Abstract:

The thesis deals with the Agent-based modeling of the financial markets which represent so called "bottom-up" approach in economics. In the first part of the thesis, the brief summary of the development of Agent-based approach and its application in the modeling of financial markets is provided. The main part of the thesis concerns the implementation of an existing asset pricing model of He, Hamill and Li (2008) and also the implementation of an extension to this model. The presented extension lies in the connecting of two sub-markets by a mutual correlation. The considered correlation is represented either by correlated dividends or by the common market maker who adjusts the prices on both markets. The influence of these two types of correlation on the overall performance of both sub-markets is then studied by analyzing the outcomes of performed simulations.