Discussion of "Monetary-Based Asset Pricing: A Mixed-Frequency Structural Approach"[*]

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Overview of the Paper

Question: Why do financial markets react strongly to the Fed?

Answer with a structural model:

- Model has New Keynesian elements and a central bank
  - ▶ Regime changes in central bank's reaction function
  - ▶ Length of a regime is not known

- Two types of private sector agents:
  1. Investors:
     - ★ Own dividend claims and trade 1-period nominal bonds
     - ★ Form beliefs about central bank reaction function and probability of changing to new regime
  2. Households: Determine macro dynamics in the model

Overview of the Paper

Question: Why do financial markets react strongly to the Fed?

- Challenge: FOMC announcements are irregularly-timed

- Investors pay attention to economy at mixed frequencies
  - Observe state of economy at monthly frequency
  - Estimate state of economy and revise beliefs based on irregularly-timed Fed announcements

- Results:
  1. Investors react to revisions in beliefs, not just conventional shocks
  2. Beliefs about regimes evolve outside of Fed announcement windows
  3. Monetary policy regime changes and beliefs about regime changes cause large variation in the stock market and short-term rates

Comments

Many good elements of this paper:

- Allows monetary policy to have more than one effect
  - Conventional shocks
  - Influence on investor beliefs

- Merges high-frequency event studies with structural macro
  - Structural estimation of high-frequency shocks
  - Importance of information inside and outside of high-frequency windows

- Agents not fully rational: learn and form beliefs about economy

- Takes regime change seriously

What I am skeptical of: how regimes are determined

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Regime Changes in U.S. Monetary Policy

The sample in this paper is January 1960 to February 2021

Many possibilities for regime change:

1. How reactive Fed is to inflation (pre-Volker, Volker, post-Volker)
   - Clarida, Galí & Gertler (2000, QJE), Orphanides (2001, AER)
2. Bretton Woods system versus post-Bretton Woods system
   - Bordo & Eichengreen (2013, NBER)
3. Regulation Q is binding versus Regulation Q is non-binding
   - Duca (1998, JEB), Mertens (2008, JME), Koch (2015, JBF)
4. Zero lower bound episodes
   - Use of quantitative easing and tightening
   - Scarce reserves versus abundant reserves
5. Changes in Fed transparency and communication
   - Swanson (2006, JMCB), Lunsford (2020, AER)

A "Model-Free" Approach to Regime Change

1. Monetary policy spread (*mps*):

$$mps_t = FFR_t - \text{Expected Inflation}_t - r_t^*$$

   - FFR_t is average nominal federal funds rate in a quarter
   - Expected inflation is four quarter moving average
   - r_t^* is from Laubach & Williams (2003, ReStat)

2. Test for breaks in mean of *mps*

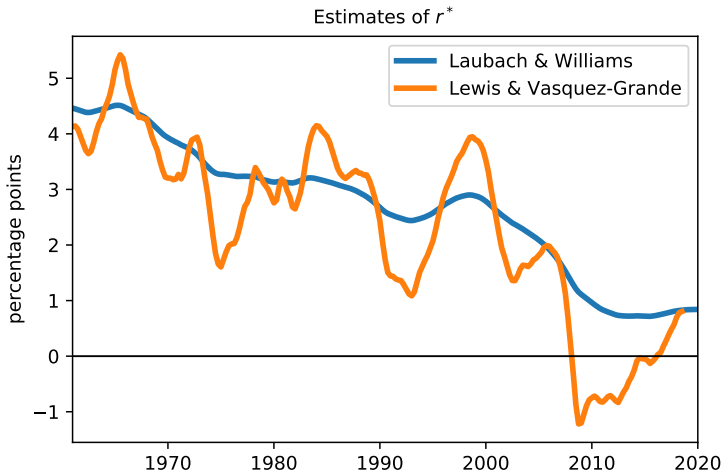How robust are dates to other models for r^*?

- Laubach & Williams (2003, ReStat)
- Lewis and Vasquez-Grande (2019, JAE)
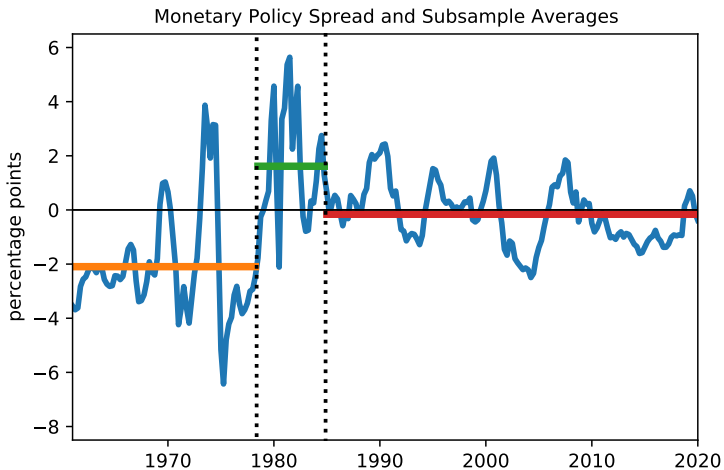
The Laubach & Williams Monetary Policy Spread

Monetary Policy Spread and Subsample Averages
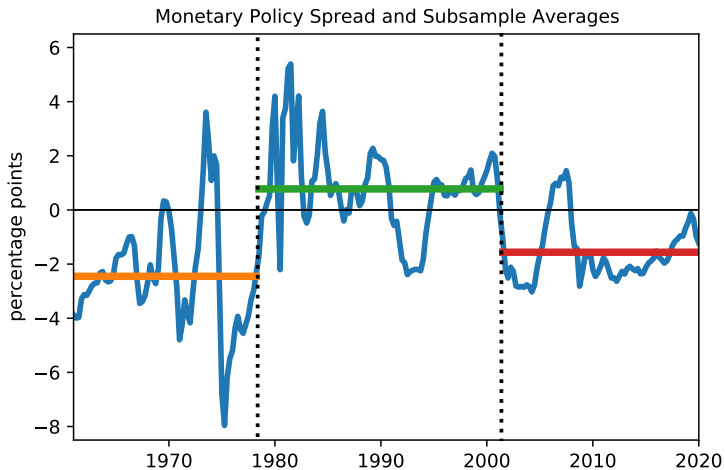
- Breaks: 1978:Q2 and 2001:Q2

Different Estimates of r^*

The Lewis & Vazquez-Grande Monetary Policy Spread

Monetary Policy Spread and Subsample Averages

- Breaks: 1978:Q2 and 1984:Q4

Questions for the Authors

- Is there another way to assign break dates?
  - Perhaps, based on inflation trends?
  - Regimes:
    1. Inflation rises in 1960s and 1970s
    2. Inflation falls in 1980s and early 1990s
    3. Inflation flat since mid 1990s

- Why use a "model-free" approach?
  - Can breaks be assigned within the model?
  - When investors' perceived probability of a break is sufficiently high?