

SCENARIO-BASED RISK EVALUATION

RUODU WANG

ABSTRACT. With the aim to bridge the gap between a few practical considerations in risk evaluation, we propose a general unified risk measure framework to take into account three relevant issues: statistical and simulation tractability, model uncertainty and scenario sensitivity, and robustness. Our approach is motivated and demonstrated by the current internal model approach used for capital charges of market risk imposed by the Basel Committee on Banking Supervision. Along the way of our study, we establish new mathematical tools for new risk measures, axiomatic characterizations, non-parametric inference, and compatibility of scenarios. This talk resembles some unfinalized research projects with Damir Filipovic, Jie Shen, Yi Shen, Bin Wang and Johanna Ziegel.

UNIVERSITY OF WATERLOO, DEPARTMENT OF STATISTICS AND ACTUARIAL
SCIENCE

E-mail address: ruodu.wang@uwaterloo.ca