“Information Aggregation and Design in Markets with Adverse Selection”

Abstract

How efectively does a decentralized marketplace aggregate information that is dispersed throughout the economy? We study this question in a dynamic setting where sellers have private information that is correlated with an unobservable aggregate state.

A common feature of all equilibria is that each seller's trading behavior provides an informative and conditionally independent signal about the aggregate state. We ask whether the state is revealed as the number of informed traders grows large. Perhaps surprisingly, the answer is no; we provide generic conditions under which information aggregation necessarily fails. In another region of the parameter space, aggregating and non-aggregating equilibria can coexist. Whether information aggregates has important implications for equilibrium trading behavior and welfare. We solve for the optimal information policy of a social planner who observes the trading behavior and chooses what information to communicate to the traders. We show that the information generated in the laissez-faire equilibrium is always inefficient when aggregation fails, but it may be efficient when aggregation obtains. When the equilibrium is inefficient, the optimal information conceals favorable news in order to accelerate trade and increase welfare.