



THE UNIVERSITY OF CHICAGO

Department of Statistics

MASTER'S THESIS PRESENTATION

DANYE XU

Department of Statistics
The University of Chicago

Comparison of Approaches for VaR Estimation of Financial Portfolio Data

MONDAY, November 9, 2020, at 10:30 AM
ZOOM Meeting

ABSTRACT

The approach combining asymmetric conditional autoregressive range (ACARR) models to estimate the current volatility and classical extreme value theory (EVT) to estimate the tail of the innovation distribution of the ACARR model is proposed by Chou and Wang (2014). They show that this approach has better performance than the McNeil and Frey (2000) approach for Value at Risk (VaR) estimation on the financial portfolio data. The McNeil and Frey (2000) approach combines generalized autoregressive conditional heteroskedasticity (GARCH) models and modern EVT. In this study, we explore the better performance of the Chou and Wang (2014) approach is from the advantage of ACARR model compared with GARCH model on specific financial data, while the classical EVT is actually not as good as modern EVT.