Abstract

The very specific features of the spot prices, especially occurrence of severe jumps, create a spot price risk for retailers who purchase electricity at unregulated highly volatile prices but resell it to consumers at fixed price. Therefore, it is of high importance to forecast whether jump is likely to occur during the next hour. However, to the best of our knowledge, such research has not been devoted to the Czech power market yet. Therefore, the aim of this thesis is to forecast the jump occurrence in the Czech day-ahead market. For this purpose we suggest four logit model specifications, each containing various independent variables (for example, electricity demand, outside temperature, lagged price and various dummy variables) where the variable selection is supported by the previous literature and by the characteristic features of the spot prices. Within the in-sample period we compare the suggested models based on the values of pseudo-R squared and Bayesian information criterion. When evaluating the out-of sample performance of suggested models we apply jump prediction accuracy and confidence, but opposed to the previous literature we suggest a kind of sensitivity analysis which, to the best of our knowledge, has not be proposed by any other power research.

Author's e-mail	Janca.Hortova@seznam.cz
Supervisor's e-mail	ladislav.kristoufek@fsv.cuni.cz