

# AEI: Improving the Social Security Trustees Report

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## ***2007 Technical Panel On Assumptions and Methods: Methodology***

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# Methodology Recommendations

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1. Transparency
2. Uncertainty
3. Micro-Simulation
4. Presentation

# Transparency

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- Method Recommendation M-1: Further **document all models** to the extent necessary for **others to replicate** forecasts. Make **available** sufficient **data for non-government analysts to replicate** forecasts, and conduct **research** to improve forecasting techniques. Include in the analysis an **explicit** discussion of the **historical time periods**, and the associated rationale, used **for each variable**.

# Transparency (con't)

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- Method Recommendation M-2: **Explicitly model and document relevant interactions.**
- Method Recommendation M-3: The Social Security Advisory Board, to whom this Technical Panel reports, should hold **semi-annual meetings with OCACT** to discuss progress on the recommendations contained in this report as well as those from previous panels.

# Transparency: Next Steps

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- Providing more comprehensive documentation
- Making data from SSA records more available
- Creating explicit models where none exist
- Clearly explaining the processes employed

# Uncertainty

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- Method Recommendation M-4: Incorporate **asymmetrical risk** in the projections.
- Method Recommendation M-5: **Further develop stochastic modeling** capabilities, and make much **greater use of stochastic analysis** to examine uncertainty, especially the **effects interactions** have on **uncertainty**.

# Uncertainty (con't)

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Method Recommendation M-6: Consider **risk-adjusting discount rates for summarized balances**. Using the risk-free interest rate to discount uncertain future cash flows is inconsistent with valuation principles, and over-weights the outcomes that are most uncertain.

# Micro-Simulation

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- *Method Recommendation M-7:*  
**Increase** the use of **micro-simulation** to analyze and display interaction effects and distributional outcomes of policy changes.

# Why Micro-Simulation

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- Increase reliance on micro-simulation BUT also advantages to cell-based (OCACT) methods
- Micro-simulation useful for Distribution Analysis.
- Micro-simulation traces behavior of individuals & families over time under varying, complex changes in economic & policy variables.
- Micro-simulation can improve forecast quality when changes in the cross-section over time affect macroeconomic outcomes and thereby system finances.

# Why Micro-Simulation (con't)

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- By explicitly accounting for interactions across variables, micro-simulation **increases transparency** around **key assumptions** underlying cell-based projections, **encouraging review of assumptions**
- **“imperative that OCACT increase its investment in and utilization of micro-simulation models as augmentations to cell-based projections.”**

# Why Micro-Simulation (con't)

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## Demographic & Economic Examples: Differing Results from Differing Methods

- Differential Mortality
- Transitional Changes in Mortality Patterns
  - Female Smoking Rates in Certain Cohorts
- Differential Labor Force Participation Rates
- Analyzing Effect of Income Inequality

# Presentation

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- *Presentation Recommendation P-1:*  
Shift the **emphasis** toward the **intermediate-term** and **away from very long-term measures** such as the infinite horizon forecasts. Shift **emphasis** toward the use of **annual cost and income rates**, and **away from summarized 75-year balances**.

# Presentation (con't)

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- *Presentation Recommendation P-2:*  
Include in the analysis an **explicit comparison** of the **U.S. experience** with **other countries**.
- *Presentation Recommendation P-3:*  
Report annually the **accuracy of previous estimates and projections**.

# Presentation (con't)

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- *Presentation Recommendation P-4:*  
Increase the use of **graphical representations of uncertainty.**
- *Presentation Recommendation P-5:*  
**Improve the explanation of trust fund accounting and its implications.**