Seðlabanki Íslands

Discussion of Paul D. McNelis' paper:

Optimal Policy Rules at Home, Crisis and Quantitative Easing Abroad

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Key issues and modelling approach

Important research question

- Policy options for a non-stressed financially integrated open economy facing spillovers due to quantitative easing (QE) in a foreign economy which is subjected to a series of negative financial and real shocks

The model

- Version of the Dedola et al. (2013) two-country economy model with households, firms, governments, credit-constrained banks, and both real and financial frictions, but neither a nominal side nor conventional monetary and exchange rate policies
- Importantly adopted to include (quasi-)policies in the non-stressed economy: capital flow management measure (CFM) and household taxes
- Solution method and simulation strategy aim to allow for a role for uncertainty and reveal adjustment surrounding crisis-events

Why this particular set-up in light of the motivation?

- The paper is motivated by QE in four major economies (left figure) and their spillover effects on emerging market economies, particularly in Asia, in the form of excessive capital inflows (funding) and credit extensions (right figure)
- Why then use a model set-up with two major economies, with its associated high degree of symmetry (for instance, in credit spreads), instead of a small open economy framework? Adjust either the motivation or the set-up?
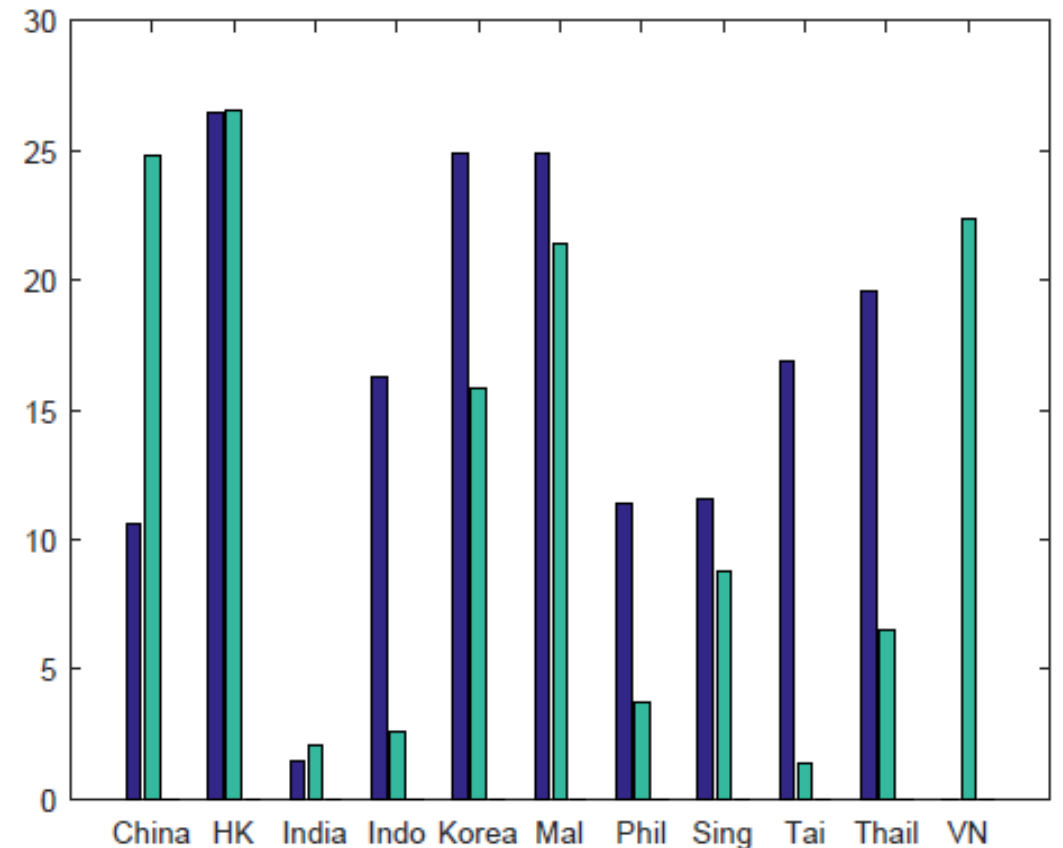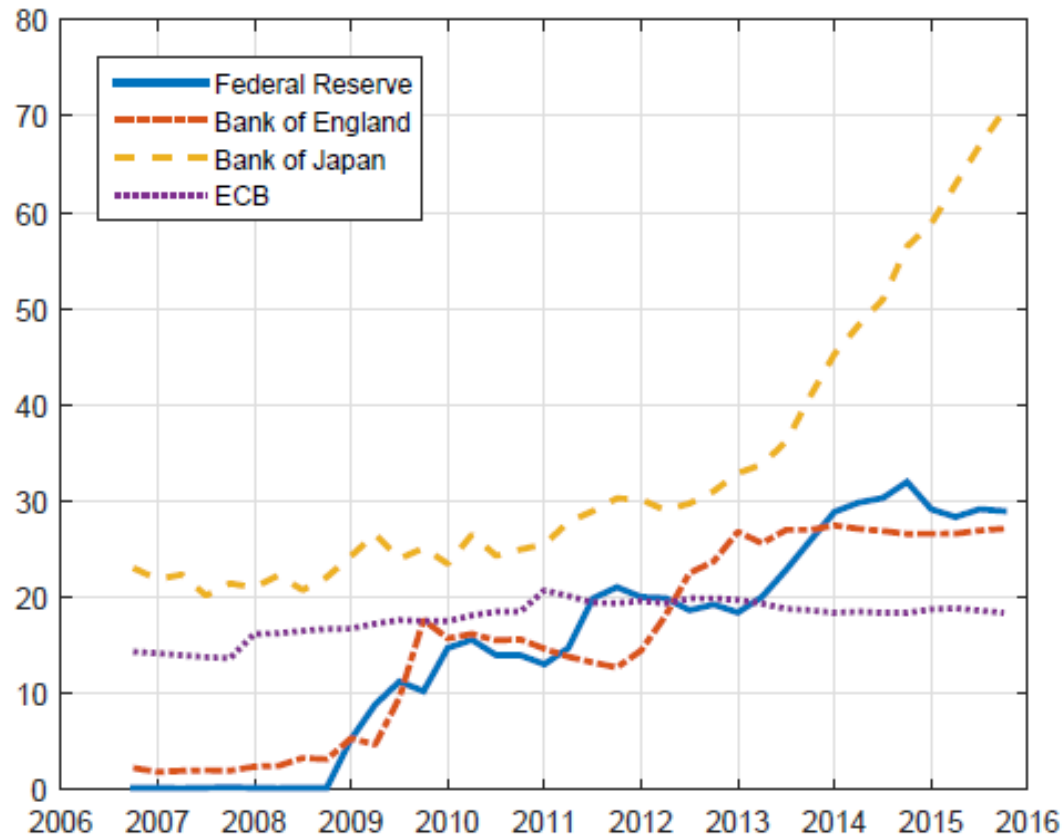
Figures from the paper. Left: Central Bank assets to GDP. Right: Credit Growth/GDP ratios in the 1990s and the recent surge.

Credit market set-up plays a key role

## Domestically credit-constrained cross-border banks

- Banks use their own net worth and domestic deposits to fund loans to firms in both countries, i.e. funding (lending) markets are segmented (integrated)
- Domestic financial friction: funding of banks is constrained by net worth due to information asymmetry between households and banks
- … these frictions nevertheless give rise to cross-border repercussions due to financial connectedness and macrofinancial linkages through which shocks propagate across balance sheets, borders, and the real-financial nexus

Frictionless firm borrowing - domestically and across borders

- Production in each economy relies only on domestic inputs, but they are partly funded from abroad in a frictionless manner
- Discuss further how this set-up captures the spillover dynamics in practice?

QE in the stressed foreign country

- Minuscular real economy benefits for the QE country: tightening of the current account to being roughly in balance
- Financial effects: tighter distributions of net worth and spreads in both, as well as of asset prices in the non-stressed
- Why so weak effects on the distribution of investment in both countries? What role for uncertainty?
- What about other variables of interest, e.g. bank leverage and assets, deposits, corporate credit and its composition?
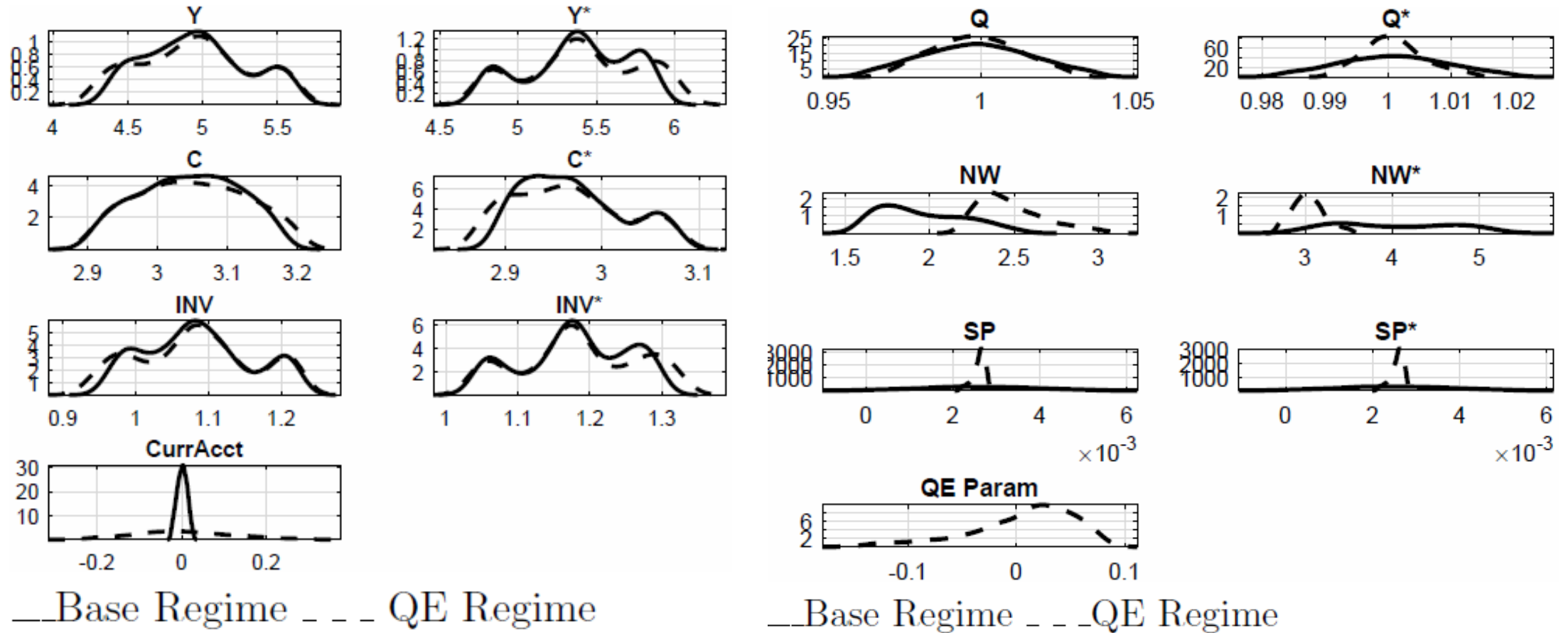
Figures from the paper. Non-starred (starred) variables are distributions of stressed (non-stressed) economy variables following recurring productivity and financial shocks in the stressed foreign country. Solid curves represent the distributions in the base regime with no policy responses in either countries. Broken lines represent the distributions with QE responses in the stressed country but no policy responses in the non-stressed country.

Dynamics surrounding crisis events

- Zoom in on crisis events and look at adjustment of mean values of real and financial variables in each country
- QE supports domestic demand in the stressed country, but GDP contraction seems the same and its recovery weaker, indicating that net exports deteriorate – are capital inflows from the non-stressed country financing that?
- Decline in bank net worth in the stressed country is larger (?) but then recovers - again what about other variables?


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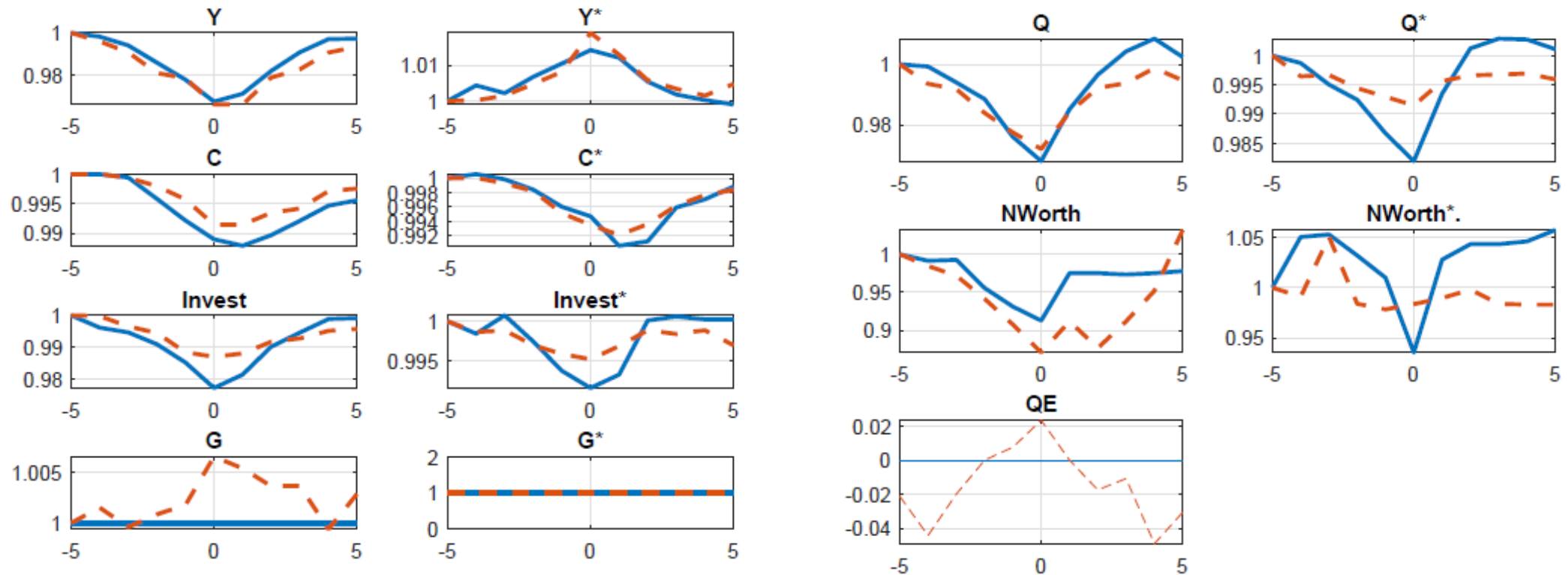
Dynamics with CFM response

- The non-stressed country now responds to foreign QE by taxing capital flows, i.e. with a CFM, producing revenue which is spent on government expenditures (in practice it would more likely be used to build FX reserves)
- Asset prices and investment stabilized, but limited effects on net worth in the non-stressed country, while relatively large spillback effects on net worth in the stressed economy – which mainly seem to affect size of QE, not investment
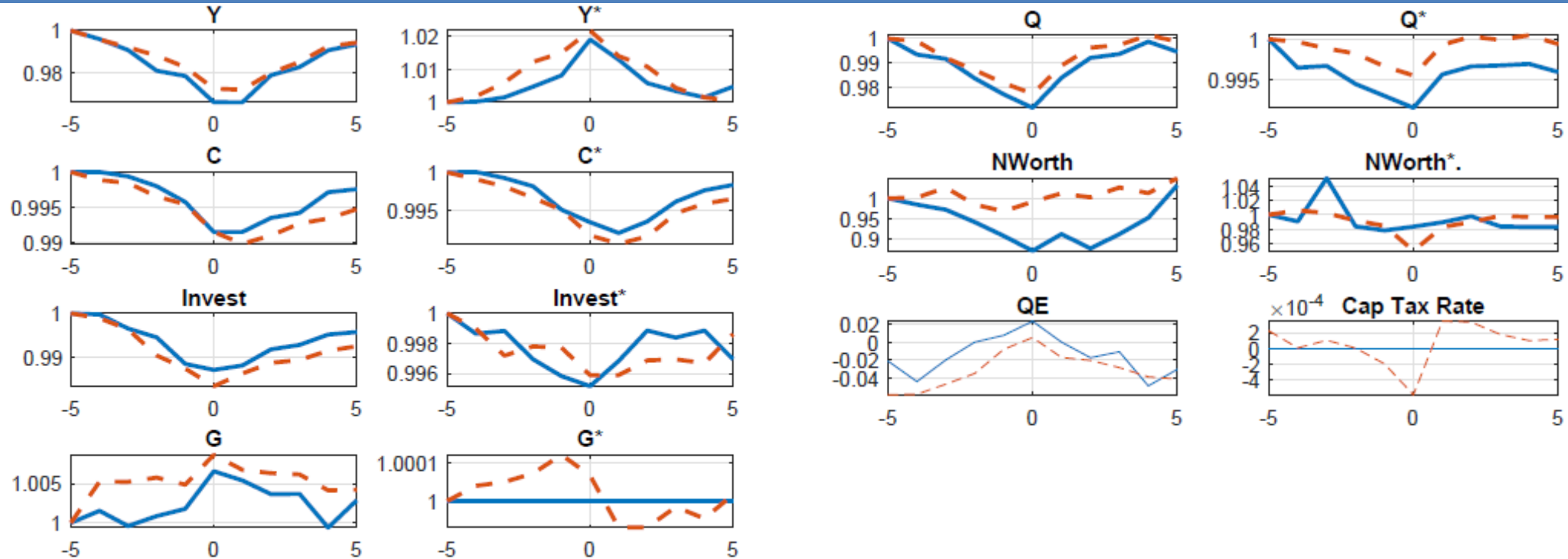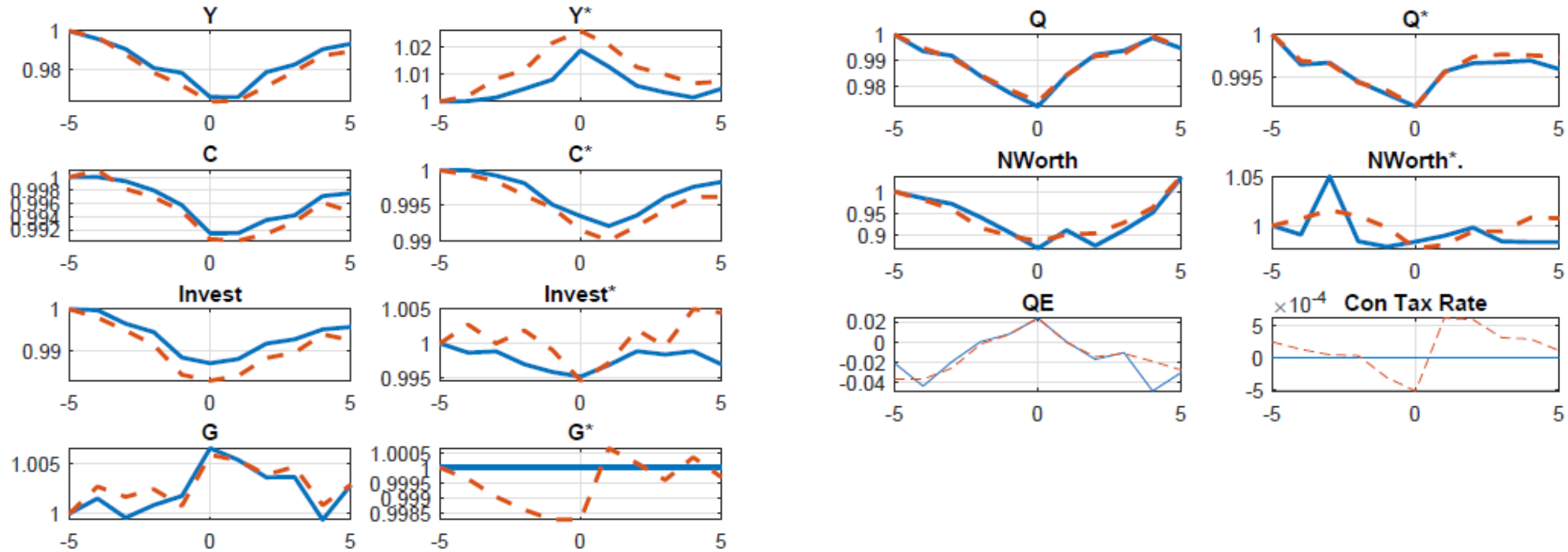

___QE Regime - - - - -CFM Regime

___QE Regime - - - - -CFM Regime

Dynamics with consumption policies instead of CFM

- Add CFM regime onto the figures to ease the comparison of CFM and consumption tax policies?
- Pre-crisis period: a bit stronger non-stressed boom, mainly due to more investment, consumption similar despite policies, government spending different (net export developments?), asset prices lower, but net worth more stabile
- Post-crisis period: investment developments reflecting net worth despite less favourable asset prices, less spillbacks

___QE Regime - - - -FR Regime

___QE Regime - - - -FR Regime

Concluding remarks

Novelty of the paper

- Combine (i) a perspective of a non-stressed financially integrated open economy exposed to foreign QE effects within the Dedola et al. (2013) model, (ii) role for policy responses in the form of CFMs and taxes on households, and (iii) somewhat uncommon but intriguing solution and simulation methods
- Interesting framework to analyse transmission of shocks across borders and the spillovers and spillbacks which policy responses give rise to

Main comments

- Coherence between motivation and choice of model set-up
- There are more variables of interest than shown and discussed in the analysis, hence questions arise with regard to the adjustment dynamics
- More detail analysis and discussions needed to convince the reader that the model adequately captures the key financial frictions and macrofinancial linkages associated with QE and efforts to mitigate their spillover effects