

The topic of this work is simulation of stock market. Studying the dependence of Prague stock exchange index PX depending on the macroeconomic parameters. It uses the connection methods, neural networks and random walks, where the random walk forward trained neural network functions as decision-making unit, normally used instead of linear approximation. Specially concerning the relationship of dependence PX on exchange rate U.S. dollar and Czech crown, gross domestic product of the Czech Republic and 2W repo rate. Simulation is performed using neural networks and linear approximation to the historical dates against them is then validated.