Statistics in Finance

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Abstract

Probability and statistics play an important role in finance. Financial applications also motivate many new developments in statistical research. In this talk, I begin with a brief summary of statistical applications in finance. I then discuss some recent research in financial econometrics, ranging from asset pricing to risk management such as bond pricing and correlated defaults. Finally, I outline some new statistical challenges in finance, including high-frequency and high-dimensional data analysis. Real examples are used throughout to demonstrate statistical applications.