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IS MARKET REACTIONS AND CORPORATE PHILANTHROPY: A CASE STUDY OF THE WENCHUAN EARTHQUAKE IN CHINA

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ABSTRACT: This paper studies the market reactions to corporate philanthropic giving in response to the 12 May 2008 Wenchuan Earthquake in Sichuan, China. Based on a sample of 136 Chinese listed companies, our results indicate a significant and positive 7-day cumulative abnormal rise in the share prices of those companies making donations compared to those without making donations. Both timeliness and the amount of philanthropic giving generate significant market reactions, confirming Godfrey's assertion that corporate philanthropy can be perceived as a genuine manifestation of firms' underlying desire to raise their market values. However, when the sample firms are divided into two groups, government-controlled and non-government controlled, Godfrey's assertion is challenged by our empirical results which show different market responses to the two different types of companies.

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Market Reactions and Corporate Philanthropy: A Case Study of the Wenchuan Earthquake in China

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1. Introduction

Corporate philanthropy is an important element in "corporate citizenship" (Saiia, 2001). It also lies at the top of the "pyramid of corporate social responsibility" (Carroll, 1991). The history of corporate philanthropy went back as far as the late 19th century (Bartkus et al., 2002). It is traditionally regarded as an expression of altruism which means giving without concern for rewards (Burlingame and Frishkoff, 1996).

In contrast to the traditional wisdom, more and more researchers suggest that corporate philanthropy is part of corporate value-building strategy (Buchholtz et al., 1999; Werbal and Wortman, 2000). Many empirical studies have focused on the strategic value of corporate philanthropy over the past two decades (Wokutch and Spencer, 1987; Saiia et al., 2003). Godfrey (2005) and Gardberg and Fombrun (2006) argue that corporate charitable giving may raise firm value through reputation-building.

The current literature mainly focuses on developed market economies that have a long history of corporate social responsibility (CSR) development. Companies in these markets tend to carry out CSR to build up their strategic relationship with investors. However, due to the short history of CSR, it is not yet clear whether it has a similar strategic goal in an emerging market economy such as China.

Our research question is "does the Chinese stock market react to corporate philanthropy?" In China, most listed companies are invested or controlled by the government. At the end of 2004, the total number of shares of all listed Chinese companies was 714.9 billion, 64% of which was non-tradable, and 74% of the non-tradable shares belonged to the state.[1]

On 29 April 2005, the China Security Regulatory Commission (CSRC) launched the non-tradable share reform to reduce state-owned shares. At the peak of the market by the end

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[1] Source data: China capital markets development report, p50.

of 2007, the market value of the listed companies went up to $4.4 trillion, equivalent to 132.6% of the country's GDP in 2007.

As the state controls a large proportion of shares, we focus our analysis on the following issues: 1) Do government-controlled companies have the same incentives to increase corporate value through philanthropic giving as private firms? 2) For government-controlled companies, is donation a genuine manifestation or an ingratiating attempt? 3) Can the market distinguish genuine intention from ingratiation for government-controlled companies?

To answer these questions, we investigate how the market reacted to companies announcing donations to the relief efforts following the 12 May 2008 Wenchuan Earthquake in Sichuan province. Based on a sample of 136 Chinese listed companies, the mean test result indicates that on average there is a significant and positive cumulative abnormal return (CAR) of nearly 3% in the event window. The multivariate regression results demonstrate that two indicators identifying genuine intention and ingratiation, timing of press releases and donation amount influenced market responses. Government-controlled companies donated later and relatively less (donation amount normalized by firm size) than private firms, but the average CAR of the former was greater than that of the latter. Non-parametric test results indicate that the market absorbed more philanthropic giving information of government-controlled companies than that of private firms. These results contradict those of existing studies focusing on developed market economies, implying that the responses of stock markets to philanthropy in China were influenced by the state, an issue that has not drawn any serious attention in the existing literature.

The rest of this paper is organized as follows. Section 2 discusses the background. Section 3 provides the research hypothesis. Section 4 focuses on research methodologies. Section 5 discusses and analyses the empirical results. The final section concludes.

2. CSR in China and the Wenchuan Earthquake

China has experienced significant changes on CSR under economic reforms over the past 30 years. In the early period, state-owned enterprises (SOEs) had to share all kinds of social responsibilities for their workers and the society. In this period, CSR was a mandatory requirement for all SOEs.

By the 1990's, reforms were carried out to transfer SOEs into share holding companies, or to privatize them entirely. In the meantime, the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE) were respectively opened in 1991 and 1992. Many SOEs have been listed on the stock exchanges since then.

Since the beginning of the 21st century, CSR has begun to attract serious attention from different levels. In 2003, the Chinese Communist Party of China (CCPC) set the goal of building a harmonious society and achieving a sustainable development for the country. Organizations and governments at all levels have responded to the call on companies, state or non-state owned, to assume CSR.

On 31 December 2008, SSE issued an announcement in which three kinds of companies were required to provide their CSR Reports, along with their Annual Reports. Although regulatory agencies have been paying close attention to CSR issues, CSR still remains voluntary for most listed companies even today.

This may present difficulties in investigating how the market reacts to CSR information. Since companies are not required to publicly report their social responsibility, there are only a few companies issuing such information. Some companies use press releases, while others use annual reports as a means of revealing their CSR information. As a result, it is difficult to compare different sources of information. In addition, CSR includes, but is not limited to, employee welfare, charitable giving, environmental protection, and community interests. Therefore, it is hard to distinguish which kind of information is attributed to the market reaction when they are released in a uniform context.

The Wenchuan earthquake took place on 12 May 2008 with an Mw Scale of 7.9, marking the most devastating earthquake in China for three decades, and the 11th deadliest event ever recorded on earth.[2] About 70,000 deaths were confirmed, with 374,643 people injured and 17,823 people missing. It was estimated that the direct economic loss was 845 billion RMB.[3]

Whether driven by the scale of the tragedy or the immediate and geographic nature of its coverage, worldwide response to the catastrophe was unrivalled. Many international organizations and foreign governments provided generous and prompt assistance. Within

[2] Data source: http://www.sciencedaily.com/releases/2009/03/090302183250.htm
[3] Source data： http://www.rbc.cn

the country, hundreds of thousands of soldiers, doctors and volunteers took part in the earthquake relief directly.

Numerous Chinese companies and individuals made substantial pledges of support within days. By 30 April 2009, the total amount of donation reached 76.7 billion RMB, of which 65.3 billion were in cash and the rest in kind.[4] In total, 273 listed companies donated 1.5 billion RMB.[5]

Although some companies did not disclose their contribution information, most companies chose to do so. This enabled us to collect information on the timing and amount of donation made by individual companies and to study how the stock market reacted to the donations within a given time window.

3. Research hypotheses

Charitable giving has been regarded as a good personal character. Recent studies have taken interest in corporate philanthropy and found a shift in corporate philanthropy from altruistic to strategic purposes. Saiia et al. (2003) suggest that corporate philanthropy managers believe that philanthropic actions are part of firm strategy.

Strategic philanthropy is a kind of giving that has meaning and impact on firm performance. In contrast to traditional altruism, corporations appear to be increasingly using philanthropic programmes as strategic tools to improve corporate value. From the tax-avoidance perspective, Navarro (1988) argues that charitable contribution can be used as advertising and to avoid taxes.

Philanthropy can also be regarded as a reputation capital strategy. Fombrum (1996) indicates that many firms may be using philanthropy to strengthen their market position by creating a "Reputation Capital." Brown, Helland and Smith (2006) find that commercial advertisement characteristic exists in charitable giving from American companies. Besides any gain in personal reputation, philanthropy can also gain companies a good reputation to help them realize their strategic goal (Gardberg and Fombrun, 2006).

A survey conducted by an American organization reported that 75% of the respondents said corporate philanthropy helped to improve corporate image, and 52% of the

[4] Data Source: http://www.163.com, 2009-08-12
[5] Data Source: http://www.sina.com.cn

respondents said that it was advantageous in encouraging employees to devote themselves to the corporation (Harbaugh, 1998).

Corporations also use charitable giving to increase brand name recognition (Smith, 1994) or improve customer royalty (Campbell et al., 1999; Harbaugh, 1998; Strahilevitz and Myers, 1998; Strahilevitz, 1999).

Many surveys and examples provide evidence supporting these claims. For instance, JDB Associates, a private Chinese company producing soft drink, became well-known almost overnight due to its 100 million RMB donation to the Wenchuan earthquake relief. The soft drink 'Wang Laoji', a main product of JDB, received rocketing demand and tremendous reaction from customers after the donation. Campbell et al. (1999) suggest that most consumers are inclined to purchase products made by corporations enthusiastically pursuing philanthropy.

To reveal whether Chinese listed companies also use philanthropy giving as a corporate strategy to raise reputation capital and to examine whether they are different from western firms, we propose the following hypothesis to be testified using data collected shortly after the Wenchuan Earthquake.

Hypothesis 1: C*orporate philanthropy announced by Chinese listed companies will lead to a significant and positive market reaction.*

Strategic philanthropy can directly result in tax exemption or indirectly create reputation capital. Comparatively speaking, the former is a short-term one-off gain, while the latter is a long-term gain. Godfrey (2005) argues that not all charitable giving can increase firm value and only such giving that is perceived to be a genuine manifestation of the underlying firm's social responsiveness will generate strategic value.

In the past three decades, Chinese people have been preoccupied with wealth creation, neglecting traditional ethical values. It was the Wenchuan Earthquake that revived the enthusiasm for ethics that had been missing for a long time and led to what Godfrey referred as "an act-based positive moral" (Godfrey, 2005).

Substantial corporate giving to the earthquake relief met the first criterion. The other criteria were that corporate giving could build positive reputation capital only if it was perceived as "a genuine manifestation of the firm's underlying intention, vision and

character." On the contrary, the attempt at gaining favor judged as ingratiating rather than genuine would lead to diminished attractiveness (Pattern, 2008).

To test whether a donation is genuine rather than ingratiating, we propose two further hypotheses on the timeliness and amount of donation.

Hypothesis 2: *The earlier the corporate press releases announcing donations to the earthquake relief campaign, the greater would be the positive market reaction triggered, and vice versa.*

Hypothesis 3: *The bigger the amount of announced donation, the bigger the market reaction to corporate press releases announcing contributions to the earthquake relief campaign, and vice versa.*

Hypothesis 2 implies that a prompter announcement of donation is considered to be more genuine than a later announcement, while Hypothesis 3 suggests that a larger amount of donation is more genuine than a smaller amount.

The primary objective of this study is to examine whether corporate philanthropy helps increase a firm's market value in the emerging Chinese market, thereby making a comparison on this issue between different markets and testing the effectiveness of Godfrey's argument on genuine donation. However, different from developed markets which are dominated by private companies, the Chinese stock markets are dominated by government-controlled firms, which are expected to assume more CSR following the earthquake. Whether this is true needs to be tested with empirical data below.

4. Methodologies

Cumulative abnormal return (CAR) is used as the dependent variable in this paper. The higher the absolute value of CAR, the bigger is the market reaction. The least squared market model is employed to estimate CAR. The specific procedure is described as follows.

Firstly, we use equation (1) to calculate abnormal return (AR) for each *i* share in period *t*:

$$AR_{it} = R_{it} - (\hat{\alpha}_i + \beta_i R_{mt}) \qquad (1)$$

R_{it} is the actual day stock return of *i* share in period *t*, this paper uses simple (equally weighted) average day returns of individual stocks. $\hat{\alpha}_i + \beta_i R_{mt}$ is expected day stock return of *i* share in period *t* estimated by a market model. α_i and β_i are parameters of the market model.

We use the Shanghai Stock Exchange Composite Index and Shenzhen Stock Exchange Composite Index independently as simple aggregate average daily return to calculate market return. The data within 200 days before the event window are used to estimate the parameters of the market model using OLS (ordinary least squared) method.

Based on the AR of individual companies, equation (2) below is used to calculate CAR:

$$CAR(\tau 1, \tau 2) = \sum_{\tau=\tau_1}^{\tau_2} AR_{it} \qquad (2)$$

Three control variables are used. First, according to Available Funds Hypothesis (Preston and O'Bannon, 1997), although companies may wish to follow normative rules of good corporate citizens at all times, their actual behavior may depend on resources available. Thus, the bigger the company, the greater the resources that can be used for donation. Meanwhile, financial performance at one time may increase a firm's ability to fund discretionary projects, including CSR projects. Thereby, it is important to control the influence of firm's size and financial performance.

Gross annual income and return on assets (ROA) are employed as a measure of company scale and firm performance respectively. It is necessary to adjust donation amount with revenue. This paper uses EPS (earning per share) as a proxy of firm performance, and uses company size, in terms of total assets, as a proxy of resource providing ability. The larger the firm, the more it can donate.

Second, Patten (1991) believes that companies in such social responsibility sensitive industries as mining, petroleum, chemical products, plastics, rubber, and forestry get more attention than those in non-sensitive industries. Based on the current situation of Chinese social and economic development and the industry classification of the CSRC, the following industries are more susceptible to social responsibility due to their highly polluted nature such as the mining, textile, apparel, leather, paper manufacturing,

printing, petroleum, chemical products，plastics and rubber industries. Beverage, food and pharmaceutical manufacturing, electricity, gas and water supply are closely connected with public well-being. Thus, they are vulnerable to public scrutiny. Therefore, the above-mentioned industries are classified as social responsibility sensitive industries, and the others are classified as non-sensitive industries. Table 1 presents the definition and measurement of related variables.

Table 1 Definitions of explanatory and control variables

Variables	Symbol	Measurement
Reporting lag	RL	Number of days between earthquake and donation announcement days
Donation	DA	Amount donated by listed companies
Adjusted donation	ADA	Amount donated divided by sales, times by 10^3
Profitability	EPS	Earnings per share
Assets	SIZE	Natural log of year-end total assets
Sensitivity	IND	1 for CSR sensitive industry, 0 otherwise
Government	GOP	1 for government-controlled company, 0 otherwise

This study focuses on Chinese-based, publicly listed companies disclosing donation information following the Wenchuan Earthquake on www.cninfo.com.cn, which was set up by the CSRC to record donation information.

The announcement must have been issued within one month of the disaster (13 May 2008 to 12 June 2008). Based on this criterion, donation information was collected from 238 firms, accounting for 87% of all companies making donation. With data cleaning, the final sample includes 136 companies (71 companies listed in SSE and 65 listed in SZSE, 37 of which are small-medium sized enterprises), covering 13 industries.

Table 2 shows the distribution of firms by industry. To satisfy the pair-sample test, we compile the data using the following rules: (1) the control sample belongs to the same industry; (2) companies did not donate or disclose any information; (3) total assets of control companies are similar to those of the study sample. The effective pair samples include only 106 companies (Table 2).

Table 2: Industry distribution of sample companies

	Study Sample		Control Sample	
Industries	Number	Share (%)	Number	Share (%)
Agriculture, Forestry, Fishing and Hunting	1	0.74	1	0.94
Mining	1	0.74	1	0.94
Manufacturing	95	69.85	76	71.69
Electricity, Gas, Water Supply	4	2.94	3	2.83
Construction	4	2.94	3	2.83
Transport, Storage	4	2.94	4	3.78
Information, Technology	4	2.94	2	1.89
Wholesale and Retail Trade	8	5.88	5	4.72
Finance, Insurance	1	0.74	0	0.00
Real Estate	3	2.19	3	2.83
Social Services	5	3.68	3	2.83
Transmission, Culture	1	0.74	1	0.94
Conglomerate	5	3.68	4	3.78
Total	136	100	106	100

The sample firms range in size based on total assets from RMB 150 million to RMB 55.5 billion with a mean (median) of RMB 3,757 million (RMB 1,830 million). The earliest donation announcement was released on 14 May 2008, the second day after the earthquake, by * ST Zhong Rong (000982) although it was not the first company donating to the earthquake relief. The latest was issued on June 7, 2008. The longest reporting lag was 26 days. The majority of firms made announcements during 20-24 May 2009 (Figure 1).

The amount of donations ranged from RMB 45,409 to RMB 30.5 million with a mean (median) of RMB 2.35 million (RMB 1.0 million). The total donation amount was RMB 320 million, about one quarter of which was donation-in-kind.

Figure 1 Distribution of donation announcements:
14 May-7 June, 2008

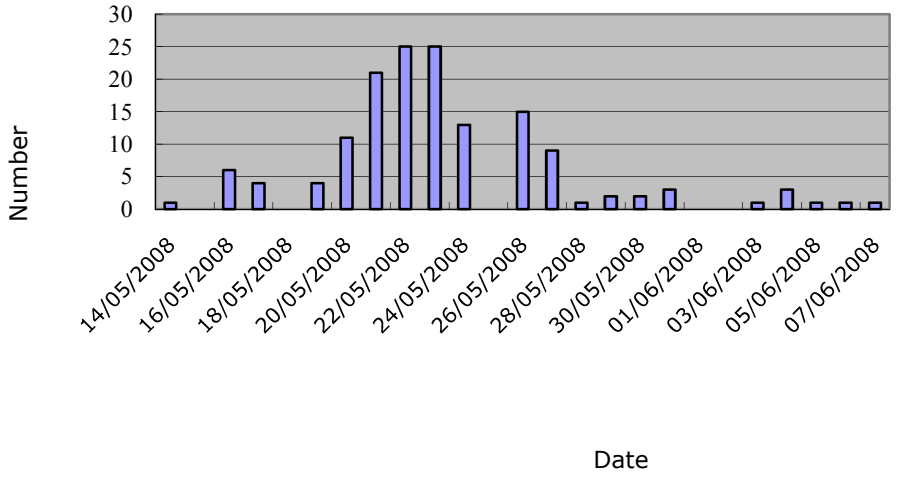


Table 3 presents the summary statistics of the relevant variables.

Table 3: Descriptive statistics and correlations

Panel A: Descriptive statistic

Variable	Mean	Minimum	Maximum	Median	Std. Deviation
RL	11.06	2	26	10	4.30
DA	2,354,834	45,409	30,500,000	1,005,500	4,016,392
ADA	4.33	0.05	62.41	2.01	8.45
SIZE	21.42	18.83	24.74	21.33	1.01
EPS	0.44	-3.09	4.22	0.35	0.68

Panel B: Correlation analysis

	RL	ADA	IND	SIZE	EPS	GOP
RL	1.000					
ADA	0.048	1.000				
IND	-0.048	0.203***	1.000			
SIZE	-0.060	-0.343***	-0.009	1.000		
EPS	-0.186**	0.283***	0.071	0.059	1.000	
GOP	0.202***	-0.265***	0.102	0.361**	-0.084	1.000

Notes: See Table 1 for definitions of variables. Figures in Panel B are Pearson product-moment correlation coefficients, with *, **, *** representing significance at 10%, 5% and 1% respectively.

Panel B in Table 3 shows the correlation analysis of explanatory and control variables. The reporting lag (RL) is associated with company profitability. The adjusted donation amount (ADA) shows a significant correlation with company size, profitability (EPS) and industry sensitivity (IND), but there is no auto-regression. The correlation relationship between the amount of donation and profitability suggests that more profitable companies commit more donations. Corporate governance (GOP) influences both reporting lag and the amount of donation.

5. Regression results

We use the paired-sample method to examine the tendency of CAR within the event window（-1，5）for the study sample, paired-sample and control sample companies

respectively. The paired-sample is a sub-sample of study sample, each of which is paired one-to-one with the control sample. The study sample covers 136 companies but the paired and control samples cover only 106 companies.

CAR for the control sample is negative except for the event window (-1, 1). CAR of the paired sample is constantly positive with a maximum value of 2.18% in the event window (-1, 3).

Table 4 Mean CAR and Mann-Whitney U test between samples

t	Study Sample（%）	Paired Sample（%）	Control Sample（%）	Study Sample VS Control Sample	Paired Sample VS Control Sample
-1	0.36	0.12	-0.67	-1.753* (0.080)	-1.449 (0.147)
0	0.52	0.61	-0.43	-2.134** (0.033)	-2.407** (0.016)
1	1.68	2.04	0.05	-1.879* (0.060)	-2.309** (0.021)
2	1.73	2.04	-0.51	-2.258** (0.024)	-2.774*** (0.006)
3	2.04	2.18	-0.47	-2.808*** (0.005)	-3.054*** (0.002)
4	1.81	1.83	-0.43	-2.325** (0.020)	-2.320** 0.020
5	2.00	1.85	-0.93	-2.595*** (0.009)	-2.526** (0.012)

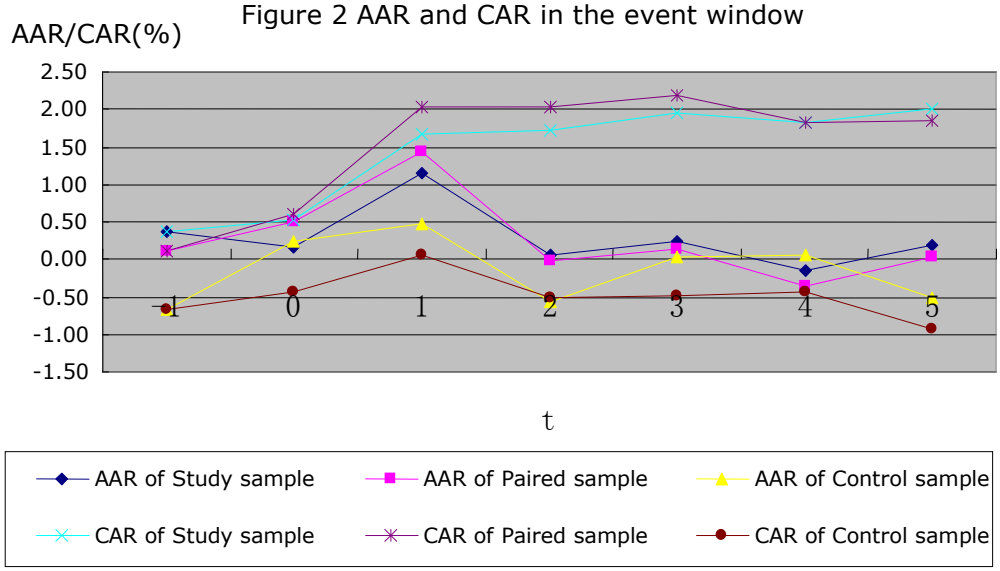
Notes: Values in columns 2-4 are mean CARs for different samples. "Study VS Control" column refers to Mann-Whitney U test between the study and control samples. "Paired VS Control" column refers to Mann-Whitney U test between the paired and control samples. Values brackets refer to significance of Z value at two-tails, *, **, *** signify significance at 10%, 5% and 1% levels respectively.

The difference between the study and control samples is significant on the date of donation announcement. CARs for the paired and study samples follow a similar trend. The maximum of CAR is 2.04% and the minimum 0.36% for the study sample. The corresponding values are 2.04% and 0.12% respectively for the paired sample. The Mann-Whitney U test indicates that the differences in the whole event window between the study and control samples are significant.

In particular, after the donation announcement, the difference remains significant in most of the event window. Hence, both the paired and study samples support Hypothesis 1. The CAR of the study and paired samples shows an apparently increasing trend on the third day of announcement, followed by a decline on the fourth day.

To examine the trend of CAR and the difference between sample groups, Figure 2 illustrates the relationship between CAR and AAR (Average Abnormal Return). With regard to AAR, although there is some difference between the study and control samples, the difference is insignificant and the trend is similar. The difference between the paired and control samples is the same. However, compared to the control sample, there is a significant and positive CAR for companies announcing donations. It shows an intensive reaction to donation information from the first day of announcement, pushing up short-term returns for the companies disclosing donation information.

Figure 2 AAR and CAR in the event window



Notes: AAR=average abnormal return, $AAR_t = \frac{1}{N}\sum_{i=1}^{N} AR_{it}$, N is number of companies in the sample; CAR= cumulative abnormal return.

The above paired-sample analysis indicates that the market responds positively from the day of donation announcement. As a result, the following multivariate regression will focus on the factors contributing to short-term CAR within various event windows, including CAR(0)、 (0，1)、(0，2)、(0，3)、(0，4) and (0，5).

To control for the "noise effect" from factors such as industry sensitivity and the like, the regression model includes the announcement time and donation amount as key explanatory variables for the market reaction. The regression results based on equation (3) are presented in Table 5.

$$CAR(\tau_1,\tau_2) = \alpha + \beta_1 \times RL + \beta_2 \times ACA + \beta_3 \times IND + \beta_4 \times SIZE + \beta_5 \times PRO + \xi \quad (3)$$

Definitions of the explanatory variables in equation (3) and Table 5 are provided in Table 1.

Table 5 Multivariate regression results of Model (1)

	CAR(0)	CAR(0, 1)	CAR(0, 2)	CAR(0, 3)	CAR(0, 4)	CAR（0, 5）
RL	-0.125 (-1.46)	-0.144 (-1.69)*	-0.161 (-1.90)*	-0.188 (-2.21)**	-0.206 (-2.40)**	-0.219 (-2.57)**
ACA	0.259 (2.69)***	0.264 (2.74)***	0.234 (2.45)**	0.205 (2.15)**	0.065 (0.68)	0.106 (1.10)
IND	-0.235 (-2.75)***	-0.197 (-2.31)**	-0.179 (-2.11)**	-0.107 (-1.26)	-0.142 (-1.66)	-0.180 (-2.11)**
SIZE	0.148 (1.64)	0.131 (1.45)	0.210 (2.35)**	0.251 (2.80)***	0.186 (2.05)*	0.159 (1.76)*
EPS	-0.107 (-1.19)	-0.177 (-1.96)*	-0.222 (-2.48)**	-0.213 (-2.36)**	-0.141 (-1.56)	-0.159 (-1.76)*
Adj-R^2 F value	0.063 (2.83)**	0.061 (2.75)**	0.077 (3.25)***	0.077 (3.24)***	0.059 (2.69)**	0.065 (2.89)**
(Sig.)	0.019	(0.022)	(0.008)	(0.009)	(0.024)	(0.017)

Notes: Figures in parentheses are t-values. *, **, *** signify significance levels at 10%, 5% and 1% respectively.

Two variables help us to understand the genuine or ingratiation characteristic of donation. One is timing, that is, an earlier announcement shows that the firm is more sincere in giving donation. The estimated coefficient on reporting lag (RL) is negative and significant, suggesting that the market responds more positively to earlier than to later announcements, supporting Hypothesis 2.

The other variable is the amount of donation, that is, a bigger amount of donation shows that the firm is more sincere. The amount of donation can be measured in two ways: the absolute amount (DA) and the relative amount which is the DA adjusted by firm size (ADA). The regression results suggest that CAR is significantly related to ADA in the first three days of announcement, but not to DA. This suggests that investors only respond to donation amount that matches with firm size, or their relative ability to make donation. The overall results support Hypothesis 3.

The coefficient on industry sensitivity is negative and significant within (0，1) ($p<0.01$), (0，2) ($p<0.05$) and（0，5）($p<0.05$), indicating that companies belonging to social responsibility sensitive industries yields lower CAR than those belonging to social responsibility non-sensitive industries. This result seems to contradict the current literature. A possible explanation is that investors respond less positively to donation announcements made by companies in social responsibility sensitive industries because the probability of these companies discharging their social responsibility is higher than that of other firms.

Profitability and size of firms affect CAR in the event window, but the influence is not constant. This may be due to the close association of these two variables with the announced amount of donation. It may also be due to some other factors such as corporate governance. Hence, further analysis is required below.

Market reactions and corporate governance

To testify whether market reactions were affected by corporate governance, the sample is divided into two groups based on whether they are controlled by the government or not.

There are 60 companies controlled by the government in the whole sample. The key differences between government-controlled and non-government-controlled companies are presented in Table 6.

Table 6 Announcement timing and donation amount of two sub-samples

	Report lag (days)	Donation amount (RMB)
Government-controlled companies	12	2,102,312
Private companies	10	2,554,193
Z	-1.800	-0.599
Asymp. Sig. (2-tailed)	0.072	0.025

The mean of reporting lag for government-controlled companies is 12 days, while that for private companies is 10 days. There is a two-day delay for the former compared to the latter. The Z-value resulting from the Mann-Whitney test is statistically significant at the 10% level. This implies that, compared to private firms, government-controlled companies have less incentive to build up corporation reputation capital through making donations.

The mean donation amount by government-controlled companies is also less than that of private companies, implying that private firms were not only quicker to respond but also more generous in making donations than government-controlled companies. When adjusted by firm size, the difference in the amounts of donation between the two groups of companies becomes even more obvious as on average government controlled companies were much larger than private firms.

The average amount of donation by government-controlled companies was 451,881 RMB less than that by private companies. However, the former's average revenue and total fixed assets in 2007 were 75% and 93% respectively more than those of the latter's. If the donation amounts were normalized by sales or assets, the relative donation differences between the two groups were much greater and statistically significant at the 1% level.

The companies that made the first donation announcement (ST Zhongrong) and the largest donation (Xin'an Share) were both private companies. On 30 July 2009, the Chinese Ministry of Civil Affairs reported that Chinese companies donated 5.457 billion RMB during the first half of 2009, of which 3.89 billion RMB were donated by private companies, accounting for 71.3% of the total.[6]

The above analysis and the results in Table 6 suggest that compared to private companies, government-controlled companies did not show as much incentives to increase their reputation capital through philanthropic giving, even when the country was suffering from a devastating earthquake. This can be explained by the fact that most government-controlled companies are large companies with substantial monopoly power. As a result, they do not have the same incentives as their private counterparts to raise reputation capital through philanthropic giving.

While government-controlled and private companies had different incentives to build up reputation capital through philanthropy giving, the market failed to identify this difference effectively. Table 7 reports the mean CAR for each of the groups in the event window.

[6] Source data: www.gov.cn

Table 7 Mean CAR for government-controlled and private companies

Event window	(-1)	(-1,0)	(-1, 1)	(-1, 2)	(-1, 3)	(-1, 4)	(-1, 5)
Government controlled companies (%)	0.47	0.51	1.43	2.28	2.37	2.23	2.04
Private companies (%)	0.27	0.53	1.87	1.29	1.63	1.48	1.97
Z-value	-0.872	-0.351	-0.026	-0.942	-0.609	-0.688	-0.057
Asymp. Sig. (2-tailed)	0.383	0.726	0.979	0.346	0.542	0.491	0.955

The first two rows in Table 7 are the mean CARs for both groups of companies. The maximum difference of CAR is one percentage point in (-1, 2) and the minimum difference is only 0.02 percentage points in (-1, 0). The differences in all event windows are statistically indifferent measured by the Z-value of the Mann-Whitney U test.

This is somewhat surprising but can be explained by the fact that Chinese companies may be able to build up their reputation capital using other strategies than philanthropic giving. For example, government-controlled companies can use their annual CSR reports to disclose their philanthropic activities on a regular basis to build up their long-term reputation.

Company size and donation amount

To examine the relationship between company size and CAR, we partitioned the sample companies into two groups based on their donation amounts and total assets on 31 December 2007. The large company group consists of firms whose total assets are larger than the sample mean, and the small company group includes firms whose total assets are less than the sample mean. The sample companies are also divided into two groups based on their amounts of donation, with the first group donating more than the sample mean and the second group less than the sample mean.

Based on both firm size and donation amount, the sample companies can be divided into four groups, i.e., large companies with large donations, large companies with small donations, small companies with large donation and small companies with small

donations. The four groups number 18, 45, 12 and 61 respectively. The mean CAR for each group within the event window is illustrated in Figure 3.

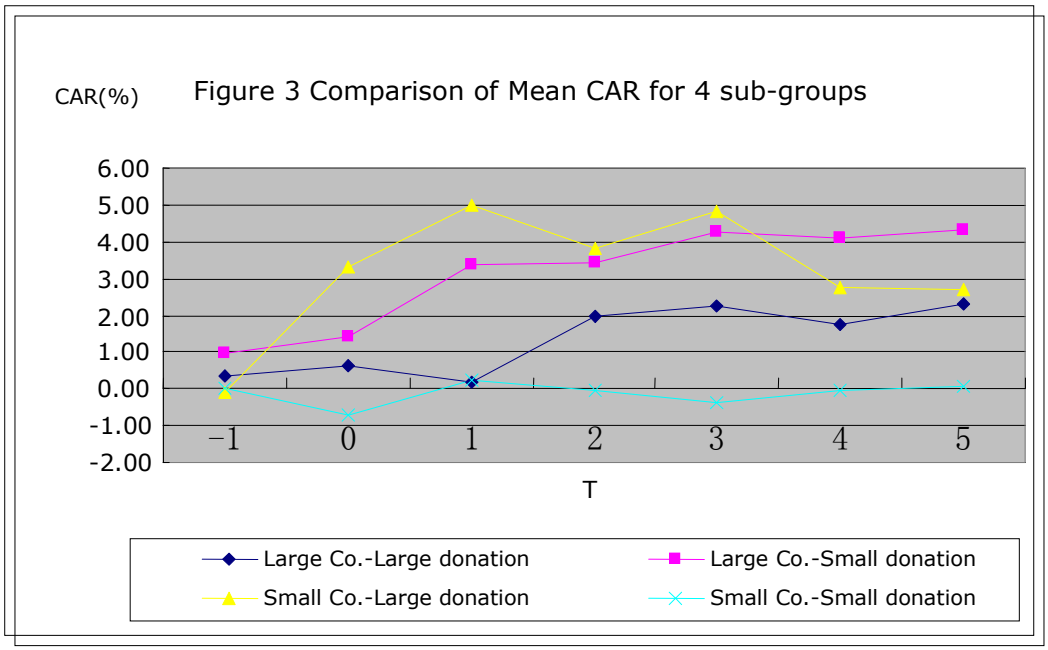


Figure 3 Comparison of Mean CAR for 4 sub-groups

Except for Group 4 (small companies with small donations), all the other groups achieved significant and positive CAR. Small companies with large donations managed to achieve the largest CAR from (-1, 0) to (-1, 3) and are then overtaken by the large companies with small donations in (-1, 4) and (-1, 5).

It is surprising to note that large companies with small donations seem to have achieved more positive market response than large companies with large donations. The mean CAR of the former group is persistently higher than that of the later group. However, this result is not much different from our earlier analysis which suggests that the market reacted indifferently to the amounts of donation by large companies. This may be due to the fact that most large companies are government controlled and investors can be indifferent towards them irrespective of their donation amounts as long as they make donations.

The indifferent market reactions to large companies making varying amounts of donation contradict the existing literature arguing that companies make donations to generate the so-called 'ingratiation effect'. Cooter and Broughman (2005) suggest that the reason for small donation was the mechanism, not the quality of humanitarian aids. A survey, conducted by a research team of Tsinghua University, reported that of the overall

philanthropic activities following the earthquake relief campaign, the government accepted about 58% of all the donations. The Red Cross and other charities accepted 31%. About 80% of all the donations went to the government special account, implying that a lot of donations were not intended for ingratiation.[7]

6. Conclusions

This paper investigates the market reaction to corporate press releases announcing donations to the relief effort following the Wenchuan Earthquake on 12 May 2008 in Sichuan, China. Based on a sample of 136 Chinese listed companies, we show that there is a significant and positive 7-day CAR to companies making donations compared to the control companies. The multivariate regression results demonstrate that timeliness (an earlier announcement) and the announced amount of donation are positively correlated with CAR.

The main results support Godfrey's argument that philanthropic giving is perceived as a genuine manifestation of firms' underlying social responsiveness to increase their market values. However, a more detailed analysis reveals some surprising results different from those of existing studies focusing on developed markets.

The first striking result is that the market reacted indifferently to government-controlled and private companies although the former not only made their donation announcements later but also donated significantly less than the latter.

It suggests that donations made by government-controlled companies were more an ingratiating effort than a genuine manifestation. Despite this, the ingratiating effort by government-controlled companies could still bring about strategic value through their annual CSR reports or tax exemption. This explains why the market reacted indifferently to the philanthropic giving by government-controlled and private companies despite the firms' different motivations and incentives.

It is also striking that the market reacted more favourably towards larger companies than smaller ones. As most large companies are government-controlled, this may imply that government-controlled companies do not need to strengthen their market positions through philanthropic giving because of their market monopoly power, or it is relatively

[7] Data source: www.cyol.net, 2009-8-12

easier for government-controlled firms to gain reputation capital than their private counterparts.

Although the main results in this paper are consistent with existing studies which suggest that philanthropy giving is a strategic instrument for firms to build up their reputation capital, the empirical results in this paper have two special important implications for corporate philanthropy in China.

First, the Chinese economy is still strongly influenced by the state through government-controlled companies. Despite continuing reforms during the last three decades, there is still a large gap between western and Chinese corporate governance. Second, there is an obvious difference between China and the West in their philanthropy regulation mechanisms. In the West, governments never accept and use civilian donations. The current system of Chinese philanthropy probably raises concern among the public regarding the misuse of philanthropic funds, thereby reducing the scale of charitable giving. Third, the Chinese society may have different levels of trust, or perception, in the charitable efforts of private and government-controlled firms.

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