

The Traditional Hedging Model Revisited With A Non Observable Convenience Yield

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Abstract

This article addresses the issue of hedging a constrained position in the spot (storable) commodity with futures contracts when, in particular, the convenience yield is not observable and is estimated by using the continuoustime Kalman-Bucy method. We extend the relevant literature when the investors operate under incomplete information and study its impact on optimal demands. The latter depend crucially on the investor's initial beliefs. The speculative and mean-variance positions in the futures contract are the unique positions capturing the effect of the incomplete information and are strongly affected by the initial value of the estimation error. We achieve a decomposition allowing investors to assess the impact of both the state variables and the initial estimation error on optimal demands. Finally, a higher initial value of the estimation error exacerbates the Samuelson effect.

JEL Classification: G11; G12; G13

Keywords: Incomplete Information; Optimal Dynamic demand; Convenience Yield; Commodity Futures Prices; Market Prices Of Risk; Interest Rates.

Field of research: Finance, Quantitative Finance

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