

Focusing on presentation of uncertainty: draft for discussion only, Ellen Meara

Background: During the prior Panel meeting, Mike Thompson and Melinda Buntin presented materials on expressing uncertainty around TR estimates. They laid out why it is important—the intermediate estimate is just that, an estimate, and given the 75-year horizon of the estimate, has great uncertainty around it.

What happens in current TR? The TR expresses uncertainty for HI over the 75-year horizon, by allowing costs relative to payroll to grow 2 percentage points faster (high cost) and 2 percentage points slower (low cost) than the intermediate projection over years 1 to 25, with this differential declining gradually until year 50. There are sensitivity analyses showing income rates, cost rates, and the actuarial balance with different assumptions regarding real wage differentials, differences in CPI, and differences in the cost/payroll relative growth rate.

Relevant presentations/materials on this topic In the August panel meeting, we heard about alternatives considered by the Trustees Working Group that would a) incorporate demographic and economic assumptions used in the OASDI projections, and b) that would allow more variance in these estimates.

In the October 31-November 1st meeting, there was some confusion regarding the current method used in the TR to reflect these High and Low estimates. OACT has prepared materials, circulated to the panel, to illustrate the calculations and clear up uncertainty.

Issues of interest to panel: The Panel is concerned that the presentation of uncertainty is challenging for those likely to use the report. This is not specific to TR, as presenting notions of uncertainty is difficult. We would like to pursue more useful representation of uncertainty around the TR estimates.

Possible findings/recommendation to guide information needs—

Finding 1: We believe that it is important to convey uncertainty regarding intermediate estimates for HI and SMI.

Finding 2: The illustrative alternative and high/low estimates, despite being distinct, are easily confused by even sophisticated readers of the TR. Nowhere does the report make explicit that one alternative conveys policy uncertainty around a small set of policies while the low/high estimates convey uncertainty that encompasses demographics, economics, and policy uncertainty including that reflected by illustrative alternative.

Finding 3: The high/low estimates, as currently presented, do not give reader important information about the relative likelihood of high versus low estimates or these versus intermediate estimates.

Finding 4: Current presentation of high/low estimates and sensitivity to key parameters is not very prominent, and the difference between high/low and sensitivity to cost/payroll relative growth rate is not clear.

Recommendation I: The TR should use language and presentation approach that more clearly distinguishes high/low from illustrative alternative.

Recommendation II: High/low alternatives should convey information about the relative likelihood of different alternatives. Even if TR maintains current approach to generating high/low estimates, stochastic modeling based on repeated draws of historic values of key parameters could yield some insight regarding the relative likelihood of high/low events based on historical trends.

Recommendation III: OACT should seek outside expertise on the presentation of graphics/data to find more transparent ways to convey relevant uncertainty.

For discussion—what information is needed to justify these findings/recommendations (or to table them)?

Questions for group—

1. Are there questions regarding the current TR approach to high/low calculations given additional information from OACT (spreadsheet showing calculations)? Are there clarifying questions for OACT?
2. Is it fair to characterize the illustrative alternative, high/low estimates (for HI) and sensitivity estimates to annual cost/payroll annual growth rates as overlapping?