2015-04-28

PRESS RELEASE

FloGARCH: Realizing long memory and asymmetries in returns volatility
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NBB Working Paper No 280 - Research Series

Strong regularities in financial time series suggest that asset returns volatility is subject to temporal variation. Scholars in the field spurred intensive research in modeling the latent volatility process of asset returns. Among the existing approaches, conditional heteroskedastic models, pioneered by Engle and Bollerslev with the ARCH and GARCH models, have known undeniable success. ARCH models have been found to replicate stylized facts of asset returns including, but not limited to, volatility clustering, fat tails in the distribution of returns and higher-order dependence in returns. Standard models have been, since then, improved in three major directions; dealing with asymmetries, accommodating for long-range dependencies and exploiting the potential of high-frequency data.

This paper makes a contribution at the intersection of these three axes by introducing a new class of long-memory asymmetric GARCH models based on high-frequency data. The new subclass of Realized GARCH is called FloGARCH standing for fractionally integrated realized volatility GARCH. FloGARCH models provide a parsimonious joint model for low frequency returns and realized measures and are sufficiently flexible to capture long memory as well as asymmetries related to leverage effects. He analyzes the performances of the models in a realistic numerical study and on the basis of a data set composed of 65 equities. Using more than 10 years of high-frequency transactions, he documents significant statistical gains related to the FloGARCH models in terms of in-sample fit, out-of-sample fit and forecasting accuracy compared to classical and Realized GARCH models.

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