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# Taming Macroeconomic Instability: Monetary and Macro Prudential Policy Interactions in an Agent-Based Model

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## Abstract

We develop an agent-based model to study the macroeconomic impact of alternative macro prudential regulations and their possible interactions with different monetary policy rules. The aim is to shed light on the most appropriate policy mix to achieve the resilience of the banking sector and foster macroeconomic stability. Simulation results show that a triple-mandate Taylor rule, focused on output gap, inflation and credit growth, and a Basel III prudential regulation is the best policy mix to improve the stability of the banking sector and smooth output fluctuations. Moreover, we consider the different levers of Basel III and their combinations. We find that minimum capital requirements and counter-cyclical capital buffers allow to achieve results close to the Basel III first-best with a much more simplified regulatory framework. Finally, the components of Basel III are non-additive: the inclusion of an additional lever does not always improve the performance of the macro prudential regulation.

**Keywords:** macro prudential policy; Basel III regulation; financial stability; monetary policy; agent-based computational economics.

**JEL classification numbers:** C63, E52, E6, G01, G21, G28.

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