Clustering of Financial Stress Spillovers

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Abstract:

The aim of this paper is the examination of international transmission of financial stress. We provide evidence regarding the nature and the extend of spillovers among 20 major economies. Also, estimates for the propagation of a US shock to the rest of the world are reported. For this reason we construct country-based financial stress indexes (FSIs) of monthly frequency over the period 2003-2013. These indexes are composite indicators representing the financial conditions prevailing each one of the examined countries. We test the robustness of our results using two alternative sets of indexes: 1) FSI constructed using the principal component approach and 2) FSI taken from the IMF. Our methodological approach is based on panel VAR (PVAR), which has recently become quite popular tool for macroeconometric analysis. The reason for its extensive usage is the ability to allow for linkages among economies. Contrary to the traditional country-specific VARs, PVARs capture a range of potential interactions among countries. The examined economies can be linked with two broad types of relations: i) dynamic dependencies and ii) static dependencies. An additional desirable feature of PVAR is researcher's freedom to accommodate different coefficients for each country model (cross-sectional heterogeneities). Both dynamic and static dependencies as well as heterogeneities can be expressed as restrictions in a large PVAR model. Based on Bayesian shrinkage methods, we test the above types of restrictions. In this way, we identify clusters of stress transmission. Our evidence suggests that the general consensus, according to which big economies affect the smaller ones but not the opposite, is only part of the story. In other words, the clusters of financial contagion are a more complex empirical phenomenon. Moreover, we reconfirm the dominant role of US in the global transmission of financial shocks.

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