

The Buffering Effect of Corporate Reputation on Negative Event Shocks

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Abstract. Against the backdrop of social media, corporate negative incidents spread rapidly and tend to trigger share price fluctuations and public trust crises. Divergences in existing studies regarding the risk-buffering function of corporate reputation mainly arise from the ambiguous classification of negative corporate events. This study selects China A-share listed firms over the period 2014 to 2024 as research samples and adopts regulatory violation penalties as quantitative indicators for confirmed negative events. With four core dimensions, including enterprise scale, profitability, analyst coverage, and institutional ownership, principal component analysis is applied to construct a repeatable multi-dimensional reputation index. A two-way fixed-effect panel model is employed to examine the moderating influence of corporate reputation on adverse event shocks. Empirical outcomes indicate that regulatory penalties reduce the return on total assets of involved firms by an average of 2.1 percentage points in the subsequent year. The interaction term between corporate reputation and regulatory penalties shows a significantly positive coefficient. A one-unit rise in reputation offsets roughly 35% of the negative impact brought by penalties. The findings verify the buffering capacity of corporate reputation, resolve existing theoretical controversies, and provide empirical support for corporate reputation management and differentiated regulatory arrangements.

Keywords: corporate reputation, negative event, buffering effect, reputation index

1. Introduction

Under the social media context, the spread speed and influence range of corporate negative incidents differ greatly from those in the traditional media era. Operational violations, product recalls, and unsubstantiated market rumors can lead to sharp stock volatility and trust crises within a short time. Classic cases ranging from early food safety scandals to recent financial fraud incidents raise a core question for the capital market: whether long-term accumulated corporate reputation can serve as an effective buffer during crises.

Most overseas research confirms that sound corporate reputation alleviates adverse market reactions caused by negative news [1]. Distinct institutional settings and investor structures in China's capital market mean overseas research conclusions cannot be directly applied to domestic enterprises. Domestic academic research also presents inconsistent results. Some analyses prove that favorable ESG performance weakens the impact of regulatory penalties [2]. Other evidence suggests

enterprises with high reputation suffer heavier losses when exposed to unconfirmed market rumors [3]. Such research contradictions stem from essential differences among types of negative events. Regulatory penalties represent officially verified facts with clear attribution, whereas market rumors feature uncertain authenticity. The distinction becomes the core starting point of the current research.

Existing literature explores the buffering effect of reputation from the perspectives of ESG performance and market rumors, yet relevant research still has gaps. This research takes China A-share listed firms from 2014 to 2024 as samples and focuses on officially confirmed regulatory violations. A composite reputation index is built via principal component analysis, and a panel data model is used to test the practical effect of reputation. Regulatory penalties are proven to impair corporate operating performance, and corporate reputation effectively hedges such adverse shocks. The results supplement boundary conditions for the reputation insurance theory based on China's market context, quantify the economic value of reputation assets, and offer references for corporate reputation operation and industrial supervision [4].

2. Theoretical framework and hypothesis development

2.1. Negative event and corporate financial performance

Regulatory penalties stand for official confirmation of corporate misconduct, which signals governance defects to the market. Negative information deepens information asymmetry between enterprises and investors and pushes financing costs upward. Cooperation relationships with suppliers and customers will also be damaged [5].

From the perspective of signaling theory, violation records reflect not only current operational problems but also potential long-term risks [6]. Negative market expectations will eventually be reflected in corporate financial performance. A large number of existing studies verify that corporate violations generate continuous negative impacts on subsequent operating results [7]. On this basis, the first research hypothesis is proposed:

H1: Negative regulatory events present a significant negative correlation with the future financial performance of enterprises.

2.2. The buffering effect of corporate reputation

Corporate reputation is a type of intangible asset accumulated through long-term business operation. The reputation insurance theory defines high reputation as moral capital for modern enterprises [8]. When regulatory violations occur, stakeholders tend to regard individual mistakes as occasional accidents rather than systematic management flaws, which lowers the adverse influence of penalties [9]. The nature of negative events determines the practical effect of reputation. Targeting officially confirmed regulatory violations, the current research holds that corporate reputation delivers prominent buffering effects [10]. The second research hypothesis is put forward accordingly:

H2: Corporate reputation significantly mitigates the negative impact of negative events on financial performance. Higher corporate reputation weakens performance losses caused by regulatory penalties.

3. Research design

3.1. Sample sources and data processing

The initial research samples consist of China A-share listed companies from 2014 to 2024. Standard sample screening rules are implemented. Financial enterprises, ST and PT listed firms are excluded. Samples with missing core variable data and enterprises with a listing duration shorter than one year are also eliminated. All continuous variables receive 1% and 99% winsorization treatment.

After data matching and lag term processing, the final research sample includes 4,536 firm-year observations covering 1,377 individual enterprises, with the research period ranging from 2019 to 2023. All raw data are sourced from the CSMAR database.

3.2. Variable setting

The explained variable is financial performance, measured by the lagged return on total assets. Return on equity is adopted as an alternative indicator for robustness testing. The core explanatory variable corresponds to negative events. A dummy variable named Violation_Dummy is constructed based on regulatory penalty records. The value equals 1 if enterprises receive regulatory penalties in a specific year and 0 in other cases. The number of violations serves as a substitute indicator for follow-up inspection.

The moderating variable is corporate reputation. Four objective indicators, including enterprise scale, profitability, analyst coverage, and institutional ownership, are selected. Principal component analysis is used to establish a composite reputation index. The first principal component explains 45.2% of the total variance. Factor loadings show that market attention and institutional recognition act as core components of corporate reputation, while profitability plays a relatively limited role. Multiple control variables are selected to ensure research reliability, including enterprise size, asset-liability ratio, growth capacity, ownership nature, CEO duality, board size, independent director ratio, and listing age.

3.3. Model specification

To test Hypothesis H1, the following baseline regression Model (1) is constructed:

$$ROA_{i,t+1} = \alpha_i + \lambda_t + \beta_1 Violation_{Dummy_{i,t}} + \beta_2 Size_{i,t} + \beta_3 Lev_{i,t} + \beta_4 Growth_{i,t} + \beta_5 SOE_{i,t} + \beta_6 Age_{i,t} + \beta_7 Board_{i,t} + \beta_8 Indep_{i,t} + \beta_9 Dual_{i,t} + \varepsilon_{i,t} \quad (1)$$

where α_i denotes the individual fixed effect, λ_t denotes the time fixed effect, and $\varepsilon_{i,t}$ is the random error term. To test the buffering effect of corporate reputation, the interaction term between regulatory penalties and reputation is incorporated into Model (1), as shown in Model (2):

$$ROA_{i,t+1} = \alpha_i + \lambda_t + \beta_1 Violation_{Dummy_{i,t-1}} + \beta_2 Reputation_{i,t-1} + \beta_3 Violation_{Dummy_{i,t-1}} \times Reputation_{i,t-1} + \beta_4 Size_{i,t} + \beta_5 Lev_{i,t} + \beta_6 Growth_{i,t} + \beta_7 SOE_{i,t} + \beta_8 Age_{i,t} + \beta_9 Board_{i,t} + \beta_{10} Indep_{i,t} + \beta_{11} Dual_{i,t} + \varepsilon_{i,t} \quad (2)$$

where the coefficient of the interaction term, Violation_Dummy $\times$ Reputation, denoted as β_3 , is the key to testing H2. A significantly positive β_3 indicates that corporate reputation plays a buffering

role.

4. Empirical results and analysis

4.1. Descriptive statistics

Table 1 displays descriptive statistics of major variables. The mean value of lagged ROA reaches 0.035 with a standard deviation of 0.058. The average value of Violation_Dummy is 0.275, which means 27.5% of sample enterprises have regulatory penalty records. The mean value of the reputation index is 3.412, and the maximum and minimum values reveal obvious gaps among sample enterprises. Statistical characteristics of all control variables are consistent with conclusions from mainstream domestic research, which proves the rationality of variable selection.

Table 1. Descriptive statistics

Variable	N	Mean	SD	Min
ROA _{t+1}	4536	0.035	0.058	-0.215
Violation_Dummy _{t-1}	4536	0.275	0.447	0.000
Reputation _{t-1}	4536	3.412	1.852	-3.390
Violation×Reputation	4536	0.938	1.758	-3.390
Size	4536	22.015	1.284	19.520
Lev	4536	0.445	0.208	0.052
Growth	4536	0.156	0.385	-0.582
SOE	4536	0.371	0.483	0.000
Age	4536	2.352	0.685	0.693
Board	4536	2.145	0.198	1.609
Indep	4536	0.375	0.053	0.333
Dual	4536	0.268	0.443	0.000

4.2. Baseline regression and moderation effect

Table 2 reports the regression results. Model (1) acts as the baseline model with only control variables included. Model (2) incorporates Violation_Dummy, Reputation, and their interaction term. The coefficient of Violation_Dummy is -0.0210 with a t-value of -6.92, significant at the 1% level. The figure shows that corporate violations reduce subsequent ROA by 2.1 percentage points on average, which verifies the validity of H1. The coefficient of Reputation is 0.0139 (t=6.54), demonstrating a positive link between reputation level and corporate financial performance. The interaction term registers a coefficient of 0.0074 (t=3.06) and passes the 1% significance test. A one-unit rise in corporate reputation offsets around 35.2% of the adverse effect brought by violations, and the outcome confirms H2. After regulatory penalties, ROA drops by 0.020 among firms with low reputation, while the decline stands at merely 0.013 for high-reputation firms. Firms with a superior reputation also maintain higher ROA during normal operation without violations. The evidence reveals that corporate reputation can counteract losses from penalties and improve daily operating performance.

Table 2. Baseline regression results

Variable	(1) Baseline model	(2) Moderation effect model
Violation_Dummy _{t-1}		-0.0210*** (-6.92)
Reputation _{t-1}		0.0139*** (6.54)
Violation×Reputation		0.0074*** (3.06)
Size	-0.0010 (-0.46)	-0.0010 (-0.46)
Lev	-0.1184*** (-10.77)	-0.1184*** (-10.77)
Growth	0.0145*** (4.23)	0.0138*** (4.05)
SOE	-0.0032 (-0.85)	-0.0028 (-0.72)
Age	-0.0056* (-1.92)	-0.0052* (-1.78)
Board	0.0085 (1.35)	0.0078 (1.24)
Indep	0.0125 (0.68)	0.0112 (0.61)
Dual	0.0021 (0.55)	0.0018 (0.48)
Individual Fixed Effects	Yes	Yes
Time Fixed Effects	Yes	Yes
N	4536	4536
Adj R ²	0.137	0.138

Figure 1 visually presents changes in the marginal effect of violations on ROA at different reputation levels. The marginal effect is calculated with the formula: $-0.0210 + 0.0074 \times \text{Reputation}$. The marginal effect reaches roughly -0.043 when the reputation index equals -3. The absolute value of the negative marginal effect declines steadily along with reputation growth. The marginal effect

turns positive when the reputation index rises to about 2.84. The findings show that the buffering function of reputation presents a gradual changing trend. Higher reputation continuously weakens the negative influence of violations on financial performance, instead of working in an absolute binary mode.

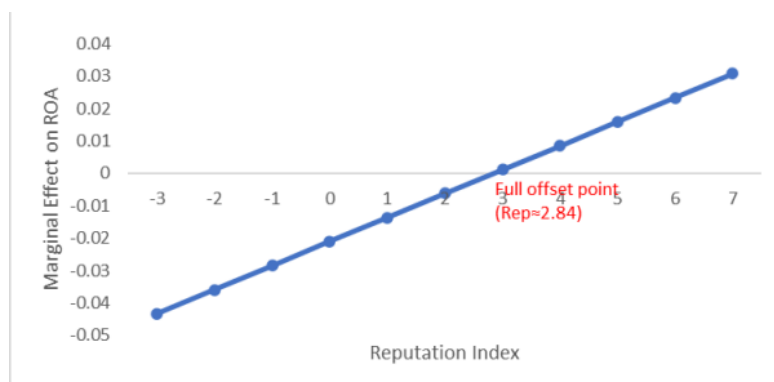


Figure 1. Marginal impact of violation on ROA (picture credit: original)

Samples are grouped by the median reputation index in Figure 2. Post-violation ROA falls by 0.020 for low-reputation firms and 0.013 for high-reputation firms, meaning the negative impact is lowered by nearly 35% for reputable enterprises. High-reputation firms also achieve higher average ROA in periods free of violations. The result aligns with the positive main effect of reputation shown in regression outcomes. A sound corporate reputation acts as a defense against losses caused by violations and supports better financial performance in regular business operations.

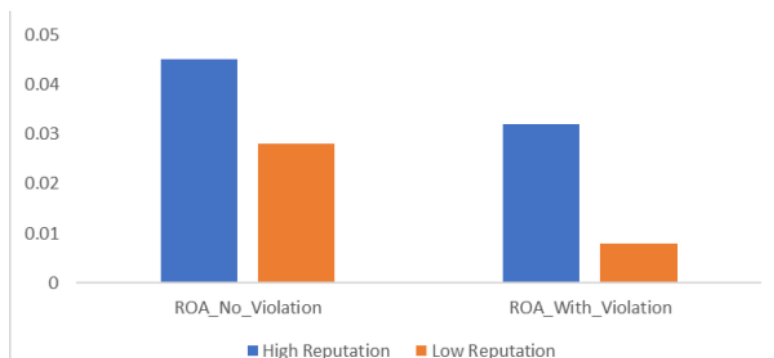


Figure 2. Impact of violation on ROA-high vs. low reputation firms (picture credit: original)

4.3. Validation checks

Multiple tests are conducted to verify the reliability of core conclusions. ROE is adopted to replace ROA for financial performance measurement, and the total number of violations is used as a substitute for the violation dummy variable. Core explanatory and moderating variables are lagged for two and three periods, respectively. A regression based on PSM matched samples is also conducted. The interaction term maintains the same symbol and statistical significance in all tests. The main conclusions remain stable under different variable settings and model designs. Table 3 lists the detailed test results.

Table 3. Robustness test results

Variable	ROE	Violation_Count	PSM	Excluding the year 2020
Violation×Reputation	0.0089** (2.45)	0.0056** (2.18)	0.0072** (2.52)	0.0078*** (3.21)
Controls	Yes	Yes	Yes	Yes
Individual FE	Yes	Yes	Yes	Yes
Time FE	Yes	Yes	Yes	Yes
N	4536	4536	3215	4102
Adj R ²	0.112	0.135	0.142	0.140

4.4. Heterogeneity analysis

Heterogeneity analysis is carried out from three dimensions, including ownership structure, industry competition, and regional marketization. Subgroup regressions are applied to different sample groups. The interaction coefficient for non-state-owned firms is significantly higher at the 5% significance level, with a p-value of 0.042. Within different industry environments, the interaction term shows a significant positive correlation in highly competitive industries, while no statistical significance exists in industries with low competition. Regions with higher marketization present a larger interaction coefficient compared with areas of low marketization. The overall results prove that the buffering effect of corporate reputation becomes more obvious in regions and industries with complete institutional systems and fierce market competition. Table 4 presents all relevant results in detail.

Table 4. Heterogeneity analysis results

Variable	SOE	Non-SOE	High competition	Low competition	High marketization	Low marketization
Violation×Reputation	0.0051* (1.72)	0.0085*** (3.35)	0.0092*** (3.48)	0.0048 (1.35)	0.0089*** (3.52)	0.0045* (1.68)
Control Variables	Yes	Yes	Yes	Yes	Yes	Yes
Individual and Time FE	Yes	Yes	Yes	Yes	Yes	Yes
N	1682	2854	2268	2268	2289	2247
Adj R ²	0.142	0.135	0.148	0.127	0.152	0.125
Between-Group Difference Test	Chi ² =4.12 P=0.042		Chi ² =5.38 P=0.020		Chi ² =4.85 P=0.028	

5. Conclusion

Based on panel data of China A-share listed firms from 2014 to 2024, the current research explores the buffering effect of corporate reputation on negative shocks brought by regulatory violations. Empirical evidence proves that officially confirmed negative regulatory events generate significant adverse impacts on corporate financial performance. Corporate reputation effectively weakens such negative shocks and helps enterprises maintain better operating performance in regular operations. Heterogeneity analysis indicates the buffering effect of reputation is more noticeable in non-state-owned enterprises, highly competitive industries, and regions with high marketization. The transformation of reputation into real economic value relies on the long-term accumulation of intangible assets inside enterprises, as well as complete external market systems and effective market constraints.

Three major contributions are made to existing research systems. The classification of negative events clarifies the source of contradictions in previous academic viewpoints. The multi-dimensional composite reputation index built via principal component analysis overcomes defects of traditional reputation evaluation methods and ensures repeatability of measurement. Heterogeneity analysis further defines the applicable boundary of reputation's buffering effect. The conclusions provide quantitative reference for corporate reputation construction and differentiated regulatory policy formulation. The research takes only regulatory violations as research objects and fails to cover market rumors, product crises, and other common negative incidents. Follow-up research can expand the classification of negative events to further explore the internal mechanism behind the buffering effect of corporate reputation.

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