## The Efficacy of League Formats in Ranking Teams

Appendix: League Formats in UEFA

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The table below presents formats that are in operation in the UEFA countries in the 2017/2018 (or 2018) season. For brevity,  $kRR_n$  denotes a k round-robin tournament with n teams involved. The "+" symbol denotes that a given entity employs a two-stage format and "/" denotes round-robin tournaments played simultaneously. If after the first stage the ranking table is not split equally, superscripts i, j in  $kRR_n^{i-j}$  denotes that teams ranked from i to j compete in separate k round-robin tournaments with n = j - i + 1 teams. Note that if this is the case, the number of rounds played by the teams may differ. Finally, prefix " $\frac{1}{2}$ " denotes that the points after the first stage are divided by two and rounded when necessary.

For example, the Cypriot league format is denoted with  $2RR_{14} + (2RR_6^{1-6}/2RR_6^{7-12})$ . It means that in the first stage there are 14 teams competing in a double round-robin tournament. Next, the league table is split into two parts: the first consist of the teams ranked from 1 to 6 and the second one from 7 to 12 (the last two teams are directly relegated). In both subgroups, another 2RR tournament is played (with six teams each). Hence, there are 36 rounds and  $2 \cdot {14 \choose 2} + 2 \cdot 2 \cdot {6 \choose 2} = 242$  matches are played in total.

There are two countries missing in the comparison. In Liechtenstein, no domestic championship is played (some teams compete in Switzerland), only domestic cup is played. In San Marino, there are 15 teams and league starts with two groups (7 and 8 teams each) in which 3RR is played. Following that, a double elimination tournament is played to determine the champion.

Perhaps the most complicated league format is employed in Belgium. After the first stage the teams ranked 1–6 compete in the championship group. The teams ranked 7–15 are coupled with teams from the second division to compete for one extra spot in international cups. The lowest ranked team is directly relegated. In Bulgaria and Denmark, with some modifications, the league table is also split into three groups after the first stage of the competition.

In certain countries (including Belgium, Bulgaria, Denmark, Iceland and the Netherlands) after a regular season, an extra round of play (typically a single elimination tournament) is employed in order to determine the league champion or the teams participating in the international cups competition in the season to follow.

Country	Format	Teams	Rounds	Matches
Albania	$4RR_{10}$	10	36	180
Andorra	$3RR_8 + (2RR_4/2RR_4)$	8	27	108
Armenia	$6RR_6$	6	30	90
Austria	$4RR_{10}$	10	36	180
Azerbaijan	$4RR_8$	8	28	112
Belarus	$2RR_{16}$	16	30	240
Belgium	$\frac{1}{2} \cdot 2RR_{16} +$	16	40	330
	$(2RR_6^{1-6}/2RR_6^{7-15}/2RR_6^{7-15})$			
Bosnia and	$2RR_{12} + (2RR_6/2RR_6)$	12	32	192
Herzegovina	, , ,			
Bulgaria	$2RR_{14} +$	14	36 / 32 / 32	236
	$(2RR_6^{1-6}/2RR_4^{7-14}/2RR_4^{7-14})$			
Croatia	$4RR_{10}$	10	36	180
Cyprus	$2RR_{14} + (2RR_6^{1-6}/2RR_6^{7-12})$	14	36	242
Czech Republic	$2RR_{16}$	16	30	240
Denmark	$2RR_{14} +$	14	36 / 32 / 32	236
	$(2RR_6^{1-6}/2RR_4^{7-14}/2RR_4^{7-14})$		, ,	
England	$2RR_{20}$	20	38	380

Country	Format	Teams	Rounds	Matches
Estonia	$4RR_{10}$	10	36	180
Faroe Islands	$3RR_{10}$	10	27	135
Finland	$3RR_{12}$	12	33	198
France	$2RR_{20}$	20	38	380
Macedonia	$4RR_{10}$	10	36	180
Georgia	$4RR_{10}$	10	36	180
Germany	$2RR_{18}$	18	34	306
Greece	$2RR_{16}$	16	30	240
Hungary	$3RR_{12}$	12	33	198
Iceland	$2RR_{12}$	12	22	132
Israel	$2RR_{14} + (2RR_6^{1-6}/2RR_8^{7-14})$	14	36 / 40	268
Italy	$2R ilde{R}_{20}$	20	38	380
Kazakhstan	$2RR_{12} + (2RR_6/2RR_6)$	12	32	192
Latvia	$4RR_8$	8	28	112
Lithuania	$4RR_8$	8	28	112
Luxembourg	$2RR_{14}$	14	26	182
Malta	$2RR_{14}$	14	26	182
Moldova	$4RR_{10}$	10	36	180
Montenegro	$4RR_{10}$	10	36	180
The Netherlands	$2RR_{18}$	18	34	306
Northern Ireland	$3RR_{12} + (2RR_6/2RR_6)$	12	38	228
Norway	$2RR_{16}$	16	30	240
Poland	$2RR_{16} + (RR_8/RR_8)$	16	37	296
Portugal	$2RR_{18}$	18	34	306
Republic of Ireland	$4RR_{10}$	10	36	180
Romania	$\frac{1}{2} \cdot 2RR_{14} + (2RR_8^{1-6}/2RR_6^{7-14})$	14	36 / 40	212 / 238
Russia	$2RR_{16}$	16	30	240
Scotland	$3RR_{12} + (RR_6/RR_6)$	12	38	228
Serbia	$\frac{1}{2} \cdot 2RR_{16} + (RR_8/RR_8)$	16	37	296
Slovakia	$2RR_{12} + (2RR_6/2RR_6)$	12	32	192
Slovenia	$4RR_{10}$	10	36	180
Spain	$2RR_{20}$	20	38	380
Sweden	$2RR_{16}$	16	30	240
Switzerland	$4RR_{10}$	10	36	180
Turkey	$2RR_{18}$	18	34	306
Ukraine	$2RR_{12} + (2RR_6/2RR_6)$	12	32	192
Wales	$2RR_{12} + (2RR_6/2RR_6)$	12	32	192