

Research projects at the MRIC

Equilibrium Models for Insider Trading with Long Memory

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Abstract

In their seminal papers Kyle and subsequently Back formulate and study an equilibrium model for insider trading, where the financial market has three agents: the insider, who already from the initial time knows the value v at the terminal time T of a given stock, the noise traders, who trade randomly without any information about the market, and the market makers, who at any time t can observe the total traded volume.

In this setting the insider tries to find the trading intensity which maximizes the expected terminal wealth.

The dilemma for the insider is that an increased trading intensity at some time t will reveal more information about the value of v to the market makers and hence induce a price closer to v , which in turn implies a reduced insider advantage. In this project we study how the introduction of persistence or memory among the noise traders influences the Kyle-Back model, in particular what effect it has on the optimal insider portfolio and maximal expected insider wealth