Financial Contagion on Interbank Networks and Real Economy

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ABSTRACT

Interdependencies among financial institutions can generate a chain reaction bankruptcy. In this paper I construct a model to study the cascadic defaults of banks connected by a given network of cross-holdings, with asset prices endogenized. I extend the model of financial contagion to include mutual effects between the expansion of failure and the reduction in asset price, assuming that the price of each proprietary asset decreases as the number of failed banks increases. This paper provides comparative statics with respect to the asset price sensitivity, dealing with random network and core-periphey network. Without asset price endogenity, the number of failed banks depends on the two feature values, the exposure of a bank to other banks and the number of links per bank. If asset prices react to the advance of contagion, these feature values play less important roles on the expansion of cascades. In particular, the effect of the exposure of a bank to financial networks ceases radically.

Keywords: Systemic risk, financial networks, financial crisis.

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