

Co-integrated Commodity Pricing Model (Abstract)

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In this paper, we propose a commodity pricing model that extends Gibson-Schwartz two-factor model to incorporate the effect of linear relations among commodity prices, which include co-integration under certain conditions. We derive futures and call option pricing formulae, and show that unlike Duan and Pliska (2004), the linear relations among commodity prices, or the error correction term, should affect the commodity derivative prices. Using crude oil and heating oil market data, we estimate the proposed model. The result suggests that there is co-integration among these commodity prices, and that its effect on derivative prices should not be ignored empirically.

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