

# MEDIA MONITORING, CRISIS PUBLIC RELATIONS AND ENTERPRISE PERFORMANCE

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## **Abstract:**

In the present Chinese economic transform, the market mechanism and legal system has not been established perfectly yet. As an informal system, media monitoring becomes a useful complement to the formal institutions such as the markets and laws. Actually, the enterprise which is facing with the media monitoring often takes crisis public relations (CPR) as a response to release the negative effects of media coverage. The empirical results show that: (1) There is a significantly negative relationship in the short-term and a significantly positive relationship in the long-term between the media monitoring and enterprise performance. (2) After considering the mechanism of CPR, the negative effects of media monitoring are released in the short-term, but it may not be conducive to the long-term development of enterprises. (3) Compared to the state-owned enterprises, we find that the above relationships have greater influence over the non-state-owned ones. Our paper enriches the research on understanding the mechanism how media monitoring affects the performance of enterprises in the short-term and long-term, and takes full account of the CPR's release effect on media monitoring. We accordingly gives the corresponding policy recommendations.

*Keywords: media monitoring, crisis public relations, enterprise performance, property right*

## **1. INTRODUCTION**

The progress of science and technology brings a new "Internet +" era, which has stimulated the development of new industries and the change of traditional business model. In the present economic transform, the market mechanism and legal system is not perfect yet, and the problem of information asymmetry between enterprises and stakeholders is prominent. The media's dual attributes of information carrier and external supervision makes it a useful supplement to the present formal institutions, and plays a more and more important role in accounting supervision. With the continuous improvement of the media communication, guiding force and influence, the attention and evaluation of media has gradually become the benchmark for stakeholders to make decisions, and will ultimately have an impact on enterprise value. Current studies on media mainly focus on two directions: the media attention and the media tone. The former one reflect the quantity of media reports. It has been proved that the high degree of media attention can effectively improve the information quality of listed companies and significantly reduce the risk information of transaction (Fang and Peress, 2009) <sup>[1]</sup>. It also helps to improve the level of corporate governance (Dyck and Zingales, 2002) <sup>[2]</sup>. The media tone is a reflection of the public opinion. From the current study on the media, we find that positive and negative reports have

unbalanced market reaction, and the effect of negative reports on corporate performance is more significant. It mainly due to the media's rent-seeking behavior, the public's curiosity on negative reports and psychological inversion on positive reports, and the managers' opportunism on positive reports (Sally White, 1991; Zheng Zhigang, 2007; Zhao Yawen, 2008) [3-5]. It is not difficult to find that, as a means of media monitoring, the negative reports have a greater impact on corporate value than other reports.

Actually, the company which is facing with media monitoring often takes crisis public relations (CPR) as a response to prevent the information from spilling over and maintain a good public impression, so that the measures it took can release the negative effects of media coverage on enterprise performance. Whether the enterprises can accurately hold the five major principles of timeliness, responsibility, communication, system, and support (Wang Boyong, 2007) [6] in the crisis public relations, will directly affect the effect of public relations crisis. Foreign scholars started their research on the crisis public relations earlier than Chinese scholars. Represented by Tim Coombs, they included the crisis public relations in the category of crisis management [7]. Benoit (1987) stressed that the most important asset of individuals or organizations is its reputation, and any social organization should pay attention to the crisis public relations in order to maximize the improvement of its reputation and image [8]. Media monitoring is inseparable from the crisis public relations. They form at the same time, restrict each other and work together to influence the enterprise performance. Therefore, it is necessary to consider the key crisis public relations when we start to explore the impact of media monitoring on enterprise performance.

Most existing researching papers analyze from the long-term influence of media monitoring on enterprise performance, while there is a lack of research on how the media exposure affects enterprise performance in the short-term (From the rare literature of short-term influence, we find that Yao Yilong examined the short and long term relationship between media monitoring and enterprise performance in the fast consumer industry) [9]. We also find that the scholars rarely consider the key crisis public relations which enterprises may take to deal with the media supervision. Based on this, by taking Chinese listed companies in Shenzhen A-shares for example, this paper not only analyzes the logical conclusion of the media exposure, the crisis public relations and the enterprise performance, but also studies if there is a diversity resulting from the different property right. The contribution of this paper lies in: (1) By distinguishing the property of all the listed companies in Shenzhen A-shares, we test the different effects of media exposure on the short-term and long-term performance. (2) By introducing the mechanism of corporate crisis public relations, we investigate the different slow-release effect of crisis public relations on the short and long term, and fully revealing the internal relations between "media monitoring -- crisis public relations -- enterprise performance". (3) The conclusion of this paper shows that, the crisis public relations can not improve the enterprise's performance in the long run, and the only effective method to enhance its competitiveness is to regard the emerged negative reports as the opportunities of punishment and improvement and improve their management level. This provide enterprises operators a theoretical basis for decision-making.

## **2. THEORETIC ANALYSIS AND RESEARCH HYPOTHESIS**

### **2.1 Media monitoring and the short/long term performance of the enterprise**

In 1930s, the American economists Berle and Means put forward the theory of "Principal-Agent Theory" which advocated the separation of ownership and management. After nearly a century of evolution, there has emerged the enterprise management which based on the right of management and the corporate governance which based on the right of ownership in the modern enterprise (Cochran and Wartick, 1988; Wu Jinglian, 1999; Zhang Weiyang, 1996) [10-12]. Enterprise management can be divided into two aspects: business management and behavior

management. Business management focuses on the management of a variety of resources, while behavior management focuses more on the management of the organization members' behavior. On one hand, negative media coverage can affect the daily production and operation activities of the enterprise, which will influence its business management in the short term; on the other hand, by affecting employees' psychology and behavior, negative coverage will affect the enterprise's behavior management. These two aspects will work together to produce certain negative influence to the enterprise management activity in the short term. This will result in a decline of enterprise performance in the short term.

The public opinion supervision of media is an effective way to eliminate all kinds of corrupt behavior caused by excessive power and lack of constraints, and thus becomes an important supplement to corporate governance mechanisms (Xin Yu, Xu Liping, 2011)<sup>[13]</sup>. In recent years, more and more domestic and international scholars carried on the research on the relationship between media supervision and corporate governance. These studies found that, as a constraint mechanism or external discipline (Chen, Pantzalis and park, 2009)<sup>[14]</sup>, media supervision can influence the corporate governance of a enterprise by the reputation mechanisms or legal punishment (Dyck and Zingales and Volchkova, 2008)<sup>[15]</sup>. From the reputation mechanism, according to Maslow's hierarchy of needs theory, the entrepreneurs realize their dual needs of material and spirit from obtaining the social and other people's affirmation. In this case, the reputation mechanism becomes an effective means to constrain the behavior of entrepreneurs. Dyck (2008) believes that the role of the media governance is achieved by impacting the reputation of the manager. R. Joe Jennifer et al. (2009) found that negative reports can force the board members and managers to complete their responsibilities more diligently, and promote the enterprise to improve the corporate governance level<sup>[16]</sup>. Nguyen (2009) also proved that the media pays more attention to the CEO, the company's performance will be better<sup>[17]</sup>. Domestically, Zheng Zhigang (2011) pointed out that, by causing the attention of general public, negative reports forms an external constraint on the behavior of managers so as to play the role of corporate governance<sup>[18]</sup>. Media monitoring also impact the corporate governance through the lawful punishment. The modern market economy is the free trade economy which takes the independent enterprise as the main body, and the legal system is the basic rule of its effective operation. Research shows that negative reports can impact on the corporate governance by using constrains on law and punishing the opportunism behavior of enterprises (Lili Dai, Parwada and Bohui Zhang, 2015)<sup>[19]</sup>. Domestic scholar Chen Zhiwu (2005) systematically discussed the relationship between the market, the law and the media<sup>[20]</sup>. In the period of economic transition, if the located legal system has a lower effect (Zhang Yi, etc., 2005)<sup>[21]</sup>, administrative governance will become a replacement mechanism of legal system and promote illegal enterprises to correct their irregularities, which will finally help the enterprises realize their performance improvement (Li Peigong and Shen Yifeng, 2010)<sup>[22]</sup>. Meanwhile Dai Yiyi and Pan Yue (2011) proposed that the criticism and questioning of media can form a huge external pressure of public opinion to the company managers, and even lead to concerns about attention and investigation of government regulators. These will help managers reduce the financial restatement which may seriously damage the interests of investors<sup>[23]</sup>. Therefore, in the long run, by two basic tools (implicit reputation mechanism and explicit legal punishment mechanism) which help maintain market discipline, the media monitoring will regulate companies' own behavior to meet the market expectations, and improved the enterprises long-term performance.

Based on the above analysis, this paper puts forward the research hypothesis 1:

H1: Media monitoring will drives the enterprise performance down in the short term, and pushes it up in the long term.

## 2.2 Short-term effect of crisis public relations

Barton (1993) believes that the crisis is an uncertainty event which can cause potentially negative impact. This event and its effect may cause great damage <sup>[24]</sup> on the organization, employees, products, services, assets and reputation. Crisis public relations can be divided into broad sense and narrow sense. The broad sense of crisis public relations refers to activities of the system which the enterprises use a variety of possible public affairs and public relations skills to achieve business goals. The narrow sense of crisis public relations mainly refers that when the enterprises meet the trust, image crisis or the mistakes in the work, they will obtain public understanding through a series of public relations activities, and then restore the impact of a work (Chen Lidan, Wang Lu, 2006) <sup>[25]</sup>. The crisis public relations in this article refers to its narrow sense whose purpose is minimizing the loss of the crisis by a professional and planned way. Nowadays media's spreading capacity, influence, and guiding force is growing. Because of the "spiral of silence" phenomenon (Noel-Herrmann, 1974) [26], the media can make the majority of the public to know the enterprises' negative information in a short period of time. And the report will be established as the mainstream opinion quickly and form negative public atmosphere. This high intensity of the media monitoring will bring managers and owners a strong pressure of public opinion. In order to alleviate the impact of public opinion on the performance of enterprises, enterprises tend to release the negative impact by crisis public relations<sup>①</sup>. Therefore, we say that the facing the media monitoring, enterprises will actively carry out public relations crisis (Tim Coombs, 2002). They will regard the public image of enterprises as an important asset and maximally save the reputation and image (Benoit, 1987). Successful crisis public relations should be able to reflect five major principles: timeliness, responsibility, communicability, systematicness and supportability (Wang Boyong, 2007). Based on the above analysis, this paper puts forward the research hypothesis 2:  
H2: Enterprises' crisis public relations can release the adverse effects of media monitoring in the short term.

## 2.3 Long-term effect of crisis public relations

In the face of the tremendous pressure of public opinion that media supervision has brought, on the one hand, enterprises will use crisis public relations to release the negative consequence and reduce the performance impact that adverse exposure caused. On the other hand, excessive dependence on crisis public relations may enable enterprises to suffer from "Crisis Public Relations Dependence." This is because, the crisis public relations only relieves the stress of public opinion in the short term. It makes enterprises avoid the difficulties caused by negative coverage on the surface. But crisis public relations itself cannot solve the problems exposed in the media supervision at the source. The more the enterprises blindly rely on, the negative effects caused by the crisis public relations will be more prominent. There are always some enterprises, who retains a deep aversion and wariness for the media monitoring, make "settle" become their first reaction as soon as the media appears their negative voice (Qiu Jin, 2009) <sup>[27]</sup>. Li Min (2005) argues that some enterprises not only learn from the lessons and take active measures to mend their mistakes, but also attempt to trivialize it by "crisis public relations" when their products have some quality problems<sup>[28]</sup>. Lu Qiwen (2007) also pointed out that the crisis public relations may ignore the problems discovery mechanism in the enterprise internal operation. Companies are likely to make mistakes easily, and even become not afraid of making mistakes. This makes the crisis public relations become a "connivance" to the enterprises troubled by negative news <sup>[29]</sup>. Companies try to cover the defects existing in the governance management through the crisis public relations. So excessive reliance on it may lead to short-sighted and opportunism psychology of managers and governors, and thus hinder the enterprises' long-term development. Blindly relies on crisis public relations is not the way of sustainable development for the enterprises, and the root of this road is to improve their own

management governance level. Based on the above analysis, we put forward the research hypothesis 3:

H3: The crisis public relations may hinder the development of enterprises in the long term.

### **3. RESEARCH DESIGN**

#### **3.1 Sample selection and data sources**

At present, China's GEM (growth enterprise market) and SME (small-medium sized enterprise) board only trades on the Shenzhen Stock Exchange. To reflect the overall situation of different sizes enterprises, this paper takes Chinese listed companies in Shenzhen A-shares during 2010 to 2014 for example, and then the all samples are selected to according to the following criteria: (1) To avoid one-period lag media coverage having a negative effect on one-period lag enterprise performance in the study of the relationship between the number of media coverage and the one lagged enterprise performance, we remove the samples who have negative reports for two consecutive years. (2) Excluding the enterprises who have no negative reports in five years. (3) Excluding the enterprises listed after 2010. (4) Excluding ST and financial listed companies. (5) Excluding the enterprises who have incomplete data. After screening, 1690 samples is obtained in 5 years. The number of negative coverage is collected from the "Chinese Crucial Newspapers Full-text Database". The capacity of crisis public relations is obtained by constructing the evaluation index of enterprises' crisis public relations capacity. Other data comes from CSMAR database, and the data is processed using stata11.0.

#### **3.2 Variable interpretation**

##### **3.2.1 Media monitoring**

In this paper, we use the number of negative coverage as a proxy variable of media monitoring. Its specific acquisition method is as follow: using the "Chinese Crucial Newspapers Full-text Database" in the "Chinese Access Journal Full-text Database" to search all of the keywords below in the "Chinese Securities News", "Securities Times", "Shanghai Securities News", "Securities Daily", "Economic Observer", "Twenty-first Century economic report", "Chinese business" and the "First Financial Daily". We Screens the negative coverage of the listed companies from 2010 to 2014. The keywords are the vocabularies which are obviously negative such as "scandal", "darkness", "insider", "illegal", "improper", and "fraud". We check the elected reports one by one, and read it in detail to further confirm whether it is a negative report when the tone of the information can not be directly determined. At the same time, by taking one year as the unit, this paper defines the short term as the reporting year of the negative coverage, and the long term as the following years after it was reported.

##### **3.2.2 The evaluation index of enterprises' crisis public relations capacity**

Existing research on the evaluation methods of enterprises' crisis public relations capacity are not uniform, for instance, 4R crisis management model (Robert heath, 1998) <sup>[30]</sup>, crisis management for entrepreneur competent force model (Zeng Zhihong, 2012) <sup>[31]</sup>. Wang Boyong, Liang Dongsheng and Lv Benfu (2007) summarized the principles of crisis public relations into five categories: timeliness, responsibility, communicability, systematicness and supportability. Given the availability of data and the characteristics of this paper, we establish the "evaluation index of enterprises' crisis public relations capacity" to measure the ability of enterprises' crisis public relations, as shown in table 1. Five major principles correspond to the reaction speed, the willingness to take responsibility, communication sincerity, reaction aspects of crisis public relations, and supporters' authority. By reading the negative coverage of listed companies, we divide the implementation of these indicators into three grades which respectively corresponds 0-2 points. (1) Reaction speed refers to the time from the crisis event occurs to the relevant

parties responds to it; (2) Willingness to take responsibility is divided into three levels: unwillingness (against / negative reaction), medium, willingness (positive reaction); (3) Communication sincerity: not sincere (conceal the truth) scoring 0, medium scoring 1, and sincere scoring 2; (4) Reaction aspects of crisis public relations: narrow recording 0 point, medium recording 1 point, and “comprehensively and systematically” recording 2 points; (5) Supporters’ authority: no support or negative support for 0, other institutions and characters for 1, government agencies and strong support for 2. In addition, the five indicators of those listed companies who did not take public relations measures after crisis event will be recorded as 0. Finally, averaging the score of each indicator, and the result is the evaluation index of enterprises’ crisis public relations capacity.

**Table 1 :** The Valuation Index of Enterprises’ Crisis Public Relations Capacity

Principles of CPR		Timeliness	Responsibility	Communicability	Systematicness	Supportability
Valuating Indicator		Reaction Speed	Willingness to Take Responsibility	Communication Sincerity	Reaction Aspects of CPR	Supporters’ Authority
Score	0	No reaction, Slow	No reaction, Weak	No reaction, Weak	No reaction, Weak	No reaction, No
	1	Medium	Medium	Medium	Medium	Medium
	2	Fast	Strong	Strong	Strong	Strong

### 3.2.3 Enterprise performance in short and long term

Referring to the relevant literature in China and abroad, this paper choose Tobin's Q value as a measure of enterprise performance. The greater the value of Tobin's Q, the higher the enterprise performance will be. We use the current Tobin's Q as the short-term performance, and the following year's Tobin's Q as the long-term performance.

### 3.2.4 Control variables

The main factors that affect the performance of enterprises include Interior environment, external environment, incentive effect and employee skills. The following variables are referenced in related study:

**Table 2:** Variable and Measurement

Variable type		Variable	Variable name	Measure Method
Research Variable	Enterprise Performance	TobinsQ	Tobin's Q	Enterprise market value / business replacement cost
	Negative coverage	Media	Number of Negative Reports	The number of negative reports on the enterprise in January 1st - December 31st
	Property Right	State	Property Right	State owned company is 1, otherwise is 0
	Ability of CPR	Cpr	The Evaluation Index of Enterprises’ Crisis Public Relations Capacity	Index obtained as mentioned above
Control Variable	External Environment	Hbshare	Whether listed both in B-shares and H-shares	Company listed in both B-shares listed and H-shares is 1, otherwise is 0

		Industry	Industry	Dummy variable
		Time	Time of List	The number of years from the listed year to the end of this year
	Interior Environment	Size	Enterprise Size	Natural logarithm of the total assets scale of enterprises
		Debt	Asset-Liability Ratio	Average total liabilities / average total assets
		Sepera	Whether the CEO and the chairman of the board are held by the same person	the CEO and the chairman of the board held by the same person is 1, otherwise is 0
		Indepe	The Proportion of Independent Directors	Number of independent directors /number of all directors
		Top1	The Proportion of the First Largest Shareholders	number of the shares that the first major shareholders held/ number of the total shares
	Incentive Effect	Ms	Shareholding Ratio of Executives	number of the shares that the executives held/ number of the total shares
	Employee Skills	Efficiency	Employee Productivity	Ln (total assets / number of employees)

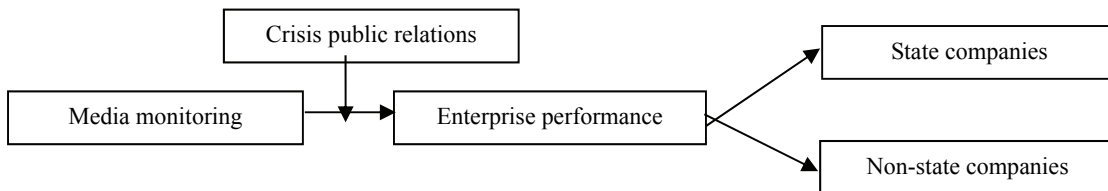
#### 4. MODEL SETTING

Using panel data, we take the Hausman Test first to select a model in the fixed effect model and the random effects model. Then, we construct the following model in order to test the relationship between the negative coverage and the enterprise performance in hypothesis 1:

$$Roa_{t+n} = \beta_{10} + \beta_{11}Media_t + \beta_{12}Control_t + \varepsilon_1$$

In the equation, "Control" represents the control variables, and its values range is from 0 to 1. The model tells the short-term impact of the negative reports on the enterprise performance when "n" is equal to 0, and the long-term impact when "n" is equal to 1. Thirdly, we divided the sample companies into two groups: "the strong" and "the weak" using the enterprises' crisis public relations capacity. And according to the model regression, we respectively verify the assumptions 2 and 3: the relationship of the negative coverage and the enterprise performance in short-term and long-term under the crisis public relations. At last, we test the influence of property right.

**Figure 1:** The relationship between media supervision, crisis public relations and enterprise performance



## 5. EMPIRICAL ANALYSIS

### 5.1 descriptive statistics

The descriptive statistics of variables are shown as follows in table 3. We can see from it that the means of the enterprise performance is 2.203 and the minimum/maximum value is 0.134/14.084. It reflects that there is a big gap between the management and governance level in our listed companies. The annual negative reports range from 0 to 24, and the average times is 0.421. It has generally exposed the weakness in practical media monitoring abilities and the unbalanced condition in distribution of supervision strength in Chinese media control. We also notice that the Enterprises' crisis public relations capacity is a generally lower and obviously different variable with the mean of 0.208 and the minimum/maximum value of 0/ 1.79. It is possible that the current domestic enterprises have not pay enough attention to the crisis public relations or their capacity is insufficient. As for the control variables, the mean of firm size is 21.602, and the deviation between its minimum and the maximum is large. The average asset-liability ratio is 42.16%. Compared with the Chinese average level of about 45%, this result illustrates that the samples this paper chosen are representative. The companies whose CEO and the chairman of the board are held by the same person accounts for 30.54%. It means that nearly 1/3 of all samples have no separation in the ownership and the management of the enterprises. There are 5.44% of companies listed in the B-shares and the H-shares at the same time, and the proportion is relative low. The mean of employee efficiency is 14.21. It varies greatly from different enterprises. The one-third of all independent directors are in line with the China Securities Regulatory Commission value's demand of 36.76%. The mean of the Proportion of the First Largest Shareholders is 35.16%, and the equity holdings of listed companies is relatively concentrated. The mean of executives' shareholding ratio is 0.13%, and it even exists the "zero holding" phenomenon. The companies with a large standard deviation have averagely listed for 8.58 years, which shows that the samples are complete in listed time. We also find that the state-owned enterprises accounts for 34.67%, and that is to say that there are more than one –third of the enterprises in the sample is state-owned.

**Table 3:** Descriptive statistics for the test of media monitoring, crisis public relations and enterprise performance

Variable	Obs	Min	Max	Mean	Std. Dev
TobinsQ	1690	0.133969	14.084	2.202522	1.657323
Media	1690	0	24	0.4213018	1.112402
Cpr	1690	0	1.79	0.2084497	0.4025618
Size	1690	13.076	25.1959	21.602	1.057873
Debt	1690	0.00708	29.6976	0.4215626	0.804233
Sepera	1673	0	1	0.3054393	0.460731
Hbshare	1689	0	1	0.0544701	0.2270102
Efficiency	1688	10.76699	19.24878	14.21374	0.988626
Indepe	1680	0.2	0.6	0.3675733	0.0513063
Top1	1690	7.18	86.49	35.15653	15.2752
Ms	1690	0	0.891	0.1320125	0.1911863
Time	1690	1	23	8.57574	6.146659
State	1690	0	1	0.3467456	0.4760748

### 5.2 Regression analysis of the media monitoring and enterprise performance in short/long term

According to the sample characteristics, we make the Hausman test and finally select to use the fixed effects panel data model to study the level of significance of explanatory variable and the



explanatory variable.

**Table 4:** The impact of negative Coverage on enterprise performance

	(1) n=0	(2) n=1		(1) n=0	(2) n=1
Media	-0.0469** (-2.04)	0.0620** (2.38)	Top1	-0.0283*** (-2.83)	-0.0149* (-1.91)
Size	-0.8215*** (-5.51)	-0.2999** (-2.11)	Industry	control	control
Debt	0.2580*** (6.75)	-0.1094 (-0.51)	Time	-0.1687*** (-5.52)	0.1328*** (4.42)
Sepera	-0.0463 (-0.30)	0.0118 (0.10)	Ms	0.2802 (0.48)	-0.6549 (-1.17)
Hbshare	-0.3481* (-1.73)	-0.1575 (-1.23)	_cons	20.3693*** (6.08)	7.3967*** (2.60)
Efficiency	0.1948 (1.55)	-0.0214 (-0.19)			
Indepe	-0.0823 (-0.08)	0.0608 (0.09)	N	1660	1309
			r2	0.2388	0.0859

Note: \*\*\*, \*\*, \* indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

Table 4 is the regression results of negative reports on enterprise performance. It can be seen that after controlling the other variables affecting the enterprise performance, the number of negative reports is significantly negative with the company's short-term performance at the 5% level when n equals to 0. This shows that current negative reports will affect the enterprise management in aspects of business management and behavior management, which will negative influence the current performance and cause a significant drop in the enterprise performance in short term. By contrast, the relationship between the negative reports and the one-period lag enterprise performance is significantly positive correlated when n equals to 1. This reflects that the corporate governance under the ownership level begin to have an effect in the long run. By regulating the corporate behavior through the reputation mechanism and legal punishment, the long-term enterprise performance is improved. This is consistent with the assumption 1 in this paper: the media monitoring will drives the enterprise performance down in the short term and pushes it up in the long term.

### 5.3 The short-term effect of crisis public relations

Table 5 shows the regression results of media coverage affecting the short-term enterprise performance under the effect of crisis public relations. As shown in Table 5, we divide the companies in to two groups in accordance with the strength of crisis public relations capacity. The regression results show that the current enterprise performance is significantly negative related to the number of negative reports in the weak group of crisis public relations ability, while it is not significant in the strong group. Combined with table 4, we know that the enterprise performance will be showed a significant decrease if the firm suffers from negative reports in the current period. In this case, taking appropriate and effective crisis public relations can release the adverse effects of negative reports. The stronger the enterprise's crisis public relations ability

is, the more obvious the release effect will be. It verifies the hypothesis 2 in this paper: enterprises' crisis public relations can release the adverse effects of media monitoring in the short term.

**Table 5:** The impact of negative reports on short-term performance under the influence of crisis public relations

	(1) The strong	(2) The weak		(1) The strong	(2) The weak
Media	-0.0274 (-1.14)	-0.0796** (-2.20)	Top1	-0.0441** (-2.51)	-0.0174 (-1.26)
Size	-0.9812*** (-3.13)	-0.5632** (-2.55)	Industry	control	control
Debt	-0.4271 (-0.46)	0.2961*** (6.90)	Time	-0.1429*** (-3.33)	-0.1905*** (-4.70)
Sepera	-0.2637 (-1.47)	0.5145** (2.03)	Ms	0.7023 (0.91)	0.2213 (0.22)
Hbshare	0.0694 (0.30)	-0.5105** (-1.99)	_cons	31.2606*** (4.34)	12.1740*** (2.82)
Efficiency	0.0606 (0.40)	0.2789 (1.49)			
Indepe	-1.1810 (-0.68)	-0.0787 (-0.06)	N r2	801 0.2245	859 0.3015

Note: \*\*\*, \*\*, \* indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

#### 5.4 The long-term effect of crisis public relations

Table 6 is the regression results of media coverage affecting the long-term enterprise performance under the effect of crisis public relations. The grouping results show that the one-period lag enterprise performance is significantly positive related to the number of negative reports in the weak group of crisis public relations ability, while it is not significant in the strong group. Combined with table 5, we know that without considering the crisis public relations, the current performance will significantly decreased after the appearance of negative reports. And the enterprise will take certain measures to improve its shortcomings in the long-term in order to make its performance increased obviously. However, we find that, after the introduction of crisis public relations, the improvement of the long-term enterprise performance is no longer significant for the company whose crisis public relations ability is relatively strong. It illustrates that enterprises over reliance on crisis public relations in the long run will have a negative impact on its performance instead. This is probably because that, based on the speculative psychology, the managers may decrease their behavior of standardizing the corporate activity after considering that the crisis public relations is competent to releases the negative effect of media coverage on enterprise performance in the short term. So it can be concluded that the crisis public relations will not be conducive to the improvement of enterprise performance in the long term. The results showed in the table 6 verify the hypothesis 3 in this paper.

**Table 6:** The impact of negative reports on long-term performance under the influence of crisis public relations

	(1) The strong	(2) The weak		(1) The strong	(2) The weak
Media	0.0676 (1.64)	0.0619** (1.97)	Top1	-0.0245 (-1.32)	-0.0134* (-1.93)
Size	-0.6380** (-2.03)	-0.1454 (-0.86)	Industry	control	control
Debt	-0.4031 (-0.46)	-0.0474 (-0.23)	Time	0.2137*** (4.52)	0.0802* (1.81)
Sepera	-0.0061 (-0.03)	0.1562 (0.94)	Ms	-0.9811 (-1.12)	-0.5238 (-0.80)
Hbshare	-0.1566 (-0.64)	-0.2549* (-1.71)	_cons	14.4319** (2.19)	4.8096 (1.40)
Efficiency	0.0712 (0.38)	-0.0991 (-0.74)			
Indepe	-0.5063 (-0.37)	0.2387 (0.30)	N r2	616 0.1234	693 0.0852

Note: \*\*\*, \*\*, \* indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

## 5.5 Further study

### 5.5.1 The impact of property rights

Taking into account the basic situation of China, the listed companies can be divided into state-owned enterprises (state companies) and non-state-owned enterprises (non-state companies) on the basis of different nature of property rights. The different characteristics determines not only the great disparity of the process of management, investment and operation between the two kinds of companies (Li Yan, Qin Yihu, 2011)<sup>[32]</sup>, but also the different effects on the relationship between the media coverage and enterprise performance. Therefore, we further explore that after negative reported, whether there is a significant difference on the impact of media coverage on enterprise performance between the different ownership companies in this study.

As shown in Table 7, this paper divide all the sample companies into state-owned enterprises and non-state-owned enterprises, and investigate the impact of media's negative reports on enterprise performance in different ownership companies respectively. The regression results show that the non-state enterprises are similar to the whole sample companies: the number of media coverage and enterprise performance is significantly negatively related at 1% statistical level in the short term, and significantly positively related in the long term. For the state-owned enterprises, media coverage is negatively related to the short-term performance and positively related to the long-term performance, but the regression results are both not significant. We believe that this is because the private enterprises are in a relatively mature market which will lead to a stronger reaction to the negative coverage compared to the state-owned enterprises. So the Tobin's Q value which represents the enterprise performance declines rapidly after the occurrence of negative reports, and it causes a significantly negative correlation in the two variables finally. But in the long term, to those problems exposed in the media monitoring the

government will constrain the speculative activity of private enterprises by legal and administrative means. Besides, compared to the state-owned enterprise whose lower efficiency is caused by the unclear rights and responsibilities (Huang Zhengrong, 2007) <sup>[33]</sup>, the agent market of private enterprise is more mature, and their agents will face greater market pressures (Kato and Long, 2006) <sup>[34]</sup>. All these matters make that the private enterprises will take effective measures to solve the problems exposed in the media monitoring more quickly than the state-owned enterprises after the negative reports occurred and that the non-state companies will realize the enterprise's long-term healthy development.

**Table 7:** The impact of property rights on the relationship between negative coverage and enterprise performance

	Panel A: state companies		Panel B: non-state companies	
	(1) n=0	(2) n=1	(1) n=0	(2) n=1
Media	-0.0180 (-0.77)		-0.0753*** (-2.86)	
Media_1		0.0192 (0.70)		0.0783** (2.22)
Size	-0.4214* (-1.93)	-0.3553 (-1.58)	-0.9482*** (-3.52)	-0.2358 (-0.98)
Debt	-2.0109** (-2.24)	-1.4272 (-1.44)	0.2687*** (8.09)	-0.0410 (-0.18)
Sepera	-0.1983* (-1.83)	-0.0809 (-0.70)	-0.0880 (-0.50)	0.0309 (0.22)
Hbshare	-0.1071 (-0.54)	-0.3867* (-1.94)	-0.4697* (-1.69)	-0.0120 (-0.07)
Efficiency	-0.0851 (-0.69)	-0.1852 (-1.28)	0.4443*** (2.70)	0.0784 (0.45)
Indepe	-1.0191 (-1.12)	-1.0681 (-1.04)	0.6223 (0.41)	0.6402 (0.70)
Top1	0.0049 (0.31)	0.0012 (0.20)	-0.0507*** (-4.02)	-0.0175 (-1.32)
Industry	control	control	control	control
Time	-0.1026** (-2.44)	0.1250*** (2.60)	-0.2299*** (-4.94)	0.1300*** (3.09)
Ms	-1.0348 (-0.71)	-3.2720 (-0.85)	-0.1198 (-0.20)	-0.5867 (-1.05)
_cons	11.3875* (1.92)	10.7377*** (2.94)	23.1950*** (4.06)	4.2889 (0.85)
N	569	450	1091	859
r2	0.2623	0.0920	0.2756	0.1149

Note: \*\*\*, \*\*, \* indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

### 5.5.2 The impact of crisis public relations on non-state enterprises

In consideration of the result that the nature of the property rights influences the relationship between negative reports and corporate performance, this paper will only analyze the non-state enterprises in the next test. Table 8 shows the analysis on the relationship between negative coverage and enterprise performance in private enterprises under the action of crisis public relations. The grouping results show that the regression of the group with weak public relations ability are similar to the whole sample: negative coverage and the enterprise performance is significantly negatively correlated in the short term and significantly positively correlated in the long term. For those enterprises whose crisis public relations ability are strong, their action of public relations release the adverse effects of negative coverage in the short term. However, enterprises' excessive dependence on the crisis public relations will make themselves short-sighted behavior in the long term, and is not conducive to their long-term sustainable development. It will expressed on the regression results with that the relationship between the negative coverage and short-term or long-term performance is not significant either. This further verifies the hypothesis 2 and 3 in this paper.

**Table 8:** The impact of negative coverage on enterprise performance in the non-state companies

	Panel A: the strong		Panel B: the weak	
	(1) n=0	(2) n=1	(1) n=0	(2) n=1
Media	-0.0276 (-0.72)		-0.0959* (-1.65)	
Media_1		0.0856 (1.47)		0.0728* (1.94)
Size	-0.7645** (-2.52)	-0.8960*** (-2.65)	-0.4802 (-1.19)	0.1872 (0.72)
Debt	-0.5083 (-0.54)	-0.4094 (-0.43)	0.3057*** (6.93)	0.1117 (0.50)
Sepera	-0.3205* (-1.76)	-0.0355 (-0.18)	0.5949* (1.91)	0.3362 (1.59)
Hbshare	-0.0885 (-0.36)	-0.1153 (-0.37)	-0.6536* (-1.92)	-0.1429 (-0.80)
Efficiency	0.3750*** (2.70)	0.3885** (2.21)	0.3203 (1.03)	-0.1229 (-0.63)
Indepe	-0.4488 (-0.21)	0.9239 (0.54)	-0.9792 (-0.48)	0.3184 (0.31)
Top1	-0.0368** (-2.09)	-0.0249 (-1.21)	-0.0438*** (-2.67)	-0.0106 (-0.79)
Industry	control	control	control	control

Time	-0.1415*** (-3.07)	0.2380*** (4.24)	-0.2921*** (-4.25)	0.0517 (0.85)
Ms	0.5339 (0.69)	-0.9017 (-1.00)	-0.6520 (-0.57)	-0.5402 (-0.82)
_cons	16.7334** (2.38)	15.4228** (2.05)	15.8963** (1.99)	-1.6611 (-0.25)
N	558	447	533	425
r2	0.1598	0.1544	0.3511	0.1435

Note: \*\*\*, \*\*, \* indicate significance at the 0.01, 0.05, and 0.10 levels, respectively.

## 5.6 Robust Test

In order to guarantee the stability of the research conclusion, we also carry out the following robust tests:

4.6.1 Using OLS to replace the panel instrumental variable method, and the empirical results do not change substantially.

4.6.2 Refer to the previous studies, we introduce the net profit growth rate (Gr) to show the growth ability of the enterprise. At the same time, we also introduce the second to tenth shareholders' shareholding proportion (Cstr2-10) and the ratio of the second largest shareholder and the first largest shareholder's shareholding (Zindex) as control variables. Then we make regression analysis on the sample companies again, and we find that the new regression results are consistent with the hypothesis above.

## 6. THE CONCLUSION

This paper takes Chinese listed companies in Shenzhen A-shares during 2010 to 2014 for example, and tests the effect of negative coverage on short/long term enterprise performance firstly. The study finds that media coverage will negatively influence the enterprise performance in the short term and positively influence it in the long term. We make a further research based on this in order to find an effective way for the enterprises to deal with the negative reports of the media. We find that the crisis public relations can effectively alleviate the negative impact of the media reporting in the short term. Grouping all samples in accordance with the enterprise crisis public relations ability, we find that the stronger crisis public relations ability is, the more effectively its enterprise performance relief will be and thus the negative effects of media coverage on enterprise performance will be smaller as well. However, the corporate crisis public relations will have a negative impact on its performance in the long term. At the same time, we note that the above relationship is more significant in the non-state-owned enterprises compared to the state-owned enterprises. The practical significance of this paper is to notice the enterprises' managers: not relying too much on the short-term effects of crisis public relations. The only method which can promote the development of enterprises will always be the improvement of their own management. As the People's Daily's comment on "Eleme" goes, the exposed problems after stage development should not be simply "repudiated" or even "one-size-fits-all" forbidden. On the contrary, we should regard them as the opportunity of improvement and upgrading.

### Notes:

① On September 18, 2015, the U. S. Environmental Protection Agency (EPA) issued a formal notice of violation to the VW group. Volkswagen Group CEO Martin Vindeln made the public

statement of apology for the first time On September 20. Four days later, Martin Vindeln resigned from Volkswagen chief executive officer post. In November, the public spokesman of VW group said they would take different modes of compensation for the American owners affected by the fraud according to the different markets. In China, this year's "3·15 party" on CCTV exposed the food safety hazards of "Eleme" and other online ordering platforms. One hour after the program, "Eleme" expelled 8 restaurants and opened 24 hours hotline at the same time to accept the supervision of consumers and media. A week later, "Eleme" announced the "fast payment of food safety issues" and other seven measures as the direction of rectification.

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