

## Finance Research Seminar

Fri, Oct 9th, 3:30-5:00; WU-H46-SR1

# Horst, Ulrich (Humboldt-Universität zu Berlin) Equilibrium Pricing in Incomplete Markets under Translation Invariant Preferences

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### **Abstract:**

The problem of equilibrium pricing in dynamically incomplete financial markets is one of the oldest problems of mathematical economics. The problem of equilibrium pricing is well understood for the benchmark case of complete markets where all risk factors can be hedged using the available assets. When markets are incomplete the situation is more involved, and to date no unified approach to incomplete markets is available. In this talk we review some recent results on equilibrium pricing in incomplete markets in discrete time when the market participants evaluate their risk exposures using dynamic risk measures.

For such market situations we establish existence and uniqueness of equilibrium results and show that the problem of dynamic equilibrium pricing can be reduced to a recursive sequence of static one-period problems. When the flow of information is generated by independent random walks the equilibrium dynamics can be described by a coupled system of backward stochastic difference equations which renders our approach easily amenable to numerical simulations.

The talk is based on joint work with Patrick Cheridito, Michael Kupper and Traian Pirvu.