

**THE FISCAL CLIFF & THE LONG-TERM  
BUDGET CHALLENGE: PROLOGUE FOR  
14.471**

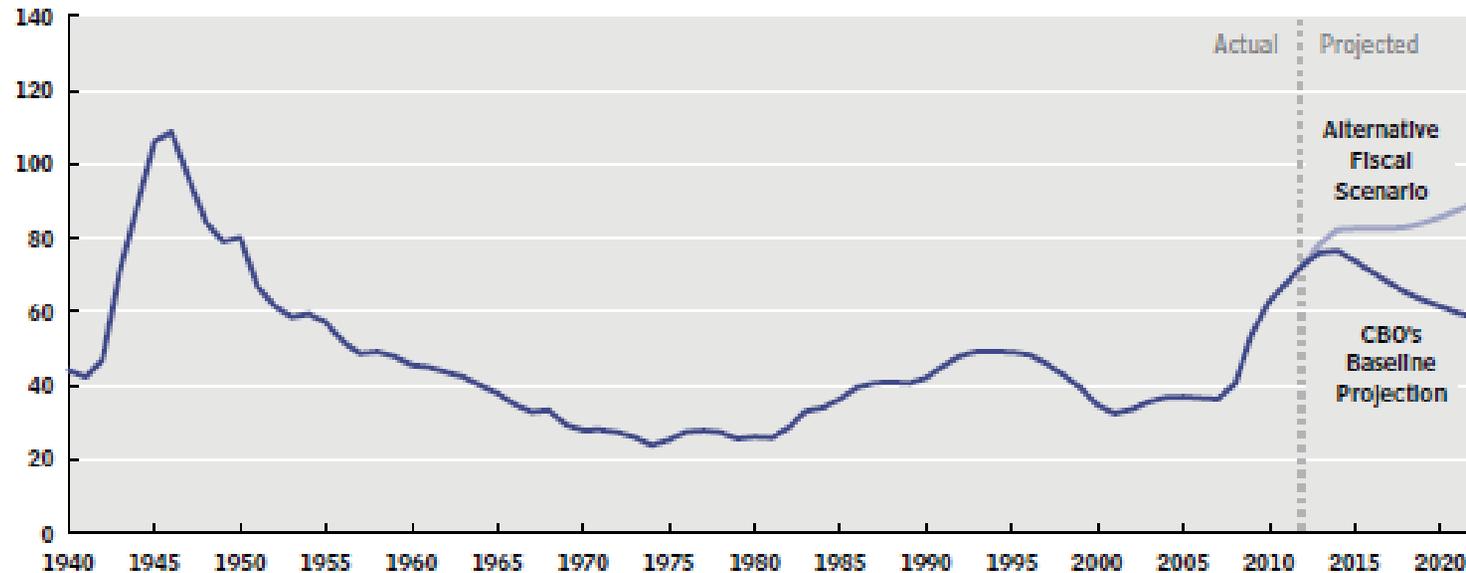
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**Summary Figure 1.**

**Federal Debt Held by the Public, Historically and As Projected in CBO's Baseline and Under an Alternative Fiscal Scenario**

(Percentage of gross domestic product)

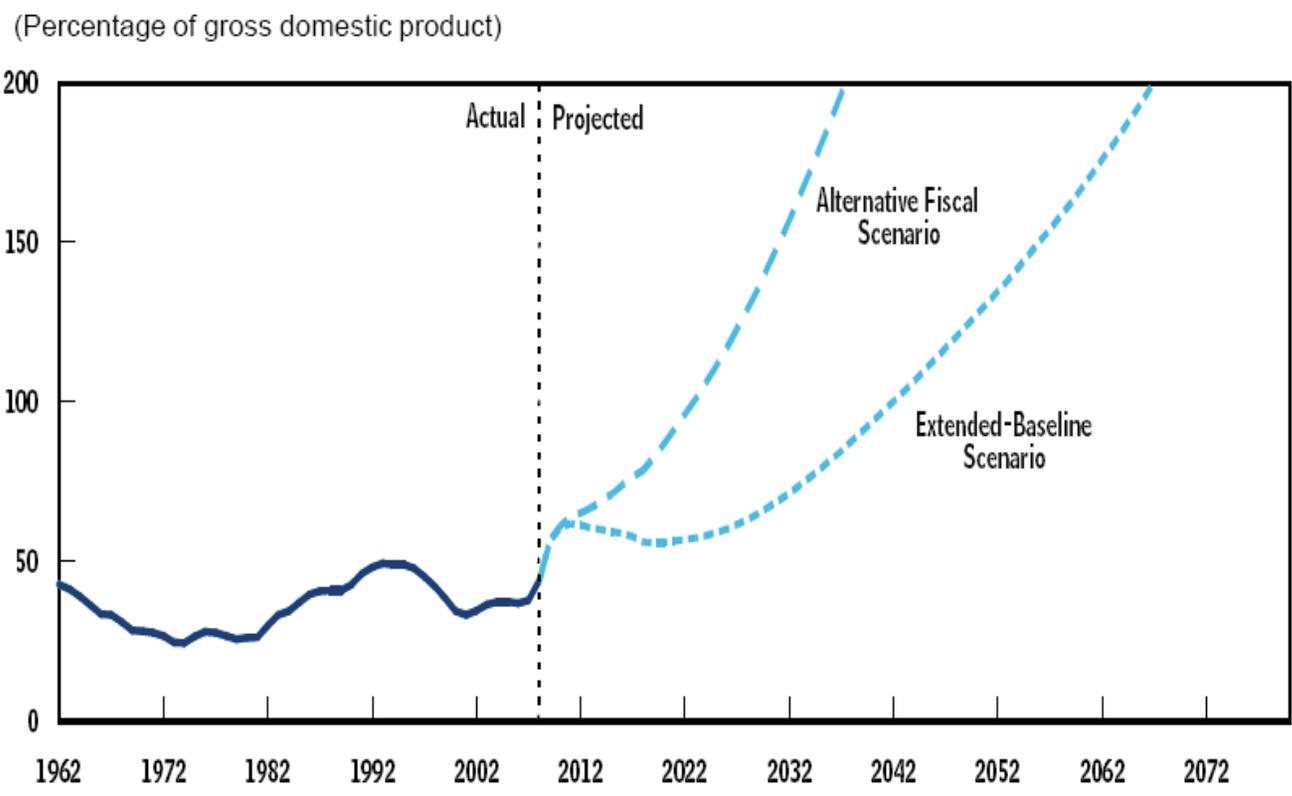


Source: Congressional Budget Office.

Note: The alternative fiscal scenario incorporates the assumptions that all expiring tax provisions (other than the payroll tax reduction), including those that expired at the end of December 2011, are instead extended; that the alternative minimum tax is indexed for inflation after 2011 (starting at the 2011 exemption amount); that Medicare's payment rates for physicians' services are held constant at their current level; and that the automatic enforcement procedures specified by the Budget Control Act of 2011 do not take effect. The budgetary effects under the alternative fiscal scenario also include the incremental interest costs associated with projected additional borrowing.



# Federal Debt Held by the Public Under CBO's Long-Term Budget Scenarios



## Deficits or Surpluses (Percentage of GDP)



## **CBO Baseline Projections & (Alternative Scenario), % of GDP (8/12)**

<b>2007</b>	<b>1.2%</b>
<b>2008</b>	<b>3.2</b>
<b>2009</b>	<b>10.1</b>
<b>2010</b>	<b>9.0</b>
<b>2011</b>	<b>8.7</b>
<b>2012</b>	<b>7.3</b>
<b>2013</b>	<b>4.0 (6.5)</b>
<b>2014</b>	<b>2.4 (5.7)</b>
<b>2015</b>	<b>1.2 (4.7)</b>
<b>2016</b>	<b>1.0 (4.6)</b>

# **DIFFERENCES BETWEEN CBO BASELINE AND "REALISTIC POLICY SCENARIO"**

- **Stable (not Falling) Discretionary Spending/GDP**
- **Index Individual Alternative Minimum Tax**
- **Extend EGTRRA (2001) & JGTRRA (2003)**
- **60K Troop Limit in Iraq/Afghanistan (This Reduces Projected Deficits)**
- **Forego Cuts in Medicare Physician Payments**
- **Interest Cost on Higher Spending**

**WHAT IS THE FISCAL CLIFF?  
POLICY CHANGES SCHEDULED TO  
TAKE EFFECT ON 1/1/13:**

- \* Expiration of Bush Tax Cuts (\$180B)**
- \* Expiration of Payroll Tax Holiday (\$120B)**
- \* Alternative Minimum Tax Hike (\$120B)**
- \* "Sequester" Cuts Federal Spending (\$110B)**
- \* Various Other Changes (\$190B)**
- \* TOTAL: \$720B or 4.6% of GDP**

# **DOES HIGHER DEBT/GDP RATIO MATTER?**

- **Crowd Out of Private Capital Formation – Long-Term Drag on Productivity Growth**
- **Higher Interest Rates –How Does Higher Debt/GDP Ratio Affect Treasury Rates?**
- **Risk of Debt Crisis? (Is Greece Relevant?)**
- **Debt Pushes Burdens to Future Generations**

# **FISCAL BALANCE: THE INTERTEMPORAL GOVERNMENT BUDGET CONSTRAINT**

**Standard Difference Equation for Gov't Debt:**

$$**D_{t+1} = (1+r)*D_t + G_t - T_t**$$

**D, G, T all measured as shares of GDP**  
**r = real interest rate - real growth rate**

**Any T-period fiscal plan implies a value of  $D_T$ .  
It's hard to know what the upper limit on feasible  
 $D_T$  might be. Values  $> 1$ ? Japan is higher.  
Reinhardt & Rogoff (2010) suggest an upper limit  
around 0.90 for many developing nations.**

**Let's require  $D_T = 0.60$ . Solving the equation  
above for  $D_t$  and iterating forward yields:**

$$D_0 = (1+r)^{-1} * D_t - G_0 + T_0$$

$$D_0 = (1+r)^{-T} * D_T - \sum_{t=0, T-1} [G_t - T_t] (1+r)^{-t}$$

**If we forecast  $\{G_t, T_t\}$  based on current policy there is no guarantee that this equation will be satisfied. Introduce an incremental tax of  $\theta$  which raises revenue equal to  $100*\theta$  percent of GDP each year. Rearranging, the budget constraint becomes**

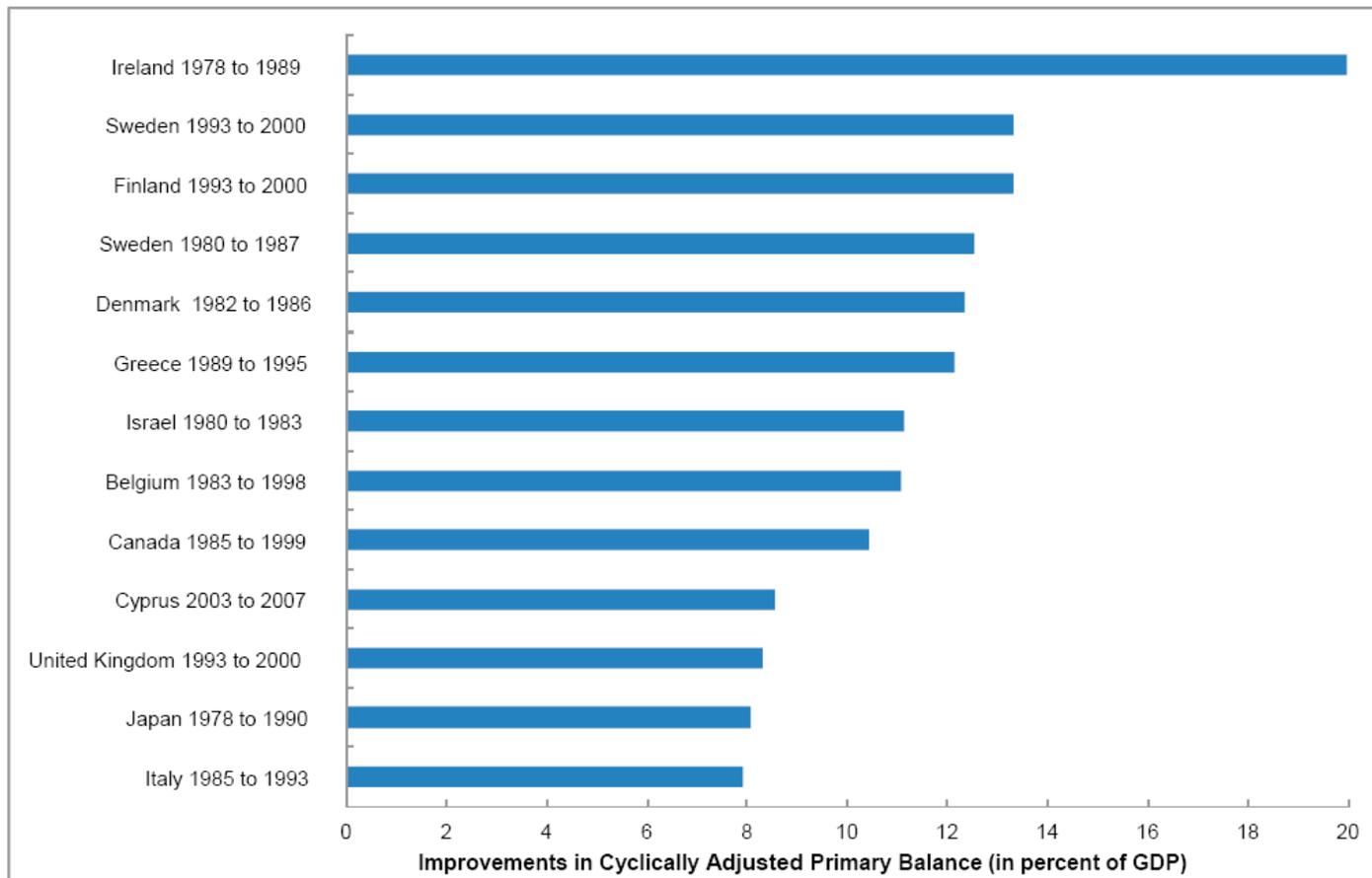
$$\begin{aligned} D_0 + \sum_{t=0, T-1} G_t * (1+r)^{-t} \\ = (1+r)^{-T} * D_T + \sum_{t=0, T-1} [T_t + \theta] * (1+r)^{-t} \end{aligned}$$

## **LONG TERM BUDGET GAP (% of GDP)**

<b>Year</b>	<b>CBO Baseline</b>	<b>CBO Alternative Scenario</b>
<b>2012-2037</b>	<b>0.8%</b>	<b>4.6%</b>
<b>2012-2062</b>	<b>1.0</b>	<b>7.0</b>

**Source: CBO, The Long Term Budget Outlook (June 2012).**

# EXAMPLES OF LARGE STRUCTURAL ADJUSTMENTS IN OECD COUNTRIES



# **POLICY OPTIONS FOR FISCAL BALANCE**

- **Raise Existing Taxes**
  - **Raise Personal Income Tax Rates**
  - **Expand the Income Tax Base**
  - **Raise Payroll Taxes: Base/Rates/Ceiling**
- **Impose New Taxes**
  - **VAT**
  - **Energy / Environmental Taxes**
- **Reign in Entitlement Spending**

# RAISING RATES - WHERE'S THE REVENUE? INCOME AND INCOME TAX LIABILITY, 2007

<b>Percentile</b>	<b>AGI Threshold</b>	<b>Share of AGI</b>	<b>Share of Tax Liability</b>
<b>Top 1%</b>	<b>\$410</b>	<b>23%</b>	<b>40%</b>
<b>Top 5%</b>	<b>160</b>	<b>37</b>	<b>61</b>
<b>Top 25%</b>	<b>67</b>	<b>69</b>	<b>87</b>
<b>Top 50%</b>	<b>33</b>	<b>88</b>	<b>97</b>

Source: NBER Taxsim Model.

## Effective Tax Rates, U.S., 2006 (from CBO)

	Income Quintile					Top 1%
	Lowest	2nd	3rd	4th	Top	
<b>Federal Income</b>	<b>-6.6%</b>	<b>-0.8</b>	<b>3.0</b>	<b>6.0</b>	<b>14.1</b>	<b>19.0</b>
<b>Payroll Taxes</b>	<b>8.5%</b>	<b>9.2</b>	<b>9.4</b>	<b>9.6</b>	<b>5.8</b>	<b>1.6</b>
<b>Corporate Income</b>	<b>0.5</b>	<b>0.6</b>	<b>0.8</b>	<b>1.2</b>	<b>5.4</b>	<b>10.4</b>

# **ENTITLEMENT REFORMS: SOCIAL SECURITY**

- **“Arithmetic” Problem Due to Aging Population**
- **Raise Retirement Age (with Advance Notice)**
- **Adjust Payroll Tax Rate and Base**
- **Incomplete Indexation for Some Period**
- **Means Testing of Benefits**

# **ENTITLEMENT REFORMS: MEDICARE & MEDICAID**

- **“Geometric” Problem Due to Aging Population and Cost Increases**
- **Enhanced Price Incentives for Consumers?**
- **Government Rationing?**
- **Upstream Intervention to Slow R&D?**
- **Means Testing of Benefits?**
- **Limited Evidence on Strategies that Work to “Bend the Curve”**

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