Nonlinearities and financial contagion in Latin American stock markets

Romero-Meza R.

Bonilla C.

Benedetti H.

Serletis A.

We use the Hinich (1996) portmanteau bicorrelation test to graphically represent nonlinear events detected in Latin American stock markets. We identify the starting, the ending, the intensity, and the persistence of nonlinear episodes. The six episodes identified in the period studied were found to be contemporaneous with international financial crises, which allows us to speculate that the contagion caused by financial crises induces nonlinear dependencies. We advocate that this test could be complementary to traditional tests employed in the study of financial contagion. We observe systematic nonlinear structure in the stock index return series that have been associated with temporary lack of market efficiency. This new approach can help financial analysts and regulators to assess graphically the state of dependence measured by the bicorrelation test as frequently as new information arrives.

Financial contagion

Hinich bicorrelation test

Nonlinear behavior