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Is the oddsmarket for soccer efficient?

Carl Ringqvist*

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Abstract

This report aims to investigate to some extent whether or not the odds-market for soccer-game outcomes is efficient. In order to try this hypothesis, we build a model for predicting the probability of each outcome alternative of a soccer game, in the sense of win, loss or draw. We base the survey on the complete history of the English Premier League, including a range of quantitative information for each game. We construct our own explanatory variables for our model over this quantitative information, a procedure requiring selection of several parameters. We will try to find the "optimal" set of parameters by optimizing a likelihood function. After choosing parameters for variable construction, we perform a statistical analysis over these, and settle with a model based on a rating for each of the opposing teams. The model performs well in predicting outcome probabilities, but fails to generate statistically significant profits, by which draw a tentative conclusion the odds-market in question is information efficient at least with respect to quantitative information. Also, some interesting findings regarding the variable construction procedure are noted.

*Postal address: Mathematical Statistics, Stockholm University, SE-106 91, Sweden.
E-mail: carl.ringqvist@gmail.com . Supervisor: Mikael Petersson.