

Ratings and Titles Working Group: Report to ICCF Congress 2018

Group Members

- Austin Lockwood, ICCF Services Director and Working Group Chair
- Gerhard Binder, ICCF Ratings Commissioner
- Uwe Staroske, ICCF Qualifications Commissioner
- Mariusz Wojnar, Former ICCF Qualifications Commissioner
- Eric Ruch, ICCF President, ex officio
- Michael Millstone, ICCF General Secretary, ex officio

Evaluation of the Glicko Rating System

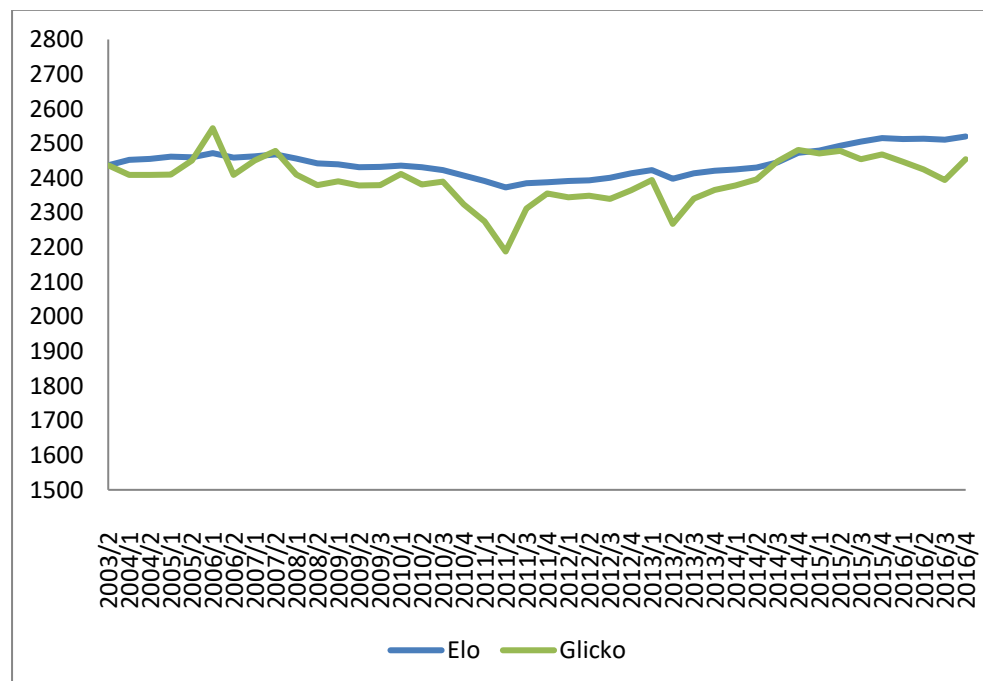
Computer software was developed to take real games from the ICCF database and calculate ratings using the formulae presented in Professor Mark Glickman's paper:

<http://glicko.net/glicko/glicko.pdf>

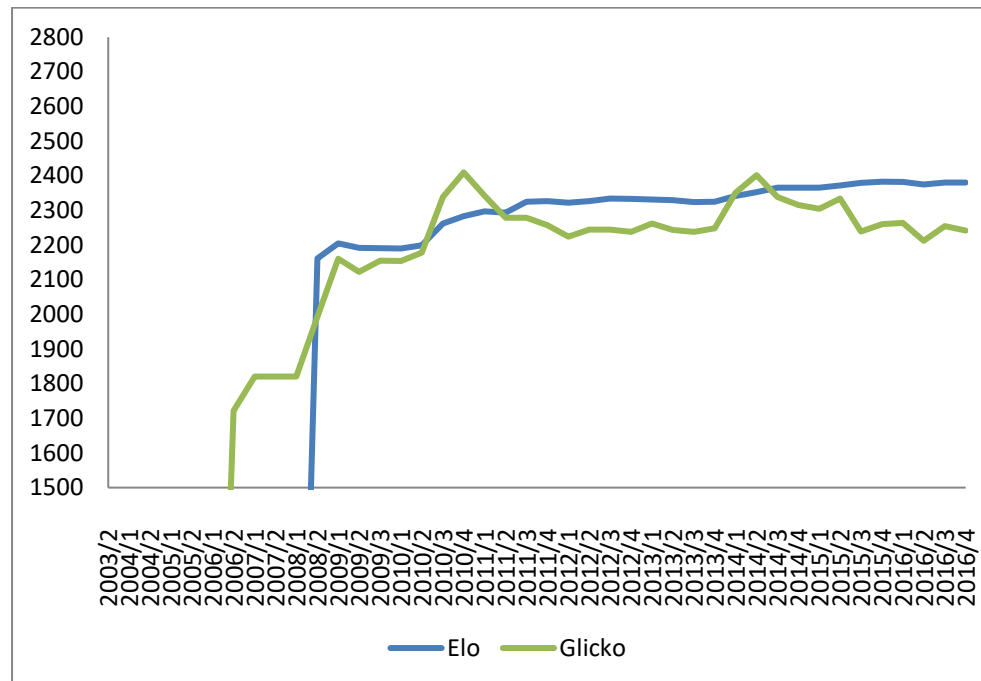
An important constant to consider when using the Glicko system is "C"; which determines the rate at which the Glicko "rating deviation" increases with player inactivity. In his example calculation, Glickman uses the assumption that five years of inactivity would pass before the rating of a typical player becomes as uncertain as that of a new player.

The following chart shows an example of the development of the Glicko rating of three members of the working group, compared with their actual Elo ratings, using the same assumptions:

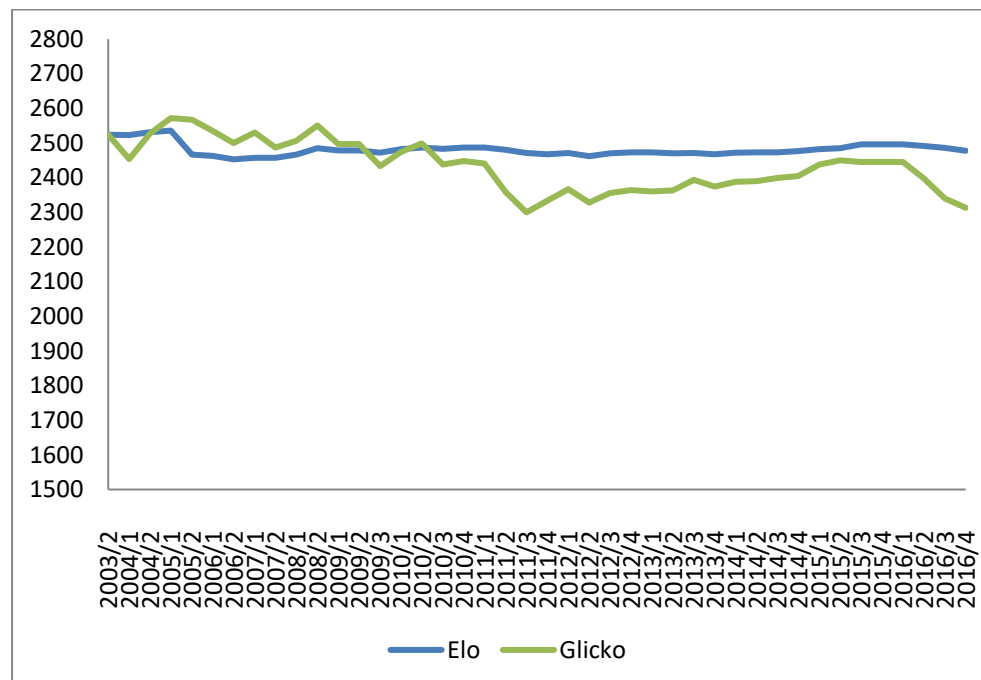
Uwe Staroske



Austin Lockwood



Eric Ruch



Although the ratings are approximately comparable, Glicko ratings appear to be much more volatile than our current Elo ratings.

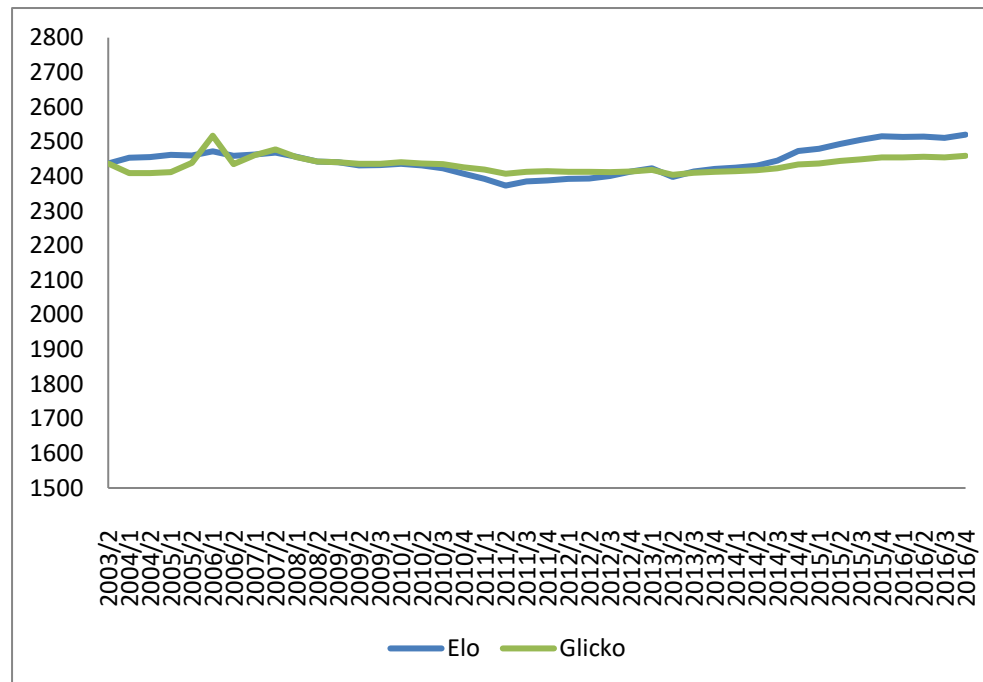
This volatility is not unexpected; Glicko ratings are designed to be more responsive when the player is relatively new and has played fewer games; this enables players to converge on their “true” rating more quickly, so one would expect to see some marked fluctuations; the ratings of more established players, however, should be more stable. Nevertheless, this level of volatility would be undesirable

for tournament organisers, and it's probable that players generally would be dissatisfied with this level of variability.

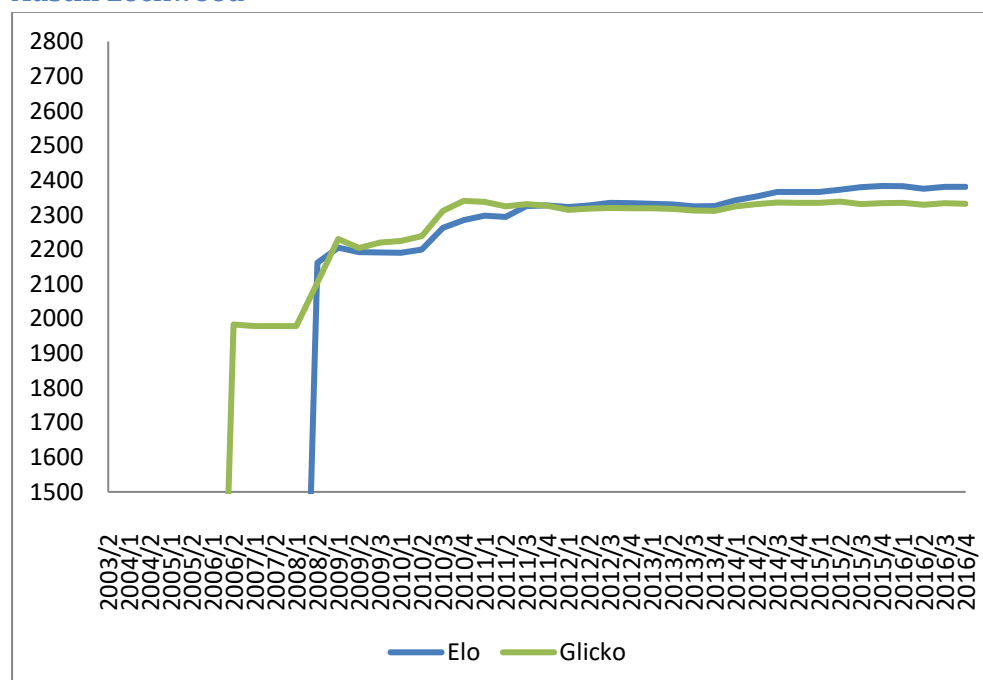
As this variability is governed by the assumptions made when estimating the value of "C", we experimented with various values of this constant, however we found that whilst we could dampen the variability to some extent, there was still volatility even with very low values of "C".

The charts below show the development of Glicko ratings for the same three players, using a very low value of "C" (5).

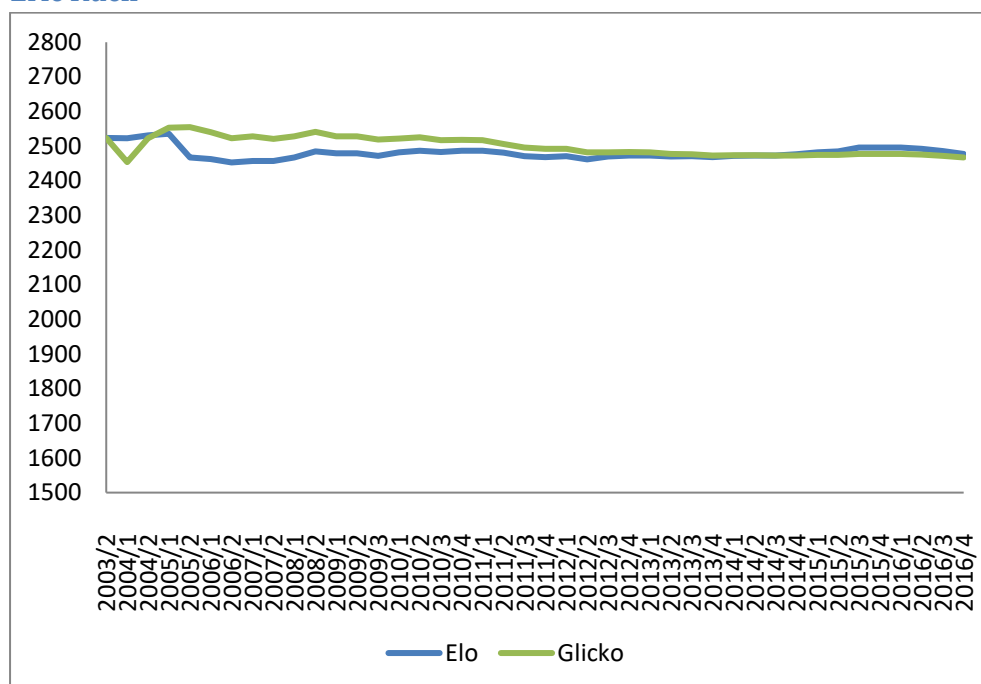
Uwe Staroske



Austin Lockwood



Eric Ruch



The second group of charts is clearly better; Glicko ratings are much more stable, and appear to be very close to Elo ratings, so it would appear that the lower the value of “C”, the more suitable the Glicko rating system is for correspondence chess.

However, this idea that players can have a differing rating deviation depending on their experience is central to the Glicko rating system; if we dampen the effects of rating deviation by lowering “C”, then we lose the advantages of the Glicko system and the ratings converge on Elo ratings. As we have established that volatility is not desirable for correspondence chess, then the benefits of the Glicko system become questionable.

The working group have therefore concluded that it would *not* be appropriate to recommend the implementation of the Glicko Rating System in ICCF at this time. We do recommend however that ICCF continue to monitor developments in this field and re-evaluate new innovations in this field as they emerge.

Expenditure

Although the 2017 Congress in Bremen approved a budget for engaging a professional statistician, all the technical work was completed by ICCF volunteers and the budget was not used.

ICCF still have a small amount of credit with our statistician, Professor Glickman, left over from previous consultation relating to the recent updates of the ratings and titles systems. This credit will be used for further consultation relating to the current Elo rating system, in particular the calculation of provisional ratings.

Austin Lockwood
ICCF Ratings and Titles Working Group Chair
August 2018