





## **Endogenous Market Making and Network Formation**

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The recent financial crisis is triggered by the failure of Lehman Brothers. Lehman Brothers was not too large but too interconnected to fail, because it was one of the major market makers behind the over-the-counter market, where most financial assets and derivative contracts are traded. Its fall interrupted the functioning of the whole financial market. The goal of this paper is to analyze the interconnectedness of this market and the corresponding systemic risk. To this end, we start from building a theory of intermediation in the over-the-counter market, where intermediaries emerge endogenously as the choice of banks. The model generates an endogenous core-periphery trading network: a financial architecture that involves a small number of large, interconnected institutions. We show that banks with less exposure to uncertainty ex ante make the market, have the highest gross trade volume and turn out to be the most connected and systemically important. As a result of the endogenous market making activity, they may be exposed more to uncertainty ex post. We show that regulation on the interconnectedness of the financial market may reduce allocation efficiency and increase systemic risk in normal times and is only useful when the aggregate risk is large enough. We also use this framework to study bid-ask spreads, trading volume and asset allocation in the market.