

Networks and Financial Markets

Leonidas Santoval Jr

Abstract

Networks are everywhere now, and becoming increasingly important as just about everything connects with everything else. In financial markets, networks mean great chances of stability but also great probability of risk. As stock markets and other markets, like commodities and currency exchange, get more connected, the systemic risk due to the complex ways in which those markets are connected grows in importance.

In this talk, I will show some of the applications of Complex Network Theory and also Information Theory to financial markets, namely the global market of stock market indices, the New York Stock Exchange, and the commodities market. This is a journey through the abstract space of relations between stock market indices and between stocks, and also in time, showing the dynamics and evolution of some of those markets from the point of view of networks.