Group structure identification in a stock market based on cross correlation

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Abstract

We study the group structure in Korean stock market by using the cross correlation matrix obtained from daily stock prices. The distribution of eigenvalues and their spacings are obtained and then used to yield the group structure with the marketwide effect and random noises removed. We also measure the time-delayed cross correlations by using the minutely stock price changes and try to identify the causal pattern in the stock market.

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