Amplification and Policy Responses with Income-Based Versus Asset-Based Borrowing Constraints

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Abstract

Economies regularly experience episodes during which a significant fraction of agents are borrowing constrained. These constraints give rise to amplification effects, which occasionally generate aggregate demand shortages. This paper analyzes amplification effects in a stylized model with both asset- and income-based borrowing constraints and investigates how macroeconomic stabilization policy can redress the amplification effects. I compare the different transmission mechanisms due to the two types of borrowing constraint. Income-based borrowing amplifies shocks to net worth when there is an aggregate demand shortage. Asset-based borrowing amplifies shocks to asset prices. Next, I analyze the impacts of ex-post policies, such as fiscal policy and liquidity operations, and ex-ante macroprudential policy. When there is no aggregate demand shortage, liquidity operations during deleveraging can lead to constrained efficiency. When there is an aggregate demand shortage, all households will be better off by taxing lenders in the deleveraging episode. If both types of borrowing constraint are present, taxing lenders to subsidize the asset-constrained agents rather than the income-constrained agents will be more effective. With either type of borrowing constraint, a macroprudential tax on debt issuance combined with a lump-sum transfer between borrowers and lenders will result in constrained efficient allocations.

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