

# An Actuarial Perspective on the 2011 Social Security Trustees Report

Highlights from the report and policy  
options to address Social Security's  
long-term financial soundness

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- **American Academy of Actuaries**
  - 17,000-member professional association whose mission is to serve the public and the U.S. actuarial profession.
  - The Academy assists public policymakers on all levels by providing leadership, objective expertise, and actuarial advice on risk and financial security issues.
  - The Academy also sets qualification, practice, and professionalism standards for actuaries in the United States.



# American Academy of Actuaries

## ■ Pension Practice Council

- Provides objective technical expertise to policymakers and regulators on pension and Social Security issues.

## ■ Social Insurance Committee

- Provides independent and objective analysis, advice, and education to stakeholders of social insurance plans with respect to:
  - Financing
  - Annual reporting
  - Managing system risks
  - Program Design



# Agenda for Today's Briefing

- Metrics for solvency and results of the 2011 Social Security Trustees Report
- Options for reform
- Current proposals



# Key Questions

- How have Social Security's financial projections changed from last year?
- What does it mean to say the system is not in actuarial balance?
- What is sustainable solvency?
- What are the implications of waiting to reform Social Security?
- What are the options for reform?



# Metrics—Short-Range Test for Solvency

- Trust Fund Ratio =  
$$\frac{\text{Trust Fund assets at beginning of year}}{\text{Trust Fund costs during year}} \div$$
- The short-range test is applied to the Old-Age and Survivors Insurance (OASI) and Disability Insurance (DI) trust funds separately



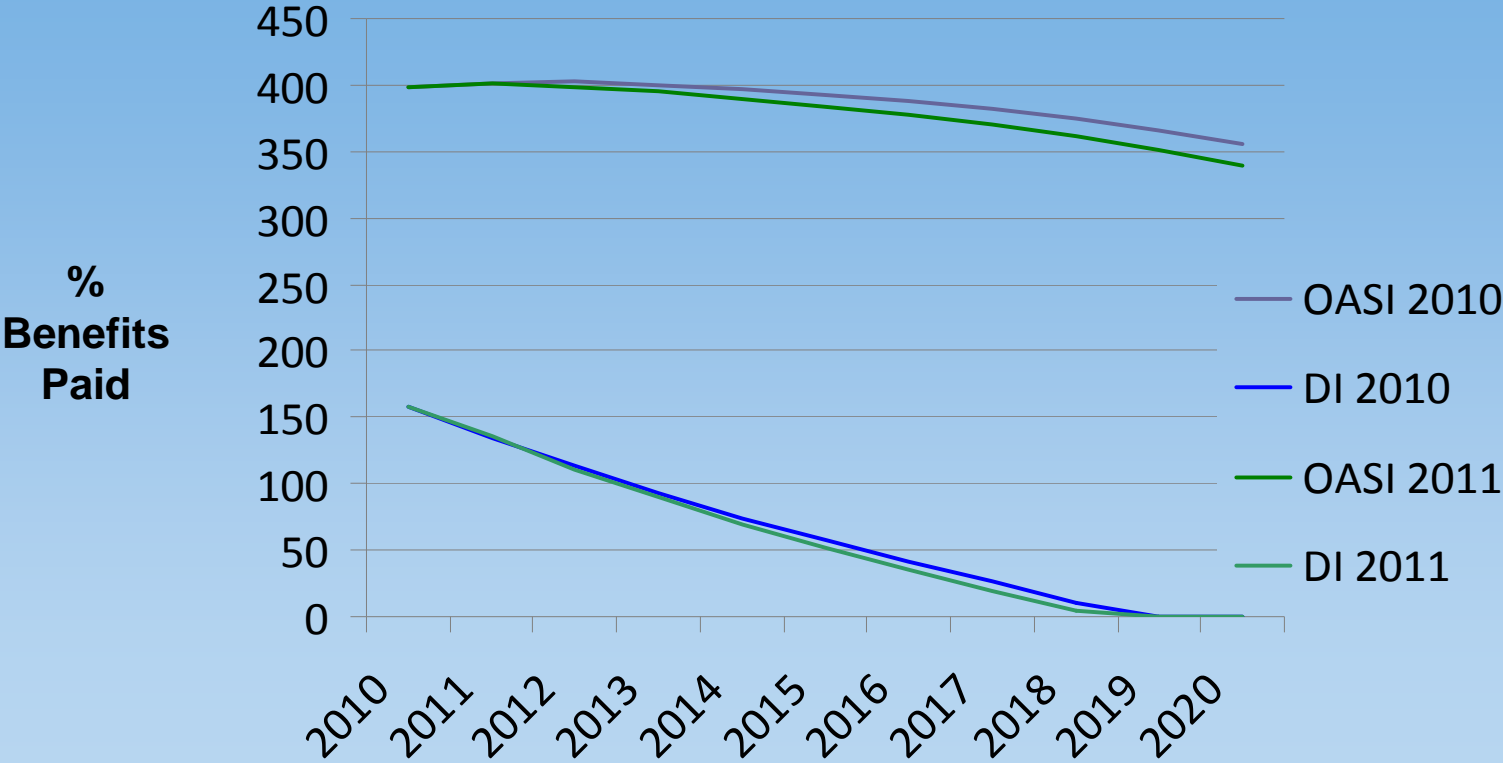
# Metrics—Short-Range Test for Solvency

- Based on the trust fund ratio:
  - If the ratio is  $> 100\%$  at some point during the projection period, then it must remain above 100% for the 10-year projection period, or
  - If the ratio is  $< 100\%$  at the beginning of the projection period, then it must reach 100% within five years (without first reaching zero) and stay above 100% for the remainder of the projection period



# Metrics—Short-Range Test for Solvency 2011 Results

Trust Fund Ratios





# Metrics—Long-Range Solvency

- 1) Trust Fund ratios
- 2) Projected annual balance
- 3) Actuarial balance



# Metrics—Long-Range Solvency

## 1) Trust Fund Ratios

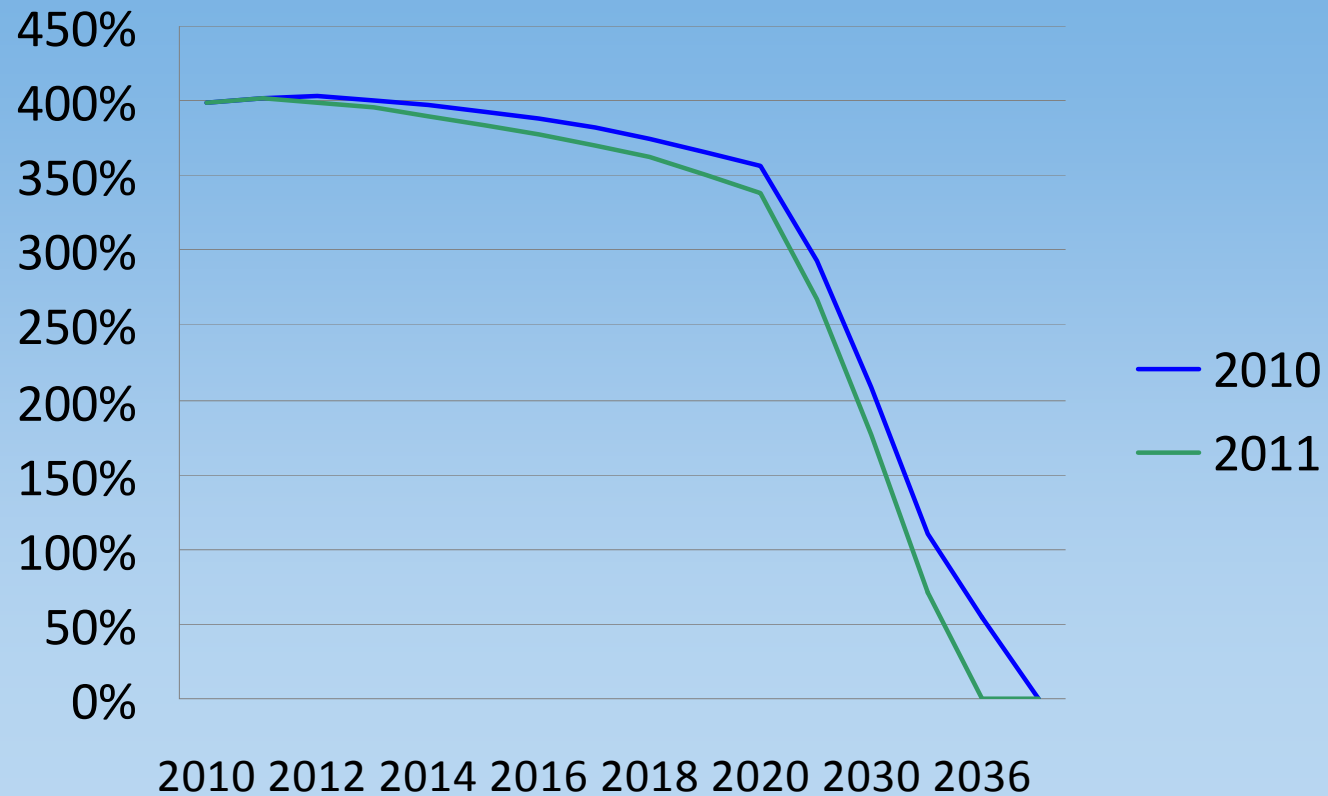
- Trends/Events to look for:
  - Year of trust fund exhaustion
  - Stability during the period
  - Trend at the end of the period



# Metrics—Long-Range Solvency

## 1) Trust Fund Ratios

### 2010 and 2011 Trust Fund Ratios



# Metrics—Long-Range Solvency

## 1) Trust Fund Ratios

### 2011 Trust Fund Ratios



# Metrics—Long-Range Solvency

## 2. Projected Annual Balance

- Projected Annual Balance =  
Annual Income Rate - Annual Cost Rate
- Expressed as a percentage of taxable payroll
- Trends/Events to Look For:
  - Year that Cost Rate exceeds Income Rate
  - The stability during the period
  - The trend at the end of the period



# Metrics—Long-Range Solvency

## 2. Projected Annual Balance

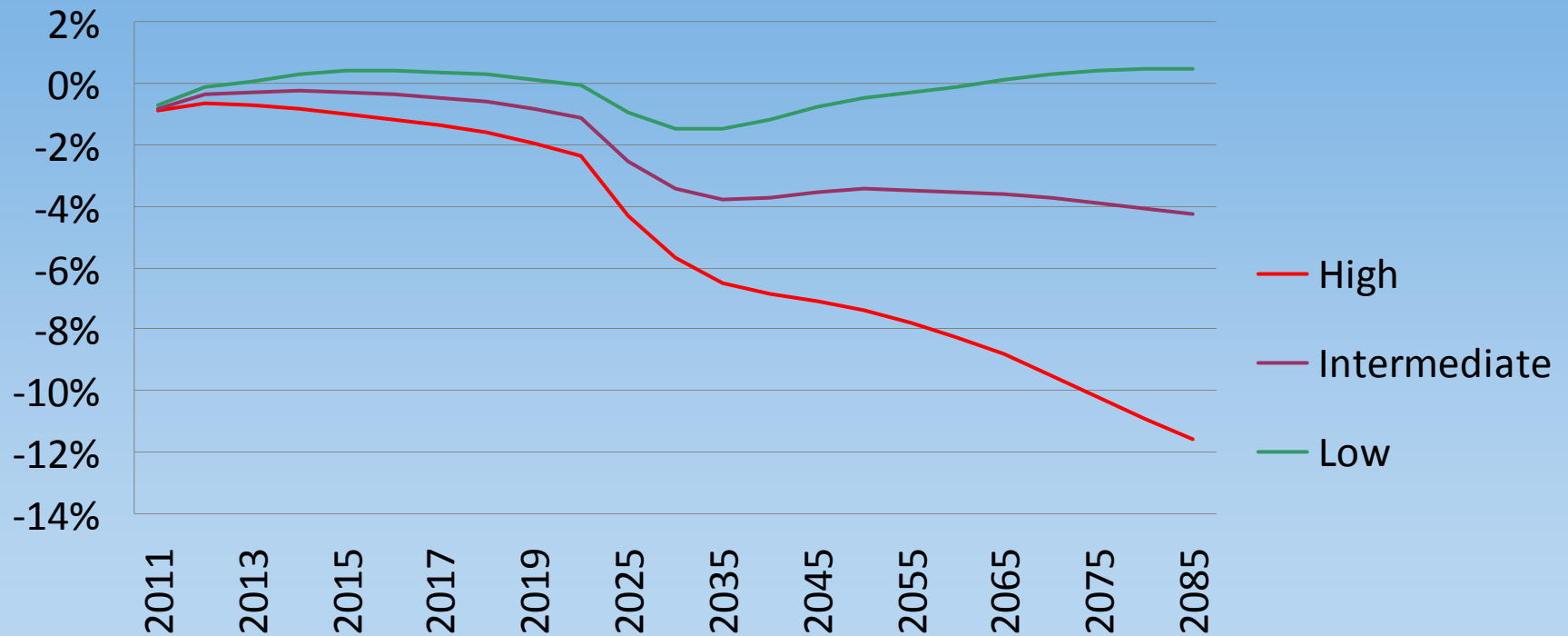
### 2010 and 2011 Projected Annual Balance



# Metrics—Long-Range Solvency

## 2. Projected Annual Balance

### 2011 Projected Annual Balance



# Metrics—Long-Range Solvency

## 3. Actuarial Balance

- **Actuarial Balance =**  
Summarized Income Rate - Summarized Cost Rate
- Trust Fund Balance is included in Income Rate
- Ending Target Fund included in Cost Rate
- Expressed as a percentage of the summarized taxable payroll





# Metrics—Long-Range Solvency

## 3. Actuarial Balance

Actuarial Balance	2010	2011
75-Year	-1.92%	-2.22%

2011 Actuarial Balance	Low	Intermediate	High
75-Year	0.29%	-2.22%	-5.59%



# Sustainable Solvency

- The Academy's Social Insurance Committee believes any modifications to the Social Security system should include “sustainable solvency” as a primary goal
- Sustainable solvency means that not only will the program be solvent for the next 75 years under the reforms adopted, but also that the timing of changes will result in stable trust fund ratios at the end of the 75-year period



# Now is the Time to Act

- If reform is enacted now, participants will have time to plan for revised levels of benefits and/or after-tax income
- Reforms can be phased-in more gradually over a longer period of time
  - In 2011, 75-year actuarial balance would require:
    - Increase tax rate from 12.4% to 14.55%, or
    - 13.8% decrease in benefits
  - In 2036, 75-year actuarial balance would require:
    - Increase tax rate from 12.4% to 16.45%, or
    - 23% decrease in benefits



# Principles for Reform

- Are the principles on which Social Security was founded still appropriate or do changing times indicate a need for fundamental reform?
- Trade-offs:
  - Individual equity or social adequacy?
  - Pay-as-you-go funding versus pre-funding?
  - Means-tested or universality?
- Opportunity to make changes based on the program's fundamental principles rather than just the need to balance income and outgo



# Design Principles

Principle	Reform Design Elements
Individual Equity	Tax increases paired with benefit increases, individual accounts, automatic adjustments to Normal Retirement Age (NRA)
Social Adequacy	Progressive formula for benefits, relate benefit levels to poverty level, minimum benefits
Benefit Adequacy	More emphasis on tax increases rather than benefit decreases, minimum benefits, age retiree increases
Generational Equity	Prefer pre-funding to pay-as-you-go funding, set taxes /benefits accordingly, automatic adjustments to NRA
Funding Uncertainty	Automatic adjustments to benefits or taxes
Minimize Trust Fund	Pay-as-you-go funding, gradual more frequent changes to benefits and/or taxes



# Reform Options

- To protect the program's solvency, policymakers have a variety of reform options available, including:
  - Raising the Social Security normal retirement age
  - Raising the maximum taxable wage base
  - Changing the primary insurance amount (PIA) formula
  - Changing the cost-of-living adjustments (COLA)



# Raising the Social Security Normal Retirement Age

Year of Birth	Current Law Social Security Normal Retirement Age
1943—1954	66
1955	66 and 2 months
1956	66 and 4 months
1957	66 and 6 months
1958	66 and 8 months
1959	66 and 10 months
1960 & older	67



# Raising the Social Security Normal Retirement Age

- Since 1940, life expectancy at age 65 for the general population has increased approximately 5 years
- Past and scheduled increases in the normal retirement age have totaled two years
- To index normal retirement age for future increases in life expectancy, the normal retirement age would increase about one month every two years





# Raising the Social Security Normal Retirement Age

- American Academy of Actuaries Position Statement *Actuaries Advocate Raising Social Security's Retirement Age* (August 2008)

[http://www.actuary.org/pdf/socialsecurity/statement\\_board\\_aug08.pdf](http://www.actuary.org/pdf/socialsecurity/statement_board_aug08.pdf)

- Life expectancy increases are uneven across the population
- Working longer may not be possible for workers in physically demanding jobs



# Raising the Taxable Wage Base

- At the current taxable wage base (TWB) of up to \$106,800 approximately 85% of earnings are subject to OASDI taxes
- Historically 90% of earnings were subject to OASDI taxes
- A return to 90% would require approximately a 25% increase in the TWB plus annual increases
- A gradual rise to 90% by around 2050 would eliminate approximately 35% of deficit\*
- Limit applies to taxes and benefits
- Removing the TWB limit for taxes but retaining a TWB for benefits would eliminate 100% of deficit

\*Based on the 2010 Trustees Report



# Changing the PIA Formula

- PIA for those newly eligible in 2011
  - 90% of first \$749 of monthly average earnings (AIME)
  - 32% of AIME in excess of \$749 and less than \$4,517
  - 15% of AIME in excess of \$4,517
- “Bend points” increase with increase in average wages
- Price indexing
- Progressive price indexing
- Longevity indexing



# Changing the Cost of Living Increase

- Applied to retirement benefits beginning at eligibility
- Based on Consumer Price Index for Urban Wage Earners and Clerical workers (CPI-W)
- Historical average annual rate of 4.4% for 1969—2009
- Chained CPI
- Development of new index



# Current Proposals

- **National Commission on Fiscal Responsibility and Reform**
  - Charged in April 2010 by President Obama to identify policies to improve the fiscal situation in the medium-term and to achieve fiscal sustainability over the long-term
  - Issued the “Moment of Truth” report in December 2010
  - Recommended changes rely more on benefit reductions than tax increases



# Current Proposals

- **Bipartisan Policy Center's Debt Reduction Task Force**
  - Issued the “Restoring America’s Future” report in November 2010
  - Recommended changes rely more on tax increases than benefit reductions



# National Commission on Fiscal Responsibility and Reform

- Index NRA and ERA to longevity, retain current ages for < 250% of poverty, partial index up to 400% of poverty
- Add new bend point for AIME greater than median, from 90%, 32%, and 15% to 90%, 30%, 10%, 5%
- Change to chained CPI in December 2011
- Enhanced special minimum benefit relative to poverty level, pro-rated for service less than 30 years



# National Commission on Fiscal Responsibility and Reform

- Increases in 20<sup>th</sup> through 24<sup>th</sup> year after benefit eligibility
- Increase TWB to 90% of covered earnings by 2049, establish new bend point for wages above TWB of 5%
- Allow retirees to receive up to 50% of PIA at age 62 with actuarial reduction, remainder available at a later age





# National Commission on Fiscal Responsibility and Reform

Principle	Reform Design Elements
Individual Equity	<ol style="list-style-type: none"> <li>1. Increase in NRA</li> <li>2. Paired increase in TWB with a benefit increase</li> </ol>
Social Adequacy	<ol style="list-style-type: none"> <li>1. Adjusted NRA for low earnings</li> <li>2. Special minimum benefit for low earnings</li> <li>3. Tax increase for those earning more than current TWB</li> </ol>
Benefit Adequacy	<ol style="list-style-type: none"> <li>1. Increases to aged retirees</li> <li>2. Adjustments to increased NRA if income is more than 4 times poverty level</li> </ol>
Generational Equity	Chained CPI
Funding Uncertainty	Automatic future increases to NRA
Minimize Trust Fund	Gradual increase in TWB



# Fiscal Commission Impact on Actuarial Balance

Provision	Change in Actuarial Balance*	Percentage of Deficit Solved
Index NRA and ERA for longevity	.34	18%
Add new bend point	.86	45%
Chained CPI	.50	26%
Enhanced special minimum	-.15	-8%
Increase in 20 <sup>th</sup> through 24 <sup>th</sup> years	-.15	-8%
Increase TWB to 90% of covered earnings	.67	35%
Allow retirees to receive up to 50% of PIA at 62	0.00	0%
<b>Total including misc. and interactions</b>	<b>2.15</b>	<b>112%</b>

\* Based on the 2010 Trustees Report



# Bipartisan Policy Center's Debt Reduction Task Force

- Subject all employer-sponsored group health insurance premiums to OASDI payroll tax
- Increase TWB to 90% of covered earnings by 2049
- Change to chained CPI in December 2012
- Reduce the 15% PIA factor to 10% by 2052
- Enhanced special minimum benefit relative to poverty level
- Index PIA formula for longevity increases
- Age 81–85 benefit increases
- Tax reform for businesses
- Tax reform for individuals



# Bipartisan Policy Center's Debt Reduction Task Force

Principle	Reform Design Elements
Individual Equity	Decrease in PIA related to longevity
Social Adequacy	<ol style="list-style-type: none"> <li>1. Special minimum benefit for near poverty level</li> <li>2. Tax increase for those earning more than current TWB</li> </ol>
Benefit Adequacy	<ol style="list-style-type: none"> <li>1. Focused more on tax increase rather than benefit decrease</li> <li>2. Increases for aged retirees</li> </ol>
Generational Equity	Chained CPI
Funding Uncertainty	Automatic future decreases in PIA
Minimize Trust Fund	Gradual increase in TWB



# Bipartisan Policy Center Impact on Actuarial Balance

Provision	Change in Actuarial Balance*	Percentage of Deficit Solved
Increase TWB to 90% of covered earnings	.60	31%
Chained CPI	.49	26%
Tax employer group health insurance, Section 125 plans, FSAs	1.15	60%
Reduce the 15% PIA factor to 10%	.07	4%
Enhanced special minimum benefit	-.09	-5%
Index PIA for longevity increases	.48	25%
Age 81–85 benefit increase	-.13	-7%
Tax Reforms for Businesses and Individuals	-.04	-2%
<b>Total including misc. and interactions</b>	<b>2.48</b>	<b>132%</b>

\*Based on the 2010 Trustees Report



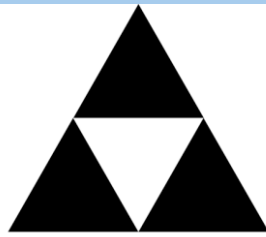
# Change in Benefits for Illustrative Workers Beginning Benefits at age 65 in 2030

Proposal scheduled benefits as a percent of present law  
schedule benefit for a 30-year or more scaled earner

Earnings Group	Fiscal Commission	Bipartisan Policy Center
Very Low—8.1% of retirees	139%	91%
Low—20.1% of retirees	106%	121%
Medium—31.4% of retirees	87%	91%
High—20.7% of retirees	73%	89%
Maximum—5.4% of retirees	66%	85%



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