

Stock Market

What causes the complex and seemingly unpredictable dynamics of a stock market? Are market fluctuation caused by dynamic behavior of traders, variation in stock value, or simply the market's trading rules?

To model this I have chosen that the agents are people buying and selling stocks. This means that the agents are individual persons. They should have their own buying stock rate and selling rate. Also each agent should have a certain capital available that should be updated as the agent buys or sells stocks. I imagine that the agents could be represented by a unique number.

Things that could be taken into consideration for a stock market model are the state variables. These could be types of stock available and company annual reports. If a company comes out with a revenue the agent might be more likely to buy that stock if the stock is likely to gain in value. Or if the company does bad one year but seems promising the next year the agent might be likely to buy the stocks now. It could also be taken into consideration what the stocks rates for similar stocks are. At last the availability of the stock also has an impact on an agent buying or selling.