International Journal of Economics, Finance and Management Sciences
2023; 11(4): 205-211
http://www.sciencepublishinggroup.com/j/ijefm
doi: 10.11648/j.ijefm.20231104.16
ISSN: 2326-9553 (Print); ISSN: 2326-9561 (Online)

Media Coverage, Investor Protection and Stock Price Crash Risk

Kun Su

School of Management, Northwestern Polytechnical University, Xi'an, China

Email address:
sukun@nwpu.edu.cn

To cite this article:
Kun Su. Media Coverage, Investor Protection and Stock Price Crash Risk. *International Journal of Economics, Finance and Management Sciences*. Vol. 11, No. 4, 2023, pp. 205-211. doi: 10.11648/j.ijefm.20231104.16

Received: June 28, 2023; **Accepted**: August 18, 2023; **Published**: August 22, 2023

Abstract: Stock price crash risk is very serious in China's capital market, which seriously harms the interests of investors and the resource allocation efficiency of the capital market. However, there is limited evidence on the determinants of stock price crash risk in China, especially from the perspective of informal institutions. Using a corporate level dataset of Chinese listed companies, this paper aims to study the effect of media coverage on stock price crash risk and the moderate effect of investor protection on this association. Using the correlation and multiple regression analysis methods, the empirical results show that: media coverage can help to reduce the information asymmetry and agency problems, and thus reduce the motivation of manager's "bad news" concealing behavior, which in turn reduces the stock price crash risk in Chinese capital market. Investor protection negatively moderates this relationship between media coverage and stock price crash risk. The effect of media coverage on stock price crash risk is more pronounced when investor protection environment is poor. This article enriches and expands the research on the affecting factors of stock price crash risk. It has important implications for us to recognize the value of media coverage and reduce stock price crash risk.

Keywords: Stock Price Crash Risk, Media Coverage, Investor Protection

1. Introduction

Frequent stock market crashes are a major unfavorable existence in China's capital market, which seriously harms the interests of investors and the resource allocation efficiency of the capital market. Based on the perspective of principal-agent theory, Jin and Myers [1] proposed the bad news hiding theory that lead to stock price collapse. This theory indicates that, in the case of poor information environment [2], management tends to conceal bad news by manipulating accounting earnings and other means when considering option pay, political factors, personal career and consumption, etc. When the accumulation of bad news exceeds the upper limit that the company can accommodate, it is difficult to continue to hide it, which may cause the bad news to be immediately released. Once the bad news released to the market, this will lead to a sharp drop in stock prices, and ultimately trigger stock price crash. Based on the bad news hiding theory, scholars have studied the affecting factors of stock price crash risk on two aspects, one is the management motivations (such as management option incentives [3], excess pay [4], tax planning [5]), and the other is restricting mechanisms (such as the quality of accounting information [2, 6], internal governance [7], external supervision mechanism [8, 9] and institution environmental [10].

Furthermore, most of the existing studies about institution constraints are limited to formal institutions. In terms of informal institutions, as an important intermediate link in information dissemination, the corporate governance role of media has received more and more attention recently [11].

As an important monitoring mechanism for the capital market, media can help reduce information asymmetry and agency cost, correct bad behavior about the capital market, and play an important governance role [12, 13]. With the development of "new media" industry, the characteristics of fast transmission speed and wide influence of new media further strengthen the information intermediary and supervision role of media [13].

However, some scholars still question the positive function of media. The subjective nature of media reports may lead to the mispricing of assets, leading to bubbles in stock prices. Generally, media is good at injecting subjective color into reports, thus causing stock price deviate from the true value by influencing investors [11].

Based on the above analysis, this paper focuses on whether media can effectively restrain stock price crash risk in China. Furthermore, considering the large difference in investor protection among various regions in China, we further discussed whether the different role of media under different investors protection environment.

To investigate this question, our study provides insights into media coverage, investor protection, and stock price crash risk. We found that the company's stock price crash risk is decreased when media coverage is increasing. Moreover, the above effect is more pronounced in poorer investor protection environment.

The rest of this paper is organized as follows: Next section discusses the theoretical analysis and develops the hypotheses Section 3 describes the data and variable design. Section 4 is the empirical results. Section 5 concludes the paper.

2. Hypotheses Development

As an important link of information dissemination, media has received increasing attention in in corporate governance recently [11]. The media's "disclosure effect" of reducing information asymmetry and the "governance effect" of supervising managers are closely related to stock price crash risk. Media coverage can affect stock price crash risk through the following ways: Firstly, the "disclosure effect" of media coverage helps to reduce information asymmetry [14]. The "disclosure effect" has two mechanisms: (1) Reducing the cost of information acquisition. Media reports are important information medium in the capital market. Through media reports, small investors can get more firm specific information easily, which can reduce the cost of information processing for investors and improve the efficiency of information dissemination. (2) Reducing irrational investment behavior. Based on the stock price bubble hypothesis, when investors' expectations turn positive, investors are not completely rational, and the speculative behavior of "following the trend and chasing the rise" is easy to cause the stock price overvalued, thus forming price bubble, which will lead to stock price crash risk. Under the condition of investor expectation decline, media disclosure can also reduce the possibility of stock price crash risk caused by investors' misread of the truth.

Secondly, media can achieve an "external governance" function. The media have a natural preference for reporting bad news [15], which reduces the motivation for bad news to be hidden inside the company, increases the difficulty to hide bad news by managers, and helps to reduce stock price crash risk. In addition, the "market pressure" brought about by media governance helps to reduce management's hiding behavior of bad news. Once the bad news concealment behavior is discovered and exposed by media, it will bring high illegal costs and reputation losses to the enterprise. This pressure mechanism reduces the possibility of hiding bad news, and reduces stock price crash risk further.

Thirdly, the media can trigger "reputation insurance mechanism" to reduce stock price crash risk. When the media serves as the pathway of good news, it can help firms spread positive news actively, so as to create a reputation insurance mechanism. Deephouse [16] believes that reputation is indeed a resource that can generate competitive advantage, but creating reputation is a real management problem, and speaking about reputation in general is meaning less to management practice. The ranking of enterprises by the mainstream media and the reports on their public welfare activities can indirectly create reputation capital for enterprises, thus forming a reputation insurance mechanism, which can protect enterprises to some extent in adverse circumstances and thus reduce stock price crash risk.

Finally, the "governance effect" of media can reduce stock price crash risk by attenuating agency problem. The existence of information asymmetry gives managers information advantage [1], which provides the possibility for managers to hide bad news. Media disclosure is one of the key factors to reduce information asymmetry and the motivation to hide bad news. Anyway, media coverage can prevent the violation of outside investor behavior [15], improve corporate transparency and reduce earnings management [17], the above-mentioned governance effect of media also can also affect stock price crash risk indirectly through reducing agency problem [12].

In summary, the theoretical path of media coverage to stock price crash risk can be summarized as shown in Figure 1. Based on this, the following hypothesis is proposed:

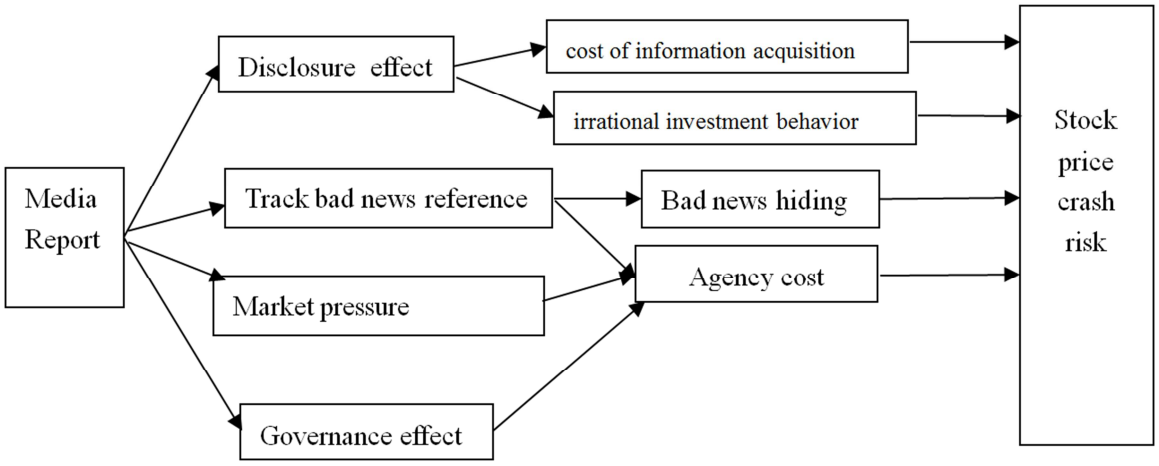

Figure 1. *Mechanism of media coverage on stock price crash risk.*

H1: The higher the media coverage, the lower the company's stock price crash risk.

Based on the differences in historical traditions, geographical locations, and levels of economic development in different regions of China, investor protection environments in different regions show large differences [18]. Investor protection environment and media coverage work together to constrain people's behavior in society. Under different investor protection environments, the governance role of media coverage may be different [12, 13]. Investor protection and media coverage can affect corporate governance. Media coverage can largely compensate for the lack of formal institutions (investor protection) and lead to governance function in the case of inadequate investor protection. However, with the improvement of investor protection, formal systems (investor protection) may gradually replace the role of informal systems such as media coverage. In this case, with the improvement of investor protection, the media's effect on stock price crash risk may gradually weaken. In the case of the substitution role of media and the formal system [11], media coverage will be relatively more obvious in areas where investor protection is poor, and in areas where investor protection is better, media coverage is relatively weak in restrain stock price crash risk. Based on the above analysis, we propose the following hypothesis 2:

H2: The link between media coverage and stock price crash risk varies with investor protection. As well, media coverage's effect on stock price crash risk is relatively weak when investor protection is better.

3. Research Design

3.1. Variable Design

3.1.1. Dependent Variable

We choose the negative return skewness coefficient (*NCSKEW*) and down-up volatility (*DUVOL*) to measure stock price crash risk which are commonly used in the literature [3, 19].

(1) Use the negative return skew coefficient to measure stock price crash risk. The calculation formula is shown in (1):

$$NCSKEW_{i,t} = -(n(n-1)^{3/2}\sum W_{i,t}^{3}) / ((n-1)(n-2)(\sum W_{i,t}^{2})^{3/2}) \quad (1)$$

In formula (1), *i* represents firms, *t* represents year, and *n* is the number of trading weeks per year for firm *i*, $W_{i,t}$ represents the specific return for *t* week of *i* firm in a certain year. The larger of this indicator, the more serious the negative degree of stock return skew coefficient, and the higher the stock price crash risk. To calculate $W_{i,t}$, the following model is constructed with the return rate $r_{i,t}$ of the firm *i* in the *t* week of a year:

$$r_{i,t} = \alpha + \beta_1\gamma_{m,t-2} + \beta_2\gamma_{m,t-1} + \beta_3\gamma_{m,t} + \beta_4\gamma_{m,t+1} + \beta_5\gamma_{m,t+2} + \varepsilon_{i,t} \quad (2)$$

In formula (2), $r_{i,t}$ is the return rate of firm *i* in the *t* week, $\gamma_{m,t}$ represents the average rate of return of the market in the *t* week. In order to reduce the potential deviations of non-synchronous stock exchanges, we added $\gamma_{m,t-2}$, $\gamma_{m,t-1}$, $\gamma_{m,t+1}$, $\gamma_{m,t+2}$, to describe market returns in weeks *t-2, t-1, t +1*, and *t +2* respectively [20]. $\varepsilon_{i,t}$ is the residual of the above regression equation, that is, the portion of the stock return that is not explained by market returns. Based on the residual term, specific return of stock *i* in week *t* is:

$$W_{i,t} = Ln(1+\varepsilon_{i,t}) \quad (3)$$

(2) Use the volatility of earnings up and down (*DUVOL*) to measure stock price crash risk. The calculation formula is shown in (4):

$$\text{DUVOL} = \log\{[(n_u-1)\sum_{Down} W_{i,t}^2]/[(n_d-1)\sum_{Up} W_{i,t}^2]\} \quad (4)$$

In formula (4), n_u indicates the number of weeks in which the annual week-specific return of stock i is higher than the average value of week-specific returns in the current year, and n_d indicates the number of weeks in which the week-specific return of stock *i* is lower than the average value of week-specific returns in the current year. The remaining symbols are as previously described. According to whether the week-specific return is greater than the annual average week-specific return of stock *i*, the sample is divided into two parts, and the natural logarithm of the standard deviation of the two types of samples is taken to obtain the upper and lower volatility of returns (*DUVOL*). The larger the value of this indicator, the more severe the leftward deviation of the distribution of stock returns, and the higher the stock price crash risk.

3.1.2. Independent Variable

The independent variables in this article are measures of media coverage and investor protection. Drawing on the methods commonly used in the literature [12], the natural logarithm of the number of reports about the firm by the four authoritative national newspapers (*China Securities Journal*, *Shanghai Securities News*, *Securities Times*, *Securities Daily*) designated by the Securities Regulatory Commission during the year is used to measure the media coverage (Media). According to Wang et al. [18], the "Development of Market Intermediary Organizations and Legal Institutional Environment" in *China's Province Marketization Index Report* (2016) is used to measure the investor protection in each region (*Protect*).

3.1.3. Control Variables

According to reference [2, 19], the control variables include: (1) Company size (*Size*), using natural logarithm of total assets; (2) Debt level (*Lev*), which is reflected by the ratio of the total liabilities to total assets; (3) Profitability (*ROA*), using the ratio of net profit to the average total assets (return on assets)

to measure profitability; (4) excess turnover (*Oturn*), which is expressed by the average monthly turnover rate in the current year minus the average monthly turnover rate in previous year, which is used to capture the heterogeneity of investor beliefs; (5) average of weekly specific return rate (*Ret*); (6) Standard deviation of specific return (*Sigma*), which is expressed using the standard deviation of weekly specific return; (7) Market-Book value (*MB*), which is measured using the ratio of the company's market value to book value; (8) Manipulated accrued profits (*ABACC*), Using the modified Jones model to calculate the absolute value of manipulative accruals [21]. In addition, we also controls the industry differences and annual differences during the regression to control annual and industry fixed effects, respectively.

The variables are summarized as shown in Table 1:

Table 1. *Variable definition.*

Variable name	Variable meaning	Calculation method
NCSKEW	Negative return skewness coefficient	Negative skew coefficient of stock-specific return, see formula (1) for details
DUVOL	Down-up volatility	down-up volatility of stock-specific returns, see formula (4) for details
Media	Media focus	Natural logarithm of number of reports from the four major newspapers plus 1 during the year
Protect	Investor protection	Taken from the Legal Environment Index in China's Province Marketization Index Report
Size	Company size	Natural logarithm of total assets
Lev	Liabilities level	Total liability/total asset
ROA	Profitability	2*net profit/ (Opening balance of total assets+Ending balance of total assets)
Oturn	Excess turnover	monthly average turnover of current year minus the previous year
Ret	Mean- specific rate of return	average of weekly specific return rate
Sigma	Specific return standard deviation	standard deviation of weekly specific return
MB	Market value-Book value	the ratio of the company's market value to book value
ABACC	Manipulated accrued profits	Using the modified Jones model to calculate the absolute value of manipulative accruals
$Industry_j$	Industry virtual variables	If the company belongs to industry *j*, the virtual variable is 1, otherwise 0
$YEAR_k$	Annual virtual variables	If the company belongs to year *k*, the virtual variable is 1, otherwise 0

3.2. Samples and Data Sources

We selected the listed companies of manufacturing companies in Shanghai and Shenzhen Stock Exchange Market from 2011 to 2016 as initial samples, and the following is specific selected criteria: (1) In order to calculate the stock price crash risk, the observations with annual trading weeks less than 30 weeks are excluded; (2) SME and GEM companies are excluded; (3) Samples with incomplete data are excluded. After the above procedure, a total of 2866 sample observations were obtained in this study. We performed a 1% Winsorize process on all continuous variables to eliminate the adverse effects of extreme values. And we collected media coverage data manually from the *Full-text Database of China's Important Newspapers*. The rest of the data was mainly derived from CSMAR database and annual reports of listed companies.

3.3. Research Model

The following model (5) is used to test hypothesis 1 by using multiple regression analysis, and the media coverage and investor protection are added to this model as interaction terms, as shown in model (6), and then this model is used to test hypothesis 2.

$$Crash_{i,t+1}=\alpha_0+\beta_1\times Media_{i,t}+\beta_2\times Crash_{i,t}+\beta_m\times Controlvaribles_{m,i,t}+\varepsilon_{i,t} \quad (5)$$

$$Crash_{i,t+1}=\alpha_0+\beta_1\times Media_{i,t}+\beta_2 Media_{it}\times Protect_{it}+\beta_3 Protect_{it}+\beta_4\times Crash_{i,t}+\beta_m\times Controlvaribles_{m,i,t}+\varepsilon_{i,t} \quad (6)$$

In the above models, $Crash_{i,t}$ means two measures of stock price crash risk, *Media* is the firm's media coverage. And α_0 represents the intercept term, β is the regression coefficients, ε is the error term, *i is* the firm, and *t* is the year. Similar to previous studies, the dependent variable uses the crash risk measure for the next period, and at the same time controls the current period's stock price crash risk during regression. In the above model (5), if the coefficient β_1 is significantly negative, indicating that media coverage reduce the stock price crash risk, then hypothesis 1 holds. If the cross-term coefficient in the model (6) is significantly greater than 0, then hypothesis 2 holds. Referring to Petersen [22], the standard error is adjusted at the company level for cluster analysis during regression analysis and testing.

4. Empirical Results

4.1. Descriptive Statistical Analysis

The descriptive statistical analysis results are shown in Table 2. It can be seen that the mean and standard deviation of NCSKEW are -0.3459 and -0.515, and DUVOL are 0.6238, and 0.4516 respectively, the results are consistent with the existing literatures. From the numerical distribution of media coverage, we can see that the degree of media coverage varies widely among companies. The average asset-liability ratio is 51.85%. For the company's profitability, average ROA is only 2.83%, and the median is 2.58%, indicating that the overall profitability of listed companies in China is relatively low. All

other relevant variables are within a reasonable range.

Table 2. *Descriptive statistical analysis.*

Variable	No	Mean	Std.	Min	Median	Max
NCSKEW	2866	-0.3459	0.6238	-1.9021	-0.3153	1.2228
DUVOL	2866	-0.2015	0.4516	-1.1599	-0.2154	0.9608
Media	2866	2.1309	1.4544	0.0000	2.4849	4.9345
Size	2866	21.9334	1.1557	19.1497	21.8768	24.6580
Lev	2866	0.5185	0.1955	0.1052	0.5263	1.0631
ROA	2866	0.0283	0.0608	-0.2371	0.0258	0.1589
Oturn	2866	-0.0380	0.3068	-0.8517	-0.0396	0.7447
Ret	2866	-0.0011	0.0007	-0.0052	-0.0010	-0.0001
Sigma	2866	0.0456	0.0141	0.0171	0.04406	0.1021
MB	2866	3.5789	3.0967	0.1768	2.6152	15.9417
ABACC	2866	0.0602	0.0555	0.0016	0.0426	0.2586

4.2. Correlation Test

The correlation analysis coefficients between the variables are shown in Table 3. The lower left part is the Pearson correlation coefficient, and the upper right part is the Spearman correlation coefficient. From the results of the Pearson (Spearman) correlation test, the two measures indicating stock price crash risk have a high (strong) correlation, and both of them are significantly negatively correlated with media coverage, indicating that media coverage has reduced stock price crash risk, consistent with Hypothesis 1. The relationship between other variables and stock price crash risk is also consistent with theoretical analysis.

Table 3. *Pearson and Spearman correlation test.*

	NCSKEW	*DUVOL*	*Media*	*Size*	*Lev*	*ROA*	*Oturn*	*Ret*	*Sigma*	*MB*	*ABACC*
NCSKEW	1	0.891***	-0.053***	-0.040**	-0.038**	0.059***	-0.236***	0.145***	-0.131***	0.048***	0.021
DUVOL	0.881***	1	-0.047**	-0.045**	-0.034*	0.036*	-0.233***	0.130***	-0.117***	0.032**	0.017
Media	-0.050***	-0.047**	1	0.236***	0.031*	0.120***	0.150***	-0.147***	0.146***	0.123***	-0.007
Size	-0.048**	-0.054***	0.188***	1	0.323***	0.091***	-0.010	0.270***	-0.271***	-0.531***	-0.085***
Lev	-0.033*	-0.026	0.025	0.305***	1	-0.405***	-0.037**	-0.016	0.015	0.031*	0.057***
ROA	0.051***	0.03	0.084***	0.148***	-0.381***	1	0.016	-0.005	0.006	0.099***	0.008
Oturn	-0.228***	-0.232***	0.139***	-0.019	-0.022	-0.022	1	-0.320***	0.317***	0.043**	-0.015
Ret	0.199***	0.162***	-0.131***	0.258***	-0.017	0.054***	-0.331***	1	-1.000***	-0.463***	-0.085***
Sigma	-0.162***	-0.133***	0.133***	-0.290***	0.014	-0.044**	0.324***	-0.976***	1	0.465***	0.086***
MB	0.049***	0.042**	0.079***	-0.472***	0.197***	-0.115***	-0.009	-0.346***	0.360***	1	0.149***
ABACC	0.018	0.016	-0.007	-0.082***	0.073***	-0.078***	0.006	-0.103***	0.112***	0.160***	1

Note: The lower left part is the Pearson correlation coefficient and the upper right part is the Spearman correlation coefficient; ***significant at the 1% level;**5% level; *10% level.

4.3. Multiple Regression Analysis

Based on model (5), the influence of media coverage on stock price crash risk was tested through multiple regression analysis. The results are shown in columns (1) to (2) of Table 4. It can be seen from column (1) that the regression coefficient of *Media* is -0.0275, and significant at the 5% level. It can be seen from column (2) that the regression coefficient of *Media* is -0.0211, significant at the level of 1%. The above test results show that under the control of other factors, media coverage is significantly negatively related to stock price crash risk. Media coverage can help reduce company's information asymmetry and agency problems, and reduce the motivation of managers to hide bad news, and then reduce stock price crash risk, Hypothesis 1 is verified.

From column (3) to (4), it can be seen that, media coverage is still significantly negatively related to the two measures indicating stock price crash risk, while the coefficients of interact term of investor protection and media coverage are 0.0032 and 0.0033, and significant at the 10% and 5% level respectively, indicating that improvement of investor protection negatively attenuates the association between media coverage and stock price crash risk. Under imperfect investor protection environment, media coverage can largely compensate for the lack of formal institution, and media coverage can restrain stock price crash risk effectively. With the improvement of investor protection, the restraining effect is gradually weakened, and Hypothesis 2 is verified.

In terms of the control variables, company size is significantly positively correlated with stock price crash risk, and the higher the debt level, the lower the stock price crash risk. The impact of the mean and volatility of the specific return on stock price crash risk is significantly positive. The higher market to book value means better growth ability, indicating that these companies are more likely to experience

stock price crash risk.

Table 4. *Regression results.*

	$NCSKEW_{t+1}$	$DUVOL_{t+1}$	$NCSKEW_{t+1}$	$DUVOL_{t+1}$
	(1)	**(2)**	**(3)**	**(4)**
Constant term	-1.3168***	-0.6350**	-1.2918***	-0.6068**
	(-3.6381)	(-2.4928)	(-3.5604)	(-2.3799)
Media	-0.0275**	-0.0211***	-0.0484***	-0.0425***
	(-2.3535)	(-2.6077)	(-2.7520)	(-3.4529)
*Media*Protect*			0.0032*	0.0033**
			(1.7357)	(2.4527)
Protect			-0.0052	-0.0047
			(-1.0562)	(-1.3363)
NCSKEW	0.0431**		0.0429**	
	(2.2918)		(2.2872)	
DUVOL		0.0605***		0.0598***
		(3.2689)		(3.2465)
Size	0.0291*	0.0097	0.0296*	0.0099
	(1.8718)	(0.9047)	(1.8999)	(0.9301)
Lev	-0.2544***	-0.1514***	-0.2544***	-0.1501***
	(-3.0305)	(-2.6109)	(-3.0221)	(-2.5914)
ROA	0.1726	0.0356	0.1808	0.0414
	(0.7298)	(0.2100)	(0.7677)	(0.2449)
Oturn	-0.0202	-0.0154	-0.0224	-0.0178
	(-0.3650)	(-0.3731)	(-0.4058)	(-0.4337)
Ret	377.7452***	252.9176***	383.2220***	258.3799***
	(4.5587)	(4.4107)	(4.6465)	(4.5284)
Sigma	23.9211***	16.5448***	24.1952***	16.8126***
	(5.5833)	(5.5400)	(5.6728)	(5.6576)
MB	0.0236***	0.0127***	0.0238***	0.0128***
	(4.4055)	(3.3386)	(4.4555)	(3.4062)
ABACC	0.0077	0.0040	0.0018	-0.0023
	(0.0344)	(0.0245)	(0.0082)	(-0.0142)
Annual effect	Yes	Yes	Yes	Yes
Industry effect	Yes	Yes	Yes	Yes
R^2	0.0721	0.0691	0.0730	0.0711
F	9.86***	9.24***	9.30***	8.97***
NO. OF. OBS	2866	2866	2866	2866

Note: ***significant at the 1% level;**5% level; *10% level.

4.4. Robustness Test

(1) Endogeneity. Drawing on Liang's [13] method of solving endogeneity related to media, Heckman's two-stage method is used. According to whether media coverage is greater than the median of industry-annual level, it is divided into high media coverage and low media coverage (*Highmedia*) as the dependent variable of the first stage. The independent variables include company size (*Size*), profitability (*ROA*), company age (*Age*), property nature (*Soe*), stock price volatility (*Sigma*), stock turnover rate (*Dturn*), and industry and year. The first stage model is shown below (7):

$$\begin{aligned} Highmedia_{i,t} = {} & \alpha_0 + \beta_1 \times Size_{i,t} + \beta_2 \times ROA_{i,t} + \beta_3 \times Age_{i,t} + \beta_4 \times Soe_{i,t} \\ & + \beta_5 \times Sigma_{i,t} + \beta_6 \times Dturn_{i,t} + \beta_7 \times \text{Industry}_{i,t} + \beta_8 \times \text{Year}_{i,t} + \varepsilon_{i,t} \end{aligned} \tag{7}$$

The inverse Mills ratio (*IMR*) calculated by the regression of the above model is incorporated into the models (5) and (6), and the regression analysis is performed again. The results of the regression analysis are still consistent with the foregoing.

(2) Add other control variables. Existing studies have shown that, in addition to the above-mentioned commonly selected control variables, the shareholding ratio of major shareholders, the independence of the directors, whether the CEO and the chairman is the same person, the shareholding ratio of institutional investors, the quality of internal control, and the quality of audit (accounting firm size and audit opinion) will also affect stock price crash risk. Therefore, we further control the above factors to retest the hypotheses. The test results show that the hypotheses are still hold.

5. Conclusions

Stock price crash risk is very serious in China's capital market, which seriously harms the interests of investors and the resource allocation efficiency of the capital market. However, there is limited evidence on the determinants of stock price crash risk in China, especially from the perspective of informal institutions. Taking listed companies in Shanghai and Shenzhen Stock Exchange Market as research objects, we study how media coverage affect stock price crash risk and the moderate role of investor protection on the above association

systematically. The results show that media coverage is significantly negatively related to stock price crash risk. Media coverage can help to reduce the company's information asymmetry and agency problems, reduce manager's motivation to hide bad news, and then reduce the stock price crash risk. Investor protection negatively moderates the association between media coverage and stock price crash risk. The media coverage's restraining effect on stock price crash risk is relatively more significant in poor investor protection environment. The research shows that media coverage is an important mechanism to prevent stock price crash risk in China's capital market, especially in areas where investor protection is poor. This study provides further evidence for the role of media governance, enriching and expanding the research on the affecting factors of stock price crash risk. It has important implications for us to recognize the value of media coverage and reduce stock price crash risk. We can further study the governance effect of new media (such as internet, digital television, weibo and etc.) in the future.

Funding

This study was supported by the National Natural Science Foundation of China (No. 72172127; 71773088), the Philosophy and Social Science Research Project in Shaanxi Province (2023ZD1106), the Fundamental Research Funds for the Central Universities in Northwestern Polytechnical University.

References

[1] Jin L, Myers S C. R2 around the world: new theory and new tests [J]. Journal of Financial Economics, 2006, 79 (2): 257-292.

[2] Hutton A P, Marcus A J, Tehranian H. Opaque financial reports, R2, and crash risk [J]. Journal of Financial Economics, 2009, 94 (1): 67-86.

[3] Kim J, Li Y, Zhang L. CFOs versus CEOs: equity incentives and crashes [J]. Journal of Financial Economics, 2011, 101 (2): 713-730.

[4] Xu N, Li X, Yuan Q, Chan K C. Excess perks and stock price crash risk: evidence from China [J]. Journal of Corporate Finance, 2014, 25: 419-434.

[5] Kim J, Li Y, Zhang L. Corporate tax avoidance and stock price crash risk: firm-level analysis [J]. Journal of Financial Economics, 2011, 100 (3): 639-662.

[6] Kim J, Zhang L. Accounting conservatism and stock price crash risk: firm-level evidence [J]. Contemporary Accounting Research, 2016, 33 (1): 412-441.

[7] Andreou P C, Antoniou C, Horton J, Louca C. Corporate governance and firm-specific stock price crashes [J]. European Financial Management, 2016, 22 (5): 916-956.

[8] Khajavi S, Zare A. The effect of audit quality on stock crash risk in Tehran stock exchange [J]. International Journal of Economics and Financial Issues, 2016, 6 (1): 20-25.

[9] Lim H, Kang S K, Kim H. Auditor quality, IFRS adoption, and stock price crash risk: Korean evidence [J]. Emerging Markets Finance & Trade, 2016, 52: 2100-2114.

[10] Wang, H. C., Cao, F., Gao, S. H., Li, Z. G. Investor Protection and Risk of Stock Price Collapse [J]. Finance and Trade Economy, 2014, (10): 73-82. (in Chinese)

[11] Chen, K. J., li, Y. X., Research on the Substitute Effect of Media Supervision and Constrained Earnings Management in the Legal Environment [J]. Management Science, 2016, 29 (4): 17-28.

[12] Kong, D. M., Liu, S. S., Ying, Q. W., The role of media in corporate behavior: turbulent or clear? [J]. Management world, 2013, (3): 145-162. (in Chinese)

[13] Liang, S. K., Media attention, information environment, and corporate expense stickiness [J]. China Industrial Economy, 2017, (2): 154-173. (in Chinese)

[14] Bushee B. J, Core J, Guay W, Hamm S. The role of the business press as an information intermediary [J]. Journal of Accounting Research, 2010, 48 (1): 1-19.

[15] Dyck A, Volchkova N, Zingales L. The corporate governance role of the media: evidence from Russia [J]. Journal of Finance, 2008, 58 (3): 1093-1135.

[16] Deephouse, D. L.. Media Reputation as a Strategic Resource: An Integration of Mass Communication and Resource-based Theories [J]. Journal of Management, 2001, 26: 109 1-1112.

[17] Chen, H., Deng, S. H., Yi, S. S., Research on Media's Corporate Governance Mechanism under the Background of "Big Data" Era: An Empirical Test Based on Information Transparency (in Chinese) [J]. Finance and Trade Economy, 2014, (7): 72-81.

[18] Wang, X. L., Fan, G., Yu, J. W., China Marketization Index Report by Province (2016) (in Chinese) [M]. Beijing: Social Science Literature Press, 2017. (in Chinese)

[19] Chen, J., Hong, H., Stein, J. C. Forecasting crashes: trading volume, past returns, and conditional skewness in stock prices [J]. Journal of Financial Economics, 2001, 61 (3): 345-381.

[20] Dimson E. Risk measurement when shares are subject to infrequent trading [J]. Journal of Financial Economics, 1979, 7 (2): 197-226.

[21] Dechow P. M, Sloan R. G, Sweeney A. P. Detecting earnings management [J]. The Accounting Review, 1995, 70 (2): 193-225.

[22] Petersen M A. Estimating standard errors in finance panel date sets: comparing approaches [J]. Review of Financial Studies, 2009, 22 (1): 435-480.