



THE UNIVERSITY OF
CHICAGO

DEPARTMENT OF STATISTICS

MASTER'S THESIS PRESENTATION

XUEQING WEI

Department of Statistics
The University of Chicago

Different Methods for Dynamic Extreme Value-at-Risk Estimation

MONDAY, November 7, 2022, at 11:00 AM

Zoom Meeting, 5747 S. Ellis Avenue

ABSTRACT

The Value-at-Risk (VaR) is an important and widely used measure in financial risk management. Estimating VaR precisely at extreme levels plays a key role in regulatory capital management. Specifically, the dynamic extreme VaR estimation is a crucial topic that has received plenty of attention. We compare six different dynamic extreme VaR estimation methods in this paper. The results show that the GARCH-EVT approach, a two-step method proposed by McNeil and Frey (2000), provides more accurate and stable estimates than other methods, both from the in-sample and out-of-sample backtestings of empirical financial data and simulated data.