

# Beggar-thy-neighbor? The international effects of ECB unconventional monetary policy measures

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April 18, 2016

Workshop on Non-Standard Monetary  
Policy Measures (ECB)

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<sup>1</sup>The views expressed here are solely those of the author and should not be taken to represent those of the Bank of England.

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- ▶ What do the authors find?
  - UMP generates important domestic fluctuations
  - International spillovers are heterogeneous (and larger for low credit-to-GDP and/or high share of domestic banks countries)
- ▶ How do they do that?
  - Mixed frequency open economy VAR where key monthly macro variables are converted into weekly series

# This paper

- ▶ **Methodological contribution** Solution to the frequency mismatch typically faced by macroeconomists when jointly modelling macro and financial variables
  - Exploit info embedded in high frequency financial data
  - Consider a short sample period (2008-2014)
  - More plausible timing assumptions than in lower frequency settings

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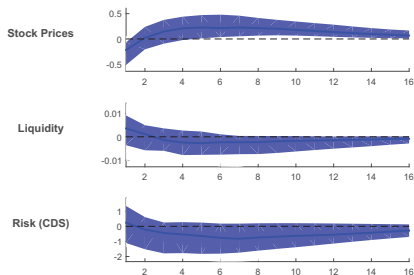
- ▶ **Methodological contribution** Solution to the frequency mismatch typically faced by macroeconomists when jointly modelling macro and financial variables
  - Exploit info embedded in high frequency financial data
  - Consider a short sample period (2008-2014)
  - More plausible timing assumptions than in lower frequency settings
  
- ▶ **Discussion** Some questions and (hopefully useful) suggestions
  - Identification
  - Heterogeneity
  - Other (minor)

# Identification

- ▶ Identification is achieved with (i) block exogeneity and (ii) timing assumption
  - (i) Foreign countries have no impact on EA
  - (ii) Cholesky with  $UMP^*$  ordered after (weekly)  $IP^*$  and  $\pi^*$

# Identification

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  - (i) Foreign countries have no impact on EA
  - (ii) Cholesky with  $UMP^*$  ordered after (weekly)  $IP^*$  and  $\pi^*$
- ▶ Timing assumption more plausible at weekly frequency than at monthly, but are the results plausible?



- ▶ Stock prices significantly fall on impact
- ▶ **Question** Does this point to endogeneity?
- ▶ Consistent with UMP as a signal about the state of the economy

## Identification (cont'd)

- ▶ Recent literature has emphasized the use of high frequency (intra-daily) data to identify MP shocks
- ▶ Rogers, Scotti, Wright (2014): change in government bond yields in a narrow intraday window around a set of UMP announcements

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	Fed		BOE		ECB
Intradaily					
Two-year Treasury	-0.11***	(0.01)	-0.01***	(0.00)	0.00
Five-year Treasury	-0.22***	(0.01)	-0.03***	(0.00)	0.00
Ten-year Treasury	-0.25		-0.03***	(0.00)	-0.01
30-year Treasury	-0.16***	(0.01)	-0.03***	(0.00)	0.00
UK Gilt	-0.12***	(0.01)	-0.25		0.02***
Italian 10 Year	-0.04***	(0.01)	-0.02***	(0.01)	-0.20***
German 10 Year	-0.09***	(0.01)	-0.05***	(0.00)	0.05***
Ten-year JGB	-0.05***	(0.01)	-0.01	(0.01)	0.00
GBP	0.66***	(0.07)	-0.82***	(0.12)	0.14***
EUR	0.86***	(0.11)	-0.02	(0.07)	0.28***
JPY	1.21***	(0.09)	0.10**	(0.05)	0.09**
Stock Returns	0.86***	(0.15)	0.23*	(0.12)	0.92***

- ▶ Stock prices are found to increase after an expansionary UMP shock
- ▶ **Question** How to reconcile this evidence with the one reported in the paper?

# Identification (cont'd)

- ▶ Authors provide robustness exercises to a number of alternative identifications schemes....
  - Announcements dummy
  - Zero and sign restrictions
  - Heteroskedasticity (Rigobon)
  
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- ▶ ... but do not make a convincing case for none of those
- ▶ **Suggestion** Proxy SVAR using high-frequency intra-daily instruments
  - Easy to implement
  - Partly addresses endogeneity problem

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- ▶ Once the EA block is identified it is possible to trace out the impact of the UMP shock to other countries
- ▶ Pointwise posterior median IRFs show a high degree of heterogeneity
- ▶ Authors conjecture this may be due to country-specific characteristics
  1. **Share of foreign banks** The larger the share of foreign banks, the smaller the real spillover of UMP
  2. **Level of financial development** The higher credit-to-GPD, the smaller the real spillover of UMP

# Exploring the heterogeneity

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  1. Sort countries according to their characteristics
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  3. Report mean group estimates
  
- ▶ Some issues
  - Country characteristics are correlated. How to partial out the factor that really matters?
  - Other (omitted) factors may matter
  - How reliable is mean group estimator when  $N$  is low? (Only 9 countries divided in two groups!)

# Exploring the heterogeneity (cont'd)

- ▶ **Suggestion** Based on related work in progress (Cesa-Bianchi, Ferrero, Rebucci, 2016)
  1. Alternative method
    - ▶ Take a statistic of each country's IRF (eg, max, impact, etc)
    - ▶ Stack them in a vector
    - ▶ Regress them on a set of country-specific characteristics
  2. Consider more factors (leverage, share of foreign currency liabilities, exch rate flexibility, capital controls, etc)
  3. Expand the list of countries (non-euro area + “small” euro area countries)

## Other minor comments

- ▶ Spillovers are reported as pointwise posterior median responses in deviation from EA
  - Good way of showing size of the response relative to EA but may mask some features of the responses
- ▶ Mean group estimates
  - Are the credible sets computed a la Pesaran, Pesaran, Smith (1996)?
  - Does low  $N$  matter?
- ▶ How reliable are the IRFs for the conventional monetary policy shock?
  - Policy rate over the period displays very little variation
- ▶ Robustness: ordering of the variables in R1 and R2 should not matter
- ▶ Confidence bands of the country-specific spillovers are not reported

# Other minor comments: specification of the VAR model

- ▶ Open economy VAR for low and high frequency variables  $y_t = [z_t, x_t]$  with block exogeneity assumption

$$\begin{aligned}A_{0,11}y_{1t} &= A_{1,11}(L)y_{1,t-1} + B_1\omega_t + \epsilon_{1t} \\A_{0,21}y_{1t} + A_{0,22}y_{2t} &= A_{1,21}(L)y_{1,t-1} + A_{1,22}y_{2t} + B_2\omega_t + \epsilon_{2t}\end{aligned}$$

- ▶ Exogenous
  - $\omega_t = [1, \omega_t^*]$  where  $\omega^* = [News_t, i_{t-1}, i_{t-1}^*, PC_t]$
- ▶ **Question** Notation is a bit confusing (does  $i_{t-1}^*$  enter the EA model)
- ▶ **Question** What is the intuition for including the announcement dummy ( $News_t$ ) as exogenous variable?

# Summing up

- ▶ Nice contribution
- ▶ General methodology – can be applied to a variety questions
- ▶ Some work to do on identification and heterogeneity
- ▶ Potentially very important implications for policy



Cesa-Bianchi, A., & Ferrero, A., & Rebucci, A., 2016. "Global Liquidity, Leverage, House Prices and Exchange Rates," unpublished manuscript



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