

The Granular Origins of Tail Risk

Torben Andersen

**Kellogg School of Management, Northwestern University
(with Yi Ding and Viktor Todorov)**

We study the tail risk in the cross-section of asset prices at high frequencies. We show that the cross-sectional tail behavior of asset returns depends on whether the price increment contains a systematic jump event or not. In case of systematic jumps, the cross-sectional asset return tail behavior is determined by the assets' exposures to the systematic event, while if the interval contains no systematic jump, it is determined by the tails of the idiosyncratic jumps. We develop an estimator for the tail shape of the cross-sectional asset return distribution with distinct asymptotic properties, depending on whether the interval contains a systematic jump or not. We show empirically that shocks to the tail shape parameters of the cross-sectional asset return distribution are source of priced risk. The price of this tail risk depends on its source: fat idiosyncratic tails are liked by investors while fat tails in assets' exposures to systematic jumps are disliked by them.