

Discussion of
«Interest Premium, Sudden Stop, and
Adjustment in a Small Open Economy»
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Policy Analysis in the Post Great Recession Era
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Outline

1. My narrative of the paper.
2. Praise
3. Comments
4. Final remarks

Motivation of the paper

- Hungarian consumers accumulated massive currency mismatches by borrowing in foreign currencies before the global financial crisis (GFC).
- Suddenly, the GFC changed the risk perceptions regarding foreign debt.
- Sudden stop: lenders ask for much higher risk premium.
- Exchange rate depreciation and external demand shock exacerbated the balance sheet problems associated with currency mismatches.
- Outcome: large drop in consumption; deleveraging, adjustment in NFA.
- This paper: **can we explain these observed facts by a DGE model?**

Main Policy Question and the Answers

What is the appropriate exchange rate (ER) regime?

- On one hand, **balancesheet channel** calls for a fixed ER regime.
- On the other hand, exchange rate flexibility will limit the collapse in tradable output driven by down wage rigidity (**trade channel**).
- The paper concludes that to maintain the managed (quasi-fixed) exchange rate regime was a wise decision because the balance sheet channel dominates the trade channel for the Hungarian case.
- Yet, it is acknowledged that more flexible ER regime would be desirable if Hungary faced the GFC with a lower indebtedness.

Execution

- Set up a model with currency mismatches with two key nonlinearities:
 - Risk premium is a nonlinear function of external debt (NFA excluding CB reserves)
 - Asymmetric (downward) wage rigidity
- Define a reduced form sudden-stop process for external debt
- Introduce shocks and simulate the model under perfect foresight
 - A permanent shift in the steady state NFA
 - Temporary export demand shock

Strengths of the study

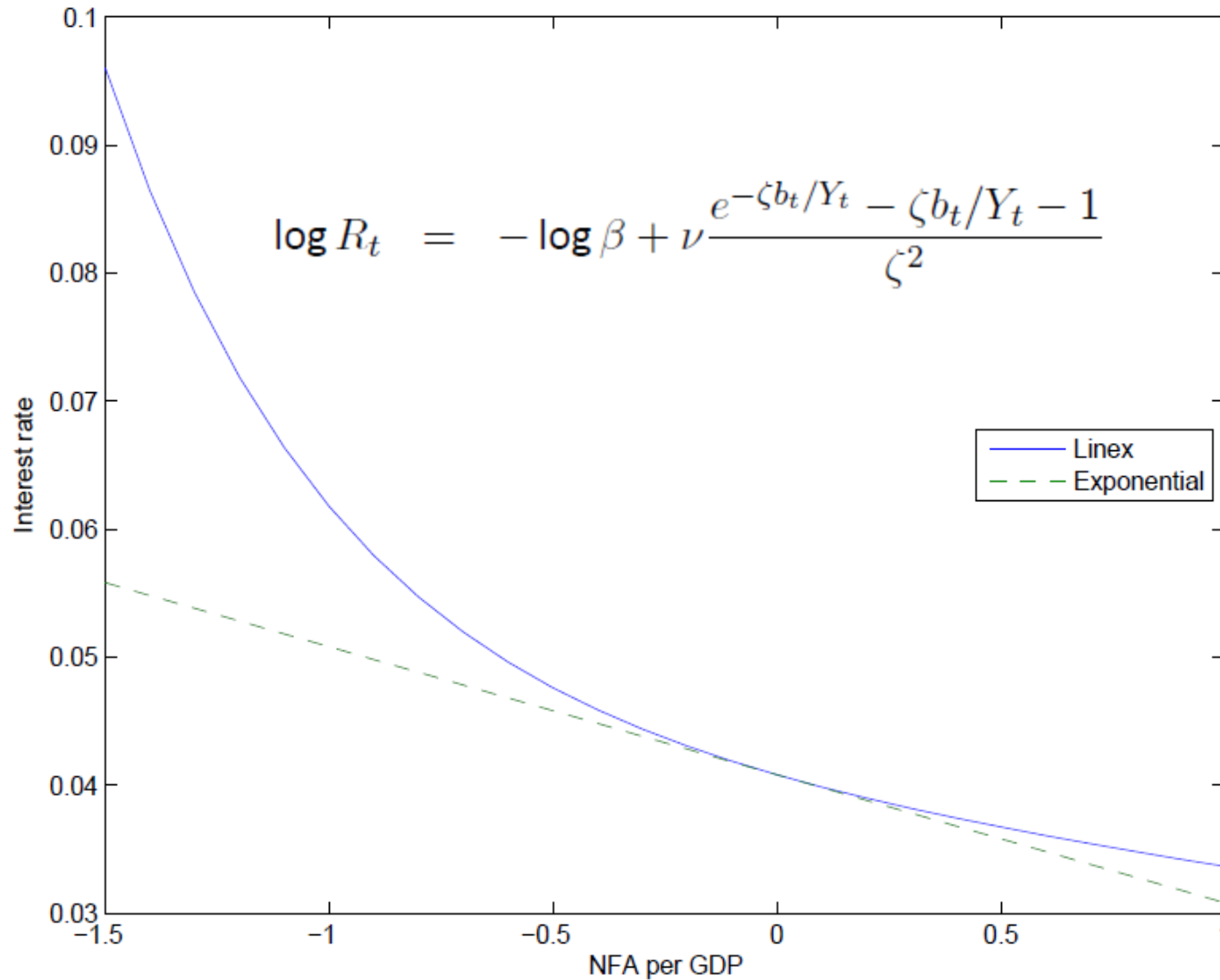
- Valuable contribution to the EM business cycle literature.
- The paper introduces a relatively simple model to think about policy tradeoffs faced by Hungary without hassling with the technicalities of solving stochastic steady state with nonlinearities.
- Provides excellent intuition in interpreting the model and the results.
- Does a reasonable job in projecting the evolution of macro variables for the three year period following the GFC (2009-2011).

Comments: Warm up

- Ad-hoc way of modeling sudden stop and financial frictions.
- Agents suddenly face an immense permanent shock to risk premium but do not expect another shock forever! Not very convincing.
- Hard to think about post-crisis dynamics without a financial accelerator mechanism (e.g. a la Gertler and Karadi 2011) or without uncertainty/stochastic behavior (Mendoza, Bianchi and others).
- To be fair, the paper is clear about its limitations.
- That is why my comments will mostly focus on more practical issues.

ON THE INTEREST RATE PREMIUM FUNCTION AND THE «CALIBRATION» OF THE STEADY STATE

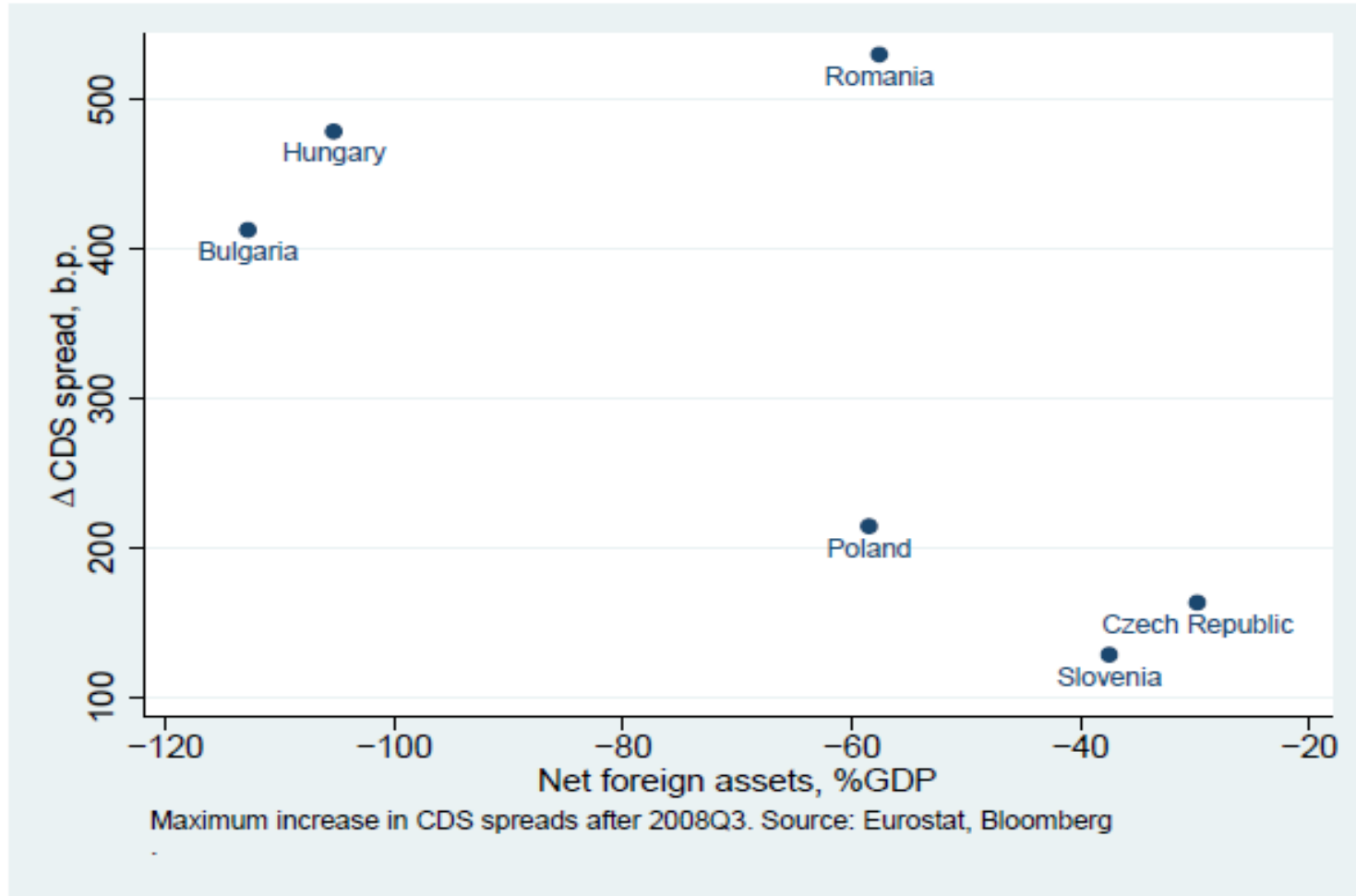
Main Contribution: Nonlinear interest premium function



On the structure of external premium function

- The most critical part of the paper; the specific functional form may need to be defended more strongly.
 - Time series and/or cross sectional evidence?
 - Is it the current or the expected debt/GDP that drives the risk premium?
- Is the relationship stronger for «nonreserve NFA» than NFA?
 - Needs empirical evidence or theoretical justification
 - At odds with the conventional risk assesment procedures
 - Greenspan-Guidotti rule, short term debt/reserves

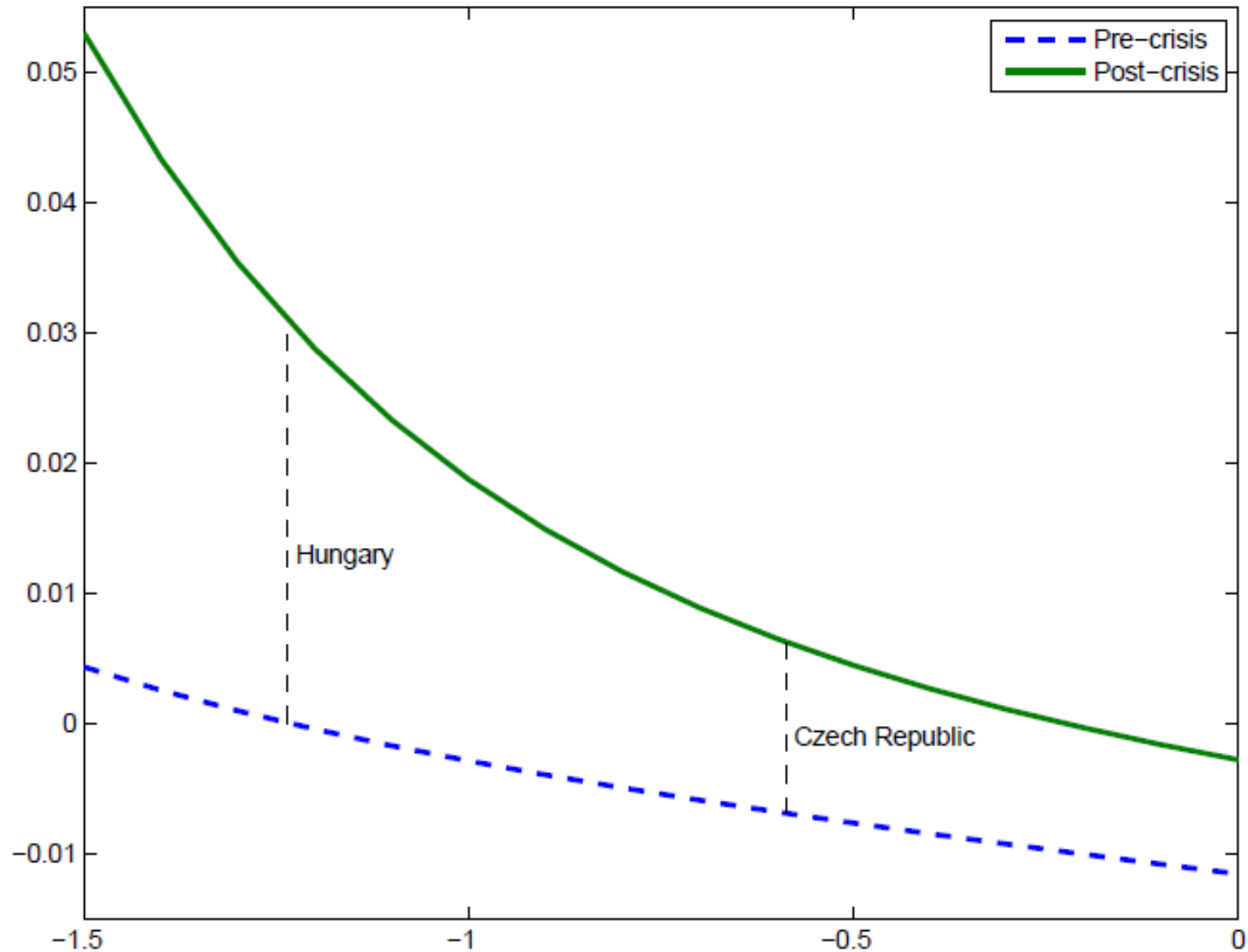
NFA and risk premium



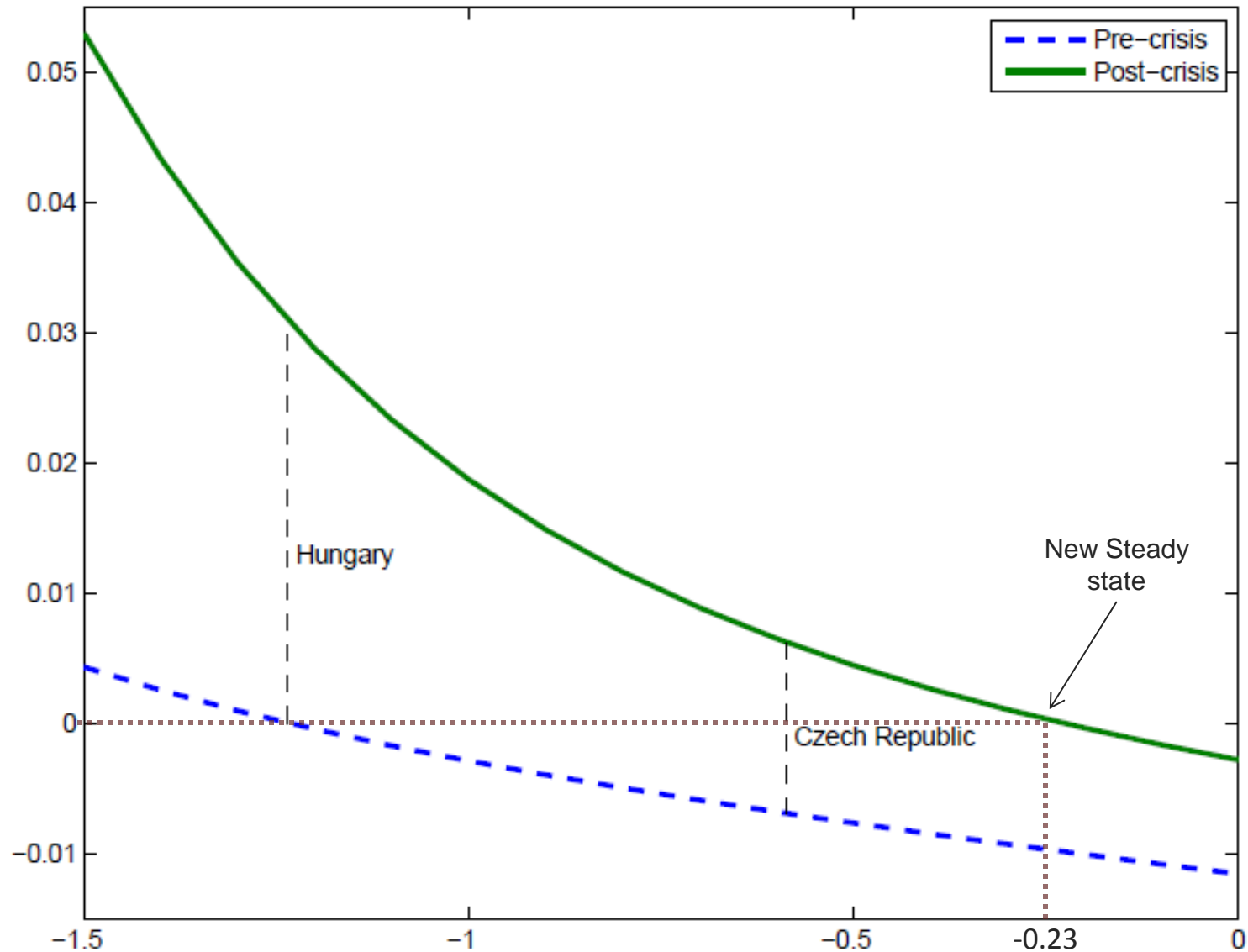
Excluding Central Bank Reserves from NFA

- The paper motivates the main idea by showing a positive relationship between Net Foreign Assets (NFA) and foreign interest rate premium
- However, in the paper what matters is the private indebtedness (or non reserve NFA) rather than NFA.
- It will be helpful to see whether the relationship is stronger with non-reserve NFA.
 - At least plot Graph 1 with non-reserve NFA

Calibration of the sudden stop and the interest premium function



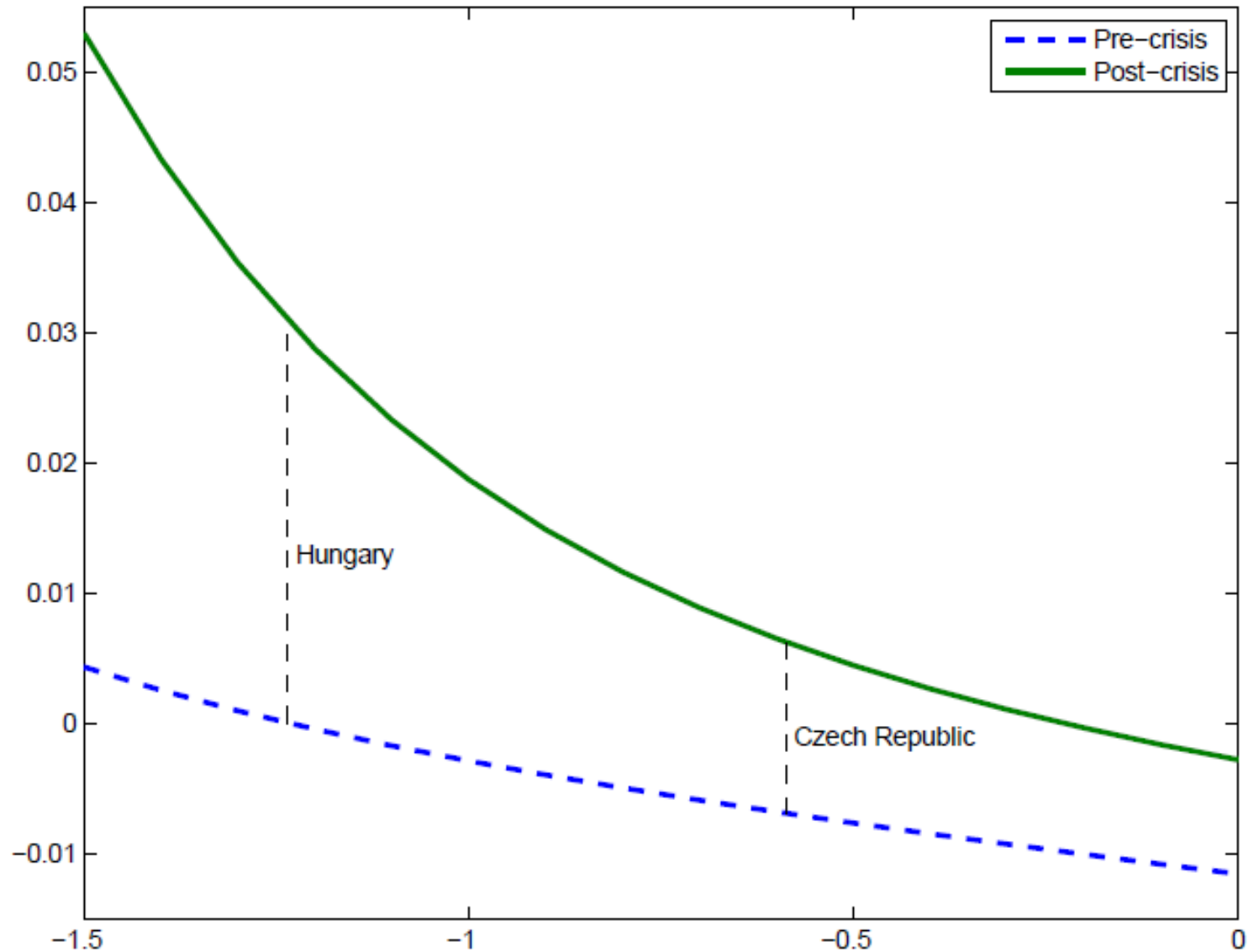
Calibration of the sudden stop and the interest premium function



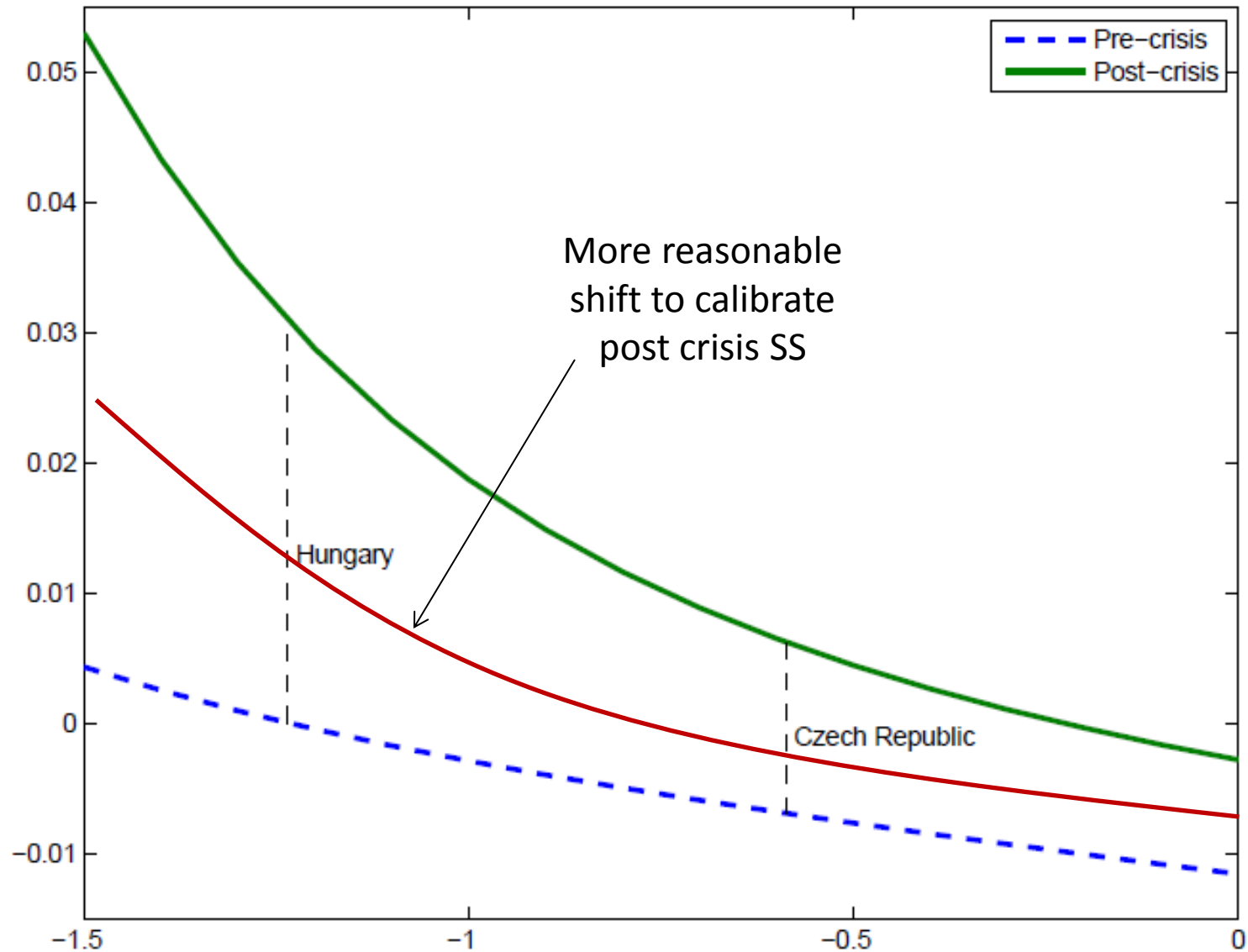
On the calibration of the steady state NFA

- The switch of the steady state NFA/GDP from -1.24 to -0.23 does not look realistic.
- The level of NFA for the post-crisis steady state is derived as a byproduct of the calibration of the interest premium function.
- Heer and Schubert (2012) calibration looks more reasonable (0.3 pp decline in steady state NFA after the crisis).

Calibration of the sudden stop and the interest premium function



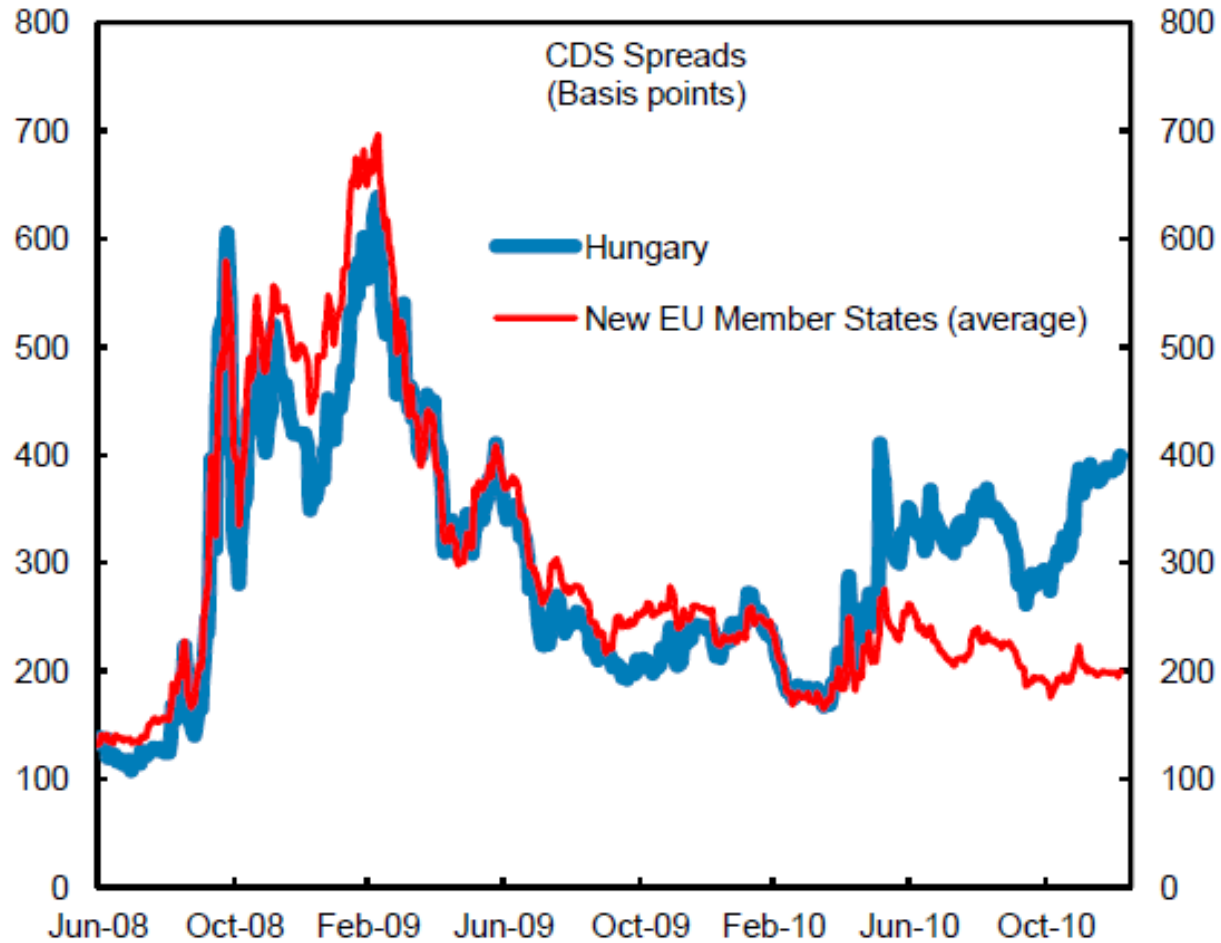
Calibration of the sudden stop and the interest premium function



On the calibration of the interest rate premium function

- The paper uses only Hungary and Czech Rep. CDS data to calibrate the interest premium function parameters.
 - Why not Poland?
- It would be more convincing to use panel data to estimate the parameters directly.
- This would make the paper stronger because main dynamics and innovation comes from the specific functional form.
- High frequency changes in CDS reflect liquidity premium as well.
 - Overshooting in risk perceptions during the crisis
- Linex function may have shifted back to some extent afterwards.
- It would be safer to use post-crisis average rather than the max of CDS to calibrate the shift in the interest premium function.

Overshooting in risk perceptions during the crisis?



Was the economy at the steady state before the crisis?

- Two critical assumptions: (i) the change in debt intolerance is not temporary (ii) the economy was initially at the steady state.
- The first one seems reasonable while the second one is not.
- The authors state that «Hungarian convergence seems to have been characterized by TFP accumulation, and not capital deepening. At least in this sense our initial steady state assumption is a reasonable one».
- Not very convincing.
- The main parameter that is supposed to be at the steady state is external debt/GDP, which does not seem to be at the SS at all!

ON THE EXCHANGE RATE REGIME

Comparing exchange rate regimes

- What is the welfare measure to compare regimes?
- There is no systematic approach in the paper.
 - The subject of interest seems to be consumption and employment
- One could construct a metric using consumer's utility function and then compare welfare across regimes.
 - Plot the welfare curve across different ER regimes ($0 < \rho_s < 1$)
 - Try for alternative levels of initial debt (3-dimensional welfare curve?)

Policy implications: Fixed vs floating ER regimes-1

The model favors fixed ER against floating ER

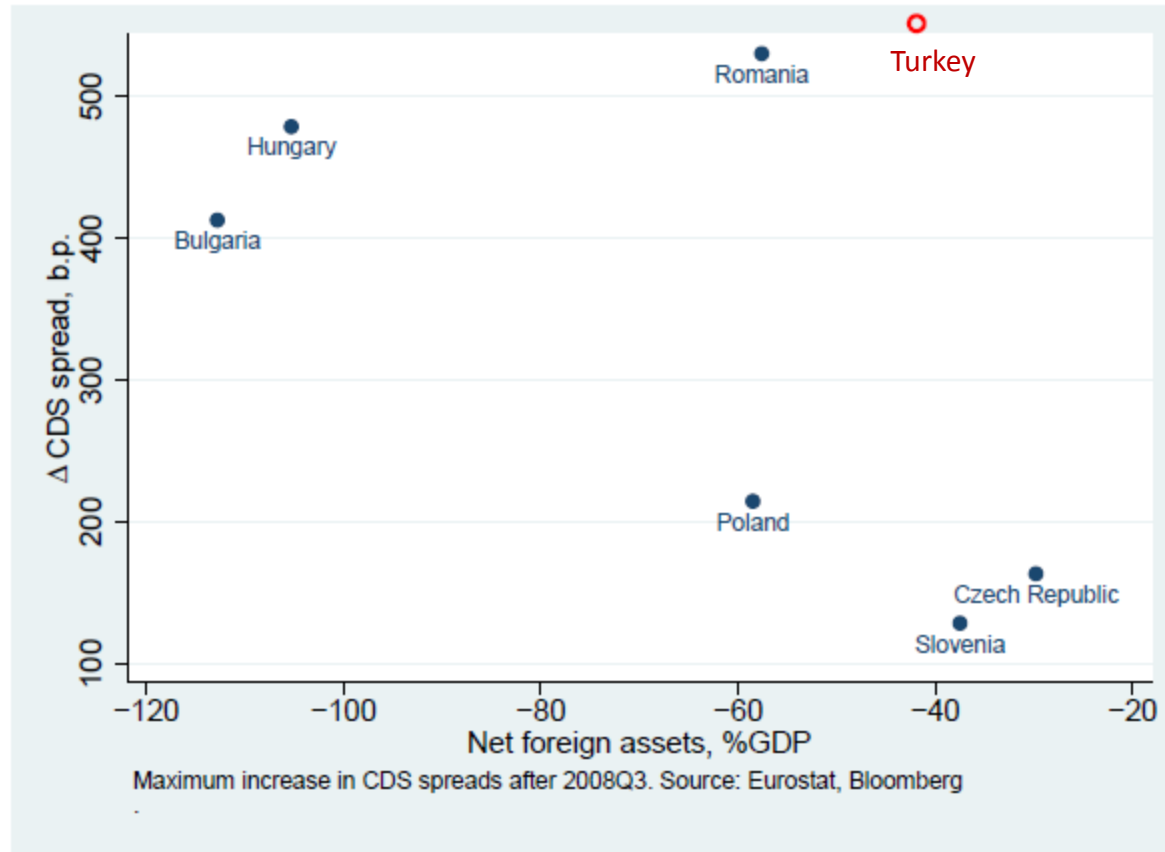
- Critical assumption: deterministic behavior.
- How would the results change under a stochastic model?
- My conjecture: Pracautionary saving motive would imply a faster deleveraging even under fixed exchange rate regime, which could diminish the marginal value of fixing the exchange rate.
- Trade channel may dominate.

Policy Implications: Fixed vs floating ER regimes-2

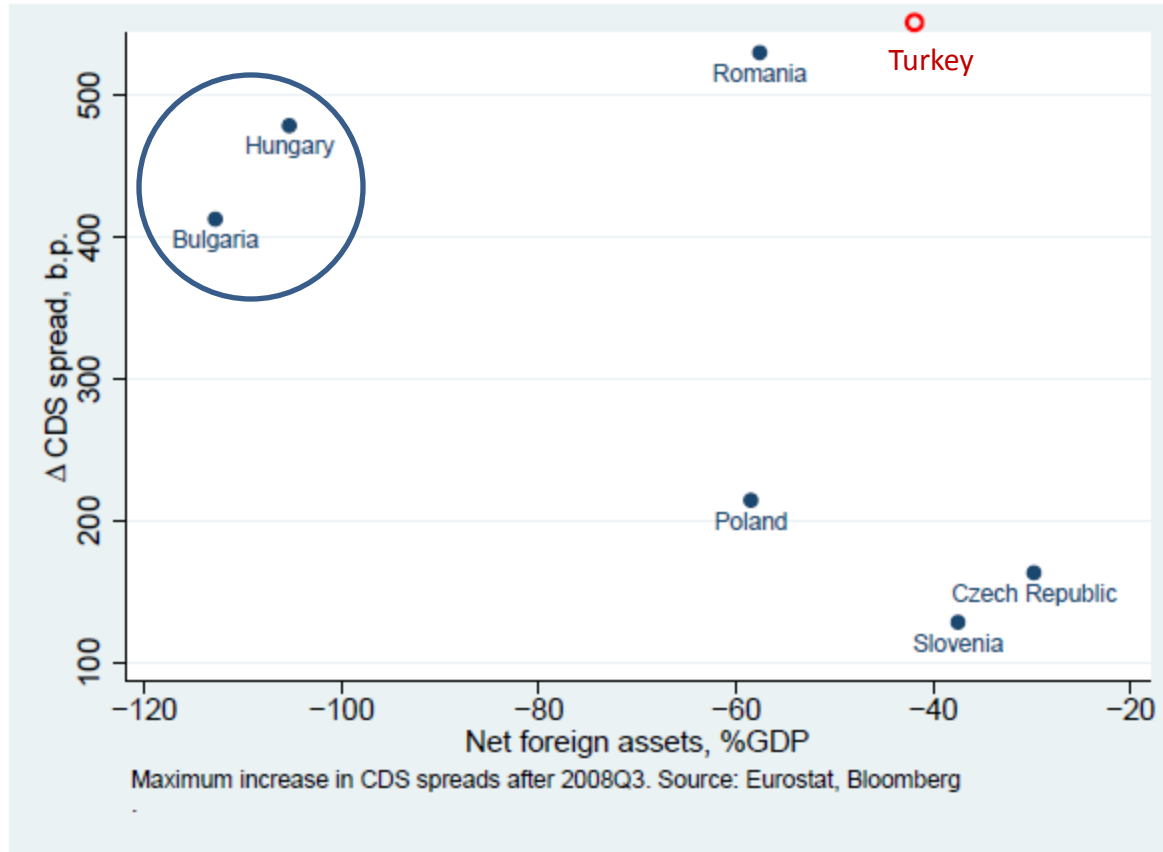
Fixed ER regime may itself create liability dolarization.

- Big question: Would Hungary have ended up with high liability dolarization under a more flexible ER regime?
- An endogenous risk premium model could capture the the role of exchange rate regimes in liability dolarization.

Countries with fixed/managed ER regimes seem to have accumulated more foreign debt before the global crisis



Countries with fixed/managed ER regimes seem to have accumulated more foreign debt before the global crisis



Calibration of monetary policy parameters

$$\left(\frac{H_t}{H_{t-1}}\right)^{\rho_s} \left(\frac{S_t}{S_{t-1}}\right)^{1-\rho_s} = 1.$$

$$b_t^c = \rho_h \frac{H_t}{S_t}.$$

- The paper treats ρ_h and ρ_s as independent parameters.
- They should be correlated by construction.
- Steady state for ρ_h changes although ρ_s is the same after the crisis. Is there any explanation/motivation for this?

ON THE SIMULATIONS

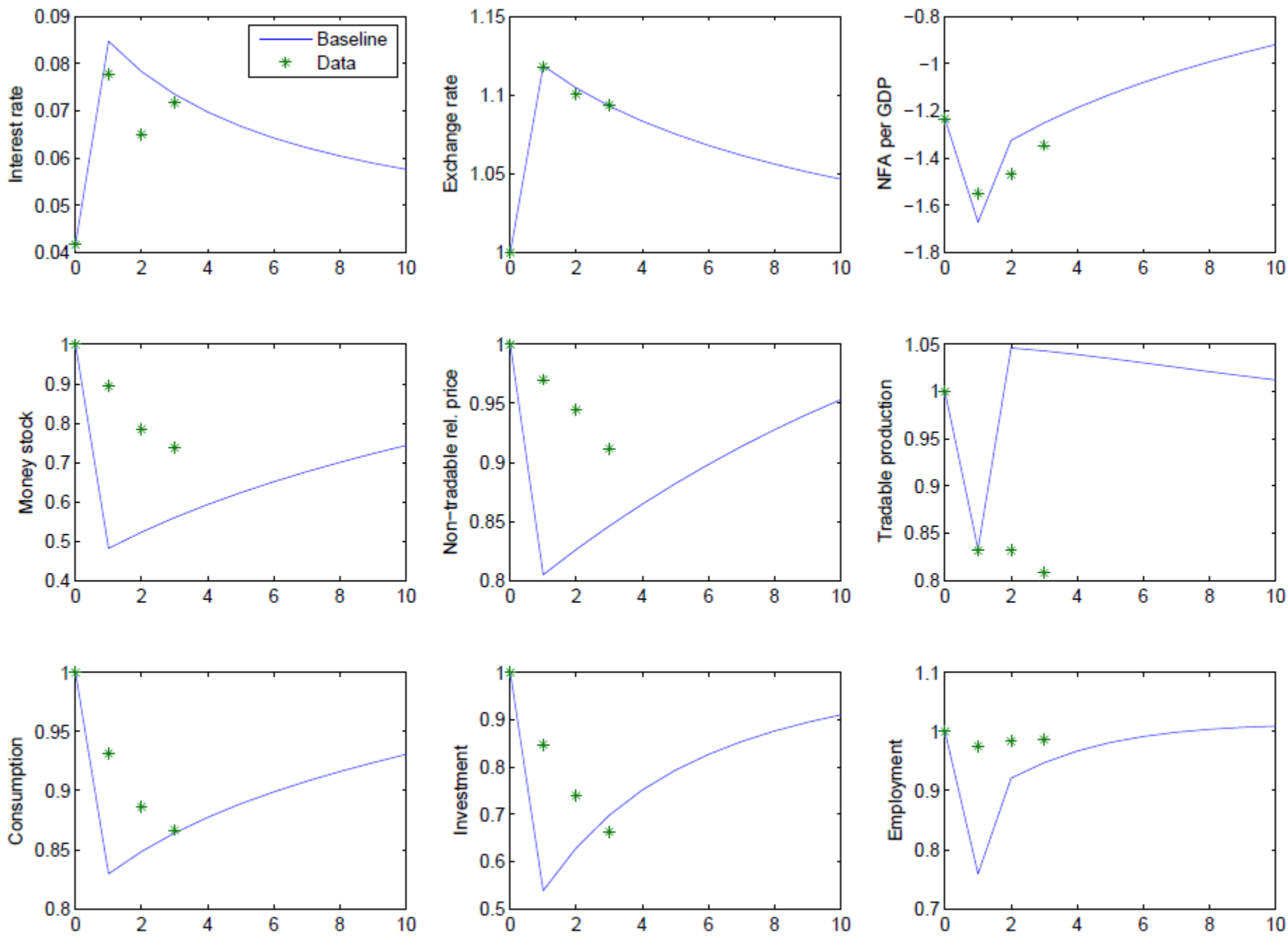


Figure 6: The crisis in Hungary: baseline simulation

Questions on the simulations

- How successful is the fit for real variables?
 - Qualitatively reasonable but quantitatively less impressive.
 - Data shows much more persistence than the simulations.
 - The qualitative dynamics is dominated by one period export shock
 - Introducing flow (not stock) adjustments costs (a la Gertler and Kiyotaki) for capital may create more persistency.
- Out of curiosity: Why not extend the data until 2013?

Further Questions on the simulations

- It is not clear whether initial drop in GDP can be attributed to the export shock or premium shock?
 - It may be interesting to look at the impacts separately.
 - What fraction of the adjustment in NFA is due to export shock?
- How critical is the nonlinearity in driving main results?
 - Could be useful to compare the simulation results under linear and standard exponential (Schmitt-Grohe and Uribe) functions.

Final Remarks

- Very useful paper from a policymaker's perspective.
- Less impressive (but still valuable) from an academic point of view.

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