Optimal Market Making in the Foreign Exchange Market

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Abstract

This talk is concerned with optimal market making in the foreign exchange market. The market maker's holdings in the different currencies are modelled as stochastic processes which are influenced by both the stochastic exchange rates and the stochastic customer buy and sell orders. The market maker can control their own bid and ask price quotes and, additionally, can buy and sell at other market participants' quotes. The resulting stochastic control problem is solved by using a Markov chain approximation.