Discussion of
"*Measuring Euro Area Monetary Policy*"
by Altavilla, Brugnolini, Gürkaynak, Motto and Ragusa

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Great paper

Key finding

Multidimensionality of monetary policy.

1. Amazing data set to share - I will use it immediately
2. Lovely history of ECB monetary policy
3. 3/4 dimensions rather than traditional 2/3 GSS+S:
    3.1 Target
    3.2 Path (Forward Guidance)
    3.3 Timing
    3.4 QE
4. Persistence of shocks
5. Asymmetry most likely a feature of the real economy
    - Rather than financial markets
6. OIS rate changes captured different types of information:
    - FG before 2014; QE afterwards.

Comments

- My work with Stephen Hansen and other co-authors has a similar motivation, different approaches but the same key finding: multidimensionality matters

- My comments are mostly broad comments:

    1. What is driving the reaction?
        - It could be many things? Can we learn what it is?

    2. A Euro Area Communication Puzzle

    3. Some Specific Comments

- Finish with a plug

Typical Event Study Approach
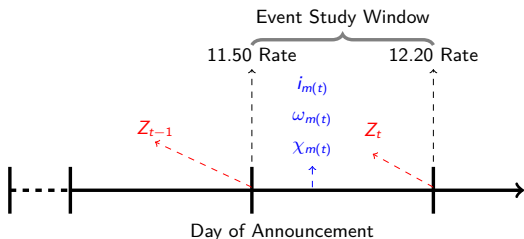
Key finding

If we observe a systematic reaction in market interest rates to communication events, then the market must receive information about one of these components.

- Excellent to isolate the impact on markets
- But conflates the effects of the different signals - GSS (2005)

But which signals matter? Why?

"Note that what matters for these surprises is how market participants interpret the policy news and how their expectations change following the policy news; it is not about the type of signal the central bank aimed to provide."
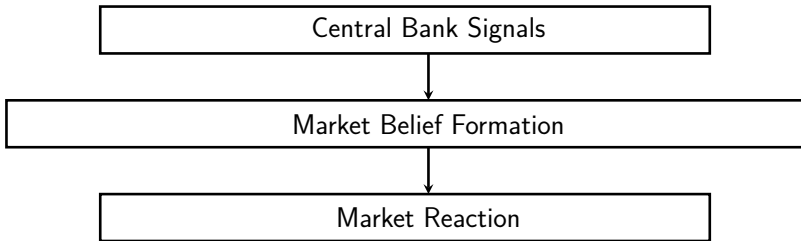
Why Does Central Bank Communication Matter?

What is the source of news?

- Direct signal of policy action
- Central bank private information on economic conditions

Why do monetary policy events move *long-maturity* yields?

- **Nakamura & Steinsson (2017)**: CB announcements reflect information about economic fundamentals with a long-term impact.
- **Hanson and Stein (2012)**: Change in short-rate expectations induce yield-oriented investors to switch to/from longer maturity bonds.
- **Hansen, McMahon and Tong (2018)**: Information effect channel through term premiums - distributional information matters

Identification Problem:
Signal may identify different components of reaction

- A Monetary Policy Rule:

$$i_m = r_t^* + \pi^* + \phi^T \omega_m + \epsilon_m$$

- r^*: equilibrium real interest rate
- π^*: inflation target
- $\omega_m = \left(\pi_{m;h}^{CB}, \tilde{y}_{m;h}^{CB} \right)^T$
  - $\pi_{m;h}^{CB} \equiv \mathbb{E}_m^{CB}[\pi_{m+h}] - \pi^*$
  - $\tilde{y}_{m;h}^{CB} \equiv \mathbb{E}_m^{CB}[\tilde{y}_{m+h}]$

- Consider the k-month forward rate:

$$f_{k,t} = \mathbb{E}\left[r_{t+k}^* \mid Z_t \right] + \pi^* + \phi^T \mathbb{E}\left[\omega_{m(t)+k} \mid Z_t \right] + \mathbb{E}\left[\epsilon_{m(t)+k} \mid Z_t \right] + \mathrm{TP}(f_{k,t})$$

A Communication Information Test

- "*Central Bank Communication and Inflation Expectations*" by Hansen, Hubert and McMahon (2017)

- We formulate the constrained likelihood problem for each medium m and each long-run asset a:

$$\min_{\beta} \sum_t \left(\nu_{a,m,t} - \beta^T \tau_{m,t} \right)^2 + \lambda \sum_v |\beta_v|$$
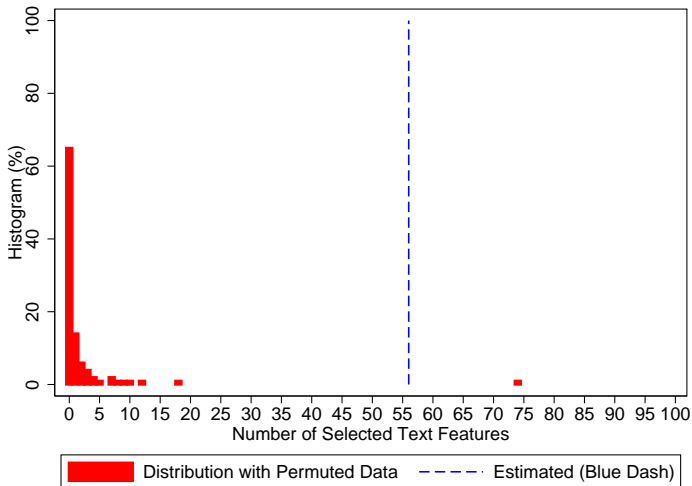
  where $\nu_{a,m,t}$ is the asset price residual.

- λ selected by leave-one-out cross validation (LOOCV).

- Simulate a distribution of the number of bigrams selected under the null of random relationships (100 draws)

Information Test Histograms: Fed Statements

Figure: 5-yr inflation swaps

Information Test Results - Fed

Table: Fed Results

	Real (5yr)	Real (10yr)	Swap (5yr)	Swap (10yr)
Fed statements	17	44	56	63
Fed minutes	83	78	18	41

(a) # of selected bigrams

	Real (5yr)	Real (10yr)	Swap (5yr)	Swap (10yr)
Statements	7	2	1	0
Minutes	1	1	25	9

(b) Permuted draws in which # features $\geq$ # in baseline (100 draws)

Information Test Results - ECB

Table: ECB Results

	Real (5yr)	Real (10yr)	Swap (5yr)	Swap (10yr)
ECB press conf	0	1	0	0
Under Trichet	0	4	0	0
Under Draghi	0	55	0	1

(a) # of selected bigrams

	Real (5yr)	Real (10yr)	Swap (5yr)	Swap (10yr)
ECB Conference	100	53	100	100
Under Trichet	100	24	100	100
Under Draghi	100	0	100	70

(b) Permuted draws in which # features $\geq$ # in baseline (100 draws)

Specific Comments

1. Can this approach of estimating and naming the shocks help with understanding the signals that drive shocks or the market response?
   - Use the components of the reaction? Or the relationship between maturities?

2. Are there "QE factors" before QE?
   - 6% significance!
   - Rolling Window to see when they start taking effect? Only post-2014?

3. Some asymmetry?
   - Table 11: asymmetry of FG on OIS 5Y and 10Y.
   - Table 13 (Spain): Some asymmetry of the Timing shock.

CEPR RPN

New CEPR Research Policy Network

CEPR has recently established a new type of research network: a Research and Policy Network, the main aim of which is to build a community of researchers around a particular topic and to ensure that policy issues are considered over a longer time period than is often the case when a single piece of output is produced and then the researchers involved move on.

- I shall lead one on Central Bank Communication.

- Events, research discussion, policy interactions, and more.

- Let me know if you are interested in being involved.

Summary

- Cool Topic

- Great Paper

- Superb Data

Simple Advice

Read this paper and use these data.

END

Our Event Study: Bank of England Inflation Report

- We use data from 70 *IR* from 1998 through to mid-2015
    - Quantitative signal ω_t
    - Rich source of text χ_t

Figure: Event Study Time Line for Month t: Example of $f_{36,t}$