

Macro-prudential policies in a commodity exporting economy

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Paper contribution and summary

- Develops medium-scale model for a commodity-producing economy with nominal rigidity and BGG banking
- Focuses on composition of credit flows
- Assesses costs and benefits of MPPs and finds that there are small costs in the model (?)

Key Stylized facts

- EMBI Spread compressed by the oil shock reverting after drop in price
- GDP, consumption, and total credit above and below trend, respectively around the shock
- Real exchange rate appreciates in boom and depreciate in bust
- Credit and output in the tradable (non-tradable) sector contracts (expands) during boom and expands (contracts) during bust

Key model features

- BGG banking exacerbates sectorial adjustment process which is otherwise efficient
 - Credit is also redirected to to this non-tradable sector
 - When the shock reverts financial capacity of tradable sector is diminished (Caballero-Lorenzoni, 2007)
 - Without financial friction, flexible IT can deal with this type of shocks (Hevia et al., 2013; Chang and Catao, 2012)
- MMP contains **total** credit, and thus ameliorates financial stability, but exacerbates market forces that squeeze the tradable sector

Outline

- Why it is important to focus on composition of credit flows?
- Role of the exchange rate and MMP in the model
- Role of nominal rigidities
- One modeling suggestion
- Conclusions

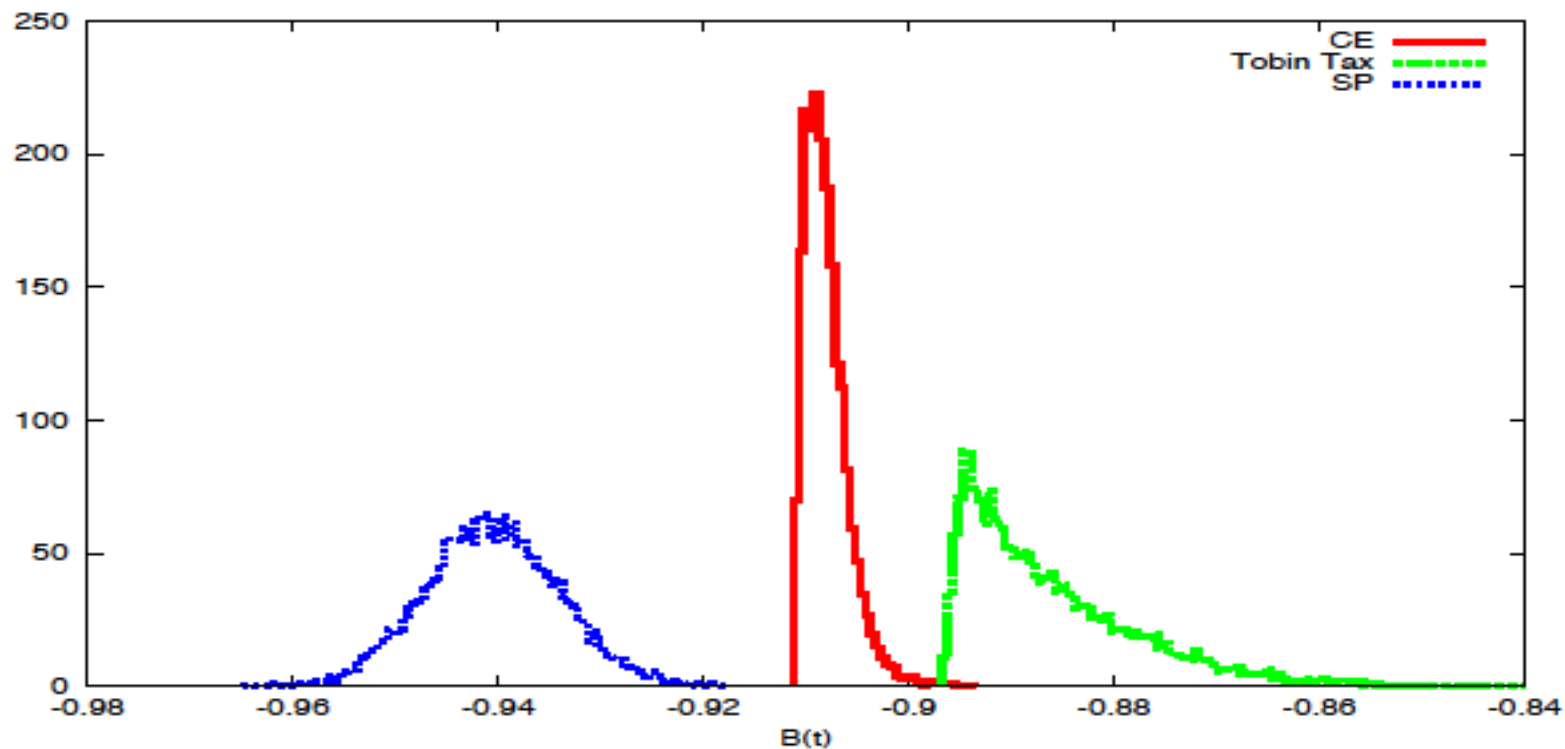


Why is it important to focus on the composition of credit?

- Growth has slowed and financial development and deepening could support it going forward
 - M2/GDP has a positive sign in the empirical growth literature
- But we need to avoid the mistakes of the past (1998 financial crisis) that lead to volatility and disintermediation
- Colombia average credit to GDP: 28%



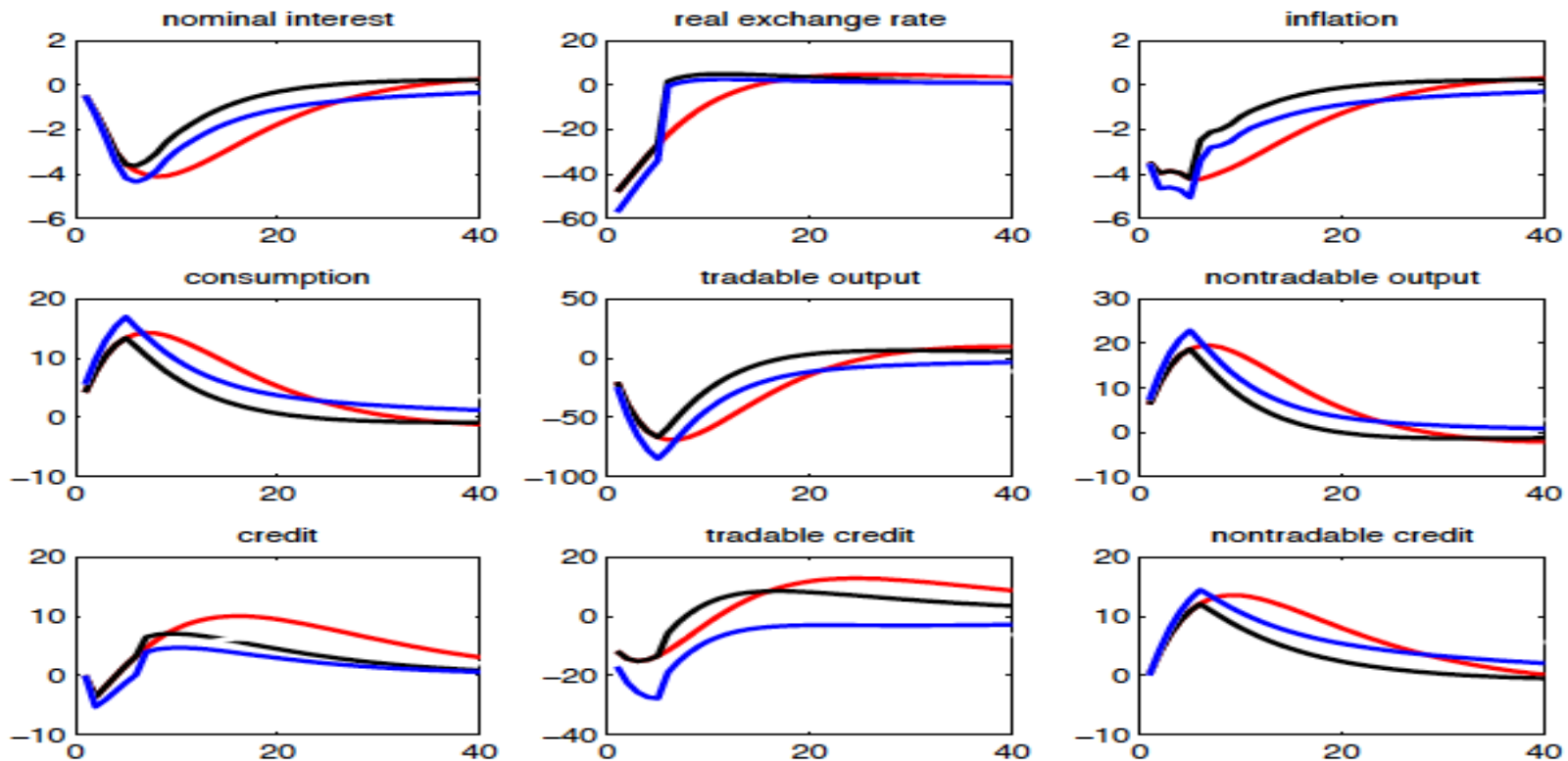
How can the composition of credit flows help?



(Benigno et al., JIE 2013)

Role of exchange rate is key in the transmission

Figure 6: Effects of macroprudential policy



We need to have some costs attached to its movements

- BGG banking:
 - Net worth of tradable sector goes down with the shock and its effect on the exchange rate
 - When shock reverses, tradable sector faces relatively more costly external finance
- But exchange movements are efficient here
 - No DD or other costs

How does ER and MMP works in the model?

$$b_t + b_t^N + b_t^T = d_t + q_t b_t^*$$

$$r_{t+1}^{kN} = \left(\frac{n_t^N}{p_t^{kN} k_t^N} \right)^{-\nu_t^N} (1 + r_t) (rp_t)$$

$$r_{t+1}^{kT} = \left(\frac{n_t^T}{p_t^{kT} k_t^T} \right)^{-\nu_t^T} (1 + r_t) (rp_t).$$

$$rp_t = \exp \left(\mu_{rp} \left(\frac{d_{t-1}}{\bar{d}} - 1 \right) \right)$$

Implications

- Caballero-Lorenzoni and Benigno et al. have occasionally binding financial frictions. Here we we have nominal rigidities (+). We need to make exchange rate appreciation costly:
 - Simple DD externality?
- Set of alternative policies:
 - Intervention that are sector specific could help rather than worsen aggregate dynamics: target credit growth in non-tradable sector?
 - Compare what MMP or ERP can do. Are they complements or substitutes? Or they pose trade off?
- Need to define what is financial instability in the model and a benchmark to evaluate alternative policies.

Do we need nominal rigidities?

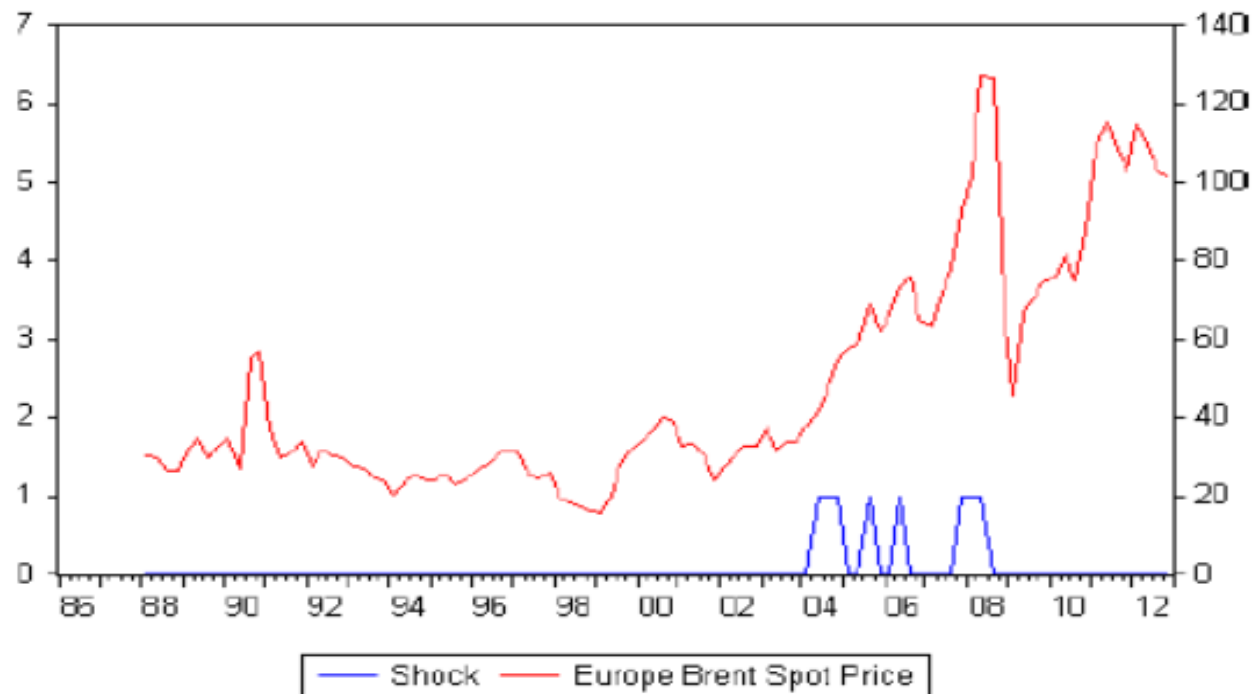
- How do they interact with the financial friction?
- Are there trade offs for monetary policy that require other instruments?
 - Should we keep output gap in the interest rate rule to make sure is not just straw man?
- Are macro and financial stability the same in the model?
 - The MMP rule target total credit growth, but this is not necessarily a good target for policy

A modeling suggestion

- Paper focuses on a window of 6 quarters before and after a commodity price shock: too narrow
 - Commodity prices are persistent
 - I(1) processes over estimation sample period
 - Add trends to the model and explore implications of permanent, possibly misperceived shocks as the paper currently does

Key stylized fact in the data

Figure 2: Price of oil and the oil shocks



Thank you

Conclusions

- Promising paper focusing on on key on important issue for Colombia and other LA countries: composition of credit flows
- Paper is technically sophisticated, very well executed and written
- Paper is preliminary and could:
 - Add costs of exchange rate changes
 - Revisit the set of of MMP policy tools available and discuss the prudential properties of standard policies

Quibbles

- Discuss role of internal finance in the transmission?
- Discuss role of balance sheet effects for banks. Why aren't they relevant? How do they work?
- Relate paper to Lorenzoni-Caballero; discuss what you lose and what you gain by giving up on occasionally binding friction and adding nominal rigidities.
- Calibration issues: elasticities of substitution; credit/GDP is way off.
- Shocks decompositions? Is the model ready for that? We need to see more on estimation to buy this. Stay qualitative. Go quantitative later.



