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The impact of Champions League game results on the shirt sponsors' stock price

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Abstract:

This paper examines the effect of outcomes of Champions League matches on the price reaction of shirt sponsors' stocks. The price reaction is measured in terms of abnormal returns. 2 days preceding the event an effect of -27, -34 and + 25 basis points are found for respectively losses, draws and wins. And after the event date an effect of -22 and -39 basis points has been found for losses on respectively day 1 and day 2.

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Introduction

The amount of money in soccer clubs and the amount of money some players “earn” has been rapidly increasing through the last decades, for instance Lionel Messi made 37.4 million euros in 2015. Not only the salary of soccer players has been increasing, but the amount of money soccer clubs get sponsored as well (Real Madrid had a ten-year deal with Adidas for 1.6 billion euros).

In past literature, the focus has been on enlisted soccer clubs and on the performance of national team. However, another view could be that the sponsors of soccer clubs have abnormal returns preceding matches and the days after. In this paper however, the reaction of shirt sponsors’ stocks to game results will be examined, since these returns can be validated by investor sentiment, hence the research question:

Do the outcomes of soccer matches affect the shirt sponsors’ stock price?

The research question will be examined by calculating abnormal returns around the match dates. These will be estimated using DataStream for event studies. To check if the abnormal returns differ between clubs and the countries they are in, regressions will also be run on the cumulative abnormal returns of the estimated CAR window.

The main findings of the paper are that abnormal returns are of a greater significance for losses than for wins and draws. Implying the results are in line with the research of Scholhents & Peenstra (2009) and Miroiu (2014). 2 days preceding the event an effect of -27, -34 and + 25 basis points are found for respectively losses, draws and wins. And after the event date an effect of -22 and -39 basis points has been found for losses on respectively day 1 and day 2.

The investigation of the effect of champions league games on the stock price of listed clubs has been done by Rennenboog & Vanbrabant (2000), Demir & Danis (2011). The study of Miroiu (2014) examined shirt sponsors’ price reactions to matches for English soccer clubs, in this paper I add 12 other countries and 29 other soccer clubs. Research has not only been done on clubs, but also on international matches of countries Scolhents & Peenstra (2009), Edmans, Garcia & Norli (2007) and Klein, Zweigler & Heidemans (2009). They suggest that performance has a mood effect, which affects the stock price by investor sentiment.

In addition to previous literature, this paper creates a broader perspective. Where previous literature primarily focused on one country and the stock price reaction of enlisted soccer clubs and soccer club sponsors to matches and Champions League matches, this paper focuses on 34 clubs from 13 different countries and their corresponding shirt sponsors per season.

The structure of the remainder of this paper is as follows. First previous literature will be reviewed. In the second part the data required and the edits on the data will be described. After the data part, the required methodological tools will be discussed. Subsequently, the results following the research are presented and a conclusion will be drawn.

Literature Review

The most recent research on sponsors' price reaction during the UEFA Champions League games is done by Miroiu (2014). Her results first confirmed which victories of the football clubs lead to positive abnormal returns for the clubs' sponsors and negative abnormal returns for defeats for English clubs. The evidence is statistically significant in the first two days after the games for victories and negative for losses in each day of the event window, with stronger statistical and negative effect in the next two days after the match.

Rennenboog & Vanbrabant (2000), researched share price reactions to soccer performances of soccer clubs listed on the London Stock Exchange (LSE) and the AIM by performing an event study. They have found positive abnormal returns of close to 1% following a soccer victory, negative abnormal returns of 1.4% after a defeat and negative abnormal returns of 0.6% after a draw over all the games. Cumulatively over the week defeats and draws sum up to abnormal losses of 2.5 and 1.7%. Their results are consistent across the English and Scottish national Cup matches and the European competitions. The abnormal returns generated are much higher after promotion and relegation games such as the European games e.g. Champions League, since these guarantee higher future income in terms of television broadcasting rights and sponsoring income.

Not only the English listed clubs have been researched, but also three listed clubs from Turkey. Demir & Danis (2011) look at the stock price reactions on the game results in terms of abnormal returns in Turkey. They find that stock prices respond positively to wins and negatively to losses for two of the 3 clubs. The results also indicate that a win in a European Cup does not affect clubs' stock returns.

Scolhents & Peenstra (2009) have analyzed 1274 matches in the national and European competitions. Their findings are that the stock market response is significant and positive for victories and that the response is negative and significantly stronger for defeats.

Edmans, Garcia & Norli (2007) have performed event studies on the stock market after international soccer matches. They suggest the performance of national soccer teams has a strong effect on mood and that mood can be documented by the stock markets' abnormal performance after a match. After a loss, they find a strong negative stock market reaction, which is of an economically significant size and exceeds 7% in monthly terms.

On the contrary to Edmans, Garcia & Norlian, Klein, Zweigler & Heidemans (2009) find no significant statistical results after conducting an event study around the dates of World and European Championship matches. They also point out "it should be noted that we are absolutely positive that we would be able to find a statistical method that shows a significant positive relationship between football

games and stock prices". Implying that if the data sets are large enough and contain many variables sometimes coincidence interrelations can be found.

Data

The data on the UEFA Champions League games from 20 seasons, season 1995-1996 until season 2015-2016 has been retrieved from the official website of the UEFA Champions League. This data could not be downloaded directly but has been taken over manually. At first 481 matches have been written down, for every match played there are 2 observations, since both soccer clubs involved either have a win, a draw or a loss as a result of the match.

From these seasons, the knockout phase matches have been recorded. For the seasons 1995-1996 until 2002-2003 there were only quarterfinals, semifinals and a final, meaning respectively 8, 4 and 1 match. The amount of observations during these seasons was 26 (2x 13). For the season 2003-2004 until 2015-2016 there were rounds of 16, quarterfinals, semifinals and a final, meaning respectively 16, 8, 4 and 1 match. Which amounts to 58 observations (2x 29).

In each stage of the knockout phase except for the final, a soccer club plays 2 games, and after the second match one club always goes through to the next stage. The result of the first soccer match in a stage can be a win, a draw or a loss, but the results of the second match in the stage are only recorded as a win or a loss, this is due to the knockout system.

As stated before in each stage of the knockout phase except for the final a soccer club plays 2 matches. Each of these matches is played at home and away for a soccer club. In order to progress to the next stage a soccer club must win on aggregate score, which is the sum of the two matches. When the aggregate score is a tie, away goals weigh heavier than home goals. If it is the case the score is a tie and the amount of away goals for both the soccer clubs is the same, after 90 minutes 2 extra sessions of 15 minutes will be added to the match. May it be that after the 120 minutes the aggregate score is still a tie and the amount of away goals for both soccer clubs is the same, the result will be decided by a series of penalties.

No matter what the result of the second match is, only the aggregate score counts. A soccer club can win the second match but not progress to the next stage if the first match cancels the effect of the win out. This means that the second match will be recorded as a win whenever the soccer club progresses to the next stage, and as a loss if the journey of the soccer club ends after the match.

In order to be of any use for the event study, the soccer clubs' shirt sponsor is required to be enlisted as a public company on a stock exchange. So, the second stage of the data collection was to match every soccer club to a shirt sponsor for every season, since sponsors in general do not tend to stick with a soccer club. 87 shirt sponsors have been manually retrieved by checking the soccer clubs' websites, their

historic shirts of the season and newspaper articles from the academic database LexusNexus. After these shirt sponsors had been retrieved, the corresponding codes for the event study have been looked up in the Datastream navigator. Just over half of the shirt sponsors, 44 out of 87, were found useful for the event study.

The last edit on the data has been done on shirt sponsor sponsoring multiple soccer clubs. For the event study to work properly, matches of clubs with the same sponsors around the same date are deleted. For instance, Real Madrid and Arsenal both had the same shirt sponsor Fly Emirates and have had matches on the same dates and matches one day from each other. These observations have been deleted, since they would have given a misrepresentation of the results.

The final set of data consists out of 446 observations: 193 wins, 64 draws and 189 losses played by 34 clubs from 13 different countries with 44 different sponsors. Table 1 shows the Wins, the Draws and the losses per Club.

TABLE 1: THE AMOUNT OF WINS, DRAWS AND LOSSES PER CLUB

Club	Country	Win	Draw	Loss
APOEL	Cyprus	1	0	3
Arsenal	England	11	4	10
Atletico	Spain	4	2	3
Basel	Switzerland	1	1	2
Bayern	Germany	32	6	19
Bordeaux	France	2	0	2
Celta	Spain	0	0	2
Celtic	Scotland	0	1	5
Chelsea	England	20	8	16
Dortmund	Germany	1	0	4
Fiorentina	Italy	0	0	2
Galatasaray	Turkey	1	2	3
Internazionale	Italy	11	3	12
Juventus	Italy	20	4	10
Kobenhavn	Denmark	0	0	2
Lazio	Italy	0	0	2
Leeds	England	1	1	2
Leverkusen	Germany	3	2	10
Liverpool	England	17	3	8
LOSC	France	0	0	2
Lyon	France	11	2	7
Manchester United	England	29	11	22
Milan	Italy	4	2	1
Olympiacos	Greece	0	1	3
Panathinaikos	Greece	1	0	1
PSV	Netherlands	5	2	7
Rangers	Scotland	0	1	1
Real Madrid	Spain	8	2	10
Schalke	Germany	5	2	7
Sevilla	Spain	0	0	2
Stuttgart	Germany	0	1	1
Valencia	Spain	1	3	4
Wolfsburg	Germany	3	0	1
Zenit	Russia	1	0	3

Methodology & hypotheses

In order to examine the research question, hypotheses have been formed.

Hypothesis 1: After a win, the sponsors' stock price increases.

Hypothesis 2: After a draw, the sponsors' stock price decreases.

Hypothesis 3: After a loss, the sponsors' stock price decreases.

Consistent with the work of previous researchers a positive return is expected after a win and a negative return after a draw or a loss. After losses, a significant decline is expected, whereas after wins and draws a less significant effect is expected (Miroiu, 2014) and Edmans, Garcia & Norli (2007). After the hypotheses, have been tested, other influences on the abnormal return will also be estimated.

With the companies ISIN codes and the match dates, an event study will be performed using the DataStream event study tool. The companies' returns will be compared with a benchmark, the MSCI world index. The MSCI world index is used as benchmark, since most of the companies studied are from different geographical locations e.g. Japan and the United States of America. In this short-term event study a control period of [-220; -120] and a test period of [-30; 30] will be used to estimate the CAR window. It will be performed on the following subsamples:

1. The games resulted in wins
2. The games resulted in draws
3. The games resulted in losses
4. All the games combined

After the event study has been performed, abnormal returns are retrieved from the output sheets. The abnormal return is equal to the difference between the realized return during the event period and the market adjusted return. For all 61 days in the test period, the average abnormal returns are calculated across firms using the formula below.

$$AR_t = \frac{1}{N} \sum_{i=1}^N ar_{it}$$

After the average abnormal returns had been ascertained, their probability values were calculated for each day of the event period. Which was done by first calculating the standard deviation for every day [-30, 30] of the test period.

$$T1AR_t = \frac{AR_t}{\frac{\sigma_t}{\sqrt{N}}}$$

The three hypotheses tested are one-sided tests, and the total group is taken as a two-sided test, since the effect of matches all-over is ambiguous.

With the significance per day of the event window the CAR window will be estimated, and subsequently the sum of the abnormal returns per day, of the estimated CAR window, will be taken to retrieve the cumulative abnormal returns. The cumulative abnormal returns and their corresponding significance statistics over period (K, L) will be calculated using the following formulas:

$$CAR_{KL} = \sum_{t=K}^L AR_t$$

$$T1CAR_{KL} = \frac{CAR_{KL}}{\frac{\sigma_c}{\sqrt{N}}}$$

To discover if the cumulative abnormal returns differ between club sponsors and countries two regressions will be run. Regression 1 will be a regression to check if there is a difference between clubs based on the country they are from, so dummies have been made for every country in the data sample.

$$CAR = \alpha + \beta_1 \times Cyprus + \beta_2 \times Denmark + \dots + \beta_n \times Turkey + \epsilon$$

Regression 2 contains again a regression on the CAR but then by sponsor instead of country, this is done to distinguish the difference in cumulative abnormal returns between sponsors.

$$CAR = \alpha + \beta_1 \times 888 Holdings + \beta_2 \times AONPLC + \dots + \beta_n \times Yokohama Rubber + \epsilon$$

Regarding regressions 1 and 2, no expectations are made, they will just be used to see if there are significant differences.

Results

After the event study was performed, the abnormal returns per day on the interval $[-30, 30]$ around the event date have been calculated to estimate the CAR window, see table 2 and figure 1 in the appendix.

In the group of losses, T-2, T+1 and T+2 are significant on a 10%, 10% and 5% significance level respectively. For the draws T-2 and T are significant on a 10% level and for the wins T-2 is significant on a 10% level.

These results imply that the abnormal returns 2 trading days before the match are significant on a 10% level. In contrast to results of Palomino, Renneboog & Zhang (2009) who do not find any significant reaction in stock prices to the release of betting odds by bookmakers, I find a significant reaction 2 days preceding the match for all match results (wins, draws and losses). This could be investor sentiment reacting to experts' expectations of match outcomes, which is particularly interesting as Palomino, Renneboog & Zhang (2009) have shown that the betting odds are excellent predictors of the game outcomes.

In case of the stock price reactions following the matches, losses have more absolute impact on the changes in stock price which is in line with previous research. Consistent with Palomino, Renneboog & Zhang (2009), the reactions to losses have a somewhat slower incorporation in prices, which is found in an even greater reaction in the second day after the event. In case of the significance of the results of a match on the abnormal returns, losses are much more significant than wins and losses. It was expected from previous research that losses have a more significant effect on abnormal returns, but the results of wins and draws were also expected to be significant.

The largest effect of the CAR window is the effect of draws on the event date itself, an effect of 81 basis points on a 10% significance level. Champions League matches are played in the evening, when stock exchanges are closed. This effect could be a reversal of the increase in abnormal returns of the preceding day, however no real explanation can be found to explain this surprising effect.

The CAR window $[-2, 2]$ has been estimated, since it is the closest window with significant results on a 10% significance level. And in the research, overlap from preceding matches and matches after the match are cancelled if the car window is equal or smaller than $[-5, 5]$ trading days. Table 3 contains the abnormal returns and their corresponding significance statistics for the estimated CAR window $[-2, 2]$.

TABLE 3: ABNORMAL RETURNS AND THEIR CORRESPONDING SIGNIFICANCE STATISTICS * p<0.01, ** p<0.05, * p<0.1 IN THE ESTIMATED CAR WINDOW [-2, 2].**

Loss	AR	T_statistics	P_value
-2	-0.00271	-1.485	0.069*
-1	0.00197	1.004	0.842
0	0.00068	0.328	0.629
1	-0.00222	-1.576	0.058*
2	-0.00391	-1.739	0.041**
Draw	AR	T_statistics	P_value
-2	-0.00342	-1.586	0.056*
-1	0.00589	1.850	0.968
0	-0.00806	-1.517	0.065*
1	0.00120	0.352	0.638
2	0.00148	0.457	0.676
Wins	AR	T_statistics	P_value
-2	0.00246	1.327	0.092*
-1	0.00045	0.217	0.414
0	0.00055	0.198	0.422
1	-0.00030	-0.192	0.576
2	-0.00106	-0.347	0.636
Total	AR	T_statistics	P_value
-2	-0.00058	-0.496	0.620
-1	0.00188	1.432	0.152
0	-0.00063	-0.376	0.707
1	-0.00109	-0.990	0.322
2	-0.00190	-1.124	0.261

Now that the CAR window has been estimated, the abnormal returns per group are summarized in order to calculate the CAR, after that the significance statistics were calculated. Table 4 shows the CAR and the corresponding significance statistics. Where the CAR window only seems to be significant on a 10% level for losses, a significant result of – 67 basis points over 5 days. Whereas wins and draws have respectively a positive and negative effect on the CAR, which was expected. However, these effects are not significant.

TABLE 4: CUMULATIVE ABNORMAL RETURN ON WINDOW [-2, 2] AND CORRESPONDING SIGNIFICANCE STATISTICS * p<0.01, ** p<0.05, * p<0.1.**

Result	CAR	T_statistics	P_value
Win	0.00210	0.469	0.320
Draw	-0.00291	-0.541	0.295
Loss	-0.00665	-1.452	0.074*
Total	-0.00232	-0.815	0.416

Thereafter, the regressions of the influences of soccer clubs and countries they are from on the CAR are run to check if there are differences between soccer clubs and countries in the case of cumulative abnormal returns.

The first regression ran is the regression of countries.

$$\text{Regression 1: } CAR = \alpha + \beta_1 \times \text{Cyprus} + \beta_2 \times \text{Denmark} + \dots + \beta_n \times \text{Turkey} + \epsilon$$

The results of regression 1 can be found in table 5 in the appendix. As can be derived from the table, none of the countries seem to have any significant correlation with the cumulative abnormal returns in all four regressions ran. This implies that cumulative abnormal returns do not significantly differ between the countries the clubs are in.

Instead of concentrating on the effect of countries on the CAR regression 2 looks at sponsors and their corresponding effect on the cumulative abnormal returns.

$$\text{Regression 2: } CAR = \alpha + \beta_1 \times \text{888 Holdings} + \beta_2 \times \text{AONPLC} + \dots + \beta_n \times \text{Yokohama Rubber} + \epsilon$$

The results of regression 2 can be found in table 6 in the appendix. Draws have the most significant results, whereas losses and wins only have one and two significant results on a 10% level respectively.

However, there is only one shirt sponsor that has match effects which have significant effects on the cumulative abnormal return compared to the other shirt sponsors. Which is Pirelli with significant effects at 1% level, 5% level, 1% level and 1% level for respectively, wins, draws losses and the total sample of match outcomes. Which means overall there are no significant differences between the match outcomes on the cumulative abnormal returns of shirt sponsors, except for Pirelli.

Conclusion

In this paper the effect of outcomes of Champions League matches on the price reaction of shirt sponsors' stocks has been examined. The price reaction is measured in terms of abnormal returns. 2 days preceding the event significant effects of -27, -34 and + 25 basis points are found for respectively losses, draws and wins. And after the event date an effect of -22 and -39 basis points has been found for losses on respectively day 1 and day 2.

Regarding the research question: "*Do the outcomes of soccer matches affect the shirt sponsors' stock price?*" three hypotheses had been formed. Hypotheses 1 and 2 are rejected, since there are no significant increases and decreases in stock prices found for respectively wins and draws. Hypothesis 3 cannot be rejected, implying there are significant decreases in the stock price of a shirt sponsor after a loss.

The results show that the stock price reaction to losses is greater than the reaction to wins and draws, and has more significant outcomes than the stock price reaction to wins. Implying the results are in line with the research of Scholhents & Peenstra (2009) and Miroiu (2014), although wins are far less significant in this paper.

The results also imply that the abnormal returns 2 trading days before the match are significant on a 10% level. In contrast to results of Palomino, Renneboog & Zhang (2009) who do not find any significant reaction in stock prices to the release of betting odds by bookmakers, a significant reaction 2 days preceding the match for all match results (wins, draws and losses) has been. This could be investor sentiment reacting to experts' expectations of match outcomes, which is particularly interesting as it can be explained with a finding of Palomino, Renneboog & Zhang (2009), whom have shown that the betting odds are excellent predictors of the game outcomes.

The regressions of countries on the cumulative abnormal return did not show any country that the clubs are from to be of influence on the cumulative abnormal return, implying it wouldn't matter in which competition the club is playing. This was expected, since it is about the return of the shirt sponsor, and shirt sponsors are not necessarily from the same country as the club they are sponsoring is in.

The regressions of shirt sponsors on the cumulative abnormal return showed only one shirt sponsor with significant influences on the cumulative abnormal returns for every match outcome, Pirelli. Implying that overall there are no significant differences between the effects of shirt sponsors on the cumulative abnormal returns.

This paper contributed to a broader perspective of Champions League match results on stock prices of shirt sponsors. The most interesting results were the significant price reactions preceding the match on T-2, which means investors react to the release of betting odds by bookmakers. The other effect of a greater effect and more significance for losses after a match could be explained by theories as the prospect theory and loss aversion. Overall people react heavier to losses than to wins, which is of great significance in this paper as the stock price reactions can be explained by investor sentiment and a decrease or increase in future earnings of a soccer club.

For future research, research on correlation between the cumulative abnormal returns and stock price characteristics as stock size, market capitalization and price level could be interesting. Whereas in this paper there has only been an examination of the relation between the shirt sponsors and the cumulative abnormal returns, it would be better to use these shirt sponsors' stock price characteristics.

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Appendix

TABLE 2: ABNORMAL RETURNS AND PROBABILITY VALUES FOR THE EVENT WINDOW [-30, 30] *** p<0.01, ** p<0.05, * p<0.1

	AR Win	p_value	AR Draw	p_value	AR Loss	p_value	AR total	p_value
-30	0.001	0.427	-0.006	0.133	-0.002	0.243	-0.001	0.530
-29	-0.001	0.720	0.003	0.778	0.000	0.508	0.000	0.927
-28	-0.002	0.789	0.001	0.607	-0.002	0.134	-0.002	0.296
-27	-0.001	0.669	0.000	0.445	-0.002	0.233	-0.001	0.395
-26	0.000	0.479	0.009	0.989	-0.005	0.029**	-0.001	0.608
-25	-0.002	0.886	0.008	0.928	0.002	0.890	0.001	0.521
-24	0.000	0.505	-0.005	0.188	0.004	0.903	0.001	0.539
-23	-0.001	0.721	0.005	0.799	-0.001	0.360	0.000	0.955
-22	0.003	0.198	-0.004	0.189	-0.003	0.115	-0.001	0.810
-21	0.001	0.322	0.008	0.891	0.004	0.917	0.003	0.072*
-20	0.006	0.032**	0.006	0.925	0.000	0.472	0.003	0.067*
-19	0.000	0.596	-0.002	0.253	-0.004	0.104	-0.002	0.184
-18	-0.003	0.916	0.005	0.885	0.001	0.699	0.000	0.957
-17	-0.001	0.793	0.006	0.874	0.001	0.682	0.001	0.535
-16	0.001	0.241	0.006	0.714	-0.002	0.233	0.001	0.791
-15	0.001	0.276	-0.003	0.233	0.000	0.503	0.000	0.933
-14	-0.001	0.770	0.006	0.815	0.000	0.423	0.000	0.960
-13	-0.001	0.776	0.000	0.504	-0.006	0.019**	-0.003	0.045
-12	0.000	0.440	0.004	0.786	0.000	0.483	0.001	0.653
-11	-0.002	0.844	-0.001	0.400	-0.004	0.091*	-0.003	0.092*
-10	0.000	0.504	0.000	0.431	-0.003	0.083*	-0.001	0.271
-9	-0.002	0.909	0.000	0.525	-0.002	0.127	-0.002	0.133
-8	0.001	0.342	-0.001	0.428	-0.003	0.131	-0.001	0.648
-7	0.000	0.514	0.002	0.688	-0.002	0.104	-0.001	0.574
-6	0.001	0.242	0.004	0.968	0.001	0.818	0.002	0.114
-5	-0.002	0.859	-0.001	0.261	-0.002	0.239	-0.002	0.178
-4	0.001	0.377	-0.002	0.294	-0.004	0.107	-0.002	0.336
-3	0.002	0.237	-0.001	0.376	-0.002	0.118	0.000	0.717
-2	0.002	0.092*	-0.003	0.056*	-0.003	0.069*	-0.001	0.620
-1	0.000	0.414	0.006	0.968	0.002	0.842	0.002	0.152
0	0.001	0.422	-0.008	0.065*	0.001	0.629	-0.001	0.707
1	0.000	0.576	0.001	0.638	-0.003	0.058*	-0.001	0.322
2	-0.001	0.636	0.001	0.676	-0.004	0.041**	-0.002	0.261
3	0.001	0.353	0.004	0.854	-0.001	0.413	0.001	0.678
4	0.001	0.326	0.010	0.984	0.001	0.764	0.003	0.123
5	-0.001	0.631	0.001	0.628	-0.003	0.170	-0.002	0.384
6	-0.002	0.841	-0.001	0.442	-0.002	0.222	-0.002	0.265

7	-0.002	0.814	-0.009	0.076*	-0.002	0.132	-0.003	0.053*
8	-0.003	0.931	0.000	0.445	0.001	0.666	-0.001	0.330
9	-0.001	0.801	0.001	0.716	-0.001	0.322	-0.001	0.525
10	0.000	0.448	0.005	0.821	0.000	0.507	0.001	0.592
11	0.000	0.448	0.003	0.864	-0.004	0.116	-0.001	0.481
12	-0.003	0.981	-0.004	0.184	-0.004	0.052*	-0.003	0.008***
13	0.001	0.323	0.002	0.689	-0.002	0.163	0.000	0.996
14	0.000	0.491	0.016	0.943	0.000	0.568	0.002	0.195
15	-0.002	0.940	0.002	0.797	0.001	0.667	0.000	0.805
16	-0.003	0.946	0.008	0.892	-0.004	0.102	-0.002	0.296
17	-0.001	0.642	0.000	0.432	0.001	0.629	0.000	0.960
18	-0.003	0.938	-0.001	0.371	-0.004	0.035**	-0.003	0.018**
19	-0.001	0.678	0.003	0.904	-0.006	0.008***	-0.002	0.072*
20	0.000	0.601	0.006	0.899	-0.001	0.359	0.000	0.771
21	-0.002	0.857	0.005	0.928	0.001	0.714	0.000	0.783
22	-0.001	0.701	-0.001	0.398	0.000	0.594	0.000	0.758
23	-0.001	0.753	-0.004	0.069*	0.001	0.696	-0.001	0.578
24	0.001	0.340	0.000	0.495	0.002	0.787	0.001	0.424
25	0.000	0.425	0.001	0.672	-0.005	0.048**	-0.002	0.248
26	-0.004	0.915	0.002	0.842	0.000	0.516	-0.001	0.394
27	-0.002	0.865	0.005	0.888	0.002	0.874	0.000	0.745
28	-0.002	0.859	0.004	0.895	0.002	0.708	0.000	0.840
29	-0.003	0.986	0.001	0.613	-0.003	0.034**	-0.002	0.011**
30	-0.002	0.863	-0.001	0.215	-0.003	0.085*	-0.002	0.059**

FIGURE 1: ABNORMAL RETURNS OVER THE [-30, 30] EVENT WINDOW

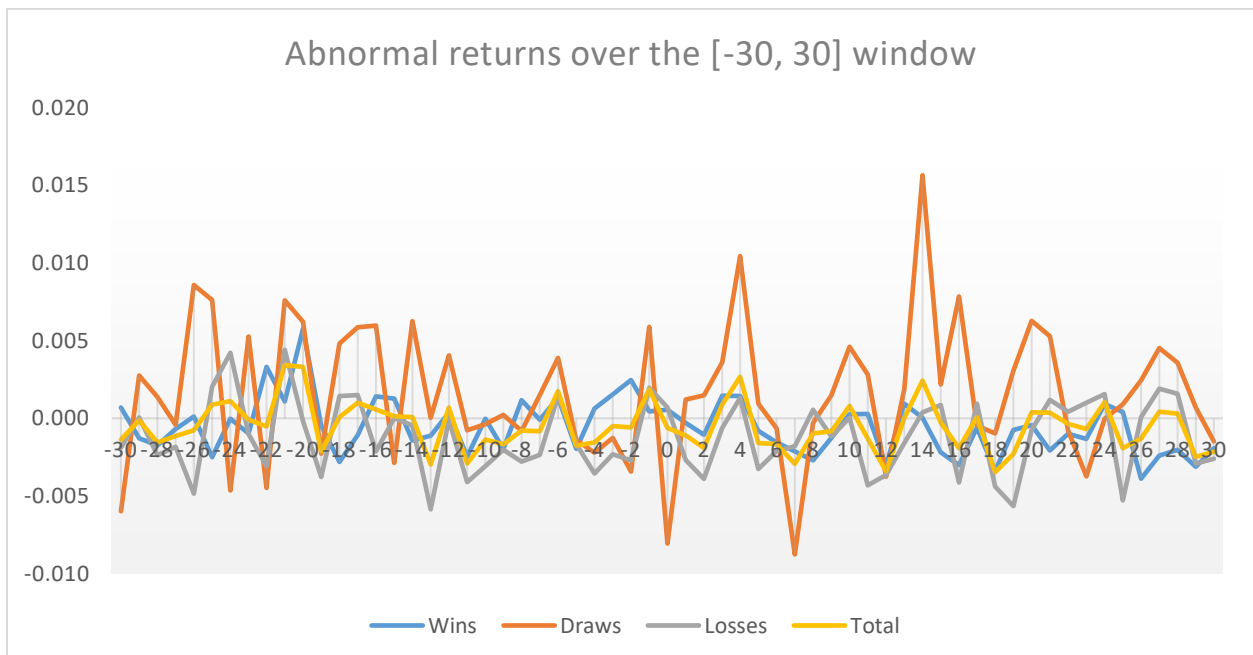


TABLE 2: THE EFFECT OF THE COUNTRY VARIABLES ON THE CUMULATIVE ABNORMAL RETURNS

VARIABLES	Win CAR	Draw CAR	Loss CAR	Total CAR
Cyprus	0.0295 (0.0898)		-0.0332 (0.0581)	-0.0161 (0.0525)
England	0.00352 (0.0639)	-0.00473 (0.0454)	-0.0143 (0.0458)	-0.00514 (0.0431)
France	0.0151 (0.0659)	0.00935 (0.0546)	-0.00801 (0.0489)	0.00423 (0.0445)
Germany	-0.00392 (0.0642)	-0.0169 (0.0466)	-0.0161 (0.0461)	-0.0112 (0.0433)
Greece	-0.0106 (0.0898)	-0.0706 (0.0631)	-0.0111 (0.0551)	-0.0197 (0.0495)
Italy	-0.0114 (0.0644)	0.00932 (0.0470)	-0.0423 (0.0466)	-0.0214 (0.0434)
Netherlands	-0.000253 (0.0696)	3.39e-05 (0.0546)	-0.0111 (0.0510)	-0.00563 (0.0458)
Spain	0.00685 (0.0659)	-0.0169 (0.0477)	0.00381 (0.0471)	0.00139 (0.0439)
Switzerland	-0.0229 (0.0898)			-0.00549 (0.0525)
Turkey	0.0266 (0.0898)	-0.0126 (0.0546)	-0.0176 (0.0581)	-0.00818 (0.0495)
Denmark			-0.00317 (0.0636)	
Russia			-0.00196 (0.0581)	-2.56e-05 (0.0525)
Constant	0.00205 (0.0635)	0.00410 (0.0446)	0.00897 (0.0450)	0.00579 (0.0428)
Observations	193	64	189	446
R-squared	0.016	0.078	0.043	0.015
Standard errors in parentheses *** p<0.01, ** p<0.05, * p<0.1				

TABLE 3: THE EFFECT OF SHIRT SPONSORS ON THE CUMULATIVE ABNORMAL RETURNS

VARIABLES	Win CAR	Draw CAR	Loss CAR	Total CAR
AONPLC	-0.0267 (0.0430)	0.102** (0.0447)	-0.0525 (0.0450)	-0.0185 (0.0261)
AmericanInternationalGroup	-0.0154 (0.0385)	0.124*** (0.0433)	-0.0451 (0.0427)	-0.00235 (0.0237)
BWIN	0.0566 (0.0465)	0.199*** (0.0475)	-0.00285 (0.0486)	0.0560** (0.0282)
CarlsbergAS	-0.0460 (0.0381)	0.0691 (0.0447)	-0.0184 (0.0376)	-0.0208 (0.0231)
DeutscheTelekomAG	-0.0457 (0.0368)	0.0851** (0.0419)	-0.0429 (0.0352)	-0.0273 (0.0220)
Emirates_NBD_PJSC	-0.0377 (0.0465)	0.102** (0.0433)	-0.0282 (0.0389)	-0.0154 (0.0251)
EvonikIndustriesAG	-0.0270 (0.0703)		-0.0112 (0.0450)	0.00110 (0.0331)
FiatChryslerAuRg	-0.0604 (0.0412)	0.0769 (0.0548)	-0.0300 (0.0410)	-0.0304 (0.0254)
GazpromPAO	-0.0362 (0.0430)	0.0725 (0.0475)	-0.0465 (0.0376)	-0.0282 (0.0247)
GigamediaLimited	0.0230 (0.0703)		-0.0241 (0.0711)	0.0167 (0.0459)
Heineken	-0.0795 (0.0703)	0.107* (0.0548)	-0.0314 (0.0551)	-0.0262 (0.0355)
KoninklijkePhilipsNV	-0.0390 (0.0444)	0.102** (0.0475)	-0.0368 (0.0399)	-0.0203 (0.0257)
LGElectronicsInc	-0.0229 (0.0703)		-0.0362 (0.0486)	-0.0171 (0.0355)
MTNGROUPLtd	-0.00918 (0.0703)		-0.0590 (0.0486)	-0.0308 (0.0355)
NovartisAG	-0.0616 (0.0703)	0.102* (0.0548)	-0.0257 (0.0551)	-0.0202 (0.0355)
OTE	-0.0493 (0.0703)		0.00207 (0.0711)	-0.00636 (0.0459)
PIRELLI	-0.107*** (0.0396)	0.0957** (0.0447)	-0.128*** (0.0367)	-0.0918*** (0.0235)
Plus500Ltd	-0.0136 (0.0465)	0.203*** (0.0548)	-0.0403 (0.0551)	0.00855 (0.0300)
RWE	-0.0503 (0.0556)	0.0951* (0.0548)	-0.0575 (0.0450)	-0.0366 (0.0300)

RenaultSA	-0.0390 (0.0430)	0.111** (0.0475)	-0.0436 (0.0450)	-0.0203 (0.0265)
SKYPLC	0.0407 (0.0556)	0.0550 (0.0548)	0.0145 (0.0711)	0.0220 (0.0355)
SPTTPR	-0.0523 (0.0412)	0.0842 (0.0548)	-0.0361 (0.0450)	-0.0290 (0.0261)
SamsungElectronicsCoLtd	-0.0280 (0.0377)	0.101** (0.0411)	-0.0531 (0.0361)	-0.0199 (0.0224)
SharpCorporation	-0.0300 (0.0430)	0.0860* (0.0447)	-0.0393 (0.0450)	-0.0195 (0.0261)
SiemensAG	-0.0402 (0.0420)	0.0596 (0.0548)	-0.0332 (0.0410)	-0.0223 (0.0257)
SonyCorp	-0.0358 (0.0387)	0.0903* (0.0475)	-0.0298 (0.0427)	-0.0166 (0.0241)
ToyotaMotorcorp	-0.0413 (0.0703)	0.0801 (0.0475)	-0.0509 (0.0486)	-0.0344 (0.0313)
TurkTelekomunikasyonAS	-0.0121 (0.0703)	0.0889* (0.0475)	-0.0434 (0.0486)	-0.0229 (0.0313)
VOLKSWAGENGROUPLCommonStoc	-0.0409 (0.0497)		-0.00104 (0.0711)	-0.0122 (0.0355)
VodafoneGroupPLC	-0.110** (0.0556)	0.0406 (0.0475)	-0.0569 (0.0376)	-0.0543** (0.0257)
BayerAG		0.123** (0.0548)	-0.0148 (0.0711)	0.00233 (0.0459)
EnbwEnergieBadenWuerttembergAG		0.0564 (0.0548)	-0.0281 (0.0711)	-0.0377 (0.0459)
KindredGroupPlc		0.0626 (0.0548)	0.0324 (0.0711)	-0.00434 (0.0459)
MolsonCoorsBrewingCoClassB		0.0899* (0.0475)	-0.0111 (0.0450)	-0.00722 (0.0313)
Holdings			-0.0187 (0.0551)	-0.00444 (0.0459)
CCGroupPLC			-0.0584 (0.0551)	-0.0442 (0.0459)
Cirio			-0.0283 (0.0551)	-0.0141 (0.0459)
CitigroupInc			-0.0441 (0.0551)	-0.0298 (0.0459)
GroupePartoucheSA			-0.0298 (0.0551)	-0.0156 (0.0459)
JinkoSolar			0.0276	0.0418

PeugeotSA			(0.0551)	(0.0459)
			-0.0302	-0.0160
SunPowerCorporation			(0.0551)	(0.0459)
			-0.0796	-0.0653
YokohamaRubberCoLtd			(0.0551)	(0.0459)
			0.00502	0.0193
Constant	0.0408	-0.0974**	(0.0551)	(0.0459)
	(0.0351)	(0.0387)	(0.0318)	(0.0205)
Observations	193	64	189	446
R-squared	0.196	0.549	0.212	0.161
Standard errors in parentheses				
*** p<0.01, ** p<0.05, * p<0.1				