# Quantifying arbitrage

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In this talk I will present a way to quantify arbitrage, that allows to deal with model uncertainty without imposing the no-arbitrage condition. In markets that admit "small arbitrage", we can still make sense of the problems of pricing and hedging. The pricing measures here will be such that asset price processes are close to being martingales, and the hedging strategies will need to cover some additional cost. We show a quantitative version of the Fundamental Theorem of Asset Pricing and of the Super-replication theorem. We study robustness of the amount of arbitrage and existence of respective pricing measures, showing stability with respect to a new, strong adapted Wasserstein distance.

*Joint work with Julio Backhoff-Veraguas (University of Vienna) and Gudmund Pammer (ETH Zurich).*