FINANCIAL MARKET TURMOIL AND RECESSION: WHAT’S NEXT?
THE FISCAL POLICY RESPONSE

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This Recession vs. Past Recessions

GDP = 100 in Quarter When Recession Begins

Quarters After Recession Begins

-2 0 2 4 6 8 10 12 14 16

1981Q3 1990Q3 2001Q1 2007Q4 Post War Ave
PROXIMATE CAUSE OF RECESSION

- Declines in house prices & stock market reduced household wealth
- Inability of households & firms to get credit
- Sharply reduced demand for goods & services
- With no turnaround in sight, expect demand to be weak indefinitely
- Firms cut back on investment & lay off workers
Stimulating Demand

- Demand for goods & services is due to
  - households: consumption
  - firms: investment
  - government: purchases of goods & labor
  - foreign sector: purchases of U.S. goods

- Monetary policy (the Federal Reserve): reduces interest rates
  - raises consumption & investment

- Fiscal policy (Congress & President): increases government spending & reduce taxes
  - raises consumption, investment, & government purchases
The Stimulus Package

<table>
<thead>
<tr>
<th></th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
<th>−2019</th>
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<tbody>
<tr>
<td><strong>Budget</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Authorization</td>
<td>379.0</td>
<td>114.7</td>
<td>53.6</td>
<td>11.2</td>
<td>9.8</td>
<td>16.2</td>
<td>580.7</td>
</tr>
<tr>
<td>Outlays</td>
<td>120.1</td>
<td>219.3</td>
<td>126.2</td>
<td>46.2</td>
<td>30.3</td>
<td>27.9</td>
<td>575.3</td>
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<tr>
<td>Revenues</td>
<td>−64.8</td>
<td>−180.1</td>
<td>−8.2</td>
<td>10</td>
<td>2.7</td>
<td>5.5</td>
<td>−211.8</td>
</tr>
<tr>
<td><strong>Net Increase in Deficit</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
<tr>
<td></td>
<td>184.9</td>
<td>399.4</td>
<td>134.4</td>
<td>36.1</td>
<td>27.6</td>
<td>22.4</td>
<td>787.2</td>
</tr>
</tbody>
</table>

Billions of Dollars

A mix of tax cuts, infrastructure spending, transfer payments, and the other white meat
An Unprecedented Fiscal Response

Government Deficits as Percent of GDP
AN UNPRECEDENTED FISCAL RESPONSE

Government Debt as Percent of GDP

With Stimulus and President’s Budget

With Stimulus
What is the Stimulus Trying to Do?

• Demand—largely through consumption—took a big hit

• Normally people try to “smooth” consumption by saving less when income falls temporarily

• But we’ve seen a sharp increase in savings
  • from 0% to 5% of income
  • due to large decline in wealth

• Why?

• To prepare for retirement, people target their wealth
  • when their wealth falls, they have to save more to achieve their target
HITTING A WEALTH TARGET

Annual Savings

Retirement Balance

Working Years

Chart no shock
Hitting a Wealth Target

Annual Savings

Retirement Balance

Working Years

1 6 11 16 21 26 31 36 41 46

Annual Savings

Retirement Balance

$0 $10,000 $20,000 $30,000 $40,000 $50,000 $60,000 $70,000 $80,000 $90,000 $100,000

$200,000 $300,000 $400,000 $500,000 $600,000 $700,000 $800,000 $900,000 $1,000,000

$0 $10,000 $20,000 $30,000 $40,000 $50,000 $60,000 $70,000 $80,000 $90,000 $100,000

Annual Savings

Retirement Balance

Working Years

1 6 11 16 21 26 31 36 41 46
Hitting a Wealth Target

![Graph showing retirement balance and annual savings over working years.](chart.png)
Hitting a Wealth Target

- Annual Savings
- Retirement Balance

<table>
<thead>
<tr>
<th>Working Years</th>
<th>Annual Savings</th>
<th>Retirement Balance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>$900,000</td>
<td>$1,000,000</td>
</tr>
<tr>
<td>2</td>
<td>$90,000</td>
<td>$800,000</td>
</tr>
<tr>
<td>3</td>
<td>$70,000</td>
<td>$700,000</td>
</tr>
<tr>
<td>4</td>
<td>$50,000</td>
<td>$300,000</td>
</tr>
<tr>
<td>5</td>
<td>$40,000</td>
<td>$200,000</td>
</tr>
<tr>
<td>6</td>
<td>$30,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>7</td>
<td>$20,000</td>
<td>$100,000</td>
</tr>
<tr>
<td>8</td>
<td>$10,000</td>
<td>$0</td>
</tr>
<tr>
<td>9</td>
<td>$0</td>
<td>$0</td>
</tr>
</tbody>
</table>
What is the Stimulus Trying to Do?

- It is rational for individuals to increase their savings
- “Paradox of thrift”: what’s good for individuals may be bad for the overall economy
- Consumption is 70% of U.S. GDP
- U.S. firms & workers geared up to produce consumption goods
- Government spending increases & tax cuts can have “multiplier” effects on private consumption
Likely Effects of the Stimulus

- Begin with the government’s claims
- Turn to some theoretical predictions from formal economic models
Predicted Effects of Stimulus: I

Figure 1
Unemployment Rate With and Without the Recovery Plan

Source: Romer-Bernstein (2009)
## Predicted Effects of Stimulus: II

Job Creation of Recovery Package by Industry

<table>
<thead>
<tr>
<th>Industry</th>
<th>Job Created in 2010Q4</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mining</td>
<td>26,000</td>
</tr>
<tr>
<td>Construction</td>
<td>678,000</td>
</tr>
<tr>
<td>Manufacturing—Total</td>
<td>408,000</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>158,000</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>604,000</td>
</tr>
<tr>
<td>Information</td>
<td>50,000</td>
</tr>
<tr>
<td>Financial Activities</td>
<td>214,000</td>
</tr>
<tr>
<td>Professional and Business Services</td>
<td>345,000</td>
</tr>
<tr>
<td>Education and Health Services</td>
<td>240,000</td>
</tr>
<tr>
<td>Leisure and Hospitality</td>
<td>499,000</td>
</tr>
<tr>
<td>Other Services</td>
<td>99,000</td>
</tr>
<tr>
<td>Utilities</td>
<td>11,000</td>
</tr>
<tr>
<td>Transportation and Warehousing</td>
<td>98,000</td>
</tr>
<tr>
<td>Government—Total</td>
<td>244,000</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,675,000</strong></td>
</tr>
</tbody>
</table>

Source: Romer-Bernstein and Mark Zandi, Moody’s economy.com
Predicted Effects of Stimulus: III

Source: Congressional Budget Office (2009)
Fiscal Financing

- Fiscal stimulus will initially be financed by borrowing
- This raises government indebtedness
- Requires *some* adjustment in policies in the future to finance the debt
  - raise various taxes
  - reduce total spending
- How will alternative *future* financing choices modify the impacts of higher *current* government spending?
- Address this in an estimated economic model
Output Effects of Higher Government Consumption

Quarters After Government Spending Increase

Source: Leeper, Plante, Traum (2009)
Output Effects of Higher Government Consumption

$1$ more government spending $\Rightarrow$ $0.80$ more GDP

Source: Leeper, Plante, Traum (2009)
Output Effects of Higher Government Consumption

Quarters After Government Spending Increase

Estimated: All Adjust
Transfers Adjust

Source: Leeper, Plante, Traum (2009)
**Fiscal Finance: Transfers Adjust**

Output Effects of Higher Government Consumption

If higher spending financed with lower future transfers, GDP rises more.

Source: Leeper, Plante, Traum (2009)
Output Effects of Higher Government Consumption

Quarters After Government Spending Increase

Estimated: All Adjust
Transfers Adjust
Govt Spend Adjusts

Source: Leeper, Plante, Traum (2009)
If higher spending financed by lower spending in the future, GDP falls after 3 years

Source: Leeper, Plante, Traum (2009)
Output Effects of Higher Government Consumption

Source: Leeper, Plante, Traum (2009)
FISCAL FINANCE: CAPITAL TAXES ADJUST

Output Effects of Higher Government Consumption

If higher spending financed by higher taxes on savings in the future, GDP falls sharply within a few years.

Source: Leeper, Plante, Traum (2009)
Should We Worry About the Deficits?

- Recently Obama has called for “fiscal responsibility”
- Pledged to cut the fiscal deficit in half by 2012
- This will be accomplished by cutting government spending & raising taxes on families earning $250K or more
- What are the consequences of this for the current fiscal stimulus?
  - will this enhance or retard the stimulus?
- Use the same estimated model to show consequences
Output Effects of Higher Government Consumption

Quarters After Government Spending Increase

Estimated: All Adjust

Source: Leeper, Plante, Traum (2009)
Stimulative effects of higher government spending using historical average speed of fiscal financing

Source: Leeper, Plante, Traum (2009)
Output Effects of Higher Government Consumption

Quarters After Government Spending Increase

Estimated: All Adjust

More Gradual Adjustment

Source: Leeper, Plante, Traum (2009)
**Future Fiscal Adjustment: Gradual**

Postponing fiscal financing increases the stimulative effects of higher government spending.

Output Effects of Higher Government Consumption

Quarters After Government Spending Increase

Source: Leeper, Plante, Traum (2009)
Output Effects of Higher Government Consumption

Quarters After Government Spending Increase

Estimated: All Adjust
More Rapid Adjustment
More Gradual Adjustment

Source: Leeper, Plante, Traum (2009)
**Future Fiscal Adjustment: Obama Plan**

Output Effects of Higher Government Consumption

**Rapid fiscal financing reduces the stimulative effects of higher government spending**

- **More Rapid Adjustment**
- **More Gradual Adjustment**
- **Estimated: All Adjust**

Source: Leeper, Plante, Traum (2009)
Fiscal Stimulus Summary

- Fiscal stimulus is the right policy to combat weak demand.
- Impacts depend on how people expect deficits will be financed—need transparency about fiscal policy.
- Stimulus less effective the more rapidly deficits are retired—counterproductive to fret about high government debt.
- Most importantly: stimulus will not be fully effective until financial market & banks are healthy—getting the financial system working is Job #1.