Financial contagion and 2016 oil crisis: a factor analysis

Turki Maya

1Institut National des Sciences Appliquées et de Technologie de Tunis

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Abstract

The paper tries to answer the following question: could the 2016 oil price crisis generate financial contagion among stock markets?

The study period is composed of two sub-periods; a quiet one from 3/01/2012 to 01/08/2014 and turbulent one from 04/08/2014 to 25/05/2016. Raw data consists of daily international stock market indexes prices. The co-movements of the stock market returns are analyzed through a principal component analysis (PCA).

The results revealed that the KMO index (Kaiser-Mayer-Olkin) is higher during the turbulent period than during the quiet one and that the proportion of variance explained by the first component during the turbulent period reached 35\% while during the quiet one it represented only 26.7\%. Regarding the component structure, for the turbulent period, three factors are able to explain the stock markets indexes movements while for the quiet period four factors are required.

The findings give more credit to the thesis supporting the linkage between cross correlation and financial contagion and classify the 2016 oil crisis, as just a coupling episode and not an extreme one.

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