Sport Sentiment and Investor Trading Behavior: Evidence from Korean Professional Baseball Matches

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The classic finance theory is based on the concept of the rationality of an efficient market, which investor stock return behavior is determined on the reflection of all information related to economic and rational factors (Boyle & Walter, 2003). However, recent research has shown that investor sentiments might be important factors to influence stock prices (Baker & Wurgler, 2006), such as religious and cultural events (Frieder & Subrahmanyam, 2004), daylight-saving time change (Kamstra, Kramers, & Levi, 2000), and weather (Hirshleifer & Shumway, 2003; Locke, Limphaphayon, & Sarajoti, 2007). Such investor decision making made by cognitive errors was also often evidenced in the sport context. Edmans, García, and Norli (2007) investigated the stock market reaction to sudden changes in investor mood triggered by the winning and losing of sport competitions and reported that World Cup outcomes affected stock returns to relevant countries. The hypothetical link between the sport outcomes and stock return is based on the belief that sport event in general has a significant effect on mood. Wann et al. (1994) revealed that following a team’s win (loss) sport fans showed positive (negative) emotional reactions to the team. More evidence supporting the impact of sporting event outcomes on human behavior has been witnessed such as students’ academic performance (Hirt et al., 1992), lottery ticket sales (Arkes et al., 1988), criminal rate (Wann et al., 2001), and suicide rate (Trofato, 1988). Boyle and Walter noted that sport match outcomes could affect an investor’s self-esteem which in turn leads to investor behavior by affecting the rationality of identifying the suitable investments.

Given that sport sentiment significantly affects stock price, whose trades are more depending on the sport sentiment, between individual investors and institutional investors? The former was found to be significantly affected by non-informative sentiment and attention (Kim & Meschke, 2013; Engelberg, Sasseville, & Williams, 2012). Edmans et al. (2007) found indirect evidence in the sense that small stocks were more affected by sport sentiment. They argued that small stocks were predominantly held by individual investors and local investors. It seems significant and worthwhile to investigate whether individual investor trading is stimulated by sport sentiment more than institutional investor trading is.

The Korean Professional Baseball League (KPBL) was initiated in 1982 by the government’s political purpose, causing mandate corporate involvement. The teams have been typically owned by a ‘Chaebol’, a conglomerate group of firms in Korea, such as Samsung, LG, and Kia, and have their unique regional bases in Korea. Since its institution, without presenting a clear business revenue model, the Chaebols have merely utilized their baseball teams as a promotional tool to enhance their brand image, convey social responsibility, and advertise new products. While a plenty of research documents that such promotional efforts positively influence consumers’ purchase behavior, no study has investigated the relationship between a sport team’s success and stock returns to the team’s parent company or the trading behavior of investors.

Therefore, the purpose of this study is to investigate the stock market reactions and investor trading in response to the Korean baseball franchises on the results of the postseason games from 1999 to 2012. It is hypothesized that winning (losing) a postseason game in KPBL will result in positive (negative) stock market reactions to the group of firms that belong to the Chaebol related to the winning (losing) team. More importantly, the study will examine if individual investors and institutional investors show different stock trading patterns depending on the outcomes of the matches. In addition, our study will see whether domestic and foreign investors behave differently in the same setting depending on whether they are individual investors or institutional investors.

A total of 198 postseason matches among eight teams (semi-playoff, playoff, and championship series) were held from 1999 to 2012 seasons (Korea Baseball Organization, 2013). Eighty seven companies listed in the Korean stock market were related to the eight baseball teams, which in turn belonged to respective Chaebol group. The number of
public companies belonging to these Chaebols ranges from one for Kia to 24 for Hyundai. The data for the stock returns during the period were obtained from multiple sources. First, the daily stock price, return, and aggregate trading volume of each company and the accounting performance record of each company were obtained from FN Guide. Second, the millisecond intraday price, return, and trading volume by different investor groups for every stock were obtained from KRX. Korean stock market is open from 9:00 am to 3:00 pm, thus we defined the event day depending on the timestamp of the completion of the game. As all postseason games during the period took place at night on trading days (weekdays) or non-trading days (weekends), the next trading day was considered as the event day.

For each game, there were two Chaebol groups involved. If we find any significant movement of stock price, two competing hypotheses are possible. One is economics based explanation, and the other is behavioral explanation. Economic explanation would argue that there might be some advertisement effects associated with the game. For example, Bhattacharya et al. (2009) documented that advertisement of a company helped to increase the investor base as in Merton (1987), which subsequently resulted in a permanent increase in stock price. Such economic explanation would be more pronounced for less known small companies. Given that the Chaebols involved in the baseball match are already well known to the investors in Korea, it is less plausible to argue that the advertisement effects would drive the movement of stock price unless the stock was a newly listed small subsidiary of the Chaebol. Therefore, we will also see if the price movement was functions of the size or the stock market registration time of the related Chaebol subsidiaries. Behavioral explanation would argue that the price movement would not be permanent but transitory, because it is corrected by rational arbitrageurs. Thus a stock market event study over one week or one month would be conducted to see if there is a significant price reversal as in Kim & Meschke (2013). To be able to clearly identify the effect of sport events, we would eliminate any observations that are confounded by other major corporate events over the event window of -10 to 10 trading days. Also, if the price movement is not driven by advertisement effect, more the price pressure would be coming from individual investor trading than from institutional investor trading.

While this study may not perfectly explain how investors’ positive or negative mood affects changes in stock prices, one of the implications of the study would be to enable practitioners to predict future trading activity and stock return on the outcomes of sporting matches. Further discussions along with several limitations of the study will be presented.