

LIQUIDITY, FINANCIAL CENTRALITY AND THE VALUE OF KEY PLAYERS

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ABSTRACT. Consider an economy in which agents face income risk but interact in a stochastic financial network. We define the financial centrality of an agent as the ex-ante marginal social value of injecting an infinitesimal amount of liquidity to that agent. We show financially central agents are not only those who are linked often, but are linked when the realized network is fragmented (has fewer links), are linked when income risk is high, when income shocks are positively correlated, when attitudes toward risk are more sensitive in the aggregate, and when there are tail risks. We apply our framework to financial markets with participation shocks, to supply chains subject to disruptions, and to village risk sharing with heterogeneous and uneven networks. We allow for endogenous participation. Financial centrality is the value of a personalized security which pays off over states in which a named trader participates in market exchanges. Evidence from Thai villages, in which the Pareto weights are determined from bargaining solutions to the risk sharing problem, is consistent with the theory. We conclude with normative, policy implications for targeting liquidity injections to key traders in markets and to links in the supply chains where money would be most useful.

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

KEYWORDS: Financial networks, financial centrality, networks, market participation, liquidity, risk sharing

1. INTRODUCTION

Delirium: *You use that word so much. Responsibilities. Do you ever think about what that means?*

Dream: *Well, I use it to refer that area of existence over which I exert a certain amount of ... influence.*

Delirium: *It's more than that. The things we do make echoes.*

–Neil Gaiman, *The Sandman, Vol. 9: The Kindly Ones*

Networks are essential to study in order to understand financial markets in a wide variety of contexts, including but not limited to banking systems, over-the-counter bond markets, supply chains, financial traders, and even informal financial relationships to abate risk in villages ([Bramouille and](#)

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