



THE UNIVERSITY OF
CHICAGO

Department of Statistics
MASTER'S THESIS PRESENTATION

SHIWEI YE

Department of Statistics
The University of Chicago

Value-at-Risk Analysis of Portfolios

MONDAY, May 5, 2014, at 8:00 AM
117 Eckhart Hall, 5734 S. University Avenue

ABSTRACT

In recent years, risk management is no longer an instrument of risk control after event happens, but a management system to be required establishing within the enterprise. Firms benefit high reputations and good investor relations from risk controlling. To manage market risk efficiently, financial firms implement a number of highly statistical techniques. The most popular among these is Value-at-Risk analysis, known as VaR. This article is designed to give an overview of VaR and illustrate the use of two simulation scenarios (Historical & Monte-Carlo) and variance-covariance method in details. We apply these methods to actual data of portfolios, to show how they work. In addition, we compare the performance of the three Value-at-Risk models and introduce an accuracy measurement: loss function-based back tests.

For information about building access for persons with disabilities, please contact Matt Johnston at 773.702-0541 or send an email to mhj@galton.uchicago.edu. If you wish to subscribe to our email list, please visit the following web site: <https://lists.uchicago.edu/web/arc/statseminars>.