The FOMC Risk Shift
by
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Discussion

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- Motivation
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- Conclusion
Stock markets react significantly to monetary policy announcements

- Bernanke and Kuttner (2005) study stock market reaction to federal reserve policy announcements
  - Stock returns are 10% more volatile on event days
  - A 25bps increase in Fed-fund futures (≈ unexpected policy tightening) leads to 1% drop in stock price
  - Fed-fund-future changes explain only a small fraction of stock returns on event days ($R^2 = 17\%$)
  - Reaction of industry portfolios to monetary shocks seem in line with CAPM betas

- Decompose stock returns into revisions to expected cash-flows and discount rates:
  - dividend growth
  - real risk-free rate
  - expected excess return

→ Monetary policy affects stock prices mostly through expected excess returns.

- Why? Various channels are possible:
  - Quantity of risk
  - Risk-aversion
  - Over-reaction
What drives returns around FOMC announcements?

The paper regresses 90 minute \((t-15,t+75)\) event-window stock returns around FOMC announcements from 2006-2017 onto changes in three factors:

- **Short-term rates**: long 3-month euro-dollar futures
- **Long-term rates**: long 10-year Treasury futures
- **Risk-Shift (RS)**: short VIX, CDX, Dollar-FX-futures

**Results:**

<table>
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<th>Event Window Returns</th>
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<tr>
<td>SR</td>
</tr>
<tr>
<td>----------</td>
</tr>
<tr>
<td>(b)</td>
</tr>
<tr>
<td>(t(b))</td>
</tr>
<tr>
<td>(R^2)</td>
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Why does **RS** explain most of the equity variation due to FOMC announcement?
Most of the impact of RS on FOMC days is short lived

If effects of RS are short-lived then they are unlikely to be due to revisions in expected dividends or risk-premia (which tend to be persistent).

Short term price pressure?
Daily ETF-flow-evidence is consistent with price pressure

- Strong positive reaction of flows into stock ETFs to RS on FOMC days.

<table>
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<th>Daily Flows</th>
<th>SR</th>
<th>LR</th>
<th>RS</th>
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<tr>
<td>-0.20</td>
<td>-0.25</td>
<td>0.33</td>
<td></td>
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<tr>
<td>-1.73</td>
<td>-2.11</td>
<td>2.81</td>
<td></td>
</tr>
<tr>
<td>2.89</td>
<td>4.33</td>
<td>7.75</td>
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- Effect is short-lived ~ stock return reaction.
Additional evidence supports the price pressure hypothesis

- Intra-day evidence on volume also consistent with price pressure:

![Figure 4: The SPDR S&P 500 ETF return on FOMC Days from 1998-2017](image)

- Flow-induced price pressure likely to explain sizable (∼ 40%) component of observed FOMC stock return reaction.

![Figure 5: Fund Flow-Induced Price Pressures](image)
RS is mechanically linked to stock returns

- **RS** is a portfolio short VIX and CDX:
  - VIX is portfolio of stock options with different moneyness.
    - Because of negative option skew (or ‘leverage effect’), VIX is decreasing in stock price
  - CDX is the price of insuring against default on 125 investment grade firms.
    - Because of financial leverage effect, CDX decreasing in stock price.

- RS is an increasing function of the stock market price.

- Regressing stock returns on RS is bound to give significant results.

- Important to focus on how RS affects stock returns in vs. outside FOMC announcement periods.

- ETF Flows and news-based results are also useful, but

  Which way does causality run between stock returns and daily flows or news?
Monetary policy and the stock market

- Focusing on short-event windows is nice for identification, but what happens around longer-term windows?

→ Lucca-Moench (2015) argue that 80% of the annual stock market return (risk-premium) is earned during the 24 hours before the FOMC announcements:

source: Kurov, Wolfe, Gilbert (2019) *The Disappearing Pre-FOMC announcement Drift*
How different are stock returns on macro-announcement days really?

- Ernst, Gilbert, Hrdlicka (2019) show that combining announcement days from
  - FOMC (Lucca-Moench 2015),
  - inflation (PPI) and employment (Savor-Wilson 2013) and
  - FOMC-cycle (Cieslak et al. 2019)
  
generates 150% of the annual stock market equity premium!

- Focus on all the macro-economic announcements and show that controlling for sample selection and for seasonality return patterns (day-of-the-month effects) stock returns on announcement days actually do not look that special!

![Figure 3. Distributions using Pseudo-Macro Announcement Rules](image.png)

Panel A (B) shows the exact distribution from selecting 2 (3) macroeconomic variables from Figure 1 overlaid with the baseline of 673 (888) randomly selected trading days over the entire time-series from Figure 2, and a distribution using announcement-rule mimicking structures. For this, we first randomly select two or three macroeconomic variables from Table 6 and then we randomly select trading days over the entire sample period according to these structures. This process is repeated for 5,000 trials.
Concluding comments

- Nice paper (many results!).

- Focus on effect of unexpected policy shock during 90-minute window around FOMC on stock market.

- Find that much of it is short-lived and driven by investor rebalancing and resulting price pressure.

- What does it imply for monetary policy (which should likely focus on the longer-term wealth effects)?

- Focus on event window is nice for identification, but what about
  - impact of policy on longer-term window returns?
  - impact of *expected* monetary policy ‘shocks’ on stock returns?