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Convergence and Divergence in European Bond Correlations

Peter Schwendner, Martin Schüle, Martin Hillebrand

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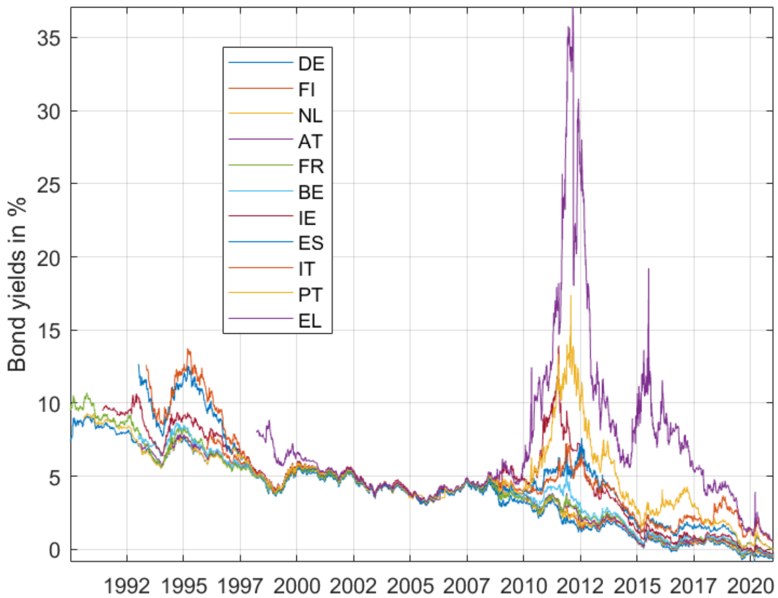
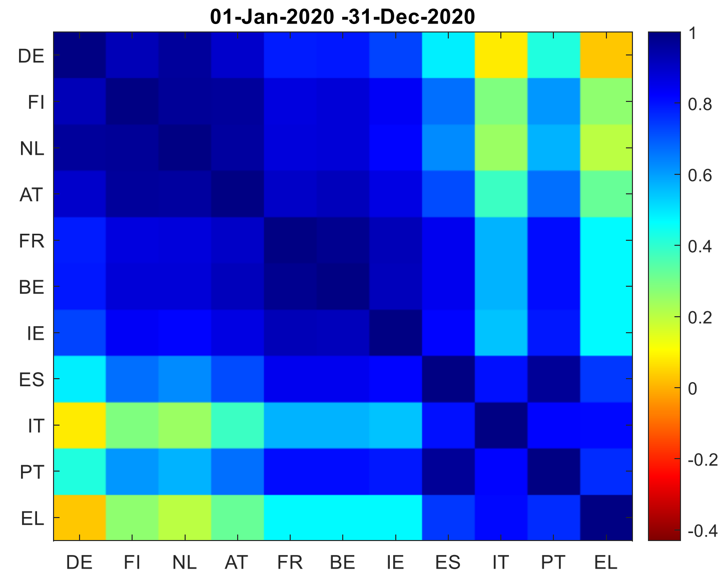


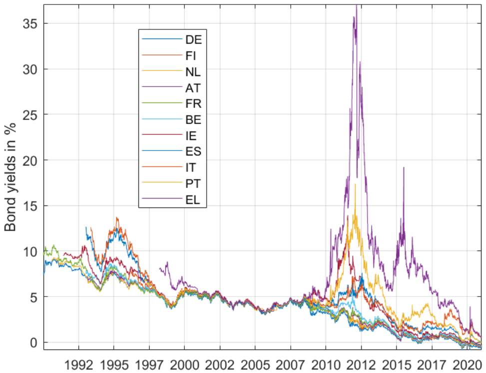
- European convergence is a central goal of EU policies.
- European sovereign bond yields show a capital market assessment of European convergence across countries.
- The European Stability Mechanism (ESM) has been set up to mitigate the divergence during the EU sovereign debt crisis by financial assistance programmes to national states funded by capital market bond issues.

Research questions:

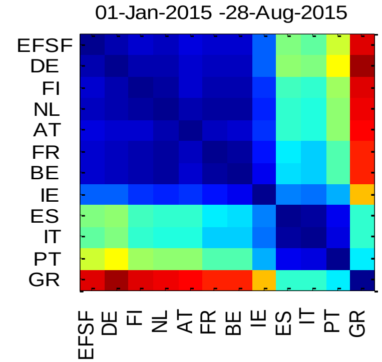
- Can we extract the current capital market sentiment regarding convergence by considering cross-sectional correlations?
- Is this a useful tool for communicating about capital markets beyond the scientific community?



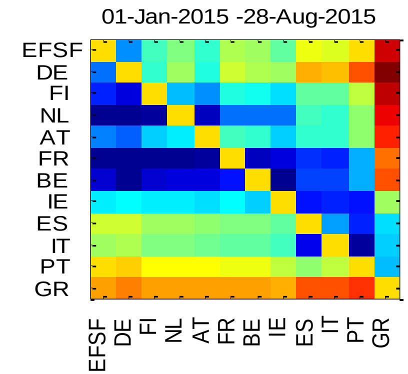
Method overview: from bond yields to correlation influence networks



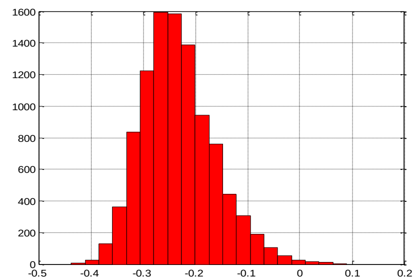
Bond yield time series



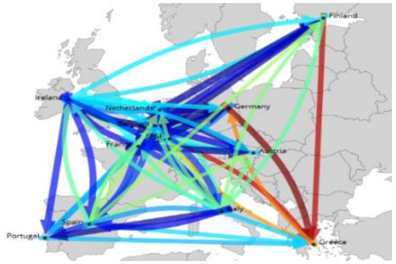
Correlation matrix of yield changes



Correlation influence



Bootstrap filter



Filtered influence network

We use **influence networks** as an unsupervised learning tool to identify the markets that drive the correlations of other markets. As correlations are very unstable, we use a **bootstrap filter** to reduce noise.

Dissemination and impact: European bond market monitoring at ESM