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Centrality-based Capital Allocations

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Centrality-based Capital Allocations[1]

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Abstract

We look at the effect of capital rules on a banking system that is connected through correlated credit exposures and interbank lending. The rules, which combine individual bank characteristics and interconnectivity measures of interbank lending, are to minimize a measure of system-wide losses. Using the detailed German Credit Register for estimation, we find capital rules based on eigenvectors to dominate any other centrality measure, followed by closeness. Compared to the baseline case, capital reallocation based on the Adjacency Eigenvector saves about 15% in system losses as measured by expected bankruptcy costs.

JEL Classification Numbers: G21; G28; C15; C81

Keywords: interconnectedness; systemic risk; SIFIs; network analysis

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