Price Informativeness and FOMC Return Reversals

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Q: Why do FOMC days experience abnormal returns?

FOMC days are **unusual**

- Savor and Wilson (2013): over 60% of equity premium is earned on days of FOMC meetings.
- Lucca and Moench (2014): find over 80% of equity remium earned day prior to FOMC meetings.

This paper: Shows that prices on FOMC days are **less informative** than other days.

- Using technique adapted from unbiasedness regressions, show that FOMC day returns are bad predictors of longer-term returns.
- Returns over the FOMC day (and three days after) reverse over following period.
- Evidence reversal associated with ETF flows and attention (press releases, news shocks).

What I'm going to do:

1. Dig into the new technique a little.
2. Suggest places to push the flows story.

Unbiasedness regressions

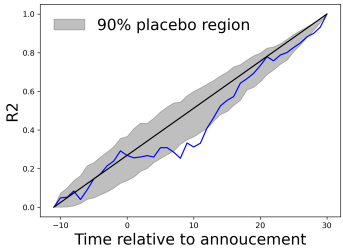
Start by taking R_t^2 from regression:

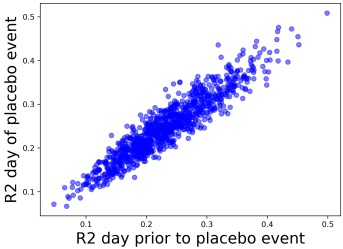
$$p_{i,T} - p_{i,-10} = \beta_t \times (p_{i,t} - p_{i,-10}) + \epsilon_{i,t}$$

Look at R_t^2 over time.

Why this figure is *not* their test statistic:

1. **"Heteroskedasticity":** More likely to see extremes near middle.
   - For instance, $R_T^2 = 1$ (variance of zero).
2. **Autocorrelation:** R_t^2 depends on R_{t-1}^2.
   - Means it's difficult to attribute R_t^2 to particular day.
   - Works for noise but also for **estimation error.**





Unbiasedness regressions

Instead, the authors look at excess R^2.

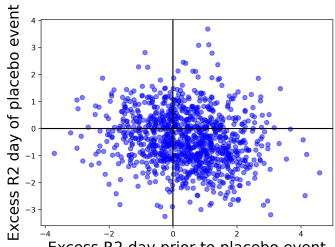
- $H0$: $\Delta R^2 = \frac{T}{N}$, so excess $R^2 \equiv \frac{T}{N}\Delta R^2 - 1$

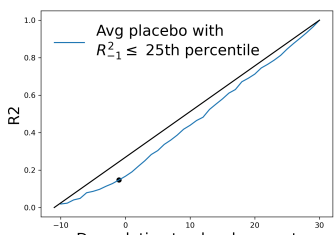
This is a ***much*** better test statistic than if you used R_t^2:

- Lower autocorrelation.
- $H0$ works well on average in bootstrapped sample.
  - That is, given R_{-10}.

However, is $H0$ appropriate ***given*** R_{t-1}?

- If R_t^2 is low (high), R_{t+n}^2 must grow faster (slower) than T/N.
- (Otherwise, $R_T \neq 1$)





Beginning of a solution

To be clear:

1. **This is not their only evidence.** Results on reversion are independent.
2. Results from excess R^2 definitely say something strange is going on close to FOMC date.
3. This only matters (in principle) *away from* the 45 degree line.

A more precise *H*0 will help make this a more precise statistic.

Possible starting point: Taking into account explicit relationship between R_t^2, R_{t-1}^2 and $R_T^2 = 1$.

- Let $\tilde{p}_{i,t} = p_{i,t} - p_{i,-10}$.
- Note can always write: $\tilde{p}_{i,t} = \alpha + \beta \times \tilde{p}_{i,t-1} + e_{i,t}$, with $\text{Cov}(e_{i,t}, \tilde{p}_{i,t-1}) = 0$.
  - Then:

$$\frac{1}{R_t^2} = \left(\frac{1}{\beta Cov(\tilde{p}_{i,t}, \tilde{p}_{i,T}) + Cov(e_{i,t}, \tilde{p}_{i,T}} \right)^2 \left[\frac{1}{R_{t-1}^2} \beta^2 Cov(\tilde{p}_{i,t}, \tilde{p}_{i,T})^2 + \frac{1}{R_e^2} Cov(e_{i,t}, \tilde{p}_{i,T})^2 \right]$$

- Moreover, $R_T = 1$.
- **For the null, impose random walk:** $\text{Cov}(e_{i,s}, \tilde{p}_{i,T}) = \sigma_e^2$ **for** $s > 0$**.**

This seems like it could be the building blocks for a more formal test.

Further thoughts on flows

Show days with high ETF flows have larger reversals.

- Suggests rebalancing, inventory stories due to attention-induced flows.
- **Can more be done by drawing on the cross section?**

Possibly related facts:

- Lucca and Moench (2014): CAPM works on FOMC days, not rest of sample.

Idle thought:

- If mutual funds exhibit similar flows, do stocks with greater mutual fund ownership experience stronger reversals?
- Seems like this kind of exercise could give a lot of insight into the mechanism.

Conclusion

This is a really nice paper:

- Provides new light on a popular topic...
- ... using novel — but straightforward — methods.
- Opens space to think about asset prices and fund flows around the FOMC.
- **Hope to see many more papers on this!**