

The aim of this thesis is to introduce probabilistic stochastic interest rate models in continuous time. Presented models are Itô processes defined by parameters, which are trying to describe interest rate behavior in the real world. For selected models we will discuss the difference between the forward and futures interest rates, called convexity adjustment. At the end of the thesis the analysis of arbitrage existence between interest rates and currency exchange rates, applied to the simplest Ho-Lee model, is presented.