Is the oddsmarket for soccer efficient?

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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 Pre-
mier 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 param-
eters 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 effi-
cient at least with respect to quantitative information. Also, some
interesting findings regarding the variable construction procedure are
noted.

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