The Shape of the Coming Recovery

Presented by:
Mark Zandi

The Great Recession is Over

Recessions since World War II

<table>
<thead>
<tr>
<th>Peak</th>
<th>Trough</th>
<th>Duration in Months</th>
<th>Peak-to-Trough % Change</th>
<th>Jobless Rate %</th>
<th>Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>December 2007</td>
<td>August 2009</td>
<td>20</td>
<td>3.5%</td>
<td>16.3%</td>
<td>5.7%</td>
</tr>
<tr>
<td>March 2001</td>
<td>November 2001</td>
<td>8</td>
<td>0.4%</td>
<td>6.3%</td>
<td>2.5%</td>
</tr>
<tr>
<td>July 1990</td>
<td>March 1991</td>
<td>8</td>
<td>-1.2%</td>
<td>-4.3%</td>
<td>2.8%</td>
</tr>
<tr>
<td>July 1981</td>
<td>November 1982</td>
<td>16</td>
<td>2.9%</td>
<td>-9.5%</td>
<td>3.1%</td>
</tr>
<tr>
<td>January 1980</td>
<td>July 1980</td>
<td>6</td>
<td>-2.2%</td>
<td>-5.2%</td>
<td>2.2%</td>
</tr>
<tr>
<td>November 1973</td>
<td>March 1975</td>
<td>16</td>
<td>-3.1%</td>
<td>-14.8%</td>
<td>4.4%</td>
</tr>
<tr>
<td>December 1969</td>
<td>November 1970</td>
<td>11</td>
<td>-1.0%</td>
<td>-5.8%</td>
<td>4.4%</td>
</tr>
<tr>
<td>April 1960</td>
<td>February 1961</td>
<td>10</td>
<td>-1.3%</td>
<td>-4.2%</td>
<td>2.3%</td>
</tr>
<tr>
<td>August 1957</td>
<td>April 1958</td>
<td>8</td>
<td>-3.8%</td>
<td>-12.7%</td>
<td>4.4%</td>
</tr>
<tr>
<td>July 1953</td>
<td>May 1954</td>
<td>10</td>
<td>-2.1%</td>
<td>-8.4%</td>
<td>2.5%</td>
</tr>
<tr>
<td>November 1948</td>
<td>October 1949</td>
<td>11</td>
<td>-1.7%</td>
<td>-6.6%</td>
<td>4.5%</td>
</tr>
</tbody>
</table>

Average 10 57 -2.6% -8.3% -2.7% 4.4% 7.6% 3.2%

Sources: NBER, BEA, FRB, BLS, Moody's Economy.com
Policymakers Stabilize the Banking System...

Difference between 3 month Libor and Treasury bill yields

- TARP fails to pass Congress
- No asset purchases
- Stress tests
- Lehman failure
- Bear Stearns collapse
- Bank funding problems
- Bear hedge funds liquidate

...and Fiscal Stimulus Provides a Meaningful Boost

Contribution to real GDP growth, percentage points

Source: Moody’s Economy.com
Consumers Have Made a Big Adjustment

Contribution to personal saving rate, percentage points

Income group:
- 95-100%
- 80-95%
- 60-85%
- 40-60%
- 0-40%

Nominal Wages Threaten to Decline

1985q1 – 2009q2, Source: BLS

2009q2
Unemployment rate = 9.3%
Natural rate = 5.3%
Compensation growth = 1.5%

$y = -0.48x + 3.40$
$R^2 = 0.32$
No Let Up In the Foreclosure Crisis...

Thousands, Sources: Equifax, Moody’s Economy.com

...Signaling More House Price Declines Ahead

Sources: Fiserv Case Shiller, Equifax, Moody’s Economy.com
Commercial RE Under Severe Pressure
Repeat Sales Indices: 2000q4 = 100

Sources: Moody’s, REAL, Fiserv

Federal Reserve’s balance sheet, $ bil

No Quick Exit For the Fed...

Sources: Moody’s, Economy.com
...and More Fiscal Stimulus May Be Needed

- More aid to unemployed workers and financially stressed state and local governments. Unemployment insurance with work share and worker re-training.
- Extend higher conforming loan limits and etend and expand the housing tax credit, accelerated depression, and NOL carryback.
- Mortgage loan modifications with principal writedown; personal bankruptcy reform.
- Direct lending to small businesses by the SBA.
- Safe harbor for commercial real estate servicers and direct commercial RE lending.

A Looming Fiscal Crisis...

Federal debt to GDP ratio under the President’s budget

Source: CBO
...Unless Health Care Reform Bends the Cost Curve

Consumer price inflation, 12-month MA, % change year ago

Moody’s Economy.com