

# Hurst Exponent Analysis of Chinese and Japanese Stock Market

Meifen CHU  
Kyushu University

## Abstract

Hurst Exponent Analysis was proposed by a British hydrologist, Harold Edwin Hurst in late 1960s. This methodology is originally used in measuring the long-range dependence of time series. Now it has been widely applied in biology, medicine, engineering, economics, etc. A number of researchers employ the Hurst Exponent Analysis in studying foreign exchange rates and stock markets. In this paper, Hurst Exponent Analysis is conducted in order to find out the characteristics of the Chinese and Japanese stock market. Since the Shanghai Stock Exchange (SSE) and the Tokyo Stock Exchange (TSE) represent their own country's market respectively, in this paper, we adopt the data from the Shanghai Stock Exchange and the Tokyo Stock Exchange. We find that both SSE and TSE series display anti-persistent characteristics. However, in the long term, the SSE series shows persistent pattern while the TSE series keeps its ant-persistent feature.

Key words: Japanese Stock Market; Chinese Stock Market; Hurst Exponent Analysis; Persistent; Anti-persistent