

## Assessing Social Security's Future

**F**OR MANY YEARS THE SOCIAL SECURITY TRUSTEES HAVE STATED, as they did again in their 2005 annual report, that the "trust funds are projected to become insolvent" and that Social Security is "not sustainable under current financing arrangements." These statements are based on the work of Social Security's independent chief actuary, Steve Goss, and his team. Many others, including the Government Accountability Office, the Congressional Budget Office and the Council of Economic Advisers, as well as Federal Reserve Board Chairman Alan Greenspan, who chaired the bipartisan commission that led to the last major Social Security reforms in 1983, agree with the trustees.

Most experts also agree with the trustees' conclusion that "the sooner adjustments are made, the smaller and less abrupt they will have to be. Social Security plays a critical role in the lives of over 48 million beneficiaries, and 159 million covered workers and their families. With informed discussion, creative thinking, and timely legislative action, we will ensure that Social Security continues to protect future generations."

Many experts also agree that reform plans should go beyond the 75-year projection period and should achieve sustainable solvency. They often say that if we just look at a 75-year fix, in the 76th year Social Security will go off a financial cliff.

For this reason, President Bush has called for a permanent fix and the U.S. Senate voted 100 to 0 in March in favor of a resolution that called for a "permanent sustainable Social Security system." The Social Security administration has included solvency as one of its four strategic goals along with service, stewardship, and staffing.

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### Longer-Term Projections

For several years, the trustees have addressed sustainable solvency by focusing on the trend of the financial status of the trust funds toward the end of the 75-year period. The program has been defined to achieve sustainable solvency when the trust fund is positive throughout the period, and trust fund assets,

expressed as a percent of annual cost, are stable or rising at the end of the period.

As part of our education and research effort, Social Security's Office of the Chief Actuary and Office of Policy have looked at additional ways to understand Social Security's future and to convey it to policy-makers and the public. For the past two years, the trustees report has included several ways to look at Social Security's future, including the closed group unfunded obligation and the infinite horizon unfunded obligation. Both these

measures, and the 75-year intermediate estimates, are presented in net present value dollars, actuarial deficit, and percent of gross domestic

product (GDP) terms. The GDP measure was shown for the first time in the 2004 trustees report. More than one calculation is presented to give different ways to look at the expected level of adequacy of Social Security's future financing.

As the chart on Page 12 shows, the results give quite different answers that can be useful to policy-makers as they evaluate various reform proposals.

These projections rightly assume the repayment by the U.S. Treasury of the \$1.7 trillion of bonds



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## Social Security's Financing Shortfalls

PROJECTION	ACTUARIAL DEFICIT	NET PRESENT VALUE	PERCENT OF GDP
75-year intermediate	1.9%	\$ 4.0 trillion	0.6%
Closed group	3.8%	12.0 trillion	1.3%
Beyond closed group	-0.3%	-0.9 trillion	-0.1%
Infinite horizon	3.5%	11.1 trillion	1.2%

held in the Social Security trust funds, which continue to build as payroll taxes exceed benefit payments and interest is paid in the form of more bonds. However, as the first of the baby boomers start to qualify for early retirement in 2008, the growth in payroll taxes over benefits will slow down, and by 2017 payroll taxes and income taxes on benefits will be less than benefits paid.

The 75-year projections show a net present value shortfall of \$4.0 trillion. In other words, if we were to fully finance this 75-year shortfall with a single cash infusion, we would need an additional \$4.0 trillion in the trust funds today, earning interest at Treasury bond rates. That giant number is slightly less than the entire public debt of the United States at the end of 2004. Yet it is only a third of the unfunded obligations of the infinite horizon and closed group measures.

If policy-makers looked only at 75-year projections, they might think it would take "only" a 1.92 percentage point increase in the combined payroll tax, from 12.4 percent to 14.32 percent, to close this deficit. However, even with that 15 percent tax increase, the system would become insolvent in the 76th year and taxes would then have to be 46 percent higher than they are today to keep Social Security solvent. This is why for over a decade the trustees and policy-makers have focused on sustainable sol-

veny, which goes beyond the 75-year period. And that's why they have more recently looked for other measures.

The closed group unfunded obligation is somewhat analogous to the Pension Benefit Guaranty Corp.'s (PBGC) "termination liability" for corporate pension plans. It makes a hypothetical assumption that Social Security would be closed down for those under 15 years of age. Those 15 and older would pay taxes at today's rate throughout their career and receive full scheduled benefits, but to do so we would need an additional \$12.0 trillion in the Social Security trust funds today.

Obviously that number makes the private-sector defined benefit pension shortfall insured by the PBGC pale in comparison, even though the PBGC is in need of serious reform again. Of course, Social Security is not an advance-funded plan, but this comparison helps policy-makers realize that under current tax rates, Social Security's pay-as-you-go financing won't work at today's scheduled benefits. The reason is that the ratio of workers to beneficiaries continues to fall from over 8 to 1 in the 1950s, to 3.3 today, to 2.1 to 1 in 30 years. As a result, Social Security's financing structure needs significant reform.

Adding all future participants to the closed group gives us the entire future experience of the program, called the infinite horizon projection. As this "Beyond

the Closed Group" present value number is less than the closed group projection, it means that those under 15 years old, and future unborn participants, will actually pay more than they receive in benefits in present value terms. The infinite horizon present value shortfall is \$11.1 trillion. The growth of \$700 billion from last year primarily reflects the passage of another year without reforms.

As the trustees report says, "These calculations of the shortfall indicate that much larger changes would be required to achieve sustainable solvency over the infinite future as compared to changes needed to balance the 75-year summary measures." It serves as a benchmark for long-term sustainability.

Some analysts suggest that one cannot accurately project the 75-year period, let alone the infinite horizon. They are correct that the projections will never be "right," but if the estimates are reasonable and objectively developed, they can be useful. The Actuarial Opinion in the trustees report states, "The assumptions used and the resulting actuarial estimates are, individually and in the aggregate, reasonable for the purpose of evaluating the financial and actuarial status of the trust funds, taking into consideration the past experience and future expectations for the population, the economy, and the program."

What are we to make of these num-

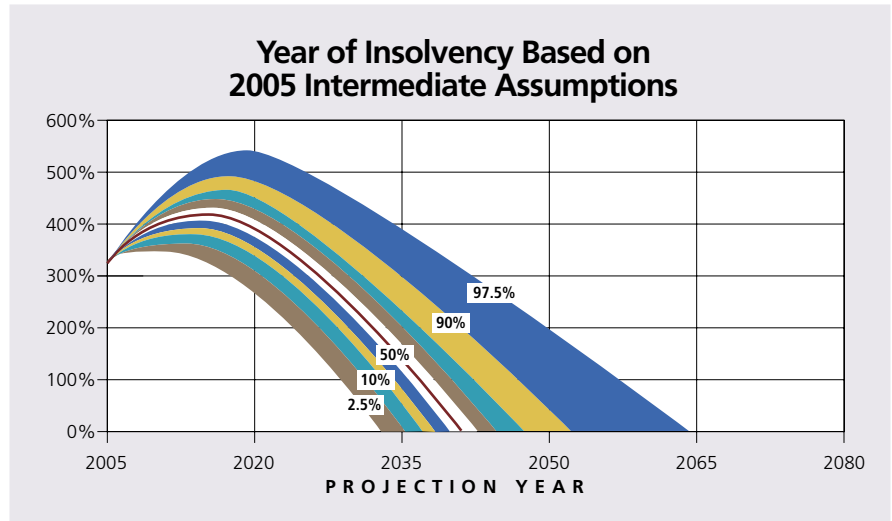
Social Security must help decision-makers understand the problems of an unreformed Social Security system and help evaluate proposed solutions.

bers? Of course, there's uncertainty around these numbers as well as potential remedies. But one way to look at it is this: To achieve permanent solvency we would need to increase payroll taxes 3.5 percentage points, from today's combined rate to 15.9 percent, a very substantial 28 percent increase. The result would be an unrealistic build-up in the trust funds and a significant adverse economic impact.

**Probabilistic Forecasts**

Another innovation in the trustees reports has been assessing the probability of future outcomes. Deterministic or point estimates are useful to policy-makers, but ranges of outcomes are also useful. Traditionally, the trustees reports have addressed the uncertainty issue by developing two scenarios using optimistic and pessimistic sets of assumptions, as well as analysis of the effects of variation in specific assumptions taken one at a time. The analysis is useful at the individual assumption level, but at the aggregate projection level, it's less meaningful. It speaks neither to the internal consistency of the assumptions in the projections nor to the probability of their occurrence. The optimistic projection even implies that there is no problem, at least through 75 years, as it assumes everything that could go right does go right.

To better help policy-makers understand the uncertainties of the projections,



Social Security's Office of the Actuary has done probabilistic or stochastic projections. They are continuing to refine their methodology. The chart in the 2004 trustees report is shown below:

The results show that the traditional determinist alternative projections have a very low probability; all four of the indicators of the traditional low-cost projections are outside the 97.5 percentile, and the actuarial balance and unfunded obligation of the traditional high-cost projection are outside the 2.5 percentile.

There are two key conclusions to draw from the stochastic projections:

- There are large uncertainties around the projections and the date of solvency, but there is very little possibility that Social Security will be solvent at the end of

the 75-year period if no action is taken to strengthen the program.

- There is less variation around the date that the cash flow goes negative, which ranges five years sooner or later from the intermediate forecast date of 2018.

**Solvency Education**

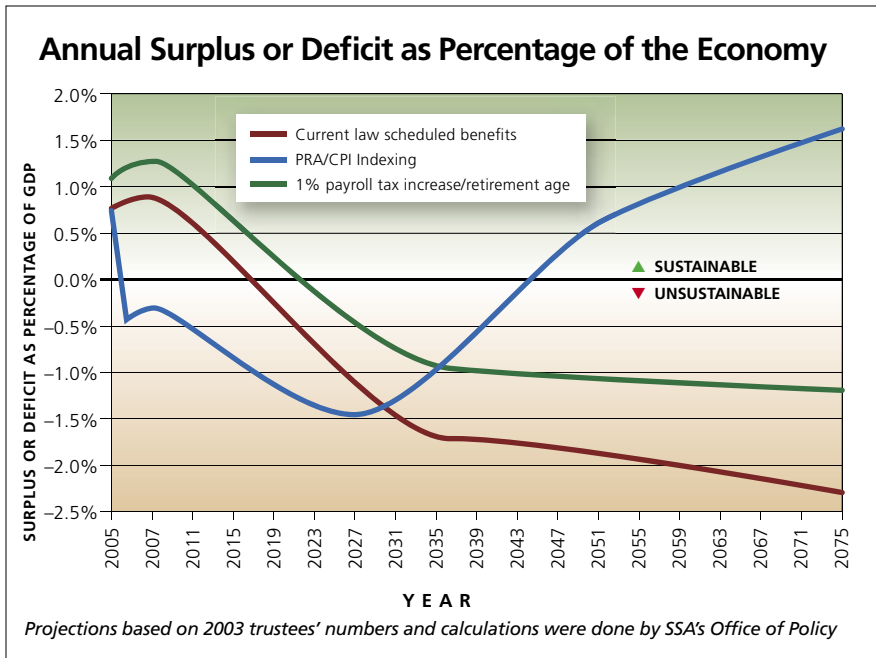
In our research and educational roles, Social Security must help decision-makers understand the problems of an unreformed Social Security system and help evaluate proposed solutions. We also have an equally important role to inform the public about the future of America's largest and most successful social program.

Social Security's public education efforts emphasize that Social Security's cur-

**75-Year Estimates of the Continued Trust Funds**

	LOW COST			INTERMEDIATE	HIGH COST		
	TRADITIONAL	STOCHASTIC		TRADITIONAL	STOCHASTIC		TRADITIONAL
	Low Cost	97.5 Percentile	90th Percentile	Intermediate	10th Percentile	2.5 Percentile	High Cost
Actuarial Balance	0.38%	-0.49%	-0.99%	-1.92%	-3.15%	-3.83	-4.96%
75-year unfunded obligation	-\$1.1T	\$0.8T	\$1.9T	\$4.0T	\$7.0T	\$8.8T	\$10.9T
Cost Exceeds Benefit Date	2022	2022	2020	2017	2014	2013	2013
Year of exhaustion	N/A	2064	2052	20414	2035	2032	2030

Using cash flow trends, the infinite horizon, and probabilistic forecasts, we can help members of Congress and many others look at alternative approaches to ensuring sustainable solvency.



rently scheduled benefits will be unsustainable without changes, as well as the possible impact on benefits and taxes if there are no changes.

We also go through the three major reform alternatives of increasing payroll taxes, slowing the growth of benefits, and/ or increasing investment returns through personal accounts. Many of the reform proposals we analyze require some general revenue funding, which over the 75-year period can be compared with the \$3.7 trillion net present value shortfall today.

To be consistent, proposed benefit and tax levels should also be compared with today's scheduled and payable benefit levels and tax rates. The \$10.4 trillion infinite horizon shortfall is another benchmark to be used in evaluating proposals that achieve sustainability.

A simple way to judge sustainability is to look at the trends of cash flows at the end of the 75-year period as shown above:

The bottom solid (red) line of today's unchanged program is clearly negative and unsustainable. The two other al-

ternatives are typical reform proposals. They both require about \$500 billion (net present value) in general revenue transfers but produce strikingly different results in the long term.

A 1983-style reform of increasing payroll taxes 1 percent and increasing the retirement age over time to 70 (dotted line) would be less negative than today's system but still not sustainable. On the other hand, a package that indexed future benefit growth to inflation rather than wages and incorporated personal accounts (blue upper solid line) would be more negative at first but would then become positive and reach sustainable solvency.

### Conclusion

There is an old saying that if your only tool is a hammer, every problem looks like a nail. In the case of Social Security, if you look at the program as a pay-as-you-go system based on 75-year projections, you develop only 75-year pay-as-you-go solutions. Using cash flow trends, the infinite horizon and probabilistic forecasts, we can help members of Congress and

many others look at alternative approaches to ensuring sustainable solvency.

In his recent State of the Union address, President Bush reiterated his commitment to finding a solution to the funding problem: "One of America's most important institutions—a symbol of the trust between generations—is also in need of wise and effective reform. Social Security was a great moral success of the 20th century, and we must honor its great purposes in this new century. The system, however, on its current path, is headed toward bankruptcy. Therefore, we must join together to strengthen and save Social Security. ... Fixing Social Security permanently will require an open candid view of the options. ... We must make Social Security permanently sound, not leave that task for another day."

Social Security has been a basic part of American life for 70 years. During that time, the program has been changed to meet the needs of the American people, and it will need to change again to meet future challenges. Each of the three basic options to strengthen Social Security has difficult trade-offs. While there may be disagreement over what should be done to achieve sustainable solvency, the Social Security trustees note that "the sooner adjustments are made the smaller and less abrupt they will have to be."

Social Security's financing problems are long term and will not affect today's retirees and near-retirees. The Social Security Administration is using the many analytical and educational tools developed over the years and is ready to respond to decision-makers' questions about the future of the program. We will also continue to work within the administration and with Congress as legislative proposals for sustainable solvency are developed. We want to ensure that Social Security will be there for the 47 million Americans currently receiving benefits, as well as for the hundreds of millions who will become eligible in the future. ●