How to Stop Worrying About R-Star - and Let Go of Activist Interest Rate Policies

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The Perceived Problem of a Low "R-Star"

- "$R^*$ is the short-term real rate such that policy is neither accommodative nor contractionary"

\[ i = r + \pi \]  

- $i = \text{nominal rate}, \ r = \text{real rate}, \ \pi = \text{inflation rate}$

**Fed Policy Issue**

- Low $r + \pi$ limits Fed’s ability to lower interest rates when economy weakens (ZB)

- I will argue that short-run interest rate policy - independent of level of $R^*$ — may have little positive effect when economy weakens
Today’s View About Policy and R-Star

- Policy view based on 3 assumptions that go hand-in-hand:
  - *Phillips Curve* - systematic empirical relationship between unemployment and inflation exploitable by policy
    - *Temporary (demand) shocks* dominate fluctuations
  - "*Secular Stagnation*" - *chronically low demand* - is depressing trend economic growth
  - I will present evidence that these views have limited empirical support and/or are not clearly understood
  - Discuss these 3 assumptions in turn
Phillips Curve is not in the Data

- In 2000, Atkeson-Ohanian showed Fed inflation forecasts based on Phillips Curve much worse than *naive forecast*
  - *Naive forecast: future inflation is equal to current inflation*
- Why is naive better? Weak empirical relationship between unemployment (or other measures of economic slack) & inflation
- Many follow-ups, several by Stock & Watson (SW) - same conclusion:
- "Suppose you are told that next quarter the economy would plunge into recession, with the unemployment rate jumping by 2 percentage points. Would you change your inflation forecast? The literature is now full of formal statistical evidence suggesting that this information should be ignored."  
1959-1969: Phillips Curve Appears
Inflation One Year Ahead

2008-2016: Phillips Curve is Gone
2008-2016: Expectations Phillips Curve is Gone
What Happened to Phillips Curve?

- Foundations of Phillips Curve - "Sticky Wages" & "Sticky Prices" - have changed
- These factors are less important today than in past
- **Sources of wage stickiness**: private sector unionization rate declined from about 35% to around 6%
- **Incentives to change wages**: Today, laid-off workers suffer enormous future wage losses (Davis and Von Wachter)
- This means workers gladly will accept even large wage cuts to keep job during recession
- **Sources of price stickiness**: More vigorous competition, technological change in information, sales, marketing, and pricing practices (Amazon, Walmart, Airlines, Hotels,...) suggest price stickiness and its allocational effects have declined over time
Short-Run Fluctuations Have Declined Over Time

- Interest rate policies based on temporary (demand) shocks driving fluctuations
- Fluctuations due to very long-run components since early 1980s
- Decompose deviations from trend into a short-run and a long-run component
- Long-run dominates in U.S. and in other countries
- Suggests conventional policies will not be effective
Relative Importance of Long- and Short-Run Components in Log of Real GDP

- Short-Run plus Long-Run
- Long-Run
Relative Importance of Long- and Short-Run Components in Log of Total Factor Productivity
Relative Importance of Long- and Short-Run Components in Log of Real GDP - France

- Short-Run plus Long-Run
- Long-Run
Relative Importance of Long- and Short-Run Components in Log of Real GDP - Germany

- Short-Run plus Long-Run
- Long-Run
Relative Importance of Long- and Short-Run Components in Log of Real GDP - Spain

- Short-Run plus Long-Run
- Long-Run
Gomme, Ravikumar, & Rupert (2015) construct real returns on gov’t & private assets

"Business capital returns bear little resemblance to short-run gov’t returns"

Both pre and post-tax returns to private capital are historically high

2012-16: 11.8% pre-tax return - historical average = 10.7%

2012-16: 7.6% post-tax return - historical average = 6.0%

U.S. today is not a low rate of return economy
Pre-Tax and Post-Tax Returns to Capital are High

Pre-Tax
Post-Tax
Pre-Tax and Post-Tax Returns to Capital are High

Returns to Business Capital

Pre-Tax
Post-Tax
Despite High Returns, Investment is Weak

- Investment is well below trend

### Average Annual Growth Rate - Real Gross Domestic Investment

<table>
<thead>
<tr>
<th>Decade</th>
<th>1950s</th>
<th>1960s</th>
<th>1970s</th>
<th>1980s</th>
<th>1990s</th>
<th>2000-16</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2.0%</td>
<td>5.5%</td>
<td>5.2%</td>
<td>3.7%</td>
<td>5.9%</td>
<td>1.1%</td>
</tr>
</tbody>
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- High returns & low investment suggest either:
  - (i) Much higher risk, or (ii) much lower expected future returns
  - Both are possibilities
  - Low productivity growth (Haltiwanger et al)
  - Impact of uncertainty (Bloom, Baker, and Davis)
  - These factors are not reasonably addressed by monetary policy
What Should Fed Do About Low R-Star Conundrum?

- Breakdown of Phillips Curve, dominance of long-run fluctuations, high return-low investment economy, suggest:
- Short-term interest rate policies may not help when economy weakens - but this remains at the top of the Fed’s to-do list
- "Phillips Curve is predictively irrelevant...but remains a workhorse of forecasting models and is the best way to understand policymaker views about unemployment and inflation" SW, Phillips Curve Inflation Forecasting, 2009
- Alternative - develop rules-based policies that focus on low and stable inflation and that promote well-functioning capital markets
- Fed can contribute significantly to understanding how capital market regulatory channels are impacting allocation of capital
- Policies that improve capital allocation to rapidly-growing businesses are much more more beneficial than short-term interest policies aimed at dampening fluctuations