



Quantifying the impact of extreme events on commodity currencies

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Abstract

In this paper we study on some of the so-called commodity currencies, analyzing co-movements at extreme levels between the exchange rates of Australia, Canada and Chile and one of the main exports of each country. To do so, we used a multivariate extension of the Hawkes-POT model. The main contribution of this model is that it allows us to work with extreme events which are irregularly spaced by incorporating the internal history of past events, making these influence the future developments of the process. According to the obtained results we can confirm that the intensity in the occurrence the extreme events in the Australian dollar is influenced by extreme events in gold. Also, the size of extreme events in the Canadian dollar is determined by the dynamics of extreme events in the Brent oil. On the other hand, for the analysed period and under the established conditions it was not possible to demonstrate a strong relationship between the Chilean peso and the price of copper.

Keywords: extreme events; value at risk; point process.