

Remark: this is the new FMJD Swiss system Annex made in 2013 based upon the French version of annex 5 and the English version of the FMJD Swiss system on rating accepted at the General Assembly 2003.

Accepted by the Technical committee 2013; to be confirmed by The General Assembly 2013

Annex 5 Swiss system

1. Introduction

The Swiss system is a tournament system to use when the number of players is so large that it is not possible to play a round robin system. The essence of the system is that in each round as much as possible players are paired who have the same or almost the same score.

A player cannot play more than one time against the same opponent.

There are many versions of the Swiss system, depending on the way in which the final result is defined for players with the same score and depending on the way in which the pairing for all rounds is defined.

Apart from the essence of the system all details may be chosen freely by a tournament organization. For official FMJD tournaments the preferred systems are FMJD Swiss system on rating and FMJD Swiss system on Solkoff, unless the FMJD Tournament Director decides otherwise.

In the tournament regulations the number of rounds and the version of the Swiss system to be used should be mentioned including any special details used.

If the number of participants is much less or much more than expected when the regulations were written the main referee, after consultation with the organization, has the right to change the number of rounds if it leads to a considerable improvement of the relation between number of players and the number of rounds

2. Aspects of versions of the Swiss system

The versions of the Swiss system may differ in a number of aspects relating to the final order of the players and the pairing:

1. The final order of the players with the same score.
2. The order of the players to be used for the pairing in the first round.
3. The order of the players to be used for the pairing in next rounds.
4. The system of pairing in a group of players with the same score.
5. The method to use for an odd number of players in a group.
6. The method by which players who cannot be paired within their own score group are paired with a next group.
7. The importance of “color preference”: players having to play with white or black.
8. The importance of “floats”: players with an opponent with a higher or a lower score.

3. Details of the aspects

1. The final order of the players with the same score.

There are several systems in use to order players with the same score:

- a. Solkoff or Buchholz: the sum of scores of all opponents
- b. Solkof median: the sum of scores of all opponents minus the highest score minus the lowest score

- c. Truncated solkoff: The sum of scores of all opponents minus the lowest score; if this is equal the sum of all opponents minus the 2 lowest scores Etc.
- d. Sonnenborn Berger: the sum of 2 times the scores of the players against who the game was won plus the sum of scores of the players against who the game was drawn.
- e. Average opponent rating: the average rating of all opponents
- f. Tournament performance rating of the player, see appendix D.
It is even possible to let the tournament performance rating be the first decisive factor for the final result and not the total score !!
- g. Own rating of the player
- h. Number from drawing of lots

In some systems some of these methods are combined, as examples:

- Solkoff median and if equal solkoff truncated
- Solkoff and if equal Sonnenborn Berger.

2. The order of the players to be used for the pairing in the first round.

To be able to pair the players in the first round the following methods are used to make an order:

- a. Drawing of lots
- b. Own rating

3. The order of the players to be used for the pairing in next rounds.

To be able to make a pairing between players with the same score in the next rounds the following methods are used:

- a. Solkoff followed by Sonnenborn-Berger
- b. Own rating
- c. Numbers from drawing of lots
- d. Average opponents rating

4. The system of pairing in a group of players with the same score.

In a group of players with the same score and an even number of players the following pairing methods are used:

- a. Pairing two half groups: the players of the first half of the group are paired against the players of the second half of the group. As an example: if there are 6 players, ordered as 1,2,3,4,5,6 the pairing is: 1-4, 2-5 and 3-6.
- b. Pairing highest player against lowest. As an example with 6 players: 1-6, 2-5, 3-4
- c. Pairing by drawing of lots

To be able to minimize the differences in average rating within a score group the FIDE has defined the Dubov Swiss pairing method which is a combination of 3b and 3c with 2b: The player with the highest average opponents rating plays against the player with the lowest own rating.

5. The method to use for an odd number of players in a group.

To reach a group with an even number of players one player is moved to the next group. This may be

- a. the first player of the group.
- b. the last player of the group.
- c. a player chosen at random from the group.

There may be conditions such as: if there is no good pairing possible in the remaining group then another player may be moved to the next group. It is important that within one score-group the maximum possible number of pairings is made.

6. The method by which players are paired who cannot be paired within their own score group.

- a. A player from a higher group plays against the first player of the next group
- b. A player from a higher group plays against the lowest player of the next group

If the pairing in the higher group was not complete and if more players are moved down to the next group this same principle is used for the players moved down, starting at the highest to move down.

As an example: suppose 3 players A,B and C are moved down from the higher group with the order A,B,C in that higher group and suppose the players in the lower group are ordered 1,2,3,4,5,6 then:

- With method a we will have the pairing A-1, B-2, C-3
- With method b we will have the pairing A-6, B-5, C-4

7. The importance of “color preference”: players having to play with white or black.

It is permitted to let the colour preference of players influence the pairing, instead of just the colour allocation after the pairing has been made, provided that the maximum number of games to be paired within a score group is not influenced. The following methods are used:

- a. No color preference: the pairing is made following the pairing rules and when the pairing is made the color is attributed to the players in such a way that as much as possible an even division of colors is reached.
- b. Weak color preference: if a player has played 2 times more with one color and he should play again with this color then the pairing in a group may be changed to give the player the other color.
- c. Strong color preference: after each round (especially after each odd round) the players in a score group are separated in two subgroups: players who should play with white and players who should play with black and the first pairing criterion will be that the players from one subgroup play against the players of the other subgroup.

8. The importance of “floats”: players with an opponent with a higher or a lower score.

Now and then it is necessary that a player is paired against a player with a higher score (a so called “up-float”) or a lower score (a so called “down-float”). The pairing in a score group may be changed if the pairing would lead to a situation where the player, who played against an opponent with a higher score in the previous round, has to play anew to a player with a higher score (or a player who played to an opponent with a lower score in the previous round has to play anew against a player with a lower score).

4. Some general details

1. The method to use if the total number of players is odd.

In case the total number of players in the tournament is odd an extra dummy player is added to the tournament.

The last player of the lowest Group is paired with this dummy player and gets a “bye” (pause) and receives two points. A player cannot get more than one “bye” in a tournament.

To avoid a bad pairing in the second round the player who has a bye in the first round is paired in the second round as if he had zero points.

If the rating plays a role in the tournament the dummy has the lowest rating in the tournament minus 1.

2. How to deal with a player leaving the tournament after having played a number of rounds.

A player who leaves the tournament after having played a number of rounds keeps his position in the classification. The player is not paired anymore in the remaining rounds of the tournament. When the number of players was even a dummy player is added to the tournament and treated as described in point 9. If there was already a dummy player in the tournament this dummy player is not paired anymore in the remaining rounds.

3. How to pair if one or more games are not (yet) played.

When one or more games are not yet played and it is necessary to make the pairing for the next round the game(s) not played are considered to be a draw, only for pairing purposes.

4. The number of rounds in relation to the number of players.

There are many theories about what the number of rounds should be.

It depends on the total number of players.

It may depend on the number of players who get rights from the tournaments.

All what is said in this regulation is that the number of rounds should not be too large in relation with the number of players. If the number of rounds comes too close to 50 % of the number of players then there may appear problems in the pairings for the last rounds.

5. Some well known standard systems.

1. FMJD Swiss on rating

- The final order between players with the same score is decided by 1e : the average rating of the opponents.
- The order in the pairing group for the first round is 2b: own rating.
- The order in the pairing group for the next rounds is 3b: own rating.
- The pairing system is 4a: pairing in two half groups.
- In case of a group with an odd number of players 5b is used: the player with the lowest own rating is moved to the next group
- This moved player plays according to 6a: to the highest rating in the next group
- The FMJD Swiss on rating is preferably played with making use of “floats”, see point 8.
- The FMJD Swiss on rating is preferably played without color preference (see point 7). If the referee or the organization decides that it is necessary to play with color preference it should be written in the tournament regulations.

2. FMJD Swiss on Solkoff

- The final order between players with the same score is decided by 1b followed by 1c: Solkoff median followed by truncated solkoff.
- The order in the pairing group for the first round is 2a: number from drawing of lots.
- The order in the pairing group for the next rounds is 3a: Solkoff plus SB.
- The pairing system is 4a: pairing in two half groups.
- In case of a group with an odd number of players 5b is used: the lowest player (lowest Solkoff and SB) is moved to the next group
- This moved player plays according to 6a: to the highest player in the next group (highest Solkoff and SB)
- If the pairing is made with a computer program which does not support this option it is also allowed to let the first player of the higher group play against the last player of the lower group, as in the KNDB Swiss system on Solkoff.

3. KNDB Swiss on Solkoff

- The final order between players with the same score is decided by 1a followed by 1d: Solkoff followed by Sonnenborn-Berger.
- The order in the pairing group for the first round is 2a: number from drawing of lots.
- The pairing in the first round is 1-2, 3-4, etc. (not important)
- The order in the pairing group for the next rounds is 3a: Solkoff followed by Sonnenborn-Berger.
- The pairing system is 4b: highest against the lowest.
- In case of a group with an odd number of players 5a is used: the highest player (highest Solkoff and Sonnenborn-Berger) is moved to the next group
- This moved player plays according to 6b: to the lowest player in the next group (lowest Solkoff and Sonnenborn-Berger)

6. Acceleration methods

There are several acceleration methods in which in the first rounds the rating differences in the games for the first round(s) will not be too large.

1. Method with 4 groups

For the first round the players are divided in 4 groups in the order of the players ratings. Then the players of the first group play against the players of the second group and the players of the third group play against the players in the fourth group, in the order of their ratings.

For the next rounds, as long as the first group is larger than the number of rounds to be played, the same method is used with the division of the players with equal score in 4 groups and pairing the first group against the second and the third group against the fourth group.

Of course, when playing a Swiss system tournament with many players and large differences in rating, it is also possible to create more groups and let players from group 1 play against group 2, group 3 against group 4, group 5 against group 6 etc.

2. Haley system

For the first round the players are divided in four groups and paired as in method 1.

In the second round the players of the first two groups get two extra points, only for pairing purposes, and then the players with 4 points are paired with each other, then the players with 3 points, then the players with 2 points etc.

Players who are paired with 3 or 4 points are players from the first two groups and players with 1 or 0 points are players from the third and fourth group whereas only in the group of 2 points there are players from all groups: players from the first two groups who have lost their first game or players from the last 2 groups who have won their first game.

Appendix A. Detail description of FMJD Swiss system on rating

a. Start of the tournament: find all ratings

Before the start of the tournament the ratings of all players are collected. Depending on the kind of tournament these may be FMJD ratings or national ratings.

For players who do not have a rating a rating estimate has to be made by the referee and/or the organization. If possible the FMJD formulae should be used to calculate FMJD ratings from national ratings. For a number of countries FMJD has published calculations on its website to calculate from national rating to FMJD rating or vice versa.

Only if it is not possible to find an estimate based on any rating of the player the referee should make an estimate as good as possible.

It is possible to ask the player himself if he can give an estimate or to ask other players if they can estimate how strong the player is.

b. Pairing for the first round

For the pairing of the first round all players are ordered on their own rating.

The group of players is divided in two halves: the group A of players with the highest rating and the group B of players with the lowest rating. Both groups ordered on the own rating of the players.

Then the pairing for the first round is made in which the strongest player of group A plays against the strongest player of group B, the second strongest player of group A against the second strongest of group B Etc.

To avoid difficulties in color for next rounds player A1 plays with white against player B1, player A2 player with black against player B2, player A3 plays with white etc.

Schematically:

A1 – B1

B2 – A2

A3 – B3

B4 – A4

Etc.

c. Forming score groups for a next round

After each round the players are grouped into score groups of players with the same score.

As much as possible players in the same score group will be paired against each other.

The players in each score group are ordered on their own rating.

d. Pairing in a score group

If there is an odd number of players in a score group the player with the lowest own rating is paired with the next lower score group and plays against the player with the highest own rating in that group.

However if the tournament is played with using “floats” this pairing may be changed: if the player in the higher score group already had a “down float” in the previous round then the next higher player in the score group is selected to play against a player of a next score group. This holds also for the player from the lower score group: if he already has had an “up-float” in the previous round the next lower player from the lower score group is selected to play against the player of the higher score group.

For the pairing in the group all remaining players with the same score are ordered on their own rating.

The group of players is divided into two halves: the group A of players with the highest rating and the group B of players with the lowest rating. Both groups are ordered on the own rating of the players.

Then the pairing for the round is made in which the strongest player of group A plays against the strongest player of group B, the second strongest player of group A against the second strongest of group B Etc, just like the pairing for the first round. After the pairing is made the colors are given to the players in such a way that an even distribution of colors to all players is reached as much as possible.

When the tournament is played with weak color preference then the pairing may be adjusted when it leads to a pairing where it is impossible to give a correct color to both players. For instance if both players played two times more with white it is not possible to give them both a correct color. In principle the pairing is made until a problem of colors is reached. Then the player of the higher group is paired against a next player from the lower group against who it is possible to attribute colors to both players.

If necessary the whole pairing may be changed to get good color attributions.

However, when it is not possible to give all games in a score group a good color attribution then it is not allowed to move 2 or more players to another score group.

When the tournament is played with strong color preference then in odd rounds the color preference is the first criterion in the pairing process: the group of players with the same score is divided in a group W of players who should play with white and a group B of players who should play with black.

In principle the players of group W play with white against the players of group B.

As much as possible the pairing principle of the Swiss system on rating should be obeyed: the group of players with the highest rating play against the group of players with the lowest rating.

It is not easy or even impossible to give all rules in detail how to act if there are problems with color preference and/or with floats.

Most times computer programs are used to make the pairings of a Swiss system tournament and different programs use slightly different approaches to solve these issues.

e. The final result

The final classification is in the order of the highest score of the players and for players with the same score the classification is in order of the highest average rating of the opponents.

Appendix B: Detail description of FMJD Swiss system on Solkoff**a. Start of the tournament: drawing of lots**

Before the start of the tournament the organization or the referee draws lot numbers for all players, or let the players draw a lot number.

b. Pairing for the first round

For the pairing of the first round the players are ordered on their lot number.

The group of players is divided in two halves: the group A of players with the lowest numbers and the group B of players with the highest numbers. Both groups ordered on lot number.

Then the pairing for the first round is made in which the first player of group A plays against the first player of group B, the second player of group A against the second player of group B. As there is no relation between the strength of the players and the lot numbers all players from group A may play with white.

Schematically:

A1 – B1

A2 – B2

A3 – B3

Etc.

c. Forming score groups for a next round

After each round the players are grouped into score groups of players with the same score.

As much as possible players in the same score group will be paired against each other.

The players in each score group are ordered on their Solkoff and SB.

d. Pairing in a score group

If there is an odd number of players in a score group the player with the lowest Solkoff and SB is paired with the next lower score group and plays against the player with the highest Solkoff and SB in that group.

However if the tournament is played with using “floats” this pairing may be changed: if the player in the higher score group already had a “down float” in the previous round then the next higher player in the score group is selected to play against a player of a next score group. This holds also for the player from the lower score group: if he already has had an “up-float” in the previous round the next lower player from the lower score group is selected to play against the player of the higher score group.

For the pairing in the group all remaining players with the same score are ordered on their Solkoff and SB.

The group of players is divided into two halves: the group A of players with the highest Solkoff and SB and the group B of players with the lowest Solkoff and SB. Both groups are ordered on the Solkoff and SB of the players.

Then the pairing for the round is made in which the highest player of group A plays against the highest player of group B, the second highest player of group A against the second highest of group B Etc, just like the pairing for the first round. After the pairing is made the colors are given to the players in such a way that an even distribution of colors to all players is reached as much as possible.

When the tournament is played with weak color preference then the pairing may be adjusted in case it led to a pairing where it is impossible to give a correct color to both players. For instance if both players played two times more with white it is not possible to give them both a correct color. In principle the pairing is made until a problem of colors is reached. Then the player of the higher group is paired against a next player from the lower group against who it is possible to correctly attribute colors to both players.

If necessary the whole pairing may be changed to get good color attributions.

However, when it is not possible to give all games in a score group a good color attribution then it is not allowed to move 2 or more players to another score group.

When the tournament is played with strong color preference then in odd rounds the color preference is the first criterion in the pairing process: the group of players with the same score is divided in a group W of players who should play with white and a group B of players who should play with black.

In principle the players of group W play with white against the players of group B.

As much as possible the pairing principle of the Swiss system on Solkoff should be obeyed: the group of players with the highest Solkoff and SB play against the group of players with the lowest Solkoff and SB.

It is not easy or even impossible to give all rules in detail how to act if there are problems with color preference and/or with floats.

Most times computer programs are used to make the pairings of a Swiss system tournament and different programs use slightly different approaches to solve these issues.

e. The final result

The final classification is in the order of the highest score of the players and for players with the same score the classification is in order of the highest Solkoff median and Solkoff truncated. See article 3.1.b and 3.1.c.

Appendix C: Some computer programs for the Swiss system

In the draughts world there are two computer programs much used for the Swiss system tournaments: Tournament Manager made by Jan Masselink from the Netherlands and Chess Arbiter for draughts, made by Adam Curylo from Poland (see www.chessarbiter.com)

Apart from setting parameters for many versions of the Swiss system, presenting the result of a Swiss system tournament and making the pairings automatically these programs have also the following options:

- Easy entering of players with automatically adding FMJD-ID, rating, title, country etc using an International FMJD file or a national file with all players ratings and other data.
- Easily producing a tournament result file to be sent to FMJD for calculation of ratings and title norms.
- Publishing the tournament pairings and results on any website (Chess arbiter)

Parameter settings for the various versions of the Swiss system:

A. Chess arbiter for Draughts

FMJD Swiss system on Solkoff.

For the tie break rules use the following settings:

- Main standings criteria: 1. Total score
- 2. Median Solkoff
- 3. Reduced Solkoff(-1,-2,...)

The settings for pairing are a bit complicated because the pairing order can be only on Buchholz (=Solkoff) but the second sort criterion cannot be SB.

Before making the pairing adjust the tournament setting for tie break to first parameter Buchholz and second parameter SB; this will lead to a final standings order based on score, Buchholz, SB

Then use the following options in “additional pairing options”:

- Main score: Total score
- 2. Place in final standings

Then change back the tournament tie break parameters.

FMJD Swiss on rating

For the tie break rules use the following settings:

- Main standings criteria: 1. Total score
- 2. Average rating of opponents

The settings for pairings are:

- Main score: Total score
- 2. Players number (!)

This means that you have to make sure the order of players numbers is the same as the rating order ! This can be reached by the following settings for sort criteria:

- Sort criteria: Swiss system random
- Sort according to 1. FMJD rating

KNDB Swiss system on Solkoff:

For the tie break rules use the following settings:

- Main standings criteria: 1. Total score
- 2. Buchholz
- 3. Sonnenborn-Berger

The settings for pairings are the same as for FMJD Swiss on Solkoff:

Before making the pairing adjust the tournament setting for tie break to first parameter Buchholz and second parameter SB; this will lead to a final standings order based on score, Buchholz, SB

Then use the following options in “additional pairing options”:

- Main score: Total score
- 2. Place in final standings

B. Tournament Manager

FMJD Swiss system on Solkoff

This system is not fully supported as tournament manager will not use the FMJD pairing method but use the KNDB pairing method within a group.

Settings:

- Ranking system: Swiss Solkoff
- Sort order (for classification) : 65 meaning Solkoff, Solkoff truncated

The order for pairing is automatically set to Solkoff and SB and the pairing method is like that used in the KNDB Swiss system on solkoff

FMJD Swiss system on rating

- Ranking system: Swiss rating
- Sort order 2: opponents rating

KNDB Swiss system on Solkoff:

- Ranking system: Swiss Solkoff
- Sort order: 47 meaning Solkoff,SB

Appendix D Tournament performance rating

Introduction

The tournament performance rating may be used as tie-break criterion between players with the same score, or even as first criterion more important than the final score, to decide about the final result.

The easy way to calculate the tournament performance rating is by using the average rating of the opponents, but given the theory of probability behind the ELO rating system it is mathematically not fully correct way to do this.

The performance belonging to an average rating may be something a bit different from the average performance, especially when there is a large variation in the ratings of the opponents.

The tournament performance rating should be calculated on a game by game basis.

Definition

The tournament performance rating is that rating for which the expected result of the player, calculated opponent by opponent, equals the realized result of the player.