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Title: "Risk Measures and Conditional Quantiles: An operator-theoretical approach"

Abstract

Quantiles are an essential part of portfolio analysis and the building blocks of “value-at-risk” as well as other more complex risk assessment instruments.

In this talk, we explore a number of properties of conditional quantiles, which correspond to the quantiles of random variables subject to the information available. Our approach emphasizes the parallelism between conditional quantiles and conditional expected values. In particular, a number of interesting results are obtained such as a generalization of Jensen’s inequality for quantiles as well as classical convergence results.

We shall also discuss the application of the previous results to dynamic risk measures.

This is joint work with Luciano de Castro (Iowa), Antonio Galvao (Michigan State University), and Bruno Nunes (Michigan State University).