

## **Shortfalls in the Long Run: Predictions about the Social Security Trust Fund**

James R. Hines Jr. and Timothy Taylor

**D**iscussions of U.S. Social Security reform invariably begin by noting the gloomy long-run projections presented in the Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds. For example, the 2004 report predicts (in its “intermediate” scenario) that the Social Security trust fund, formally known as the Old Age and Survivors Insurance (OASI) trust fund, will be empty and the program therefore unable to pay its full scheduled level of benefits for future years starting in 2044. If the Disability Insurance (DI) trust fund is included in the calculations with the Old Age and Survivors Insurance (OASI) trust fund, as is often done, the actuaries predicted in 2004 that the combined trust fund would be empty in 2042.<sup>1</sup>

But although the solvency of the trust fund dominates current discussion of the long run future of Social Security, the Social Security trust fund did not exist at the inception of the system. In 1935, when the original Social Security legislation passed into law, President Franklin Roosevelt was concerned that the U.S. Supreme Court might rule that the federal government lacked constitutional authority to levy taxes that were earmarked to pay benefits to individuals. Thus, one part of the

<sup>1</sup> Many proposals for addressing the long-term issues of Social Security involve benefit reductions both in Disability Insurance and in Old Age and Survivors Insurance. However, the proposals in the papers that follow in this symposium do not alter the long-term financial balance of Disability Insurance, and instead focus on the Old Age and Survivors Insurance program. Thus, the discussion in this introduction will also focus on the OASI trust fund.

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original Social Security legislation authorized a payroll tax with funds flowing to an “Old-Age Reserve Account,” while a technically separate part of the legislation promised benefits to workers (Kollman, 2000; Achenbaum, 1986, pp. 28–30). But in 1937, the U.S. Supreme Court held that the benefit and tax structure of Social Security was constitutional in *Helvering v. Davis* (301 U.S. 619 [1937]). Soon after, the Social Security Act Amendments of 1939 replaced the earlier payroll tax with the Federal Insurance Contributions Act and replaced the Old-Age Reserve Account with a trust fund.

A trust fund requires trustees. The Social Security trust fund became effective on January 1, 1940, and promptly on January 3, 1941, the Board of Trustees sent its first annual report to the Speaker of the House and the President of the Senate (Social Security Administration, 1941). This report was not published at the time and has only recently become broadly available. Indeed, the complete set of trustees’ reports back to 1941 is available at (<http://www.ssa.gov/history/reports/trust/trustreports.html>).

## Setting the Context

The original 1941 report of the Board of Trustees established themes and patterns that have persisted in subsequent reports.

The 1941 report emphasized that the nature of Social Security required long-term analysis: “The probable future level of benefit payments is high and the trend of such payments will be steeply ascending over the next generation and longer . . . Prudent management, therefore, requires emphasis on the long-range consideration of income and disbursements.”

Every annual report since the first has offered long-term forecasts, although the horizon for the long-term projections has varied. From 1941 to 1943, the trustees projected taxes and benefits for each year to 1990, while the reports for 1944 to 1957 offered annual projections to 2000. An ambitious report in 1958 provided 93 years of projected taxes and benefits through 2050. Perhaps daunted by this effort (and its projection of trust fund insolvency in 2032), the reports for 1959 through 1971 looked forward only to 2025. In 1972, the projection horizon jumped forward to 2045. Since then, the time horizon is projected out to the first year divisible by five that is at least 75 years in the future. This (roughly) 75-year horizon matches the personal concerns of Social Security system participants, given that U.S. workers will typically enter the labor force in a serious way between ages 20 and 25, and few will live beyond 95 or 100 years of age.

The 1941 report warned that the finances of the Social Security system would come under stress in the long term as the share of the population over age 65 continued to increase: “Consequently, benefits under the program are expected to increase markedly over a long period. This results from the fact that larger numbers of workers will be eligible and will qualify for benefits and from the expectation that the proportion of the population in ages 65 and over, estimated at 7 per cent in

1940, may eventually rise to perhaps 14 to 16 percent. Hence the essential assurance of future financial soundness of the system, with its rising rate of disbursement, rests on a graduated increase in contribution rates or provision of income from other sources, or both.”

The population eventualities anticipated in 1941 will soon arrive. The share of the U.S. population over age 65 will reach 14.5 percent in 2015 and 16.3 percent in 2020, according to the U.S. Census Bureau (Statistical Abstract of the United States, 2003, Table 12). The 2004 Annual Report of the Board of Trustees points out that the ratio of Social Security beneficiaries to workers paying into the system has fallen dramatically, from 5.1 workers per beneficiary in 1960 to 3.4 workers per beneficiary in 2000, with an intermediate estimate of 2.3 workers per beneficiary projected by 2025 (Social Security Administration, 2004, p. 47).

The annual reports of the trustees have always considered long-run trust fund solvency. Figure 1, reprinted from the 1941 report, presents two scenarios. The solid line shows expected taxes projected through 1990, while the two dashed lines show alternative scenarios with higher and lower benefits. According to the report, “The range in the benefit figures shown in the chart does not represent minimum or maximum values. The examples are merely illustrative of reasonable projections.” An accompanying table in the 1941 report reported averages of these high and low scenarios.

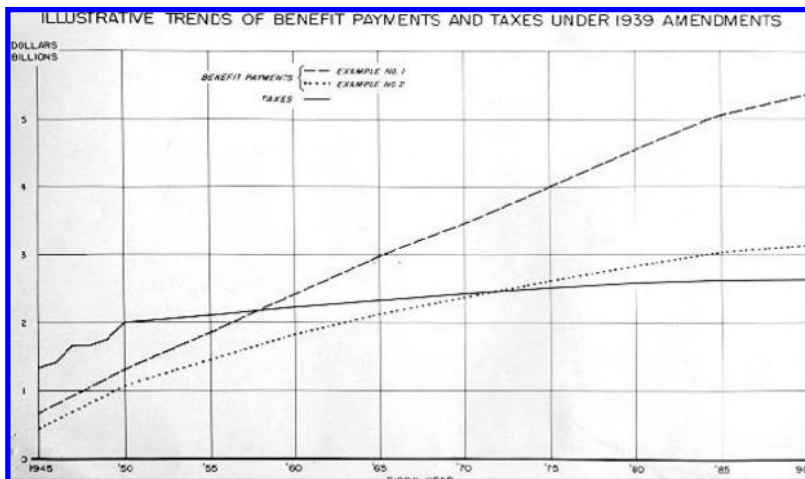
According to the pessimistic Example 1 in Figure 1, Social Security benefits would exceed tax collections on an annual basis by the late 1950s, and the 1941 report argues that about five years thereafter, the accumulated funds and interest in the trust fund would be depleted. In the optimistic Example 2, annual benefit payments start to exceed tax collections in the early 1970s, but because of the accumulated total in the trust fund and interest earnings on that fund, the Social Security system’s annual income might exceed annual benefit payments indefinitely.

Subsequent reports of the Board of Trustees continued offering a range of scenarios, corresponding to different assumptions about future demographic and economic conditions, particularly population growth, longevity and wage growth. In the early 1940s, the reports offered two scenarios. In the late 1940s and through the 1980s, there were commonly four scenarios. In one year, 1954, the report contained six scenarios. But most of the reports, including all of those since 1991, have offered three scenarios.<sup>2</sup>

Three scenarios for the future of the Social Security, taken from the 2004 report of the Board of Trustees, appear in Figure 2. Since this symposium focuses on retirement issues rather than disability, Figure 2 shows only the estimates for

<sup>2</sup> As the depth and specificity of the actuarial analysis expanded, so too did the annual reports of the Board of Trustees. The first reports from 1941 to 1943 were fewer than 20 pages long. By 1950, the report had grown to 38 pages; by 1960, it was 64 pages; in 1970, it consumed 75 pages; in 1980, it was 99 pages; in 1990, 157 pages; and the 2000 report was 239 pages long. Subsequent austerity kept the reports for 2001 to 2004 slightly shorter than their 2000 predecessor.

Figure 1

**Social Security Trust Fund Projections from 1941**

Source: Social Security Administration website, at (<http://www.ssa.gov/history/reports/trust/tf1941.html>).

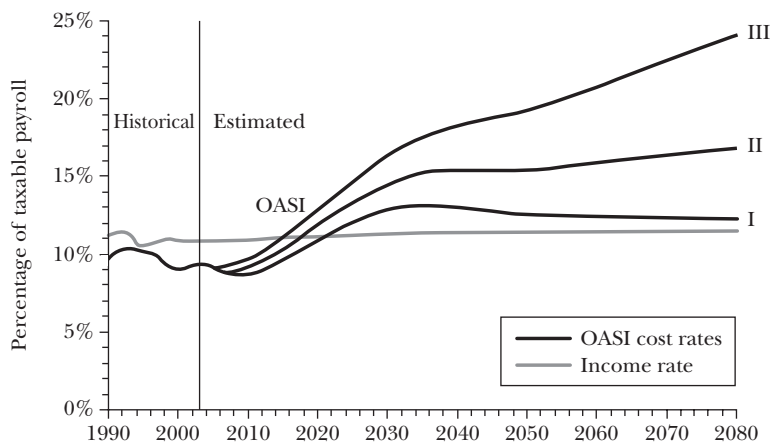
Old Age and Survivors Insurance (OASI), setting the analysis of Disability Insurance (DI) aside for another day. Program income varies relatively little between the intermediate, low-cost and high-cost projections, so only the intermediate estimate is shown for income, whereas projected program costs vary substantially. In all three scenarios, annual costs will start exceeding annual income within the next two decades, although the projected date varies from 2016 (high-cost scenario) to 2018 (intermediate scenario) to 2022 (low-cost scenario).

Projected future income shortfalls do not create an immediate financial problem for Social Security, however, since annual income has exceeded annual benefits since the 1980s, allowing the system to accumulate a trust fund that earns interest. At the end of 2003, the Old Age and Survivors Insurance trust fund held \$1,355 billion, which was three times current annual expenditures. Figure 3 shows how the OASI trust fund is projected to evolve. The vertical axis shows the trust fund ratio: that is, the assets in the trust fund at the beginning of the year as a percentage of expenditures in that year.

In the intermediate scenario, the OASI trust fund is projected to be exhausted in 2044. In the high-cost scenario, the trust fund would be exhausted by 2034. In the low-cost scenario, the trust fund is not exhausted by 2080, although the trust fund ratio is at that time falling at a very slow rate of about three percentage points per year.

In the history of the trustee's reports, an intermediate prediction that the trust fund will be exhausted in 40 years is not unusual. Although predictions from earlier years are couched in different language, and not directly comparable, the reports of 1942 and 1943 suggest that the trust fund would be exhausted in about

Figure 2

**Social Security Income and Cost Projections**

*Note:* The lines show only Old Age and Survivors Insurance (OASI) and do not include Disability Insurance (DI).

*Source:* Social Security Administration (2004). From the website, ([http://www.ssa.gov/OACT/TR/TR04/IV\\_LRRest.html#wp219007](http://www.ssa.gov/OACT/TR/TR04/IV_LRRest.html#wp219007)).

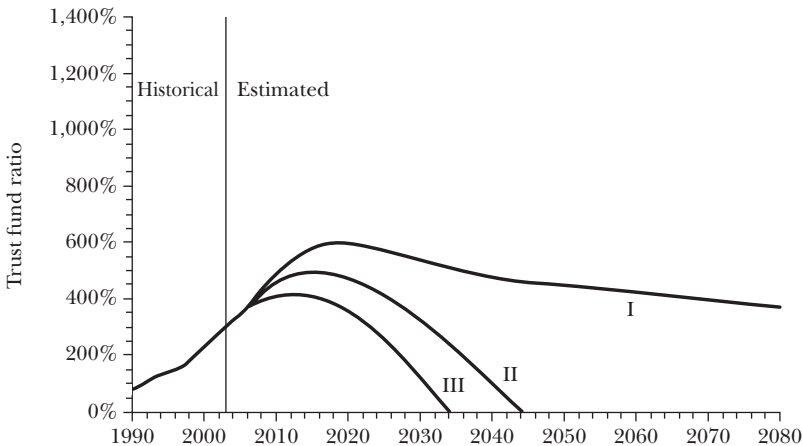
27 years—by 1969 or 1970. The 1954 report suggested that the trust fund would be exhausted in 41 years—by 1995. Reports in the late 1970s suggested that the trust fund would be exhausted in about 50 years, while reports in the early 1980s foretold that the trust fund would be exhausted in one year. After the substantial amendments to Social Security in 1983, the program for several years was projected to be solvent through a 75-year horizon. In all reports since 1992, the date of insolvency for Social Security has varied from 2031 (as predicted in 1995, 1996 and 1997) to 2044 (as predicted in 1993, 2003 and 2004).

How large is the gap between projected future Social Security income and projected future benefits, assuming that tax and benefit provisions do not change? Given the amount already collected in the trust fund, the unfunded obligation of the system for a 75-year horizon has a present value of \$3.7 trillion, which is also equal to 1.8 percent of the payroll that is taxed by Social Security or 0.7 percent of GDP projected over that time. If one looks beyond 75 years and instead considers an infinite horizon, the present value of the shortfall is \$10.4 trillion, which is 3.5 percent of projected future taxable payroll or 1.2 percent of projected GDP (Social Security Administration, 2004, p. 59).<sup>3</sup>

In this symposium, the authors have agreed to focus their discussion on

<sup>3</sup> As noted earlier, this introduction and the papers that follow focus on Social Security—that is, the Old-Age and Survivors Insurance (OASI) program. The Disability Insurance (DI) program is technically separate, though policymakers and analysts often consider it in tandem with OASI. In projecting the size of future liabilities, the 2004 Annual Report does not separately identify disability insurance, so the figures in this paragraph include both the OASI trust fund and also the DI trust fund.

Figure 3

**Projections for the Social Security Trust Fund from 2004***(assesses in the trust fund at beginning of year as a share of expenditures that year)*

*Note:* The lines show only Old Age and Survivors Insurance (OASI) and do not include Disability Insurance (DI).

*Source:* Social Security Administration (2004). From the website: ([http://www.ssa.gov/OACT/TR/TR04/IV\\_LRest.html#wp266183](http://www.ssa.gov/OACT/TR/TR04/IV_LRest.html#wp266183)).

policies rather than actuarial assumptions by taking the intermediate forecasts of the 2004 Trustee’s Report as the starting point for their discussion. Of course, these forecasts can be questioned: any actuarial forecast depends on a range of economic and demographic assumptions, typically holding public policy constant. Those interested in an alternative set of long-term estimates for the Social Security trust fund might begin with Congressional Budget Office (2004). For a brief history of the actuarial balance estimates since 1983, see Social Security Administration (2004, Appendix B).

## Optimism Premised on Action

The original 1941 report of the Social Security Board of Trustees established one final theme that has resonated through Social Security policymaking: a spirit of optimism that long-term issues confronting the program can be addressed successfully. The Board of Trustees wrote in 1941: “Because of the cumulative growth of the disbursements, any long-term deficiency in the finances of the program would be apparent well in advance, and, therefore, could be met without serious shock or disturbance, by moderate changes in the financial provisions.”

The two papers in the symposium that follows make quite different recommendations. Peter Diamond and Peter Orszag argue that the long-term deficit in Social Security can and should be addressed with a mixture of carefully targeted tax

increases and benefit reductions that would not fundamentally change the structure of the program. Martin Feldstein argues instead that Social Security can and should be fixed by creating individual accounts that would supplement the existing program and to a certain degree replace it. But both papers note that since the long-run problems are apparent well in advance, moderate changes taken now can succeed. Conversely, the longer that the U.S. political system waits to address the long-run insolvency of Social Security, the more severe are the changes that will be required.

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## References

**Achenbaum, W. Andrew.** 1986. *Social Security: Visions and Revisions*. New York: Cambridge University Press.

**Congressional Budget Office.** 2004. "The Outlook for Social Security." June.

**Kollmann, Geoffrey.** 2000. *Social Security: Summary of Major Changes in the Cash Benefits Program*. Congressional Research Service. RL30565. May 18; Available at (<http://usinfo.state.gov/usa/infousa/society/socwelf/ss2000.htm>).

**Social Security Administration.** 1941. "First Annual Social Security Trust Fund Report—1941." Available at (<http://www.ssa.gov/history/reports/trust/tf1941.html>).

**Social Security Administration.** 2004. "The 2004 Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds." March 23; Available at (<http://www.ssa.gov/OACT/TR/TR04/index.html>).