

Sovereign, Bank and Insurance Credit Spreads: Connectedness and System Networks*←

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Abstract

Macrofinancial risk has become increasingly important over time as global markets have become increasingly more connected. We apply several econometric measures of connectedness based on Granger-causality networks to the changes of sovereign risk of European countries and credit risk of major European, U.S., and Japanese banks, brokerages, and insurance companies to investigate the evolution of these connections. Sovereign and credit risk are measured using the Merton Model (Contingent Claims Analysis) applied to risk-adjusted balance sheets, which calculates the sensitivity of the enterprise's assets and liabilities to external "shocks." We highlight connections among countries and institutions to quantifying the effects of asset-liability mismatches within and across countries and financial institutions.

Keywords: Sovereign and Credit Risk; Financial Institutions; Liquidity; Financial Crises; Contingent Pricing

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