

DERIVATIVES PRICING, RISK MEASUREMENT AND PORTFOLIO SELECTION UNDER MODEL UNCERTAINTY

DAVID SAUNDERS, UNIVERSITY OF WATERLOO (CANADA)

Traditional applications of quantitative techniques to problems in finance specify a mathematical model, estimate or calibrate its parameters based on historical data or observed market prices, and then calculate model outputs such as prices, sensitivities, risk measures and optimal portfolios. In recent years, there has been a growing recognition of the importance of model uncertainty in this process. I will discuss some examples from derivatives pricing, risk measurement and portfolio selection, considering in each case the mathematical problems that arise from the recognition of model uncertainty.