Financial Market Stability, Corporate Strategic Radicalization and Analyst Coverage: Analysis Based on the Perspective of Stock Price Crash Risk - Empirical Evidence from Shanghai and Shenzhen A-Share Listed Companies

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Abstract. Information is the compass of the financial market, and analysts, as a bridge between companies and investors, play a role in transmitting information. Therefore, it is crucial to study the influencing factors of analyst coverage. This paper examines whether corporate strategic radicalization affects analyst coverage using a sample of A-share listed companies traded on SSE and SZSE with panel data from 2008-2018, and examines whether the risk of corporate stock price crash exacerbates the impact of corporate strategic radicalization on analyst coverage. It is found that (1) corporate strategic radicalization has a significant positive effect on analyst coverage; and (2) stock price crash risk has a positive effect in promoting the relationship between corporate strategic radicalization and analysts. In this paper, the samples are grouped according to the type of corporate ownership as well as corporate executives' concurrent positions, respectively, for further analysis and discussion, and the findings are unaffected. The conclusions still stand after considering the endogeneity issue using the lagged term approach. This paper not only supplements the research literature on analyst coverage, but also provides a policy reference for government departments to formulate corporate regulatory policies.

Keywords: Analyst coverage; Corporate strategic radicalization; Stock price crash risk.

1. Introduction

Analysts are information intermediaries between companies and investors (Fang, 2007). Studies have shown that securities analysts can serve as an effective extra-legal monitoring mechanism (Pan, 2011). However, at the same time, the behavior of analysts themselves can be influenced by various aspects, i.e., market conditions can also affect analyst coverage (Lang & Lundholm, 1996). Some of the literature focuses more on the mechanism of external factors on analyst coverage, which can act on analyst coverage by affecting the speed of information flow (Yang, 2019) as well as analyst sentiment (Tan, 2015). In contrast, there is also some literature focusing on internal factors. Since analysts' behavior is based on the internal operation of the company, the company's stock price reflects the market situation and the market evaluation of the company, and the company's strategy reflects the company's own evaluation of the market and its reaction to the market situation, this paper focuses on "the corporate strategic radicalization" to analyze the factors that influence the analyst coverage and the mechanism of the impact of stock price crash risk on the relationship between corporate strategic radicalization and analyst coverage.

Corporate strategic radicalization is the firm's response to market changes. First, it is momentous to consider the reasons why the firm's strategic radicalization is different from other firms. From macro elements, firms that are supported by policies and have less tax burden have relatively higher strategic radicalization (Zhang, 2021). From micro aspects of firms, corporate directors' and officers' liability insurance increases firms' strategic radicalization (Xing, 2020). Second, it is also significant to consider the impact of various aspects of the change in the strategic radicalization of the firm. An increase in strategic radicalization leads to a decrease in true surplus management as well as a decrease in accrual surplus management (Cheng, 2019). There are still relatively few studies on the impact of strategic radicalization on analyst coverage, and in particular, the literature on the relationship between strategic radicalization and analyst coverage specifically for firms is even rarer.

The risk of stock price crash can threaten the survival of enterprises, affect the efficiency of capital allocation in the stock market, lead to instability in the securities market, and even trigger a global economic crisis (Chen et al., 2009). The Chinese A-share market is more unstable compared to the global stock market (Piotroski & Wong, 2010), and is prone to sharp rises and falls, and A-share investors bear greater risks. Therefore, the risk of stock price crash is important for analysts of A-share listed companies to attach importance to.

Thus, the main questions of interest in this paper are about whether and what kind of effect the degree of corporate strategic radicalization has on analyst coverage, and whether and how the risk of stock price crash moderates the relationship between the degree of strategic radicalization of the firm and analyst coverage. Also, does the uncertainty lead to changes in analyst coverage when increased strategic radicalization exacerbates the instability of a company's operations? Besides, when the risk of stock price crash rises, if the company also has a high level of strategic radicalization, it will make the risk to investors rise. In this case, will investors increase the demand for analyst coverage and thus lead to an increase in analyst coverage?

To these ends, this paper selected a sample of Shanghai and Shenzhen A-share listed companies with panel data from 2008-2018. It is found that corporate strategic radicalization has a significant positive effect on analyst coverage; stock price crash risk has a positive effect in promoting the relationship between corporate strategic radicalization and analysts. Based on this, this paper further analyzes and discusses the sample according to the type of corporate ownership as well as corporate executives' concurrent positions respectively, and the findings are unaffected. The conclusions still hold after considering the endogeneity issue using the lagged term approach.

The marginal contributions of this paper are mainly reflected in the following aspects. (1) this paper enriches the research literature on the influencing factors of analyst coverage, and for the first time, exploring the influencing factors of corporate analyst coverage in a deeper way from the perspective of the interaction between stock price crash risk and corporate strategic radicalization, bridging the gap of previous literature. (2) This paper also complements the economic consequences of stock price crash risk, explains its mechanism of action on analyst coverage through strategic radicalization, enriches its context of action, and extends the research margins related to internal control quality. (3) It unveils the role of corporate strategic radicalization and explains the bridging role of corporate strategic radicalization, which has some practical implications for the attention of corporate management analysts and enriches the related research to some extent. (4) This paper finds that corporate strategic radicalization positively contributes to the analysis of concerns, and the risk of stock price crash positively moderates the relationship between the two, which has positive implications for sound government regulatory mechanisms, effective corporate management, and proper investment by investors.

2. Theory and Hypotheses

2.1 The relationship between corporate strategic radicalization and analyst coverage.

An increase in the corporate strategic radicalization indicates a stronger desire to adapt to the market, but at the same time, it will increase the instability of corporate development. The accrual of corporate surplus management as well as true surplus management will be affected (Cheng, 2019), and both of them are the object of investors' attention, so it will have an impact on analyst coverage (Higgins et al., 2015). As an information intermediary, analysts have stronger ability to collect information and analyze information than investors, so the demand for analysts from investors will increase. In order to be paid more, analysts are expected to devote more attention to companies with greater strategic radicalization. In addition, when a company's strategy becomes more radical, it is usually in pursuit of corporate innovation or expansion. This is a time when companies are under greater financial pressure and need external financing to provide support. Analysts can build a bridge between companies and investors. Third, an increase in strategic radicalization leads to a decrease in the transparency of information disclosure (Myers & Jin, 2004), and in order to meet the needs of

investors, analysts need to devote more attention to companies with greater strategic radicalization in order to extract information from uncertainty and make reasonable forecasts. Therefore, Hypothesis 1 is proposed based on the above analysis.

H1: Increased corporate strategic radicalization will boost analyst coverage.

2.2 The impact of stock price crash risk on the relationship between corporate strategic radicalization and analyst coverage.

The increased risk of corporate stock price crash will lead to blocked financing and increased difficulty in borrowing, which will have an impact on the capital structure of the firm, significantly reducing the share of short-term debt of the firm (Wang et al., 2018). Firms need analysts to communicate their needs to investors and obtain financing to enable them to operate properly. This increases the demand for analysts. When the corporate strategy is radical, the company needs high capital to meet its innovation or expansion needs, and the risk of stock price crash makes the company's financing difficult, the company will need analysts' help more. In addition, investors are skeptical of companies with a more radical strategy, and when the risk of a crash increases, investors may become irrational and sell a large number of shares at any cost, making analyst coverage very important to maintain market stability and corporate survival. Therefore, the risk of stock price crash will increase the demand for financing due to radical strategies of firms, thus increasing analyst coverage. Therefore, hypothesis 2 is proposed.

H2: The risk of stock price crash positively moderates the positive relationship between a corporate strategic radicalization and analyst coverage.

3. Empirical Design

3.1 Data Analysis and Sample Selection

In this paper, the panel data of A-share listed companies traded on SSE and SZSE from 2008 to 2018 is selected as the sample, and the research sample is screened according to the following steps: (1) excluding financial listed companies; (2) excluding the sample of companies with missing relevant financial data. The final sample of 13,344 "company-year-analysts" was obtained. In order to eliminate outliers, continuous variables were winsorized. The relevant financial data are obtained from the China Stock Market & Accounting Research Database (CSMAR), and the missing data are collected manually.

3.2 Variable Selection

Explained variable: analyst coverage. Corporate innovation is a key tracking area for analysts, who mainly deliver incremental information to the capital market by publishing research reports, and information on innovation projects is usually disclosed in detail in the research reports. This paper uses the number of analysts who track and analyze firms in a year to measure the analyst coverage of a specific firm.

Explanatory variable: strategic radicalization of the firm. This paper refers to Bentley et al. (2013) to measure the degree of strategic radicalization, which is measured by six indicators, including the ratio of R&D expenditure to sales revenue, the ratio of number of employees to sales revenue, the growth rate of sales revenue, the ratio of selling and administrative expenses to sales revenue, the standard deviation of the number of employees and the ratio of net fixed assets to total assets. The six indicators were taken as moving averages of the past five years, and then the "industry-year" sample was sorted from smallest to largest and divided into five groups, with the first five indicators assigned the values 0, 1, 2, 3, 4, and the last indicator assigned the values 4, 3, 2, 1, 0, respectively. The final value of strategic radicalization for each sample is obtained by summing up the six values of each "company-year" sample, and the values range from 0 to 24, with larger values indicating more radical strategies.

Moderator variable: individual stock crash risk. Based on the study of Wang et al, this paper adopts the negative coefficient of skewness NSCKEW and the upward and downward earnings volatility ratio DUVOL as the measures of stock price crash risk of listed companies. The specific calculation method is as follows.

First, to eliminate the effect of market returns on the benefit of individual stocks, equation (1) regresses the weekly returns (Ret) of firm i on an annual basis to obtain the firm's weekly idiosyncratic returns:

$$\mathrm{Re}t_{i,t} = \alpha_i + \beta \mathrm{Re}t_{m,t-2} + \beta_2 \mathrm{Re}t_{m,t-1} + \beta_3 \mathrm{Re}t_{m,t} + \beta_4 \mathrm{Re}t_{m,t+1} + \beta_5 \mathrm{Re}t_{m,t+2} + \epsilon_{i,t}$$

Where Reti,t is the return of firm i in week t and Retm,t is the average market return in week t. To control for the effect of non-synchronous stock trading, the market return overshooting term t+1, t+2 and the lagged term t-1, t-2 are further added. ϵi,t is the residual of the equation, which is the part of the stock return that cannot be explained by the market return, i.e., the idiosyncratic return. Then, define the idiosyncratic return of firm i at week t as Wi,t = ln (1 + ϵi,t) and use Wi,t to calculate the proxy for the stock price crash.

The first variable is the negative coefficient of skewness (NCSKEW), which measures the degree to which an individual stock is negatively skewed by its return. The higher the negative skewness, the higher the volatility of the return, and the higher the risk of a stock crash will be. Also, n represents the number of weeks that a stock of firm i trades in a year and is calculated as in (4-2).

$$NCSKEW_{i,t} = \frac{n(n-1)^{\frac{3}{2}} \sum W_{i,t}^3}{(n-1)(n-2)\left(\sum W_{i,t}^2\right)^{\frac{3}{2}}}$$

The second variable is the down-to-up volatility (DUVOL). If the duration of negative returns is shorter and the degree of negative returns is greater, then the greater the indicator is, and the greater the risk of a stock crash. Also, nu indicates the number of weeks when Wi,t is greater than the average market return and nd indicates the number of weeks when Wi,t is less than the average market return.

$$DUVOL_{i,t} = \ln\left(\frac{\sum_{down} W_{i,t}^2}{n_d - 1}\right) - \ln\left(\frac{\sum_{up} W_{i,t}^2}{n_u - 1}\right)$$

Table 1. Variable Definitions

Variable Type	Variable Name	Variable Symbol	Variable Definition
Explained Variable	Analyst Coverage	*guanzhu*	Number of analysts who followed up and analyzed companies during the year
Explanatory Variable	Corporate Strategic Radicalization	*STRATEGEY*	Values range from 0-24, with larger values indicating a more aggressive company strategy
Moderator Variable	Stock Price Crash Risk	*NCSKEW*	Negative coefficient of skewness of the company's stock, as specified in Equation (4-2)
		DUVOL	Down-to-up volatility of the company, as specified in Equation (4-3)
Controlled Variables	Property Rights	*STATE*	State-owned enterprises are recorded as 1, otherwise they are recorded as 0
	Executive Stock Ownership	SR	The ratio of executive stock ownership to the total shares
	Debt-to-asset Ratio	*LEV*	Ratio of total debts to total assets
	Enterprise Size	*SIZE*	Enterprise size Ln (total assets)
	Board Size	*BOARD*	Ln (number of board members)
	Enterprise Age	*AGE*	Enterprise establishment time

3.3 Model Design

First, in order to test the first hypothesis proposed in this paper, i.e., whether the corporate strategic radicalization will have an impact on analyst coverage, the paper first constructs the following two models to be tested.

$$guanzhu_{i,t} = \alpha_{1,0} + \alpha_{1,1}STRATEGY_{i,t} + \sum Industryfe + \epsilon_{i,t} \quad (1)$$

$$guanzhu_{i,t} = \alpha_{2,0} + \alpha_{2,1}STRATEGY_{i,t} + \alpha CVs_{i,t} + \sum Industryfe + \epsilon_{i,t} \quad (2)$$

In models (4-4) and (4-5), guanzhui,t denotes the analyst coverage of each firm, i.e., the number of analysts following firm i in year t. STRATEGYi,t denotes the corporate strategic radicalization. In model (4-5), CVsi,t is added as control variables in this paper, which include Executive Stock Ownership (SR), Debt-to-asset Ratio (LEV), enterprise size (SIZE), board size (BOARD), and enterprise age (AGE). This paper controls for industry fixed effects (Industryfe). According to the research hypothesis, this paper expects $\alpha 1,1 > 0$ & $\alpha 2,1 > 0$, i.e., the rise in the corporate strategic radicalization will promote an increase in the number of corporate analyst coverage.

Second, in order to further test the second hypothesis proposed in this paper that the risk of stock price crash has a positive moderating effect on the relationship between strategic radicalization and analyst coverage, the following four models are constructed to be tested.

$$guanzhu_{i,t} = \beta_{1,0} + \beta_{1,1}STRATEGY_{i,t} + \beta_{1,2}strategy\_NCSKEW_{i,t} + \sum Industryfe + \epsilon_{i,t}$$

$$guanzhu_{i,t} = \beta_{2,0} + \beta_{2,1}STRATEGY_{i,t} + \beta_{2,2}strategy\_NCSKEW_{i,t} + \beta CVs_{i,t} + \sum Industryfe + \epsilon_{i,t}$$

$$guanzhu_{i,t} = \gamma_{1,0} + \gamma_{1,1}STRATEGY_{i,t} + \gamma_{1,2}strategy\_DUVOL_{i,t} + \sum Industryfe + \epsilon_{i,t}$$

$$guanzhu_{i,t} = \gamma_{2,0} + \gamma_{2,1}STRATEGY_{i,t} + \gamma_{2,2}strategy\_DUVOL_{i,t} + \gamma CVs_{i,t} + \sum Industryfe + \epsilon_{i,t}$$

In models (4-6) and (4-7), strategy_NCSKEWi,t is the stock price crash risk of firm i in year t expressed as the negative coefficient of skewness of the company's stock. In models (4-8) and (4-9), strategy_DUVOLi,t is the risk of stock price crash in year t expressed as thedown-to-up volatility for firm i. According to the research hypothesis, this paper expects $\beta 1,1 > 0$ & $\beta 1,2 > 0$ & $\beta 2,1 > 0$ & $\beta 2,2 > 0$. After replacing the moderating variables in models (4-6)and (4-7), according to the research hypothesis, this paper expects $\gamma 1,1 > 0$ & $\gamma 1,2 > 0$ & $\gamma 2,1 > 0$ & $\gamma 2,2 > 0$.

4. Empirical Analysis

4.1 Descriptive Statistics

Table 5-1 reports the results of the descriptive statistics of the variables. The mean value of analyst coverage guanzhu is 18.948, indicating an average of 19 analysts per tracked company, with a standard deviation of 18.917 and a polar deviation of 137, indicating a large variation in attention between companies. The STRATEGY mean is 11.924 and the standard deviation is 4.085, indicating that different companies adopt different levels of radicalization in their strategies. The mean value of stock price crash risk using NCKEW method is -0.272 with a standard deviation of 0.701, while the mean value of stock price crash risk using DUVOL method is -0.187 with a standard deviation of 0.479. The mean value of STATE by property rights is 0.522, indicating that the number of Chinese owned and private companies is nearly equal. The mean value of SR is 0.067, indicating that on average, 67 of every 1000 shares in the sample companies are held by the top management. The mean value of LEV is 0.468, which means that the sample companies are in a safe operating state on average,

with a very high value of 3.919, indicating that some of the selected companies have high financial risks. The mean value of SIZE is 22.408 with a standard deviation of 1.247, the mean value of BOARD is 2.169 with a standard deviation of 0.203, and the mean value of AGE is 2.771 with a standard deviation of 0.203.

Table 2. Descriptive Statistics of Variables

Variables	SampleSize	AverageValue	StandardDeviation	MinimalValue	MaximumValue
guanzhu	13344	18.948	18.917	0	137
STRATEGEY	13344	11.924	4.085	0	24
NCSKEW	13344	-0.272	0.701	-2.707	2.139
DUVOL	13344	-0.187	0.479	-1.588	1.272
STATE	13344	0.522	0.5	0	1
SR	13344	0.067	0.152	0	5.91
LEV	13344	0.468	0.199	0.007	3.919
SIZE	13344	22.408	1.247	17.779	28.52
BOARD	13344	2.169	0.203	1.099	2.89
AGE	13344	2.771	0.313	1.609	3.932

4.2 Correlation Analysis

In this paper, the correlation coefficients are computed for the relevant variables as well as for the correlation analysis. The results show that there is a positive relationship between analyst coverage and corporate strategic radicalization and stock price crash index, which indicates that the increase of company strategic radicalization can increase analyst coverage to the company, and the stock price crash index has a positive moderating effect on the relationship between the two. In addition, analyst coverage is positively correlated with top ownership, enterprise size, and board size, and negatively correlated with the nature of corporate ownership, balance sheet ratio, and company establishment. The correlations among the explanatory variables are low, indicating that there is no significant multicollinearity among the variables.

Table 3. Correlation of Variables

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
(1) *guanzhu*	1.000									
(2) *STRATEGEY*	0.109	1.000								
(3) *NCSKEW*	0.091	0.066	1.000							
(4) *DUVOL*	0.073	0.064	0.882	1.000						
(5) *STATE*	-0.035	-0.184	-0.084	-0.091	1.000					
(6) *SR*	0.063	0.161	0.077	0.081	-0.442	1.000				
(7) *LEV*	-0.046	-0.093	-0.057	-0.067	0.244	-0.221	1.000			
(8) *SIZE*	0.416	-0.059	-0.071	-0.092	0.246	-0.159	0.402	1.000		
(9) *BOARD*	0.109	-0.069	-0.041	-0.043	0.268	-0.177	0.151	0.226	1.000	
(10) *AGE*	-0.083	-0.048	-0.018	-0.019	0.095	-0.152	0.050	0.110	-0.010	1.000

4.3 Multiple Regression Analysis

Multiple regression models are used to examine the impact of corporate strategic radicalization on analyst coverage and the moderating effect of stock price crash risk, controlling for year and industry fixed effects, respectively. The regression results are presented in Table 5-3.

4.3.1 The impact of the corporate strategic radicalization on analyst coverage.

Model A examines the impact of the corporate strategic radicalization on analyst coverage. Model A (1) shows that the STRATEGY coefficient is 0.513, which is significant at the 1% level of significance; Model A (2) adds control variables and the STRATEGY coefficient is 0.476, which is significant at the 1% level of significance. This indicates that there is a positive relationship between analyst coverage and the degree of strategic radicalization of the company. The higher the level of

corporate strategic radicalization, the higher the level of analyst coverage to the company, and hypothesis 1 is verified.

4.3.2 The moderating effect of stock price crash risk on the relationship between corporate strategic radicalization and analyst coverage.

Model B examines the moderating effect of stock price crash risk on the relationship between corporate strategic radicalization and analyst coverage. Model B(1) and Model B(2) consider to calculate the risk of stock price crash using the NCSKEW method. In Model B(1), the STRATEGY coefficient is 0.539, which is significant at the 1% level, and the interaction term strategy_NCSKEW between the radicalization of the firm's strategy and the risk of stock price crash is 0.183, which is significant at the 1% level. Model B(2) adds control variables, STRATEGY coefficient is 0.511, significant at 1% level, and strategy_NCSKEW coefficient is 0.199, significant at 1% level. Model B (3) and Model B (4) consider to calculate the risk of stock price crash using the DUVOL method. Model B(3) has a STRATEGY coefficient of 0.535, which is significant at the 1% level, and the interaction term strategy_DUVOL between the corporate strategic radicalization and the risk of stock price crash has a coefficient of 0.209, which is significant at the 1% level. Model B (4) adds control variables, STRATEGY coefficient is 0.510, significant at 1% level, and strategy_DUVOL coefficient is 0.26, significant at 1% level. All of these models suggest that the risk of stock price crash positively moderates the relationship between strategic radicalization and analyst coverage, i.e., the number of analysts who pay attention to companies with higher strategic radicalization increases when the risk of stock price crash increases, and Hypothesis 2 is tested.

Table 4. Impact of Corporate Strategic Radicalization on Analyst Coverage and the Moderating Effect of Stock Price Crash Risk

	A		B			
	(1)	(2)	(1)	(2)	(3)	(4)
	guanzhu	*guanzhu*	*guanzhu*	*guanzhu*	*guanzhu*	*guanzhu*
STRATEGY	0.513***	0.476***	0.539***	0.511***	0.535***	0.510***
	(13.12)	(14.05)	(13.81)	(15.13)	(13.67)	(15.06)
strategy_NCSKEW			0.183***	0.199***		
			(9.89)	(12.76)		
strategy_DUVOL					0.209***	0.266***
					(7.70)	(11.60)
STATE		−2.745***		−2.636***		−2.643***
		(−8.37)		(−8.08)		(−8.09)
SR		7.333***		6.838***		6.916***
		(7.02)		(6.58)		(6.65)
LEV		−22.05***		−21.95***		−21.95***
		(−27.52)		(−27.56)		(−27.53)
SIZE		9.203***		9.229***		9.261***
		(68.87)		(69.47)		(69.60)
BOARD		4.238***		4.295***		4.230***
		(5.96)		(6.07)		(5.97)
AGE		−5.469***		−5.391***		−5.380***
		(−11.13)		(−11.04)		(−11.00)
_cons	12.83***	−175.7***	13.08***	−176.5***	13.01***	−177.2***
	(26.03)	(−52.62)	(26.59)	(−53.17)	(26.43)	(−53.28)
Year/Ind	controlled	controlled	controlled	controlled	controlled	controlled
N	13344	13344	13344	13344	13344	13344
Adj.R²	0.0520	0.3232	0.0589	0.3313	0.0562	0.3299
F	172.26	797.29	135.70	726.45	116.18	721.44

t statistics in parentheses

$* p < 0.1$, $** p < 0.05$, $*** p < 0.01$

5. Further Analysis

5.1 The sample is further analyzed by grouping the firms according to the property rights.

The property rights as an important factor affecting the economic performance of firms has attracted much attention from scholars. Studies have shown that state-owned enterprises tend to disclose less accurate performance reports than non-state-owned enterprises, which affects the accuracy of information (Yuan, 2014), and this may have an impact on the influence of corporate strategic radicalization on analyst coverage and the moderating effect of stock price crash risk. Therefore, this paper intends to conduct further analysis in terms of the property rights dimension. Specifically, the sample is divided into state-owned and non-state-owned enterprises, and sample regressions are conducted for models A(2), B(2), and B(4). The results are shown in Table 5-7 below.

Models I(1), (2) and (3) are restricted to the case where the sample is state-owned enterprises, and the coefficient of the corporate strategic radicalization STATEGY was 0.428, significant at the 1% significance level. The two methods, NCSKEW and DUVOL, were used to calculate coefficients of stock price crash risk strategy_NCSKEW & strategy_DUVOL. The coefficients are 0.265 and 0.368, respectively, both significant at the 1% level of significance. Models J(1), (2) and (3) restrict the sample to non-state-owned-enterprises, and the STATEGY coefficient of the corporate strategic radicalization is 0.501, which is significant at the 1% significance level. Both of them are significant at 1% level of significance. Through the robustness test of the subsample, it is found that the direction of the three variables does not change and the magnitude of the effect is similar, so the conclusion remains unchanged, that is, the corporate strategic radicalization has a positive promotion effect on analyst coverage, and the risk of stock price crash has a positive moderating effect on the relationship between the two.

Table 5. Regression Results After Grouping the Sample According to Property Rights

	I			J		
	(1)	(2)	(3)	(1)	(2)	(3)
	guanzhu	*guanzhu*	*guanzhu*	*guanzhu*	*guanzhu*	*guanzhu*
STRATEGY	0.428***	0.492***	0.493***	0.501***	0.515***	0.514***
	(9.45)	(10.90)	(10.89)	(9.87)	(10.17)	(10.14)
strategy_NCSKEW		0.265***			0.147***	
		(11.67)			(6.85)	
strategy_DUVOL			0.368***			0.189***
			(11.05)			(6.00)
STATE	0	0	0	0	0	0
	(.)	(.)	(.)	(.)	(.)	(.)
SR	49.91***	47.80***	47.88***	6.164***	5.873***	5.928***
	(4.72)	(4.56)	(4.56)	(5.54)	(5.29)	(5.34)
LEV	−24.90***	−24.74***	−24.75***	−19.39***	−19.33***	−19.32***
	(−23.05)	(−23.13)	(−23.11)	(−16.17)	(−16.18)	(−16.16)
SIZE	8.950***	8.969***	9.005***	10.21***	10.24***	10.27***
	(54.58)	(55.22)	(55.36)	(43.90)	(44.18)	(44.24)
BOARD	4.295***	4.333***	4.304***	4.085***	4.148***	4.070***
	(4.58)	(4.66)	(4.63)	(3.80)	(3.87)	(3.79)
AGE	−3.871***	−3.872***	−3.838***	−6.249***	−6.177***	−6.176***
(−5.12)		(−5.17)	(−5.12)	(−9.51)	(−9.44)	(−9.43)
_cons	−175.7***	−176.1***	−176.9***	−196.5***	−197.3***	−197.8***
(−39.01)		(−39.47)	(−39.62)	(−36.43)	(−36.70)	(−36.74)
Year/Ind	controlled	controlled	controlled	controlled	controlled	controlled
N	6971	6971	6971	6373	6373	6373
Adj.R^2	0.3733	0.3852	0.3840	0.2912	0.2963	0.2951
F	567.40	515.30	512.28	388.60	342.21	340.06

t statistics in parentheses

∗ p < 0.1, ∗∗ p < 0.05, ∗∗∗ p < 0.01

5.2 The sample was further analyzed by grouping the general manager and the chairman of the board according to whether they are concurrently appointed or not.

While the dual role of chairman and general manager leads to a decrease in corporate supervision (Tian, 1997), which affects the transparency and accuracy of corporate information disclosure, the separation of the board of directors and general manager affects the efficiency of corporate investment (Zhang, 2020) and the degree of corporate strategy execution. Therefore, this paper divides the sample companies into part-time and discrete companies for heterogeneity analysis, and the results are shown in Tables 5-6 below.

Models G(1), (2) and (3) are regressions for the concurrent sample of firms with the corporate strategic radicalization STATEGY. The coefficient is 0.567, which is significant at 1% significance level, and the coefficients of stock price crash risk strategy_NCSKEW & strategy_DUVOL calculated with both NCSKEW and DUVOL are 0.176 and 0.209 respectively, significant at the 1% level of significance. Models H(1), (2) and (3) are regressions for the discrete sample of firms, with a STATEGY coefficient of 0.440 for strategic radicalization, which is significant at the 1% level of significance. A coefficient of strategy_NCSKEW & strategy_DUVOL for the risk of stock price crash, calculated using the NCSKEW and DUVOL methods, which are 0.206 and 0.283, respectively, both significant at the 1% level of significance. For both samples, the corporate strategic radicalization positively contributes to analyst coverage, and the risk of stock price crash positively moderates the relationship between the two, so the conclusion can be considered unaffected.

Table 6. Regression Results After Grouping the Sample According to Whether or Not the General Managers and the Chairmen of the Board of Directors are Concurrently Appointed

	G			H		
	(1)	(2)	(3)	(1)	(2)	(3)
	guanzhu	*guanzhu*	*guanzhu*	*guanzhu*	*guanzhu*	*guanzhu*
STRATEGY	0.567***	0.577***	0.580***	0.440***	0.483***	0.481***
	(7.40)	(7.57)	(7.59)	(11.64)	(12.79)	(12.72)
strategy_NCSKEW		0.176***			0.206***	
		(5.57)			(11.48)	
strategy_DUVOL			0.209***			0.283***
			(4.49)			(10.74)
STATE	−2.665***	−2.613***	−2.611***	−2.566***	−2.445***	−2.447***
	(−3.09)	(−3.05)	(−3.04)	(−7.08)	(−6.79)	(−6.79)
SR	5.838***	5.374***	5.420***	8.260***	7.842***	7.937***
	(3.24)	(2.99)	(3.01)	(6.36)	(6.08)	(6.14)
LEV	−18.60***	−18.65***	−18.62***	−23.36***	−23.24***	−23.24***
	(−10.76)	(−10.85)	(−10.81)	(−25.77)	(−25.79)	(−25.77)
SIZE	10.49***	10.52***	10.53***	9.041***	9.069***	9.104***
	(31.13)	(31.40)	(31.36)	(61.65)	(62.20)	(62.35)
BOARD	0.307	0.430	0.380	5.470***	5.486***	5.424***
	(0.19)	(0.27)	(0.24)	(6.85)	(6.91)	(6.83)
AGE	−8.831***	−8.739***	−8.704***	−4.354***	−4.285***	−4.284***
(−8.83)		(−8.79)	(−8.73)	(−7.70)	(−7.62)	(−7.62)
_cons	−188.6***	−189.4***	−189.7***	−177.2***	−178.0***	−178.6***
(−24.92)		(−25.16)	(−25.15)	(−46.78)	(−47.27)	(−47.39)
Year/Ind	controlled	controlled	controlled	controlled	controlled	controlled
N	2598	2598	2598	10746	10746	10746
Adj.R^2	0.3533	0.3608	0.3581	0.3203	0.3285	0.3275
F	176.39	160.02	158.02	629.09	573.66	570.76

t statistics in parentheses

∗ p < 0.1, ∗∗ p < 0.05, ∗∗∗ p < 0.01

6. Robustness Test

The above confirms that companies with more radical corporate strategies influence analyst coverage, as well as when stock prices crash Firms with higher corporate strategy attract more analyst coverage when the risk of a crash is higher. However, it is also possible that firms with higher analyst coverage tend to adopt more radical corporate strategies and that analysts tend to focus on firms with higher risk of stock price crash. That is, there may be an inverse causal endogeneity relationship in this paper. In order to consider the effect of endogeneity issues, robustness tests are conducted using the lagged term approach.

Table 7. Lagged Variable Regression Result

	K		L		M	
	(1) *guanzhu*	(2) *guanzhu*	(1) *guanzhu*	(2) *guanzhu*	(1) *guanzhu*	(2) *guanzhu*
*STRATEGY*1	0.543***	0.570***	0.583***	0.610***	0.586***	0.613***
	(13.92)	(14.34)	(14.97)	(15.35)	(15.07)	(15.46)
*strategy_NCSKEW*1					0.239***	0.237***
					(12.94)	(12.56)
*strategy_DUVOL*1			0.305***	0.299***		
			(11.35)	(10.91)		
STATE	−2.573***		−2.506***		−2.504***	
	(−6.82)		(−6.68)		(−6.69)	
SR	7.915***		7.108***			
	(5.69)		(5.13)		(5.13)	
LEV	−24.70***		−24.63***		−24.59***	
	(−25.91)		(−25.99)			
SIZE	9.648***		9.744***		9.718***	
	(62.26)		(63.17)		(63.17)	
BOARD	4.151***		4.175***		4.242***	
	(5.08)		(5.14)		(5.23)	
AGE	−5.791***		−5.727***		−5.751***	
	(−9.57)		(−9.52)			
*STATE*1		−3.035***		−2.957***		−2.964***
		(−7.91)		(−7.74)		(−7.78)
*SR*1		5.296***		4.709***		4.648***
		(4.30)		(3.84)		(3.80)
*LEV*1		−23.69***		−23.56***		−23.53***
		(−23.90)		(−23.90)		(−23.91)
*SIZE*1		9.230***		9.323***		9.300***
		(57.90)		(58.72)		(58.73)
*BOARD*1		4.614***		4.636***		4.679***
		(5.48)		(5.54)		(5.60)
*AGE*1		−5.438***		−5.373***		−5.394***
		(−9.46)		(−9.40)		(−9.45)
_cons	−183.9***	−176.2***	−186.1***	−178.3***	−185.5***	−177.8***
	(−46.90)	(−44.58)	(−47.69)	(−45.32)	(−47.66)	(−45.30)
Year/Ind	controlled	controlled	controlled	controlled	controlled	controlled
N	10627	10627	10627	10627	10627	10627
Adj.R^2	0.3244	0.2982	0.3325	0.3059	0.3349	0.3084
F	650.58	569.74	592.22	518.95	599.13	525.62

t statistics in parentheses

∗ p < 0.1, ∗∗ p < 0.05, ∗∗∗ p < 0.01

To address possible endogeneity, this paper analyzes one period lag of corporate strategic radicalization (STRATEGY1) and one period lag of the interaction term between stock price crash risk and corporate strategic radicalization (strategy_NCSKEW1 & strategy_DUVOL1). In model K

(1), the estimated coefficient of STRATEGY1 is significantly positive at the 1% level. In order to exclude possible interference from the control variables, the model K (2) is obtained by regressing the control variables with a one-period lag. The estimated coefficient of STRATEGY1 is still significantly positive at the 1% level, indicating that it is the increase in corporate strategic radicalization that is causing the analyst coverage. In models L (1) and M (1), the estimated coefficients of strategy_NCSKEW1 & strategy_DUVO1L are significantly positive at the 1% level. The estimated coefficients of both strategy_NCSKEW1 & strategy_DUVOL1 are still significantly positive at the 1% level in models L (2) and M (2) by regressing the control variables with one period lag in order to exclude possible disturbances. This suggests that it is the increased risk of stock price crash that enhances the analyst coverage to the increased corporate strategic radicalization. Thus, after accounting for endogeneity, the paper remains robust.

7. Research Conclusions and Implications

As China's investment and financing market is booming and diversifying, the government, enterprises, and investors are placing higher demands on the timeliness and accuracy of information dissemination in the financial market. Analysts, as information dissemination intermediaries, are playing an increasingly important role in the financial market, so it is crucial to understand the factors influencing analyst coverage. This paper studies the impact of strategic radicalization on analyst coverage and the moderating effect of stock price crash risk on the relationship between analyst coverage and strategic radicalization in a sample of Chinese A-share listed companies in Shanghai and Shenzhen from 2000 to 2020. It is found that strategic radicalization has a significant positive effect on analyst coverage, and stock price crash risk has a positive contribution to the relationship, i.e., analysts tend to pay attention to firms with higher strategic radicalization and attract more analyst coverage when firms with strategic radicalization have higher stock price crash risk; the findings still hold after heterogeneity analysis and controlling for endogeneity.

For the government regulatory part, it is necessary to improve the market regulatory system and regulate the behavior of enterprises. This paper finds that compared to state-owned-enterprises, the impact of strategic radicalization on analyst coverage is more pronounced for non-state-owned-enterprises, while the moderating effect of stock price crash risk is relatively weak. The government should accelerate the pace of state-owned-enterprises reform, break the rigid exchange, and try to eliminate the difference in resource endowment among state-owned-enterprises. For companies, it is important to choose a strategy that is consistent with the company's current situation as well as its development goals in order to effectively communicate information to the public and maintain normal and stable operations. When a company needs financial support for technological innovation or industrial expansion, it should adopt a more radical strategy, and analysts can help the company obtain the funds needed for development by analyzing the current situation of the company and conveying information to investors. In addition, this paper finds that when there is a risk of stock price crash, companies should reasonably assess the market conditions and appropriately reduce the radicalization of the company's strategy to reduce the quantity and quality of negative information about the company to investors and avoid the risk of corporate bankruptcy. For investors, they should select corporate investments based on market conditions and their own objective judgment, combined with analyst coverage.

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