

## Accepted Manuscript

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PII: S0927-5398(14)00029-2  
DOI: doi: [10.1016/j.jempfin.2014.03.009](https://doi.org/10.1016/j.jempfin.2014.03.009)  
Reference: EMPFIN 725

To appear in: *Journal of Empirical Finance*

Received date: 19 August 2013  
Revised date: 17 March 2014  
Accepted date: 31 March 2014



Please cite this article as: Conrad, Christian, Loch, Karin, Rittler, Daniel, On the macroeconomic determinants of long-term volatilities and correlations in U.S. stock and crude oil markets, *Journal of Empirical Finance* (2014), doi: [10.1016/j.jempfin.2014.03.009](https://doi.org/10.1016/j.jempfin.2014.03.009)

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On the macroeconomic determinants  
of long-term volatilities and correlations in  
U.S. stock and crude oil markets\*

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First version: March 13, 2012

This version: March 14, 2014

**Abstract**

Using a modified DCC-MIDAS specification, we endogenize the long-term correlation between crude oil and stock price returns with respect to the stance of the U.S. macroeconomy. We find that variables that contain information on current and future economic activity are helpful predictors of changes in the oil-stock correlation. For the period 1993-2011 there is strong evidence for counter cyclical behavior of the long-term correlation. For prolonged periods with strong growth above trend our model predicts a negative long-term correlation, while before and during recessions the sign changes and remains positive throughout the economic recovery.

**Keywords:** Oil-stock relationship, long-term volatility, long-term correlation, GARCH-MIDAS, DCC-MIDAS

**JEL Classification:** C32, C58, Q43

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\*We would like to thank Thomas Eife, Lutz Kilian, Sandra Schmidt, and Timo Teräsvirta for valuable comments and suggestions. Christian Conrad gratefully acknowledges financial support from the “Juniorprofessorenprogramm” of the state of Baden-Württemberg.

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