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Northwestern Institute on Complex Systems Seminar

Speaker: Saikat Ray Majumder, Kellogg School of Management, Northwestern University

Title: Price Dynamics in Political Prediction Markets

When: Wednesday, March 12, 2008

Where: Chambers Hall, 600 Foster Street, Lower Level Classroom

Time: 12:00 – 1:00

Refreshments will be available and a NICO Coffee Hour will follow for questions, networking, and collaboration.

Abstract

Prediction markets, in which contract prices are used to forecast future events, are increasingly applied to various domains ranging from political contests to scientific breakthroughs. However, the dynamics of such markets are not well understood. Here, we study the return dynamics of the oldest, most data-rich prediction markets, the Iowa Electronic Presidential Election "Winner-takes-all" markets. As with other financial markets, we find uncorrelated returns, power-law decaying volatility correlations and, usually, power-law decaying distributions of returns. However, unlike other financial markets, we find diverging volatilities as the contract settlement date approaches. We propose a dynamic binary option model that captures all features of the empirical data and can potentially provide a tool with which one may extract true information events from a price time series.

Paper co-authored by Luis Amaral, Daniel Diermeier, and Tom Reitz (University of Iowa).