



Quantitative Finance > Statistical Finance

# Segmentation analysis on a multivariate time series of the foreign exchange rates

Aki-Hiro Sato

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This study considers the multivariate segmentation procedure under the assumption of the multivariate Gaussian mixture. Jensen-Shannon divergence between two multivariate Gaussian distributions is employed as a discriminator and a recursive segmentation procedure is proposed. The daily log-return time series for 30 currency pairs consisting of 12 currencies for the last decade (January 3, 2001 to December 30, 2011) are analyzed using the proposed method. The proposed method can detect several important periods related to the significant affairs of the international economy.

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