

# Networks, Shocks, and Systemic Risk\*

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## Abstract

This chapter develops a unified framework for the study of how network interactions can function as a mechanism for propagation and amplification of microeconomic shocks. The framework nests various classes of games over networks, models of macroeconomic risk originating from microeconomic shocks, and models of financial interactions. Under the assumption that shocks are small, we provide a fairly complete characterization of the structure of equilibrium, clarifying the role of network interactions in translating microeconomic shocks into macroeconomic outcomes. This characterization enables us to rank different networks in terms of their aggregate performance. It also sheds light on several seemingly contradictory results in the prior literature on the role of network linkages in fostering systemic risk.

*Keywords:* Interaction networks, shock propagation, systemic risk.

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