equal nearly all 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 that the problem of rising health care spending in the Medicare program reflects spending growth in the U.S. health system as a whole. Therefore, unless spending in the health system as a whole is addressed, implementing options to control Medicare spending may have limited long-term effectiveness.

Conclusion

The American Academy of Actuaries' Medicare Steering Committee continues to be very concerned about Medicare's long-range financing problems. HI non-interest income is already falling short of outlays this year and the HI trust fund is projected to be depleted as soon as 2019. In addition, Medicare will likely place 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 large. The program's sustainability is also called into 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 2007 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's Medicare Steering Committee 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.

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