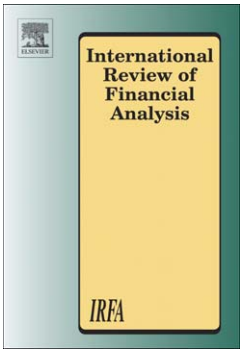

Modelling Time Varying Volatility Spillovers and Conditional Correlations Across Commodity Metal Futures

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PII: S1057-5219(17)30176-X
DOI: doi:10.1016/j.irfa.2017.11.003
Reference: FINANA 1159

To appear in: *International Review of Financial Analysis*

Received date: 9 June 2017
Revised date: 18 October 2017
Accepted date: 28 November 2017

Please cite this article as: KARANASOS, M., ALI, F.M.E.N.L.A., MARGARONIS, Z. & NATH, R., Modelling Time Varying Volatility Spillovers and Conditional Correlations Across Commodity Metal Futures, *International Review of Financial Analysis* (2017), doi:10.1016/j.irfa.2017.11.003

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This draft: October 2017

Abstract

This paper examines how the most prevalent stochastic properties of key metal futures returns have been affected by the recent financial crisis using both mapped and unmapped data. Our results suggest that copper and gold futures returns exhibit time-varying persistence in their corresponding conditional volatilities over the crisis period; in particular, such persistence increases during periods of high volatility compared with low volatility. The estimation of a bivariate GARCH model further shows the existence of time-varying volatility spillovers between these returns during the different stages of such a crisis. Our results, which are broadly the same in relation to the use of mapped or unmapped data, suggest that the volatilities of copper and gold are inherently linked, although these metals have very different applications.

Keywords: Financial crisis, Metal futures, Structural breaks, Time-varying volatility spillovers

JEL Classification Codes: C32; Q02