Quest for Robust Optimal Macroprudential Policy

Pablo Aguilar, Stephan Fahr, Eddie Gerba and Samuel Hurtado

Discussion by Armen Nurbekyan, Central Bank of Armenia

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What does the Paper do?

- Studies optimal macroprudential policy for Euro Area by explicit derivation of welfare
- Derives optimal time-invariant capital requirements
- Considers macroprudential rules, namely Countercyclical Capital Buffers (CCyB), conditional on capital requirements above

What does the Paper find?

- The optimal level of time-invariant capital requirement is 15.6 percent

- Even with the time-invariant instrument, the optimal level of capital reduces the volatility of the economy, while increasing the steady-state welfare

- If the optimal level of capital were present entering the 2011-13 EU crisis, then
- Bank default rates would have been 3.5 percentage points lower
- Credit and GDP would have been 5 percent and 0.8 percent higher

- The optimal CCyB rule depends on whether the optimal time-invariant capital requirements are in place.
- When those are in place, the CCyB should respond to total credit and mortgage lending spreads

Structure of the Model: Clerc et al. (IJCB, 2015)

Figure 1. Diagram of Balance Sheets of Households, Entrepreneurs, and Banks

Patient Households	
Deposits $d_t^H + d_t^F$	
House $q_t^H h_t^s$	Net Worth n_t^s

Mortgage Banks	
Mortgages b_t^m	Deposit d_t^H
	Net Worth n_t^H

Industrial Banks	
Loans b_t^e	Deposit d_t^F
	Net Worth n_t^F

Impatient Households	
House $q_t^H h_t^m$	Mortgage b_t^m
	Net Worth n_t^m

Entrepreneurs	
Capital $q_t k_t$	Loan b_t^e
	Net Worth n_t^e

Source: Kiyotaki 2015

Structure of the Model: Clerc et al. (IJCB, 2015) (cntd)

Figure 2. Payoff to Impatient Household and Mortgage Bank

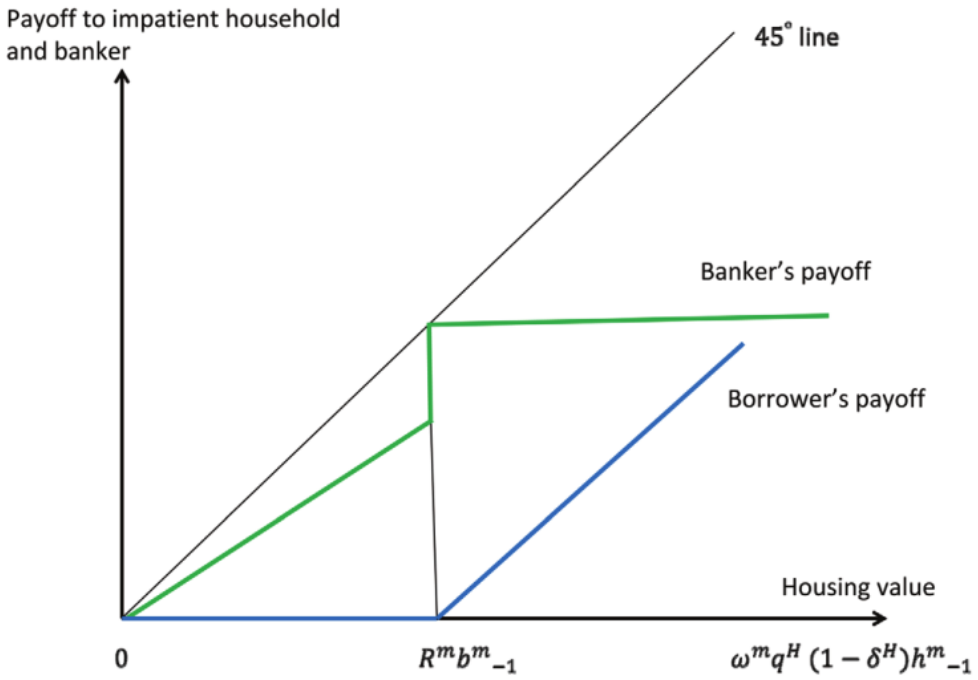
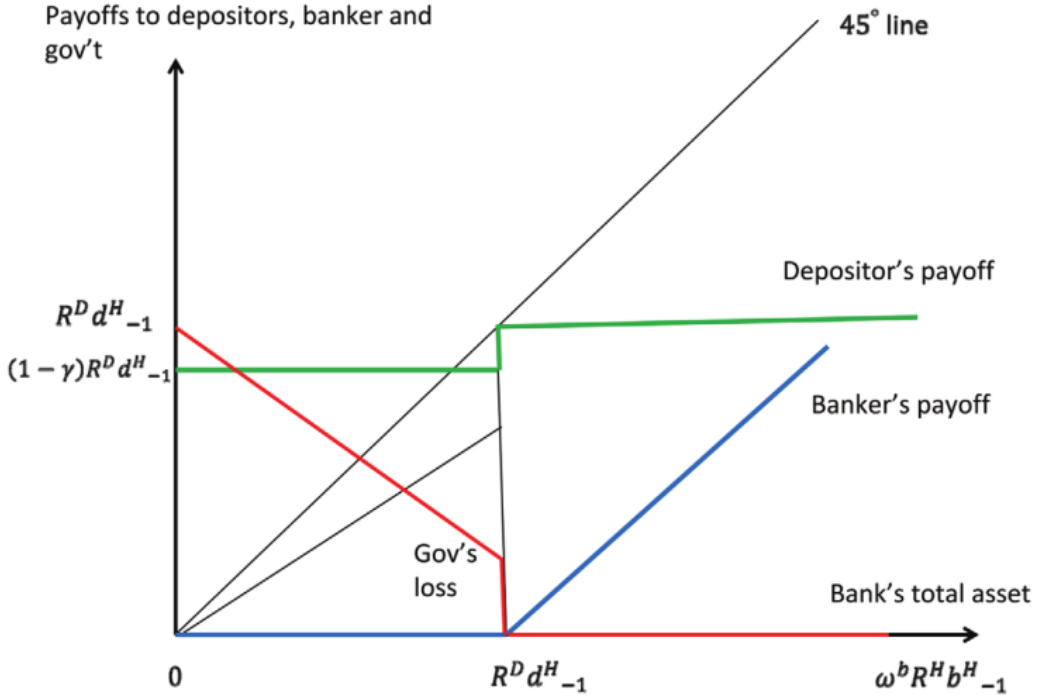


Figure 3. Payoffs to Mortgage Bank, Depositors, and Government

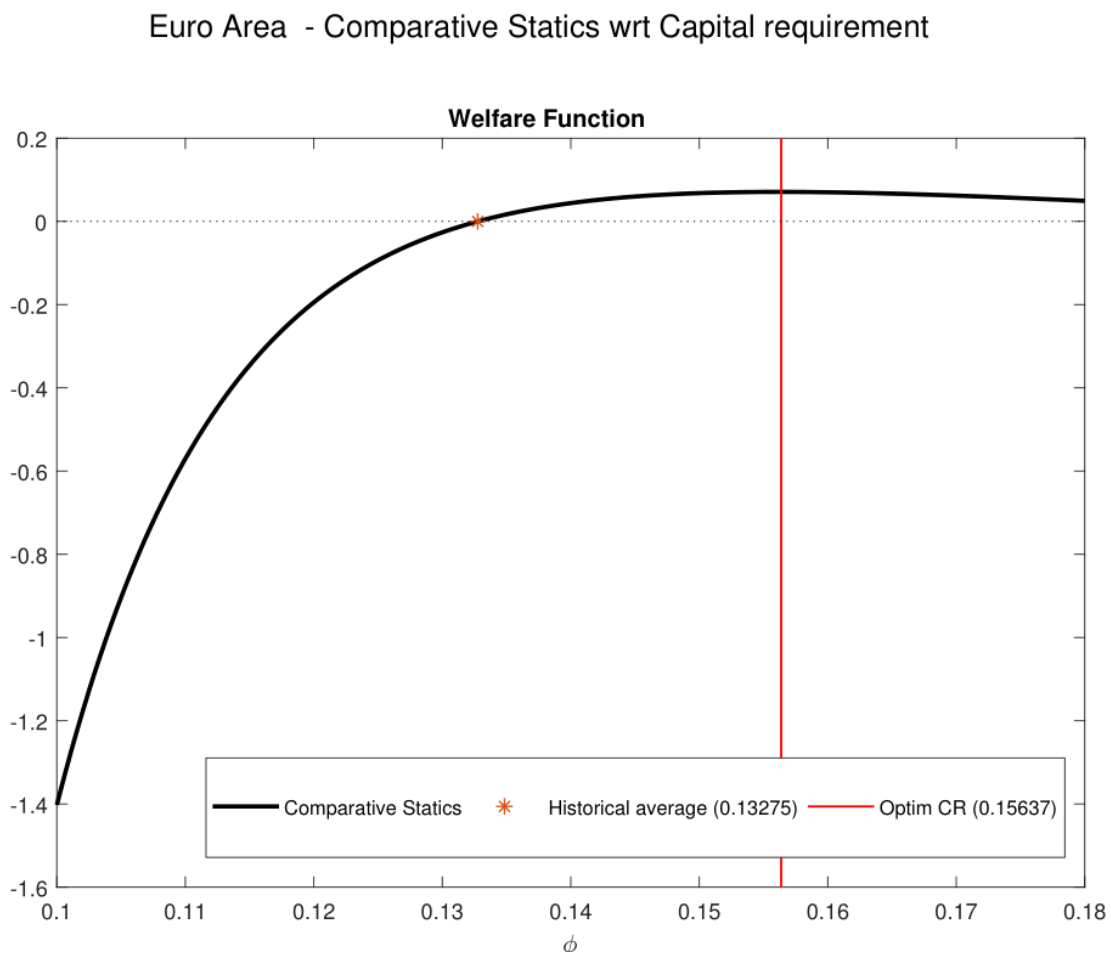


Source: Kiyotaki 2015

Summary of the Underlying Model

- Costly state verifications of returns on housing, capital, and bank loans
- Government deposit insurance and cost of disruption of deposit service to households
- Collateral constraints on impatient households and entrepreneurs, capital requirement of banks, and limited saving of banks and entrepreneurs.

Setting the capital level ’too high’ is more forgiving than setting it ’too low’



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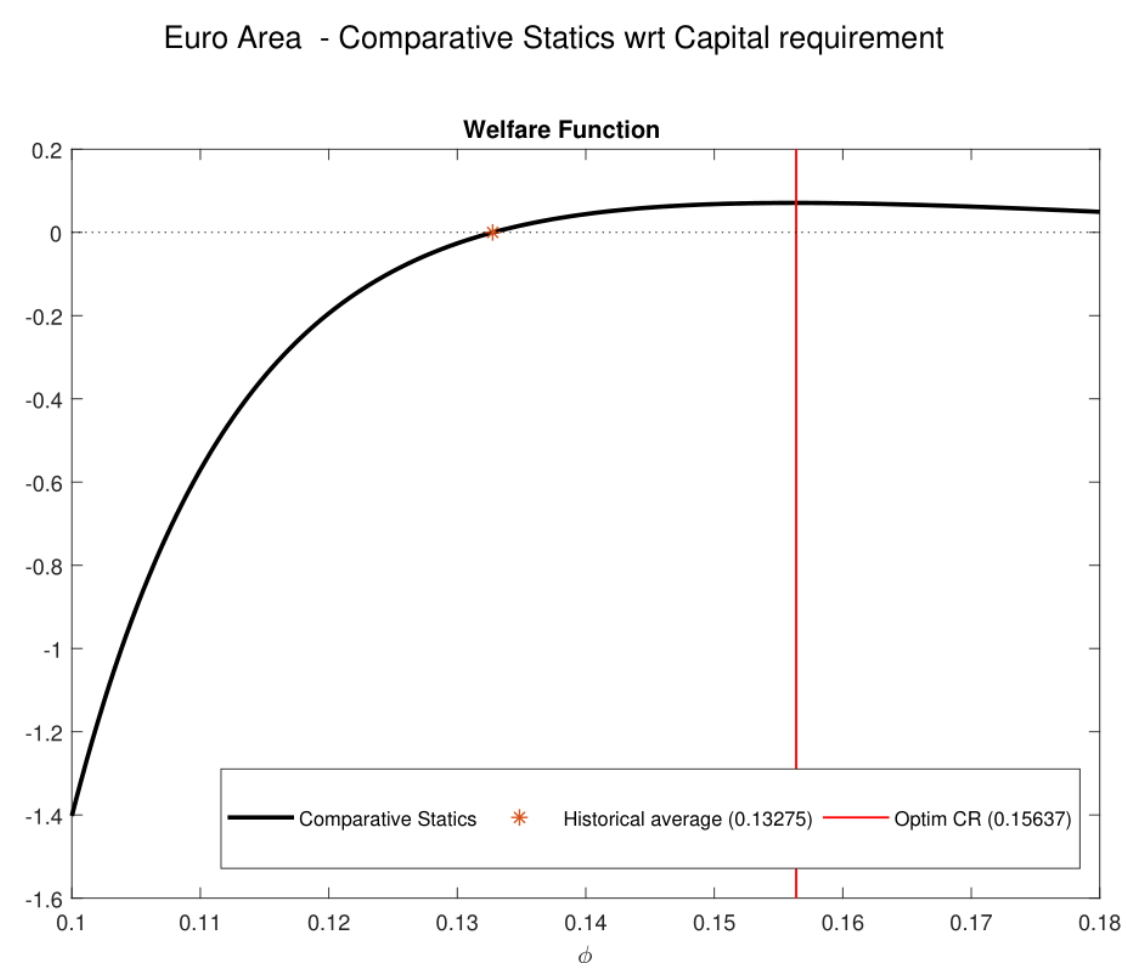
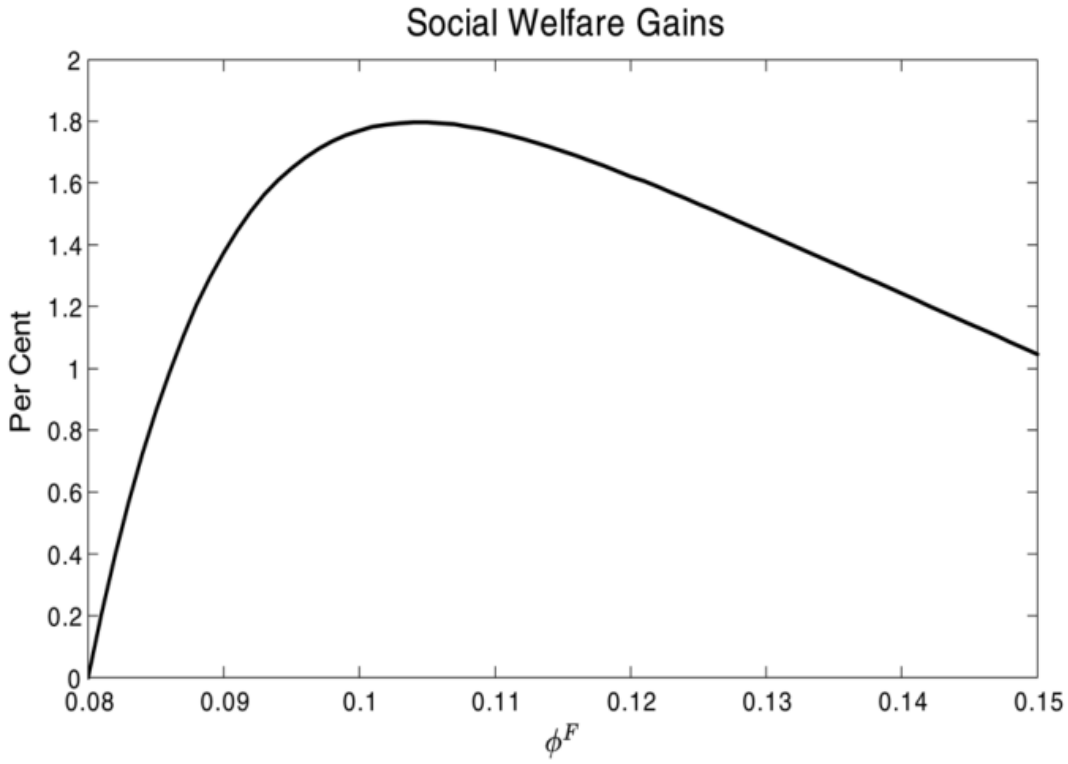


Figure 1. Steady-State Welfare Depending on the Capital Requirement



Smell Tests for Policymakers

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- In this setup to generate large roller coasters we need to assume very large resource costs (30%!!) after defaults

Smell Tests for Policymakers: What Story does the Model Tell?

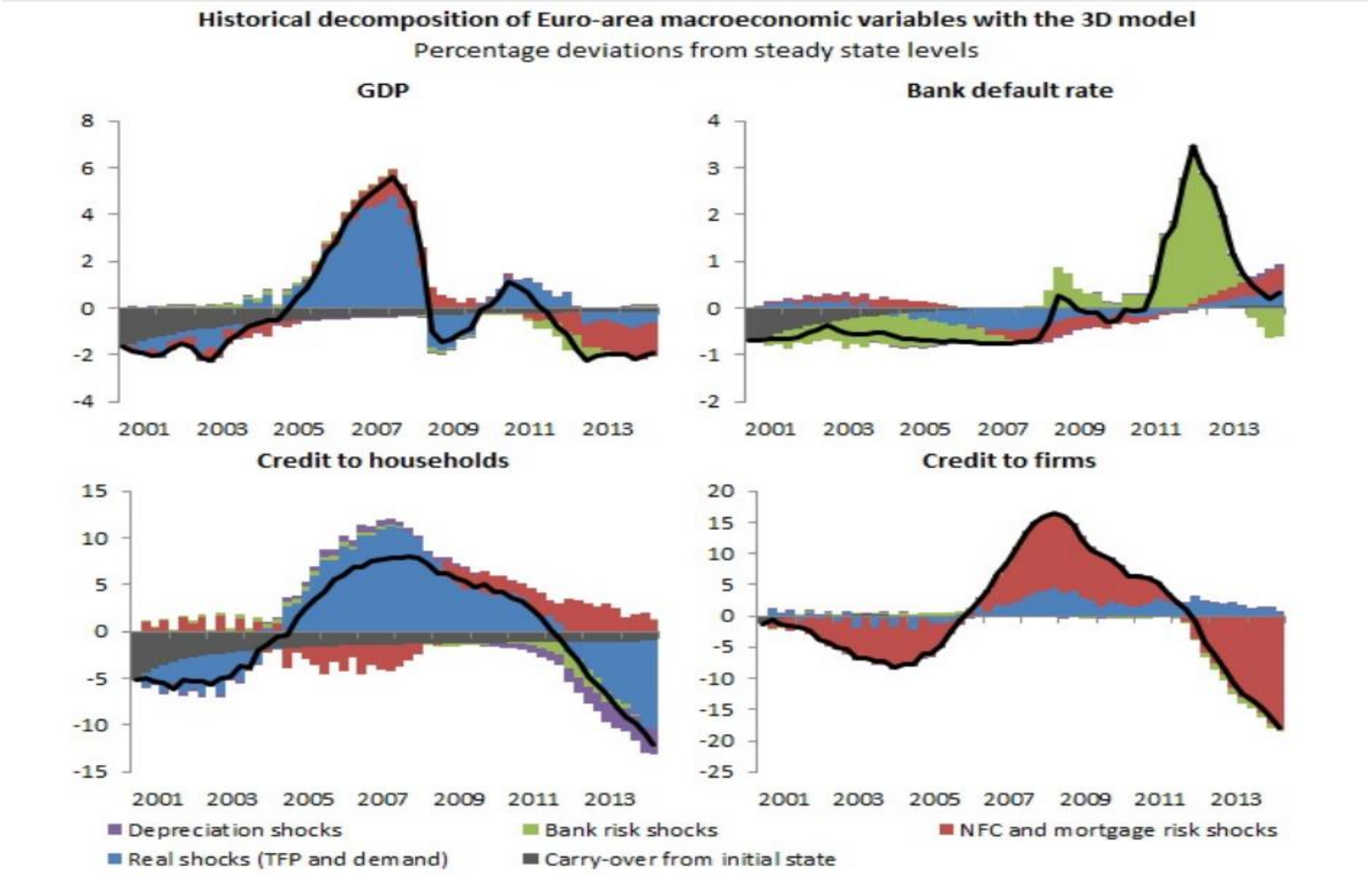

Figure 4: Shock decomposition

Suggestions to include in the Paper

- Can this setup generate the stylized empirical facts about financial cycles?
- It would be useful to have a lengthy discussion of impulse response functions. In particular, engineer financial cycles and compare the correlation structure of macroeconomic variables leading to the downturn
- How is the CCyB discussed in the model connected to the ongoing work on financial cycles (e.g. BIS)?
- It would be interesting to extract real-time financial cycle measures derived from the model and compare with the empirical work on financial cycles
- How much does the assumption of (near)-linear probability of defaults (PD) weaken the results for welfare optimization?
- Here again, looking at non linearities of PDs is crucial (PDs are endogenous). Would be nice to see PDs in real time.

Thank You