Discussion of

Ghysels, Idier, Manganelli, Vergote

A high frequency assessment of the ECB securities markets programme

By **Marek Jarociński**

European Central Bank, DGR/MPR

ECB Workshop on non-standard monetary policy measures, Frankfurt, 6-7 October 2014

What this paper does

- Estimates the effect of SMP interventions on yields
- Endogeneity problem addressed by using high frequency data
- Finding: SMP interventions reduced yields and volatility

My discussion

1. Endogeneity problem, identification
2. Propagation of the SMP effect within a day – a comment
3. Persistence beyond one day – a question

1. Endogeneity problem

- Question: what is the effect of SMP interventions on yields?
- Problem: SMP interventions are endogenous
  - **SMP interventions happen when yields are high**

Regression with daily data

$$\text{yield}(t) = \gamma_0 \, \text{SMP}(t) + \ldots + v(t)$$

- γ_0 captures causal effects both ways, SMP $\leftrightarrow$ yield
  - **yield responds to SMP (-)**
  - **SMP responds to yield (+)**

What changes when *t* is *15 minutes*?

- Timing restrictions become possible!
  - **yield responds to SMP immediately (-)**
  - **SMP respond to yield WITH A LAG**

↑

IDENTIFYING ASSUMPTION

What changes when *t* is *15 minutes*?

- Timing restrictions become possible!
  - **yield responds to SMP immediately (-)**
    - traders at private institutions are fast:
  - **SMP respond to yield WITH A LAG**

What changes when *t* is *15 minutes*?

- Timing restrictions become possible!
  - **yield responds to SMP immediately (-)**
    - traders at private institutions are fast:
  - **SMP respond to yield WITH A LAG**
    - traders at ECB are less fast

- **γ_0 captures the immediate causal effect SMP → yield**

2. Propagation of the SMP effects

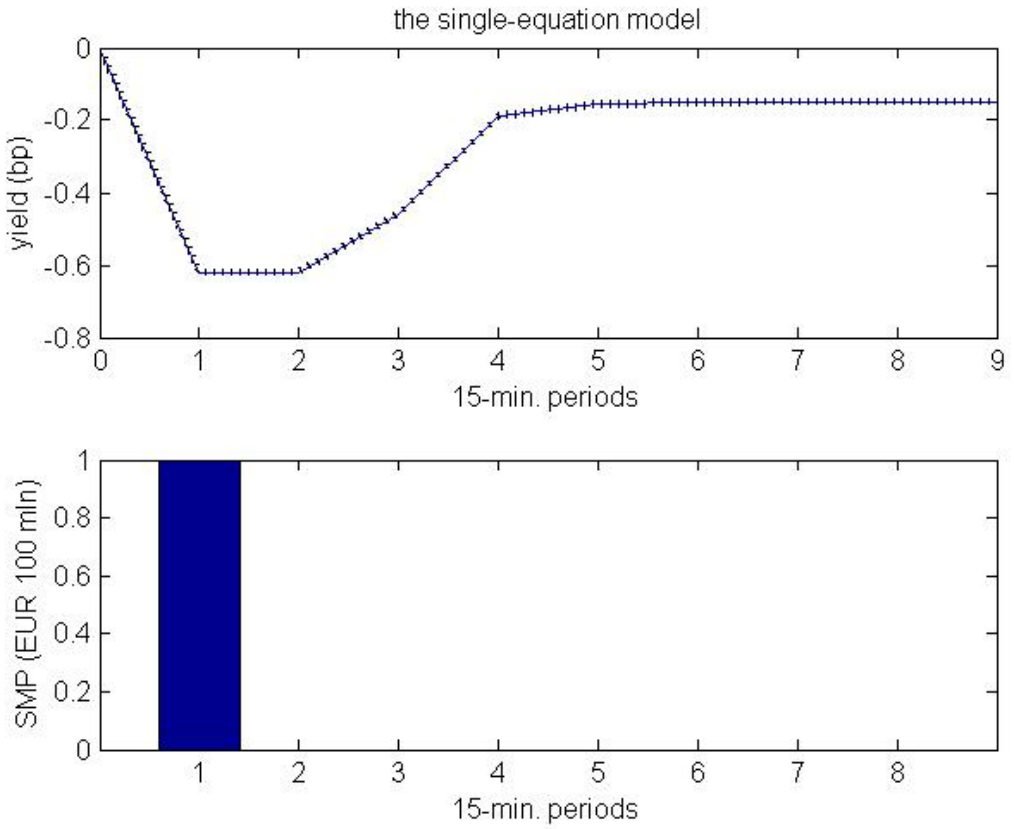
- My comment: this is the paper's weak point
- I will use the example of the Italian 10y bond

The regression in the paper

$$\text{yield}(t) = \alpha\, \text{yield}(t-1) + \gamma_0\, \text{SMP}(t) + \sum_j \gamma_j\, \text{SMP}(t-j) + v(t)$$

Impulse response to SMP intervention

Italian 10y bond



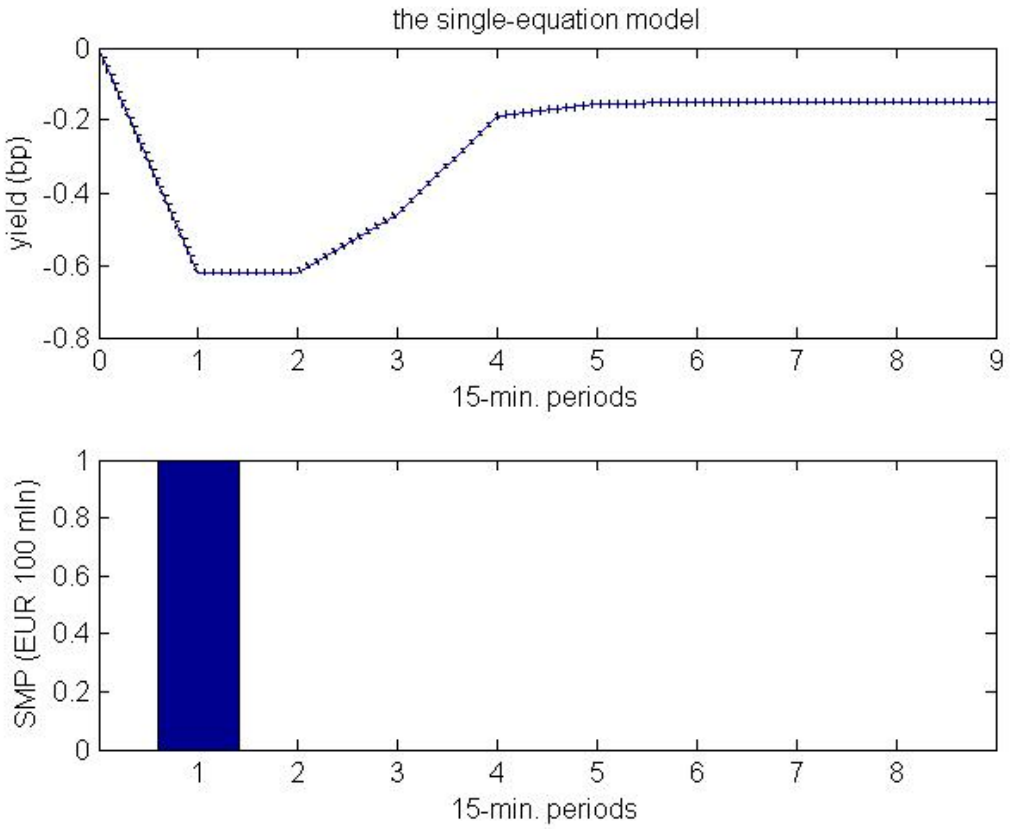
The SVAR equivalent to the regression in the paper

SMP(t) = u(t)

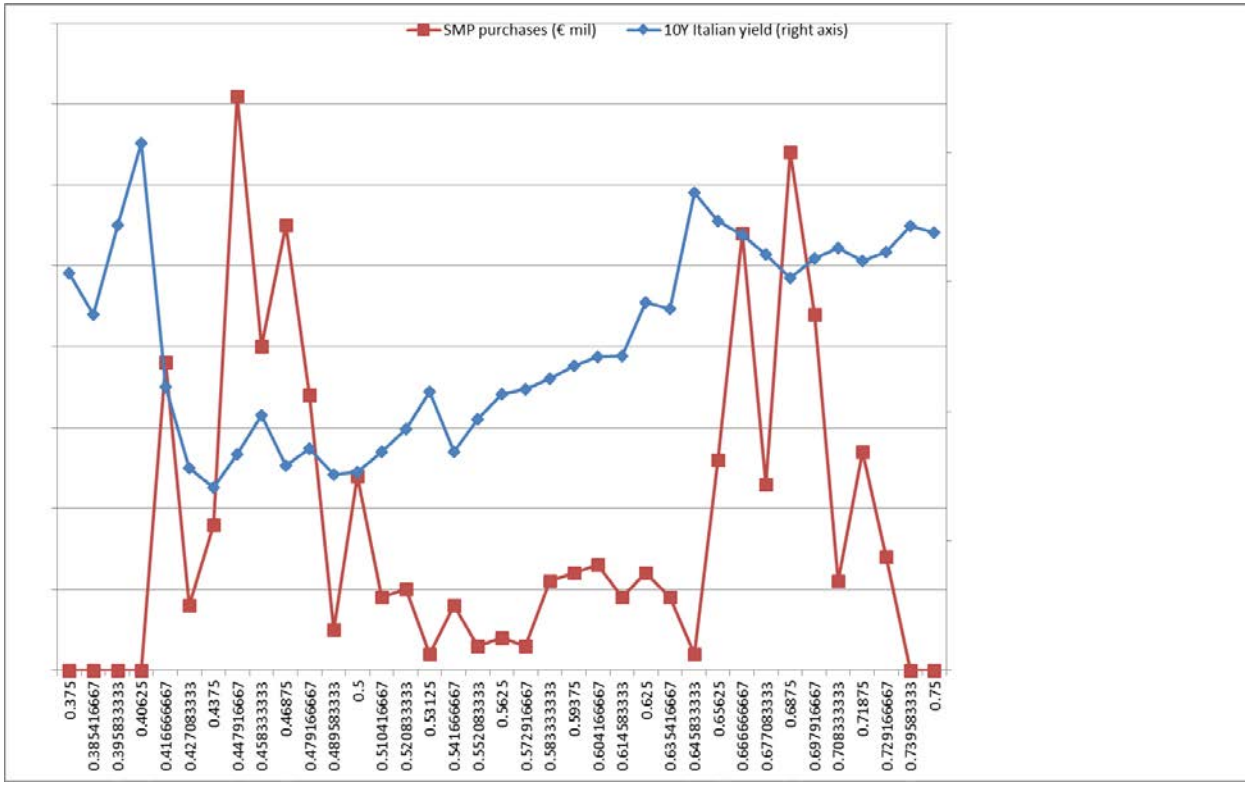
$yield(t) = \alpha\, yield(t-1) + \gamma_0\, SMP(t) + \sum_j \gamma_j\, SMP(t-j) + v(t)$

Impulse response to SMP intervention

Italian 10y bond



SMP purchases respond to yields with a lag



$$SMP(t) = c + \delta\ yield(t-1) + u(t)$$

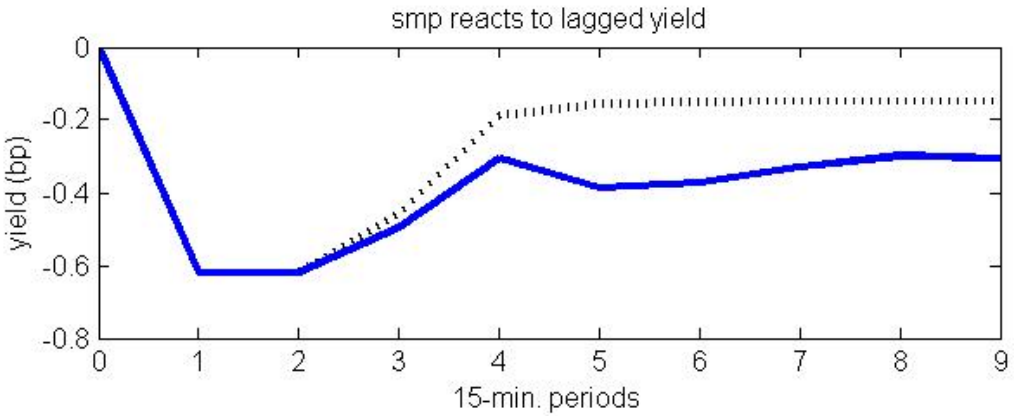
The SVAR adding the response of SMP to yield

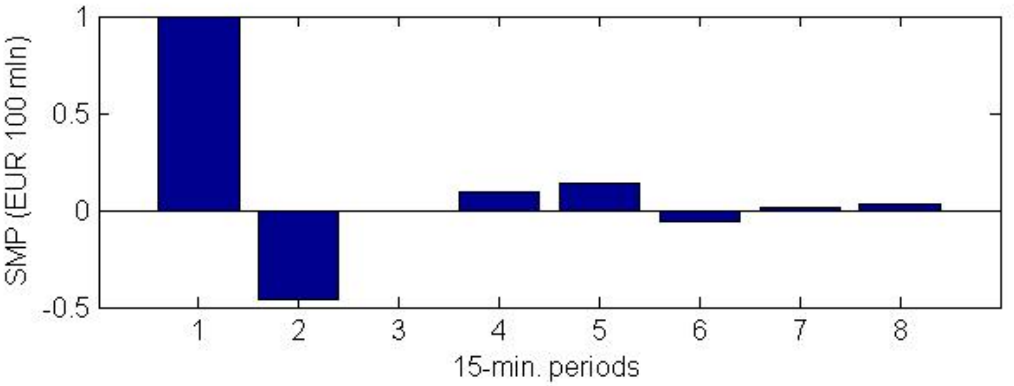
SMP(t) = **δ yield(t-1) +** u(t)

yield(t) = α yield(t-1) + γ_0 SMP(t) + $\sum_j \gamma_j$ SMP(t-j) + v(t)

Impulse response to SMP intervention

Italian 10y bond





The long run effect of SMP doubles!

Intuition

- Recognize that SMP interventions happen when yields are on the rise.
- Then the counterfactual (in the absence of intervention) is a continued yield increase.
- → Find even stronger effects of SMP.

Persistence beyond one day?

- The paper focuses on the first minutes / hours after SMP intervention
- The effects after **weeks** and **months** are **more interesting!**
- The paper could do more work on this.
- Literature on long run effects of high-frequency events, incl. Altavila, Giannone, Modugno (ECB)

Summary

- Convincing high frequency identification of the immediate effect of SMP interventions
- A richer model is needed to study propagation – potential to find even stronger effects.
- What about persistence beyond one day?