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

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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.

Comments: 13 pages Latex. arXiv admin note: substantial text overlap with [arXiv:1007.2817](#)

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