Accepted Manuscript

Currency co-movement and network correlation structure of foreign exchange market

Yong Mai, Huan Chen, Jun-Zhong Zou, Sai-Ping Li

PII: S0378-4371(17)30960-3
DOI: https://doi.org/10.1016/j.physa.2017.09.068
Reference: PHYSA 18673

To appear in: *Physica A*

Received date : 16 May 2017
Revised date : 19 September 2017

Please cite this article as: Y. Mai, H. Chen, J. Zou, S. Li, Currency co-movement and network correlation structure of foreign exchange market, *Physica A* (2017), https://doi.org/10.1016/j.physa.2017.09.068

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

ACCEPTED MANUSCRIPT

Currency Co-movement and Network Correlation Structure of Foreign Exchange Market

Yong Mai[a], Huan Chen[a], Jun-Zhong Zou[b], Sai-Ping Li[c,*]

[a]*School of Business, East China University of Science and Technology, 130 Meilong Road, Shanghai 200237, China*
[b]*School of Information Science and Engineering, East China University of Science and Technology,Box 579, 130 Meilong Road, Shanghai 200237, China*
[c]*Institute of Physics, Academia Sinica, Nankang, Taipei 11529, Taiwan*

Abstract

We study the correlations of exchange rate volatility in the global foreign exchange(FX) market based on complex network graphs. Correlation matrices (CM) and the theoretical information flow method (Infomap) are employed to analyze the modular structure of the global foreign exchange network. The analysis demonstrates that there exist currency modules in the network, which is consistent with the geographical nature of currencies. The European and the East Asian currency modules in the FX network are most significant. We introduce a measure of the impact of individual currency based on its partial correlations with other currencies. We further incorporate an impact elimination method to filter out the impact of core nodes and construct sub-networks after the removal of these core nodes. The result reveals that (i) the US Dollar has prominent global influence on the FX market while the Euro has great impact on European currencies; (ii) the East Asian currency

*Corresponding author. Tel.:+862164251780.
Email address: spli@phys.sinica.edu.tw (Sai-Ping Li)

دریافت فوری ← متن کامل مقاله

ISIArticles
مرجع مقالات تخصصی ایران

✓ امکان دانلود نسخه تمام متن مقالات انگلیسی
✓ امکان دانلود نسخه ترجمه شده مقالات
✓ پذیرش سفارش ترجمه تخصصی
✓ امکان جستجو در آرشیو جامعی از صدها موضوع و هزاران مقاله
✓ امکان دانلود رایگان ۲ صفحه اول هر مقاله
✓ امکان پرداخت اینترنتی با کلیه کارت های عضو شتاب
✓ دانلود فوری مقاله پس از پرداخت آنلاین
✓ پشتیبانی کامل خرید با بهره مندی از سیستم هوشمند رهگیری سفارشات