Macroeconomic Advisers, LLC

Long-Term Unemployment and the Outlook for Inflation

The Federal Reserve Bank of Cleveland: Monetary Policy and the Public

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May 30, 2014
Cleveland, OH

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The Inflation Model: NKPC

\[
\pi_t = \lambda \pi_t^e + \left(1 - \lambda\right) \sum_{j=1}^{3} w_j \pi_{t-j} - \beta(u_t - \tilde{u}_t)
\]

- \( \pi_t \) \( \text{core PCE inflation} \)
- \( \lambda \pi_t^e \) \( \text{SPF 10 - year inflation expectations ("anchor")} \)
- \( \left(1 - \lambda\right) \sum_{j=1}^{3} w_j \pi_{t-j} \) \( \text{lagged inflation ("momentum")} \)
- \( \beta(u_t - \tilde{u}_t) \) \( \text{unemployment gap (labor market "slack")} \)

\[
\sum_{j=1}^{3} w_j = 1; \text{no long - run trade - off between inflation and slack}
\]
A Phillips Curve estimated through 2007 and assuming a NAIRU of 5.5% since predicted deflation following the Great Recession.

Source: Macroeconomic Advisers, LLC
Long-Term Unemployed as Percent of Total Unemployment

Source: Bureau of Labor Statistics; Macroeconomic Advisers, LLC

May 30, 2014
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Empirical Results

### Regressions for Change in Core PCE Inflation

<table>
<thead>
<tr>
<th></th>
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<tbody>
<tr>
<td></td>
<td>(1A)</td>
<td>(1B)</td>
<td>(2A)</td>
<td>(2B)</td>
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<tr>
<td>Gravitational Pull of Expectations</td>
<td>-0.264</td>
<td>-0.261</td>
<td>-0.298</td>
<td>-0.301</td>
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<tr>
<td>t-statistic</td>
<td>-3.0</td>
<td>-3.1</td>
<td>-3.6</td>
<td>-3.7</td>
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<tr>
<td>Inflation Change, 1st Lag</td>
<td>-0.572</td>
<td>-0.574</td>
<td>-0.495</td>
<td>-0.491</td>
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<td>t-statistic</td>
<td>-5.4</td>
<td>-5.4</td>
<td>-5.0</td>
<td>-5.1</td>
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<tr>
<td>Inflation Change, 2nd Lag</td>
<td>-0.230</td>
<td>-0.231</td>
<td>-0.183</td>
<td>-0.181</td>
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<td>t-statistic</td>
<td>-2.5</td>
<td>-2.5</td>
<td>-2.1</td>
<td>-2.1</td>
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<tr>
<td>Short-Term Unemployment Rate</td>
<td>-0.174</td>
<td>-0.188</td>
<td>-0.170</td>
<td>-0.166</td>
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<tr>
<td>t-statistic</td>
<td>-2.1</td>
<td>-3.2</td>
<td>-2.9</td>
<td>-3.0</td>
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<tr>
<td>Long-Term Unemployment Rate</td>
<td>-0.053</td>
<td>0.001</td>
<td>0.001</td>
<td>0.001</td>
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<td>-0.2</td>
<td>0.2</td>
<td>0.2</td>
<td>0.2</td>
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<tr>
<td>Regression Constant</td>
<td>0.716</td>
<td>0.733</td>
<td>0.617</td>
<td>0.613</td>
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<tr>
<td>t-statistic</td>
<td>2.3</td>
<td>2.4</td>
<td>2.1</td>
<td>2.1</td>
</tr>
<tr>
<td>R-squared</td>
<td>0.440</td>
<td>0.439</td>
<td>0.405</td>
<td>0.405</td>
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</tbody>
</table>

The “short-term unemployment rate” is significant over the short and long sample, with a coefficient that is stable across the periods.

The “long-term unemployment rate” is insignificant over both the short and the long sample.

Note: the short-term and long-term unemployment rates are the contributions of the short-term and long-term unemployed to the total unemployment rate.
Why? (It Seems so Counterintuitive!)

- **Decline in Labor Market Matching Efficiency**
  - Krueger: no tendency for long-term unemployed to gravitate towards growing industries
  - Tendency to be re-employed in same industry, or not at all

- **Job search declines with unemployment duration**
  - Krueger & Mueller: search declines 1.5 minutes per week
  - Wanberg et. al: search declines from 18 to 11 hours per week by 20th week of unemployment

- **Employer discrimination rises with duration of unemployment**
  - Kroft et. al: “call back rate” declines with duration
  - Ghayad: “call back rate” drops sharply at exactly 6 months
NAIRU vs. Share of Long-Term Unemployed in Total Unemployment

- 2007
- 2013
- 2016
- 2009

NAIRU (Percent)

Long-Term Unemployed as Percent of Total Unemployment
Wrap Up

• Does it matter if LT unemployment falls because the LT unemployed find jobs or exit the labor force?
  – For inflation, no; for real growth, yes.

• Given uncertainty surrounding LT unemployment
  – Our forecast balances the risks through 2016
  – But should we lower NAIRU below 5.5% after 2016?

• Policy Implications
  – FOMC can’t be complacent about today’s modest inflation
  – General macroeconomic stimulus stimulus riskier than policies specific to the long-term unemployed