

**Discussion of paper by Gaston Gelos and Yulia
Ustyugova on
"Inflation responses to commodity price
shocks – how and why do countries differ?"**

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Policy Responses to Commodity Price Movements
Central Bank of the Republic of Turkey and IMF
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The paper...

- Important question, esp. for policy
 - Cross-country differences in responses to commodity price shocks and their determinants
- Empirical approach: 79 advanced and emerging economies, 2001-2011; esp. focus on 2008 episode
- Main conclusions
 - Inflation targeting as determinant does not matter (much)
 - Central bank autonomy and monetary policy stance important (economically)
 - Exchange rate regime not relevant
 - confirmation of some common findings: energy/food-intensity, inflation level, openness

The comments...

1. Identification of commodity price “shocks” crucial
2. Role of exchange rate for impact of commodity price shocks on domestic inflation
3. Role of central bank reaction functions, inflation targeting and structural break of 2007-08 financial crisis
4. Implications for policy might well be different...

Three empirical approach

- Speed of reversion
- Augmented Phillips curve – country-specific and panel estimations
- Event-study of 2008 episode
- Results across approaches not always clear-cut (e.g. IT, CB autonomy)

I. Identification of commodity price “shocks”

- “Speed of reversion” between headline π and core π

$$\pi_t^{headline} - \pi_{t-12}^{headline} = \alpha + \beta(\pi_{t-12}^{headline} - \pi_{t-12}^{core}) + \varepsilon_t \quad (1)$$

$$\pi_t^{core} - \pi_{t-12}^{core} = \alpha + \beta(\pi_{t-12}^{core} - \pi_{t-12}^{headline}) + \varepsilon_t \quad (2)$$

- $H_0: \beta = -1$
- Source of deviation may be domestic and not global...
- ... and may be unrelated to commodity prices
- Empirical test assumes “reversion”, while divergence may in fact persist (or even grow)

Identification of commodity price “shocks”

- Augmented Phillips curve – panel estimation

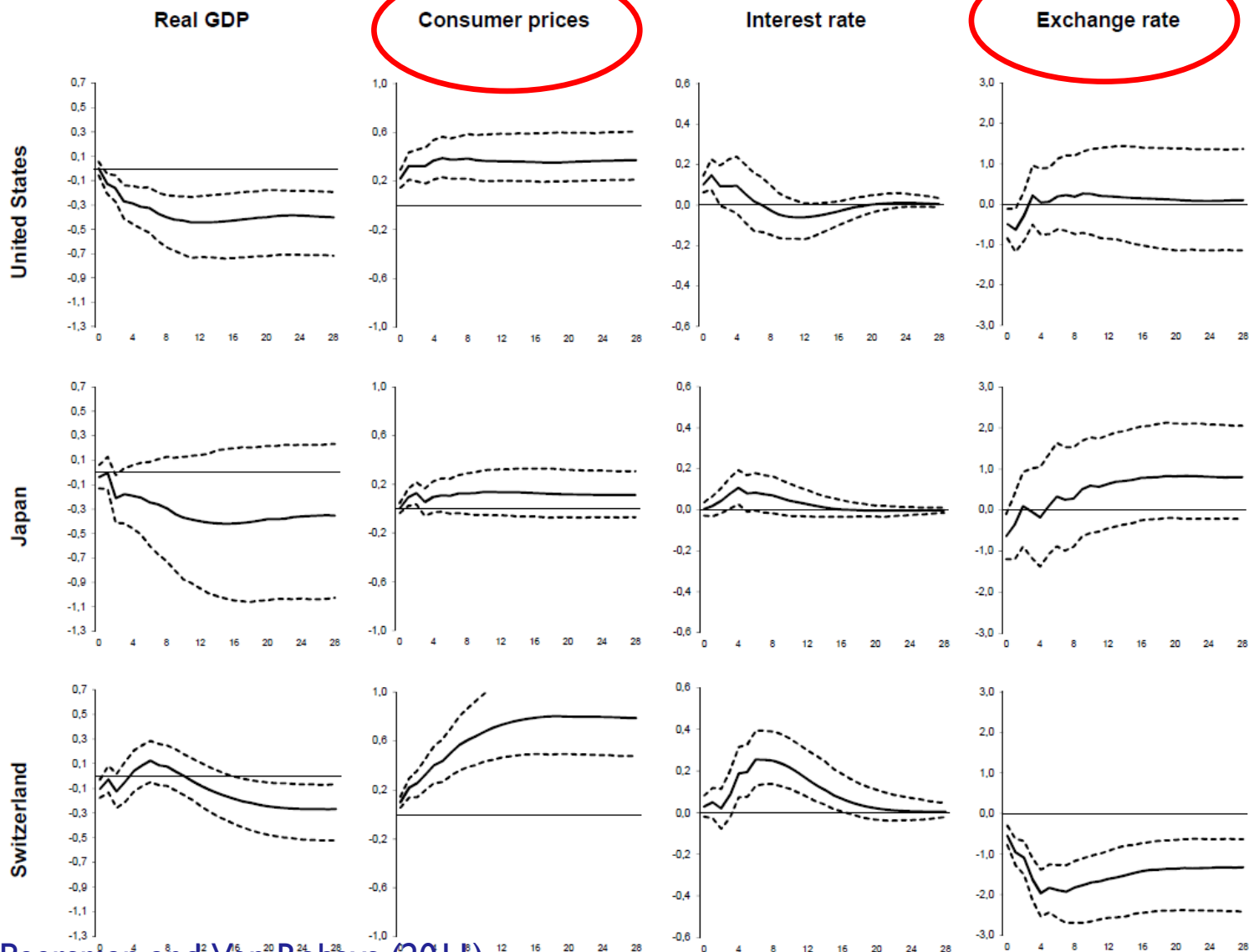
$$\pi_{i,t} = f \left[\pi_{i,t-1}, E(\pi_{i,t+1}), y_{i,t}^{gap}, \pi_{t-k}^{WCom}, (\pi_{t-k}^{WCom} * X_{i,t}) \right]$$

- No “shocks” are identified, merely correlations
- Even if commodity price shocks were identified, several caveats
 - $X_{i,t}$ itself is missing – e.g. IT regime is surely fundamental for π performance
 - $X_{i,t}$ included individually – important to control for all relevant factors simultaneously – e.g. FX peggers different from other countries in many relevant dimensions
 - Endogeneity of commodity price changes, e.g. to global demand
 - Multicollinearity across regressors

Identification of commodity price “shocks”

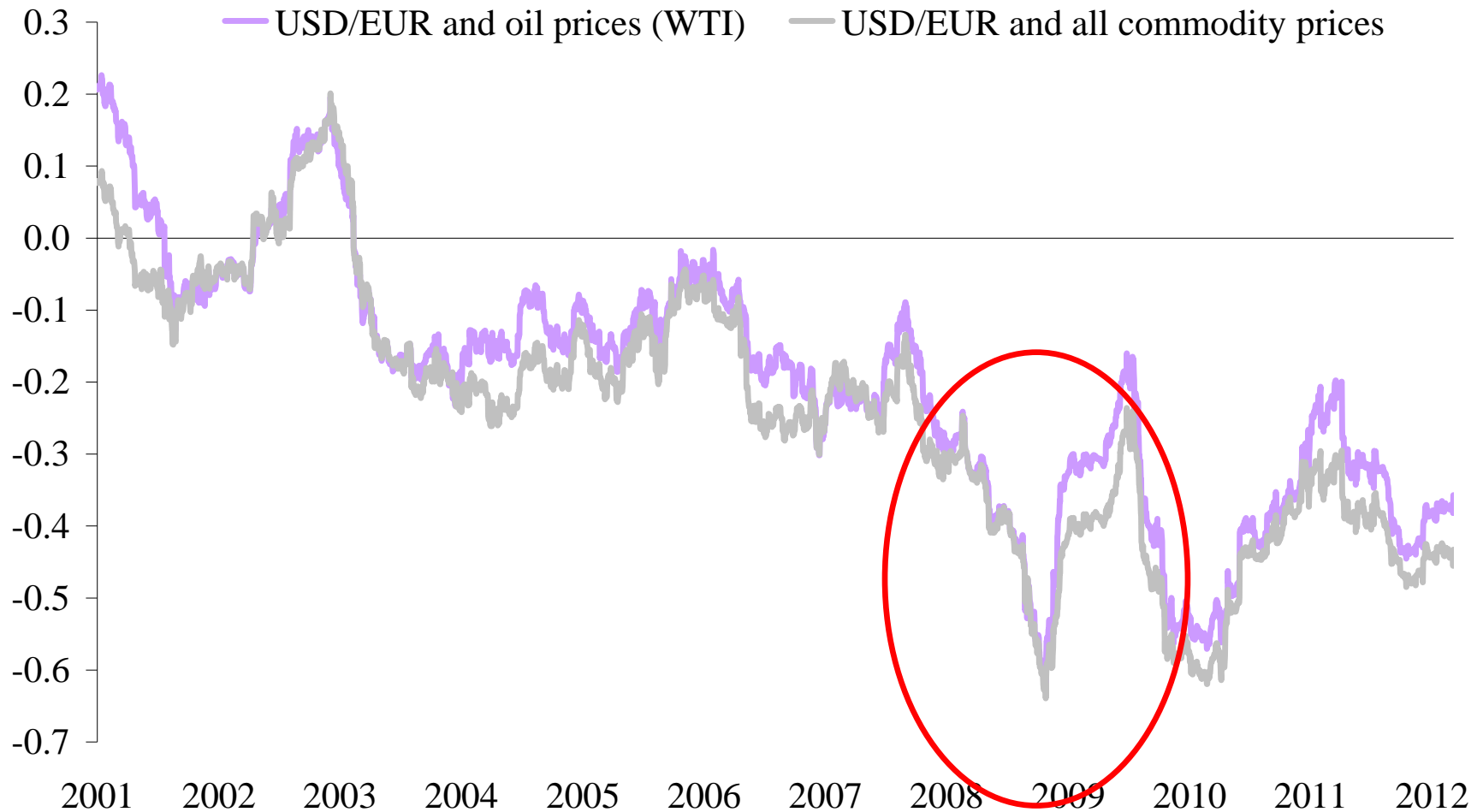
- Not only identification of commodity price shock important...
- But also *type* of commodity price shock – e.g. Peersman and Van Robays (2011, SVAR framework)
 - No/little cross-country heterogeneity in π responses to oil price shock if *demand* shock or *oil-specific demand* shock
 - Large cross-country heterogeneity if *oil supply* shock: peak IRFs ranging from 0 to 0.8% rise in CPI if 10% long-run rise in oil prices due to supply shocks among advanced economies
 - Heterogeneity in π responses across countries and across types of oil price shocks to a significant extent explained by differences in exchange rate responses

2. Role of exchange rates

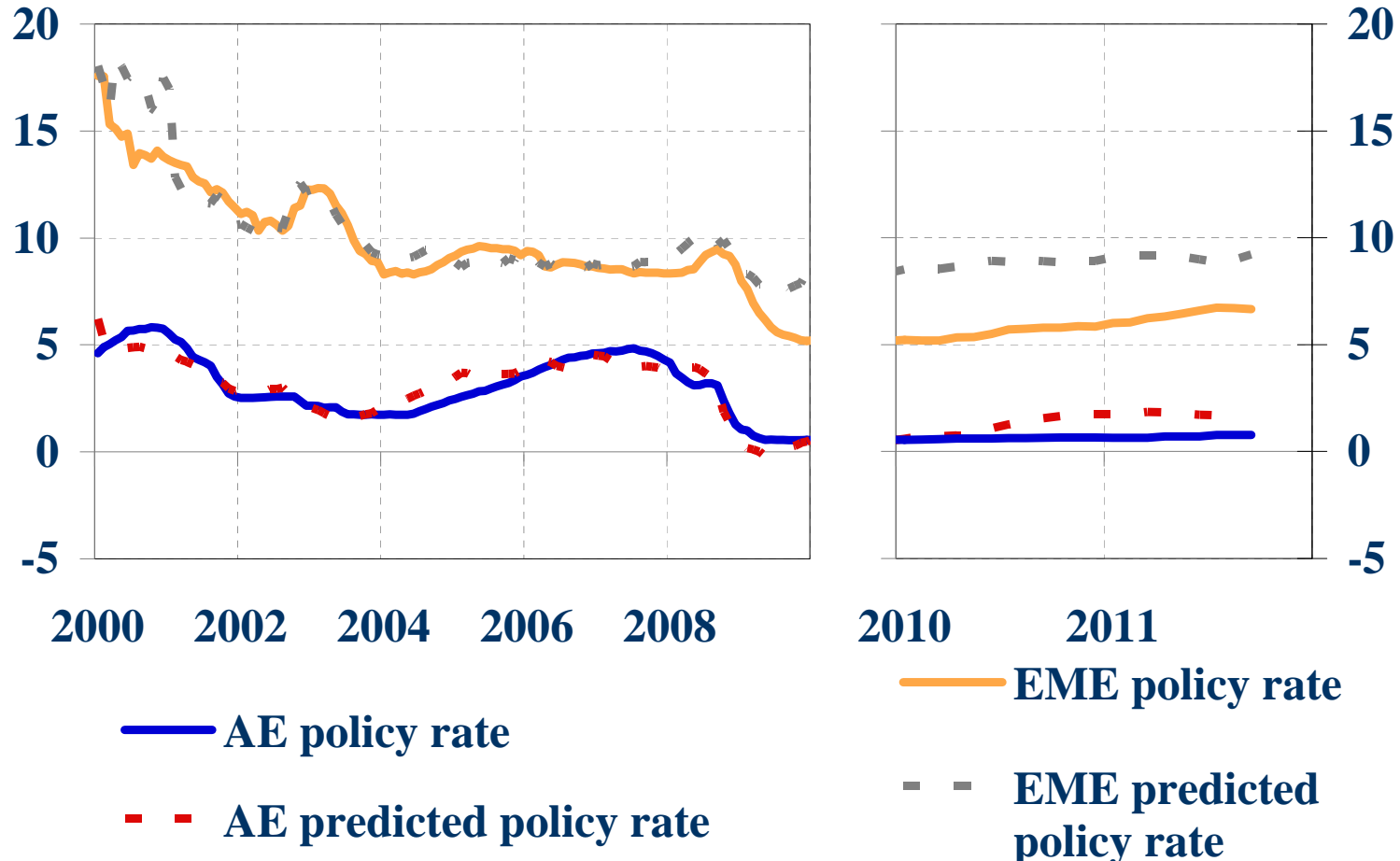


Source: Peersman and Van Robays (2011)

Time-varying correlation USD – commodity prices



3. 2008 shock – Have CB reaction functions changed?



Notes: Actual and implied monetary policy rates derived from Taylor-rule estimates for advanced economies and emerging markets (% per annum)

Source: Amzallag, Bashir and Fratzscher (2011)

Summing up...

- Event-study of 2008 episode
 - Other developments: “decoupling” debate EMEs vs AEs, financial stability concerns
- Important question for understanding how commodity price shocks affect inflation...
- ... and role of (central bank) policy for pass-through
- Some suggestions
 1. Identification of commodity price shocks crucial
 2. Empirical methodology, more systematic approach, simultaneous inclusion of determinants
 3. Role of FX adjustment important for heterogeneity
 4. Intriguing implication for central banks: IT and credibility relevant?

Annex