



THE UNIVERSITY OF
CHICAGO

Department of Statistics

MASTER'S THESIS PRESENTATION

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An Empirical Study on Kernel Conditional Quantile Estimation
Method for Stationary Processes

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ABSTRACT

After the global financial crisis in 2008, both industry and academia realized the drawbacks of using Value-at-Risk (VaR) as a risk measure. Consequently, conditional Value-at-Risk (CVaR) as an alternative to VaR has been adopted by an increasing number of financial institutes for risk management. An accurate estimation of CVaR presents many challenges. In existing CVaR estimation literature, the most significant challenge is to come up with a well-specified parametric model on the underlying asset processes. Wu et al. (2008) presents a nonparametric method to compute CVaR by using Kernel Conditional Quantile Estimation. This method does not require an underlying parametric model and is applicable to all stationary asset processes. In this paper, we empirically study the properties of this method by applying it to various simulated and real datasets.