

Tone of Crop Reports and Volatility of Soybean Future Contracts

RODRIGO FERNANDES MALAQUIAS

UNIVERSIDADE FEDERAL DE UBERLÂNDIA (UFU)

ERICA JUVERCINA SOBRINHO

UNIVERSIDADE FEDERAL DE UBERLÂNDIA (UFU)

PABLO ROGERS

UNIVERSIDADE FEDERAL DE UBERLÂNDIA (UFU)

ILIRIO JOSÉ RECH

UNIVERSIDADE FEDERAL DE GOIÁS (UFG)

Agradecimento à orgão de fomento:

Rodrigo F. Malaquias agradece ao Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq) e à Fundação de Amparo à Pesquisa do Estado de Minas Gerais (FAPEMIG; Projeto de Demanda Universal, 2022, APQ-02071-22, Edital 001/2022), pelo apoio concedido para a realização de parte desta pesquisa.

Tone of Crop Reports and Volatility of Soybean Future Contracts

Introdução

Since many factors affect the volatility of commodities futures, there is a space for new studies to improve the understanding of their pricing (Imai, Gaiha, & Thapa, 2011). Commodity prices react to new information on the market, so disclosing information on production forecasting is important.

Problema de Pesquisa e Objetivo

We expect to advance previous research by including the tone of crop reports in these analyses. Therefore, the main purpose of this research is to test the relationship between the positive tone of crop reports and the volatility of returns of soybean futures.

Fundamentação Teórica

The literature has indicated that a decrease (increase) in the price of financial assets could be a result of negative (positive) sentiment (Omura & Todorova, 2019) after information processing. Crop reports published by public bodies are informative and affect the commodity futures markets, with a trend of greater impact at the time of announcement (Karali, Isengildina-Massa, Irwin, Adjemian, & Johansson, 2019; Ying et al., 2019; Isengildina-Massa et al., 2021). Therefore, investors can use some information from crop reports to trade.

Metodologia

In this paper, we use an ARCH-GARCH model (Poon, 2005) to test the effect of information available on crop reports on the conditional volatility of future contracts of soy. The sample period starts on April/2018 and ends in January/2022. For each month, we collected the crop report from CONAB. Using the KH Coder software, we calculated the number of sentences of each report containing positive and negative expressions; this list was based in previous research (Henry, 2008; Malaquias & Borges Júnior, 2021; Yekini et al., 2016). More than 200 concurrent models were evaluated.

Análise dos Resultados

The main results indicate that the tone of crop reports can improve the understanding of the volatility of soybean future contracts returns.

Conclusão

In line with the literature (Silveira, Mattos, & Saes, 2017; Karali, Isengildina-Massa, Irwin, Adjemian, & Johansson, 2019; Ying et al., 2019), our results suggest that the content of crop reports is relevant to understand volatility of soybean contracts returns in the one day around analysis, and our results indicate that the effect is stronger when we consider the positive tone of crop reports.

Referências Bibliográficas

Fama, E. F. (1970). Efficient Capital Markets: A Review of Theory and Empirical Work. *The Journal of Finance*, 25(2), 383-417. Silveira, R. F. L., Mattos, F. L., & Saes, M. S. M. (2017). The Reaction of Coffee Futures Price Volatility to Crop Reports. *Emerging Markets Finance and Trade*, 53(10), 2361-2376. Yekini, L. S., Wisniewski, T. P., & Millo, Y. (2016). Market reaction to the positiveness of annual report narratives. *British Accounting Review*, 48(4), 415-430.