Impact of President Bush Plan for Social Security Reform

Gerald Schillaci
ACSW June 10, 2005 Houston
President’s Commission Reform Model 2

Model 2 Basic:

- Gradual reduction in replacement ratio for new retirees based on change in the wage indexing to CPI indexing. Estimated reduction is a 1.1% reduction compounded for the number of years birth-year exceeds 1947.
- It is this reduction in benefits that re-aligns the system costs with tax revenue.
- The reduction is not specified but theoretical.

Model 2 Optional:

- Personal Accounts (so-called privatization)
- Up to 4% of pay or $1,000 if lessor could be diverted from the traditional program to a 401K type account the participant would control and invest.
Social Security in Crisis

4 trillion actuarial deficit?
11.1 trillion?
12.7 trillion?

How much is 4 trillion dollars, anyway?

<table>
<thead>
<tr>
<th>No. workers (2003)</th>
<th>Aggregate Wages</th>
<th>Annual Avg Wage</th>
</tr>
</thead>
<tbody>
<tr>
<td>147,782,000</td>
<td>4.827 trillion</td>
<td>34,065</td>
</tr>
</tbody>
</table>

If 4 trillion is the official deficit of the system, what would it take to fix it?
Immediate increase in FICA tax of 1.9% from 12.4% to 14.3% (not going to happen), or
Immediate decrease in all benefits of 13% (not going to happen)
Pension Funding terminology

Pay as you go funding (income required to equal outgo for one year)
   No build up of assets except perhaps a short term liquidity requirement.
   No assets reserved to insure payment of benefits accrued

Modified Pay as you go funding (income required to equal outgo for an extended period, 75 years), 4 trillion deficit (official social security basis)
   Solvency is required for 75 years on a cash flow basis
   Solvency is defined as having cash to pay cash benefits
   No reserve to insure payment of accrued benefits required
   A liquidity reserve of one year’s benefits is required at the end of the 75 year period

Full Reserve Funding(prefunded), 12.7 trillion deficit
   Asset buildup targeted to equal or exceed accrued liability
   To protect the pensions of workers in private enterprise
Social Security Basics

- Payroll Tax is 12.4% (combined ER and EE) up to 90,000 annual max
- No scheduled future increases in the tax rate, and no political will to increase tax rate, in either political party.
- The 90,000 annual max is indexed automatically to increases in average national wage.
- The 12.4% tax rate is actuarially deficient by a little less than 1.92% of payroll based on the 75 year valuation period (2005 Trustees Report). That is, about 14.32% is indicated as the correct tax actuarially.
Social Security Basics (cont)

- The social security program is a defined benefit plan that provides a benefit based on a formula that takes into account career average (indexed) earnings, years of service, age at retirement, etc.

- The formula is progressive, meaning it is biased in favor of lower paid.

- The formula is indexed in a way that provides stable replacement ratios for new retirees with average earnings, no matter what year he retires.
Social Security Basics (cont)
Replacement Ratios for new retirees

Low Wage Earner 
Average Earner 
Maximum Earner 

$11,200 
$34,065 
$90,000 

72% 
42% 
26% 

These replacement ratios will be extremely stable under the current formula because everything in the benefit formula is indexed to average wage.

Keeps benefits for new retirees in line with increasing standard of living, not just inflation.
After retirement, benefits are indexed to CPI, not wages.
Figure 16: Social Security Benefit Formula Replaces Earnings at Different Rates

Monthly benefit amount (2005 dollars)

2,500
2,000
1,500
1,000
500

0 1,000 2,000 3,000 4,000 5,000 6,000 7,500
Average Indexed Monthly Earnings

90 percent
32 percent
15 percent

Source: Social Security Administration.
**Actuarial Balance**  
(from 2005 Trustees Report)

(Official Criteria for actuarial condition)

- PV of cash paid benefits 75 years 35.154 trill.
- + PV liquidity reserve time 75 .301
- - PV of FIT paid on SS benefits 1.642
- - Beginning trust fund assets 1.687
- =Total funded by 12.4% payroll tax 32.126

- Divide by PV 12.4% tax for 75 years 224.501 trill.

- Levelized Cost 75 years 14.31%
- Subtract from actual tax rate 12.40%
- Difference is “actuarial balance” -1.92%
Beyond 75 years

- The 75 year actuarial balance calculation basically ignores the period beyond the 75th projection year, except for the liquidity reserve.
- Every year the valuation period moves up one year and captures the 76th year from the previous valuation.
- If projected cash flow is negative for that year (benefits exceed the 12.4% tax), there will be creeping actuarial imbalance simply from the change in actuarial period.
## Projected Cash Flows by Year
(as a % of payroll)

### (2005 Trustees Report)

<table>
<thead>
<tr>
<th>Year</th>
<th>Cash Flow / Payroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>1.59%</td>
</tr>
<tr>
<td>2010</td>
<td>1.73</td>
</tr>
<tr>
<td>2015</td>
<td>0.45</td>
</tr>
<tr>
<td>2020</td>
<td>-1.00</td>
</tr>
<tr>
<td>2025</td>
<td>-2.42</td>
</tr>
<tr>
<td>2030</td>
<td>-3.54</td>
</tr>
<tr>
<td>2040</td>
<td>-4.26</td>
</tr>
<tr>
<td>2050</td>
<td>-4.36</td>
</tr>
<tr>
<td>2060</td>
<td>-4.79</td>
</tr>
<tr>
<td>2070</td>
<td>-5.32</td>
</tr>
<tr>
<td>2080</td>
<td>-5.75</td>
</tr>
</tbody>
</table>
Figure II.D3.—Number of Covered Workers Per OASDI Beneficiary

Historical  Estimated

Calendar year
### Table V.A1.—Principal Demographic Assumptions, Calendar Years 1940-2080

<table>
<thead>
<tr>
<th>Calendar year</th>
<th>Total fertility rate</th>
<th>Age-sex-adjusted death rate (^2) per 100,000, by age</th>
<th>Net immigration</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Total</td>
<td>Under 65</td>
</tr>
<tr>
<td><strong>Historical data:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1940</td>
<td></td>
<td>2.23</td>
<td>1,779.1</td>
</tr>
<tr>
<td>1945</td>
<td></td>
<td>2.42</td>
<td>1,586.6</td>
</tr>
<tr>
<td>1950</td>
<td></td>
<td>3.03</td>
<td>1,435.6</td>
</tr>
<tr>
<td>1955</td>
<td></td>
<td>3.50</td>
<td>1,324.2</td>
</tr>
<tr>
<td>1960</td>
<td></td>
<td>3.61</td>
<td>1,330.9</td>
</tr>
<tr>
<td>1965</td>
<td></td>
<td>2.88</td>
<td>1,304.6</td>
</tr>
<tr>
<td>1970</td>
<td></td>
<td>2.43</td>
<td>1,224.3</td>
</tr>
<tr>
<td>1975</td>
<td></td>
<td>1.77</td>
<td>1,099.0</td>
</tr>
<tr>
<td>1980</td>
<td></td>
<td>1.82</td>
<td>1,035.9</td>
</tr>
<tr>
<td>1985</td>
<td></td>
<td>1.84</td>
<td>984.2</td>
</tr>
<tr>
<td>1990</td>
<td></td>
<td>2.07</td>
<td>931.2</td>
</tr>
<tr>
<td>1991</td>
<td></td>
<td>2.06</td>
<td>918.8</td>
</tr>
<tr>
<td>1992</td>
<td></td>
<td>2.04</td>
<td>906.2</td>
</tr>
<tr>
<td>1993</td>
<td></td>
<td>2.02</td>
<td>928.0</td>
</tr>
<tr>
<td>1994</td>
<td></td>
<td>2.00</td>
<td>916.2</td>
</tr>
<tr>
<td>1995</td>
<td></td>
<td>1.98</td>
<td>913.9</td>
</tr>
<tr>
<td>1996</td>
<td></td>
<td>1.98</td>
<td>900.4</td>
</tr>
<tr>
<td>1997</td>
<td></td>
<td>1.97</td>
<td>885.1</td>
</tr>
<tr>
<td>1998</td>
<td></td>
<td>2.00</td>
<td>878.3</td>
</tr>
<tr>
<td>1999</td>
<td></td>
<td>2.01</td>
<td>884.3</td>
</tr>
<tr>
<td>2000</td>
<td></td>
<td>2.06</td>
<td>875.6</td>
</tr>
<tr>
<td>2001</td>
<td></td>
<td>2.03</td>
<td>867.1</td>
</tr>
<tr>
<td>2002</td>
<td></td>
<td>2.02</td>
<td>866.2</td>
</tr>
<tr>
<td>2003(^2)</td>
<td></td>
<td>2.03</td>
<td>861.9</td>
</tr>
<tr>
<td>2004(^3)</td>
<td></td>
<td>2.02</td>
<td>857.9</td>
</tr>
<tr>
<td><strong>Intermediate:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td></td>
<td>2.02</td>
<td>854.2</td>
</tr>
<tr>
<td>2010</td>
<td></td>
<td>2.01</td>
<td>828.2</td>
</tr>
<tr>
<td>2015</td>
<td></td>
<td>1.99</td>
<td>796.7</td>
</tr>
<tr>
<td>2020</td>
<td></td>
<td>1.98</td>
<td>764.7</td>
</tr>
<tr>
<td>2025</td>
<td></td>
<td>1.96</td>
<td>734.0</td>
</tr>
<tr>
<td>2030</td>
<td></td>
<td>1.95</td>
<td>705.0</td>
</tr>
<tr>
<td>2035</td>
<td></td>
<td>1.95</td>
<td>677.7</td>
</tr>
<tr>
<td>2040</td>
<td></td>
<td>1.95</td>
<td>652.1</td>
</tr>
<tr>
<td>2045</td>
<td></td>
<td>1.95</td>
<td>628.2</td>
</tr>
<tr>
<td>2050</td>
<td></td>
<td>1.95</td>
<td>605.7</td>
</tr>
<tr>
<td>2055</td>
<td></td>
<td>1.95</td>
<td>584.5</td>
</tr>
<tr>
<td>2060</td>
<td></td>
<td>1.95</td>
<td>564.6</td>
</tr>
<tr>
<td>2065</td>
<td></td>
<td>1.95</td>
<td>545.8</td>
</tr>
<tr>
<td>2070</td>
<td></td>
<td>1.95</td>
<td>528.1</td>
</tr>
<tr>
<td>2075</td>
<td></td>
<td>1.95</td>
<td>513.2</td>
</tr>
<tr>
<td>2080</td>
<td></td>
<td>1.95</td>
<td>493.3</td>
</tr>
<tr>
<td>Assumption</td>
<td>Intermediate</td>
<td>Low-Cost</td>
<td>High-Cost</td>
</tr>
<tr>
<td>---------------------------------------------------------------------------</td>
<td>--------------</td>
<td>----------</td>
<td>-----------</td>
</tr>
<tr>
<td><strong>Total fertility rate:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultimate assumption (children per woman)</td>
<td>1.95</td>
<td>2.2</td>
<td>1.7</td>
</tr>
<tr>
<td>75-year actuarial balance</td>
<td>-1.92%</td>
<td>-1.64%</td>
<td>-2.22%</td>
</tr>
<tr>
<td>Year of combined trust fund exhaustion</td>
<td>2041</td>
<td>2041</td>
<td>2041</td>
</tr>
<tr>
<td><strong>Reduction in death rates:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Average annual reduction in total age-sex adjusted death rates between 2004 and 2079</td>
<td>0.72%</td>
<td>0.30%</td>
<td>1.27%</td>
</tr>
<tr>
<td>75-year actuarial balance</td>
<td>-1.92%</td>
<td>-1.33%</td>
<td>-2.63%</td>
</tr>
<tr>
<td>Year of combined trust fund exhaustion</td>
<td>2041</td>
<td>2044</td>
<td>2038</td>
</tr>
<tr>
<td><strong>Real-wage differential:</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ultimate assumption (average wage increase minus 2.8% CPI increase)</td>
<td>1.1%</td>
<td>1.6%</td>
<td>0.6%</td>
</tr>
<tr>
<td>75-year actuarial balance</td>
<td>-1.92%</td>
<td>-1.39%</td>
<td>-2.45%</td>
</tr>
<tr>
<td>Year of combined trust fund exhaustion</td>
<td>2041</td>
<td>2047</td>
<td>2037</td>
</tr>
</tbody>
</table>
Table V.A2.—Social Security Area Population as of July 1 and Dependency Ratios, Calendar Years 1950-2080

<table>
<thead>
<tr>
<th>Calendar year</th>
<th>Population (in thousands)</th>
<th>Dependency ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Under 20</td>
<td>20-64</td>
</tr>
<tr>
<td>Historical data:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>1950</td>
<td>54,466</td>
<td>92,841</td>
</tr>
<tr>
<td>1960</td>
<td>73,076</td>
<td>99,818</td>
</tr>
<tr>
<td>1965</td>
<td>80,132</td>
<td>104,795</td>
</tr>
<tr>
<td>1970</td>
<td>80,684</td>
<td>113,158</td>
</tr>
<tr>
<td>1975</td>
<td>78,437</td>
<td>122,857</td>
</tr>
<tr>
<td>1980</td>
<td>74,568</td>
<td>134,428</td>
</tr>
<tr>
<td>1985</td>
<td>73,211</td>
<td>144,957</td>
</tr>
<tr>
<td>1990</td>
<td>75,060</td>
<td>153,368</td>
</tr>
<tr>
<td>1995</td>
<td>79,621</td>
<td>160,844</td>
</tr>
<tr>
<td>2000</td>
<td>82,557</td>
<td>170,274</td>
</tr>
<tr>
<td>Intermediate:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2005</td>
<td>83,859</td>
<td>181,017</td>
</tr>
<tr>
<td>2010</td>
<td>84,579</td>
<td>189,544</td>
</tr>
<tr>
<td>2015</td>
<td>85,101</td>
<td>195,071</td>
</tr>
<tr>
<td>2020</td>
<td>86,412</td>
<td>197,819</td>
</tr>
<tr>
<td>2025</td>
<td>87,319</td>
<td>199,091</td>
</tr>
<tr>
<td>2030</td>
<td>88,477</td>
<td>199,758</td>
</tr>
<tr>
<td>2035</td>
<td>89,203</td>
<td>202,410</td>
</tr>
<tr>
<td>2040</td>
<td>89,718</td>
<td>206,118</td>
</tr>
<tr>
<td>2045</td>
<td>90,236</td>
<td>209,519</td>
</tr>
<tr>
<td>2050</td>
<td>91,018</td>
<td>211,891</td>
</tr>
<tr>
<td>2055</td>
<td>91,909</td>
<td>213,749</td>
</tr>
<tr>
<td>2060</td>
<td>92,749</td>
<td>215,201</td>
</tr>
<tr>
<td>2065</td>
<td>93,477</td>
<td>217,322</td>
</tr>
<tr>
<td>2070</td>
<td>94,133</td>
<td>219,132</td>
</tr>
<tr>
<td>2075</td>
<td>94,809</td>
<td>221,426</td>
</tr>
<tr>
<td>2080</td>
<td>95,554</td>
<td>223,359</td>
</tr>
</tbody>
</table>
75-year Social Security financing shortfall
(share of taxable payroll)

Change in 75-year actuarial balance of Social Security, 1983-2005, by reason for change*

- Valuation period: -1.3%
- Demographic factors: 0.7%
- Economic factors: -0.4%
- Disability: -0.6%
- All other: -0.4%

* Total = 1.94.

Infinite Valuation Period

Actuarial Balance-Infinite (3.50%)
-75 year (1.92%)

PV of Unfunded Liability
- Infinite 11.1 trillion
- 75 year 4.3 trillion

“Given the uncertainty of projections 75 years into the future, extending these projections into the infinite future can only increase the uncertainty, so that the results can have only limited value for policymakers. This is largely due to anomalies and incongruities that inevitably arise from extending any set of long-range actuarial assumptions to infinity.” American Academy of Actuaries Issue Brief
Presidents 2001 Commission

- Recognized that solving the so-called “actuarial balance” for 75 years was not addressing the long term problem permanently.
- Rejected the infinite valuation approach
- Instead came up with the concept of “sustainability of solvency” in addition to the standard 75 year balance requirement
- Translation: In the absence of scheduled tax rate increases, benefits must be gradually reduced to eliminate negative projected cash flows in future periods
President’s Commission Model 2 Reform Proposal

Model 2 Basic:
- Gradual reduction in replacement ratio for new retirees based on change in the wage indexing to CPI indexing. Estimated reduction is a 1.1% reduction compounded for the number of years birth-year exceeds 1946.
- It is this reduction in benefits that re-aligns the system costs with tax revenue.
- The reduction is not specified but theoretical.

Model 2 Optional:
- Personal Accounts(so-called privatization)
- Up to 4% of pay or $1,000 if lessor could be diverted from the traditional program to a 401K type account the participant would control and invest.
Change from wage indexing to CPI indexing

National Average Wage  
1951  2,799.15  
2001  32,921.92  
Compounded Increase for 50 years 5.05%

CPI-W(urban workers)  
1951  26.62  
2001  173.4  
Compounded Increase for 50 years 3.82%

50 year average differential  1.23%  
Assumed future differential  1.10%

Driver of differential is productivity increase (increases standard of living; wage grows faster than CPI)  
Assumed productivity increase in future 1.60%
<table>
<thead>
<tr>
<th>Year</th>
<th>National Avg Wage</th>
<th>Increase over prev year</th>
<th>CPI Increase</th>
<th>Increase Differential</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>$8,630.92</td>
<td>6.9%</td>
<td>6.5%</td>
<td>0.4%</td>
</tr>
<tr>
<td>1978</td>
<td>$9,226.48</td>
<td>6.0%</td>
<td>9.9%</td>
<td>-3.9%</td>
</tr>
<tr>
<td>1979</td>
<td>$9,779.44</td>
<td>7.9%</td>
<td>14.3%</td>
<td>-6.4%</td>
</tr>
<tr>
<td>1980</td>
<td>$10,556.03</td>
<td>8.7%</td>
<td>11.2%</td>
<td>-2.5%</td>
</tr>
<tr>
<td>1981</td>
<td>$11,479.46</td>
<td>9.0%</td>
<td>3.5%</td>
<td>6.6%</td>
</tr>
<tr>
<td>1982</td>
<td>$12,513.46</td>
<td>10.1%</td>
<td>7.4%</td>
<td>1.6%</td>
</tr>
<tr>
<td>1983</td>
<td>$13,773.10</td>
<td>5.5%</td>
<td>3.5%</td>
<td>2.0%</td>
</tr>
<tr>
<td>1984</td>
<td>$14,531.34</td>
<td>4.9%</td>
<td>3.1%</td>
<td>1.8%</td>
</tr>
<tr>
<td>1985</td>
<td>$15,239.24</td>
<td>5.9%</td>
<td>1.3%</td>
<td>4.6%</td>
</tr>
<tr>
<td>1986</td>
<td>$16,135.07</td>
<td>4.3%</td>
<td>4.2%</td>
<td>0.1%</td>
</tr>
<tr>
<td>1987</td>
<td>$16,822.51</td>
<td>3.0%</td>
<td>4.0%</td>
<td>-1.0%</td>
</tr>
<tr>
<td>1988</td>
<td>$17,321.82</td>
<td>6.4%</td>
<td>4.7%</td>
<td>1.7%</td>
</tr>
<tr>
<td>1989</td>
<td>$18,426.51</td>
<td>4.9%</td>
<td>5.4%</td>
<td>-0.5%</td>
</tr>
<tr>
<td>1990</td>
<td>$19,334.04</td>
<td>4.0%</td>
<td>3.7%</td>
<td>0.3%</td>
</tr>
<tr>
<td>1991</td>
<td>$20,099.55</td>
<td>4.6%</td>
<td>3.0%</td>
<td>1.6%</td>
</tr>
<tr>
<td>1992</td>
<td>$21,027.98</td>
<td>3.7%</td>
<td>2.6%</td>
<td>1.1%</td>
</tr>
<tr>
<td>1993</td>
<td>$21,811.60</td>
<td>5.2%</td>
<td>2.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>1994</td>
<td>$22,935.42</td>
<td>0.9%</td>
<td>2.6%</td>
<td>-1.7%</td>
</tr>
<tr>
<td>1995</td>
<td>$23,132.67</td>
<td>2.7%</td>
<td>2.9%</td>
<td>-0.2%</td>
</tr>
<tr>
<td>1996</td>
<td>$23,753.53</td>
<td>4.0%</td>
<td>2.1%</td>
<td>1.9%</td>
</tr>
<tr>
<td>1997</td>
<td>$24,705.66</td>
<td>4.9%</td>
<td>1.3%</td>
<td>3.6%</td>
</tr>
<tr>
<td>1998</td>
<td>$25,913.90</td>
<td>5.8%</td>
<td>2.5%</td>
<td>3.3%</td>
</tr>
<tr>
<td>1999</td>
<td>$27,426.00</td>
<td>5.2%</td>
<td>3.5%</td>
<td>1.7%</td>
</tr>
<tr>
<td>2000</td>
<td>$28,861.44</td>
<td>5.6%</td>
<td>2.6%</td>
<td>3.0%</td>
</tr>
<tr>
<td>2001</td>
<td>$30,469.84</td>
<td>5.5%</td>
<td>1.4%</td>
<td>4.1%</td>
</tr>
<tr>
<td>2002</td>
<td>$32,154.82</td>
<td>2.4%</td>
<td>2.1%</td>
<td>0.3%</td>
</tr>
<tr>
<td>2003</td>
<td>$32,921.92</td>
<td>2.1%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## Illustration of Benefit reduction under Model 2

<table>
<thead>
<tr>
<th>Retiree in 2032</th>
<th>Pension Current Law</th>
<th>Reform Pension</th>
<th>Reform w/PA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average earner</td>
<td>16,116</td>
<td>12,917</td>
<td>14,772</td>
</tr>
<tr>
<td>Max earner</td>
<td>21,288</td>
<td>17,062</td>
<td>19,008</td>
</tr>
</tbody>
</table>

| Retiree in 2052 | | |
|-----------------| | |
| Average earner  | 19,541              | 12,554         | 18,300      |
| Max earner      | 25,823              | 16,590         | 22,884      |
Rationale for Reform Model 2

- Reform Model 2 achieves actuarial balance by reducing the replacement ratios (benefits) of our young people, children and grandchildren.

- Is it fair? Although it may seem the solution is unbalanced, the following rationalizations are offered:
  - Younger participants will benefit from PA accounts and social security actuaries estimate that average investment results will be 1.6% greater than the break even rate (break even rate is 3% plus inflation).
  - Younger participants will have more time to adjust to program changes.
  - Guaranteed benefits, even with the reductions, will be as good as today’s benefit’s after adjusting for inflation, (but not as good on a replacement ratio basis).
  - Congress may do ad-hoc increases in the future to restore benefits, if affordable. This is how the system operated before automatic indexing.
Personalized Accounts (PA’s) with Carve-out

- Assume a private pension plan with a lump sum option based on 5% interest
- Suppose the plan allowed lump sum not just at retirement but every year based on the benefit earned that year
- Suppose you took all the lump sums and accumulated them and were able to earn 6%
- At retirement you were allowed to buy back in to a guaranteed pension by taking your cumulative lump sums with interest and do a reverse lump sum (annuitization) at the same 5% basis
- Your benefit is enhanced by the increased interest earnings of 6% over the assumed 5%
Personalized Accounts (PA’s) with carve-out

- This example is very analogous to what happens with the personalized accounts with carve-out except that only a portion of the guaranteed social security benefit could be lump-summed out, as defined by the 4% of pay or $1000 limits.
- Net effect will be a wash on the guaranteed benefit if the cumulative investment return is same as the assumed rate, eg 3% plus inflation.
- Very similar to variable annuity concept.
- Social security estimates that on average, participants could outperform the break-even rate by 1.6% over the long term with 50/50 mix of stocks/bonds (breakeven rate is 3% plus inflation).
Personalized Accounts Investment Options

Two Tier System
Tier 1 for accounts up to $5000:
   Centralized approach with limited choices
   Choice of 5 indexed funds similar to the Federal Employee TSP (Thrift Savings Plan)
   Plus 3 “balanced funds“
Tier 2 for accounts greater than $5,000:
   De-centralized approach with private providers
   No sales loads, only clearly identified annual fee for management
   Must be very diversified
Actuarial Balance and Projected Cash Flows by Year (as a % of payroll)

(2001 Commission Report-Actuarial Memo) with Reform Model 2

Actuarial Balance is positive for 75 years at +.13%
The trend of increasingly negative annual cash flow is removed. The effects of transition cost is included.

<table>
<thead>
<tr>
<th>Year</th>
<th>cash flow / payroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>0.78%</td>
</tr>
<tr>
<td>2010</td>
<td>-0.08</td>
</tr>
<tr>
<td>2015</td>
<td>-1.37</td>
</tr>
<tr>
<td>2020</td>
<td>-2.77</td>
</tr>
<tr>
<td>2025</td>
<td>-3.57</td>
</tr>
<tr>
<td>2030</td>
<td>-0.25</td>
</tr>
<tr>
<td>2040</td>
<td>-0.41</td>
</tr>
<tr>
<td>2050</td>
<td>-0.36</td>
</tr>
<tr>
<td>2060</td>
<td>0.15</td>
</tr>
<tr>
<td>2070</td>
<td>1.01</td>
</tr>
<tr>
<td>2075</td>
<td>1.41</td>
</tr>
</tbody>
</table>
Reasons for considering personal accounts

- Studies show that asset-holding has substantial positive long-term effect on health and marital stability
- Personal accounts would give workers a legal right to their assets and thus provide a substantially stronger guarantee than the current unsustainable program
- Personal accounts would permit individuals to seek a higher rate of return on their social security contributions and enhance their ultimate benefit
Personal Accounts vs the Trust Fund

- One of the biggest objections to pre-funding social security (as opposed to pay as you go funding) is that any accumulating assets is by law only invested in federal treasury debt (bonds). There has always been ambiguity as to whether this represents real savings, or a squandering of taxpayer money on additional government spending, which the debt finances.

- The personal accounts provide a mechanism to do pre-funding of social security in a way that removes this ambiguity.
Trust fund

In my travels around the country I hear people say, why don't you just give us the money back we put in. But that's not the way Social Security works. It's a pay-as-you-go system. You pay; we go ahead and spend. (Laughter.) You pay through payroll taxes; we spend on paying for the beneficiaries, the retirees for that year. But if we've got any money left over, we didn't save it for you, we spent it on government. That's the way it works. It's a pay-as-you-go. And then there's -- all that's left over is a file cabinet full of IOUs. I have seen the file cabinet in West Virginia firsthand, and I saw all the IOUs. But the system is not the kind of system where we're holding the money for you. That's not the way it works. We're spending your money and left behind some paper that can only be good if the government decides to redeem the paper. That's a pay-as-you-go system.
Raiding the Trust Fund

- What is referred to as "raiding the Social Security Trust Fund" has no effect on the Social Security Trust Fund. Its real effect is to raise the national debt.

- In 1969, President Johnson started combining the financial data of the Social Security program with the financial data of the federal government for the purpose of reporting the budget. In 1969, the federal government was running a deficit and the Social Security program was running a surplus. By adding the two together, Johnson was able to tell the American people that the federal budget had a surplus, while in reality, it had a deficit.

- So what does "raiding the Trust Fund" mean? When Social Security loans money to the federal government, the government can either spend the money or use it to pay off someone else that the federal government owes money to. If the federal government spends the money, this action is what some people refer to as, "raiding the Social Security Trust Fund."

- The point to realize here is that it is not Social Security or senior citizens who get a raw deal in this situation, but younger people who will be stuck paying the debt in the future.
Lockbox

- What is referred to as "putting Social Security into a "lockbox" has no effect on Social Security.
- "I will put Social Security into a lockbox." This is one of the most common campaign promises. What does it mean? It means that Social Security loans its surplus money to the federal government, and the federal government uses the money to pay off someone else it owes money to.
- Although the effect on Social Security and the national debt is neutral, it would be great if this always happened, because the alternative is that the federal government borrows the money from Social Security and spends it, which increases the national debt.
- Again, the key point to realize is that there is no effect on Social Security.
- Privatization would put Social Security surpluses into the accounts of individual citizens. This money would be their personal property that no one could touch (including the individuals who own it) until they are eligible to receive Social Security benefits. The concept is simple: Get the money out of the reach of politicians. If they don't have it, there is no way they can spend it or take advantage of a confusing situation to make people believe that they are saving it.
Transition financing needed to finance personal accounts while maintaining the liquidity requirement in the traditional Trust Fund

This financing would be in the form of transfers from general tax revenues to the Trust fund as needed to maintain liquidity.

<table>
<thead>
<tr>
<th>Year</th>
<th>% payroll</th>
<th>Year</th>
<th>% payroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>2025</td>
<td>.1%</td>
<td>2038</td>
<td>2.6</td>
</tr>
<tr>
<td>2026</td>
<td>3.6</td>
<td>2039</td>
<td>2.5</td>
</tr>
<tr>
<td>2027-2031</td>
<td>3.7</td>
<td>2040</td>
<td>2.3</td>
</tr>
<tr>
<td>2032-2033</td>
<td>3.5</td>
<td>2041</td>
<td>2.1</td>
</tr>
<tr>
<td>2034</td>
<td>3.4</td>
<td>2042</td>
<td>2.0</td>
</tr>
<tr>
<td>2035</td>
<td>3.2</td>
<td>2043</td>
<td>1.7</td>
</tr>
<tr>
<td>2036</td>
<td>3.0</td>
<td>2044</td>
<td>1.6</td>
</tr>
<tr>
<td>2037</td>
<td>2.9</td>
<td>2045</td>
<td>1.4</td>
</tr>
</tbody>
</table>
Transition Financing (cont)

<table>
<thead>
<tr>
<th>Year</th>
<th>% payroll</th>
</tr>
</thead>
<tbody>
<tr>
<td>2046</td>
<td>1.2%</td>
</tr>
<tr>
<td>2047</td>
<td>1.0</td>
</tr>
<tr>
<td>2047</td>
<td>0.9</td>
</tr>
<tr>
<td>2047</td>
<td>0.8</td>
</tr>
<tr>
<td>2048</td>
<td>0.6</td>
</tr>
<tr>
<td>2049</td>
<td>0.4</td>
</tr>
<tr>
<td>2050-2051</td>
<td>0.2</td>
</tr>
</tbody>
</table>

These costs can be considered an investment in a lower cost, better funded system for the future. The amounts in the personal accounts are a form of pre-funding of benefit cost, which (as in the private pension system) reduces future average payroll costs by earning interest to partially defray costs.
Personalized Accounts

- The moneys diverted to the personal accounts result in a reduction in guaranteed benefits on a cost neutral basis to the system.
- In the short term however, the liquidity needs of the system are increased.
- The transition costs can be interpreted as a loan from the Treasury to the SS Trust Fund to cover the short term liquidity problem (which will be paid back).
- In the long term system costs are lower due to the partial pre-funding that the personal accounts represent (interest defrays part of the cost).
- By the end of the 75 year projection period, it is estimated 12.3 trillion of pre-funding in the personal accounts would contribute interest offset to costs.
Personalized Accounts

- On a present value basis, the total transition costs would be .4 trillion, are 1/3 of 1% of Gross Domestic Product for 1 year.
Impact of Reform

- Every private pension plan, whether defined benefit are not, will likely need to be re-evaluated for benefit adequacy in light of social security reductions.
- Private plans integrated with social security may need to be adjusted.
- Tier II funds will create new opportunities similar to the current 401K marketplace.
Alternative Fixes

- Gradually increase the taxable wage base to restore the 90% of all wages targeted by Congress per the 1983 amendments + .6%
- Invest 20% of Trust funds in equities + .4%
- Improve the accuracy of the post retirement COLA increase (use CPI-chained) + .4%
- Cover all state and local government EEs + .2%
- Dedicate residual estate tax in 2010 + .5
- Total improvement to actuarial balance +2.1%
Alternative Fixes

- The estate tax that applies in 2009 to estates in excess of 3.5 million (7 million for a married couple) at tax rate of 45% will be phased out entirely in 2010. The chief actuary of Social Security, among other, has suggested instead dedicating this tax to fix the SS deficit.

- The CPI index currently used to increase retirees benefits in the annual COLA overstates the increase in the cost of living by not taking into account the “substitution” phenomenon in consumers behavior. The “chained” CPI index solves this and lowers annual CPI increase by approx. 3/10 of a % annually.
Alternative Fixes

- Raising retirement age gradually. This solution has already been used to solve past imbalances, but could be extended. The effect would be very similar to the reduction of benefits under the President’s Model 2, although it would probably result in a less powerful decrease rate. Most likely the increase in retirement age would be based on increase in life expectancy, and counterbalance the increase in cost from improving mortality.
Alternative Fixes

- Means Testing would reduce or eliminate benefits for higher income or wealthier Americans.
- This is different from the so-called "earnings test" which simply delayed the start date of Social security until a person actually retired, based on the evidence of his paid wages.
- There are a number of philosophical and practical problems with means testing
- It is a violation of the "earned right" principle of the system, and could erode public support
- It would be a disincentive for savings and administratively burdensome and expensive
- Does not appear to have widespread public support
## Social Security and Private Pension Obligations, Trust Fund Assets and Over (Under) Funding

<table>
<thead>
<tr>
<th>Year</th>
<th>Social Security</th>
<th>Private Pensions</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Plan obligations (billions)</td>
<td>Trust fund assets (billions)</td>
</tr>
<tr>
<td>1984</td>
<td>--</td>
<td>--</td>
</tr>
<tr>
<td>1985</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1986</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1987</td>
<td>na</td>
<td>no</td>
</tr>
<tr>
<td>1988</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1989</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1990</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1991</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1992</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1993</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1994</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1995</td>
<td>na</td>
<td>na</td>
</tr>
<tr>
<td>1996</td>
<td>$9,492.5</td>
<td>$567.0</td>
</tr>
<tr>
<td>1997</td>
<td>$9,381.8</td>
<td>$655.5</td>
</tr>
<tr>
<td>1998</td>
<td>$10,274.8</td>
<td>$762.5</td>
</tr>
<tr>
<td>1999</td>
<td>$11,066.8</td>
<td>$896.1</td>
</tr>
<tr>
<td>2000</td>
<td>$11,879.3</td>
<td>$1,049.4</td>
</tr>
<tr>
<td>2001</td>
<td>$12,919.5</td>
<td>$1,212.5</td>
</tr>
<tr>
<td>2002</td>
<td>$13,539.8</td>
<td>$1,378.0</td>
</tr>
<tr>
<td>2003</td>
<td>$14,160.1</td>
<td>$1,530.8</td>
</tr>
</tbody>
</table>

Sources: Social Security trust fund balances are drawn from 2004 Annual Reports of the Board of Trustees of the Federal Old-Age and Survivors Insurance and Disability Insurance Trust Funds (Washington, D.C.: U.S. Government Printing Office, 2004); the estimated underfunding is unpublished data from the Office of the Actuary, U.S. Social Security Administration; private pension plan assets are derived from the Pension Benefit Guaranty Board’s Pension Insurance Date Book for various years found at www.pbgc.gov/publications/default.htm for private defined benefit plans and from the Federal Reserve Bank’s Flow of Funds data for various years for defined contribution assets and individual retirement account balances; private pension plan obligations for defined benefit plans also are taken from the PBGC Data Book, and defined contribution plan and individual retirement account obligations were calculated as the equivalent of assets.
Figure 14: Annual Personal Saving Rates, 1960 - 2004

Consequences of Inaction
### Medicare and Social Security as % of GDP

<table>
<thead>
<tr>
<th>Year</th>
<th>Medicare</th>
<th>Social Security</th>
<th>Both</th>
</tr>
</thead>
<tbody>
<tr>
<td>2005</td>
<td>2.6%</td>
<td>4.3%</td>
<td>6.9%</td>
</tr>
<tr>
<td>2010</td>
<td>3.5</td>
<td>4.3</td>
<td>7.8</td>
</tr>
<tr>
<td>2020</td>
<td>5.0</td>
<td>5.2</td>
<td>10.2</td>
</tr>
<tr>
<td>2030</td>
<td>6.8</td>
<td>6.1</td>
<td>12.9</td>
</tr>
<tr>
<td>2040</td>
<td>8.1</td>
<td>6.3</td>
<td>14.4</td>
</tr>
<tr>
<td>2050</td>
<td>9.2</td>
<td>6.2</td>
<td>15.5</td>
</tr>
<tr>
<td>2060</td>
<td>10.5</td>
<td>6.3</td>
<td>16.8</td>
</tr>
<tr>
<td>2070</td>
<td>12.1</td>
<td>6.4</td>
<td>18.5</td>
</tr>
</tbody>
</table>
Expert opinion cited in conclusion section of AAA Issue Brief on Social Security Actuarial Assumptions

“Predictions are always difficult. Especially when they’re about the future.”

- Yogi Berra