Universität Basel

Publication

An agent-based model for market impact

Based on recent theoretical and empirical developments this paper proposes an agent-based model for market impact. Three types of agents are present on the market: Liquidity consumers, liquidity providers and noise traders. The first group creates large orders based on portfolio considerations. When they submit an order to the market they split it up into smaller parts to evade price impact costs. The second group of agents acts as liquidity providers which forecast order flow and supply liquidity at both sides of the order book. Noise traders represent the third group of agents which cover all other strategies on the market. The model is able to produce both temporary and permanent market impact while keeping statistical price efficiency as well as concave market impact functions in relative order sizes. The results are insensitive to reasonable parameter variations.