Presentation of Technical Panel on Assumptions and Methods Report

September 27, 2019

A Panel Commissioned by the Social Security Advisory Board
Panel Members

- Robert Beuerlein
- Ron Gebhardtsbauer
- Alexander Gelber
- Joshua Goldstein
- Patricia Guinn
- Kathleen Mullen
- Louise Sheiner
- Sita Slavov
- Kent Smetters
- Tom Terry
The panel of expert actuaries, economists and demographers appointed by the Social Security Advisory Board (the board) is charged with providing technical assistance to the board by reviewing the assumptions and the methods used to integrate those assumptions for projecting the future financial status of the Old Age, Survivors, and Disability Insurance (OASDI) programs. The panel shall deliver a written report to the board by September 2019. The report should reflect the full range of views expressed by panel members.

Specifically, the Panel is asked to:

• Review the key economic and demographic assumptions, assess whether they are reasonable, and detail the rationale for considering alternative values.

• Review the current projection methods, assess whether they are reasonable and appropriate, and detail the rationale for considering new methodologies.

• Consult with the board, the Trustees, and the Office of the Chief Actuary regarding specific assumptions or methods that may benefit from additional attention from the panel.

• Review ways to improve the presentation of key concepts in the Trustees report so as to make them more accessible and informative to policymakers and the public.
Process

November 2018 – June 2019 – Monthly Meetings

Input and Presentations:

• Trustees’ Working Group
• Past Public Trustees
• Senate Finance Committee
• House Ways and Means Committee
• Congressional Budget Office
• Insurance industry, communications, journalism and academic experts
• Office of the Chief Actuary

Support from SSAB staff
Overview

Charter allowed for review and discussion of all aspects of Trustees Report.

Trustees Report and Projections by OCACT
- Reasonable
- Insightful
- Meaningful

Recommendations - Position Trustees Report for the future

Public Confidence is enhanced by this process.

Specific Recommendations
- Modernizing
- Improving Public Understanding
- Demographic, Economic, Program-Specific Assumptions
- Uncertainty
Modernizing

- Enhance current framework.
- Flexibility and speed for continuation of good work in future.
- Evolution of modeling tools is growing rapidly.
- More than incremental.

Multi-year project
- Nimble and robust
- Investment with long-term returns
Improving Public Understanding

Importance of effective communications

Communication has evolved

Trustees Report is well established

Appetite for more information

Recommendations:

• Broadly Accessible
• Transparent
• Highly technical report becomes readable and understandable
Assumptions

Diverse group of experts – Actuaries, Demographers, Economists

Professional judgment is essential

Choice of assumptions can reasonably vary among professionals

Recognize Trustees and OCACT’s willingness:
  • Detailed scrutiny from our group
  • Consideration of recommendations

Recommendations:
  • Specific and general
  • Equally important – various points of view considered and rationale
Uncertainty

“Increased uncertainty of important assumptions”…External Experts

Recent experience
- Trend
- Aberration
- New Normal

Understanding of uncertainty
- Possible range of outcomes
- Meaningful information for decision making

Recommendations:
- Greater emphasis on uncertainty
- Incorporate state-of-the-art techniques
Methods
Modernization

“Model refresh”

Newer modeling techniques

Modeling dynamic effects on the economy
Uncertainty and Clarity

Recent statistical methods
Communicate statistical ranges – e.g., 5% and 95%
“Current law” projections
Presentation
Emphasis on clarity and understanding

Speak to both sophisticated and general audiences

• Understanding of both audiences is important
• Enhance public trust
• Highly technical language not helpful (e.g. “trust fund reserve depletion”)

Recommendations aimed at improving accessibility and transparency of report
Turn tables into graphs

<table>
<thead>
<tr>
<th>Historical data</th>
<th>1950</th>
<th>2016</th>
<th>Trustees 2019 projection</th>
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<th>Sudden death rate</th>
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<th>30-34</th>
<th>60-64</th>
<th>Age-adjusted death rate (log scale)</th>
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<td>2090</td>
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Table C1A.—Fertility and Mortality Assumptions. Calendar Years 1950-2050

<table>
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<th>Calendar year</th>
<th>Total Sudden</th>
<th>Total</th>
<th>Sudden 35-39</th>
<th>Age-adjusted death rate (log scale)</th>
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<tr>
<td>2090</td>
<td>3,950.8</td>
<td>300</td>
<td>600</td>
<td>900</td>
</tr>
</tbody>
</table>

Age-sex adjusted death rates (log scale)

Death rate 1950-2016

Historical

Projected

Trustees 2019 projection

TPAM
Technical Panel on Assumptions and Methods
Focus graphs on core messages

Figure II.D2.—OASDI Income, Cost, and Expenditures as Percentages of Taxable Payroll
[Under Intermediate Assumptions]

Cost: Scheduled and payable benefits
Cost: Scheduled but not fully payable benefits
Non-interest Income
Payable benefits as percent of scheduled benefits:
2018-34: 100%
2035: 80%
2093: 75%

Expenditures: Payable benefits = income after trust fund depletion in 2035

Cost: Scheduled and payable benefits
Cost: Scheduled but not fully payable benefits
Non-interest income
Beginning in 2035 when the trust fund reserves are depleted, benefits=non-interest income, and payable benefits will be 79% of scheduled benefits
Payable benefits will be 75% of scheduled benefits in 2093

Calendar year

2000  2010  2020  2030  2040  2050  2060  2070  2080  2090
Federal plain language guidelines

- Central messages upfront
- Liberal use of headings
- Short paragraphs
- Explain and simplify
- Short, declarative sentences
Simplify public facing material

- Bullet points, **bolding**, **underlining**, *italicizing*

- Table of changes to key outcomes

- Short summaries

- Key figures up front
• Provide clear context

• Rename!
  “partial benefits date”
  “reduced benefits date”

• Add a new, simpler graphic
A new, simpler graphic

Social Security has sufficient resources to fund 100% of scheduled benefits through 2034...

...but when trust fund reserves are depleted in 2035, tax revenues are sufficient to pay for 80% of scheduled benefits …

...gradually declining to 75% in 2095
Enhance online and media strategies

Expert advice to help with enhancements:

• Improve website user interface
• Create FAQs
• Leveraging social media
• Improve OCACT’s webpage on the TR
Transparency

- Expand sensitivity analyses
- Greater external access to projection models
- Make available comparisons of past projections to actual realizations
Demographic Assumptions
Summary: Demographic Recommendations

- Lower fertility rates and continued postponement of births to older ages
- Faster ultimate rate of mortality improvement in line with historical trends
- Project long-range immigration as share of the population
- Emphasize uncertainty
Fertility: Panel expects shift toward later childbearing to continue for decades

**Technical Panel scenario birth rates, by age**

Trustees assumed birth rates, by age
So fertility rates will rebound more slowly.
Mortality: Panel recommends increasing the ultimate rate of mortality improvement to align with long-term historical experience.
Near–term mortality improvement hard to predict

Poor recent experience due to social causes such as opioids and deaths of despair

How long will it last?
Net immigration should be tied to the size of the population.

Trustees project net immigration as a declining share of population.
Projections should better reflect additional characteristics of population

- Develop the capability to model native and immigrant fertility separately
- Develop capability to model demographic assumptions by income and/or education
- Factor in cause of death analysis in the mortality assumptions
- Capture the changing characteristics of immigrants, e.g. country of origin
Economic Assumptions
Productivity Growth

Put some weight on possibility it remains low

Affected by structural changes in economy: aging, less dynamism and competition

Other forecasters have NFB productivity growth over next 30 years well below 2%

Trustees assumption that it rises to 2% possible, but not balanced

Panel suggests 1.9%

Non-farm business productivity average annual growth rate

<table>
<thead>
<tr>
<th>Period</th>
<th>Growth Rate</th>
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</thead>
<tbody>
<tr>
<td>1962-2017</td>
<td>2.02%</td>
</tr>
<tr>
<td>1973-2017</td>
<td>1.80%</td>
</tr>
<tr>
<td>1992-2017</td>
<td>2.00%</td>
</tr>
<tr>
<td>2007-2017</td>
<td>1.31%</td>
</tr>
</tbody>
</table>

Trustees ultimate assumption, 2.00%
Labor Share

Don’t assume rebounds to long-term average

Share declined through early 1980s; well below 1947-2018 average since then

Structural changes (e.g. higher depreciation) lowered share

Changes likely long-lasting

Panel doesn’t anticipate rebound in labor share
Earnings Share of Compensation

Rate of growth of health spending has slowed markedly.

Panel suggest excess growth of 1 ppt in near term, declining over time, and decline over time.

Not much different from Trustees, but Trustees projection is contingent on Cadillac tax.

We don’t think excess cost growth assumption should be increased if Cadillac tax repealed.

<table>
<thead>
<tr>
<th>Historical interval</th>
<th>Difference between growth rates in employer-paid health insurance and total compensation</th>
</tr>
</thead>
<tbody>
<tr>
<td>1975-2017</td>
<td>2.37%</td>
</tr>
<tr>
<td>1975-1992</td>
<td>4.76%</td>
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<tr>
<td>1992-2017</td>
<td>0.74%</td>
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<tr>
<td>1992-2007</td>
<td>0.81%</td>
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<tr>
<td>1982-2017</td>
<td>1.40%</td>
</tr>
<tr>
<td>1982-2007</td>
<td>1.60%</td>
</tr>
<tr>
<td>2007-2017</td>
<td>0.64%</td>
</tr>
</tbody>
</table>
Taxable Share of Earnings

Looks like share fell through 2000 but then flattened

But share taxable rises with unemployment rate, making hard to eyeball

Adjusting for cyclicality shows steady decreases through 2013, but then unexplained rise

We think too few years to declare decline over

Structural factors that have increased inequality likely continuing

Panel recommends assuming trend abates gradually over 25 years
Labor Force Participation (LFP)

Long-run decline in prime-age male LFP.

- Fell faster during recession, then recovered
- Now similar to pre-2008 trend

Trustees: turnaround continues
Panel: drivers of decline: globalization, technology haven’t ended.

- Long-run decline continues, but abates over 25 years
- Similar story for 16-24 men and women (not shown)
Program-Specific
Benefit models and alternatives

Benefit model projects number of future beneficiaries and average benefit amounts

OCACT adjusts historical data to reflect projected changes in working and claiming behavior

Direction of adjustments sensible but ad hoc approach makes it hard to impose (or verify) internal consistency across assumptions

Microsimulation would ensure internal consistency of assumptions

Panel recommends comparing benefit projections based on current methodology against results from alternate models such as a microsimulation model
Benefit claiming patterns tied to historical claiming patterns, adjusted for:

- increases in full retirement age
- changes in labor force participation

Claiming patterns may change in future:

- Gains from delaying benefits have increased in past two decades
- People may accelerate claims in anticipation of trust fund depletion

Panel recommends SSA study sensitivity of key financial outcomes (cost, income, depletion date) to benefit claiming age patterns
Disability incidence trends

Disability incidence rate, age-sex adjusted, recent projections vs. actual rates

Disability incidence rate age-adjusted vs. unemployment rate, males, 1995-2018
Lower disability incidence rate

Unclear why there was a post-2008 shift, or whether shift is temporary or permanent

Appears to be driven by award rate, rather than application rate

However, private disability incidence has also fallen (suggesting workplace factors)

Signs of reversal among younger age groups

Panel recommends lowering ultimate age-sex adjusted disability incidence rate to 4.9

Puts a bit of weight on recent observed downward shift in disability incidence (which we view as mostly temporary) and consistent with unemployment rate recommendation
Recap

Charter allowed for review and discussion of all aspects of Trustees Report.

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