Financial institution's vulnerability: assessing the role of intra and inter-community dependences

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Abstract

In this communication, we show that several topological characteristics of financial institutions can predict their vulnerability in crisis period. This result is obtained by applying a two-step procedure in the spirit of Balla et al (2014). In a first step, we use the approach developed by Geraci and Gnabo (2017) based on Time-Varying Parameter Vector AutoRegressive (TVP-VAR) model as well as Granger causality statistical tests on stock market returns to recover the unobserved spillover network of financial institutions. In a second step, we regress alternative measures of institutions' vulnerability on a set of pre-crisis and institution-level topological characteristics. We test for statistical differences when the topological measures are computed based on close peers (i.e. we only consider intra-community links) or on the whole system (i.e. we consider intra and inter-community links). Overall, our sample include 95 financial institutions embedding banks, broker-dealers, insurance and real-estate companies listed in the Standard & Poor's 500 index.