Discussion of Paul Hubert: “State-dependent effects of monetary policy”

Georg Strasser
European Central Bank

Macro Workshop at Deutsche Bundesbank
18 October 2019

The opinions expressed in this presentation are those of the authors and do not necessarily reflect the views of the European Central Bank or the Eurosystem.
Summary

- Interaction of BoE Monetary Policy (MP) Committee decisions and Inflation Report (IR)

- Key result: IR affects the effect of MP committee decisions (on, e.g., inflation expectations)

- Based on data October 2004 - July 2015, 43 IR reports
Event Study

- Regress changes in inflation expectations on pairs of MPC and IR surprises

\[ \Delta y_w = \alpha + \beta_1 \Delta i(MP_w) + \beta_2 \Delta i(IR_w) + \beta_3 \Delta i(MP_w) \times \Delta i(IR_w) + \varepsilon_t \]

where \( \Delta i(\cdot) \) = daily change of nominal 1yr gilt yield, \( \Delta y_w \) = change in inflation swaps (1yr-5yr), multi-day window (3 specifications)

- Result: \( \beta_3 < 0 \) and significant

- Only if \( \Delta i(IR_w) > 0 \), we get after \( \Delta i(MP_w) > 0 \) that \( \Delta y_w < 0 \)
Inflation Report

- Includes forecast conditional on path for Bank Rate implied by market rates *prior* to policy meeting
- Market expectations include expectation about systematic part of MPC decisions
- IR is published about 4 days after MP (during sample period)
- With knowledge of central bank’s information from IR and market expectations, might back out unsystematic MP from MPC decisions
Release Sequence vs. Information Content

- Are IR surprises correlated with central bank information shock component of MPC decision (e.g. Jarocinski and Karadi, 2019)?

- Is IR report complete, or is MPC decision based on IR +X?

- Is IR report frozen pre-MPC, or is IR based on MPC information +X?
Example: Inflation Report - August 2013

- The MPC’s policy guidance: “... the MPC intends not to raise Bank Rate from its current level of 0.5% at least until the Labour Force Survey headline measure of the unemployment rate has fallen to a threshold of 7%, subject to the conditions below.”

- Opening Remarks by the Governor at IR press conference: “... the MPC is today announcing explicit state-contingent forward guidance.”
Table 2 - smallest window

<table>
<thead>
<tr>
<th></th>
<th>Smallest window (on IR day only)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Monetary surprises</td>
</tr>
<tr>
<td></td>
<td>0.617</td>
</tr>
<tr>
<td></td>
<td>[0.41]</td>
</tr>
<tr>
<td></td>
<td>IR surprises</td>
</tr>
<tr>
<td></td>
<td>0.404</td>
</tr>
<tr>
<td></td>
<td>[0.96]</td>
</tr>
<tr>
<td></td>
<td>Monetary surprises * IR surprises</td>
</tr>
<tr>
<td></td>
<td>4.247</td>
</tr>
<tr>
<td></td>
<td>[4.69]</td>
</tr>
<tr>
<td></td>
<td>Macro data releases</td>
</tr>
<tr>
<td></td>
<td>Yes</td>
</tr>
<tr>
<td></td>
<td>N</td>
</tr>
<tr>
<td></td>
<td>130</td>
</tr>
<tr>
<td></td>
<td>R²</td>
</tr>
<tr>
<td></td>
<td>0.36</td>
</tr>
</tbody>
</table>

- Offsetting of linear terms, nonlinear interaction
- Interpretation hinges on size of surprises
- Standard deviation of IR surprises and MPC surprises similar
\( \beta_1 > 0, \beta_3 < 0 \)

- Is \( \Delta i(MP_w) \) in MPC window correlated with its counterpart in IR window? Slow adjustment?

- How large are the average \( \Delta i(MP_w), \Delta i(IR_w) \) relative to \( \Delta i(MP_w) \times \Delta i(IR_w) \)? Does net effect of the 4 MPC-IR pairs obtain qualitatively for all three window specifications?

- Is sign of \( \Delta i(IR_w) \) correlated with, e.g., business cycle?
How does MPC surprise affect IR impact?

Regression for IR days only, conditional on relative sign of MP/IR surprise (IR window only)

\[ \Delta y_w = \alpha + \beta_1 \Delta i(IR_w) \mathbb{I}(\text{sgn}(\Delta i_w(MP_w)) = \text{sgn}(\Delta i_w(IR_w))) \\
+ \beta_2 \Delta i(IR_w) \mathbb{I}(\Delta i_w(MP_w) > 0 \land \Delta i_w(IR_w) < 0) \\
+ \beta_3 \Delta i(IR_w) \mathbb{I}(\Delta i_w(MP_w) < 0 \land \Delta i_w(IR_w) > 0) \\
+ \beta_4 \Delta i(IR_w) \times \Delta i(MP_w) \mathbb{I}(\cdot) + \ldots + \varepsilon_t \]

separate windows for MP and IR, confirmation vs. confusion
1. Nice, thought-provoking paper, highlights that various forms of CB communication (and MP announcements) interact in non-trivial way.

2. MP effect is state-dependent; central bank might be able to influence the state!

3. Explore alternative interpretations.