

A truncated two–scales realized volatility estimator

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In this talk we introduce a novel estimator of the integrated volatility of asset prices based on high frequency data that is consistent in the presence of price jumps and market microstructure noise. We begin by introducing a jump signaling indicator based on a local average of intra-daily returns that allows to detect jumps when the price is contaminated by noise. We then combine this technique with the two-scales realized volatility estimator to introduce the so called truncated two-scales realized volatility estimator (TTSRV). We establish consistency of the TTSRV in the presence of finite or infinity activity jumps and noise. In case of finite activity jumps, we also establish the asymptotic distribution of the estimator. A simulation study shows that the TTSRV performs satisfactorily in finite samples and that it out–performs a number of alternative estimators recently proposed in the literature.