Evaluating President Bush’s Social Security Reform Proposal

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Brief Overview of Social Security
Payroll tax rate: 12.4%
Benefits: Retiree, survivor, disability, dependent
Replacement rate: 24% - 60%

Solvency
- 75-year shortfall is 1.92% of payroll (0.65% of GDP)
- Infinite-horizon shortfall is 3.5% of payroll (1.2% of GDP)

Social Security Outlook

President Bush’s Proposal

(1) Voluntary Individual Accounts
- 4 percent of payroll when fully phased in
- Benefit offset: Every dollar contributed to the account reduces defined Social Security benefit by one dollar in present value

(2) Reduce Replacement Rate: “Progressive Price Indexing”

Macroeconomic Features of Accounts

Impact on the Debt
Replacement Rate
Scaled Medium Earner Retiring in 2055

Impact on Individuals

- Rational choice model
  - People who are not equity-constrained will not participate
  - Equity-constrained could gain from diversification

- Behavioral model
  - More equity exposure / risk facing individuals
  - Less savings if accounts are perceived as net wealth

“Progressive Price Indexing”
Reduce replacement rates
- Top 1 percent frozen in real terms (price indexing)
- Bottom 30 percent same as current law (wage indexing)
- Convex combination for those inbetween

Impact on the Social Security Deficit

Impact on Replacement Rates

<table>
<thead>
<tr>
<th></th>
<th>Current Schedule</th>
<th>2045</th>
<th>2075</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low (27th percent.)</td>
<td>49%</td>
<td>49%</td>
<td>49%</td>
</tr>
<tr>
<td>Medium (55th percent.)</td>
<td>36%</td>
<td>30%</td>
<td>26%</td>
</tr>
<tr>
<td>High (85th percent.)</td>
<td>30%</td>
<td>23%</td>
<td>18%</td>
</tr>
<tr>
<td>Maximum (99th percent.)</td>
<td>24%</td>
<td>17%</td>
<td>12%</td>
</tr>
</tbody>
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Solvency Goals

1983 Reforms:
- Projected to restore 75-year solvency (2060+)
- 1983 projected balance 2005-79: +0.15% to -0.79%
- Today’s projected balance 2005-79: -1.92%

Lessons:
- Sustainable solvency
- Robust solvency
Coping With Uncertainty

Two principal sources of uncertainty in a PAYGO system:

– Productivity Growth
– Demographic Uncertainty

PAYGO Balance

\[ \text{PAYGO Balance} = \frac{\text{Benefit}}{\text{Income}_{t-1}} + \text{Beneficiaries} \]

\[ \text{Replacement Rate} = \frac{\text{Workers}}{\text{Beneficiaries}} \]

Demographic Uncertainty

Alternative Outcomes in 2080

<table>
<thead>
<tr>
<th>Working age (20-64) per Retiree age (65+)</th>
<th>PAYGO Tax Rate (OASI Only)</th>
<th>PAYGO Replacement Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>4.9</td>
<td>10.6%</td>
</tr>
<tr>
<td>Low</td>
<td>3.0</td>
<td>12.0%</td>
</tr>
<tr>
<td>Intermediate</td>
<td>2.3</td>
<td>15.7%</td>
</tr>
<tr>
<td>High</td>
<td>1.7</td>
<td>21.3%</td>
</tr>
</tbody>
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Proposal: Dependency Indexing

What To Index?
• Can do a combination of payroll taxes and benefits

How To Handle the Transition?
• Can directly index parameters
• Can pick a transition path, dependency index deviations from initially projected dependency rates

Sample Plan

Base Provisions
• Raise taxable maximum and charge a legacy tax of 2.9 percent above maximum
• Tax fringe benefits at 6.2 percent
• Include State & local workers
• Enhance minimum benefit

Dependency Indexing
• Divide equally between payroll tax and benefits
Cost and Income Under Plan

Cost
Income