

Realized Factor GARCH

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Abstract

We introduce a multivariate GARCH model that utilizes realized measures of volatility and covolatility. The model has a hierarchal factor structure, where the underlying model defines the core volatility factors that form the basis for the modeling of all individual returns series. This structure makes the model tractable and scalable. We apply the model to US equity data, where the underlying factor structure is deduced from exchange-traded index funds.

Keywords: Financial Volatility; Beta; Realized GARCH; High Frequency Data.

JEL Classification: G11, G17, C58

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