Abstract

The main focus of this thesis is the futures option pricing in electricity sector. We begin with description of fundamental features of futures options and describe specifics of electricity and markets where it is traded, which influenc option pricing. Further on, we will choose, according to defined criteria, three pricing methods resp. models that will be subject of our interest for the rest of the work – Black model, binomial model and Monte Carlo simulation. These models will be then briefly described and the basic idea of their approach to option pricing will be introduced. In the last, most important part, of this thesis we deal with empirical testing of all the three above mentioned pricing methods using data obtained from European Energy Exchange in Leipzig. In order to find best model for electricity futures option pricing we first calculate option premiums according to single models, these estimates are compared with the market premiums and based on the average percentage difference between these two values the most accurate model is chosen. To the author's best knowledge, the thesis presents the broadest empirical testing of futures option pricing models in electricity sector.