

HØGSKOLEN I OSLO
OG AKERSHUS

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Football Shirt Sponsorship & Firm Value

An Event Study

**Masteroppgave i økonomi og administrasjon
Handelshøyskolen ved HiOA
2017**

Sammendrag

Denne avhandlingen undersøker sammenhengen mellom sponning av profesjonelle fotballklubbers drakter og markedsverdien til hovedsponsoren. En event-studie på offentliggjøring av sponsoravtaler gjennomføres. Jeg finner at den kumulative anormale avkastningen til sponsorene ikke er statistisk signifikant forskjellig fra null for noen av event-vinduene. Statistisk signifikant negativ gjennomsnittlig anormal avkastning for sponsorenes rivaler er funnet for vinduet som undersøker effekten av avtaledetaljer som dekkes i media i dagene etter offentliggjøring. Dette indikerer at sponsorerers gevinst ligger i negativ avkastning for rivaler, men den totale effekten for rivaler for alle vinduer er ikke signifikant forskjellig fra null. Jeg konkluderer med at sponning av draktene til profesjonelle fotballklubber ikke har effekt på sponsorenes markedsverdi.

Abstract

This paper investigates the impact of football shirt sponsorship on the market value of the sponsoring firm, by conducting an event study. I find that the cumulative abnormal return of sponsorship agreement announcements is not significantly different from zero in the days surrounding the announcement. Rival wealth effects are significantly negative in the period summing up effect of media coverage of agreements, pointing towards a relative profit for sponsors through negative returns for rival firms, but in total this effect is not significantly different from zero. I conclude that football shirt sponsorship has no effect on the market value of the sponsoring firm.

Preface

This master's thesis makes out the final part of the master's program in business and administration at Oslo Business School. The study combines theory from finance and marketing literature.

The background for writing a thesis about football shirt sponsorship is a keen affection for football and sport in general, as well as an interest for sponsorship and the workings of it.

The writing process was equally challenging and interesting. I would like to thank my guidance counsellor Knut Nygaard for constructive feedback and inspirational discussions.

Oslo, May 16th 2017

Knut Landa

TABLE OF CONTENTS

ABSTRACT	II
PREFACE.....	III
1. INTRODUCTION	1
1.1 BACKGROUND.....	1
1.2 RESEARCH QUESTION.....	2
1.3 STRUCTURE	2
2. SPONSORSHIP THEORY	5
2.1 DEFINITIONS	5
2.2 SPONSORSHIP AND ADVERTISING	6
2.3 THE OBJECTIVE OF SPONSORSHIP	7
2.4 FROM SPONSORSHIP TO INCREASED FIRM VALUE	8
2.5 MEASURING THE EFFECT OF SPONSORSHIP	9
2.6 SUMMARY.....	13
3. FOOTBALL SPONSORSHIP	14
3.1 THE ECONOMIC STATE OF FOOTBALL	14
3.2 FOOTBALL'S ECONOMIC POTENTIAL	14
3.3 FOOTBALL SHIRT SPONSORSHIP.....	15
3.4 FOOTBALL CLUBS AND PROFIT MAXIMIZATION	16
3.5 SPONSORSHIP-FIT AND FOOTBALL RIVALRY	18
PART II – METHODOLOGY & SAMPLE.....	20
4. METHODOLOGY.....	21
4.1 THE EFFICIENT MARKET HYPOTHESIS	21
4.2 MEASUREMENT WINDOWS	22
4.3 MARKET MODEL	23
4.4 ESTIMATION OF THE MARKET MODEL	23
4.5 AGGREGATION OF ABNORMAL RESULTS.....	24
4.6 TESTING THE RESEARCH HYPOTHESIS	25
4.7 METHODOLOGIC CHOICES IN THIS STUDY.....	26
5. SAMPLE	28
5.1 CHOOSING AND FINDING A SAMPLE.....	28
5.2 DESCRIBING THE SAMPLE	29
5.3 CONSEQUENCES OF THE SAMPLE-SIZE	30
PART III – EMPIRICAL RESULTS.....	32
6. RESULTS	33
6.1 ANNOUNCEMENT RETURNS	33
6.2 FIRM SPECIFIC RESULTS	36
6.3 TEAM SPECIFIC RESULTS	39
6.4 RIVAL FIRM WEALTH EFFECTS.....	41
7. CONCLUSION	43
7.1 LIMITATIONS.....	44
PART IV – REFERENCES	45
REFERENCES	46
APPENDIX.....	1

1. Introduction

This chapter presents the background and motivation for this thesis, as well as the thesis' research question. Furthermore, the structure and layout of the thesis is illustrated.

1.1 Background

The football industry is growing rapidly. The total revenue of the twenty wealthiest clubs rose to €7,4 billion in the 2015/16 season, up 12 % from the previous one, and three clubs had a total revenue of more than €600 million (URL 1). Commercial revenue is one of three main revenue sources for clubs. Football shirt sponsorship is one of the components in this category. Firms pay to have their company logo adorned on the front of a team's shirt. The football clubs increase their revenue and the sponsoring firm expects to earn a positive return on the investment.

Sponsorship is an activity that is part of the marketing strategy of a firm. There has been a remarkable rise in sponsorship spending over the last 20 years, as well. The global sponsorship expenditure in 2015 is estimated to \$57,5 billion, an increase of approximately 429 % from 1996 to 2015. The growth rate in sponsorship spending is similar to the growth rate in advertising, marketing and promotion spending, between 3 and 5 percent yearly from 2013-2016. Particularly Asia and South-America have experienced a solid growth over the last years, with large companies such as Huawei, Tata and Mahindra being very active in securing sponsorship deals both domestically and internationally. Even though Europe is the most mature market for sponsorship activities it is still growing at a rate of over 3 per cent yearly (URL 4).

Measuring the effect of sponsorship is vital for sponsors. Even more so when sponsorship expenditure is growing and takes up an increasing portion of marketing budgets. However, there are conflicting views between what businesses consider as the intuitive impact of sponsorship and what marketing experts say. A representative from the French car rental company *Europcar*, who sponsored a cycling team from the same country, claimed that the total amount of time the riders from the team appeared on television during the Tour de France, showing the *Europcar* logo, more than paid for the entire sponsorship of an estimated

\$6 million (URL 3). T. Meenaghan and P. O’Sullivan claim that this is a misconception and that exposure is a measure of publicity and not a measure of the effect of that publicity and other related investments (Meenaghan & O’Sullivan, 2013).

Treating exposure as a measure of effectiveness is not valid, as the link between the two is unproven. If that was the case, firms could increase their sponsorship budgets heavily, and expect that the effectiveness would increase just as much (Pham, 1991; Sparks, 1995). However, historically, the lack of more robust research has led to this reliance on media exposure as a trusted measurement method.

Marketing literature provides framework for understanding how a sponsorship works, and how its effect can be measured. However, event studies can also be used to investigate sponsorship effectiveness, building on principles from finance literature. The evidence provided by such sponsorship studies, is inconclusive.

1.2 Research question

This thesis is motivated by a desire to investigate whether the growth in football shirt sponsorship expenditure is well-founded, as an investment that adds market value. The research question is:

- *Does sponsoring a professional football team’s shirt increase firm value?*

The research question is answered through analysing the abnormal cumulative return on sponsoring firm’s stocks around the time of sponsorship agreement announcements.

1.3 Structure

This paper is divided into three parts.

Part I gives an introduction to sponsorship theory. Definitions and characteristics of sponsorship are presented, as well as an explanation of how sponsorship can create value for the sponsor. Measurement methods used in sponsorship studies are described.

Part II contains a walkthrough of the methodology of event-studies. The theoretical background for such studies is explained in detail. The methodological approach used in the thesis is described. The sample is presented, as well as the process behind assembling it.

Part III provides the empirical results and discussions related to it. This final part of the thesis also contains the conclusion, and an assessment of limitations.

PART I - THEORY

2. Sponsorship Theory

This section covers sponsorship theory. Definitions, characteristics and the aim of sponsorship is presented, in order to create an understanding of why companies invest in sponsorship. A lot of focus is dedicated to different measurement methods of the effectiveness of sponsorship, as this thesis seeks to investigate exactly this.

2.1 Definitions

There are a number of definitions of sponsorship in the marketing literature. In the following the most acknowledged are presented. The most commonly used definition is the one proposed by Meenaghan (1983): “*Sponsorship can be regarded as the provision of assistance either financial or in-kind to an activity by a commercial organization for the purpose of achieving commercial objectives*”. Otker (1988) provides a more straightforward definition: “*Commercial sponsorship is (1) buying and (2) exploiting an association with an event, a team, a group, etc., for specific marketing (communications) purposes*”. The exploitation of the association between the sponsor and the sponsee is vital for a sponsorship to be profitable. If there is no promotion of the association between the two, then the value of the sponsorship is non-existent. This is underlined by Cornwell (1995), who introduces the term sponsorship-linked marketing, which is “*the orchestration and implementation of marketing activities for the purpose of building and communicating an association to a sponsorship*”. The most extensive literature review on the topic of sponsorship research is “*An International Review of Sponsorship Research*”, by Cornwell and Maignan (1998), they propose a universal definition which is based on the aforementioned ones. Although their definition is dated almost 20 years back in time, it encompasses the main elements of sponsorship, and still stands as one of the most complete definitions of sponsorship in the research literature:

Sponsorship involves two main activities: (1) an exchange between a sponsor and a sponsee whereby the latter receives a fee and the former obtains the right to associate itself with the activity sponsored and (2) the marketing of the association by the sponsor. Both activities are necessary if the sponsorship fee is to be a meaningful investment.

2.2 Sponsorship and advertising

Sponsorship and advertising are marketing activities and share some characteristics. However, sponsorship differs from advertising. Advertising is more direct, explicit and can be more easily controlled. Sponsorship has the ability to overcome some communication barriers, which results in an unlimited number of target selection possibilities (Erdogan & Kitchen, 1998). In general, advertising only targets viewers, as opposed to sponsorship, which targets active participants, spectators and media followers (Hastings, 1984). There is not only a difference in target audience, but also in the way the two marketing tools are constructed. Sponsorship is often mute and non-verbal, whereas advertising use a mixture of vocals, visuals and context in order to get the message across (Meenaghan, 1983). An example is a picture of football player celebrating a goal, that ends up in the sports pages, with a company logo emblazoned on his chest, as opposed to an ad made in a photo-studio posted in a magazine where a football player is used to sell cars or beverages.

The exploitation-factor of sponsorship, which is entailed in the definition used in this paper, points to advertising as way of a leveraging a sponsorship. A corporation's sponsorship of a major event will as follows most likely appear in advertising campaigns used by the sponsor. Such advertisements are the most valuable way of leveraging a sponsorship. Leveraging in this context refers to promotional spending in addition to the sponsorship fee. (Cornwell et. al, 2005b)

The differences between sponsorship and advertising are highlighted by Meenaghan (2005):

- **Interaction:** Sponsorship contains an emotional involvement in the relation between supporters and the sponsored team or event. Sponsorship can, as follows, create engagement, and thereby affect the communication that arises between the sponsored firm and its potential consumers.
- **The communication process:** Advertising is a verbal and visual way of communicating. Sponsorship is indirect communication that seeks to affect the reflection of consumers, and consequently increase brand awareness.
- **The leisure part of sponsorship:** The ties between sponsor and sponsee is often close. Sponsorship involves social, cultural and leisure related activities for the sponsor's employees. Advertising is a less comprehensive business transaction.

2.3 The objective of sponsorship

The objectives for firms to engage in sponsorships are manifold. A study completed in New Zealand, where 19 firms were asked to rank sponsorship objectives, showed that enhancing image and improving goodwill tops the priority list, but increasing awareness, management interest, staff recruitment and profitability also have importance (Cornwell and Maignan, 1998). Authors argue that these objectives are insufficient, because marketing and communication objectives mainly are adopted by large corporations, and that small or mid-sized businesses simply view sponsorship as a tool that is used to establish community relations and as a way to support their community (Mount and Niro, 1995).

Goodwill is described as a consumer's positive attitude towards a sponsor who sponsors an object with which the consumer has an emotional attachment. The presence of goodwill is one of the differences between sponsorship and advertising (Dees et al. 2008). If a consumer views a sponsorship as beneficial for the community, it is less likely that he will develop a negative attitude or relationship with the sponsor's products or services (Meenaghan, 2001). This means that goodwill affects the sponsor's image, which is a desirable effect of a sponsorship. Section 2.4 explains why this is the case.

The different sponsorship objectives, which sponsee to choose, are decided by various factors. Sponsorship area, activity, sponsor industry and company size are the most common ones (Copeland et al. 1996). There are a number of studies which have identified these priorities (Hermanns et al. 1986; Püttmann 1991; Thwaites et al. 1998). Also included is perceived affinity between sponsor product and sponsored activity, affinity between targets of sponsor and sponsee, the popularity and image of the potential sponsored party and its willingness to cooperate (on a long-term basis), geographical reach, contact frequency, contact quality, expected sponsorship costs/benefits, the type of rights received, possibility to integrate the sponsorship into the communication/marketing strategy (Walliser, 2003).

An effect of sponsorship is the ability to target a wide range of audiences. However, there is limited research on which type of sponsorship is most capable of reaching diversified publics. It is not the type of sponsorship selected that is most important, but rather the leveraging of the sponsorship. Sponsoring a popular tennis tournament or a renowned opera performance will probably serve the purpose of reaching a mass audience with upscale demographic characteristics. On the contrary, if one wishes to reach key decision makers in the distribution

channel, box seats to either event would most likely yield better results, and build strong business ties (Cornwell & Maignan, 1998).

As an indication of which type of sponsoring is used by different sponsors, studies show that firms sponsoring sports often use a percentage of sales allocation method, and that sponsors of cultural and community activities more often than not use task-and-objective budget setting or an ad hoc approach. This is seen as evidence of the latter's philanthropic perspective on sponsorship (Hoek, Gendall & West, 1990).

2.4 From sponsorship to increased firm value

It is important to understand how a sponsorship creates value for the sponsor. In the following, this causality is explained.

Firms engage in marketing activities in order to attain attention from target groups and become visible in the market. A sponsorship creates exposure. Exposure has cognitive, affective and behavioral outcomes (Cornwell et al., 2005b). Brand knowledge is a cognitive effect of sponsorship, and refers to the customer's ability to identify a brand under different circumstances. Here, exposure leads to customer awareness. This awareness is affected by the customer's emotional preferences towards the sponsor. The perceived fit between sponsor and sponsee is one effect of these preferences. If a customer feels that this fit is natural then his attitude towards the sponsorship is positive. If the fit is perceived as bad the effect is the opposite. These preferences are subjective (Simmons & Becker-Olsen, 2004). The attitude towards a sponsor is called brand equity. Brand equity refers to the consumer's response to a firm's marketing initiatives. A brand has positive brand equity if consumers react more positively to an element in the market mix for the brand than for similar brands (Keller, 1993).

A positive brand equity affects customer behavior. A study on the customer behavior of NASCAR-fans confirms this. Of more than 1000 respondents 71 per cent said that they *often* or *almost always* chose to purchase products from brands sponsoring NASCAR rather than products from other brands. (Madrigal, 2000). This is supported by Pope et al. (2009), who found a positive effect on purchase intent for products of sponsoring firms than for firms which did not engage in sponsorship. Purchase intent or commitment are behavioral effects of sponsorship. This is the end product sponsors target. If a sponsorship manages to achieve behavioral effects it will lead to increased sales and profit for sponsors. The model below shows the effect of a successful sponsorship.

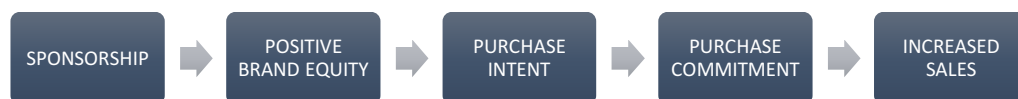


Figure 2.4.1: Sponsorship effects.

The theory behind the effect of sponsorship is supported by the correlation between positive brand equity and increased profit shown in multiple studies (Mizik, 2014; Stahl et al., 2012; Aaker & Jacobsen, 1994).

2.5 Measuring the effect of sponsorship

A sponsorship is effective if it manages to cause the effect shown in figure 2.4.1. There are several ways of measuring this effectiveness. In the following, the most common measurement methods used in marketing studies are presented. Three main measuring methods are presented;

- i) exposure-based methods
- ii) sponsorship awareness
- iii) experiments

The first two are completed using surveys. The methods are both introduced and critiqued.

2.5.1 Exposure-based methods

The exposure-based method builds on the theory of exposure leading to added firm value. There are two main techniques:

- i) measuring the amount and type of media coverage generated by a sponsored event
- ii) calculating direct and indirect audiences

These measures provide an estimation of generated exposure (Hulks, 1980). *Exposure-based methods* have been in use for a long time and are still regarded as highly relevant. As today's media landscape looks very different, with exposure on the internet and social media leading to more channels to monitor, the method demands more comprehensive work today than before. It is important to understand the limitations of the method, and not view the link between

exposure and effectiveness to be directly related. Exposure is important for sponsorships to be effective, but it is not the only component needed for this to happen.

Exposure based methods contribute to measuring certain aspects of sponsorship and, in the right context, it is an important tool for sponsors. The method serves a purpose when comparing different sponsorship deals in a firm's portfolio, or in comparison with competing properties in a rival's brand portfolio. Measuring exposure is also a useful tool if a firm evaluates enhancement of a sponsorship's visibility or making changes to the sponsorship's profile. The main factors this measurement method identifies are issues with readability, attention-gaining capacity, type-face, obstruction, location or color ways. The extent and quality of mentions and coverage are also possible to identify (Meenaghan & O'Sullivan, 2013).

2.5.2 Sponsorship awareness

Sponsorship awareness is a method where one measures to which extent it is known that a sponsor is associated with an event. The measuring takes place via surveys, where the respondents register the familiarity, awareness and preferences engendered by a sponsorship (McDonald, 1991). Most studies examining sponsorship effects tend to include some sort of tracking measure. In spite of this, there is broad criticism of the method in the literature. Meenaghan and O'Sullivan claim that there are three related issues with measuring sponsorship awareness that may arise (Meenaghan & O'Sullivan, 2013).

Firstly, the surveys used in studies can either ask prompted or unprompted questions. Unprompted questions are spontaneous, and the questions do not have any clues embedded in them as to which sponsor is involved. This method consistently results in lower awareness scores than prompted questions, but the results are seen as truer. Prompted methods take two forms, either the respondents are handed a list with sponsors, and subsequently asked which one of the listed firms who sponsors an event. This tests the respondents' knowledge of the sponsorship. However, there are a lot of factors that influence the participants when using this method. The list of sponsors contains sponsors from three categories:

- (i) the event sponsors
- (ii) firms who are not involved with the event
- (iii) made up firms, so-called dummy-sponsors

The creation of this list may affect respondents, as a list where the number of dummy-sponsors is small and where the firms who are not involved with the event may have an unnatural fit with the event can be seen as easier to answer than others. Therefore, the list-aided approach has its weaknesses. The second way of completing prompted surveys are to straight out tell the respondents which sponsor they are investigating, and then asking the respondents if they are aware of this. The legality of the following answers is very questionable. Participants may answer untruthfully in fear of appearing unknowledgeable, or because people tend to agree with what is being said, the so-called friendliness effect. Hence, the method of asking prompted questions usually gives unreliable results (Meenaghan & O'Sullivan, 2013).

The second issue with measuring awareness focuses on the different prerequisites of the respondents, mainly, their involvement. This factor most likely has an impact on the scores, and may lead to incorrect results in regards to measuring what the sponsorship is achieving. There are two aspects here. *Relatedness* refers to the fit of the relationship between sponsor and sponsee. If the association between them is seen as natural, the fit is good. A good fit inflates results. The other aspect is *prominence*. Here, more prominent brands, i.e. well-known brands, are more frequently suggested as event sponsors, as opposed to less-known ones. This may obscure the results, and one should therefore use considerable judgement when interpreting them. The *relatedness*- factor weighs heavier than the *prominence*-factor, which is mostly only involved for large events (Johar & Pham, 1999).

Studies have shown that the approach of the different questionnaires used in surveys lead to different results. This is the third and final issue with measuring awareness. Results from studies who investigate this, show that there is considerable variation in measured awareness for the different forms used. As an example, prompted sequences are hugely affected by the wording of the clues, and do as such lead to unreliable results (Tripodi et al., 2003).

A difficulty with measuring awareness is to isolate the effect of the sponsorship from the effect of advertising and other marketing activities. Some scholars claim that measuring awareness has no value, because they fail to measure a change in attitude towards the sponsors, but solely measure the ability to remember a firm or a product they already endorse (McDonald, 1991).

Awareness measurement does, in spite of the criticism, serve a purpose if applied correctly. Studies that manage to solve the challenges with constructing surveys are useful to sponsors. Sponsorship awareness is an important first step in achieving a successful sponsorship. If the

survey results are used on the target market of the sponsor, and if surveys are completed regularly, the awareness scores may prove useful.

2.5.3 Experiments

A different approach to measuring sponsorship effectiveness is the use of experiments. Pham (1991) is the most prominent scholar in this context. He rejects the academic value of surveys, and claims that only experiments isolate the effect of sponsorship, and will therefore provide more robust results. This is supported by Quester & Thompson (2001). They believe that every study attempting to measure the effectiveness of sponsorship should include experiments, as they provide more validity than surveys. However, out of the 83 studies on sponsorship identified between 1996 and 2013, by Walliser (2013), less than a quarter were experiments.

2.5.4. Event studies

An event study is a statistical method that is used to measure the effect of an event on a firm. The method is described in detail in Chapter 4. Studies on sponsorship using this method have taken many different approaches. The effect on a sponsor's stock of announcements of sponsorship deals, doping scandals, success on the field, and other incidents have been investigated using the event study methodology. Examples follow below.

Eisdorfer & Kohl (2014) found a positive relation between success on the field for NFL-teams and firm value. Matches played in venues with a sponsor in the stadium name were investigated, and positive average abnormal returns for the stadium sponsors were revealed when the home team won. Knittel & Stango (2010) investigated the effect on sponsors following Tiger Woods' personal scandal which led to him stepping back from golf. They estimated a loss of \$5-12 billion for shareholders of companies endorsing Woods.

The studies on the profitability of football shirt sponsorship show conflicting results. Both Martinez & Janney (2015) and Naidenova et al. (2016) find a negative relation between sponsorship and firm value, with the latter claiming football shirt sponsorship being charity rather than commercial investment. Agrawal & Kamakura (1995) suggests that market reactions to sponsorship announcements are small, or insignificant, as the market believes that the costs outweigh the benefits.

2.6 Summary

What we draw from all this research is that sponsorship involves a partnership between a sponsor and a sponsee, and that sponsorship differs from advertising. Sponsorship must be leveraged in order to be effective. Such leveraging can be joint promotional activities by sponsor and sponsee. Measuring sponsorship effectiveness is complicated, reflected by the multitude of different methods used in academic studies. The event study methodology is a method for measuring the effectiveness of a sponsorship. Event studies on football shirt sponsorship have yielded conflicting results. The results from this thesis may reflect this.

3. FOOTBALL SPONSORSHIP

This section provides insight on the topics of football economy and football shirt sponsorship. The commercial evolution of football, the object of football clubs' existence, as well as fan-club loyalty and football rivalry are the topics explained. The reason for highlighting these topics is to provide a deeper understanding of why studies on football shirt sponsorship yield results who show no or a negative relation between sponsorship and firm value. This will in turn create a framework and overview of the literature needed to understand the empirical results of this thesis.

3.1 The Economic State of Football

The Deloitte Football Money League is a ranking of the 20 football clubs in the world which generate the most revenue. Manchester United FC topped the first edition with a revenue of £88m. 20 years later they are back at the top spot, with a revenue nearly 6 times larger (URL 1). Even though Deloitte did not publish a complete list of 20 teams in their first edition, they report that the 20th team that year was Arsenal FC with a revenue of €36m. In order to gain a place in the top 20 in the 2015/16 season the revenue needed was Leicester City's €165m, an increase of 358 %. Deloitte divide the revenue streams of football clubs into three:

- (i) broadcast revenue
- (ii) commercial revenue
- (iii) matchday revenue

In the Football Money League 2017, the commercial revenue stands for 43 % of total revenue, broadcast revenue 39 % and matchday revenue 18 %, on average. Football shirt sponsorship is commercial revenue. Deloitte's report show that the increase in football shirt sponsorship deals is on par with the economic development in football.

3.2 Football's Economic Potential

The untapped revenue potential in Asia will most likely be the biggest revenue driver for European football clubs going forward. China seems most active in trying to bolster their football culture, with an aim to become a "World Football Superpower" by 2050. The growing transfer fees paid by Chinese clubs to Europe is one of the consequences, with club

owners making large investments in order to be viewed more favorably by the government (URL 5). Deloitte's 2017 report projects that a Chinese club might figure in the Money League by 2030. The growing number of Asian shirt sponsors also exemplifies Asia's potential. Richard Kenyon, director of marketing at Everton FC, ranked 23rd in the Football Money League 2017, supports this notion, and reports on a larger Asian fan base for the club, with more engagement in social media. More importantly Kenyon mentions improved and growing shirt sales in the region, with several new sponsorship deals being made with Asian companies (URL 6). The general opinion is that the economic rise of the football economy has many years of growth ahead of it, and that the clubs stand to improve their revenue substantially.

3.3 Football Shirt Sponsorship

Football shirt sponsorship generally consists of a company establishing a relationship with a football club, which gives the sponsoring company the legal right to be associated with the club throughout the contract period. The most obvious consequence of the relationship is the placement of the sponsoring company's logo on the shirts of the football club (Chadwick, 2004). The position of the logo is almost always on the stomach or breast area of the shirt. The logo is clearly visible and is rarely contested by other sponsors on the front side of the shirt. Furthermore, a sponsorship agreement leads to joint promotional activities, where the club may be used in the sponsoring company's advertisement campaigns and vice versa (Beech et. al., 2000a; Beech et. al., 2000b).

The thriving football economy has increased cost pressure relating to player acquisition and salaries (Dempsey and Reilly, 1998). This has increased the importance of lucrative shirt sponsorship agreements for clubs, who no longer view sponsorship as a minor revenue stream, but a key revenue component for covering costs (Ray, 2003).

Studies have shown that football shirt sponsorship may increase sales, enhance awareness levels and management of brand attitudes, as well as constitute brand personality, stature and impact, and positively affect consumer perceptions (Miles, 2001; Wilcox et. al, 2001; Rosson, 2001). Football fans acknowledge football shirt sponsorship as an important revenue stream for clubs. Therefore, sponsoring firms generally attain increased brand equity. (TNSSport, 2002; Rosson, 2001).

However, the notion that football sponsorship is a positive and profitable investment is disputed. The complex and challenging nature of sponsorship relationships are, according to IEG (1999), not recognized by sponsoring corporations. This in turn leads to ineffective sponsorships. The lack of competent sponsorship management skills and resulting ineffectiveness is supported by several studies (Mintel, 2000; Cornwell and Maignan, 1998; Hoek, 1999).

Chadwick & Thwaites (2005) report on the inadequate management capabilities of sponsoring firms, and believe that corporations are unprofessional when operating with a short-term view on sponsorship relationships. The power-balance in the club-firm relationships is skewed in favor of the football clubs, with powerful clubs not hesitant of exploiting their position. This imbalance is counter-intuitive, seeing as football clubs are relative small businesses compared to sponsoring firms. As an example, Manchester United FCs total revenue in 2012 was €396m, compared to their shirt sponsors parent company General Motors' reported earnings of €199,3bn. It is therefore suggested that sponsoring firms need to take advantage of the business-related competence that they possess, as they have succeeded in becoming profitable, large corporations, that are market led and marketing oriented. This may explain why some studies find a negative or no relation between sponsorship and firm value, as the consequence of the lacking management skills may be ineffective sponsorship agreements and unprofitable or at least less profitable investments (Martinez & Janney (2015); Naidenova et al. (2016); Kamakura (1995)).

3.4 Football Clubs and Profit Maximization

A key insight needed when doing business with football clubs is that football clubs do not have the same objective as other companies. Football clubs do not seek to maximize shareholder value or to maximize profit. Football clubs are utility-maximizing and are constructed in order to win football matches.

In *Soccernomics*, a pivotal book on football economy, the football business is labeled as the worst business in the world. Very few football clubs manage to turn a profit. After investigating the relationship between profit and league position in the Barclays Premier League between 1992 and 2007, the numbers show that a higher league position often

resulted in profits moving in the opposite direction. This happened in 45 per cent of all cases. This was also the case if a team moved into a lower league position with profits increasing (Kuper and Szymanski, 2012).

Football clubs want to win trophies. That is their primary target, and the reason for their existence. In order to win you need the best players. And the best players are expensive, both in transfer fees and salaries. If you do not buy them, some other team will. Players and agents are very much aware of this, and transfer fees are not seen as financial investments, but rather a way to gain a competitive advantage on the pitch. The wage-performance relationship that supports these arguments is examined and explained in *Money and Football*. A regression on the relationship show that the wages and league position of a club are highly correlated. The table below summarizes the results:

<i>Period</i>	<i>R²</i>
1958 – 1975	0,62
1976 – 1994	0,74
1995 - 2013	0,77

Table 3.4: Wage-performance results. R².

R² refers to how well the model explains variation in the dependent variable. This means that 77 per cent of the variation in position in the Premier League era, from 1995-2013, is accounted for by wages, in this model (Szymanski, 2015).

A study of the behavior of Spanish and English clubs between 1993-2005 investigated whether or not they pursued profit. Of course, making a profit means spending less then you earn, but as the wage/performance relation shows, less spending reduces performance. The study's findings were univocal, and concluded that clubs did not pursue profit (Kuper and Szymanski, 2012). The study estimated the league position for each team that would maximize profits. Barcelona FC, for example, unquestionably one of the two best teams in Spanish football would have to aim to finish 15th, because of the large wage cuts needed for maximizing profit. Their biggest competitor, Real Madrid FC, would have to aim for a 17th place. On average, Spanish teams finished 12 places above their profit-maximizing position. One possible explanation for this is that if a club chooses to maximize profits through

reducing spending, with every other team pursuing footballing results, the worsened results on the pitch would lead to relegation.

The importance of understanding how football clubs think is highlighted here to explain why some sponsorship agreements turn out ineffective for sponsoring companies. If companies fail to make the proper adjustments to a club's business perspective and mentality, the consequence may be unprofitable investments.

3.5 Sponsorship-Fit and Football Rivalry

The sponsorship theory literature review of this thesis provided an understanding of the basic foundation for sponsorship; exposing a company's logo on an item or an event will lead to people, potential customers, raising awareness of the brand and establishing a positive relationship with it. This will in turn lead to potential customers becoming actual customers. The fit between a sponsor and a sponsee was mentioned as one factor that may influence the success of a sponsorship. Relating to football this idea is challenged. The nature of football creates loyal fans, who are thought to be more prone to establishing a customer relationship with the sponsors of their team. Another consequence of the competitive nature of football is rivalry. Rivalries are common throughout the football world, on all levels. Often based on geographical proximity, defining historical matches between teams or longstanding competition for winning the same trophies. The effect of such rivalries is disdain, or even hatred of rival teams. When the Portuguese football player Luis Figo transferred from Barcelona FC to their biggest rival Real Madrid FC in year 2000, the Barcelona fans were outraged to the point that they threw a pig's head onto the pitch in Figo's first match against his former team mates (URL 7).

Bergkvist (2012) argues that the negative emotions toward rivals can be transferred onto sponsors of rival teams as well, and effectively making the brand of the sponsor less attractive to a portion of their potential customers. As an effect Bergkvist believes that firms who chooses to sponsor a football club at the same time chooses to be disliked by a set of their customers. Bergkvist's argument is based on a study investigating if football fans deliberately chose not to drink beer from a brand sponsoring a rival team. The study demonstrates that there is a downside of sponsorship, and that sponsors fail when they assume that the fit between the object and the brand is equal for their entire target group. Martinez & Janney

(2015) support these findings; Their study on football shirt sponsorships showed negative results for sponsors of both national teams, individual teams and leagues. However, the reactions were more severe for sponsors of individual teams. This is interpreted as a consequence of the backlash from rival fans.

3.6 Summary

This section has highlighted the main characteristics of the football business, which consists of utility maximizing clubs with little focus on profit. Loyalty and rivalry is explained, in order to show why football sponsorship may be more complex, and demand more from sponsors in order to make effective sponsorships.

This concludes Part I of this thesis. Part II follows, which explains the methodology and sample of the analyses.

PART II – METHODOLOGY & SAMPLE

4. Methodology

In this section, I outline the event study methodology used to analyze and answer my research question: “Does sponsoring a professional football team’s shirt increase firm value?”. The methodology theory is based on MacKinlay (1997).

4.1 The Efficient Market Hypothesis

The efficient market hypothesis was launched by Fama (1970), in order to explain why historical price movements are no good in predicting future changes in security prices. A market is efficient if the prices fully reflect all available information. This means, that if a piece of new information becomes available, for example a company merger or an unforeseen accident, affected companies experience a change in stock value, as investors will buy or sell the stock until it eventually ends up on the “correct” level. This new price level will fully reflect all available information yet again. The assumptions behind the efficient market hypothesis are:

- There are no transaction costs
- Information is universally shared and costless
- Homogenous investors

These assumptions are rarely met, but Fama (1970) operates with three different degrees of market efficiency:

- **Weak form:** Prices reflect historical price movements
- **Semi-strong form:** Prices reflect historical price movements as well as all public information
- **Strong form:** Prices reflect historical price movements as well as all public and private information

Most empirical evidence support the semi-strong form of market efficiency. Based on this, the idea is that when a firm and a football club publishes a joint press release, announcing a sponsorship, this is viewed upon as new information in the market. The prices in the market will therefore react to this new information, and depending on expectations of profitability, the stock of the sponsoring company will move up or down.

Event studies compare the return of a stock on the day, or around the time, of an announcement, with an estimated normal return for the company involved. Examples of such announcements are mergers and acquisitions, issues of new debt or equity, earnings announcements or new business partners. An announcement of new information is referred to as an event. This gives the following relation:

$$AR_{i\tau} = R_{i\tau} - E(R_{i\tau}|X_{\tau}) \tag{1}$$

here, $AR_{i\tau}$, $R_{i\tau}$, and $E(R_{i\tau}|X_{\tau})$ are the abnormal, actual, and normal returns for time period τ . X_{τ} is the conditioning information for the normal return model.

4.2 Measurement Windows

When preparing data for an event-study, the time around the event is generally divided into three parts; an estimation window, an event window and a post-event window. The latter, however, is often not included in studies investigating short term effects. The timeline for an event-study is:

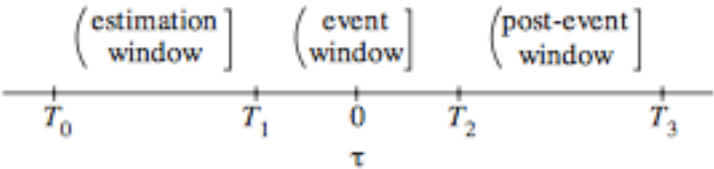


Figure 4.2: Timeline for event-studies.

$\tau = 0$ is the event date. The event window length is set to be larger than one day. This enables the use of abnormal returns around the event day. The estimation window is required in order to estimate a normal return for the involved stock. The analyses in this study use an estimation window of 250 days, with a 20-day gap between the last day of the estimation window and the announcement date.

It is important that the estimation window and the event window do not overlap. If these overlap, the normal returns would more than likely be strongly influenced by the reactions caused by the event itself. Preventing this overlapping results in a more accurate estimation.

4.3 Market Model

Calculating the normal return can be done in different ways. Models can be either statistically or economically founded. The economic models do, however, include statistical assumptions. The two most frequently used models are the constant mean return model and the market model. These are both statistically anchored. The latter is considered an improvement over the first, due to the separation of the return from the variation in the market's return, but the results of the two are generally quite similar. Both models are used in this thesis.

The market model relates the return of a security to the return of the market portfolio. The model is as follows:

$$R_{it} = \alpha_i + \beta_i R_{mt} + \varepsilon_{it} \quad (2)$$

$$E(\varepsilon_{it} = 0) , \quad var(\varepsilon_{it}) = \sigma_{\varepsilon_i}^2$$

R_{it} and R_{mt} are the period- t returns on security I and the market portfolio. ε_{it} is the zero-mean disturbance term. α_i , average return for stock I with R_{mt} equal to zero, β_i , the stock's sensitivity to market movements, and $\sigma_{\varepsilon_i}^2$, are the parameters of the market model. The market portfolio is generally represented by a stock index in studies, for example the S&P 500 Index or the MSCI World Index. The event date is defined as $\tau = 0$. The period $\tau = T_1 + 1$ to $\tau = T_2$ is the event window. $\tau = T_0 + 1$ to $\tau = T_1$ is the estimation window. $L_1 = T_1 - T_0$ and $L_2 = T_2 - T_1$ represent the length of the estimation window and the event window respectively.

4.4 Estimation of the Market Model

Assuming general conditions ordinary least squares (OLS) is an ideal procedure for estimating the market model parameters. Both parameters and residual variance from the estimation period are estimated. Said parameters are mentioned above. The formulas behind these are as follows:

$$\hat{\beta}_i = \frac{\sum_{\tau=T_0+1}^{T_1} (R_{i\tau} - \hat{\mu}_i)(R_{m\tau} - \widehat{\mu}_m)}{\sum_{\tau=T_0+1}^{T_1} (R_{m\tau} - \widehat{\mu}_m)^2} \quad (4)$$

$$\hat{\alpha}_i = \hat{\mu}_i - \hat{\beta}_i \widehat{\mu}_m \quad (5)$$

$$\widehat{\sigma}_{\varepsilon_i}^2 = \frac{1}{L_1 - 2} \sum_{\tau=T_0+1}^{T_1} (R_{i\tau} - \hat{\alpha}_i - \hat{\beta}_i R_{m\tau})^2 \quad (6)$$

where

$$\widehat{\mu}_i = \frac{1}{L_1} \sum_{\tau=T_0+1}^{T_1} R_{i\tau}$$

and

$$\widehat{\mu}_m = \frac{1}{L_1} \sum_{\tau=T_0+1}^{T_1} R_{m\tau}$$

The market model parameter estimates are used to measure and analyze the abnormal return. The sample abnormal return is:

$$\widehat{AR}_{i\tau} = R_{i\tau} - \widehat{\alpha}_i - \widehat{\beta}_i R_{m\tau} \quad (7)$$

The null hypothesis, H_0 , is that the impact of the event on the behavior of returns is zero. The distribution of the sample abnormal return, of any given observation in the event window, is:

$$\widehat{AR}_{i\tau} \sim N(0, \sigma^2(\widehat{AR}_{i\tau})) \quad (8)$$

4.5 Aggregation of Abnormal Results

The objective with an event study is to draw inferences for the investigated event. In order to do that, the results need to be aggregated, both through time and across securities. When using an event window that stretches over multiple periods the concept of cumulative abnormal return (CAR) is necessary. The sum of all included abnormal returns, where $T_1 < \tau_1 \leq \tau_2 \leq T_2$:

$$\widehat{CAR}_i(\tau_1, \tau_2) = \sum_{t=\tau_1}^{\tau_2} \widehat{AR}_{i\tau} \quad (9)$$

Given an estimation window, L_1 , which assumes that the aforementioned sample error is zero, the variance of \widehat{CAR}_i is:

$$\sigma_i^2(\tau_1, \tau_2) = (\tau_2 - \tau_1 + 1) \sigma_{\varepsilon_i}^2 \quad (10)$$

The distribution of the cumulative abnormal return under the null hypothesis is then:

$$CAR_i(\tau_1, \tau_2) \sim N(0, \sigma_i^2(\tau_1, \tau_2)) \quad (11)$$

Now the observations need to be aggregated, as the testing of one single observation serves little purpose. It is assumed that there is no overlapping of event windows, in order to rule out problems with clustering. Clustering would lead to correlation in abnormal return across securities, underestimation of variance and increase t-value. The prevention of clustering is a criterion for independent abnormal returns and independent CAR, across securities. Using $AR_{i\tau}$ from equation (7) to aggregate abnormal return from each of the event-periods gives the aggregated abnormal return for the period τ :

$$\overline{AR}_\tau = \frac{1}{N} \sum_{i=1}^N \widehat{AR}_{i\tau} \quad (12)$$

For samples with a large L_1 , the variance is:

$$var(\overline{AR}_\tau) = \frac{1}{N^2} \sum_{i=1}^N \sigma_{\varepsilon_i}^2 \quad (13)$$

These estimates can be used to analyze the abnormal returns for any event period, by aggregating the average abnormal returns, using the same approach as the one used to calculate CAR_i .

This gives the following CAR for each interval in the event window:

$$\overline{CAR}(\tau_1, \tau_2) = \sum_{\tau=\tau_1}^{\tau_2} \overline{AR}_\tau \quad (14)$$

$$var(\overline{CAR}(\tau_1, \tau_2)) = \sum_{\tau=\tau_1}^{\tau_2} var(\overline{AR}_\tau) \quad (15)$$

4.6 Testing the Research Hypothesis

As previously mentioned, the null hypothesis, H_0 , is that the cumulative abnormal return is zero. To make inferences about this the following equation can be used:

$$\overline{CAR}(\tau_1, \tau_2) \sim N[0, var(\overline{CAR}(\tau_1, \tau_2))] \quad (16)$$

Because the variance, $\sigma_{\varepsilon_i}^2$, is unknown, an estimator is needed to calculate variance of abnormal returns, as in (13). It is possible to test H_0 using the sample variance measure of $\sigma_{\varepsilon_i}^2$ from the market model regression in the estimation window, to calculate $\text{var}(\overline{AR}_\tau)$:

$$\theta_1 = \frac{\overline{CAR}(\tau_1, \tau_2)}{\text{var}(\overline{CAR}(\tau_1, \tau_2))^{1/2}} \sim N(0,1) \quad (17)$$

The value of θ_1 is compared to critical values, accounting for number of observations and degrees of freedom. The criterion of no clustering is applied here, which means that the covariance is zero. Using the value to calculate p-values can be sensible, in order to identify the lowest level of significance for rejection of the null hypothesis. P-values are probabilities and refers to the reliability of the results.

4.7 Methodologic Choices in this Study

Event-window

This event study will use three event windows.

- (-1,0) = from 1 day before $\tau = 0$ to the day of announcement
- (1,+5) = from 1 day after $\tau = 0$ to 5 days after
- (-1,+5) = from 1 day before $\tau = 0$ to 5 days after

The [-1,0]-window is the announcement window. The results from this window measure the immediate effect of the announcement of a sponsorship agreement between a firm and a football club. Such announcement usually take the form of press releases, which are published on both the firm's and the club's official webpages. The date of publishing is day 0 in the event window, $\tau = 0$.

The [1,5]-window is the media coverage window. This window will measure the impact of the media's coverage of the announced sponsorship. Usually, the coverage entails details of the financial size of the agreement. These figures are rarely mentioned in the official press releases, and are mostly based on rumors or leaked information from the clubs. As an example, Chevrolet's record sponsorship agreement with Manchester United FC was made public on the 30th July 2012. The first articles covering the agreement that contained the

alleged sponsorship fees and financial obligations bound by the contract surfaced five days later, on Sunday the 4th of August. Day 5 of the Chevrolet (General Motors) event window is the 5th of August, which means that the effect of detail leakage should be reflected in the General Motors stock on the 5th of August (URL 10).

The [-1,5]-window is a window summing up the total effect of the sponsorship agreement.

Including event windows of different sizes will give a wider understanding of the effects of the announcement. It is important to avoid too large or too small event windows. The first might lead to difficulties in isolating effects, and the latter might make eventual effects too scarce or incomplete.

Estimation window

As suggested by MacKinley (1997) an estimation window of 250 days is used. This is approximately one calendar year of trading days. This window is large enough to assume that the sampling error, β_i , is zero. The estimation window starts 270 days prior to the announcement date. This leads to a gap of 20 days between the announcement date and the end date of the estimation window, which excludes overlapping.

Market index

The MSCI World market index is used for every company. This index represents large and mid-cap equity performance across 23 developed market countries. The index does not offer exposure to emerging markets. (URL 8)

5. Sample

In the following, the procedure of choosing the sample for this thesis is described.

5.1 Choosing and finding a sample

When choosing the sample for the thesis I first needed to establish selection criteria. Using the event study methodology meant that firms needed to be listed on a stock exchange in order to be eligible for selection. The second criterion was that the announcement date of the sponsorship agreements had to be easily obtainable.

Firstly, all current shirt sponsorship agreements were identified. Overviews of active agreements are published by news media and football blogs prior to every season (URL 9). Every sponsor was then investigated, with the main focus being finding out whether they were listed or not. After learning that a relatively few number of sponsors actually were listed at the time of the sponsorship, the search widened to include expired sponsorship agreements. By using a *Google* image search for historical football kits to every club playing in the top two flights of the biggest leagues of Europe over the past 30 years, and then specifying the search to learn the details of each agreement, the number of eligible clubs grew. Then, using the list of listed firms sponsoring or having sponsored a football club over the years, a search for the press releases of each agreement was conducted. The date of the press release counts as the announcement date in the study. These were easily obtained for all sponsors.

The list containing sponsoring firms, sponsored clubs and announcement dates meant that the sample was complete. The next step was collecting stock returns using the data program Thomson Reuters Eikon *Datastream*. Stock returns for the desired period of time for sponsoring firms, plus values on the MSCI World index were gathered. If the sponsoring company was owned by a parent company, as was the case with Chevrolet and Opel who are owned by General Motors, the stock returns of the parent company is used.

The sample consists of 29 sponsorship agreements. Analytical challenges due to the sample size are described in detail in Section 5.4.

Next, the headquarters of each company was identified, as well as main industry. This information was easily achievable through *Wikipedia*. In order to group firms according to size the annual financial reports for each firm, for the year of the sponsorship announcements were identified. That means that if a deal was announced in 2014, the report summarizing 2014, published some time in 2015 was used. Reported revenue was used as a parameter for grouping firms.

I also needed to divide teams into groups based on three team attributes;

- (i) top tier teams
- (ii) Champions League participants
- (iii) Football Money League participants

The first attribute had already been collected. A search on Champions League participants in the year of announcement was conducted in order to identify which teams belonged in that category. Lastly, Deloitte’s Football Money League reports are easily accessible on Deloitte’s homepages.

Finally, stock returns for three competitors to each firm were collected, using the same method. The competitors were identified by the help of Thomson Reuters Eikon’s list of “industry peers” for each company. *Ziggo*, the Dutch cable operator sponsoring Ajax Amsterdam FC, had no peers listed and was consequently taken out of the sample for the rival firm analysis. The time period and index for this part was the same as for previously collected data.

5.2 Describing the Sample

The tables below show summary statistics.

	<i>REVENUE (\$)</i>	<i>NUMBER OF EMPLOYEES</i>
<i>MEAN</i>	48 597 475 373	115 898
<i>MAX</i>	228 247 000 000	462 400
<i>MIN</i>	250 431 000	80
<i>MEDIAN</i>	23 164 579 410	56 240

Table 5.2.1: Summary statistics. Sample.

The 29 teams in the sample play in 8 different countries, and 11 different leagues. England is by far the best represented country, with 15 teams.

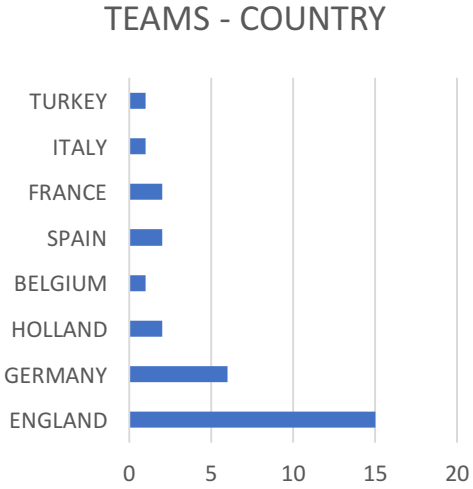


Figure 5.2.1: Country distribution. Sample.

19 out of the 29 sponsorship deals were announced after 2010.

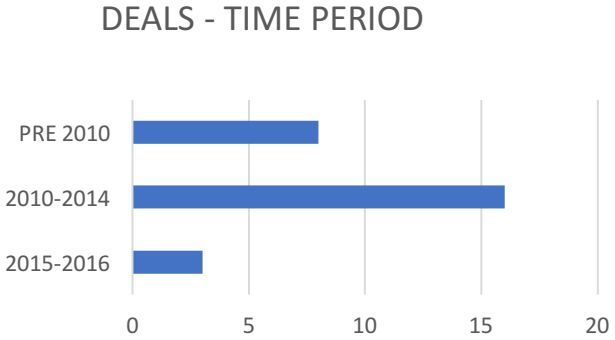


Figure 5.2.2: Deals. Announcement years.

Two tables (Table 5.2.2 and Table 5.2.3) summing up the characteristics for each firm in the sample can be found in the appendix.

5.3 Consequences of the sample-size

A sample of 29 teams is lower than desired, and will have some analytical consequences. When calculating statistical significance of the results, the size of the sample affects the critical values which decide the limit of significance.

When testing a hypothesis, a t-value is computed and compared to a critical value based on a chosen significance level, the type of test (one-sided/two-sided) and number of degrees of freedom. With 29 teams and a significance level of 5 %, the critical t-value of a two-sided test is 2,045 (Wooldridge, 2008). This means that the null hypothesis is kept as long as the computed t-value is less than 2,045. If the sample had 100 teams the critical value would be 1,984. In order to account for this in the analysis, several significance levels are used, from 1% through 10%, as well as a computation of p-values. P-values are probabilities, a value between 0 and 1, and summarizes the strength or weakness the results against the null-hypothesis. In the example above, with a critical t-value of 2,045, a p-value of 0,05 means that the probability of achieving a t-score of 2,045 or more is 5 %, given a true null hypothesis. A p-value above 0,05 would mean keeping the null hypothesis. The null hypothesis is usually that there is no relation between the phenomena studied.

As the sample size is accounted for when comparing t-values to the critical value, the empirical results in this thesis must fulfil stricter demands in order to achieve statistical significance. This strictness gives robust results, and is a way of solving the sample size challenge.

PART III – EMPIRICAL RESULTS

6. Results

This section presents the results of the event study. Four analyses are conducted.

(1) CAR for the sample

- Calculating CAR using the mean return model and the market model

(2) Variation in CAR for sponsors characteristics

- Investigating whether CAR varies with firm specific characteristics

(3) Variation in CAR for sponsee characteristics

- Investigating whether CAR varies with team specific characteristics.

(4) CAR for sponsor rivals

- Calculating CAR for sponsor rivals

The reasoning behind completing the analyses in this order is to obtain a complete, diversified understanding of sponsorship agreements' impact on firm value. In that regard, the steps in the analysis can be seen as a funnel, where each step comes as a consequence of the results in the previous step, and therefore seeks to reveal more on the relationship investigated.

The event study's hypotheses:

$$H_0: \text{Cumulative abnormal returns} = 0$$

$$H_1: \text{Cumulative abnormal returns} \neq 0$$

The presentation of the results first interprets the insights provided by the output, without taking statistical significance into consideration. This is done in order to show understanding of what the different models seek to explain. Ultimately, the statistical significance of the results is discussed, and the null hypothesis is either kept or rejected.

6.1 Announcement Returns

The table below shows the results of a regression based on the mean return model and the market model over the three event windows. Panel A is the mean return model results. Panel B the market model results.

	PANEL A			PANEL B		
<i>Event-window</i> (τ_1, τ_2)	[-1,0]	[1,5]	[-1,5]	[-1,0]	[1,5]	[-1,5]
<i>N</i>	29	29	29	29	29	29
<i>Average CAR</i>	0,555 %	- 1,140 %	-0,585 %	0,542 %	- 0,858 %	-0,316 %
<i>Median</i>	0,431 %	- 1,138 %	0,281 %	0,057 %	- 0,949 %	0,458 %
<i>Standard error</i>	0,073 %	0,146 %	0,141 %	0,067 %	0,078 %	0,086 %
<i>t-value</i>	0,25768	0,01606	-0,34835	0,93735	- 0,945	-0,34835
<i>p-value</i>	83,94 %	98,80 %	74,18 %	52,06 %	39,82 %	74,18 %
Firms with CAR > 0	15	16	15	15	10	15

Table 6.1.1: Announcement returns. Statistical significance: *p<0.1; **p<0.05; ***p<0.01

The announcement effect measured in the announcement effect window in panel A shows a positive average CAR of 0,555 %. The interpretation of this is, that the cumulative return on the stocks over the two days in the event window is 0,555 % higher than the estimated normal return. 15 out of the 29 companies in the sample received a positive response in the market. However, the results are not statistically significant. The null hypothesis is not rejected, and a relationship between sponsorship agreements and effect on firm value is not proven.

The window measuring the effect of media coverage over the five days following the announcement shows a negative average CAR of -1,14 %. 16 out of the 29 firms do, however, show a positive abnormal return. The results are not statistically significant, and the null hypothesis cannot be rejected.

The window summing of the total effect of the sponsorship announcements are in line with the other windows, and shows no statistical significance.

Panel B shows that the results from the market model are similar to those of the mean return model. The average CAR is negative in the media coverage window and in the total window for both panel A and B. This may indicate that the market is slow to react on the new information in the market, or that information takes time to become public.

The similarities between the models is highlighted by figure 6.1.1 below, which shows the average CAR for the sample on the different days in the event window.



Figure 6.1.1: Model comparison between the mean return model and the market model.

The similarities are supported by event study theory. Brown and Warner (1985) show that results based on the mean return model do not systematically deviate from results based on more sophisticated models. As a result of this only detailed results from one of the models is presented below; the market model. Firstly, a histogram providing an overview of CAR-distribution for the sample is listed, for the total window.

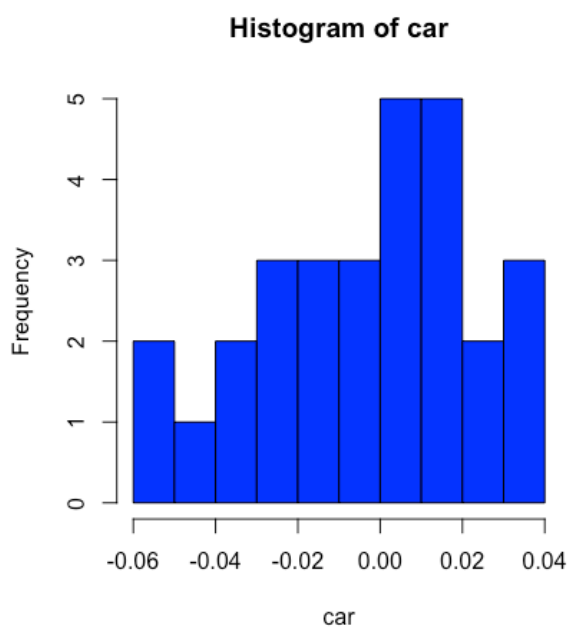


Figure 6.1.2: Histogram of CAR for all firms. Market model.

Table 6.1.2 shows the market model output for the event window days. The curve in figure 6.1.1 is based on these values. None of the values are statistically significant. However, the negative ACAR on day 5 might indicate that the media coverage of the sponsorships has an effect that occurs several days after the announcement date, and that the response is negative. This is in line with the intuition behind the inclusion of the media coverage window, explained in Chapter 4.7.

<i>DAY</i>	<i>ACAR</i>	<i>T-VALUE</i>
-1	0,56 %	0,28
0	0,54 %	0,27
1	0,81 %	0,41
2	0,27 %	0,14
3	0,29 %	0,15
4	0,21 %	0,10
5	- 0,32 %	-0,16

Table 6.1.2: Average CAR for the sample on each of the days in the event windows. Statistical significance: *p<0.1; **p<0.05; ***p<0.01

The results from the first part of the analysis are univocal. No relation between change in firm value and shirt sponsorship is proven. This is in line with results from the studies discussed in section 2.5.4, who showed no or a negative relation between sponsorship and firm value.

6.2 Firm Specific Results

This section shows results from a test of firm specific characteristics, in order to investigate whether these explain different reactions to sponsorship agreement announcements across firms. This is done by performing a regression with CAR on the left-hand side and including sector as explanatory variable. Two control variables are included, size and country.

All firms are categorized into groups depending on the business they operate in. This results in four categories:

<i>BUSINESS</i>	<i>NUMBER OF FIRMS</i>
<i>Car manufacturers</i>	8
<i>Telecom/IT</i>	9
<i>Financial services</i>	7
<i>Other</i>	5
Total	29

Table 6.2.1: Business categories.

The intuition behind using business as an explanatory variable is that the customer relationship to different businesses are dissimilar. It is for example reasonable to assume that most people tend to be more reluctant to switch banks than their mobile subscription. This may affect the effect of sponsorships, as affecting behavioral patterns is more difficult for some sponsors than for others.

The firms are divided into groups based on their origin country. This grouping is the first control variable. Companies sponsoring teams based in the same country as the sponsors' headquarters are grouped together. Firms sponsoring teams in different countries are labelled international companies, and are consequently grouped together as well. The control variable size is a binary variable, with firms rated as international being assigned a 1, and other firms 0. The reason behind this inclusion is the theory behind fit and sponsee, and the emotional connection between sponsor and target group.

Secondly, size is included as a continuous variable. Total revenue in the year of sponsorship agreement announcement is the basis of the variable, which is the natural logarithm of revenue. The revenue numbers are collected from the annual reviews published by the companies. This results in a semi-elastic model.

The business variable receives most attention in the result interpretation. In the following, the results from the regression are presented for all event windows. Models (1), (2) and (3) are labelled *simple* models. Models (4), (5) and (6) are the *larger* models. Model (7) is a model containing all variables.

The window summarizing the effect over the entire investigated period is presented below.

Regression Results							
	<i>Dependent variable:</i>						
	CAR for [-1,5]-window						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Car Manufacturers	0.009 (0.010)			0.004 (0.012)			0.008 (0.017)
Telecom/IT		-0.010 (0.010)			-0.008 (0.011)		0.001 (0.017)
Financial Services			0.005 (0.011)			0.010 (0.012)	0.013 (0.018)
International Companies				-0.008 (0.012)	-0.007 (0.012)	-0.012 (0.011)	-0.010 (0.013)
Company Size				0.002 (0.003)	0.002 (0.003)	0.003 (0.003)	0.002 (0.003)
Constant	-0.006 (0.006)	-0.00000 (0.006)	-0.004 (0.005)	-0.044 (0.068)	-0.051 (0.064)	-0.065 (0.066)	-0.054 (0.071)
Observations	29	29	29	29	29	29	29
R ²	0.032	0.036	0.008	0.058	0.075	0.082	0.096
Adjusted R ²	-0.004	0.001	-0.029	-0.055	-0.036	-0.028	-0.100
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01						

Table 6.2.2: Regression results. Firm specific. Event-window [-1,5].

The first half of the table shows the results from a simple model that controls for neither size nor fit. Car manufacturing firms have an average CAR of 0,9 %. This means that the announcement of a sponsorship is met with a larger stock return than estimated on the day of announcement of 0,9 %. This result is not statistically significant on any significance level, and the null hypothesis is kept. This is the case for the entire regression, as the larger model shows.

The interpretation of the control variables shows that international companies are more likely to yield worse returns than domestic companies, with negative coefficients. These findings are consistent with the literature, but are not statistical significant. The company size shows increased effect for companies with larger revenue, but these results are not statistically significant.

The other two windows similarly have insignificant cross-correlations with the sector of the sponsor. I conclude that the effect on change in firm value from football shirt sponsorship agreements is not significantly different from zero, and that business of the sponsor does not explain variation in CAR, controlled for size and fit.

6.3 Team Specific Results

The sample contains teams playing in different leagues, at different levels and with different financial resources. As a consequence of this, a regression using team characteristics as variables is completed, in order to test whether CAR is systematically related to team attributes. The idea behind this is to investigate whether or not the expected payoff for sponsors depend on the success of the teams they are sponsoring. A team belonging in either of the three categories described below is more successful on the field than a team who do not. This effect is labelled *the success-theory* in this thesis. However, given that football clubs are utility maximizing, with a desire to win, at the expense of profit maximization, it is not given that *the success-theory* holds.

Team characteristics:

i. Top tier teams

- Top tier teams get more TV-coverage than lower tier teams, because of the higher level of football they manage to display. In general, top tier teams are superior to non-top tier teams in every aspect of running a football club as well. The assumption here is that top tier teams are more attractive sponsees.

ii. UEFA Champions League participants

- UEFA Champions League is the most prestigious football club tournament in the world. Participation is secured through finishing among the best teams in the different domestic leagues. Participation means increased total revenue, through all revenue streams.

iii. Teams in the Deloitte Football Money League

- The Deloitte Football Money League is explained in Chapter 3.1.

The results of the regression for the total window is presented below.

Regression Results

	<i>Dependent variable:</i>		
	CAR for [-1,5]-window		
	(1)	(2)	(3)
Top tier teams	0.012 (0.012)	0.006 (0.012)	0.003 (0.013)
Champions League Participants		0.014 (0.010)	0.007 (0.014)
Teams in the Money League			0.010 (0.014)
Constant	-0.013 (0.010)	-0.013 (0.010)	-0.013 (0.010)
Observations	29	29	29
R ²	0.038	0.100	0.120
Adjusted R ²	0.002	0.031	0.015
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01		

Table 6.3.1: Regression results. Team specific. Total window.

The coefficients are positive for all variables. The interpretation of this is that sponsorship agreement announcements involving teams who belong in either of the categories are better received in the market than for other teams. The first model is a linear regression on top tier teams. Expanding the model to include control variables decrease this value. This may indicate that this category is less central than the other ones. The largest model shows strongest effects for teams figuring in the Football Money League or in the Champions League in the year of announcement. A possible explanation is that these teams are stronger financially than other competitors, and have more evolved marketing departments with more skilled staff. This may in turn mean stronger negotiators and better deals for teams than for firms. None of the results are statistically significant, however, and the null hypothesis cannot be rejected. The regression does, therefore, not provide results that indicates an effect on firm value for announced sponsorship agreements, and show no variation in CAR for team specific attributes.

The other two windows similarly have insignificant cross-correlations with team attributes. The results can be found in the appendix.

We conclude that CAR is not systematically related to team attributes. The results do not confirm the *success-theory*; hence, they don't build ground for assuming that more successful teams are either more or less profitable to sponsor for firms.

6.4 Rival Firm Wealth Effects

The results from the sections above do not yield any statistical significant results. Based on this, it is not proven that football shirt sponsorship has an effect on firm value, neither negative nor positive. However, there may be different channels through which profit is generated.

One possible channel is that the increased firm value for sponsoring firms is relative to the sponsoring firm's competitors; That the negative change in the rivals' firm value makes the sponsoring firm more valuable. In order to test this, an event study using the same event-windows, market index and methodology as in part (1) is completed. The CAR of three rival firms for each firm in the sample is estimated. With no eligible rivals suggested for Ziggo, the sample is made up by 84 rival firms. This method is inspired by Fisher-Vanden & Thorburn (2011). The sample selection process and method is explained in chapter 5.2.

The results of the calculations follow.

RIVAL FIRM WEALTH EFFECT			
<i>Event-window (τ_1, τ_2)</i>	<i>[-1,0]</i>	<i>[1,5]</i>	<i>[-1,5]</i>
<i>N</i>	84	84	84
<i>Average CAR</i>	0,81 %	-1,33 %***	-0,52 %
<i>Median</i>	0,731 %	- 0,159 %	0,009 %
<i>Standard error</i>	0,032 %	0,064 %	0,076 %
<i>t-value</i>	0,4950	- 3,381	-0,123
<i>p-value</i>	62,5 %	0,222 %	90,31 %
<i>Number of firms with CAR > 0</i>	51	35	37

Table 6.4.1 Regression results. Rival firms. All event-windows. Statistical significance: *p<0.1; **p<0.05; ***p<0.01

The media coverage window yields statistically significant results. The rival firms have an average CAR of -1,33 %. This means that they on average show a loss of 1,33 % compared to estimated normal return over the 5 days.

Seeing as the ACAR of the firms in the original sample is statistically insignificant, sponsoring firms experience an increase in firm value, relative to their rivals, in the media coverage window. This can be seen as an indication for football shirt sponsorship being a value creating investment. The announcement window show no significant results; hence the agreement details that appear in the media following the day of announcement may be better to measure the impact of sponsorship on the sponsor's firm value. It also appears as though the market is fairly slow in reacting to these details.

The window summing up the total effect provides insignificant results. This indicates that the total rival wealth effect is not significantly different from zero.

7. Conclusion

The aim of this thesis was to investigate the relation between football shirt sponsorship and firm value, and to find out whether such a marketing activity affects firm value of the sponsor. 29 sponsorship deal announcements were studied, involving listed firms, using different approaches.

The first part of the empirical analysis contained calculations based on both the mean return model and the market model. Neither of the approaches provided statistical significant results. The results point towards football shirt sponsorship having no effect on firm value, neither positive nor negative. All three event windows yielded similar results.

The analysis which differentiated the sample, testing for firm and team specific characteristics yielded no statistical significant results, and no relation between football shirt sponsorship and change in firm value, or variation in CAR systematically related to firm or team characteristics was found.

The final part of the empirical analysis came as a consequence of the insignificant results, and looked at wealth effects for rival firms. This approach proved useful, with a statistical significant result in the media coverage window. Rival firms experienced an average abnormal return of -1,33 % in the 5 days after the sponsorship announcements. This supports the theory that increase in firm value due to football shirt sponsorship is relative, with the negative wealth effect for rival firms being the relative gain for sponsors. However, with the total effect window giving insignificant results the wealth effect is not significantly different from zero.

This thesis does not find evidence of football shirt sponsorship affecting firm value. This is in line with previous studies. A reason for this may be that the financial gain of the sponsorship agreements is outweighed by the costs, or that the number of new customers is nulled out by the existing customers, who are loyal fans of rival teams and choose to end their customer relationship with the sponsor. It may also be the case that the market view shirt sponsorship as having no effect on turning potential customers into actual costumers, and hence irrelevant for a company's profitability, which is reflected in no abnormal stock return.

7.1 Limitations

The sample size of 29 companies is smaller sample than desired. Part two of the empirical analysis which studies firm and team specific attributes divides a small sample into smaller groups. However, challenges with critical values are covered in chapter 5.4, and are accounted for in the analyses, with stricter critical values, giving robust results.

PART IV – REFERENCES

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Appendix

Sponsor	Business	Country	Stock Exchange	Club	Announcement date
AIA	Financial services	China	Hong Kong	Tottenham Hotspurs	15.08.2013
AirAsia	Aviation	Malaysia	Malaysia	Queens Park Rangers	12.09.2011
American Express	Financial services	USA	NYSE	Brighton Hove Albion	13.03.2013
AON	Financial services	USA	NYSE	Manchester United FC	03.06.2009
Aviva	Financial services	UK	London	Norwich United	29.04.2008
Chansiri	Food supplier	Thailand	Bangkok	Sheffield Wednesday	01.06.2015
Chevrolet	Car manufacturer	USA	NYSE	Manchester United FC	30.07.2012
Comarch	IT	Polen	Warszaw	1860 Munich	05.05.2010
Daikin	Heating solutions	Japan	Tokyo	Club Brugge	08.06.2015
Gazprom	Energy company	Russia	Moscow	Schalke 04	10.10.2006
Genting	Betting company	Malaysia	Malaysia	Aston Villa	22.06.2011
Hewlett Packard	IT	USA	NASDAQ	Tottenham Hotspurs	08.07.2013
Hyundai	Car manufacturer	South-Korea	South-Korea	Olympique Lyonnais	14.08.2012
JEEP	Car manufacturer	USA	Milano	Juventus	06.04.2012
Nürnberg Versicherung	Financial services	Germany	Frankfurt	FC Nürnberg	20.07.2016
Opel	Car manufacturer	Germany	NYSE	Feyenoord	04.03.2013

Plus500	Financial services	Israel	London	Atletico Madrid	25.06.2015
Samsung	IT	South-Korea	South-Korea	Chelsea FC	25.04.2005
SAP	IT	Germany	Frankfurt	Hoffenheim	10.06.2013
Scania	Car manufacturer	Sweden	Stockholm	Angers	20.07.2012
Siemens	Telecommunications	Germany	Frankfurt	Real Madrid	17.07.2002
Standard Chartered	Financial services	UK	London	Liverpool FC	14.09.2009
Suzuki	Car manufacturer	Japan	Tokyo	MK Dons	03.05.2014
Telekom	Telecommunications	Germany	Frankfurt	Bayern Munich	08.03.2002
Toyota	Car manufacturer	Japan	Tokyo	Besiktas	28.06.2011
Virgin Media	Telecommunications	UK	NASDAQ	Southampton FC	08.06.2016
Vodafone	Telecommunications	UK	London	Fortuna Düsseldorf	07.05.2012
Yokohama	Tire Manufacturer	Japan	Tokyo	Chelsea FC	26.02.2015
Ziggo	Telecommunications	Holland	Amsterdam	Ajax	07.11.2014

Table 5.2.2: Describing the sample I.

Sponsor	Number of employees	Total revenue in USD	Stock Exchange	Area served	Headquarters Location
AIA	20 000 (2016)	\$21 610 000 000	Hong Kong	Asia-Pacific	Hong Kong, Hong Kong
AirAsia	5137	\$1 418 428 715	Malaysia	Worldwide	Kuala Lumpur, Malaysia
American Express	62 800	\$32 974 000 000	NYSE	Worldwide	New York, USA
AON	37 700	\$7 600 000 000	NYSE	Worldwide	London, UK
Aviva	54 000	\$83 345 154 620	London	Worldwide	London, UK
Thai Union Group (Chansiri)	46 500	\$3 720 000 000	Bangkok	Worldwide	Samut Sakhon, Thailand
General Motors (Chevrolet)	213 000	\$152 000 000 000	NYSE	Worldwide	Detroit, USA
Comarch	3500	\$250 431 000	Warszaw	Worldwide	Krakow, Poland
Daikin	56 240	\$14 950 359 477	Tokyo	Worldwide	Osaka, Japan
Gazprom	462 400	\$46 797 806 096	Moscow	Worldwide	Moscow, Russia
Genting	55 000 (2012)	\$6 171 979 363	Malaysia	Worldwide	Kuala Lumpur, Malaysia
Hewlett Packard	317 500	\$112 300 000 000	NASDAQ	Worldwide	Palo Alto, USA
Hyundai	104 731 (2013)	\$78 557 100 000	South-Korea	Worldwide	Seoul, South-Korea
FCA Group (JEEP)	218 311	\$110 090 463 304	Milano	Worldwide	London, UK
Nürnberger Versicherung	4227	\$4 404 942 950	Frankfurt	Europe	Nürnberg, Germany
General Motors (Opel)	219 000	\$155 000 000 000	NYSE	Worldwide	Detroit, USA
Plus500	80	\$275 600 000	London	Worldwide	6 different locations
Samsung	128 000	\$69 910 000 000	South-Korea	Worldwide	Seoul, South-Korea

SAP	66 572	\$23 164 579 410	Frankfurt	Worldwide	Walldorf, Germany
Scania	38 597	\$12 061 128 148	Stockholm	Worldwide	Södertälje, Sweden
Siemens	426 000	\$88 098 278 545	Frankfurt	Worldwide	Berlin & Munich, Germany
Standard Chartered	77 326	\$15 184 000 000	London	Worldwide	London, UK
Suzuki	14 571	\$28 549 494 753	Tokyo	Worldwide	Hamamatsu, Japan
Telekom	256 000	\$56 315 190 000	Frankfurt	Worldwide	Bonn, Germany
Toyota	317 716	\$228 247 000 000	Tokyo	Worldwide	Toyota, Japan
Liberty Global (Virgin Media)	45 000	\$20 000 000 000	NASDAQ	Worldwide	Denver, USA
Vodafone	86 373	\$29 010 625 000	London	Worldwide	London, UK
Yokohama	22 187	\$5 183 447 100	Tokyo	Worldwide	Tokyo, Japan
Ziggo	2571	\$2 144 677 325	Amsterdam	Europe	Amsterdam, Holland

Table: 5.2.3: Describing the sample II.

At early stages in the work process an event-window covering day one and two after the announcement day was investigated. The results for the first part of the analysis follow:

	<i>MEAN RETURN MODEL</i>	<i>MARKET MODEL</i>
<i>Event-window (τ_1, τ_2)</i>	[1,2]	[1,2]
<i>N</i>	29	29
<i>Average CAR</i>	- 0,894 %	- 0,271 %
<i>Median</i>	- 1,140 %	- 0,173 %
<i>Standard error</i>	1,953 %	1,4331 %
<i>t-value</i>	0,32519	-0,472
<i>p-value</i>	79,98 %	71,90 %
<i>Significant?</i>	No	No

Before deciding on performing a multiple regression with control variables to investigate firm and team specific effects other analyses were completed. Firstly, an attempt to show firm specific differences depending on which industry the sponsors operated in were completed. These are results from market model calculations, using the same method as in part one of the empirical analysis. The results follow.

Event-window [-1,0]

<i>BUSINESS</i>	<i>CAR</i>	<i>T-VALUE</i>	<i>SIGNIFICANT?</i>
<i>Car manufacturing</i>	1,14 %	1,194	No
<i>Financial services</i>	0,25 %	0,149	No
<i>IT</i>	-0,51 %	-1,342	No
<i>Telecommunications</i>	0,16 %	0,603	No
<i>Other</i>	-0,40 %	-0,241	No

Event-window [1,2]

<i>BUSINESS</i>	<i>CAR</i>	<i>T-VALUE</i>	<i>SIGNIFICANT?</i>
<i>Car manufacturing</i>	0,09 %	-0,103	No
<i>Financial services</i>	0,25 %	0,147	No
<i>IT</i>	-0,62 %	-1,64	No
<i>Telecommunications</i>	-0,11 %	-0,392	No
<i>Other</i>	-1,57 %	-0,960	No

Event-window [1,5]

<i>CATEGORY</i>	<i>CAR</i>	<i>T-VALUE</i>	<i>SIGNIFICANT?</i>
<i>Car manufacturing</i>	-0,51 %	-0,336	NO
<i>Financial services</i>	-0,21 %	-0,080	NO
<i>IT</i>	-0,84 %	-1,394	NO
<i>Telecommunications</i>	-0,29 %	-0,674	NO
<i>Other</i>	-1,34 %	-0,519	NO

The same procedure was completed for team specific effects. The results follow.

UEFA CHAMPIONS LEAGUE - PARTICIPANTS

<i>EVENT WINDOW</i>	<i>CAR</i>	<i>T-VALUE</i>	<i>SIGNIFICANT</i>
<i>[-1,0]</i>	1,53 %	1,128	No
<i>[1,2]</i>	0,60 %	0,443	No
<i>[1,5]</i>	-0,38 %	-0,179	No

UEFA CHAMPIONS LEAGUE - NON-PARTICIPANTS

<i>EVENT WINDOW</i>	<i>CAR</i>	<i>T-VALUE</i>	<i>SIGNIFICANT</i>
<i>[-1,0]</i>	0,09 %	0,170	No
<i>[1,2]</i>	-0,66 %	-1,170	No
<i>[1,5]</i>	-1,07 %	-1,200	No

BARCLAYS PREMIER LEAGUE CLUBS

<i>EVENT WINDOW</i>	<i>CAR</i>	<i>T-VALUE</i>	<i>SIGNIFICANT</i>
<i>[-1,0]</i>	-0,01 %	-0,014	No
<i>[1,2]</i>	0,47 %	0,528	No
<i>[1,5]</i>	-0,43 %	-0,308	No

OTHER CLUBS

<i>EVENT WINDOW</i>	CAR	T-VALUE	SIGNIFICANT
<i>[-1,0]</i>	0,93 %	1,246	No
<i>[1,2]</i>	-0,79 %	-1,056	No
<i>[1,5]</i>	-1,16 %	-0,976	No

Detailed results from both firm and team specific regressions follow, for the announcement window, and the media coverage window.

Regression Results

	<i>Dependent variable:</i>						
	CAR for [-1,0]-window						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Car Manufacturers	0.005 (0.008)			0.004 (0.010)			0.005 (0.014)
Telecom/IT		-0.001 (0.008)			0.001 (0.009)		0.003 (0.014)
Financial Services			-0.004 (0.009)			-0.003 (0.009)	0.00003 (0.014)
International Companies				-0.005 (0.010)	-0.006 (0.009)	-0.005 (0.009)	-0.005 (0.011)
Company Size				-0.0002 (0.002)	0.0001 (0.002)	0.00001 (0.002)	-0.0003 (0.002)
Constant	0.004 (0.004)	0.006 (0.004)	0.006 (0.004)	0.010 (0.054)	0.004 (0.051)	0.007 (0.053)	0.012 (0.057)
Observations	29	29	29	29	29	29	29
R ²	0.014	0.001	0.008	0.025	0.019	0.022	0.028
Adjusted R ²	-0.022	-0.036	-0.029	-0.092	-0.098	-0.095	-0.184

Note: *p<0.1; **p<0.05; ***p<0.01

Regression Results

	<i>Dependent variable:</i>						
	CAR for [1,5]-window						
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Car Manufacturers	0.004 (0.009)			0.001 (0.011)			0.003 (0.015)
Telecom/IT		-0.009 (0.009)			-0.009 (0.010)		-0.002 (0.016)
Financial Services			0.009 (0.010)			0.013 (0.011)	0.013 (0.016)
International Companies				-0.003 (0.011)	-0.0003 (0.011)	-0.007 (0.010)	-0.005 (0.012)
Company Size				0.002 (0.003)	0.002 (0.002)	0.003 (0.002)	0.002 (0.003)
Constant	-0.010* (0.005)	-0.006 (0.005)	-0.011** (0.005)	-0.054 (0.063)	-0.054 (0.059)	-0.072 (0.059)	-0.066 (0.064)
Observations	29	29	29	29	29	29	29
R ²	0.008	0.035	0.031	0.030	0.061	0.086	0.092
Adjusted R ²	-0.028	-0.001	-0.005	-0.086	-0.051	-0.024	-0.105
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01						

Regression Results

	<i>Dependent variable:</i>		
	CAR for [1,5]-window		
	(1)	(2)	(3)
Top tier teams	0.005 (0.011)	0.004 (0.012)	0.003 (0.012)
Chamipions League Participants		0.003 (0.010)	0.00001 (0.013)
Teams in the Money League			0.004 (0.013)
Constant	-0.012 (0.009)	-0.012 (0.010)	-0.012 (0.010)
Observations	29	29	29
R ²	0.007	0.009	0.013
Adjusted R ²	-0.030	-0.067	-0.106
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01		

Regression Results

	<i>Dependent variable:</i>		
	CAR for [-1,0]-window		
	(1)	(2)	(3)
Top tier teams	0.007 (0.009)	0.002 (0.009)	0.001 (0.010)
Chamipions League Participants		0.012 (0.008)	0.007 (0.011)
Teams in the Money League			0.007 (0.011)
Constant	-0.0003 (0.008)	-0.0003 (0.008)	-0.0003 (0.008)
Observations	29	29	29
R ²	0.023	0.095	0.109
Adjusted R ²	-0.013	0.025	0.002
<i>Note:</i>	*p<0.1; **p<0.05; ***p<0.01		