



Can macroprudential policy tame financial-real interactions?

Mikael Juselius (Bank of Finland)

Conference on Financial Stability, Banco de Portugal, Lisbon 8.10.2019

The views expressed here are those of the authors and not necessarily those of the Bank for International Settlements or the Bank of Finland.



Introduction

- How effective is macroprudential policy?
 - For curbing financial cycles? Reducing crisis risk? Reducing procyclicality in the banking sector?
 - Ultimately we care about real effects
- To answer this question we therefore need:
 - A characterization of financial-real interactions
 - Define the goals

Two views of the financial cycle

1. Finance as amplifier, but not driver, of real cycles

- Financial frictions amplify shocks
- Low probability of crisis that agents largely ignore
- Monetary policy (MP) sufficient to manage real cycle
- Macroprudential policy (MacPru) manages crisis probability

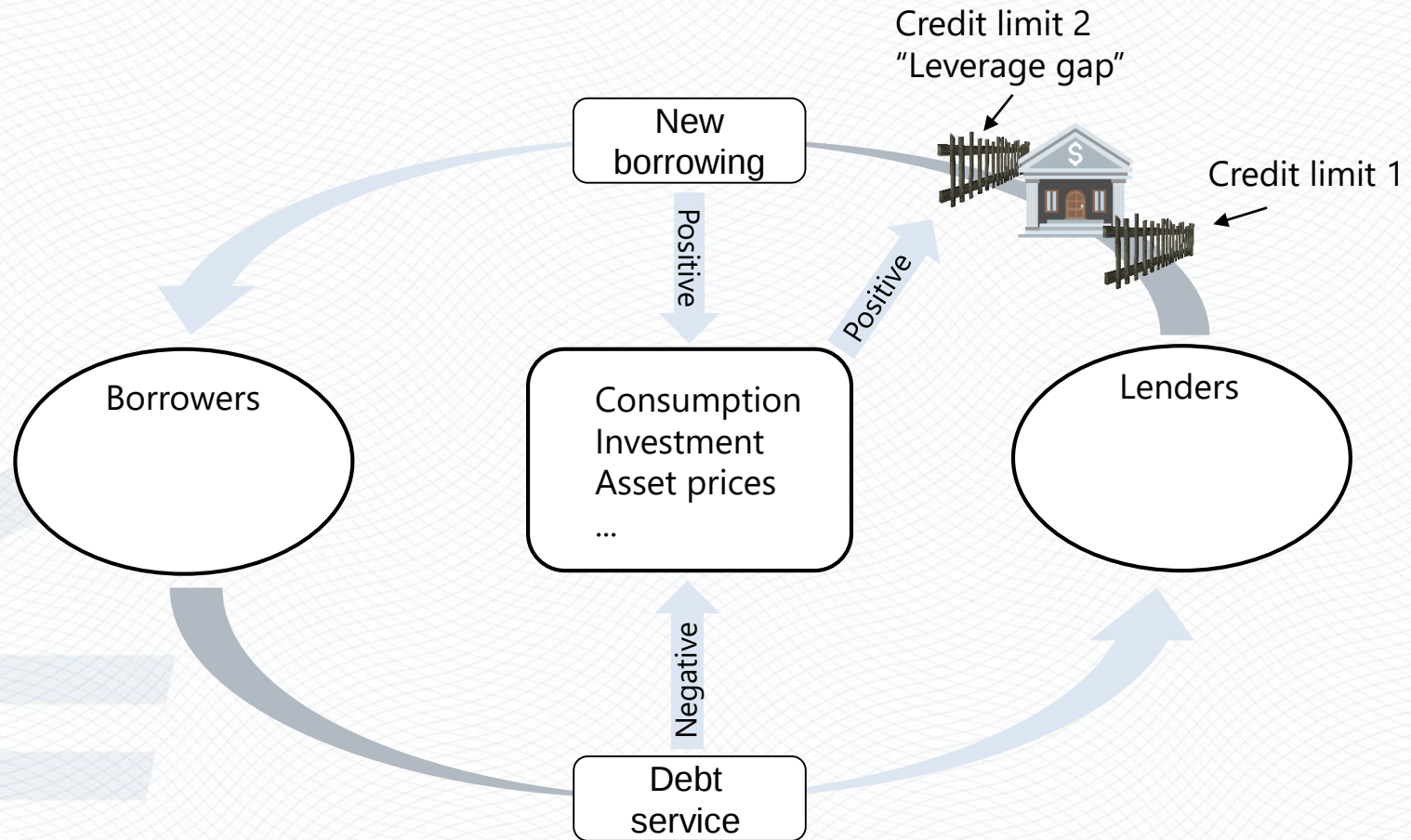
2. Mutually reinforcing financial and real cycles

- Endogenous boom-bust dynamics
- Complex intertemporal policy tradeoffs
- MP and MacPru affects both cycles (and probability of crisis)
- Requires high policy coordination

Road map

1. The financial cycle (second view)
2. Adding the financial cycle to a semi-structural model (Laubach-Williams)
3. Counterfactual 1: stabilizing through MP
4. Counterfactual 2: stabilizing through MacPru
5. Conclusion

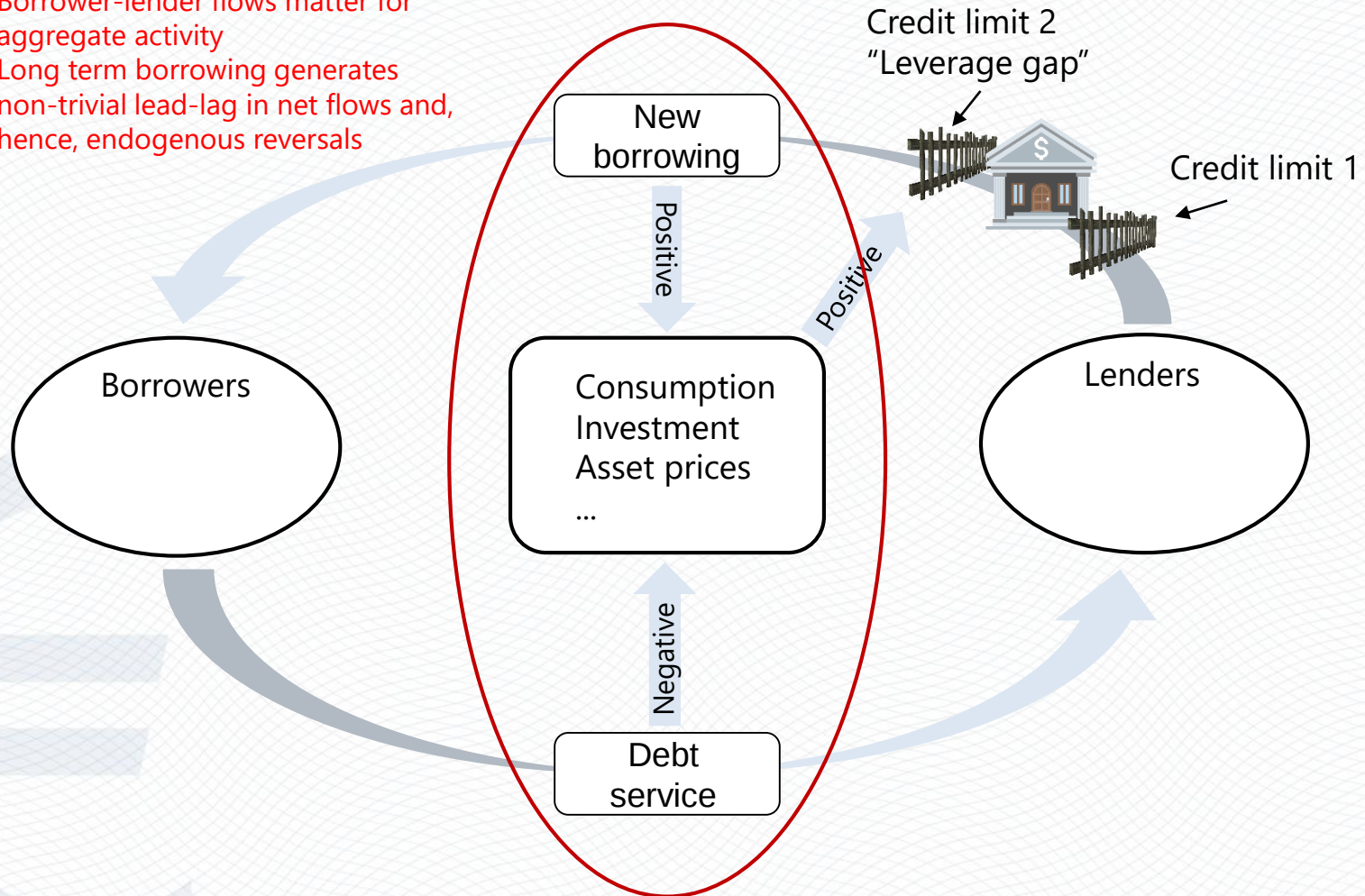
The financial cycle



The financial cycle

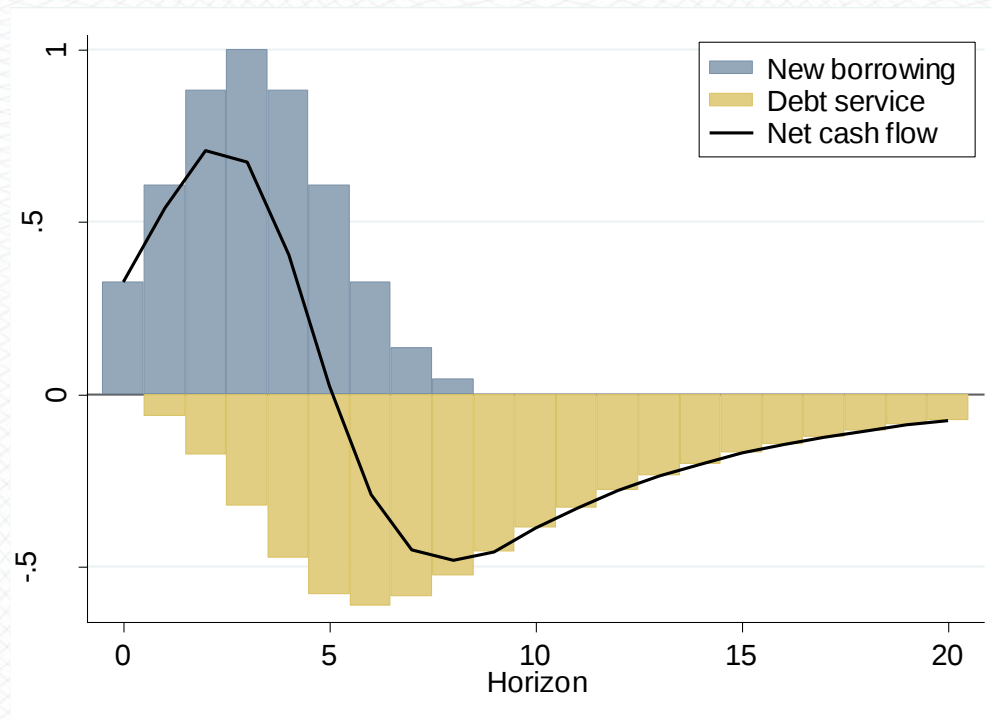
Drehmann, Korinek, Juselius (2018):

- Borrower-lender flows matter for aggregate activity
- Long term borrowing generates non-trivial lead-lag in net flows and, hence, endogenous reversals



Lead-lag and endogenous reversals

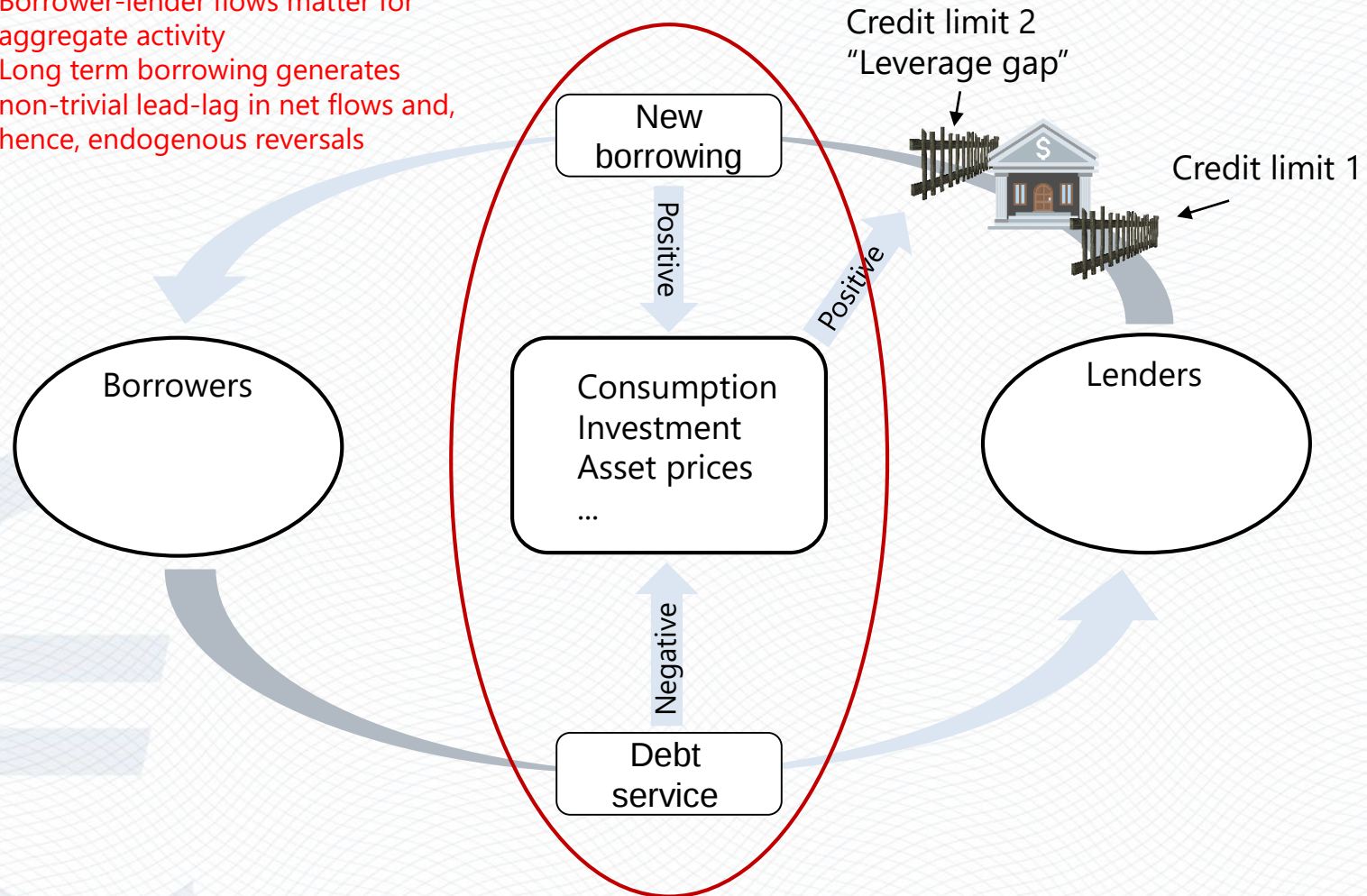
- Debt service ratio: $\frac{\text{interest payments} + \text{amortization}}{\text{income}}$



The financial cycle

Drehmann, Korinek, Juselius (2018):

- Borrower-lender flows matter for aggregate activity
- Long term borrowing generates non-trivial lead-lag in net flows and, hence, endogenous reversals



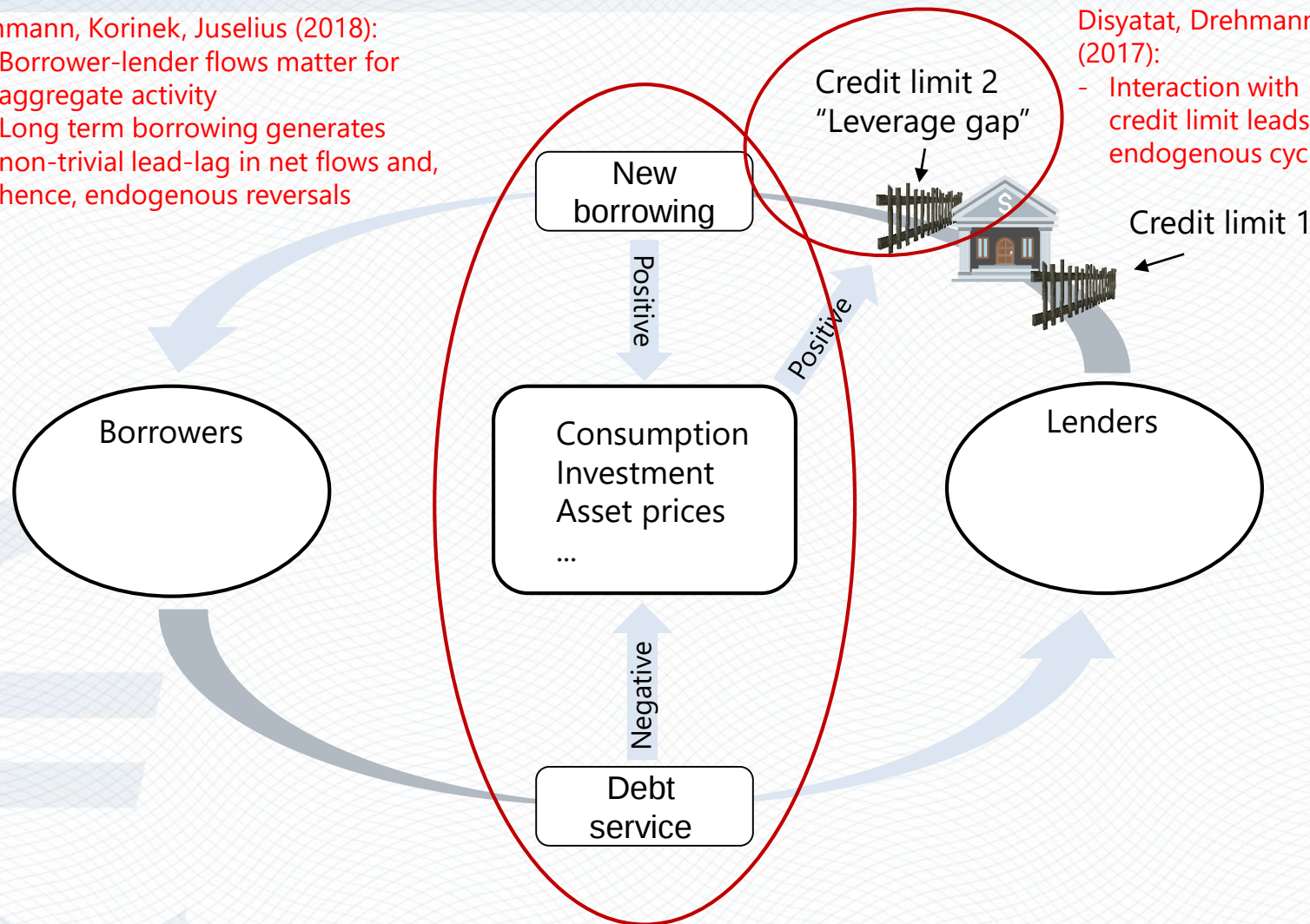
The financial cycle

Drehmann, Korinek, Juselius (2018):

- Borrower-lender flows matter for aggregate activity
- Long term borrowing generates non-trivial lead-lag in net flows and, hence, endogenous reversals

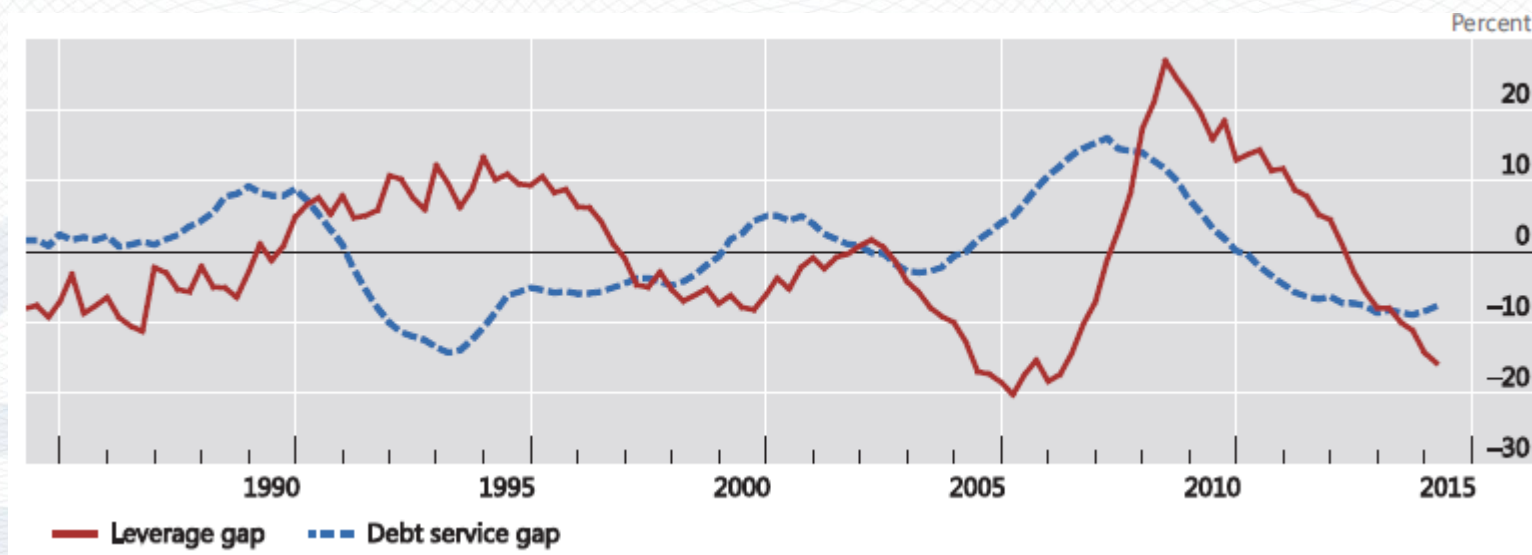
Juselius, Borio, Disyatat, Drehmann (2017):

- Interaction with credit limit leads to endogenous cycles



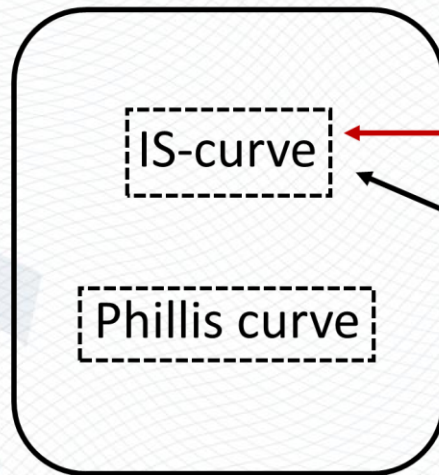
Debt service and leverage interaction

- Leverage gap: $\frac{\text{credit}}{\text{value of assets}}$ – steady state LTV ratio
- Debt service gap: debt service ratio – steady state value

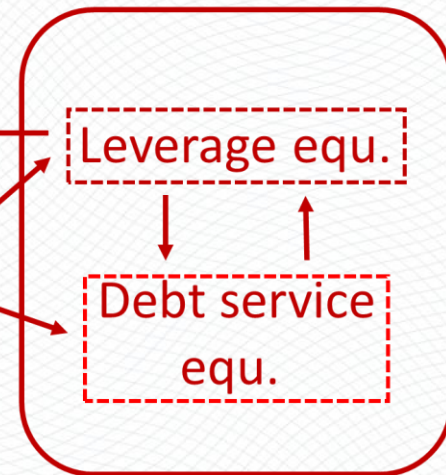


Adding the financial cycle to a semi-structural model

Standard Laubach-Williams

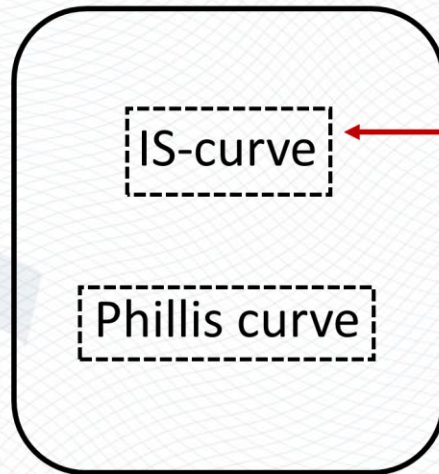


Extension

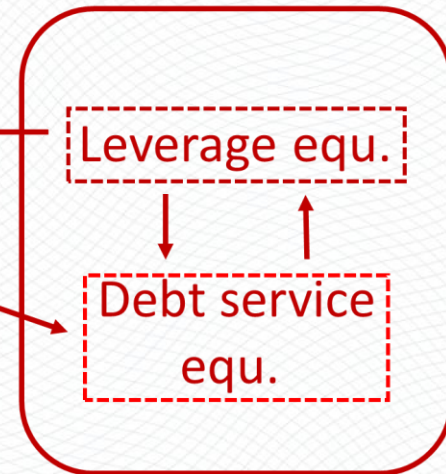


Estimating the model

Standard Laubach-Williams



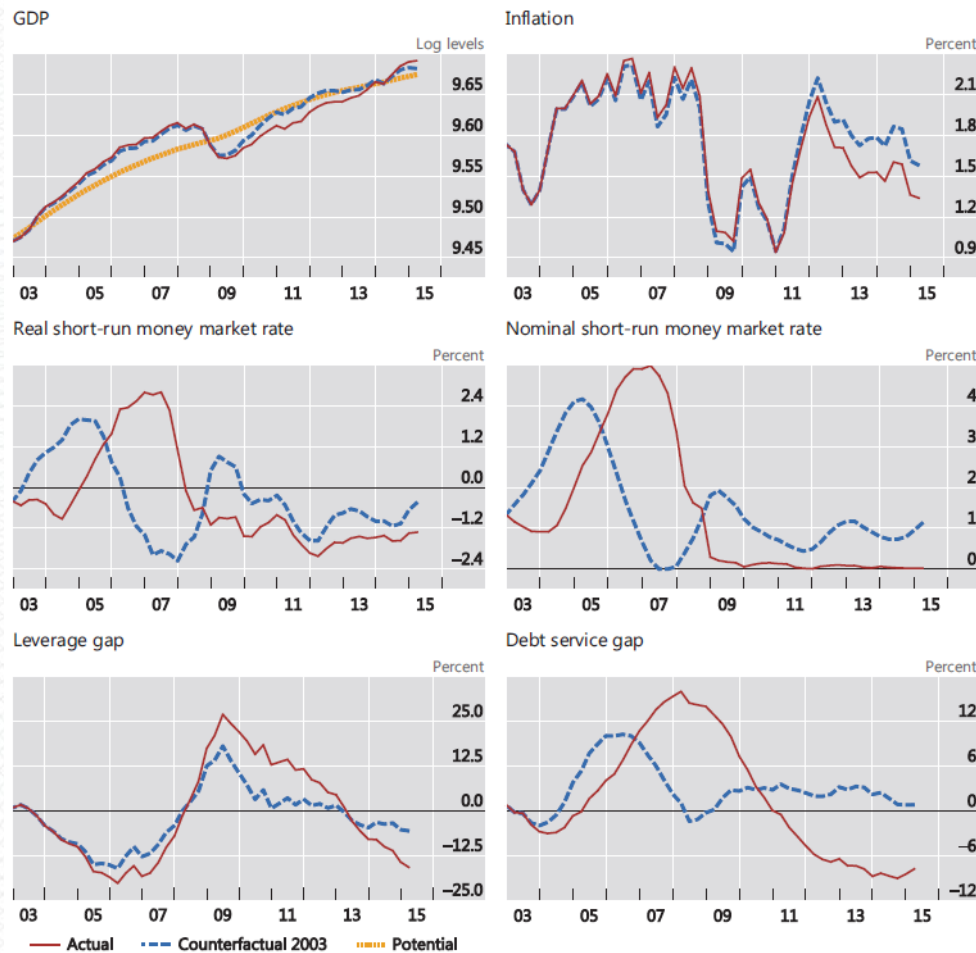
Extension



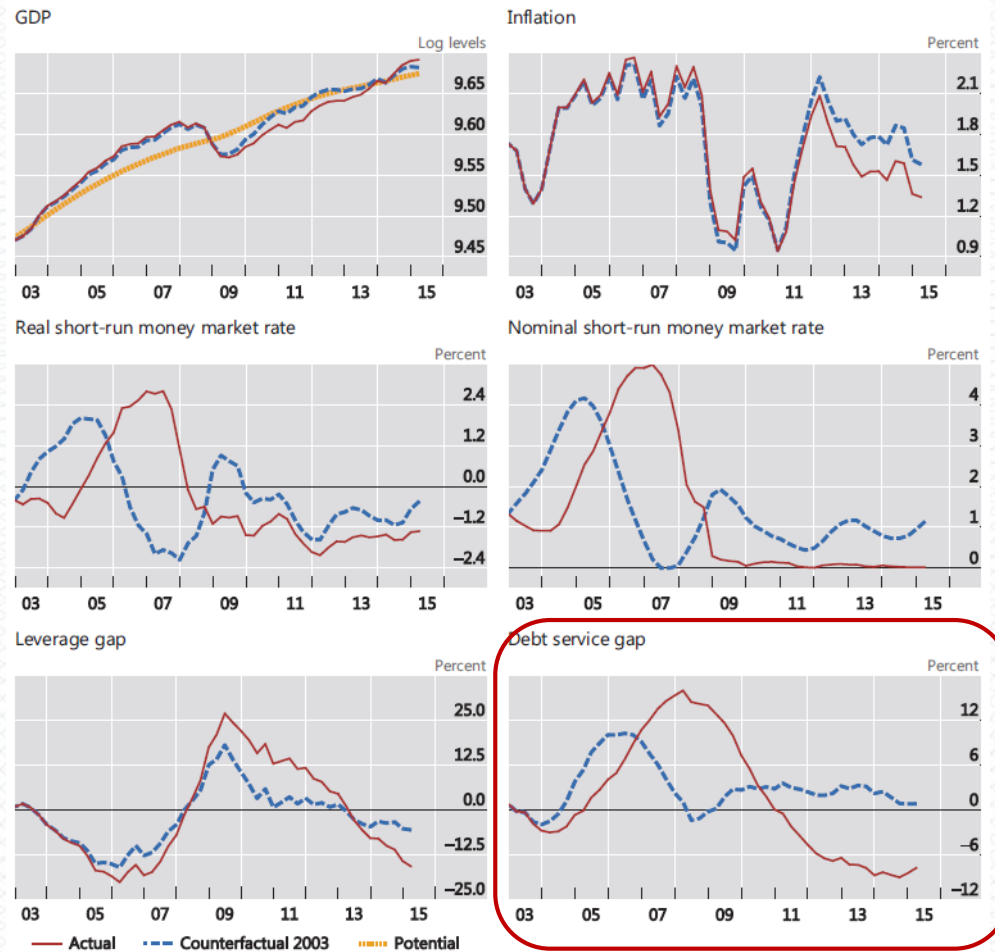
Monetary policy



CF1: debt service in Taylor rule

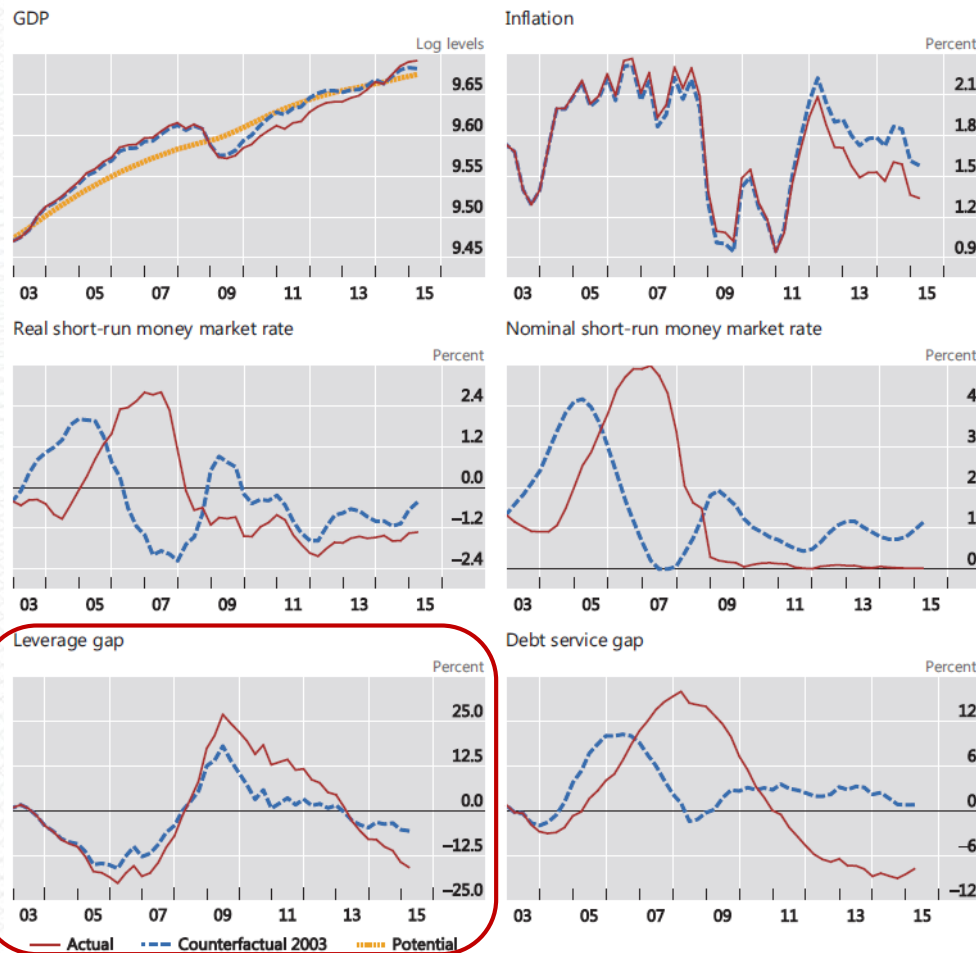


CF1: debt service in Taylor rule



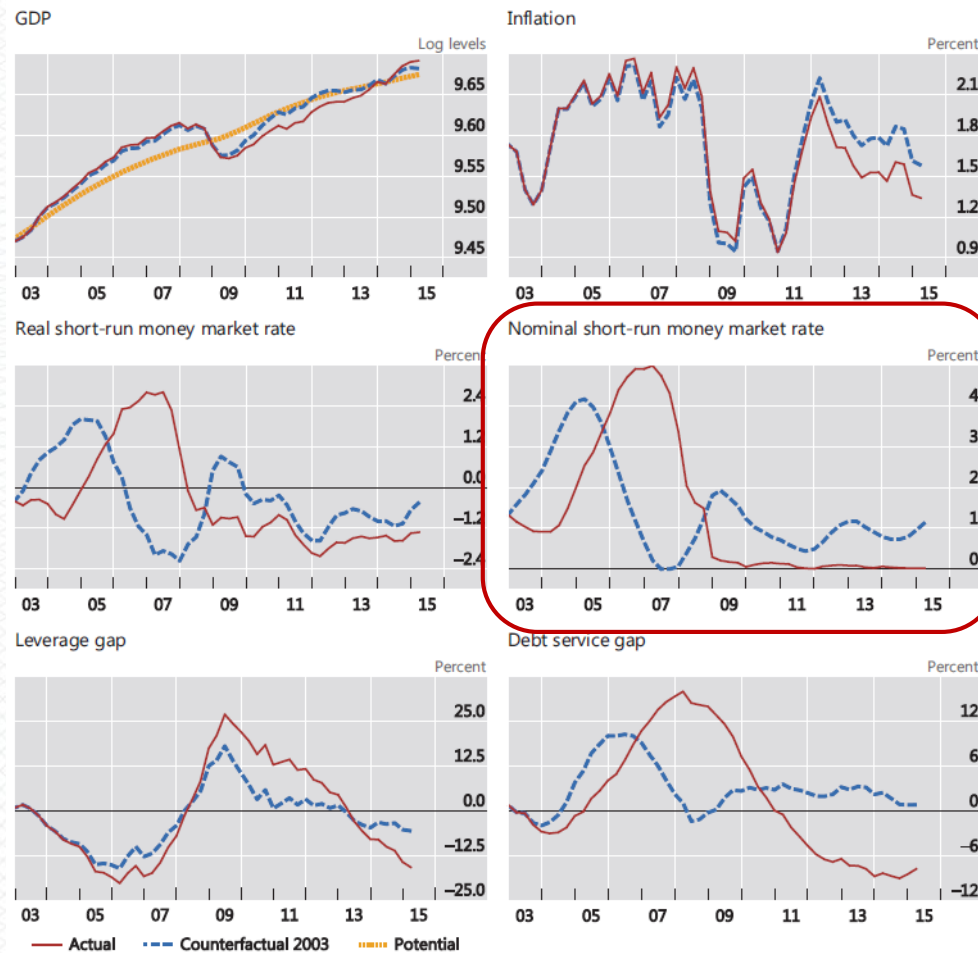
Big stabilizing effect
on debt service gap

CF1: debt service in Taylor rule



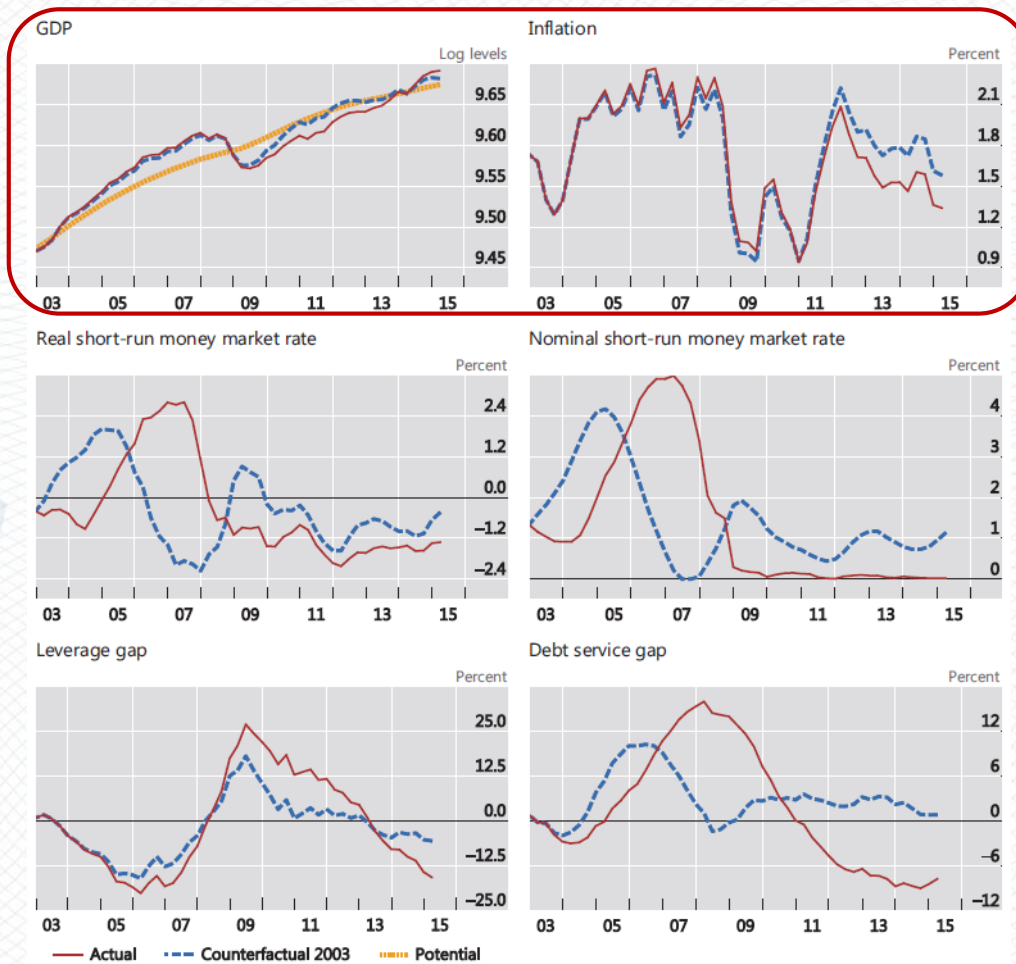
Notable but less strong effect on leverage gap

CF1: debt service in Taylor rule



Creates policy space

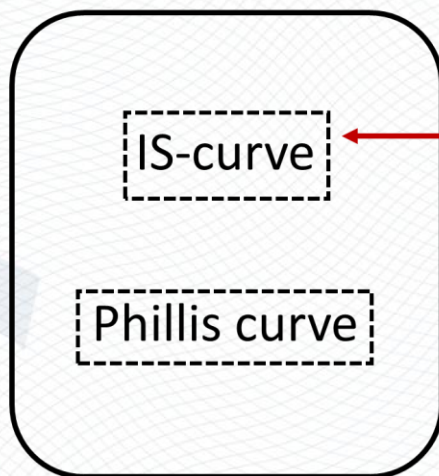
CF1: debt service in Taylor rule



Helps stabilize
output and
inflation

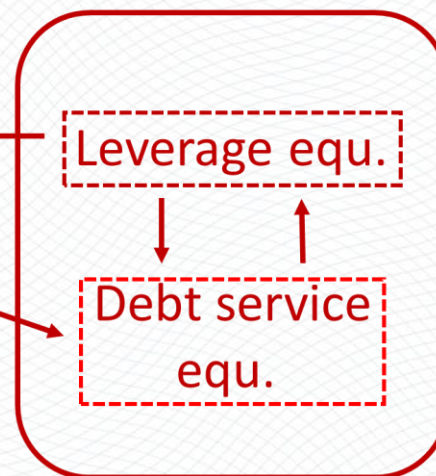
Macroprudential policy in the model?

Standard Laubach-Williams

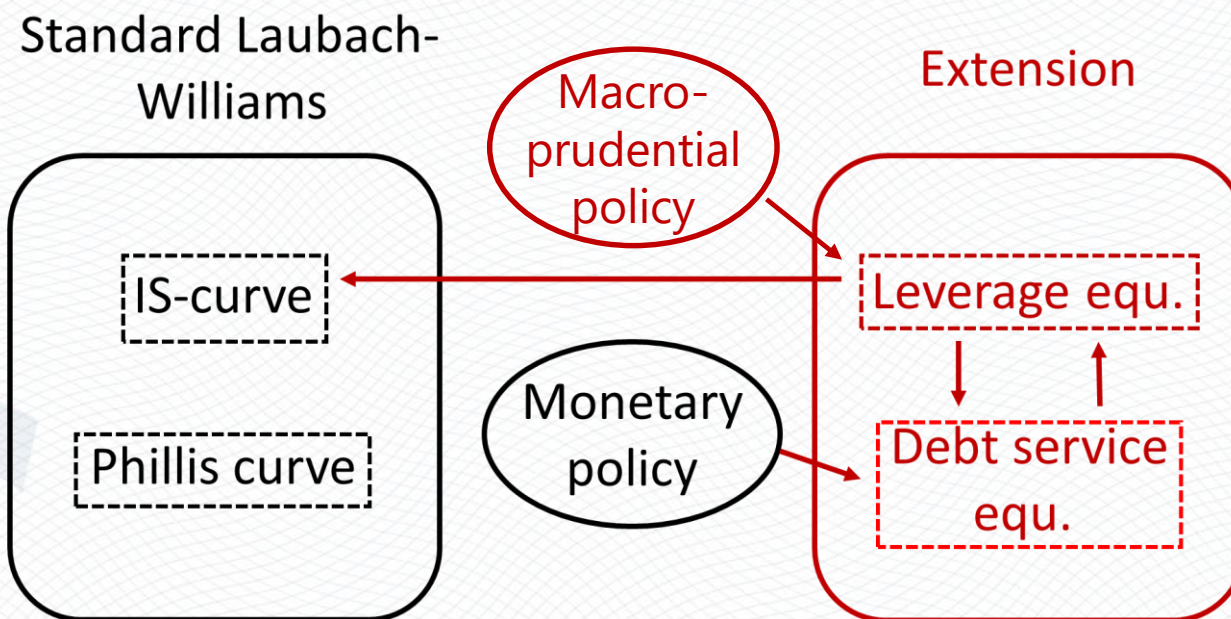


Monetary policy

Extension



Macroprudential policy in the model?



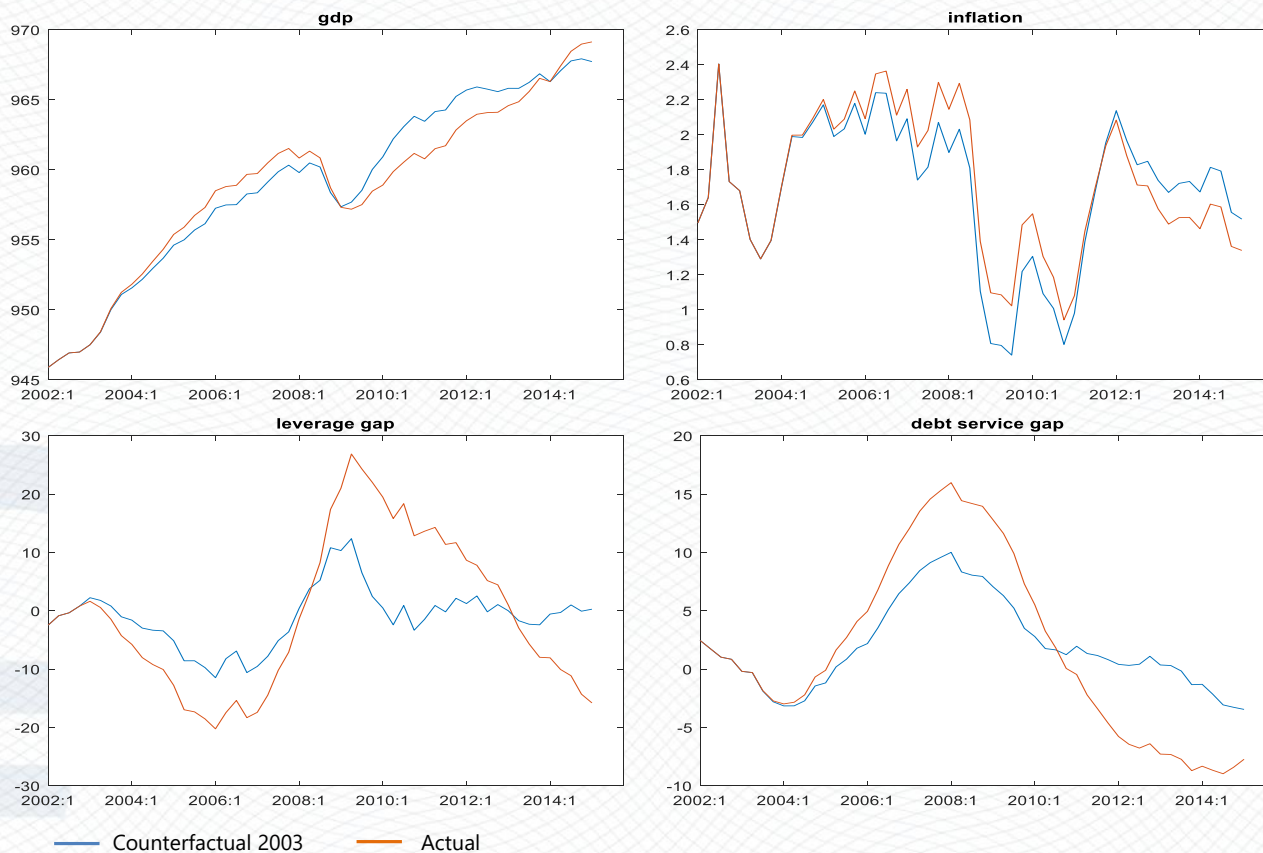
CF2: counter-cyclical LTV ratio

- Back of the envelope calibration:
 - Mortgage debt about 50% of private non-financial debt
 - A fraction, 75%, affected by changing LTVs
- Counter-cyclical LTV rule:

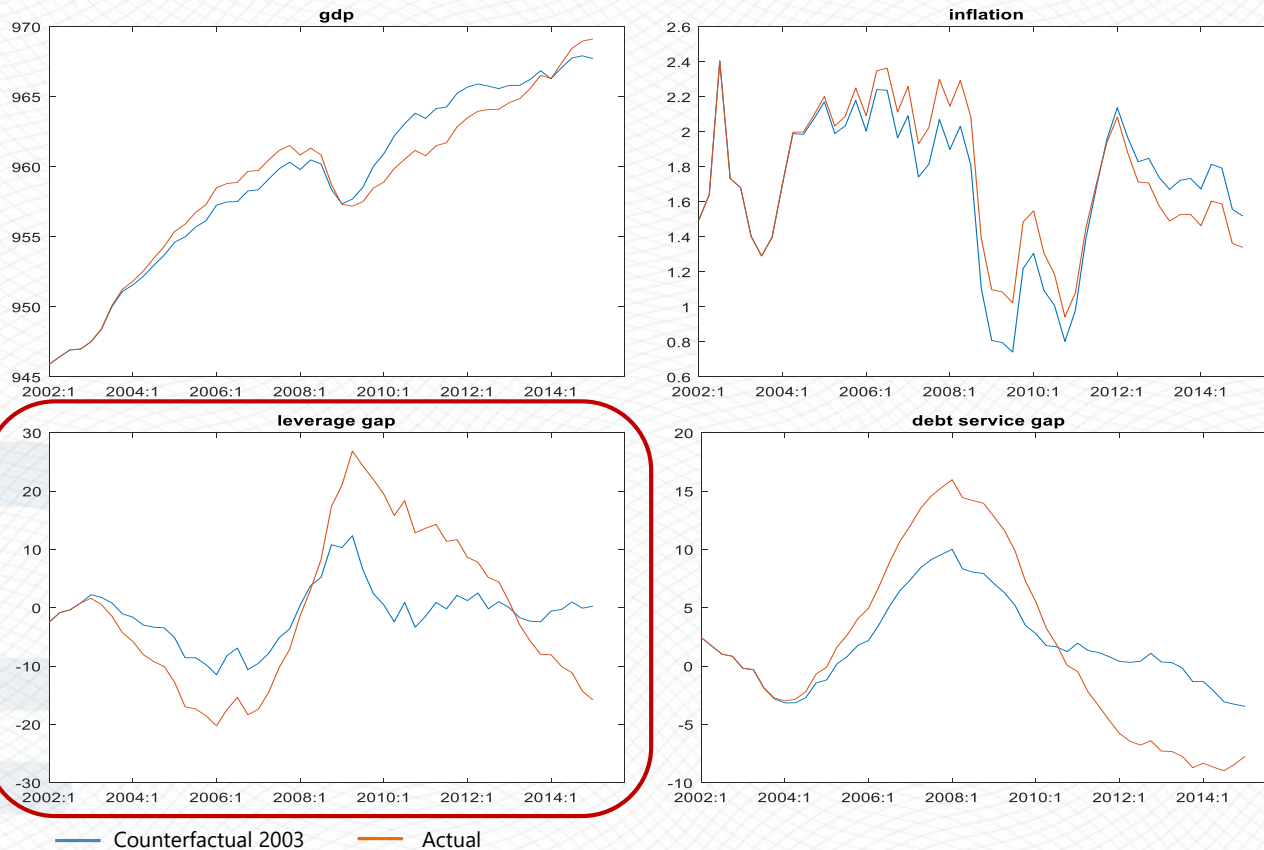
Leverage gap	Action
<-10	Lower LTV by 5 pp
> -10 and < -2.5	Lower LTV by 2.5 pp
> -2.5 and < 2.5	Leave LTV unchanged
> 2.5 and < 10	Raise LTV by 2.5 pp
> 10	Raise LTV by 5 pp

- Caveats: Lucas critique (!); optimistic calibration

CF2: counter-cyclical LTV ratio

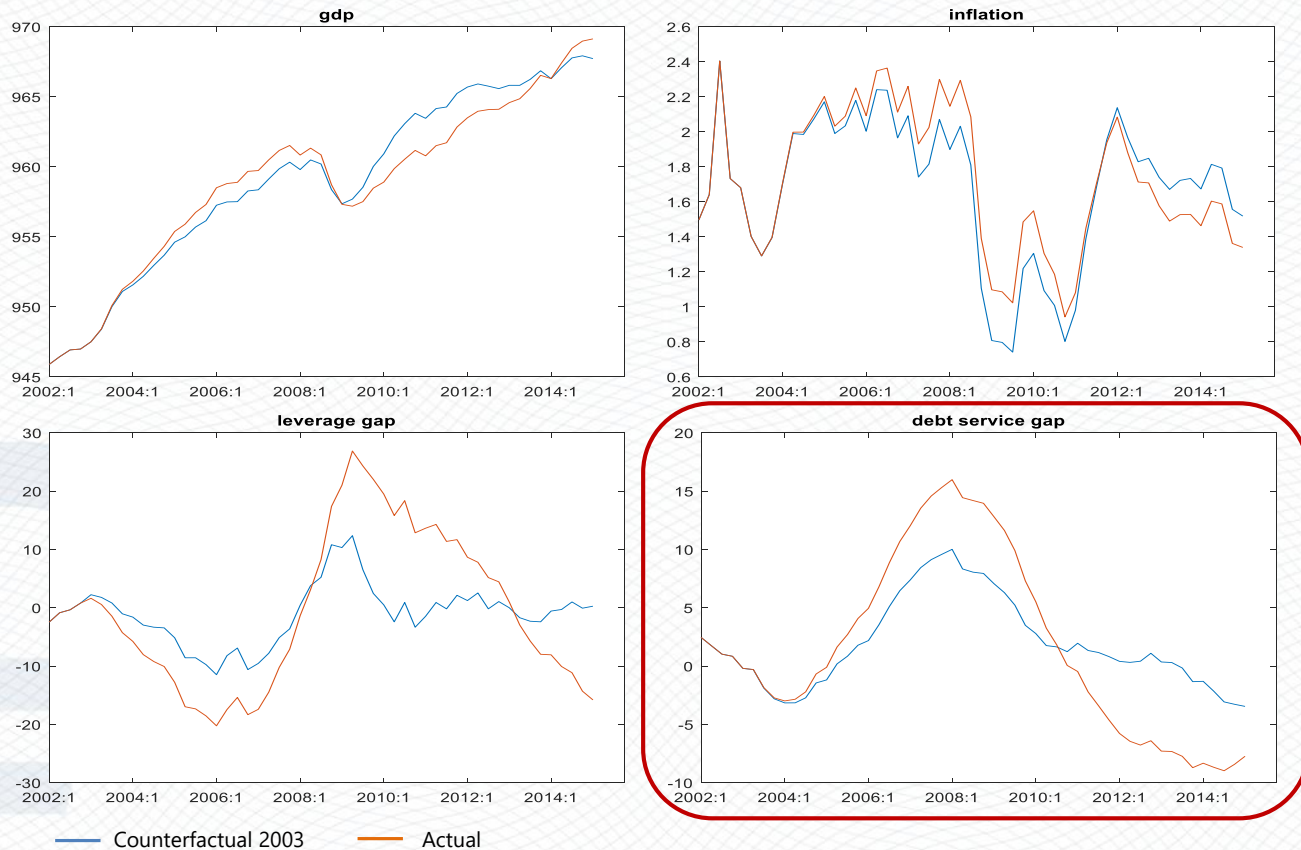


CF2: counter-cyclical LTV ratio



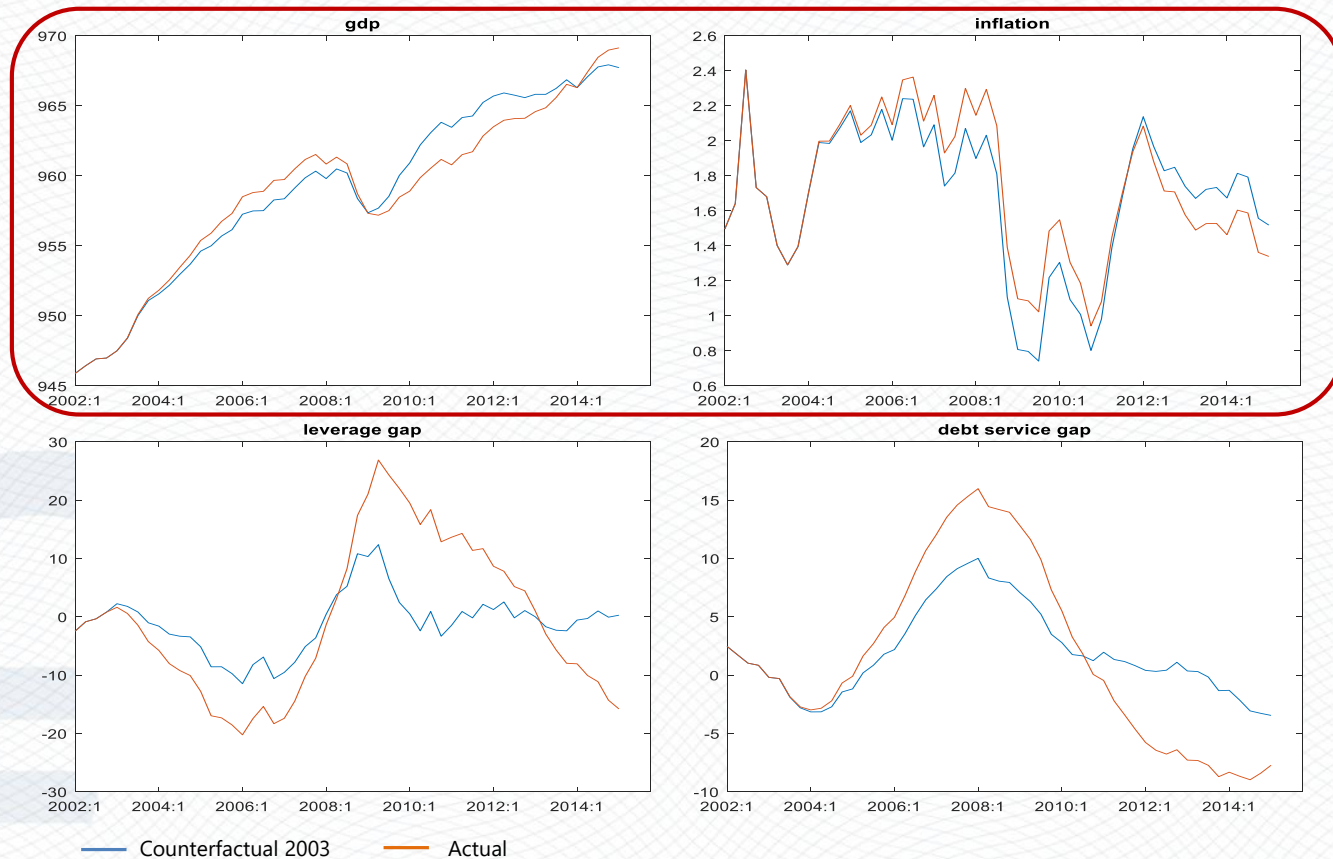
Big stabilizing
effect on
leverage gap

CF2: counter-cyclical LTV ratio



Notable effect
on debt service
gap

CF 2: counter-cyclical LTV ratio



Similar effect
on output and
inflation
(but policy
rate at zero)

Conclusion

- If financial and real cycles are highly interdependent
 - No clean separation between MP and MacPru
 - MP needs to take financial cycle into account to manage the real cycle
 - MacPru can give extra degrees of freedom
 - Requires a high degree of policy coordination
- The way forward
 - Develop theory models with (more) realistic financial-real interactions
 - Careful empirical assessments