NATIONAL BANK OF ROMANIA

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Exploring interactions between financial sector and real economy in Romania: A DSGE approach

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Agenda

- Introduction and problem discussion

- Methodology

- Implementation

- Results

- Conclusions

Introduction and problem discussion

Implementation of the macroprudential policy under CRD IV / Basel III:

- Rapid growth of shadow banking

- Few research on financial business cycles

- Home bias, low interest rates, slow recovery and other stylized facts at this moment

Introduction and problem discussion

<u>Primary objective</u>: Investigating the nexus between macroprudential policy implementation and the financial business cycle

<u>Secondary objectives</u>:

- Analysis of financial business cycles facts as in Iacoviello (2013) and Rubio and Carrasco-Gallego (2014)

- Effects of different types of shocks (as in Christiano *et al.,* 2008) and macroprudential rules

Methodology

- For this purpose, a Dynamic Stochastic General Equilibrium (DSGE) Model was applied
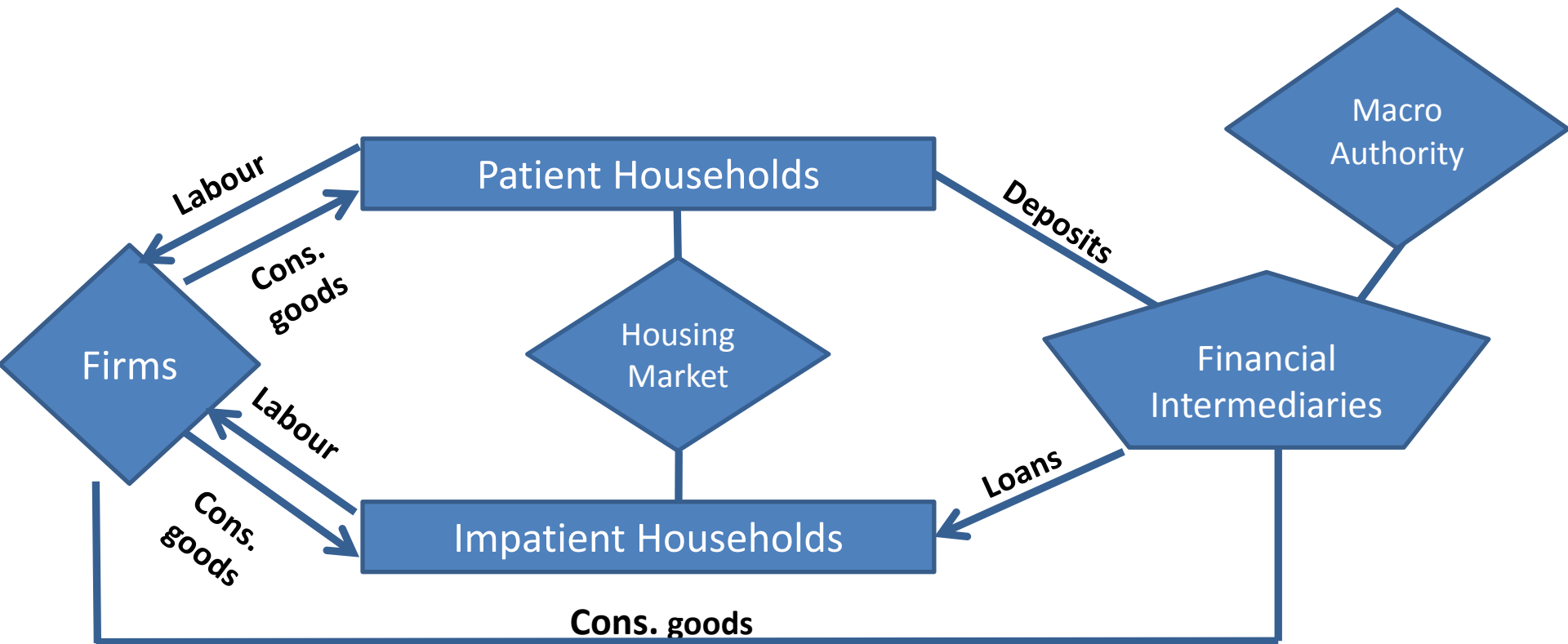
Methodology

- Why such an approach? – Owing to its comprehensivness:

➢ Decision making process is *dynamic*

➢ Future outcomes are *stochastic*

➢ Discipline is ensured by *general equilibrium*

➢ Microfundations allow to judge in terms of the primitive factors of fluctuations as well of the welfare
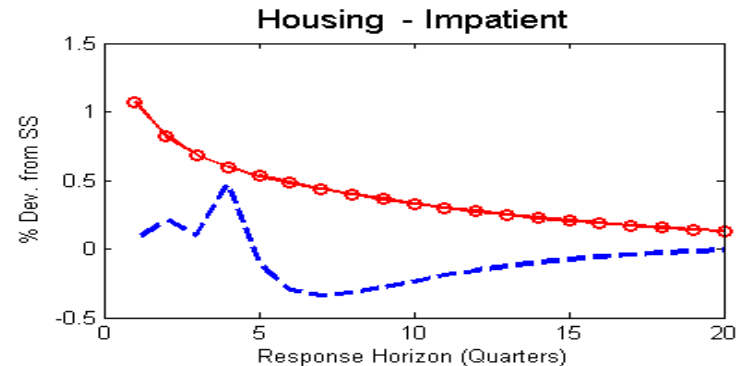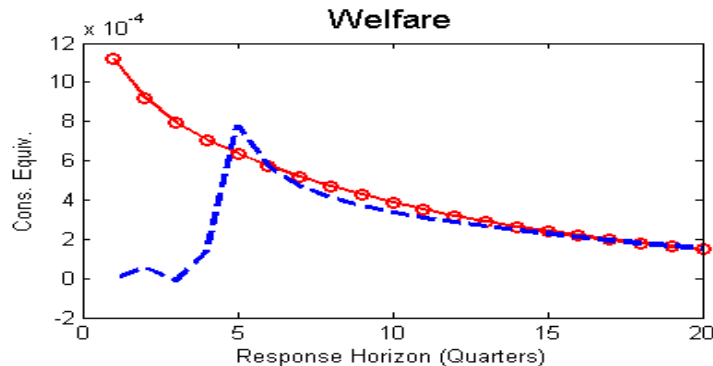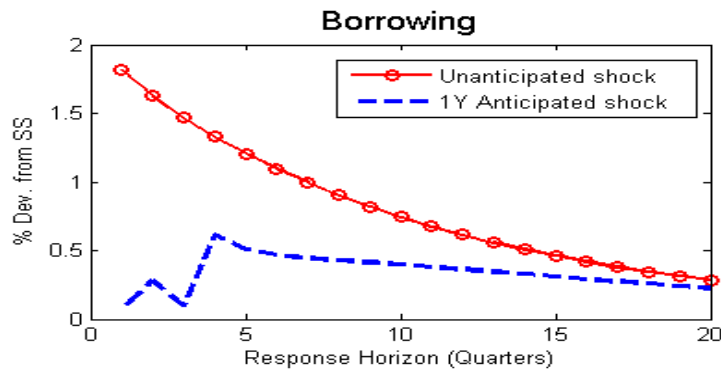
Implementation

Method: Calibration

Solving: First order approximation

Sample: January 2007 – June 2015
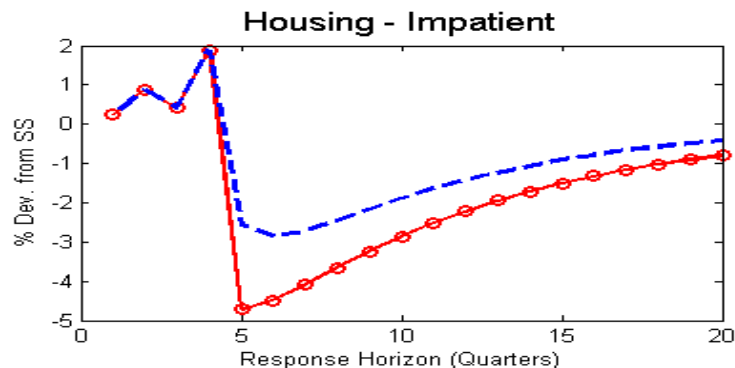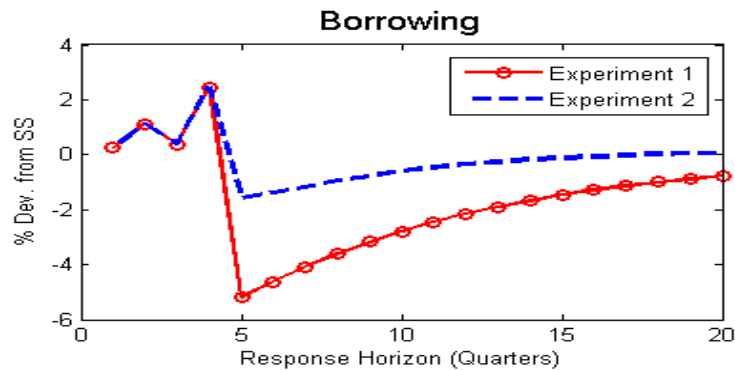
Frequency: quarterly

Results

- Impulse-response functions to a 1% technology shock
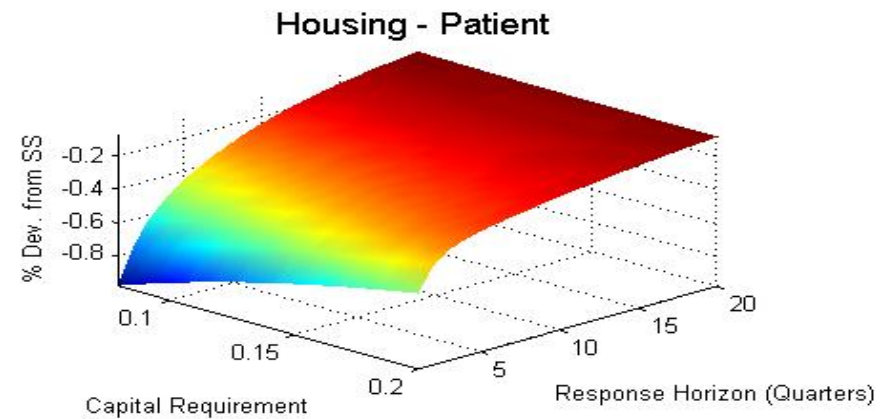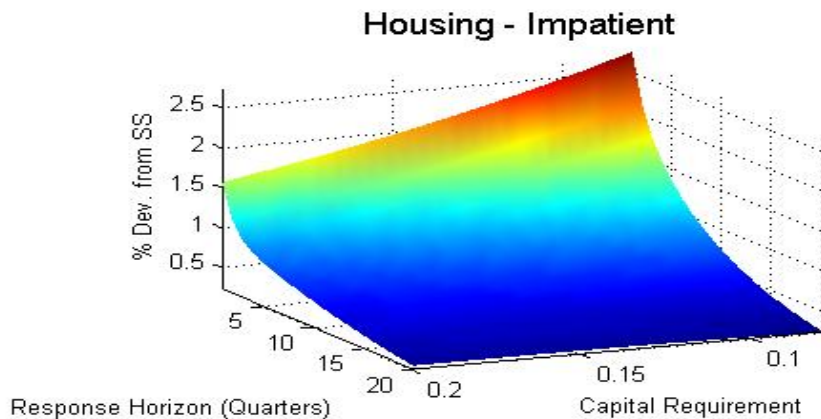- ➢ Anticipated shock was introduced as 1-year signal using Beaudry-Portier (2004) solution
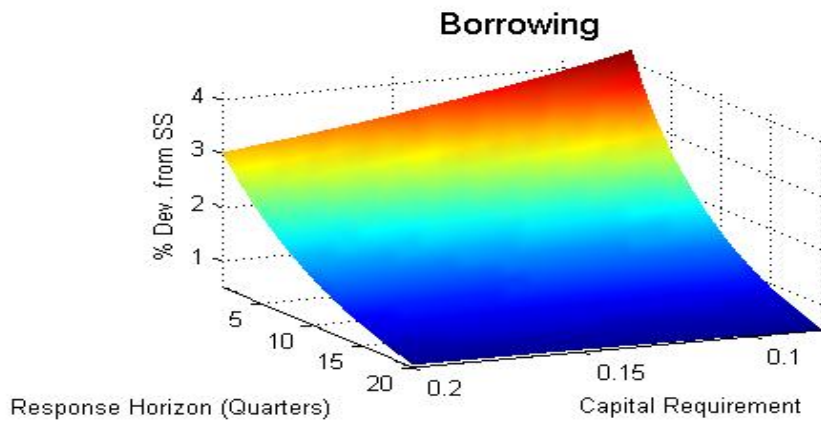
Results

- Experiment 1: 1 year signal (4% shock) + unanticipated (- 4 % shock in t+4) ➡ 0 effect
- Experiment 2: 1 year signal (4% shock) + unanticipated (- 2 % shock in t+4) ➡ 50% materialization
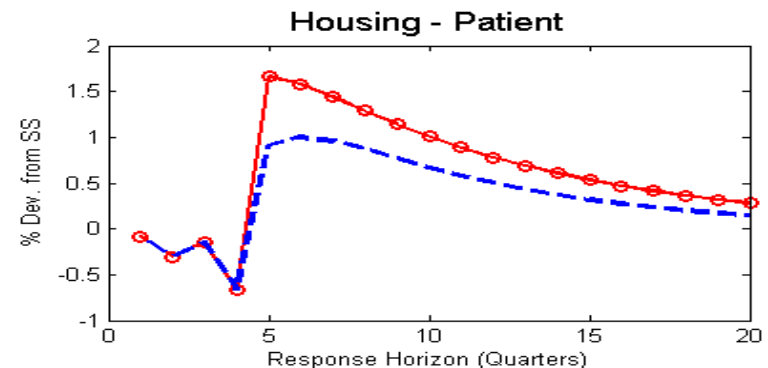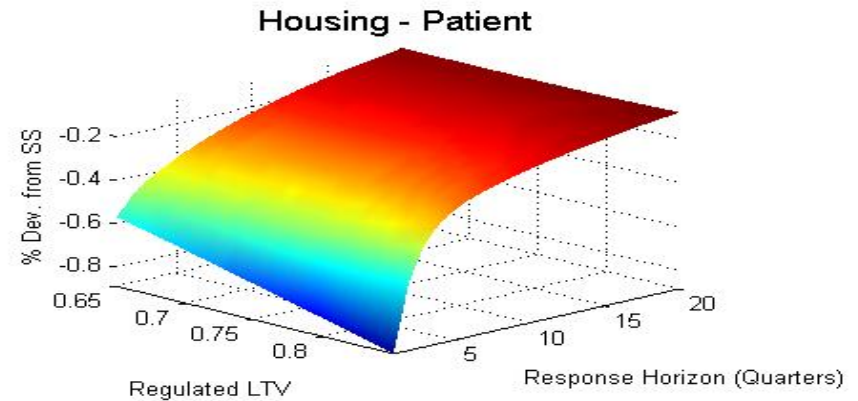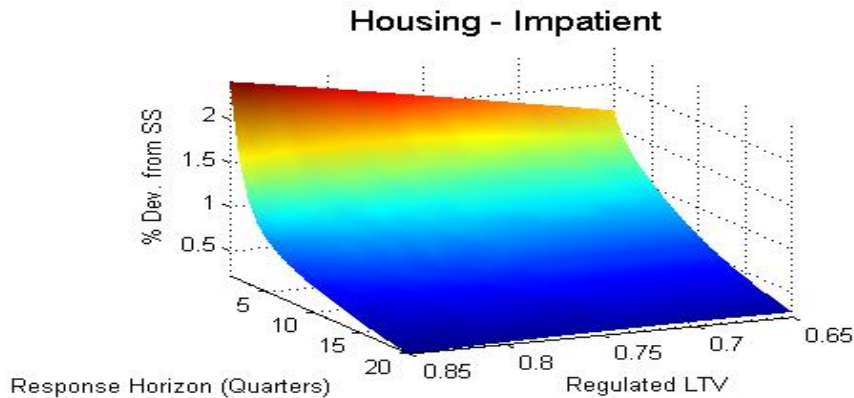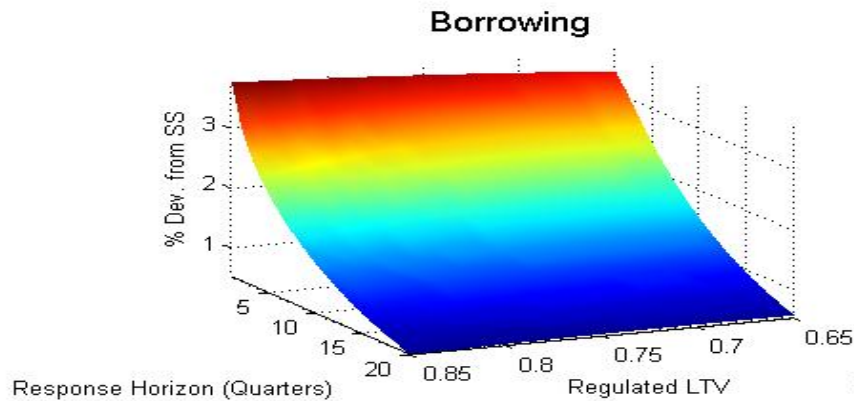
Results

- Impulse-responses to an unanticipated technology shock by varying the capital requirements ratio
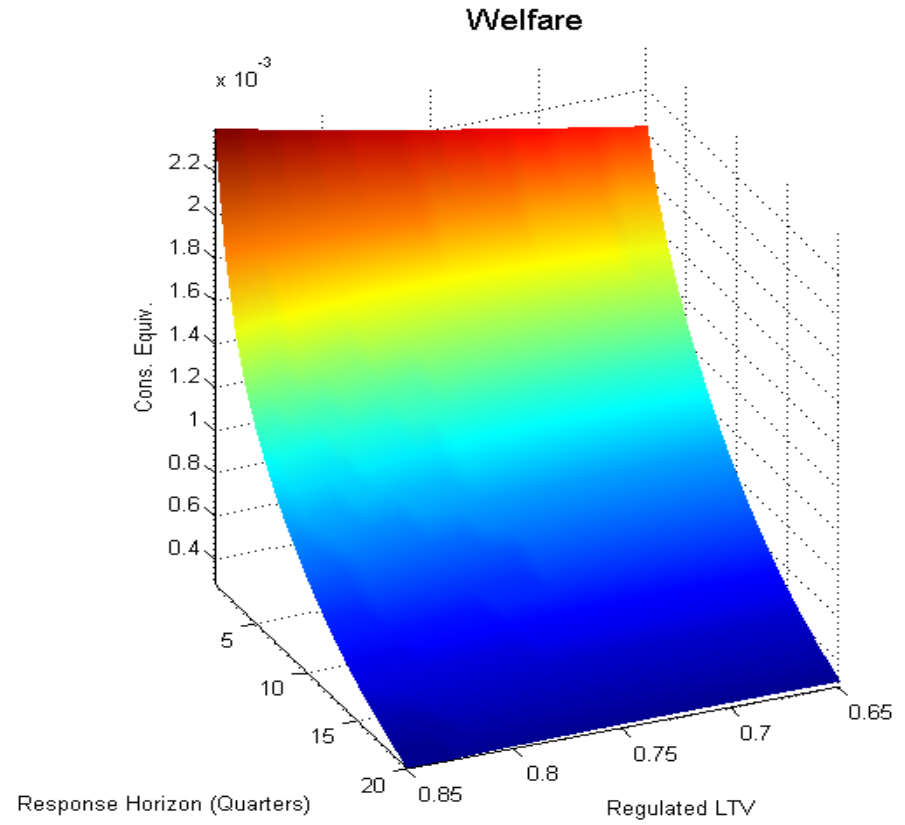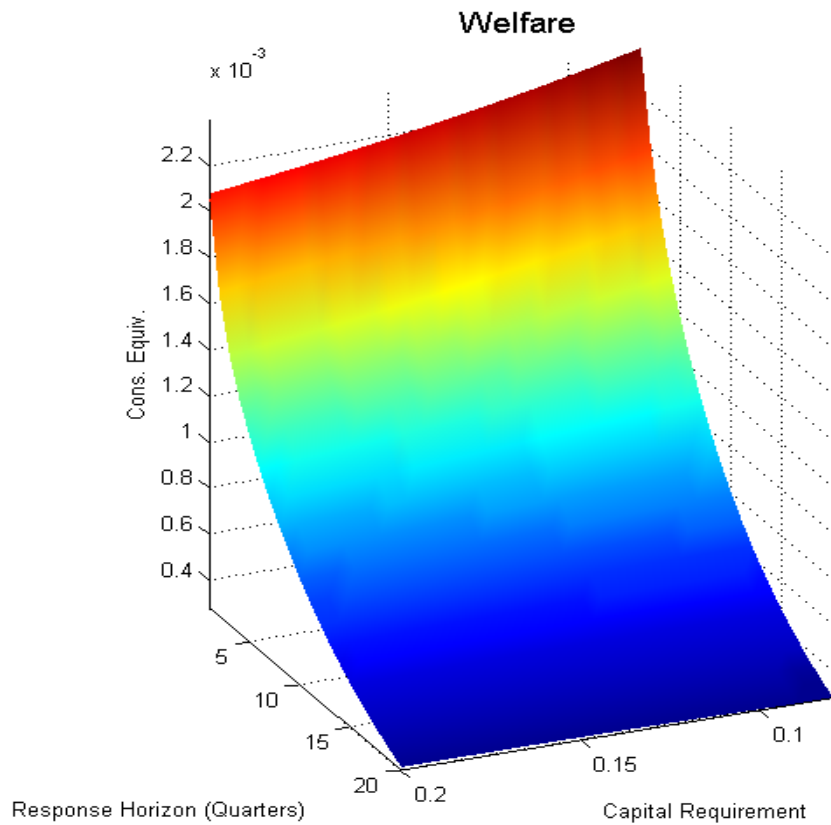
Results

- Impulse-responses to an unanticipated technology shock by varying the regulated LTV ratio
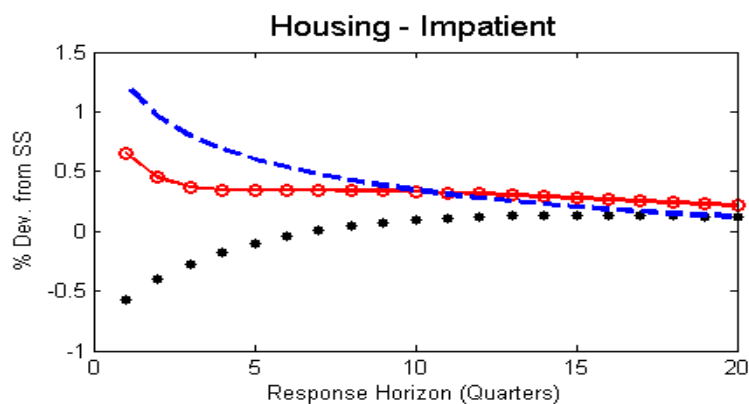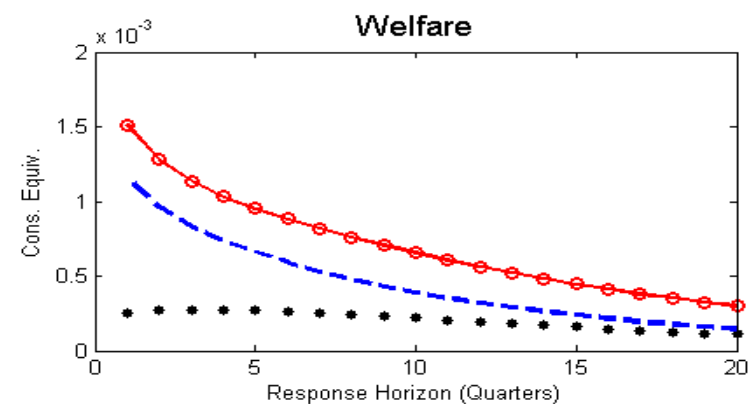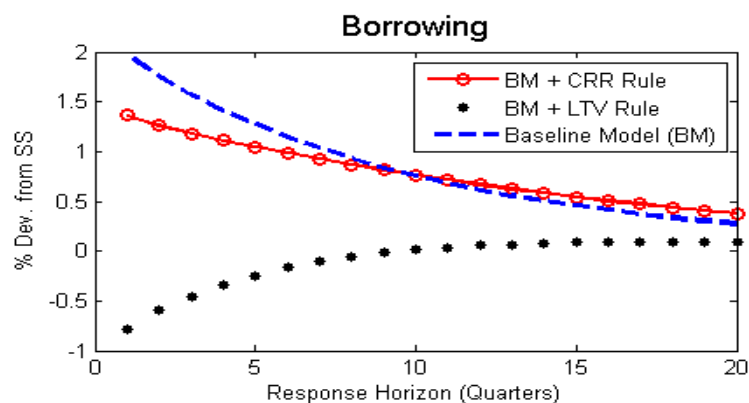
Results

- Impulse-responses for computed welfare to an unanticipated technology shock

Results

- Impulse-responses to an unanticipated technology shock for the baseline model with dynamic macroprudential rules

Conclusions

- Need for a sound strategy on the macroprudential implementation – by relating to the Timbergen rule

- Focus on a specific credit market segment may cause regulatory arbitrage

- A general aim for the macroprudential policy could be the reduction of macro-financial volatility (and uncertainty, if possible)

- Macroprudential strategy may differ according to cycle regime and the shocks to be addressed

Thank you!