The Impact of Sponsorship Contract Announcements on Stock Price Reaction: Evidence from the Korea Baseball Organization (KBO) Cases

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Abstract

This study assesses the impact of sponsorship contract announcements on stock prices in the Korea Baseball Organization (KBO) League. We adopt the event study methodology to examine abnormal returns (ARs) and cumulative abnormal returns (CARs) of the five Korean conglomerate companies around the dates in which they announce sponsorships with the KBO teams. The results show that all the sample companies have negative ARs at their sponsorship announcement dates. However, we find that CARs recover these initial negative ARs within a maximum of 13-trading-days, suggesting the potential reversibility in the short-term negative value impact of sponsorship. We argue that the negative stock price reactions of sponsorship could be temporary phenomena, possibly being driven by behavioral biases, such as underreactions to the benefits of sponsorship and overreactions to its costs. Overall, this study contributes to the behavioral finance and marketing literature and suggests practical implications for companies strategically managing market reactions to their sponsorship contracts.

Key words: sponsorship, event study, behavioral finance, Return On Sponsorship (ROS), Korea Baseball Organization (KBO)

Introduction

Recently, companies have been placing increasing emphasis on customer-centric marketing strategies and are expanding substantial investment in sport sponsorship activities to manage their brand equity and create customer-based equity (Ambler et al., 2002). Therefore, the global sponsorship market has grown to $6.6 billion in 2022 despite a significant decline in activity during the COVID-19 period (Statista, 2023). In addition, there have been numerous studies on

sponsorship expenditures and their effects to justify such substantial sponsorship spending. Examining research on sponsorship effects, it can be broadly categorized into studies on the impact of sponsorship activities and exposure on sponsor brand equity (Madrigal, 2000; Meenaghan & Shipley, 1999; Smith, 2014), and studies on the influence of sponsorship on the stock prices or corporate value of sponsoring companies(Mazodier & Rezaee, 2013; Kudo et al., 2015; Cornwell et al., 2005).

Regarding research on the impact of sponsorship on corporate value, studies consistently indicate a positive long-term effect of sponsorship (Baim et al., 2015; Joshi & Hanssens, 2010; Hanke & Kirchler, 2013); however, in the short term, evidence is mixed

(Eshghi, 2022; Mazodier & Rezaee, 2013; Krüger, 2015). In other words, whether sport sponsorship activities are indeed beneficial to the short-term value is arguable. Thus, the current study seek to add evidence to this stream of the literature by examining the short-term impact of sponsorship activities on sponsoring firm value. To quantitatively measure the short-term value effect, this paper follows prior studies that have used the event study approach focusing on the announcement date that information about the firm's sponsorship agreement is released in the stock market.

In this paper, the authours specifically focus on the Korea Baseball Organization (KBO) in the Korean sports industry for two reasons: First, KBO, which was founded in 1984, is the most popular and economically biggest professional sports league in South Korea, compared to other sports such as football. For instance, more than eight million spectators visited the baseball parks in the 2017 season (a record high). Even during the COVID-19 pandemic period, more than six million fans visited the baseball parks in the 2022 season (Kim, H. et al., 2021). Because of this high public interest, events such as the conclusion of sponsorship contracts between companies and professional baseball teams receive considerable attention in the media, resulting in the fact that the stock price of sponsoring companies is inevitably affected by these events.

Second, in the Korean sports industries, it is general that large conglomerates and group-affiliated companies sponsor sports teams with their company brand. Recently, Shinsegae Group, ranking 11th conglomerate in South Korea, purchased the SK Wyverns (one of the KBO teams) for approximately 130 billion KRW and is considering modifying the design of the Starfield in Cheongna to build a dome stadium to increase customer dwelling time in the largest shopping mall under construction (Kim & Lee, 2020). This supports the fact that such large companies are doing KBO sponsorships to achieve their goals. Furthermore, this Korean context enables us to effectively examine sponsoring companies' stock price reactions because they are publicly traded in the Korean stock market.

Using the Korean stock market data for companies

sponsoring the KBO teams, this paper aims to construct a unique case study. Note that our case study consists of five Korean conglomerate firms as these are all available cases since 2000s. Given the limited sample size, the power of test could be weak; nevertheless, we find consistent results that all the sample companies are likely to have negative stock price reactions at their announcement dates of the KBO sponsorship agreements. The most negative sample has experienced, during a single-trading-day, the reduction of 300 billion KRW (approximately, 300 million USD) in market capitalization (see, the analysis of NCSOFT case in pages 17-18). However, these negative reactions appear to recover relatively quickly, more specifically, within 13-trading-days. This phenomena suggests that although the stock market initially and short-termly reacts negatively, market participants require a certain period of time to assess the long-term marketing benefits from sponsorship. It is intuitive that the cost of sponsorship activities, such as immediate cash outflows, can be recognized explicitly, but its benefit does not.

The authors seek to contribute to the management literature for the following three points. First, prior research (specifically, in the marketing field) has analyzed the effects of these corporate sponsorship activities through measurements from a marketing communications perspective, such as brand awareness, attitude, image, and purchase intention (Aaker, 1992; Ambler et al., 2002; Kinney, 2010; Madrigal, 2000; Mamo et al., 2022). However, with the rise of mega-sports leading to a significant increase in sponsorship costs compared to the past, there has been a need from the corporate standpoint to ascertain Return on Sponsorship (ROS) through quantitative measures as we have examined in this study.

Second, there has been an increase in research activities aiming to prove the effectiveness of sponsorship activities through financial measurements (Cornwell et al., 2005; Eshghi 2022; Joshi & Hanssens 2010; Mazodier & Rezaee 2013; Spais & Filis 2008). This study adds some evidence to such a large stream of literature on sport sponsorship marketing. Since our analysis could be viewed as a case study in the Korean

KBO sample, it is hard to generalize in different countries or other sports sponsorships, indicating one of this paper's limitations. Nonetheless, to the best of our knowledge, this is the first attempt to examine publicly-traded firms' stock price movement around the KBO sponsorship agreement announcement dates. It is also worthynoting that related previous studies have observed a mixture of positive and negative effects on the value of sponsor companies due to sponsorship activities (e.g., Kudo et al., 2015; Mazodier & Rezaee, 2013). Extending the argument of our study, future studies may focus on the wider sample coverage, such as baseball sports sponsorship worldwide.

Finally, this study can contribute to the behavioral finance literature (e.g., Brooks & Byrne, 2008; Gennaioli et al., 2015). We interpret our results that market participants underreact (or neglect) to the benefits and/or overreact to the costs of sponsorship contract events. However, these initial underreactions and overreactions appear to vanish in the market over a period of approximately two weeks (about 13 trading days in our study), suggesting that the negative stock price reaction on the sponsorship contract announcement might be a temporary phenomenon. Thus, our findings from in sports sponsorships can be driven by cognitive bias concerns, such as heuristics and conservatism of stock market investors (e.g., Foroughi et al., 2016).

This paper also provides practical implications. First, shareholders of the sponsoring company may show forecasting errors that put too much weight on recent information about significant costs or overreaction, at least at the point when a sponsorship contract event occurs. Thus, it might be necessary for a sponsoring firm's marketing managers to well convince their shareholders to prevent short-term stock price decline when they engage in sport sponsorship. Second, since sponsorships are often viewed as long-term investments, such sponsorships can eventually enhance the firm's sales, brand loyalty, reputation, or value. However, it is difficult to provide causal evidence supporting this long-term positive impact. Instead, our study at least shows some evidence that the negative stock price reaction around KBO sponsorship contracts appears to be a temporary phenomenon, thereby concluding that negative short-run stock price declines could be driven by behavioral biases, such as underreactions for benefits of sponsorship and/or overreactions for its costs.

Literature Review

Sponsorship Effects: Marketing Communication Perspective

Sport sponsorship serves as part of the marketing communication process, aiming to increase brand equity, sales, and corporate value to achieve the sponsor's marketing objectives (Madrigal, 2000; Meenaghan & Shipley, 1999). For instance, the International Olympic Committee (IOC) has established sponsorships worth a total of $1 billion from 12 companies through its TOP (The Olympic Partner) program since the 1988 Seoul Olympics (IOC, 2019). Furthermore, it is known that the FIFA World Cup earns sponsorship revenue at the level of $1.5 billion (FIFA, 2019), with top sponsors paying between $25M and $50M annually, and second-tier partners paying between $10M and $25M per year (Smith, 2014). Sponsorship activity can be defined as a process where the host of an event receives financial support from a sponsor to achieve the sponsor's commercial goals (Lee, 2021). Corporate sponsorship activities can be seen as part of marketing communication, like advertising activities, and are expected to have a positive impact on the company's brand equity (Lee & Pedersen, 2011).

As the consumer market expands into a global network environment, corporate sponsorship activities have not only established themselves as a market for huge commercial opportunities, but also their scale is explosively growing, leading to many studies on the range and effect of influence related to sponsorship activities (Ratten, 2016; Shank, 2022). Studies on the effects of sponsorship activities focusing on the components of brand equity have been conducted over the past 20 years. Kinney (2010) claimed that expanding brand image is the primary objective of sponsorship

activities. Moreover, Mamo et al. (2022) conducted an experiment targeting participants recruited from various countries to survey the perceptions of stakeholders regarding sponsorship activities. As a result, it was quantitatively confirmed that sponsorship activities have a positive impact on the potential image and attitudes towards the sponsor.

In line with this, Turley & Kelley (2014) provide a detailed analysis of the role of sponsorship in sports marketing, emphasizing that sponsorship can achieve not only traditional marketing objectives, such as brand awareness, positive corporate image, and increased sales, but also non-marketing goals, such as contributing to the community. Their research highlights how sponsorship differs from simple advertising and explores various potential benefits of sports sponsorship. This supports the notion that although KBO sponsorships may initially show negative stock price reactions, they could have positive long-term effects as suggested in our study.

Similarly, Walraven et al. (2012) systematically reviewed the effects of sponsorship and presented an integrated conceptual framework of sponsorship outcomes. They highlighted that sponsorship could contribute to enhancing brand equity, building relationships with employees, fostering trust with stakeholders, and increasing shareholder value. Their research emphasizes the long-term and broad impact of sponsorships, suggesting that sponsorships not only affect short-term stock price fluctuations but may also lead to long-term increases in firm value. This aligns with our study's perspective that the short-term stock price decline following KBO sponsorship announcements might be a temporary phenomenon.

Aaker (1992) studied brand awareness, loyalty, perceived quality, brand associations, and other unique brand assets, distinguishing five categories constituting the Brand Equity Model, which was subsequently used in sponsorship research. In a study on sports marketing through football, Rosca (2011) found that sports marketing had relatively positive effects on customer relationships compared to general marketing events, and demonstrated through case studies that sports marketing effectively enhances brand value and

awareness among target customers. Ngan et al. (2011) investigated through an experiment that the performance of a sponsored team could affect consumers' purchase intentions for the sponsoring company's products, revealing that the winning team's performance influenced purchase decisions, and this was more effective on ordinary people than fervent fans. Vance et al. (2016), based on consumer surveys, discovered that sports-related sponsorship activities showed higher brand halo effects compared to other sponsorship activities, despite their highly commercial approach, and confirmed that sports fandom had a positive effect on purchase intentions. Qualitative research on the effects of sponsorship activities on the company's image, brand awareness, purchase decisions, and other factors has been ongoing for a long time (Chiu & Won, 2016; Foroughi et al., 2016; Wang, 2017; Zhou et al., 2017).

Sponsorship Effects: Long-term Perspective

Since the cost related to sponsorship in corporate financial statements has significantly increased, there is a growing need to verify whether the sponsorship activities that companies invest in actually lead to an increase in company profitability. To do this, many studies are now attempting to quantitatively measure ROS by utilizing financial indicators such as sales, operating profit, advertising cost, Tobin's Q, or by measuring changes in the company's stock price through event study methodology (Mazodier & Rezaee, 2013; Kudo et al., 2015; Cornwell et al., 2005). In contrast, a large stream of prior research on sponsorship activities has predominantly used survey methods to measure changes in consumer behavior, such as brand awareness, brand equity, brand loyalty, attitude, or purchase intention before and after corporate sponsorship activities (Ferrier et al., 2013; Michael et al., 2012; Ngan et al., 2011).

Meenaghan (1991) argued that the effects of sponsorship should be measured through company sales or other indicators, and in fact, the demand to quantitatively measure marketing assets such as sponsorship activities from a company manager's point

of view is increasing recently. Keller & Lehmann (2003) explained the process of creating value through a company's marketing activities from a broad perspective through the model shown in Figure 1. According to the Brand Value Chain, the value creation of marketing activities begins with influencing consumer behavior, and ultimately affects the change in financial value such as company sales and stock prices.

From the long-term perspective, the sponsorship's positive effects are consistently found. Joshi & Hanssens (2010) reported in their study on the impact of advertising effectiveness on corporate value that there is a long-term correlation between a company's advertising expenses and its market capitalization. Companies that spend on advertising can have a positive impact on their market value in the long run, and potentially a negative impact on competitors. Hanke & Kirchler (2013) investigated the results of major football matches, including the World Cup and the European Championship, from 1996 to 2008. They found a positive effect on the sponsoring companies' stock prices that supported the winning teams. Baim et al. (2015) conducted a study on the sponsors of the 2012 London Olympics and found that the announcement of sponsorship participation resulted in a significant increase in the earnings of the sponsor companies during the period. Kim, H. et al. (2021) also measured changes in corporate value using Tobin's Q. In their analysis of the sponsorship activities of KBO League, they found significant positive effects during the sponsorship contract period between Nexen Tire and Heroes Baseball Team. Kim (2014) surveyed the effects of corporate sponsorship through famous athletes who performed well at the 2010 Vancouver Olympics and confirmed a positive change in figures for sales, operating profit, and net profit indicators of four sponsoring companies (Samsung Electronics, Maeil Dairy, Kookmin Bank, Hyundai Motors). A panel data analysis of advertising effects confirmed positive effects in corporate value indicators such as ROA, ROE, and Tobin's Q (Lee et al., 2016).

Sponsorship Effects: Short-term Perspective

Meanwhile, the event study methodology, which has been widely used in the business field, is often utilized in research analyzing the short-term effects. This methodology, established by Fama et al. (1969), is primarily used to study the effects on a company's stock price when a specific event occurs in a company. The interest in the impact of marketing investment on a company's stock price has greatly motivated the investigation into the effect of sport sponsorship
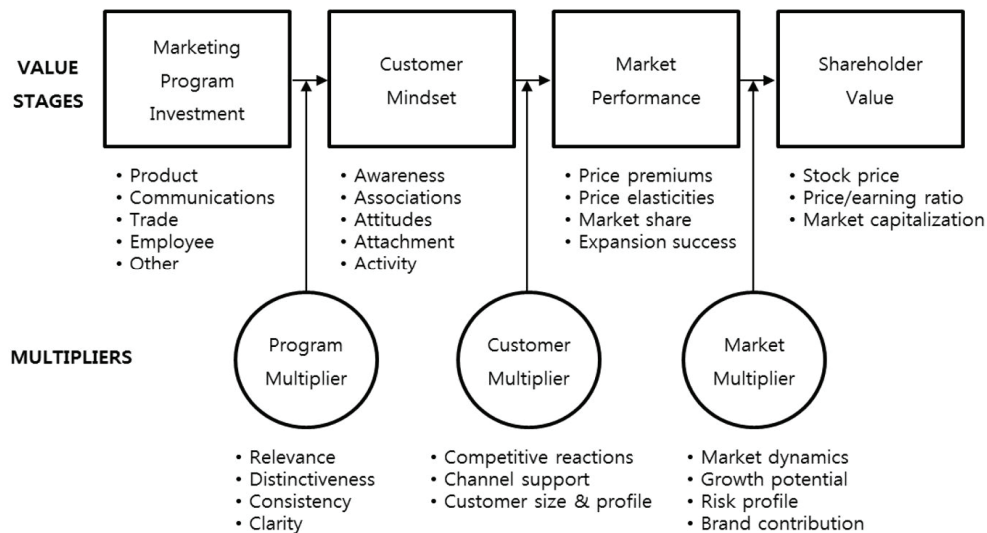

Figure 1. Process of creating value through marketing activities (Keller & Lehmann, 2003)

announcements on the value of the respective company. As a result, positive effects were found in the analysis of the sponsorship effects of the National Football League (NFL), Major League Baseball (MLB), National Hockey League (NHL), National Basketball Association (NBA), and Professional Golfers Association (PGA) (Cornwell et al., 2005). Lee (2004) attempted to quantitatively measure the effect of sponsorship based on sports events and sponsor company's stock data using the event study methodology. The study revealed that the announcement effect of Olympic sponsorship had a positive impact on the sponsor company's stock price, based on the announcement point in the press for companies participating in the official sponsorship program for the Olympics, TOP3 and TOP4, in 1994, 1996, 1998, and 2000. Also, Spais & Filis (2008) analyzed the stock prices of Fiat and Juventus using the event study methodology to analyze the change in the corporate value of the sponsor and the sponsored organization and found a positive effect on the sponsor company's stock price.

From the short-term perspective, a number of studies argue that the stock market reacts negatively to the firm's sponsorship. It is possible that managers may engage in some management activities for their private benefits (e.g., social reputation) at the expense of shareholders. If so, the stock market perceives sponsorship agreements as negative events since sponsorship could be driven by agency problems (e.g., Jensen & Meckling, 1976). Kudo et al. (2015) utilized the event study methodology to analyze the effects of sponsorship announcements in NASCAR, PGA Tour, and LPGA Tour. Their results showed a mixed pattern, with negative abnormal returns (AR) observed in PGA and LPGA, while a positive effect was found in NASCAR. Mazodier & Rezaee (2013) investigated the impact of sponsorship announcements on a firm's stock value by examining a total of 293 sponsorship announcements worldwide in 2010. The study revealed significantly negative ARs following the announcement dates. Similarly, Eshghi (2022) found negative effects in their research. Through a meta-analysis of 3,192 sponsorship announcement cases from 36 previous

studies, they discovered negative impacts in the samples from the 2000s. In a similar context, Krüger (2015) observed statistically significant negative (-) short-term stock price reactions when disclosures regarding a company's community contributions were announced.

Hypotheses Development

Based on the comprehensive analysis of the perspectives mentioned so far, we argue that sport sponsorship agreements may lead to negative stock price reactions. This is consistent with the view of behavioral finance because stock market participants may perceive that such a sponsorship is immediate cash outflows of the sponsoring company, while its potential effect can be complex and subject to diverse opinions. In other words, market participants may overestimate the marketing costs, i.e., cash outflows in the short term, and underestimate the long-term benefits that positive marketing effects or ESG activities associated with sponsorship agreements can generate. We propose the first research hypothesis as follows:

> H1: The short-term stock price reaction around the KBO sponsorship agreement will be negative.

The behavioral finance perspective suggests that not all market participants make rational decisions at every moment, while the traditional view assumes that market participants are homogenously rational and always doing their mean-variance analysis with all available information. On the one hand, individuals are likely to underestimate or just ignore an uncertain event based on the psychological conjecture (e.g., Kahneman and Tversky, 1972). Similarly, people may neglect financial events with low-risk, as suggested by Gennaioli et al., (2015). On the other hand, individuals can overestimate the likelihood of negative events compared to the actual likelihood (Tversky and Kahneman, 1973). Consistent with this view, Sunstein and Zeckhauser (2011) argue that individuals overestimate the negative consequences of some risky events, leading to them disliking such risky events. In short, the behavioral finance view could be better to explain some phenomenon in reality,

compared to the traditional efficient capital market theory, such as representativeness, conservatism, availability bias, and mental accounting (e.g., Brooks & Byrne, 2008).

Thus, in our study, the short-term stock price reaction at the time of sponsorship agreement could be somewhat biased (e.g., short-term overreaction or underreaction). If so, market participants may require a certain period of time to assess the long-term marketing beneficial impact due to sponsorships, while significant costs that must be paid in the future are disclosed at the announcement of the agreement. In other words, irrational judgments (in the short term) may be involved when market participants analyze and respond to sport sponsorship agreement events. For example, a sport sponsorship agreement may be a project that has a positive net present value (NPV) that is larger than the actual cost. Therefore, we propose two conflicting hypotheses of whether the market's reaction to the KBO sponsorship event will eventually recover or not within a certain period. The second research hypothesis is as follows:

H2a: [Recovery hypothesis] If H1 is supported, after a certain period, the short-term negative stock price reaction will be recovered.

H2b: [No-recovery hypothesis] If H1 is supported, after a certain period, there is no tendency or opposite movement in stock price reaction.

Research Methodology

Institutional Background: Event Study

This study used the event study methodology to investigate the impact of sponsorship contract announcements on the short-term value of companies and the period of recovery from overreaction or underreaction thereafter. The event study methodology is a research method that clearly explains the effect of new information on stock prices. Its application is continuously expanding not only in finance but also in accounting, macroeconomics, and marketing. In this study, we analyzed the impact of a company's

sponsorship contract event on the sponsor company's stock price using the event study methodology, which evaluates the impact of unique events such as mergers and acquisitions, paid-in capital increases and dividends, and profit announcements on the company's stock price.

Brown & Warner (1980, 1985) used monthly and daily stock return data from the US stock market and simulated the testing power of the Mean Adjusted Return Model, Market Adjusted Return Model, and Market Model, which are major performance measurement models for measuring ARs in various market situations. They suggested an event study methodology that minimizes statistical errors and enhances testing power. According to the simulation results, the Market Model is generally superior in detecting excess returns, and the test method assuming independence without considering the cross-sectional correlation appearing between individual firms' excess returns has relatively high testing power. Malatesta (1986) tested the testing power of the event study methodology based on the seemingly unrelated regression technique, unlike the standard event study methodology of Brown & Warner (1980, 1985) using residual analysis. The analysis showed that the event study's testing power based on the seemingly unrelated regression technique did not yield superior results compared to the relatively simple traditional residual analysis. Therefore, this study adopts event study methodology based on the market model.

Event Study Approach

This event study approach examines whether there is any abnormal price movement when specific information is made public in the market, and it investigates the time at which such phenomena react, centered around the time of the event occurrence. To confirm abnormal price changes in the stock price, it is necessary to first estimate the return rate in normal cases.

The market model measures normal expected returns using coefficients estimated by ordinary least squares regression (OLS). The regression coefficients are

estimated using stock return data from the estimation period considered unaffected by the event. The abnormal return () at time t of stock j can be represented as follows:

$$AR_{j_t} = R_{j_t} - E(R_{j_t}) = R_{j_t} - (\alpha + \beta R_{m_t})$$

where R_{j_t} is the actual return observed at time t in the event period of stock j. R_{m_t} indicates the market index return at time t. α and β are the estimated coefficients.

The estimation period is a period believed to be unaffected by specific information on the stock price. The reason for setting the estimation period is to estimate the normal expected return rate using data over a certain period of time. The event period, or event window, is a period deemed to be influenced by specific information on the stock price and is a period for testing whether specific information has created ARs.

As a result, regression coefficients alpha (α) and beta (β) were estimated. Based on the data from the estimation period, the normal expected return model is estimated by substituting alpha (α) and beta (β) into the Market Model. The Market Model is as follows:

$$R_t = \alpha + \beta R_{m_t} + \varepsilon_t$$

R_t = Expected normal return of the company at time t

R_{m_t} = Market return at time t

α and β = Estimated coefficients during the estimation period

ε_t = Error term; $E(\varepsilon_t)=0$

The daily AR is the abovementioned error term that is calculated by subtracting the expected daily return by the market model from the actual return, $AR_t = \varepsilon_t = R_t - (\alpha + \beta R_{m_t})$.

Since the effect of an event on the company's value usually occurs over a range rather than being temporarily reflected on a specific day, the CAR in event studies is more important than the result of daily excess return, shown through AR. To obtain CAR, AR

should be accumulated during the certain period as follows:

$$CAR_{[0,n]} = \sum_{t=0}^{n} AR_t$$

n : Trading days within the event range

Data and Sample Selection

This study focuses on all the KBO sponsorship contract events after 2000: Nexen Tire (2010), NCSOFT (2010), KT (2012), Kiwoom Securities (2018),[1] and E-Mart (2021). To do this, we manually check and collect the announcement dates of KBO sponsorship agreements from various datasets, such as news articles and a firm's official announcement in the stock market. We obtain stock price data from FN Dataguide.

The Korea Baseball Organization (KBO) League, established in 1982, is one of the most popular sports leagues in South Korea. Consisting of 10 professional teams, the league attracts millions of fans each year, with games being broadcast nationwide across various media platforms. Sponsorship agreements within the KBO League provide companies with significant marketing benefits, including brand exposure, enhanced consumer awareness, and the opportunity to foster close connections with their target market. For instance, through main sponsorship deals, a sponsor's logo appears on team uniforms, stadium billboards, and

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1) It is noteworthy that the financial industry is often excluded from the sample or studied exclusively in most research in finance. This is because the financial industry (e.g., banks, securities firms, insurance companies, etc.) is strictly regulated under the government. Moreover, the financial statements disclosure practices of financial institutions differ significantly from other industries, and thus, the valuation for financial companies are also distinct. Therefore, this study utilizing the event study methodology should exclude Kiwoom Securities, but we intentionally include it to increase our sample observations as much as possible.

official marketing materials, playing a crucial role in building brand awareness and a positive image. The companies participating in KBO sponsorships are predominantly large conglomerates, targeting primarily South Korean consumers. Companies such as SK, Samsung, and Lotte have been involved in KBO sponsorships, leveraging their already strong brand presence both domestically and internationally. KBO sponsorships go beyond typical marketing activities, serving as a strategic tool for strengthening long-term brand equity and fostering emotional connections with consumers. Therefore, the cases of KBO sponsorship deals analyzed in this study should be viewed not only in terms of their short-term impact on stock price fluctuations but also as part of a broader effort to establish deeper market and consumer relationships.

Specifically, to calculate stock price reaction by event study, we adopt as follows: First, we used the daily stock return rate of the sponsoring company. Second, the MKF industry index was used as the market index because the sponsor companies are greatly influenced by the unique features of each industry. The MKF sector index is a sub-sector index of FICS (FnGuide Industry Classification Standard), which was jointly developed by Korea's Maeil Business Newspaper and FnGuide, applying the GICS classification system. Third, we set the 300 days prior to the event period as the estimation period. Finally, the event period for the analysis of ARs was set as the period from 15 days before the event to 15 days after.

Results: Event Study from the KBO Sponsorship Cases

Table 1 presents our five sample companies with the event date (i.e., the date that their KBO sponsorship agreement is announced), their AR at the event date, and the corresponding changes in their market capitalization. We find that all the sample companies showed significantly negative stock price reactions. The economic magnitude of the negative effect ranged from approximately 20 billion to a maximum of 300 billion Korean Won.

The company with the largest negative excess return was NCSOFT, which recorded an AR of -6.77% on the announcement day. Comparing the previous day's its closing price, this firm experienced a sharp decline, -6.6%, suggesting that investors consider the KBO sponsorship as the bad news. At that time, the analyst's report mentioned that NCSOFT had a cash reserve of over 500 billion won and had already spent an annual average of over 17 billion won on game marketing expenses and over 25 billion won on R&D expenses. Therefore, the negative impact of the KBO sponsorship on net profit was expected to be limited, but the stock

Table 1. Analysis of abnormal stock prices (AR) on the official announcement day of sponsorship

No	Event date	Sponsor Company	Comparison Index	Abnormal Return (AR)	Market Capitalization on the Day Before the Event	Abnormal Market Capitalization
1	Feb. 8, 2010	Nexen Tire	Consumer discretionary	-4.14%	0.4B	-16.2M
2	Dec. 22, 2010	NCSoft	IT	-6.77%	3.7B	-250.3M
3	Mar. 29, 2012	KT	Telecommunications services	-0.86%	6.7B	-58.1M
4	Nov. 6, 2018	Kiwoom Securities	securities	-4.34%	1.5B	-63.9M
5	Jan. 26, 2021	E-Mart	Consumer discretionary	-3.34%	4.1B	-136.8M

market reacts significantly and negatively. Based on the analysis of the five sponsorship contract events that occurred after 2000, we argue that H1 of this study is supported.

Examining the second hypothesis (H2), our study with five cases is illustrated in Figures 2~6: the stock price movement of each sponsoring company around 15 days before and after the event date. Specifically, we focus on whether the negative AR at the event date is quickly recovered or not. The behavioral finance literature posits that stock market investors may too overestimate the negative consequences from some events, while they may underestimate the positive ones, implying conservatism (e.g., Sunstein and Zeckhauser, 2011). With this regard, when investors recognize a firm's sports sponsorship in stock market, they may overreact to the cost of sports sponsorship and/or underreact to its benefit, leading to an immediate (short-term) negative stock market reaction. However, such a short-termly negative reaction could be temporary if it is driven by some cognitive bias, such as overreaction, underreaction, and conservatism. In short, we expect that, after a certain period of time (e.g., a few days) for assessing the long-term marketing beneficial side of sponsorships, the negative stock market reactions as shown in Table 1 would be subsequently recovered.

As expected, Figure 2 shows that Nexen Tire's stock price exhibited an AR of -4.14% at the KBO sponsorship announcement, but this short-term negative AR was recovered within only two trading days, as indicated by the cumulative abnormal return (i.e., CAR from 0), which aggregates the ARs after the announcement date.

Figure 3 illustrates that NCSOFT, which has the most negative AR at the event date, also experienced the recovery after 11 trading days. Here, the event date of NCSOFT is December 22, 2010, that NCSOFT submitted the intent letter for the establishment of the 9th professional baseball team. Similarly, KT made the initial media report on March 29, 2012, regarding its plan to attract the 10th professional baseball team in the KBO. In Figure 4, KT's CAR from 0 exhibited a rapid recovery trend during the 9 trading days following the announcement, but within the observation period of 15 trading days, it did not fully recover to the normal level. Nevertheless, note that KT only experienced a relatively less-negative AR of -0.86% at the event date.

In Figure 5, Kiwoom Securities, unlike other companies in the study, did not recover from the negative AR observed on the sponsorship contract announcement day. On November 6, 2018, when the title sponsorship contract with the Heroes baseball team was announced, Kiwoom Securities recorded an AR of -4.34%. We never find that CAR from 0 fully
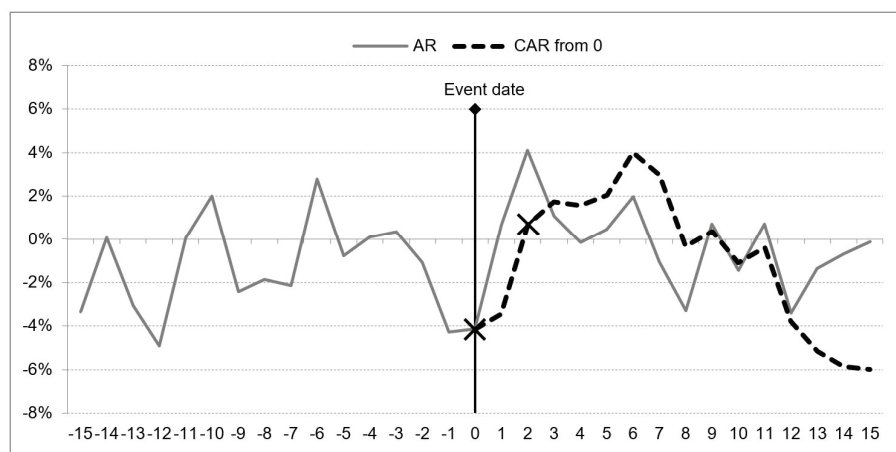

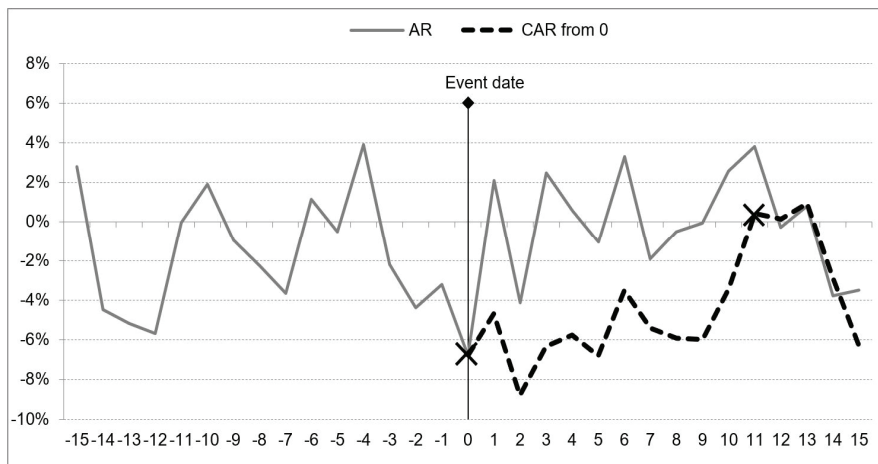*Figure 2. Event study result on official sponsorship announcement date: Nexen Tire*

Figure 3. Event study result on official sponsorship announcement date: NCSoft
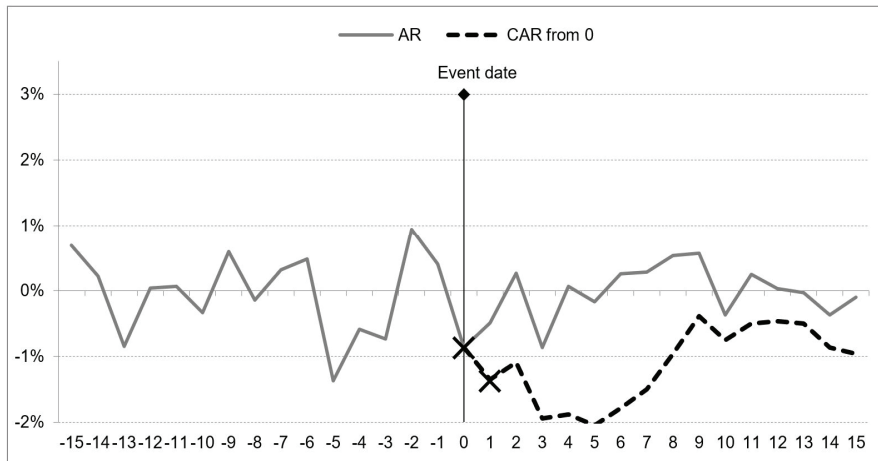

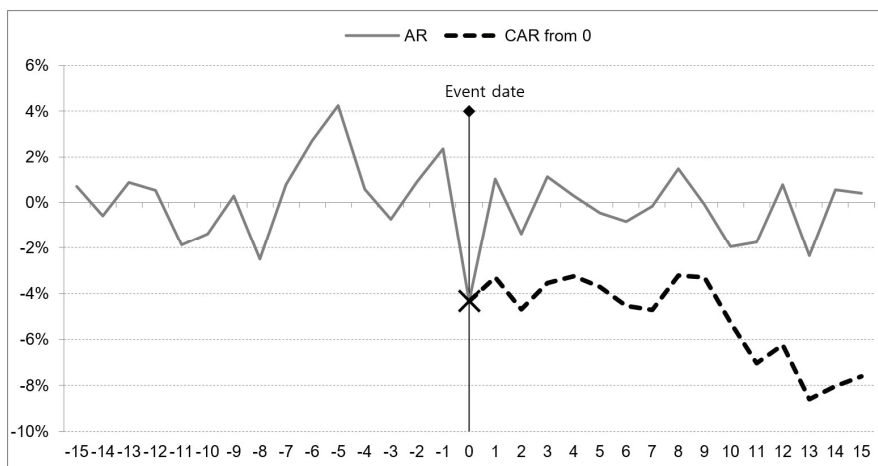*Figure 4. Event study result on official sponsorship announcement date: KT*

Figure 5. Event study result on official sponsorship announcement date: Kiwoom Securities
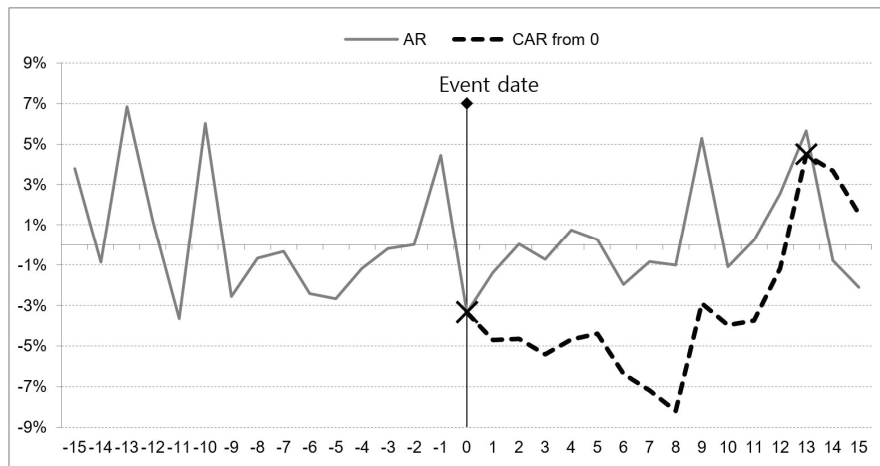
Figure 6. *Event study result on official sponsorship announcement date: E-Mart*

Table 2. *Summary for the case study from the KBO sponsorship*

Sample	AR(0)	H1	CAR(0, +t)	H2	Note
Nexen Tire	Negative	Support	Fully recover negative AR(0) at t=2	Support H2a	
NCSoft	Negative	Support	Fully recover negative AR(0) at t=11	Support H2a	
KT	(Weakly) Negative	(Weakly) Support	Strongly recover negative AR(0) at t=9	Weakly Support H2a	
Kiwoom Securities	Negative	Support	Cannot recover negative AR(0) until t=15	Support H2b	Financial industry
E-Mart	Negative	Support	Fully recover negative AR(0) at t=13	Support H2a	

recovers to the normal level within the observation period of 15 trading days.

On January 26, 2021, E-Mart signed an MOU on the acquisition of a professional baseball team with SK Telecom. The event, which attracted attention with the largest team acquisition amount in history, approximately 130 billion won. At this moment, E-Mart's AR shows a -2.80% at the event date. However, as shown in Figure 6, CAR from 0 fully recovered after 13 trading days, and in fact, it turns out the positive.

We summarize our case study in Table 2. Examining the cumulative abnormal return (CAR from 0) from the announcement date for the five sponsorship contract events in the KBO League since 2000, we find that

three out of the five companies, excluding KT and Kiwoom Securities, recovered to the normal level within a maximum of 13 trading days. Although KT did not recover to the normal stock price level during the event period, there were observations of a rapid recovery in the stock price within nine trading days after the announcement. Therefore, we find partial evidence supporting *H2a* (instead of *H2b*), which suggests that the short-term negative effect from the KBO sponsorship is likely to be recovered after a certain period. On the other hand, Kiwoom Securities, which showed results that do not support H2a, may be due to the reflection of the unique characteristics of the financial industry.

Conclusion and Discussion

The size of the sports industry in the global market is significantly growing and changing. For instance, over 200 countries have participated in the Olympic Games since 2000, doubling the number from 1960. According to FIFA, TV broadcast revenues from 2015 to 2018 reached $3 billion, equivalent to about 3.3 trillion KRW (FIFA, 2019). In addition, consumer behavior towards sports-related media has been changing due to the expansion of SNS and smartphones. As a result, traditional media markets have significantly decreased compared to a decade ago. CBS showed a decline of about 12%, and ABC and Fox showed reductions of 16% and 30%, respectively. Moreover, the viewership of the Olympic Games has decreased over time, with the opening ceremony of the 2016 Rio Olympics recording the lowest viewership since the 2000s (IOC, 2019; FIFA, 2019; Shin & MCST, 2019).

The abovementioned shift represents a new challenge for marketing managers. Thus, it is natural that companies are now preferring marketing activities that allow for direct empathy with customers and have a more effective impact, moving away from traditional advertising through broadcasting and media. However, sponsorship activities, which involve substantial investment, have traditionally relied heavily on the decision of top executives due to the difficulty of verifying ROS at the practical level. Thus, we need to study and understand new indicators from the consumer's perspective, such as the sponsor company's stock price or sponsor immersion and loyalty, to validate the effects of such strategies, rather than relying on traditional research methods based on viewership and customer satisfaction.

This study aims to examine the impact of sponsorship contract events on the value of sponsor companies. Specifically, we obtain the Korean stock market data for KBO-sponsoring publicly traded companies to adopt the event study methodology, which can be very reasonable for measuring stock price reactions in the short-term period. Here, we find the negative ARs for all five companies on the date of the sponsorship contract announcements. This suggests that the event of sponsorship contract announcements raised short-term concerns about substantial cost burdens in the market. However, more importantly, we argue that these negative ARs on the event date are generally recovered within a maximum of 13 trading days.

Our study provides several implications as follows: First, we note that prior studies show a mixture of evidence on whether sponsorship activities contribute to the value of sponsoring firms or not (e.g., Kudo et al., 2015). In our analysis, the KBO cases appear to have the negative stock price reaction around the sponsorship announcement. However, according to the behavioral finance perspective, market participants underreacted to the benefits and overreacted to the costs of sponsorship contract events as they can particularly overestimate negative risky decisions (Sunstein & Zeckhauser, 2011). Supporting this regard, we further find that these underreactions/overreactions were generally resolved in the stock market over a period of approximately two weeks in our sample, suggesting that the short-run negative value effects of sponsorships might be a temporary phenomenon.

Böhler et al. (2007) analyze critical variables for successful partnerships in sports sponsorship, emphasizing that sponsorship functions as a relational marketing strategy rather than merely a financial contribution. They suggest that cooperation between corporations and sports clubs can contribute to building long-term relationships based on mutual understanding and trust. This perspective is applicable to the relationship between the KBO League and its sponsors, where sponsorship goes beyond financial support to become a key marketing strategy for sponsors to strengthen their relationship with fans and build brand loyalty.

Second, we collect available cases for the KBO sponsorships since 2000s, but our case study only consists of five Korean publicly-traded firms, implying the limitation of this study. Nevertheless, we still find some evidence supporting our hypotheses. Furthermore, to the best of our knowledge, this study is the first attempt to examine publicly-traded firms' stock price movement using the Korean sample (typically, the KBO

sponsorships).

Although this study primarily focuses on the short-term stock price reactions, it is important to consider the potential long-term effects of sponsorship agreements on corporate value and brand equity. Sponsorships are typically seen as long-term investments that can gradually build brand awareness, loyalty, and emotional connections with consumers. Over time, the initial negative stock price reactions may evolve into positive outcomes as the benefits of sponsorship activities, such as increased brand exposure and consumer engagement, are realized. According to previous studies (Joshi & Hanssens, 2010; Baim et al., 2015), long-term sponsorships often lead to increases in market capitalization and corporate profitability. Thus, while short-term fluctuations are notable, the strategic nature of sponsorship suggests that the true value lies in its capacity to create enduring relationships and improve brand equity over the long term.

Third, sponsorships could be motivated by the long-term perspective, and thus, these might be eventually beneficial to brand loyalty or firm value. These potential long-term consequences of sponsorships are difficult to prove empirically; instead, we show that the negative stock price reaction around KBO sponsorship contracts is temporary, arguing that such negative stock price drops in the short-run are caused by market participants' behavioral biases, those are overreactions for costs of sponsorships and underreactions for benefits.

Finally, we highlight that a sponsoring firm's marketing managers should provide sufficient information to the market, providing the insight for corporate managers. For instance, to prevent the negative stock price reaction at the sponsorship agreement date, it is better that managers conduct their firm's public relation and explain the sponsorship in detail at that date. Still, investors may be concerned about the sponsorship's immediate cash outflows, instead of its ambiguous positive side. Thus, managers should estimate the ex-ante expected (positive) effect of sponsorship and reduce information asymmetry between them and investors by revealing it.

Meanwhile, this paper has some limitations. First,

as abovementioned, our sample only consists of five cases; however, our sample can represent the whole data or population (rather than sampling) of the KBO sponsorship events. Yet it is still true that our study has a very limited size, thus we cannot obtain ample statistical power for the test. Future studies may examine whether the baseball team sponsorship contracts affect value of the sponsoring firms by constructing international data, which can overcome concerns due to the limited sample size. Second, given the nature of the event study methodology, we cannot investigate the announcement effect of KBO sponsorship events from a relatively long-term perspective, and thus, we cautiously interpret our results in the very short-term period. Future studies aiming to examine some long-term value impact should consider another approaches, such as the portfolio analysis. Finally, since we speicifically focus on KBO sponsorship contracts, one might argue that our results and interpretations cannot be generalized to sponsorships in either other sports (e.g., football and golf) or other countries. With this regard, more generalizable future research needs to extend the sample coverage (e.g., using international data) and/or the focused sports sponsorship (e.g., football). It is also possible to compare the value impact of sponsorship events among different sports within the same country. Another interesting avenue for future international research would be to examine whether the value implication of sports sponsorship differs by the cultural contexts among different countries, such as uncertainty avoidance, religiosity, and short-termism of stock market investors.

In conclusion, sports industry sponsorship is not just a short-term investment but a long-term strategic decision that could bring brand value and improved customer loyalty. As highlighted by Böhler et al. (2007), successful sports sponsorship depends on building long-term relationships through transparent communication and mutual understanding. Further studies should consider various aspects, such as the changes in the sports market structure and consumers' behavior, as well as provide a deeper understanding of the effects of sponsorship activities on corporate value.

Author Contributions

Hyun-Min Kim: Responsible for the implementation of the event study methodology, Hyun-Min Kim collected and analyzed data for this research. He played a pivotal role in deriving the study's key findings and ensuring methodological accuracy.

Hyeong Joon Kim: Specializing in behavioral finance, Hyeong Joon Kim conducted an in-depth review of past literature on the short-term and long-term impacts of sponsorship activities. He interpreted the study's results through a behavioral finance lens, providing valuable insights into the implications of the findings.

Sanghak Lee: With extensive experience in research on corporate sponsorship activities, Sanghak Lee led the overall study, focusing on the analysis and direction of marketing effects. He supervised the research framework and ensured the study's objectives were achieved.

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