Beyond the Balance Sheet Model of Banking: Implications for Bank Regulation and Monetary Policy
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ABSTRACT

Bank balance sheet lending is commonly viewed as the predominant form of lending. We document and study two margins of adjustment that are usually absent from this view using microdata in the$10 trillion U.S. residential mortgage market. We first document the limits of the shadow bank substitution margin: shadow banks substitute for traditional—deposit-taking—banks in loans which are easily sold, but are limited from activities requiring on-balance-sheet financing. We then document the balance sheet retention margin: banks switch between traditional balance sheet lending and selling loans based on their balance sheet strength, behaving more like shadow banks following negative shocks. Motivated by this evidence, we build and estimate a workhorse structural model of the financial intermediation sector. Banks and shadow banks compete for borrowers. Banks face regulatory constraints but benefit from the ability to engage in balance sheet lending. Critically, departing from prior literature, banks can also choose to access the securitization market like shadow banks. To evaluate distributional consequences, we model a rich demand system with income and house price differences across borrowers. The model is identified using spatial pricing policies of government-sponsored entities and bunching at the regulatory threshold. We study the quantitative consequences of several policies on lending volume and pricing, bank stability, and the distribution of consumer surplus across rich and poor households. Both margins we identify significantly shape policy responses, accounting for more than $500 billion in lending volume across counterfactuals. Secondary market disruptions such as quantitative easing have significantly larger impacts on lending and redistribution than capital requirement changes once we account for these margins. We conclude that a regulatory policy analysis of the intermediation sector must incorporate the intricate industrial organization of the credit market and the equilibrium interaction of banks and shadow banks.

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