Negative News of Celebrities and Value Change in Companies with Celebrity Endorsements

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Keywords: scandals of famous persons; endorsed companies; event study method

Abstract: It is an important marketing strategy for Chinese companies to use celebrities in the movie and television industry for endorsements to help promote their products and improve their business performance. However, will the negative news of the celebrities have a negative impact on those companies? By using the event study method to screen 56 samples from 2005 to 2018 through the Internet, this paper conducted an empirical study on the changes of the cumulative abnormal returns of the listed companies with celebrity endorsements due to the negative news of their endorsers. The results showed that the cumulative abnormal returns of the listed companies with celebrity endorsements were negative due to the negative news of their endorsers. However, altogether, such returns failed to pass the significance test. The negative news of their endorsers have no significant negative impact on the values of those companies.

1. Introduction and Literature Review

Celebrity endorsements are used by Chinese companies as an important marketing strategy to raise their wider profile and increase sales of their products. Generally speaking, celebrities have a huge fan base so that the products they endorse can be more quickly recognized and accepted by consumers through network effect. Also, investors favour companies that produce or sell such related products, which helps promote company values. However, a fact that cannot be ignored is that negative news of the celebrities are emerging in an endless stream, whether this will adversely affect the values of those companies? Once the celebrities have negative news, advertisements about the products they endorse are no longer disseminated through TV and the Internet. Fans' loyalty to the celebrities may waver, consumers' trust in such products may also decline, and sales of such products may drop off. Investors sell off their stocks out of fear of the future expectations of the companies. In the capital market, this represents the decline in the company values. Therefore, studying the influence of negative news of the celebrities and the change in company values can not only provide guidance for companies to get celebrity endorsements, but also help investors to have a more robust investment portfolio.

In terms of the relationship between the negative news of the celebrities and values of the companies they endorse, Fizel et al. (2008) pointed out that the negative news of the celebrities will not have a significant negative impact on company values through the study on the impact of endorsements in the sports industry. The research of Elberse and Verleun (2012) pointed out that there is a weak positive correlation between the performances of sports stars in the seasons and the values of the companies they endorse, that is, the values of the companies they endorse increase commensurately with the sports stars' performances, but with a limited improvement. Starting from the stock market of the United States, and combined with the actual negative news of the celebrities, Bartz et al. (2013) discussed the impact of their negative news on stock returns. The results showed that, on the whole, the negative news of the celebrities will not have a negative impact on the companies they endorse, that is, there is no significant correlation between the negative news of the celebrities and the values of the companies they endorse. Currently there are few literatures about the impact of negative news of the celebrities on the values of the companies they endorse in China. Therefore, based on China's stock market, this paper studied the impact of negative news of the celebrities on the values of the listed companies they endorse.

2. Research Methods and Data Declaration

2.1 Research Methods

Event research is usually the best choice among the methods to study the impact of specific events on corporate performance. In the event study method, the event date and event window are first to be determined. Due to the sudden and unpredictable occurrence of negative news of the celebrities, this paper took the occurrence date of such negative news as the event date, and the 15 days before and after the occurrence date of such negative news as the event window. According to the event study method proposed by Mackinlay (1997), this paper took 187 days before the occurrence date of such negative news and 30 days after the events as the estimation window, and empirically studied the impact of negative news of the celebrities on the values of the listed companies they endorse through the change in stock return of the companies.

The core of the empirical research is whether the stock value of the companies with celebrity endorsements changes significantly in the estimation window after the occurrence of the negative news of the celebrities, that is, whether such companies' stock has significant cumulative abnormal return (CAR). If there are cumulative abnormal returns, which means that the negative news of the celebrities have a significant impact on the values of the companies they endorse, and vice versa. This paper used the difference between the actual return rate and the expected return rate of such companies' stock to measure the abnormal returns. Among them, the yield model of a single stock can be expressed:

$$R_{i,t} = \alpha_i + \beta_i R_{m,t} + \varepsilon_{i,t} \tag{1}$$

In which $R_{i,t}$ is the actual return rate of the individual share; $R_{m,t}$ is the market index return rate; $\varepsilon_{i,t}$ is the random disturbance term; α_i and β_i are parameters to be estimated. Based on the regression analysis on individual shares, it is available to acquire the estimated values of α_i and β_i, to calculate the expected return of individual shares, with the following fomula:

$$\hat{R}_{i,t} = \hat{\alpha}_i + \hat{\beta}_i R_{m,t} \tag{2}$$

In which $\hat{R}_{i,t}$ is the expected normal yield rate of individual shares; $\hat{\alpha}_i$ and $\hat{\beta}_i$ are estimated values of α_i and β_i. The abnormal return rate of the individual share is:

$$AR_{i,t} = R_{i,t} - \hat{R}_{i,t} \tag{3}$$

The cumulative abnormal return rate is:

$$CAR_{i,t} = \sum_{t=-j}^{t=j} AR_{i,t} \tag{4}$$

In which $CAR_{i,t}$ is the cumulative abnormal return rate of the sample event during the period of [-j,j].

The core of the event study method is on verifying the significant difference between $CAR_{i,t}$ and 0, which is verified in virtue of t test in this paper.

2.2 Data declaration

Through search engines and the keywords which express negative news, this paper got the list of celebrities who had scandals in 2005 to 2018. Then, by searching the list of companies with celebrity endorsements when their endorsers had negative news and deleting the non-listed companies, 56 valid samples were obtained.

3. Statistical Analysis

According to steps of the event study method, significance test is conducted to the 56 sample events selected in this paper; i.e., if the selected samples meet the analysis demands. In virtue of F test used for the overall significance of the regression equation and the t test used for significance of single

variables, according to the results of empirical analysis, all the 56 samples refuse the null hypothesis, which means that all the 56 events selected in the paper can be taken as samples for the event study method.

It is needed to test the cumulative average abnormal return rate (CAR) after the determination of the sample validity. In consideration of the decisive roles played by CAR in company performance influences, only test results are provided in the empirical analysis in this paper. Considering that scandals of famous persons are sudden events out of expectation, there is no influence of secret divulging; therefore, the date of the event can be determined as the start date of CAR, and the days before the scandals of famous persons cannot be taken within the sample period of CAR. The day of the event (T=0) is taken as the start date for calculation of CAR in this paper, please refer to the specific check results in Table 1.

Table 1 Cumulative Abnormal Return Rate (CAR) of Different Time Spans and Check Results

Event window	CAR	P value	Event window	CAR	P value
（-15,0）	-0.0055	0.407	（0,1）	-0.0044	0.346
（-14,0）	-0.0068	0.376	（0,2）	-0.0051	0.258
（-13,0）	-0.0074	0.488	（0,3）	-0.0048	0.556
（-12,0）	-0.0073	0.382	（0,4）	-0.0060	0.397
（-11,0）	-0.0076	0.294	（0,5）	-0.0052	0.271
（-10,0）	-0.0082	0.312	（0,6）	-0.0072	0.33
（-9,0）	-0.0089	0.408	（0,7）	-0.0068	0.449
（-8,0）	-0.0071	0.552	（0,8）	-0.0085	0.338
（-7,0）	-0.0065	0.617	（0,9）	-0.0093	0.418
（-6,0）	-0.0054	0.732	（0,10）	-0.0113	0.329
（-5,0）	-0.0049	0.588	（0,11）	-0.0154	0.196
（-4,0）	-0.0033	0.475	（0,12）	-0.0098	0.513
（-3,0）	-0.0021	0.617	（0,13）	-0.0077	0.602
（-2,0）	-0.0023	0.416	（0,14）	-0.0089	0.593
（-1,0）	-0.0028	0.552	（0,15）	-0.0122	0.377
（0,0）	-0.0035	0.444			

According to Table 1, the cumulative abnormal return rate (CAR) of different event spans is generally a negative value; however, the concomitant probability P value used for check for t statistical quantity of CAR significance is larger than 0.1. It indicates that on the usual significance level, there is no significant difference between the cumulative abnormal return rate (CAR) and 0; i.e., the null hypothesis that the cumulative abnormal return rate is 0 cannot be refused. According to the check results in Table 1, generally speaking, occurrence of scandals of famous persons does not lead to significant negative influence on stock return rate of endorsed listed companies. Investors regard scandals of famous persons as individual problems, which are irrelevant to the endorsed companies; it is the connotation of the attribution theory. The empirical conclusion in this paper is in accordance with the conditions of the endorsement of famous persons in our country. In virtue of endorsement by famous persons, companies can improve popularity of companies and products, to promote market sales by inspiring buying desires of consumers, so as to improve business performance. With respect to listed companies, improvements in business performance can promote confidence of investors to companies, so as to facilitate the increase in share prices, leading to positive stock return rate. However, in condition of scandals of famous persons, there is no significant drop on stock return rate; therefore, companies may still select the famous persons with scandals when they search for spokesmen for their companies or products. Therefore, scandals of famous persons give rise to no significant negative influence on the endorsed companies; in addition, influences of scandals on themselves gradually fade as time goes by, leading to lack of enthusiasm for famous persons to maintain their honor.

4. Conclusions

In virtue of the event study method, based on network screening, 56 events during 2005 – 2018 are selected in this paper, to conduct empirical analysis on influences of scandals of famous persons on stock return rate of listed companies endorsed by them. According to the research findings, generally speaking, although the cumulative abnormal return rate of endorsed listed companies is a negative value after scandals of famous persons, it fails to pass the significance test. That is to say, scandals of famous persons do not lead to significant negative influences on stocks of endorsed listed companies. Investors regard scandals of famous persons as individual problems of famous persons, which are irrelevant to the endorsed companies.

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