

1159-60-45

Paul Glasserman and **Dan Pirjol*** (dpirjol@gmail.com), School of Business, Hoboken, NJ 07030, and **Qi Wu**. *Tail risk monotonicity under temporal aggregation in GARCH(1,1) models.*

The stationary distribution of a GARCH(1,1) process has power law tails, which makes it appropriate for modeling financial time series for heavy tailed variables. A GARCH process observed at one frequency can be approximated with another observed at a lower frequency and different parameters. We study the change in the tail exponent under temporal aggregation of the time series, and derive conditions under which the tail exponent increases under temporal aggregation. These conditions cover most relevant combinations of parameters and innovation distributions, but we also note the existence of counterexamples near the edge of the parameter space. (Received July 22, 2020)