Equity Term Structure Response to FOMC Announcements

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Discussion:

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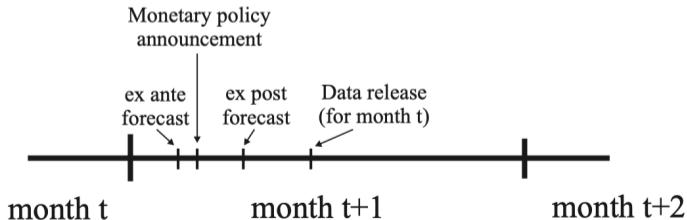
May 2023

Outline

Background

Back-and-forth literature on how the public interprets unanticipated changes to the fed funds rate:

▶ ROMER AND ROMER (2000): *"**The Federal Reserve has considerable information about inflation beyond what is known to commercial forecasters** [. . .] policy actions provide signals of the Federal Reserve's information, and commercial forecasters modify their forecasts in response to those signals. These findings may explain why long-term interest rates typically rise in response to shifts to tighter monetary policy."*

▶ FAUST, SWANSON, AND WRIGHT (2004): **No we don't.**

FIGURE 1: TIMING OF MONETARY POLICY ANNOUNCEMENTS AND DATA
RELEASES FOR PROPOSED TESTS OF SUPERIOR INFORMATION

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Background

Back-and-forth literature on how the public interprets unanticipated changes to the fed funds rate:

► NAKAMURA AND STEINSSON (2018): *"We use a **high-frequency identification** approach to estimate the causal effect of monetary shocks [. . .] in sharp contrast with the implications of standard monetary models, contractionary shocks raise [survey] expectations about output growth. We interpret the increase in expected output growth after a monetary tightening as evidence of a **Fed information effect.**"*

► BAUER AND SWANSON (2023): **We have to do this again?**

FIGURE 2. ILLUSTRATION OF THE "FED RESPONSE TO NEWS" CHANNEL

Notes: The Blue Chip survey of forecasters is conducted in the first two to three business days of each month, while FOMC announcements can occur at any point within the month. In between the time of the Blue Chip survey and the FOMC announcement, significant economic news, such as the employment report, is often released. Old economic news, released before the Blue Chip survey, can also be relevant if some Blue Chip forecasters update their forecasts sluggishly. See text for details.
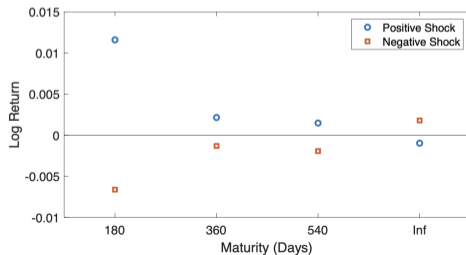
This Paper

Where this paper fits in:

- ▶ Well known [Bernanke and Kuttner (2005)]: Equity ↘ when i_t ↗ unexpectedly

- ▶ ... but what about **short-term equity**? Test using high-frequency changes:

$$\text{Dividend-strip return} = \alpha + \beta(\text{fed funds futures change}) + \varepsilon$$

- ▶ If **short-term equity** ↗ when i_t ↗, would provide robust evidence of Fed information effect **without the problem that pre-announcement survey expectations are measured at a lag**

Figure 1: **Average Dividend Strip Return by Monetary Policy Shock**

This Paper

Additional analyses:

1. Unexpected 6-month dividend strip return positively forecasts real future dividends, even when controlling for unexpected changes to the policy rate

2. Sentiment analysis of FOMC minutes: Information effect is stronger when communication by the FOMC seems to contain more positive info about the growth outlook

3. Simple but clean model in which the short-term–long-term equity response difference can only arise with an information effect

Outline

1. Background & Summary

2. Comments & Interpretation

1. Great idea with big potential impact

- ▶ If **short-term equity** ↗ when i_t ↗, would provide robust evidence of Fed information effect **without the problem that pre-announcement survey expectations are measured at a lag**

- ▶ This is a great idea!

- ▶ Would seem to offer potential resolution to a literature with no convergence after 20+ years

- ▶ Very well written, and a bunch of impressive work on sentiment analysis & model that I'm not even touching on
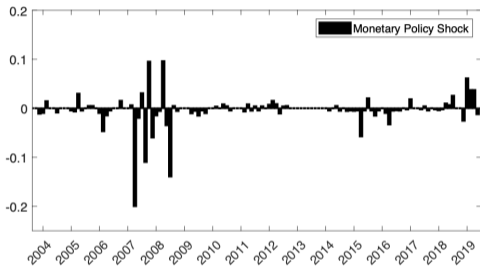
2. But want to be sure of the effect

- High-frequency measurement of dividend strip returns is challenging
- To get intraday estimates back to 2004, have to back out dividend claim prices implied by S&P options from put-call parity:

$$\text{Index} + \text{put}(K) - \text{call}(K) = PV(\text{Dividends}) + Ke^{-r_f}$$

  - No arbitrage: Buy index, buy put, and write call (LHS) = Buy zero-coupon bond + claim to dividends until expiration (RHS)
  - If it's difficult to *measure* high-frequency changes in dividend strip prices in response to small policy shocks, are we sure they can be *traded on*?
  - One cause for concern: The only significant effect is at the 6m horizon, but these are the most noisily estimated (3x higher standard deviation of returns than 12m, but dividend prices should be *less* volatile as one approaches horizon of 0)
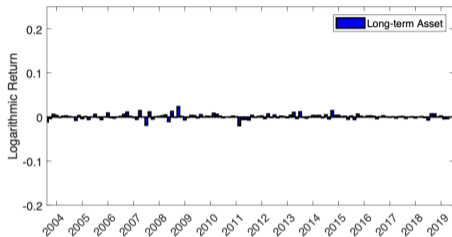
2. But want to be sure of the effect

Figure A.1: **Monetary Policy Shock**

Panel A: Long-term Asset (Aggregate Market)
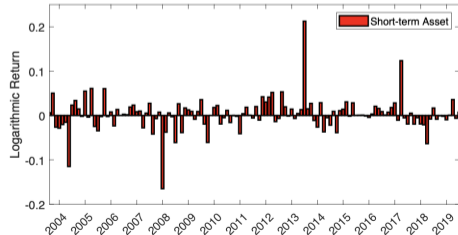
Panel B: Short-term Asset (180-day Dividend Strip)

▶ Small policy shocks (these are changes to 1m fed funds futures rate; should follow the lit. and use a series of maturities)

▶ Small S&P changes. . .but larger & noisier dividend-strip returns

2. But want to be sure of the effect

Figure A.1: **Monetary Policy Shock**

Panel A: Response of Implied Risk-free Rate
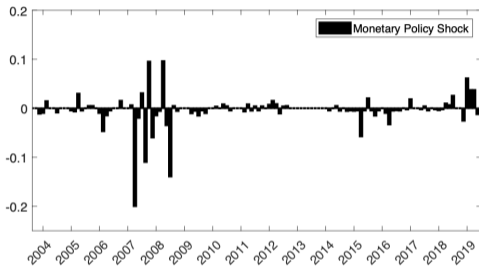
▶ And might be concerned about differential attenuation bias from averaging prices over set of minutes: Pos. & neg. policy shocks are symmetrically sized, but estimated risk-free rates changes are higher after pos. shock
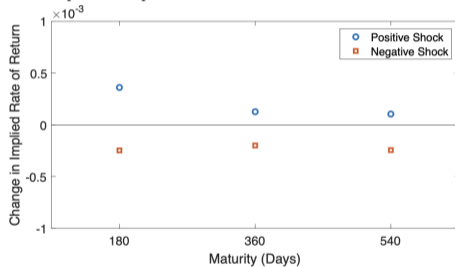
3. Interesting but unanswered questions of interpretation

- ▶ If dividend strips are capturing information effect, shouldn't we see a negative coefficient on the interest-rate shock in the predictive regression for dividend growth controlling for dividend-strip returns?
    - ▶ Table 4: Instead, see insignificant positive coefficient. . .where's the conventional policy effect?
- ▶ Couldn't we also use high-frequency changes in breakeven inflation at shorter horizons to test this information effect?
    - ▶ Some liquidity issues there, too, but evidence in Nakamura & Steinsson (2018) is less strong (close to zero effects)

Final Notes

- ▶ Really liked the paper: thought provoking, well written, and has the potential to provide a meaningful step forward in unsettled literature

- ▶ Need to be certain of the results before I'm ready to declare the literature closed

- ▶ Didn't have time to discuss sentiment analysis & model, in part because I thought both were very well done

Thank you!