Rules and Discretion

• What is a monetary policy rule?
  – A fixed mapping from publicly observable information into instrument choices.

• What is monetary policy discretion?
  – Freedom to choose instruments as desired.
Consensus Supports Rules

• Kydland and Prescott (1977)

• Taylor (1993)

• Rules are the basis of modelling of central banks.
  – policy decisions are treated as merely random noise around rules

• House legislation requires Fed to treat the Taylor Rule as “reference” rule.
Today: Two Strong Reasons to Favor Discretion

- **Empirical** problem: a rule must be based on historical performance.
  - past success is no guarantor of future reliability

- **Theoretical** problem: much useful information is non-rulable.
  - Can’t encode all predictive factors into a fixed rule.
On the Empirical Problem

• I document that in 2009-10, Federal Open Market Committee (FOMC) aimed for a slow recovery in UR and inflation.

• Why did FOMC support a slow recovery?

• It relied on its pre-2007 reaction function (Taylor Rule) as a guide to its plans for removing monetary accommodation.

• My criticism is similar to Brunner and Meltzer’s criticism of Fed in 1929-30.
On the Theoretical Problem

- Central banks have a lot of information about inflation.

- Not all of their information is *rulable*: how would we ever encode events of 8/09/07 into a rule?

- **Benefit of rule**: eliminates bias (due to time inconsistency and other factors).

- **Benefit of discretion**: central banks can offset non-rulable shocks.

**Rule vs. discretion: which benefit is larger?**

I answer this question for different objectives (mean-variance and minimax).
EMPIRICAL PROBLEM
Summary of Economic Projections

• FOMC gathers participants’ projections on quarterly basis.
  – Summary of Economic Projections (SEP).

• Key: projections are based on *appropriate* monetary policy.

• Hence, beyond normal 1-2 yr lags, they can be viewed as participant’s economic goals.
## FOMC’s Unemployment Rate Goals

Table 1: Median Fourth Quarter SEP Projections for UR

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>2 Years Ahead</th>
<th>3 Years Ahead</th>
<th>Long Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>9.8</td>
<td>8.3</td>
<td>7.0</td>
<td>5.0</td>
</tr>
<tr>
<td>2010</td>
<td>9.5</td>
<td>8.0</td>
<td>7.1</td>
<td>5.3</td>
</tr>
</tbody>
</table>
FOMC’s Inflation Goals

Table 2: Median Fourth Quarter SEP Projections for Inflation

<table>
<thead>
<tr>
<th></th>
<th>Current</th>
<th>2 Years Ahead</th>
<th>3 Years Ahead</th>
<th>Long Run</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>-0.5</td>
<td>1.5</td>
<td>1.5</td>
<td>2.0</td>
</tr>
<tr>
<td>2010</td>
<td>1.3</td>
<td>1.4</td>
<td>1.5</td>
<td>2.0</td>
</tr>
</tbody>
</table>
## Staff Forecast Based on Taylor Rule (1993)

Table 3: FOMC Staff’s Projections

<table>
<thead>
<tr>
<th>Year</th>
<th>2009 UR proj.</th>
<th>2009 core (\pi) proj.</th>
<th>2010 UR proj.</th>
<th>2010 core (\pi) proj.</th>
</tr>
</thead>
<tbody>
<tr>
<td>2010</td>
<td>9.5</td>
<td>1.1</td>
<td>9.7</td>
<td>1.1</td>
</tr>
<tr>
<td>2011</td>
<td>8.2</td>
<td>1.0</td>
<td>9.0</td>
<td>1.0</td>
</tr>
<tr>
<td>2012</td>
<td>6.1</td>
<td>1.1</td>
<td>7.9</td>
<td>1.0</td>
</tr>
<tr>
<td>2013</td>
<td>4.9</td>
<td>1.4</td>
<td>7.1</td>
<td>1.2</td>
</tr>
<tr>
<td>2014</td>
<td>4.7</td>
<td>1.6</td>
<td>6.1</td>
<td>1.3</td>
</tr>
<tr>
<td>2015</td>
<td>NA</td>
<td>NA</td>
<td>5.2</td>
<td>1.5</td>
</tr>
</tbody>
</table>
Implications

• Taylor Rule-based projections implied slow recovery.

• FOMC goals closely track this slow recovery.

• FOMC reluctant to pursue more aggressive recovery.
  – through asset purchases (perhaps understandable?)
  – or through aggressive forward guidance
THEORETICAL PROBLEM
Basic Setup

- Central bank (CB) has possible inflation target bias.
  - time consistency or political economy

- CB has non-rulable information about inflation.

- Society cannot use pecuniary tools for incentives.
Analytical Framework

• Society faces a delegation problem (Holmstrom (1984)) with respect to CB.

• I use his basic formalism to address rules vs. discretion.

• Rule: monetary accommodation is pre-determined function of rulable information.

• Discretion: CB can choose any level of accommodation.
Results

• When is discretion superior to best possible rule?

• With mean-variance: if st. dev. of non-rulable shock > bias.

• With minimax: if largest abs. value of non-rulable shock > bias.

• I argue that, in past 20 years, FOMC has little pro-inflation bias.
CONCLUSIONS
• Paper argue, using theory and evidence, that:

For FOMC, discretion is superior to rules.

• Congress shouldn’t enshrine Taylor Rule as a reference rule.

• Instead Congress should:
  – Establish clear quantitative goals for FOMC.
  – Support existing Fed institutions that work to constrain pro-inflation bias.