

Abstract

This paper is part of the research on the interlinkages between insurers and their contribution to systemic risk on the insurance market. Our work constitutes an answer to the recommendations contained in the 2017 report of the European Insurance and Occupational Pensions Authority (EIOPA), an independent EU advisory body to the European Parliament, the Council of Europe and the European Commission, which shows that when analysing systemic risk in the insurance sector, one should take into account, among others, the dynamics of interconnectedness between institutions. The present article is another study of the authors in this subject. Its main purpose is to present the results of the analysis of linkage dynamics and systemic risk in the European insurance sector using hybrid models combining statistical-econometric tools with network modelling and predictive analysis tools. These networks are based on dynamic dependence structures modelled using a copula. Then, we determine the Minimum Spanning Trees. Finally, the linkage dynamics is described by means of the time series of selected topological network indicators.