The Network Structure of Money Multiplier*

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Abstract

The money view of banking emphasizes deposits as part of money supply that central banks can manage to influence the macroeconomy (Friedman and Schwartz, 1963). The credit view focuses instead on the asset side of bank balance sheets and proposes a bank lending channel (Bernanke, 1983). We show that by connecting monetary base and credit supply, the monetary role of deposits is in fact key to the credit channel. The circulation of deposits as means of payment reshuffles reserves—the settlement assets—among banks. A bank's position in the payment network determines its liquidity risk and willingness to invest in illiquid loans. We develop a structural model of liquidity percolation in the payment system and characterize an equilibrium money multiplier that links the churn of reserves and the creation of bank credit and deposits. Based on granular payment data, our estimation reveals a small set of systemically important banks that have disproportionately large impact on the equilibrium outcome.

Keywords: Credit supply, money multiplier, payment, network, externalities, systemic risk

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