

Discussion on International Spillovers of Quantitative Easing

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First Annual Workshop ESCB Research Cluster 1 on Monetary Economics

10 October 2017

Negative Spillover Effects Of Unconventional Policies

- ▶ Two-country DSGE model to illustrate possible negative international effects of quantitative easing in large economy on small open economy (SOE)
- ▶ Extensively discussed in the recent literature, both empirical and theoretical, as well on the political level (or even with the calls for global coordination)
- ▶ „For example, if unconventional monetary policy actions lead to small positive effects on exports to emerging economies (EMs) and a feeble recovery in the source country but large capital outflows and asset price bubbles in the EMs, these policies could be rated Red. Global welfare would decrease with this policy“ by Raghuram Rajan: Towards rules of the monetary game (BIS, 2016)

Key Findings

- ▶ The model is calibrated to Poland and a block of 3 big economies (US, UK, EA)
- ▶ The quantitative easing in large economy generates an inflow of foreign capital to SOE sovereign bond markets
- ▶ The term premia show strong cross-country co-movement during the period of quantitative easing, not necessarily during the normal times
- ▶ The impact on GDP in SOE might be negative, especially in the short run, despite the positive effect on domestic demand
- ▶ A set of robustness checks supports the main findings (a different way QE is implemented, physical capital included, etc.)

Model Summary

- ▶ Extends the work of Alpanda and Kabaca (2015), Chen et al. (2012)
- ▶ Key features: two-country setup, market segmentation (no need to model imperfect substitutability in detail), the bonds issued by SOE traded internationally
- ▶ *Minor comment:* The paper would benefit from the clear account of the contributions in the introduction
- ▶ The model is largely symmetric in both countries
- ▶ Standard structure: firms, government, households

Comment 1

- ▶ Two types of households: restricted (trade long term bonds) and unrestricted (all types of bonds, but with a cost)
- ▶ SOE: restricted - domestic long-term bonds, unrestricted - domestic short/long-term bonds and foreign long-term bonds
- ▶ No limits on international transaction for the households in large country
- ▶ Motivation for limited access of restricted households in SOE?
- ▶ Pension funds have different international investment profiles (Poland and Chile on extremes)

Comment 2

- ▶ The real debt both in small and large country is fixed
- ▶ But there are differences in composition
- ▶ Small country:

$$\frac{B_{H,t}^g}{P_{L,t} B_{H,L,t}^g}$$

- ▶ Large country:

$$\frac{P_{L,t}^* b_{F,L,t}^{g*}}{P_L^* b_{F,L}^{g*}} = \left(\frac{P_{L,t-1}^* b_{F,L,t-1}^{g*}}{P_L^* b_{F,L}^{g*}} \right)^{\gamma_L^*} \exp\{\varepsilon_t^{L*}\}$$

Unconventional Monetary Stimulus

- ▶ QE: 30 period, decrease in private sector portfolio by 10 pp, followed by 30 period withdrawal
- ▶ Large country: positive but low effect on output, negative on term premium for the first approx. 30 periods
- ▶ Small country: two channels with the opposite effect on growth, negative first
- ▶ One - lower term premium in large economy stimulates the outflow of funds to small economy, accompanied by a drop in the domestic term premium with a positive impact on SOE
- ▶ Two - the currency of SOE appreciates, deteriorating the price competitiveness and leading to output contraction
- ▶ Unlike conventional monetary easing: the positive impact on output of small economy over first 10 periods

Comment 3

- ▶ The description in part 4.1 does not match the Figure 4 (paper update)
- ▶ Example: the term premium in the large/small economy by 60 bps on impact, stays around this level for about 6 years
- ▶ Figure 4 suggests the effect of 40 bps
- ▶ Explanation?
- ▶ *Minor comment:* Comparing unconventional vs conventional - A sequence of steps vs. one off negative shock

Robustness Checks

- ▶ QE announced every 1 or 2 years, agents are fully surprised
- ▶ Including the physical capital - changes the portfolio allocation
- ▶ Asymmetric bond market segmentation - larger share of restricted households bring stronger negative output effect
- ▶ Higher transaction costs lower the responses
- ▶ Low price elasticity of demand for imports - weaker response of SOE term premium, but stronger appreciation

Comment 4

- ▶ It might be worth considering heterogeneous effects of *different programs* and/or the role of *financial factors*, like the frictions or risk aversion.
- ▶ The programs lead to different patterns in portfolio reallocation (e.g. Fratzscher, Lo Duca and Straub, 2013)
- ▶ MacDonald (2015) suggests that capital market frictions between the EMEs and the US seem to explain the heterogeneity of the impact on the EMEs. He also shows that Treasury bill purchases have a bigger impact than the MBS purchases

Conclusions

- ▶ Highly relevant topic
- ▶ Elaborated model to illustrate the channels through which the unconventional measures in large economy can impact SOE
- ▶ Findings in line with the empirical literature, it holds a potential for further extension
- ▶ Policy implications

Thank you.