

Critiques of the Social Security Trustees Report

By Mark J. Warshawsky

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Warshawsky discusses a recent prominent critique by professors Konstantin Kashin, Gary King, and Samir Soneji of the methods and assumptions underlying the trustees' forecasts regarding the financial status of the Social Security and Medicare trust funds, and he analyzes the authors' conclusion that the forecasts are increasingly and systematically flawed.

Review of the 2014 Trustees Report

As we await the release of the Social Security trustees report for 2015, it is worthwhile to consider an alternative viewpoint, from the Congressional Budget Office, about the future finances of Social Security programs. Also, we summarize a recent prominent critique by professors Konstantin Kashin, Gary King, and Samir Soneji of the financial projection methods and assumptions of the trustees and the chief actuary. As a point of reference for this discussion, we'll first review some basic results from last year's trustees report.

Each year the trustees of the Social Security and Medicare trust funds report on the financial status of the two programs. In 2014 the trustees report projected that the combined trust funds for the old age, survivors (OASI), and disability insurance (DI) programs (collectively OASDI) would be exhausted of reserves in 2033. At that point, continuing tax revenue would be sufficient to pay 77 percent of scheduled benefits, declining to 72 percent in 2088. The DI trust fund, however, was expected to run out much sooner, by 2016. When that occurs, the government must by law reduce disability payouts to 81 percent of scheduled benefits. Because the primary source of revenue for Social Security is the payroll tax, the programs' revenues and costs are traditionally expressed as percentages of taxable payroll — that is, the amount of worker earnings taxed to support the programs. The 75-year actuarial balance measure, which compares revenue

with cost over an extended period, is also expressed as a percentage of taxable payroll. The balance (actually a deficit) represents the average amount of program changes needed (from benefit cuts, tax increases, or both) throughout the 75-year valuation period to achieve a zero balance on average. For OASI, the 75-year actuarial deficit was estimated in 2014 to be 2.55 percent of taxable payroll; for DI it was 0.33 percent; and for the entire program (OASDI) it was 2.88 percent.¹

Comparison With CBO Projections

The Congressional Budget Office does an annual independent projection of Social Security finances, and its 2014 projections were bleaker than those of the trustees of the Social Security and Medicare trust funds. The CBO projected that, under current law, the DI trust fund would be exhausted in fiscal 2017 and the OASI trust fund would be exhausted in 2032. If future legislation shifted resources from the OASI trust fund to the DI trust fund, the combined OASDI trust funds would be exhausted in 2030. According to the CBO, the projected 75-year imbalance increased from 3.36 percent in 2013 to 3.97 percent of taxable payroll in 2014. When measured as a share of taxable payroll, the CBO's estimates of long-term tax revenues are about the same as those produced in 2013, but the projections of long-term outlays are slightly higher than in 2013. Specifically, the 75-year cost rate — a measure of outlays — is 0.6 percentage points higher. Outlays are a larger share of taxable payroll, primarily because of lower projected interest rates; the resulting lower discount rate increases the present value of larger amounts late in the projected stream of spending. That change accounts for about half of the 0.6 percentage point increase in the 75-year cost rate. Changes to the CBO's 10-year baseline projections account for another 0.2 percentage points, and updated data and other estimating changes account for the remaining 0.1 percentage point. While there are many reasons that the CBO's projections are more dire than those of the trustees, an important part of the difference is the CBO's assumption that the significant decline in mortality experienced over past decades will continue at the same rate. Also,

¹For further discussion of the 2014 trustees report, see Mark J. Warshawsky, "The 2014 Social Security and Medicare Trustees Reports," *Tax Notes*, Aug. 25, 2014, p. 967.

the CBO anticipates lower overall interest rates and somewhat higher rates of disability in the future than do the trustees.

The June 2015 CBO projection presents an even worse situation for Social Security as its main scenario.² The combined trust fund exhaustion date is a year earlier — in 2029. The 75-year financial shortfall is now projected to be 4.4 percent of taxable payroll. The outlook worsened because expectations of future interest rate levels fell, and the application of a new method lowered future payroll tax revenues.

A Recent Academic Critique

Recently, political scientists Kashin, King, and Soneji published two articles questioning important aspects of the projections and assumptions in the Social Security trustees reports, particularly during the post-2000 period since Steve Goss became chief actuary.³ They correctly note that there has never been a systematic and comprehensive evaluation of the accuracy of the trustees' projections. By contrast, in most private and public pension plans, a periodic analysis of actuarial gains and losses (that is, the actual financial results of the pension plan compared with the prior projections) attributed by source (that is, by individual assumption, such as interest rates) is typically conducted to gauge the reasonableness and accuracy of individual assumptions. The Social Security Administration (SSA) does not do this. Kashin, King, and Soneji conducted major elements of this empirical analysis for the period since 1980. They conclude that the SSA's forecasting errors were approximately unbiased until 2000 but then became systematically biased afterward, and increasingly so over time. They show that most of the forecasting errors suggest that the Social Security Trust Funds are in better shape than the true outcomes have revealed them to be in. They add that the report's uncertainty intervals are increasingly inaccurate.

Kashin, King, and Soneji focus much of their empirical work on the SSA actuary's mortality assumptions. The actuary uses mortality projections that are consistently higher than observed rates, thus underestimating program costs. This systematic forecasting bias cannot be explained by the effects of the Great Recession. (Increases in unemployment historically reduce mortality, primarily

because of fewer accidental deaths, such as from traffic accidents, that are not counterbalanced by a small increase in the number of suicides.) Moreover, the underestimation of mortality is in many years a major reason for the underestimation of total program cost (actuarial loss). The actuary also consistently projects fertility as greater than it turns out to be.

Kashin, King, and Soneji are particularly concerned with the mortality assumption because it is central to the overall long-range projection of the trustees. The SSA's technical advisory panels, commissioned every four years since 1999, have all suggested that mortality rates should be lower than what the actuary assumed. Moreover, the panels have recommended that the actuary simplify and formalize its methodology so as to avoid having to make qualitative assumptions about causes of death by age and gender. The actuary has largely ignored these recommendations.

As political scientists, the researchers give political and procedural explanations for the actuarial errors:

The Chief Actuary and his office found (or placed) themselves in the untenable position of simultaneously being the defender of Social Security, a supposedly unbiased arbiter between increasingly polarized political parties, and a defender of their own office's reputation. [The actuary] responded to this pressure by hunkering down and trying as hard as possible to resist change in response to political pressure. Although a laudable attempt, social psychological evidence indicates that ad hoc and qualitative procedures allow biases no matter how hard individuals try to avoid them. The particular direction of bias turned out to cause [the actuary] to be insulated not only from inappropriate political pressure but also from needed changes due to changing patterns in mortality and other inputs into the forecasting process.⁴

Kashin, King, and Soneji emphasize that the actuary values consistency in forecasting over time above accuracy at any one time. Although this protects the final projections from fads in academic and political thinking, it also biases today's forecast toward yesterday's forecast and away from valid new data or methods of analysis. These researchers report a widely held supposition among experts that the actuary "maintains a private list of assumptions that in his best judgment require change.

²CBO, "The 2015 Long-Term Budget Outlook," at ch. 3 (June 16, 2015).

³Kashin, King, and Soneji, "Explaining Systematic Bias and Nontransparency in U.S. Social Security Administration Forecasts," *Political Analysis* (to be published in 2015); and Kashin, King, and Soneji, "Systematic Bias and Nontransparency in US Social Security Forecasts," 29(2) *J. Econ. Persp.* 239 (Spring 2015).

⁴Kashin, King, and Soneji, "Explaining Systematic Bias," *supra* note 3, at 12.

However, instead of making these changes when they seem to him to be scientifically warranted — immediately — [the actuary] introduces them over a much longer time frame, at instances specifically chosen to counterbalance other changes in the world and pressures from the Technical Panel, all in order to keep the ultimate forecasts relatively consistent over time.”⁵

In my opinion, as a past participant in the trustees’ process, these political science studies provide many valuable insights regarding the method, process, and projections of the actuary and the trustees. However, the studies ignored the important role of the Trustees Working Group, composed of the public trustees and agency officials and staff from Treasury, the Department of Labor, the Department of Health and Human Services, and the SSA. While I was at Treasury, the working group did achieve constructive changes in both assumptions and method even when initially resisted by the actuary, such as the beginnings of an analytical presentation of uncertainty. The technical panels are not universally correct — they sometimes make recommendations that are only weakly supported by empirical evidence or wade into areas of presentation and measurement, like the infinite horizon, which are matters of interpretation and alternative measurement, not empirical fact. Therefore, it is unreasonable to expect the trustees and the actuary to fully explain their refusal to adopt all the technical panels’ recommended changes. The studies present no evidence that the Social Security actuary ever faced political pressure to alter assumptions.

Moreover, the political science studies ignore one important source of the actuary’s defensiveness — the introduction of a competing official projection. Around 2003 the CBO, frustrated by inaccuracies it found in the trustees’ assumptions about future benefits, began to undertake its own long-range projections of Social Security, eventually establishing its own demographic assumptions.

As a plausible alternative to a social and psychological explanation of the actuary’s defense of the Social Security program — and his overall defensiveness — one can posit that he is consciously pursuing a strategy based on a policy bias of not changing program benefits. That is, underplaying the seriousness of the program’s financial problems tends to lead to a delay in political action — and no

change in program benefits. Take the DI program as an example. As shown below, there is clear evidence that the costs of the DI program have been underestimated since 2000. The last technical panel strongly advised the actuary to increase the projected rate of disability, based on compelling empirical evidence, but this advice was largely ignored. As insolvency of the DI Trust Fund has loomed closer, the actuary has emphasized in recent public presentations that the policy response should be to transfer tax revenues from the retirement program and not to change the benefit parameters or administration of the disability program.

Some Basic Empirical Analysis

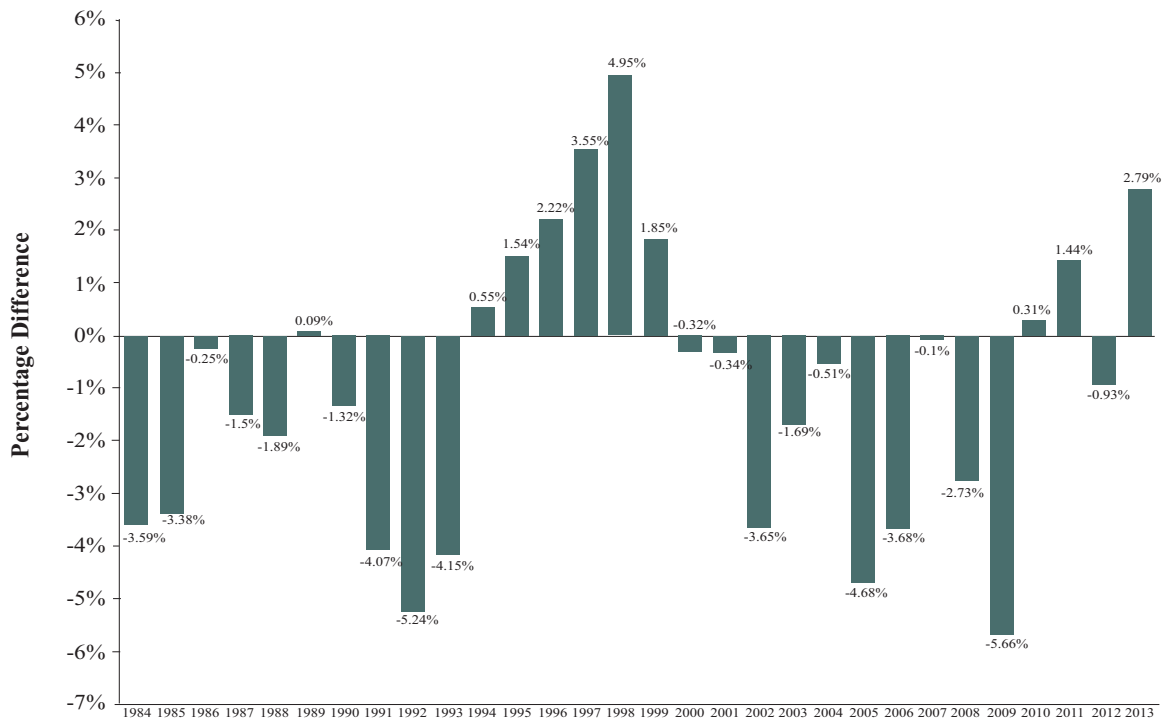
Although I cannot compete with Kashin, King, and Soneji in their sophistication or in the comprehensiveness of their methodological techniques, I can still look at the basic data and see if there are any apparent bias patterns on a gross basis. In particular, for OASI and DI separately, I look at the one-year ahead projection error of the trustees regarding spending, which is largely driven by demographics such as the aging and retirement of the baby boom generation. By contrast, the revenue side is more influenced by the economy, owing to the volatility of payroll tax revenues, and it is admittedly hard to forecast turning points in economic activity even one year in advance. So it would be unfair to focus on forecasting errors on the revenue side. Nevertheless, a full analysis of gains and losses by source would distinguish economic from demographic assumptions as the reason for error on both sides of the programs’ finances.

Figures 1 and 2 show the percentage differences between projections in the prior year’s trustees report and the actual expenditures for DI and OASI, respectively, from 1984 (the year after major reform legislation) through 2013. For both programs, it is fair to say that there has been a consistent underestimation of spending since 2000, which covers a period of recession, recovery, recession, and recovery. Before 2000 the patterns differ somewhat — DI shows large swings, whereas OASI has shown generally small errors. So the time series of the basic data is consistent with the more sophisticated analysis of Kashin, King, and Soneji: There has been a consistent tendency since Steve Goss became chief actuary to under-project Social Security spending.

⁵*Id.* at 15.

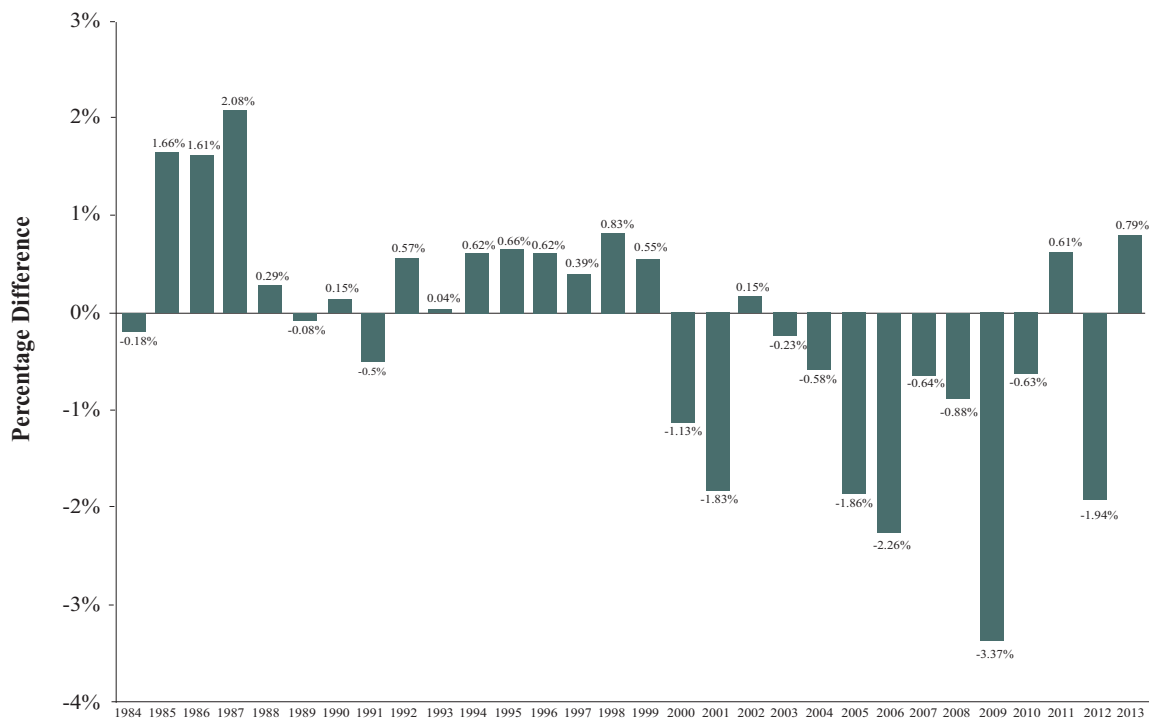
(Figures appear on the following page.)

Figure 1. Percentage Differences Between Projections in the Prior Year's Trustees Report and Actual Disability Insurance Expenditures, 1984-2013



Source: Annual Social Security Trustees' reports.

Figure 2. Percentage Differences Between Projections in the Prior Year's Trustees Report and Actual Old Age and Survivors Insurance Expenditures, 1984-2013



Source: Annual Social Security Trustee's reports.