

An Announcement Effect of Korea Best Brands by Interbrand on Korea Equity Market

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Abstract

Reputable brands play a significant role on the long-term performance of a company and sustainable customer perceptions. Investors need to regard brand valuation reports like Korea Best Brands as important information. This study uses the event study methodology to investigate the announcement effect of Korea Best Brands. The results of this study are as follows. Korea Best brands announcement have positive impacts on listed companies in the first year, it was not seen consistent since that time. Also, fallen and ascended group in brand value have no effects before the event day but have a negative effect after the event day. Significant increasing in brand value prevents a negative effect of unusual falling.

Keywords: *Korea Best Brands, Brand, Brand Equity, Event Study*

1. Introduction

Coca-cola has grown with a strong brand during the last 120 years and was ranked at the first place on Global Best Brands of Interbrand from 2000 to 2012. This company is the largest beverage company in the world. Its market share in the United States amounted to 41.9 percent. This example shows that a powerful brand has an effect on sustainable growth and market share. New research considers brands as assets that reformed the insights of brand management and brand valuation methods [1]. Also, fairly powerful brands give parent companies higher financial benefits and more affirmative customer attitude than rivals. Thus, many companies aim to construct praiseworthy brands that give rise to favorable customer loyalty, sustainable growth, market share, and novel innovations.

According to the efficient market hypothesis, stock price reflects all available information in the financial market, price changes have to reflect new information. When the important event occurs, stock prices of related companies change during the event period. The event study describes an empirical method that enables a researcher to evaluate the impact of a specific event on a firm's stock price. Brand valuation reports by specialized companies could be also an important information. Namely, many investors in financial market could pay attention to Korea Best Brand by Interbrand to use essential information. Considering these points, this study researches whether the announcement of Korea Best Brands have an effect on the listed companies.

This article investigates whether the announcements of Korea Best brands by Interbrand influence its related companies. The remainder of this research is organized as follows. Section 2 introduces brand and brand equity. Section 3 and 4 introduces the data and the event study methods. Section 5 discusses the results of announcements effects of Korea Best Brands. In the last section, conclusions are discussed.

2. Brand and Brand Equity

Brands are regarded just as a symbol or a sign. In the late 1980s, these views are altered that brands are the most important intangible assets to improve firm's financial value and to inspire business strategy [1]. To establish a satisfactory brand, it naturally requires prudential planning, long-term commitment, and creative marketing strategy [2]. The American Marketing Association [3] defines a brand as "Name, term, design, symbol, or any other feature that identifies one seller's good or service as distinct from those of other sellers." Kotler and Keller [2] define a brand as "a product or service whose dimensions differentiate it in some way from other products or services designed to satisfy the same need." These distinguishable differences have not only functional, rational, or tangible role but also more symbolic, emotional, or intangible role [2]. As Previous researches suggest that trustworthy brands have latent product premium ([4] and [5]), higher customer loyalty than competitors ([1] and [6]), and financial benefits ([1] and [7]).

Also, Aaker [1] defines brand equity as "the set of assets and liabilities linked to a brand's name and symbol that adds to or subtracts from the value provided by a product or service to a firm and/or that firm's customers." In his Brand Equity Model, he categorizes five components like brand loyalty, brand awareness, perceived quality, brand associations and other proprietary assets [1]. Brand loyalty is the degree to which people are faithful to a brand [1]. Brand awareness is the degree to which a brand is known among the public like familiarity [1]. Perceived quality is the degree to which a brand is considered to deliver respectable quality products [1]. Brand associations are the degree to which it contributes to bring out more favorable attitude and feelings than rivals and to play a role in the buying process [1]. Other proprietary assets are patents and intellectual property rights, relations with trade partners, and so on [1].

There are several literatures on how to evaluate brand equity. Brand valuation methods are separated by consumer-level or firm-level [8]. The former distinguishes component of utility ([7] and [9]), equalization price [4], and the difference in the customer's willingness to pay for a branded product as compared with identical unbranded [10]. The latter distinguishes revenue premium [5], and incremental profit contribution [11]. New literatures considered these two methods at the same time [6].

Interbrand [2] is a top brand-management firm and has developed a brand estimation model. It defines brand value as "the net present value of the forecasted brand earnings." [2] Also, its procedures have five steps like market segmentation, financial analysis, the role of branding, brand strength, and brand value calculation [2]. Shortly dividing market, Interbrand evaluates brand value based on financial performance, the Role of Brand Index (RBI), and brand strength [12]. The financial performance is evaluated by the entire financial performance corresponding to the brand [12]. RBI calculated as a proportion of the brand choice influence in forming the demand [12]. RBI is multiplied by the economic earnings of the branded products or services due to the brand influence. The brand strength is based on the ten core factors relatively compared to other brands in relation to brand management. These factors are the strength and sustainability of the brand [12].

Table 1. Korea Best Brands List

Date	Total (Listed)	Company Name by Ranking Order (Variation of Brand Value, billion KRW)
21. Feb. 2013	30 (26)	Samsung Electronics(n), Hyundai Motor(n), Kia Motors(n), SK Telecom(n), POSCO(n), KB Financial(n), Samsung Life Insurance(n), Naver(n), Shinhan Card (n*), LG Electronics(n), Shinhan Financial(n), KT(n), Hana Financial(n), Hyundai Heavy Industries(n), LG Chem(n), Samsung Fire & Marine(n), Hyundai Mobis(n), Lotte Shopping(n), Hyundai Card(n*), AmorePacific(n), Samsung Card(n), Samsung C&T(n), Kyobo Life Insurance(n*), Hyundai Eng. & Constr.(n), SK Innovation(n), Hankook Tire(n*), Hyundai Department Store(n), LG Household & Health Care(n), Hitejinro(n), CJ CheilJedang(n).
20. Feb. 2014	50 (45)	Samsung Electronics(10,520), Hyundai Motor(2,391), Kia Motors(978), SK Telecom(178), POSCO(143), Samsung Life Insurance(285), LG Electronics(691), Naver(106), KB Financial(-52), Shinhan Card(354*), KT(105), Shinhan Financial(-191), Hana Financial(-74), Hyundai Heavy Industries(-54), Samsung Fire & Marine(0), Hyundai Mobis(293), LG Chem(-178), Lotte Shopping(273), AmorePacific(199), Hyundai Card(78*), Samsung Card(112), Kyobo Life Insurance(246*), Samsung C&T(135), Hyundai Eng. & Constr.(42), Hankook Tire(144), SK Innovation(-35), KT&G(n), LG Household & Health Care(157), E-Mart(n), Hyundai Department Store(13), CJ CheilJedang(150), Hitejinro(27), Samsung Securities(n), CJ O Shopping(n), Doosan Infracore(n), Hotel Shilla(n), Hyundai Marine & Fire Insurance(n), Hyundai Capital(n*), LotteHimart(n), S-Oil(n), LG Uplus(n), Hanwha Life Insurance(n), Mirae Asset Securities(n), Dongbu Insurance(n), CJ E&M(n), Samsung Heavy Ind.(n), GS Home Shopping(n), Hyundai Home Shopping(n), BC Card(n*), Nong Shim(n)
10. Mar. 2015.	50 (46)	Samsung Electronics(5,811), Hyundai Motor(1,424), Kia Motors(684), SK Telecom(86), Samsung Life Insurance(294), Naver(337), LG Electronics(173), POSCO(-155), Shinhan Card(3*), KB Financial(-134), Shinhan Financial(301), KT(67), Hana Financial(186), Samsung Fire & Marine(165), LG Chem(149), AmorePacific(528), Hyundai Mobis(78), Lotte Shopping(2,003), Samsung Card(225), Hyundai Card(55*), Kyobo Life Insurance(12*), Samsung C&T(-43), Hyundai Eng. & Constr.(37), Hankook Tire(9), KT&G(7), LG Household & Health Care(52), CJ CheilJedang(138), E-Mart(33), Hyundai Department Store(11), SK Innovation(-143), Doosan Infracore(183), Samsung Securities(-32), CJ O Shopping(25), Hitejinro(-58), Hotel Shilla(9), LG Uplus(72), DaumKakao(n), Coway(n), S-Oil(2), LotteHimart(3), Hanwha Life Insurance(0.4), Shinsegae(n), CJ E&M(17), Hansam(n), Lottechilsung(n), Mirae Asset Securities(-20), GS Home Shopping(11), Hyundai Home Shopping(24), Hyundai Capital(-69*), Nong Shim(32)
Total	130 (117)	(n) means new listing company. *(12) is not listed on KRX during estimation window.

Interbrand launched the report “Best Global Brands” with business weeks since 2000. It tries to consider brands as core value initiators for business and society. It suggests that a good brand increases business performance, influences customer choice, constructs good relationship and gain financial benefits [12].

3. Data

Table 1 shows that Korea Best Brands announcement date, the total number of the listing companies, company name listed on Korea Best Brands, and variation of a brand value per year. Korea Best Brands announced on 21 Feb 2013, 20 Feb 2014, and 10 Mar 2015. The total number of Korea Best Brands is 130. Except for missing data and not

listed companies, this study obtains 117 stock prices from KisValue and gains KOSPI and KOSDAQ from Korea Exchange (KRX).

The total number by the year used in the analysis is 26 in 2013, 45 in 2014, and 46 in 2015. Also, the total number of fallen group and ascended group by brand value used in the analysis are respectively 17 and 55. The total number of fallen group over 200 billion KRW used in the analysis in brand value is 17.

4. The Event Study

The general approach of the event study starts with a proxy for what normal return would have been in the lack of the event. The abnormal return by the event is assessed as the difference between actual stock return and its index returns for identical period under theoretical model. Previous researches use these methods to evaluate impacts of special events like e-commerce announcements [13], new product announcements [14], [15], brand valuation reports announcements [16] and earnings announcement [17].

4.1. Window of the Event Study

Interbrand announced Korea Best Brands from 2013 to 2015 as Table 1. This study considers announcement dates of Korea Best Brand as the event day of brand valuation reports. Also, window of the event study arranges the estimation window from -180 to -20 days and the event window from -5 to +5 days like Figure 1.

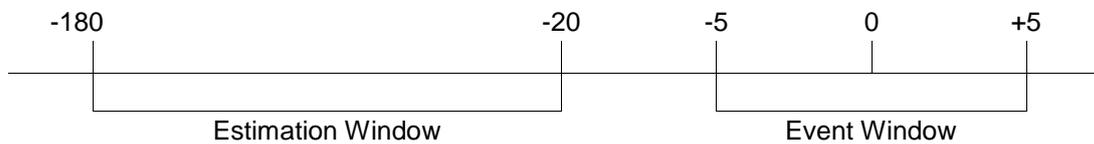


Figure 1. Window of Event Study

4.2. The Procedure of the Event Study

To analyze the effects of Korea Best Brands' announcement, this study uses first a regular "market model" regression to estimate the link between stock returns and KOSPI or KOSDAQ. This study assesses α_i as intercept and β_i as slope of under equation (1) during the estimation window. Secondly, given these parameter estimates, abnormal stock returns ($AR_{i,t}$) of each company are calculated during the event window under equation (2).

$$R_{i,t} = \alpha_i + \beta_i R_m + \epsilon_{i,t} \quad (1)$$

$$\text{s.t. } E[\epsilon_{i,t}] = 0, \text{Var}[\epsilon_{i,t}] = \sigma_{i,t}^2$$

$$AR_{i,t} = R_{i,t} - \alpha_i - \beta_i R_m \quad (2)$$

Thirdly, mean average abnormal returns (AAR_t) are calculated as average of $AR_{i,t}$ under equation (3) and cumulative abnormal returns (CAR_{t_1,t_2}) are measured cumulative AAR from t_1 to t_2 periods under equation (4).

$$AAR_t = \frac{1}{n} \sum_{i=1}^n AR_{i,t} \quad (3)$$

$$CAR_{t_1,t_2} = \sum_{t_1}^{t_2} AAR_t \quad (4)$$

Fourthly t-statistics of AAR_t and CAR_{t_1,t_2} are measured during event window under equation (5) and (6).

$$t_{AAR_t} = \sqrt{n} \sum_{i=1}^n AAR_t / \hat{\sigma}(AR_{i,t}) \quad (5)$$

$$t_{CAR_{t_1,t_2}} = \sum_{t_1}^{t_2} AAR_t / \sqrt{t_2 - t_1 + 1} \hat{\sigma}(AR_{i,t}) \quad (6)$$

5. Results

5.1. Results of Korea Best Brands Announcements by the Year

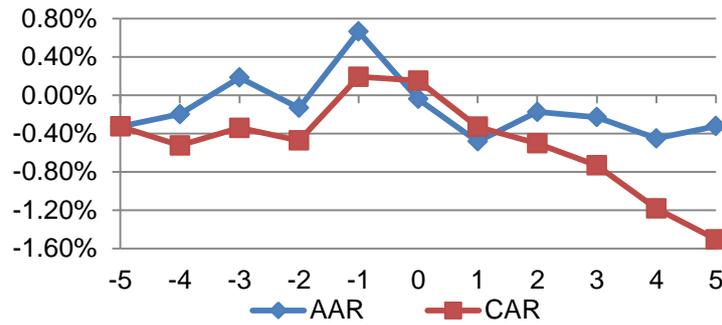


Figure 2. AAR and CAR of Korea Best Brands Announcement in 2013

Table 2. Statistics of Korea Best Brands Announcement in 2013

Day	AAR	t-value	CAR	t-value
-5	-0.33%	-0.85	-0.33%	-0.85
-4	-0.20%	-0.52	-0.52%	-0.97
-3	0.18%	0.48	-0.34%	-0.51
-2	-0.13%	-0.35	-0.47%	-0.62
-1	0.66%	1.74*	0.19%	0.23
0	-0.04%	-0.10	0.15%	0.16
1	-0.48%	-1.26	-0.33%	-0.33
2	-0.17%	-0.45	-0.50%	-0.47
3	-0.23%	-0.60	-0.73%	-0.64
4	-0.45%	-1.18	-1.18%	-0.98
5	-0.32%	-0.85	-1.50%	-1.19

$p < 0.1$

According to Table 2 and Figure 2, announcement of Korea Best Brands in 2013 have effects on listed companies under market model. Specifically, the AAR of listed companies is 0.66 percent on the D-1 day. Given the standard error of the announcement of Korea Best Brands is 0.38 percent, t-value of AAR is 1.74 and the null hypothesis is rejected. These results suggest that announcement of Korea Best Brands in first year has positive effects on companies listing.

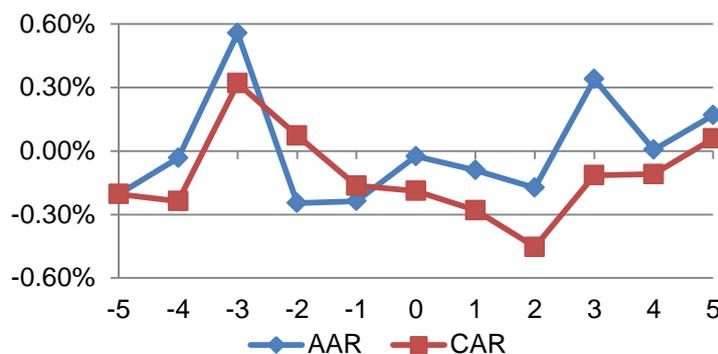


Figure 3. AAR and CAR of Korea Best Brands Announcement in 2014

Table 3. Statistics of Korea Best Brands Announcement in 2014

Day	AAR	t-value	CAR	t-value
-5	-0.20%	-0.61	-0.20%	-0.61
-4	-0.03%	-0.10	-0.24%	-0.50
-3	0.56%	1.66	0.32%	0.55
-2	-0.25%	-0.73	0.07%	0.11
-1	-0.24%	-0.71	-0.16%	-0.22
0	-0.03%	-0.07	-0.19%	-0.23
1	-0.09%	-0.27	-0.28%	-0.32
2	-0.17%	-0.52	-0.45%	-0.48
3	0.34%	1.01	-0.11%	-0.11
4	0.01%	0.02	-0.11%	-0.10
5	0.17%	0.50	0.06%	0.05

Table 3 and Figure 3 suggest AAR, CAR, and t-value of Korea Best Brands Announcement in 2014. AAR and t-value of D-1 day are 0.56 percent and 1.66. However, this statistics are not significant. As shown by Table 3 and Figure 3, the announcement effect of Korea Best Brands in second year has no effect on companies listing.

According to Table 4 and Figure 4, announcement of Korea Best Brands in 2015 have negative effects on listed companies under market model. On the D+1 day, the AAR of listed companies is -1.39 percent. Given the standard error of the announcement of Korea Best Brands is 0.35 percent, t-value of AAR is -4.01 and the null hypothesis is rejected. This result is unusual falling as compared with the preceding year.

Comprehensively, results of first year are positive effects of new information, but results in 2015 are unusual negative impacts unlike the previous year. Because the analysis of yearly analysis was evaluated fallen and ascended companies at the same time, it could make effects offset each other or have unusual results. Thus, additional analysis was conducted to find the cause of this effect occurs in the following section.

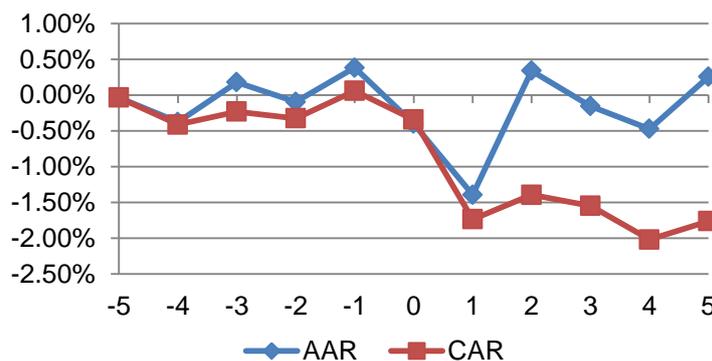


Figure 4. AAR and CAR of Korea Best Brands Announcement in 2015

Table 4. Statistics of Korea Best Brands Announcement in 2015

Day	AAR	t-value	CAR	t-value
-5	-0.03%	-0.10	-0.03%	-0.10
-4	-0.38%	-1.08	-0.41%	-0.83
-3	0.18%	0.52	-0.23%	-0.38
-2	-0.09%	-0.27	-0.32%	-0.47
-1	0.38%	1.10	0.06%	0.08
0	-0.40%	-1.15	-0.34%	-0.40
1	-1.39%	-4.01**	-1.73%	-1.89*
2	0.34%	0.98	-1.39%	-1.42

3	-0.16%	-0.45	-1.55%	-1.48
4	-0.47%	-1.35	-2.02%	-1.84*
5	0.26%	0.74	-1.76%	-1.53

*p<0.1, **p<0.01

5.2. Results of Fallen and Ascended Group in Brand Value

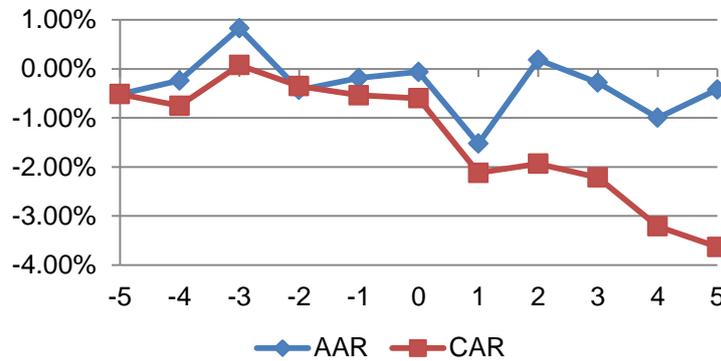


Figure 5. AAR and CAR of Fallen Group in Brand Value

According to Table 5 and Figure 5, announcement of fallen group in brand value have effects on listed companies under market model. AARs and CARs of fallen group are not significant before the event day. However, AAR of D+1 day is -1.52 percent. Given the standard error of the announcement of Korea Best Brands is 0.29 percent, t-value of D+1 day is -2.62. Also, AARs of fallen group are steadily negative after the event day except D+2 day. To do so, CARs of D+4 day and D+5 day are -3.21 and -3.63 percent. Given the same standard error, t-values are respectively -1.75 and -1.88. This result suggests that fallen group in Korea Best Brands has no effect on fallen group in brand value before event day but negative effects after event day.

Table 5. Statistics of Fallen Group in Brand Value

Day	AAR	t-value	CAR	t-value
-5	-0.52%	-0.89	-0.52%	-0.89
-4	-0.24%	-0.41	-0.75%	-0.91
-3	0.83%	1.43	0.08%	0.08
-2	-0.43%	-0.74	-0.35%	-0.30
-1	-0.19%	-0.32	-0.54%	-0.41
0	-0.06%	-0.10	-0.60%	-0.42
1	-1.52%	-2.62**	-2.12%	-1.38
2	0.19%	0.32	-1.93%	-1.17
3	-0.28%	-0.48	-2.22%	-1.27
4	-1.00%	-1.71	-3.21%	-1.75
5	-0.42%	-0.72	-3.63%	-1.88

*p<0.1; **p<0.01

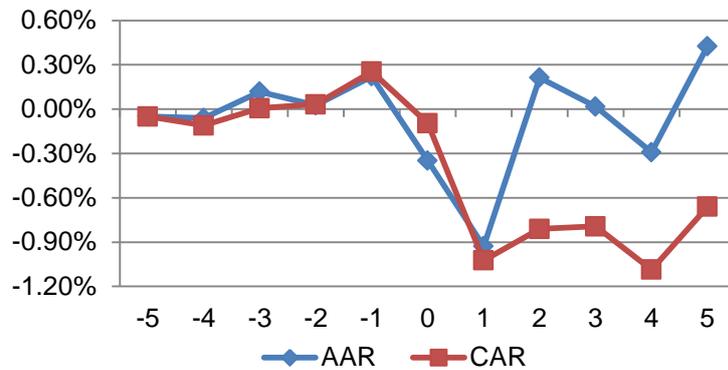


Figure 6. AAR and CAR of Ascended Group's in Brand Value

Table 6. Statistics of Ascended Group's in Brand Value

Day	AAR	t-value	CAR	t-value
-5	0.03%	0.12	0.03%	0.12
-4	-0.08%	-0.27	-0.05%	-0.11
-3	0.13%	0.45	0.09%	0.17
-2	0.00%	0.02	0.09%	0.16
-1	0.25%	0.85	0.34%	0.52
0	-0.44%	-1.49	-0.09%	-0.13
1	-0.77%	-2.63**	-0.86%	-1.11
2	0.18%	0.61	-0.68%	-0.83
3	0.18%	0.60	-0.51%	-0.58
4	-0.16%	-0.54	-0.67%	-0.72
5	0.45%	1.53	-0.22%	-0.23

** p<0.01

According to Table 6 and Figure 6, announcement of ascended group in brand value have effects on listed companies under market model. AARs and CARs of ascended group are not significant before the event day. After D-day, AAR of D+1 day is -0.77 percent. Given the standard error of the announcement of Korea Best Brands is 0.35 percent, t-value of D+1 day is -2.63. This result suggests that ascended group in Korea Best Brands has no effects on ascended group in brand value before event day but negative effects after event day. This result is due to unusual result in 2015.

Also, this paper has an additional analysis to investigate announcement effect of considerably ascended group in brand value. In detail, this study investigates companies ascended over 200 billion KRW in brand value. As Table 7 and Figure 7, AARs and CARs of ascended group over 200 billion KRW in brand value are not significant. This result suggests that ascended group over 200 billion KRW in brand value has no effect unlike the ascended group has negative effects.

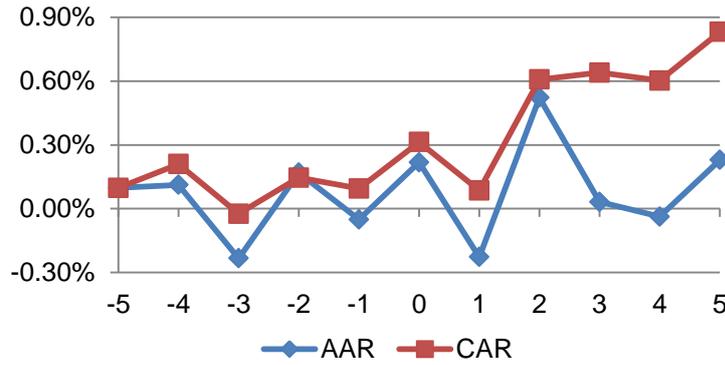


Figure 7. AAR and CAR of Ascended Group Over 200 Billion KRW in Brand Value

Table 7. Statistics of Ascended Group over 200 Billion KRW

Day	AAR	t-value	CAR	t-value
-5	0.10%	0.28	0.10%	0.28
-4	0.11%	0.32	0.21%	0.42
-3	-0.23%	-0.66	-0.02%	-0.04
-2	0.17%	0.48	0.15%	0.21
-1	-0.05%	-0.14	0.10%	0.12
0	0.22%	0.61	0.31%	0.36
1	-0.23%	-0.64	0.09%	0.09
2	0.52%	1.47	0.61%	0.61
3	0.03%	0.09	0.64%	0.60
4	-0.04%	-0.11	0.60%	0.54
5	0.23%	0.65	0.83%	0.71

6. Conclusions

Brand valuation is too tough to accurately estimate for investors. In financial market, investors need to search the brand valuation reports of specialized companies. If newly announced information is satisfied, investors are willing to invest. As the efficient market hypothesis, financial market rapidly reacts. Given these points, it is significant to estimate the announcement effects of brand valuation reports on listed companies' stock prices.

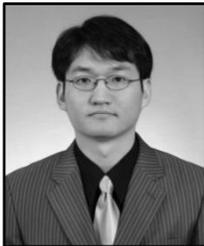
Our results suggest that the announcement in 2013 has positive impacts on the listed firm's stock prices due to the new information. However, the announcement in 2015 has negative shock after an event day unlike previous years. Therefore, such announcement effects of Korea Best Brands by the year are not consistent. To precisely check the announcement effects of Korea Best Brands by the year, future researches need to cumulate data for along period of time.

Announcement of brand valuation reports has no effects on fallen group and ascended group before the event day but has negative effects after the event day. Investors consider fallen news of brand value as substantial news. Also, the Announcement in 2015 has impacts on fallen and ascended group. To investigate more depth, this study limits ascended group over 200 billion KRW. The ascended group over 200 billion KRW has no effects in comparison with merely ascended group. Therefore, substantial increasing in brand value prevents a negative effect of unusual falling in 2015. Consequently, companies must strive to build good brands, manage their brands healthy, and increase greatly in brand equity. Also, investors need to consider separately ascended group and fallen group in brand valuation reports.

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