

FINANCIAL CENTRALITY AND LIQUIDITY PROVISION

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ABSTRACT. We study an endowment economy in which agents face income risk, as if uncertain returns on a portfolio, and agents can only make transfers in states when they are actively participating in the market. Besides income risk, agents also have limited and stochastic market access, with a probability distribution governed by an underlying social network. While network connections may serve to dissipate shocks, they may also provide obstacles to the sharing of risk, as when participation frictions are generated through the network.

We identify and quantify the value of key players in terms of whether they are likely to be able to smooth the resulting market participation risk and how valuable that smoothing would be when they are there. We define *financial centrality* in economic terms, given the model, as the ex ante marginal social value of injecting an infinitesimal amount of liquidity to the agent.

We show that the most financially central agents are not only those who trade often -- as in standard network models -- but are more likely to trade when there are few traders, when income risk is high, when income shocks are positively correlated, when attitudes toward risk are more sensitive in the aggregate, when there are distressed institutions, and when there are tail risks. We extend our framework to allow for endogenous market participation. Observational evidence from village risk sharing network data is consistent with our model.

JEL CLASSIFICATION CODES: D14, E44, G01, L14, O16

KEYWORDS: Financial networks, networks, market participation, liquidity injection