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The sponsorship effect:

Do sport sponsorship announcements impact the firm value of sponsoring firms?

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Abbreviations

AAR	Average abnormal return
ABC	American Broadcasting Company
AMEX	American Stock Exchange
AR	Abnormal return
ASEGI	Athens Stock Exchange General Index
ATP	Association of Tennis Professionals
B	Billion
BMP	Boehmer, Musumeci and Poulsen
CAAR	Cumulated average abnormal return
CAR	Cumulated abnormal return
CEO	Chief executive officer
CFO	Chief financial officer
CORP	Level of sponsorship
Corp.	Corporation
CPT	Cost per thousand
CSR	Corporate social responsibility
d	Dividend payment
DAX	Deutscher Aktien Index
DCF	Discounted cash flows
DFB	Deutscher Fußball Bund
DFL	Deutsche Fußball Liga
e.g.	exempli gratia (for example)
EMH	Efficient market hypotheses
ER	Expected return
F1	Formula 1
FC	Football Club
FFF	Fédération Française de Football
FIFA	Fédération Internationale de Football Association
FTSE	Financial Times Stock Exchange
HML	Value-risk factor

HOME	Sponsor and sponsee originate from same country
ICB	Industry Classification Benchmark
Indi 500	Indianapolis 500 miles race
INTERNAT	Reach of sponsorship
IOC	International Olympic Committee
IPO	Initial public offering
KOSPI	Korea Composite Stock Price Index
LPGA	Lady's Professional Golfers' Association
M	Million
M&A	Merger & Aquisitions
Max.	Maximum
MENA	Middle East and North Africa
Min.	Minimum
MLB	Major League Baseball
MMF	Market-risk factor
MR	Mean return
n	Sample size
n.a.	not available
n.s.	not significant
N+	Number of individual sponsorships with positive ARs
NASCAR	National Association for Stock Car Auto Racing
NASDAQ	National Association of Securities Dealers Automated Quotation
NBA	National Basketball Association
NCAA	National Collegiate Athletic Association
NEW	Novelty of deal
NFL	National Football league
NHL	National Hockey League
NOC	National Olympic Committee
NPV	Net present value
NYSE	New York Stock Exchange
P	Stock price

p	p value
p.	page
PGA	Professional Golfers' Association
PWC	PricewaterhouseCoopers
R	Return
ROA	Return on assets
ROI	Return on investment
RQ	Research question
S&P 500	Standard & Poor's 500 Index
SAR	Standardized abnormal return
SD	Standard deviation
SE	Standard error
SEC	Securities and Exchange Commission
SIZE	Size of sponsor
SMB	Size-risk factor
SMI	Swiss Market Index
T	Total number of days in a period
T	Test statistic
t _{BMP}	Boehmer, Musumeci and Poulsen t statistic
TECH	Sponsor is from high tech industry
TV	Television
TWSM	The World Sponsorship Monitor
UEFA	Union of European Football Associations
UK	United Kingdom
UMD	Momentum-risk factor
US	United States of America
USA	United States of America
VALUE	Total contract value of sponsorship deal
VIF	Variance inflation factors
VIK	Value in kind
VIP	Very important person

WSJ	Wall Street Journal
WTA	Women's Tennis Association
YEAR	Year in which sponsorship deal was officially announced
z	z statistic

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1. Introduction

This dissertation project analyses and interprets the effect of sport sponsorship announcements on the value of the sponsoring firm. This chapter will provide an overview of the relevance and significance of the research project (section 1.1) followed by an introduction to the purpose and objective of this study (section 1.2) and concludes with an outline of the structure of this study including a short description of each chapter (section 1.3).

1.1 Significance of the study

“Half the money I spend on advertising is wasted. The trouble is, I don’t know which half!”

John Wanamaker, founder of first US department store

Sponsorship in general and also sport sponsorship in specific has become a vital part of every major company’s marketing strategy (Javalgi, Traylor, Gross & Lampman, 1994; Meenaghan, 1991). Marketing professionals consider sponsorships as an important tool for building brand equity and corporate image (Cornwell, Roy & Steinard, 2001; Tripodi, 2001), especially in times of increased media fragmentation. New media (e.g. (mobile) internet) are competing with old media (cable TV, radio), dividing up the audience across a multitude of media channels and making it more difficult for marketers to reach the targeted audience (Rust & Oliver, 1994). Sponsorship provides the means to overcome this challenge.

Consequently, over the last two decades sport sponsorship has gained a consistently increasing share of marketing budgets and has developed into a marketing tool that is on par with traditional tools such as advertising, public relations, sales promotions, and personal selling. Today sport sponsoring constitutes a vital part of the marketing communication mix (Meenaghan & Shipley, 1999; Tripodi, 2001). On a global scale, the spending on sport sponsorships engagements has increased from €15 billion in 2004 to €22 billion in 2009 and is expected to further increase to €27 billion

by 2013 (PricewaterhouseCoopers (PWC), 2010). Sponsorship deals constitute significant marketing investments for sponsoring firms. For example, Hyundai has recently resigned as an official sponsor with the global soccer association FIFA for a total contract value of \$280 million (Fenton, 2011).

Unlike traditional marketing vehicles, sponsorship enables marketers to connect with consumers in very emotional situations and brand as well as corporate image can be enhanced via associations with positively associated events (Miyazaki & Morgan, 2001). Approaches to evaluate sponsorship deals include soft measures like increased brand recognition, purchase intention or media airtime of the brand name during the broadcast of sport events. However, attempting to translate these measures into financial values (e.g. sales uplift) is a daunting task. It is practically impossible to get a reliable estimate of what part of a sales uplift can be attributed to the sponsorship, and what part is to be attributed to other activities, such as price-offs, in-store activities or other media commercials.

Despite improving qualitative key success factors like image, awareness and purchase intention (Gwinner, 1997; Keller, 1993), sport sponsorship also has the ultimate goal to show bottom line impact by increasing future sales and profits. Incurred direct costs (sponsorship fees) as well as indirect costs (activation costs, agency costs) are expected to be offset by future benefits in terms of increased media exposure and brand awareness, positive image building, and ultimately higher profits (Farrell & Frame, 1997). According to Mishra, Bobinski and Bhabra (1997) public announcements of sponsoring deals contain current and unexpected information about the sponsoring firm. Investors process the news and might adjust expectations for the sponsor's future cash flow. As a result, the share price would react accordingly (Mishra et al., 1997).

In light of these circumstances a reliable and practical study will be conducted, analyzing the measurable impact of sport sponsorship on the value of a sponsoring firm. This sponsorship effect is analyzed using the concept of abnormal returns (*AR*), defined as the difference between expected stock returns and actual observed stock returns. This analysis will offer an overview of sponsorship performance in general, across various sports, regions, types and industries.

The results should be interesting for different groups. It enables marketers to discuss on a quantitative basis about including sponsorship into the communication strategy. It facilitates CEOs and CFOs to evaluate past sponsorships deals and decide about upcoming possibilities. Also, team owners and sport event organizers should benefit from the results, as the findings give them additional insights about the value of sponsorship deals. This is helpful in negotiating prices and fees. The results are also interesting for marketing scholars by offering further evidence on the question of the economic effectiveness of sponsorship deals.

Although previous studies have analyzed the effect of sponsoring announcements on share prices (e.g., Agrawal & Kamakura, 1995; Clark, Cornwell & Pruitt, 2009; Miyazaki & Morgan, 2001; Samitas, Kenourgios & Zounis, 2008) there is a research deficit as existing studies are generally limited in three dimensions (Reiser et al., 2012): First, very little research is available on the sponsorship effect within different sports types (e.g. Clark et al., 2009; Cornwell, Clark & Pruitt, 2005). Second, existing studies are based on rather outdated and very small sample sizes of less than 40 observations (e.g. Miyazaki & Morgan, 2001; Farrell & Frame, 1997; Pruitt, Cornwell & Clark, 2004). Third, with only few exemptions (i.e. Samitas et al., 2008), past research has a strikingly regional focus on the US.

1.2 Purpose of research

This study adds to the current body of literature by addressing the previously mentioned research deficits. Furthermore, this research provides a comprehensive overview of the financial performance of sport sponsorship announcements and the identification of key characteristics that might have an impact on the success of a sponsoring deal. The concept of *AR* will be extended from financial economics and applied to the field of sport marketing, investigating share price reactions upon sponsorship announcements. Hence, the overarching aim of this study is twofold: (1) Based on identified *ARs*, it will be analyzed if sport sponsorship announcements have an impact on firm value. This sponsorship effect will be analyzed for all sports in general, and for various different sports, regions, sponsorship types and industries in specific. (2) By means of multiple

regression analysis it will be determined which factors influence the success of sponsoring deals in terms of ARs following the official announcement.

1.3 Organization of the dissertation

In order to achieve the previously stated objectives this research project is organized in eight chapters (1. Introduction, 2. Theoretical Fundamentals, 3. Literature Review, 4. Theoretical Framework, 5. Research questions, 6. Methodology, 7. Results and Discussion, and 8. Conclusion) that will be briefly introduced in the following.

After the field of research as well as the significance and the purpose of this study are introduced Chapter 1 “Introduction” concludes with an outline of the structure of this doctoral thesis. Chapter 2 “Theoretical Fundamentals” continues with laying the theoretical foundation on how sport sponsorships can create financial value via enhancing both, marketing and financial metrics. The for this study most relevant theoretical concepts from both fields, sport marketing (especially sponsorships) and finance (especially capital markets theory) are presented. The following chapter 3 “Literature Review” offers a comprehensive summary of the critical literature related to the aim of this study of analyzing the financial impact of sport sponsorships, including an overview of the general effects of sponsorships (e.g. on awareness, image, ambush marketing activities), the direct financial effects on firm value and the previously identified determinants for these financial effects. The main deficits of the current state of research in this area are also highlighted in this section. Based on the theoretical fundamentals and the findings of earlier research the theoretical framework for the effect of sport sponsorship announcements on the firm value of sponsoring firms is introduced in chapter 4 “Theoretical Framework”, from which also the study’s central research questions as defined in chapter 5 “Research Questions” are derived. The methodological approach employed in the current study in order to assess the research questions and to probe the theoretical framework is described in chapter 6 “Methodology”. First, the data collection process will be explained in detail since it is vital to the success and reliability of the study. Next, available methods for the evaluation of financial effect of sport sponsorships are discussed and finally the statistical approach for the data analysis regarding sample characteristics, firm value effects (abnormal returns) and determinants

of firm value effects is presented. Based on the methodological approach chapter 7 “Results and Discussion” provides the results of the data analysis with respect to the firm value effect of sport sponsorship announcements and subsequently discusses the implications of these results related to the field of sport economics. The results as are presented and discussed for the overall sample as well as for different sub-samples within the dimensions of different sports, sponsorship types, regions and industries. The study wraps up with chapter 8 “Conclusion” including a summary of the main findings of this research project and also actionable recommendations for both sport managers as well as corporate managers involved with sport sponsorships. Lastly, future research directions are recommended based on the identified research deficits and as well as newly identified research topics in the context of this study.

2. Theoretical Fundamentals

The following chapter presents the for this study most relevant theoretical concepts from both the field of sport marketing (especially sponsorships) and finance (especially capital markets). First, the theoretical fundamentals regarding sport sponsorships are introduced, including a clear definition of the term “sponsorship” (2.1.1), an overview of the historic development and the status quo of the global sponsorship market today and a discussion of the role of sponsorships within a firm’s promotion mix (2.1.2) as well as a description on how sponsorships are linked to sales and profits figures (2.1.3). Second, relevant theoretical fundamentals regarding capital markets are presented, including the efficient market hypothesis (Fama, 1970), stock returns and abnormal returns (2.2.1) as well as the theoretical determination of firm value via the discounted-cash-flow method and the multiples approach (2.2.2). The chapter then concludes with a summary combining the marketing and finance concepts by showing how sport sponsorships can create financial value via enhancing both, marketing and financial metrics (2.3).

2.1 Sponsorships

This section offers an overview of the theoretical fundamentals of sponsorships. Rather than offering a full-blown and exhaustive discussion of the broad area of sponsorships this section focuses on the topics most relevant for this study in order to equip the reader with sufficient background knowledge for this dissertation project.

2.1.1 Defining “sponsorship”

In the following the term sponsorship will be defined, discussed and contrasted with other forms of providing resources to receiving institutions such as donations and patronage. Before the sponsorship term will be defined it is instrumental to first briefly mention the two main parties involved in sponsorship deals. Following Hermanns and Marwitz (2008), the individual, company or institution that provides some sort of (financial) resources is called the sponsor. For the sponsor, sponsorships are primarily a marketing vehicle. On the other hand, the individual, team or organization that receives the (financial) resources is called the sponsee. For the sponsee, sponsorships are

primarily a financing method and a revenue source. Many prior studies discuss the nature of sponsorships and provide a definition (e.g. Bruhn, 2004; Derbaix, Gérard & Lardinoit, 1994; Drees, 1992; Meenaghan, 1983; Sandler & Shani, 1989) which can be clustered in two broad categories (Hermanns & Marwitz, 2008). One cluster follows a rather process-oriented definition approach for sponsorship (e.g. Bruhn, 2004), and the other cluster follows a rather communication-oriented definition approach (e.g. Drees, 1992; Sandler & Shani, 1989).

The following sponsorship definition is an example for the process-oriented approach:

“Sponsoring is the planning, organization, execution and measurement of activities that include a company’s provision of cash materials or services for individuals, teams or organizations that are related to sports, culture, environmental services, social services or the media in order to support and patronize such individuals, teams or organizations and to fulfill own communication goals.” (Bruhn, 2004, p. 5).

The focus of this definition, besides the sponsorship process, is also set on corporate philanthropy aiming to support and patronize the sponsee. Whereas this still might be the case for culture, environmental or social services sponsorships this definition is problematic when it comes to sport sponsorships. This is because sport sponsorship deals are not closed primarily for philanthropic reasons, but for commercial purposes and sponsors primarily aim to improve their own awareness and image (Walliser, 2003). Thus, the sponsorship definition following a rather communication-oriented approach seems to be more suitable in the field of sport marketing and will be used in this study: Sponsorship is “the provision of resources (e.g. money, people, equipment) by an organization directly to an event or activity (or team) in exchange for a direct association to the event or activity (or team). The providing organization can use this direct association to achieve either their corporate, marketing or media objectives.” (Sandler & Shani, 1989, p. 10). Meenaghan (1991) stresses the communication-focus even more by stating that from the corporate perspective sponsorship is an investment to gain access to the exploitable marketing potential of a particular sponsee. For this study it is important to keep in mind that sport sponsorship is defined following the above cited communication-oriented approach since such deals have commercial rather than

philanthropic objectives. Sport sponsorship is therefore fundamentally different from other types of support like donations or patronage which should not be confused with sponsorships. The key difference is that sponsorships always include some kind of material benefit for the sponsor in terms of marketing communication rights and recognition, whereas donations and patronages are altruistic activities with the primary goal of knowing that good is being done (Meenaghan, 1983). From this discussion it becomes clear that sponsorships involving professional sports are well defined using the communication-oriented approach.

2.1.2 Sport sponsorship: Historic development and status quo

This section first briefly presents the historic development of sponsorship using Germany as an example and then provides an overview of the status quo of the global sport sponsorship market today. Although sponsorship has a longer tradition in some regions (e.g. USA) than in others (e.g. Asia) the different stages (see figure 1) in the development process are similar throughout the regions (Hermanns, 1986).

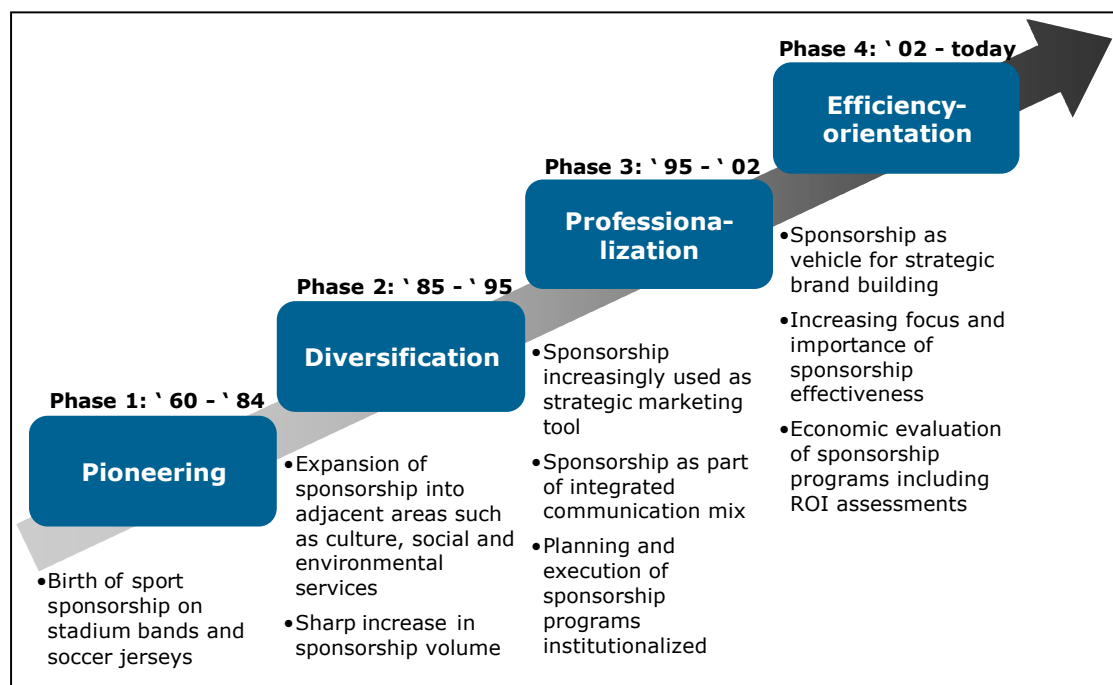


Figure 1: Historic development of sponsorship, exemplary for Germany (based on Hermanns & Marwitz, 2008).

The historic development of sponsorships can be broadly described by four phases: Pioneering, diversification, professionalization and efficiency-orientation.

In the pioneering phase sponsorships first appeared in the field of sports. The broad popularity of sport competitions and the trend towards commercialization of professional sports offered an opportunity for corporations to become a part of the attractive sport sector. Among the first sponsored items was the front of jerseys worn by athletes during the competition and stadium bands surrounding the pitch inside stadiums. Whereas in the early beginning sport sponsorships mainly appeared on in the most popular sport within a region (e.g. soccer in Germany) it also gained popularity in other sports (e.g. tennis, basketball, golf) towards the end of the pioneering phase.

The second phase, the diversification phase, is characterized by an expansion of sport sponsorships into adjacent areas such as culture as well as social and environmental services. However, the motivation for sponsorships in these areas is more altruistic and philanthropic when compared to sport sponsorships. Sponsorship deals did not only gain popularity in adjacent areas but also within its origin, the sport. As a result, the sponsorship volume increases sharply during the diversification phase, both in terms of number of deals and also in terms of total deal value (Hermanns & Marwitz, 2008). The increasing popularity of sponsorships as an alternative marketing tool is also triggered by a growing media landscape and thus a higher media coverage of sport events (Meenaghan, 1991). At the same time, the media landscape became also more fragmented. The growing number of TV channels encouraged “zapping” and posed a threat to traditional advertising techniques such as TV commercials (Rust & Oliver, 1994). Therefore companies increased their activities in alternative marketing campaigns such as sponsorships.

The third phase, the professionalization phase, is characterized by matured sponsorship processes. The planning and execution of sponsorship programs were optimized and institutionalized and became more professional by losing its ad-hoc character. This first happened for sport sponsorships, but later also for the adjacent areas culture, social and environmental sponsorships. Rather than treating sponsorships as an isolated and stand-alone marketing vehicle sponsorships were increasingly seen as a strategic marketing tool and as a vital ingredient for an integrated communication mix

(Meenaghan, 1991). The increasing number of marketing communication tools and the fragmentation of target groups call for a differentiated approach in communicating with consumers. For example, a telecommunication provider Telco Corp. has on the highest level two heterogenic target groups, namely private customers and business customers. Moreover, these sub-groups are further divided since private customers include adults and teenagers and business customers include large corporations and smaller businesses (see figure 2). This fragmentation as well as the at best superficial cognitive processing of marketing information or even the total ignorance of marketing messages poses challenges related to a company's marketing communication (Bruhn, 2003). Sport sponsorships offer an opportunity to overcome these challenges by communicating with a specific target group on a rather emotional level, which increases the quality of the marketing communication approach (Hermanns & Marwitz, 2008).

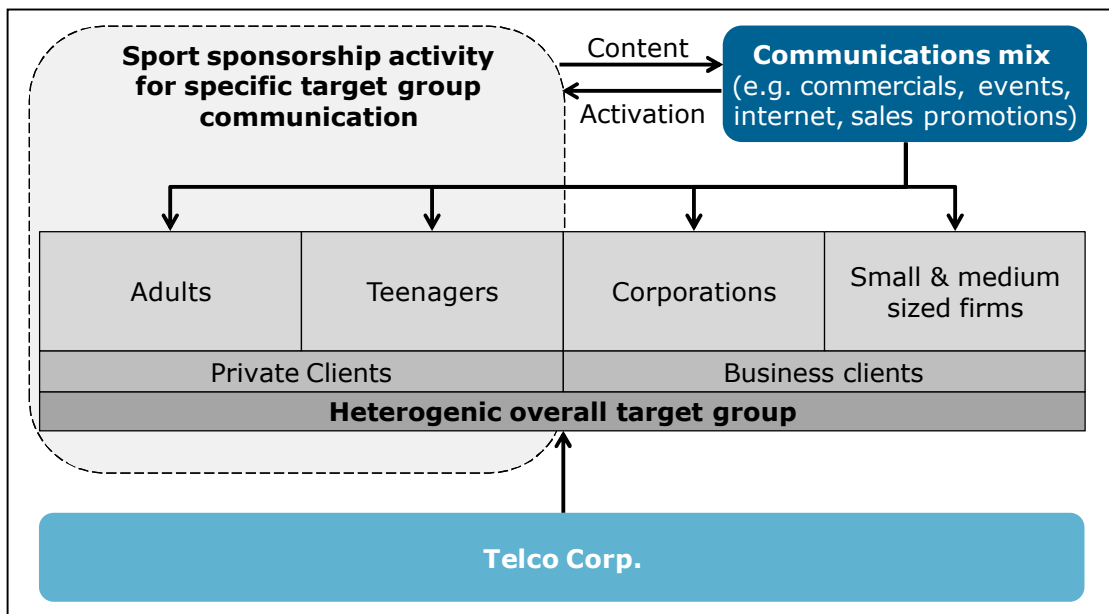


Figure 2: Sport sponsorship activities as content provider for integrated communications mix for aligned marketing communication; example for a telecommunication provider (based on Hermanns, Riedmüller & Marwitz, 2003, p. 226).

Nevertheless, as can be seen in figure 2, a sponsorship program does not necessarily cover all different target groups directly. For example, if Telco Corp. decides to become the main sponsor of a soccer team the sponsorship by itself primarily reaches private customers that are following the team either live in the stadium or on TV. However, by

utilizing the sponsorship as content for other marketing tools in the communications mix (e.g. print and TV commercials, e-marketing, special events, point-of-sales promotions) other target groups could also be reached indirectly. Thus, using the sponsorship program as a platform allows an integrated communication with the heterogenic overall target group (Sohns, Weilguny & Klotz, 2002). For example, Telco Corp. could invite business clients to the VIP lounge during matches of the sponsored team or create special events for business clients that feature some sport stars of the sponsored team. Furthermore, Telco Corp. could use the acquired sponsorship rights in additional print and TV commercials to further activate and intensify the sponsorship deal in order to reach more consumers. The integration of the sponsorship program in the communications mix not only provides content for other marketing tools helping to reach all target groups, but also activates and reinforces the effectiveness of the sponsorship program itself. It is therefore highly beneficial to integrate sponsorship programs into the overall communications mix of a company.

In the fourth phase of the historic sponsorship development, the efficiency phase, the economic evaluation of sponsorship programs has gained high importance. Just like any other traditional marketing tool corporate managers also question the efficiency and the economic value of sponsorships in light of the growing and often hefty investments. Next to the rather soft metrics such as increases in awareness scores or image enhancements corporate managers also monitor economic metrics such as customer retention rates, new customer acquisition rates and return-on-invest (ROI) scores. Marketing managers are often required to justify the investments in sponsorship programs and to show real financial returns for the firm and their shareholders (Cornwell, Pruitt & Clark, 2005). Thus, this dissertation project contributes to further analyze the real economic value of sport sponsorship programs. Moreover, sponsorship programs continue to play an essential role as an instrument for strategic brand management since it allows to transfer a sponsee's image to the company and to connect with consumers on a very emotional level and thereby differentiating from competitors that often offer very similar products.

As already mentioned earlier, the sport sponsorship market has been growing rapidly over the past decades. On a global scale the spending on sport sponsorship programs has increased from \$1 B in 1986 (Gardner & Shuman, 1987) to \$15 B in 2004, to \$ 22B in 2009 and is expected to further rise to \$27 B by 2013 (PWC, 2010). Sport sponsorships take the lion's share of the global sponsorship market (84%), whereas the shares taken by other categories are significantly lower (e.g. culture sponsorships with 6% and media sponsorships with 5%; Fenton, 2011). The global sport sponsorship market is dominated by sponsors from North America (39%) and the EMEA¹ region (35%). The most popular sports among sponsors are the big sports enjoying high popularity in their respective regions, including soccer, American football, motor sports, arena sponsorships and Olympics. All of these sports are of course included in the analysis of this dissertation project.

2.1.3 Link between sponsorship activities and sales figures

Having defined what constitutes sponsorships and having described its role in the overall marketing strategy of a company raises the question of how the intangible concept of sponsorship is linked to financial measures, especially sales figures. The link can be established via three main objectives of sponsorship programs, namely increasing awareness for the sponsor through exposure, enhancing the sponsor's image through the association with the sponsee and increasing institutional goodwill via perceived generosity (Gwinner, 1997; Keller, 1993).

First, regarding the objective related to increased awareness it should be noted that the reach and visibility of sport sponsorships is quite high. Starting with the audience in the stadium watching a sponsored team or event the sponsorship reach is broadened by the live as well as post-event TV coverage and is further enlarged by the print media where the sponsorship might be mentioned in the article itself (e.g. event name sponsorships) or is displayed in the pictures (e.g. jersey sponsorships). Thus, this high reach and visibility of sponsorships guarantees additional awareness for the sponsor. Second, sport sponsorships are instrumental in initiating a positive image

¹ EMEA=Europe, Middle East and Africa

transfer of perceived characteristics (e.g. healthy, dynamic, successful, international) from the sponsee to the sponsor (Brown & Dacin, 1997; Grohs, Wagner & Vsetecka, 2004). This enhanced image of a company could help consumers to differentiate the sponsoring firm from otherwise seemingly similar competitors. However, it is important to note that it is also possible that the sponsor's image could be damaged by a sponsorship deal if the sponsee acts inappropriately (e.g. Tiger Woods scandal). Third, unlike traditional advertising techniques like TV commercials, which consumers rather view skeptical and untrustworthy, sport sponsorship deals are regarded as beneficial for the sponsee (Pruitt et al., 2004). This perceived generosity translates into goodwill and positively influences consumers' attitude and behavior towards a firm or a brand (Crimmins & Horn, 1996; Meenaghan, 2001). To conclude, sponsorship programs can indirectly increase the sales figures of a sponsoring firm by improving several factors along the buying process as captured by the described main objectives of sponsorship deals. The improved awareness, image and institutional goodwill eventually translates into higher purchase intentions and ultimately into higher sales and profits (Farrell & Frame, 1997).

2.2 Capital markets

The following section provides an overview of relevant theoretical fundamentals of capital markets. The main goal of this section is to equip the reader with sufficient background knowledge about the functioning of stock markets and firm valuation that is most relevant for this study and not to offer an in-depth discussion of capital market theory. In the context of this study the most relevant theoretical fundamentals regarding capital markets include the efficient market hypothesis (Fama, 1970) and the concept of abnormal stock returns which are covered in section 2.2.1. Section 2.2.2 deals with the theoretical determination of firm values based on the discounted-cash-flow approach and also introduces the multiple-approach to determine the value of a firm.

2.2.1 Theoretical fundamentals of stock markets

In the following the (for this study) most relevant concepts regarding stock markets will be introduced, starting with a brief description of stock markets, followed by a definition of firm value and how it is influenced by Fama's (1970) efficient market hypothesis (EMH) and finally concluding with the introduction of the concept of abnormal stock returns. Stock markets are secondary markets for shares of corporations that already went public through the process of an initial public offering (IPO). An IPO is the process each company goes through to become a publicly listed corporation. The primary sale of IPO shares is limited to investors that previously register for the IPO. After a company went public its shares can then be traded in secondary markets, the stock exchanges (Ross, Westerfield & Jaffe, 2004). The main task of stock markets is to facilitate the trade of company shares by bringing together buyers and sellers in order to secure liquidity and to assist in finding fair stock prices (Geißler, 2007). The stock price reflects the demand and supply for a certain share (Busse, 2003). It is the result of all buy- and sell-orders for a given stock that are collected in a so called order book. Based on this order book the stock price is calculated that fulfills the maximum amount of orders (Zantow, 2007).

The demand and supply for a company's stock and consequently the buy- and sell orders that determine the stock price are influenced by information about the company. The importance of company related information is also captured in Fama's (1970), which states that at any given time stock prices are a summary of all available information about a firm and its expected future performance. A key part of EMH is the effect of new information on stock prices. Fama states that in efficient capital markets stock prices instantly react to new information if the news is relevant and influences buy- and sell orders. The degree of market efficiency is characterized by three different forms: weak, semi-strong and strong. The weak form implies that stock prices reflect all available information on historical stock prices. The semi-strong form assumes that stock prices reflect all publicly available information of a firm, including historical stock prices, other fundamental company data from analysts and annual reports as well as public ad-hoc news about a company. In addition to that, the strong form implies that stock prices also reflect all inside information about a company, information that is not

yet available to the public (Fama, 1970). Prior research on the efficiency of capital markets provides evidence that markets are in general semi-strong efficient (e.g. Fama, 1998; Jensen, 1978) which means that it is not possible to earn excess returns through arbitrage-trading mechanisms² based on publicly available information (Albers et al., 2006). Nevertheless, earlier studies on market efficiency identified some anomalies (e.g. size, momentum or value effect) that might suggest that financial markets are inefficient (e.g. Banz, 1981; DeBondt & Thaler, 1985; Basu, 1983). However, Ball (1978) reports that such anomalies point out inadequacies in the underlying asset-pricing model rather than market inefficiency. Furthermore, Schwert (2002) provides evidence that the identified anomalies disappeared over time and were specific to the analyzed sample and period. Moreover, in today's multi-media environment with rapid information dissemination combined with low-cost trading opportunities share prices react in under one minute to relevant announcements (Busse & Green, 2002). Thus, in this dissertation project it is assumed that stock markets are efficient in the semi-strong form and that share prices immediately react to new relevant public information. Because any unexpected relevant information about a company is believed to influence the price of that company's share accordingly, share prices can be used as reliable indicators for firm value (Agrawal & Kamakura, 1995). Consequently, total firm value is then the sum of the value of all individual company shares. It is because of the high importance of company information for stock prices and thus firm value that publicly listed companies are bound by law to release firm-related news to the public in a timely manner. This is enforced by government agencies such as the Securities and Exchange Control (SEC) in the USA.

Furthermore, the magnitude of the price change as a result from unexpected information provides an estimate for the economic value for that specific piece of information (Brown & Warner, 1985). The concept of abnormal returns (*AR*) captures these unexpected changes in share prices. *ARs* reflect the change in stock prices following an unexpected event after the actual return has been adjusted for expected changes resulting from general market movements. In other words, *ARs* describe the

² Arbitrage in finance refers to the practice of exploiting a price difference between securities. In the context of EMH this means that investors cannot earn excess returns by trading on publicly available information since this information is already reflected in the stock price.

difference between the actual observed change in share prices for a given time period and an expected normal change in share prices in absence of the new information. This difference is referred to as abnormal, since it is unexpected and most likely triggered by the new information (Brown & Warner, 1985).

2.2.2 Firm value analysis

Two widely used approaches for the theoretical determination of a firm's value are introduced next, including the discounted-cash-flow method and the multiples-approach. It is important for this dissertation project to briefly discuss the two main approaches for firm valuation (Ross et al., 2004) as it is instrumental to the understanding of how sport sponsorships can have an impact on firm value. Firm valuation is “the process of converting a forecast into an estimate of the value of a firm or some component of the firm” (Palepu, Healy, Bernard & Peek, 2007, p. 293), which is based on the classic financial theory that the value of any financial construct should be equal to the present value of its expected future pay-offs. The discounted-cash-flow method (DCF) therefore assumes that the value of a firm should be equal to the present value of expected future cash flows. Thus, the sum of expected future cash flows – discounted at the appropriate discount rate reflecting the company's cost of capital – represents a fair estimate for the value of a firm (Palepu et al., 2007). In order to value a company an analyst then makes assumptions about future cash flow streams and also about other financial figures (e.g. sales, profits, capital expenditures) that are needed to estimate a firm's cash flows. Assuming that EMH holds, any new information about a company could trigger an adjustment in the DCF-model and lead to a change in firm value. However, it becomes clear from the description above that the DCF-method can be very sensitive to the often very detailed assumptions made to forecast future cash flows (Wöhe & Döring, 2008).

An alternative method to determine firm values is less exposed to this forecast uncertainty. The multiples-approach is a valuation method based on share price multiples. The popularity of this approach lies within its simplicity as it does not require detailed multi-year forecasts for various financial figures. There are different forms of the multiples-approach; each one is based on a different performance measure, e.g. sales, profits or cash flows. Nevertheless, the underlying idea is the same for all forms.

The analyst that attempts to determine a firm value using this method first selects a comparable firm (or set of firms) that is similar in terms of industry, size, growth opportunities and financial characteristics such as the capital structure (Achleitner, A., 2002; Palepu et al., 2007). The selected performance measure is used as the basis to calculate the stock price multiple for the comparable firm. This ratio is then applied to the selected performance measure of the firm being analyzed in order to determine its value. Thus, this method assumes that financial markets are capable of finding fair prices for listed companies and that price multiples of comparable firms are indeed applicable to the company being valued. Again, given that EMH holds, any news information about a firm could alter the estimated firm value if it impacts the performance measures selected as the basis for the share price multiples.

2.3 Impact of sponsorships on firm value

The previous discussion has established the marketing-related link between advertising campaigns such as sponsorship programs and sales figures (2.1.3) and has explained how the value of a firm is determined based on classic finance theory (2.2.2). Based on this information this section describes how sport sponsorships can impact the value of sponsoring firms. First, sport sponsorships can indirectly increase the sales of a sponsor by improving several factors in the buying process as captured by the main objectives of sponsorships, namely increasing awareness, enhancing a sponsor's image and increasing institutional goodwill (Gwinner, 1997; Keller, 1993). This eventually translates into higher purchase intentions and ultimately into higher sales and profits (Farrell & Frame, 1997). Second, analysts who first learn about a sponsorship deal will consider the impact on expected future sales, profits and cash flows and will adjust the forecast accordingly if necessary. Since these financial figures are input variables for the firm valuation process any adjustments in these performance measures also lead to an adjustment in estimated firm value. Based on the outcome of the firm valuation process investors might sell or buy the sponsor's shares or financial analysts might issue buy- and sell-recommendations for the sponsor in case the shares seem to be under- or overvalues, respectively. Through the previously described order-book process this can eventually lead to adjustments in the stock price and thus firm value.

Apart from the marketing-related effect sponsorships might have on firm value there is an additional effect that is purely based on financial value creation. Sport sponsorships could be seen as a communication channel to investors and analysts to overcome potential information asymmetries (Ross, 1977). Companies could use long-term sponsorship programs that involve multi-million dollar investments to signal their positive beliefs about a bright and prosperous future for the company. Instead of just giving a press statement about future expectations corporate managers could use sponsorships as voluntary multi-million dollar commitments to add further weight (Clark, Cornwell & Pruitt, 2002). This could also have a beneficial impact on share prices and thus firm value if investors understand the signal and deem it to be credible.

To conclude, sport sponsorships can have an impact on firm value via marketing-related effects on sales and also via finance-related effects in terms of the signaling theory.

3. Literature review

This chapter provides a comprehensive review of the critical literature related to the aim of the study of analyzing the financial impact of sport sponsorships. This section includes an overview of the general effects of sponsorships on brand values such as awareness or image and the danger of competitors ambushing a sponsor's marketing campaign. Next, direct financial effects of sport sponsorship deals on the firm value of sponsoring companies including relevant determinants for these financial effects are extensively discussed. Finally, deficits in the current state of research and the research need in this area are presented.

3.1 General effects of sponsorships

This section will provide an overview about general effects of sponsorships consisting of qualitative effects on brand values. The review of the brand effects includes the impact of sponsorships on the major sponsorship objectives: awareness and image (e.g. Cornwell & Maignan, 1998; Walliser, 2003). In addition, the effect of sponsorships on the intention of consumers to purchase a sponsored product and the threat of ambush marketing activities of competitors will be briefly reviewed. Brand effects are important in the context of discussing the economic value of sponsorship because any share price reaction was thought to be the result of adjustments of expected future sales and profits of a sponsoring firm (see also section 2.1.3). These adjustments were based on possible changes in brand values such as awareness, image and purchase intentions as a result of the sponsorship activity (e.g. Farrell & Frame, 1997; Mishra et al., 1997; Miyazaki & Morgan, 2001). This section on the general effects of sponsorships does not have the aim to be complete and exhaustive but rather to give a comprehensive overview of the relevant research dealing with general sponsorship effects.

In an early study on the effects of commercial sponsorships Meenaghan (1983) argued that communication measures (e.g. awareness levels, image, purchase intention rates) were suitable proxies for assessing sponsorship effectiveness. It seemed difficult if not impossible to link marketing activities like TV commercials or sponsorship programs directly to revenues making it unfeasible to evaluate the effectiveness of such

activities based on sales figures. Measuring the communication effectiveness acknowledged that a consumer moved through various stages of the buying process before the actual transaction. Within this buying process, a consumer first learned about the existence of a product (awareness), then formed his personal attitude towards this product (image) and finally decided if to buy the product or not (purchase intention). However, the author also mentioned that these communication effects were linked to the stages in the buying process leading to the actual purchase itself. Therefore these measures could be considered as a detour for assessing sponsorship effectiveness.

Numerous studies analyzed the effect of sponsorship in the early stages of the buying process, namely on awareness. Awareness was defined as the consumer's unaided³ knowledge about a company, brand or product (Meenaghan, 1983). Although the reliability of awareness measures was impaired since changes in awareness levels could also have resulted from other marketing activities the impact of sponsorship deals on awareness levels has been investigated in the past. In a survey of 50 managers about the value of their sponsorship investments Cornwell, Roy and Steinard (2001) found that managers believed that sponsorship deals positively impacted the awareness of sponsored brands among consumers and perceived awareness levels were even higher for deals with a longer duration. Nevertheless, Cornwell and Maignan (1998) summarized the research on measuring the impact of sponsorships on awareness and reported that the majority of empirical studies showed a small or even ambiguous effect of sponsorships on awareness scores (e.g. Couty, 1994; Easton & Mackie, 1998; Müller, 1983; Nicholls, Roslow & Laskey, 1994; Sandler & Shani, 1992, 1993). In his update on the international review of sponsorship research Walliser (2003) provided an overview of determinants on these inconsistent awareness effects. It was found that an increase in awareness levels was realized when the sponsorship activity was supported by other advertising techniques such as TV commercials (e.g. Lardinoit, 1998) or other classical marketing activities (e.g. Du Plessis, 1997; Eilander, 1992; Quester & Thompson, 2001). It was argued that supporting advertising campaigns delivered additional brand messages and helped consumers to create a link between the sponsor and the sponsee

³ Unaided means the consumer has knowledge about a brand or a company without being provided specific hints or indications.

which resulted in improved awareness scores (Crimmins & Horn, 1996). Furthermore, Grohs et al. (2004) analyzed the role of sponsor-sponsee fit (both functional and image related fit) on awareness changes and reported a good match improved awareness levels after a sponsorship. Overall, previous research indicated that sponsorships were instrumental in improving awareness scores for a company or a brand if the sponsorship activity was part of a coordinated and integrated marketing campaign including other advertising vehicles and if there was a close match between sponsor and sponsee.

Another research stream dealt with the effect of sponsorships on corporate as well as brand image. Image was generally defined based on Keller (1993) as “perceptions about a brand (a corporation) as reflected by the brand (corporation) associations held in consumer memory. Brand (corporation) associations are informational nodes linked to the brand (corporation) node in memory and contain the meaning of the brand (corporation) for consumers” (Keller, 1993, p. 3, (corporation) added). One objective of sponsorship was to enhance the sponsor’s own image by transferring associations linked to the sponsee (e.g. health, dynamic, success; Grohs et al., 2004). Thus, image transfer was defined as the transfer of attributes from the sponsee to the sponsor itself (Gwinner, 1997). Cornwell & Maignan (1998) and Grohs et al. (2004) reviewed the research on the effects on brand and corporate image and reported evidence for a small but successful image transfer as a result of sponsorships (e.g. Crimmins & Horn, 1996; Otker & Hayes, 1987; Rajaretnam, 1994; Stipp & Schiavone, 1996). However, one study analyzing the corporate image of five sponsors before and after the sponsored event found mixed results varying from a clear image enhancement to a negative image effect and conclude that the success of the image transfer depended on the industry of the sponsor (Javalgi et al., 1994). Previous research has also shown that various factors influenced the image effect. As it was the case for awareness, the image transfer from sponsee to sponsor worked best when the sponsorship activity was integrated with other marketing tools (Crimmins & Horn, 1996; Quester & Thompson, 2001; Stipp & Schiavone, 1996) and for deals with a longer duration (Cornwell et al., 2001). However, Merbold (1989) found that most image effects were only temporary and enhancements gained from sponsorships diminished after the partnership has ended. D’Astous and Bitz (1995) surveyed a sample

group about the perceived effect of different sponsorship scenarios on various brand values and reported that the sponsorship nature influenced the effect on corporate image. Philanthropic deals seemed to generate more positive image effects than commercial deals (e.g. sport sponsorship deals). It was argued that philanthropic deals resembled donations for a good cause and created more positive feeling among consumers which they transferred back to the sponsoring firm. Finally, it was stated that a sponsor's visibility during the sponsored event positively impacted the image transfer (Stip & Schiavone, 1996), but a perceived over-exploitation of sponsorship rights proved to be harmful for image effects, especially for sport sponsorships (Meenaghan & Shipley, 1999).

As mentioned before, the objective of sponsorship is to positively influence on the various stages of the buying process. This also includes the aim to increase a consumer's intention to purchase a sponsored product (Pope & Voges, 2000). Purchase intention was defined as a consumer's willingness to buy a sponsored product as a result of enhanced corporate or brand image (Harvery, Gray & Despain, 2006). As it was the case for image, previous studies have shown that the intention to buy certain products increased as a result from sponsorship activities (Daneshvary & Schwer, 2000; Pope & Voges, 2000). Consumers were more likely to purchase a sponsored product than a non-sponsored one. This likelihood was higher for consumers frequently attending a sponsored event and lower for consumers with a higher level of education (Daneshvary & Schwer, 2000). Purchase intention also depended positively on the degree fans were emotionally attached to a sponsee which lead to higher increases in purchase intention scores when sponsored teams had a loyal fan base (Tsotsou & Alexandris, 2009).

The desired effect of sponsorship programs can be severely impaired by conflicting activities from competitors. It is common practice for competitors of official sponsors to launch marketing campaigns in order confuse consumers about who the real sponsor is (Meenaghan, 1998). These activities were coined ambush marketing and were defined as planned campaigns by competitors to associate themselves indirectly with a sponsee in order to steal at least some of the recognition and benefits from the actual sponsor (Sandler & Shani, 1989) and was regarded as a lower-cost alternative for official sponsorships (Meenaghan, 1998). Ambushing firms could follow different

strategies, ranging from sponsoring the broadcast of the event (instead of sponsoring the event itself) to purchasing massive advertising time around the broadcast of the event or even to sponsor subcategories within the main event (Meenaghan, 1994, 1996). For example, for the 1988 Winter Olympics McDonald's was an official sponsor, but was ambushed by a competitor called Wendy's. Wendy's most visible ambush tactic was to become a broadcast sponsor, namely the "proud sponsor of ABC's broadcast of the 1988 Winter Olympics" (Sandler & Shani, 1989). The authors used the same Olympic Games to empirically assess the effect of ambush marketing on sponsor identification and reported that overall official sponsors were identified correctly as main sponsors more often than ambushers. But a more detailed analysis revealed that ambush-sponsors were falsely identified as main sponsor more often than the actual sponsor in three out of seven product categories. It was argued that ambush strategies can be an effective marketing tool in some product categories. Other studies confirmed these results and concluded that ambush marketing strategies were successful when the official sponsor did not sufficiently prevent such activities by protecting the property rights (Millman, 1995, Parker, 1991) and by fully exploiting the own sponsorship rights in order to assure that consumers are able to recall the correct sponsor (Crimmins & Horn, 1996, Sandler & Shani, 1992).

3.2 Direct financial effects of sport sponsorships

This section will provide an extensive review of previous research that has already investigated the financial impact of sport sponsorships by analyzing the direct wealth effects of the announcement of sponsorship deals on share prices of sponsoring firms. Existing studies can be clustered into three main categories: Studies about sport events (e.g. Olympics, title events), sponsorship types (e.g. endorsement contracts, arena deals) and different sports (e.g. motor sports, soccer). These studies are summarized in table 1 and will be discussed in the following.

3.2.1 Studies about sponsoring sport events

The majority of previous studies examined the wealth effect of sport sponsorship deals for specific sport events. These studies either analyzed deals associated with Olympic Games in specific or with other miscellaneous major sport events in general and will be reviewed hereafter.

An early study on sponsorship wealth effects analyzed the 1996 Olympic Games (Farrell & Frame, 1997). The aim of this research was to find out what impact the announcement of 1996 Olympic sponsorships had on the firm value of sponsoring firms. It was hypothesized that if corporations strive to maximize firm value, Olympic sponsorship deals must be value enhancing. This wealth maximization hypothesis implied that potential benefits arising from the sponsorship outweigh incurred investments. Positive brand/ corporate image building, awareness increases and ultimately higher sales were considered as the main benefits. These advantages were

Table 1: Overview of studies about wealth effects of sport sponsorships (listed by main sponsorship category; n.a. = not applicable; n.s. = not significant; FIFA = Fédération Internationale de Football Association; PGA = Professional Golfers Association; LPGA = Ladies Professional Golf Association; ATP = Association of Tennis Professionals; NASCAR = National Association for Stock Car Auto Racing; NCAA = National Collegiate Athletic Association; NFL = National Football League; NHL = National Hockey League, NBA = National Basketball Association; MLB = Major League Baseball).

Author (Year)	Sponsorship category	Country	Sponsorship details	Sample size (period)	(C)AR (day(s))
Farrell & Frame (1997)	Events	USA	1996 Summer Olympics	26 (92 – 95)	-0.43% (+2)
Miyazaki & Morgan (2001)	Events	USA	1996 Summer Olympics	27 (92 – 95)	+1.24% (-4 to 0)
Spais & Filis (2006)	Events	Greece	2004 Summer Olympics	3 (00 – 01)	n.a.
Samitas, Kenourgios & Zounis (2008)	Events	International	2004 Summer Olympics	21 (00 – 04)	+6.3% (-5 to 0)
Mishra, Bobinski & Bhabra (1997)	Events	USA	Title event sponsorships (FIFA, PGA, ATP)	76 (sports related: 50) (86 – 95)	+0.56% (0)
Caldéron, Más & Nicolau (2005)	Events	Spain	Title event sponsorships (Olympics, cycling, sailing, cultural events)	58 (sports related: 21) (92 – 00)	+0.76% (+2)

Author (Year)	Sponsorship category	Country	Sponsorship details	Sample size (period)	(C)AR (day(s))
Clark, Cornwell & Pruitt (2009)	Events	USA	Title event sponsorships: Overall sample	114 (90 – 05)	n.s.
			ATP	9	-5.32% (0 to +20)
			PGA	36	n.s.
			LPGA	6	n.s.
			NASCAR	23	+2.29% (0 to +10)
			NCAA Football	40	-0.76% (0 to +1)
Johnston (2010)	Events	Australia	Major sport events	51	+0.31% (+1)
Agrawal & Kamakura (1995)	Types	USA	Personality sponsorships	110 (80 – 92)	+0.54% (-1 to 0)
Clark, Cornwell & Pruitt (2002)	Types	USA	Naming right deals of major league stadiums (NFL, NBA, NHL, MLB)	49 (85 – 00)	+1.65% (-1 to +1)
Cornwell, Clark & Pruitt (2005)	Types	USA	Official product sponsorships: Overall sample	53 (90 – 03)	+1.1% (-2 to +2)
			NFL	14	n.s.
			MLB	8	n.s.
			NHL	11	+2.41% (-2 to +2)
			NBA	10	+3.0% (-5 to +5)
			PGA	10	+1.46% (-1 to +1)
Cornwell, Pruitt & van Ness (2001)	Sports	USA	Motor sports (Indi 500)	28 (63 – 08)	n.s.
Pruitt, Cornwell & Clark (2004)	Sports	USA	Motor sports (NASCAR)	24 (95 – 01)	+1.29% (-1 to 0)
Spais & Filis (2008)	Sports	Italy	Soccer	1 (07)	n.a.

expected to be at least partly offset by direct costs such as sponsorship fees and indirect costs resulting from ambush marketing activities from competitors or potential agency costs from misalignments of interests between shareholders and managers. The event

study approach (see also section 6.3.2 for more details) was used to detect the existence of any net benefits. It was tested if there were significant differences in actual stock returns and expected stock returns on and around the day of the announcement. The presence of such differences (abnormal returns) would indicate a positive wealth effect of Olympic sponsorship announcements. The sample included sponsoring firms ($n=26$) that were either a Tier 1⁴, Tier 2 or Tier 3 sponsor for the 1996 Olympics in Atlanta and were publicly listed on an American stock exchange (NYSE, AMEX or NASDAQ). However, the exclusion of foreign sponsors as well as privately-held sponsors from the analysis limited the broader generalization of the study's findings significantly and resulted in a very small sample. The event study results revealed interesting insights. The findings attested a negative share price reaction to Olympic sponsorship announcements. On each of the two days following the announcement the sponsors were exposed to a statistically significant stock price underperformance. This effect was confirmed by a multi-day window analysis, namely for the three day window between the day of the announcement and the two following days. Interestingly, there is no evidence for a share price reaction to the sponsorship news on the announcement day itself. Furthermore, there is statistical evidence of a positive share price reaction four days prior the announcement. Unfortunately no attempt was made to provide an explanation for this surprising finding. Farrell and Frame (1997) reasoned that the overall negative wealth effect can be explained with the agency cost theory. Stated differently, investors believed that managers' decisions to become an Olympic sponsor were motivated by the desire for personal perks (e.g. VIP seats in the arenas) rather than financially sound expectations about a boost in future sales. Consequently, investors do not consider Olympic sponsorship deals as value-adding marketing investments. The root cause for the fact that there was no share price reaction on the announcement day itself, but on the two following days was thought to be related to the subsequent and staggered release of details regarding promotional activities supporting the sponsorship deal. However, this would imply that investors do not react on the pure announcement of sponsorship deals, but wait for supplementing information about the implementation

⁴ Olympic sponsorships are classified into three groups (Tier 1 = worldwide Olympic sponsors; Tier 2 = centennial Olympic Game partners; Tier 3 = sponsors) with declining sponsorship fees and rights from Tier 1 to 3.

and the level of activation support. Although this might hold for some individual cases it seems unlikely to be valid as a general explanation. Detailed information about the implementation of a sponsorship is generally not released right after the official announcement since the detailed strategy including specifics about the activation support are usually developed after a deal has been signed. If general ideas about the sponsorship support already do exist, it would be part of the announcement itself. An alternative explanation could be that stock markets are not perfectly efficient and that it takes time until this kind of information is processed and reflected in share prices.

The wealth effect of 1996 Olympic Games sponsorship announcements was also investigated by another study (Miyazaki & Morgan, 2001). It was argued that Olympic sponsorships are valuable investments because of the ability to increase brand/ corporate equity by improving the brand/ corporate image. On the other hand, the high sponsorship fees might offset these benefits. The data set used for analysis ($n=26$) was very similar to the one in the previously discussed Farrell and Frame study. It is because of this similarity that the sample also shares the same disadvantages, namely a limited generalization due to the regional focus on the USA and the small sample size. Again, the event study methodology was applied to test for the existence of unexpected returns around the announcement date. Cumulated ARs (*CAR*) for different time windows around the announcement were tested to show the aggregated effect and to account for information leakages or slow stock market reactions. However, the study lacks the analysis for single days, especially the announcement day $t=0$. The authors reported significant positive *CARs* for the windows $t=-4$ to $t=0$ ($CAR=+1.24\%$) and for $t=-3$ to $t=0$ ($CAR=+0.89\%$). As opposed to Farrell and Frame (1997) who reported a negative wealth effect for the same 1996 Olympic sponsorship announcements, the findings here provide evidence that Olympic sponsorships seem to be value-enhancing investments. The fact that share prices reacted already before the actual announcement day indicates that information about deals already leaked to the market before the official press release.

It is interesting to note that Miyazaki and Morgan (2001) neither mentioned nor compared their findings with Farrell and Frame (1997). This is surprising because of the

striking similarity of these two studies and the contradictory conclusions. One can only speculate on potential reasons for these inconsistencies. An explanation could be possible differences in the announcement dates that have been researched for each sponsorship deal. However, this is impossible to verify because Miyazaki and Morgan (2001) did not supply announcement dates (Cornwell, Pruitt & Clark, 2005).

A study on the wealth effect of sponsorship announcements of the 2004 Athens' Olympic Games was conducted in Greece (Samitas et al., 2008). The key advantage of sport sponsorships was considered to be the ability to generate customer awareness while using the emotional state of the audience to create positive associations between the values of the event and the sponsored brand/ corporation. Being an Olympic sponsor would offer corporations access to an international audience and enable sponsors to link their name to the Olympic spirit. It was therefore researched how stock prices reacted to the announcement of Athens' 2004 Olympic sponsorship deals. The sample consisted of 21 companies that sponsored the 2004 Games as either an international or a national sponsor. Thus, the sample consisted of 10 national sponsors from Greece and 11 international sponsors from the USA, South Korea and Switzerland. Although the sample size is small, it should be mentioned positively that this study is based on a reasonably international sample. Event study methodology was utilized to examine potential wealth effects. The relevant national stock market indices⁵ were used as benchmarks for expected returns calculations. Furthermore, the overall sample was split into two sub-samples representing national versus international sponsors as well as smaller versus larger sponsors. The size of a sponsor was determined based on market capitalization and number of employees. For the first sub-sample it was reported that both, announcements of national and international sponsorships were followed by significant positive share price reactions. However, national sponsorships generated higher *CARs* (+10% for the window $t=-5$ to $t=0$) when compared with the *CARs* following international deals (+6% for the same window). Concerning the analysis of the second sub-sample, the results indicated significance positive *ARs* for small firms

⁵ S&P 500 for the USA, Greek General Index ASEGI for Greece, Korean Composite Stock Price Index KOSPI for South Korea and Swiss Blue Chip Index SMI for Switzerland

but only very weak evidence for any share price reactions for larger sponsors. The existence of *ARs* for both national and international sponsors suggested that investors regarded Olympic sponsorships as overall profitable investments. A reason why international sponsors generated lower *ARs* than national sponsors could be that many international firms had a history of being an Olympic sponsor and faced a diminishing impact on firm value. This is because investors already expected such a deal and already incorporated these expectations at least partially into the price. The fact that share prices of smaller firms reacted more than share prices of larger firms was unfortunately not further discussed.

Next to analyzing the wealth effect of the sponsorship announcements the Athens 2004 study also analyzed the share price reactions of sponsoring firms on the day of the opening ceremony. Although the opening ceremony per se does not contain any new relevant information for investors it might be considered as an indicator of the market sentiment regarding Olympic sponsorships. Therefore the results will be briefly presented. The event study results (having the opening ceremony as the main event instead of the sponsorship announcement) showed almost no significant impact on share prices and *ARs*. These results were not further discussed in the study, but it can be speculated that the absence of any share price reaction to the opening ceremony provides evidence to the explanation that such an event does not contain relevant information for investors.

The Olympics Games were also the topic of a different study analyzing the announcement effect of sponsorship deals for the 2004 Summer Games in Athens (Spais & Filis; 2006). The core objective of the study was to examine the impact of Olympic sponsorship programs on investors' behavior which is represented by share price reactions. Based on a very small sample of only three sponsorship announcements of Greek firms, the event study methodology was applied to each of the three sponsorship announcements individually to test for unexpected returns in every single case. This was different from approaches in previous studies on the sponsorship effect, where the significance of *ARs* was analyzed on an aggregated level across all firms in the sample. However, this approach on single firm level might be appropriate for analyzing the

success of individual sponsorships a broader generalization of findings is impaired. The value of the findings is further limited because the sample only consists of three data points. Nonetheless, the results of this study indicated mixed share price reactions. One sponsorship announcement was followed by positive *ARs*, whereas two the other two showed no significant share price reaction. Unfortunately the presentation of the findings neglected to display the percentage values for excess returns and *ARs* were only tested for the entire event window of $t=-21$ to $t=+21$. No results were given for other time periods or single days, e.g. the announcement day itself. The mixed results were explained by the fraction of surprise inherent in the sponsorship announcement. The two deals that were value-neutral were announced by two of the largest Greek firms. Hence, the sponsorship involvement in the Olympics in the home country could have been already expected and priced in. The deal that produced positive *ARs* was announced by a smaller Greek company and might have caught investors by surprise, resulting in an adjustment of the share price.

A study on the share price effect of corporate sponsorships of miscellaneous major events was conducted in the USA (Mishra, Bobinski & Bhabra; 1997). The general objective of this research was to assess the economic value of corporate sponsorship programs including both, sport sponsorships as well as cultural sponsorships. Next to the assessment of the economic value the study provided a broad overview of reasons why cash flow projections might be influenced by sponsorship deals (see table 2). In the following the factors having a hypothesized positive effect on cash flows (positive impact factors) will be briefly presented, the reasons why sponsorships could affect cash flows negatively (negative impact factors) will be discussed subsequently.

Customer awareness is thought to be the origin of any consumer's buying decision process. Sport sponsorship generates additional awareness among customers, hence influencing the likelihood for a brand of being a candidate in the buying decision process. As already suggested by previous research, sponsorships were instrumental in building a certain brand or corporate image in the mind of consumers. Partnering with a certain type of event was thought to be instrumental in utilizing that event's image to improve the own image. This image-transfer could be beneficial for firms that are

aiming at changing their appearance to the public. Image was considered to be important within the buying decision process as it provides further information to potential consumers. Sponsorships could also improve the acceptance of integrated promotion campaigns among channel members. The inter-relatedness between manufacturers and retailers might increase as a result of higher motivation on the retailers' side to represent a brand because of an appealing marketing campaign that is based on a sponsorship deal. Potential goal divergence between manufacturers and retailers could be mitigated because not only the manufacturer but through the mark-up also the retailer would benefit financially from every additional unit sold.

Table 2: Sponsorship factors influencing cash flow expectations (Mishra, Bobinski & Bhabra, 1997).

Theoretical impact on cash flow expectations	Factor	Description
POSITIVE	Customer awareness	Sport sponsorship generates additional awareness among potential customers
	Company image	Positive image-transfer from event to sponsor
	Channel member acceptance	Higher inter-relatedness between manufacturers and retailers through sponsorships
	Institutional goodwill	Positive side-effect on non-consumers like community leaders and regional politicians
	Corporate identity	Leverage of sponsorship for internal marketing purposes to create better employee motivation
NEGATIVE	Ambush marketing	Competitors attempt to extract some of the benefits from the official sponsorship program
	Event-sponsor fit	Weakened effectiveness if sponsorship is poor match with firm's overall objectives or image
	Agency problems	Sub-optimal decisions if managers act out of self-interest rather than maximizing firm value

Another factor speculated to have a positive effect on cash flow projections was described as institutional goodwill. It was speculated that institutional goodwill possibly influences also non-consumers like community leaders and regional politicians. Investments made in sponsorship programs could be seen as commitments made to specific markets or regions and thereby could affect local policy making and regulations in a way that is favorable to the sponsoring firm. The last factor mentioned was the

positive effect on corporate identity when leveraging the sponsorship also for internal marketing purposes. Using sponsorships to create better moral, excitement and job satisfaction in general could positively influence the individual performance of each employee and hence firm performance.

Next to these positive impact factors, the study highlighted also some negative impact factors. These will be briefly presented in the following. As described earlier, ambush marketing refers to advertising campaigns that are created by competitors to give the impression of official sponsorship involvement without actually being a sponsor. Because competitors attempt to extract some of the benefits of being an official sponsor ambush marketing activities constitute a threat to actual sponsors. The sponsorship effectiveness could also be weakened in case of poor event-sponsor fit. If the majority of consumers views the sponsorship as immoral (e.g. tobacco industry sponsoring the Olympic Games) future cash flow expectations might be conservative. Managers acting more out of self-interest rather than striving for maximizing firm value pose another threat to future cash flows. These agency problems might cause executives to make decisions about sponsorships that are not primarily driven by economic benefits optimization. This might lead to sub-optimal outcomes in the choice of sponsorship deals. Mishra et al. (1997) presented a broad overview of positive and negative impact factors of sponsorship but unfortunately did not test the statistical relevance of these factors. Although it was neglected to analyze the effect of these factors on the economic value of corporate sponsorship programs the sponsorship effect in general has been assessed. The sample consisted of overall 76 sponsorship deals including 50 sport deals and 26 cultural deals. The sample of deals that were announced by American firms between 1986 and 1995 only included sponsorships of major events such as the Olympics, Soccer World Cup or major tennis tournaments for sport deals and major concert tours or national art exhibits for cultural deals. The study specifically excluded deals of local or regional nature because of their limited relevance to affect future cash flows. A sponsor's share price was used as a proxy to analyze the economic value of a deal. It was argued that (on the announcement day and in absence of confounding events) share price is a proxy superior to firm profit or sales because it is not simultaneously influenced by other marketing activities such as TV advertisement, in-

store activities or rebates. Event study was also used in this study to assess the share price effect of announcements of major event sponsorships.

The findings suggested a positive share price reaction, indicating a positive economic value for event sponsorships in the US. On the announcement day share prices of sponsoring firms were on average 0.56% higher than expected. It is important to note that this is the result for the overall sample, including 40% cultural sponsorships. Unfortunately possible differences between sport and cultural sponsorships have not been further investigated. The positive ARs on the announcement day implied that event sponsorship created significant economic value for investors and that sponsorship should play a role in the overall marketing mix of a firm. As a reason why sponsorship created value it was suggested that the ability to reach target customers is much higher for sponsorships than for traditional advertising methods (e.g. no zapping during TV commercials).

A similar study was recently conducted in for Australian sponsorships (Johnston, 2010). By applying event study methodology it was researched whether the announcement of event sponsorship deals impact share prices of Australian companies. Unfortunately it was not further specified, whether the sample ($n=51$) mainly consisted of sport or cultural sponsorships. But due to the fact that all references and comparisons in this study originated from sport sponsorship studies it is assumed that the findings are also relevant for the sports sector. The results indicated a positive sponsorship effect ($AR=+0.31\%$) on the day following the announcement. The author argued that although the effect was positive it was not large and concluded that the Australian sponsorship market was competitive with almost fair prices where the value a sponsor received from a partnership was only slightly higher than the investment.

Another study researching the effect of major event sponsorship on company performance was conducted in Spain (Caldéron, Más & Nicolau, 2005). The main objective was to examine whether commercial⁶ or philanthropic⁷ sponsorships lead to

⁶ Commercial = Firms participate in sponsoring in order to gain direct commercial benefits (D'Astous & Bitz, 1995)

⁷ Philanthropic = Firms participate in sponsoring in order to benefit society in general (Meenaghan, 1991)

better firm performance in terms of stock returns. While this seems slightly unrelated to the topic of sport sponsorship effectiveness it is important to note that the commercial sponsorships included in the sample were almost exclusively sports related deals. Therefore, this study will be presented in the following. The sample consisted of 58 event sponsorships announced by firms listed in Spain between 1992 and 2000. 37 of these deals were classified as philanthropic and the remaining 21 as commercial (of which 18 were sport sponsorships). The initial sample was divided into two sub-samples based on the nature of the deal; one for philanthropic and one for commercial deals. Each sub-sample was analyzed applying the event-study approach. It was observed that commercial sponsorships of major events generated positive and significant ARs of +0.8% on the second day after the announcement. On the other hand, no share price reaction was detected for philanthropic sponsorships. The authors speculated that commercial sponsorship attracted considerably more media attention and thereby reached more investors as well as consumers who were positively influenced by the sponsorship.

The impact of event sponsorship programs was specifically researched for title events in the US (Clark et al., 2009). The authors note that the rising costs of title event sponsorships had challenged the true underlying value of such engagements. Therefore, the study analyzed the share price reaction of sponsoring firms following the public announcement of such deals. For this purpose the exact announcement dates of the sponsorship deal were researched for title events in auto racing (NASCAR), golf (PGA, LPGA), tennis (ATP, WTA) and college football (NCAA). Sports for which title events are rather uncommon were excluded from the analysis (e.g. baseball, basketball, ice hockey, professional American football). The dataset ($n=114$) includes deals that were announced between 1990 and 2005 by firms listed in the US. It is because of this regional focus that the broader generalization of findings is limited. The comparatively big sample of 114 observations is however one of the largest samples used for an effectiveness study of sport sponsorship. Event study methodology was employed in order to measure the impact of major title event sponsorship announcements on share prices, assuming that changes in share prices result from new information that has not

yet been factored into the share price. This is an application of the EMH (Fama, 1970). The event-analysis was performed for the sample as a whole, for sports-specific sub-samples and for sub-samples representing new versus extended contracts. The new/extended contract analysis was performed per sport⁸ in order to account for potential changes in share price reactions due to sport-specific increases in sponsorship costs for extended contracts. In contrast to the majority of earlier studies the average share price reaction for the overall sample in this research showed no significant *ARs* for the time periods under investigation (time windows of varying length between $t=-20$ to $t=+20$). Results for individual days around the announcement date were not given. The findings for the analysis on a more detailed level suggested that the wealth effect differed by sport. Share prices reacted favorably to announcements of NASCAR title event sponsorships with significant positive *ARs* of +2.3% for the ten days following the announcement. On the contrary, investors' reaction to NCAA title event sponsorships was strictly negative with share prices underperforming -2.1% during the ten days after the announcement. For golf and tennis there was no evidence for any share price reaction. The results for the new/ extended contract analysis testify that there were no *AR* differences between both types of announcements for NASCAR title events. In the case of NCAA it became clear that new contracts generated significant negative *ARs* whereas renewed contracts did not trigger any share price reaction. The opposite was found for golf. New contracts were thought to be value neutral with no significant *ARs*, but contract extensions were followed by an unexpected -2.7% drop in share prices. The overall conclusion for these findings was that title event sponsorship programs were value neutral and that sponsors paid a fair price for the expected future benefits. Looking at different sports individually the authors argued that the positive effect seen for NASCAR was based on the extraordinary fan loyalty in combination with high attendance and TV viewing rates. Because most of the NCAA events were sponsored for the first time in the sample period it was assumed that both, the sponsor and the sponsee, were lacking experience which signaled uncertainty and insecurity to investors. As a result NCAA title event sponsorships were associated with negative *ARs*. The new/extended contract analysis confirms this explanation. New NCAA deals lead to negative

⁸ Analysis only for sports with sufficient sample size (NASCAR, NCAA, PGA)

ARs and extended NCAA deals were value neutral. As prices for NCAA title event deals have remained constant the authors suggested that investors valued the experience that sponsors have gained in the previous engagement.

3.2.2 Studies about different sponsorship types

Research in the field of economic value analysis for different sponsorship types is fairly thin. Previous studies have analyzed the economic impact of celebrity endorsements, stadium sponsorships as well as official product sponsorships and will be presented in the following.

A study from the USA investigated the wealth effects of personality sponsorships (Agrawal & Kamakura, 1995). As expenditures on celebrity endorsement contracts and related advertising campaigns constitute significant investments the authors expected that these intangible assets translate into future sales and profits outweighing the initial investments. Hence, it was investigated what the economic return on personality sponsorships were and how share prices of sponsoring firms reacted to the announcement of such deals. Announcement data was gathered for 110 contracts closed between 1980 and 1992. It should be mentioned that the generalizability of the findings from this study regarding the assessment of sport sponsorship effectiveness was slightly impaired for two reasons. First, the sample also included contracts with non-sport celebrities, limiting the generalizability to the field of sport economics. Second, the sample consisted only of endorsements by American firms, limiting the application of the results on a global scale. Event study methodology was used to measure abnormal effects on share prices around the announcement day $t=0$. The results showed that personality sponsorships were on average associated with positive *ARs*. For the announcement day itself $t=0$ a significant excess return of +0.44% was detected and confirmed by positive significant *ARs* cumulated over days $t=-1$ and $t=0$. According to the authors the existence of positive *ARs* suggested that, despite the high initial investments, the financial community considered personality sponsorships as a value-enhancing advertisement tool. The reason why some deals already triggered a share price reaction already on the day before the announcement, as reflected by positive

significant *ARs* cumulated over days $t=-1$ and $t=0$, was thought to be information leakage before the official announcement in the print media (e.g. official press conferences).

Motivated by critical news articles in the business press suggesting that stadium sponsorships were bad investments driven by poor decision making from corporate managers a study in the USA analyzed the economic value of such stadium-naming-rights agreements (Clark et al., 2002). The authors deemed the underlying research for these news articles as unqualified and examined in a controlled study the net value of stadium sponsorships based on a sample of 49 arena sponsorship contracts closed and announced in the USA between 1985 and 2002. Stadiums used by teams from the National Football League (NFL), National Basketball Association (NBA), National Hockey League (NHL) and the Major League Baseball (MLB) were represented. As mentioned earlier, because of the regional focus on the USA the results of this study were primarily applicable for stadium sponsorships in this region and any global generalization should be made with caution. On the positive side the overall sample of 49 observations was large enough to warrant sufficient statistical robustness of the overall results. The event-study approach was also used in this context to value these stadium sponsorship programs by measuring unexpected returns on the sponsor's stock around the day of the official announcement. The overall findings attested positive and significant excess returns on the very day of the announcement $t=0$ ($AR=+0.73\%$) and on the following day $t=+1$ ($AR=+0.66\%$). Significant positive cumulated *ARs* were also found for the period from $t=-1$ to $t=+1$ which strengthened the conclusion that investors deemed stadium sponsorship deals as value-enhancing marketing programs. It was speculated that the reason for this positive effect was twofold. First, stadium sponsorships increased awareness, purchase intention and improved brand image (as discussed in more detail in section 3.1). Second, sponsorship deals were thought to be useful vehicles to signal managerial optimism about future cash flows to the markets.

The economic impact of official product sponsorships (e.g. Gatorade as official sports beverage of the NFL) was analyzed for major sport leagues in the USA (Cornwell, Pruitt

& Clark, 2005). It was suspected that share price reactions to the announcement of official product sponsorships were comparable to other forms of sponsorships such as title event deals since official product contracts involved similar sizable investments. Official product sponsorship deals constituted a special form of sponsorship because these deals were generally structured as value-in-kind deals where sponsors paid a large part of the agreed upon fee by providing its own products or services without charge. This offered a special opportunity to demonstrate the own product and to improve brand image by letting sport stars use the own product. 53 announcements of official product sponsorships for the NFL, MLB, NHL, NBA and PGA were included in the analysis. It should be noted that the special form of value-in-kind financing could make comparisons with results of other studies on the wealth effect of sponsorship inaccurate. The event study approach was applied to measure the impact of official product sponsorships on share prices of sponsoring firms around the announcement day. The analysis was performed for the overall sample ($n=53$) and for the sport specific sub-samples. Since the sub-sample size ranged between only 8 and 14 observations these results should be interpreted carefully. The results indicated that there was no share price reaction on single days around the announcement for the overall sample. However, the multi-day period analysis revealed a positive sponsorship impact. For the period $t=-2$ to $t=+2$ positive and significant cumulated ARs of +1.11% were registered. The results for the individual league sub-samples suggested positive excess returns for the NBA ($CAR=+3\%$ for $t=-5; +5$), NHL ($CAR=+2.41\%$ for $t=-2; +2$) and PGA ($CAR=+1.46\%$ for $t=-1; +1$) but no reaction for MLB and NFL deals. It was concluded that financial markets viewed official product sponsorships as overall positive investments with expected future benefits exceeding the initial investments. Unfortunately, no explanation was provided with regards to the finding of favorable wealth effect for NBA-, NHL- and PGA-sponsorships but no effect for MLB and NFL deals. It can only be speculated that the price level for sponsorships in the MLB and NFL has reached a point where investors believed that future benefits arising from the deal equaled initial deal costs.

3.2.3 Studies about sponsoring different sports

Research on the wealth effect of sponsoring different sports has not yet received dedicated attention. It has only been investigated as subset of a study on the economic value of title event sponsorships (see also section 3.2.1; Clark et al., 2009) or within another study on the wealth effect of being an official product sponsor (see also section 3.2.2; Cornwell et al., 2005). Research that did analyze the value of sponsoring different sports in general dealt with motor sport deals or in a single case with a case study on soccer sponsorships. These studies will be presented in the following.

Cornwell, Pruitt and van Ness (2001) analyzed the value of being a corporate sponsor for motor sports. Although it was not the sponsorship per se that was examined but the effect of the participation outcome (did the sponsored team win or lose?) this study is relevant for the current research. It provided important insights about the relationship between the sponsorship value and the success of a sponsee. It was hypothesized that sponsoring a winning team might have provided additional benefits to a sponsor in terms of higher media exposure as compared to other teams that participated but lost. Hence, the economic value of sponsoring a winner versus a loser was analyzed. The sample consisted of 260 corporate sponsorships of teams that participated in the annual Indianapolis 500 miles race between 1963 and 1998. The sample was further divided into two sub-samples, one included sponsorships of teams that won the race in a specific year ($n=28$) and one that included all losing teams. The sample only included sponsors from the USA. This regional homogeneity limited the application of the results to other regions. Event study methodology was applied to test for the economic impact of motor sport sponsorship on firm value. The date for each race constituted the event date and share price reactions were evaluated around this date for both sub-samples individually. For the sub-sample including winning teams the findings provided no evidence for any reaction in the sponsor's stock price on or around the day of the victory. On the contrary, evidence was reported that sponsoring losing teams generated positive excess returns ($AR=+1.8\%$ on $t=+2$). The authors argued that investors saw some residual benefit for firms to sponsor racing teams and that these benefits resulted more by the mere exposure on the race day than the outcome. Furthermore, it was speculated that

victories did not translate into returns because investors might have already expected a possible victory before the race and that share prices already reflected these expectations before the race. The victory itself was then no surprise to investors when it actually occurred.

A similar study was conducted for the Formula 1 (F1). Also employing event study methodology Schredelseker and Fidahic (2011) assessed the economic value of winning a F1 grand prix for automotive companies supporting F1 teams (e.g. Daimler & McLaren, Fiat & Ferrari). Although it might be arguable if this kind of support constituted sponsorship in its narrow sense since supporting firms were also team owners the results of the research are relevant since it provided information about the financial impact of winning races on share prices of affiliated firms. The results indicated an overall positive share price on the race day for both, winning and losing teams, but returns were even higher for winning teams. These findings contradicted the evidence from the NASCAR study (Cornwell et al., 2001) but it is important to note that the F1 study investigated the economic effect for sponsors who are also team owners demonstrating their high performance and capabilities on the race track.

The wealth effects of motor sport sponsorships were also analyzed in another study. Pruitt et al. (2004) analyzed the financial value of sponsoring NASCAR teams. Because of the high annual fees of up to \$20 M per year compared to for example stadium naming right deals (~\$5 M per year) the authors questioned the overall bottom-line impact of these expensive advertising campaigns. 24 primary⁹ sponsorship deals between American companies and NASCAR racing teams announced between 1995 and 2001 were included in the sample. Unfortunately, the regional focus, the exclusion of secondary¹⁰ sponsors and the small sample size hindered the results of the study to be applied to a broader universe of sponsorship deals. As in other studies measuring the economic value of corporate events the event-study approach was utilized to assess the impact of NASCAR sponsorship announcements on share prices of sponsoring firms. The very first announcement in the press served as the event date and it was tested for

⁹ Primary NASCAR sponsors were those sponsors that appeared in large letter on the hood of the sponsored car.

¹⁰ Secondary NASCAR sponsors appeared in smaller print on the side of the car

significant share price reactions around this date. The results provided evidence for a positive sponsorship effect. For the overall sample ($n=24$) the unexpected returns resulting from the announcement of the deal cumulated to +1.29% for days $t=-1$ to $t=0$. The positive impact was even greater ($CAR=+2.37\%$ for $t=-1$ to $t=0$) when only sponsors with direct ties to the automotive industry were considered ($n=9$). These findings suggested that financial markets welcomed NASCAR sponsorships as highly visible marketing programs and worthwhile marketing investments. Expected benefits still seemed to exceed the comparatively high annual costs. It was speculated that this positive sponsorship effect was driven by the sponsor's access to the extremely loyal NASCAR fan base and the possibility that this loyalty towards a team also spilled over to a team's sponsor. The fact that congruent sponsorships achieved higher returns supported earlier findings that investors value a high degree of event-sponsor fit. Especially motor sports offered congruent sponsors the opportunity to present their products in an authentic environment and live in action.

Spais and Filis (2008) attempted to analyze the stock market reaction to soccer sponsorship announcements in Italy. The overall objective of the study was to test whether the sponsor or the sponsee benefited more from a recently announced sponsorship deal. Insights generated about the announcement effect on the share price of the sponsored club were interesting, but not relevant in this context and will not be further discussed. However, the empirical findings are also relevant for this study since part of the analysis contained information about the effect on the sponsor's share price. The authors compared the average return on the sponsor's stock from a pre-announcement period with average returns from post-announcement period to draw conclusions about wealth effects. The research was set up as a case study with the 2007 sponsorship deal between Fiat and Juventus Torino being the only observation. The nature of the case study of only one sponsorship deal and the geographical focus on Italy severely limited any broader application of the results. Although it was claimed that event-study methodology was used to analyze share price reactions following the deal announcement it was actually a two-sample t-test that compared mean returns from before and after the announcement of the deal. The first part of the analysis compared

the sponsor's pre- and post-announcement average return. However, the results of this approach are not representative because it ignores market-wide effects that also might have an impact on share prices. The second part of the analysis partly overcame this shortfall by testing for differences in the sponsor's mean return and the mean return on the market index, separately for the pre- and for the post-announcement period. Unfortunately the authors did not define abnormal or unexpected returns¹¹ to test for a difference in these market-adjusted returns between the pre- and post-event period in order to properly account for market-wide effects on share prices that were not attributable to the announcement. Hence, the methodology only yielded weak results with regards to the question if the sponsorship announcement impacted share prices. The results for the first part of the analysis indicated that the average daily return on the Fiat stock was positive (+0.46%) for the two month preceding the announcement but turned negative (-0.02%) for the two month after the announcement but this difference was not statistically significant. The second part of the analysis revealed that the average daily return on Fiat (+0.46%) was significantly higher than on the market index (-0.06%) during the pre-announcement period. This changed for the post-announcement period when this difference became insignificant (Fiat -0.02%; index -0.08%). Overall, Fiat's lower average return after the announcement indicated that investors were skeptical about the deal with Juventus Torino. The study did not provide an explanation for these results, but it can be speculated that investors doubted that Fiat would be able use the sponsorship deal to generate future benefits amounting to the paid sponsorship fee of \$33 M.

3.3 Determinants of sport sponsorship wealth effects

In addition to analyzing the financial impact of sport sponsorship announcements a number of studies also tested for certain determinants in order to identify what drives financial sponsorship success. Multiple regression analysis was performed where ARs were used as a proxy for financial sponsorship success and served as the dependent

¹¹ The unexpected return on day t only contains that part of the total return on day t that was not expected given a certain market return on the same day. If for example a company C is expected to generate a return equal to the market return on a given day t , then: Unexpected return _{t} = (Total return company C_t - Market return _{t}).

variable. A set of sponsor-specific, deal-specific, sponsee-specific and demographic factors served as independent variables (see also table 3). These factors and their role as determinants for the wealth effects of sport sponsorship deals will be discussed in the following.

Table 3: Overview of regression determinants for abnormal returns following sport sponsorship announcements (+ = significant positive effect; - = significant negative effect; n.s. = not significant).

Classification	Factor	Effect	Author(s) (Year)
Sponsor-specific factors	Firm size	+	Caldéron, Mas-Ruiz & Nicolau (2005); Clark, Cornwell & Pruitt (2009)
		-	Clark, Cornwell & Pruitt (2002)
		n.s.	Clark, Cornwell & Pruitt (2002); Cornwell, Pruitt & van Ness (2001); Farrell & Frame (1997); Mishra, Bobinski & Bhabra (1997); Pruitt, Cornwell & Clark (2004)
	Cash flow	-	Pruitt, Cornwell & Clark (2004)
		n.s.	Clark, Cornwell & Pruitt (2002); Clark, Cornwell & Pruitt (2009)
	Managerial ownership	n.s.	Farrell & Frame (1997)
	Blockholder ownership	+	Farrell & Frame (1997)
	High tech firm	+	Clark, Cornwell & Pruitt (2002); Cornwell, Pruitt & Clark (2005)
	Repeat sponsor	n.s.	Farrell & Frame (1997)
	Advertising expenditure	n.s.	Mishra, Bobinski & Bhabra (1997)
	Market share	-	Cornwell, Pruitt & Clark (2005)
	Profitability	+	Mishra, Bobinski & Bhabra (1997)
Deal-specific factors	Congruence	+	Clark, Cornwell & Pruitt (2009); Cornwell, Clark & Pruitt (2005); Cornwell, Pruitt & van Ness (2001); Pruitt, Cornwell & Clark (2004)
		-	Caldéron, Mas-Ruiz & Nicolau (2005)
	Contract length	+	Clark, Cornwell & Pruitt (2002)
		-	Johnston (2010)
	Sponsorship fee	n.s.	Clark, Cornwell & Pruitt (2002); Johnston (2010)
	Company level sponsorship	+	Pruitt, Cornwell & Clark (2004)
Sponsee-specific factors	Local sponsor	+	Clark, Cornwell & Pruitt (2002)
	Winning percentage	+	Clark, Cornwell & Pruitt (2002)
	First time winner	+	Cornwell, Pruitt & van Ness (2001)
Demographic factors	TV live broadcast	n.s.	Cornwell, Pruitt & van Ness (2001)
	Host city population	n.s.	Clark, Cornwell & Pruitt (2002)

Sponsor-specific factors represented characteristics of the sponsoring firm and included firm size, cash flow, a dummy for high tech firms, a dummy for repeat sponsors, ad spent, market share, profitability, managerial ownership and blockholder ownership. Firm size, approximated by either a sponsor's total assets or by its market capitalization, seemed to have an overall positive effect on the wealth effect (Caldéron et al., 2005; Clark et al., 2009). Thus, larger companies were better able to leverage the sponsorship also in other marketing activities by supporting the deal by a multi-million dollar activation program (Clark et al., 2009) and were better able to absorb such heavy investments than smaller firms (Caldéron et al., 2005). Other studies reported no significant effect (Comwell et al., 2001; Farrell & Frame, 1997; Mishra et al., 1997; Pruitt et al., 2004) indicating that firm size might not have been an important prerequisite for successful sponsorship. Only a single case documented a negative effect (Clark et al., 2002). It was reasoned that smaller firms generated higher ARs because they benefited from a rather focused product range which enabled them to better realize synergistic effects between well coordinated marketing activities (Clark et al., 2002). The overall direction of the impact of firm size on ARs is however mostly positive.

The economic success of sponsorship deals was also influenced by a company's cash flow position. Cash flow was used as a proxy for potential agency conflicts within a firm when managers act more out of self interest (e.g. guaranteed VIP seating as a main sponsor at essentially no personal cost) instead of maximizing firm value (Jensen and Meckling, 1976). Cash flow served well as a proxy for this type of moral dilemma since a tight cash situation limited a firm's investment opportunities naturally and forced management to strictly decide about investments based on value to the firm instead of personal value. Previous research showed that ARs were lower for sponsors with a high level of cash flow (Pruitt et al., 2004). This is in accordance with the hypothesized effect that a higher level of cash gave managers more leeway for investment decisions based on personal motives and that the sponsorship decision was at least partially driven by agency motives (Pruitt et al., 2004). Other studies found no significant impact for cash flow (Clark et al., 2002; Clark et al., 2009) meaning that potential agency problems were irrelevant for the economic success of sponsorship deals. Overall, the risk of agency problems showed to have a mostly negative impact on sponsorship success.

Other agency-related attributes like the ownership structure of a sponsoring firm also determined the financial impact of a sponsorship deal. Ownership structure provided an indication about potential agency conflicts due to the misalignment of interests between managers and shareholders. The shareholder structure was characterized by the share of managerial ownership and by the share of outside blockholder ownership. A high level of shares owned by managers (managerial ownership) was expected to mitigate agency problems because managers were shareholders themselves and interests were expected to be aligned. A high level of outside blockholders (e.g. pension funds, insurances) was expected to reduce agency problems because these large blockholders were thought to be well organized to monitor and discipline corporate managers in order to maximize firm value. It would be much less likely that manager's actions and strategic decisions would be monitored by a fragmented shareholder structure with many smaller investors. Based on empirical results the managerial ownership structure had no impact on *ARs*, but a positive relationship between large outside blockholders and stock returns was found (Farrell & Frame, 1997). Thus, the presence of large investors reduced concerns that managers act out of self-interest instead of maximizing firm value when deciding about sponsorships.

The fact that a sponsor was a high-technology firm also determined the economic value of sponsorships. High-tech firms were generally defined as firms from the computer, internet, telecommunications or bio technology industry (e.g. Clark et al., 2002). These industries constitute a specifically interesting sector because high-tech firms differ from traditional firms in terms of unstable and volatile cash flows from largely intangible products which were difficult for investors to estimate. A concept from classic financial economics known as signaling theory (Ross, 1977) was utilized to test if high-tech firms were able to signal optimism about future profits to investors. Empirical results provided evidence for a positive correlation between being a high-tech sponsor and *ARs* (Clark et al, 2002; Cornwell, Pruitt & Clark, 2005). By closing a multi-year sponsorship contract and committing to a major marketing campaign involving multi-million dollar payments high-tech firms signaled to investors their positive beliefs and confidence about a prosperous future.

Another sponsor-specific determinant for financial sponsorship success was a firm's prior experience as a sponsor. In this context repeat sponsors were defined as those sponsors that have sponsored the same event before. Prior sponsorship experience might have given repeat sponsors an advantage over new sponsors in terms of learning from mistakes and successes from the previous sponsorship. Although not implemented, an alternative possibility would have been to classify repeat sponsors as sponsors with any prior sponsorship experience because the lessons learned in the course of one sponsorship deal were at least partially applicable in other sponsorship situations. However, previous research indicated that being a repeat sponsor did not influence *ARs* (Farrell & Frame, 1997). Thus, either a sponsor's prior experience seemed not be crucial for the success of a sponsorship campaign or investors already expected the repeated involvement of a sponsor for a specific event and share prices have already adjusted before the official announcement.

A sponsor's overall advertising intensity and its role in explaining sponsorship wealth effects was also investigated. A firm's overall advertising expenditures served as a proxy for its advertising intensity and sponsorship investments as well as all costs related to activating and leveraging the sponsorship program were part of this overall marketing budget. Earlier findings suggested no significant correlation between the overall marketing intensity and *ARs* following the sponsorship announcement (Mishra et al., 1997). In other words, the total amount a sponsor spent on advertising and promotion seemed to have no effect on the financial value of a sponsorship deal.

A sponsor's market share played a relevant role for the outcome of a sponsorship program. The relevant share was defined as the sponsor's market share within the product categories of the sponsored brands or products before the sponsorship. Based on Weber's law (Miller, 1962) it was hypothesized that the marginal benefit from sport sponsorships declined with higher levels of market share because a high market share implied an already high level of brand awareness among consumers and thus no need for expensive sponsorship campaigns to improve brand awareness. Statistical analysis confirmed a negative impact of market share on *ARs* (Cornwell, Pruitt & Clark, 2005). Sponsors with smaller shares in the relevant product categories gained more from the sponsorship than firms with dominant positions in the respective markets.

Since the contract fees constituted significant investments for sponsors the firm's profitability also determined the wealth effect of sport sponsorships. The financial ratio return on assets (ROA¹²) was used as a proxy for firm profitability and gave an indication on how profitable a firm was before the sponsorship given its total size. Although it is generally a good approach for firms to invest in growth strategies in times of prosperity (high profitability) and to follow a rather stabilizing course through cost cutting in rough times (low profitability), investing in marketing activities in times of low profitability might be a way for managers to break the downward spiral and lead the business back to prosperity. Prior research showed that ARs is positively influenced by the sponsor's profitability (Mishra et al., 1997). Investors valued sponsorship activities more when the sponsoring firm has made profits in the past.

Deal-specific factors represented characteristics of the sponsorship deal itself and included the degree of sponsor-sponsee fit, contract length, sponsorship fee, execution level of the sponsorship (brand or company level) and an indication if the sponsor was a local firm. The perceived degree of closeness (congruence) between a sponsor and its sponsee was found to be an important characteristic affecting the financial benefits of a sponsorship program. Partnerships were defined as congruent when a sponsor either had a direct relationship with the sponsored sport (e.g. Nike and USA Basketball) or when the sponsor's products were likely to be used while watching the sport (e.g. Heineken and UEFA Champions League) (Cornwell et al., 2005). Earlier sponsorship research has shown that congruence was a key factor for sponsorship success because it improved the probability consumers would recall a brand's sponsorship involvement and thus increased awareness scores (Crimmins & Horn, 1996; McDaniel, 1999). The majority of studies documented a positive association between congruent sponsorship deals and changes in stock prices (Clark et al., 2009; Cornwell et al., 2005; Cornwell et al, 2001; Pruitt et al., 2004). Sponsorships with a high degree of sponsor-sponsee match generated higher ARs than seemingly unrelated partnerships. Only one study reported a negative relationship between congruence and stock returns (Caldéron et al., 2005).

¹² ROA = Operating income before depreciation divided by total assets

The economic impact of sponsorship announcements depended also on contract-related attributes like the duration of the contract and the agreed upon sponsorship fee. Contract length was measured in years and represented the total time a sponsor committed for a deal and tested whether investors preferred deals having a longer or shorter duration. Sponsorship fees were defined as total sponsorship costs relative to a sponsor's cash flows in order to test if the relative cost paid influenced the financial impact of a sponsorship campaign. Although specific details about a deal such as the contract duration or the deal value were rarely released, this information was collected for a study on stadium sponsorships deals. The empirical results suggested that stock returns around the announcement day were positively impacted by the contract length but no significant effect was observed for the contract value (Clark et al.). Hence, longer sponsorship agreements were perceived more positively by investors and generated on average higher ARs than shorter deals. Shareholders seemed to appreciate that long-term contracts assured a continuity of marketing activities in the future at prices already locked-in at the time of the announcement. A recent Australian study also analyzed the effect of duration and sponsorship fees on ARs (Johnston, 2010). The results supported Clark et al.'s (2002) finding that ARs were unrelated to sponsorship costs, but suggested that returns were higher for short-term contracts. It was argued that investors valued the flexibility to cancel a sponsorship program quickly in the case when expected sales uplifts would not materialize.

Share price reactions following a sponsorship announcement were also influenced by the execution level of a sponsorship deal. Two levels were differentiated, sponsorships on corporate level (e.g. Procter & Gamble) and on brand level (e.g. Head & Shoulder shampoo) and it was found that sponsorship deals on corporate level positively influence share price reactions (Pruitt et al., 2004). Sponsorship as a marketing vehicle seemed to be better able to improve corporate image than brand image. Deals on corporate level were described as an umbrella for many individual brands and thereby providing more points of conceptual contact for a good sponsorship fit (Pruitt et al., 2004).

Another deal-specific factor determining share price reactions was the origin of a sponsor relative to the sponsee. If a sponsor was from the same city or region as the

sponsored team or event the deal was classified as local. Empirical evidence showed a positive influence of local sponsorships on share prices (Clark et al., 2002). In other words, sponsorship deals with local sponsors generated higher ARs than deals with out-of-town firms. Despite the inherent higher risk of agency problems with managers abusing sponsorships for personal interests (e.g. VIP seating) when local managers decide about local sponsorship deals it was stated that these local deals enhance the company image among regional customers considerably more than out-of-town deals (Clark et al., 2002).

Sponsee-specific factors described the sponsored entity and included performance indicators of the sponsored team (winning percentage, first time winner status) and the TV coverage of the sponsored team or event. The performance of a sponsored team was thought to be an additional determinant for stock returns around the announcement day of a sponsorship. One way to approximate performance was the percentage of games won during the two years prior to the deal (Clark et al., 2002). Winning games was especially important for sponsorships in the USA because of the set up of the championship system in all major leagues. It consisted of two parts, the regular season and the play-offs. If a team won enough games and qualified for the play-offs its sponsor enjoyed an extra exposure compared to those of losing teams not participating in the play-offs. Accordingly, a positive impact of a team's success rate on share price reactions was observed. Overall, successful teams attracted more spectators into stadiums and enjoyed greater media coverage. Both factors translated into higher reach¹³ and ultimately reduced the cost per thousand¹⁴ (CPT) of the campaign, especially when a team qualified for the play-offs. This was reflected in the higher ARs for sponsorships of teams with a higher winning percentage. The characteristic if the winner of a NASCAR race was a first time winner or a repeat winner was another approach to approximate performance (Cornwell et al., 2001). The analysis in this study differed from other studies since it was tested how a sponsor's share price reacted to the victory

¹³ Reach = Key figure in advertising analysis, measuring the total amount of consumers exposed to a campaign

¹⁴ Cost per thousand (CPT) = Costs per 1000 consumers reached by a campaign (total costs of a campaign divided by its reach)

of its sponsored team as opposed to the announcement of a sponsorship deal. Being a first-time winner influenced returns around the day of the victory positively. Thus, the economic value of a sponsorship after winning a race was lower when investors already expected a successful race which was indicated by a team's past performance. Share prices of sponsors of previously successful teams already reflected the possibility for a victory, whereas share prices of sponsors of first-time winners did not reflect this possibility and had to adjust accordingly on the day of the victory, resulting in higher ARs.

TV coverage was also of importance for sponsorship deal. An empirical study differentiated between events that were broadcasted live on TV and events that were not on TV or shown at a later time and found no evidence of a significant relation between stock returns and live TV coverage (Cornwell et al., 2001).

The only demographic factor analyzed as a determinant for financial sponsorship success was the population of the city hosting the sponsee. Population served as a proxy for the size of the local market that would be reached first-handed through the sponsorship. Therefore, larger cities offered exposure to greater consumer base. However, empirical results indicated that there was no significant relationship between sponsorship success and the local market size measured by population (Clark et al., 2002).

3.4 Summary

Previous research documented an overall positive impact of sport sponsorship on firm value and positive share price reactions following the announcement of such sponsorship deals. Sponsorship deals between large and profitable companies from the high tech industry and successful sponsees experienced higher ARs than others. Financial sponsorship success was also positively impacted by a high degree of congruence, contract length and sponsorships on company level rather than brand level. Deals involving sponsors with high cash flows and high market shares were perceived as less positive by the financial community.

The literature review reveals three main deficits in the research field of sport sponsorship effects on the firm value. First, prior research was mainly focused on the United States and therefore the reported findings may not be applicable internationally. There is no study that analyzed the wealth effect of sponsorship deals on the firm value from an international perspective. Second, previous studies were mainly concentrated on analyzing specific sport events (e.g. Olympics, title events) and to a lesser extent on specific sponsorship types (e.g. endorsement contracts, arena sponsorships). Different sports have not yet received dedicated attention. With the exception of motor sports, different sport types have only been analyzed as either a subset of a study on sport events (e.g. title events in American Football, tennis or golf) or on sponsorship types (e.g. “official product” sponsorship in basketball, soccer or ice hockey). Third, the samples used in prior research have limitations in terms of up-to-datedness and size. The sample used by Clark et al. (2009) consisted of 114 announcements and was the largest sample in this research area. More common were samples sizes of below 30 deals (e.g., Farrell & Frame, 1997; Miyazaki & Morgan, 2001; Samitas et al., 2008).

Therefore, the current body of literature would benefit from an international study taking the effect of sponsorship announcements on share prices in several sports into account, using a recent, comprehensive and representative dataset.

4. Theoretical Framework

This chapter introduces the theoretical framework for the effect of sport sponsorship announcements on abnormal returns on the sponsoring firm's stocks. It serves as the foundation for all statistical analysis as well as the research questions which will be introduced in the following chapters.

The framework applies to the universe of large sponsorship deals which constitutes also the object of investigation in this study and basically consists of two parts. The first one establishes a direct connection between sponsorship announcements and share price reactions which is mainly based the efficient market hypothesis (Fama, 1970) already introduced in section 2.2.1. The second part of the framework provides an overview of specific characteristics that might determine share price reactions and hence abnormal returns. These determinants are mainly based on findings from previous research as discussed in chapter 3.3. The research questions presented in the following chapter also reflect both parts of the framework for abnormal returns following sponsorship announcements which is displayed in figure 3 and will be discussed hereafter.

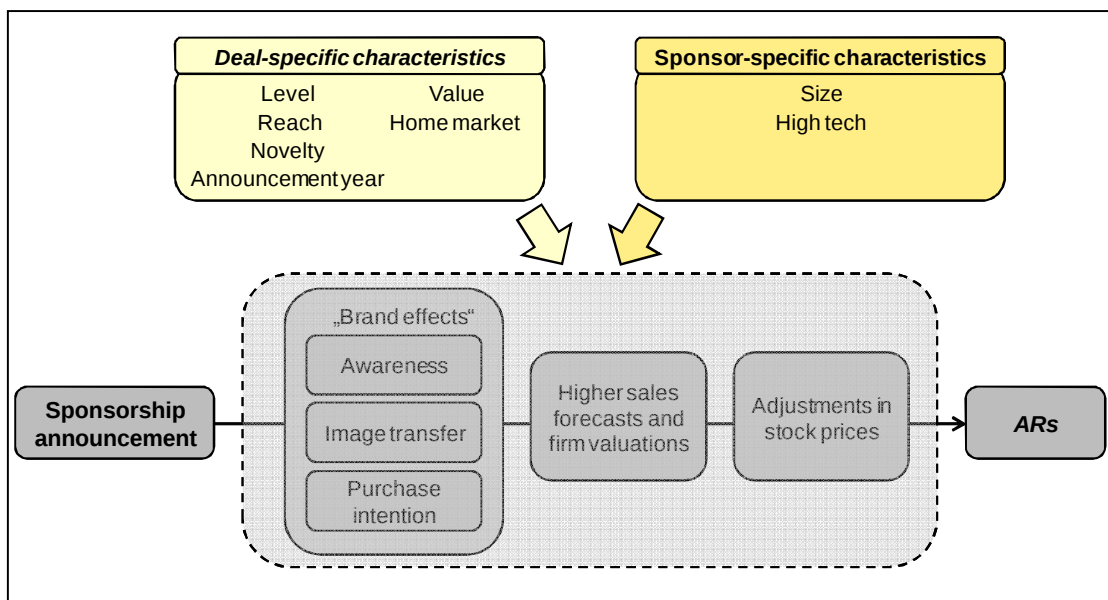


Figure 3: Theoretical framework for abnormal returns following sponsorship announcements incl. determinants (own depiction).

The first part of the framework links the event of the sponsorship announcement to share price reactions and resulting abnormal returns. As introduced in section 2.2.1, ARs denote the unexpected part of a stock return that was triggered by some unanticipated event, for example the announcement of a sponsorship deal. The logical chain connecting the announcement to the share price of the announcing firm is based on Fama's (1970) EMH. As mentioned before, EMH states that financial markets are efficient in a way that share prices react to new information about a firm instantaneously. In this framework the semi-strong form is assumed namely that a firm's share price reflects all publicly available information. When investors receive new information (e.g. announcement of a sponsorship deal) the share price should react accordingly. The direction and amplitude of the share price reaction depends on the relevance of the informational content of the announcement for the valuation of a firm. In terms of the previously introduced DCF-model (see section 2.2.2) it means that if the announcement leads investors to adjust their cash flow expectations upward, then companies are valued at a higher price and share prices should rise. The cash flow is adjusted upward when expected cash inflows (e.g. increased sales) outweigh expected cash outflows (e.g. sponsorship fees). Similarly companies are valued at a lower price and share prices should fall if the announcement leads investors to adjust their cash flow expectations downward. If an announcement is regarded as value-neutral, cash-flow expectations remain unchanged and the valuation of a company and the share price stay constant. It is important to note that announcements can be value-neutral for two reasons. The first one is that the information is simply not relevant for the valuation of companies. The second reason is that the announcement might be relevant, but that investors expect the net impact on cash to be neutral in case the expected additional future cash flow is offset by the costs related to the sponsorship program (including fees and activation costs), thus leaving the firm value and share price unchanged.

Unlike other marketing tools such as point-of-sales promotions or rebate campaigns neither the announcement of sport sponsorships nor the sponsorship program itself has an immediate impact on the sales figures of a sponsor. It is the positive effect on brand values such as awareness, image and purchase intention that give investors reason to believe that future sales will improve as a result of the sponsorship (e.g. Farrell

& Frame, 1997; Miyazaki & Morgan, 2001). These qualitative effects are often considered to be the primary goal of sponsorships (Cornwell & Maignan, 1998; Walliser, 2003) but improvement in these brand effects will ultimately lead to higher sales. Previous studies have shown that sponsorships can increase the awareness of a sponsored product (e.g. Grohs et al., 2004) as well as consumers' intention to purchase a sponsored product (e.g. Pope & Voges, 2000). Furthermore positive image effects resulting from an image transfer from the sponsee to the sponsor (e.g. Quester & Thompson, 2001) rounded the brand effects off. Because of these overall beneficial influences on a consumers' buying process in combination with the mostly positive share price reactions to sponsorship announcements reported in earlier studies (e.g. Agrawal & Kamakura, 1995; Farrell & Frame, 1997; Miyazaki & Morgan, 2001) it is expected that *ARs* following sponsorship announcements are positive. It is important to mention at this point that the current study analyzes the financial effect of sponsorships and therefore the discussed brand effects serve as a theoretical explanation for this effect and are not tested empirically.

The second part of the framework (figure 3) models the impact of deal-specific and sponsor-specific characteristics on share prices and hence on *ARs*. The deal-specific characteristics describe the nature of a sponsorship deal and are included in the model to test if certain factors related to the structure of a deal impact *ARs*. The sponsor-specific characteristics describe the sponsoring firm and entered the model in order to test whether certain sponsor attributes affect *ARs*. The theoretical motivation for including these factors in the model is mainly based on findings of prior studies on the determinants of excess returns. The framework's primary aim is to test various factors regarding their influence on *ARs*, rather than attempting to fully explain *ARs*. This is also reflected in the number of individual factors included in the model which is comparable with other studies in this research field (e.g. Clark et al., 2002; Cornwell et al., 2001; Cornwell et al., 2005). Both, the deal-specific and the sponsor-specific characteristics will be discussed in the following.

The deal-specific characteristics include the sponsorship level and its reach, the novelty of the deal, the announcement year, the deal value and a factor indicating whether the sponsorship is within a sponsor's home market. Once a company has decided to sponsor it also needs to decide if the sponsorship should be on company level (company name will appear in the sponsorship) or on brand level (brand name will appear in the sponsorship, respectively). Promoting on company level has the advantage that the advertising effect might spill over to several individual brands. Moreover, it has been reasoned that sponsorships lack the ability to convey a detailed product message and hence is more valuable in building corporate image (Meenaghan, 1991). This assumption is supported by Pruitt et al. (2004) who reported a positive effect of corporate level sponsorships on ARs. It is therefore expected that share price reactions to announcements of sport sponsorship engagements are significantly higher for sponsorship deals on corporate level than on brand level.

The second deal-specific characteristic accounts for the fact that endorsement deals generally differ in their geographic reach. Whereas some sponsorships reach an international audience (e.g. sponsoring the FIFA World Cup), others are mainly noticed nationally (e.g. NASCAR races in the USA). Although this characteristic has not yet been analyzed in previous studies it can be speculated that the probability for higher future sales increases with a greater sponsorship reach since sponsorship deals with international coverage reach a wider audience than national sponsorships. Hence, a positive relation between a sponsorship's reach and share price reaction is expected.

Third, the novelty of the sponsorship deal (contract renewal versus new contract) can also have an impact on the value of a sponsorship deal. Farrell and Frame (1997) suggested that contract extensions should affect returns more positively as repeat sponsors already have experience with that specific sponsorship setting which is valuable to fully exploit all opportunities linked to the sponsorship. Moreover, recall and recognition of sponsors should be higher for repeat sponsors than for new sponsors. For this reason, it is expected that share price reactions are higher for renewed sponsorship deals (contract extensions) than for new sponsorship deals.

Fourth, the year of the announcement is included in the model. Because of the rising sponsorship fees over the last years (Clark et al., 2009) the announcement year is

included in order to capture a possible effect of diminishing profitability over the years. Because firms have to pay higher fees for the right to exploit a sponsee's name and image to gain access to additional future sales and profits the return on sponsorship investments might have declined over the years. However, it is also likely that the potential future sales resulting from sponsorship activities have increased at the same time because of greater TV presence of sport events or simply better execution of sponsorships (e.g. supported by other marketing activities). These higher potential sales could justify higher fees and as a result returns on sponsorships could even have increased over the years. It is assumed that both forces are at play and therefore it is expected that the announcement year factor has an overall neutral influence on *ARs*.

The fifth deal-specific factor is the value of the deal and captures the fee paid by the sponsor over the lifetime of a sponsoring contract. It is hypothesized that higher deal values correspond with a higher visibility of the sponsorship engagement for customers, for example because of a better placement of the firm logo on the team uniforms and because a higher deal value indicates that the sponsored event is a major event. In addition, expensive sponsorship program are major marketing platforms for the sponsor and the significant investments made are likely to generate CEO attention. As a result, these sponsorships are subject to higher internal control mechanisms and are supported adequately by other marketing campaigns to maximize its impact. Hence, a positive relation between deal value and share price reaction is expected. A positive (but insignificant) effect of deal value on firm value was also reported in previous research (e.g., Clark et al., 2002).

The last deal-specific characteristic indicates whether a sponsorship is within the home market of a sponsoring firm. A sponsorship deal is considered to fall into the home market if there is a match between the origin of the sponsor (approximated by the country of its primary listing) and the home country of a sponsee. Previous research found empirical evidence that local sponsorships within the home market of sponsoring firms generated higher returns than out-of-town deals (Clark et al., 2002). It was argued that these home market deals enhanced company image more than other deals. For this reason *ARs* for home market deals are expected to be higher than for other deals.

With regard to sponsor-specific characteristics firm size and a sponsor's affiliation with the high tech industry can impact the returns on sponsorship programs. First, the sponsor's total assets are used as a proxy for firm size. Different effects are possible for firm size. On the one hand, it could be assumed that larger firms have more financial resources to provide a sponsorship activity with sufficient activation support and related marketing activities to achieve the full potential of the deal. Consequently, a positive connection between returns and firm size can be expected. There is also support for this assumption in previous research (e.g. Clark et al., 2009). On the other hand, a negative effect seems also plausible. Potential advantages why larger firms could achieve higher sponsorship returns (such as more extensive activation support) are possibly neutralized by the relative increase in visibility and thereby awareness for smaller firms. Because large firms are already in the mindset of consumer the incremental awareness increase through sponsorship programs might be significantly higher for smaller firms and therefore more valuable for them. Findings from previous research also support the negative firm size effect (e.g. Clark et al., 2002). Therefore, it is expected that ARs following the announcements of sport sponsorship engagements are negatively influenced by firm size.

Another sponsor-specific characteristic is a sponsor's affiliation with the high tech industry. High-tech firms are defined as in Clark et al. (2002) and include firms from the computer, internet, telecommunications and biotech industry. The industry classification for each sponsor is included in the sponsorship database provided by The World Sponsorship Monitor (TWSM, 2010) and is based on the main revenue source of a company. Two independent referees validated this initial classification using the Industry Classification Benchmark taxonomy developed by the FTSE Group and found no irregularities. Unlike firms for instance from the consumer goods sector high tech firms typically do not have steady cash flows making it extremely difficult for investors to estimate future cash flows for firm valuation purposes. By investing heavily in sponsorship deals, managers of high tech firms can signal investors that they are optimistic about the future (Clark et al., 2002). This is an application of the signaling theory developed by Ross (1977). Prior research supports the positive effect of sponsors from the high tech industry on firm value (e.g., Clark et al., 2002; Cornwell et al., 2005).

Consequently, it is expected that *ARs* following announcements of sport sponsorship deals are significantly higher for firms from the high tech sector than for other firms.

5. Research Questions

Based on the previous theoretical chapters this section presents this study's central research questions that will be analyzed using the methodological approach developed in the following chapter. The research questions can be grouped into two clusters. The first one deals with the detection of ARs and the second one deals with the identification of determinants for ARs.

The main focus of this study is on the wealth effects of sport sponsorship programs and the impact of the value of a sponsoring firm. This will be assessed for all sponsorship deals in general as well as for specific sub-categories including different sports, sponsorship types, regions and industries. In this context the first cluster of research questions will be investigated:

RQ1. How does the announcement of sport sponsorship deals impact ARs for sponsoring firms around the day of the announcement:

- a. from a *general perspective*?
- b. for different *sports*?
- c. for different *sponsorship types*?
- d. for different *regions*?
- e. for different *industries*?

In addition to the detection of wealth effects regression analysis is employed to identify specific factors determining ARs. The framework developed in the previous chapter serves as a theoretical foundation. Again, the determinants will be analyzed for sponsorship deals in general as well as for specific sub-categories including different sports, sponsorship types, regions and industries. Thus, the second cluster of research questions is:

RQ 2. Which factors determine ARs following the announcement of sport sponsorship deals:

- a. from a *general perspective*?
- b. for different *sports*?

- c. for different *sponsorship types*?
- d. for different *regions*?
- e. for different *industries*?

The methodological procedure employed to provide answers to the research questions and to test the hypothesis will be described in the following chapter.

6. Methodology

This chapter introduces the methodological approach employed in the current study in order to assess the research questions and to probe the theoretical framework. The methodological procedures are based on a comprehensive dataset of international sponsorship announcements from various sports, regions, industries and sponsorship types. The following sections present the methodological approach including the data collection process, available methods for the evaluation of financial effect of sport sponsorships including a discussion of these methods and conclude with the statistical approach for the data analysis.

6.1 Data collection

Relevant data about the exact date of the announcement as well as corresponding financial data must be gathered in order to be able to analyze the effect of sponsoring announcements on share prices of sponsoring firms. This section describes the data collection process and illustrates how specific data decisions have been made.

The initial starting point for the research of sport sponsorship announcements is a database provided by The World Sponsorship Monitor (TWSM, 2010). TWSM is a data provider using a global office network to screen relevant media including international press and various specialized Internet sites for the announcement of sponsorship deals¹⁵. Every sponsorship deal involving a total sponsorship fee of at least \$75,000 is included in the database providing an comprehensive overview of sponsorship deals associated with various sports (e.g. soccer, tennis, American football), different regions (North America, Europe, Asia/ Pacific, Africa) as well as specific events such as Olympics and arena sponsorship. The initial database includes more than 30 different sports ranging from very popular sports like soccer and basketball to less popular sports such as darts and bowling. From there the available deal information of the top ten¹⁶ (Fenton, 2011) sponsored sport categories was extracted. The scope was

¹⁵ Next to sport sponsorships TWSM also reports information on sponsorship deals from the arts & culture, charity and broadcasting sector.

¹⁶ Based on the number of reported deals in 2009 and 2010; the top ten list based on reported value was nearly congruent

limited to the top ten sponsored sport categories to keep the resulting manual research effort feasible for this dissertation project. The different categories included were American football, baseball, basketball, golf, motor sport (Formula 1 & NASCAR), arena sponsorship, Olympics, soccer and tennis. It is important to note at this point that it can be argued if Olympics and arena sponsorships should be considered as sports. It is true that Olympics is by definition a combination of a variety of sports including for example track and field, swimming, soccer, handball or martial arts and boxing and arena sponsorships is not an specific sport per se, but for the purpose of this study it is instrumental to consider both as an equivalent to the different sports. This is because from a sponsor's perspective all of these sport categories including Olympics and arena deals are mutually exclusive sponsorship opportunities that should be analyzed separately. For these reasons both, the current research analyzes Olympics and arena sponsorship deals alongside different sports.

In a first step of the data collection process a sponsorship database provided by TWSM was acquired. This initial database serves as the basis for the dataset used for statistical analysis in this study. Besides the announcement month of a sponsorship deal it contains information about the sponsor, the sponsee and about the deal itself. All relevant items for this study are displayed in figure 4 and will be described in the following. The reported announcement month reflects the month and the year the sponsorship has been announced to the press.

Information about the sponsor includes the sponsor's name and the industry the sponsor is mainly active in. If the deal is on brand level the brand name is listed at the sponsor's name, and if the deal is on company level the company name is listed as the sponsor's name. To ensure that brand level sponsorships can also be linked to stock prices the name of the company name for each brand is researched and added to the database manually. The industry classification for each sponsor, which is based on the main revenue source of a company, is also included in the database. Two independent referees have validated this classification using the Industry Classification Benchmark (ICB) taxonomy developed by the FTSE Group and found no irregularities. The initial industry classification on ICB sub-sector level (e.g. Clothing-Sports and Clothing-Casual) is too

detailed and would hinder statistical analysis on separate industry groups. Therefore, the industry classification is aggregated to the ICB industry level (e.g. Clothing-Sports and Clothing-Casual were among others aggregated to consumer goods; see also Appendix B). This aggregation ensures that each industry group contains enough observations for separate analysis.

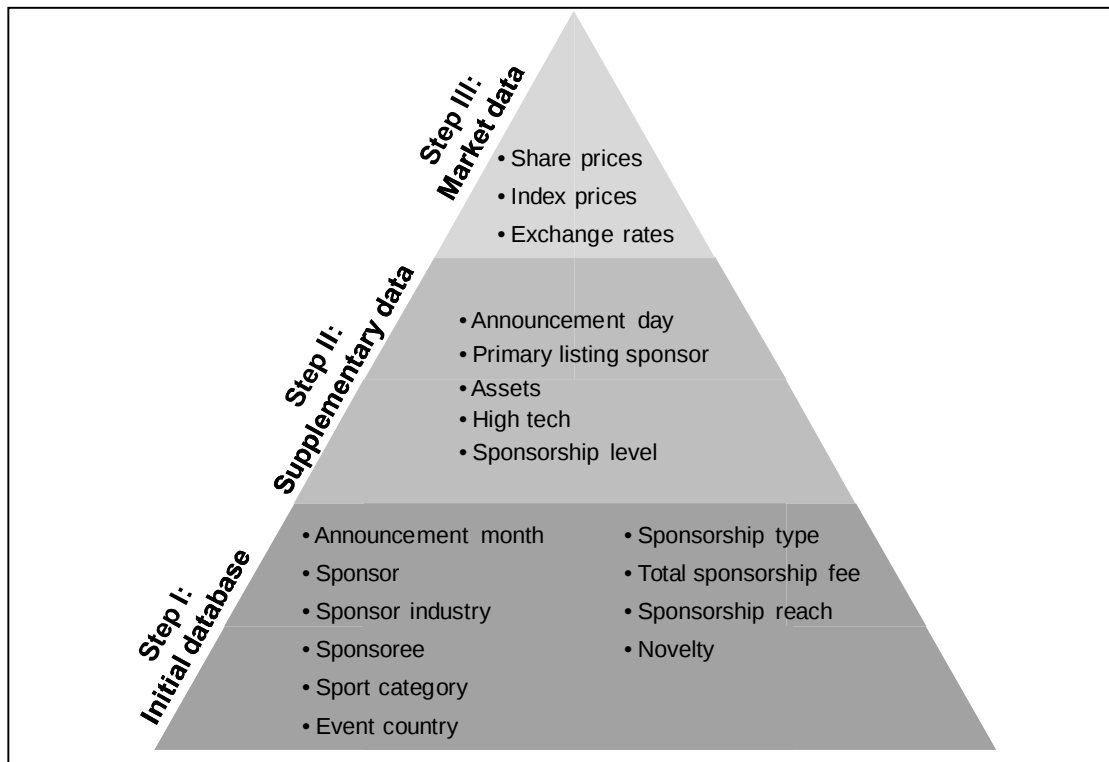


Figure 4: Overview of data collection process including data items.

Information about the sponsee includes the name of the sponsored entity, its main sport category and the event country. Depending on the nature of the entity the name of the sponsee is the team, organization or event name or the name of the sponsored sport star. The sport category reflects the type of sport a sponsee is associated with (e.g. FC Chelsea is associated with soccer). The event country is defined by the national league a sponsee mainly competes in (e.g. the basketball team EnBW Ludwigsburg is associated with Germany). In case a sponsee has consistent international or even global presence, event country is defined accordingly as “international” (e.g. Ferrari Formula 1 team).

Information about the sponsorship deal itself includes the sponsorship type, total sponsorship fee, sponsorship reach and the novelty of a deal. The sponsorship type describes the deal with respect to the nature of the sponsee. It is distinguished between team (e.g. Los Angeles Lakers), event (e.g. US Open), organization (e.g. PGA), and personality sponsorships (e.g. Michael Jordan). The sponsorship fees are reported in US \$ and capture the payments to be made by the sponsor. Where values are disclosed in the official announcements these figures are reflected in the database. When no values have been quoted in the media a value band is estimated based on benchmarking with known prices for similar deals, industry interviews, and expert opinions. For statistical calculations the mean value of the band is used. Total fees refer to the right fees paid over the entire duration of a deal. The database also contains details about the sponsorship reach which classifies deals based on their geographical coverage. Coverage in this context reflects how far a sponsorship program will be noticed by consumers and can be either national (e.g. Verizon Wireless sponsoring the NFL team Buffalo Bills) or international (e.g. Heineken sponsoring the UEFA Champions League). The information about the deal itself concludes with the novelty of a deal and specifies whether a sponsor and a sponsee team up for the first time or if an ongoing partnership has been extended and an existing contract has been renewed.

The initial database contains information about 4,795 sponsorship deals announced between January 1st 1999 and August 1st 2010 in the above mentioned sport categories. Because it is required to collect further information about these deals in order to be able to perform statistical analysis the database is trimmed to a size that is feasible within the scope of this dissertation project. As will be explained later in this chapter the identification of the exact announcement date is essential for all statistical procedures in this study. Unfortunately the identification of the exact date of the announcement for every single sponsorship deal constitutes the main driver for the time consuming research. Therefore, a three-staged filter approach is used to form the final dataset for this study. This filter approach is displayed in figure 5 and each stage will be discussed next.

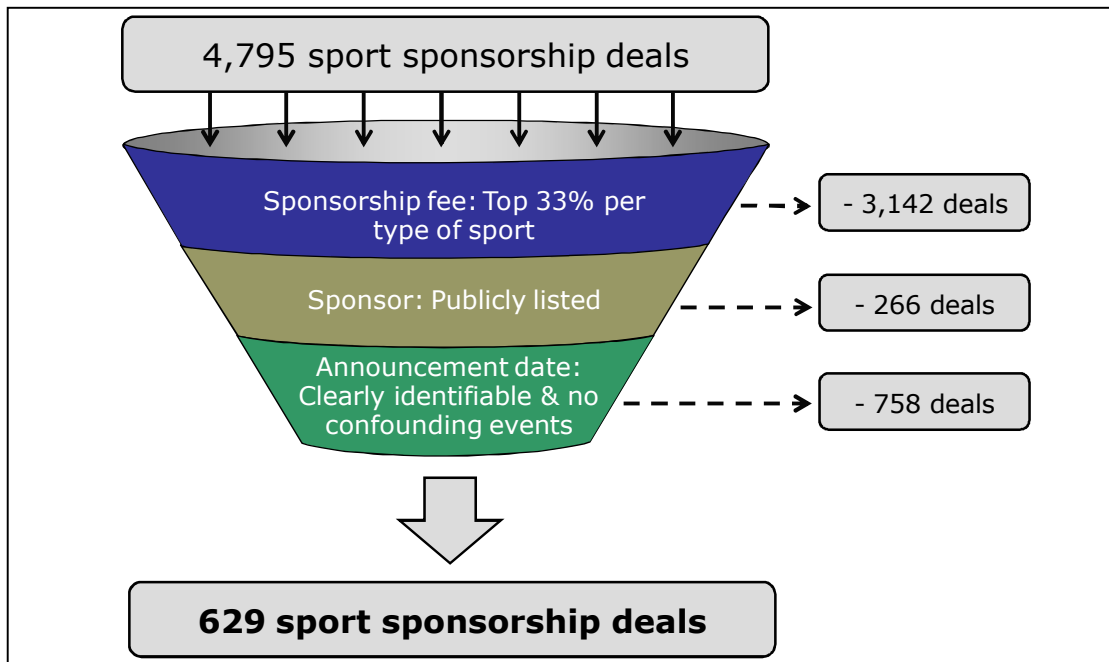


Figure 5: Three-staged filtering process including number of deals excluded at each stage.

The first stage is based on the total sponsorship fee which is also referred to as deal value. Because it is assumed that the likelihood for minor deals to be publicly announced, to appear in the media and to capture the attention of investors would be very low this study focuses on large sponsorship deals involving high deal values. Only deals from the top tercile based on value entered the final dataset, representing the universe of large sponsorship deals with a value of at least \$1.5 M. As a result the first filtering stage excludes 3,142 deals (67%) based on the minimum deal value criterion. The remaining 1,653 deals enter the second stage of the filter. Here it is checked whether the sponsoring firm was listed on a stock exchange at the time of the announcement. Because the financial effect of sponsorship announcements with regard to ARs is analyzed via share price reactions further 266 deals (6%) for which relevant share price data is not available are excluded from the dataset. The remaining 1,387 deals enter the last stage of the filtering process. Manual searches for every single deal are conducted in order to identify the earliest date of the sponsorship announcement using the online databases for news articles Factiva and LexisNexis. Deals for which the earliest announcement date could not be identified beyond doubt (e.g. not mentioned in the press or severe speculation in the media already before the official announcement)

are eliminated from the dataset as well as deals where the sponsorship announcement competes with other firm news (e.g. earnings announcements), so called confounding events, that could also influence the share price. As a consequence further 758 deals (16%) are eliminated due to the clean announcement date criterion. The resulting final dataset contains 629 sport sponsorship deals.

In a second step of the data collection process additional sponsor specific information for every single observation is gathered (see figure 4). The earliest date of the sponsorship announcement already researched during the filtering process constitutes a crucial figure for the statistical analysis of the research questions. The data provider Datastream is used for gathering all further financial information that is required including the identification of the stock exchange where a sponsor has its primary listing¹⁷. A match between the country of the primary listing and the event country identify home market deals (e.g. BMW sponsoring a golf tournament in Germany). Additional fundamental financial information about firm size (total assets) is also collected. Total assets (Datastream item WC02999) of the year ending before the sponsorship announcement are used as a proxy for firm size. Assets have been used as a proxy for size in favor of the sponsor's market capitalization because assets are not influenced by sometimes heavy fluctuations in share prices which would artificially impact firm size if market capitalization was used as a proxy¹⁸. Next, based on the industry classification from the first step of the data collection process, it is checked whether a sponsor is from the high-tech sector. High-tech firms are defined following Clark et al. (2002) and include sponsors from the computer, internet, telecommunications and biotech industry. The dataset is further enriched with information about the sponsorship level indicating if a deal is on corporate level (company name appears in the sponsorship program) or on brand level (brand name appears in the sponsorship program). This information stems from the initial database but is validated using the press releases about the sponsorship announcements.

¹⁷ The primary listing of a sponsor is the main stock exchange where the shares of a sponsor are primarily traded.

¹⁸ To check for robustness all calculations have also been performed using market capitalization as a proxy for size and have yielded similar results.

Relevant market data including share prices, index prices and exchange rates is collected in the last step of the data collection process. For a time period of ± 2 years around the day of the announcement daily closing prices for shares of sponsoring firms (Datastream item P) as well as closing prices for the corresponding main indices (e.g. Adidas and DAX; Coca Cola and Dow Jones Industrials). In case the announcement day falls on a non-trading day (e.g. holiday or weekend) the next possible trading day is defined as the adjusted announcement day. This is because it is the earliest day that markets could show a reaction to the sponsoring announcement. Due to the internationality of the sample a few observations (<4%) were affected by the issue of non-synchronous trading hours of international stock exchanges when the first announcement was made in a different time-zone than the country of a sponsor's primary listing. This time difference might have caused a late response to the announcement of some deals because exchanges might have already been closed at the time of the first announcement. Unfortunately, it was not possible to identify the exact time of the announcement which would be needed for a possible adjustment of the announcement date. Thus, no dates were adjusted; however, as will be explained in section 6.3.2 the methodological approach corrects for possible event-day uncertainty by also analyzing event windows in addition to single event dates (MacKinley, 1997). Lastly, exchange rates are extracted from Datastream to convert financial company data that is provided in local currency. All numbers are converted to US \$ using the actual exchange rate from December 31st.

The size of the sample should satisfy basic criteria to allow reliable and representative statistical analysis. Event studies are frequently affected by smaller samples due to the scrutiny of the research process for events to be included in the sample (e.g. clearly identifiable announcement dates; no confounding events). This is reflected by the fact that the majority of published marketing related event studies are based on a sample of 25 to 75 observations (Johnston & Cornwell, 2005). Thus, it can be stated that the sample size of the current study ($n=629$) warrants robust analysis. A minimum sample size is also required for the application of multivariate regression analysis. Econometric literature suggests a minimum of two (Backhaus, Erichson, Plinke & Weiber, 2008) to

five (Hair, Anderson, Babin & Black, 2010) observations per independent variable included in a regression model. Thus, for a regression analysis including ten independent variables the sample should consist of at least 20 to 50 observations. For the current study this means that based on comparisons with sample sizes of other marketing event studies and based on the suggested minimum sample size for a regression model including ten factors a minimum sample size of ~40 observations for all individual sub-samples (sports, sponsorship types, regions and industries) should be sufficient. The composition of the final dataset is displayed in table 4 and includes overall $n=629$ sponsorship deals and is to the author's best knowledge the largest sample analyzed in an event study on sponsorship effectiveness.

Table 4: Overview of sport-specific sub-sample categories and corresponding sample size.

Categories	Number of observations (n)
Motor sports	120
thereof Formula 1	62
thereof NASCAR	41
Soccer	117
Golf	83
Olympics	65
Basketball	62
Tennis	62
Arena sponsorships	43
Baseball	40
American Football	37
TOTAL	629

6.2 Methods

Several methodological approaches for the assessment and evaluation of the effects on firm value resulting from marketing activities such as sponsorship programs are available. As already mentioned in chapter 2.2 share prices reflect the expectations about a company's future sales and earnings. Because marketing programs are targeted to increase future sales and earnings these programs have a direct impact on share prices and thus firms value. Therefore, a company's share price is central for all (but one) methods which will be discussed in the following. After different methods relevant in the context of determining the effect of marketing activities on firm value have been introduced, this section concludes with a discussion of the available methods.

6.2.1 Methods to evaluate financial effects of sponsorship announcements

The methods to evaluate financial effects of marketing activities such as sponsorship programs including the event study approach, the four-factor model, the calendar portfolio approach, the stock-return response model, and a sales and profit analysis and will be introduced in the following.

The event study approach (Brown & Warner, 1980; 1985) assesses the direct impact of an event on share prices and thus on firm value. In this context an event is defined as a piece of information that is released to the financial markets for the first time, such as the announcement of a new product launch, the appointment of a new CEO or the announcement of a sponsorship deal. A change in firm value as a result of an event is identified via *ARs*, namely the difference between the actual return on a share around the time of the announcement and a *normal* return assuming that the event had not taken place. Based upon EMH the event study approach allows determining the financial impact of firm events in terms of direction as well as magnitude. Because identified *ARs* are attributed to the event it is of utmost importance that no other events occurred at the same time as the event that is analyzed and that the exact date of the announcement can be identified. If *ARs* are positive on average it indicates that the event (e.g. the announcement of a sponsorship deal) has a positive impact on share prices and thus firm value. Negative *ARs* on the other hand indicate a negative impact of that event on firm value. In a way, using event studies in the marketing context offers a unique way to measure the net present value (NPV) of events like sponsorship announcements without having access to actual accounting data such as upfront investment costs and profit uplifts. *ARs* following the announcement of such programs reflect the difference between investors' expectations about future profits and total costs (e.g., sponsorship fees, activation costs) arising from the sponsorship deal (Clark et al., 2009).

Originally used in the field of financial economics the event study methodology was used to investigate the effect of various events on firm value such as the announcement of M&A deals (e.g. Swaminathan, Murshed & Hulland, 2008), joint ventures (e.g. Burton, Lonie & Power, 1999), dividends (e.g. Kalay & Loewenstein, 1985) or corporate earnings (e.g. Ball & Brown, 1968). However, the event study

approach is also widely applied in the marketing area when analyzing effects on firm value (Johnston, 2007) resulting from events in the field of brand strategy (e.g. brand name change, brand extensions), innovations (e.g. new product launch, new patent) and media communications (e.g. advertising slogan change, sponsorship programs). Table 5 provides an overview of exemplary studies about the firm value effect of various marketing activities.

Table 5: Exemplary studies about financial effects of marketing activities applying event study methodology (based on Johnston (2007); excluding studies on sponsorship effect, see separate table 1).

Category	Author	Announcement Topic
Corporate/ Brand strategy	Horsky & Swyngedouw (1987)	Corporate name change
	Lane & Jacobson (1995)	Brand extension
	Bhagat & Umesh (1997)	Legal decision to brand rights
	Geyskens, Gielens & Dekimpe (2002)	Online channel addition
	Subramani & Walden (2001)	Intro E-commerce
	Changeur (2004)	Brand creation etc
	Kilic & Darsun (2006)	Corporate identity change
	Becchetti, Ciciretti & Hasan (2007)	CSR Index entry/ exit
Innovation	Eddy & Saunders (1980)	New product launch
	Chaney, Devinney & Winer (1991)	New product launch
	Kelm, Narayanan & Pinches (1995)	R&D project
	Koku, Jagpal & Viswanath (1997)	New product launch
	Hendricks & Singhal (1997)	Delay in product launch
	Chang, Chen & Hung (2005)	Innovation patent
	Sood & Tellis (2009)	Innovation project
Media communication	Bobinski & Ramirez (1994)	Financial ads in WSJ
	Mathur & Mathur (1995)	Slogan change
	Mathur & Mathur (1996)	New relationship with agency
	Hozier & Schatzberg (2000)	End relationship with agency
	Mathur & Mathur (2000)	Green marketing strategies
	Kim & Morris (2003)	Ads during super bowl
	Pandey, Shanahan & Hansen (2005)	Workforce diversity index
	Wiles & Danielova (2006)	Product placement
	Elberse (2007)	Casting announcement (Star?)
	Filbeck, Zhao, Tompkins & Chong (2009)	Media advertising
	Tipton, Bharadwaj & Robertson (2009)	Deceptive marketing
	Swaminathan & Moorman (2009)	Marketing alliances
	Boyd, Chandy & Cunha (2010)	Appointment CMO

The main advantage of the event study approach is that it allows researchers to assess the financial value of marketing activities such as sponsorship programs on a quantitative basis (Johnston, 2010) as opposed to qualitative approaches based on

surveys to analyze the effect on brand values like awareness and image. The event study approach links marketing programs directly to the tangible financial metric AR without having to rely on firm-specific and difficult to obtain accounting data such as incremental sales and incremental profits resulting from a specific marketing campaign. The method basically enables researcher to analyze the financial markets' valuation of the impact of sponsorship deals on firm value (Agrawal & Kamakura, 1995). Furthermore, the basic data needed to run the analysis (share prices, announcement dates) is publicly available making the event study approach easy to implement (Srinivasan & Hanssens, 2009) once the data is collected.

A disadvantage of the approach is that results are sensitive to the accurateness of the determination of a clear-cut event date. Because it is tested how share prices react to an event on and around that specific day the exact event date must be clearly available (Brown & Warner, 1980) in order to prevent a timing-mismatch between the actual event day and the analyzed share price reaction. The event must also be unexpected to trigger a reaction in share prices. Following EMH, share prices would already reflect the new information if the event has been anticipated by investors. A possible bias in the results as a consequence of confounding events constitutes another disadvantage. When specific event news compete with other firm relevant news on or around the event date possible share price reactions cannot be attributed only to the event, because other news might have also led to at least part of the reaction (Bowman, 1983). Thus, to prevent this problem it is suggested to exclude observations affected by confounding events from the analysis (Foster, 1980). For this reason the event study approach is disadvantaged when analyzing long-term effects stretching over multiple weeks or months since the difficulty of isolating the event of interest from other competing news increases with the length of the analyzed time window.

A method suitable for studying long-term effects of marketing programs is the four-factor model¹⁹. Initially developed by Fama and French (1993) and Carhart (1997) the four-factor model is based on the basic idea that investors need to be compensated for

¹⁹ The four-factor model is also known as the Fama-French model or Carhart model. However, this study solely uses the name four-factor model.

risk. Investors in riskier securities like stocks are compensated through higher returns when compared to other lower-risk securities such as government bonds (Markowitz, 1952). The four-factor model uses this risk-return approach and establishes a relationship between a stock's expected return ($E(R)$) and its risk profile based on the four fundamental risk factors market risk (MMF), size risk (SMB), value risk (HML) and momentum risk²⁰ (UMD):

$$(0) E(R_{it}) = \alpha_i + \beta_i \text{MMF}_t + s_i \text{SMB}_t + h_i \text{HML}_t + u_i \text{UMD}_t + \varepsilon_{it}$$

The coefficients of the risk factors account for a stock's exposure to risk and return differences between the return on a market portfolio and the risk-free interest rate (MMF), between small and big firms (SMB), between high and low book-to-market ratio²¹ firms (HML) and between previously high and low return portfolios (UMD)²². However, it is α that captures the unexpected or abnormal part of a stock's return that is not explained by the four risk factors. In order to analyze if an event or a specific characteristic has an effect on a firm's stock return the four-factor approach compares two portfolios, one including firms that share a specific characteristic (event group), e.g. firm is a sponsor, and one only including firms that do not have that specific characteristic (control group), e.g. firm is not a sponsor. Model 0 is then applied to both portfolios and the resulting α are compared. The difference between both α captures the relative long-term performance difference between both portfolios. If α for the event group is larger than α for the control group the event stocks outperformed the control stocks (Madden, Fehle & Fournier, 2006) and the analyzed characteristic (e.g. being a sponsor) provides additional value to the firm, and vice versa.

The main advantage of the four-factor model is that it can be used in absence of exact event dates. For example, Madden et al. (2006) analyzed the financial effect of firms following a branding strategy versus other firms not investing heavily in branding their products. Because it is impossible to define a specific date as the beginning of the branding strategy it was analyzed whether these *branding* firms generated higher returns

²⁰ The momentum risk factor was added by Carhart (1997).

²¹ The book-to-market multiple is the ratio of a firm's book value of its total assets and its market capitalization and reflects how investors value a firm relative to its actual worth.

²² Because it is α that is critical for the interpretation of the four-factor model the individual risk factors are not further discussed here. Please see Fama and French (1993) and Carhart (1997) for more details.

than *non-branding* firms. Because the financial effect is not analyzed for a specific date but rather for a longer time-period the four-factor model is qualified for longer-term analysis (Srinivasan & Hanssens, 2009). Nevertheless, the method's main advantage is also its main weakness. Because the event or characteristic is not isolated in time any observed abnormal return could also be caused by other characteristics or events happening in the analyzed time period. It is difficult to create a causal link between a specific characteristic (e.g. being a sponsor) and abnormal returns (Madden et al., 2006) and therefore it is difficult to test for a direct impact on firm value without a clear-cut date when investors first learned about a specific characteristic. Furthermore, the four-factor approach is prone to a selection bias because a portfolio consisting of firms sharing one characteristic (e.g. strong brands) might omit other important characteristics that are associated with the analyzed variable (e.g. firms with strong brands are also likely to have a higher market share and higher sales) but these other characteristics are not represented in the analysis (Srinivasan & Hanssens, 2009). Lastly, the application of this approach in an international setting is limited because the risk factors that are required for the estimation of abnormal returns are only readily available for the USA and a few selected other large countries.

Another method to evaluate the effect of marketing programs on firm value is the calendar portfolio approach. Similar to the previously discussed four-factor model the calendar approach was originally applied in the field of financial economics and is based on the same four risk factors (market, size, value, and momentum risk). A hypothetical portfolio, called the calendar portfolio, is constructed with firms that share the characteristic that is being investigated (e.g. being a sponsor). A stock is added to the portfolio at the time investors learn about this specific characteristic for the first time (e.g. on the day of the official sponsorship announcement) and each stock is held in the portfolio for a pre-specified period (e.g. 12 months) before it is excluded again (Sorescu, Shankar & Kushwaha, 2007). Thus, the calendar portfolio consists of firms that have experienced the analyzed characteristic within this pre-specified event window. To test for abnormal returns as a result of a certain characteristic like a special marketing activity such as a sponsorship program the monthly returns of the calendar portfolio are

regressed against the risk factors from model 0. If the portfolio's return is normal given its risk profile the realized returns should be fully explained by these risk factors and α should be zero. Any α value different from zero indicates the existence of abnormal returns for the portfolio of firms sharing a specific characteristic.

The calendar portfolio approach was first used in financial economics to investigate the long-run financial impact of seasoned equity offerings (Loughran & Ritter, 1995) and to analyze the existence of ARs for a stock trading strategy based on momentum²³ (Jegadeesh & Titman, 1993) but has also been applied in the marketing field. For example, one study uses the calendar portfolio approach to measure the effect of new product announcements on firm value (Sorescu et al., 2007).

The advantage of the calendar portfolio approach is its robustness when analyzing long-term trends in abnormal returns. The construction of portfolios accounts for likely cross-sectional correlations between returns of different firms and events. For example, if firm A announces two different sponsorships within the same year using a long-term window for return analysis would severely increase the possibility of cross-sectional dependencies between both returns. The calendar portfolio approach addresses this problem by aggregating all single events into one portfolio before analyzing effects on returns (Mitchell & Stafford, 2000).

However, by combining all single events into only one portfolio this method only produces one single AR figure for the entire portfolio. Therefore, it is not possible to run cross-sectional regression analysis to investigate the impact of specific determinants of returns. Because of the combination of single events into one group and because all calculations for this portfolio are based on monthly returns (Sorescu et al., 2007) it is not possible to apply the calendar portfolio method to the analysis of short-term effects. As it is the case for many approaches for measuring long-term return performance other events might occur within the analyzed event window. These confounding events limit the method's ability to link possible ARs to a single event. Lastly, the calendar portfolio approach can have difficulties in detecting ARs because the analysis is based on portfolio returns averaged over the entire event window

²³ In this context momentum describes a strategy of investing in *prior winners* (stocks with positive returns in the past).

(Loughran & Ritter, 2000). If for example ARs predominantly exist in the first half of the event window (closer to the month investors have first learned about the analyzed characteristic) the approach might fail to detect these significant ARs because returns are averaged over the entire event window.

The stock return response model is another model to study the effect of marketing programs on share prices and firm value. It is based on an approach developed by Ball and Brown (1968) who studied the information content and value effects of various accounting metrics (e.g. sales or profit figures). Like the event study approach the response model is based on EMH, implying that stock prices summarize all available public information about a firm and represents a measure for the present value of a firm's future cash flows. Unexpected events affecting future cash flows lead to an adjustment in a firm's stock price (Mizik & Jacobson, 2004). Based on this, the stock return response model describes actual returns as a function of expected returns and unanticipated changes in firm-specific financial and marketing characteristics. Financial characteristics include accounting metrics such as unexpected changes in sales or profit figures whereas marketing characteristics include metrics such as unexpected changes in customer satisfaction, awareness or purchase intention scores as a result of unanticipated marketing campaigns. In the stock return response model unexpected changes in the relevant metrics are determined by deviations of actual results from past results (Lev, 1989) or from analysts' expectations for a given metric (Brown, Hagerman, Griffin & Zmijewski, 1987). Regressing actual stock returns against these unanticipated changes in marketing and financial metrics allows analyzing investors' expectations about the value of such marketing activities that are assumed to be the root cause for the unanticipated changes in the analyzed metrics (Mizik & Jacobson, 2004). The model specifically tests whether or not unexpected changes in the financial and marketing metrics change the projections of future cash flows which are reflected in a company's share price and thus firm value. A significant coefficient for a specific metric would imply that this characteristic impacts firm value by signaling value-relevant information about a firm's future economic performance (Johnston, 2010). The response model provides insights about the information content of marketing activities with respect to

the relevance for future cash flows and how investors perceive the likelihood that the analyzed activity adds value to the firm.

Because the stock return response model analyzes changes in a firm's marketing strategy over a longer-term time window (e.g. months or even years) this method is applicable to assess the value impact of continuous marketing events (e.g. price movements or product quality scores) rather than discrete marketing events (e.g. sponsorship announcements; Mizik & Jacobson, 2004). Despite the fact that analyzed events must be continuous it is difficult to choose appropriate marketing metrics to test the value effect of a marketing strategy because as stated by EMH share prices react to unanticipated information that is available to the public. The analysis is however requires detailed marketing data that is often not available to investors or researchers rendering the stock return response model often unfeasible for external stakeholders.

A straightforward, but problematic way to assess the economic value of marketing activities is to measure the incremental sales and profits resulting from a specific marketing campaign (Meenaghan, 1991). A direct impact on sales and profits from a marketing investment (e.g. sponsorship deal) is however not traceable because the effects of marketing campaigns are not confined to a clearly defined time window but carry-over to periods when a specific campaign might have already been replaced by a different marketing program. It is difficult to isolate and measure the effect of a single campaign (e.g. sponsorship program) because other marketing activities (e.g. TV advertisements, in-store promotions, price-offs) might occur parallel to the analyzed campaign (Agrawal & Kamakura, 1995). Furthermore, external influences from the economic environment such as competitor actions or the general economic climate complicate the identification of incremental sales and profits resulting from a single marketing activity (Meenaghan, 1991).

6.2.2 Discussion of methods

The preceding description of different methods to assess the value-impact of marketing programs point out the importance of selecting an appropriate method to empirically analyze the research questions at hand. The following section discusses each method

with regard to its applicability and feasibility within the scope of the current study about the effect of sponsorship announcements on the value of sponsoring firms and concludes with the presentation of the methodological approach used for this dissertation project.

The event study method is a viable option for assessing the economic impact of marketing activities because the data (event dates, stock prices) needed for implementation are publicly available. Furthermore, the analyzed marketing activity in this study, sponsorship programs, can be tied to a specific date which is a prerequisite for applying the event study approach. Because of the existence of a clear-cut event date (the date of the sponsorship announcement) this approach can be used to assess the value effect for a short-term event window, allowing robust inferences of cause and effect with respect to sponsorship announcements and ARs. The frequency that the event study approach has been used in marketing efficiency studies in general (see table 5) and in previous studies on value effects of sport sponsorship deals in specific (see chapter 3.2) confirms that this method constitutes a proven research design for the research questions at hand. The event study approach “is, in fact, the standard assessment metric for the measurement of the net economic value of any corporate event – marketing or otherwise – for which precise announcement dates may be obtained” (Pruitt et al., 2004, p. 281). However, it is important to take relevant precautions to prevent possible biases in the results. As already mentioned in section 6.2.1 event study results are sensitive to the correct identification of the event date as well as to confounding events occurring on or around the event date. Therefore, the announcement dates for the events entering the sample must be very well researched and events affected by other competing news about a firm must be excluded from the analysis when using the event study approach. Furthermore, it is important to bear in mind that this method is designed for short-term analysis and should not be applied to longer-term trend studies. In light of the discussed advantages and taking into account the possible sources of biases the event study method will be used for the statistical analysis within this dissertation project.

The four-factor model is an approach to investigate longer-term effects of marketing programs to be used when exact event dates are not available. The fact that the settings of the current study allows the analysis of firm value effects by means of exact event dates lets the four-factor model appear less precise and thus less adequate

for this study. In addition, because the model relies on the four risk factors that are only available for the USA and few other selected countries the four-factor model is not applicable for this international study that includes sponsorship announcements from around the globe.

The calendar portfolio approach also suffers from its dependence on the risk factors that are only available for a few countries. Because only a single portfolio is constructed of firms that share a specific characteristic and it is tested for *ARs* of the entire portfolio this approach does not produce individual *AR* figures for each event. Thus, applying the calendar portfolio approach to the current study would imply that regression analysis could not be employed to identify the determinants of *ARs* because regression analysis requires individual *ARs* for each event. For these reasons the calendar portfolio approach disqualifies as a method for this study.

The stock return response model analyzes continuous rather than discrete events over a longer-term horizon. Because sponsorship announcements are one-time events²⁴ (unlike for example customer satisfaction scores as a metric for a customer satisfaction campaign) the stock return response model is considered as unfeasible for this study. Moreover, the model requires detailed marketing data (e.g. development of awareness scores or purchase intention rates as proxies for sponsorship programs) that is not available within the scope of this dissertation project.

The analysis of incremental sales and profits resulting from a marketing program would be a viable and preferred approach to measure the effectiveness of such programs. Because it is impossible to isolate the incremental effect of a single campaign of on a company's current sales or profit figures it is not possible to measure the true effectiveness of a single marketing program (at least for company outsiders). Therefore, this approach is unfortunately not feasible and will not be used in this study.

Based on the discussion of methodological approaches to analyze share price reactions to marketing activities the event study approach is considered to be the adequate method to assess the economic effect of sponsorship deals on firm value. The next section explains the statistical procedure of this approach.

²⁴ Although a firm can announce different sponsorships over time, each individual sponsorship deal can only be officially announced once.

6.3 Data analysis

This section describes the process of the data analysis in this study, namely the event study methodology and multiple regression analysis. The statistical analysis of the dataset will be carried out along five dimensions: For the overall sample and for sub-samples within the dimensions of sports (soccer, motor sports, basketball, golf, tennis, baseball, American football, Olympics, arena sponsorships), industries (oil & gas, telecommunications, financial services, technology, industrials, consumer goods, consumer services), sponsorship types (event-, organization-, personality-, team-sponsorship) and regions (Asia/ Pacific, Europe, North America). All samples are analyzed following a three step process which is explained in the following sections. First, the sample characteristics are discussed; second, all samples are tested for the presence of ARs (event study approach) and third, all samples are analyzed to identify potential determinants of ARs (multiple regression analysis). All statistical calculations are performed with the statistical software package STATA. To allow comparisons with prior event studies testing the financial effectiveness of sponsorship programs an α -level of 0.1 is used for all statistical tests (e.g., Clark et al., 2002, 2009; Farrell & Frame, 1997; Tsiotsou & Lalountas, 2005).

6.3.1 Sample characteristics

The first part of the data analysis displays descriptive statistics for the overall sample as well as for all analyzed sub-samples. Key figures about dispersion (standard deviation, minimum, maximum values) and central tendency (mean, median) are provided for the variables introduced with the theoretical framework (see chapter 4). The variables include the deal-specific characteristics level, reach, novelty, announcement year, value and home market and the sponsor-specific characteristics size and high tech. Subsequently the characteristics of a sub-sample are described in terms of insights about frequency distributions of the sponsorship announcements within different sports, industries, sponsorship types and regions. The sample characteristics for each individual

sub-sample will be presented very briefly in consideration of the number of sport-, industry-, sponsorship type- and region-specific analysis covered in this study.

6.3.2 Abnormal returns

In the second part of the data analysis process all samples are tested for the existence of abnormal returns. This procedure consists of three main steps. First, expected or normal returns (*ER*) are estimated for the stocks of sponsoring firms around the announcement day of a sponsorship deal, second, *ARs* are calculated for the same time period and third, the significance of these *ARs* is tested.

First, *ERs* need to be estimated for stocks of sponsoring firms. *ERs* reflect the return on a stock that could be expected in absence of any unanticipated event that might influence investors' expectations about a firm's future cash flows. By this definition *ERs* are based on information about a firm that is available before the analyzed event (e.g. sponsorship announcement) takes place (Farrell & Frame, 1997). In general, a return on stock *i* on day *t* ($R_{i,t}$) is defined as the percentage change of a stock price in a given period:

$$(1) R_{i,t} = \frac{((P_{i,t} - d_{i,t}) - P_{i,t-1})}{P_{i,t-1}}$$

with $P_{i,t}$ being the closing price of stock *i* on day *t*, $d_{i,t}$ any dividend payment for stock *i* on day *t* and $P_{i,t-1}$ the closing price of stock *i* on the previous trading day *t-1*.

There are different ways of estimating *ERs* of which the three most commonly used models (Armitage, 1995) are discussed in this study²⁵. These include the market model, the market-adjusted return model and the mean-adjusted return model.

The market model describes expected returns for stock *i* on day *t* ($ER_{i,t}$) as a function of the return on the market index:

$$(2) ER_{i,t} = \alpha_i + \beta_i R_{m,t} + e_{i,t}$$

²⁵ For a full overview of estimation methods for estimated returns please refer to Armitage (1995).

with α and β being the market model parameters, $R_{m,t}$ the return of the market index m on day t , and $e_{i,t}$ the statistical margin of error (Brown & Warner, 1980). The market model accounts for stock inherent risk, which is captured by the β , and controls for the market risk by including the return on the market index into the prediction model.

An alternative approach to estimate ERs is the market-adjusted return model. Here, the expected return of stock i on day t is equal to the return on the market index m $R_{m,t}$ on the same day t :

$$(3) ER_{i,t} = R_{m,t}$$

This approach accounts for market-wide risks by assuming that individual stock returns should on average perform analogue to the market. However, equating individual stock returns to market returns hinders the market-adjusted return model to control for stock inherent risk (risk factors that only affect individual stocks and not the entire market, e.g. litigation risk). Another way to estimate ERs is the mean-adjusted return model. Here, the expected return of stock i on day t is the mean return stock i has generated during an estimation window ew before the event has occurred ($MR_{i,ew}$):

$$(4) ER_{i,t} = MR_{i,ew}$$

Although straightforward to implement, the mean-adjusted approach estimates ERs in isolation of market trends. Hence, the model cannot control for these market trends which would be captured by the market index returns (Binder, 1998).

For these reasons the market model from equation 2 is considered to be the most reliable method to estimate ERs (Armitage, 1995) and is employed in the current study. The market model has become the standard approach for ER estimation which is highlighted by the vast majority of previous event studies applying this model (e.g. Agrawal & Kamakura, 1995; Clark et al., 2009; Cornwell et al., 2005; Mishra et al., 1997). It is important to note at this point that the sensitivity of the empirical results to

the method of *ER* calculation has been tested. All results are robust against the choice of the estimation model as all approaches lead to similar results.

The market model parameter α and β are estimated via equation 2 using actual returns from an estimation window of -120 trading days (- six months), beginning on day $t=-130$ to $t=-11$ (see figure 6). Day $t=0$ marks the announcement date. In case this date fell on one of the stock exchange closing days across the various countries (e.g., weekend, holidays) the next possible trading day was defined as $t=0$.

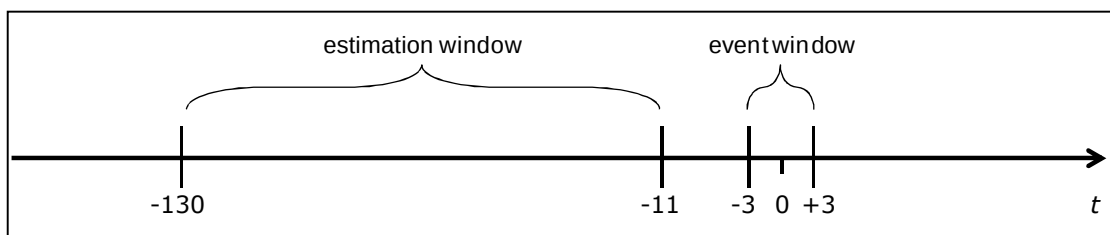


Figure 6: Overview of estimation window and event window, $t=0$ marks the event date (e.g. sponsorship announcement).

In practice, estimation windows are set between -100 and -300 days before the event date (Armitage, 1995) but most event studies select estimation windows of -100 to -150 days (Johnston & Cornwell, 2005). It is important that the estimation window is selected in a way that it does not overlap with the analyzed event date. This is to ensure that the estimated model parameters are not influenced by the event itself. For this reason the estimation window in this study stops already ten days before the event date. Furthermore it is advisable to select an estimation window that does not reach too far back before the event (e.g. >-300 days) because the parameter estimations might be outdated and thus imprecise in case the time distance between the estimation window and the event date is too large. In order to ensure that the results of this study are not sensitive to the selection of the estimation window all calculations have also been performed using -240 days (-12 months) instead of -120 days (-6 months) and lead to similar results.

For every single country that is represented in the sample the corresponding leading stock market index (e.g. Dow Jones for the USA; FTSE 100 for UK) is used as a proxy for the return on the market portfolio R_m in equation 2. Because there are different

market indexes for each country (e.g. Dow Jones and S+P 500 for the USA) it is important to ensure that the selection of a market index does not bias the results. Thompson (1988) uses simulation of daily data to estimate the market model parameters and finds no difference when using different market indices for the same country. The current study's results are also robust against changes in the selection of national stock market indices (e.g. using the S&P 500 instead of Dow Jones for the USA). The parameters estimated using the market model in equation 2 are used to calculate the ARs in the next step of the AR analysis.

Second, unexpected or abnormal returns have to be calculated in order to test whether an event such as the announcement of a sponsorship deal has a significant impact on share prices of sponsoring firms. The abnormal return of a stock i on day t ($AR_{i,t}$) is defined as the difference between the actual return on stock i on day t ($R_{i,t}$) and the expected return of stock i on day t ($ER_{i,t}$):

$$(5) AR_{i,t} = R_{i,t} - ER_{i,t}$$

or substituting equation 2 into 5 :

$$(6) AR_{i,t} = R_{i,t} - (\alpha_i + \beta_i R_{m,t})$$

with $R_{i,t}$ defined as in equation 1, and $ER_{i,t}$ is calculated using the market model parameters²⁶ α and β estimated by equation 2 and $R_{m,t}$ being the return on the market index m on day t . Next, daily ARs are averaged across all firms in the sample in order to test statistical significance on an aggregate level. Average abnormal return (AAR) across all events on day t is defined as:

$$(7) AAR_t = \frac{1}{N} \sum_{i=1}^N AR_{i,t}$$

²⁶ Estimating α and β during the estimation window before the event ensures that these parameters are not biased by the event itself.

with $AR_{i,t}$ being the abnormal return of stock i on day t and N the total number of events in the sample.

The event window describes the time horizon that is being analyzed for the existence of AR s as a result of a specific event (see figure 6). In this study the event window stretches from three days prior to three days after the event date ($t=-3$ to $t=+3$). Brown and Warner (1985) note that selecting a short event window warrants empirical precision by isolating the effect of the analyzed event from other factors and thereby minimizing the risk of biased results caused by confounding events. Therefore the event window is set to $t=-3$ to $t=+3$. The analysis of event windows, as opposed to solely analyzing the event day ($t=0$) itself, corrects for possible uncertainties regarding the identification of exact announcement dates and accounts for information leakages as well as late stock market reactions. Although assuming EMH share prices should not react before an official announcement of a specific event (before $t=0$) it still might be possible due to inside information of some investors (McWilliams & Siegel, 1997). On the other hand, stock markets could also react late to an event (after $t=0$) because investors might need time to process new information and to form an opinion about what consequences an event might have for future cash flows. The AAR s are cumulated over different time windows (e.g., $t1=-2$ to $t2=+2$) within this event period to be able to analyze the significance of the cumulative effect of sponsorship announcements. Cumulated average abnormal return ($CAAR$) between day $t1$ and $t2$ is defined as follows:

$$(8) CAAR_{t1:t2} = \frac{1}{N} \sum_{i=1}^N \sum_{t=t1}^{t2} AAR_{i,t}$$

Third, the statistical relevance of abnormal returns is tested. Significant AAR s and $CAAR$ s would indicate that the analyzed event does have an impact on share prices and thus on firm value. To test the statistical significance of AAR s and $CAAR$ s, and consequently to analyze the first cluster of research questions about the impact sponsorship announcement on abnormal returns, Boehmer, Musumeci, and Poulsen's

(BMP; 1991) standardized cross-sectional t -test is applied (Farrell & Frame, 1997). This parametric test is well specified for event studies using daily stock returns as it overcomes the potential problem of event-induced heteroskedasticity (Binder, 1998). The BMP test statistic (t_{BMP}) is defined as:

$$(9) \quad t_{BMP} = \frac{\frac{1}{N} \sum_{i=1}^N SAR_{i,E}}{\sqrt{\frac{1}{N(N-1)} \sum_{i=1}^N (SAR_{i,E} - \frac{1}{N} \sum_{i=1}^N SAR_{i,E})^2}}$$

with $SAR_{i,E}$ being the standardized abnormal return for stock i in period E and N the total number of events in sample. The standardized abnormal return for stock i in period E ($SAR_{i,E}$) included in formula 9 is defined as follows:

$$(10) \quad SAR_{i,E} = \frac{AR_{i,E}}{\sqrt{Ts_i^2}}$$

with $AR_{i,E}$ being the abnormal return for stock i in period E , T the total number of days in period E , and s_i the standard deviation of AR s of stock i from the estimation window.

To further strengthen the significance of the results the Wilcoxon signed rank test is performed (McWilliams & Siegel, 1997). It has been suggested to include this non-parametric test into the event study analysis as the normality assumption implicit in the t -test might be violated when dealing with daily stock data and to assure that the results are not driven by extreme outliers (McWilliams & Siegel, 1997). Instead of using the value of AR s the rank-test uses its ordinal information. As a result, the corresponding z -statistic is not influenced by the variance in the distribution of returns (Agrawal & Kamakura, 1995). To conclude, it is tested whether abnormal returns can be detected for sponsoring firms, which would be revealed by a significant difference between expected stock returns and actual observed stock returns. The process of identifying determinants for abnormal returns will be presented in the following section.

6.3.3 Determinants of abnormal returns

After the previous sections have presented the data analysis process related to the description of sample characteristics and related to detecting ARs it is now discussed how all samples are analyzed to identify potential drivers of ARs. Multivariate linear regression analysis is employed to shed light on the second cluster of research questions dealing with factors determining ARs. This is done by testing the theoretical model (see chapter 4) with respect to the influence of the deal- and sponsor-specific characteristics on share prices. Regression analysis is the most commonly used method to investigate causal dependencies between an output factor (e.g. ARs) and various explaining characteristics (Backhaus et al., 2008) and is therefore the adequate and applicable method in the context of this study. As an alternative to the linear form the regression models could have been calculated based on exponential or logarithmic forms in order to improve the overall goodness of fit of the model. However, this study employs the linear form because using alternative forms could not significantly improve the explanatory power of the models and because the results of linear regression models are straightforward comprehensible and easier to communicate to the sport sponsorship community.

The regression model technique for variable selection follows the ordinary enter-method where all independent variables enter the regression model simultaneously as opposed to a step-wise approach where independent variables enter the model via an iterative process and based on each individual's statistical significance. The enter-method is used in the current study for two reasons. First, in order to test the theoretical model it is inevitable to include all independent variable to be able to make inferences about each individual factor's impact on ARs. This is supported by Backhaus et al. (2008) who suggest the enter-method for empirically testing theoretical cause-and-effect models. Second, including all variables in the regression model allows cross-comparisons between the analyzed sub-samples.

Percentage values of cumulated abnormal returns (CARs) for each individual observation between $t=-3$ to $t=+3$ serve as the dependent variable for all regression models. The relevant time window for the regression analysis stretches from three days prior to three days after the announcement date to account for possible information

leakages due to inside information (McWilliams & Siegel, 1997) as well as late stock market reactions (see also section 6.3.2 on the definition of event windows).

All six deal-specific characteristics (CORP, INTERNAT, NEW, YEAR, VALUE, HOME) and the two sponsor-specific characteristics (SIZE, TECH) from the theoretical framework explaining ARs enter the regression model as independent variables. All factors are already introduced and described in chapter 4 on the theoretical framework but table 6 reproduces a summary overview of the variables including names, abbreviations, descriptions as well as information about each factor's scale.

Table 6: Overview of variables from regression model including dependent, independent and control variables.

Variable	Short	Description	Scale
Dependent variable			
Cumulated AR	CAR	Cumulated abnormal return for days $t=-3$ to $t=+3$ (in %)	Metric
Independent variables			
Level	CORP	Level of sponsorship (0=brand level; 1=corporate level)	Dummy
Reach	INTERNAT	Reach of sponsorship (0=national, 1=international)	Dummy
Novelty	NEW	Novelty of deal (0=renewed, 1=new)	Dummy
Announcement year	YEAR	Year in which sponsorship deal was officially announced	Metric
Deal value	VALUE	Total contract value of sponsoring deal (in million \$)	Metric
Home market	HOME	Match between a sponsor's country of primary listing and the home country of the sponsored entity	Dummy
Size	SIZE	Size of sponsor measured by total assets (in \$ billions at year-end before announcement)	Metric
High tech	TECH	Sponsor is from high tech industry (1=yes)	Dummy
Control variables			
Olympic deal	OLYMPICS	Sponsorship is for the Olympics (1=yes)	Dummy
Arena sponsorship	ARENA	Sponsorship is a arena deal (1=yes)	Dummy
Sport vector	SPORT	Different sports (American football, baseball, basketball, golf, motor sports, tennis, soccer (reference category))	Dummy
F1 deal	F1	Sponsorship is associated with Formula 1 (0=other motor sports, 1=Formula 1 deal)	Dummy
NASCAR deal	NASCAR	Sponsorship is associated with NASCAR (0=other motor sports, 1=NASCAR deal)	Dummy

Moreover, control variables for Olympic sponsorship deals (OLYMPIC), arena sponsorships (ARENA), and specific sports (SPORT) are included in the regression

model to control for possible cross-sectional differences in ARs for sponsorships of different nature (Cornwell et al., 2005).

The regression equation for the entire sample is written down below in formula 11 (with $\sum_0^7 SPORT$ representing a summary vector for all sports included in the sample as listed in table 6):

$$(11) CAR = \beta_0 + \beta_1 CORP + \beta_2 INTERNAT + \beta_3 NEW + \beta_4 YEAR + \beta_5 VALUE + \beta_6 HOME + \beta_7 SIZE + \beta_8 TECH + \beta_9 OLYMPICS + \beta_{10} ARENA + \beta_{11} \sum_0^7 SPORT + \varepsilon$$

Formula 12 displays the regression equation for the analysis of the sub-samples which is similar to formula 11, but excludes the control dummies²⁷:

$$(12) CAR = \beta_0 + \beta_1 CORP + \beta_2 INTERNAT + \beta_3 NEW + \beta_4 YEAR + \beta_5 VALUE + \beta_6 HOME + \beta_7 SIZE + \beta_8 TECH + \varepsilon$$

The appropriate applicability of such regression models and the resulting validity of inferences about model parameters depend on the fulfillment of specific assumptions underlying linear regression models. These assumptions state that the model is well specified in terms of completeness and a linear relationship between the dependent and independent variables, that error terms have a zero mean, are homoskedastic and uncorrelated with one another (no autocorrelation), that independent variables are uncorrelated with one another (no multicollinearity), and that error terms are normally distributed (see also Brooks, 2008; Fahrmeir, Kneib & Lang, 2009; von Auer, 2007). The compliance of this study's regression model with these basic assumptions is discussed in the following.

The theoretical development of the model (see chapter 4) justifies that is fair to assume that the majority of factors relevant to model ARs are included. However, it is

²⁷ Only the motor sports sub-sample includes two dummy variables controlling for AR differences between F1 and NASCAR (reference category is motor cycle racing).

also important to note that it is impossible to exhaustively include all relevant factors due to the fact that not all factors are known or measurable. Fortunately, this has no severe implication for the current model because the missing variable effect is only reflected in a bias of the constant β_0 in formula 11 and not in the β -coefficients of the characteristics being tested (Backhaus et al., 2008). This first assumption relates to another one concerning the error terms ε . If a model includes all relevant explaining variables, it is assumed that ε only contains random effects which can be positive or negative, but average out in total. However, this assumption can be neglected for the current study because a mean of the error terms different from zero again only affects the constant β_0 (Backhaus et al., 2008) that is not used for interpretations in the current context. Another basic assumption regarding the specification of linear regression models is that the relationship between the dependent variable and independent variables is linear.

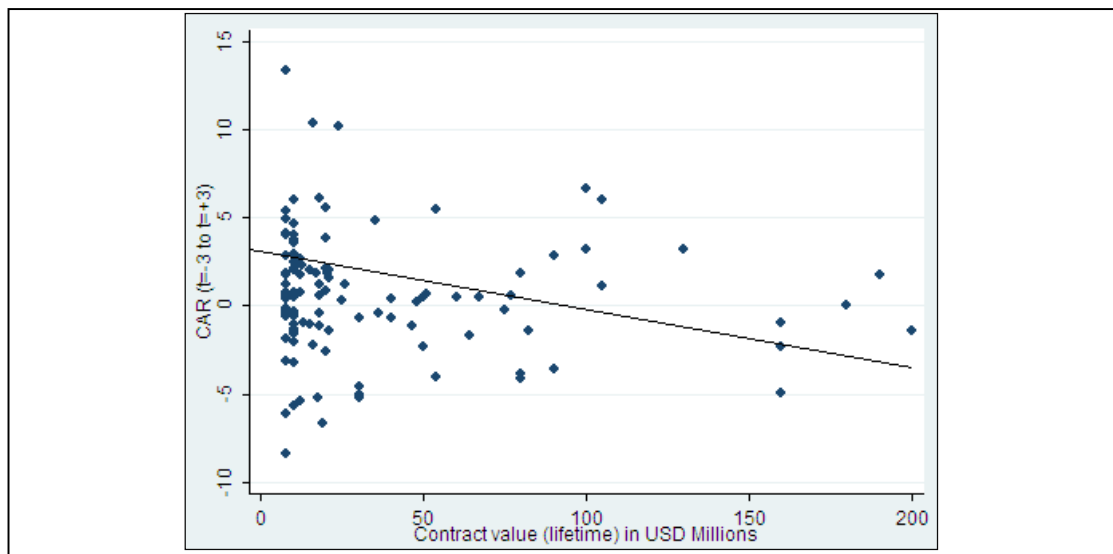


Figure 7: Exemplary scatterplot plotting abnormal returns versus VALUE for the soccer sample.

This assumption can be validated by a visual inspection of a scatterplot plotting values of the independent variable versus values of the dependent variable (von Auer, 2007). Because of the amount of sub-samples an exemplary scatterplot for the variable VALUE is displayed in figure 7. Similarly, visual inspection of the other characteristics gave no

indication of a non-linear relationship²⁸. It is further assumed that error terms are homoskedastic, meaning that error terms have a constant variance and that the variance does not depend on the predicted value of the dependent variable (von Auer, 2007). The data was tested for homoskedasticity using the White-test (White, 1980) and results indicated that the error terms are indeed heteroskedastic and thus that the homoskedasticity assumption is violated. Because unequal error variances could lead to biased standard errors all regression models were estimated with robust standard errors to control for heteroskedasticity (MacKinnon & White, 1985; White, 1980). Error terms are also assumed to be uncorrelated of one another (no autocorrelation). Albeit this assumption is especially important for time-series analysis it only plays a minor role when analyzing cross-sectional data (Backhaus et al., 2008) as it is the case for this study. Because the order of the individual data points can be rearranged for cross-sectional data (without altering the regression results) error terms are uncorrelated of one another by definition. Linear regression models are also based on the assumption that the independent variables are not perfectly linear dependent from each other. That is, if an independent variable can be described using other independent variables from the same model the model is affected by multicollinearity which can lead to inflated standard errors (von Auer, 2007). Bivariate correlations between the independent variables are examined in order to detect multicollinearity. High correlation coefficients (close to 1) would provide a first indication for multicollinearity. Next, variance inflation factors (VIF) are calculated (Hair, Anderson, Tatham & Black, 1998). The VIF shows how much the variance of an estimated regression coefficient is increased due to multicollinearity (O'Brien, 2007). Large values for VIF (>10) would signal a severe problem with multicollinearity. However, all correlation coefficients are below 0.9 (Tabachnick & Fidell, 2007) and all VIFs are below 10 (Hair et al., 1998) indicating no problems with multicollinearity. The last assumption for linear regression models demands error terms to be normally distributed to ensure the validity of significance testing (Backhaus et al., 2008). However, the importance of this assumption is negligible for sufficiently large data sets. The central limit theorem states that an approximate

²⁸ Moreover, changes in model specification from the linear form to other non-linear forms (e.g. log) could not improve the model significantly.

normal distribution can be assumed if the sample is large ($n > 40$ observations) which is the case for this study (Backhaus et al., 2008; von Auer, 2007). In addition to the basic assumptions the dataset was tested for endogeneity of the independent variables. A variable is considered to be endogenous if it correlates with the error term indicating a circular causality between the dependent and independent variable. As there is no correlation between the independent variables and the residuals for the dataset of this study, there should be no endogeneity problem (Wooldridge, 2002). To conclude, the current dataset fulfills all assumptions underlying linear regression models with the exception of homoskedastic error terms which is accounted for by using robust standard errors for all regression models.

7. Results and discussion

Based on the methodological approach introduced previously this chapter provides the results of the data analysis regarding to the firm value effect of sport sponsorship announcements and subsequently discusses the implications of these results. More specifically, the results section first presents the sample characteristics, followed by the event study results for detecting *ARs*, the regression results for identifying possible determinants of *ARs* and finally interprets these results and discusses the implications related to sport economics. Furthermore, the discussion includes an internal and external comparison of the findings. Internally the results are compared with findings from other sub-samples within this study and externally the results are compared, wherever possible, with other research in the area of direct financial effects of sport sponsorships (see also chapter 3.2). Whereas previous studies to compare the findings from the overall sample including all different sponsorships are manifold (e.g. Clark et al., 2009; Cornwell et al., 2005; Mishra et al., 1997) studies on the sponsorship effect within different sports are very limited and the research from a regional and industry perspective is nonexistent. Therefore, a direct comparison with other studies is only possible with limitations.

The analysis of the different sub-samples produced some outcomes that are specific to a certain sample (e.g. sport or sponsorship type) but also outcomes that are consistent over almost all different sub-samples. It seems more efficient to address and discuss these communalities in context with the overall sample in order to reduce complexity and redundancies when discussing specific sub-samples. Thus, the individual sub-sample discussions will focus the results that are specific to that sample. Moreover, the high number of individual analysis (20 sub-samples) warrants a deviation from the standard procedure to first presents the results for all samples followed by a separate chapter on the discussion of the results. Thus, for reasons of efficiency and lucidity the discussion for each sub-sample is integrated into this chapter and will follow right after the presentation of the results for each sub-sample. Results are presented and discussed for the overall sample (section 7.1) as well as for the sub-sample analysis within the dimensions of different sports (section 7.2), sponsorship types (section 7.3), regions (section 7.4) and industries (section 7.5).

7.1 Overall sample

7.1.1 Sample characteristics

For the overall sample ($n=629$ sponsorship deals) the descriptive statistics for all variables included in the analysis are summarized in table 7. With regard to the deal-specific characteristics it can be stated that the majority (74%) of the sponsorship deals in the overall sample are on corporate level where the sponsor's company name is featured in a sponsorship program whereas the remaining 26% are brand level sponsorships where the brand name appears in the campaign.

Table 7: Overview of variables including descriptive statistics (overall sample, $n=629$ observations); SD=standard deviation.

Variable	Description	Scale	Mean	Median	SD	Min	Max.
<i>Deal-specific factors</i>							
CORP	Level of sponsorship (0=brand level; 1=corporate level)	Dummy	0.74	0	0.44	0	1
NEW	Novelty of deal (0=renewed, 1=new)	Dummy	0.67	1	0.47	0	1
INTER-NAT	Reach of sponsorship (0=national, 1=international)	Dummy	0.47	0	0.50	0	1
HOME	Match between sponsor's primary listing and the country of the sponsee (1=match)	Dummy	0.52	1	0.50	0	1
YEAR	Year in which sponsorship deal was officially announced	Metric	2006	2006	3	1999	2010
VALUE	Total contract value of sponsorship deal (in \$ M)	Metric	52.7	20.0	109.1	2	1200
<i>Sponsor-specific factors</i>							
SIZE	Size of sponsor measured by total assets (in \$ B)	Metric	200.2	26.2	468.3	0.1	2973.2
TECH	Sponsor is from high tech industry (1=yes)	Dummy	0.14	0	0.34	0	1

Moreover, the majority (67%) of the analyzed sponsorships are new contracts as opposed to renegotiated contract extensions (33%). Almost half (47%) of the deals in the overall sample have an international reach and are noticeable in several countries. In a similar way, roughly half (52%) of the analyzed sponsorships are classified as home

deals where both the sponsor and the sponsee originate from the same country. The analyzed announcement period stretches from 1999 to 2010. A more detailed analysis of the variable year shows that 35% of the sponsorship deals in the overall sample were announced in the first half of the sample period (1999 – 2004) whereas the remaining 65% were announced more recently (2005 – 2010). The average contract value of a sponsorship deal is \$52.7 M with a median value of \$20 M. Because the median contract value is less than half of its mean value it should be noted that the mean value is inflated by some extremely expensive sponsorship deals. This high dispersion is also reflected in the high standard deviation (SD) of \$109.1 M and also in the large range between a minimum contract value of \$2 M and a maximum value of \$1,200 M.

Pertaining to sponsor-specific characteristics it can be noted that the average size of a sponsoring firm is \$200.2 B as approximated by total assets with a median value of only \$26.2 B. Again, such a difference between the mean and median value for size suggests that the high mean firm size is caused by some extremely large firms in the sample. The high SD of \$468.3 B combined with firms sizes ranging from \$100 M to up to \$2,900 B highlight the variety of different firm sizes represented in the overall sample. However, a more detailed analysis reveals that the majority (75%) of the sponsorship deals in the sample are associated with firms having total assets of \$144 B or less. With respect to the last sponsor-specific characteristic TECH it can be seen that 14% of firms represented in the overall sample are from the high tech sector.

Next, the sample characteristics in terms of insights about frequency distributions of sponsorship announcements related to different sports, industries, sponsorship types and regions are presented. The largest sport categories represented in the overall sample are motor sports and soccer, constituting each 19% of all observations (see figure 8a). While golf, Olympics, tennis and basketball are also fairly well represented with 10 to 13% each, arena deals, baseball and American football contribute fewer sponsoring deals to the overall sample with 6 to 7% each. In terms of industries it is interesting to note that 75% of the analyzed deals are associated with companies from the consumer goods (47%), financial services (18%) or consumer services (10%) sector (see figure 8b). With the exception of personality deals, all sponsorship types are represented equally in the overall sample with event, team and

organization sponsorships each contributing 27 to 33% whereas personality deals only account for 9% (see figure 8c).

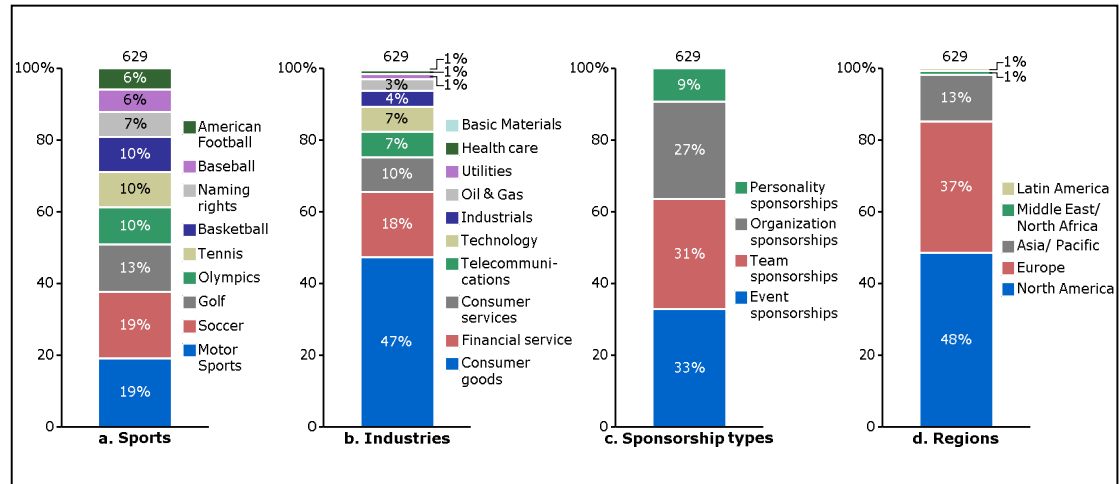


Figure 8: Frequency distributions of sport sponsorship announcements related to different sports, industries, sponsorship types and regions (overall sample, $n=629$ observations).

The regional split in figure 8d points out that the overall sample mainly consists of deals with North American (48%) and European sponsors (37%) and only to a lesser extend of sponsors from the Asia/ Pacific region (13%).

7.1.2 Event study results

The results of the event study analysis for the overall sample shed light on the first research question dealing with the sponsorship effect from a general perspective (RQ 1a). Table 8 summarizes AARs for selected days (panel A) and CAARs for time periods (panel B) around the announcement day. AAR for the overall sample is positive (+0.36%) and significant ($p < 0.01$) on the announcement day itself with the majority (55%) of sponsorship deals generating positive returns²⁹. However, day 2 and 3 following the announcement register significant negative AARs (-0.09%, $p < 0.05$ and -0.16%, $p < 0.1$, respectively). Because of the conflicting results for single days it is important to examine CAARs of multi-day periods around the announcement day in order to assess the cumulative impact. CAARs for all (but one) periods displayed in

²⁹ In order to keep the results section concise the presentation of the event study results focuses on the findings from the parametric t-test. However, the non-parametric rank test confirms the parametric results in all cases and is therefore not explicitly mentioned throughout the text.

panel B of table 8 are positive and significant (e.g. days -1 to +1: +0.53%, $p < 0.01$) and no evidence for a negative reaction is found.

Table 8: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (overall sample, $n=629$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.01%	-0.26	296 (47%)	-1.08
-2	0.05%	0.78	317 (50%)	-0.11
-1	0.06%	0.91	331 (53%)	0.63
0	0.36%	4.71***	344 (55%)	3.96***
+1	0.11%	1.23	315 (50%)	0.11
+2	-0.09%	-2.06**	284 (45%)	-2.39**
+3	-0.16%	-1.73*	297 (47%)	-2.01**
<i>Panel B: Periods</i>				
-3 to +3	0.32%	1.36	328 (52%)	1.47
-2 to 0	0.48%	3.96***	347 (55%)	3.74***
-2 to +1	0.58%	4.02***	357 (57%)	3.70***
-1 to 0	0.42%	4.25***	340 (54%)	3.27***
-1 to +1	0.53%	4.17***	345 (55%)	3.28***
0 to +1	0.47%	4.25***	342 (54%)	3.29***

Thus, these findings provide statistical evidence that sport sponsorship announcements positively impact the firm value of sponsoring firms from a general perspective for the overall sample.

7.1.3 Regression results

The findings from the regression analysis provide insights for the second research question dealing with the identification of characteristics determining ARs following sponsorship announcements from a general perspective for the overall sample (RQ 2a). The results are summarized in table 9. Based on the results from the regression analysis CORP is the only factor with a significant effect on CARs for the overall sample. This negative effect implies that sponsorships on brand level have a more positive impact on CARs than sponsorships on corporate level. The overall model is significant ($p < 0.1$) and explains 4.9% of the variance in CARs³⁰.

³⁰ Previous studies on measuring sponsorship effectiveness reported similar values for R^2 of less than 12% (e.g., Clark et al., 2009; Cornwell et al., 2001; Mishra et al., 1997)

Table 9: Summary of regression results for CARs between $t=-3$ and $t=+3$ (overall model) Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T=test statistic; p = p-value; Seven sport dummies are used to capture sport-specific effects (reference category is soccer); all SPORT dummies are not significant ($p>0.1$) except for American football ($p<0.05$).

Factor	Coefficient	Robust SE	T	p
Constant	57.502	130.150	0.44	0.659
CORP	-0.808	0.417	-1.94	0.053*
INTERNAT	-0.162	0.488	-0.33	0.739
NEW	0.010	0.347	0.03	0.977
YEAR	-0.028	0.065	-0.44	0.661
VALUE	0.001	0.002	0.56	0.577
HOME	0.453	0.420	1.08	0.281
SIZE	-0.001	0.001	-1.44	0.150
TECH	0.461	0.636	0.73	0.468
OLYMPICS	1.392	0.766	1.82	0.070*
ARENA	0.215	0.732	0.29	0.769
SPORT dummies	included	/	/	/
$R^2=0.049$; $F=1.50$; $p=0.095^*$; $n=629$				

7.1.4 Discussion

After the sample characteristics and the results of the statistical analysis have been presented this section will now put these findings for the overall sample across all analyzed sports into context with previous research in the field of sponsorship effectiveness and discuss the implications for the sport economics community. As mentioned before, sample characteristics that are similar across all sub-samples are addressed in this section and neglected in the sub-sample discussions in order to reduce complexity and redundancies.

First, the specific features regarding the characteristics describing the overall sample are addressed. The sample of 629 sponsorship announcements is to the author's best knowledge the largest sample ever used in an event study on sponsorship effectiveness. As already mentioned (see chapter 3.2.1) Clark et al.'s (2009) sample of 114 announcements used to study the financial impact of title event sponsorships constituted the largest sample so far in this field of research. However, sample sizes of below 30 deals are more common (e.g. Farrell & Frame, 1997; Miyazaki & Morgan, 2001; Samitas et al., 2008). Thus, the size of the sample in this dissertation study answers to one of the main research deficits that has been identified previously, namely the limited generalizability of earlier findings due to small sample sizes (see chapter 3.4).

Because previous studies have generally not reported information about the descriptive statistics further external comparison of other sample characteristics is unfortunately not possible. However, it is striking that almost three quarters of the sponsorship deals in the overall sample as well as most analyzed sub-samples are on corporate level promoting a company name rather than a specific brand name. According to Pruitt et al. (2004) the preference for corporate level deals can be motivated by three reasons. First, corporate deals might offer more points of conceptual contact between the sponsor and the sponsee than more specialized brand level deals. Thus, the likelihood for a credible image fit, which is an important prerequisite for successful sponsorship programs (Grohs et al., 2004), might be higher on corporate level. Second, corporate deals provide a greater platform for general sponsorship objectives such as networking with clients or improving the esprit de corps among employees because all brands and products benefit from a deal on corporate level. Third, corporate deals might outnumber brand level deals because sponsorships offer only very limited possibilities to include further information other than a name. Since relevant brand communication should also include details about product benefits, availability and price (Pruitt et al., 2004) sponsorships might be a suboptimal marketing vehicle for brands.

Regarding the novelty of a deal it is noticeable that across all samples about two thirds of the analyzed deals are newly signed contracts. This is similar to the proportion of new deals reported in an earlier study (Farrell & Frame, 1997). The predominance can be a result of the phenomenon that a sponsor has certain objectives to be achieved through a sponsorship program (e.g. awareness creation, image improvement). Once a contract expires and the initial objectives have been met there is no need to incur further costs and to extend the current contract. However, another possible cause for this high share of new deals is more of methodological nature. Since it is necessary to identify the very first announcement date by researching newspaper articles about sponsorship partnerships it is possible that the research process is affected by an inherent selection bias. This is because new sponsorship deals might be better covered by the press since they appear more mediagenic³¹ than the formal extension of an existing relationship. In

³¹ In this context mediagenic means more attractive for the press.

addition, it is often problematic to identify the earliest announcement date for renewed deals since there are already speculations in the press and investors might anticipate a contract extension before the official announcement (Farrell & Frame, 1997).

The fair balance between sponsorships having an international coverage and deals with a rather national reach as well as the fair balance between home deals (sponsor and sponsee from the same country) and foreign deals indicate that on an aggregated level there seems to be no dominating strategy with respect to the international orientation of sport sponsorships.

For the overall sample and for the majority of the sub-samples the analyzed announcement period stretches from 1999 to 2010. The incorporation of very recent sponsorship deals answers to a previously identified research deficit in the area of measuring sponsorship effectiveness, namely the fact that the data used in prior studies have limitations in terms of up-to-dateness (see chapter 3.4). With the exception of Johnston's (2010) analysis of sponsoring sport events in Australia using data from 2008 previous research is based on samples from before 2005 (e.g. Clark et al., 2009; Miyazaki & Morgan, 2001; Pruitt et al., 2004).

The contract values for the different deals included in the sample range from \$2 M up to \$1,200 M for a single deal. This huge range as well as the high standard deviation indicates a broad dispersion of individual contract values. Next to the differences between sponsees in terms of marketing potential (for example success rate, exclusivity of deal, fan loyalty, fan base) this variance has two main drivers. First, average contract values differ greatly between the analyzed sub-samples. Whereas the average deal value for the overall sample is \$53 M, the corresponding value for soccer deals is \$74 M and for golf deals it is only \$16.3 M. This shows that the deal value also depends greatly on the sponsored sport. Second, the deal value of course depends also on the contract length. The longer a contract lifetime, the higher the sponsorship costs. However, the information related to the length of a sponsorship deal was not available as it was not disclosed in the majority of the press releases announcing the deals. Because of the lack of information regarding the contract length the values in the sub-samples are also total contract values having a huge value range. Nevertheless, analyzing the effect of total contract values provides important insights about how

investors value the overall commitment of significant financial resources to a single marketing program. Gathering information about contract durations could be an interesting topic for future research as it also allows analyzing the effect of annual sponsorship fees rather than total sponsorship fees.

Regarding the size of the sponsoring firms included in the overall sample (as measured by total assets) it should be noted that the average sponsor is bigger than in comparable studies. The median size of \$26.2 B is twice as large as the median size reported in a previous study on the effectiveness of event sponsorships (\$11.4 B; Mishra et al., 1997). However, as already mentioned previously the overall sample as well as all analyzed sub-samples are characterized by a high variety of different firm sizes, ranging from \$0.1 B up to almost \$3,000 B. It is important to mention that the biggest sponsors with the highest level of total assets are financial services providers. This is because the assets reported on the balance sheet of a financial institution are financial assets (e.g. deposits in checking accounts, financial investments) whereas other companies mainly report non-financial assets (e.g. property, plant, equipment, inventory, receivables) and these non-financial assets are generally significantly less than financial assets. Nevertheless, as already discussed in section 6.1 total assets is an appropriate proxy to analyze the role of firm size for sponsorship effectiveness³² (e.g. Farrell & Frame, 1997; Mishra et al., 1997).

Pertaining to the share of high tech firms there are no reference values from other studies available. Keeping in mind that the defined high tech sector (Clark et al., 2002) only represents a small fraction of the overall industry landscape the high tech share of 14% seems reasonable.

Next, the sample characteristics with respect to the frequency distributions of different sports, industries, sponsorship types and regions will be discussed. The overall sample contains sponsorship announcements from ten different sports which is more than in any other event study on sponsorship effectiveness. Previous studies either focused on specific event like the Olympics (e.g. Miyazaki & Morgan, 2001, Samitas et al., 2008)

³² To check for robustness all calculations have also been performed using market capitalization as a proxy for size and have yielded similar results.

or covered only a specific type of sponsorship like official product sponsorships across different sports (e.g. Clark et al., 2002; Cornwell et al., 2005). Thus, the breadth of the sample regarding different sports improves the generalizability of the overall results and allows for a detailed sport-specific sub-sample analysis as this is another research deficit identified in section 3.4. The fact that motor sports and soccer are the largest sport categories represented in the overall sample is not surprising since both are international oriented sports with numerous high profile sponsorship opportunities. As a consequence the absolute number of highly visible sponsorships documented in the press is higher for these sports than for other sports with fewer high profile sponsorship opportunities. Thus, the research process yielded more results for motor sport and soccer than for example for baseball or golf, since these are on a global scale less popular sports with a more narrowly defined fan base.

Because of the various opportunities for activation programs and product presentations it is not surprising that every second sponsor in the overall sample as well as all analyzed sub-samples are from the consumer goods industry. This is because of the nature of the business relationship between consumer goods companies and end consumers which is a business-to-consumer relationship involving tangible products (as opposed to products from telecommunications or utility companies). These products can be used for on-site product presentations and free give-aways of product samples to increase consumer awareness and ultimately to increase the intention to purchase a sponsor's products (D'Astous & Bitz, 1995; Pope & Voges, 2000).

Regarding the different sponsorship types it is striking that less than 10% of the deals are personality sponsorships whereas the other sponsorship types are equally represented with about 30% each. An explanation for this under-representation is that personality deals are more common in individual-oriented sports like golf and tennis. In team-oriented sports most sponsorship deals are on the team level and individual contracts are rather an exception and involve mostly the superstars of a team.

Although almost half of the sponsorship deals in the overall sample are announced by companies from North America the other half of the deals is involve mainly sponsors from Europe and Asia/ Pacific, but also some sponsors from Middle East/ North Africa (MENA) and Latin America are included. As already stressed in

before, there is no prior study that analyzed the wealth effects of sport sponsorship deals from an international perspective. Earlier research is mainly based on single country studies that mostly focus on the US (e.g. Agrawal & Kamakura, 1995; Cornwell et al., 2005; Mishra et al., 1997, Pruitt et al., 2004). The internationality of this dissertation project addresses this research deficit. However, sponsors from regions like Latin America, MENA and to a lesser extend Asia/ Pacific have a fairly low share in the overall sample. This could be the result of two reasons. First, sport sponsorship as a marketing tool may just still be in the development stage in these regions. This line of thought is supported by a study on the size of the global sponsorship market where the Asian/ Pacific and Latin American markets are significantly smaller than the North American or European sponsorship market (PWC, 2010). Second, a methodological explanation is also possible. Press releases in other languages than English and German could not have been found because the research for the press articles to identify the earliest announcement dates was conducted in these two languages. As a result, if sponsorships have been announced in other languages than English or German (e.g. Chinese and Spanish), the corresponding press releases would not have been found during the data collection and thus not entered the sample.

The results from the event study analysis will be discussed and interpreted next. The event study methodology assists in detecting abnormal returns following the announcement of sport sponsorship deals in order to make inferences about the effect of sponsorships on share prices of sponsoring firms and thus firm value (see also chapter 6.2.1). The results of the overall sample document that share prices generally reacted positive to press releases about sponsorship programs. In particular, across the entire sample sponsoring firms achieved AARs of +0.36% on the announcement day. However, the share prices declined on day 2 and 3 after the announcement suggesting that some correction takes place after the initial positive returns. This is possibly caused by an increased sale of a sponsor's shares motivated by profit-taking behaviour of some investors after the share price rose before. Nevertheless, the analysis of multi-day periods indicates that also on a cumulative basis share prices rise and CAARs are positive with as much as +0.58%. These positive unexpected returns imply that

investors saw sponsorship deals as value creating investments with beneficial impact on future sales and profits of the sponsoring firm. Overall, these substantial marketing investments were considered to be positive NPV projects that enhanced firm value. This implies, however, that deals might have been generally underpriced and that the equilibrium price level for sport sponsorship contracts has not (yet) been reached. The fact that sponsorship programs were considered as positive return projects could assist sponsees in negotiating higher fees in order to allocate the benefits arising from the sponsorship cooperation more equally between both parties.

The findings of an overall positive sponsorship effect are generally in line with the results of previous research (see also table 1 in chapter 3.2). Although some studies document also a negative share price reaction to sponsorship announcements (e.g. Clark et al., 2009; Farrell & Frame, 1997) the vast majority report positive ARs of a comparable magnitude as in this study, namely between +0.31% and +0.76% for single days (e.g. Clark et al., 2002; Cornwell et al., 2005; Mishra et al., 1997; Miyazaki & Morgan, 2001; Samitas et al., 2008). However, the sub-sample analysis also shows that not all sponsorships are equal. Whereas the majority of the analyzed groups also attest a positive sponsorship effect (motor sports, Olympics, basketball, baseball, American football; organization-, team sponsorships; North America, Europe; consumer goods, consumer services, telecommunications) there are also sub-samples for which no sponsorship effect (arena sponsoring; event-, personality sponsorships; financial services) or even a negative sponsorship effect was detected (soccer, golf, tennis; Asia/Pacific).

In the following the results of the regression analysis to identify potential factors determining ARs are interpreted. Overall it should be stated that the explanatory power of most regression models in this study is only around 0.1. This relatively low R^2 indicates that further variables might be relevant to explain abnormal returns. For example, the level of congruence between a sponsor and the sponsored organization was found to be a relevant factor impacting ARs (Cornwell et al., 2005; Pruitt et al., 2004). However, this variable was not included in the model because of the subjective character of what constitutes a congruent sponsorship. Moreover, a sponsor's market share could

be relevant because the marginal benefit from the sponsorship is likely to decline with higher levels of market share as a result of already high awareness scores. Unfortunately, it was not possible to obtain reliable estimates for this variable. Whereas the diversity of the sample regarding regions, industries, sponsorship types, and sports was an advantage over past literature in terms of broader generalizability of event study results, it might be a disadvantage at this point due to a lack of clear universal explanatory variables. Moreover, previous studies reported similar values for R^2 of less than 0.12 (e.g., Clark et al., 2009; Cornwell et al., 2001; Mishra et al., 1997) indicating that the variance in abnormal returns is difficult to explain.

Next, the impact of the different deal-specific and sponsor-specific characteristics introduced with the theoretical framework will be discussed. First of all it is important to mention that for the overall sample only one out of the eight factors tested in the framework has a significant impact on *CARs*. As it can also be seen in the subsequent results for the sub-samples the determinants for *CARs* differ between sports, sponsorship types, regions, and industries and the effect has for some factors even the opposite direction. As a result, the significance of some individual factors might have been cancelled out on the aggregate level in the overall regression model. For the overall sample *CARs* are determined only by the level of sponsorship (CORP). Contrary to the finding of previous research (Pruitt et al., 2004), deals on corporate level (e.g., promoting the firm name instead of a brand name) experienced lower returns compared to brand level deals. One explanation can be that investors are sceptical about the ability of consumers to associate the sponsored company name with specific brands, and as a result, future sales would be unaffected by the sponsorship. Thus, the previously stated expectation about a negative effect of CORP is confirmed (see also chapter 4). All other factors (NEW, INTERN, HOME, YEAR, VALUE, SIZE, TECH) have no significant effect on *CARs* in the overall model. However, many of these factors are significant in sub-sample models. Hence, these effects will be addressed in the respective sub-sample discussion.

To conclude, the results of this dissertation project are based on a comprehensive dataset that addresses the main identified research deficits. First, the sample of 629 sponsorship

announcements is to the author's best knowledge the largest sample ever used in an event study on sponsorship effectiveness and answers to a research deficit that has been identified previously, namely the limited generalizability of earlier findings due to small sample sizes. Second, the incorporation of very recent sponsorship deals answers to another previously identified research deficit in the area of measuring sponsorship effectiveness, namely the fact that the data used in prior studies have limitations in terms of up-to-dateness. Third, the breadth of the sample regarding different sports improves the generalizability of the overall results and allows for a detailed sport-specific sub-sample analysis as this was identified as another research deficit. Fourth, earlier research is mainly based on single country studies that mostly focus on the US. The internationality of this dissertation project addresses this research deficit. The event-study results of the overall sample document a positive sponsorship effect since share prices generally showed a positive reaction ($AAR=+0.36\%$ on day 0) to press releases about sponsorship programs. Overall, these substantial marketing investments were considered to be positive NPV projects that enhanced firm value. This implies, however, that deals might have been generally underpriced and that the equilibrium price level for sport sponsorship contracts has not (yet) been reached. For the overall sample *CARs* are determined only by the level of sponsorship (*CORP*). Deals on corporate level generated lower returns compared to brand level deals, indicating that investors might be sceptical about the ability of consumers to associate the sponsored company name with specific brands.

7.2 Sports

This section analyzes the sponsorship effect for the sport-specific sub-samples including soccer, motor sports, golf, Olympics, tennis, basketball, arena sponsorships, baseball, and American football. The event study results shed light on the first research question dealing with the sponsorship effect for various sports (RQ 1b) whereas the second research question about determinants of *ARs* for sponsorships in different sports (RQ 2b) is covered by the regression analysis.

7.2.1 Soccer

7.2.1.1 Sample characteristics

Table 10 provides an overview of the descriptive statistics for all relevant variables for the sport-specific sub-sample soccer ($n=117$).

Table 10: Overview of variables including descriptive statistics (soccer, $n=117$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.74	1	0.44	0	1
NEW	Dummy	0.56	1	0.50	0	1
INTERNAT	Dummy	0.61	1	0.49	0	1
HOME	Dummy	0.53	1	0.50	0	1
YEAR	Metric	2006	2006	3	1999	2010
VALUE	Metric	73.5	43.8	82.4	17.4	500
<i>Sponsor-specific factors</i>						
SIZE	Metric	189.9	18.3	504.5	0.2	2973.2
TECH	Dummy	0.10	0	0.30	0	1

With regard to the deal-specific factors the soccer sample is characterized by the fact that the majority (74%) of sponsorship deals are on corporate level and that slightly more than half (56%) of the soccer deals are new contracts. Moreover, most soccer sponsorships (61%) have an international reach beyond national borders and in 53% a sponsor supports an entity in its home country. The average contract value for the soccer sample is \$73.5 M with a median value of \$43.8 M. The difference between the mean and median suggests that the mean value is impacted by a few very expensive sponsorship deals. The SD of \$82.4 M also hints at a high degree of dispersion which can also be seen in the large difference between the minimum (\$17.4 M) and maximum (\$500 M) contract value for soccer deals. For the sponsor-specific characteristics of the soccer sample it is striking that the average size of a sponsoring firm (measured by total assets) is \$189.9 B, but the median size is only \$18.3 B. Again, this is because of the heterogeneity among soccer sponsors with respect to firm size³³. The SD of \$504.5 B and the huge difference between the smallest (\$200 M) and biggest (\$2,973.2 B) sponsor confirms this heterogeneity. A closer view on firm sizes reveals that 75% of the soccer deals are sponsored by companies with less than \$78.2 B in total assets.

³³ E.g. global financial service institutions generally report total assets in excess of \$1,000 B.

Furthermore, 10% of the sponsors in the soccer sample are associated with the high tech sector.

Next, the frequency distributions within the soccer sample with respect to different industries, sponsorship types and regions are discussed (see figure 9). The consumer goods sector (64%) is by far the largest industry branch represented in the soccer sample, followed by financial services (15%) and telecommunications (9%). Soccer deals are mainly team (48%) and event sponsorships (37%; e.g. FIFA World Cup). The regional focus of soccer sponsorships represented in this study is mainly on Europe (55%), North America (28%) and to a lesser extent on the Asia/ Pacific region (9%).

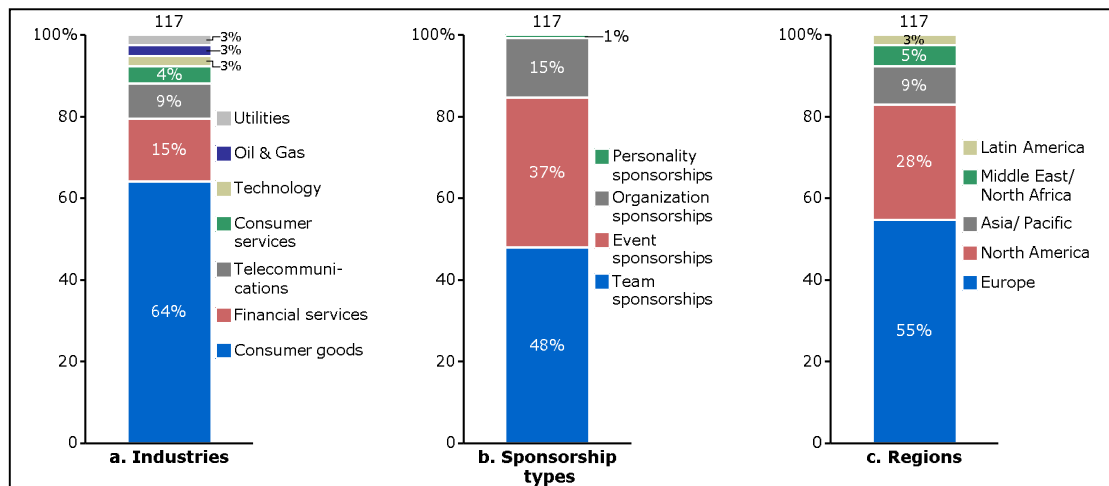


Figure 9: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (soccer, $n=117$ observations).

7.2.1.2 Event study results

The event study results for the return impact of the announcement of soccer sponsorships are displayed in table 11. While the announcements trigger significant negative returns on the day following the official announcement ($AAR=-0.21\%$, $p<0.05$ in panel A) there is no statistical evidence for any share price reaction when analyzing the cumulative effect on ARs via time windows (panel B). As share prices show no reaction to soccer sponsorships, or even react slightly negative on the day after such an announcement was made, it seems that soccer sponsorships have no beneficial impact on ARs of sponsoring firms.

Table 11: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (soccer, $n=117$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	0.06%	0.21	57 (49%)	-0.12
-2	-0.01%	-0.02	55 (47%)	-0.37
-1	0.14%	1.29	68 (58%)	0.68
0	0.11%	0.83	58 (50%)	-0.09
+1	-0.21%	-2.34**	52 (44%)	-1.86*
+2	0.04%	0.01	65 (56%)	0.54
+3	-0.19%	-0.90	53 (45%)	-1.44
<i>Panel B: Periods</i>				
-3 to +3	-0.07%	-0.01	56 (48%)	-0.05
-2 to 0	0.24%	1.37	58 (50%)	0.95
-2 to +1	0.03%	0.32	55 (47%)	-0.26
-1 to 0	0.25%	1.56	61 (52%)	0.50
-1 to +1	0.04%	0.36	53 (45%)	-0.75
0 to +1	-0.10%	-0.43	50 (43%)	-1.29

7.2.1.3 Regression results

The findings from the regression analysis of the soccer model provide insights about the factors determining abnormal returns and are summarized in table 12. The results reveal significant negative effects for the factors INTERNATIONAL, NEW and SIZE. The negative effect of INTERNATIONAL implies that deals with a national focus generate more positive CARs than sponsorships with international reach.

Table 12: Summary of regression results for CARs between $t=-3$ and $t=+3$ (soccer model) Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T =test statistic; p = p -value.

Factor	Coefficient	Robust SE	T	p
Constant	403.431	269.161	1.50	0.137
CORP	-0.411	0.816	-0.50	0.615
INTERNAT	-1.870	0.733	-2.55	0.012**
NEW	-1.312	0.755	-1.74	0.085*
YEAR	.0200	0.134	-1.49	0.139
VALUE	-0.003	0.005	-0.62	0.539
HOME	-0.019	0.830	-0.02	0.982
SIZE	-0.002	0.001	-2.12	0.037**
TECH	0.722	1.050	0.69	0.493
$R^2=0.140$; $F=2.39$; $p=0.021$ **; $n=117$				

The negative impact of NEW suggests that contract extensions lead to higher returns than newly signed deals and the negative influence of SIZE on CARs indicates that

smaller sponsors are more likely to experience higher abnormal returns than bigger sponsors. The soccer model is overall significant ($p < 0.05$) and explains 14% of the variation of abnormal returns.

7.2.1.4 Discussion

In the following section the results specific to the soccer sub-sample will be discussed and interpreted. It is important to keep in mind that the discussion on the sub-sample level generally focuses on findings that deviate from the overall sample in order to prevent redundancies and to ensure efficiency.

The soccer sample is with 117 announcements the biggest of its kind being analyzed regarding the wealth effect of soccer sponsorship deals. The only study that can be used for reasons of comparison is a case study researching the share price effect of soccer sponsorships (Spais & Filis, 2008). Unfortunately their research was based on only one deal (between Fiat and Juventus Torino) and thus prohibits any broader application of the results. Nevertheless, there are some characteristics that are peculiar to the soccer sample and therefore warrant a separate discussion from the overall sample. First, it is noticeable that the proportion of new contracts is considerably lower among soccer deals. Almost every second deal in the soccer sample is extended whereas only every third deal is renewed in the overall sample. An explanation for these ongoing cooperations between companies and soccer sponsees could be that soccer sponsors have longer-term sponsorship goals. It can also be that the average contract length for soccer deals is shorter than for other sports and as a result, contracts have to be renewed more often in order to achieve the sponsorship goals. Next, the limited opportunities of high profile sponsorships like being an official sponsor for a FIFA World Cup could increase the renewal rate. Once a firm has been selected to be an official FIFA or UEFA sponsor it is likely to continue that sponsor relationship, also to prevent to be replaced by competitors. The high share of soccer sponsorships with an international reach is not surprising if one recalls that this dissertation project covers the universe of large sponsorship deals that involve a contract value of at least \$1.5 M. This means that in the universe of large deals the majority of sponsorship opportunities have an international exposure, either on club level with the Euro- or Champions League, or on national team level with the Euro or World Cup. The average contract value for soccer deals is

significantly higher than the overall average deal value and is next to arena sponsorships the highest across all analyzed sport categories. It can be speculated that the high price level for soccer sponsorships is mainly a result of two factors. One, soccer is renown for a very large viewership (both stadium and TV). In many countries, especially in Europe, soccer is the most popular sport with the largest fan base and fans that are remarkably loyal to their team. Hence, as a soccer sponsor a company is visible to a very broad range of potential customers; not only fans, but also other people watching soccer without being a serious fan, which is highly valuable from a marketing perspective. But not only the popularity of a sport is important for sponsors, it is also the involvement of fans. It has been shown that involvement and loyalty (which is both well developed among soccer fans) positively influence the intention to purchase a sponsored product (Tsotsou & Alexandris, 2009). Two, soccer matches are extremely well covered by the press, giving a sponsor a high exposure to the media and thus to soccer fans and viewers. Matches are not only shown live on TV, but are also part in many post-match TV shows showing and discussing the highlights of a game. In addition, in most sport sections of newspapers soccer generally receives the highest attention including pictures and detailed articles. Overall, the value of soccer deals is mainly driven up by the international popularity of the sport itself in combination with the very high media exposure for sponsors. With regards to the frequency distributions in the soccer sample it should be mentioned that the high share of team sponsorships is not surprising because soccer is a team-oriented sport. Since soccer is more popular in Europe than in North America it is consequential that the majority of soccer deals involve companies from Europe.

The findings from the event study analysis will be discussed and interpreted next. The results of the soccer sample suggest that share prices react slightly negative to the announcement of soccer sponsorships. Investors perceived such deals rather sceptical. The negative share price reaction can be a sign that investors were pessimistic about the cost-benefit ratio for soccer deals. In other words, shareholders believed that expected future incremental sales originated from a soccer sponsorship could not justify the high prices paid for the deal. The high price level is also reflected in the previously discussed sample characteristics. This result is in line with previous research that exists

on the financial impact of soccer deals. Spais and Filis (2008) documented significantly lower stock returns for sponsors during a post-announcement period when compared to the returns registered in a pre-announcement period. Thus, it is important for corporate managers to question and challenge any estimates about future benefits (e.g. additional future sales) from a sponsorship program in order to avoid overpayments and to improve the cost-benefit ratio in favour of the company.

In the following the results of the regression analysis to identify the determinants of returns are discussed. In the soccer model three out of the eight characteristics tested in the theoretical framework have a significant effect on *CARs*. The effect of *INTERNAT* on abnormal returns was significant and negative which is against the previously stated expectations (see chapter 4). A comparison with previous work is not possible as this characteristic has not been under investigation until now. The better performance of deals with national coverage could indicate a mismatch between a sponsors geographic target group and the sponsorship reach. For example, a global soccer event might not be the best fit for a Brazilian beer producer, because (with few exceptions) the beer industry is characterized by fragmented national markets rather than a global market. The negative effect of *NEW* is in line with previous research (e.g., Clark et al., 2009: NCAA sample) and with expectations. The argument that sponsors gain significant experience in first time partnerships that is valuable to optimally leverage their sponsorship rights when the same sponsorship deal is extended seems to be supported. Moreover, the results indicated that *SIZE* had a negative influence on returns for soccer sponsorships. The negative effect for firm size implies that larger sponsors experienced lower *ARs* than smaller sponsors. This is in accordance with Clark et al.'s (2002) study on stadium sponsorships and also with Samitas et al.'s (2008) study on Olympic sponsorships, it contradicts however the findings of Clark et al.'s (2009) research on title event sponsorships. Nevertheless, the findings support the previous stated expectation that potential scale advantages for larger firms in terms of extensive activation support are likely to be neutralized by additional visibility and significantly higher incremental awareness increase for smaller firms.

To conclude, from a viewpoint of a corporate manager it is essential to thoroughly evaluate the expected benefits from entering a soccer sponsorship, especially

if it is a deal with international reach. If a company decides to sponsor an internationally active soccer team or an international event there should be a match between the geographical markets the sponsor is represented in and its sponsee is exposed to. Otherwise a sponsor might run the risk to pay for benefits that it cannot capitalize on. In addition, if a soccer sponsor has the choice it should prefer to extend existing cooperations in order to utilize the experience that has been accumulated in the course of the cooperation with the sponsee.

7.2.2 Motor sports

7.2.2.1 Sample characteristics

The descriptive statistics for the motor sport sample ($n=120$) are summarized in table 13. Regarding the deal-specific factors it is interesting to note that approximately two thirds of the motor sport deals (68%) promote the corporate name rather than a brand name and that the majority of the motor sport deals (68%) are first time sponsor partnerships. More than half of the sub-sample (60%) are deals with an international character reaching several different countries. In 40% of the cases a sponsor opted to improve his awareness at home by supporting a sponsee from his home country. The size of the average contract value for a motor sport sponsorship deal is \$59.0 M which is almost three times its median value of \$18.0 M.

Table 13: Overview of variables including descriptive statistics (motor sports, $n=120$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.68	1	0.47	0	1
NEW	Dummy	0.68	1	0.47	0	1
INTERNAT	Dummy	0.60	1	0.49	0	1
HOME	Dummy	0.40	0	0.49	0	1
YEAR	Metric	2005	2005	3	2000	2010
VALUE	Metric	59.0	18.0	140.4	7.5	1,200
<i>Sponsor-specific factors</i>						
SIZE	Metric	208.3	33.9	420.0	0.1	2,187.6
TECH	Dummy	0.26	0	0.44	0	1

Thus, the average value is inflated by some very large sponsorship contracts which also explain the high SD of \$140.4 M as well as the high range of contract values from \$7.5

M to up to \$1,200 M. Turning to the sponsor-specific factors the average firm size (total assets) is \$208.3 M with a median value of \$33.9 M. Again, such a difference between mean and median indicates a high dispersion of firm sizes in the sample which is confirmed by a huge SD of \$468.3 M. Overall, the size of motor sport sponsors ranges from \$100 M to \$2,187.6 B. The share of high tech sponsors (26%) is almost twice as much as for the overall sample which is not surprising due to the importance of technology for this sport. Out of the 120 motor sport deals the majority are Formula 1 (F1) related ($n=62$) and the remaining deals are associated with NASCAR ($n=41$) or motor cycle racing ($n=17$). The motor sport sample itself is quite heterogenic with F1 deals differing greatly from NASCAR and motor cycling deals in terms of contract values. The average sponsorship fee for a F1 deal is \$85.0 M, whereas the average is only \$35.0 M for NASCAR deals and only \$20.0 M for motorcycling deals. In order to control for these fundamental differences additional dummy variables, indicating if a sponsorship deal is associated with the F1 or NASCAR, are included in the motor sport model.

The frequency distributions of motor sport sponsorship announcements with respect to different industries, sponsorship types and regions are summarized in figure 10.

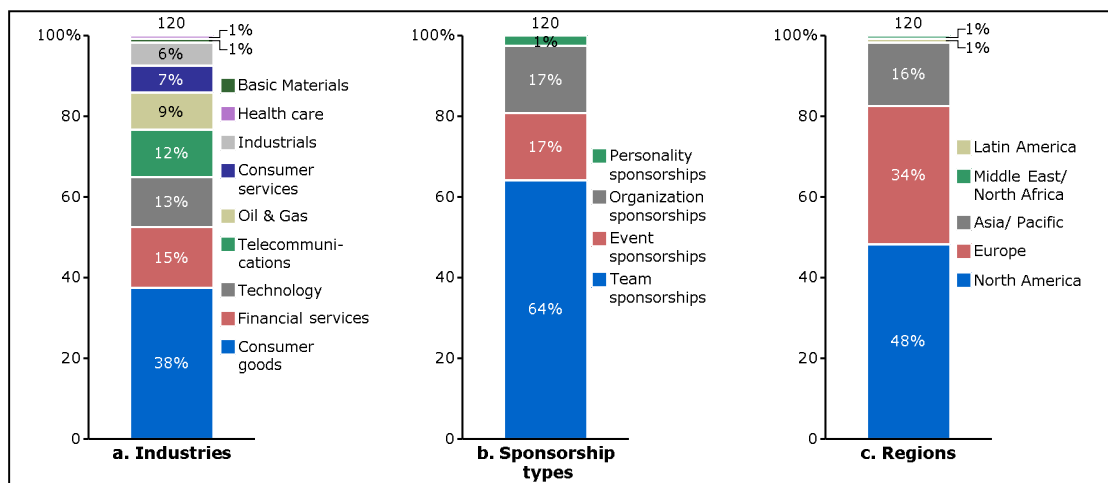


Figure 10: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (motor sports, $n=120$ observations).

By far the largest industry group sponsoring motor sports is the consumer goods (38%) sector followed by the financial services (15%), technology (13%) and telecommunications sector (12%). Interestingly the share of the oil & gas sector is three times as big as for the overall sample and accounts for almost 10% of the motor sport deals. A reason for this high oil & gas involvement can be the natural fit between the industry and the sport. In terms of sponsoring types it is interesting to note that the vast majority of the motor sport sample are team sponsorships (64%). The second largest sponsorship types are event and organization deals accounting for 17% each. The regional split indicates that more than 80% of the deals are closed by firms from either North America (48%) or Europe (34%).

7.2.2.2 Event study results

The event study results for the firm value impact of motor sport sponsorship announcements are displayed in table 14. Highly significant positive AARs on the announcement day (+0.58%, $p < 0.01$; panel A) show a positive announcement effect of motor sport deals on firm value.

Table 14: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (motor sports, $n=120$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.06%	-0.52	58 (48%)	-0.52
-2	-0.03%	-0.45	66 (55%)	0.23
-1	0.07%	0.11	56 (47%)	-0.41
0	0.58%	3.06***	74 (62%)	2.89***
+1	0.13%	1.13	60 (50%)	0.29
+2	0.02%	-0.22	56 (47%)	-0.31
+3	-0.03%	-0.20	66 (55%)	0.30
<i>Panel B: Periods</i>				
-3 to +3	0.67%	1.19	70 (58%)	1.77
-2 to 0	0.62%	1.42	68 (57%)	1.91*
-2 to +1	0.74%	1.88*	71 (59%)	2.24**
-1 to 0	0.65%	1.97*	67 (56%)	1.74*
-1 to +1	0.77%	2.40**	67 (56%)	2.06**
0 to +1	0.70%	2.78***	71 (59%)	2.66***

This finding is further strengthened by consistently positive and significant *CAARs* for various time windows around the announcement day (e.g. +0.70%, $p < 0.01$ for days -1 to +1; panel B). More detailed analysis shows that the overall positive returns for motor sport sponsorships are mainly driven by NASCAR deals. The results of a separate analysis for only NASCAR deals show highly significant and positive *AARs* (+0.92%, $p < 0.01$; Appendix C) on day 0 which is confirmed by a positive cumulative effect with *CAARs* of +1.63% ($p < 0.01$) for days -1 to +1. In contrast, a similar analysis for F1 deals yields positive but insignificant returns (e.g. +0.33%, $p < 0.1$ for days -1 to +1; Appendix D). Overall, it can be stated that motor sport deals generally impact *ARs* favorably.

7.2.2.3 Regression results

The results for the motor sport regression model are summarized in table 15. Based on these results the factor INTERNATIONAL shows a negative effect on *CARs* whereas NEW seems to influence returns positively. The negative impact of international deals suggests that sponsorships with a more focused national reach perform financially better than engagements with sponsees that are also present on an international level.

Table 15: Summary of regression results for *CARs* between $t = -3$ and $t = +3$ (motor sport model) Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value; F1 and NASCAR as control variables with motorcycle racing as reference category.

Factor	Coefficient	Robust SE	T	p
Constant	-43.033	272.274	-0.16	0.875
CORP	0.254	0.751	0.34	0.736
INTERNAT	-4.112	1.166	-3.53	0.001***
NEW	1.333	0.653	2.04	0.044**
YEAR	0.022	0.136	0.016	0.869
VALUE	0.006	0.005	1.20	0.232
HOME	-0.507	0.744	-0.68	0.497
SIZE	-0.000	0.002	-0.24	0.807
TECH	0.427	1.285	0.33	0.740
F1	0.921	1.102	0.84	0.405
NASCAR	-1.279	1.124	-1.14	0.257
$R^2 = 0.125$; $F = 1.96$; $p = 0.044$ **; $n = 120$				

The positive load of the NEW factor implies that newly signed motor sport sponsorship contracts generate higher returns than contract extensions. The overall motor sport model is significant ($p < 0.05$) and explains 13% of the variance in *CARs*.

7.2.2.4 Discussion

In the following section the results specific to the motor sport sub-sample will be discussed and interpreted. The motor sport sample ($n=120$) is the biggest sample used in an event study analysis on the effectiveness of motor sport sponsorships. Comparable studies by Pruitt et al. (2004) and Clark et al. (2009) utilized sample sizes of fewer than 25 announcements to analyze the financial impact of NASCAR deals in the USA. Although most characteristics of the motor sport sample in this study are similar to the overall sample discussed in section 7.1.4 there are some differences that will be addressed in the following. First, the high share of sponsorships having an international reach is a result of the international nature of motor sports, especially the F1. All F1 races take place in different countries and even different continents, making it a truly global sport. This international focus of the F1 also explains the low proportion of home deals. Such an international platform provides a unique sponsorship opportunity for global corporations seeking to gain global exposure³⁴ without being forced to select one specific country as the core market (as it would be the case with soccer sponsorships for example). The fact that the share of high tech sponsors is twice as high as in the overall sample is not surprising due to the central role technology plays in motor sports, resulting in a high degree of fit between motor sport sponsees and sponsors from the technology sector. In a similar way, the share of oil & gas sponsors is three times as big as in other sports, which is also caused by the natural fit between the industry and the sport. This fit, also sometimes called congruence, has been found to have a positive effect on sponsorship effectiveness (e.g. Cornwell et al., 2005).

Motor sport sponsorships generated highly positive AARs (+0.58% on the announcement day), indicating that the investment community was very optimistic about motor sports deals. This direction is generally in accordance with previous results on motor sport sponsorships (Clark et al., 2009; Pruitt et al., 2004), although previous studies have documented a stronger impact which was reflected in higher levels of ARs. Pruitt et al. (2004) registered positive ARs of +1.29% around the day of the announcement of NASCAR team sponsors. Clark et al. (2009) report for their study on

³⁴ This is different for NASCAR deals where all races take place in the US and as a result the share of sponsors from the US (and thus the share of HOME deals) is considerably higher.

the share price impact of NASCAR title event sponsorships *ARs* of +2.29%, although this high level is at least partially due to the fact that the authors reported abnormal returns cumulated over a ten day period. It is interesting to note that the motor sports results in this research project are also driven by NASCAR sponsorships, and not by F1 deals. Whereas the share prices reaction to the announcement of NASCAR sponsorships was positive and significant, the registered share price effect of F1 deals was positive, but insignificant. There are two possible reasons for this difference. First, deal prices were considerably higher for F1 sponsorships than for NASCAR deals (see also section 7.2.2.1). The fact that the impact of F1 deals was neutral suggests that sponsorship contracts were signed at fair prices. Sponsors paid an adequate amount with regard to future benefits in terms of additional sales and profits. Second, NASCAR sponsors can build on an exceptionally loyal fan base. As Pruitt et al. (2004) note, NASCAR fans see a direct link between the performance of the teams and the sponsors. Fans are aware of the fact that “it is the sponsor that enables teams to develop better engines, better cars and to run more tests. That translates into fan loyalty.” (Pruitt et al., 2004, p. 284). Overall, it seems like investors regard motor sport sponsorship programs as value creating investments for sponsoring firms where the incurred costs are exceeded by the expected beneficial impact on future sales and profits, especially when investing in NASCAR deals.

Next, the results of the regression analysis to identify the determinants of *ARs* are discussed. Two characteristics tested in the theoretical framework have a significant impact on *CARs* in the motor sport model. The significant and negative effect of *INTERNAT* on abnormal returns is in line with the previously stated expectations. Although a comparison with previous work is not possible as this characteristic has not yet been under investigation until now, this result is consistent with the result of the soccer sub-sample within this study where also a negative effect of *INTERNAT* on *CARs* was found. As previously speculated (see also section 7.2.1.4), the better performance of deals with national coverage could indicate that investors fear a possible mismatch between a sponsors geographic target group and the reach of sponsorships with international reach. The positive influence of *NEW* is somewhat surprising as it contradicts the previously stated expectations as well as the results from the soccer

analysis within this study and also previous research (e.g., Clark et al., 2009: NCAA sample). However, in the same study Clark et al. (2009) find empirical evidence for a positive influence of NEW on *CARs* for the golf sub-sample which is confirmed by the negative effect of NEW documented for the motor sport sample in this study. One explanation for the fact that new motor sport deals generated higher returns than contract extensions could be that the price level for follow up contracts with motor sport teams is higher than for the initial contract. Investors might believe that the expected future benefits cannot justify the prices paid for follow up contracts. Another reason could be that new contracts enjoy greater attention by the press and thus higher press coverage. In fact, Koku, Jagpal and Viswanath (1997) document a positive relationship between the press coverage of a firm's announcement and its impact on the firm's share price because more stakeholders, especially investors and customers, will be informed about the firm news.

To sum up, the analysis has shown that the motor sport sample has the highest share of sponsors from the technology as well as the oil and gas sector, due to the high degree of natural fit between the sport and these industries. From a managerial perspective, it is important to note that motor sport offers truly global sponsorship opportunities with races around the globe. Investors perceive motor sport deals overall very positive and as value increasing investments, but more detailed analysis has shown that NASCAR deals seem to be more successful than F1 deal. Therefore, corporate managers should be more price-sensitive when investing in the F1. The same holds for renewed deals that generate lower returns than new deals and as a consequence, managers should be more price-conscious when renewing contracts.

7.2.3 Golf

7.2.3.1 Sample characteristics

An overview of the descriptive statistics for the sub-sample golf ($n=83$) is displayed in table 16. In terms of deal-specific factors the golf sample is characterized by the fact that the vast majority (83%) of the deals are on corporate level promoting a firm name rather than individual brands. Approximately 60% of the golf deals are newly signed contracts.

About half of the sample involves sponsorships having an international coverage beyond national borders and also about half of the golf sponsors prefer to partner up with a sponsee from its own country. The average deal value of \$16.3 M, which is about a third of the average deal value for the overall sample, indicates that golf sponsorships seem to be less pricy than other sport categories. However, the values of individual golf deals also differ greatly ranging from \$5.0 M to \$100.0 M.

Table 16: Overview of variables including descriptive statistics (golf, $n=83$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.83	1	0.38	0	1
NEW	Dummy	0.60	1	0.49	0	1
INTERNAT	Dummy	0.48	0	0.50	0	1
HOME	Dummy	0.47	0	0.50	0	1
YEAR	Metric	2005	2005	3	1999	2010
VALUE	Metric	16.3	12.0	15.6	5.0	100.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	294.8	41.3	579.8	0.3	2,973.2
TECH	Dummy	0.06	0	0.24	0	1

For the golf sample the sponsor-specific factor size is described by an average firm size of \$294.8 B. Nevertheless, the median size (\$41.3 B) being considerably below the average suggests that the mean size is inflated by a few very large golf sponsors. This is also reflected by the high dispersion (SD=\$579.8 B; smallest sponsor: \$0.3 B; biggest sponsor: \$2,973.2 B). Lastly, the high tech industry accounts for 6% of the golf sponsorships in this study.

The frequency distributions of the sample regarding different industries, sponsorship types and regions are introduced next (see figure 11). The consumer goods sector (40%) and the financial services sector (30%) provide the most sponsorship deals in the golf sample. Event sponsorship is the most common deal type (52%) for golf deals, followed by organization (22%) and personality sponsorships (18%). It is not surprising that personality deals are much more common than team sponsorships (1%) since golf is characterized by competitions between individuals rather than teams³⁵. The regional

³⁵ With the exception of rare team events such as the Ryder's Cup.

split shows that most golf deals in the sample involve sponsors from North America (52%) or Europe (37%).

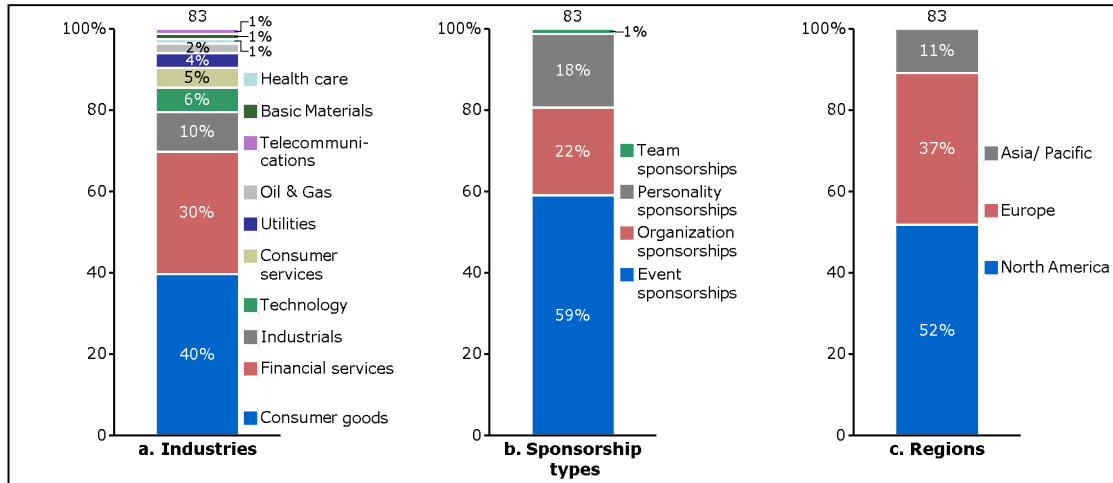


Figure 11: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (golf, $n=83$ observations).

7.2.3.2 Event study results

The results of the event study analysis for the golf sample are summarized in table 17. Panel A displays AARs for individual days around the announcement and panel B displays CAARs for selected time periods.

Table 17: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (golf, $n=83$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	tBMP	N+ (%)	z
<i>Panel A: Days</i>				
-3	-0.02%	-0.01	43 (52%)	-0.01
-2	0.19%	0.91	47 (57%)	0.94
-1	-0.02%	-0.18	44 (53%)	0.17
0	-0.07%	-0.73	36 (43%)	-0.50
+1	0.15%	0.43	38 (46%)	-0.32
+2	-0.30%	-1.82*	27 (33%)	-2.92**
+3	-0.24%	-0.61	41 (49%)	0.33
<i>Panel B: Periods</i>				
-3 to +3	-0.31%	-1.25	41 (49%)	-0.59
-2 to 0	0.10%	-0.10	42 (51%)	0.31
-2 to +1	0.25%	0.18	46 (55%)	0.74
-1 to 0	-0.09%	-0.64	36 (43%)	-0.54
-1 to +1	0.06%	-0.24	39 (47%)	0.02
0 to +1	0.08%	-0.01	38 (46%)	-0.63

Whereas golf sponsorship deals trigger significant negative returns on the second day following the announcement (-0.30% , $p < 0.1$) there is no statistical evidence for either positive or negative share price reactions when examining the cumulative effect via time periods (e.g. $CAAR = +0.06\%$, $p > 0.1$ for days -1 to $+1$). Because share prices do not react to golf sponsorship announcements, or even react slightly negative, it seems that golf deals have no beneficial impact on ARs of sponsoring firms.

7.2.3.3 Regression results

Table 18 provides an overview of the regression results for the golf model. The results show that none of the included variables has a significant impact on CARs. This finding suggests that the financial returns on golf sponsorships are independent of the analyzed deal-specific and sponsor-specific characteristics. The model is overall also not significant.

Table 18: Summary of regression results for CARs between $t = -3$ and $t = +3$ (golf model) Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	-252.481	382.221	-0.66	0.511
CORP	0.705	1.378	0.51	0.611
INTERNAT	1.291	1.298	1.00	0.323
NEW	-1.544	0.933	-1.65	0.102
YEAR	0.125	0.191	0.66	0.514
VALUE	0.025	0.032	0.79	0.434
HOME	1.898	1.238	1.53	0.130
SIZE	-0.001	0.001	-1.24	0.217
TECH	-1.446	1.831	-0.79	0.432
$R^2 = 0.083$; $F = 1.49$; $p = 0.177$; $n = 83$				

7.2.3.4 Discussion

Next, the results specific to the golf sample will be discussed and interpreted. Most sample characteristics are strikingly similar to the overall sample and will not be discussed again at this point to prevent redundancies (see section 7.1.4). Nevertheless, there are a few differences that will be addressed in the following. It stands out that golf sponsorships have a considerably higher proportion of corporate level deals (83%) than other sport categories or the overall sample (74%). A reason for this extra proportion of corporate level deals could be the high share of financial institutions represented in the

golf sample (30%) which is almost twice as high as in the overall sample. The high involvement of financial institutions in the golf sport is not unexpected due to the rather affluent golf community and the image of wealth that is still attached to the golf sport (Cornwell et al., 2005). Financial companies mostly engage in corporate level sponsorships since their corporate name serves as an umbrella name for all offered products (see also section 7.5.2.4). As a result, the share of corporate level deals within the golf sample is higher than for other sport categories since the proportion of financial institutions is also comparatively high. The average contract value for golf deals (\$16.3 M) is similar to the average price levels for basketball, baseball and tennis deals but is significantly lower than the average deal value in the overall sample (\$52.7 M). A reason for the lower price level could be that golf has a fairly narrow fan base when compared to other sports like soccer, motor sports or American football. Next to the size of the fan base, TV viewership, live attendance and overall press coverage – all important indicators for evaluating the value of a sponsoring right - are hypothesized to be lower for golf than for other sports (Clark et al., 2009) and therefore the price level for golf deals is lower. The organizational structure of professional golf around the tournaments belonging to the (European) PGA Tour explains the high proportion of event sponsorships (59%). The high share of personality endorsements (18%) results from the individual oriented nature of the golf sport as opposed to team-oriented sports where team sponsorships prevail.

The findings from the event study analysis will be discussed next. The results for the golf sample suggest that share prices react slightly negative (-0.30% on day +2) to the announcement of golf sponsorships. This negative effect on the value of sponsoring firms indicates that investors were pessimistic about the cost-benefit ratio for golf deals. In other words, shareholders believed that the expected future additional profits resulting from the sponsorship program could not compensate the costs associated with the sponsorship deal. Interestingly, this negative sponsorship effect is not in line with prior studies on golf sponsorships. Clark et al. (2009) analyzed the share price impact of PGA and LPGA title event sponsorships and reported a neutral effect, whereas Cornwell et al. (2005) documented a positive share price reaction to the announcement of PGA official product sponsorships. Thus, the findings of the current study add additional insights to

the discussion of the effectiveness of golf sponsorships since prior studies have only analyzed specific sponsorship types related to the PGA (e.g. PGA title events, PGA official product sponsorship). This result is important for corporate and sport managers. For corporate managers the presence of negative *ARs* should send a warning signal that the prices paid for golf sponsorships are generally too high. In the future, corporate managers should question and challenge the value of golf deals more thoroughly by relating it to TV and live attendance and to overall media exposure in order to avoid overpaying. On the other hand, sport managers should attempt to increase the value of golf sponsorships by strengthening the core attributes. Reach might not be the core strength of golf sponsorships in light of the limited press coverage and popularity. It might be the case that golf sponsorships are better suitable for improving other positive impact factors than awareness like corporate identity (Mishra et al., 1997) or customer acquisition and retention. Sport managers could create customized hospitality programs for employees of the sponsoring firm in order to boost employee morale. Moreover, the access to the rather affluent customer group within the golf community is a unique feature of golf sponsorships and should be taken advantage of by sponsors (especially banks and insurances with wealth management programs).

The very low R^2 and the insignificance of the golf regression model show that *ARs* cannot be explained by the characteristics included in the model. None of the factors is significant and as a result it is not possible to draw any conclusions about the determinants of abnormal returns for this sub-sample. However, it might be possible that other factors that are not part of the model can explain abnormal returns (see section 7.1.4).

To conclude, the negative share price reaction to the announcement of golf sponsorships indicates an insufficient cost-benefit ratio. Corporate managers should challenge the expected payoffs from golf deals in order avoid overpaying. Sport managers should strive to increase the value of golf sponsorships by building sponsorship packages more based on the core strengths which might be improving corporate identity and customer acquisition and retention via hospitality programs rather than focussing on awareness increases.

7.2.4 Olympics

7.2.4.1 Sample characteristics

The sample characteristics for all relevant variables included in the Olympics sub-sample ($n=65$) are provided in table 19. With regard to the deal-specific factors this sample is characterized by a high share of Olympic sponsorships on corporate level (86%) featuring the firm name in the sponsorship program and a high share of contracts that are newly signed (78%) as opposed to the extension of existing contracts. The reach for Olympic deals is mostly international (78%) and only a small fraction (22%) of Olympic deals have the focus on one particular country (e.g. sponsoring national Olympic committees). About half of the sample involves deals between sponsors and sponsees from the same country. The average contract value of \$69.5 M (median value \$50.0 M) indicates that the price level for Olympic sponsorships is comparable to soccer and motor sport deals. In terms of sponsor-specific characteristics it is worth mentioning that 15% of Olympic sponsors in the sample are associated with the high tech industry. The average firm size of \$70.6 B is again inflated by a few large sponsors since the median size is only \$22.0 B which is similar to the median firm size for the overall sample. The large difference between mean and media size is also reflected by the high SD of \$142.7 B.

Table 19: Overview of variables including descriptive statistics (Olympics, $n=65$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.86	1	0.35	0	1
NEW	Dummy	0.78	1	0.41	0	1
INTERNAT	Dummy	0.78	1	0.41	0	1
HOME	Dummy	0.52	1	0.50	0	1
YEAR	Metric	2006	2007	3	1999	2010
VALUE	Metric	69.5	50	62.3	10.2	260.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	70.6	22.0	142.7	0.2	736.5
TECH	Dummy	0.14	0	0.35	0	1

The sample characteristics in terms of frequency distributions for different industries, sponsorship types and regions are displayed in figure 12. The industry split shows that firms from the consumer goods (37%) and consumer services sector (18%) are the most

common Olympic sponsors in the sample. Because the Olympic Games is a sport event by definition almost all deals (86%) are categorized as event sponsorships. Only 11% are organization deals including mostly sponsorships of national Olympic committees. Europe (45%) and North America (42%) constitute the main regions of Olympic sponsors in the analyzed sample and only a minority of 14% are sponsors from the Asia/Pacific region.

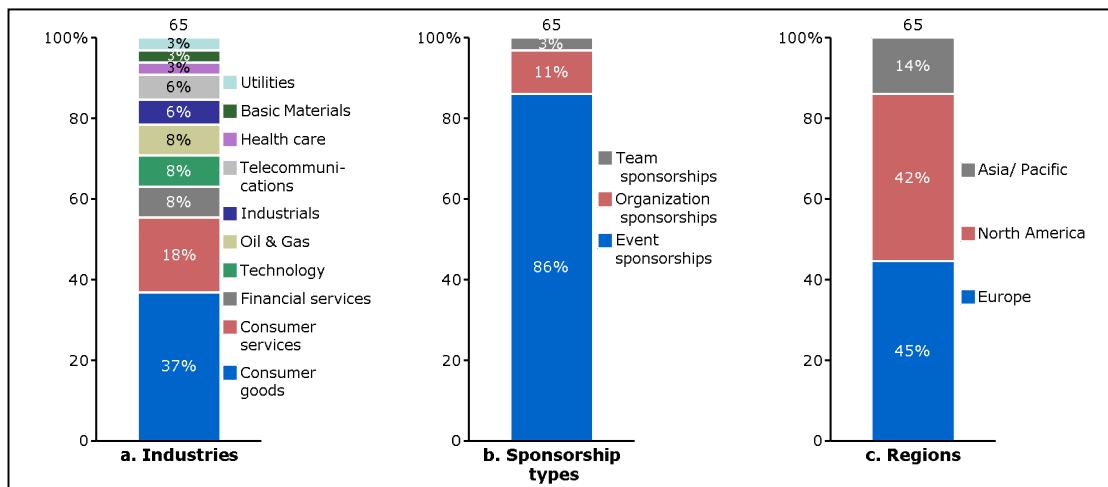


Figure 12: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (Olympics, $n=65$ observations).

7.2.4.2 Event study results

The event study results for the value impact of Olympic sponsorship deals are depicted in table 20. AARs on the announcement day itself are positive (+0.64%) and highly significant ($p < 0.01$) and thus point out a positive announcement effect of Olympic sponsorships on firm value. Consistently positive and significant CAARs for almost all time windows surrounding the announcement day confirm this finding (e.g. CAAR=+1.02%, $p < 0.01$ for days 0 to +1 in panel B). Overall, because of the strong positive effect and the absence of any negative reactions it can be stated that Olympic deals generally impact ARs favorably.

Table 20: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (Olympics, $n=65$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	0.13%	0.01	28 (43%)	-0.52
-2	0.28%	0.77	30 (46%)	-0.40
-1	0.19%	0.40	36 (55%)	0.45
0	0.64%	3.15***	43 (66%)	2.86***
+1	0.38%	1.58	35 (54%)	1.16
+2	0.11%	0.13	28 (43%)	-0.62
+3	-0.40%	-1.02	25 (28%)	-1.62
<i>Panel B: Periods</i>				
-3 to +3	1.31%	1.76*	35 (54%)	1.50
-2 to 0	1.10%	2.14**	35 (54%)	1.43
-2 to +1	1.48%	2.83***	43 (66%)	2.36**
-1 to 0	0.82%	2.02**	37 (57%)	2.04**
-1 to +1	1.20%	3.07***	46 (71%)	3.22***
0 to +1	1.02%	3.71***	46 (71%)	3.51***

7.2.4.3 Regression results

The regression results for the Olympic sponsorship model are summarized in table 21. Based on these results the factors CORP and YEAR both have a significant negative effect on CARs.

Table 21: Summary of regression results for CARs between $t=-3$ and $t=+3$ (Olympic model) Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T =test statistic; p = p -value.

Factor	Coefficient	Robust SE	T	p
Constant	844.319	407.768	2.08	0.043**
CORP	-3.831	1.833	-2.09	0.041**
INTERNAT	2.508	1.593	1.57	0.121
NEW	-0.265	1.646	0.16	0.873
YEAR	-0.420	0.203	-2.07	0.043**
VALUE	-0.011	0.011	-0.97	0.334
HOME	1.491	1.312	1.14	0.261
SIZE	0.002	0.005	0.48	0.635
TECH	2.809	1.825	1.54	0.129
$R^2=0.093$; $F=1.82$; $p=0.093^*$; $n=65$				

The negative impact of CORP implies that sponsorship deals on brand level generate higher CARs than sponsorships on corporate level. The negative influence of YEAR suggests that the financial returns on Olympic sponsorship announcements have

declined over the past decade. The model explains about 10% of the variance in *CARs* and is overall significant ($p < 0.1$).

7.2.4.4 Discussion

The results specific to the Olympics sample will be discussed next. Although most sample characteristics are similar to the overall sample there are some differences that will be addressed in the following. First of all, the Olympics sample is characterized by a high share of corporate level deals (86%). An explanation could be that being an Olympic sponsor provides companies an excellent opportunity to display their firm as a good corporate citizen, next to increasing awareness and benefiting from the positive Olympic image (Farrell & Frame, 1997). By using the sponsorship program to promote the corporate name instead of a specific brand corporate managers might be hoping that the improved image and awareness also spills over to individual brands and products. Furthermore, the average deal value (\$69.5 M) is considerably higher than the average deal value for the overall sample (\$52.7 M). From a cost perspective it seems challenging that the marketing budget of a single brand is sufficient for such hefty investments and therefore Olympic deals are most often carried out on the corporate level so that the sponsorship costs can be allocated across multiple brands. The high deal values are likely to be driven by the high global visibility of the event itself as well as by the limited sponsorship opportunities due to the product/ service exclusivity for Tier 1 sponsors (see also chapter 3.2.1). The high proportion of newly signed contracts (78%) can also be a result of the high required investments in Olympic sponsorship programs since on top of the sponsorship fee significant multi-million dollar investments in supporting marketing campaigns are necessary to ensure that consumers recognize official sponsors and to prevent competitors from successfully ambushing the official sponsorship campaign (Farrell & Frame, 1997; Sandler & Shani, 1989). In light of these hefty investments it seems reasonable that only few sponsors decide to become a long-term repeat sponsor for the Olympics (e.g. Coca Cola) but rather shift the marketing spending to other programs once a sponsorship contract expires or to reduce it overall. The high share of international deals is not surprising since the Olympic Games are a truly global event with athletes from around the world competing against each other and

furthermore, the event country changes from event to event. Lastly, almost 90% of the deals in this sample are classified as event sponsorships since the Olympic Games is a sport event. Although it could be argued that the International Olympic Committee (IOC) and the National Olympic Committees (NOC) also receive part of the paid sponsorship fees (which then would be classified as organizational sponsorships), however, the lion's share is used to finance the Summer and Winter Games (Samitas et al., 2008) and it is thus classified as event sponsorships.

The positive stock market reaction to the announcement of Olympic sponsorships implies that investors view such marketing programs as value-enhancing activities. Share prices reacted positive ($AAR=+0.64\%$ on day 0) which is in line with most prior research that also documents a positive sponsorship effect for Olympic deals (Miyazaki & Morgan, 2001; Samitas et al., 2008). However, Farrell and Frame (1997) also provide evidence for a negative share price reaction to the announcement of sponsorship deals for the 1996 Summer Games in Atlanta. Nevertheless, the positive sponsorship effect documented in this study has implications for corporate as well as sport managers. For corporate managers it provides further evidence that the multi-million dollar investments in Olympic sponsorships create real economic value. This could support marketing managers in justifying the high expenditures in front of the executive board and also shareholders. For sport managers, especially managers active in the sales process of Olympic sponsorship rights, the existence of positive *ARs* indicates further potential to extract even higher sponsorship fees in the future since the expected benefits for corporations seem to exceed all related costs of the sponsorship program.

The regression analysis indicates that *CORP* and *YEAR* are the only two factors from the theoretical framework that have a significant influence on *CARs*. In line with previous research (Pruitt et al., 2004) deals on corporate level generated lower returns than brand level deals. This finding should be interesting to corporate managers that consider investing in Olympic sponsorships since the vast majority of Olympic deals are on corporate level. The reason for the lower returns for such deals might be that corporate names are often detached from brand names (for example, brand name: Pizza Hut, corporate name: Yum! Brands) and as a result it might be challenging for

consumers to link a corporate name to specific brands. Thus, the advantage of corporate level deals, namely the umbrella promotion effect seems to be offset by difficulties in linking corporate names to individual brands. The effect of the variable announcement year has not yet been analyzed in the past. The fact that more recently announced Olympic deals were perceived more pessimistic by investors than older deals could be a result of rising sponsorship fees over the years. In fact, Farrell and Frame (1997) reported a 150% price increase for Olympic sponsorships over a four year period which could lead to diminishing abnormal returns for sponsors.

To sum up, the overall positive sponsorship effect for Olympic deals invites sport managers to further increase sponsorship fees in upcoming negotiations since the expected future profits for sponsoring firms seem to outweigh the already high sponsorship costs. The return disadvantage for corporate level deals should encourage corporate managers to consider using Olympic sponsorship programs also to promote specific brands rather than corporate names.

7.2.5 Tennis

7.2.5.1 Sample characteristics

Table 22 provides an overview of the descriptive statistics for all relevant variables of the tennis sub-sample ($n=62$).

Table 22: Overview of variables including descriptive statistics (tennis, $n=62$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.71	1	0.46	0	1
NEW	Dummy	0.71	1	0.46	0	1
INTERNAT	Dummy	0.82	1	0.39	0	1
HOME	Dummy	0.26	0	0.44	0	1
YEAR	Metric	2006	2007	3	1999	2010
VALUE	Metric	17.5	10.0	18.7	3.0	90.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	333.9	26.0	706.1	0.1	2,973.8
TECH	Dummy	0.08	0	0.27	0	1

With regard to the deal-specific factors the tennis sample is characterized by the fact that the majority of the sponsorship deals in the sample are on corporate level (71%) and that

most tennis deals are newly signed contracts (71%). Moreover, most deals have an international coverage (82%) by involving sponsees with international presence. This international focus is also mirrored by the fact that only the minority (26%) of tennis sponsors support a sponsee from its home country. The value of an average tennis contract is \$17.5 M with a median of \$10.0 M.

Turning to the sponsor-specific factors, the average firm size is \$333.9 B whereas the median sponsor size for the tennis sample is only \$26.0 B. Such a high discrepancy between mean and median indicates a high dispersion of firm sizes included in the sample which is confirmed by a high SD of \$706.1 B and by sponsor sizes ranging from \$0.3 B to \$2,973.8 B. Lastly, about 8% of the tennis sponsors are from the high tech industry.

The frequency distributions of tennis sponsorship announcements with respect to different industries, sponsorship types and regions are summarized in figure 13. As it is also the case for other sports the largest industry group sponsoring tennis is the consumer goods sector (60%) followed by the financial services (23%) and technology sector (8%).

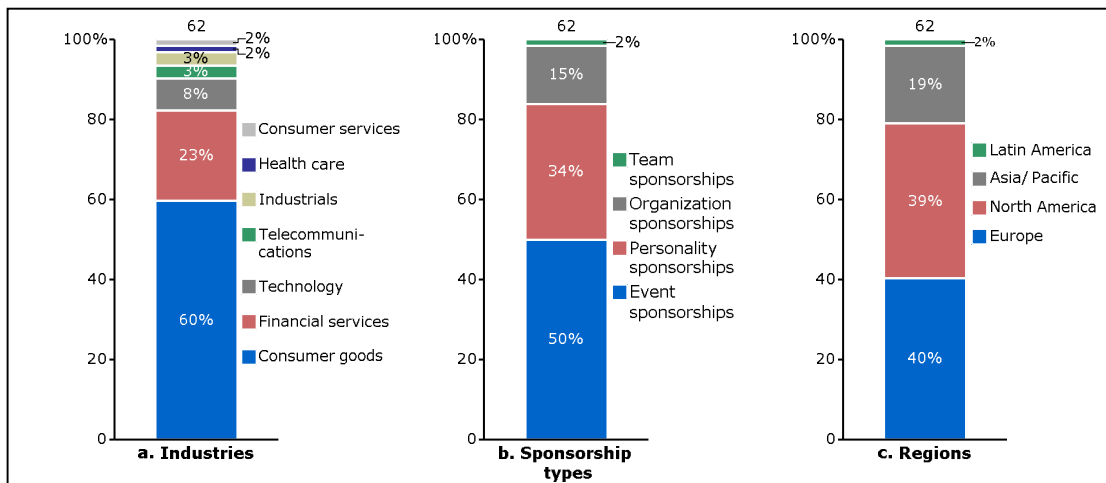


Figure 13: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (tennis, $n=62$ observations).

In terms of sponsorship types it is interesting to note that the majority of the tennis sample consists of event (50%) and personality sponsorships (34%). Similar to golf the share of personality sponsorships is higher than for team sports because it is mostly

individuals who compete against each other. The regional split indicates that more than 80% of the tennis deals involve firms from North America (48%) and Europe (34%) and only a minority share of 16% involves sponsors from the Asia/ Pacific region.

7.2.5.2 Event study results

The event study results for the firm value impact of tennis sponsorship announcements are displayed in table 23.

Table 23: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (tennis, $n=62$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	0.21 %	0.63	28 (45%)	0.19
-2	0.06 %	0.32	29 (47%)	-0.12
-1	-0.09%	0.65	30 (48%)	-0.10
0	-0.08%	-0.35	24 (39%)	-0.68
+1	-0.43%	-4.23***	23 (37%)	-2.50**
+2	-0.33%	-1.67	30 (48%)	-1.33
+3	0.20%	0.24	29 (47%)	-0.15
<i>Panel B: Periods</i>				
-3 to +3	-0.47%	-0.37	28 (45%)	-0.76
-2 to 0	-0.11%	0.66	31 (50%)	-0.09
-2 to +1	-0.54%	-0.18	27 (44%)	-1.15
-1 to 0	-0.17%	0.44	27 (44%)	-0.52
-1 to +1	-0.61%	-0.90	24 (39%)	-1.90*
0 to +1	-0.52%	-1.58	24 (39%)	-1.93*

The highly significant negative AAR on the day following the announcement (-0.43%, $p<0.01$ in panel A) combined with the overall negative (however mostly insignificant) cumulative returns in the multi-day analysis (panel B) suggest that the announcement of tennis deals impact ARs of sponsoring firms in a negative way.

7.2.5.3 Regression results

The findings from the regression analysis of the tennis model provide insights about the factors determining CARs and are summarized in table 24. The results reveal a significant negative effect for the factor CORP and a significant positive effect for INTERNAT. The negative impact of CORP is consistent with the overall sample and

suggests that sponsorships on brand level have a more positive impact on *CARs* than deals promoting a corporate name. The positive influence of INTERNAT on returns implies that tennis deals with an international focus generate in general higher returns than sponsorships that have the focus on a single country (e.g. sponsorships of smaller national tournaments). The model explains 15% of the variance in *CARs* but is unfortunately insignificant ($p > 0.1$).

Table 24: Summary of regression results for *CARs* between $t=-3$ and $t=+3$ (tennis model) Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	-133.23	477.125	-0.28	0.781
CORP	-2.418	1.346	-1.80	0.078*
INTERNAT	4.007	2.295	1.75	0.087*
NEW	1.866	1.475	1.26	0.211
YEAR	0.064	0.239	0.27	0.789
VALUE	0.045	0.029	1.55	0.127
HOME	3.057	2.174	1.41	0.166
SIZE	-0.001	0.001	-0.54	0.589
TECH	-0.442	2.035	-0.22	0.829
$R^2=0.152$; $F=1.28$; $p=0.275$; $n=62$				

7.2.5.4 Discussion

In the following the results specific to the tennis sample will be discussed. Although the majority of characteristics of the tennis sample are similar to the overall sample (see section 7.1.4) there are some differences that will be addressed next. First of all, tennis sponsorships are characterized by a high degree of internationalization. This is reflected by the high share of deals having an international reach (82%) and a low share of home deals (26%) where both the sponsor and the sponsee originate from the same country. This international focus is a consequence of the way professional tennis is structured and organized. Unlike other sports professional tennis is not organized around national leagues but as the ATP World Tour consisting of individual tournaments around the world (e.g. US Open, Australian Open, Wimbledon). Thus, this international exposure provides a unique platform for cross-border sponsorship deals. The average contract value for tennis deals (\$17.5 M) is similar to the average price level for golf, baseball and basketball deals but is considerably lower than average deal values for other highly popular sports that offer lighthouse events like Olympics (Summer and Winter Games)

or soccer (e.g. World Cup, European Championship). A reason for the lower price level for tennis sponsorships could also be the lower popularity of the sport when compared to for example soccer or motor sports. Fan base, TV viewership, stadium attendance and overall press coverage - all important indicators for evaluating the value of sponsorship rights - are hypothesized to be lower for tennis than for other sports (Clark et al., 2009) and therefore the price level for tennis deals is lower. Moreover, the organizational structure of professional tennis around the tournaments belonging to the ATP World Tour is also the reason for the high proportion of event sponsorships (50%). The share of personality endorsements (34%) is the highest for all sub-samples analyzed in this dissertation project and results from the individual-oriented nature of the tennis sport as opposed to team-oriented sports where team sponsorships prevail.

The results from the event study analysis suggest that the investment community views tennis sponsorships as overall negative return projects. The share prices reaction to the announcement was negative (-0.43% on day +1), indicating that investors were pessimistic about the cost-benefit ratio for tennis deals. It seems that the expected future incremental sales originated from the sponsorship program could not justify the sponsorship fees. This negative sponsorship effect for tennis is in line with past results on the effectiveness of tennis sponsorships. An earlier study on the share price impact of sponsoring tennis tournaments also reports a negative impact (Clark et al., 2009). This result is important for both, corporate and sport managers. For corporate managers the presence of negative *ARs* should send a warning signal that the prices paid for tennis sponsorships are generally too high. In the future, corporate managers should question and challenge the value of tennis deals more thoroughly by relating it to TV and stadium attendance and to overall media exposure in order to avoid overpaying. On the other hand, sport managers should attempt to increase the value of tennis sponsorships by strengthening the core attributes of tennis deals. Reach might not be the core strength in light of the limited TV viewership, stadium attendance and lower media exposure. It might be the case that tennis sponsorships are better suitable to improve other positive impact factors like institutional goodwill and corporate identity (see also table 2 in chapter 3.2.1 “Studies about sponsoring sport events”). The role of differential core attributes for tennis sponsorships and its impact on sponsorship success is however not

covered in this dissertation project and should be addressed by future research. Nevertheless, sport managers could create customized programs that stress the advantages of tennis sponsorships by for example optimizing the hospitality programs for sponsor employees and other stakeholders. Corporate managers would have to ensure that the investment community understands the aims and objectives of such investments when a sponsorship objective is not only to generate awareness, but is also for example used as a platform for internal marketing to boost employee morale (Mishra et al., 1997).

The results of the regression analysis show that excess returns for this sample are determined by CORP and INTERNAT. In line with previous expectations (see chapter 4) but contrary to the findings of previous research (Pruitt et al., 2004) deals on corporate level generated lower returns than brand level deals. It seems like investors value the promotion of specific brands since corporate names are often detached from brand names and as a result consumers might have difficulties in linking a corporate name to specific brands. The better performance of tennis deals having an international reach might be linked to the fact that deals with an international coverage reach a wider audience and more potential customers and thus might increase the probability of additional future sales. Nevertheless, this positive effect is specific to the tennis sample and contradicts the results of other sub-samples (e.g. soccer, motor sports; consumer goods). Furthermore, the robustness of these findings is impaired since the overall regression model for the tennis sample is insignificant.

To conclude, the negative share price reaction to the announcement of tennis sponsorships indicates an insufficient expected cost-benefit ratio. Corporate managers should challenge the expected payoffs from tennis sponsorships in order avoid overpaying. Sport managers should strive to increase the value of tennis sponsorships by building sponsorship packages more based on the core strengths of tennis deals which might be improving corporate identity and institutional goodwill via hospitality programs rather than focussing on awareness increases.

7.2.6 Basketball

7.2.6.1 Sample characteristics

For the sub-sample basketball ($n=62$) the descriptive statistics are depicted in table 25. Concerning the deal-specific characteristics it can be stated that the majority of basketball sponsorships (68%) are on corporate level where the sponsor's company name is featured in the campaign. Moreover, most deals are new contracts (73%) as opposed to extended agreements. In contrast to most other sports most basketball deals have a rather national focus (87%) and a high share of basketball sponsors prefer to support a sponsee from its home country (68%).

Table 25: Overview of variables including descriptive statistics (basketball, $n=62$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.68	1	0.47	0	1
NEW	Dummy	0.73	1	0.45	0	1
INTERNAT	Dummy	0.13	0	0.34	0	1
HOME	Dummy	0.68	1	0.47	0	1
YEAR	Metric	2006	2006	3	2001	2010
VALUE	Metric	19.8	10.0	38.9	2.0	250.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	105.8	16.0	293.9	0.9	1,836.3
TECH	Dummy	0.16	0	0.37	0	1

The average contract value for a basketball sponsorship is \$19.8 M with a median value of \$10.0 M which compares to the price level of tennis and golf deals. The SD of \$38.9 M indicates that individual contract values differ greatly, resulting in a value range from \$2.0 M up to \$250.0 M. On the side of the sponsor-specific characteristics it should be noted that the average firm size of a basketball sponsor is \$105.8 B with a median size of only \$16.0 B. Such a difference implies that the high average size is caused by a few very large firms in the sample. The high SD of \$293.9 B and the huge range of represented firm sizes from \$0.1 B to \$1,836.3 B highlight this variety of sizes among basketball sponsors in the sample. About 16% of the basketball sponsors generate their main revenue in the high tech industry.

Figure 14 presents the sample characteristics in terms of insights about frequency distributions of basketball sponsorship announcements with respect to

different industries, sponsorship types and regions. The top three industry groups supporting basketball financially are consumer goods (52%), consumer services (15%), and financial services (11%). Basketball deals are mainly organization sponsorships (42%, mainly sponsorships of the NBA), followed by personality (26%) and team sponsorships (21%). The high share of personality deals is somewhat surprising since basketball is actually a team-oriented type of sport. The regional split reveals that most basketball sponsors are from North America (65%).

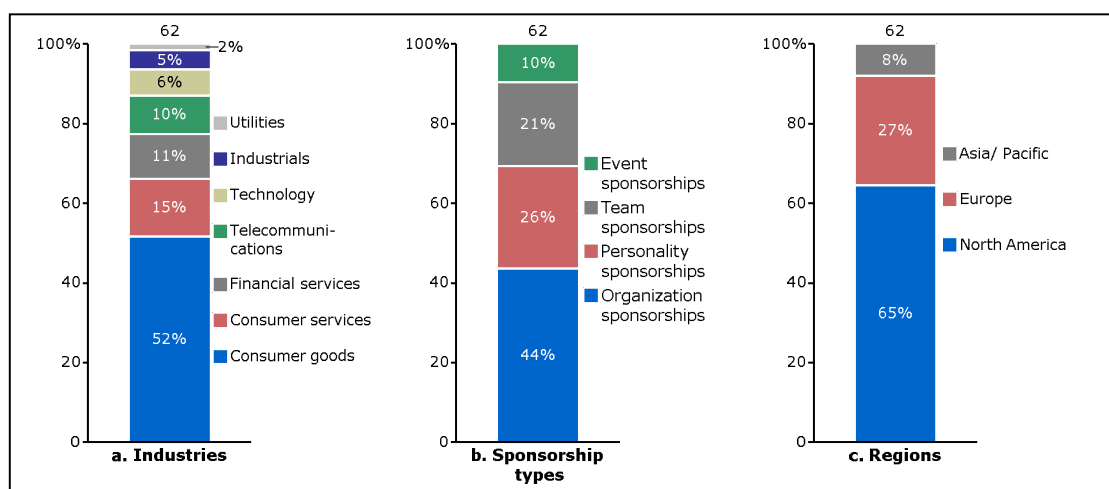


Figure 14: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (basketball, $n=62$ observations).

7.2.6.2 Event study results

The results of the event study analysis for the basketball sample are summarized in table 26. *AARs* for basketball deals are positive and highly significant on the announcement day (+0.48%, $p<0.01$) and on the following day (+0.42%, $p<0.05$). However, three days prior the official announcement significant negative abnormal returns are registered (-0.49%, $p<0.01$). Because of the conflicting results for single days it is important to assess the cumulative announcement effect for various multi-day periods around the announcement day. *CAARs* for all (but one) periods are positive and significant (e.g. +0.85%, $p<0.01$ for days -1 to +1 in panel B). Thus, these findings provide statistical evidence for a positive firm value effect of basketball sponsorship announcements.

Table 26: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (basketball, $n=62$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.49%	-2.72***	19 (31%)	-2.77***
-2	-0.07%	0.14	27 (44%)	-0.53
-1	-0.06%	-0.11	32 (52%)	-0.10
0	0.48%	2.94***	35 (56%)	2.24**
+1	0.42%	2.59**	38 (61%)	2.33**
+2	-0.20%	-1.57	25 (40%)	-1.50
+3	-0.34%	-1.33	24 (39%)	-1.96*
<i>Panel B: Periods</i>				
-3 to +3	-0.26%	-0.38	31 (50%)	-0.51
-2 to 0	0.36%	2.07**	37 (60%)	1.77*
-2 to +1	0.78%	3.29***	40 (65%)	2.86***
-1 to 0	0.43%	2.32**	37 (60%)	1.95*
-1 to +1	0.85%	3.38***	42 (68%)	3.20***
0 to +1	0.90%	4.29***	44 (71%)	3.61***

7.2.6.3 Regression results

The results from the regression analysis of the basketball model are displayed in table 27. Based on these findings the factors CORP, VALUE and SIZE determine CARs with a significant negative impact. The negative effect of CORP is consistent with other sport models from within this study and reveals that basketball deals involving brand names impact CARs more positive than deals involving corporate names.

Table 27: Summary of regression results for CARs between $t=-3$ and $t=+3$ (basketball model) Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T =test statistic; p = p -value.

Factor	Coefficient	Robust SE	T	p
Constant	-9.722	286.884	-0.03	0.973
CORP	-2.788	0.708	-3.94	0.000***
INTERNAT	-0.828	0.923	-0.90	0.374
NEW	1.202	0.725	1.66	0.103
YEAR	0.006	0.143	0.04	0.968
VALUE	-0.009	0.005	-1.83	0.073**
HOME	-0.844	0.786	-1.07	0.288
SIZE	-0.003	0.001	-2.68	0.010***
TECH	0.455	0.960	0.47	0.637
$R^2=0.343$; $F=8.78$; $p=0.000$ ***; $n=62$				

The negative influence of VALUE suggests that returns tend to be lower for high-value basketball sponsorships. The negative SIZE effect indicates that smaller sponsors are

able to generate higher *CARs* than their bigger counterparts. The overall basketball model is significant ($p < 0.01$) and explains more than 30% of the variations of *CARs*.

7.2.6.4 Discussion

In the following section the results specific to the basketball sample will be discussed and interpreted. As mentioned before, for reasons of efficiency only those sample characteristics that differ from the overall sample will be addressed at this point. Until now no other study has analyzed sponsorship effectiveness specifically for basketball deals and therefore it is not possible to compare the results of this study externally. The basketball sample in this study (mostly NBA deals) is characterized by a rather national focus of the sponsorships as reflected by the low share of deals having an international coverage and a high share of home deals. Regarding the international reach of basketball deals it is mostly the personality endorsements with superstar such as Kobe Bryant, LeBron James or Yao Ming that receive international attention. Although the results of NBA matches are being followed throughout the world the sponsorships and the campaigns created around it reach mostly a national audience since basketball sponsors do not appear on the team jerseys (like soccer sponsors). Basketball sponsors buy the right to build marketing campaigns featuring the sponsee that are usually broadcasted only nationally and thus the international visibility of basketball sponsorships is low. An example for this national focus is a deal between the NBA and Tsingtao Breweries for marketing activities only in China. For the US market the NBA has another deal with a beer company, namely Budweiser. As a consequence of this low international visibility basketball sponsees mostly attract companies from the same country as reflected by the high share of home deals. Because this sample contains mostly NBA deals the majority of basketball sponsors in this study are from North America. The average contract value for basketball deals (\$19.8 M) is similar to the average price level for golf, baseball or tennis deals but considerably lower than the average deal value for other highly popular sports that are organized around major events like Olympics (Summer and Winter Games) or soccer (e.g. World Cup, European Championship). Basketball has the second highest share of personality sponsorships (tennis has the most) among the analyzed sports. Due to the fact that basketball is a team-oriented sport this characteristic is

somewhat surprising. However, because of the small team size (5 players) and the importance of individual players for each team individual endorsement contracts with the superstars are consequential. Moreover, the endorsement of sport equipment is especially worthwhile for basketball gear (especially shoes) since it is also worn by non-athletes for fashion reasons whereas the sports equipment for other team sports (e.g. soccer, American football) is strictly worn by athletes (e.g. soccer cleats). For example, Michael Jordan even has his own signature shoe brand for Nike.

The event study results suggest a positive sponsorship effect for basketball deals ($AAR=+0.48\%$ on day 0). Investors believe that the total sponsorship costs are less than the expected future sales and profits and as a result the share price and thus the firm value increases. This result is generally in line with the preponderance of prior research on sponsorship effectiveness (see table 1 in chapter 3.2) as well as with a basketball specific sub-sample analysis of the financial effect of NBA official product sponsorships (Cornwell et al., 2005) although the magnitude of ARs reported in the official product study is much higher ($+3.0\%$ for days -5 to +5). The positive returns are good news for corporate managers as it proves the economic success of basketball sponsorship programs. The fact that AR levels are fairly low suggests that sport managers were in general successful in negotiating a close to fair price for basketball sponsorships. Although a perfectly fair price would theoretically imply that the expected future benefits equal the total sponsorship costs and ARs would be zero this must not be necessarily the optimal solution neither for the sponsor nor for the sponsee. The sponsor might need some level of positive return to justify the sponsorship program internally or in front of shareholders. A sponsee might not want to risk deterring potential sponsors by too high asking prices for sponsorship rights. Overall, a small excess return for the sponsor might be a practicable compromise. This topic however remains an interesting area for future research.

The results of the regression analysis show that abnormal returns for the basketball sample are determined by CORP, SIZE and VALUE. The negative effect of corporate level deals contradicts previous research (Pruitt et al., 2004) but is in line with the previously stated expectation (see chapter 4). One explanation could be that investors are sceptical about the ability of consumers to associate a sponsored company

name with specific brands, and as a result future sales would be unaffected by the sponsorship program. Moreover, the negative effect of SIZE is in line with expectations as well as prior results (e.g. Clark et al., 2002; Samitas et al., 2008). A reason for the negative size effect can be that smaller sponsors overcome any potential scale disadvantages regarding the possibility to devote adequate financial resources (on top of the fees) to activate sponsorship programs by larger incremental awareness and market share gains. The negative impact of deal value on abnormal returns should warn corporate managers not to overpay for basketball deals since investors seem to be price sensitive when it comes to basketball sponsorships. If large sponsorship fees are paid corporate managers should ensure to educate stakeholder about the expected future benefits in order to avoid the suspicion that a deal was signed for other reasons than economic value (e.g. first row seats for managers).

To sum up, share prices react positively to the announcement of basketball sponsorships, but the comparatively low *AR* level could indicate that prices might be close to fair in a way that wealth gains are almost evenly distributed and leaving a small surplus on the side of the sponsor. Moreover, investors seem to be price sensitive when it comes to basketball sponsorships.

7.2.7 Arena sponsorships

7.2.7.1 Sample characteristics

A summary of the descriptive statistics for the sub-sample arena sponsorships ($n=43$) is provided in table 28. In terms of the deal-specific factors the arena deals in this study are characterized by the fact that the vast majority of deals (84%) are on corporate level promoting a firm name rather than individual brand names. Almost 90% of the deals are newly signed contracts. Extensions for arena deals are rare because of the long duration of such contracts. It is not uncommon that arena sponsorships are sold for more than seven years per contract. None of the deals in the sample is classified as international. This rather local character of arena sponsorships is also reflected in the strikingly high share of home deals (77%) where a sponsor partners up with a sponsee from its own country. The analyzed time period stretches from 2001 to 2010. The average value for

an arena sponsorship is \$100.6 M with a median of \$68.0 M. The high SD of \$102.3 M indicates a high dispersion of individual contract values which range from \$10.4 M up to \$400.0 M.

Table 28: Overview of variables including descriptive statistics (arena sponsorships, $n=43$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.84	1	0.37	0	1
NEW	Dummy	0.88	1	0.32	0	1
INTERNAT	Dummy	0	0	0	0	0
HOME	Dummy	0.77	1	0.43	0	1
YEAR	Metric	2005	2005	3	2001	2010
VALUE	Metric	100.6	68.0	102.3	10.4	400
<i>Sponsor-specific factors</i>						
SIZE	Metric	258.1	73.0	475.3	1.3	2,032.0
TECH	Dummy	0.16	0	0.37	0	1

Pertaining to the sponsor-specific characteristics it is noteworthy that 16% of the arena sponsors in this sample are active in the high tech industry. The average firm size is \$258.1 B is about 25% bigger than the average sponsor in the overall sample. However, it should be mentioned that the sponsor sizes in the arena sponsorship sample are quite heterogeneous with a SD of \$475.3 B. The median firm size of only \$73.0 B suggests that the high average size is inflated by a few very big sponsors in the sample.

The frequency distributions of arena sponsorship announcements with respect to different industries, sponsorship types and regions are displayed in figure 15.

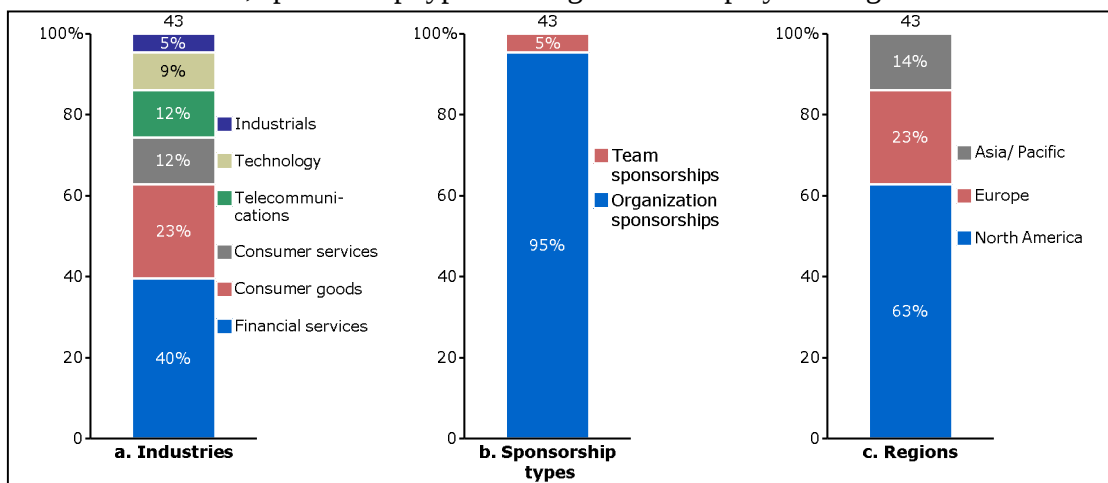


Figure 15: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (Arena sponsorships, $n=43$ observations).

Unlike most other sports the consumer goods sector (23%) is only the second largest industry group sponsoring arenas, second to the financial services sector (40%). Moreover, 95% of the arena deals in the sample are classified as organization sponsorships. The regional split shows that the majority of deals (63%) involve firms from North America where arena sponsorships have a longer history than in Europe (23%) or the Asia/ Pacific region (14%).

7.2.7.2 Event study results

The event study findings for the firm value impact of arena sponsorship announcements are summarized in table 29. The results for AARs on single days show no significant share price reaction. The AAR on the announcement day is negative (-0.03%) but insignificant ($p > 0.1$). The analysis of the cumulative effect yields similar results. None of the analyzed periods shows a significant CAAR (e.g. -0.08%, $p > 0.1$ for days 0 to +1 in panel B). As share prices show no reaction it seems that arena sponsorships neither have a positive nor a negative impact on abnormal returns of sponsoring firms.

Table 29: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (arena sponsorships, $n=43$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.01%	0.85	22 (51%)	0.51
-2	0.19%	1.56	21 (49%)	0.74
-1	0.23%	0.41	24 (56%)	1.04
0	-0.03%	-0.64	20 (47%)	-1.49
+1	-0.04%	-0.33	22 (51%)	0.02
+2	0.19%	0.15	19 (44%)	-0.18
+3	-0.23%	-0.21	22 (51%)	-0.66
<i>Panel B: Periods</i>				
-3 to +3	0.30%	0.65	22 (51%)	0.39
-2 to 0	0.39%	0.91	26 (60%)	1.36
-2 to +1	0.34%	0.53	27 (63%)	0.81
-1 to 0	0.20%	-0.12	21 (49%)	-0.12
-1 to +1	0.16%	-0.35	22 (51%)	-0.37
0 to +1	-0.08%	-0.60	17 (40%)	-0.86

7.2.7.3 Regression results

Table 30 shows the findings from the regression analysis of the arena sponsorship model and provides insights about the determinants for CARs. The results reveal significant positive effects for the factors HOME and SIZE. The positive influence of HOME on CARs suggests that an arena sponsor experiences higher financial returns after acquiring the naming rights for a sports venue in its home country. The positive impact of SIZE implies that bigger arena sponsors generate higher abnormal returns than smaller sponsors. The arena sponsorship model is overall significant ($p < 0.05$) and explains about 25% of the variation of CARs.

Table 30: Summary of regression results for CARs between $t=-3$ and $t=+3$ (arena sponsorship model)
Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	-415.970	476.1	-0.87	0.388
CORP	0.837	1.144	0.73	0.469
NEW	2.437	1.789	1.36	0.182
YEAR	0.205	0.237	0.87	0.393
VALUE	-0.010	0.006	-1.60	0.119
HOME	3.035	1.225	2.48	0.018**
SIZE	0.002	0.001	1.78	0.084*
TECH	1.135	2.046	0.55	0.583
$R^2=0.252$; $F_{2,79}=$; $p=0.020^{**}$; $n=43$				

7.2.7.4 Discussion

The results specific to the arena sponsorship sub-sample will be discussed in the following. Although many characteristics are similar to the overall sample (see section 7.1.4) there are some differences that will be addressed next. It is important to mention that due to the small sample size of this sub-sample ($n=43$) the broader application of these findings is limited. Arena sponsorships are characterized by a high share of corporate level deals (84%). An explanation could be that companies regard arena sponsorships not merely as displaying a name on the arena and becoming part of the official name of the sponsored arena. Companies see arena sponsorships also as “miniature trade fairs” where products and services could be showcased and demonstrated (Clark et al., 2002). By promoting the corporate name in a sponsorship a company can display and advertise many different products and brands in the arena throughout the lifetime of a deal. Furthermore, the average deal value (\$100 M) is

considerably higher than the average deal value for the overall sample (\$52.7 M). From a cost perspective it seems challenging that the marketing budget of a single brand is sufficient for such hefty investments and therefore arena deals are most often carried out on the corporate level and the sponsorship costs can be allocated across multiple brands. The high deal values for arena sponsorships are also likely to be driven by the longer duration of such contracts. Although no detailed data is available within this dissertation project it is not uncommon for arena sponsorship contracts to have a duration of more than five years (e.g. AOL Arena in Hamburg: 5 years; Mercedes-Benz Arena in Shanghai: 10 years). Those long-term contracts and high deal values are also reflected in the low renewal rate of arena deals (only 12% of the contracts in this sample are renewed). It is reasonable that given a long-term contract a sponsor achieves its sponsorship objectives during this time and does not need to invest again in the same deal but can rather shift the marketing spending to other programs. The fact that this sample does not include any arena sponsorships having an international reach calls for an explanation. The geographical coverage was defined to be national by default for arena sponsorships since they are most visible and recognizable in the local market where the sponsored arena is located (Clark et al., 2002). Next to increasing awareness and to improve the image another primary goal of arena sponsorships is to establish a good community relationship and to support the community (Cornwell & Maignan, 1998). This explains also the strong local ties of arena sponsors as reflected by the high share of home deals. The strikingly high share of arena deals classified as organization sponsorships is a consequence of the fact that sport venues are rarely owned by sport clubs or teams but mostly by cities, communities or investment syndicates.

The event study analysis reveals that investors seem to view arena sponsorships as overall value-neutral investments since AARs around the announcement day are insignificant. Thus, it is expected that any future benefits in terms of additional sales and profits are offset by the initial sponsorship fee and activation costs. For corporate managers this is not necessarily bad news since it just implies that the prices paid for arena deals are at a fair level. Sport managers can also be satisfied with this outcome since the prices paid for arena deals seem to be in equilibrium and wealth gains are allocated equally between the sponsor and the sponsee. This neutral sponsorship effect

diverges from the findings of a previous study. Clark et al. (2002) have analyzed the impact of announcing stadium sponsorships on share prices and found highly positive ARs. However, this prior study only included deals from the USA whereas this current study also includes deals from Europe and Asia. Unfortunately a separate event analysis for regional differences was not possible due to the small sample size but could be an area for future research.

Next, the findings from the regression analysis will be discussed. Abnormal returns are positively influenced by HOME and SIZE. The positive impact of HOME indicates that a sponsorship scenario with an arena and its arena sponsorship partner from the same country leads to higher returns. This finding is in line with previous research that reports a more positive effect on firm value for local stadium sponsorships (Clark et al., 2002). Thus, it seems like geographic proximity between sponsor and the sponsored arena is of special importance for arena sponsorships. A reason for this “local bonus” might be that it is easier for home firms to be accepted as arena sponsors by fans and local consumers and to create an effective, authentic and comprehensive marketing platform to support the sponsorship. Home firms have an advantage in creating additional goodwill among local citizens that eventually translates into real economic benefits (Clark et al., 2002). SIZE is a positive determinant for abnormal returns following the announcement of arena sponsorships. Previous findings on the role of firm size in determining abnormal returns in the sponsoring context seems inconclusive since there is evidence for a negative size effect (e.g. Clark et al., 2002; Samitas et al., 2008) as well as for a positive size effect (e.g. Caldéron et al., 2005; Clark et al., 2009). A reason for the positive size effect could be that larger firms have an advantage over smaller firms in terms of financial resources to adequately support sponsorships with activation programs and thereby making the sponsorships more valuable for larger firms (Clark et al., 2009). Furthermore the positive influence of firm size on ARs following arena sponsorships could be related to the high initial sponsorship investment (average deal value is \$100 M) which could be simply too much for smaller firms.

To conclude, the analysis has shown that arena sponsors pay generally high but fair prices for their arena sponsorships. The neutral sponsorship effect indicates that prices are in equilibrium, that sponsors pay exactly for what they expect to get and thus,

wealth gains seem to be equally distributed between sponsor and sponsee. Regarding future sponsee selection corporate managers should keep in mind that regional or national ties with an arena seems to increase the financial value of an arena deal.

7.2.8 Baseball

7.2.8.1 Sample characteristics

The descriptive statistics for all relevant variables included in the baseball sub-sample ($n=40$) are provided in table 31. Concerning the deal-specific characteristics it should be mentioned that more than half (68%) of the baseball deals in this sample use the sponsorship program to promote a firm name as opposed to a brand name. Only 50% of the baseball contracts are newly signed implying that every second baseball deal is a contract extension.

Table 31: Overview of variables including descriptive statistics (baseball, $n=40$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.68	1	0.47	0	1
NEW	Dummy	0.52	1	0.51	0	1
INTERNAT	Dummy	0	0	0	0	0
HOME	Dummy	0.58	1	0.50	0	1
YEAR	Metric	2007	2007	2	2003	2010
VALUE	Metric	18.4	10.0	21.8	3.8	100.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	210.2	30.5	419.8	1.0	1,857.3
TECH	Dummy	0	0	0	0	0

The sample only includes national deals focusing on a single country (the USA) and 58% of the deals involve a sponsor and a sponsee from the same country. The average contract value of \$18.4 M compares to the price level of golf, tennis and basketball sponsorships. The smallest baseball deal in this sample is valued at \$3.8 M and the biggest one at \$100.0 M. None of the analyzed baseball sponsors is active in the high tech sector. The average firm size of \$210.2 B seems to be inflated by a number of very big sponsors since the median firm size is only \$30.5 B. This high discrepancy between mean and median also affects the high SD of \$419.8 B and the very broad size range of \$0.1 B up to \$1,857.3 B.

The characteristics of the baseball sample in terms of frequency distributions for different industries, sponsorship types and regions are depicted in figure 16. The industry split shows that firms from the consumer goods sector (53%) are the most common baseball sponsors in the sample, followed by the consumer services (23%) and financial services sector (18%). Baseball deals are almost exclusively team (55%) and organization sponsorships (43%). The organization deals mostly include sponsorships of the MLB. The fact that the baseball sponsees in this sample are mostly associated with the MLB in the USA explains the high share of North American sponsors (60%). The remaining baseball sponsors are from Europe (23%) or the Asia/ Pacific region (17%).

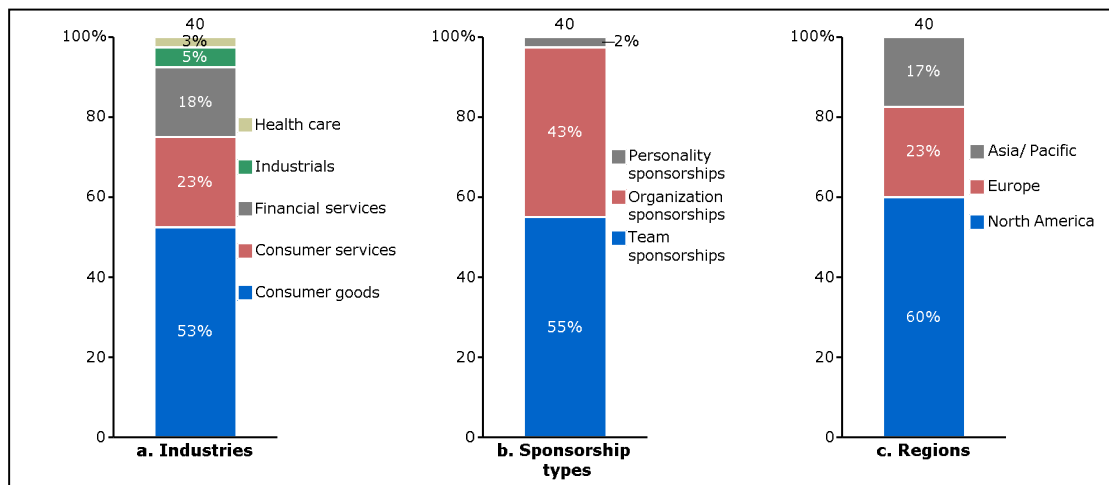


Figure 16: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (baseball, $n=40$ observations).

7.2.8.2 Event study results

Table 32 displays the event study results for the announcement effect of baseball sponsorships. Highly significant positive AAR on the announcement day (+0.84%, $p < 0.01$ in panel A) suggests a positive effect of baseball deals on firm value. This finding is supported by the overall positive and significant cumulated effects across different time windows around the day of the sponsorship announcement (e.g. CAAR=+1.49%, $p < 0.01$ for days -1 to +1 in panel B). Thus, it can be stated that baseball sponsorships generally impact ARs and thus firm value favorably.

Table 32: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (baseball, $n=40$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.36%	-1.01	14 (35%)	-1.91*
-2	-0.08%	-1.36	21 (53%)	-0.52
-1	-0.17%	0.45	21 (53%)	0.30
0	0.84%	4.00***	29 (73%)	3.12***
+1	0.81%	1.87*	26 (65%)	1.80*
+2	-0.46%	-0.82	17 (43%)	-1.02
+3	-0.29%	-1.51	17 (43%)	-1.52
<i>Panel B: Periods</i>				
-3 to +3	0.30%	0.24	19 (48%)	0.50
-2 to 0	0.60%	2.00*	24 (60%)	1.73*
-2 to +1	1.41%	2.36**	23 (58%)	2.33**
-1 to 0	0.68%	2.95***	28 (70%)	2.61**
-1 to +1	1.49%	3.04***	28 (70%)	2.80***
0 to +1	1.65%	3.17***	27 (68%)	2.81***

7.2.8.3 Regression results

The results for the baseball regression model are summarized in table 33. Based on the results the factor VALUE has a significant positive and the factor HOME a significant negative impact on CARs. The positive sign for VALUE suggests that sponsors who commit to a more expensive baseball sponsorship generate higher returns than firms involved in lower priced deals. The negative effect of HOME indicates that a sponsorship scenario with a sponsor and its sponsee from the same country leads to lower stock returns. Unfortunately the overall baseball model does not reach the required level of significance ($p>0.1$).

Table 33: Summary of regression results for CARs between $t=-3$ and $t=+3$ (baseball model) Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T =test statistic; p = p -value.

Factor	Coefficient	Robust SE	T	p
Constant	30.203	745.078	0.04	0.968
CORP	-0.108	1.441	-0.08	0.941
NEW	0.350	1.472	0.24	0.814
YEAR	-0.015	0.371	-0.04	0.969
VALUE	0.061	0.033	1.86	0.072*
HOME	-2.570	1.473	-1.75	0.090*
SIZE	-0.000	0.001	-0.43	0.671
$R^2=0.150$; $F=1.26$; $p=0.301$; $n=40$				

7.2.8.4 Discussion

The results specific to the baseball sample will be discussed and interpreted next. As it is also the case for most other sub-samples in this study many characteristics are similar to the overall sample and will not be discussed again at this point in order to avoid redundancies (see section 7.1.4). Nevertheless, there are some differences that will be addressed in the following. It is important to note, that the small size of this sub-sample ($n=40$) limits the generalizeability of these findings. Baseball sponsorships are characterized by a high renewal rate. The share of new deals is significantly lower for baseball (52%) than for other sports or the overall sample (67%). A reason could be that the average contract length for baseball deals is shorter than for other sports. It seems reasonable that a shorter-term deal is more likely to be extended than a long-term multi-year deal. The speculation of shorter-term baseball deals is further nourished by the low average deal value which is less than half of the average deal value for the overall sample. However, the details and the impact of contract length should be addressed by future research and is not in the scope of this dissertation project. Furthermore, since baseball is a truly American sport it is not surprising that baseball sponsorships are characterized by a low degree of internationalization as reflected by the absence of deals having an international coverage³⁶ and the fact that the vast majority of baseball sponsors are companies from North America. It is striking that the baseball sample also contains no event sponsorships. The reason may be twofold. One, baseball is organized as a series of regular league matches followed by a series play-off matches to determine the champion at the end of each season (World Series). Unlike soccer (e.g. World Cup, European Championships) or sports like golf or tennis the possibilities for baseball event sponsorships are very limited. Two, the small sample size reduces the likelihood that some of the rare baseball event sponsorships (e.g. World Series sponsorships) are included in this analysis.

Capital markets seem to view baseball sponsorships as positive return investment opportunities where future benefits offset initial investments in fees and activation costs. Share prices react positively to the announcement of such deals ($AAR=+0.84\%$ on day 0)

³⁶ It is important to mention that the sample proportion of 0% of the deals having an international reach is likely to be a consequence of the small sample size. Overall, the population proportion is likely to be $>0\%$, but is still expected to be very low. The same holds for TECH.

which is a finding different from Cornwell et al.'s (2005) study on the share price impact of MLB official product sponsorships where a neutral impact was determined. This result has implications for corporate as well as sport managers. For corporate managers it provides further evidence that sport sponsorships generate real economic returns next to the improvement in marketing metrics such as awareness or image scores. This could help marketing managers in justifying the multi-million dollar fees for baseball sponsorships as economically beneficial investments to successfully differentiate from competitors (Cornwell et al., 2005). For sport managers on the other hand the existence of positive *ARs* reveals an opportunity to extract higher sponsorship fees in future negotiations.

Confirming the previously stated expectation (see chapter 4) the regression results indicate that *VALUE* has a significant positive impact on abnormal returns following the announcement of baseball deals. The effect of deal values has so far only been analyzed in one study (Clark et al., 2002) that reports a positive but insignificant effect of deal values on *ARs*. A reason for this positive effect found in this study can be that higher deal values generate more attention in the press and thus a higher level of media coverage. Previous research indicates that the share price impact of a corporate event is positively influenced by the intensity of press coverage because more investors and potential customers will be informed about the news (Koku et al., 1997). Another possible explanation is that high sponsorship fees indicate that the program is a major marketing platform for the sponsor and that the significant investments made are likely to generate CEO attention. As a result, the sponsorship is subject to higher internal control mechanisms and is supported adequately to unfold its full potential and thus to maximize its impact. The negative impact of *HOME* suggests that a sponsorship setting with the sponsor and sponsee from the same country leads to lower returns. This finding contradicts previous research that reports a more positive effect on firm value for local sponsorships within the home market of a sponsor (Clark et al., 2002). However, this prior study assessed the financial effectiveness of stadium sponsorships for which a geographic proximity between sponsor and sponsored stadium seems to be of special importance (see also section X.2.7.4). Nevertheless, the negative *HOME* effect for baseball deals suggests that investors welcome and reward non-American firms to

become a baseball sponsor (all sponsees in this baseball sample are from North America). However, the robustness of these regression results are severely impaired since the overall regression model for the baseball sample is insignificant.

Overall, the financial community views baseball sponsorships as positive return projects that create real economic value. In the future, sport managers should attempt to drive up the price level for baseball deals since the positive *ARs* indicate that most wealth gains are captured by the sponsor. The fact that baseball sponsorships involving sponsors from outside North America generated higher returns than HOME deals should make baseball sponsorships more attractive for foreign companies.

7.2.9 American Football

7.2.9.1 Sample characteristics

Table 34 provides an overview of the descriptive statistics for all relevant variables in the American football sample ($n=37$). Regarding the deal-specific characteristics the sample is characterized by the fact that slightly more than half of the American football deals (54%) promote a corporate name instead of a brand name and that the majority of the sponsorships are new deals (64%). The share of American football sponsorships that have a truly international coverage is very low (5%) and consists mainly of Super Bowl deals, which is an event that is broadcasted worldwide.

Table 34: Overview of variables including descriptive statistics (American football, $n=37$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.54	1	0.51	0	1
NEW	Dummy	0.62	1	0.49	0	1
INTERNAT	Dummy	0.05	0	0.23	0	1
HOME	Dummy	0.78	1	0.42	0	1
YEAR	Metric	2006	2007	3	2001	2010
VALUE	Metric	81.5	10.0	216.3	7.5	1,200.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	78.8	14.4	241.0	0.2	1,459.7
TECH	Dummy	0.19	0	0.40	0	1

This national focus on the USA is also reflected in the high share (78%) of home sponsorships where both the sponsoring firm and the sponsee are from the same country,

which is the USA in the case of American football. The average contract value for an American football deal in this sample of \$81.5 M is heavily influenced by a few large sponsorships (e.g. the largest contract value is \$1,200 M). Hence, the median contract value is considerably lower (\$10.0 M). A more detailed analysis of the contract values reveals that 75% of the American football deals are valued at less than \$20.0 M. Concerning the sponsor-specific characteristics it should be noted that the average size of an American football sponsor is \$78.8 B with a median of only \$14.4 B. This difference once again signals a huge dispersion of firm sizes represented in the sample which is confirmed by the high SD of \$241.0 B and a high range of firm sizes from \$0.2 B up to \$1,459.7 B. Almost 20% of the American football sponsors are active in the high tech industry.

The frequency distributions within the American football sample with respect to different industries, sponsorship types and regions are displayed in figure 17. As it is also the case in many other sports, most American football sponsors are from the consumer goods industry (57%), followed by the consumer services (22%) and financial services sector (8%).

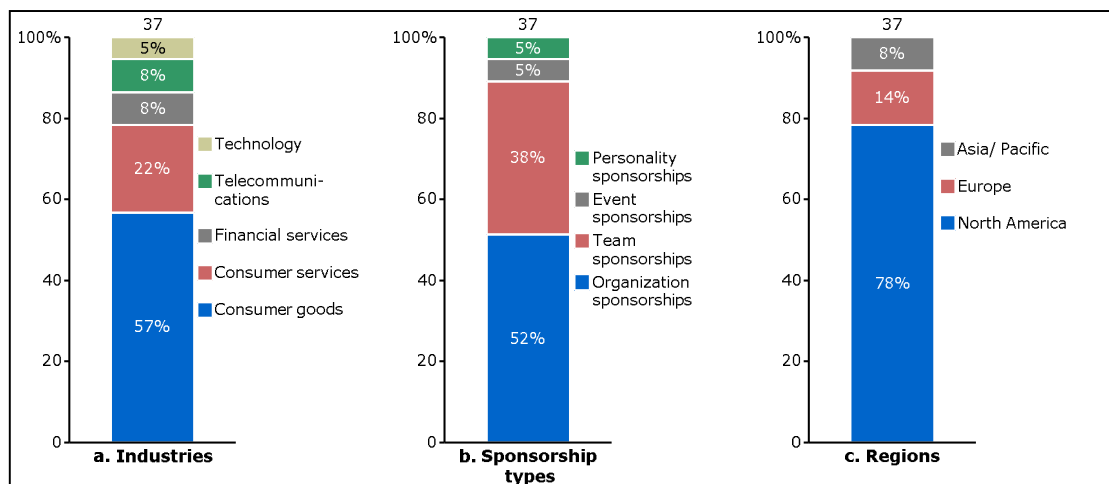


Figure 17: Frequency distributions of sport sponsorship announcements related to different industries, sponsorship types and regions (American football, $n=37$ observations).

The prevailing deal types are organization (52%) and team sponsorships (38%). The regional split substantiates the fact that American football deals have a regional focus on the USA with 78% of the sponsors in the sample coming from North America.

7.2.9.2 Event study results

The results of the event study analysis for the firm value impact of American football sponsorship announcements are displayed in table 35. Significant positive AARs on the announcement day (+1.47%, $p < 0.1$ in panel A) as well as three days before the official announcement (+0.46%, $p < 0.001$) indicate a positive sponsorship effect of American football deals on firm value.

Table 35: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (American football, $n=37$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	0.46%	2.92***	27 (73%)	2.59**
-2	0.00%	-0.26	21 (57%)	0.17
-1	0.22%	0.73	20 (54%)	0.70
0	1.47%	1.94*	25 (68%)	3.30***
+1	0.24%	1.04	21 (57%)	0.49
+2	-0.13%	-1.09	17 (46%)	-0.51
+3	0.11%	0.39	20 (54%)	0.41
<i>Panel B: Periods</i>				
-3 to +3	2.37%	2.79***	26 (70%)	3.05***
-2 to 0	1.69%	2.41**	26 (70%)	2.71***
-2 to +1	1.93%	2.22**	25 (68%)	2.26**
-1 to 0	1.69%	2.75***	26 (70%)	3.01***
-1 to +1	1.93%	2.49**	24 (65%)	2.59**
0 to +1	1.71%	2.83***	25 (68%)	2.81***

In order to assess the cumulative impact of the sponsorship deals multi-day time periods around the announcement day are analyzed. All analyzed periods have positive and highly significant CAARs (e.g. +1.71%, $p < 0.01$ for days 0 to +1 in panel B). Thus, these findings provide statistical evidence that the announcement of American football sponsorships have a positive impact on ARs of sponsoring firms.

7.2.9.3 Regression results

Table 36 presents the regression results for the American football model in order to identify determinants for abnormal returns. For this sample SIZE is the only significant factor and has a positive loading. This positive SIZE effect suggests that, all else equal,

bigger sponsoring firms experience higher CARs than smaller American football sponsors. The model explains about 12% of the variation of CARs and is overall significant ($p < 0.01$).

Table 36: Summary of regression results for CARs between $t=-3$ and $t=+3$ (American football model)
*Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.*

Factor	Coefficient	Robust SE	T	p
Constant	-621.495	638.573	-0.97	0.339
CORP	-1.835	2.280	-0.81	0.428
INTERNAT	2.823	3.427	0.82	0.417
NEW	1.112	1.548	0.72	0.478
YEAR	0.310	0.318	0.97	0.338
VALUE	0.003	0.002	1.29	0.207
HOME	1.900	2.303	0.82	0.416
SIZE	0.003	0.001	2.47	0.020**
TECH	-0.900	1.597	-0.56	0.578
$R^2=0.123$; $F=4.07$; $p=0.003$ ***; $n=37$				

7.2.9.4 Discussion

The following section presents a discussion about the results specific to the American football sub-sample. Although most characteristics are similar to the overall sample there are some differences that will be addressed next. It is important to note that due to the rather small size of this sub-sample ($n=37$) the generalizability of these results are limited. The American football deals included in this sample are characterized by a high share of brand level deals (46% versus 26% for the overall sample) where sponsors promote specific brands rather than the corporate name. This high share of brand level deals is primarily driven by two kinds of sponsorships: by beer sponsors and by official product sponsors. Since the beer industry is dominated by large conglomerates each owning a portfolio of many beer brands (e.g. Molson Coors owning Miller, Coors, Carling, Corona, ...) with different target customers for each beer (both demographic and geographic) all beer sponsors in this sample opted to sponsor on brand level. Similarly, official product sponsorships are on brand level since it is mostly one specific brand that becomes an “official product” for the NFL rather than an entire company owning multiple brands. Furthermore, American football sponsorships are characterized by a low degree of internationalization as reflected by the extremely low proportion of deals having an international reach (5%) and the high proportion of home deals (78%).

This national focus is a result of the fact that by far the largest American football fan base is within the US. Furthermore, with the exception of the play-offs and the Super Bowl the international coverage of regular season games is rather limited which is reflected by the low share of international deals. The event sponsorships have a lower proportion among American football deals (5%) when compared to other sports or the overall sample (33%). This is because most deals in this sample are linked to professional football (where only the Super Bowl classifies as an event) and not to college football (where there are many different Bowls at the end of each season).

The fact that American football sponsorship deals consistently generated positive abnormal returns (+1.47% on day 0) indicates that investors are very optimistic about the pay-offs from such programs and that the initial investments are expected to be offset by additional future sales and profits. Moreover, the *AR* levels detected for this sub-sample are higher than for any other sub-sample analyzed in this study. This is surprising since prior studies on the share price impact of American football sponsorships have reported an either neutral effect (Cornwell et al., 2005: analyzing official NFL product sponsorships) or even a negative effect (Clark et al., 2009: analyzing sponsorships of college football title events). However, the presence of highly positive *ARs* suggests that the price level for American football deals needs to increase for all benefits arising from the deal to be allocated more evenly between sponsor and sponsee. The high *ARs* signal that the expected future profits severely outweigh the investments and that corporate manager should be willing to pay higher fees. Thus, sport managers should increase their asking price for sponsorship rights when negotiating American football deals in the future.

The results of the regression analysis show that excess returns for this sample are determined by *SIZE*. *SIZE* impacts abnormal returns following the announcement of American football sponsorships positively. The findings of prior research on the role of firm size in determining abnormal returns in the sponsorship context seem inconclusive since there is evidence for a negative size effect (e.g. Clark et al., 2002; Samitas et al., 2008) as well as for a positive size effect (e.g. Caldéron et al., 2005; Clark et al., 2009). A reason for the positive size effect could be that larger firms have an advantage over smaller firms in terms of financial resources to adequately support sponsorships with

activation programs and thereby making the sponsorship programs more valuable for larger firms (Clark et al., 2009). Furthermore the positive influence of firm size on ARs for American football sponsors could be related to the high initial sponsorship investment (average deal value is \$81.5 M) which could be simply too much and too risky for smaller firms.

To conclude, the share price reaction and thus the impact on firm value of American football sponsorship deals is highly positive. The high magnitude of ARs suggests that sponsoring firms capture the lion's share of expected wealth gains. As a result, sport managers should ask for higher prices when selling American football sponsorship rights in order to approach an equilibrium price level.

7.3 Sponsorship types

This section analyzes the sponsorship effect for the deal-type specific sub-samples including sponsorships of events, organizations, teams and personalities. The event study results shed light on the first research question dealing with the sponsorship effect for various types of sponsorship deals (RQ 1c) whereas the second research question about determinants of ARs for different sponsorship types (RQ 2c) is covered by the regression analysis.

7.3.1 Event sponsorship

7.3.1.1 Sample characteristics

An overview of the descriptive statistics for the event sponsorship sub-sample ($n=207$) is presented in table 37. Pertaining to deal-specific factors event sponsorships are characterized by the fact that more than three quarters of the deals are on corporate level (77%) promoting firm names instead of brand names. Most event deals in the sample are newly signed contracts (67%) and most of the sponsored events have an international reach (68%). About half of the event sponsors (51%) prefer to support an event in its home country. The average value for an event sponsorship is \$49.9 M and the deal values range from \$3.0M up to \$750.0 M. These diverging values also cause the SD to be at a high level of \$76.6 M.

Table 37: Overview of variables including descriptive statistics (event sponsorship, $n=207$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.77	1	0.42	0	1
NEW	Dummy	0.67	1	0.47	0	1
INTERNAT	Dummy	0.68	1	0.47	0	1
HOME	Dummy	0.51	1	0.50	0	1
YEAR	Metric	2006	2007	3	1999	2010
VALUE	Metric	45.9	20.0	76.6	3.0	750.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	289.4	37.3	607.7	0.1	2,973.2
TECH	Dummy	0.12	0	0.33	0	1

Concerning the sponsor-specific factors it should be mentioned that the average firm size of an event sponsor is \$289.4 B with a mean size of only \$37.3 B. A few very large event sponsors (maximum firm size in this sample is \$2,973.2 B) drive the average size upward and cause the large difference between the mean and medium sizes. A minority of 12% of the event sponsors are from the high tech industry.

Next, the frequency distributions within the event sponsorship sample with respect to different industries, sports and regions are discussed (see figure 18). The consumer goods sector (41%) is the most common represented industry branch in the sample, followed by the financial services (24%) and consumer services industries (10%). Event sponsors in this sample mostly decided to sponsor the Olympics (27%), golf (24%), soccer (21%) and tennis events (15%). This high share for Olympics, golf and tennis is not surprising since competitions in these sports are organized as individual events and tournaments. The high share for soccer is explained by sponsorship deals for European and World Championships rather than deals involving competitions in the national leagues. The regional split indicates that event deals are most popular among European (44%) and North American sponsors (34%).

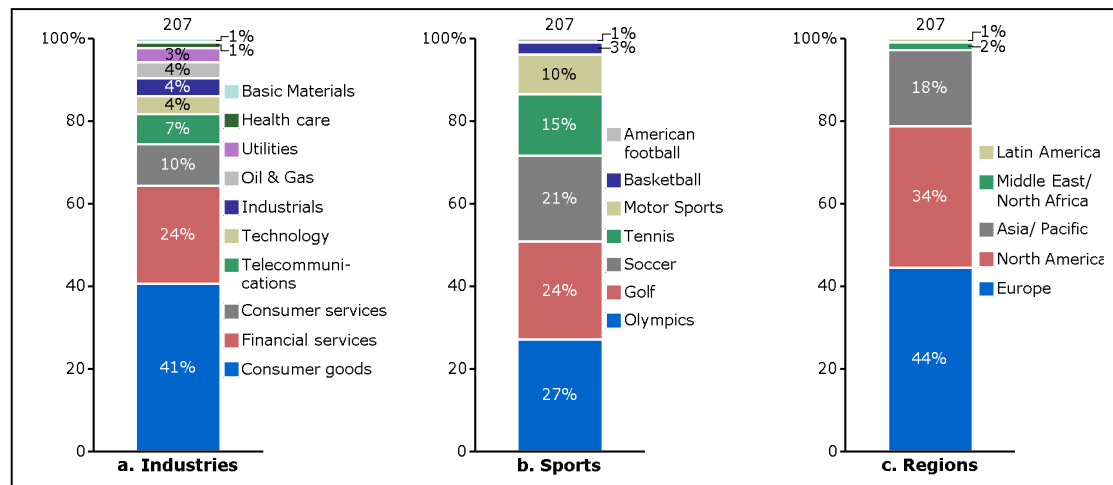


Figure 18: Frequency distributions of sport sponsorship announcements related to different industries, sports and regions (event sponsorships, $n=207$ observations).

7.3.1.2 Event study results

The event study results for the financial impact of event sponsorships are presented in table 38. The results for AARs on single days around the announcement show no significant share price reaction, neither positive nor negative.

Table 38: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (event sponsorships, $n=207$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.14%	-0.68	92 (44%)	-1.17
-2	0.07%	-0.23	95 (46%)	-0.59
-1	0.10%	0.48	111 (54%)	0.80
0	0.21%	1.19	110 (53%)	1.54
+1	0.02%	-0.38	92 (44%)	-1.52
+2	-0.13%	-1.60	86 (42%)	-1.48
+3	-0.31%	-1.46	97 (47%)	-1.55
<i>Panel B: Periods</i>				
-3 to +3	-0.20%	-1.54	98 (47%)	-0.86
-2 to 0	0.37%	0.76	101 (49%)	1.00
-2 to +1	0.39%	0.53	111 (54%)	0.79
-1 to 0	0.30%	1.24	105 (51%)	1.28
-1 to +1	0.32%	0.88	108 (52%)	0.99
0 to +1	0.22%	0.52	109 (53%)	0.71

The AAR on day 0 is positive (+0.21%) but not significant ($p>0.1$). The analysis of the cumulative effect yields similar results. None of the analyzed periods shows significant

CAARs (e.g. +0.32%, $p > 0.1$ for days -1 to +1 in panel B). Since share prices do not react to the announcement of event sponsorships it seems that such deals have no impact on ARs of sponsoring firms.

7.3.1.3 Regression results

Table 39 displays the findings from the regression analysis of the event sponsorship model. The results reveal that the factors VALUE and TECH both have a significant positive effect on CARs while the impact of the SIZE factor is significant negative. The positive influence of VALUE suggests that event sponsorships involving a higher deal value trigger higher ARs than less expensive deals. The positive load of the TECH factor indicates that event sponsors from the high tech industry have a higher impact on CARs than sponsors from other industry branches. The negative SIZE effect implies that it is the smaller sponsors that generate higher returns following the announcement of event sponsorships. The model is overall significant ($p < 0.01$) and explains 13% of the variance in CARs.

Table 39: Summary of regression results for CARs between $t = -3$ and $t = +3$ (event sponsorship model)
Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	293.317	216.378	1.36	0.177
CORP	-0.900	0.785	-1.15	0.253
INTERNAT	0.474	0.688	0.69	0.492
NEW	-0.739	0.670	-1.10	0.271
YEAR	-0.146	0.108	-1.36	0.177
VALUE	0.009	0.004	2.17	0.031**
HOME	1.056	0.655	1.61	0.108
SIZE	-0.001	0.001	-2.57	0.011**
TECH	2.117	0.998	2.12	0.035**
$R^2 = 0.129$; $F = 3.68$; $p = 0.001$ ***; $n = 207$				

7.3.1.4 Discussion

Next, the results specific to the event sponsorship sub-sample will be discussed and interpreted. The financial effectiveness of event sponsorships has already been analyzed by prior research for title event deals (e.g. Clark et al., 2009) or Olympic event deals (e.g. Farrell & Frame, 1997) but this current sample is by far the most comprehensive

one by size ($n=207$) as well as variety since it includes both title events and Olympic events. Unfortunately an external comparison of the sample characteristics is not possible since prior studies have not included the descriptive statistics of the underlying sample. Regarding the internal comparison it should be mentioned that although most characteristics of the event sponsorship sample in this study are congruent with the overall sample (see section 7.1.4) there are some differences that will be addressed in the following. First, the strikingly high share of deals with international reach (68%) is most likely due to the fact that this study analyzes the universe of large sponsorships (contract value > \$2 M). Therefore, the events included in the sample are mostly internationally well-known events like the US Open (tennis) or the Australian Grand Prix (F1). However, it is interesting to note that despite of the international reach of the sponsored events the share of home deals is surprisingly high (51%). This is surprising because for most other sub-samples a high share of international reach coincides with a rather low share of home deals or vice versa (e.g. organization sponsorships, personality sponsorships, Asia/ Pacific region). This indicates that it might be local or national pride that causes this high share of companies sponsoring an event in the home market although the international reach of the events would also justify a higher rate of foreign sponsorships. Moreover, it is not surprising that three out of the four most popular sports for event sponsors (golf, tennis, Olympics) are actually organized around events rather than in a league system.

Financial analysts seem to view event sponsorships as overall value-neutral investments since ARs around the announcement day are positive but statistically insignificant. This suggests that the expected future cash flows resulting from the event sponsorship are roughly matched by the costs related to the sponsorship program including fees and activation costs. The fact that the sponsorship effect is neither positive nor negative suggests that firms do not under- or overpay for the expected future pay-offs. Prices seem to be at equilibrium and wealth gains seem to be equally allocated between the sponsor and the sponsee. The results of prior research on the financial effectiveness of event sponsorships are mixed. In line with the results of this research, a study analyzing the share price impact of title event sponsorships in the USA finds no significant impact on the value of the sponsoring firm (Clark et al., 2009).

However, the neutral sponsorship effect is in conflict with other prior studies. On the one hand, there is evidence of positive *ARs* following the announcement of event deals (Mishra et al., 1997; Miyazaki & Morgan, 2001; Samitas et al., 2008) and on the other hand there is evidence of a negative sponsorship effect for Olympic events (Farrell & Frame, 1997). Thus, the current results shed further light on the assessment of the effectiveness of event sponsorships by suggesting a neutral value effect.

Based on the regression analysis three characteristics from the theoretical framework determined *CARs*. First, confirming the previously stated expectation (see chapter 4) the positive effect of *VALUE* implies that high sponsorship fees positively influenced abnormal returns. Until now, only one study has analyzed the impact of fees on the financial effectiveness of sport sponsorships and found a positive, but insignificant relationship (Clark et al., 2002). A reason can be that higher deal values generate more attention in the press and thus a higher level of media coverage. Previous research indicates that the share price impact of a corporate event is positively influenced by the intensity of press coverage because more investors and potential customers will be informed about the news (Koku et al., 1997). Another possible explanation is that high sponsorship fees indicate that the program is a major marketing platform for the sponsor and that the significant investments made are likely to generate CEO attention. As a result, the sponsorship might be subject to higher internal control mechanisms and is supported adequately to unfold its full potential and thus to maximize its impact. Second, the results indicated that *SIZE* also has a negative influence on returns for an event sponsorship. Although there is some evidence for a positive effect of firm size on abnormal returns following title event sponsorships (Clark et al., 2009) the preponderance of prior research (e.g. Clark et al., 2002; Samitas et al., 2008) as well as the results of most sub-samples within this dissertation project (e.g. soccer, basketball; personality sponsorships; Europe) document a negative size effect. The findings support the previously stated expectation that potential scale advantages when it comes to financial resources for the activation support are neutralized by the visibility gain and incremental awareness increase for smaller event sponsors. Third, in line with expectations and prior research (Clark et al., 2002; Cornwell et al., 2005) the regression results reveal that sponsors from the high tech sector generate higher *ARs*

than sponsors with other industry backgrounds. This could be a result of the signalling effect (Ross, 1977). Unlike firms from the consumer goods industry, for instance, high tech firms typically do not have steady cash flows making it extremely difficult for investors to estimate future cash flows for firm valuation purposes (see also section 2.2.1). By investing heavily in sponsorship deals, managers of high tech firms can signal investors that they are optimistic about the future (Clark et al., 2002).

To conclude, investors seem to believe that corporate managers pay fair prices for the expected future benefits resulting from event sponsorships. Thus, no excess returns are detected and the effect on firm value is neutral, indicating that an equilibrium price level prevails for event sponsorships. Sport managers could use the fact that high tech firms earn higher returns on event deals than companies from other industries as an argument to achieve a price premium when negotiating future sponsorship fees with high tech firms.

7.3.2 Organization sponsorship

7.3.2.1 Sample characteristics

Table 40 gives an overview of the descriptive statistics for the organization sponsorship sub-sample ($n=170$). Regarding the deal-specific characteristics it should be mentioned that organization sponsorships are mostly carried out on the corporate level (71%). The majority of this type of deal is based on newly signed contracts rather than extended ongoing partnerships. It is striking that only 18% of the organization sponsorships have an international reach which is less than half of the share of international deals in the overall sample. This national focus is also reflected in the high share of home deals (67%) where the sponsor and the sponsee originate from the same country. The average contract value for an organization sponsorship of \$62.8 M is highly influenced by a few large deals (largest deal in the sample is \$1,200 M) and thus the median deal value is only \$20.0 M.

Table 40: Overview of variables including descriptive statistics (organization sponsorship, n=170 observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.71	1	0.45	0	1
NEW	Dummy	0.66	1	0.47	0	1
INTERNAT	Dummy	0.18	0	0.39	0	1
HOME	Dummy	0.67	1	0.47	0	1
YEAR	Metric	2005	2005	3	1999	2010
VALUE	Metric	62.8	20.0	123.8	2.0	1,200.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	163.1	25.3	376.4	0.2	2,032.0
TECH	Dummy	0.14	0	0.34	0	1

The average size of an organization sponsor in this study is \$163.1 B with a median size of \$25.3 B. Once again, the large difference between mean and median is caused by a few very big sponsors, a characteristic that is also reflected in the high SD of \$376.4 B. About 14% of the organization sponsors are active in the high tech sector.

The frequency distributions of organization sponsorship announcements are depicted in figure 19. As it is the case for most sub-samples, by far the most organization sponsors are from the consumer goods industry (43%), followed by the financial services (21%) and the consumer services sector (12%).

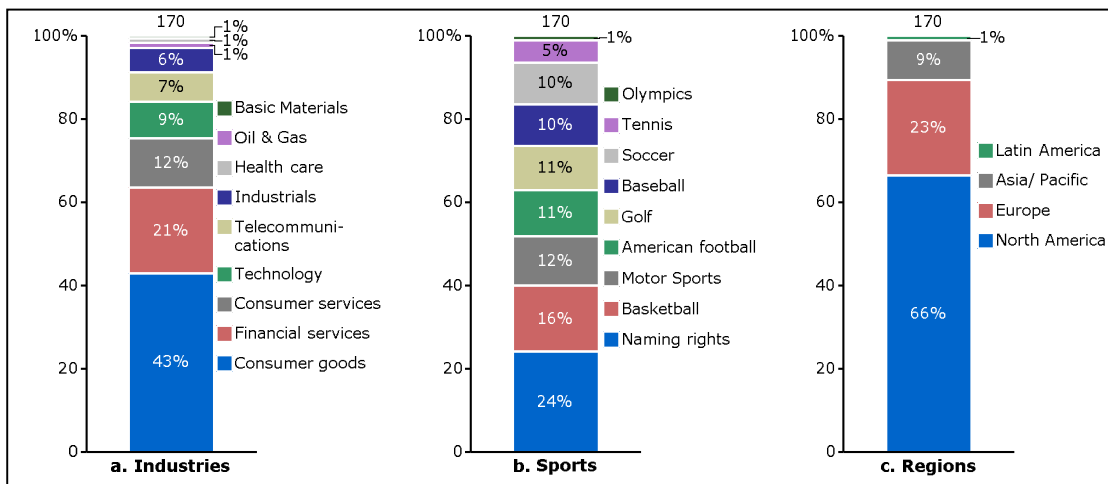


Figure 19: Frequency distributions of sport sponsorship announcements related to different industries, sports and regions (organization sponsors, n=170 observations).

The split by different sports shows that the organization deals in this sample are roughly evenly distributed across all sport categories. From a regional perspective it is

interesting to note that most organization sponsorships involve companies from North America (66%) and only to a lesser extent from Europe (23%) or the Asian/ Pacific region (9%).

7.3.2.2 Event study results

The results of the event study analysis for the organization sponsorship sample are summarized in table 41. The findings for the announcement effect on single days are mixed. Whereas AARs are positive and significant on the announcement day (+0.39%, $p < 0.01$ in panel A) as well as two days before the official announcement (+0.12%, $p < 0.05$), the AAR is negative (-0.26%) and significant ($p < 0.1$) on day +3. It is therefore important to examine CAARs for multi-day periods around day 0 in order to assess the cumulative impact. CAARs for all (but one) analyzed periods are positive and highly significant (e.g. +0.39%, $p < 0.01$ for days 0 to +1 in panel B) and no further evidence for a negative share price reaction is found. Hence, these findings suggest that the announcement of organization sponsorships impact ARs of sponsoring firms positively.

Table 41: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (organization sponsorships, $n=170$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	0.04%	0.05	79 (46%)	-0.34
-2	0.12%	2.19**	96 (56%)	1.63
-1	0.06%	0.50	95 (56%)	1.09
0	0.39%	3.18***	94 (55%)	2.18**
+1	0.01%	0.51	93 (55%)	0.68
+2	-0.03%	-0.52	80 (47%)	-0.25
+3	-0.26%	-1.64*	74 (44%)	-2.19**
<i>Panel B: Periods</i>				
-3 to +3	0.32%	1.51	88 (52%)	0.89
-2 to 0	0.57%	3.48***	108 (64%)	3.52***
-2 to +1	0.58%	3.15***	102 (60%)	2.94***
-1 to 0	0.45%	2.94***	100 (59%)	2.60***
-1 to +1	0.46%	2.54**	96 (56%)	2.09**
0 to +1	0.39%	2.72***	95 (56%)	2.14**

7.3.2.3 Regression results

Table 42 provides a summary of the results from the regression analysis of the organization sponsorship sample. The results indicate that none of the included factors has a significant impact on CARs. This finding implies that the financial returns on the announcement of organization sponsorship deals are independent of the analyzed deal-specific and sponsor-specific characteristics. Moreover, the overall model is not significant ($p > 0.1$).

Table 42: Summary of regression results for CARs between $t=-3$ and $t=+3$ (organization sponsorship model) Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	-157.562	226.959	-0.69	0.489
CORP	-1.074	0.872	-1.58	0.117
INTERNAT	0.758	0.872	0.87	0.386
NEW	0.306	0.680	0.45	0.653
YEAR	0.078	0.113	0.69	0.489
VALUE	0.002	0.003	0.83	0.407
HOME	1.019	0.707	1.44	0.151
SIZE	0.001	0.001	1.12	0.265
TECH	-0.047	0.915	-0.05	0.959
$R^2=0.044$; $F=0.92$; $p=0.504$; $n=170$				

7.3.2.4 Discussion

The results specific to the organization sponsorship sample will be discussed below. Although most sample characteristics are similar to the overall sample (see section X.1.4 “Overall discussion”) there are some differences that will be discussed next. The very low proportion of deals with an international reach (18%) in combination with the high share of home deals where the sponsor and the sponsee are from the same country indicate a rather national focus of organization sponsorships. Taking into account that the majority of sport organizations are associations of national leagues (e.g. NBA, NFL, DFL) or national teams (DFB, FFF) this national focus is not surprising in light of the national orientation of most sport governing bodies. In this study organization sponsorship is the most expensive sponsorship type (average contract value is \$62.8 M). Keeping in mind the national focus it could be speculated that some companies perceive these high prices paid to national organizations as some kind of good deed to support the greater good of a sport in addition to improving its own institutional goodwill. This

argument is however based on speculation and would need further research to verify its validity. Another possible reason for the high price level might simply be demand and supply. Whereas there are many different possibilities for event and team sponsorships within a given sport there is usually only (per country) one national and one international governing organization. Thus, this limited supply of sponsorship opportunities might also drive prices up. The highest share of organization sponsorships are arena and basketball deals. The fact that sport arenas are often owned by cities or investment syndicates explains the high share for arena deals. Other popular sports involving big organizations like FIFA, UEFA (soccer) or IOC (Olympics) are often linked to specific events like the World Cup or the Olympic Games. Consequently such deals are classified as event sponsorships and these sports only make up a smaller share of organization deals.

The event study yields mixed results for the single day analysis, with positive AAR on the day of the announcement (+0.39%) and negative AAR after the announcement (-0.26% on day +3). This mixed effect indicates that investors might revise their initially very positive expectations downward resulting in a share price decrease three days after the announcement. Nevertheless, the examination of the cumulative effect reveals that the overall sponsorship effect for organization deals is quite positive which is in line with previous research (e.g. Agrawal & Kamakura, 1995; Cornwell et al., 2005; Pruitt et al., 2004). The magnitude of AARs (+0.39%) is comparable to AARs registered for the overall sample but lower than returns on team sponsorships (+0.60%) or on official product sponsorships (+1.10%) which is the closest related prior study analyzing the effectiveness of official product sponsorships for various organizations in the US (Cornwell et al., 2005). The existence of positive abnormal returns suggests that capital markets are generally optimistic about organization sponsorships and that additional future discounted cash flows exceed all costs related to the sponsorship program. Hence, despite the high price level investors do not seem to believe that companies act inefficiently when it comes to negotiating sponsorship fees.

The very low R^2 and the insignificance of the organization sponsorship regression model show that ARs cannot be explained by the characteristics included in

the model. None of the factors is significant and as a result it is not possible to draw any conclusions about the determinants of abnormal returns for this sub-sample. However, it might be possible that other factors that are not part of the model can explain abnormal returns (see section 7.1.4).

To sum up, financial markets view organization sponsorships in general as value enhancing marketing investments. However, corporate managers should be price sensitive when negotiating fees and should not neglect to see sponsorships of national governing bodies as pure business investments even if a primary goal of such a sponsorship might be to improve institutional goodwill.

7.3.3 Team sponsorships

7.3.3.1 Sample characteristics

An overview of the descriptive statistics for the team sponsorship sub-sample ($n=193$) is provided in table 43. In terms of the deal-specific characteristics it is noteworthy that the most team deals in this sample promote rather a corporate name than individual brand names (72%). Moreover, the majority of the analyzed team contracts (62%) are new partnerships between a sponsor and a team as opposed to contract extensions. Less than half of the team sponsorships (44%) have an international reach and are noticed in several countries. The same proportion (46%) of the deals is classified as home deals where both the sponsor and the sponsee are from the same country. The average value for a team sponsorship contract is \$55.3 M.

Table 43: Overview of variables including descriptive statistics (team sponsorships, $n=193$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.72	1	0.45	0	1
NEW	Dummy	0.62	1	0.49	0	1
INTERNAT	Dummy	0.44	0	0.50	0	1
HOME	Dummy	0.46	0	0.50	0	1
YEAR	Metric	2005	2006	3	2000	2010
VALUE	Metric	55.3	22.0	108.0	2.0	1,200.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	183.0	27.0	415.3	0.2	2,886.5
TECH	Dummy	0.17	0	0.37	0	1

The median contract value of \$22.0 M is less than half of the average value. Hence, the sample includes some contracts of very high value which is also reflected in the high SD of \$108.0 M as well as the high value range from \$2.0 M up to \$1,200 M. In a similar manner the average firm size of a team sponsor is affected by a few large individual companies in the sample, resulting in an average size of \$183.0 B in contrast to a median firm size of only \$27.0 B. 17% of the team sponsors in this sample are from the high tech sector.

The frequency distributions of team sponsorship announcements with respect to different industries, sports and regions are depicted in figure 20. By far the largest industry branch represented in the sub-sample is the consumer goods sector (50%), followed by the financial services (15%), telecommunications, technology and consumer services sector (8% each),

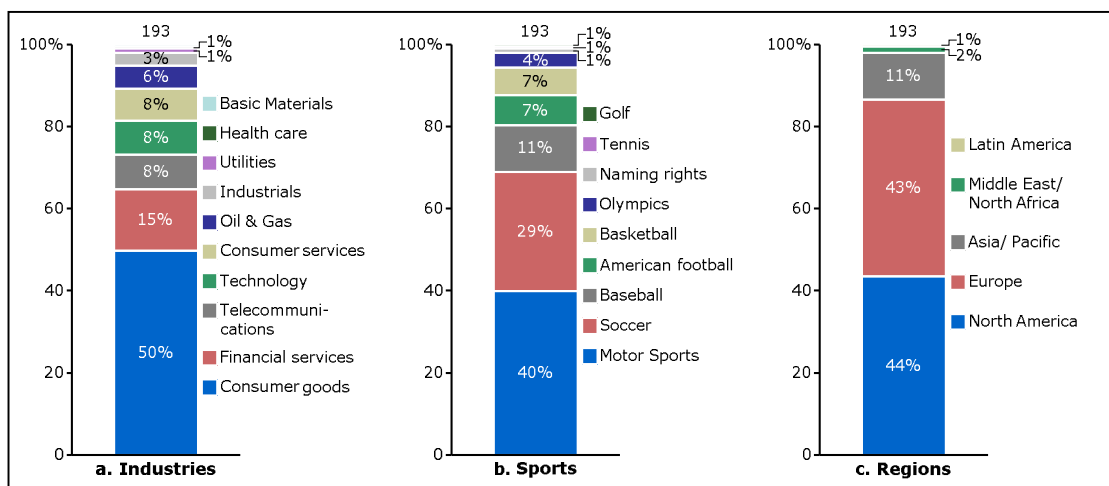


Figure 20: Frequency distributions of sport sponsorship announcements related to different industries, sports and regions (team sponsorships, $n=193$ observations).

Concerning different sports it is not surprising that team sponsorships are most common in the team-oriented sports motor sport (40%), soccer (29%) and baseball (11%). The regional split highlights that most of the team sponsors in the sample are based in North America (44%) or Europe (43%).

7.3.3.2 Event study results

The event study results for the firm value impact of team sponsorship announcements are shown in table 44. Highly significant positive AAR on the day of the announcement (+0.60%, $p < 0.01$ in panel A) indicate a positive sponsorship effect for team deals. This initial finding is further validated by consistently positive and significant CAARs for the selected time periods around the announcement (e.g. +0.84%, $p < 0.01$ for days -1 to +1 in panel B). Thus, it can be stated that sponsoring sport teams generally has a beneficial influence on ARs of sponsoring firms.

Table 44: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (team sponsorships, $n=193$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	0.05%	0.25	96 (50%)	-0.12
-2	-0.04%	-0.17	94 (49%)	-0.91
-1	0.01%	0.32	97 (50%)	-0.61
0	0.60%	3.47***	113 (59%)	3.38***
+1	0.23%	1.14	98 (51%)	0.52
+2	-0.15%	-1.37	91 (47%)	-1.39
+3	0.04%	1.16	101 (52%)	0.46
<i>Panel B: Periods</i>				
-3 to +3	0.74%	2.20**	110 (57%)	2.33**
-2 to 0	0.57%	2.69***	107 (55%)	2.25**
-2 to +1	0.80%	2.94***	112 (58%)	2.65***
-1 to 0	0.61%	3.13***	107 (55%)	2.06**
-1 to +1	0.84%	3.32***	108 (56%)	2.56**
0 to +1	0.83%	3.56***	109 (56%)	2.89***

7.3.3.3 Regression results

Table 45 summarizes the regression results for the team sponsorship model. The results reveal that none of the included variables has a significant impact on returns. This finding suggests that financial returns on team sponsorship announcements are unrelated to the analyzed deal-specific and sponsor-specific characteristics. Above all, the model is overall not significant ($p > 0.1$).

Table 45: Summary of regression results for CARs between $t=-3$ and $t=+3$ (team sponsorship model)
 Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	29.250	243.563	0.12	0.905
CORP	-0.781	0.567	-1.38	0.170
INTERNAT	-1.034	0.828	-1.25	0.213
NEW	0.580	0.633	0.92	0.361
YEAR	-0.014	0.121	-0.11	0.910
VALUE	-0.001	0.002	-0.29	0.769
HOME	0.525	0.708	-0.74	0.459
SIZE	0.001	0.001	-0.69	0.488
TECH	-0.091	0.939	-0.10	0.922
$R^2=0.031$; $F=1.34$; $p=0.227$; $n=193$				

7.3.3.4 Discussion

In the following the results specific to the team sponsorship sub-sample will be discussed. It is interesting to note that almost all characteristics of this sample are similar to the overall sample. Hence, for reasons of efficiency and to prevent redundancies the discussion of the sample characteristics will not be reproduced at this point (see section 7.1.4). The only substantial difference to the overall sample is the high share of motor sport and soccer deals (combined 70%) among the team sponsorships. However, taking into account that both sports are team-oriented and both sports also contribute the most observations for this study the high share for motor sports and soccer is not unexpected.

The event study results suggest a positive sponsorship effect for team sponsorships implying that the initial sponsorship fees and other related costs are expected to be offset by additional future sales and profits. Investors seem to be confident that team sponsorships as marketing tools have the potential to generate economic value for the sponsoring firm and for their shareholders. The magnitude of the AARs (+0.60% on day 0) is higher than for any other analyzed sponsorship type in this study (event-, organization- and personality sponsorships) and almost twice as high as the reported abnormal return level for the overall sample. Although a direct comparison with prior studies is not possible because the sponsorship effectiveness has not yet been analyzed specifically for team sponsorships, this positive effect is generally in line with the preponderance of prior research on sponsorship effectiveness (see table 1 in 3.2). For corporate managers this result provides further evidence that sport sponsorships in

general, and team sponsorships in specific are economically justifiable investments. Sport managers however should be alerted by the existence of such highly positive excess returns. It seems that the price level for team sponsorship rights should be increased in upcoming negotiations in order to allocate the expected benefits resulting from the sponsorship deal more equally between sponsor and sponsored teams.

The very low R^2 and the insignificance of the team sponsorship regression model show that *ARs* cannot be explained by the characteristics included in the model. None of the factors is significant and as a result it is not possible to draw any conclusions about the determinants of abnormal returns for this sub-sample. However, it might be possible that other factors that are not part of the model can explain abnormal returns.

To conclude, the overall sponsorship effect for team sponsorship deals is highly positive, indicating that equilibrium price levels might not yet have been reached. Thus, sport managers should attempt to raise the price level in the future by negotiating higher sponsorship fees.

7.3.4 Personality sponsorships

7.3.4.1 Sample characteristics

Table 46 summarizes the descriptive statistics for all relevant variables for the sub-sample personality sponsorships ($n=59$). With respect to the deal-specific characteristics the sample is characterized by the fact that about three quarter (73%) of the personality sponsors decided to promote the company name instead of an individual brand name. Furthermore, four out of five personality endorsements (83%) in this sample are newly signed contracts. More than half of the personality deals (66%) involve sport celebrities with an international presence and less than one third (29%) of the celebrity endorsers support a sport star from its home country. The average value of a personality deal is \$18.6 M and is significantly lower than other sponsorship types such as event or team sponsorships. The values for the individual contracts range between \$3.0 M and \$100.0 M. Regarding the sponsor-specific factors it should be noted that the average firm size in this sample is \$50.7 B. However, this value is highly inflated as indicated by the considerably lower median firm size of \$7.6 M. Overall, firm sizes for personality

sponsors range from \$0.1 B to \$1,054.5 B. Only 10% of the celebrity endorsers are associated with the high tech sector.

Table 46: Overview of variables including descriptive statistics (personality sponsorships, $n=59$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.73	1	0.45	0	1
NEW	Dummy	0.83	1	0.38	0	1
INTERNAT	Dummy	0.66	1	0.48	0	1
HOME	Dummy	0.29	0	0.46	0	1
YEAR	Metric	2005	2005	3	1999	2010
VALUE	Metric	18.6	10.0	21.8	3.0	100.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	50.7	7.6	152.0	0.1	1,054.5
TECH	Dummy	0.10	0	0.30	0	1

The frequency distributions within the personality sponsorship sample with respect to different industries, sports and regions are displayed in figure 21. The vast majority of personality sponsors are from the consumer goods industry (78%), using sport stars as ambassadors for their products. Personality sponsors are most common in the individual-oriented sports tennis (36%) and golf (25%). Surprisingly personal endorsements are also quite common in the rather team-oriented sport tennis (27%).

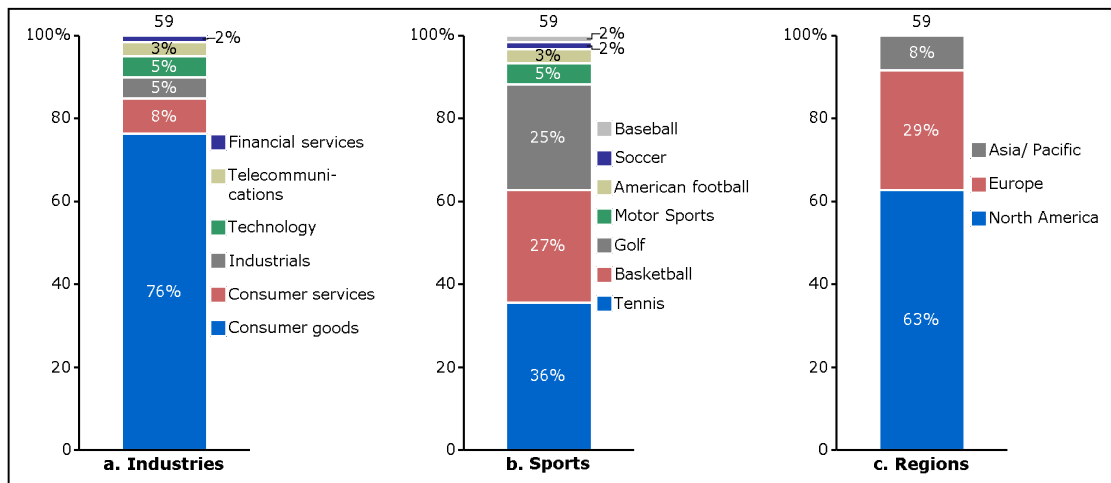


Figure 21: Frequency distributions of sport sponsorship announcements related to different industries, sports and regions (personality sponsorships, $n=59$ observations).

The regional split shows that it is mostly companies from North America (63%) that sponsor individuals and that this type of sponsorship is less common among European (29%) and Asian/ Pacific firms (8%).

7.3.4.2 Event study results

Table 47 presents the findings from the event study analysis of the personality sponsorship sample. The results for the analysis of single days around the official announcement show no significant share price reaction. The AAR on the announcement day itself is positive (+0.08%) but insignificant ($p > 0.1$). The assessment of the cumulative sponsorship effect leads to similar results. None of the analyzed time windows shows a significant CAAR (e.g. +0.44%, $p > 0.1$ for days -1 to +1 in panel B). Because share prices show no reaction it seems that personality sponsorship announcements have no impact on ARs of sponsoring firms.

Table 47: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (personality sponsorships, $n=59$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	0.10%	-0.23	29 (49%)	-0.59
-2	0.10%	0.44	32 (54%)	0.11
-1	0.08%	0.98	28 (47%)	-0.23
0	0.08%	0.08	27 (46%)	0.26
+1	0.28%	1.55	32 (54%)	0.94
+2	0.03%	0.12	27 (46%)	0.23
+3	0.04%	-0.78	25 (42%)	-0.85
<i>Panel B: Periods</i>				
-3 to +3	0.71%	0.75	32 (54%)	0.72
-2 to 0	0.26%	0.66	31 (53%)	0.59
-2 to +1	0.54%	1.28	32 (54%)	0.86
-1 to 0	0.16%	0.56	28 (47%)	0.12
-1 to +1	0.44%	1.26	33 (56%)	0.59
0 to +1	0.36%	1.17	29 (49%)	0.50

7.3.4.3 Regression results

The results from the regression analysis of the personality sponsorship sample are summarized in table 48. The results indicate that SIZE is the only significant factor having a negative impact on CARs. This negative SIZE effect suggests that bigger

sponsors experience lower abnormal returns than smaller celebrity endorsers. However, the overall model is unfortunately not significant ($p > 0.1$).

*Table 48: Summary of regression results for CARs between $t=-3$ and $t=+3$ (personality sponsorship model) Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.*

Factor	Coefficient	Robust SE	T	p
Constant	-103.237	403.715	-0.26	0.799
CORP	-1.644	1.768	-0.93	0.357
INTERNAT	1.564	1.701	0.92	0.362
NEW	0.603	1.535	0.39	0.696
YEAR	0.051	0.201	0.26	0.799
VALUE	0.003	0.035	0.08	0.936
HOME	2.579	2.095	1.23	0.224
SIZE	-0.004	0.002	-2.20	0.033**
TECH	-1.288	1.493	-0.86	0.799
$R^2=0.070$; $F=0.68$; $p=0.704$; $n=59$				

7.3.4.4 Discussion

Next, the findings specific to the personality sponsorships sum-sample are interpreted. Most sample characteristics differ from the overall sample and will be discussed in the following. First, the share of newly signed contracts (83%) is considerably higher than for the overall sample. This however does not necessarily mean that deals with sport celebrities are not extended in most cases, but it is also possible that contract extensions with sport stars receive less press attention than new partnerships. Consequently, the press research for this study would under-represent contract extensions. Second, the high proportion of deals with international sport celebrities (66%) in combination with the very low share of home deals (29%) reveal a rather international focus of the personality sponsorships included in this sample. This is not unexpected since this study is based on the universe of large multi-million dollar sponsorship deals and thus, the included personality endorsements involve mostly international sport stars. The average contract value (\$18.6 M) is relatively low when compared to other sponsorship types or the overall sample which are at least twice as expensive. A reason might be that the sponsorship rights in a personality deal are bound to a single person whereas the rights in an organization-, team- or event sponsorship deal offer broader opportunities. Furthermore, the lower average value might also reflect the higher risk for a sponsor by linking its own name to a single sport celebrity (e.g. Tiger Woods or Michael Phelps

scandals). The fact that personality deals are on average less expensive than other sponsorship types might also explain the small average size of celebrity endorsers which is only one fourth of the average firm size in other sponsorship types. The lower deal value might attract smaller firms that cannot or do not want to pay the higher fees associated with event- or team sponsorships, for example. Most personality deals involve sponsors from the consumer goods sector (76%) which is not surprising because it is often sport equipment manufacturers (which is a sub-category of the consumer goods sector) that sponsor sport stars. Sport stars often use the equipment (e.g. golf clubs, tennis rackets, soccer shoes) of their sponsor in order to promote the products.

Capital markets seem to view personality sponsorships as overall value-neutral investments since *ARs* around the announcement date are positive but statistically insignificant (+0.08% on day 0). This suggests that the expected future benefits in terms of additional sales and profits resulting from the celebrity endorsement program roughly match the total costs of the program. Since future cash flows are offset by the investments in the sponsorship campaign the overall impact on firm value is neutral. This result however contradicts the findings of an earlier study on the financial effectiveness of celebrity sponsorships which reported positive *ARs* (+0.44%) for the announcement day (Agrawal & Kamakura, 1995), although a comparison can only be made with limitations since this study also included non-sport celebrity endorsements. A reason why investors might not be overly optimistic when it comes to personality sponsorships could be the sponsor's dependence on one individual athlete and his/ her behaviour. The potential risk of negative behaviour might be factored into the expectations and reduces the estimated future sales and profit figures. Furthermore, many sport stars endorse many different brands and products (sponsorship cluttering) which could have a negative effect on the ability of consumers to correctly identify and recall all the different sponsors. Thus, corporate managers should carefully select sport stars they want to use for advertising purposes. They should not have too many other endorsement contracts and should be trusted to represent themselves and the sponsor appropriately. For sport managers and sport celebrities it can be suggested not to endorse too many brands simultaneously in order to maximize the value for each individual endorsement contract.

The regression model indicates that SIZE is the only factor from the theoretical framework that has an influence on CARs following the announcement of personality endorsements. As it is also the case for many other sub-samples in this study (e.g. soccer, basketball; event sponsorships; financial service industry) the results suggest that SIZE has a negative impact on returns. This is generally in line with previous research (e.g. Clark et al., 2002; Samitas et al., 2008) but there is also some evidence for a positive size effect on returns (Clark et al., 2009). The registered negative size effect could be explained by the additional visibility and considerably higher incremental awareness increase for smaller firms as compared to their larger established competitors. However, the robustness of this result is severely impaired since the overall regression model for the personality sponsorships sample is not significant.

To sum up, the financial effect of personality sponsorships on the value of the sponsoring firm is neutral. Investors seem to believe that any generated economic value is offset by the costs associated with the personality endorsement. In order to improve the effectiveness corporate managers should mitigate potential risks and should prevent sponsorship cluttering by carefully selecting the endorsed sport celebrity.

7.4 Regions

This section analyzes the sponsorship effect for the different sponsor regions including North America, Europe and the Asia/ Pacific region³⁷. The event study results shed light on the first research question dealing with the sponsorship effect for various sponsor regions (RQ 1d) whereas the second research question about determinants of ARs for different sponsor regions (RQ 2d) is covered by the regression analysis.

7.4.1 North America

7.4.1.1 Sample characteristics

An overview of the descriptive statistics for the regional sub-sample North America ($n=305$) is displayed in table 49. In terms of deal-specific factors the sample is

³⁷ These regions allow a separate analysis due to a sufficiently large sample sizes. MENA and Latin America could not be analyzed separately since less than the required minimum amount of observations ($n=40$; see also chapter 6.1) were available for these two regions.

characterized by a high share of corporate level deals (77%) using the sponsorship program to promote the company name. More than half (66%) of the sponsorships involving companies from North America are new deals. Sponsorships with North American firms have a rather national focus with only one third (31%) of the deals enjoying an international presence and two thirds of the deals in this sample are home deals (67%) where both the sponsoring firm and the sponsee are from North America. Whereas the average contract value is \$51.8 M the median value is only \$15.3 M. This high discrepancy indicates a high dispersion among individual contract values in the North American sample. This is confirmed by the high SD of \$109.8 M and a deal value range from \$2.0 M up to \$1,200 M. Pertaining to the sponsor-specific characteristics it is noteworthy that the firm sizes of North American sponsors also vary greatly. While the average size is \$126.8 B the median size is only \$21.0 B. More detailed analysis reveals that the large average size is highly inflated by some very big sponsors since 75% of the North American sponsors are smaller than \$61.8 B. About 12% of the sponsors in the sample are from the high tech industry.

Table 49: Overview of variables including descriptive statistics (North America, n=305 observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.77	1	0.42	0	1
NEW	Dummy	0.66	1	0.47	0	1
INTERNAT	Dummy	0.31	0	0.47	0	1
HOME	Dummy	0.67	1	0.47	0	1
YEAR	Metric	2005	2005	3	1999	2010
VALUE	Metric	51.8	15.3	109.8	2.0	1,200.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	126.8	21.0	326.0	0.1	2,187.6
TECH	Dummy	0.12	0	0.33	0	1

The sample characteristics in terms of frequency distributions for different industries, sports and sponsorship types are depicted in figure 22. The industry split shows that the majority of the sponsors from North America are active in the consumer goods industry (45%), followed by the financial service (16%) and consumer service sector (15%). North American sponsorships are roughly evenly distributed with respect to the different sports. Furthermore, the most common sponsorship type for North American firms is organization sponsorship (37%), closely followed by team (28%) and event deals (23%).

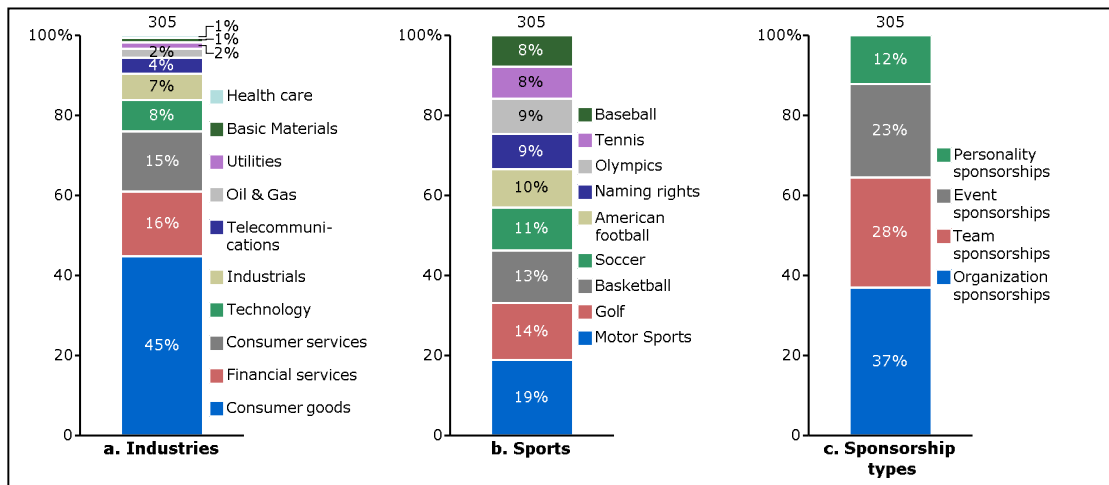


Figure 22: Frequency distributions of sport sponsorship announcements related to different industries, sports and sponsorship types (North America, $n=305$ observations).

7.4.1.2 Event study results

Table 50 provides a summary of the event study results for the share price impact of sponsorship deals announced by North American firms. The AAR on the day of the announcement is positive (+0.46%) and highly significant ($p < 0.01$) suggesting a positive announcement effect of sponsorships involving North American firms.

Table 50: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (North America, $n=305$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
Panel A: Days				
-3	0.01%	0.18	151 (50%)	0.04
-2	0.08%	1.29	157 (51%)	0.18
-1	0.14%	1.42	165 (54%)	1.76
0	0.46%	3.96***	171 (56%)	3.55***
+1	0.23%	1.85*	166 (54%)	1.01
+2	-0.03%	-1.38	135 (44%)	-1.41
+3	-0.14%	-1.39	144 (47%)	-1.33
Panel B: Periods				
-3 to +3	0.75%	2.29**	169 (55%)	2.45**
-2 to 0	0.68%	4.23***	177 (58%)	3.81***
-2 to +1	0.91%	4.55***	186 (61%)	4.47***
-1 to 0	0.60%	4.10***	173 (57%)	3.63***
-1 to +1	0.83%	4.31***	181 (59%)	4.13***
0 to +1	0.69%	4.03***	175 (57%)	3.57***

Moreover, consistently positive and significant CAARs for all analyzed time periods around the official announcement (e.g. +0.83%, $p < 0.01$ for days -1 to +1 in panel B) also imply a positive cumulative announcement effect. Overall, the highly significant positive effects in absence of any sign of negative share price reactions provide statistical evidence that sponsorships by North American firms generally impact ARs favorably.

7.4.1.3 Regression results

The findings from the regression analysis for the North American model are displayed in table 51. The results reveal that the factor VALUE has a significant positive impact on CARs. This positive effect implies that North American sponsors can expect higher abnormal returns following the announcement of high profile sponsorships including a substantial sponsorship fee. Unfortunately, the overall model does not reach the required level of significance ($p > 0.1$).

Table 51: Summary of regression results for CARs between $t = -3$ and $t = +3$ (North America model) Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	192.055	180.953	1.06	0.289
CORP	-0.876	0.634	-1.38	0.168
INTERNAT	1.038	0.847	1.22	0.222
NEW	0.477	0.574	0.83	0.407
YEAR	-0.096	0.090	-1.06	0.289
VALUE	0.004	0.002	1.68	0.094*
HOME	0.953	0.830	1.15	0.252
SIZE	0.001	0.001	0.61	0.541
TECH	1.141	0.819	1.39	0.164
$R^2=0.036$; $F=1.37$; $p=0.210$; $n=305$				

7.4.1.4 Discussion

In the following the results specific to the North America sample will be discussed. The sample ($n=305$) is the biggest one used in an event study analysis on the financial effectiveness of North American sponsors. Comparable studies analyzing the financial impact of sport sponsorship announced by companies from either Canada or the USA are based on sample sizes of less than 114 announcements (Clark et al., 2009). Although most characteristics of the North America sample in this study are similar to the overall

sample (see section 7.1.4) there are some differences that will be addressed next. Sponsorships involving companies from this region are characterized by a low degree of internationalization. This is reflected by a very low proportion of deals with an international reach (31%) and a high share of home deals (67%). This national focus is a consequence of the huge size of the domestic markets in the US and also in Canada. This differs from other regions, e.g. the Eurozone, where the international focus is more important for companies due to the smaller sizes of domestic markets and the close proximities between countries. The average value paid by North American sponsors (\$51.8 M) compares to the average deal value for the overall sample and is similar to the fees paid in other regions like Europe and Asia/ Pacific. The North America sample differs from the overall sample with respect to the sponsored sport categories in three ways. First, the motor sport deals included in the North American sample are almost exclusively NASCAR deals as opposed to F1 deals which is the majority in the Europe as well as the overall sample. Second, soccer has a considerable lower share since it is less popular in North America than in other regions, especially Europe. Third, typical American stick and ball sports like baseball, basketball and American Football seem to receive more sponsor attention in North America than elsewhere.

The fact that sponsorship deals announced by North American firms consistently generated positive abnormal returns (+0.46% on the announcement day) indicates that the investment community was very optimistic about the pay-offs from such deals. Investors seem to be confident that the initial investments are going to be offset by additional future sales and profits. The direction of these results is generally in line with previous research (which is predominantly available for the USA, but unfortunately not for Canada). The analysis of the sponsorships related to the 1996 Summer Olympics in Atlanta suggested also a positive sponsorship effect (Miyazaki & Morgan, 2001). Moreover, American studies on the financial effectiveness of title event sponsorships (Mishra et al., 1997), celebrity endorsement (Agrawal & Kamakura, 1995), stadium sponsorships (Clark et al., 2002) and official product sponsorships (Cornwell et al., 2005) also document a positive sponsorship effect for sponsors from North America. Nevertheless, the impact documented in other studies seemed to be overall stronger than in this study (see table 1 in chapter 3.2). The results from this current study at hand have

implications for corporate as well as sport managers. For corporate managers it provides further evidence that sport sponsorships generate real economic returns for North American firms and their shareholders. This could help marketing managers in justifying multi-million dollar sponsorship fees as economically beneficial investments in a marketing vehicle that is instrumental to successfully differentiate from competitors (Cornwell et al., 2005). As it is also the case for other sub-samples the existence of positive *ARs* reveals an opportunity for sport managers to extract higher sponsorship fees in future negotiations as positive excess returns imply that investors believe that the sponsoring firms pay a “cheap” price for the expected future benefits. Confirming the previously stated expectations (see chapter 4) the regression analysis indicates that *VALUE* has a significant positive effect on *ARs* of North American sponsors. Until now, only one study has analyzed the impact of fees on the effectiveness of sponsorships and found a positive, but insignificant relationship (Clark et al., 2002). A reason might be that higher deal values generate more attention in the press and thus a higher level of media coverage. Previous research indicates that the share price impact of a corporate event is positively influenced by the intensity of press coverage because more investors and potential customers will be informed about the news (Koku et al., 1997). Another possible explanation could be that high sponsorship fees indicate that the program is a major marketing platform for the sponsor and that the significant investments made are likely to generate CEO attention. As a result, the sponsorship is subject to higher internal control mechanisms and is supported adequately to unfold its full potential and thus to maximize its impact. However, the robustness of this result is severely impaired since the overall regression model for the North America sample is insignificant.

To conclude, sponsorship deals involving sponsors from the North American region have a rather national focus when compared with sponsorships from other regions. On the one hand the presence of positive excess returns provides corporate managers with evidence that sport sponsorships are economic beneficial marketing investments. On the other hand it should alert sport managers to aim for higher prices when selling their sponsorship rights to North American firms in the future.

7.4.2 Europe

7.4.2.1 Sample characteristics

Table 52 summarizes the descriptive statistics for the Europe sub-sample ($n=231$). Regarding the deal-specific characteristics it is noteworthy that the majority of the European sponsors (65%) opted to use the sponsorship program as a vehicle to promote a firm name rather than individual brands.

Table 52: Overview of variables including descriptive statistics (Europe, $n=231$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.65	1	0.48	0	1
NEW	Dummy	0.68	1	0.47	0	1
INTERNAT	Dummy	0.57	1	0.50	0	1
HOME	Dummy	0.43	0	0.50	0	1
YEAR	Metric	2006	2007	3	2000	2010
VALUE	Metric	51.1	23.7	95.3	2.0	1,200.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	331.3	53.1	621.5	0.2	2,973.2
TECH	Dummy	0.14	0	0.35	0	1

Furthermore, more than two thirds of the European deals (68%) are new partnerships between the sponsors and the sponsee. Contrary to the national focus of North American sponsors the majority of firms from Europe preferred to sponsor entities with international presence (57%) and entities from another country than its home country (57%). The average total deal value paid by European sponsors is \$51.1 M which compares to the average price level paid by North American sponsors. The average size of a sponsoring firm is \$331.3 B whereas the median firm size is only \$51.1 B. This large difference is caused by a few very big sponsors in the sample, ranging from \$0.2 B up to \$2,973.2 B. This huge range also affects the SD to be very high (\$621.5 B). About 14% of the European sponsors are from the high tech industry.

The frequency distributions of the sponsorship announcements made by European firms with respect to different industries, sports and sponsorship types are depicted in figure 23. Almost half of the European sponsors in this study are from the consumer goods industry (43%), followed by the financial services (24%) and the telecommunications sector (10%). The split by sports indicates that sponsorship deals

involving firms from Europe are most common for soccer (28%), motor sports (18%), golf (13%) and Olympics (10%). The two favorite sponsorship types for European firms are event (40%) and team sponsorships (36%).

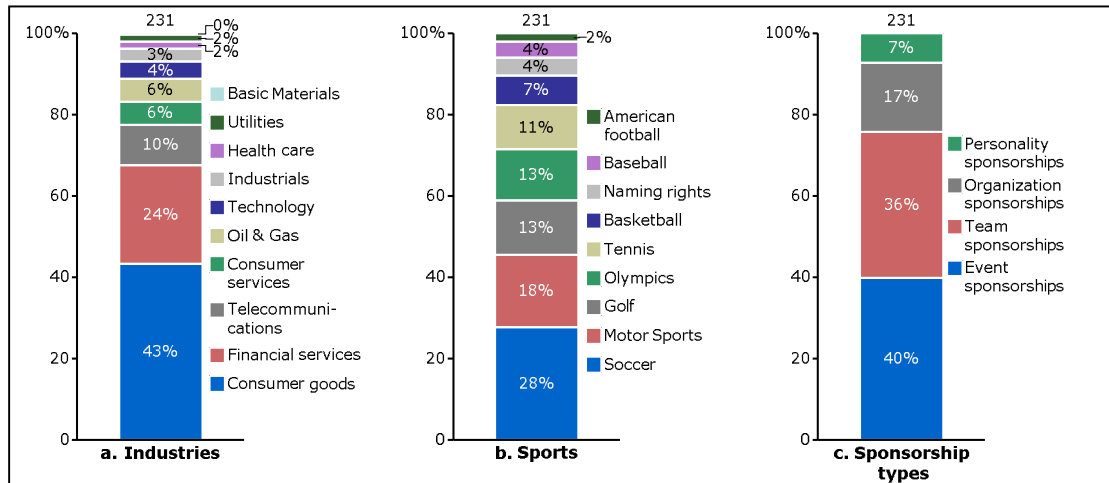


Figure 23: Frequency distributions of sport sponsorship announcements related to different industries, sports and sponsorship types (Europe, $n=231$ observations).

7.4.2.2 Event study results

The event study results for the financial impact of sponsorship announcements from European companies are displayed in table 53. The positive and significant AAR on the announcement day (+0.27%, $p < 0.05$ in panel A) suggests a positive sponsoring effect for European sponsors. This initial finding for single days is further strengthened by the outcome for the cumulative effect during various time windows. CAARs are positive and significant for most of the analyzed windows (e.g. 0.36%, $p < 0.05$ for days -1 to 0 in panel B). Thus, it can be stated that sport sponsorships involving European firms generally impact ARs positively.

Table 53: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (Europe, $n=231$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.07%	-1.12	99 (43%)	-1.69*
-2	0.08%	0.78	119 (52%)	0.52
-1	0.09%	0.55	123 (53%)	0.05
0	0.27%	2.32**	126 (55%)	1.85*
+1	-0.04%	-0.47	103 (45%)	-0.99
+2	-0.11%	-0.67	109 (47%)	-1.16
+3	-0.18%	-0.66	109 (47%)	-1.16
<i>Panel B: Periods</i>				
-3 to +3	0.05%	0.41	120 (52%)	0.60
-2 to 0	0.45%	2.29**	125 (54%)	2.15**
-2 to +1	0.41%	1.88*	129 (56%)	1.57
-1 to 0	0.36%	2.26**	120 (52%)	1.43
-1 to +1	0.32%	1.76*	122 (53%)	1.02
0 to +1	0.24%	1.58	119 (52%)	0.98

7.4.2.3 Regression results

The results from the regression analysis of the Europe model are presented in table 54. Based on these findings the factors CORP and SIZE both have a significant negative influence on CARs. The negative effect of CORP indicates abnormal returns for European sponsors are higher when the sponsorship program focuses on promoting a specific brand name instead of a company name. The negative SIZE effect implies that smaller European sponsors can expect higher returns than their bigger counterparts. The overall model is significant ($p<0.1$) and explains almost 10% of the variance in CARs.

Table 54: Summary of regression results for CARs between $t=-3$ and $t=+3$ (Europe model) Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T =test statistic; p = p -value.

Factor	Coefficient	Robust SE	T	p
Constant	148.419	189.125	0.78	0.433
CORP	-0.950	0.517	-1.84	0.067*
INTERNAT	-0.469	0.507	-0.93	0.356
NEW	-0.750	0.504	-1.49	0.138
YEAR	-0.073	0.094	-0.78	0.438
VALUE	0.002	0.003	0.43	0.665
HOME	0.519	0.495	1.05	0.296
SIZE	-0.001	0.001	-2.02	0.045**
TECH	0.004	0.728	0.01	0.995
$R^2=0.094$; $F=1.87$; $p=0.065^*$; $n=231$				

7.4.2.4 Discussion

The results specific to the Europe sample will be discussed next. Most sample characteristics are strikingly similar to the overall sample and will not be discussed again at this point in order to prevent redundancies (see section 7.1.4). Nevertheless, the Europe sample is characterized by its international focus of the sponsorship deals. This is reflected by the comparatively high share of deals having an international presence (57%) and a low share of home deals (43%). The international focus of sponsorship deals in the Europe sample is higher than for deals from the overall sample (47%) as well as for deals from the North America sample (31%). Due to the close proximity of the different countries and the fact that most European companies are active internationally, especially within the Eurozone, this high degree of internationalization is not unexpected. Because the domestic markets of European firms are significantly smaller than for American companies the international presence plays a more important role in Europe than in North America, which is also reflected in the international focus of European sponsorship programs. European sponsorships also differ from other regions as well as the overall sample in terms of the sponsor size. The average size of a sponsoring firm from Europe is on average 100% larger than a sponsor from North America and 50% larger than a sponsor from the overall sample. Since the industry split is roughly the same in all of these three samples the reason for the size difference cannot be that a specific assets-intensive industry group is over-represented in the European sample. It can be speculated, that smaller companies in Europe are more conservative regarding the high financial commitments to sponsorship programs and that it is the bigger companies that are active in the high-profile sponsorships that are analyzed in this study. Furthermore, it is not surprising that soccer is the sport category with the highest share (28%) of sponsorship deals involving European firms. The high popularity soccer enjoys in this region explains why the share of soccer deals is considerably higher among European sponsors than for Asian/ Pacific sponsors or North American sponsors where traditional ball and stick sports (e.g. American football, baseball, basketball) enjoy greater popularity.

The stock market reaction to the announcement of sponsorships involving European firms implies that capital markets welcome such programs as positive return

investment opportunities where the future benefits outweigh the initial sponsorship fees and other related marketing costs to support such a campaign. Although the ARs generated on the announcement day (+0.27%) is lower than returns reported in the few other studies on European sponsorship deals, the positive sponsorship effect for European firms is confirmed. Caldéron et al. (2005) investigated the financial impact of title event sponsorships in Spain and reported highly positive ARs (+0.76%). Another mostly European study analyzed the share price impact of sponsorship deals for the 2004 Summer Olympics in Athens and documented also highly positive abnormal returns (+6.3% for days -5 to 0; Samitas et al., 2008). These positive returns are good news for corporate managers as they justify past and encourage future sponsorship investments and the economically successful integration of sponsoring activities in the overall marketing mix. The fact that AR levels are fairly low suggests that sport managers were in general successful in negotiating almost fair prices. Although a perfectly fair price would theoretically imply that the expected future benefits equal the total sponsorship costs and ARs would be zero this must not necessarily be the optimal solution, neither for the sponsor nor for the sponsee. The sponsor might need some level of positive returns to justify the sponsorship program internally or in front of shareholders. A sponsee might not want to risk deterring potential sponsors by too high asking prices for sponsorship rights. Overall, a small excess return for the sponsor might be a practicable compromise. This topic however remains an interesting topic for future research.

The results of the regression analysis show that ARs in the European sample are determined by CORP and SIZE. The negative effect of corporate level deals contradicts previous research (Pruitt et al., 2004) but is in line with the previously stated expectation (see chapter 4). One explanation could be that investors are skeptical about the ability of consumers to associate a sponsored company name with specific brands, and as a result future sales would be unaffected by the sponsorship program. Moreover, the negative effect of SIZE is in line with expectations as well as prior results (e.g. Clark et al., 2002; Samitas et al., 2008). A reason for the negative size effect can be that smaller sponsors overcome potential scale disadvantages regarding the possibility to devote adequate

financial resources (on top of the fees) to activate sponsorship programs by larger incremental awareness and market share gains.

To sum up, sport sponsorships involving European firms have a higher international focus when compared to sponsorship deals from other regions. Share prices react positively to the announcement, but the comparatively low magnitude of ARs suggests that the price level might be approximately fair in a way that wealth gains are almost evenly distributed between the sponsor and the sponsee, with a small advantage on the side of the sponsor which might be needed for political reasons to justify a sponsorship program internally within the sponsoring firm. As it has been shown before, sponsorships seem to be more efficient for European firms when they are executed on the brand level.

7.4.3 Asia/ Pacific

7.4.3.1 Sample characteristics

Table 55 presents the descriptive statistics of all relevant variables for the Asia/ Pacific sub-sample ($n=81$). Regarding the deal-specific factors the sample is characterized by a strikingly high share (88%) of sponsorship deals on corporate level. Furthermore, more than half (62%) of the deals in this sample are based on newly signed contracts. Because of the high proportion of sponsorships with an international reach (72%) and only very few home deals (19%) it seems that sponsors from the Asia/ Pacific region prefer deals that have a high international visibility.

Table 55: Overview of variables including descriptive statistics (Asia/ Pacific, $n=81$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.88	1	0.33	0	1
NEW	Dummy	0.62	1	0.49	0	1
INTERNAT	Dummy	0.72	1	0.45	0	1
HOME	Dummy	0.19	0	0.39	0	1
YEAR	Metric	2005	2005	3	1999	2010
VALUE	Metric	44.3	17.5	67.6	3.0	351.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	128.7	36.3	356.8	0.4	2,355.7
TECH	Dummy	0.14	0	0.34	0	1

The average contract value is \$44.3 M. The considerably lower median value of \$17.5 M and the high SD of \$67.6 M suggest that the sponsorship fees paid by Asia/ Pacific sponsors are quite diverse. This diversity is also captured by the range, stretching from \$3.0 M up to \$351.0 M. Pertaining to the sponsor-specific factors this sample is characterized by an average sponsor size of \$128.7 B and a median size of only \$36.3 B. Again, this huge gap indicates a severe diversity of sponsor sizes which is also mirrored in the size range from \$0.4 B to \$2,355.7 B. About 14% of all Asia/ Pacific sponsors are associated with the high tech industry.

The frequency distributions within the Asia/ Pacific sample regarding different industries, sports and sponsorship types are depicted in figure 24. About three out of four sponsors in this sample are active in the consumer goods industry (72%). Moreover, motor sport (23%) is the most common sport sponsored in this sample. Other popular sports include tennis (15%), soccer (14%), Olympics (11%), baseball (9%), naming rights (7%), basketball (6%), American football (4%) and golf (1%). Event sponsorships account for almost half (47%) of the deals, whereas personality sponsorships are less common (6%).

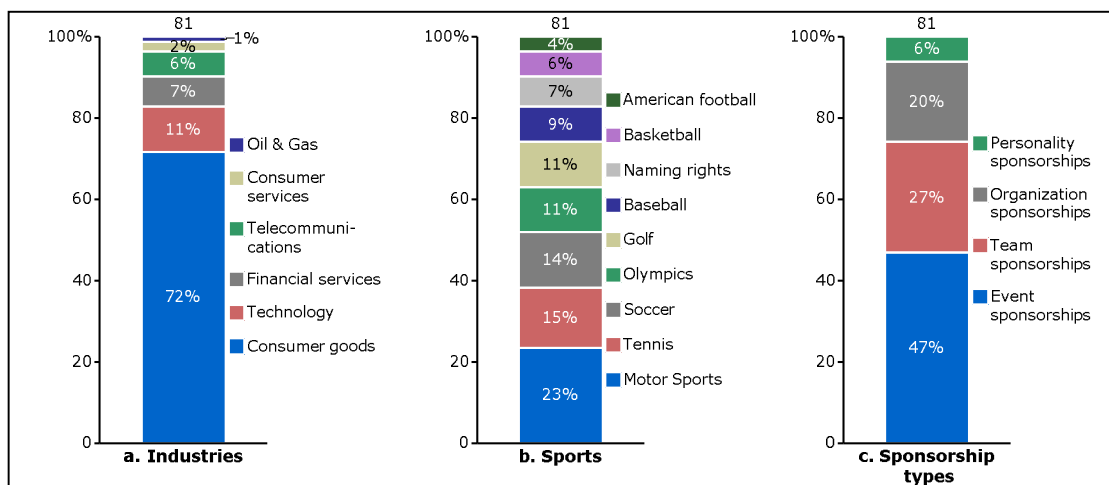


Figure 24: Frequency distributions of sport sponsorship announcements related to different industries, sports and sponsorship types (Asia/ Pacific, $n=81$ observations).

7.4.3.2 Event study results

The results of the event study analysis for the firm value impact of sponsorship announcements involving firms from the Asia/ Pacific region are summarized in table 56. While the announcements trigger significant negative returns on the second day after

the official announcement day (AAR=-0.32%, $p<0.05$ in panel A) there is additional statistical evidence for a negative share price reaction when analyzing the cumulative effect on ARs via time windows (CAAR=-0.66%, $p<0.1$ for days -3 to +3 in panel B). As share prices show a negative reaction to sponsorships involving Asia/ Pacific companies it seems that such deals have a negative impact on ARs of sponsoring firms.

Table 56: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (Asia/ Pacific, $n=81$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.04%	0.24	39 (48%)	-0.67
-2	-0.08%	-1.31	35 (43%)	-1.14
-1	-0.23%	-0.96	37 (46%)	-1.40
0	0.22%	1.12	41 (51%)	0.69
+1	-0.01%	-0.05	39 (48%)	-0.41
+2	-0.32%	-2.13**	33 (41%)	-1.92*
+3	-0.20%	-1.17	38 (47%)	-1.11
<i>Panel B: Periods</i>				
-3 to +3	-0.66%	-1.85*	32 (40%)	-2.09**
-2 to 0	-0.09%	-0.96	40 (49%)	-0.35
-2 to +1	-0.10%	-0.81	35 (43%)	-0.94
-1 to 0	-0.01%	-0.10	41 (51%)	-0.31
-1 to +1	-0.02%	-0.10	35 (43%)	-0.73
0 to +1	0.21%	0.71	41 (51%)	0.19

7.4.3.3 Regression results

Table 57 presents the results from the regression analysis from the Asia/ Pacific model.

Table 57: Summary of regression results for CARs between $t=-3$ and $t=+3$ (Asia/ Pacific model) Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T =test statistic; p = p -value.

Factor	Coefficient	Robust SE	T	p
Constant	-1.0006.3	357.1	-2.82	0.006***
CORP	-0.919	1.025	-0.90	0.373
INTERNAT	0.226	1.089	0.21	0.836
NEW	0.676	1.075	0.63	0.531
YEAR	0.501	0.178	2.82	0.006***
VALUE	0.009	0.005	1.86	0.067*
HOME	0.999	1.572	0.64	0.572
SIZE	-0.000	0.001	-0.39	0.695
TECH	0.040	1.568	-0.02	0.981
$R^2=0.124$; $F=1.27$; $p=0.274$; $n=81$				

The findings reveal that the factors YEAR and VALUE both have a significant positive impact on CARs. The positive effect of YEAR indicates that sponsorship deals that have been announced in more recent years generated higher returns than deals that have been announced earlier. The positive value effect implies that sponsors from the Asia/ Pacific region can expect higher abnormal returns for deals that involve substantial sponsorship fees. Unfortunately, the overall model is not significant ($p > 0.1$).

7.4.3.4 Discussion

The following section discusses the results specific to the Asia/ Pacific sub-sample. Although most sample characteristics are similar to the overall sample (see section 7.1.4) there are some differences that will be discussed next. First, it stands out that sponsorships involving companies from the Asia/ Pacific region are mostly corporate level deals. Second, the very high proportion of deals having an international reach (72%) and a very low proportion of home deals (19%) suggest a rather international focus. It can be speculated that the firms from the Asia/ Pacific region in this sample use sponsorship programs to improve their international visibility, maybe to create awareness for future market expansions. The high share of corporate level deals would support this hypothesis since it could be a strategy for an expanding firm to first create awareness for the company as such before specific brands and products are promoted. However, as already mentioned earlier the data collection process might also explain the high degree of international deals in this sub-sample. A number of national sponsorships might not have been identified during the data collection if the official announcement was not available in English or German, the two languages the research was conducted in. The high share of consumer goods companies is mainly driven by sponsors from the consumer electronics sector (e.g. Sony, Panasonic, Toshiba). The fact that the name of consumer electronic brands and products often include the company name (e.g. Sony Play Station) further explains the high share of corporate level deals.

Whereas sponsorships are generally seen as a value creating marketing activity for sponsors from North America and Europe it was perceived as a negative sign in the Asia/ Pacific region with negative returns (e.g. $AAR = -0.32\%$ on day +2). This finding contradicts the results from a prior study documenting positive ARs for sport

sponsorships in Australia (Johnston, 2010). However, the comparability with this study is limited since it is only focused on Australia and does not include any sponsorships from Asia. An explanation for this negative sponsorship effect might be information asymmetry between corporate managers and investors. Total sponsorship expenditures in the Asia/ Pacific region is still on a comparatively low level and amount to only 50% of European and to only 30% of American sponsorship expenditures (PWC, 2010). These figures indicate that sponsorship might still be a development phase in the Asia/ Pacific region and investors still need to be convinced about its effectiveness as a marketing tool. Thus, in order to overcome potential information asymmetry and investor skepticism corporate managers should enrich each sponsorship announcement with additional details about the expected future benefits and how these are planned to be realized. The fact that the first significant share price reaction was registered two days after the announcement further strengthens the argument that investors seem to be inexperienced with regards to Asia/ Pacific sponsorships since they needed two days to form their expectations. Because the average deal value is on a similar level as in other regions it seems unlikely that firms from the Asia/ Pacific region are overpaying for their sponsorship rights.

The findings from the regression analysis will be discussed next. *ARs* are positively influenced by two factors, namely *VALUE* and *YEAR*. The positive effect of deal value is in line with previously stated expectations (see chapter 4) and also with previous research (e.g. Clark et al., 2002). As already mentioned earlier a reason can be that more expensive sponsorships are more visible and generate higher press attention which was found to amplify the share price effect of corporate events (Koku et al., 1997). Moreover, the positive value effect might also be caused by higher internal control mechanisms resulting from the high investments in the sponsorship program (see also section 7.4.1.4 for more details). The effect of the variable announcement year has not yet been analyzed in prior studies. Nevertheless, the fact that more recent sponsorship deals were perceived more positive by investors than deals from the distant past could be a result of a development process. First, investors were more pessimistic about the effectiveness of sport sponsorships, but over time they became more positive and optimistic about the true value of such marketing programs. However, the

robustness of these results is severely impaired since the overall regression model for the Asia/ Pacific sample is insignificant.

To conclude, because the sponsorship market in the Asia/ Pacific region still seems to be in its development phase (when compared to North America or Europe) it is important for corporate managers to enrich the official sponsorship announcement with more details about execution support and expected future benefits in order to overcome potential information asymmetries between managers and investors. These information asymmetries could be the root cause for the negative sponsorship effect for the Asia/ Pacific region. However, it needs further research to confirm the information asymmetry hypothesis.

7.5 Industries

This section analyzes the sponsorship effect for the different industries including the consumer goods, financial services, consumer services and telecommunications industries³⁸. The event study results shed light on the first research question dealing with the sponsorship effect for various industries (RQ 1e) whereas the second research question about determinants of ARs for different industries (RQ 2e) is covered by the regression analysis.

7.5.1 Consumer goods

7.5.1.1 Sample characteristics

A summary of the descriptive statistics for the sub-sample consisting of sponsors from the consumer goods industry is presented in table 58. In this sample the majority of sponsors (65%) preferred to advertise a corporate name instead of a specific brand name. Furthermore, almost 60% of the sponsorship deals with consumer goods companies are new contracts and half the sponsorship agreements (49%) have an international reach with visibility in multiple countries. About 40% of the deals are

³⁸ These industries allow a separate analysis due to sufficiently large sample sizes. The remaining industry groups could not be analyzed separately since less than the required minimum amount of observations were available (see also chapter 6.1).

classified as home deals since the involved consumer goods company and the sponsee are from the same country.

Table 58: Overview of variables including descriptive statistics (Consumer goods, n=298 observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.65	1	0.48	0	1
NEW	Dummy	0.59	1	0.49	0	1
INTERNAT	Dummy	0.49	0	0.50	0	1
HOME	Dummy	0.42	0	0.49	0	1
YEAR	Metric	2005	3	2005	1999	2010
VALUE	Metric	57.4	20.0	123.1	2.0	1,200.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	46.6	14.4	73.2	0.1	430.4
TECH	Dummy	0	0	0	0	0

The average contract value for a consumer goods sponsorship is \$57.4 M whereas the median deal value is only \$20.0 M. This gap and the high SD of \$123.1 M indicate that individual contract values differ greatly, resulting in a value band reaching from \$2.0 M to \$1,200 M. On the side of the sponsor-specific characteristics it is noteworthy that the average size of a consumer goods sponsor is \$46.6 B which is more than three times larger than the median sponsor size of \$14.4 B. Again, such a difference is caused by a few very large firms in the sample as highlighted by the size range from \$0.1 B up to \$430.4 B. There are no high tech firms in the consumer goods sample by definition.

The sample characteristics of the consumer goods sample in terms of frequency distributions for different sports, sponsorship types and regions are displayed in figure 25. Sponsors from the consumer goods sector are represented in all sport categories in this sample, but the sport that received most sponsorship deals is soccer (25%), followed by motor sports (15%), tennis (12%), golf (11%) and basketball (11%). The distribution among the four different sponsorship types is also fairly well balanced with team sponsorships having the highest share (32%) and personality endorsements the lowest share (15%). The regional split indicates that most consumer goods sponsors are from North America (46%) and Europe (34%) and only to a lesser extend from the Asia/Pacific region (19%).

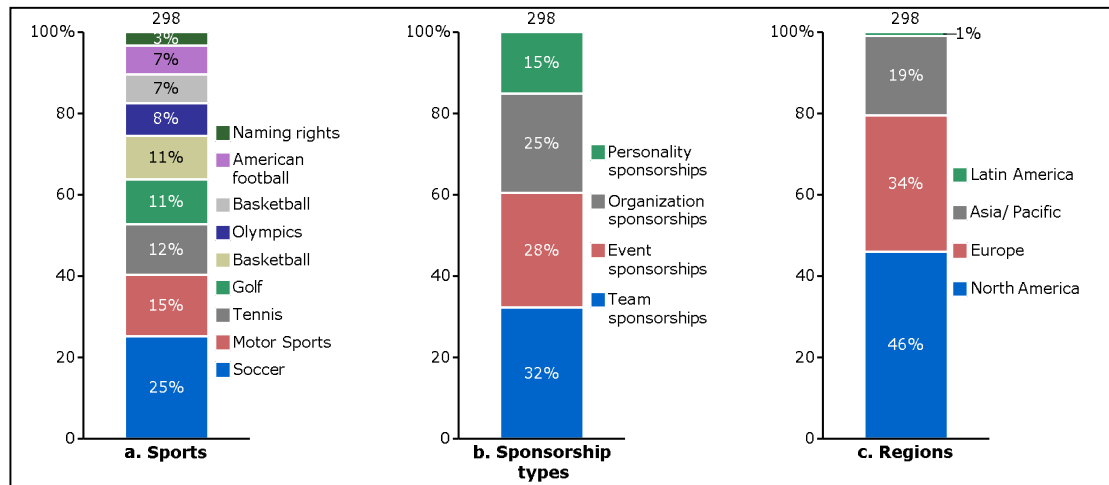


Figure 25: Frequency distributions of sport sponsorship announcements related to different sports, sponsorship types and regions (Consumer goods, $n=298$ observations).

7.5.1.2 Event study results

Table 59 provides the findings from the event study analysis for the firm value effect of sponsorship announcements made by firms from the consumer goods sector. The analysis of single days around the announcement reveals that the AAR on day 0 is positive and highly significant (+0.30%, $p < 0.01$ in panel A). This result indicates a positive announcement effect for consumer goods sponsors. In addition, consistently positive and significant CAARs for almost all analyzed time periods around the official announcement confirm this conclusion (e.g. +0.45%, $p < 0.01$ for day -1 to +1 in panel B). Therefore, it can be stated that the announcement of sponsorship deals involving companies from the consumer goods industry generally have a positive effect on ARs of sponsoring firms.

Table 59: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (Consumer goods, $n=298$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
Panel A: Days				
-3	0.09%	0.47	139 (47%)	-0.71
-2	0.00%	0.09	168 (50%)	-0.28
-1	0.13%	1.39	162 (54%)	0.79
0	0.30%	2.88***	156 (52%)	2.42**
+1	0.02%	0.57	149 (50%)	-0.42
+2	-0.14%	-1.29	137 (46%)	-1.43
+3	-0.11%	-1.50	137 (46%)	-1.69*

Day(s)	(C)AAR	t _{BMP}	N+ (%)	z
<i>Panel B: Periods</i>				
-3 to +3	0.29%	1.15	154 (52%)	0.79
-2 to 0	0.43%	2.94***	167 (56%)	2.83***
-2 to +1	0.45%	2.73***	168 (56%)	2.19**
-1 to 0	0.43%	3.26***	160 (54%)	2.23**
-1 to +1	0.45%	2.99***	160 (54%)	1.88*
0 to +1	0.32%	2.96***	155 (52%)	1.49

7.5.1.3 Regression results

The regression results for the consumer goods model for identifying determinants for abnormal returns are displayed in table 60. The findings reveal that the factors CORP and INTERNAT both have a significant negative impact on CARs. The negative influence of CORP implies that consumer goods companies generate higher returns with sponsorship deals that promote specific brands instead of the corporate name. The negative effect of INETR NAT suggests that deals with a national focus generate higher CARs than sponsorships with an international reach. The consumer goods model is overall significant ($p < 0.1$) and explains almost 5% of the variance in CARs.

Table 60: Summary of regression results for CARs between $t = -3$ and $t = +3$ (Consumer goods model)
Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	-72.562	187.065	-0.39	0.698
CORP	-1.344	0.505	-2.66	0.008***
INTERNAT	-1.025	0.572	-1.79	0.074*
NEW	-0.035	0.512	-0.07	0.945
YEAR	0.037	0.093	0.40	0.692
VALUE	0.002	0.001	1.47	0.142
HOME	0.068	0.616	0.11	0.913
SIZE	-0.003	0.003	-0.84	0.400
$R^2 = 0.042$; $F = 1.87$; $p = 0.075^*$; $n = 298$				

7.5.1.4 Discussion

The following section presents a discussion of the results specific to the consumer goods sub-sample. Among the analyzed industries the consumer goods sector has the highest share of brand level sponsorships where sponsors use a sponsorship program to promote a specific brand name rather than a corporate name. This high level of brand sponsorship can have two possible reasons. First, many consumer goods companies are

conglomerates owning multiple big brands alongside many smaller brands³⁹. The size of the big brands might justify an independent major marketing campaign and thus a brand level sponsorship program. Second, the corporate names of consumer goods companies are often detached from the individual brand names (e.g. Procter & Gamble: Gillette, Wella, Blendax; Henkel: Persil, Schauma, Pritt). Thus, corporate level sponsorships might be risky if companies are unsure that consumers can link the corporate name to the different brands. The fact that the proportion of home deals is considerably lower than in other industry samples as well as the overall sample might suggest that consumer goods companies use sponsorship programs to promote their products in foreign markets. This is not surprising if one keeps in mind that most consumer goods producers are multinational companies with international brands such as Swatch for example, which is a well known brand for watches not only in Switzerland, but also internationally. On average, consumer goods sponsors do not pay significantly more or less for a deal (\$57.4 M) when compared to the overall sample or other industries. In terms of sponsorship types it is noteworthy that the share of personality sponsorships is almost twice as high as in the overall sample. This could be because having a celebrity use or consume a specific product might improve the credibility of advertisements among consumers (Kamins, Brand, Hoeke & Moe, 1989).

The event study results suggest a positive sponsorship effect for deals involving sponsors from the consumer goods sector ($AAR=+0.30\%$ on day 0), implying that investors are optimistic that the initial investments are offset by additional future sales and profits. In other words, the incurred sponsorship costs are less than the overall expected benefits resulting from the sponsorship program. For corporate managers this means that investments in sport sponsorships are economic profitable, a fact that can be used to explain sponsorship expenses to executives. However, sport managers could use this result to ask for higher fees when negotiating with consumer goods firms. The existence of positive ARs indicates that consumer goods sponsors could be convinced to pay higher prices in light of the expected additional sales and profits. Although there is no prior research specifically dealing with the sponsorship effectiveness from an

³⁹ For example, Procter & Gamble bought the formally independent company Wilkinson and integrated it as a brand

industry perspective this results generally confirms the overall positive sponsorship effect documented in previous studies (see also table 1 in section 3.2). The magnitude of the detected *ARs* is similar to the level found in the overall sample as well as prior studies (e.g. Mishra et al., 1997; Miyazaki & Morgan, 2001; Samitas et al, 2008).

Furthermore, *ARs* are influenced by two characteristics from the theoretical model. For deals involving consumer goods companies returns are determined by CORP and INTERNAT. In line with previously stated expectations (see chapter 4) but contrary to the findings of previous research (Pruitt et al., 2004) deals on corporate level generated lower returns than brand level deals. Thus, it seems like investors value the promotion of specific brands since - as previously mentioned – the consumer goods business is more a brand business. Corporate names are often detached from brand names and as a result it cannot be expected that consumers can link a corporate name to individual brands. Thus, the advantage of corporate level deals, namely the umbrella promotion, seems not to be applicable for consumer goods sponsors. Once again, the effect of INTERNAT on returns is negative. The better performance of deals having a rather national reach indicates that investors prefer sponsorship activities that are focused on a specific market. The focus on a single country prevents a possible mismatch between a sponsor's geographic target markets and the sponsorship coverage (see also section 7.2.1.4). A comparison with prior research is not possible because this characteristic has not been analyzed before.

To sum up, the overall positive sponsorship effect for deals involving consumer goods companies provides sport managers with some ground to ask for higher sponsorship fees in the future since expected benefits seem to outweigh the costs associated with the sponsorship program. Moreover, in absence of a major reason favouring a corporate level deal, sponsorship programs for consumer goods companies should promote specific brands instead.

7.5.2 Financial services

7.5.2.1 Sample characteristics

Table 61 presents an overview of the descriptive statistics for the sub-sample consisting of sponsors from the financial services industry ($n=114$). Regarding the deal specific factors this sample is characterized by a very high share (88%) of sponsorship deals promoting a company name rather than a brand name.

Table 61: Overview of variables including descriptive statistics (Financial services, $n=114$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.88	1	0.33	0	1
NEW	Dummy	0.66	1	0.48	0	1
INTERNAT	Dummy	0.40	0	0.49	0	1
HOME	Dummy	0.67	1	0.47	0	1
YEAR	Metric	2006	2007	3	2000	2010
VALUE	Metric	51.2	24.0	68.7	3.0	400.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	872.9	665.7	796.3	1.0	2,973.2
TECH	Dummy	0	0	0	0	0

Furthermore, the majority of sponsorship deals with financial companies are newly signed contracts (66%). Less than half of the deals have an international presence (40%) and the sponsors in this sample are more inclined to support a sponsee from its own country (67%) than from other countries indicating a rather national focus. The average contract value is \$51.2 M; twice as much as the median contract value of \$24.0 M. This gap indicates the existence of a few very large sponsorship deals in the sample. The high SD of \$68.7 M and the value range from \$3.0 M up to \$400.0 M confirm this high level of dispersion. In terms of the sponsor-specific characteristics it is noteworthy that the average size of a financial service sponsor of \$827.9 B is considerably higher than the average firm size of sponsors from other industries (e.g. the average size of a sponsor from the consumer goods sector is \$46.6 B).

The sample characteristics in terms of frequency distributions with respect to different sports, sponsorship types and regions are depicted in figure 26. The split by sports indicates that sponsors from the financial services sector mostly invest in golf deals (22%). The highest share of financial services sponsors invest in event

sponsorships (43%), followed by organization (31%) and team sponsorships (25%). The vast majority of the firms included in this sample are from Europe (49%) or North America (43%).

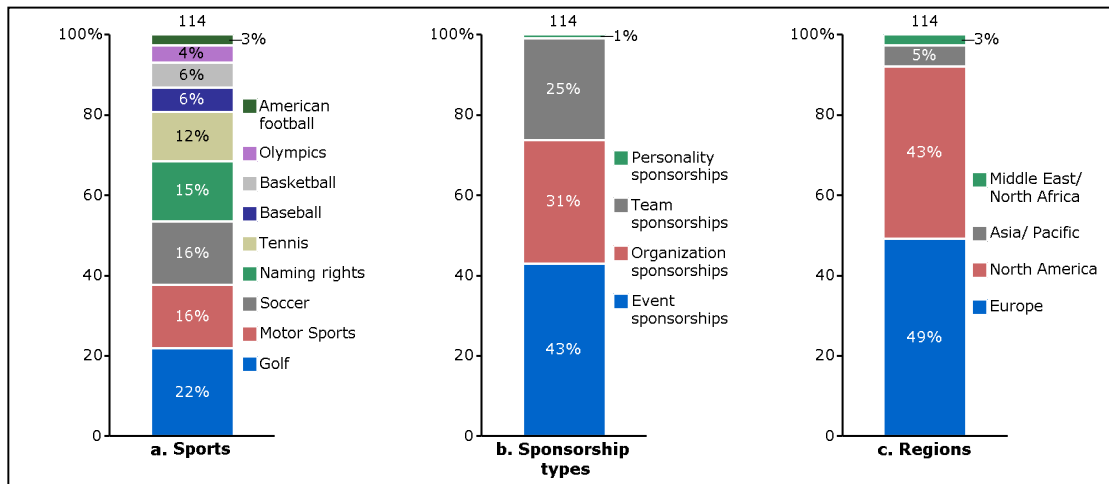


Figure 26: Frequency distributions of sport sponsorship announcements related to different sports, sponsorship types and regions (Financial services, $n=114$ observations).

7.5.2.2 Event study results

The event study findings for the firm value impact of sponsorship announcements involving financial institutions are summarized in table 62. The results for AARs on single days show no significant share price reaction. The AAR on the announcement day is positive (+0.08%) but insignificant ($p>0.1$). The analysis of the cumulative effect yields similar results. None of the analyzed periods shows a significant CAAR (e.g. -0.02%, $p>0.1$ for days 0 to +1 in panel B). As share prices show no reaction it seems that sponsorship deals with firms from the financial services sector neither have a positive nor a negative impact on ARs of sponsoring firms.

Table 62: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (Financial services, $n=114$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.33%	-1.59	50 (44%)	-1.61
-2	0.24%	0.98	64 (56%)	1.14
-1	-0.10%	-0.48	54 (47%)	-0.95
0	0.08%	0.58	58 (51%)	-0.15
+1	0.02%	-0.39	54 (47%)	-0.82
+2	-0.08%	-1.12	53 (46%)	-1.37
+3	-0.32%	-0.30	59 (52%)	-0.27
<i>Panel B: Periods</i>				
-3 to +3	-0.50%	-0.67	56 (49%)	-1.25
-2 to 0	0.22%	0.92	60 (53%)	0.65
-2 to +1	0.24%	0.64	60 (53%)	0.44
-1 to 0	-0.02%	0.12	53 (46%)	-0.65
-1 to +1	0.00%	-0.13	51 (45%)	-1.01
0 to +1	0.09%	0.13	52 (46%)	-0.45

7.5.2.3 Regression results

The results for the regression analysis of the financial services model are summarized in table 63. Based on these findings only the factor SIZE has a significant impact on abnormal returns and this impact is negative. The negative SIZE effect suggests that smaller financial institutions generate higher CARs as a result of a sponsorship deal than larger institutions. However, the overall model is not significant ($p>0.1$).

Table 63: Summary of regression results for CARs between $t=-3$ and $t=+3$ (Financial services model) Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T =test statistic; p = p -value.

Factor	Coefficient	Robust SE	T	p
Constant	-39.974	309.123	-0.13	0.897
CORP	-0.731	1.150	-0.64	0.526
INTERNAT	1.095	0.851	1.29	0.201
NEW	-0.784	0.787	-1.00	0.322
YEAR	0.020	0.154	0.13	0.897
VALUE	0.003	0.005	0.61	0.544
HOME	0.965	0.865	1.11	0.267
SIZE	-0.001	0.001	-1.74	0.084*
$R^2=0.062$; $F=1.01$; $p=0.432$; $n=114$				

7.5.2.4 Discussion

The results of the financial services sub-sample will be discussed next. The high share of sponsorship deals on corporate level (88%) is not surprising because for most financial institutions such as banks and insurance companies the corporate name functions as an umbrella name for all offered products (e.g. Allianz life insurance, Allianz car insurance and Allianz property insurance all carry the corporate name in the product name). Financial services sponsors seem to focus their sponsorship activities on their home market as indicated by the high share of deals with sponsees from the same country in combination with a comparatively low share of deals having an international reach. Thus, it can be speculated that many financial services providers use sponsorship programs to improve their position at home. Furthermore, it can be assumed that since awareness scores for established banks and insurances are likely to be already at a satisfactory level the major sponsorship objective could be image enhancement. On average financial institutions do not pay significantly more or less for sponsorship deals (\$51.2 M) when compared to the average deals value for the overall sample and also compares to the average fee paid by consumer goods sponsors, for example. As already mentioned before, financial services providers are much bigger (in terms of total assets) than non-financial companies. This is because the assets reported on the balance sheet of a financial institution are financial assets (e.g. deposits in checking accounts, financial investments) whereas other companies mainly report non-financial assets (e.g. property, plant, equipment, inventory, receivables) and these non-financial assets are generally lower in total value than financial assets. Nevertheless, as already discussed in section 6.1 “data collection” total assets is an appropriate proxy to analyze the role of firm size for sponsorship effectiveness (e.g. Farrell & Frame, 1997; Mishra et al., 1997). A reason why most sponsorships announced by financial institutions are golf deals can be the naturally good fit between the industry and the sport since golf is still considered to attract a rather affluent clientele (Cornwell et al., 2005). Thus, golf provides banks and insurances a unique platform to gain access to relevant customer groups (Mishra et al., 1997). Besides golf, motor sports (especially F1) and soccer are also heavily sponsored by financial services institutions. It is interesting to note that for the sport categories

most heavily sponsored by financial institutions either a negative (golf, soccer) or a neutral sponsorship effect (F1) has been documented in this study.

In a similar way, investors view sponsorship deals undertaken by banks and insurances as overall value neutral investments since ARs around the official announcement are not significantly different from zero. This indicates that for financial service companies the costs and the benefits that are expected from the sponsorship deal seem to cancel each other out, resulting in a zero NPV project. For sport managers, this implies that overall financial institutions pay fair prices for sport sponsorship deals. Financial managers have three levers to improve the financial effectiveness of their sponsorship investments. One, they could try to reduce the sponsorship fees in upcoming negotiations with potential sponsees. Two, corporate managers should attempt to influence and improve investors expectations about the potential of a sponsorship program by releasing more detailed information about supporting marketing activities in order to signal to investors that the sponsorship is part of a well integrated marketing strategy. Three, corporate managers should consider to intensify sponsorships of other sports than F1, golf or soccer since sponsorships in these sports seem to have an overall negative impact on the value of sponsoring firms.

The regression analysis indicates that SIZE is the only factor from the theoretical framework having an influence on CARs of financial institutions. As it is also the case for many other sub-samples in this study (e.g. soccer, basketball; event-, personality sponsorships) the results suggest that SIZE has a negative impact on returns. This is generally in line with previous research (e.g. Clark et al., 2002; Samitas et al., 2008) but there is also some evidence for a positive size effect on returns (Clark et al., 2009). The registered negative size effect could be explained by the additional visibility and considerably higher incremental awareness increase for smaller firms when compared to their larger established competitors. However, the robustness of this result is severely impaired since the overall regression model for the financial services sample is not significant.

To conclude, the analysis has shown that financial services providers pay in general a fair price for sponsorship deals from a cost-benefit perspective. Sport managers can take that as a confirmation that they have not sold their sponsorship rights

too cheaply to banks and insurances. Financial managers could attempt to improve the financial effectiveness of sponsorships by either increasing the expected benefits (e.g. higher activation support, better informed investors) and by shifting sponsorship investments to more profitable sport categories.

7.5.3 Consumer services

7.5.3.1 Sample characteristics

The descriptive statistics of all relevant variables for the industry-specific sub-sample consisting of sponsors from the consumer services industry⁴⁰ ($n=61$) are summarized in table 64. The majority (72%) of consumer services providers that are involved in a sponsorship program decided to promote the firm name instead of pushing a specific brand. This high share of corporate level deals results from the fact that the company name of many consumer services providers serves as an umbrella brand for all of the offered products (e.g. Lufthansa). Moreover, three quarters of the deals in this sample are new partnerships between the sponsor and the sponsee. The geographical characteristics indicate that sponsors from the consumer services sector have a more national focus than other industry branches. Only 21% of the sponsors in this sample decided to support a sponsee with an international presence. Furthermore, most sponsorship deals involving consumer services firms are defined as home deals where both the sponsor and the sponsee are from the same country. The average contract value of \$29.7 M is considerably lower than the average value of deals involving other industries such as financial services or consumer goods. Pertaining to the sponsor-specific characteristics it is interesting to note that the average size of a consumer services sponsor (\$15.3 B) is small in comparison to other industry groups. This is because many sponsors in this sample are restaurants (e.g. McDonalds, Pizza Hut) and companies that are active in the restaurant business do not have production facilities or other capital-intensive items on their balance sheets. Thus, total assets are lower for consumer service companies when compared to firms from other industries and thus the

⁴⁰ The consumer services sample includes firms from the travel, restaurant and media sector.

average firm size is smaller. Lastly, about 5% of the firms in this sample are associated with the high tech sector.

Table 64: Overview of variables including descriptive statistics (Consumer services, $n=61$ observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.72	1	0.45	0	1
NEW	Dummy	0.75	1	0.43	0	1
INTERNAT	Dummy	0.21	0	0.41	0	1
HOME	Dummy	0.79	1	0.41	0	1
YEAR	Metric	2007	2008	3	1999	2010
VALUE	Metric	29.7	12.7	43.1	3.7	220.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	15.3	9.4	13.9	0.1	51.0
TECH	Dummy	0.05	0	0.22	0	1

The frequency distributions of this sample with respect to different sports, sponsorship types and regions are depicted in figure 27. In this study the sponsorship deals with consumer services companies are roughly evenly distributed across all the different sports as well as the different sponsorship types. Only personality endorsements (8%) receive less attention from consumer services providers. Moreover, the regional split indicates that the lion's share of consumer services sponsors are from North America (75%) and only a few sponsors are from Europe (21%) or the Asian/ Pacific region (3%).

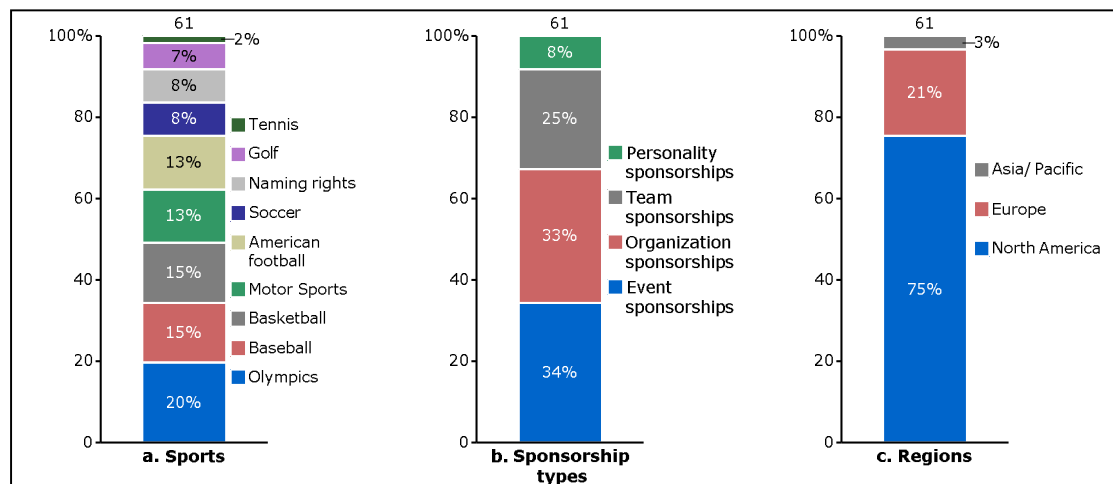


Figure 27: Frequency distributions of sport sponsorship announcements related to different sports, sponsorship types and regions (Consumer services, $n=61$ observations).

7.5.3.2 Event study results

The event study results for the firm value impact of sponsorship announcements involving firms from the consumer services industry are displayed in table 65. A highly significant and positive AAR on the announcement day itself (+1.04%, $p < 0.01$; panel A) shows a positive sponsorship effect on firm value. This finding is further strengthened by examining the cumulative effect via time windows. CAARs are positive and significant for various time windows around the announcement day (e.g. +1.45%, $p < 0.01$ for days 0 to +1; panel B). Consequently, it can be stated that sponsorship deals with consumer services providers generally impact ARs favorably.

Table 65: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (Consumer services, $n=61$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.10%	-0.32	31 (51%)	-0.98
-2	-0.02%	-0.08	29 (48%)	0.07
-1	-0.26%	-0.85	32 (52%)	-0.31
0	1.04%	3.36***	41 (67%)	3.25***
+1	0.41%	1.33	34 (56%)	1.36
+2	-0.47%	-1.50	23 (38%)	-3.37***
+3	-0.26%	-0.85	23 (38%)	-2.35**
<i>Panel B: Periods</i>				
-3 to +3	0.34%	0.30	31 (51%)	0.71
-2 to 0	0.75%	2.01**	35 (57%)	1.71*
-2 to +1	1.16%	2.17**	34 (56%)	1.97*
-1 to 0	0.78%	2.42**	40 (66%)	2.43**
-1 to +1	1.19%	2.57**	38 (62%)	2.53**
0 to +1	1.45%	3.54***	44 (72%)	3.52***

7.5.3.3 Regression results

Table 66 provides an overview of the results from the regression analysis of the consumer services model. The results show that none of the included variables has a significant impact on CARs. This finding suggests that the financial returns on sponsorships involving consumer service providers are independent of the analyzed deal-specific and sponsor-specific characteristics. The model is overall also not significant.

Table 66: Summary of regression results for CARs between $t=-3$ and $t=+3$ (Consumer services model)
 Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	203.440	357.768	0.57	0.572
CORP	-0.008	1.257	-0.01	0.995
INTERNAT	0.922	1.584	0.58	0.563
NEW	0.846	1.563	0.54	0.590
YEAR	-0.102	0.178	-0.57	0.571
VALUE	-0.014	0.009	-1.53	0.133
HOME	0.996	1.963	0.51	0.614
SIZE	0.005	0.069	0.07	0.943
TECH	1.860	1.585	1.17	0.246
$R^2=0.039$; $F=0.59$; $p=0.785$; $n=61$				

7.5.3.4 Discussion

In the following the results specific to the consumer services sample will be discussed. The high proportion of deals having a single-country focus and the high share of home deals indicate that companies from the consumer services sector have a rather national focus when it comes to sport sponsorships. Although some service providers do have international business many companies derive most of their business in the home market (e.g. Lufthansa in Germany, DirecTV in the USA). Thus, consumer service companies seem to use sponsorship programs to strengthen the position in the home market rather than to support an expansion into new geographical markets. The average contract value is at least 40% lower than in other industries as well as the overall average contract value. It can be speculated that consumer services firms refrain from becoming the main sponsor of an entity and rather become a second-tier sponsor. For example, service firms from the airline sector or the hotel sector could become the “official travel partner” and a large part of the sponsorship fee could be paid as value-in-kind⁴¹ (VIK; Samitas et al., 2008). This assumption however as well as the effectiveness differences between main and second-tier sponsorships (especially for the consumer services sector) remains a topic for future research. The small average size of consumer service providers in this study compared to other industry groups is because many of the sponsors are restaurants (e.g. McDonalds, Pizza Hut) and hotels. With the exception of airlines (which are only few observations in this study) the total assets of a service company are comparatively

⁴¹ In value-in-kind payments the sponsorship fee is (partially) paid in products or services (e.g. free flights or hotel nights).

lower than consumer goods producer or telecommunication providers since the service firms do not have capital-intensive items such as production facilities or telecommunication infrastructure listed on their balance sheets.

The financial community views the investments in sponsorship campaigns made by consumer service providers as highly beneficial. The *AAR* generated on the announcement day (+1.04%) are the highest for all analyzed industry sub-samples and confirms the overall positive announcement effect that has been documented in prior research (see also table 1 in section 3.2). A comparison to previous studies specifically analyzing consumer services sponsors is unfortunately not possible because sponsorship effectiveness has not yet been analyzed from the industry perspective. A reason for the optimism on the side of the investors might indeed be the method of payment. Under the assumption that consumer service providers pay a large part of the agreed sponsorship fee as VIK such sponsors have a cost advantage over sponsors from other industries that might pay mostly in cash. This is because, for example, a hotel night is worth more to the sponsee than it costs the sponsor⁴². As a result, the true costs incurred by the consumer service sponsor might be only a fraction of the overall agreed upon sponsorship fee (this holds for the proportion that is paid not in cash, but as VIK). Consequently, the overall financial benefits net of all costs are positive for the sponsor, and even more so the higher the share of the fee that is paid as VIK. Again, it remains to future research to confirm this explanation regarding the effect of VIK payments on *ARs*. Nevertheless, the implications for corporate managers are twofold. First, sport sponsorship is a value-enhancing marketing activity for consumer service providers. Second, although not yet statistically proven, it seems that managers should maximize the share of the total sponsorship fee that is paid VIK as opposed to cash. From the viewpoint of sport managers, the results imply that they should insist on higher sponsorship fees when negotiating with consumer services companies. This can be achieved by explicitly increasing the asking price for the sponsorship rights or implicitly by challenging the underlying dollar value of VIK payments. Instead of a value perspective (How much is a hotel night worth to the sponsee?) one could use a cost

⁴² E.g., a hotel night might be worth \$150 to the sponsee (which is the regular price), but costs the sponsoring hotel only \$50. Thus, the true costs to the sponsor in this example are only 33% of the stated value.

perspective (How much does this hotel night cost the sponsor?) as a basis. The effect would be that for the same amount of VIK payments a sponsee would receive more free flights or hotel nights and thereby implicitly increasing the amount of the total sponsorship value.

The very low R^2 and the insignificance of the consumer services regression model shows that *CARs* cannot be explained with the characteristics from the theoretical framework. As a result, it is not possible to draw any conclusions about the determinants of abnormal returns for the consumer services sample. However, it might be possible that other factors that are not included in the model explain *CARs* (see also section 7.1.4).

To sum up, the reaction of investors to the announcement of sponsorship deals involving consumer services providers is very positive. Although none of the tested characteristics had a significant impact on returns, it can be speculated that consumer service sponsors paying a high share of the fee as VIK enjoy a cost advantage and generate higher returns than other sponsors. Sport managers should follow a cost perspective when negotiating the true value of VIK payments.

7.5.4 Telecommunication

7.5.4.1 Sample characteristics

A summary of the descriptive statistics for the sub-sample consisting of sponsors from the telecommunications industry ($n=45$) is provided in table 67. Regarding the deal-specific characteristics it should be noted that two thirds of the telecommunications sponsors opted for a sponsorship program promoting the firm name instead of a specific brand name. As it is also the case in other sub-samples the majority of deals (80%) are based on a newly signed contract between the sponsoring firm and the sponsee. More than half of the sponsorships (60%) in this sample have a multinational reach since the respective sponsees compete internationally. The average contract value is \$75.1 M with a median of only \$42.0 M. This gap as well as the high SD of \$124.6 M suggests that the sample includes some very expensive sponsorship deals which inflate the average deal value.

Table 67: Overview of variables including descriptive statistics (Telecommunication, n=45 observations); SD=standard deviation.

Variable	Scale	Mean	Median	SD	Min.	Max.
<i>Deal-specific factors</i>						
CORP	Dummy	0.67	1	0.48	0	1
NEW	Dummy	0.80	1	0.40	0	1
INTERNAT	Dummy	0.60	1	0.50	0	1
HOME	Dummy	0.60	1	0.50	0	1
YEAR	Metric	2005	2005	3	2000	2010
VALUE	Metric	75.1	42.0	124.6	3.7	750.0
<i>Sponsor-specific factors</i>						
SIZE	Metric	88.9	56.9	83.3	0.3	290.2
TECH	Dummy	1.0	1.0	0	1	1

This high dispersion is also reflected in the high value range from \$3.7 M to \$750.0 M. The average size of a sponsor from the telecommunication sector of \$88.9 B in total assets is twice as big as the size of the average consumer goods sponsor. Lastly, all telecommunications companies are coded as high tech firms by definition.

Table 28 depicts the frequency distributions of the telecommunications sample with respect to different sports, sponsorship types and regions. About half of the deals in this sample are either related to motor sports (31%) or soccer (22%). In terms of different types it is noteworthy that no sponsorship type emerges as being the typical type for telecommunications sponsors. However, deals with individual sport stars seem to be less relevant (4%). The majority of sponsoring telecommunication companies are from Europe (51%) and to a lesser extend from North America (27%).

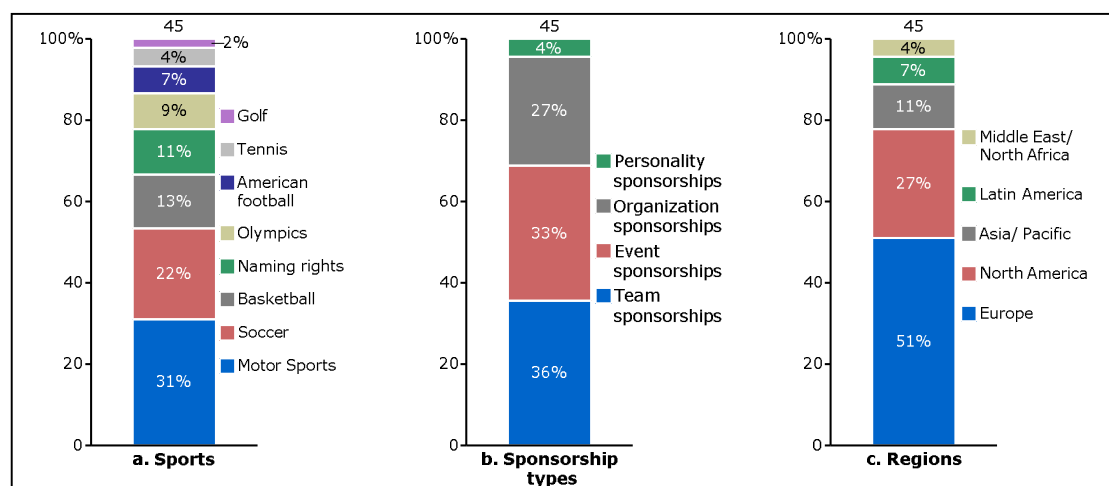


Figure 28: Frequency distributions of sport sponsorship announcements related to different sports, sponsorship types and regions (Telecommunications, n=45 observations).

7.5.4.2 Event study results

Table 68 provides a summary of the event study results for the share price impact of sponsorship deals announced by telecommunication companies. The AAR on the day of the announcement is positive (+0.46%) and significant ($p < 0.05$) suggesting a positive announcement effect of sponsorships involving firms from the telecommunications industry. Moreover, consistently positive and significant CAARs for all (but one) analyzed time periods around the official announcement (e.g. +1.20%, $p < 0.01$ for days -1 to +1 in panel B) also imply a positive cumulative announcement effect. Overall, the highly significant positive effects in absence of any sign of negative share price reactions provide statistical evidence that sponsorships by telecommunication companies generally impact ARs favorably.

Table 68: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (Telecommunications, $n=45$ observations). Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0.05%	-1.17	18 (40%)	-0.69
-2	-0.21%	-0.70	21 (47%)	-0.87
-1	0.85%	1.05	28 (62%)	1.71*
0	0.46%	2.37**	27 (60%)	1.68*
+1	-0.12%	0.01	22 (49%)	-0.32
+2	0.22%	0.33	26 (58%)	1.12
+3	0.05%	0.99	23 (51%)	0.51
<i>Panel B: Periods</i>				
-3 to +3	1.21%	1.86*	26 (58%)	1.76*
-2 to 0	1.10%	2.29**	28 (62%)	1.78*
-2 to +1	0.99%	2.31**	25 (56%)	1.50
-1 to 0	1.32%	2.85***	28 (62%)	2.27**
-1 to +1	1.20%	2.75***	28 (62%)	2.09**
0 to +1	0.35%	1.39	27 (60%)	1.41

7.5.4.3 Regression results

The findings from the regression analysis for the telecommunications model are presented in table 69. The results reveal that the factors INTERNAT and SIZE both have a significant negative impact on CARs. The negative influence of INTERNAT indicates that sponsorship deals with a focus on one specific country lead to more positive returns than deals having an international reach. Furthermore, the negative

SIZE effect implies that within the telecommunications industry it is the smaller sponsors that generate higher abnormal returns when announcing sponsorship agreements. The telecommunications model is overall significant ($p < 0.1$) and explains about 35% of the variance in CARs.

Table 69: Summary of regression results for CARs between $t = -3$ and $t = +3$ (Telecommunications model)
Note: *** $p < 0.01$; ** $p < 0.05$; * $p < 0.1$; SE=standard error; T=test statistic; p= p-value.

Factor	Coefficient	Robust SE	T	p
Constant	550.386	428.843	1.28	0.207
CORP	-0.669	1.290	-0.52	0.607
INTERNAT	-2.471	1.315	-1.88	0.068*
NEW	-1.643	1.451	-1.13	0.265
YEAR	-0.271	0.213	-1.27	0.211
VALUE	0.012	0.009	1.36	0.181
HOME	-1.712	1.145	-1.50	0.143
SIZE	-0.017	0.009	-1.87	0.069*
$R^2 = 0.346$; $F = 2.06$; $p = 0.073^*$; $n = 45$				

7.5.4.4 Discussion

The following section presents a discussion of the findings specific to the telecommunications sample. Because no other studies analyzing the effectiveness of sponsorships involving companies from the telecommunications sector are available no external comparisons are possible. Nevertheless, the results will be compared internally with other industry-specific samples from within this study. Regarding the sample characteristics it is striking that four out of five sponsorships are based on newly signed contracts. This high rate of new deals could indicate that telecommunications firms generally follow a one-contract sponsorship strategy. It can be speculated that the main objective of such a one-contract strategy is the creation of awareness rather than image improvement which is linked to credibility and thus requires an ongoing relationship between the sponsor and its sponsee (Cornwell et al., 2001). The consistency of a sponsorship program is important because any image enhancements tend to be of temporary nature that diminish once a sponsorship deal ended (Merbold, 1989). The comparatively high proportion of sponsorship deals having an international reach can be interpreted in a way that telecommunication companies use the sponsorship programs to increase awareness internationally. Over the last 20 years the telecommunication industry has been privatized and opened up for free market competitions in most

countries. As a result many telecommunications providers have expanded their business beyond the domestic markets and entered foreign markets for which sponsorship deals is a useful marketing vehicle to create international awareness. The average value of telecommunication deals is 50% higher than the overall average deal value, indicating that telecommunication sponsors generally opted for highly visible sponsorships that provide a good opportunity to increase overall awareness. The average sponsor from the telecommunications sector is twice as big as the average sponsor from the consumer goods sector. However, this inter-industry size difference is driven by the capital intensiveness of the telecommunications sector (e.g. heavy investments in landlines and wireless network infrastructure). The high share of European firms in this sample is a consequence of the number of different national telecommunications providers in Europe that evolved in most countries from the formerly state-owned companies whereas the number of providers in North America (Canada and USA) is naturally limited by the capital-intensiveness of the industry.

Capital markets viewed sport sponsorships involving telecommunication companies as positive return investment projects as reflected by the overall positive share price reaction and *ARs*. These results confirm the general tendency that sponsorship programs enhance the value of sponsoring firms (see table 1 in chapter 3.2). Compared to other industry branches within this study the registered *ARs* are on a similar level as for the consumer goods sample but reached only half of the *ARs* of sponsorship deals involving consumer service providers. Corporate managers should not be irritated by the previously mentioned comparatively high price level for telecommunications sponsorships as investors believe that the future benefits will outweigh initial costs. On the flip side, sport managers can use this line out argument to negotiate even higher sponsorship fees since telecommunication sponsors seem to pay a low price for expected future profits as reflected by the existence of positive *ARs*.

Furthermore, the analysis has shown that *ARs* are influenced by two characteristics. The negative effect of *INTERNAT* is in line with the previously stated expectations and also with the results of other sub-samples within this study (soccer, motor sports; consumer goods). The better performance of sponsorships having a national reach instead of a multi-country exposure suggests that investors prefer

programs that are focused on a specific country and target a specific market. A reason can be that the sponsorship reach should be aligned with the international footprint of a telecommunications sponsor and with its expansion strategy. If a sponsee competes in countries where the sponsor is not represented investors could see this as a sub-optimal sponsee selection and a waste of resources. This does not necessarily mean that all deals with international reach are inferior to national deals. However, corporate managers should clearly justify the sponsee selection in order to reduce the information asymmetry and to enable investors to fully understand the potential of a sponsorship program. The impact of information asymmetry on sponsorship effectiveness is a topic that should be addressed by future research. Moreover, the results indicated that SIZE had a negative impact on returns which supports the previously stated expectation as well as previous results (e.g. Clark et al., 2002; Samitas et al., 2008). An explanation for the negative size effect might be that the larger sponsors, such as the formerly state-owned telecommunications providers, already have high awareness scores that smaller providers are still lacking. As a result, smaller telecommunication sponsors have higher incremental gains from a sponsorship program than their larger, established counterparts.

To conclude, it is important to note that deals involving telecommunication firms are on average more expensive than deals with firms from other industry branches, but nevertheless such deals are still positive return projects that enhance firm value. As a result, sport managers should strive to achieve higher sponsorship fees when negotiating with telecommunications providers since the expected benefits for the sponsee warrants even higher prices. Corporate managers should keep in mind that investors view deals with international coverage more pessimistic than national deals and should consider disclosing more detailed information when announcing deals with international reach.

7.6 Results summary

This section provides a summary overview for the key results of all samples that were analyzed in this study including the overall sample as well as the sport specific, sponsorship type specific, region specific and industry specific sub-samples. First, table

70⁴³ presents the key findings for each sample regarding the event study analysis and the detection of abnormal returns following the announcement of sport sponsorships. The results of both types of analysis are displayed, for the single day effect as well as for the multi-day effect. Next, table 71 tabulates for all analyzed samples the significant characteristics that determine abnormal returns, categorized by a positive and a negative impact.

To sum up, the event study analysis reveals that the overall share price reaction to the announcement of sport sponsorship deals and the impact on ARs is positive. Thus, sport sponsorships increase the value of sponsoring firms. This finding holds for the overall sample as well as for most sub-samples. Only in a few sub-samples sport sponsorships have no impact on share prices (arena sponsoring, event sponsorships, personality sponsorships, financial services) or even impact share prices slightly negative (soccer, golf, tennis, Asia/ Pacific region). The regression analysis indicates that the characteristics determining abnormal returns differ between the analyzed models. However, it seems that the factors CORP, INTERNAT and SIZE have a negative effect on returns in many sub-samples.

⁴³ For reasons of efficiency and lucidity table 70 only lists the first day after the announcement showing a significant return (otherwise it shows the return on the announcement day) and period -1 to +1 in order to make results comparable. This period was chosen to account for early and late stock price reactions. If the return for -1 to +1 is not significant, the closest period with a significant return is listed (otherwise the return for -1 to +1 is shown).

Table 70: Summary of event study results across all analyzed samples; Sign.=Significance level of t_{BMP} with *** $p<0.01$, ** $p<0.05$ and * $p<0.1$ (green=significant positive effect, red=significant negative effect, blue=no significant effect).

Sample	Sample size	Single day effect			Multi day effect		
		Day	AAR	Sign.	Period	CAAR	Sign.
Panel A: Overall sample							
Overall	629	0	0.36%	***	-1 to +1	0.53%	***
Panel B: Sports							
Soccer	117	0	-0.21%	**	-1 to +1	0.04%	
Motor sports	120	0	0.58%	***	-1 to +1	0.77%	**
Golf	83	+2	-0.30%	*	-1 to +1	0.06%	
Olympics	65	0	0.64%	***	-1 to +1	1.20%	***
Tennis	62	+1	-0.43%	***	-1 to +2	-0.93%	*
Basketball	62	0	0.48%	***	-1 to +1	0.85%	***
Arenas	43	0	-0.03%		-1 to +1	0.16%	
Baseball	40	0	0.84%	***	-1 to +1	1.49%	***
American football	37	0	1.47%	*	-1 to +1	1.93%	**
Panel C: Sponsorship types							
Events	207	0	0.21%		-1 to +1	0.32%	
Organizations	170	0	0.39%	***	-1 to +1	0.46%	**
Teams	193	0	0.60%	***	-1 to +1	0.84%	***
Personalities	59	0	0.08%		-1 to +1	0.44%	
Panel C: Regions							
North America	305	0	0.46%	***	-1 to +1	0.83%	***
Europe	231	0	0.27%	**	-1 to +1	0.32%	*
Asia/ Pacific	81	+2	-0.32%	**	-3 to +3	-0.66%	*
Panel D: Industries							
Consumer goods	298	0	0.30%	***	-1 to +1	0.45%	***
Financial services	114	0	0.08%		-1 to +1	0.00%	
Consumer services	61	0	1.04%	***	-1 to +1	1.19%	**
Telecommunications	45	0	0.46%	**	-1 to +1	1.20%	***

Table 71: Summary of results from regression analysis across all analyzed models.

Sample	Significant factors: Positive	Significant factors: Negative	R ²
<i>Panel A: Overall sample</i>			
Overall	-	CORP	0.049
<i>Panel B: Sports</i>			
Soccer	-	INTERNAT; NEW; SIZE	0.140
Motor sports	NEW	INTERNAT	0.125
Golf	-	-	0.083
Olympics	-	CORP; YEAR	0.093
Tennis	INTERNAT	CORP	0.152
Basketball	-	CORP; VALUE; SIZE	0.343
Arenas	HOME; SIZE	-	0.252
Baseball	VALUE	HOME	0.150
American football	SIZE	-	0.123
<i>Panel C: Sponsorship types</i>			
Events	VALUE; TECH	SIZE	0.129
Organizations	-	-	0.044
Teams	-	-	0.031
Personalities	-	SIZE	0.070
<i>Panel C: Regions</i>			
North America	VALUE	-	0.036
Europe	-	CORP; SIZE	0.094
Asia/ Pacific	YEAR; VALUE	-	0.124
<i>Panel D: Industries</i>			
Consumer goods	-	CORP; INTERNAT	0.042
Financial services	-	SIZE	0.062
Consumer services	-	-	0.039
Telecommunications	-	INTERNAT; SIZE	0.346

8. Conclusion

The final chapter of this doctoral thesis provides a summary of the main findings of this research project (section 8.1) and also actionable recommendations for both sport managers as well as corporate managers involved with sport sponsorships (section 8.2). Lastly, future research directions are recommended based on the identified research deficits and as well as newly identified research topics in the context of this study (section 8.3).

8.1 Summary

Sponsorship in general and also sport sponsorship in specific has become a vital part of every major company's marketing strategy (e.g. Javalgi et al, 1994; Meenaghan, 1991). Over the last two decades sport sponsorship has gained a consistently increasing share of marketing budgets and today sport sponsorship constitutes a vital part of most firms' marketing communication mix, representing a global sport sponsoring budget of \$29 B in 2009 (PWC, 2010). In light of these significant investments made in sport sponsorships executives increasingly question the financial return of these marketing programs. Although there are some studies analyzing the financial effectiveness of sport sponsorships the literature review (see also section 3.4) reveals three main deficits in the research field of sport sponsorship effects on firm value, namely (1) lacking international focus with no dedicated analysis for different regions, (2) lacking sport-specific focus with no detailed analysis for different sports and (3) limited generalizability of previous results due to sample limitations regarding size and up-to-dateness. Thus, the main purpose of this study is to provide a comprehensive overview of the financial performance of sport sponsorship programs and the identification of key characteristics that might have an impact on the success of sponsorships by using a unique and recent dataset of worldwide sponsorship announcements, analyzing different sports, regions, sponsorship types and industries. The global dataset including 629 sponsorship announcements between 1999 and 2010 is to the author's best knowledge the largest one ever used in an effectiveness study of sport sponsorships. Event study methodology was used to assess the impact of sponsorship announcements on ARs

(difference between expected stock returns and actual observed stock returns) and thus on firm value, whereas regression analysis was employed to analyze which factors determine ARs following sport sponsorship announcements.

Generally in line with most prior research the event study results document an overall positive effect on stock returns as a result of official sponsorship announcements ($AAR=+0.36\%$ on the announcement day). Also the multi-day analysis of the cumulative sponsorship effect indicated positive share price reactions (e.g. $CAAR=+0.53\%$ for days -1 to +1), providing statistical evidence that sport sponsorship announcements positively impact the firm value of sponsoring firms for the overall sample across all sports. These positive unexpected returns imply that investors saw sponsorship deals as value creating investments with beneficial impact on future sales and profits of the sponsoring firm and that the marketing investments were generally considered to be positive NPV projects that enhanced firm value. However, the sub-sample analysis also shows that not all sponsorships are equal. Whereas the majority of the analyzed sub-samples also attest a significant positive sponsorship effect (motor sports, Olympics, basketball, baseball, American football; organization-, team sponsorships; North America, Europe; consumer goods, consumer services, telecommunications) there are also sub-groups for which no sponsorship effect (arena sponsoring; event-, personality sponsorships; financial services) or even a significant negative sponsorship effect was detected (soccer, golf, tennis; Asia/ Pacific).

The results of the overall regression analysis to identify potential factors determining ARs reveal that across all sports abnormal returns are significantly higher for corporate level deals (sponsorship promotes corporate name) than for brand level deals (sponsorship promotes specific brand name), indicating that investors might be sceptical about the ability of consumers to associate a sponsored company name with specific brands. Furthermore, more detailed sub-sample analysis suggests that sponsorship deals of smaller firms, high value deals, and national deals were found to have significantly higher abnormal returns than others.

This study has some limitations. The first limitation relates to the selection of sample firms. The selection process using a numerical cut-off value excluded smaller sponsorship deals (contract value < \$1.5 million). Thus, the results are primarily

applicable to large sponsorship deals. Second, the relatively low R^2 s of the regression models indicate that further variables might be relevant to explain abnormal returns. For example, the level of congruence between a sponsor and the sponsee was found to be a relevant factor impacting ARs (Cornwell et al., 2005; Pruitt et al., 2004). However, this variable was not included in the model because of the subjective character of what constitutes a congruent sponsorship. Whereas the diversity of the sample regarding regions, industries, sponsorship types, and sports was an advantage over past literature in terms of broader generalizability of event study results, it might be a disadvantage at this point due to a lack of clear universal explanatory variables. Nevertheless, previous studies reported similar values for R^2 of less than 0.12 (e.g., Clark et al., 2009; Cornwell et al., 2001; Mishra et al., 1997) indicating that the variance in abnormal returns is difficult to explain. Although the dataset is constructed from the universe of sponsorship announcements from around the globe, it is likely that sponsorship deals from the Asia/Pacific or Latin American region are underrepresented. This is because the data collection process was conducted in English and in German, and it might be the case that sponsorship deals from Asia/Pacific or Latin America were mainly announced in an Asian language or in Spanish and therefore did not appear in the research. Lastly, it should be mentioned that in some cases investors might be incapable of accurately interpreting a firm's complex marketing strategy (Srinivasan & Hanssens, 2009) and therefore imprecisely value the effect of sponsorship programs on expected cash flows and profits (Johnston, 2009). As a consequence, individual sponsorship announcements could lead to over- or under-reacting share prices. In addition, some investors could be influenced by certain biases. For example, the familiarity bias (Huberman, 2001) suggests that some investors tend to value sponsorship deals with sponsees they are personally familiar with more positive than unfamiliar deals. However, even if individual events in this study are affected by such an improper valuation it is unlikely to have an impact on the overall results since the analysis is carried out on the aggregated level across all firms in a specific sample.

8.2 Recommendations

Derived from the findings of this study, actionable recommendations for sport as well as corporate managers involved with sport sponsorships will be presented in the following section. The main implications of this research includes optimized price negotiations for sponsorship deals, overcoming information asymmetries between managers and investors and finding the right strategy for each sponsorship program, especially in terms of sponsorship level, reach and value.

The event study results and identified *ARs* can assist in optimizing upcoming negotiations of sponsorship fees. In general, positive *ARs* (overall sample; motor sports, Olympics, basketball, baseball, American football; organization-, team sponsorships; North America, Europe; consumer goods, consumer services, telecommunications) indicate that investors believe that sponsorship programs are overall positive return projects with expected future cash flows exceeding all costs related to the program. On one hand, this provides corporate managers with statistical proof that sport sponsorships create real economic value. Marketing managers should use this evidence of economic success when justifying past or future sponsorship deals in front of their superiors or investors. To sport managers on the other hand, the existence of positive *ARs* should be a warning sign. Since positive *ARs* signal that the expected pay-offs for a sponsoring firm outweigh the costs (e.g. sponsorship fees) the lion's share of the expected wealth gains from the sponsorship is captured by the sponsor. In other words, the sponsee sells its sponsorship rights too cheaply. Thus, in case of positive *ARs* sport managers should strive to achieve higher prices in upcoming negotiations, as prospective sponsors should be willing to pay more in light of the expected future cash flows. Although a perfectly fair price would theoretically imply that the expected future benefits equal the total sponsorship costs and *ARs* would be zero this must not be necessarily the optimal solution neither for the sponsor nor for the sponsee. The sponsor might need some level of positive returns to justify the sponsorship program internally or in front of shareholders. A sponsee might not want to risk deterring potential sponsors by too high asking prices for sponsorship rights. Overall, a small excess return for the sponsor might be a practicable compromise.

However, the sub-sample analysis also shows that not all sponsorships are equal. Some groups show a neutral sponsorship effect (arena sponsoring; event-, personality sponsorships; financial services). This implies for corporate and sport managers that sponsorships are generally signed at market-clearing prices (Clark et al., 2009) and sponsors pay a fair price for the expected benefits. Thus, sport managers should not attempt to increase price in the future, but rather hold prices constant in order to continue this stage of equilibrium.

In the case of a negative sponsorship effect (soccer, golf, tennis; Asia/ Pacific) investors believe that the expected future cash flows cannot justify the incurred sponsorship costs and therefore deem the sponsorship as a negative return project. Corporate managers have two levers to improve this perceived cost/ benefit ratio. First, they could reduce the costs by attempting to negotiate lower prices for future sponsorship deals. To a certain extent sport managers could be willing to accept lower fees in the case of negative ARs since the current price seems to be above fair price level and sport managers might not want to risk a potential longer-term relationship with a sponsor. Second, sport and corporate managers should jointly work to improve the expected benefits by increasing the overall attractiveness of a sponsorship program. One approach could be to customize each sponsorship campaign based on the specific core attributes of a sponsee. Sometimes reach is not the core attribute due to limited media attention and overall popularity for some sports (e.g. golf, tennis). Thus, other positive impact factors than awareness should be in the focus of a sponsorship program, such as improving corporate identity and employee motivation or customer acquisition and retention. Sport and corporate managers could create customized hospitality programs for employees and (potential) customers to achieve these goals and to maximize the value of the sponsorship program.

Furthermore, it is important to avoid investor skepticism by overcoming potential information asymmetries between corporate managers and outside stakeholders (Clark et al., 2002). The true or hidden value of a sponsorship deal might not always be obvious for investors and to other stakeholders. The risk is that investors might view a sponsorship deal as motivated by management ego to gain personal benefits (e.g. VIP seats; Crimmins & Horn, 1996) rather than by economic reasons. Thus, corporate

managers should enrich the official sponsorship announcements with additional details about the expected future benefits and how these are planned to be realized in order to reduce investor skepticism.

Moreover, it is important for corporate managers to find the optimal strategy for each sponsorship program, especially in terms of sponsorship level, reach and value. Based on the results of this study investors prefer brand level deals promoting a specific brand, high value deals and deals that have a rather national focus on a specific country. Thus, corporate managers should keep in mind these deal-specific characteristics when selecting prospective sponsees. Nevertheless, it is important to emphasize that the sub-sample analysis indicated sport-specific differences which to a certain extent limit the validity of overarching statements regarding a dominating sponsorship strategy in terms of deal-specific characteristics (see section 7.2 for sport-specific discussions).

To conclude, corporate and sport managers should regard the results of this study as an indication of “price-level fairness” of sport sponsorship deals. A positive sponsorship effect signals that deals might be generally underpriced, and sponsorship fees should increase accordingly. A negative sponsorship effect indicates that deals might be generally overpriced given the expected future pay-offs. Either the sponsorship fees should decrease or the attractiveness of the sponsorship program should be improved. A neutral sponsorship effect signals that prices for sponsorship rights seem to be at a fair level. Moreover, it can be recommended to enrich official sponsorship announcements with additional details about the planned execution support and expected future benefits in order to overcome potential information asymmetries between managers and investors. Lastly, it is important for corporate managers to find the optimal strategy for each sponsorship program, especially in terms of sponsorship level, reach and value.

8.3 Future research directions

This dissertation project contributes to further closing the previously identified research deficits in the field of analyzing financial sponsorship effectiveness. However, this study also highlights the need for future research in this area which could take a number of directions. One research stream could focus on identifying further determinants for

abnormal returns and thereby improving the explanatory power of regression models explaining *ARs*. As already mentioned before (see section 7.1.4) the current model in this study could be enlarged by adding additional variables such as the level of congruence (Pruitt et al, 2004) or the sponsor's market share. Furthermore, a variable for contract length could be included in the analysis (Johnston, 2010) assuming that this information can be gathered, maybe by interviewing sport and corporate managers involved with sport sponsorships. Future research should also further investigate the reasons why sponsorships with national reach generated higher *ARs* than deals with international reach using the speculated mismatch between the sponsors geographic target group and the sponsorship reach as a starting point. Next, the initial finding of the negative sponsorship effect for Asia/ Pacific sponsors warrants further research on regional differences of sponsorship effectiveness. Similarly, the Latin American region should be in the focus of analyzing the sponsorship effect in the future since this region is underrepresented in this study. However, the data collection process should also be conducted in Spanish in order to identify a sufficient amount of sponsorship deals. Another interesting topic for future research deals with the optimal price level for sponsorships. Although a perfectly fair price would theoretically imply that the expected future benefits equal the total sponsorship costs and *ARs* would be zero this must not be necessarily the optimal solution. A sponsor might need some level of positive return to justify the sponsorship program internally and a sponsee might not want to risk deterring potential sponsors by too high asking prices. Future research could investigate if a small excess return for the sponsor might be a practicable compromise and constitutes a stable price equilibrium. Furthermore, the firm value impact of sponsorship withdrawals should be explored; especially in times where sponsoring firms face challenges following scandals such as Tiger Woods or Michael Phelps. Lastly, future research could replicate the current study for the universe of small sponsorships (total deal value < \$1.5 M) in order to gain insights about the financial performance and determinants for financial success of smaller scale deals.

9. References

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10. Appendix

Appendix A: Overall sponsorship sample

Table 72: Overall sponsorship sample (n=629) inclusive announcement dates.

Sport	Sponsor	Sponsee	Announcement Date
Soccer	ABN AMRO	Ajax Amsterdam	23.08.2004
Soccer	Absa	Absa Premier League	27.09.2007
Soccer	Absa	South African Football Association	27.08.2007
Soccer	adidas	AC Milan	14.01.2008
Soccer	adidas	Benfica	03.01.2003
Soccer	adidas	Chelsea F.C.	22.10.2010
Soccer	adidas	EURO 2012 & 2016	21.09.2009
Soccer	adidas	Fédération Française de Football (FFF)	07.06.2004
Soccer	adidas	Japan Football Association	26.05.2006
Soccer	adidas	Mexican Soccer Federation	10.08.2010
Soccer	adidas	Mexican Soccer Federation	04.10.2006
Soccer	adidas	MLS	30.08.2010
Soccer	adidas	MLS	05.10.2004
Soccer	adidas	Newcastle United	10.12.2003
Soccer	adidas	Olympique Lyonnais	10.08.2009
Soccer	adidas	Real Madrid	01.04.2004
Soccer	adidas	Russian Football Union	08.09.2008
Soccer	adidas	UEFA official ball	24.07.2009
Soccer	AEGON	Ajax Amsterdam	16.10.2007
Soccer	AIG	Manchester United	05.04.2006
Soccer	AmBev	Brazilian Football Federation	24.05.2001
Soccer	Amstel	Champions League	06.02.2003
Soccer	Anheuser-Busch	FIFA 2007-2014	27.04.2006
Soccer	AON	Manchester United	02.06.2009
Soccer	Autonomy	Tottenham Hotspurs	08.07.2010
Soccer	Barclaycard	FA Premiership	01.05.2001
Soccer	Barclaycard	Manchester United	14.03.2003
Soccer	Barclays	Barclays Premiership	23.10.2009
Soccer	Barclays	Barclays Premiership	27.09.2007
Soccer	Barclays	Barclays Premiership	03.10.2003
Soccer	Basic Italia	A.S. Roma	16.07.2007
Soccer	BBVA	Liga BBVA	03.06.2008
Soccer	BNP Paribas Fortis	RSC Anderlecht	14.12.2009
Soccer	Canon	EURO 2008	18.07.2007
Soccer	Carling	Carling Cup	18.12.2008

Sport	Sponsor	Sponsee	Announcement Date
Soccer	Carling	Celtic and Rangers joint sponsorship	02.01.2003
Soccer	Carling	League Cup title	03.11.2005
Soccer	Carlsberg	EURO 2004	21.03.2002
Soccer	Carlsberg	FA	08.09.2009
Soccer	Carlsberg	Liverpool	31.05.2005
Soccer	Carlsberg	Liverpool	08.08.2002
Soccer	Carlsberg	UEFA	24.08.2006
Soccer	Carrefour	Fédération Française de Football (FFF)	06.10.2005
Soccer	Castle Lager	South African Football Association	27.08.2007
Soccer	Castrol	EURO 2008 Global Event Sponsor	21.11.2006
Soccer	Castrol	FIFA World Cup Sponsor until 2014	30.06.2008
Soccer	Citibank	Werder Bremen	18.05.2007
Soccer	Coca-Cola	Coca-Cola Football League	12.03.2007
Soccer	Coca-Cola	Coca-Cola Football League	27.02.2004
Soccer	Coca-Cola	EURO 2012 & 2016	22.02.2010
Soccer	Coca-Cola	FIFA sponsor 2006-2022	22.11.2005
Soccer	Coca-Cola	Pele	06.08.2001
Soccer	Continental	EURO 2008 Global Event Sponsor	26.01.2006
Soccer	Continental	FIFA World Cup 2014	24.02.2010
Soccer	Continental	MLS	14.01.2010
Soccer	Deutsche Telekom	Bayern Munich	12.07.2007
Soccer	E.ON	Borussia Dortmund	16.01.2002
Soccer	E.ON	FA Cup	03.02.2006
Soccer	First National Bank	FIFA World Cup 2010	06.07.2006
Soccer	Ford	Champions League	20.02.2006
Soccer	Ford	Champions League	20.12.2002
Soccer	Ford	Champions League	14.12.1999
Soccer	Gazprom Neft	CSKA Moscow	17.03.2004
Soccer	Heineken	Champions League	19.05.2008
Soccer	Herbalife	Los Angeles Galaxy	23.03.2007
Soccer	Hublot	FIFA World Cup 2010 & 2014	12.04.2010
Soccer	Hutchison 3G	Premier League Official Mobile Service Partner	02.07.2001
Soccer	Hyundai	EURO 2008 Eurotop Sponsor	24.04.2007
Soccer	Hyundai	EURO 2012 & 2016	01.03.2010
Soccer	Hyundai	FIFA Official car sponsor	08.02.1999
Soccer	ING	Holland	06.10.2009

Sport	Sponsor	Sponsee	Announcement Date
Soccer	JVC	EURO 2008 Eurotop Sponsor	07.06.2005
Soccer	Kia	FIFA Partner 2007-2014	01.03.2005
Soccer	McDonald's	EURO 2012 & 2016	26.05.2010
Soccer	McDonald's	FA Official Supporter	11.04.2002
Soccer	MTN	FIFA World Cup 2010	13.07.2006
Soccer	Nike	Arsenal London	08.08.2003
Soccer	Nike	Barcelona	27.10.2006
Soccer	Nike	Barcelona	14.02.2002
Soccer	Nike	Borussia Dortmund	01.08.2003
Soccer	Nike	Celtic	21.09.2004
Soccer	Nike	Dutch Football Federation (KNVB)	01.06.2004
Soccer	Nike	Fédération Française de Football (FFF)	22.02.2008
Soccer	Nike	Korean Football Association	23.10.2007
Soccer	Nike	Manchester United	28.09.2000
Soccer	Nike	PSV Eindhoven	06.01.2009
Soccer	Nike	Werder Bremen	18.11.2008
Soccer	Northern Rock	Newcastle United	20.04.2004
Soccer	Novotel	Olympique Lyonnais	25.04.2006
Soccer	Oi (Telemar)	FIFA World Cup 2014	22.03.2010
Soccer	Pepsi	FA Partners	17.03.2003
Soccer	Philips	FIFA World Cup 2006	14.11.2002
Soccer	Puma	Italian Football Federation	27.03.2007
Soccer	Puma	Italian Football Federation	06.12.2002
Soccer	Puma	Lazio	08.11.2000
Soccer	Puma	Tottenham Hotspur	10.02.2006
Soccer	Reebok	Liverpool	05.02.2003
Soccer	Samsung	Chelsea F.C. (from June 2005)	25.04.2005
Soccer	Saudi Telecom	Manchester United	18.08.2008
Soccer	Seara	FIFA World Cup 2010 & 2014	12.04.2010
Soccer	Seat	UEFA Europa League	10.09.2009
Soccer	Sharp	Champions League	03.09.2003
Soccer	Siemens	Real Madrid	16.07.2002
Soccer	Sony	FIFA Partner from 2007 to 2014	06.04.2005
Soccer	Sony PlayStation	Champions League	28.08.2008
Soccer	Telkom SA	FIFA World Cup 2010	07.08.2007
Soccer	Thomas Cook	Manchester City	26.06.2008
Soccer	T-Mobile	Bayern Munich	04.03.2002
Soccer	Umbro	Football Association of Ireland	02.11.2006
Soccer	Umbro	Olympique Lyonnais	02.05.2007

Sport	Sponsor	Sponsee	Announcement Date
Soccer	UniCredit	Champions League	14.01.2009
Soccer	Vodafone	Champions League	23.11.2005
Soccer	Vodafone	Manchester United	01.12.2003
Soccer	Volkswagen	Brazilian Football Federation	27.11.2009
Soccer	X Box	Seattle Sounders FC	28.05.2008
Soccer	Yingli Green Energy	FIFA World Cup 2010	03.02.2010
Soccer	Zon	Liga Zon Sagres	05.07.2010
Motor Sports	3M	NASCAR Officially Licensed Products	10.09.2010
Motor Sports	Acer	Ferrari	20.01.2006
Motor Sports	Acer	Prost Grand Prix	22.02.2001
Motor Sports	Aldar Properties	Spyker	15.03.2007
Motor Sports	Alice	Alice Team	01.11.2007
Motor Sports	Alice	Ferrari	24.05.2006
Motor Sports	Allianz	Formula One	23.03.2009
Motor Sports	Allianz	Williams	18.05.2000
Motor Sports	AMD	Ferrari	06.02.2002
Motor Sports	AMD	NASCAR Official Technology Partner	06.10.2005
Motor Sports	AT&T	Williams	20.10.2006
Motor Sports	Bombardier Inc.	Indianapolis Motor Speedway	12.03.2002
Motor Sports	Budweiser	Dale Earnhardt Jr.	10.03.2004
Motor Sports	Budweiser	Richard Childress Racing	11.08.2010
Motor Sports	Budweiser	Williams	17.07.2003
Motor Sports	Burger King	Stewart-Haas Racing	21.01.2009
Motor Sports	Camel	Camel Yamaha MotoGP Team	09.01.2006
Motor Sports	Checkers Drive-In Restaurants	Indianapolis 500 and NASCAR's Brickyard 400	08.02.2005
Motor Sports	Cintas Corporation	Joe Gibbs Racing	02.11.2000
Motor Sports	CitiFinancial	Roush Fenway Racing	23.01.2008
Motor Sports	Coca-Cola	NASCAR	07.12.2007
Motor Sports	Coca-Cola	Speedway Motorsports tracks	05.03.2010
Motor Sports	Coors Light	NASCAR official beer	25.09.2007
Motor Sports	Craftsman	NASCAR Official Tools	26.01.2009
Motor Sports	Credit Suisse	Sauber	14.10.2003
Motor Sports	Credit Suisse	Sauber	17.01.2001
Motor Sports	Crown Royal	Roush Racing NASCAR team	07.11.2005
Motor Sports	Crown Royal	Roush Racing NASCAR team	10.11.2004
Motor Sports	Crown Royal	The Crown Royal 400	18.04.2006
Motor Sports	Dell	BMW Sauber	05.05.2006
Motor Sports	Dell	Lotus	09.07.2010

Sport	Sponsor	Sponsee	Announcement Date
Motor Sports	Delphi Automotive Systems	Hendricks Motorsports in the Winston Cup Series	31.10.2000
Motor Sports	Delphi Automotive Systems	Scot Sharp IRL team	30.01.2002
Motor Sports	Denso	Toyota	24.02.2005
Motor Sports	DHL	DHL Jordan-Honda F1 team	22.02.2002
Motor Sports	DHL	Formula One "official logistic partner"	12.05.2004
Motor Sports	DIRECTV	IndyCar Series	03.04.2008
Motor Sports	Domino's Pizza	Michael Waltrip Racing NASCAR 2007	19.06.2006
Motor Sports	Domino's Pizza	NASCAR Official Pizza	09.08.2005
Motor Sports	DuPont	Jeff Gordon	28.10.2010
Motor Sports	Duracell	NASCAR	11.02.2004
Motor Sports	EDS	Jaguar Racing	14.02.2002
Motor Sports	Esso	Toyota	05.02.2001
Motor Sports	ExxonMobil	McLaren	28.06.2006
Motor Sports	ExxonMobil	NASCAR	22.01.2009
Motor Sports	FedEx	Joe Gibbs Racing	17.06.2004
Motor Sports	FedEx	Williams	25.02.2002
Motor Sports	Fiat	Yamaha	04.11.2008
Motor Sports	Fiat	Yamaha	02.02.2007
Motor Sports	Ford	Jordan Grand Prix	19.08.2002
Motor Sports	Fortuna	Yamaha	04.11.2002
Motor Sports	Foster's	Australian Grand Prix	23.01.2001
Motor Sports	Foster's	British Grand Prix title sponsor	07.03.2000
Motor Sports	Gatorade	NASCAR properties until 2008	27.09.2002
Motor Sports	Generali	Ducati	27.05.2009
Motor Sports	Gillette	NASCAR sponsor, shaving, oral care and battery products	14.11.2003
Motor Sports	Home Depot	Joe Gibbs Racing NASCAR team	26.09.2003
Motor Sports	Home123 Corporation	NASCAR Official Mortgage Company	20.04.2005
Motor Sports	HSBC	Jaguar Racing	10.07.2001
Motor Sports	HSBC	Shanghai Grand Prix	09.03.2004
Motor Sports	Infineon Technologies	Jordan Grand Prix	16.01.2001
Motor Sports	ING	ING Australian Grand Prix	01.11.2006
Motor Sports	ING	ING Belgian Grand Prix	12.06.2007
Motor Sports	ING	ING Hungarian Grand Prix 2008	22.01.2008
Motor Sports	ING	Renault	05.10.2006
Motor Sports	Intel	BMW Sauber	15.12.2005

Sport	Sponsor	Sponsee	Announcement Date
Motor Sports	Izod	IndyCar Series	04.11.2009
Motor Sports	Jack Daniel's	Richard Childress Racing (RCR) NASCAR team	03.12.2004
Motor Sports	Johnnie Walker	McLaren	13.12.2004
Motor Sports	Lenovo	McLaren	17.12.2008
Motor Sports	Lenovo	Williams	02.02.2007
Motor Sports	LG Electronics	Formula One	27.11.2008
Motor Sports	Marlboro	Ducati 2003 -2006	16.09.2002
Motor Sports	Marlboro	Ferrari 2001-2006	22.02.2001
Motor Sports	Marlboro	Ferrari 2007-2012	07.09.2005
Motor Sports	Marlboro	Team Marlboro Peugeot Total	04.09.2002
Motor Sports	Mild Seven	Renault	20.01.2003
Motor Sports	Mobil 1	Stewart-Haas Racing	11.10.2010
Motor Sports	Motorola	Danica Patrick	08.09.2006
Motor Sports	Nextel	NASCAR Nextel Cup Series	17.06.2003
Motor Sports	NiQuitin CQ	Williams	15.04.2003
Motor Sports	NTT DoCoMo	Renault	30.12.2003
Motor Sports	Office Depot	NASCAR Office Products Partner	03.01.2005
Motor Sports	Office Depot	Stewart-Haas Racing	23.07.2008
Motor Sports	Old Spice	Stewart-Haas Racing	23.07.2008
Motor Sports	Orange	Arrows Team	03.03.2000
Motor Sports	Panasonic	Toyota	15.01.2009
Motor Sports	Panasonic	Toyota	07.10.2005
Motor Sports	Panasonic	Toyota	03.07.2001
Motor Sports	Pizza Hut	NASCAR 5 races 2005 title sponsor	22.04.2005
Motor Sports	Powerade	NASCAR	02.05.2002
Motor Sports	Quaker State	Hendrick Motorsports	06.09.2010
Motor Sports	Reebok	Lewis Hamilton	14.05.2008
Motor Sports	Repsol	Honda team in Moto GP	31.07.2007
Motor Sports	Royal Bank of Scotland	Williams	07.01.2005
Motor Sports	SanDisk Corporation	Ducati	17.01.2007
Motor Sports	Santander	Ferrari	09.09.2009
Motor Sports	Santander	McLaren	01.11.2006
Motor Sports	SAP	United States Grand Prix	02.06.2000
Motor Sports	Shell	Ferrari	25.03.2010
Motor Sports	Shell	Ferrari	04.05.2005
Motor Sports	Shell	Ferrari	20.04.2000
Motor Sports	Shell	Richard Childress Racing	09.10.2006
Motor Sports	Siemens	Global Partner Formula One	30.04.2003

Sport	Sponsor	Sponsee	Announcement Date
Motor Sports	SingTel	Formula 1 SingTel Singapore Grand Prix	27.10.2010
Motor Sports	SingTel	Formula 1 SingTel Singapore Grand Prix	16.11.2007
Motor Sports	Sunoco	NASCAR	14.08.2003
Motor Sports	SunTrust Bank	NASCAR Official Bank	21.06.2004
Motor Sports	Telefonica	Renault	05.01.2004
Motor Sports	Telmex	Sauber	09.09.2010
Motor Sports	Texas Instruments	Troy Aikman and Roger Staubach NASCAR team	16.08.2005
Motor Sports	Tide	PPI Motorsports NASCAR Nextel Cup team	13.10.2003
Motor Sports	Toyota	AMA Motocross Championship	21.11.2005
Motor Sports	Toyota	Toyota Grand Prix of Long Beach	03.08.2005
Motor Sports	T-Systems	BMW Sauber	11.01.2008
Motor Sports	UBS	Global Partner Formula One	30.08.2010
Motor Sports	UPS	Dale Jarrett	17.11.2000
Motor Sports	Vodafone	Ferrari	16.12.2004
Motor Sports	Vodafone	Vodafone McLaren Mercedes from 2007	14.12.2005
Motor Sports	Yahoo!	Prost Grand Prix	02.02.2000
Golf	Accenture	Tiger Woods	03.10.2003
Golf	Administaff	PGA Champions Tour in Houston	14.04.2004
Golf	American Express	American Express Championship and World Golf Championship	12.08.2002
Golf	Anheuser-Busch	PGA Tour	13.02.2008
Golf	AT&T	Title sponsor Pebble Beach Pro-Am PGA event	04.02.2003
Golf	Ballantines	Ballantine's Championship	03.07.2007
Golf	Bank of America	Colonial PGA Tour Stop Fort Worth Texas	20.05.2002
Golf	Barclays	Barclays Classic	12.10.2004
Golf	Barclays	Barclays Scottish Open European PGA event	19.02.2007
Golf	Barclays	Barclays Scottish Open European PGA event	05.03.2002
Golf	Barclays	Singapore Open	02.11.2009
Golf	BearingPoint	Phil Mickelson	15.09.2004
Golf	BMW	BMW Championship	19.06.2006

Sport	Sponsor	Sponsee	Announcement Date
Golf	BMW	BMW Championship	17.12.2009
Golf	BMW	BMW International Open in Eichenried	14.04.2010
Golf	BMW	European PGA Championship event at Wentworth	17.01.2005
Golf	BMW	PGA Tour Europe	26.05.2010
Golf	Bridgestone	World Golf Championships title sponsor from 2006	19.08.2005
Golf	Buick	Tiger Woods	11.02.2004
Golf	Buick	Tiger Woods	23.11.1999
Golf	Cadburys	Cadburys Schweppes PGA Australian Championship	24.11.2003
Golf	Callaway	Annika Sorenstam	31.03.2005
Golf	Callaway	PGA of America	25.07.2002
Golf	Callaway	Phil Mickelson	07.09.2004
Golf	Charles Schwab & Co.	Official Investment Firm PGA Tour & Champions Tour	27.10.2003
Golf	Chevron	Chevron World Challenge	03.04.2008
Golf	Citi	Presidents Cup	08.10.2008
Golf	Coca-Cola	Official Soft Drink PGA Tour, Senior PGA & Buy.ComTour	14.10.2002
Golf	Coca-Cola	THE TOUR Championship presented by Coca-Cola	21.03.2005
Golf	Constellation Energy	The Constellation Energy Senior Players Championship 2006	31.01.2006
Golf	Constellation Energy Group	Constellation Energy Group Classic	04.12.2002
Golf	Crestor	PGA Tour	05.01.2004
Golf	Crowne Plaza	PGA Tour Colonial event in Fort Worth	25.07.2006
Golf	Deutsche Bank	Players' Championship of Europe	22.09.2004
Golf	Dow Chemicals	PGA Tour "Official Chemistry Company"	08.09.2008
Golf	Evian	Ladies European Tour	04.05.2000
Golf	FedEx	Official Shipping Company of the PGA and PGA Senior Tour	26.06.2002
Golf	Ford	Ford Doral PGA Event	01.10.2002
Golf	HSBC	Abu Dhabi HSBC Golf Championship	22.09.2010

Sport	Sponsor	Sponsee	Announcement Date
Golf	HSBC	World Matchplay Championship	20.03.2003
Golf	Humana Inc.	PGA Tour. Official Health Insurance Sponsor	14.02.2005
Golf	IBM	United States Golf Association (USGA)	28.04.2008
Golf	John Deere	John Deere Classic	10.02.2003
Golf	John Deere	John Deere Classic	30.11.2009
Golf	Kemper Insurance	Kemper Insurance Open	13.05.2002
Golf	Kia	Michelle Wie	10.02.2010
Golf	Kodak	PGA Tour	10.12.2007
Golf	Lloyds TSB	Golf-team Faldo, Montgomery. Woosnam, Davies	19.12.2002
Golf	McDonald's	Michelle Wie	22.03.2010
Golf	Mercedes USA	PGA event Hawaii	22.02.2006
Golf	Mitsubishi Electric	PGA Tour	16.04.2007
Golf	Nike	Tiger Woods	15.09.2000
Golf	Nissan	Nissan Open	20.02.2006
Golf	Nissan	Nissan Open	22.11.1999
Golf	Nordea	Scandinavian Masters	22.10.2009
Golf	Northern Trust	PGA Tour event Los Angeles	15.10.2007
Golf	Omega	Dubai Desert Classic	05.10.2009
Golf	Omega	Mission Hills World Cup	30.01.2007
Golf	Pepsi	Official soft drink PGA of America.	19.02.2003
Golf	Royal Bank of Canada	Canadian Open	01.11.2007
Golf	Royal Bank of Canada	PGA Tour	28.01.2010
Golf	Royal Bank of Scotland	US PGA Championship	30.07.2007
Golf	SAP	Ernie Els	19.12.2005
Golf	SAP	Ernie Els	09.12.2002
Golf	Shell	Shell Houston Open PGA Tour	19.04.2006
Golf	Sony	Sony PGA Tour Hawaii	14.01.2002
Golf	TAG Heuer	Tiger Woods	07.10.2002
Golf	Taylormade	Sergio Garcia	09.10.2002
Golf	Titleist	Ernie Els	08.01.2003
Golf	Toshiba	Toshiba Senior Classic PGA Champions Tour Newport Beach	21.03.2003
Golf	Travelers Insurance	PGA Travelers Championship in Connecticut	12.02.2009
Golf	UBS	UBS Hong Kong Open 2005	07.06.2005

Sport	Sponsor	Sponsee	Announcement Date
Golf	Unisys	Australian PGA Tour	07.06.2002
Golf	UPS	European PGA	24.11.2008
Golf	US Bank	US Bank Greater Milwaukee Open PGA event	31.03.2004
Golf	Valero Energy	Valero Energy Texas Open, PGA Tour event	26.09.2002
Golf	Walt Disney Company	Tiger Woods	11.04.2001
Golf	Waste Management	Waste Management Phoenix Open	09.12.2009
Golf	Wells Fargo	Charlotte PGA event	03.08.2010
Golf	Wyndham	PGA Stop Tour tournament	17.08.2010
Golf	Xerox	Presenting Sponsor PGA tour Phoenix Open	30.10.2002
Golf	Zurich Financial Services	Zurich Classic of New Orleans	02.07.2007
Golf	Zurich Financial Services	Zurich Classic of New Orleans	21.04.2009
Olympics	Acer	Olympics TOP sponsor 2009-2012	06.12.2007
Olympics	Adecco	London Olympics 2012 Tier Two sponsor	14.01.2009
Olympics	adidas	Australian Olympic Committee	21.09.2005
Olympics	adidas	London Olympics 2012 Tier One sponsor	19.09.2007
Olympics	adidas	Olympic Games Beijing 2008 Official Sportswear Partner	24.01.2005
Olympics	Aeroflot	Sochi 2014 Winter Olympic Games	19.08.2009
Olympics	Alpha Bank	Olympic Games 2004 Athens	08.02.2001
Olympics	Anheuser-Busch	Olympic Games Beijing 2008 International beer sponsor 2008 Olympic Games	28.09.2004
Olympics	Anta	Chinese Olympic Committee	23.06.2009
Olympics	ArcelorMittal	London Olympics 2012 Tier Two sponsor	01.04.2010
Olympics	Asics	Olympic Winter Games 2006 Turin	09.07.2003
Olympics	Athinaiki Breweries	Olympic Games 2004 Athens	08.02.2001
Olympics	Atos Origin	TOP 2012-2016	25.05.2009
Olympics	Bank of America	United States Olympic Committee	14.05.2004

Sport	Sponsor	Sponsee	Announcement Date
Olympics	Bell Canada	Vancouver 2010 Winter Olympic Games	18.10.2004
Olympics	BHP Billiton	Olympic Games Beijing 2008 Official medals sponsor	09.12.2005
Olympics	BMW	London Olympics 2012 Tier One sponsor	18.11.2009
Olympics	BMW	United States Olympic Committee	01.06.2010
Olympics	BP	London Olympics 2012 Tier One sponsor	03.07.2008
Olympics	BP	United States Olympic Committee	15.02.2010
Olympics	BT (British Telecommunications)	London Olympics 2012 Tier One sponsor	05.03.2008
Olympics	Cadbury	London Olympics 2012 Tier Two sponsor	20.10.2008
Olympics	Canadian Pacific Railway	Vancouver 2010 Winter Olympic Games	24.01.2007
Olympics	CBS Outdoor	London Olympics 2012 Tier Three sponsor	02.07.2010
Olympics	Cisco	London Olympics 2012 Tier Two sponsor	13.07.2009
Olympics	Coca-Cola	Olympics to 2020	01.08.2005
Olympics	Coca-Cola	TOP sponsor through to 2008	19.11.2002
Olympics	Dow Chemicals	IOC 2010-2020	13.07.2010
Olympics	Eurostar	London Olympics 2012 Tier Three sponsor	12.05.2010
Olympics	Gateway	Olympic Games 2002 Salt Lake City 2002 Winter Olympic Games, Salt Lake City	04.11.1999
Olympics	GE	TOP 2005-2008 and 2009-2012	06.06.2003
Olympics	GlaxoSmithKline	London Olympics 2012 Tier Three sponsor	01.12.2009
Olympics	Holiday Inn	London Olympics 2012 Tier Three sponsor	01.06.2009
Olympics	Hyundai	Olympic Games 2004 Athens Organising Committee	13.08.2004
Olympics	John Hancock	Olympic TOP sponsor 2004-2008	14.02.2002
Olympics	Johnson & Johnson	Olympic Games Beijing 2008 & Turin Winter Olympics	26.07.2005
Olympics	Kodak	Olympic Games	16.03.2000
Olympics	Lloyds TSB	London Olympics 2012 Tier One sponsor	15.03.2007

Sport	Sponsor	Sponsee	Announcement Date
Olympics	McCann Erickson	London Olympics 2012 Tier Three sponsor	29.04.2009
Olympics	McDonald's	Olympic Games 2004 Athens	06.07.2000
Olympics	McDonald's	TOP sponsorship to 2012	25.02.2004
Olympics	Monster.com	Olympic Games 2002 Salt Lake City	18.01.2000
Olympics	Next	London Olympics 2012 Tier Three sponsor	19.03.2010
Olympics	Nike	US Olympic and Paralympic teams	10.04.2008
Olympics	Omega	IOC 2010-2020	25.09.2009
Olympics	Panasonic	TOP sponsor	07.08.2002
Olympics	Petro-Canada	Vancouver 2010 Winter Olympic Games	06.06.2005
Olympics	Procter & Gamble	IOC 2010-2014	23.07.2010
Olympics	Procter & Gamble	U.S.team in Vancouver 2010 & London 2012.	07.09.2009
Olympics	Rona	Vancouver 2010 Winter Olympic Games	05.05.2005
Olympics	Rosneft	Sochi 2014 Winter Olympic Games	25.02.2009
Olympics	Rostelecom	Sochi 2014 Winter Olympic Games	04.02.2009
Olympics	Sainsbury's	2012 London Paralympic Games	04.05.2010
Olympics	Samsung	Partner Wireless Communication Equipment	23.10.2002
Olympics	Samsung	Partner Wireless Communication Equipment	23.04.2007
Olympics	Sinopec (China Petroleum & Chemical Corp)	Olympic Games Beijing 2008	11.10.2004
Olympics	Sohu.com	Olympic Games Beijing 2008	07.11.2005
Olympics	Telecom Italia	Turin Winter Olympics 2006 Official telecommunications supplier	15.06.2004
Olympics	Thomas Cook	London Olympics 2012 Tier Two sponsor	20.10.2009
Olympics	Ticketmaster	London Olympics 2012 Tier Three sponsor	23.07.2009
Olympics	Trident	London Olympics 2012 Tier Three sponsor	11.03.2009
Olympics	Tsingtao	Olympic Games Beijing 2008	11.08.2005

Sport	Sponsor	Sponsee	Announcement Date
Olympics	UPS	Olympic Games Beijing 2008 Official Logistics and Express Delivery Sponsor	28.07.2005
Olympics	Visa	Olympic Sponsor to 2020	27.10.2009
Olympics	Volkswagen	Olympic Games Beijing 2008	10.06.2004
Tennis	adidas	Ana Ivanovic	08.02.2010
Tennis	adidas	Andre Agassi	25.07.2005
Tennis	AEGON	Great Britain's Davis and Federation Cup teams	04.02.2009
Tennis	American Express	U.S. Open	03.06.2002
Tennis	American Express	U.S. Open & USTA	31.05.2005
Tennis	Anta Sports Products	Jelana Jankovic	19.01.2009
Tennis	Anta Sports Products	Zheng Jie	13.04.2009
Tennis	Aramis	Andre Agassi	20.02.2003
Tennis	Ariel	LTA Young Players of the Future/Championship Whites	26.04.2002
Tennis	Avon	Venus Williams	15.12.2000
Tennis	Barclays	Barclays ATP World Tour Finals	18.06.2008
Tennis	Barclays	Dubai Tennis Championships	11.09.2007
Tennis	BNP Paribas	BNP Paribas Open	15.01.2009
Tennis	BNP Paribas	Davis Cup	15.09.2005
Tennis	BNP Paribas	Davis Cup	21.12.2000
Tennis	BNP Paribas	Davis Cup & Fed Cup	17.09.2010
Tennis	BNP Paribas	FFT	11.05.2007
Tennis	BNP Paribas	Roland Garros Virtual Tour (with PlayStation)	22.04.2005
Tennis	Citizen	U.S. Open	16.08.2010
Tennis	Colgate-Palmolive	Maria Sharapova	28.04.2005
Tennis	Corona	ATP World Tour	22.02.2010
Tennis	Credit Suisse	Roger Federer	16.11.2009
Tennis	Evian	Maria Sharapova	18.06.2010
Tennis	Evian	Olympus US Open Series	31.03.2008
Tennis	FedEx	ATP World Tour	08.09.2010
Tennis	Heineken	U.S. Open	14.08.2006
Tennis	IBM	U.S. Open	21.07.2009
Tennis	J.P. Morgan	U.S. Open	20.08.2007
Tennis	Jacob's Creek	Australian Open	06.10.2009
Tennis	Kia	Australian Open	14.01.2003
Tennis	Kia	Major sponsor Australian Open	30.10.2001

Sport	Sponsor	Sponsee	Announcement Date
Tennis	Lagardère	Roland-Garros	22.04.2005
Tennis	Lever 2000	U.S. OpenSeries	23.05.2006
Tennis	Lexus	Andy Roddick	17.06.2005
Tennis	Lexus	U.S. Open	13.06.2005
Tennis	Lilly	Indianapolis Tennis Championships Presented by Lilly	26.02.2008
Tennis	Lincoln	United States Tennis Association	20.04.2000
Tennis	Lindt	Roger Federer	29.10.2009
Tennis	Mercedes	Roger Federer	27.05.2010
Tennis	Mercedes	Roger Federer	28.04.2008
Tennis	Mercedes	U.S. Open	26.10.2009
Tennis	National Bank Financial Group	Tennis Canada "Rogers Cup"	01.12.2009
Tennis	Nike	Lleyton Hewitt	15.01.2001
Tennis	Nike	Maria Sharapova	11.01.2010
Tennis	Nike	Serena Williams	09.12.2003
Tennis	Olympus	U.S. Open & US Open Series Official Camera	14.01.2008
Tennis	Panasonic	Australian Open	09.11.2009
Tennis	Panasonic	U.S. Open	25.08.2010
Tennis	Parlux Fragrances	Maria Sharapova	20.09.2004
Tennis	Polo Ralph Lauren	Wimbledon Tennis Open	11.06.2010
Tennis	Polo Ralph Lauren	Wimbledon Tennis Open	08.03.2006
Tennis	Reebok	Amélie Mauresmo	19.05.2005
Tennis	Ricoh	ATP Official Office Solutions Provider	14.04.2010
Tennis	Ricoh	ATP Official Office Solutions Provider	03.07.2008
Tennis	Sanex	WTA	01.11.1999
Tennis	SAP	Andy Roddick	17.11.2006
Tennis	Sina.com	China Open 2010	17.03.2009
Tennis	Telefonica	Davis Cup	06.03.2009
Tennis	Terra Lycos	Anna Kournikova	16.03.2001
Tennis	Valspar	U.S. Open	11.06.2007
Tennis	Whirlpool	WTA Tour in Europe	11.03.2004
Tennis	Wrigley Company	Serena & Venus Williams	22.03.2001
Basketball	adidas	Gilbert Arenas	11.12.2003
Basketball	adidas	NBA	11.04.2006
Basketball	American Airlines	NBA Europe Live	03.07.2008
Basketball	American Express	NBA	17.06.2002
Basketball	Anheuser-Busch	Chicago Bulls, Chicago Blackhawks and the United Center	30.01.2006
Basketball	Anta	Kevin Garnett	04.08.2010

Sport	Sponsor	Sponsee	Announcement Date
Basketball	BBVA	NBA	13.09.2010
Basketball	Bubblicious	LeBron James	23.02.2004
Basketball	Budweiser	Global Partner NBA	11.12.2002
Basketball	Cadbury Schweppes Americas Beverages	New Orleans Hornets	26.01.2007
Basketball	China Mobile	NBA in China	07.04.2005
Basketball	Cisco	NBA	05.11.2007
Basketball	Coca-Cola	LeBron James	25.08.2003
Basketball	Coca-Cola	NBA	15.04.2002
Basketball	Continental Airlines	New York Knicks	22.10.2001
Basketball	Dell	NBA	29.10.2002
Basketball	DHL	NBA in Asia	15.05.2007
Basketball	Efes Pilsener	Euroleague Basketball	22.10.2009
Basketball	EnBW	EnBW Ludwigsburg	16.04.2010
Basketball	FedEx	NBA	02.11.2007
Basketball	FedEx	NBA	22.11.2004
Basketball	Garmin	Yao Ming	12.04.2005
Basketball	Gatorade	NBA	31.07.2002
Basketball	Gatorade	USA Basketball	02.08.2010
Basketball	General Motors	WNBA	19.08.2002
Basketball	Harris	Chicago Bulls	29.10.2007
Basketball	Helvetia Patria	Spanish Basketball Federation	12.06.2007
Basketball	HP	NBA	13.10.2008
Basketball	ING-DiBa	Deutscher Basketball Bund	24.06.2009
Basketball	McDonald's	Dwight Howard	02.02.2010
Basketball	McDonald's	LeBron James	02.02.2010
Basketball	McDonald's	Yao Ming	13.02.2004
Basketball	Molson	Montreal Expos	16.02.2001
Basketball	Nike	Andrew Bogut	17.06.2005
Basketball	Nike	Carmelo Anthony	20.05.2003
Basketball	Nike	Dwayne Wade	16.07.2009
Basketball	Nike	Ha Seung-jin	01.07.2004
Basketball	Nike	Kobe Bryant	24.06.2003
Basketball	Nike	NBA	11.11.2004
Basketball	Nike	USA Basketball	05.11.2009
Basketball	Nokia	NBA in Greater China	23.05.2005
Basketball	Radio Shack	NBA	29.01.2004
Basketball	Reebok	29 NBA teams	01.08.2001
Basketball	Reebok	John Wall	09.06.2010
Basketball	Reebok	Peja Stojakovic	13.11.2003
Basketball	Reebok	Shaun Livingston	16.09.2004
Basketball	Right Guard	NBA	11.10.2010
Basketball	Russell Corporation	NBA	15.12.2004
Basketball	Sina	NBA	14.10.2010
Basketball	Southwest Airlines	NBA	27.07.2005
Basketball	Taco Bell	NBA	01.07.2009
Basketball	TD Banknorth	Boston Celtics	26.10.2005

Sport	Sponsor	Sponsee	Announcement Date
Basketball	Tiffany & Co.	USA Basketball	02.08.2010
Basketball	Tissot	CBA League Official Supplier	12.10.2007
Basketball	Tissot	FIBA	28.05.2009
Basketball	T-Mobile	Miami Heat	28.10.2010
Basketball	T-Mobile	NBA	08.09.2008
Basketball	T-Mobile	NBA and WNBA Official Wireless Services Partner	03.10.2005
Basketball	Tsingtao	NBA in China	25.08.2008
Basketball	Turkish Airlines	Turkish Airlines Euroleague Basketball	26.07.2010
Basketball	Verizon Wireless	NBA	12.02.2002
Basketball	Wells Fargo	Portland Trail Blazers	11.06.2010
Arena sponsorships	Anheuser-Busch	New Meadowlands Stadium	19.06.2008
Arena sponsorships	ANZ	ANZ Stadium	12.12.2007
Arena sponsorships	Bank of America	Bank of America Stadium	16.01.2004
Arena sponsorships	Bank of Montreal	Toronto FC stadium	31.08.2006
Arena sponsorships	Barclays	New Jersey Nets' arena	18.01.2007
Arena sponsorships	Cisco	Oakland A's Major League Baseball stadium	07.11.2006
Arena sponsorships	Citigroup	New York Mets	13.11.2006
Arena sponsorships	Citizens Bank of Pennsylvania	MLB Philadelphia Phillies	17.06.2003
Arena sponsorships	FedEx	Memphis Grizzlies stadium	16.10.2002
Arena sponsorships	Ford	Homestead-Miami Speedway	04.11.2005
Arena sponsorships	Gillette	Gillette Stadium (New England Patriots)	22.09.2010
Arena sponsorships	Gillette	Gillette Stadium (New England Patriots)	05.08.2002
Arena sponsorships	Honda	Anaheim Ducks (NHL) arena	19.07.2006
Arena sponsorships	Imtech	Hamburg stadium	20.08.2009
Arena sponsorships	Infineon Technologies	Sears Point Raceway	24.06.2002
Arena sponsorships	Invesco	Invesco Field at Mile High	23.01.2001
Arena sponsorships	Jaguar	Coventry Arena	22.07.2004

Sport	Sponsor	Sponsee	Announcement Date
Arena sponsorships	JPMorgan Chase	Madison Square Garden	06.09.2010
Arena sponsorships	Kyocera	Kyocera Arena	16.03.2005
Arena sponsorships	Lincoln Financial Group	NFL Eagles stadium	03.06.2002
Arena sponsorships	M&T Bank	Baltimore Ravens stadium	06.05.2003
Arena sponsorships	Mercedes	Mercedes-Benz Arena	07.12.2009
Arena sponsorships	Mercedes	Mercedes-Benz-Arena	19.03.2008
Arena sponsorships	MetLife	New Meadowlands Stadium	16.06.2008
Arena sponsorships	Nissan	Nissan Stadium in Yokohama	07.10.2004
Arena sponsorships	O2	O2 World	13.04.2010
Arena sponsorships	O2	The O2	16.05.2005
Arena sponsorships	Office Depot	Office Depot NHL Florida Panther arena	13.09.2002
Arena sponsorships	Pizza Hut	FC Dallas stadium	16.06.2005
Arena sponsorships	Prudential Financial (US)	New Jersey Devils stadium	05.01.2007
Arena sponsorships	Qwest	NFL Seattle Seahawks stadium	02.06.2004
Arena sponsorships	Ricoh	Coventry City stadium	26.04.2005
Arena sponsorships	Royal Bank of Canada	Raleigh Entertainment and Sports Arena	27.08.2002
Arena sponsorships	Sprint Nextel	Kansas City arena	22.07.2004
Arena sponsorships	Staples	Staples Center	19.10.2009
Arena sponsorships	Swedbank	Swedbank Arena	15.10.2007
Arena sponsorships	TCF Financial Corporation	TCF Bank Stadium University of Minnesota stadium	24.03.2005
Arena sponsorships	TD Banknorth	Boston Celtics stadium	03.03.2005
Arena sponsorships	Toyota	Houston Rockets stadium	24.07.2003
Arena sponsorships	Trustmark	Trustmark Park Mississippi Braves stadium	25.03.2005
Arena sponsorships	U.S. Cellular	MLB Chicago White Sox	03.01.2003

Sport	Sponsor	Sponsee	Announcement Date
Arena sponsorships	University of Phoenix	Arizona Cardinals stadium	26.09.2006
Arena sponsorships	Yum! Brands	Louisville Arena	19.04.2010
Baseball	adidas	New York Yankees.	01.04.2005
Baseball	Audi	New York Yankees	25.03.2009
Baseball	Bank of America	Minor League Baseball	14.07.2005
Baseball	Bank of America	MLB	08.07.2004
Baseball	Bank of America	San Francisco Giants	10.01.2005
Baseball	Bank of America	St Louis Cardinals	27.03.2006
Baseball	Bayer	MLB Official Multivitamin	09.04.2008
Baseball	Best Buy	Minnesota Twins	29.09.2010
Baseball	Budweiser	MLB corporate sponsorship	09.08.2004
Baseball	Canon	New York Yankees	24.02.2009
Baseball	Canon	New York Yankees	08.04.2004
Baseball	Coca-Cola	St Louis Cardinals	22.06.2004
Baseball	Coors	Colorado Rockies	04.04.2008
Baseball	Delta Air Lines	Atlanta Braves	15.04.2010
Baseball	Delta Air Lines	Minnesota Twins	30.03.2010
Baseball	Delta Air Lines	New York Yankees	24.11.2008
Baseball	DHL	Cincinnati Reds	02.04.2008
Baseball	DHL	MLB "Official Express Delivery and Logistics Provider"	31.03.2005
Baseball	Frito-Lay	MLB	25.09.2009
Baseball	General Motors	MLB	24.03.2003
Baseball	Gillette	MLB corporate sponsorship	16.04.2009
Baseball	Hartford Financial Services Group	Chiba Lotte Marines	18.03.2008
Baseball	Henkel	Arizona Diamondbacks	06.07.2010
Baseball	Holiday Inn	MLB	16.04.2009
Baseball	Holiday Inn	MLB	27.04.2006
Baseball	Home Depot	MLB Official home improvement warehouse of Major League Baseball	01.04.2005
Baseball	Honda	Toronto Blue Jays	05.04.2010
Baseball	HSBC	Toronto Blue Jays	05.04.2007
Baseball	Miller	Washington Nationals	01.04.2005
Baseball	NewBridge Bank	Greensboro Grasshoppers	09.11.2007
Baseball	Nike	Alex Rodriguez	13.06.2005
Baseball	Nikon	New York Mets	12.04.2004
Baseball	Pepsi	MLB	16.04.2009
Baseball	Reebok	MLB	17.02.2004

Sport	Sponsor	Sponsee	Announcement Date
Baseball	Scotts Miracle-Gro Company	MLB	20.01.2010
Baseball	Sharp	San Francisco Giants	29.03.2005
Baseball	Starbucks	Seattle Mariners	13.03.2003
Baseball	Taco Bell	MLB	18.06.2004
Baseball	The Stanley Works	Minnesota Twins	01.04.2009
Baseball	Uni-President Enterprises	New York Yankees	03.08.2010
American Football	7-Eleven	Chicago Bears	04.01.2007
American Football	adidas	University of Notre Dame Athletic Teams	09.11.2005
American Football	Allstate Insurance	Sugar Bowl	22.03.2006
American Football	Bank of America	NFL	16.08.2007
American Football	Bridgestone	Super Bowl Half Time show	16.07.2010
American Football	Bud Light	NFL	05.05.2010
American Football	Budweiser	Carolina Panthers	23.05.2005
American Football	Campbell's Soup Co.	NFL	04.06.2010
American Football	Campbell's Soup Co.	NFL	09.02.2004
American Football	Coors	New Orleans Saints	25.09.2006
American Football	Coors	New York Giants	27.08.2007
American Football	Coors	NFL from 2006	06.09.2005
American Football	Delta Air Lines	Minnesota Vikings	28.07.2009
American Football	Expedia.com	NFL	13.11.2007
American Football	Gatorade	LaDainian Tomlinson	14.05.2008
American Football	Gatorade	NFL	23.02.2004
American Football	General Motors	NFL Super Bowl & Pro Bowl	03.12.2001
American Football	HP	San Francisco 49ers	22.07.2010
American Football	IBM	NFL	12.10.2009
American Football	JetBlue Airways	Buffalo Bills	14.05.2008

Sport	Sponsor	Sponsee	Announcement Date
American Football	KFC	NFL	17.11.2008
American Football	Miller	Carolina Panthers	26.05.2005
American Football	Miller	Dallas Cowboys	27.05.2008
American Football	Miller	Green Bay Packers Official Beer Sponsor	23.07.2002
American Football	Nike	NFL	12.10.2010
American Football	Papa John's	NFL	12.01.2010
American Football	Pepsi	NFL	28.03.2002
American Football	Prilosec OTC	NFL	11.07.2005
American Football	Rogers AT&T Wireless	Premier Sponsor of the Canadian Football League	14.10.2003
American Football	Samsung	NFL	23.08.2007
American Football	Sirius Radio	NFL	16.12.2003
American Football	Starter	Tony Romo	22.09.2008
American Football	SunCom Wireless	Carolina Panthers	08.09.2005
American Football	The Tampa Tribune	NFL Tampa Bay Buccaneers	10.12.2002
American Football	Under Armour	NFL	21.11.2006
American Football	Verizon Wireless	Buffalo Bills	16.08.2005
American Football	Visa	NFL	22.09.2009

Appendix B: Industry aggregation

Table 73: Overview industry aggregation (based on Industry Classification Benchmark taxonomy developed by the FTSE Group).

Industry	Supersector	Sector	Subsector
Basic materials	Basic resources	Industrial metals & mining	Iron & steel
Consumer goods	Automobiles & parts	Automobiles & parts	Automobiles
Consumer goods	Food & beverage	Beverages	Brewers
Consumer goods	Food & beverage	Beverages	Distillers & vintners
Consumer goods	Food & beverage	Beverages	Soft drinks
Consumer goods	Food & beverage	Food producers	Food products
Consumer goods	Personal & household goods	Household goods & home construction	Durable household goods
Consumer goods	Personal & household goods	Household goods & home construction	Nondurable household goods
Consumer goods	Personal & household goods	Leisure goods	Consumer electronics
Consumer goods	Personal & household goods	Leisure goods	Recreational products
Consumer goods	Personal & household goods	Personal goods	Clothing & accessories
Consumer goods	Personal & household goods	Personal goods	Personal products
Consumer goods	Personal & household goods	Tobacco	Tobacco
Consumer services	Media	Media	Broadcasting & entertainment
Consumer services	Retail	General retailer	Broadline retailers
Consumer services	Retail	General retailer	Specialized consumer services
Consumer services	Retail	General retailer	Specialty Retailer
Consumer services	Travel & leisure	Travel & leisure	Airlines
Consumer services	Travel & leisure	Travel & leisure	Hotels
Consumer services	Travel & leisure	Travel & leisure	Restaurant & bars
Consumer services	Travel & leisure	Travel & leisure	Travel & tourism
Financials	Banks	Banks	Banks
Financials	Insurance	Non-life insurance	Full line insurance
Health care	Health care	Pharmaceuticals & biotechnology	Pharmaceuticals
Industrials	Construction & materials	Construction & materials	Building materials & fixtures
Industrials	Construction & materials	Construction & materials	Heavy construction
Industrials	Industrial goods & services	Aerospace & defense	Aerospace
Industrials	Industrial goods & services	Industrial engineering	Commercial vehicle & trucks
Industrials	Industrial goods & services	Industrial transportation	Delivery services

Industry	Supersector	Sector	Subsector
Industrials	Industrial goods & services	Support services	Business support services
Industrials	Industrial goods & services	Support services	Waste & disposal services
Oil & gas	Oil & gas	Oil & gas producers	Exploration & production
Technology	Technology	Software & computer services	Internet
Technology	Technology	Software & computer services	Software
Technology	Technology	Software & computer services	Computer services
Technology	Technology	Hardware & equipment	Computer hardware
Technology	Technology	Hardware & equipment	Electronic office equipment
Technology	Technology	Hardware & equipment	Telecommunications equipment
Telecommunications	Telecommunications	Fixed line telecommunications	Fixed line telecommunications
Telecommunications	Telecommunications	Mobile telecommunications	Mobile telecommunications
Utilities	Utilities	Electricity	Conventional electricity
Utilities	Utilities	Electricity	Alternative electricity

Appendix C: Results NASCAR

Table 74: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (NASCAR, $n=41$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0,17%	-1,20	20 (49%)	-0,84
-2	0,04%	0,64	24 (59%)	0,38
-1	0,27%	0,21	20 (49%)	0,50
0	0,92%	3,81***	28 (68%)	3,13***
+1	0,45%	2,02**	25 (61%)	1,35
+2	-0,18%	-0,44	17 (41%)	-1,02
+3	0,01%	0,04	21 (51%)	-0,10
<i>Panel B: Periods</i>				
-3 to +3	1,33%	2,13**	27 (58%)	2,48**
-2 to 0	1,23%	2,24**	29 (57%)	2,59**
-2 to +1	1,67%	3,03***	30 (59%)	3,53***
-1 to 0	1,18%	2,07**	28 (56%)	2,34**
-1 to +1	1,63%	2,89***	28 (56%)	2,95***
0 to +1	1,36%	3,74***	29 (59%)	3,36***

Appendix D: Results Formula 1

Table 75: (Cumulative) average abnormal returns for selected days (AAR, panel A) and periods (CAAR, panel B) around the announcement date (Formula 1, $n=62$ observations). Note: *** $p<0.01$; ** $p<0.05$; * $p<0.1$; t_{BMP} =test statistic; $N+$ =number of individual sponsorships with positive ARs; %=percentage of individual sponsorships with positive ARs; z =Wilcoxon signed rank test statistic.

Day(s)	(C)AAR	t_{BMP}	$N+$ (%)	z
<i>Panel A: Days</i>				
-3	-0,19%	-0,57	37 (44%)	-1,12
-2	0,02%	-0,48	33 (53%)	0,24
-1	-0,30%	-0,46	24 (39%)	-2,20**
0	0,54%	1,63	37 (60%)	1,58
+1	0,09%	0,21	27 (44%)	-0,32
+2	0,14%	0,07	30 (48%)	0,16
+3	-0,04%	-0,15	35 (56%)	0,40
<i>Panel B: Periods</i>				
-3 to +3	0,26%	-0,17	30 (53%)	0,35
-2 to 0	0,26%	-0,01	33 (48%)	0,16
-2 to +1	0,34%	0,09	32 (52%)	0,54
-1 to 0	0,24%	0,28	27 (44%)	-0,12
-1 to +1	0,33%	0,39	30 (48%)	0,31
0 to +1	0,63%	1,22	36 (58%)	1,62

Academic Resumé

Personal Information

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Education

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Abstract

Today sport sponsorship constitutes a vital part of most firms' marketing communication mix, representing a global sport sponsorship budget of \$29 B in 2009 (PWC, 2010). In light of these significance investments executives increasingly question the financial return of such marketing programs. Because of the revealed deficits of prior research the main purposes of this study are to provide a comprehensive analysis of the financial effectiveness of sport sponsorship announcements and to identify key characteristics that might have an impact on the success of sponsorships by using a unique and recent dataset of worldwide sponsorship announcements, analyzing different sports, regions, sponsorship types and industries. The global dataset includes 629 sponsorship announcements between 1999 and 2010 and is to the author's best knowledge the largest sample ever used in an effectiveness study of sport sponsorships. Event study methodology (Brown & Warner, 1985) was used to assess the impact of sponsorship announcements on *ARs* (difference between expected stock returns and actual observed stock returns) and thus on firm value, whereas regression analysis was employed to analyze which factors determine *ARs* following sport sponsorship announcements. The event study results document an overall positive effect on stock returns as a result of official sponsorship announcements ($AAR=+0.36\%$ on day 0), providing statistical evidence that sport sponsorship announcements positively impact the firm value of sponsoring firms for the overall sample across all sports. These positive abnormal returns imply that investors saw sponsorship deals as value creating investments with beneficial impact on future sales and profits of the sponsoring firm. However, the sub-sample analysis also shows that not all sponsorships are equal and the sponsorship effect for some analyzed sub-samples were neutral or even negative. The results of the overall regression analysis reveal that across all sports *ARs* are significantly higher for corporate level deals (sponsorship promotes corporate name) than for brand level deals (sponsorship promotes specific brand name), indicating that investors might be sceptical about the ability of consumers to associate the sponsored company name with specific brands. More detailed sub-sample analysis suggests that sponsorship deals of smaller firms, high value deals, and national deals were found to have significantly higher abnormal returns than others.