AMERICAN ACADEMY of ACTUARIES

ISSUE BRIEF

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Key Points

- Beginning in 2008, HI expenditures exceeded all HI income, including interest.
- The trust fund depletion date is projected to arrive in 2017, two years earlier than was projected last year, due to significantly lower projected payroll tax income during the current economic recession.
- By 2017, tax revenues would cover only 81 percent of program costs.
- The value in today's dollars of the HI deficit over the next 75 years is $14 trillion. Eliminating this deficit would require an immediate 134 percent increase in payroll taxes or an immediate 53 percent reduction in benefits, or some combination of the two.

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.

The projections of Medicare's financial status in the 2009 Medicare trustees' report have deteriorated compared to the projections in the 2008 report. The HI trust fund, which pays for hospital services, will be depleted in 2017, two years earlier than was previously projected. Beginning in 2008, HI expenditures exceeded all HI income, including interest. 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—including the projected exhaustion of the HI trust fund, this fund's very substantial long-range financial imbalance and the problem of rapid growth in Medicare expenditures generally."

This issue brief examines more closely the findings of the trustees' report. The American Academy of Actuaries' Medicare Steering

The American Academy of Actuaries is a professional association with over 16,000 members, whose mission is to assist public policymakers by providing leadership, objective expertise, and actuarial advice on risk and financial security issues. The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.

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Committee concludes that the Medicare program faces serious short-term and long-term financing problems. As highlighted in the 2009 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 will exceed HI income, including interest, again this year. The trust fund depletion date is projected to arrive in 2017, two years earlier than was projected last year, due to significantly lower projected payroll tax income during the current economic recession. At that time, tax revenues would cover only 81 percent of program costs, and this share will decrease rapidly thereafter.
- The value in today's dollars of the HI deficit over the next 75 years is $14 trillion. Eliminating this deficit would require an immediate 134 percent increase in payroll taxes or an immediate 53 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 prescription drug benefit. The SMI trust fund is expected to remain solvent only because its financing is reset each year to meet projected future costs. Projected increases in SMI expenditures 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.
- Medicare expenditures are also projected to increase rapidly as a share of GDP and of total federal revenues, 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.

The Medicare Steering Committee recommends 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. Trust fund assets are projected to fall below annual expenditures during 2011. 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 is no longer adequate to fund the HI portion of Medicare benefits;
2. Medicare's demands on the federal budget are increasing; and

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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.

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) and prescription drugs (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. In effect, the trust fund assets represent loans to the U.S. Treasury's general fund.

The 2009 Medicare trustees' report highlights the long-term financing problems facing the program:

- The HI program is funded primarily through earmarked payroll taxes. From 1998 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 and has continued to fall short since then. Beginning in 2008, HI expenditures exceeded all HI income, including interest. The HI trust fund has begun to redeem its assets—U.S. government securities—in order to pay for benefits. Since the federal government is experiencing unified budget deficits, 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.
- The HI trust fund depletion date is projected to arrive in 2017, two years earlier than projected in the 2008 Medicare trustees' report, due to significantly lower projected payroll tax income during the current economic recession. At that time, tax revenues are projected to cover only 81 percent of program costs, with the share decreasing further thereafter.
- The value in today's dollars of the HI deficit over the next 75 years is $14 trillion, or 3.9 percent of taxable payroll over the same time period. Eliminating this deficit would require an immediate 134 percent increase in payroll taxes or an immediate 53 percent reduction in benefits, or some combination of the two. Delaying action would require more drastic tax increases or benefit reductions. Using an infinite time horizon would increase the projected shortfall to $36 trillion, or 6.5 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, would 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 became 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 10 percent of total Part D costs in 2009. State payments on behalf of certain beneficiaries will cover about 13 percent of costs and general revenues will cover the remaining 77 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 2008 and projections over the next 10 years. Recall that the SMI program is designed for about three-quarters of its expenditures to be funded through general revenues. In 2008, Medicare expenditures already exceeded public receipts by $166 billion. This amount is expected to grow over the next 10 years; the cumulative difference between Medicare expenditures and public receipts is projected to total $2.5 trillion over this period.

Beginning in 2008, when HI expenditures exceeded HI public receipts plus interest income on trust fund assets, the HI trust fund began drawing down its assets, further increasing Medicare's demand on the federal budget. Unless payroll taxes are increased or spending reduced, HI trust fund assets are projected to be depleted in 2017. 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 2008 to 8.1 percent of GDP in 2080. This will increase

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
2008	$214.4	$235.6	$21.2	$144.9	$166.0
2009	209.2	245.6	36.4	149.8	186.2
2010	222.1	254.2	32.1	154.4	186.5
2011	235.5	268.8	33.3	163.6	196.9
2012	249.0	289.1	40.1	183.5	223.6
2013	263.6	312.9	49.3	192.8	242.1
2014	278.6	341.9	63.3	197.5	260.8
2015	293.6	352.7	59.1	201.6	260.7
2016	308.1	376.5	68.4	210.6	279.0
2017	323.3	403.1	79.8	228.4	308.2
2018	339.1	432.8	93.7	250.8	344.5
Total 2009-2018	$2,722.0	$3,277.5	$555.5	$1,933.1	$2,488.6

[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 2009 Medicare Trustees' Report Tables III.B4 and III.C1 (Intermediate Projection).

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
2008	0.11 %	1.29 %	1.40 %
2010	0.19	1.32	1.52
2020	0.52	1.82	2.34
2030	1.20	2.75	3.95
2040	1.89	3.30	5.19
2050	2.33	3.64	5.97
2060	2.71	4.01	6.71
2070	3.12	4.35	7.47
2080	3.48	4.62	8.10

[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 2009 Annual Reports, Chart E.

considerably the pressures on the federal budget, unless HI income shortfalls or SMI general revenue contributions are reduced.[2]

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 2008, total Medicare spending was 3.2 percent of GDP. Spending is expected to rise to 6.4 percent of GDP in 2030 and 11.2 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.)

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 7.6 percent of GDP in 2008. This share of GDP is projected to increase to 12.5 percent in 2030 and 17.0 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, nearly 50 percent of all federal revenues in 2009 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 about 80 percent in 2050, and by 2080, Medicare and Social Security spending would equal over 90 percent of total federal revenues.

These projections highlight the increasing

[2] A provision of the Medicare Prescription Drug, Improvement, and Modernization Act of 2003 (MMA) established a funding trigger intended to address these financial challenges. 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 would be required to recommend ways to reduce this percentage. This is the third consecutive year the funding warning was triggered. However, in January 2009, the House passed a rules package that eliminates the requirement for House legislative activity regarding the Medicare trigger for the duration of the 111th Congress.

Table 3: Medicare and Social Security Expenditures as a Share of GDP

(Percentage)

Calendar Year	Medicare	Social Security	Medicare Plus Social Security
2008	3.2 %	4.4 %	7.6 %
2009	3.6	4.8	8.4
2010	3.5	4.9	8.4
2020	4.5	5.4	9.9
2030	6.4	6.1	12.5
2040	7.9	6.1	14.0
2050	8.7	5.8	14.5
2060	9.6	5.8	15.4
2070	10.5	5.8	16.3
2080	11.2	5.8	17.0

Source: American Academy of Actuaries' tabulations based on 2009 Medicare Trustees' Report (plot points for Figure II.D.1) and 2009 Social Security Trustees' Report (plot points for Figure II.D.5).

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 deeply concerned about Medicare's long-range financing problems. HI income is already falling short of outlays this year and the HI trust fund is projected to be depleted as soon as 2017. The program's sustainability is also called into question as currently promised benefits will require increasing shares of both GDP and total federal revenues.

The committee recommends that policymakers implement changes to improve Medicare's financial outlook. We agree with the 2009 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."

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 Reform Options, 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/**.