

Behaviour of stock markets

Ararat Harutyunyan

We model a typical behaviour of stock market where people buy and sell stocks. In our model we have three groups of people: those who buy shares, those who sell and those who just join the market. In this model, we consider the case where the newcomers follow a sheepish behaviour, that is, they are more likely to join the larger group. However, if the gap between the number of sellers and buyers was great for a long period of time, then the people tend to switch from the larger group to the smaller one (i.e. from buyers to sellers or from sellers to buyers). Our goal is to see if we can find a repetitive or a fractal behavior of the buyers and sellers after a period of time. We do this by simulating the model, and then plotting the number of buyers versus the number of sellers at times when the gap between them has been large over a certain period of time.