

Title: Dynamic Connectedness

The topic of dynamic connectedness based on Diebold Yilmaz approach has a wide range of application from financial to macro time series data and it is based on indices of total and directional connectedness which allows to measure how a country/market/financial institution contributes and its vulnerable to systemic risk

Syllabus:

- 1) intro to VAR modelling and Forecast Error Variance Decomposition (2 hrs)
- 2) generalized impulse response and structural VAR based indices of connectdness (2 hrs)
- 3) Parsimonios modelling: a) Long memory ; b) large scale VAR (2 hrs)
- 4) Applications using R (4 hrs)

References:

Caloia G., Cipollini A. and S. Muzzioli (2019): How do normalization schemes affect net spillovers? A replication of the Diebold and Yilmaz (2012) study, *Energy Economics*, Volume 84, 104536

Demirer, M.; Diebold, F.X.; Liu, L.; Yilmaz, K. (2017) Estimating global bank network connectedness. *Journal of Applied Econometrics*. Volume 33, 1–15.

Diebold, F.X.; Yilmaz, K. On the network topology of variance decompositions: Measuring the connectedness of financial firms (2014). *Journal of Econometrics*. Volume 182, 119–134.

Diebold, F.X.; Yilmaz, K. Trans-Atlantic Equity Volatility Connectedness: U.S. and European Financial Institutions, 2004–2014 (2016). *Journal of Financial Econometrics*, Volume 14, 81–127.