

**“The Transmission of Monetary Policy Shocks”
by Silvia Miranda-Agrippino and Giovanni Ricco**

Discussion by

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Methodological contributions of the paper

1. Important analysis of the effects of **informational rigidities** on the identification of monetary policy shocks.
2. **New estimate of monetary policy shocks** that is easily constructed by combining past approaches.
 - Romer and Romer Greenbook and market-based surprises
3. **New method for estimating impulse response functions**, again combining past approaches.
 - Bayesian LP combines SVAR and LP

MAR's idea behind the informational rigidity

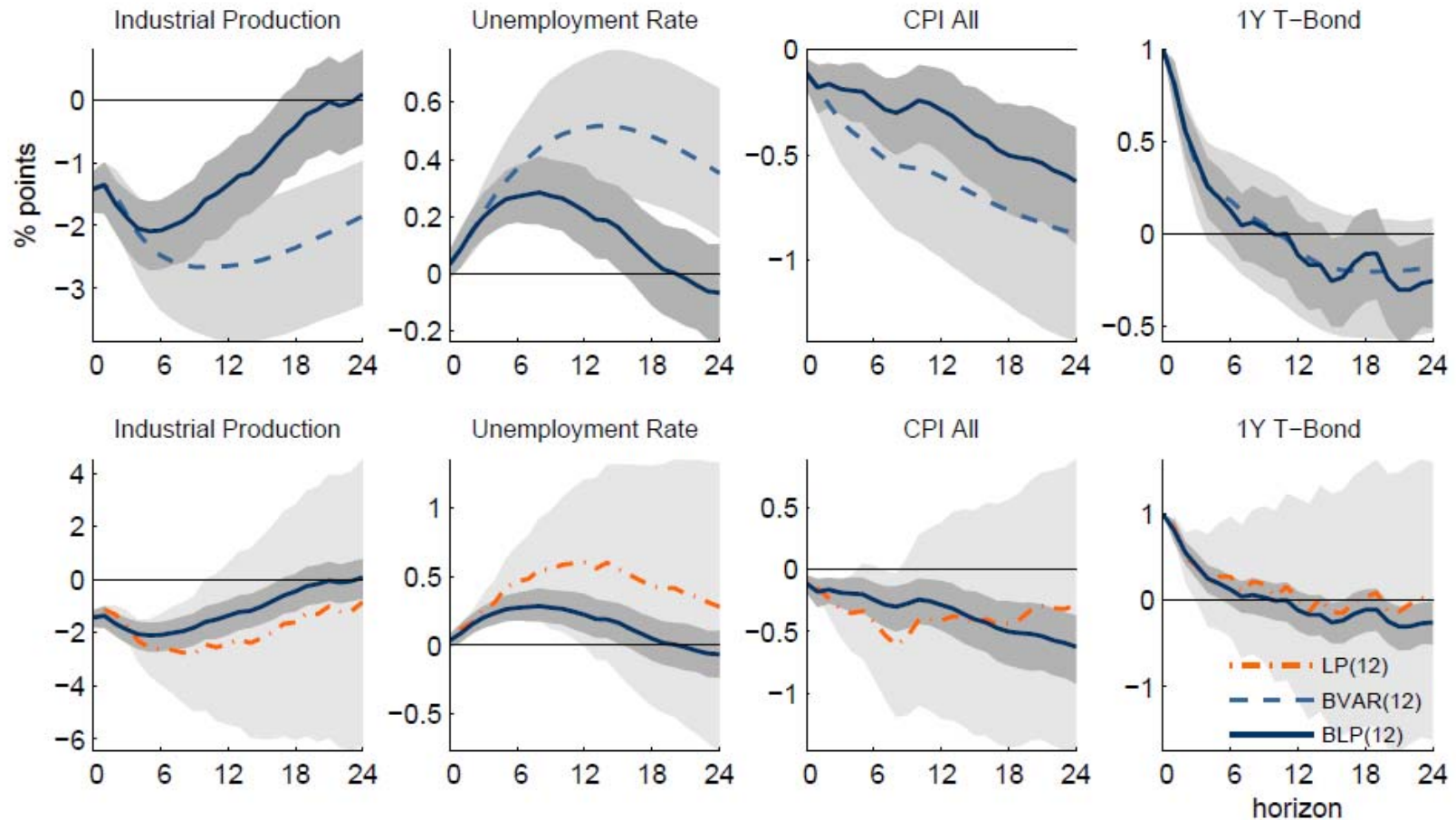
- Both the central bank and private agents receive (separate) **noisy signals about the fundamentals** of the economy.
- Both **update their forecasts** using a Kalman filter.
- In this economy:
 - Expectation revisions are **not orthogonal** to their own past or to past available information.
 - **Central bank actions reveal information** about fundamentals to private agents.
 - Standard measures of **shocks** (market-based or Romer-Romer) **will be serially correlated**.

This insight helps explain a lot of puzzles!

- Miranda-Agrippino and Ramey (*Handbook*) independently discovered that the **Gertler-Karadi** monetary policy shocks **were serially correlated**.
- My *Handbook* chapter found **numerous puzzles** when I subjected the Romer-Romer and Gertler-Karadi shocks to robustness checks.
- Miranda-Agrippino and Ricco (MAR) **construct a new measure of monetary policy shocks** that is serially uncorrelated and obtain beautiful, **classic effects of monetary policy shocks on macro variables**.

Example of their results

From the smaller scale VAR



Miranda-Agrippino-Ricco's monetary policy shock

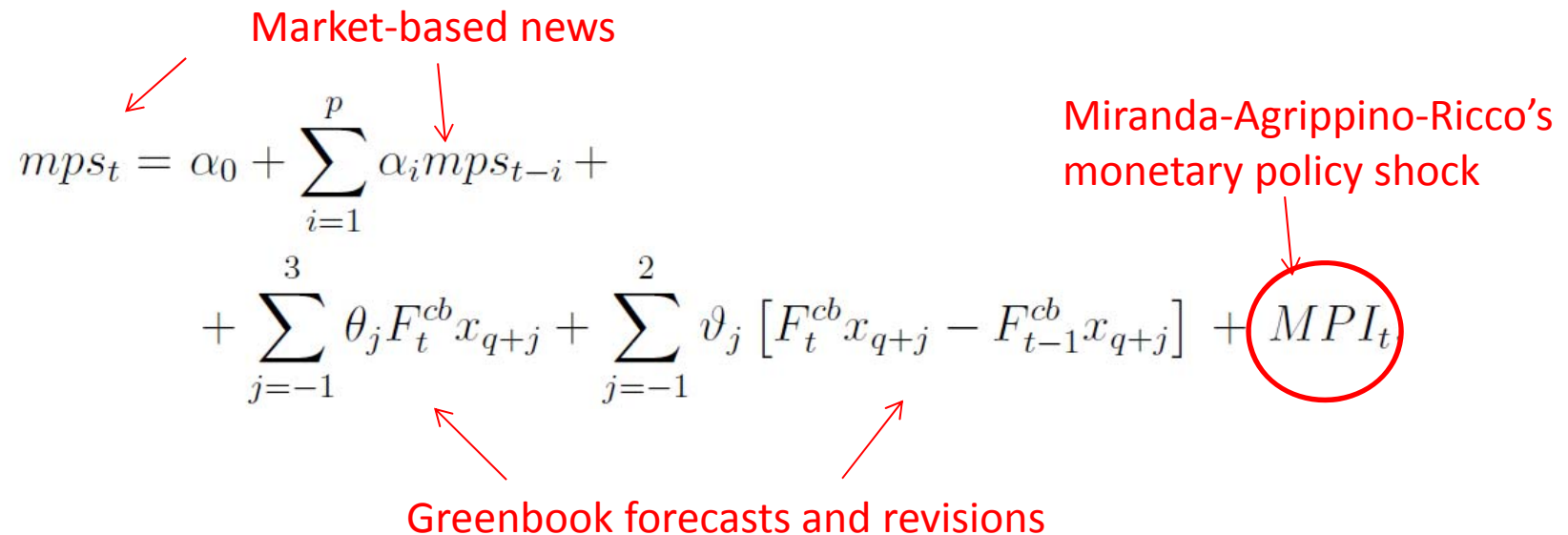
- The residual in the following regression:

$$mps_t = \alpha_0 + \sum_{i=1}^p \alpha_i mps_{t-i} + \sum_{j=-1}^3 \theta_j F_t^{cb} x_{q+j} + \sum_{j=-1}^2 \vartheta_j [F_t^{cb} x_{q+j} - F_{t-1}^{cb} x_{q+j}] + MPI_t$$

Market-based news

Miranda-Agrippino-Ricco's monetary policy shock

Greenbook forecasts and revisions

The diagram shows the regression equation with several red annotations. A red arrow points from the text 'Market-based news' to the sum of lagged mps terms. Another red arrow points from 'Miranda-Agrippino-Ricco's monetary policy shock' to the term MPI_t, which is circled in red. A third red arrow points from 'Greenbook forecasts and revisions' to the sum of Greenbook forecast terms. There is also a red arrow pointing from the Greenbook forecast terms towards the MPI_t term.

- It is this MPI_t shock that produces all of the clean results (i.e. shocks that raise the target interest rate are contractionary).
- A puzzle: When writing my Handbook chapter, I also projected the news on the Greenbook forecasts, but still got puzzling results.

Theoretical conundrum

- Miranda-Agrippino-Ricco (MAR) implicitly assume that a correctly identified true monetary policy shock from the Taylor Rule

$$i_t = \phi_0 + \phi'_x F_{cb,t} x_t + u_t ;$$

should affect the economy in the standard way, i.e., that a positive u_t should lead to contractionary effects on output, unemployment, etc.

- I will now argue that their idea of information rigidities doesn't predict standard effects!

Theoretical conundrum

Miranda-Agrippino-Ricco beautifully state the implications of information rigidities on page 12:

implicit disclosure of information can strongly influence the transmission of monetary impulses, and the central bank's ability to stabilise the economy. Empirically, if not accounted for, it can lead to both price and output puzzles. In fact, a policy rate hike can be interpreted by informationally constrained agents either as a deviation of the central bank from its monetary policy rule – i.e. a contractionary monetary shock –, or as an endogenous response to inflationary pressures expected to hit the economy in the near future. Despite both resulting in a policy rate increase, these two scenarios imply profoundly different evolutions for macroeconomic aggregates, and agents' expectations

Theoretical conundrum

- MAR implicitly assume that if they – **the econometricians** – can correctly identify the monetary policy shock, then the **private agents** should respond to it as a true monetary policy shock.
- The problem is that **private agents don't have the Greenbook forecasts in real time** – they must still do the **signal extraction problem**. (see p. 97 of my *Handbook* chapter)
- BTW, this critique also applies to Romer and Romer (2004).

Expanding the **econometrician's information set** by adding Greenbook forecasts doesn't solve the agents' signal extraction problem.

Is the information effect important?

Yes, particularly in samples that start in the 1990s:

- Campbell et al. (2012) find that an unexpected increase in interest rates leads forecasters to predict a fall in the unemployment rate.
- Nakamura and Steinsson (2017) find that an unexpected rise in interest rates leads forecasters to expect faster GDP growth.
- Melosi (2017) finds that contractionary monetary policy leads to rises in expected inflation.

But Miranda-Agrippino-Ricco find standard results when they use their new shock **This can only happen if private forecasters were able to correctly identify the shock.**

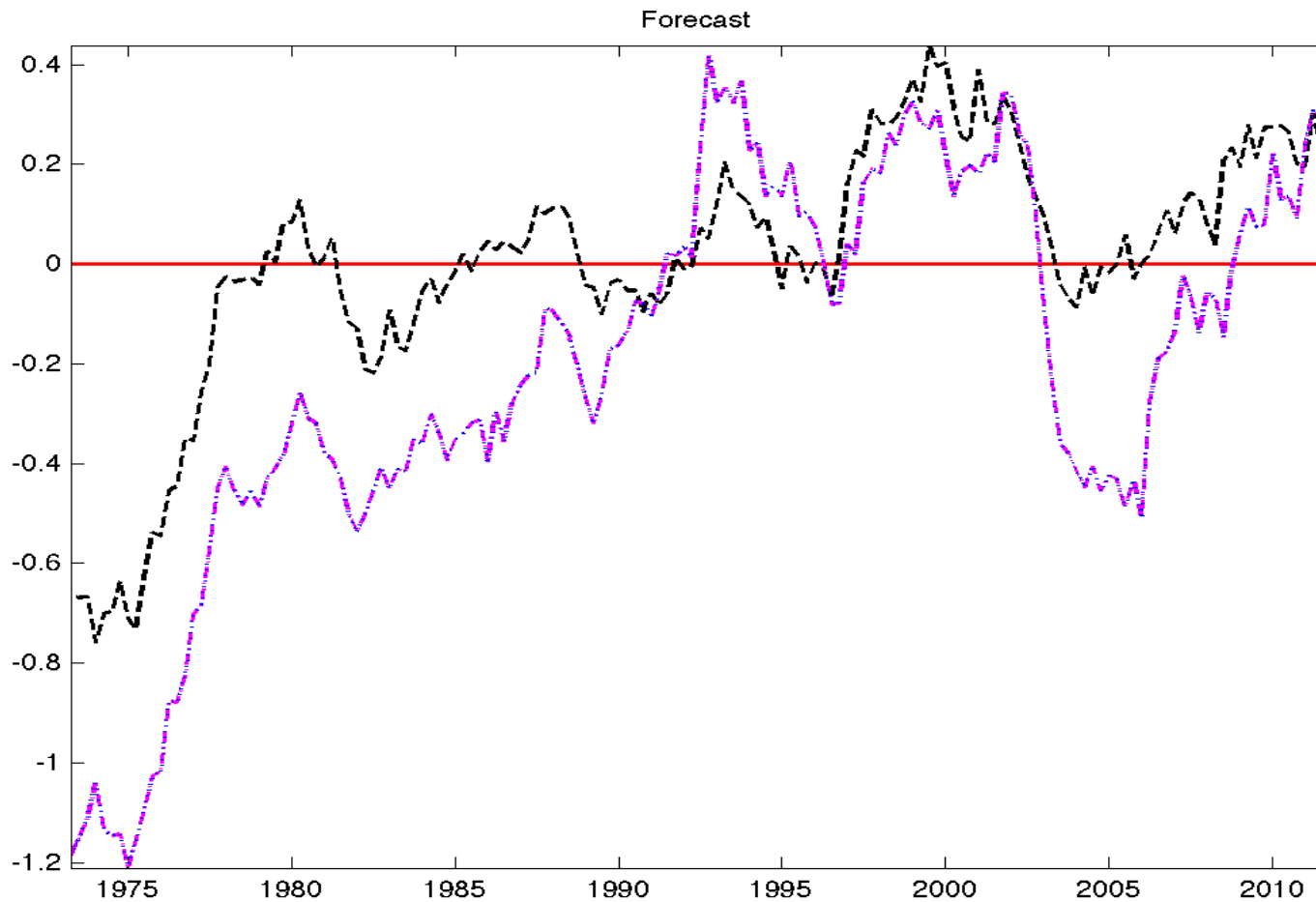
The Conundrum

- As long as the information effect is important, then **even true monetary policy shocks should not have standard monetary effects.**
- This then raises the question: why did Christiano, Eichenbaum and Evans (1999) and others get **standard monetary effects** using standard VARs in the earlier period?
- In **work-in-progress, Wenbin Wu and I** explain why. In particular, we explain why standard identification methods produce classic results for the early period but reverse results for the later period.

Ramey-Wu explanation

- Before the 1980s, the Federal Reserve conducted monetary policy very erratically, so a significant part of the **identified** monetary shocks was due to **true** monetary shocks.
- As I argue in my Handbook chapter, **true monetary shocks are now rare** since monetary policy is being conducted more systematically.
- Thus, most of the interest rate surprises are comprised of the superior information on the part of the Fed.
- **Wenbin Wu and I study how professional forecasters reactions to standard identified monetary shocks changes over time.** Consider the following:

The effect of a standard identified monetary shock on survey expectations of future output growth



From Valerie Ramey and Wenbin Wu, work in progress.

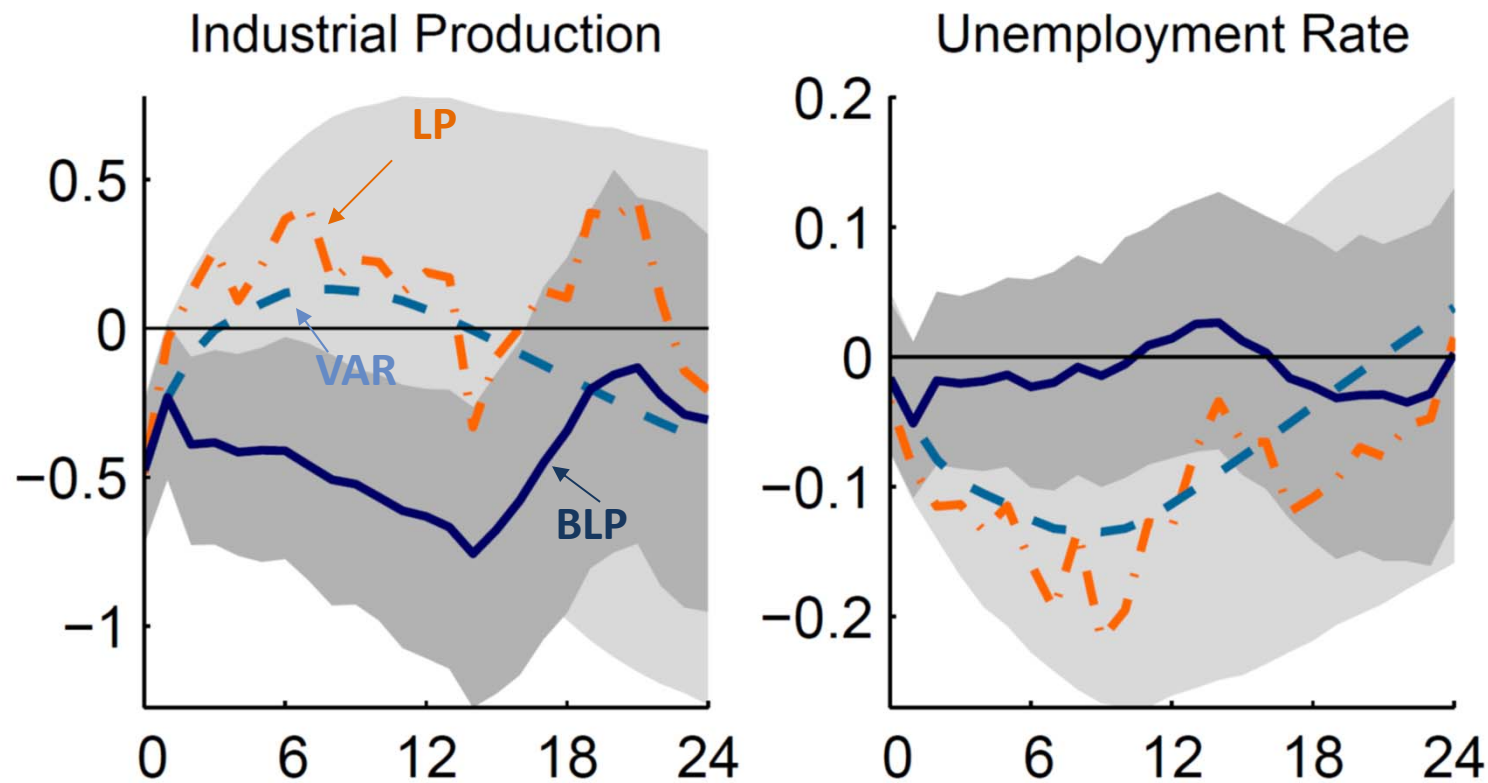
A few comments on the new BLP methodology.

1. It seems to be a **very promising way** to combine the flexibility of local projections with the precision of VARs.
2. Because the authors use **proxy SVARs much like Gertler-Karadi**, it shares two issues there:
 - Possible **nonfundamentality** (due to forward guidance)
 - **Identification from 1979** – end, even though shocks are available only from the early 1990s.
3. There are some results that seem **puzzling**:

Puzzling Results

Page 6: “the posterior mean of BLP IRFs is an optimally weighted combination of VAR and LP-based IRFs.”

But from Figure 11:



Conclusions

1. Very nice paper that significantly moves the literature forward on understanding the puzzles about the nature of the identified shocks (e.g. serial correlation).
2. The new BLP methodology is a promising new methodology for estimating IRFs.
3. I am less convinced by the monetary transmission results, since I think that there is logical inconsistency.

Explorations with Gertler-Karadi (2015) Monetary Shocks

Possible explanations:

- Gertler and Karadi's impulse responses functions are constructed as nonlinear functions of the reduced-form VAR parameters estimated on data from **1979 through 2012**; the Jordà method estimates are for the 1991 to 2012 sample and are direct projections rather than functions of reduced-form VAR parameters. Since the estimates of the impact effects on industrial production are near zero for both methods, the entire difference in the impulse responses is due to the differences in the dynamics implied by Gertler and Karadi's reduced form VAR parameter estimates.
- A second possible explanation for the difference is that the rising importance of **forward guidance** starting in the mid-1990s means that the VAR underlying the proxy SVAR is misspecified. Gertler and Karadi's fed funds futures variable captures news well, but they do not include it directly in the SVAR; they only use it as an instrument.