The Fed’s Response to Economic News Explains the “Fed Information Effect”

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The “Fed Information Effect”

\[ BC_{rrev_t} = \alpha + \theta mps_t + \varepsilon_t \]
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- \( t \) indexes FOMC announcements
- \( BCrev_t \) is one-month change in Blue Chip forecast around FOMC announcement
- \( mps_t \) is measure of FOMC announcement surprise in 30-min window around announcement
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- standard macro models, VARs predict \( \theta < 0 \) (for GDP, inflation)
- but empirical work sometimes estimates \( \theta > 0 \)
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Federal Reserve Monetary Policy Announcement Surprise, 30-min. window (pct)

1-month change in Blue Chip GDP 4-qtr Forecast (pct)
The “Fed Information Effect” story:

- the Fed is a better economic forecaster than the private sector
- when the Fed lowers interest rates, private sector infers that economy must be worse than they thought
- so private sector lowers rather than raises GDP forecast
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See:

- Romer and Romer (2000 AER)
- Campbell, Evans, Fisher, Justiniano (2012 BPEA)
- Nakamura-Steinsson (2018 QJE)
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Estimates of \( \theta \) are biased if economic news is correlated with \( mps(t) \).
The "Fed Response to News" Channel

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  - nonfarm payrolls
  - Brave, Butters, Kelley (2019) “big data” index of macro data releases for previous month
  - \( \Delta \log \text{S&P500} \)

Note: under standard FIRE assumption, \( mps_t \) should be unpredictable: \( \alpha, \beta = 0 \) (even if Fed Information Effect is true) but if markets don’t know Fed’s monetary policy rule, then \( mps_t \) can be correlated with economy ex post, resulting in \( \beta \neq 0 \) (see also Cieslak, 2018 RFS; Schmeling et al., 2020)
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**Economic news measure:**

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## Economic News Predicts Monetary Policy Surprises

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- MP Surprise measure: (1) Nonfarm payrolls, (2) Brave et al. index, (3) $\Delta \log S&P500$

**Full sample:** 1/1990–6/2019, including unscheduled announcements

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Bottom line:
- $\text{news}_t$ is correlated with $\text{mps}_t$
  (which will cause omitted variable bias in “Fed Information Effect” regressions)
Economic News Drives Out “Fed Information Effect”

Repeat “Fed Information Effect” regressions with omitted news variable included:

Campbell et al. (2012):

\[ BCrev_t = \alpha + \beta target_t + \gamma path_t + \varepsilon_t \]

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- information effect prediction is ambiguous for \( \beta, \gamma, \theta \)
  - but Jarocinski-Karadi (2019), Cieslak-Schrimpf (2019) argue \( \beta, \gamma, \theta \) should be \( > 0 \) if information effect is substantial
### Stock Market Regression Results

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- **fed funds rate**
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(2) Nakamura-Steinsson
- **fwd. guidance**
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(0.45) \quad (0.54) \quad (0.72)
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<th>(1) Campbell et al.</th>
<th>(2) Nakamura-Steinsson</th>
</tr>
</thead>
<tbody>
<tr>
<td>fed funds rate</td>
<td>first princ. comp.</td>
</tr>
<tr>
<td>“target factor”</td>
<td>“MP surprise”</td>
</tr>
<tr>
<td>fwd. guidance</td>
<td></td>
</tr>
<tr>
<td>“path factor”</td>
<td></td>
</tr>
</tbody>
</table>

### Full sample: 1/1990–6/2019, including unscheduled announcements

<table>
<thead>
<tr>
<th>Δ log S&amp;P500</th>
<th>-4.37***</th>
<th>-2.52***</th>
<th>-7.82***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(0.45)</td>
<td>(0.54)</td>
<td>(0.72)</td>
</tr>
</tbody>
</table>


<table>
<thead>
<tr>
<th>Δ log S&amp;P500</th>
<th>-4.24***</th>
<th>-2.05***</th>
<th>-5.95***</th>
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</thead>
<tbody>
<tr>
<td></td>
<td>(0.46)</td>
<td>(0.65)</td>
<td>(1.03)</td>
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</tbody>
</table>

### Full sample: 1/1990–6/2019, excluding unscheduled announcements

<table>
<thead>
<tr>
<th>Δ log S&amp;P500</th>
<th>-3.11***</th>
<th>-3.14***</th>
<th>-6.53***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(0.64)</td>
<td>(0.51)</td>
<td>(0.82)</td>
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</table>


<table>
<thead>
<tr>
<th>Δ log S&amp;P500</th>
<th>-2.81***</th>
<th>-3.02***</th>
<th>-6.03***</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>(0.64)</td>
<td>(0.51)</td>
<td>(0.78)</td>
</tr>
</tbody>
</table>
Survey of Blue Chip Forecasters

- We collected contact information for all 52 forecasters in the Blue Chip panel
Survey of Blue Chip Forecasters

- We collected contact information for all 52 forecasters in the Blue Chip panel
- emailed them a survey asking how they revised their GDP, unemployment, and inflation forecasts in response to:
  - federal funds rate decision
  - FOMC statement
  - interest rate “dot plot”
  - Summary of Economic Projections (SEP) forecasts for GDP, unemployment, and inflation
Results from Our Survey

36 responses out of 52 possible:

<table>
<thead>
<tr>
<th>Response to hawkish surprise in:</th>
<th>Fed Funds Rate</th>
<th>FOMC Statement</th>
<th>“Dot Plot”</th>
</tr>
</thead>
<tbody>
<tr>
<td>Do not revise GDP forecast</td>
<td>13</td>
<td>16</td>
<td>14</td>
</tr>
<tr>
<td>Revise GDP forecast downward</td>
<td>18</td>
<td>15</td>
<td>18</td>
</tr>
<tr>
<td>Revise GDP forecast, but direction depends on other factors</td>
<td>5</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Revise GDP forecast upward</td>
<td>0</td>
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<td>0</td>
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- The last row contradicts “Fed information effect”
Results from Our Survey

Response to FOMC’s Summary of Economic Projections (SEP)

Do not revise GDP forecast 24

Revise GDP forecast towards SEP forecast, if substantially different 4

Use SEP to help forecast fed funds rate, effect on GDP standard 3

Use SEP to help forecast fed funds rate, effect on GDP depends on other factors 1

Revise GDP, but revision depends on multiple factors 2
Results from Our Survey

Response to FOMC’s Summary of Economic Projections (SEP)

Do not revise GDP forecast 24

Revise GDP forecast towards SEP forecast, if substantially different 4

Use SEP to help forecast fed funds rate, effect on GDP standard 3

Use SEP to help forecast fed funds rate, effect on GDP depends on other factors 1

Revise GDP, but revision depends on multiple factors 2

If there was a Fed information effect, we ought to see it here
Typical Quotes from Our Survey

“I trust my outlook more than the Fed’s. . . Their forecasting ability is pretty poor.”

“My view is that the Fed does not have superior information. . . The FOMC forecast tends to be off by a lot.”

“We tend to find that the Fed has no better information advantage over economists like myself. . . In fact, what we have found many times is Fed forecasts (per the SEP) tend to be somewhat stale.”

“I would be responding to the change in the policy outlook, not to the possibility that the Fed ‘knew’ something that I did not.”

“We would not be updating our forecasts because we think the SEP forecasts are good. But if we think they signal something about future policy and portend a market shock then we might change some forecasts in anticipation of that.”
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In the paper, we also:

1. show Blue Chip and Fed Greenbook forecasts are very similar
2. conduct extensive robustness analysis of empirical results
3. provide simple model of private-sector learning about Fed’s monetary policy rule to model “Fed Response to News” channel
4. using model, show high-frequency monetary policy surprises can be used:
   - in high-frequency regressions to estimate effects of monetary policy
   - in high-frequency identification of VARs (but some adjustment here can be necessary)
Conclusions

1. Economic news is an omitted variable in “Information Effect” regs.
   - “Fed Information Effect” regressions suffer from omitted variable bias
   - including the omitted variable drives out “Fed Information Effect”

2. Stock market responses to FOMC announcements do not support “Fed Information Effect”

3. Our survey of Blue Chip forecasters contradicts “Fed Information Effect”

4. Evidence for “Fed Information Effect” is weak

5. We propose alternative “Fed Response to News” channel that can explain all of the empirical findings