



## Mapping the structure of the global flow-of-funds analysis

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The flow-of-funds matrices have been acknowledged as a key tool at the forefront of the financial risk debates. However, current flow-of-funds matrices only focus on the single region or country and cannot reflect the multi-region ripple effects in the world. Considering the complexity of global financial risk network can help to effective risk reductions for countries. We develop a new time series of global flow-of-funds matrices with applications to both the global financial crisis of 2007-2008 and the European debt crisis of 2011. The new series is constructed using parallelized supercomputing resources and significantly advances the previous state of art because of three innovations. First, it is available as a continuous time series of global multi-region flow-of-funds tables from 2001-2013. Second, it distinguishes at least 40 individual countries including China with detailed sectors. Third, it reconciles two main data resources named Coordinated Portfolio Investment Survey (CPIS) by International Monetary Fund and Consolidated Banking Statistics (CBS) by Bank for International Settlements. The new series is then applied to analyze the ripple effects of global financial crisis of 2007-2008 and the European debt crisis of 2011.

**Keywords:** global flow-of-funds matrices; global financial crisis; European debt crisis.