

Dynamic Macro-prudential Regulation

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Abstract

I propose a new dynamic general equilibrium framework, in which government guarantees induce financial institutions to take on too much risk through excessive leverage. In response, the regulator sets capital requirements to trade-off growth with financial stability (tax-payer exposure to a banking sector collapse). This trade-off depends on the state of the economy. Optimal capital requirements are therefore time varying. I solve the model numerically to characterize the optimal requirements and show that they should crucially react to aggregate bank capital and credit expansion. For most parameterization, optimal requirements are higher in good times, which resonates with the notion of “counter-cyclical capital buffers”. I also show that, in this set-up, the size of an individual financial institution is irrelevant. No extra-buffer is thus required for large institutions.

Finally, I compare the optimal policy to the (best possible) constant capital requirement and show that the latter generates not only excess volatility but also episodes of extremely excessive credit expansion. In such cases, there is no longer a trade-off: an increase in capital requirement would both be good for growth and improve financial stability.