

Chaotic Phenomena at Czech Capital Market

Dagmar BLATNA, Jiri TRESL

University of Economics, Prague, 13067 Prague 3, W.Churchill Sq.4, Czech Republic
blatna@vse.cz, tresl@vse.cz

Several financial applications of methods developed originally in physics are demonstrated. First, the time development of cumulative strain prior to material failures and preceding log-periodic oscillations have been observed in Telecom stock prices. Second, the search for chaotic patterns in PX index time series and its volatility was performed using correlation dimensions and BDS test. Finally, Hurst exponent computed for PX index was slightly greater than 0.5, which supported persistent behaviour with tendency to cycles' creation.

Key words: Log-periodic oscillations, stock prices, correlation dimension, Hurst exponent