

STATISTICS COLLOQUIUM

FRIDAY, FEBRUARY 7, 2014

TALK: 4:15 PM — SCIENCE CENTER RM. 705

RECEPTION: 3:50 PM — SCIENCE CENTER, 7TH FLOOR

“Föllmer’s Measure and Options on Exploding Exchange Rates”

Johannes Ruf
Oxford-Man Institute of Quantitative Finance
University of Oxford

ABSTRACT

Strict local martingale models have been suggested to model the underlying exchange rate in pricing Foreign Exchange options. In such models, put-call parity does not hold if one assumes minimal superreplicating costs as contingent claim prices. I will illustrate how put-call parity can be restored by changing the definition of a contingent claim price. More precisely, I will discuss a change of numeraire technique when the underlying is only a local martingale.

Then, the new (Föllmer) measure is not necessarily equivalent to the old measure. If one now defines the price of a contingent claim as the minimal superreplicating costs under both measures, then put-call parity holds. I will discuss properties of this new pricing operator.

This talk is based on joint work with Peter Carr and Travis Fisher.