Quantitative Finance > Statistical Finance

The fractional volatility model: No-arbitrage, leverage and completeness

R. Vilela Mendes, M. J. Oliveira, A.M. Rodrigues

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Based on a criterion of mathematical simplicity and consistency with empirical market data, a stochastic volatility model has been obtained with the volatility process driven by fractional noise. Depending on whether the stochasticity generators of log-price and volatility are independent or are the same, two versions of the model are obtained with different leverage behavior. Here, the no-arbitrage and completeness properties of the models are studied.

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