Editorial preface

Risk and risk management are of most important concern for financial institutions and for insurance companies. This is in particular true since the emergence of European regulations in these areas by the *Solvency* and the *Basel II*-rules. The mathematical development of risk measures and related premium principles has been quite rapid over the last 15 years even if some roots of these areas go back much further. This development has lead to a better understanding of the various concepts of risk measurement as well as to the various common and different methodological needs. In particular since the appearance of the book of Föllmer and Schied (2002) it has also become apparent to a wider group of scientists that the analysis of risk measures is connected with some important historical mathematical development in utility theory as well as with some much more recent mathematical achievements in various areas like in financial hedging theory, robust and Choquet representation theory, stochastic ordering and risk aversion, portfolio optimization, risk allocation problem, and many others.

The idea to the present special volume on risk measures was born at the EURANDOM workshop to this subject in May 2005 in Eindhoven, which dealt with several aspects of risk measurement. Several of the invited speakers to this workshop agreed to contribute to this volume. The first part of this volume gives an introduction to risk measures. It introduces various axiom systems and discusses their relationship and also explains some recent developments as e.g. to dynamic risk measures. The second part is concerned with some applications of risk measures to various optimization problems as portfolio optimization, risk sharing, and robust utility optimization.

We hope that this collection of papers might also give some impetus to the actual important area of statistical analysis of risk measures which would be a research area particularly well suited for this journal.

L. Rüschendorf