

# Financialization of the commodity future markets through factor models

Winicius Botelho Faquieri <sup>1</sup>

Fernando Antonio Lucena Aiube <sup>2</sup>

<sup>1</sup> Faculty of Economics, UERJ, Rio de Janeiro, Brazil

<sup>2</sup> Faculty of Economics, UERJ, Rio de Janeiro, Brazil

The present paper aims to verify whether factor models are able to capture the financialization phenomenon of commodity markets. We compare the models with one and two-factors in the periods before and during the financialization. If these type of models are sensitive to financialization, the convenience yield factor will be less relevant or even non-significant in the financialization period. In this case the one-factor model will be more appropriate to fit data on future markets meaning a great simplification in the market analysis.

## References

- [1] Michael J Brennan and Eduardo S Schwartz. Evaluating natural resource investments. *Journal of business*, pages 135–157, 1985.
- [2] Bahattin Buyuksahin, Michael S Haigh, Jeffrey H Harris, James A Overdahl, and Michel A Robe. Fundamentals, trader activity and derivative pricing. 2008.
- [3] Bahattin Buyuksahin, Michael S Haigh, and Michel A Robe. Commodities and equities: 'a market of one'? 2008.
- [4] Bahattin Buyuksahin and Michel A Robe. Does 'paper oil' matter? energy markets' financialization and equity-commodity co-movements. 2011.
- [5] Bahattin Büyüksahin and Michel A Robe. Speculators, commodities and cross-market linkages. *Journal of International Money and Finance*, 42:38–70, 2014.

- [6] Patrick Chan, Ronnie Sircar, and Michael V Stein. A feedback model for the financialization of commodity markets. *SIAM Journal on Financial Mathematics*, 6(1):870–899, 2015.
- [7] Gonzalo Cortazar, Ivo Kovacevic, and Eduardo S Schwartz. Commodity and asset pricing models: An integration. Technical report, National Bureau of Economic Research, 2013.
- [8] Bassam Fattouh, Lutz Kilian, and Lavan Mahadeva. The role of speculation in oil markets: What have we learned so far? 2012.
- [9] Christopher L Gilbert et al. Speculative influences on commodity futures prices 2006-2008. United Nations Conference on Trade and Development, 2010.
- [10] James D Hamilton and Jing Cynthia Wu. Effects of index-fund investing on commodity futures prices. *International Economic Review*, 56(1):187–205, 2015.
- [11] Brian J Henderson, Neil D Pearson, and Li Wang. New evidence on the financialization of commodity markets. *Review of Financial Studies*, page hhu091, 2014.
- [12] Takashi Kanamura. A financialization model of crude oil markets. 2015.
- [13] Matteo Manera, Marcella Nicolini, and Ilaria Vignati. Financial speculation in energy and agriculture futures markets: A multivariate garch approach. *The Energy Journal*, 34(3):55, 2013.
- [14] Jörg Mayer. The growing financialisation of commodity markets: Divergences between index investors and money managers. *Journal of Development Studies*, 48(6):751–767, 2012.
- [15] Eduardo Schwartz and James E Smith. Short-term variations and long-term dynamics in commodity prices. *Management Science*, 46(7):893–911, 2000.
- [16] Eduardo S Schwartz. The stochastic behavior of commodity prices: Implications for valuation and hedging. *The Journal of Finance*, 52(3):923–973, 1997.

- [17] Annastiina Silvenmoinen and Susan Thorp. Financialization, crisis and commodity correlation dynamics. *Journal of International Financial Markets, Institutions and Money*, 24:42–65, 2013.
- [18] Kenneth J Singleton. Investor flows and the 2008 boom/bust in oil prices. *Management Science*, 60(2):300–318, 2013.
- [19] Ke Tang and Wei Xiong. Index investment and the financialization of commodities. *Financial Analysts Journal*, 68(5):54–74, 2012.