Third Round of The Euro Area Enlargement: Are The Candidates Ready?

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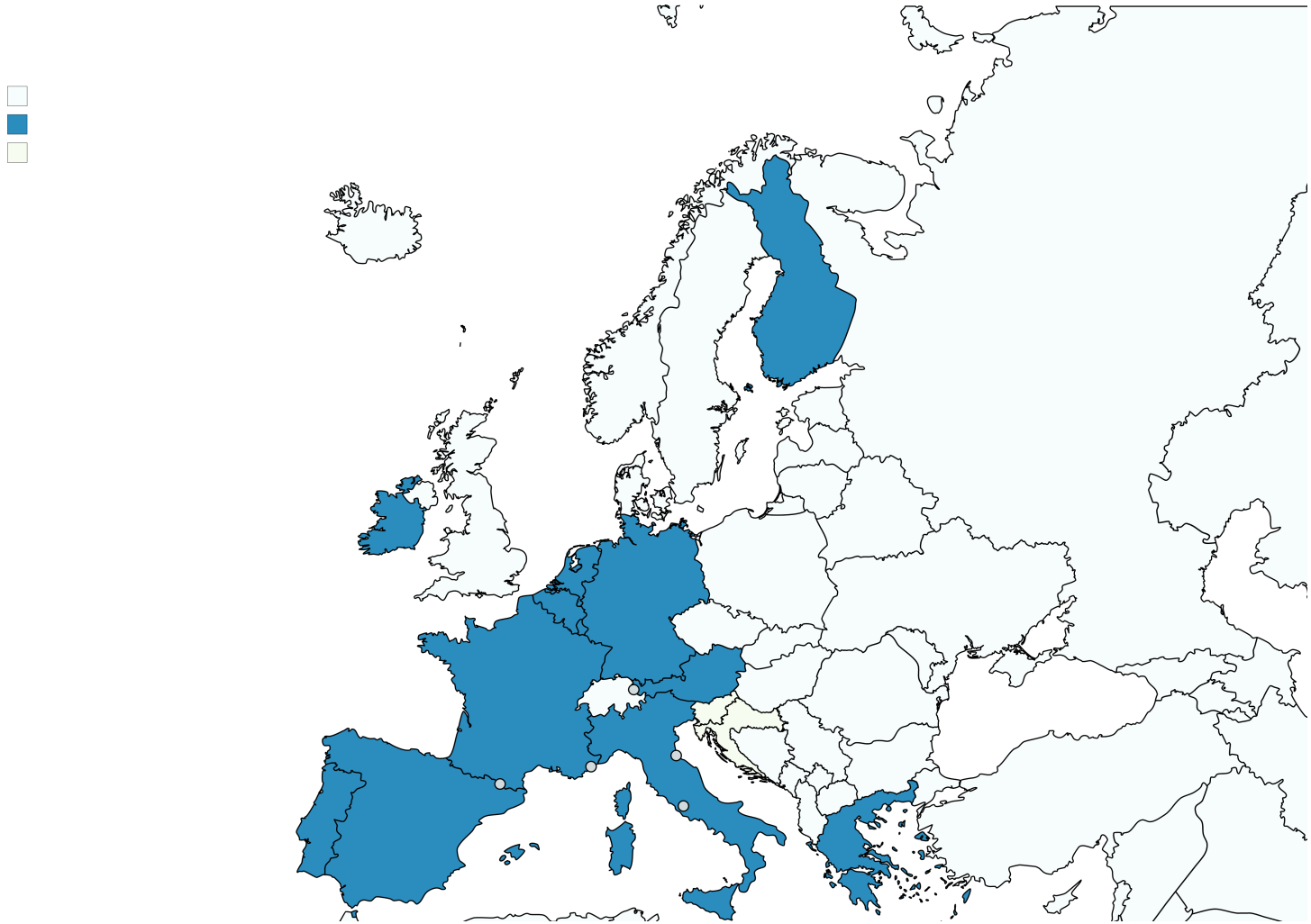
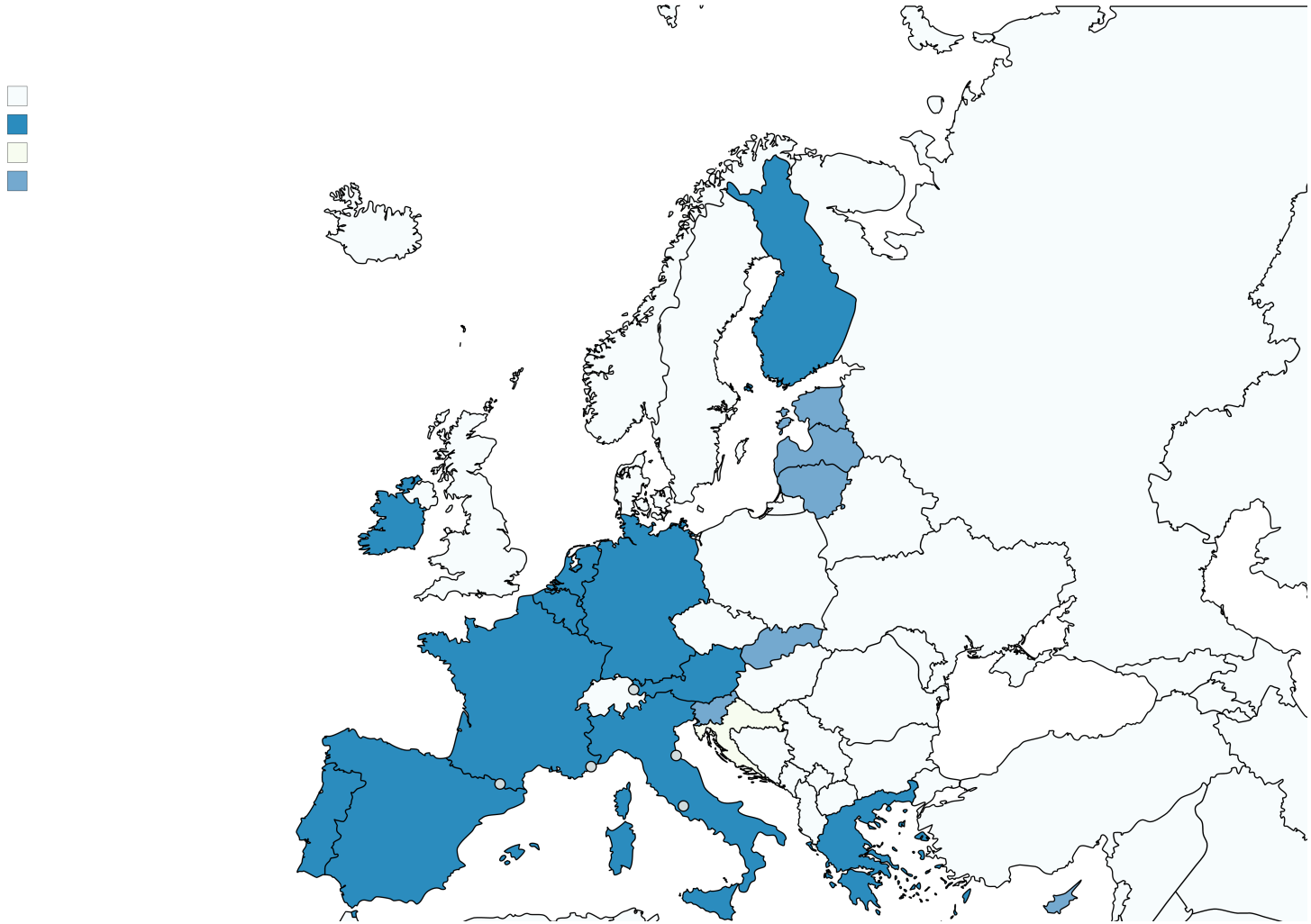
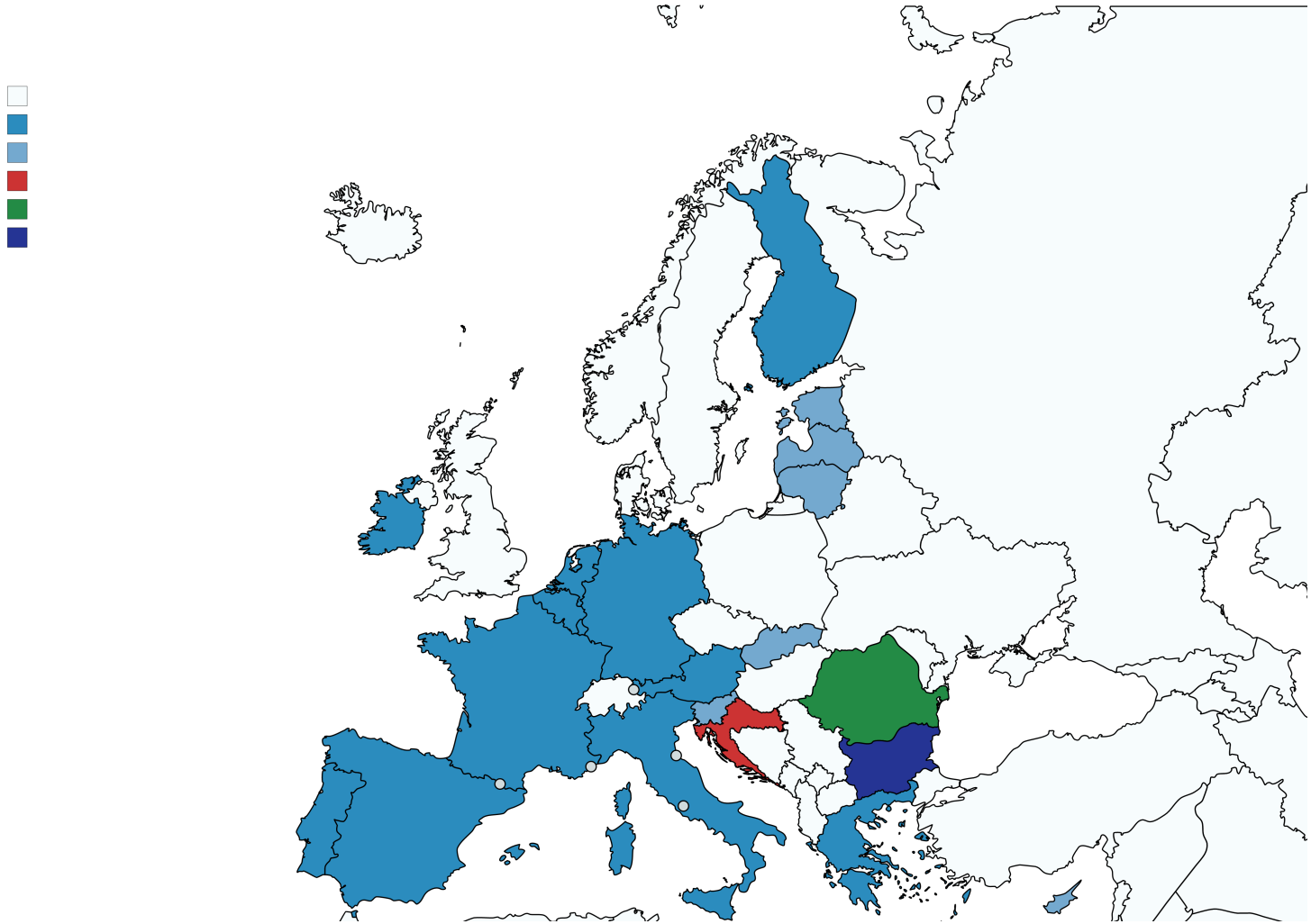
First round of the enlargement



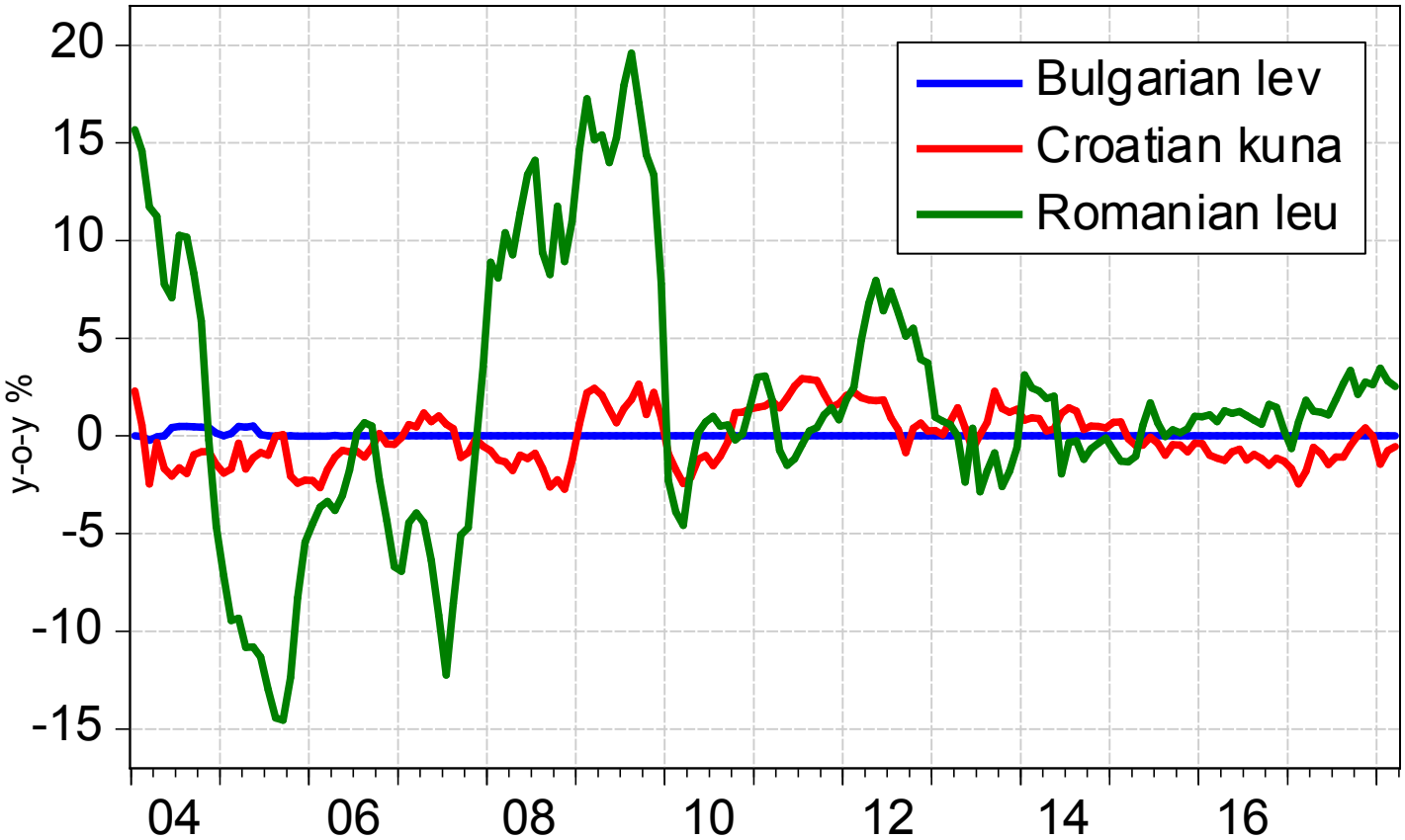
Second round of the enlargement



Third round of the enlargement?



Euro candidate countries - three monetary stories



Key *policy* question

- **What is the cost of giving up the monetary policy autonomy?**
- answer to this question depends on:
  - **coherence of economic shocks** in euro candidate countries and the euro area (meta property of OCA)
  - **relevance of common chocks** (shocks that **ECB reacts to**) in euro candidate countries
  - **effects of ECB policy** on GDP and inflation in euro candidate countries
- **The aim of this paper** is to address these questions using a *new analytical framework*

Theoretical framework

- **OCA theory**
  - do euro candidate countries satisfy key OCA properties?
  - focus on the analysis of coherence of economic shocks (meta property)
- **Relevance of external shocks in small open economies**
  - transmission of real and nominal (monetary policy) economic shocks from large economies
  - euro area shocks play very important role in NMS countries
- **Role of exchange rates**
  - fixed vs floating exchange rate - policy choice?
  - exchange rates as shock absorbers vs shock propagators
- **Mundellian trilemma**
  - monetary policy autonomy, free capital flows and fixed exchange rate
  - impossible trinity challenged (Rey, 2015)

Research questions

This paper formally addresses **four** main questions:

- Do standard economic shocks hitting the euro area have **similar** effects on three candidate countries?
- How **important** are shocks relevant for ECB policy making process for three candidate countries?
- Do monetary policy shocks of the ECB have the expected **counter-cyclical** effects on euro candidate countries?
- Does the **exchange rate regime matter** for the transmission of euro area shocks to candidate countries?

Methodology

- small open economy **BVAR model** (**two blocks**): block exogeneity assumption
- variables
  - domestic: GDP, inflation, nominal exchange rate(HR, RO) and domestic interest rate (RO)
  - euro area: GDP, inflation, shadow rate (Wu and Xia 2016)
- we propose a methodology that allows us to calculate the share of **common shocks** in GDP and inflation and compare these shares across countries
- we extend and complement related literature such as Bayoumi and Einchengreen (1992/3/4), Peersman (2011) and Kotarac, Kunovac i Ravnik (2017)

Identification - short run restrictions

	Short run						
Shocks/Variables	GDP_{EA}	$HICP_{EA}$	MP_{EA}	GDP_D	$HICP_D$	ER_D	MP_D
External shocks							
Demand	+	+	+	?	?	?	?
Supply	+	–	?	?	?	?	?
Monetary policy	+	+	–	?	?	?	?
Domestic shocks (BG)							
Demand	0	0	0	+	+		
Supply	0	0	0	+	–		
Domestic shocks (HR)							
Demand	0	0	0	+	+	?	
Supply	0	0	0	+	–	?	
Exchange rate	0	0	0	?	+	+	
Domestic shocks (RO)							
Demand	0	0	0	+	+	?	+
Supply	0	0	0	+	–	?	?
Exchange rate	0	0	0	?	+	+	+
Monetary policy	0	0	0	+	+	+	–

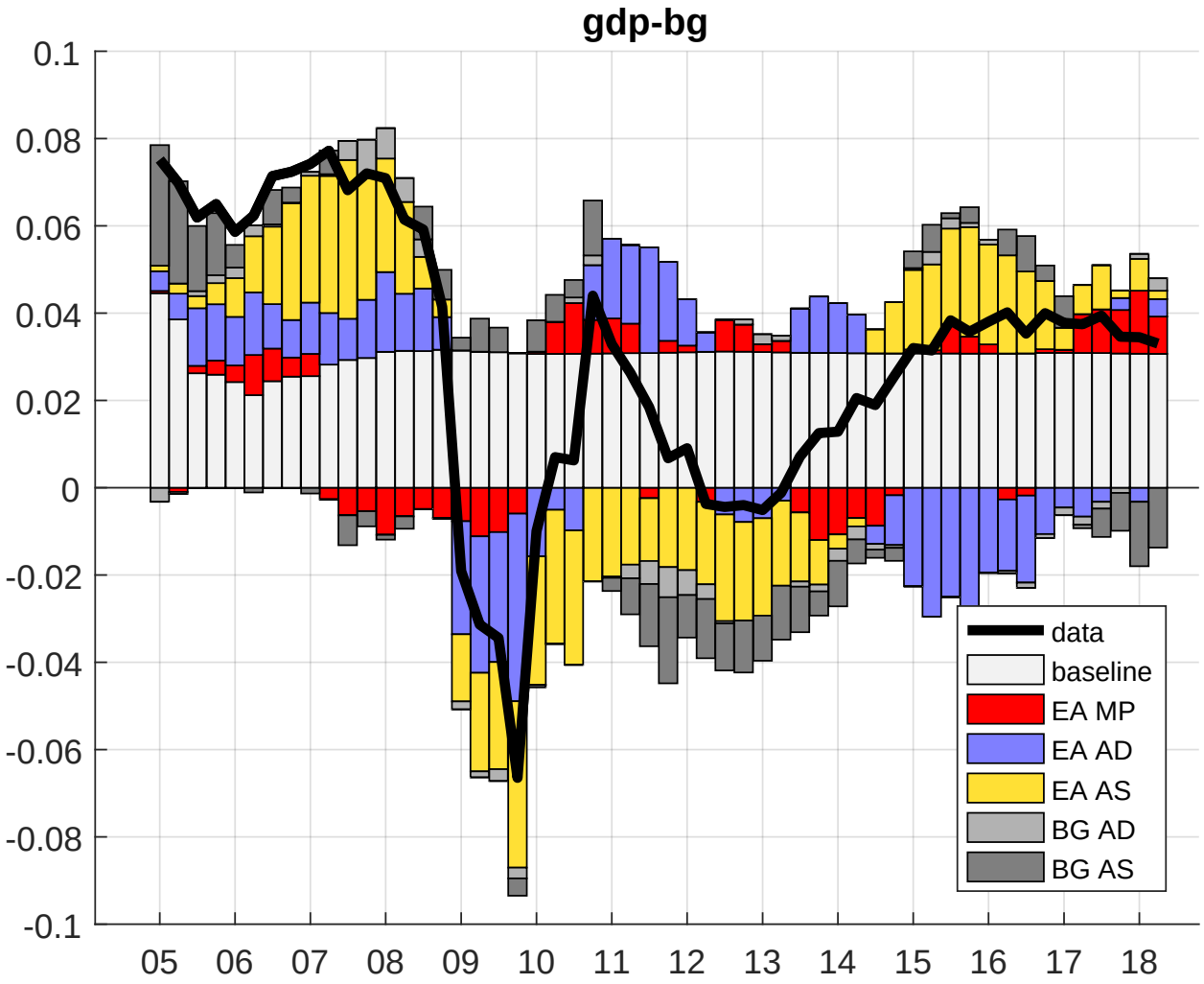
Note: (+) = positive reaction; (-) = negative reaction; (0) = no reaction; (?) = no restrictions. Shocks are defined as expansionary.

Identification - long run restrictions

	Short run						
Shocks/Variables	GDP_{EA}	$HICP_{EA}$	MP_{EA}	GDP_D	$HICP_D$	ER_D	MP_D
External shocks							
Demand	0	?	?	?	?	?	?
Supply	?	?	?	?	?	?	?
Monetary policy	0	?	?	?	?	?	?
Domestic shocks (BG)							
Demand	?	?	?	0	?		
Supply	?	?	?	?	?		
Domestic shocks (HR)							
Demand	?	?	?	0	?	?	
Supply	?	?	?	?	?	?	
Exchange rate	?	?	?	0	?	?	
Domestic shocks (RO)							
Demand	?	?	?	0	?	?	?
Supply	?	?	?	?	?	?	?
Exchange rate	?	?	?	0	?	?	?
Monetary policy	?	?	?	0	?	?	?

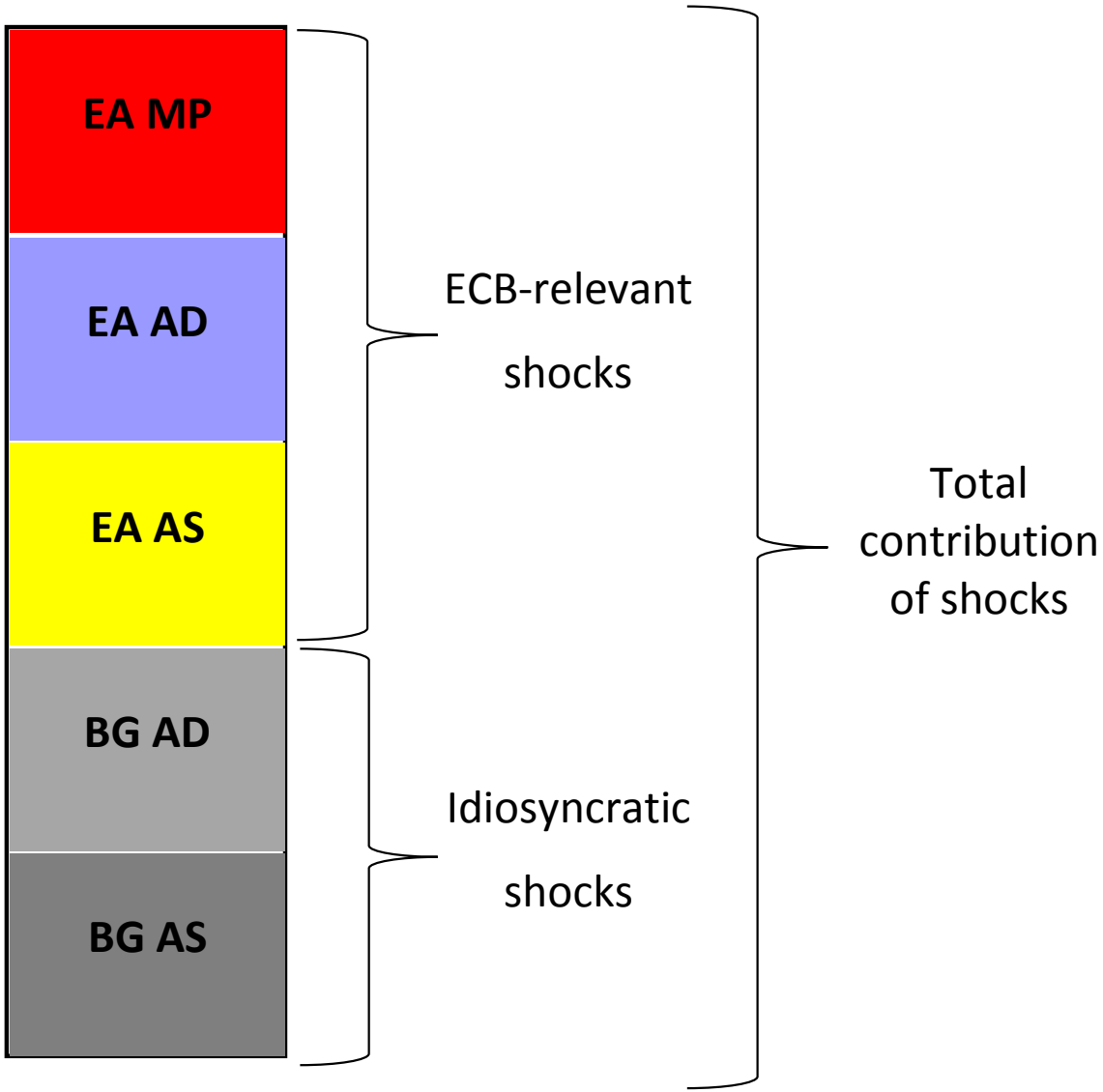
Note: (+) = positive reaction; (-) = negative reaction; (0) = no reaction; (?) = no restrictions. Shocks are defined as expansionary.

Results: historical decomposition example



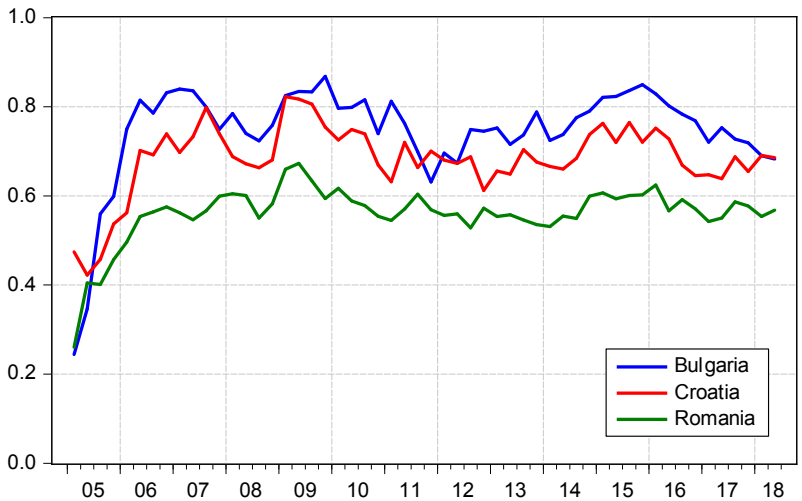
- y_{jt}^k - contribution of shock k to variable j in time period t
- $y_{jt}^k = \sum_{h=0}^{t-1} \psi_{jk,h} \cdot \varepsilon_{k,t-h}$

Results: Contributions - illustrative example

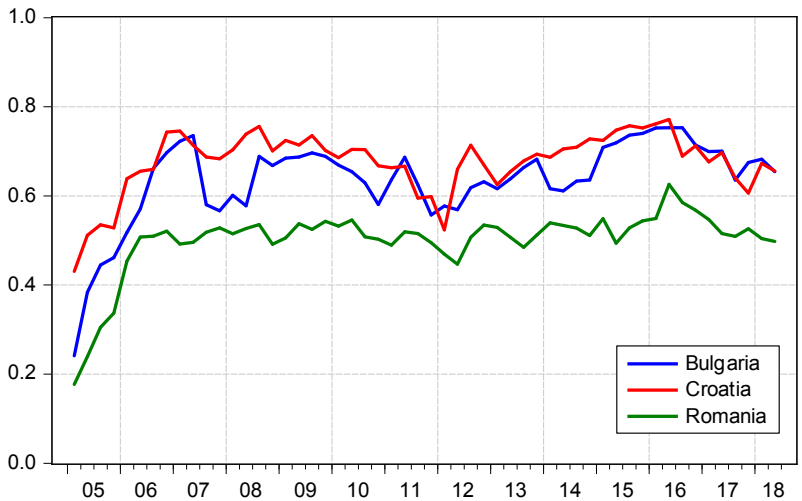


Results: contribution of common shocks

(a) GDP



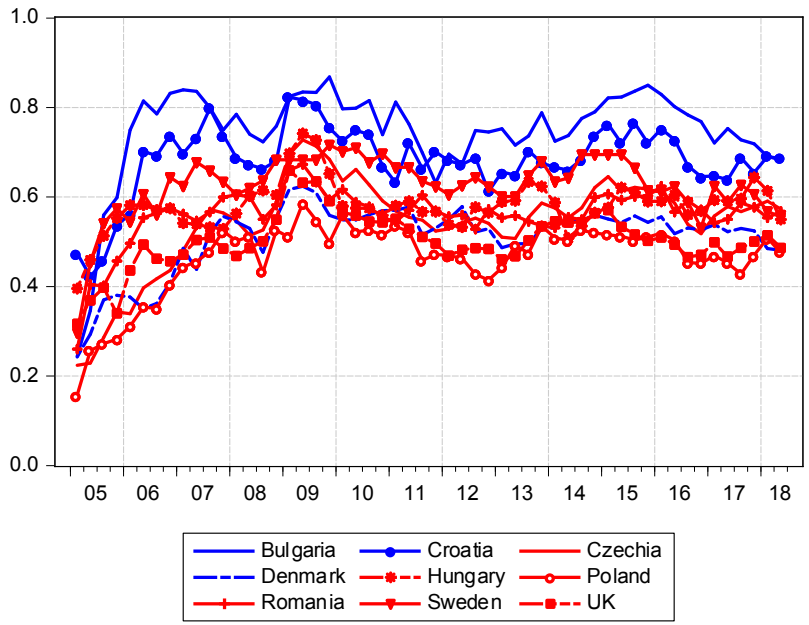
(b) HICP



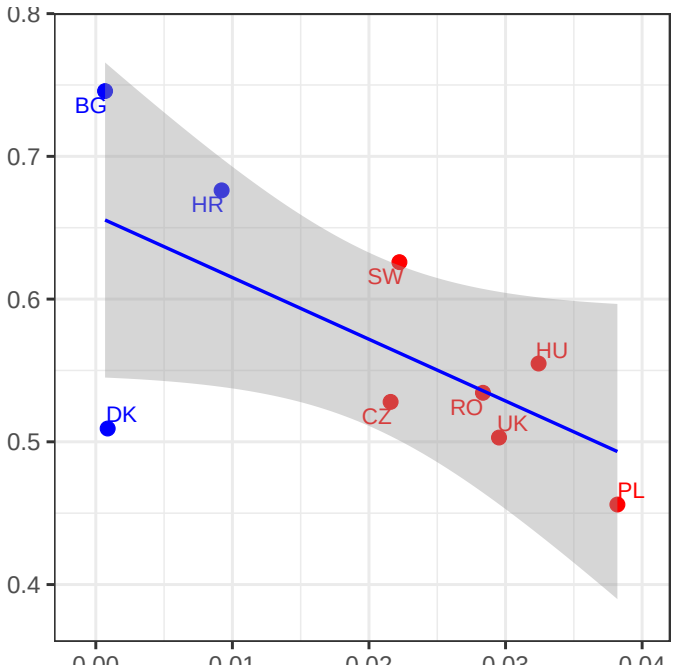
$$\widetilde{y_{jt}^k} = \frac{\left|y_{jt}^k\right|}{\sum_{l=1}^{n}\left|y_{jt}^l\right|} \qquad \sum_{k=1}^{5}\widetilde{y_{jt}^k}$$

Results: contribution of common shocks - floaters vs peggers - GDP

(c) Contributions

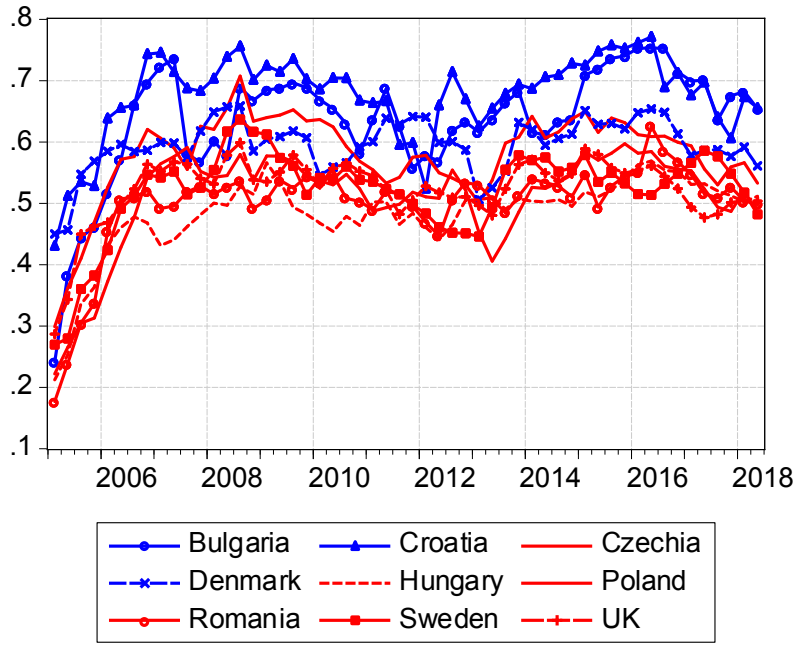


(d) Scatter

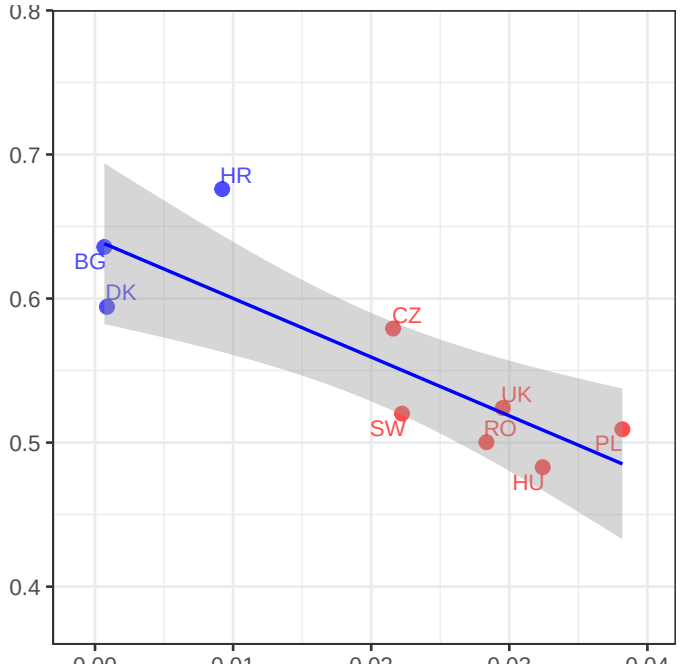


Results: contribution of common shocks - floaters vs peggers - HICP

(e) Contributions

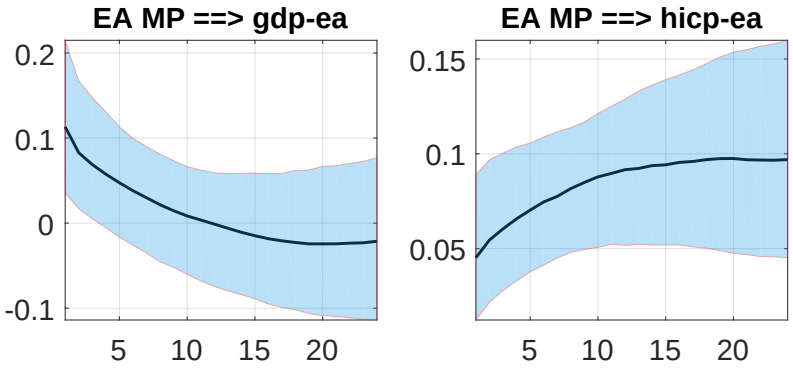


(f) Scatter

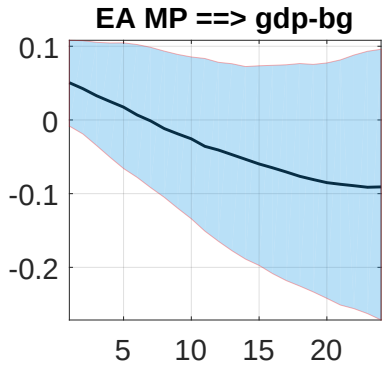


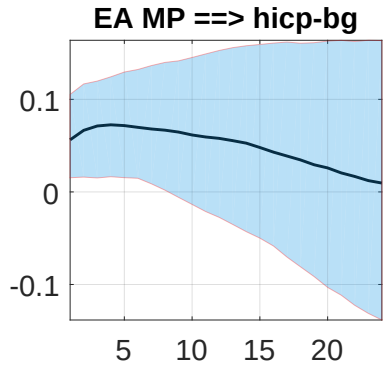
Results: effects of the ECB's policy

(a) EA

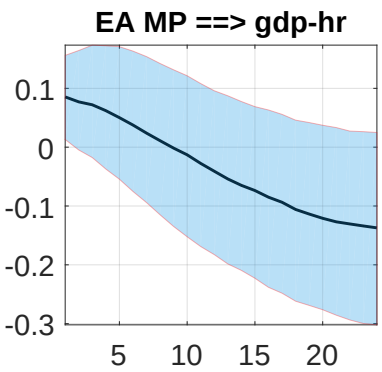


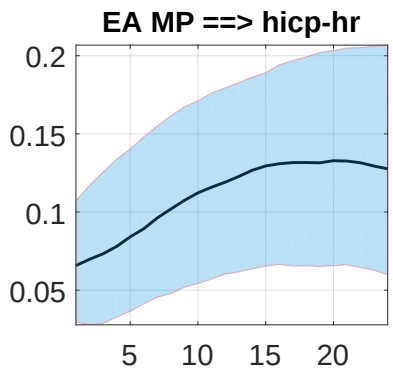
(b) BG



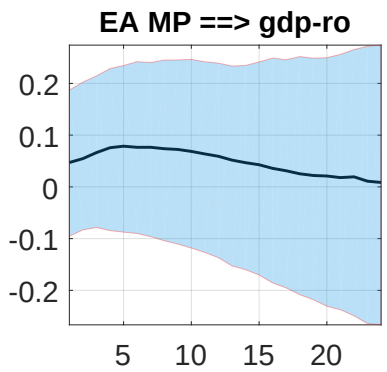


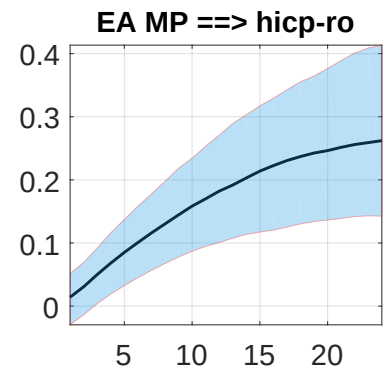
(c) HR





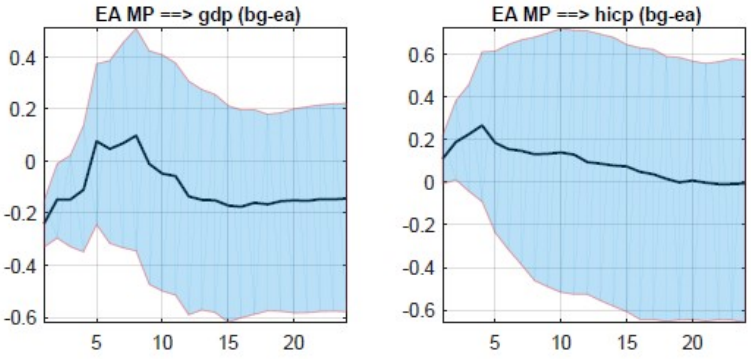
(d) RO



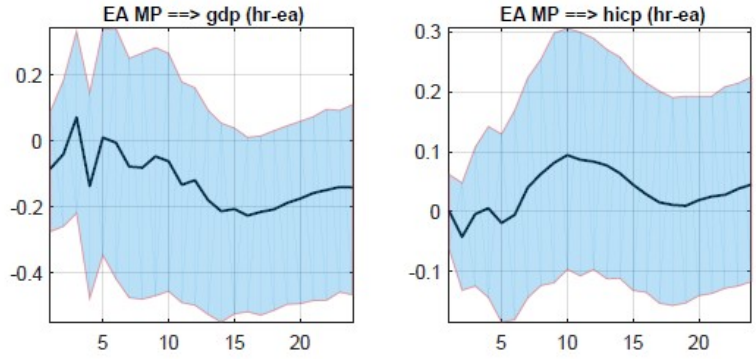


Results: effects of the ECB's policy - differences

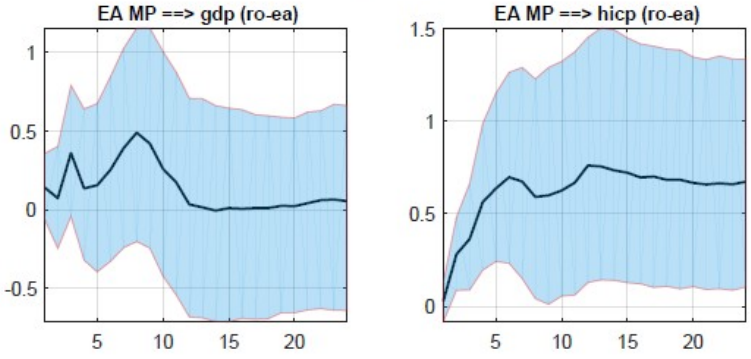
(a) BG



(b) HR



(c) RO



Conslusions

Our results indicate that:

- common shocks are **dominant determinants** of GDP and inflation developments in Bulgaria, Croatia and Romania
- contribution in Romania **somewhat less pronounced** - the role of different exchange rate regimes?
- ECB's policy has **similar effects** on GDP and inflation in euro candidate countries and the euro area

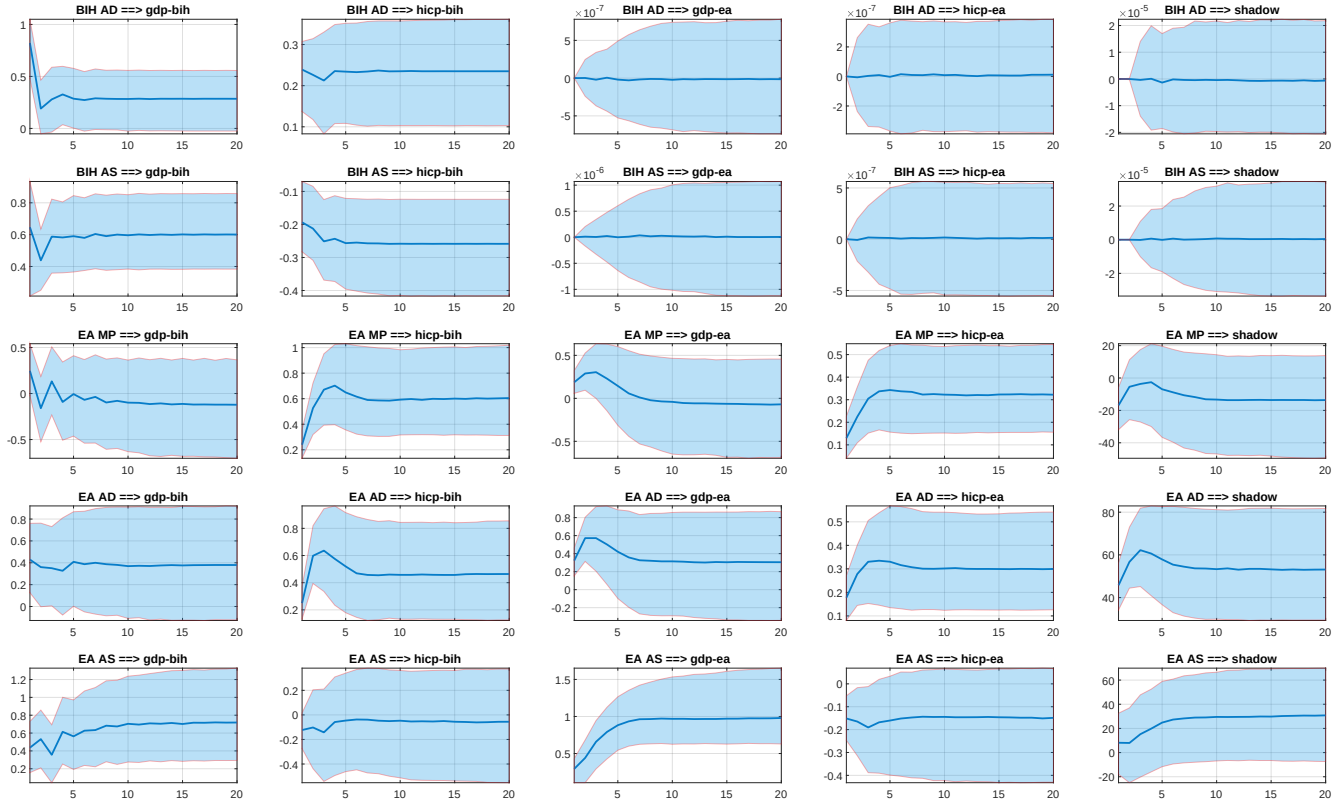
Thus, we can conclude that:

- costs of the loss of (*already limited*) monetary sovereignty **should not be pronounced**, even in Romania
- common countercyclical policy should be **adequate** for three candidate countries
- common countercyclical policy could be also suitable for **other non-euro area countries**?

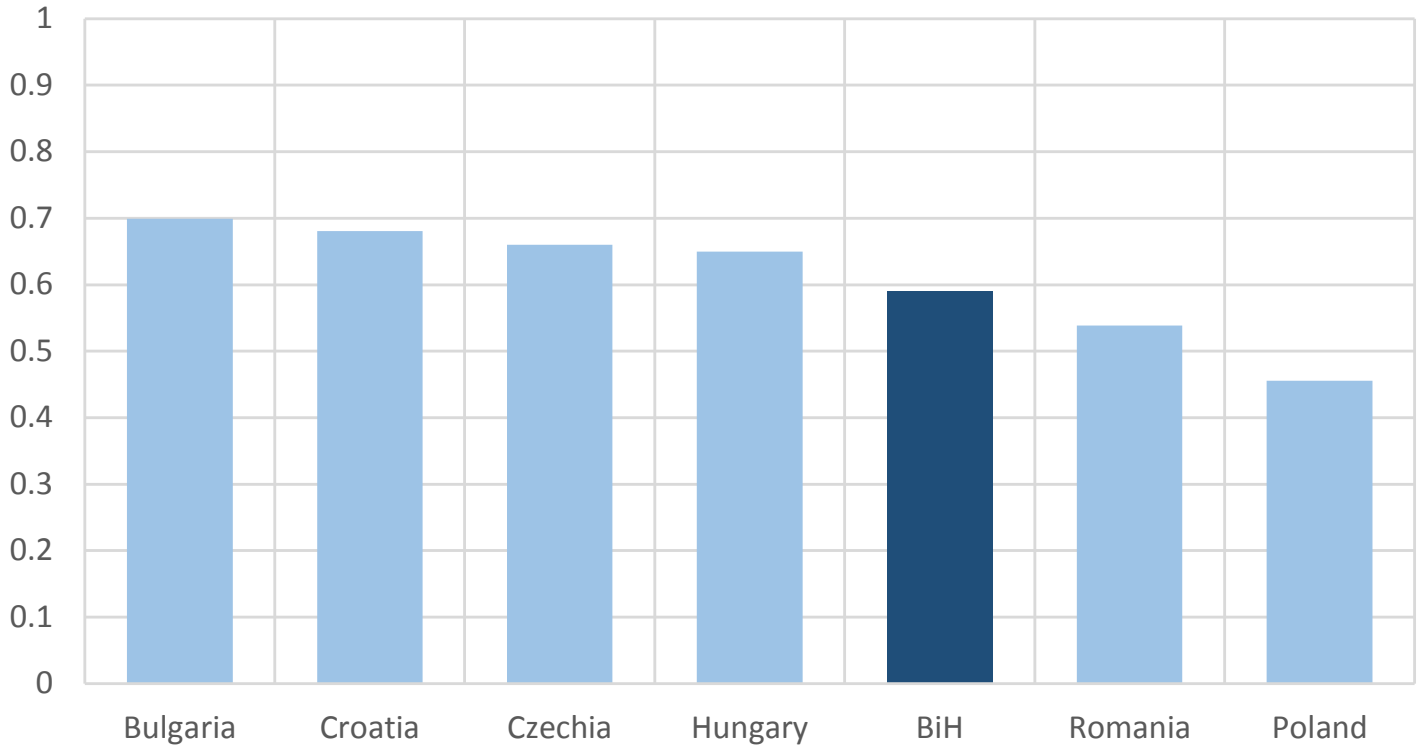
Thank you!

Appendix (sample 2008-2018)

BiH - impulse responses



Contributions to GDP



Contributions to CPI