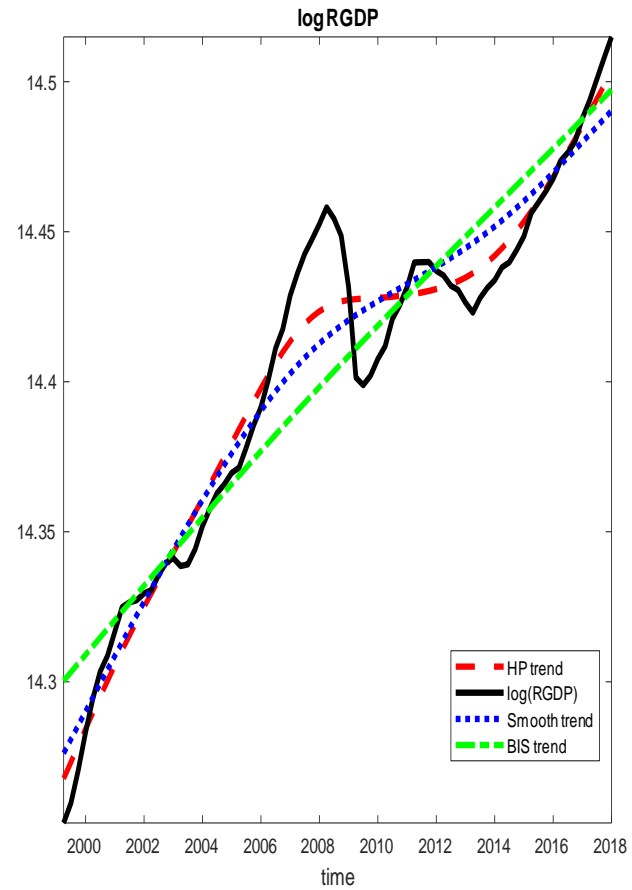
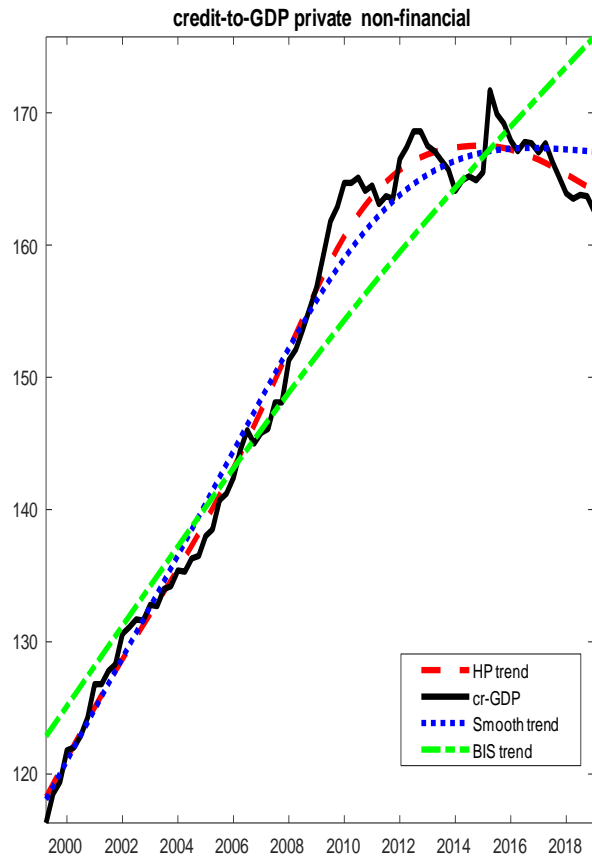


The financial and the real cycle in the Euro area

Fabio Canova, BI Norwegian Business School, CAMP, and CEPR

Measurement of the cycle

- Trend and cycles not observables. Need assumptions to compute them from observable series.
- Typical assumptions: trend is deterministic (no variability); smooth (low variability); a random walk (plenty of variability).
- Interpretation of the evidence depends on which assumption one makes.
- **How we treat 8-15 years cycles (not business cycles, not trends) usually make a difference for interpretation.**
- Credit crucial in Euro area: over 50% of external firm financing via banks; in US less than 25%.

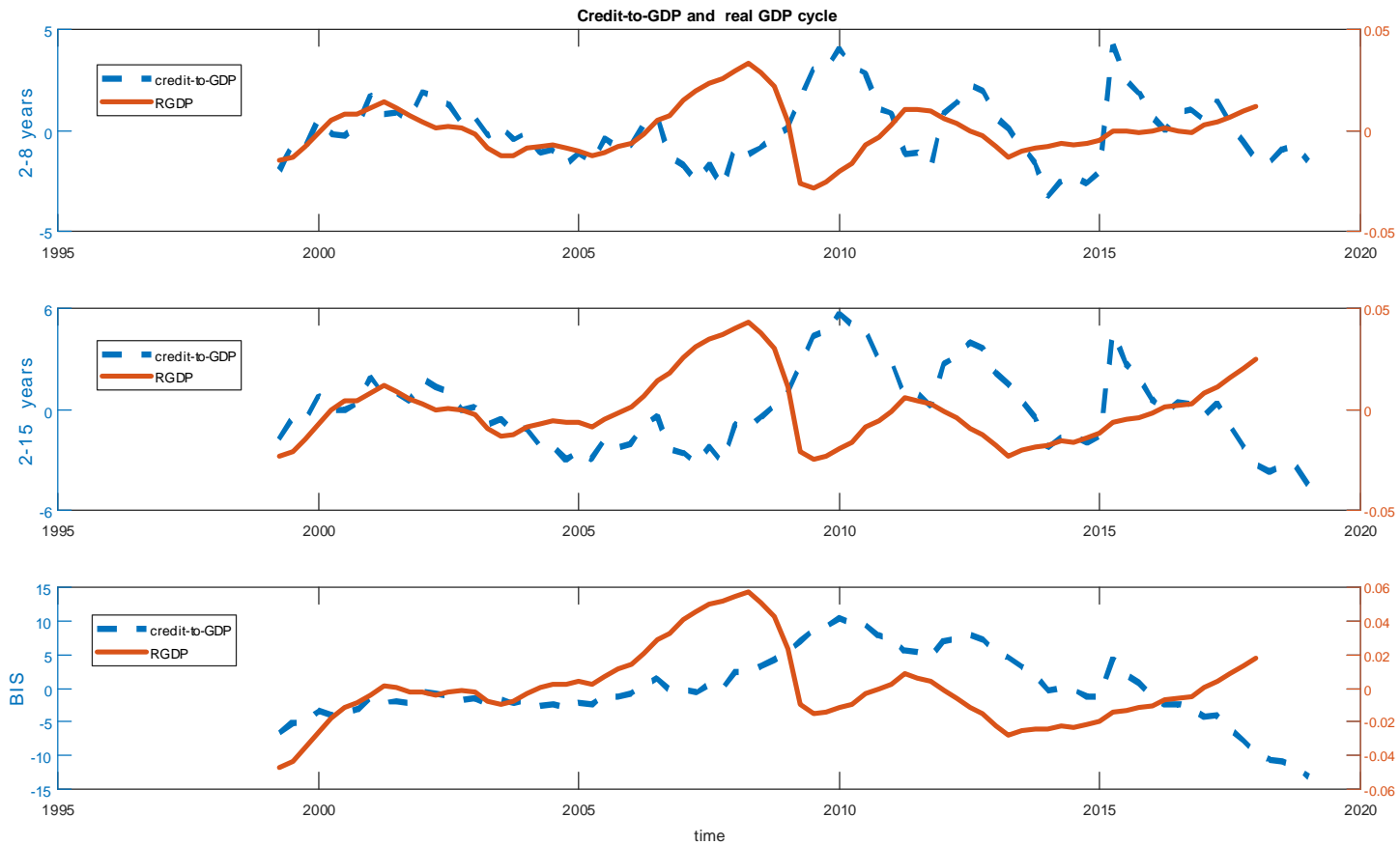


- Credit/GDP below trend since 2016 because real GDP is above trend.

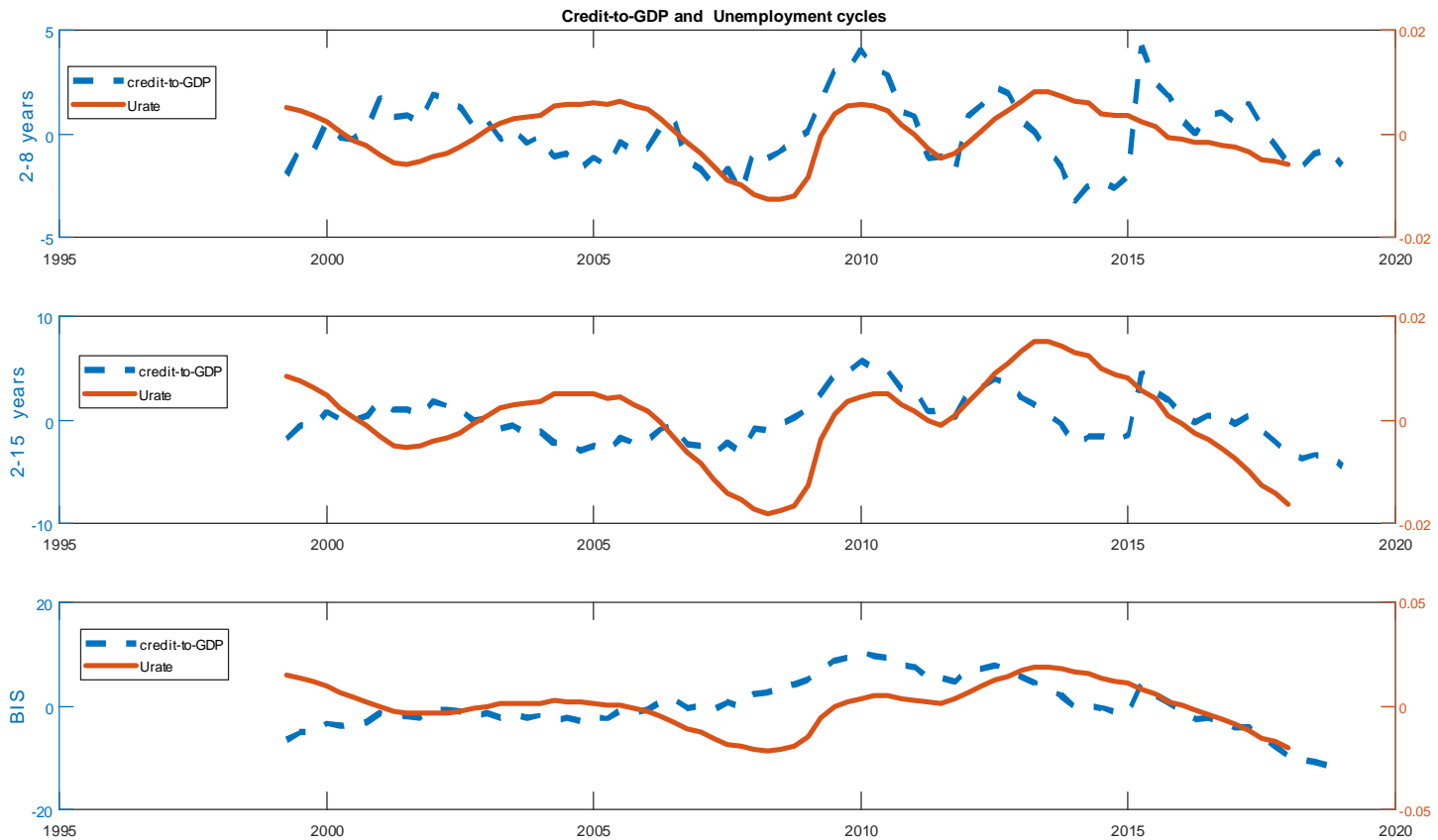
Financial and real cycles in Euro area

Variable	% of variance	% of variance	Persistence
	2-8 years cycles	8-15 years cycles	AR1
Credit/GDP total	1.5	18.3	0.99
Credit/GDP households	1.6	19.0	0.99
Credit/GDP private non financial	1.7	19.1	0.99
log(real GDP)	2.1	20.3	0.99
Labor Productivity	2.2	20.4	0.99
Unemployment rate	1.6	18.1	0.98

- Similar features. Use same assumptions to measure cyclical features.
- Two setups: cycles 8-15 years are part of the trend; cycles 8-15 are part of "cycle" Use BIS definition as benchmark.

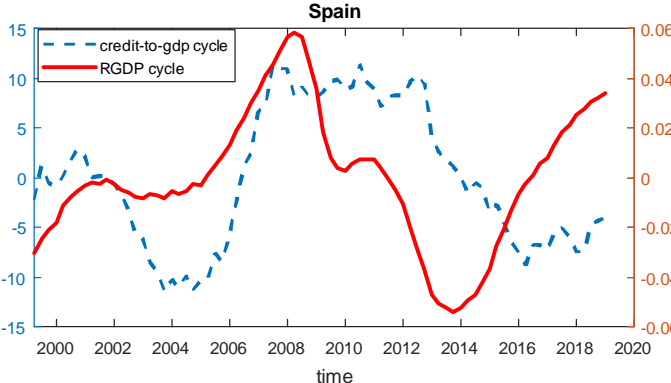
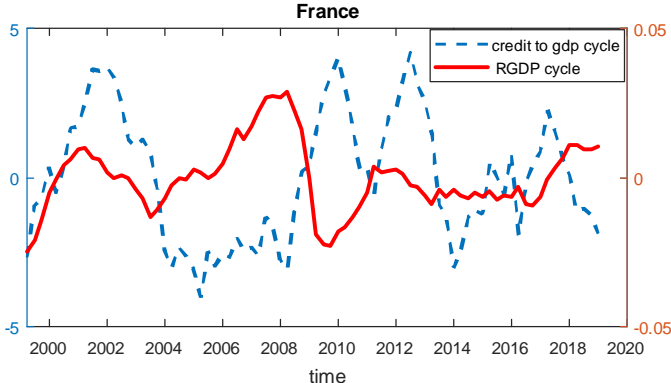
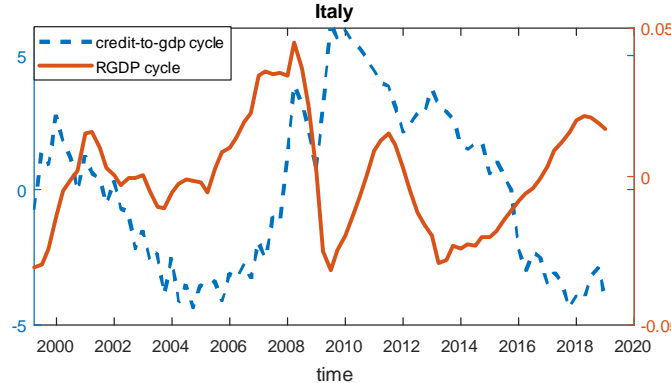
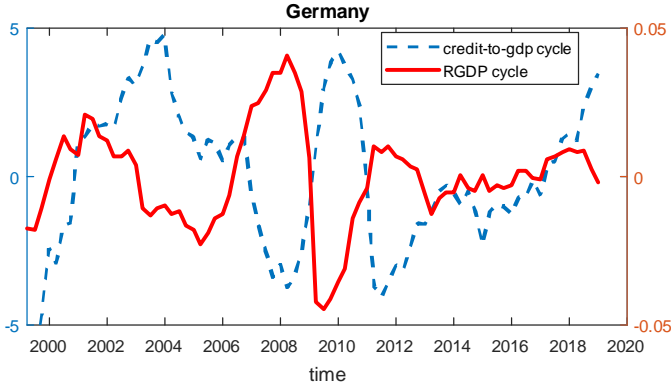


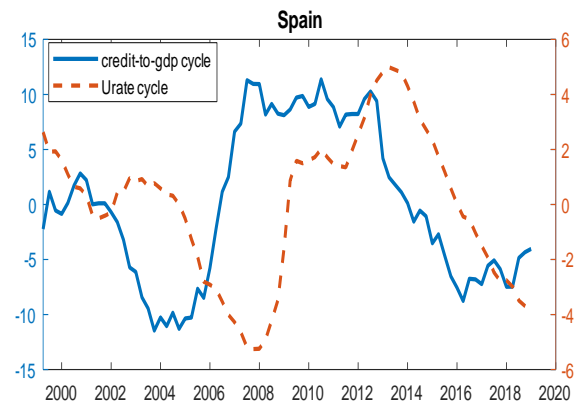
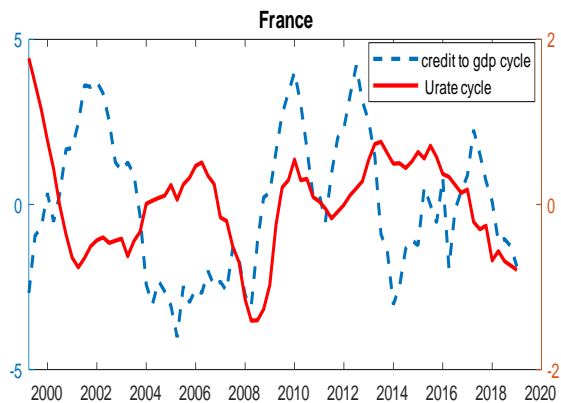
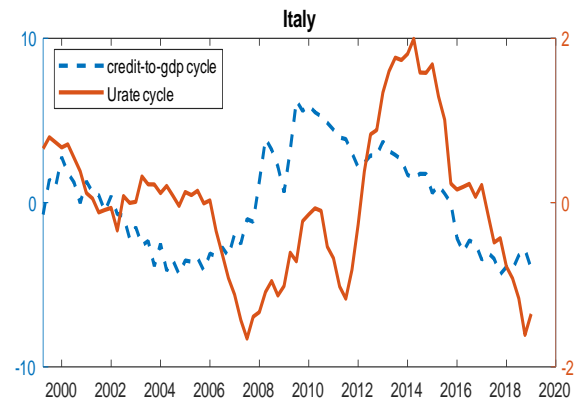
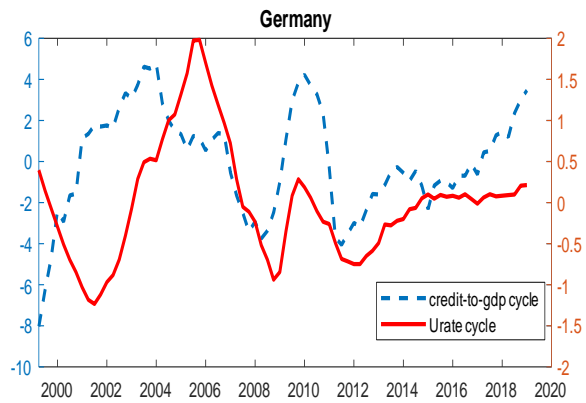
- Some synchronization. Stronger in period of financial stress.



- Credit lead unemployment by about 3-4 years.

Euro area heterogeneities

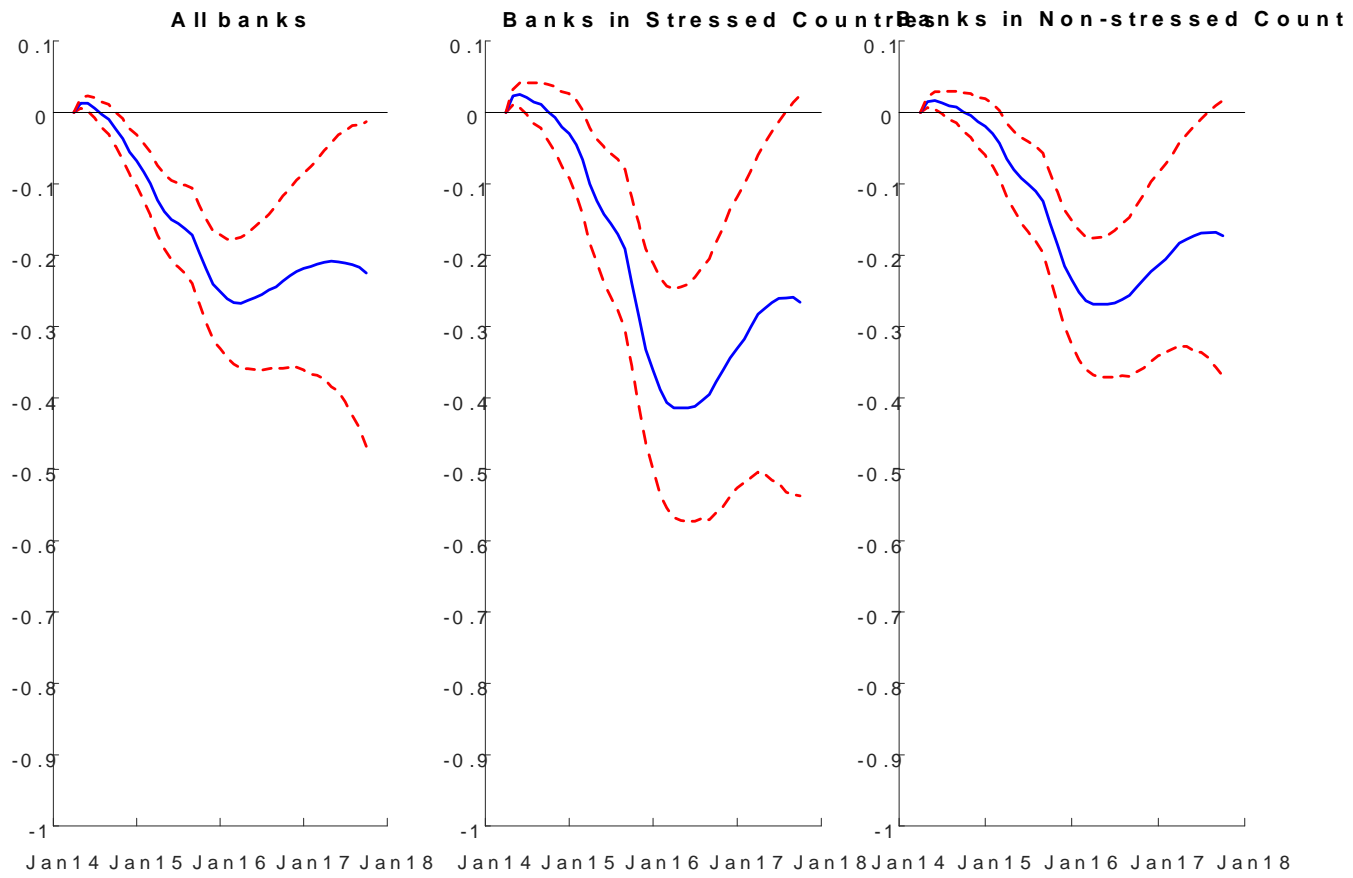


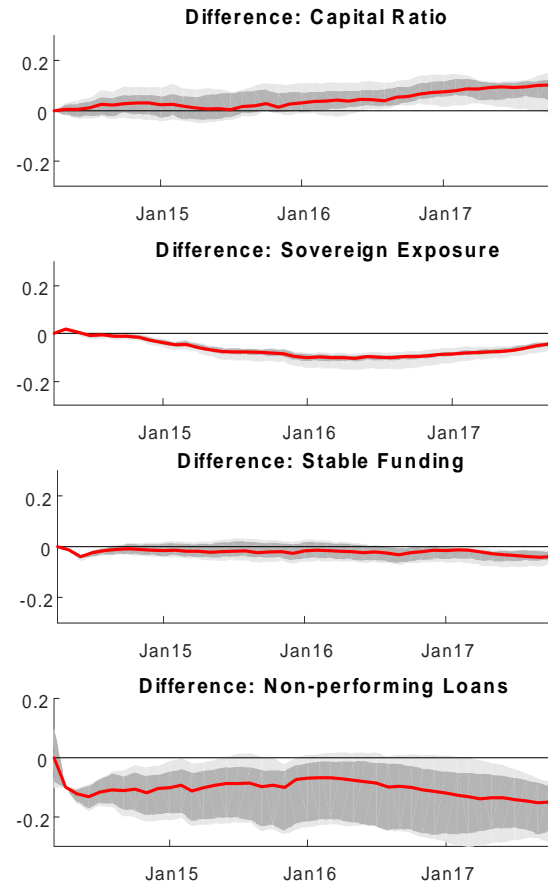
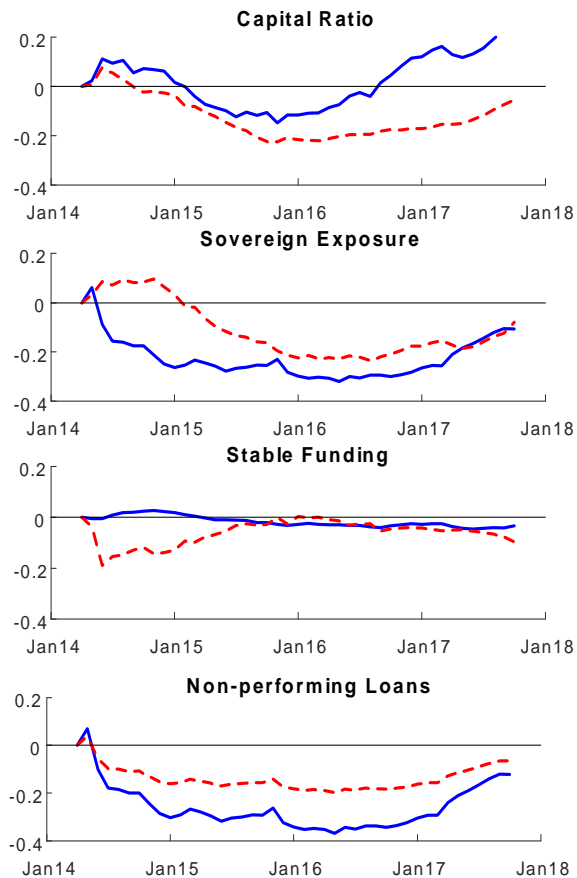


Monetary policy and bank profitability

Altavilla, C., Canova, F., and Ciccarelli, M.: Mending the broken link: heterogeneous bank lending rate and unconventional monetary policy, forthcoming, Journal of Monetary Economics.

- Unconventional monetary policy helped to re-establish 'normal' lending rates to firms and consumers . Use information about 325 euro area banks.
- Measure how profit margins (lending - deposit rates) respond to unconventional monetary policy surprises.





- Larger drop for banks with a low capital, high sovereign exposure, and high share of NPL.