The Economic Outlook and Unconventional Monetary Policy

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November 1, 2012
Overview

- Open-ended purchase of MBS worked as expected
  - Financial reaction more than some expected
  - Improvements in interest-sensitive sectors
- Inflation close to target since 2000 and below target currently
When to stop asset purchases is complicated

- Begin discussion when unemployment has fallen at least \( \frac{1}{2} \) percent – 7.25 percent
- I see it as a threshold that starts the discussion – not a trigger that initiates action

My view: More like 6.5 percent unemployment to warrant the federal funds rate being lifted off the zero bound
Outlook

- Recovery has averaged roughly 2 percent growth – faster than many developed countries but too slow to quickly improve labor markets

- Action to stimulate more growth
  - Purchase $40 billion in MBS until significant improvement in labor markets
  - Continue maturity extension program
  - Indicate that short-term rates are expected to remain exceptionally low through mid-2015
Figure 1
Financial Market Response to FOMC Announcement

July 2, 2012 - October 26, 2012

Source: Federal Reserve Board, J.P. Morgan, NYT, WSJ / Haver Analytics
Figure 2
Mortgage Loan Applications
Four-Week Moving Average, October 28, 2011 - October 26, 2012

Index, Four-Week Average Ending October 28, 2011 = 100

Note: Refinance applications account for 78% of applications on average over this period.

Source: Mortgage Bankers Association / Haver Analytics
Figure 3
Housing Starts
January 2000 - September 2012

Thousands of Units, Seasonally Adjusted Annual Rate

Source: Census Bureau, NBER / Haver Analytics
Figure 4
Auto Loan Rates at Commercial Banks
Weekly, January 5, 2007 - October 26, 2012

Source: Bankrate.com, Bloomberg
Figure 5
Auto and Light Truck Sales
January 2000 - September 2012

 Millions of Units, Seasonally Adjusted Annual Rate
Figure 6
Growth in Real Consumer Durables from Trough of Last Four Recessions

Index, Trough=100

Quarters from Trough

Source: BEA, NBER / Haver Analytics
Figure 7
Inflation Rate: Change in Personal Consumption Expenditure (PCE) Price Index
January 2000 - September 2012

Percent Change from Year Earlier

Average Over Period: 2.2%
Figure 8
Inflation Rate: Change in Core Personal Consumption Expenditure (PCE) Price Index

January 2000 - September 2012

Percent Change from Year Earlier

Core PCE (Excluding Food and Energy)

Average over Period: 1.9%

Source: BEA, NBER / Haver Analytics
Figure 9
Distribution of PCE and Core PCE Inflation Rates (Quarterly Changes at Annual Rates)

2000:Q1 - 2012:Q3

Source: BEA / Haver Analytics
Open-Ended MBS

- Automatic stabilizer
  - Negative shocks – could increase purchase period or amounts
  - Mitigate, but not fully or immediately offset large shocks, such as fiscal cliff
  - Positive shocks – shorten, shrink, or end purchase programs

- What determines if labor market improves substantially?
Figure 10
Economic Conditions at Last Easing and First Tightening by Fed during Past Three Recoveries

<table>
<thead>
<tr>
<th>Date of Recession Trough</th>
<th>Date of Last Easing</th>
<th>Unemployment Rate (%)</th>
<th>Monthly Average Job Growth over Past 3 Months</th>
<th>PCE Inflation Rate % Change from Year Earlier</th>
</tr>
</thead>
<tbody>
<tr>
<td>November 1982</td>
<td>August 21, 1986</td>
<td>7.0</td>
<td>116,700</td>
<td>2.4</td>
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<tr>
<td>March 1991</td>
<td>September 4, 1992</td>
<td>7.6</td>
<td>90,300</td>
<td>3.1</td>
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<tr>
<td>November 2001</td>
<td>June 25, 2003</td>
<td>6.1</td>
<td>-90,300</td>
<td>1.9</td>
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</tbody>
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<tr>
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</thead>
<tbody>
<tr>
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<td>January 5, 1987</td>
<td>6.6</td>
<td>192,300</td>
<td>2.3</td>
</tr>
<tr>
<td>March 1991</td>
<td>February 4, 1994</td>
<td>6.6</td>
<td>279,300</td>
<td>1.9</td>
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<tr>
<td>November 2001</td>
<td>June 30, 2004</td>
<td>5.6</td>
<td>298,700</td>
<td>2.8</td>
</tr>
</tbody>
</table>

Source: Federal Reserve Board, BLS, BEA, NBER / Haver Analytics
Conditions to End Easing

- End of easing quite different across cycles
- No single variable captures inflationary pressures or labor market conditions
- Future path of inflation and unemployment can be quite uncertain
- Given lack of historical experience of unwinding large balance sheets, need to be attuned to unintended consequences
My Preference for Threshold

- Continue asset purchase at least until the unemployment rate reaches 7.25 percent as long as inflation is contained
- Lift short-term rates off the zero bound after the unemployment rate reaches 6.5 percent, as long as inflation is contained
Conclusion

- Economy improving slowly
  - Positive signs for the housing market
  - Positive signs for consumer spending
- Significant downside risks that could more than off-set monetary stimulus
- Policy is encouraging more economic growth than if we had not taken recent actions