

DISCUSSION OF
**A. Inoue, B. Rossi – ‘The Effects of
Conventional and Unconventional Monetary
Policy on Exchange Rates’**

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NBER International Seminar on Macroeconomics
Dublin, 29-30 June 2018

Summary

This Paper:

- ▶ What is the effect of **conventional/unconventional** US MP on **exchange rates**?
- ▶ **Methodology** VARs with functional shocks (Inoue and Rossi, 2017)
⇒ Shocks are **shifts in the yield curve** (multidimensional)

Results:

- ▶ Conventional/unconventional monetary policy easing ⇒ Depreciation in spot nominal exchange rates
- ▶ **Lots of heterogeneity...**

Very important question!

(International Transmission of MP Shocks)

Important methodological contribution...

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Important methodological contribution... interesting application!

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1. Shock as **shifts in the yield curve** on announcement days

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3. **Set Identification** of Impacts

$$A_0 = \begin{pmatrix} A_{11} & 0_{M \times 1} \\ A_{21} & A_{22} \end{pmatrix} \begin{pmatrix} Q & 0_{M \times 1} \\ 0_{1 \times M} & 1 \end{pmatrix}$$

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4. Impulse Response Functions

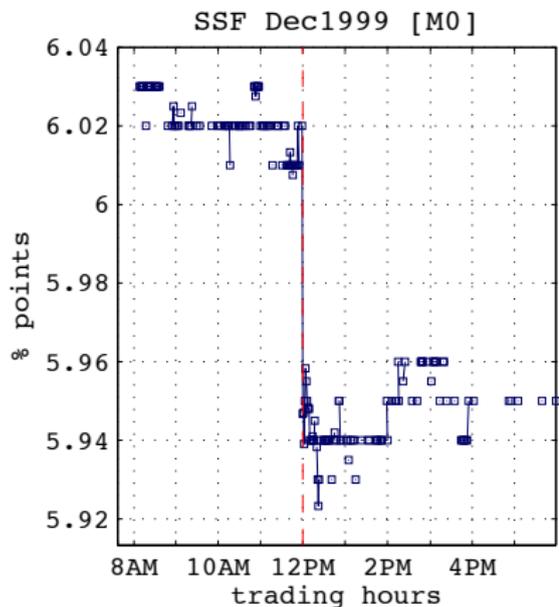
$$\frac{\partial \Delta s_{i,t+h}}{\partial \varepsilon_t^m(\tau)} = \sum_{\tau=1}^M c_{\tau,h} (A_{11} Q)^{-1} \varepsilon_t^m(\tau)$$

Assumptions

1. **Exogeneity**: movement in yield curve on an announcement day only due to the MP shocks
2. The VAR is the DGP
3. (Partially) **Recursive** structure – Yield curve responds to Exchange rates only with a lag
4. **Perfect observability** of shocks

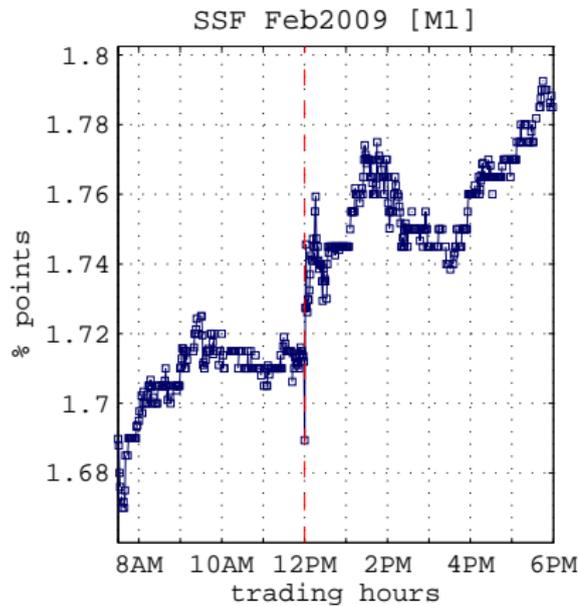
1. MP Shocks vs Information

A Typical Announcement Day



1. MP Shocks vs Information

UK Q1-2009



event type: Rate Decision
date: 05/02/2009 12:00
new rate: 1 (old: 1.5)
forecast: 1

conflicts:
none

1. MP Shocks vs Information

UK Q1-2009



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5 February 2009

Bank of England Reduces Bank Rate by 0.5 Percentage Points to 1.0%

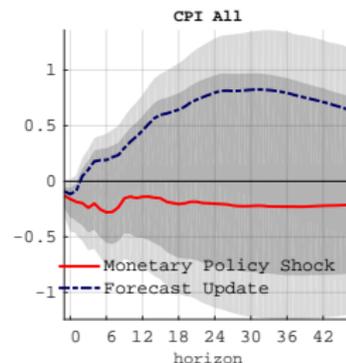
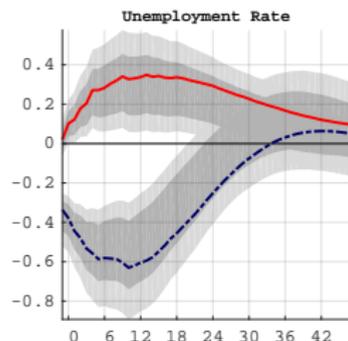
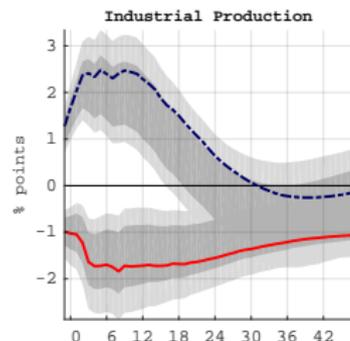
The Bank of England's Monetary Policy Committee today voted to reduce the official Bank Rate paid on commercial bank reserves by 0.5 percentage points to 1.0%.

The global economy is in the throes of a **severe and synchronised downturn**. **Output in the advanced economies fell sharply** in the fourth quarter of 2008, and growth in the emerging **market economies appears to have slowed markedly**. **Business and household sentiment in many countries has deteriorated**. The **weakness of the global banking and financial system** means that the supply of credit remains constrained.

In the **United Kingdom**, output dropped sharply in the fourth quarter of 2008 and **business surveys point to a similar rate of decline in the early part of this year**. **Credit conditions** faced by companies and households have **tightened further**. The underlying picture for consumer spending appears weak. Businesses have

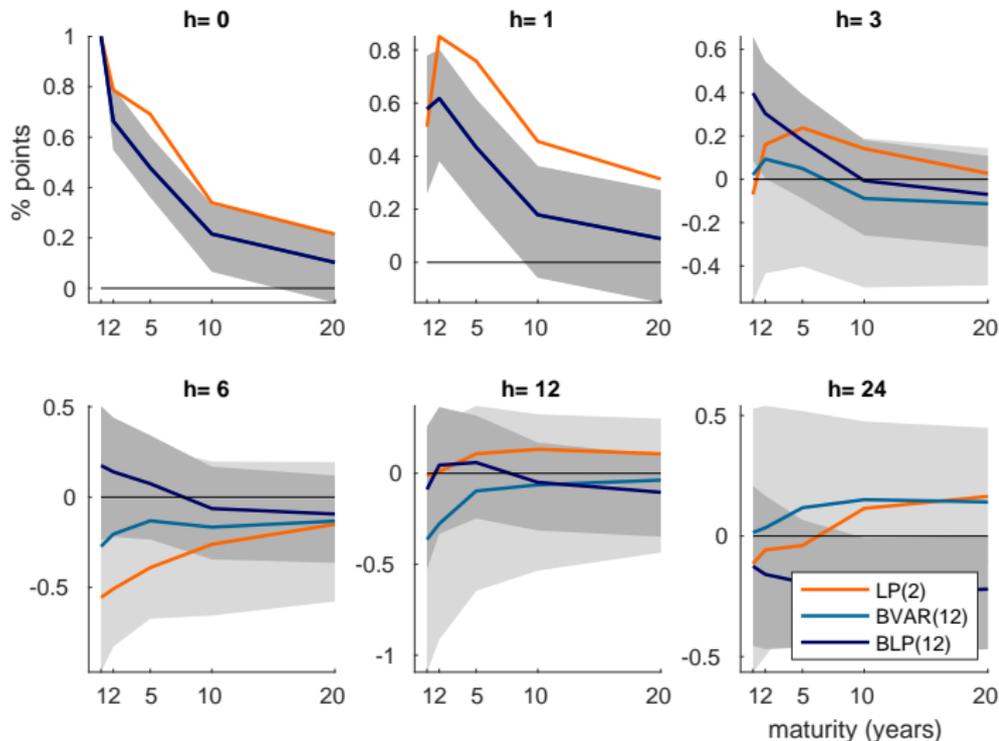
1. MP Shocks vs Information

$$\begin{aligned} mps_t = & \alpha_0 + \sum_{i=1}^p \alpha_i mps_{t-i} \\ & + \underbrace{\varrho F_t^{cb} u_{q+0} + \sum_{j=-1}^3 \rho_j F_t^{cb} x_{q+j} + \sum_{j=-1}^2 \theta_j [F_t^{cb} x_{q+j} - F_{t-1}^{cb} x_{q+j}]}_{\text{Information}} + MPI_t \end{aligned}$$



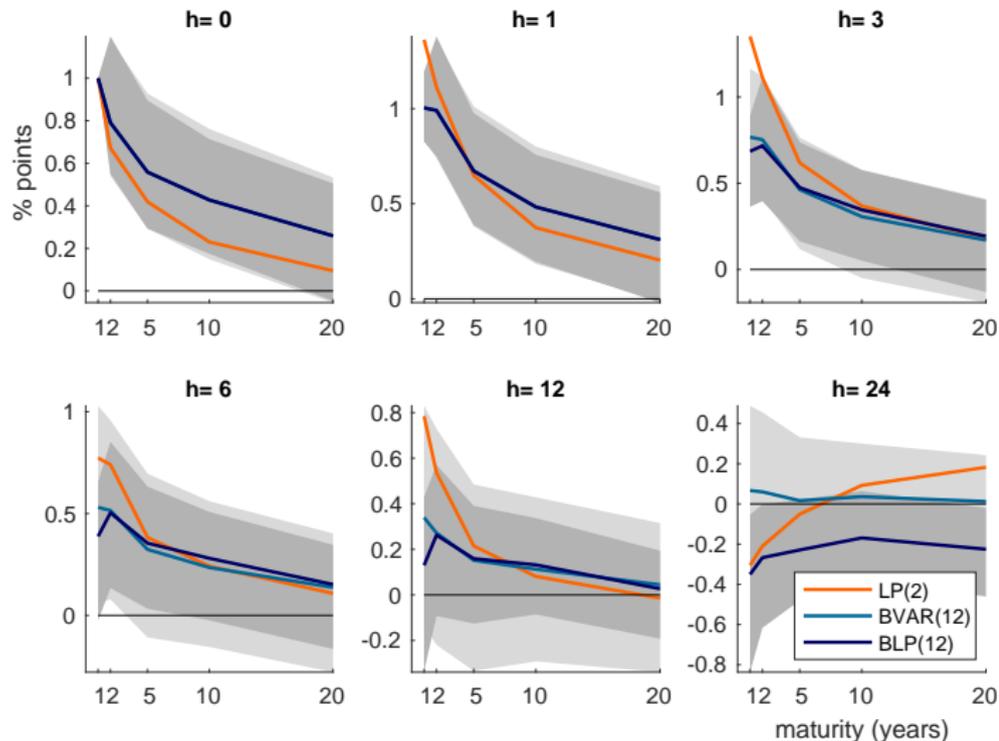
1. MP Shocks vs Information

MP Shock – Yield Curve Response



1. MP Shocks vs Information

Information Released – Yield Curve Response



1. MP Shocks vs Information

Which Information?

- ▶ Present **state of the economy** (**Signalling Channel**)... and future ones (**Odyssean vs Delphic FG**)
- ▶ Revision of **risk premia**
- ▶ Changes to MP rule **parameters**
- ▶ ...
- ▶ **Shifts** the yield curve at **different maturities** (Ellingsen and Söderström, 2001)

⇒ **Heterogeneity?**

2. Informational Sufficiency and Misspecification?

Misspecification?

- ▶ If the Identification is correct but...
- ▶ ... the VAR does not capture the Data Generating Process...
- ▶ ... bias in transmission coefficients!

The Model:

- ▶ Very small information set (**only yields!**)...
- ▶ Short lag order ($p = 2$)
- ▶ The two interact! (Shoerfheide, 2005)

- ▶ Highly collinear time-series...
- ▶ Bayesian techniques allow to shrink towards common factors...
- ▶ Informative or non-informative priors?

Do VAR coefficients capture the dynamics of exchange rates?

⇒ **Heterogeneity?**

3. The Impact Matrix

1. IRFs are set identified, as in sign restrictions
 - Is Q sampling inducing implicit priors (e.g. Baumeister, Hamilton 2015)?
 - Model distribution?
2. Exchange rate shocks do not affect yield curve on impact
 - Two type of shocks:
 - (i) yield curve shock
 - (ii) exchange rate shocks

several shocks may contemporaneously affect all of them...

⇒ **Heterogeneity?**

4. Daily Jumps a Perfect Measure of MP Shocks?

- ▶ Usual setting for **IV-SVAR** and **IV-LP** (using **future contracts**)

$$z_t = \kappa u_t^{mp} + \eta_t$$

Instrumenting (and normalising) gets rid of noise and constants

- ▶ Here surprises are **directly employed** in the IRFs
- ▶ MP shocks or MP surprises:
effects of **deviations from MP rule** or...
effects of **MP announcements?**
- ▶ How do the **model forecast** and **market forecast** relate?
Inconsistency?

Conclusions – Some conceptual issues...

1. Information revelation or MP shocks?
2. What are the fundamental degrees of freedom?
 - VAR: N variables $\implies N$ shocks!
 - Shifts live in a M -dim subspace of the VAR shocks...
 - Shifts or shocks?
3. Statistics approaches or Single event descriptions?
 - Models distribution, parameters uncertainty...
 - **Coverage bands!**
4. How much heterogeneity?

Deep conceptual issues... Thoughtful paper!