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It is Harder, not Easier, to Predict the Winner of the Champions League

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It is Harder, not Easier, to Predict the Winner of the Champions League

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Abstract

European Cup football has experienced a major change in format with the introduction of the Champions League in 1992 and a major change in admission rules with direct qualification for multiple teams from the highest ranked leagues in 1999. We show that, in line with popular press reports and other studies, qualification in lower rounds has become more predictable in the Champions League. At the same time, however, outcomes at later stages have become less predictable. We provide evidence and an explanation.

JEL Classification: L83

Keywords: Champions League, European Cup, Sports Tournaments, Uncertainty of Outcome

1. Introduction

The major European competition among football (soccer) teams, the Champions League, is the most prestigious football club competition in the world. The Champions League is organized as a successor of the European Champion Clubs' Cup – often simply referred to as the “European Cup” – in which national league winners competed in a knockout tournament from its inception in 1955.

Both the popular press and academic studies argue that the change from the European Cup (EC) to the Champions League (CL) has made the CL less exciting and its outcomes more predictable (see e.g. Haan et al., 2002, 2012; Milanovic, 2005; Cross, 2009; Fisher, 2012; Gall, 2012). For example, Milanovic (2005) finds that in the CL the same teams are more likely to qualify for the quarterfinals.

However, the argument that the CL's outcomes are more predictable seems inconsistent with ad hoc observations on the history of EC and CL winners (see Table 1). Several teams were able to win the EC several times in a row. In fact, in 13 out of 37 seasons, the winner of the EC was the winner of the previous season. In contrast, not a single team has been able to win the CL twice in a row.¹ To put it differently, if one would bet on the winner of the championship and put his money on the winner of the previous championship, the chances were 35% that one would win in the EC and 0% in the CL. This observation seems inconsistent with the argument that the CL rules have made the major European competition less exciting and more predictable.

In this paper we first confirm – consistent with Milanovic's (2005) findings – that it is indeed easier to predict who will qualify for lower knockout rounds, such as the round of 16 and the quarterfinals, under the current CL rules. However we also show that the uncertainty of who

¹ Admittedly, whereas 37 EC editions were organized, only 20 CL editions have been organized up to now. We return to this issue when discussing our results.

wins in the competition increases beyond these stages with the CL. So it is harder, not easier, to predict the winner.

We provide an explanation for both empirical findings. Our argument is that the group-round and the new qualification rules of the CL, allowing multiple teams from the highest ranked leagues to directly participate, make it more likely that these teams qualify for the round of 16 – and less likely that teams from lower ranked leagues progress. This is consistent with the earlier argument of less excitement and more predictability. However, we argue further that the same rules also cause smaller quality differences between teams in later rounds of the tournament, making the outcomes of the final rounds less certain and less predictable.

The paper is organized as follows. Section 2 discusses the main differences between the CL and the EC. Section 3 provides the theoretical predictions. Section 4 comments the data, discusses the empirical indicator we use and presents the results. Section 5 concludes.

2. Main Differences between the Champions League and the European Cup

The CL and the EC differ in two aspects: the tournament format and the admission rules (as summarized in Table 2). The EC was established by the UEFA (Union of European Football Associations) in 1955 as a pure knockout tournament between the champions of European national leagues (Granville, 1991).² However, due to complaints from the teams from higher ranked leagues that the knockout format of the EC favored the teams from lower ranked leagues while the value of this competition was dependent on the teams from higher ranked leagues, which attract larger (television) audiences, UEFA introduced a mini-league system into the

² Except for the first edition, where the organizers decided on the playing schedule, the schedule was determined by random draw (UEFA, 2004).

format of the EC in the 1991/92 season (see e.g. King, 2004; Holt, 2007). At the start of the 1992/93 season, UEFA ratified this change of format and renamed the tournament the CL.

The CL initially implied a change from an (unseeded) knockout tournament to a hybrid tournament combining a (seeded) round robin tournament in which groups of four teams compete to determine qualifiers and a (seeded) knockout tournament between the qualified teams (Scarf et al., 2009).³

Later, UEFA also changed the admission rules. As in the EC, the first editions of the CL included only national league champions (and the titleholder). From 1999 onwards multiple teams from the highest ranked leagues were admitted. Since the 1999/2000 season, the runners-up from the six highest ranked leagues, assigned according to the official UEFA coefficients, also directly qualify for the group-round.⁴ Since the 2009/10 season also the third-placed teams of the three highest ranked countries qualify directly.

3. Theoretical Predictions

The operational research literature uses simulation methods to compare match or tournament outcome uncertainty under different tournament formats (see e.g. Appleton, 1995; McGarry and Schutz, 1997; Scarf et al., 2009; Scarf and Yusof, 2011; Koning and McHale, 2012). For this purpose prediction models are used to simulate the expected outcomes of games between two teams. This can then be extended to a complete tournament to obtain estimates for different indicators such as a team's probability to qualify for certain tournament rounds, the probability

³ If tournaments are seeded, highly ranked teams play lowly ranked teams in earlier rounds, which maximizes the probability that the highly ranked teams qualify for later rounds (see e.g. Noll, 2003; Monks and Husch, 2009).

⁴ The UEFA coefficients are calculated based on the performance of teams from each country in the main European club competitions, the CL and the Europa League. In general, each participating team gets two points for a win, one point for a draw and some bonus points for qualifying for later tournament rounds. The UEFA coefficient assigned to a country is the sum of points obtained by all the participating teams from that country divided by the number of those teams.

that the team with the highest ranking before the tournament wins the tournament, the correlation between a team's pre- and post-tournament ranking, etc.

The tournament format influences these tournament outcomes. Scarf et al. (2009) simulate CL outcomes for 11 different possible tournament formats. The simulated formats include the "unseeded 2 leg knockout" structure (which was the format of the EC) and the "seeded 1 group-round and 2 leg seeded knockout in later rounds" structure (the current format of the CL). The simulation estimates show that the average ranking of the teams that qualify for the different knockout rounds in later rounds is higher for the current CL format than for the EC format. This suggests that on average the highly ranked teams who participate in the tournament are more likely to qualify for the round of 16 in the CL than in the EC, and vice versa for lowly ranked teams.

These simulation results do not take into account the effect of UEFA's decision to allow multiple teams from the highest ranked leagues to qualify directly for the CL (compared to only one team per league for the EC). Because of this decision it is more likely that a specific highly ranked team from one of the highest ranked leagues qualifies year after year since they qualify even if they do not win the title in their national league but end second (or third). Additionally, it is more difficult for a team from a lower ranked league to qualify since only the champions qualify for their national leagues (as in the EC) and since fewer spots remain to directly qualify for the group-round.

These two effects from UEFA's decision to allow multiple teams from the highest ranked leagues to qualify directly for the CL suggests that a specific highly ranked team from one of the highest ranked leagues is more likely to qualify for the round of 16 in the CL than in the EC, and vice versa for a team from a lower ranked league.

However, another effect of UEFA's decision to allow multiple teams from the highest ranked leagues to qualify directly for the CL (compared to only one team per league for the EC) and of the knockout format versus the hybrid format is that the average ranking of the qualified teams is higher, and that the quality difference between the teams is smaller at later stages in the tournament. This implies that while it is less likely that a team from a lower ranked league progresses to the round of 16, it is also more difficult for a specific highly ranked team from one of the highest ranked leagues to progress at later stages in the tournament.

In sum, the introduction of the group-round and the rule change towards direct qualification for multiple teams from the highest ranked leagues has made it more likely for a specific highly ranked team from one of the highest ranked leagues to qualify for the round of 16 in the CL than in the EC and – at the same time – less likely to qualify for later stages in the CL than in the EC. Hence, we predict that on average it is easier to predict who will qualify for the lower rounds in the CL than in the EC and harder to predict who will qualify for later stages in the CL than in the EC.

4. Empirical Evidence

Table 3 and Table 4 present summary statistics on the number of teams that reached various stages in the EC and the CL. More detailed data on all teams and their performance in the EC and the CL can be found in Appendix.

192 teams reached the round of 16 in the EC at least once over the 1955-1991 period. For the CL this was 84 teams over the 1992-2011 period. What matters, of course, is the average number. Comparing the number of teams that reached the round of 16 and the quarterfinals over five-year periods in the EC with the CL, we observe that these numbers are substantially lower in

the CL than in the EC. Over five-year periods the number of round of 16 participants was almost always at least 50 in the EC. Except for the first CL editions, this number decreased to less than 40 in the CL. Similarly, while over five-year periods on average 29 teams have reached the quarterfinals in the EC, except for the first CL editions not more than 22 teams have been able to reach this round in the CL.

The difference in the number of qualified teams between the CL and the EC is smaller and even reversed at later stages in the tournament. On average 15 teams have reached the semifinals in a five-year period in the EC, compared to 12 in the CL. Over five-year periods, on average seven teams have reached the finals in the EC and six teams in the CL. Finally, on average more different teams (4) won the CL than the EC (3).

To provide better evidence for our theoretical predictions, we calculate an indicator which is commonly used in the literature, i.e. “uncertainty of outcome”. The literature identifies three different levels of uncertainty of outcome (UO): for a match, a season and a championship (see e.g. Szymanski, 2003; Buzzacchi et al., 2003; Goossens, 2006). Most studies have focused on uncertainty of outcome for a particular match or season.

The focus of our study is on UO in the CL and the EC, which is a “dynamic” measure, i.e. it measures particular teams’ dominance of a championship and the predictability of the winners *across* seasons. Following Hadley et al. (2005) and Pawlowski et al. (2010), we use a Markov model to compare UO between two periods.⁵ In a Markov process the outcome at time $t + 1$ is determined by the state at time t (Krautmann and Hadley, 2006). The probability that a particular entity i will transition from one state at time t , $S_{i,t}$, to another state at time $t + 1$,

⁵ Hadley et al. (2005) use the Markov model to compare a team’s probability of qualifying for postseason play in Major League Baseball (MLB), the highest level of professional American baseball in the United States, before and after the players’ strike in 1994. Pawlowski et al. (2010) use the Markov model to compare a top team’s probability of qualifying for the CL group-round before and after the change of the distribution system of CL revenues in 1999.

$S_{i,t+1}$, is called the “transitional probability”. In our case the entity is a football team and the two states refer to qualification for a particular tournament round: either team i qualified or team i did not qualify. For each knockout round, we assign a dummy variable equal to 1 if team i qualified and equal to 0 if team i did not qualify. For each of the dummy variables, four transitional probabilities can be calculated (see e.g. Koop, 2003):

$$p_{00} = Pr(S_{i,t+1} = 0/S_{i,t} = 0); \quad (1)$$

$$p_{01} = Pr(S_{i,t+1} = 1/S_{i,t} = 0); \quad (2)$$

$$p_{10} = Pr(S_{i,t+1} = 0/S_{i,t} = 1); \quad (3)$$

$$p_{11} = Pr(S_{i,t+1} = 1/S_{i,t} = 1), \quad (4)$$

where p_{00} is the probability that team i repeats in not qualifying across two seasons, p_{01} the probability that team i goes from not qualifying in one season to qualifying in the next season, p_{10} the probability that team i goes from qualifying in one season to not qualifying in the next season and p_{11} the probability that team i repeats in qualifying across two seasons.

Table 5 presents the UO indicators and Figure 1 shows the difference in the UO indicator between the CL and the EC for the various knockout rounds and for winning the tournament. Figure 1 shows that the difference in the UO indicator between the CL and the EC is negative for the round of 16, the quarterfinals and the semifinals. On the other hand, the difference in the UO indicator between the CL and the EC is positive for the finals and for winning the tournament. These empirical indicators are consistent with our hypotheses that it is easier to predict who will qualify for lower rounds in the CL than in the EC and that, at the same time, it is harder to predict who will qualify for later stages in the CL than in the EC.⁶

⁶ UEFA introduced the group-round in the 1991/92 season but officially renamed the tournament the CL in the 1992/93 season. Our results are robust to switching the data from the 1991/92 season between the EC era and the CL era.

Next, we can try to see which of the rule changes under the CL was crucial in causing the effects. As we explained in Section 2, the current CL implied two key changes compared to the EC: the tournament format and the admission rules. The second change (direct qualification for multiple teams from the highest ranked leagues) was implemented only in 1999 when the CL was already in place for several years. Figure 2 shows the difference in UO indicators between the CL after 1999 and before 1999. There is a strong relationship. The difference in the UO indicator is negative for the round of 16 and the quarterfinals. There is almost no difference in the semifinals and the difference in the UO indicator is positive for the finals. This suggests that it is in particular the change in the admission rules that makes it easier to predict who will qualify for lower rounds in the CL and harder to predict who will qualify for later stages in the CL.

Finally, as Eckard (1998, 2001) and Pawlowski et al. (2010), we also compare our empirical indicator over periods of equal length to check whether our results are not driven by the longer sample period of the EC. We split the EC sample into two periods (practically) equal to the CL period: the 1955-1973 period and the 1973-1991 period. Table 5 shows that there are only small differences in the UO indicator between the two EC periods for the round of 16, the quarterfinals and the semifinals. There is a larger difference in the UO indicator for the finals and for winning the tournament, with the UO indicator lower for the early period. However, regardless of the EC period under comparison, uncertainty of the final outcome of the tournament is considerably higher in the CL than in the EC.⁷

⁷ Also the results of the difference in uncertainty of outcome between the CL after and before 1999 are robust to comparing our empirical indicator over periods of equal length. Results are available upon request.

5. Conclusion

In this paper we empirically examine how the change in format with the introduction of the Champions League in 1992 and the change in admission rules with direct qualification for multiple teams from the highest ranked leagues in 1999 affected uncertainty of outcome in European Cup football.

We first explain how the introduction of the group-round and the new admission rules has made it more likely for a specific highly ranked team from one of the highest ranked leagues to qualify for the round of 16 in the Champions League than in the European Cup. This is consistent with the existing argument of less excitement and more predictability in the Champions League. However, we also argue that the same rules cause smaller quality differences between teams in later rounds of the tournament. This has made it less likely for a specific highly ranked team from one of the highest ranked leagues to qualify for later stages in the Champions League than in the European Cup, making the outcomes of the later rounds in the Champions League less certain and less predictable.

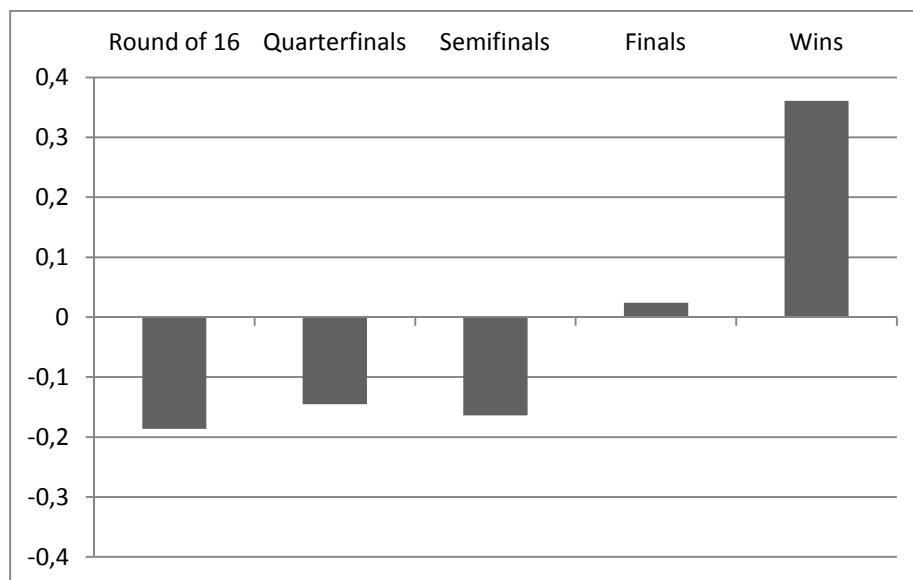
Through a comparison of differences in uncertainty of outcome between the Champions League and the European Cup and between the Champions League after 1999 and before 1999, we confirm that it indeed is easier to predict who will qualify for lower rounds such as the round of 16 and the quarterfinals in the Champions League. However, we also show that it is harder to predict who will qualify for later stages such as the finals and who will win the tournament. So it is harder, not easier, to predict the winner of the Champions League.

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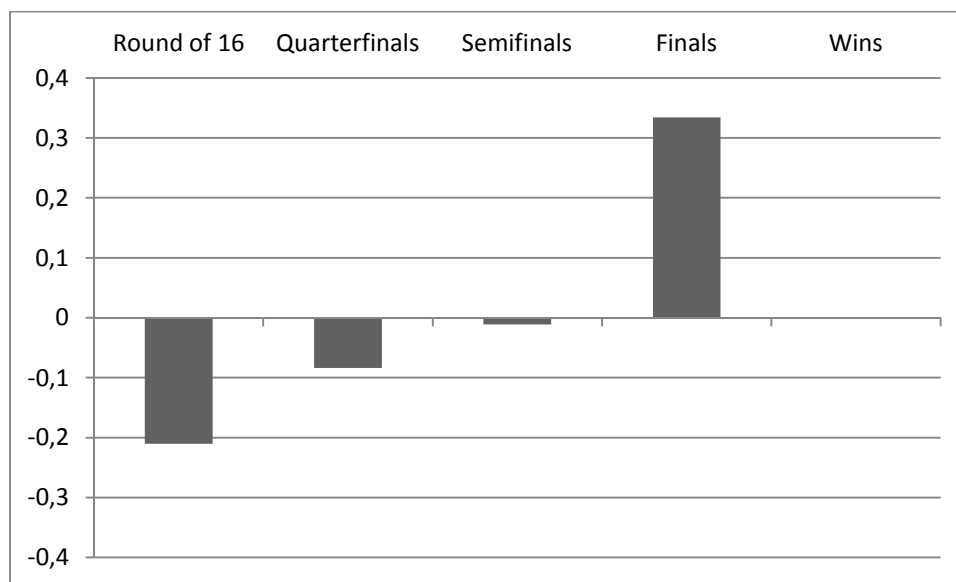
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Figure 1: Differences in uncertainty of outcome between the Champions League (1992-2011) and the European Cup (1955-1991)



Notes: (i) The Figure shows the difference in the teams' average probability of qualifying for the different knockout rounds (or winning) in one season and not qualifying (or not winning) in the next season between the Champions League and the European Cup. A positive difference is associated with higher uncertainty of outcome in the Champions League and vice versa.

Figure 2: Differences in uncertainty of outcome between the Champions League after 1999 (1999-2011) and before 1999 (1992-1998)



Notes: (i) The Figure shows the difference in the teams' average probability of qualifying for the different knockout rounds (or winning) in one season and not qualifying (or not winning) in the next season between the Champions League after and before 1999. A positive difference is associated with higher uncertainty of outcome after 1999 and vice versa. (ii) No club has won the Champions League twice in a row, such that the difference in uncertainty of outcome between the Champions League after 1999 and before 1999 equals 0 for this stage.

Table 1: European Cup and Champions League winners

| European Cup | | Champions League | |
|--------------|-------------------|------------------|---------------------|
| Season | Team | Season | Team |
| 1955/56 | Real Madrid | 1992/93 | Olympique Marseille |
| 1956/57 | Real Madrid | 1993/94 | AC Milan |
| 1957/58 | Real Madrid | 1994/95 | Ajax |
| 1958/59 | Real Madrid | 1995/96 | Juventus |
| 1959/60 | Real Madrid | 1996/97 | Borussia Dortmund |
| 1960/61 | Benfica | 1997/98 | Real Madrid |
| 1961/62 | Benfica | 1998/99 | Manchester United |
| 1962/63 | AC Milan | 1999/2000 | Real Madrid |
| 1963/64 | Internazionale | 2000/01 | Bayern München |
| 1964/65 | Internazionale | 2001/02 | Real Madrid |
| 1965/66 | Real Madrid | 2002/03 | AC Milan |
| 1966/67 | Celtic | 2003/04 | FC Porto |
| 1967/68 | Manchester United | 2004/05 | Liverpool |
| 1968/69 | AC Milan | 2005/06 | FC Barcelona |
| 1969/70 | Feyenoord | 2006/07 | AC Milan |
| 1970/71 | Ajax | 2007/08 | Manchester United |
| 1971/72 | Ajax | 2008/09 | FC Barcelona |
| 1972/73 | Ajax | 2009/10 | Internazionale |
| 1973/74 | Bayern München | 2010/11 | FC Barcelona |
| 1974/75 | Bayern München | 2011/12 | Chelsea |
| 1975/76 | Bayern München | | |
| 1976/77 | Liverpool | | |
| 1977/78 | Liverpool | | |
| 1978/79 | Nottingham Forest | | |
| 1979/80 | Nottingham Forest | | |
| 1980/81 | Liverpool | | |
| 1981/82 | Aston Villa | | |
| 1982/83 | Hamburger SV | | |
| 1983/84 | Liverpool | | |
| 1984/85 | Juventus | | |
| 1985/86 | Steaua Bucuresti | | |
| 1986/87 | FC Porto | | |
| 1987/88 | PSV Eindhoven | | |
| 1988/89 | AC Milan | | |
| 1989/90 | AC Milan | | |
| 1990/91 | Red Star Belgrade | | |
| 1991/92 | FC Barcelona | | |

Notes: (i) Data are gathered from UEFA.

Table 2: Main changes in tournament format and admission rules

| Period | Tournament format | Directly qualified teams |
|-----------|-------------------------|---|
| 1955-90 | knockout | 1 st from each country |
| 1991-93 | knockout, 1 group-round | 1 st from the majority of countries |
| 1994-1998 | 1 group-round, knockout | 1 st from country ranked 1-8 |
| 1999-2002 | 2 group-round, knockout | 1 st from country ranked 1-10, 2 nd from 1-6 |
| 2003-08 | 1 group-round, knockout | 1 st from country ranked 1-10, 2 nd from 1-6 |
| From 2009 | 1 group-round, knockout | 1 st from country ranked from 1-12, 2 nd from 1-6, 3 rd from 1-3 |

Notes: (i) Tournament format refers to the tournament excluding qualifying or preliminary rounds. (ii) Before the 1966/67 season, preliminary rounds coincided with first rounds. (iii) Except for the final, games have always been played in two legs – one home game and one away game for each team. (iv) The group-round in the 1993/94 season was followed by a knockout round between semifinalists. (v) From the inception of the EC, the titleholder also qualifies directly for next season's campaign. See UEFA (2012) for implications for other teams from the same country if the titleholder does not qualify through its national competition. (vi) The number of UEFA countries increased substantially during the 1991-93 period because of the dissolution of socialist political entities like the Soviet Union, Yugoslavia and Czechoslovakia.

Table 3: Number of teams that reached various stages in the European Cup

| Round | Period | 1955-91 | 1955-91 5-year average | 1955-59 | 1960-64 | 1965-69 | 1970-74 | 1975-79 | 1980-84 | 1985-89 |
|---------------|--------|---------|---------------------------|---------|---------|---------|---------|---------|---------|---------|
| Round of 16 | | 192 | 54 | 56 | 56 | 60 | 55 | 46 | 52 | 50 |
| Quarterfinals | | 112 | 29 | 30 | 31 | 29 | 29 | 27 | 30 | 26 |
| Semifinals | | 62 | 15 | 13 | 16 | 15 | 15 | 16 | 16 | 13 |
| Finals | | 33 | 7 | 5 | 6 | 9 | 7 | 8 | 7 | 7 |
| Wins | | 19 | 3 | 1 | 3 | 5 | 2 | 3 | 4 | 4 |

Notes: (i) The theoretical maximum number of teams reaching the various stages respectively equals 80, 40, 20, 10 and 5. (ii) Data from the 1990/91 season and from the 1991/92 season are excluded from the last column for comparability reasons.

Table 4: Number of teams that reached various stages in the Champions League

| Round | Period | 1992-2011 | 1992-2011 5-year average | 1992-96 | 1997-2001 | 2002-06 | 2007-11 |
|---------------|--------|-----------|-----------------------------|---------|-----------|---------|---------|
| Round of 16 | | 84 | 39 | 50 | 38 | 33 | 37 |
| Quarterfinals | | 50 | 23 | 29 | 22 | 20 | 22 |
| Semifinals | | 27 | 12 | 13 | 11 | 14 | 10 |
| Finals | | 12 | 6 | 6 | 6 | 7 | 5 |
| Wins | | 13 | 4 | 5 | 3 | 4 | 4 |

Notes: (i) The theoretical maximum number of teams reaching the various stages respectively equals 80, 40, 20, 10 and 5. (ii) There was no semifinal during the 1992/93 season and no round of 16 during the 1997/98 season and the 1998/99 season.

Table 5: Uncertainty of outcome in the Champions League and the European Cup

| Round | Period | Champions League | | | European Cup | | |
|---------------|--------|------------------|---------|-----------|--------------|---------|---------|
| | | 1992-2011 | 1992-98 | 1999-2011 | 1955-91 | 1955-73 | 1973-91 |
| Round of 16 | | 0,535 | 0,648 | 0,438 | 0,721 | 0,712 | 0,725 |
| Quarterfinals | | 0,612 | 0,667 | 0,583 | 0,757 | 0,771 | 0,743 |
| Semifinals | | 0,635 | 0,636 | 0,625 | 0,799 | 0,806 | 0,792 |
| Finals | | 0,816 | 0,583 | 0,917 | 0,792 | 0,75 | 0,833 |
| Wins | | 1 | 1 | 1 | 0,639 | 0,556 | 0,722 |

Notes: (i) The Table shows the teams' average probability of qualifying for the different knockout rounds (or winning) in one season and not qualifying (or not winning) in the next season for various periods of the Champions League and the European Cup. A higher average probability is associated with higher uncertainty of outcome and vice versa.

Appendix

Table A.1: Performance of teams in the European Cup (for teams which qualified at least once for the round of 16 in the EC)

| Team | Round of 16 | Quarterfinals | Semifinals | Finals | Wins |
|-------------------------|-------------------------|-------------------|-------------|--------|-------------|
| SK Tirana | 88;89 | | | | |
| Arat Yerevan | | 74 | | | |
| Austria Wien | 61;62;81;85;86 | 84 | 78 | | |
| Gwardia Warsaw | 55 | | | | |
| Rapid Wien | 56;64;67;82;87 | 55;68;83 | 60 | | |
| Wacker Innsbruck | 89;90 | 77 | | | |
| Wiener Sportklub | | 58;59 | | | |
| Anderlecht | 55;64;66;67;68;72 | 62;65;74;86;87;91 | 81;85 | | |
| Club Brugge | 73;88;90 | 76 | | 77 | |
| KV Mechelen | | 89 | | | |
| Royal Antwerp | 57 | | | | |
| RWD Molenbeek | 75 | | | | |
| SK Beveren | 84 | | | | |
| Standard Liège | 70;82;83 | 58;69;71 | 61 | | |
| Dinamo Minsk | | 83 | | | |
| FK Sarajevo | 67 | | | | |
| CDNA Sofia | 58;60;62;71;72;82;83;90 | 56;73;80;89 | 66;81 | | |
| Levski Sofia | 65;77;84 | | | | |
| Lokomotiv Sofia | 64;78 | | | | |
| Spartak Plovdiv | 63 | | | | |
| Hajduk Split | 74 | 75;79 | | | |
| Apoel Nicosia | 86 | | | | |
| Apollon Limassol | 91 | | | | |
| Omonia Nicosia | 72;79;85;87 | | | | |
| Banik Ostrava | 76;81 | 80 | | | |
| Bohemians Praha | 83 | | | | |
| Dukla Praha | 57;58;64;79 | 61;62;63 | 66 | | |
| Hradec Kralove | | 60 | | | |
| Sparta Praha | 87;89 | 65;67;84;91 | | | |
| TJ Vitkovice | 86 | | | | |
| Zbrojovka Brno | 78 | | | | |
| AB København | 68 | | | | |
| AGF Aarhus | 55;57;87 | 60 | | | |
| B1903 København | 77 | | | | |
| B1909 Odense | 59 | | | | |
| B1913 Odense | 61 | | | | |
| Brøndby IF | 91 | 86 | | | |
| Esbjerg fB | 62;80 | | | | |
| Hvidovre IF | 67 | | | | |
| KB København | 81 | | | | |
| Lyngby BK | 84 | | | | |
| Vejle BK | 73;79 | | | | |
| Arsenal | 91 | 71 | | | |
| Aston Villa | | 82 | | | 81 |
| Burnley | | 60 | | | |
| Derby County | 75 | | 72 | | |
| Everton | | 70 | | | |
| Ipswich Town | 62 | | | | |
| Leeds United | | | 69 | 74 | |
| Liverpool | 66;73 | 81;82 | 64 | 84 | 76;77;80;83 |
| Manchester United | | | 56;57;65;68 | | 67 |
| Nottingham Forest | | | | | 78;79 |
| Tottenham Hotspur | | | 61 | | |
| Wolverhampton Wanderers | 58 | 59 | | | |
| Haka Valkeakoski | 61 | | | | |
| HJK Helsinki | 74;82 | | | | |
| HPS Helsinki | 58 | | | | |
| Kuusysi Lahti | | 85 | | | |
| Reipas Lahti | 68 | | | | |
| TPS Turku | 76 | | | | |
| AS Monaco | 63 | 88 | | | |
| AS Saint-Etienne | 67;69 | 76 | 74 | 75 | |

| Team | Round of 16 | Quarterfinals | Semifinals | Finals | Wins |
|--------------------------|----------------|---------------|------------|--------|-------------|
| FC Nantes | 66;77;80 | | | | |
| Girondins Bordeaux | | 87 | 84 | | |
| OGC Nice | | 56;59 | | | |
| Olympique Marseille | 71;91 | | 89 | 90 | |
| RC Strasbourg | | 79 | | | |
| Stade de Reims | 60 | 62 | | 55;58 | |
| Dinamo Tbilisi | 79 | | | | |
| 1. FC Magdeburg | 72;74 | | | | |
| 1. FC Kaiserslautern | 91 | | | | |
| 1. FC Köln | | 64 | 78 | | |
| 1. FC Nürnberg | | 61 | | | |
| 1. FC Saarbrücken | 55 | | | | |
| Bayern München | | 72;76;85;87 | 80;89;90 | 81;86 | 73;74;75 |
| BFC Dynamo Berlin | 80;81;84;86 | 79;83 | | | |
| Borussia Dortmund | 56 | 57 | 63 | | |
| Borussia Mönchengladbach | 70;71 | 75 | 77 | 76 | |
| Carl Zeiss Jena | | 70 | | | |
| Dynamo Dresden | 73;77 | 76;78;90 | | | |
| Eintracht Braunschweig | | 67 | | | |
| Eintracht Frankfurt | | | | 59 | |
| Hamburger SV | 83 | | 60 | 79 | 82 |
| Rot-Weiß Essen | 55 | | | | |
| Schalke 04 | | 58 | | | |
| TSV 1860 München | 66 | | | | |
| Vorwärts Berlin | 61;65 | 69 | | | |
| Werder Bremen | 65 | 88 | | | |
| Wismut Karl-Marx-Stadt | 57;60 | 58 | | | |
| AEK Athens | 78;89 | 68 | | | |
| Olympiakos Piraeus | 74;82;83 | | | | |
| PAOK Thessaloniki | 76 | | | | |
| Panathinaikos | 60;64;65;77 | 91 | 84 | 70 | |
| ETO Győr | 83 | | 64 | | |
| Ferencváros | 69;76 | 65 | | | |
| Honvéd Budapest | 56;80;85;89;91 | | | | |
| MTK Budapest | 58 | 55 | | | |
| Ujpest Dozsa | 60;74;75 | 71;72 | 73 | | |
| Vasas Budapest | 62;66 | 67 | 57 | | |
| IA Akranes | 75 | | | | |
| Valur Reykjavik | 67 | | | | |
| Bohemians Dublin | 78 | | | | |
| Cork Celtic | 74 | | | | |
| Derry City | 65 | | | | |
| Dundalk | 79 | | | | |
| Waterford United | 70 | | | | |
| AC Milan | 59;69 | 63;90 | 55 | 57 | 62;68;88;89 |
| AS Roma | | | | 83 | |
| Cagliari | 70 | | | | |
| Fiorentina | | 69 | | 56 | |
| Hellas Verona | 85 | | | | |
| Internazionale | | | 65;80 | 66;71 | 63;64 |
| Juventus | 75;81;86 | 61;85 | 67;77 | 72;82 | 84 |
| Napoli | 90 | | | | |
| Sampdoria | | | | 91 | |
| Torino | 76 | | | | |
| Jeunesse d'Esch | 59;63 | | | | |
| Sliema Wanderers | 71 | | | | |
| AZ Alkmaar | 81 | | | | |
| Ajax | 73;80 | 57;66;77 | 79 | 68 | 70;71;72 |
| DWS Amsterdam | | 64 | | | |
| Feyenoord | 61;74 | 71 | 62 | | 69 |
| PSV Eindhoven | 55;76;78;91 | 63;88;89 | 75 | | 87 |
| Rapid JC Heerlen | 56 | | | | |
| Sparta Rotterdam | | 59 | | | |
| Glentoran | 77;81 | | | | |
| Linfield Belfast | 84 | 66 | | | |
| Fredrikstad FK | 60 | | | | |
| Lillestrøm SK | 78;87 | | | | |
| Lyn Oslo | 64 | | | | |
| Rosenborg BK | 86 | | | | |

| Team | Round of 16 | Quarterfinals | Semifinals | Finals | Wins |
|-----------------------|----------------------------|-------------------|----------------------|----------------|----------|
| Välerengen IF | 66 | | | | |
| Górnik Zabrze | 63;65;66;72;87;88 | 67 | | | |
| Lech Poznan | 90 | | | | |
| Legia Warsaw | | 70 | 69 | | |
| Polonia Bytom | 62 | | | | |
| Ruch Chorzow | 75 | 74 | | | |
| Szombierki Bytom | 80 | | | | |
| Widzew Łódz | | | 82 | | |
| Wisla Kraków | | 78 | | | |
| Benfica | 63;69;72;73;81;84 | 65;68;75;77;83;91 | 71 | 62;64;67;87;89 | 60;61 |
| FC Porto | 79;85;87;88 | 90 | | | 86 |
| Sporting CP Lisbon | 55;58;62;70 | 82 | | | |
| Arges Pitesti | 72;79 | | | | |
| CCA Bucuresti | 57;86;89 | | 87 | 88 | 85 |
| Dinamo Bucuresti | 56;63;64;65;71;73;82;84;90 | | 83 | | |
| Rapid Bucuresti | 67 | | | | |
| Universitatea Craiova | | 81 | | | |
| UT Arad | 70 | | | | |
| CSKA Moscow | 71 | | | | |
| Spartak Moscow | 88 | 80 | 90 | | |
| Zenit Leningrad | 85 | | | | |
| Aberdeen | 80 | 85 | | | |
| Celtic | 72;77;82;86;88 | 68;70;79 | 71;73 | 69 | 66 |
| Dundee FC | | | 62 | | |
| Dundee United | | | 83 | | |
| Glasgow Rangers | 56;57;75;90 | 61;64;78;87 | 59 | | |
| Hibernian | | | 55 | | |
| Kilmarnock | 65 | | | | |
| Red Star Bratislava | 59 | | | | |
| Slovan Bratislava | 56;70 | | | | |
| Spartak Trnava | 69 | 72;73 | 68 | | |
| Athletic Bilbao | 83 | 56 | | | |
| Atlético Madrid | 66 | 77 | 58;70 | 73 | |
| FC Barcelona | | | 59;74 | 60;85 | 91 |
| Real Madrid | 60;68;69;76;78;89 | 64;66;90 | 67;72;75;79;86;87;88 | 61;63;80 | 55-59;65 |
| Real Sociedad | | | 82 | | |
| Sevilla | | 57 | | | |
| Valencia | 71 | | | | |
| Atvidabergs FF | | 74 | | | |
| Djurgårdens IF | | 55 | | | |
| IFK Göteborg | 58;59;91 | 84;88 | 85 | | |
| IFK Malmö | | 60 | | | |
| IFK Norrköping | 56;57;62;63 | | | | |
| Malmö FF | 75;89;90 | | | 78 | |
| FC Basel | 70;80 | 73 | | | |
| FC Zürich | | | 63;76 | | |
| Grasshoppers Zürich | 71;84 | 56;78 | | | |
| La Chaux-de-Fonds | 64 | | | | |
| Servette FC Genève | 55;61;79;85 | | | | |
| Xamax Neuchâtel | 87;88 | | | | |
| Young Boys | 57;59;60 | | 58 | | |
| Besiktas | 58 | 86 | | | |
| Fenerbahce | 59;61;68;74;85 | | | | |
| Galatasaray | 63 | 62;69 | 88 | | |
| Trabzonspor | 76 | | | | |
| Dinamo Kiev | 67;69;78 | 72;75;81;82;91 | 76;86 | | |
| Dnipro Dnipropetrovsk | | 84;89 | | | |
| Zaria Voroshilovgrad | 73 | | | | |
| Partizan Belgrade | 61;83 | 55;63 | | 65 | |
| Red Star Belgrade | 59;68;69;77;88 | 57;73;80;81;86;91 | 56;70 | | 90 |
| Vojvodina Novi Sad | | 66 | | | |

Notes: (i) Data are gathered from UEFA. (ii) The order of the teams is by nationality (with alphabetic ranking of the countries). (iii) In case a team merged during the EC period, the Table shows the name of the team during their first EC round of 16 participation. (iv) 2 teams did not have to play the round of 16 during the 1968/69 season and one team did not have to play the round of 16 during the 1982/83 season, such that the number of round of 16 observations equals 293 rather than 296. (v) There was no semifinal during the 1991/92 season such that the number of quarterfinals observations equals 150 rather than 148 and the number of semifinals observations equals 72 rather than 74.

Table A.2: Performance of teams in the Champions League (for teams which qualified at least once for the round of 16 in the CL)

| Team | Round of 16 | Quarterfinals | Semifinals | Finals | Wins |
|----------------------|-------------------|----------------|-------------|----------|----------|
| Austria Salzburg | 94 | | | | |
| Austria Wien | 92;93 | | | | |
| Rapid Wien | 96 | | | | |
| Sturm Graz | 00 | | | | |
| Anderlecht | 94;00 | 93 | | | |
| Club Brugge | | 92 | | | |
| Levski Sofia | 93 | | | | |
| Hajduk Split | | 94 | | | |
| Apoel Nicosia | | 11 | | | |
| Sparta Praha | 93;99;01;03 | | | | |
| AaB Aalborg | 95 | | | | |
| FC København | 93;10 | | | | |
| Arsenal | 01;02;04;06;10;11 | 00;03;07;09 | 08 | 05 | |
| Blackburn Rovers | 95 | | | | |
| Chelsea | 05;09 | 99;10 | 03;04;06;08 | 07 | 11 |
| Leeds United | 92 | | 00 | | |
| Liverpool | 05 | 01;08 | 07 | 06 | 04 |
| Manchester United | 93;94;03;04 | 97;99;00;02;09 | 96;01;06 | 08;10 | 98;07 |
| Newcastle United | 02 | | | | |
| Tottenham Hotspur | | 10 | | | |
| AJ Auxerre | | 96 | | | |
| AS Monaco | 04 | | 93;97 | 03 | |
| FC Nantes | 01 | | 95 | | |
| Girondins Bordeaux | 99 | 09 | | | |
| Lille OSC | 06 | | | | |
| Olympique Lyon | 00;06;07;08;10;11 | 03;04;05 | 09 | | |
| Olympique Marseille | 99;10 | 11 | | | 92 |
| Paris Saint-Germain | 00 | | 94 | | |
| 1. FC Kaiserslautern | | 98 | | | |
| Bayer Leverkusen | 02;04;11 | 97 | | 01 | |
| Bayern München | 03;05;10 | 97;01;04;06;08 | 94;99 | 98;09;11 | 00 |
| Borussia Dortmund | 02 | 95 | 97 | | 96 |
| Hertha BSC | 99 | | | | |
| Schalke 04 | | 07 | 10 | | |
| VfB Stuttgart | 03;09 | | | | |
| Werder Bremen | 04;05 | 93 | | | |
| AEK Athens | 92;94 | | | | |
| Olympiakos Piraeus | 07;09 | 98 | | | |
| Panathinaikos | 00;08 | 01 | 95 | | |
| Ferencváros | 95 | | | | |
| AC Milan | 96;00;07;09;10 | 03;11 | 05 | 92;94;04 | 93;02;06 |
| AS Roma | 01;02;08;10 | 06;07 | | | |
| Fiorentina | 99;09 | | | | |
| Internazionale | 06;07;08;11 | 98;04;05;10 | 02 | | 09 |
| Juventus | 01;03;08 | 04;05 | 98 | 96;97;02 | 95 |
| Lazio Roma | 00 | 99 | | | |
| Napoli | 11 | | | | |
| Ajax | 05 | 02 | 96 | 95 | 94 |
| Feyenoord | 93;99 | | | | |
| PSV Eindhoven | 05 | 92;06 | 04 | | |
| Rosenborg BK | 95;99 | 96 | | | |
| Lech Poznan | 92;93 | | | | |
| Legia Warsaw | | 95 | | | |
| Widzew Łódź | 96 | | | | |
| Benfica | | 94;05;11 | | | |
| Boavista | 01 | | | | |
| FC Porto | 95;01;04;06;07;09 | 92;96;99;08 | 93 | | 03 |
| Sporting CP Lisbon | 08 | | | | |
| Dinamo Bucuresti | 92 | | | | |
| Steaua Bucuresti | 93;94;95;96 | | | | |
| CSKA Moscow | 11 | 92;09 | | | |
| Lokomotiv Moscow | 02;03 | | | | |
| Spartak Moscow | 94;00 | 93;95 | | | |
| Zenit St. Petersburg | 11 | | | | |
| Celtic | 06;07 | | | | |

| Team | Round of 16 | Quarterfinals | Semifinals | Finals | Wins |
|------------------------|-------------------|---------------|----------------|--------|----------|
| Glasgow Rangers | 95;96;05 | 92 | | | |
| Slovan Bratislava | 92 | | | | |
| Atlético Madrid | 08 | 96 | | | |
| Celta de Vigo | 03 | | | | |
| Deportivo de la Coruña | 02 | 00;01 | 03 | | |
| FC Barcelona | 92;04;06 | 94;02 | 99;01;07;09;11 | 93 | 05;08;10 |
| Real Madrid | 04;05;06;07;08;09 | 95;98;03 | 00;02;10;11 | | 97;99;01 |
| Real Sociedad | 03 | | | | |
| Sevilla | 07;09 | | | | |
| Valencia | 10 | 02;06 | | 99;00 | |
| Villarreal | | 08 | 05 | | |
| IFK Göteborg | 96 | 92;94 | | | |
| FC Basel | 02;11 | | | | |
| FC Sion | 92 | | | | |
| Grasshoppers Zürich | 95;96 | | | | |
| Fenerbahce | 96 | 07 | | | |
| Galatasaray | 94;01 | 93;00 | | | |
| Dinamo Kiev | 94;99 | 97 | 98 | | |
| Shakhtar Donetsk | | 10 | | | |

Notes: (i) Data are gathered from UEFA. (ii) The order of the teams is by nationality (with alphabetic ranking of the countries). (iii) In case a team merged during the CL period, the Table shows the name of the team during their first CL round of 16 participation. (iv) There was no round of 16 during the 1997/98 season and during the 1998/99 season, such that the number of round of 16 observations equals 144 rather than 160. (v) There was no semifinal during the 1992/93 season, such that the number of quarterfinals observations 82 rather than 80 and the number of semifinals observations 38 rather than 40.