



The University of Chicago
Department of Statistics

Mini-seminars for First Year Ph.D. Students

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**Nonparametric Inference of Value-at-Risk
for Dependent Financial Returns**

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ABSTRACT

A brief introduction of value-at-risk(VaR), the nonparametric estimation of VaR and associated standard error estimation for dependent financial returns. Theoretical properties of kernel VaR estimator are investigated in the context of dependence. The presence of dependence affects the variance of the VaR estimates and has to be taken into consideration in order to obtain adequate assessment of their variation. An estimation procedure of the standard errors is proposed based on kernel estimation of the spectral density of a derived series.