



Article

Does the Change in Financial Statement Format Influence Stock Price Crash Risk?

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Abstract

By employing the 2017 reform of China's financial statement presentation as an exogenous shock, we evaluate how the change shapes the likelihood of stock price crashes. Our analysis indicates that firms affected by the reform exhibit notably higher crash risk after the new reporting format is adopted, and this finding remains consistent across multiple robustness checks. The increase in crash risk can be largely attributed to managerial incentives to manage earnings by reclassifying held-for-sale assets and other special items. Moreover, the reform exerts a stronger effect on firms that exhibit poor information transparency and receive little oversight from internal and external monitors.

Keywords: classification shifting; financial statement format; stock price crash risk

1. Introduction

Accounting standard setters revise the presentation of financial statements to improve transparency, thereby facilitating investors in obtaining a deeper interpretation of financial information when selecting investment targets. Recent studies have explored immediate investor reaction to changes in the presentation of special items, including their relocation across different financial statements (Huang et al., 2025; Y. J. Lee et al., 2006), from footnotes to the main financial statements (Enache & Srivastava, 2018; Mohanram et al., 2025; Riedl & Srinivasan, 2010), and from below to above the operating income line (Bartov & Mohanram, 2014; Luo et al., 2018). However, the long-term capital market effects of changes in financial statement presentation remain largely unexplored. Our study reveals that classification manipulation used by firms inclined to suppress negative disclosures leads to long-term adverse consequences, confirming the agency theory.

Since December 2017, Chinese publicly listed firms have been required to present held-for-sale assets as a separate line item on the balance sheet. This requirement distinguishes it from the US Generally Accepted Accounting Principles (US GAAP), under which held-for-sale assets are not reported separately but are instead grouped within traditional non-current assets. Despite China's position as one of the world's most extensive and rapidly expanding economies and capital markets, the accounting standards for held-for-sale assets could lead to negative outcomes in the Chinese context compared to more mature capital markets. Chinese investor structure remains dominated by retail participants, many of whom have limited ability to interpret complex financial disclosure (Huang et al., 2025; Titman et al., 2022). Meanwhile, compared to developed countries, China's legal environment is relatively weaker and may not provide sufficient oversight of managers' opportunistic behavior (K.-C. Chen et al., 2016; Ke & Zhang, 2021). Therefore, the adoption



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of the new Chinese financial format offers a unique opportunity to examine whether and how managers conceal negative information through classification shifting between held-for-sale and other assets. Crash risk serves as an indicator of the level of undisclosed bad information that managers accumulate during a specific period (Bleck & Liu, 2007; Hutton et al., 2009; J.-B. Kim et al., 2011). The new financial statement format allows greater flexibility for managers' opportunistic behaviors. This flexibility could allow managers to conceal negative information (Luo et al., 2018; Mohanram et al., 2025), ultimately causing a sudden collapse in stock price.

To investigate how the new Chinese financial statement format introduced in 2017 influences stock price crash risk, we develop a difference-in-difference (DID) model and utilize a sample of A-shares listed on the Shanghai Stock Exchange (SHSE) and the Shenzhen Stock Exchange (SZSE) from 2014 to 2022. We define firms as the treatment group if they have a higher ratio of fixed assets, construction in progress, productive biological assets, intangible assets (hereinafter long-term operating), and held-for-sale assets to total assets, because they have more flexibility to manipulate profits after the new regulation. Our evidence shows that the financial statement presentation reform is followed by a substantial uptick in crash risk among treatment firms. These findings imply that, in response to the change in financial statement format, firms may resort to reclassifying items to obscure unfavorable information. Moreover, the conclusion holds consistently even when subjected to a comprehensive set of validation tests, including placebo tests, replacing the estimation method with entropy balancing, and adding additional fixed effects.

Next, we examine how managers of treatment firms conceal unfavorable news following the new financial statement format, thereby heightening crash risk. Specifically, we suppose that treatment firms might reclassify other long-term operating assets as held-for-sale assets to lessen depreciation and amortization expenses and thereby inflate operating income. We observe that depreciation and amortization rates in treatment firms decline substantially following the adoption of the new financial statement format, thereby corroborating the shift in classification between held-for-sale assets and other non-current assets. On the other hand, we suspect that treatment firms may also boost their operating profits by increasing non-recurring gains from asset disposals and government subsidies, or they might shift recurring operating expenses into non-recurring categories to improve their core profits. We find that after implementing the new financial statement format, abnormal non-recurring gains and losses, as well as unanticipated changes in core earnings, increase noticeably for the treatment firms, thereby confirming the classification shifting in the non-recurring gains and losses.

Finally, we further implement various cross-sectional examinations. First, our results reveal that the rise in crash risk is substantially greater for treatment firms that receive lower disclosure-quality ratings from the SHSE and SZSE and state-owned enterprises (SOEs), implying that firms with poorer information transparency have greater flexibility to shift classifications and conceal unfavorable news (Hutton et al., 2009). Second, a high-quality internal governance system can effectively restrain managers' earnings manipulation behavior and mitigate crash risk (Z. Fan et al., 2020; Hu et al., 2020). Thus, treatment firms with less effective internal governance, indicated by fewer independent directors and a higher shareholding of the majority shareholders, experience a larger stock price crash. Third, a firm's effective external monitoring helps prevent managers from manipulating profits, thereby lowering the possibility of price crashes (H. An & Zhang, 2013; Z. An et al., 2020). Accordingly, our evidence suggests that treatment firms display a stronger surge in crash risk following the financial statement format reform when they do not engage a Big Four audit and have lower shareholdings of professional institutional investors.

We add to existing studies through three major contributions. First, we document the adverse market consequences resulting from the change in financial statement presentation. Unlike previous studies focusing on informational motivation in financial statement presentation (Enache & Srivastava, 2018; Riedl & Srinivasan, 2010), our results support managers' opportunistic behaviors in responding to changes in financial statement format (Bartov & Mohanram, 2014; Y. J. Lee et al., 2006; Luo et al., 2018; Mohanram et al., 2025).

Second, our results enrich the area of classification shifting. An increasing number of studies examines classification shifting between income and expense to boost operating and core profits (Bartov & Mohanram, 2014; Barua et al., 2010; Y. Fan et al., 2010; Marquardt & Wiedman, 2005; McVay, 2006; Mohanram et al., 2025), as well as the shifting between cash flow categories to improve operating cash flow (Baik et al., 2016; Gordon et al., 2017; L. F. Lee, 2012). However, few studies have examined the shift in classification between different assets. Using a unique Chinese setting for reporting held-for-sale assets, we find that managers might reclassify held-for-sale assets from other non-current assets to lower depreciation and amortization expense.

Third, we also enrich the studies examining the underlying factors associated with stock price crash risk. Previous finding proves that managerial distortion of earnings, together with the suppression of negative news, is a key driver of heightened crash risk (Hutton et al., 2009; Jin & Myers, 2006). Moreover, information transparency, executive characteristics and behaviors, along with the strength of internal and external monitoring, all substantially affect the crash risk (Callen & Fang, 2017; S. Chen et al., 2024; Guan et al., 2023; Hu et al., 2020; Hutton et al., 2009; C. Kim et al., 2019; J.-B. Kim et al., 2011, 2015). Our findings indicate that managerial opportunistic reclassification practices give rise to a higher likelihood of price crashes.

The remaining sections proceed as follows. Section 2 presents a review of related literature and the development of hypotheses. Section 3 introduces the variable definitions and details the empirical design. Section 4 provides the empirical findings, and Section 5 summarizes the paper's conclusions.

2. Literature Review and Hypothesis Development

2.1. Stock Price Crash Risk

Among the pioneering studies on crash risk, Jin and Myers (2006) argue that managerial hoarding of adverse information raises the occurrence of stock price collapse. They hold the opinion that managers can selectively disclose accounting information when dealing with bad news. When the stockpile of negative information surpasses a critical level, its sudden release in the market can cause a steep drop in stock price. Bleck and Liu (2007) document that managers often delay reporting unfavorable news to maximize personal benefits, thereby heightening crash risk (Kothari et al., 2009).

According to previous studies, the information gap between internal management and outside investors is one of the most important factors affecting crash risk (Bleck & Liu, 2007; Hutton et al., 2009; J.-B. Kim et al., 2011). Hutton et al. (2009) demonstrate that lower transparency facilitates managerial concealment of adverse information, thus causing a higher level of crash risk. Meanwhile, the comparability and complexity of financial statements also affect the crash risk (C. Kim et al., 2019; J.-B. Kim et al., 2016). Increased comparability in financial statements allows investors to more accurately assess firm performance, thereby constraining managers' capacity and incentives to hide negative information and ultimately lowering crash risk (J.-B. Kim et al., 2016; S. Kim et al., 2013). Conversely, through producing overly complex financial reports, managers can obscure unfavorable information, thereby diminishing transparency and elevating crash risk (C. Kim et al., 2019). Additionally, a number of studies demonstrate that exogenous shocks

aimed at improving information transparency can significantly decrease crash risk. [DeFond et al. \(2015\)](#) demonstrate that IFRS adoption enhances firms' transparency in financial reporting, thereby generally lowering the crash risk in non-financial firms. [Guan et al. \(2023\)](#) prove that the Trading Reports and Compliance Engine (TRACE) rules not only improve the disclosure of negative news in the bond market but also increase information spillover to the stock market, ultimately decreasing crash risk.

Two significant factors influence the information asymmetry. First, a good internal governance environment discourages managers from hiding bad news. Many studies have found that stronger corporate governance helps to restrain agency conflicts and curb managers' opportunistic behavior ([Andreou et al., 2016](#); [Hu et al., 2020](#); [Masulis et al., 2007](#)). [Andreou et al. \(2016\)](#) investigate how various internal governance factors affect future crash risk, finding that short-term institutional ownership, CEO stock option incentives, and director ownership increase crash risk because these factors induce opportunistic behavior and agency issues. Conversely, they also find that factors such as accounting conservatism and robust corporate governance policies can mitigate crash risk. Using firms across 41 countries as a sample, [Hu et al. \(2020\)](#) demonstrate that major board reforms, which enhance board oversight and reduce agency problems, diminish crash risk. Moreover, personal traits of executives can either amplify or diminish this risk by impacting governance effectiveness or directly shaping their decision-making preferences. For example, overconfident CEOs tend to misjudge investment returns, assuming that even projects with a negative net present value will create positive returns. The persistence in such unprofitable investments can lead to poor performance buildup, eventually causing higher crash risk ([J.-B. Kim et al., 2015](#)). It has also been shown that younger CEOs are more likely to conceal negative information regarding bad business performance, which subsequently triggers a risk crash ([Andreou et al., 2017](#)).

Second, strong monitoring power outside firms could effectively discourage managers from concealing unfavorable information and furthermore lower price crash risk ([H. An & Zhang, 2013](#); [Z. An et al., 2020](#); [Callen & Fang, 2017](#); [S. Chen et al., 2024](#)). Institutional investors, as sophisticated market participants, play a crucial role in supervising managerial behaviors. [H. An and Zhang \(2013\)](#) argue that institutional investors are motivated to monitor managers when they expect to hold stocks for an extended period. Their finding indicates that as the institutional ownership rises, the crash risk diminishes, suggesting that these investors actively prevent managers from concealing negative information. Building on this, [S. Chen et al. \(2024\)](#) hold the opinion that common institutional owners experience lower information processing costs and have more substantial incentives for external governance oversight, which enables them to help reduce crash risk by curbing the accumulation of unfavorable information, thereby playing a crucial supervisory role. Auditors serve an essential role in monitoring information disclosure quality, thus exerting a substantial influence on crash risk ([Callen & Fang, 2017](#)). [Callen and Fang \(2017\)](#) demonstrate that auditors' accumulated knowledge through ongoing relationships with clients strengthens their ability to identify and curb the withholding of unfavorable news, thereby mitigating subsequent crash risk. As a significant external constraint, media supervision effectively limits managers' information disclosure behavior through public opinion pressure and information dissemination ([Z. An et al., 2020](#); [Dyck et al., 2008](#)). [Z. An et al. \(2020\)](#) show that firms receiving more media exposure tend to exhibit lower crash risk.

2.2. Classification Shifting

Unlike approaches based on accruals or real activities, classification shifting leaves total earnings unchanged but manipulates the presentation of financial statements through intentionally misclassifying special items. As one of the earlier studies about classification

shifting, [McVay \(2006\)](#) finds that firms in the US tend to reclassify recurring expenses into special items to inflate reported core earnings. Subsequently, expense misclassification has attracted growing attention in the accounting area ([Barua et al., 2010](#); [Cook et al., 2022](#); [Cready et al., 2010](#); [Y. Fan et al., 2010](#); [Y. Fan & Liu, 2017](#)). Consistent with [McVay's \(2006\)](#) conclusions, [Y. Fan et al. \(2010\)](#) reveal that firms exhibit stronger tendencies toward classification shifting during the final quarter of the fiscal year. [Y. Fan and Liu \(2017\)](#) document that firms reclassify various types of core expenses to achieve specific earnings targets. [Cook et al. \(2022\)](#) also find that manufacturing firms can capitalize a portion of fixed costs into inventory rather than expensing them through cost of goods sold, which increases reported income.

Prior studies suggest that firms, largely motivated by opportunistic considerations, often manipulate earnings via classification shifting after changes in financial reporting formats. As evidenced by [Baik et al. \(2016\)](#) and [Gordon et al. \(2017\)](#), IFRS allows firms considerable flexibility in classifying interest and dividend cash flows across the cash flow statement. [Luo et al. \(2018\)](#) find that a mandatory shift in the presentation of investment income induces firms to present larger investment income, thereby altering accounting information. [Y. J. Lee et al. \(2006\)](#) study managers' choices regarding the reporting of comprehensive income between income and equity statements. They find that firms with a tendency toward cherry-picking and a low level of disclosure quality tend to present comprehensive income on the equity statement. [Mohanram et al. \(2025\)](#) provide evidence that non-SOEs tend to manage market value and report higher research and development (R&D) expenditures after the mandatory relocation of the R&D item from the notes to the income statement.

2.3. Institutional Background and Hypothesis Development

On 25 December 2017, China's Ministry of Finance promulgated a new regulation regarding financial reporting format, namely *Notice on the Revision of Financial Format Statements of General Enterprises—Financial Accounting 2017 No. 30* (the notice). The notice addresses implementation challenges arising from the *Accounting Standards for Business Enterprises No. 42* (ASBE No. 42) ([Ministry of Finance of the People's Republic of China, 2017b](#)) and ASBE No. 16 ([Ministry of Finance of the People's Republic of China, 2017a](#)), with the overarching goal of improving the overall reliability and informativeness of accounting disclosures.¹ The new financial statement format has undergone two revisions. First, the balance sheet introduces two new line items, namely *assets held for sale* and corresponding liabilities. The former refers to the book value of non-current assets designated for disposal, and this category also covers both current and non-current assets included within a disposal group classified as held for sale. Since held-for-sale assets are excluded from depreciation and amortization processes, a firm's operating profit could increase if it improperly classifies long-term operating assets as held-for-sale. This encourages firms to enhance their operating profit by increasing the amount of held-for-sale assets. Taking Montnets Cloud (stock code: 002123.SZ) as a typical example, it improperly classifies a total of 78.48 million Yuan of fixed and intangible assets into the category of held-for-sale assets in the 2019 financial report, thereby reducing depreciation and amortization by about 7.61 million Yuan.²

Second, the income statement now includes two new items, namely *gain on disposal of assets* and *other income*, which are positioned above the operating profit line. The term *gain on disposal of assets* captures the profit or loss recognized when firms dispose of non-current assets. The item *other income* refers explicitly to government subsidies related to the firm's daily operations. However, before the change in financial statement format in 2017, the gains or losses from the disposal of long-term operating assets due to sales or

transfers, as well as gains or losses from asset write-offs and surpluses or deficits, were all included in non-operating items and displayed below the operating profit line. Meanwhile, all government subsidies were also recognized as non-operating expenses before 2017. According to Figure 1, the total of gains on the disposal of assets and government subsidies increased from 270.34 billion yuan in 2016 to 422.09 billion yuan in 2023. The average percentage of gains on the disposal of assets and government subsidies is 46.65%, indicating that these items represent substantial components of non-recurring profits and losses for Chinese publicly listed firms. As a result, the change in the financial statement format in 2017 enables firms to adjust their operating profit upward by increasing non-recurring gains and losses associated with disposal gains and government subsidies. For example, to maintain its listing status, Ankai Automobile (stock code: 000868.SZ) reported 88.69 million yuan in government subsidies and 56.14 million yuan in current asset disposal gains in 2019, enabling it to turn a loss into a profit.³ Overall, the notice provides more flexibility for firms with a larger level of long-term operating and held-for-sale assets to conduct earnings management.

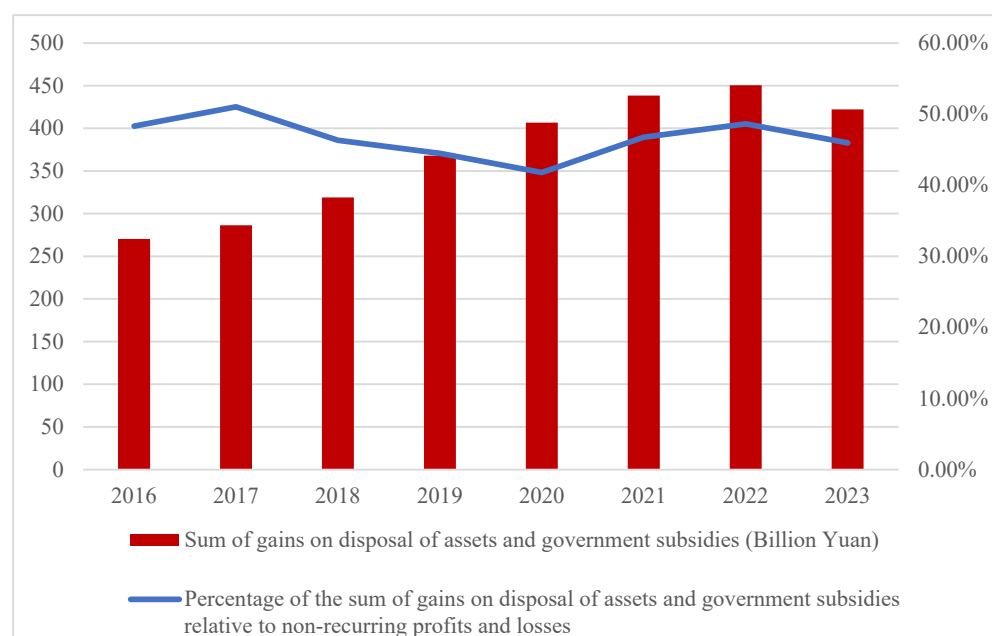


Figure 1. Time trend of gains on disposal of assets and government subsidies from 2016 to 2023.

Accounting earnings and their components offer crucial information for investors when making valuation decisions and choosing investment targets (Bartov & Mohanram, 2014; Mohanram et al., 2025). There is a heated discussion regarding the economic consequences of the financial statement format changes. On the one hand, managers motivated by informational considerations aim to enhance investors' awareness of the economic effects of special items through financial statement presentation, thereby strengthening their value relevance (Enache & Srivastava, 2018; Riedl & Srinivasan, 2010). The new financial statement format in Chinese, which occurred in 2017, requires firms to disclose more information about assets and earnings. Thus, based on signaling theory, managers tend to improve information transparency to help investors understand its economic significance and meet the needs of accounting setters. Stock price crash risk reflects the overall transparency of the information environment and serves as an indicator of the extent to which managers withhold unfavorable information. Accordingly, our hypothesis is as follows.

H1a. *If signaling theory holds, firms with larger long-term operating and held-for-sale assets tend to increase information quality after the 2017 financial statement format change.*

On the other hand, according to agency theory, managers may opportunistically misclassify the special items to manipulate accounting earnings, thus diminishing their value relevance (Bartov & Mohanram, 2014; Y. J. Lee et al., 2006; Luo et al., 2018; Mohanram et al., 2025). While both Chinese accounting standards and US GAAP provide similar guidance on held-for-sale assets, only the Chinese standards require separate presentation, whereas US GAAP does not. Therefore, China presents an opportunity to explore the effects of misclassification between held-for-sale and other assets. Furthermore, in less developed stock markets, Chinese managers may display more opportunistic behavior, such as manipulating earnings, because the potential benefits greatly exceed the costs. To align managerial behavior with shareholder goals of value maximization, boards routinely establish compensation targets linked to financial and market indicators, including return on assets and earnings per share (Bennett et al., 2017). If managers fail to meet their compensation targets, they will lose their bonus payment. In situations characterized by declining financial performance, the firm may face delisting, as financial performance constitutes the paramount criterion for delisting during our research period (Zhou et al., 2018). This would result in managers losing their career positions. Consequently, managers have a strong incentive to manipulate earnings upward and thus avoid missing performance goals. On the cost side, the risk of managers manipulating earnings is relatively low. Given China's relatively less mature institutional framework, it is difficult to effectively supervise managers' opportunistic behavior, and their violations are usually subject to only relatively light penalties (K.-C. Chen et al., 2016; Ke & Zhang, 2021). More importantly, China's capital market is primarily driven by individual investor activity, who have limited information-gathering and processing capabilities, making it hard to identify managers' opportunistic behavior (Huang et al., 2025; Titman et al., 2022). Therefore, referring to agency theory, the new financial statement format probably stimulates firms to report higher operating and core profits through classification shifting, ultimately leading to an increased informational gap between firms and outside investors. Accordingly, managers with opportunistic motivations might withhold bad news through classification shifting, thus causing greater information opacity and heightening the potential for crash risk (Hutton et al., 2009; Jin & Myers, 2006). According to the above analysis, our opposite hypothesis is as follows.

H1b. *If the agency theory holds, firms with larger long-term operating and held-for-sale assets tend to hoard more bad news after the 2017 financial statement format change.*

3. Variable Construction and Research Method

3.1. Research Sample

We employ the new financial statement format in China, implemented in December 2017, as an exogenous shock to analyze its impacts on the crash risk. The 2017 financial statements adopting the new financial reporting format are disclosed in 2018. Therefore, we take 2018 as the year of the exogenous event. Our research period is between 2014 and 2022, encompassing the four years before and after the change in the financial reporting format. The years 2014 to 2017 are defined as the pre-event window, while 2019 to 2022 represent the post-treatment window. Our sample consists of all non-financial A-share firms listed on the SHSE and the SZSE. We exclude firms that received special treatment and those listed after 2017. Finally, we obtain 2623 firms and 16,129 firm-year observations. Financial and non-financial information, along with stock returns, is sourced from the China Stock Market and Accounting Research (CSMAR) and Wind databases. To reduce the impact of extreme values, all continuous variables are winsorized at the 0.5% and 99.5% levels. Table 1 shows the sample selection procedure along with the corresponding number of firms and observations retained at each stage.

Table 1. This table shows the sample selection procedure along with the corresponding number of firms and observations retained at each stage.

	Number of Firms	Observations
Total observations	3311	22,045
Less		
Firms in the financial industry	123	829
Firms with special treatment	3	580
Firms listed after 2017	443	1519
Observations with fewer than 30 weeks of weekly returns within a given year	1	441
Observations with insufficient data to compute control variables	118	2547
Final observations	2623	16,129

3.2. Research Method

We utilize the DID approach to investigate how the exogenous event regarding the new financial statement format in China affects crash risk. The main regression is illustrated below.

$$Crash_{i,t} = \alpha + \beta_1 Treat_i + \beta_2 After_t + \beta_3 Treat_i \times After_t + \gamma Controls_{i,t-1} + \varepsilon_{i,t} \quad (1)$$

where $Crash_{i,t}$ indicates stock price crash risk, measured by two variables. The first variable is $NCSKEW$, measured as the negative conditional skewness of idiosyncratic weekly stock returns. The second is $DUVOL$, calculated as the asymmetric volatility of negative and positive returns. An increase in $NCSKEW_{i,t}$ indicates stronger leftward skewness in returns, which corresponds to higher left-tail risk and an increased probability of abrupt drops in stock prices. $DUVOL_{i,t}$ measures the market's sensitivity to bad news by comparing the volatility differences between declining and rising weeks for stock i over a period t . Thus, an elevated $DUVOL_{i,t}$ suggests a more intense reaction of stock prices to negative information.

$Treat_i$ assumes a value of one for firm i when it is classified in the treatment group. According to the hypothesis developed in Section 2.3, firms with larger amounts of long-term operating and held-for-sale assets have more flexibility to manipulate profits, thereby hiding unfavorable news. Therefore, we assign a firm to the treatment group depending on whether its 2017 ratio of long-term operating and held-for-sale assets to total assets surpasses the sample median. $After_t$ equals one for the period following the financial statement format change (2018–2022) and zero for the pre-change period (2014–2017).

$Controls$ proxies a series of control variables. First, we include several stock market-related factors. Large price volatility prompts investors to update their perceptions of market risk and to require more substantial risk-adjusted returns, leading to lower equilibrium prices. This process magnifies the influence of unfavorable disclosures while simultaneously muting the market's response to favorable information, thereby producing negative skewness (J. Chen et al., 2001). Thus, stock return volatility is incorporated as a control variable, proxied by the annual standard deviation of each firm's weekly returns ($Sigma$). In the theoretical framework of J. Chen et al. (2001), stocks that have experienced substantial past gains tend to undergo steep declines, since prolonged high returns often signal an inflated bubble. Meanwhile, under short-selling restrictions, divergent investor opinions prevent stock prices from fully reflecting negative information, allowing adverse news to accumulate. Thus, we control for past stock returns (Ret), which are calculated as the annual average weekly returns, and opinion differences among investors ($Odif$), proxied by the change in average monthly turnover relative to the preceding year.

Second, we consider some financial variables to control for the effects of financial performance. Hutton et al. (2009) find that financial leverage and operating performance negatively relate to crash risk. This occurs because those firms are better able to utilize debt financing. Well-performing firms also tend to enhance information disclosure and maintain a consistent flow of information, thus mitigating information asymmetry and lowering crash risk. The leverage (*Lev*) is calculated as the ratio of total liabilities divided by total assets, while operating performance (*ROA*) is calculated as net profit divided by total assets. Large firms tend to have higher R^2 , indicating limited disclosure of firm-specific information. Once accumulated negative firm-specific information is eventually disclosed to investors, stock price crashes may happen (Hutton et al., 2009). Additionally, firms with low book-to-market value may experience more severe crashes, as prolonged bubbles unwind (J. Chen et al., 2001). The firm size (*Size*) is measured as the natural logarithm of total assets. The market-to-book value (*MB*) is calculated as the ratio of market value to book value of equity.

Third, we also control for several non-financial factors. Mature firms typically demonstrate better governance quality, which may lead to a decreased accumulation of adverse information and lower crash risk (Andreou et al., 2017). Firm age (*Age*) is the natural logarithm of the number of years since its founding. According to Hutton et al. (2009), firms with lower information quality may exhibit larger R^2 , reflecting an increased likelihood of price crashes. To measure information opacity (*Opaque*), we calculate the sum of the absolute value of discretionary accruals from the previous three years, using estimates derived from the modified Jones model (Dechow et al., 1995). Referring to Hu et al. (2020), firms subject to higher levels of oversight face reduced crash risk. We include three variables to proxy for internal supervision. The first is the proportion of independent directors (*Indep*). The second is the natural logarithm of the number of directors (*Director*). The third is the ownership held by the largest shareholder (*Ownship1*). N. Xu et al. (2014) find that managers in SOEs might conceal negative information for extended periods to gain excessive benefits, thereby raising the future crash risk. Accordingly, we construct an indicator (*SOE*), assigning the value of one for SOEs. To address potential endogeneity, we lag all control variables by one year. Additionally, considering the substantial variation over time and across industries, the fixed-effects estimated method can effectively avoid the deviation of the results that are driven by a particular industry or a given year. Thus, industry-fixed and year-fixed effects are included in the regression model (Dyck et al., 2022).

Table 2 shows summary statistics for the key variables. *NCSKEW* averages -0.339 with a standard deviation of 0.714 , and its values vary between -3.034 and 2.506 , indicating significant differences in crash risk across firms. Similarly, *DUVOL* has an average of -0.222 and a standard deviation of 0.473 , varying from -1.653 to 1.431 . These statistics for *NCSKEW* and *DUVOL* display substantial cross-sectional variation, and these patterns generally align with the results documented by Y. Xu et al. (2021).

Table 3 gives the outcomes of univariate tests comparing the mean values of *NCSKEW* and *DUVOL* between treatment and control groups around the financial statement format change. In panel A, the mean of *NCSKEW* for the treatment and control groups during the pre-event window is -0.356 and -0.328 , respectively. The difference between the two groups shows no statistical significance prior to the change in financial statement format, indicating the absence of pre-trends in *NCSKEW*. During the post-treatment window, the difference between the two groups is 0.039 and markedly exceeds the difference observed during the pre-event window. Accordingly, the difference in difference in *NCSKEW* between the treatment and control groups is 0.067 and significant at the 1% level, implying a rise in crash risk for treatment groups following the exogenous event of the financial statement format change. Panel B presents the outcomes of univariate tests for *DUVOL*. It

indicates that the difference in *DUVOL* between the two groups is significantly negative at the 5% level during the pre-event window, whereas it becomes positive in the following period. The notable difference in the mean of *DUVOL* between the two suggests that the exogenous shock of the new financial statement format causes a remarkable rise in crash risk after considering any substantial observable differences between the two groups before the event. Overall, the results of univariate tests indicate that the significant observable differences between the treatment and control groups are controlled for before the event, ensuring that the variation in crash risk is solely attributable to the exogenous factors.

Table 2. This table presents the summary statistics of the key variables.

Variable	N	Min	P25	P50	P75	Max	Mean	Std
<i>NCSKEW</i>	16,129	−3.034	−0.723	−0.291	0.089	2.506	−0.339	0.714
<i>DUVOL</i>	16,129	−1.653	−0.538	−0.218	0.092	1.431	−0.222	0.473
<i>Treat*After</i>	16,129	0	0	0	1	1	0.326	0.469
<i>Treat</i>	16,129	0	0	1	1	1	0.501	0.500
<i>After</i>	16,129	0	0	1	1	1	0.659	0.474
<i>Sigma</i>	16,129	0.013	0.034	0.044	0.057	0.126	0.047	0.019
<i>Ret</i>	16,129	−0.791	−0.163	−0.095	−0.056	−0.008	−0.129	0.110
<i>Odifff</i>	16,129	−1.304	−0.142	0.003	0.152	1.575	0.010	0.329
<i>Lev</i>	16,129	0.046	0.298	0.446	0.594	0.944	0.449	0.197
<i>ROA</i>	16,129	−0.800	0.010	0.031	0.059	0.286	0.028	0.073
<i>Size</i>	16,129	19.885	21.779	22.527	23.457	27.386	22.704	1.311
<i>MB</i>	16,129	1.000	2.333	3.189	4.475	36.963	3.954	3.059
<i>Age</i>	16,129	1.792	2.833	3.045	3.178	3.664	2.992	0.280
<i>Opaque</i>	16,129	0.015	0.081	0.128	0.202	0.701	0.156	0.107
<i>Indep</i>	16,129	0.250	0.333	0.364	0.429	0.600	0.377	0.056
<i>Director</i>	16,129	1.609	1.946	2.197	2.197	2.708	2.131	0.199
<i>Ownship1</i>	16,129	0.058	0.213	0.303	0.425	0.794	0.327	0.148
<i>SOE</i>	16,129	0	0	0	1	1	0.436	0.496

Table 3. Univariate test for *NCSKEW* and *DUVOL*.

Panel A: <i>T</i> -test for <i>NCSKEW</i>			
<i>After</i>	Control group	Treatment group	Treatment—Control
0	−0.328	−0.356	−0.028 (−1.545)
1	−0.357	−0.318	0.039 *** (2.739)
1−0	−0.029 * (−1.786)	0.038 ** (2.347)	0.067 *** (2.917)
Panel B: <i>T</i> -test for <i>DUVOL</i>			
<i>After</i>	Control group	Treatment group	Treatment—Control
0	−0.219	−0.244	−0.025 ** (−1.965)
1	−0.227	−0.207	0.020 ** (2.182)
1−0	−0.008 (−0.670)	0.037 *** (3.400)	0.045 *** (2.864)

The *t*-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

4. Empirical Results

4.1. Results for the Baseline Model

Columns (1) and (5) of Table 4 give the results without including control variables and fixed effects. It indicates that the coefficients of *Treat*After* are 0.067 and 0.045, respectively. Columns (2) and (6) report the results after including all control variables. It indicates that the coefficients for *Treat*After* are 0.046 and 0.034, respectively. Columns (3) and (7) show consistent findings after accounting for all control variables and industry-fixed effects. Additionally, Columns (4) and (8) include industry- and year-fixed effects, and all the coefficients of *Treat*After* are significantly positive. Regarding economic significance, the crash risk in treatment firms increases by 0.047 following the change in financial statement format in Column (4), corresponding to 6.58% of a one-standard-deviation rise in NCSKEW (0.714 from Table 2). Therefore, the results support the H1b in both statistical and economic terms.

Table 4. This table presents the influence of the new financial statement format introduced in 2017 on the stock price crash risk.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	NCSKEW	NCSKEW	NCSKEW	NCSKEW	DUVOL	DUVOL	DUVOL	DUVOL
<i>Treat*After</i>	0.067 *** (2.854)	0.046 * (1.957)	0.047 ** (1.987)	0.047 ** (1.977)	0.045 *** (2.716)	0.034 ** (2.009)	0.033 ** (1.983)	0.033 ** (1.979)
<i>Treat</i>	−0.028 (−1.423)	0.001 (0.038)	−0.023 (−1.064)	−0.023 (−1.061)	−0.025 * (−1.759)	−0.008 (−0.564)	−0.017 (−1.104)	−0.018 (−1.131)
<i>After</i>	−0.029 * (−1.776)	−0.014 (−0.825)	−0.009 (−0.521)		−0.025 * (−1.759)	−0.004 (−0.296)	−0.000 (−0.003)	
<i>Sigma_{t−1}</i>		6.326 *** (5.049)	6.885 *** (5.424)	7.802 *** (6.060)		3.278 *** (3.947)	3.759 *** (4.450)	3.939 *** (4.592)
<i>Ret_{t−1}</i>		1.030 *** (4.852)	1.102 *** (5.114)	1.236 *** (5.721)		0.564 *** (4.010)	0.626 *** (4.379)	0.696 *** (4.867)
<i>Odifft_{t−1}</i>		−0.120 *** (−5.748)	−0.128 *** (−6.085)	0.001 (0.049)		−0.092 *** (−6.669)	−0.097 *** (−7.003)	0.010 (0.626)
<i>Lev_{t−1}</i>		−0.132 *** (−3.108)	−0.148 *** (−3.279)	−0.150 *** (−3.316)		−0.050 * (−1.758)	−0.060 ** (−1.983)	−0.052 * (−1.704)
<i>ROA_{t−1}</i>		0.363 *** (3.785)	0.350 *** (3.577)	0.273 *** (2.783)		0.213 *** (3.469)	0.208 *** (3.318)	0.168 *** (2.685)
<i>Size_{t−1}</i>		0.014 ** (2.364)	0.019 *** (3.120)	0.019 *** (2.937)		−0.005 (−1.230)	−0.001 (−0.320)	−0.004 (−1.005)
<i>MB_{t−1}</i>		0.017 *** (7.006)	0.019 *** (7.621)	0.017 *** (7.014)		0.008 *** (5.051)	0.010 *** (5.654)	0.009 *** (5.054)
<i>Age_{t−1}</i>		0.036 (1.638)	0.024 (1.086)	0.019 (0.830)		0.049 *** (3.347)	0.040 *** (2.741)	0.026 * (1.720)
<i>Opaquet_{t−1}</i>		0.020 (0.344)	0.040 (0.677)	0.030 (0.503)		0.019 (0.526)	0.026 (0.697)	0.024 (0.648)
<i>Indep_{t−1}</i>		−0.118 (−0.943)	−0.098 (−0.769)	−0.067 (−0.526)		−0.074 (−0.912)	−0.056 (−0.682)	−0.034 (−0.413)
<i>Director_{t−1}</i>		−0.053 (−1.356)	−0.061 (−1.571)	−0.056 (−1.418)		−0.056 ** (−2.202)	−0.061 ** (−2.365)	−0.053 ** (−2.058)
<i>Ownership_{1t−1}</i>		−0.091 ** (−2.035)	−0.120 *** (−2.614)	−0.100 ** (−2.167)		−0.065 ** (−2.243)	−0.081 *** (−2.683)	−0.065 ** (−2.138)
<i>SOE_{t−1}</i>		0.019 (1.399)	0.018 (1.225)	0.016 (1.110)		0.026 *** (2.834)	0.023 ** (2.391)	0.024 ** (2.484)
Year FE	NO	NO	NO	YES	NO	NO	NO	YES
Industry FE	NO	NO	YES	YES	NO	NO	YES	YES
F statistic	3.284	10.401	11.243	8.518	3.842	11.071	11.297	6.230
Observations	16,129	16,129	16,129	16,129	16,129	16,129	16,129	16,129
Adj-R ²	0.001	0.009	0.013	0.034	0.001	0.010	0.013	0.040

The robust t-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

Regarding control variables, *Sigma*, *Ret*, and *MB* are positively related to crash risk, while *Lev* and *Ownership_{1t−1}* have a negative effect on crash risk. Highly volatile stocks often have higher information asymmetry, allowing managers to conceal adverse information more easily. For stocks with high past returns, excessive optimism and speculative behavior among investors may lead to prices deviating from their fundamental values. Therefore, more volatile stocks and those with high past returns tend to experience crash risk (J. Chen et al., 2001; DeFond et al., 2015; Hutton et al., 2009). The negative coefficient of *Lev* is in line with previous findings (Hutton et al., 2009). A high market-to-book ratio in the previous

period typically identifies a firm as a growth stock, which is associated with larger future crash risk (DeFond et al., 2015).

4.2. Results for the Dynamic Treatment Effect Model

The reliability of the DID method depends on the satisfaction of the parallel trend assumption. This assumption does not necessitate that crash risk remains constant between treatment and control groups throughout the financial statement format change, as the differences are accounted for in the DID estimation. Conversely, a similar trend in crash risk in the two groups before the financial statement format reform is required. According to the method established by Jacobson et al. (1993), the dynamic treatment effect model is used to test the persistence effect of the change in the financial statement format. Panels A and B of Figure 2, respectively, report the results of NCSKEW and DUVOL, with 2017 serving as the reference year. Prior to the implementation of the new financial statement format, there is no statistically meaningful distinction in crash risk between firms in the treatment and control groups, providing additional evidence that the parallel trend assumption holds. Following the exogenous event, the treatment firms' stock price crash risk increases remarkably in 2018, whereas it becomes insignificant in later periods. Since investors assign a negative valuation to lower operating profits and non-recurring gains and losses, treatment firms are prone to report higher operating and core profits through classification shifting during the year of the format change. As a result, this could diminish the information quality for treatment firms and also bring out a higher crash risk. Investors would gradually anticipate potential changes in accounting reporting and modify their valuations as firms carry out classification shifting. Consequently, the new financial statement format appears to affect crash risk primarily in the short run.

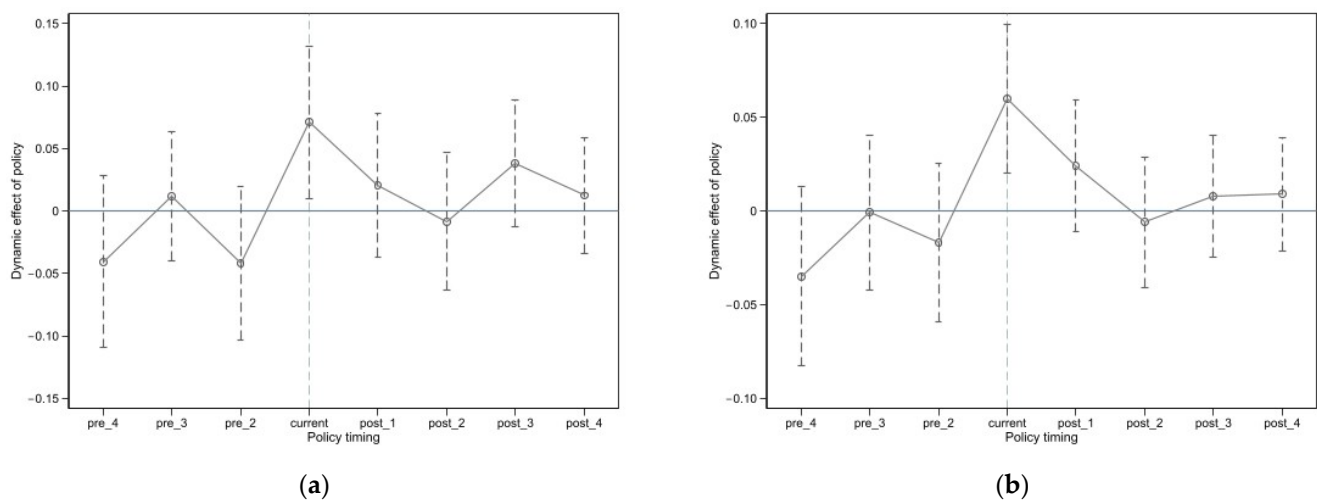


Figure 2. Results for the dynamic treatment effect model. (a) Results of the dynamic treatment effect model before and after the financial statement format change for NCSKEW. (b) Results of the dynamic treatment effect model before and after of the financial statement format change for DUVOL.

4.3. Robustness Checks

The analysis above indicates that treatment firms would suffer a larger possibility of price crashes following the financial statement format change. However, we are concerned that several factors may interfere with our results. Therefore, we carry out a series of robustness checks. First, there could be some unobservable omitted variables that lead to biased estimators within our DID model. Therefore, to mitigate the impact of these unobserved factors, we perform a placebo test. Panels A and B of Table 5 designate 2016 and 2020 as fictitious years for the implementation of the new financial statement format.

The insignificance of all *Treat*After* coefficients suggests that our results are driven by the real format change.

Table 5. The table shows the results for designating the years 2016 and 2020 as fictitious implementation years.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	NCSKEW	NCSKEW	NCSKEW	DUVOL	DUVOL	DUVOL
Panel A: Designating the year of the exogenous event as 2016						
<i>Treat*After</i>	0.025 (0.879)	0.026 (0.928)	0.024 (0.849)	0.026 (1.263)	0.026 (1.257)	0.025 (1.225)
<i>Treat</i>	0.010 (0.370)	−0.014 (−0.499)	−0.013 (−0.451)	−0.008 (−0.422)	−0.017 (−0.838)	−0.017 (−0.837)
<i>After</i>	−0.058 *** (−2.727)	−0.057 *** (−2.657)		−0.013 (−0.858)	−0.013 (−0.817)	
Controls	YES	YES	YES	YES	YES	YES
Year FE	NO	NO	YES	NO	NO	YES
Industry FE	NO	YES	YES	NO	YES	YES
F statistic	10.626	11.282	8.253	10.744	10.858	6.063
Observations	16,129	16,129	16,129	16,129	16,129	16,129
Adj-R ²	0.009	0.013	0.034	0.010	0.013	0.040
Panel B: Designating the year of the exogenous event as 2020						
<i>Treat*After</i>	0.010 (0.452)	0.013 (0.548)	0.010 (0.415)	−0.001 (−0.075)	−0.001 (−0.057)	−0.003 (−0.200)
<i>Treat</i>	0.027 (1.638)	0.003 (0.149)	0.004 (0.224)	0.014 (1.321)	0.005 (0.440)	0.006 (0.494)
<i>After</i>	0.009 (0.490)	0.010 (0.558)		0.022 * (1.899)	0.023 ** (2.007)	
Controls	YES	YES	YES	YES	YES	YES
Year FE	NO	NO	YES	NO	NO	YES
Industry FE	NO	YES	YES	NO	YES	YES
F statistic	10.309	11.078	8.166	11.189	11.351	5.946
Observations	16,129	16,129	16,129	16,129	16,129	16,129
Adj-R ²	0.009	0.012	0.034	0.010	0.013	0.040

The robust t-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

Second, to minimize possible bias due to functional form misspecification, we utilize the entropy balancing method (Hainmueller & Xu, 2013; Shipman et al., 2017). We match firms whose ratio of long-term operating and held-for-sale assets is above the sample median (treatment group) to firms with a ratio of those assets below the median (control group) using *Sigma*, *Ret*, *Odifff*, *Lev*, *ROA*, *Size*, *MB*, *Opaque*, *Age*, *Indep*, *Director*, *Ownership1*, and *SOE* as covariates. Table 6 presents results with the first-order moments of the covariates and shows that all coefficients of *Treat*After* are significantly positive, which proves our main findings.

Third, we re-estimate the baseline regressions with firm-fixed effects and province-year interaction fixed effects. A total of 46 observations are automatically excluded during the regression process after adding fixed effects. Table 7 indicates that the estimated coefficients remain consistent, reinforcing the robustness of our conclusions.

Table 6. This table presents the results for the entropy balancing method.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	<i>NCSKEW</i>	<i>NCSKEW</i>	<i>NCSKEW</i>	<i>DUVOL</i>	<i>DUVOL</i>	<i>DUVOL</i>
<i>Treat*After</i>	0.069 *** (2.778)	0.070 *** (2.813)	0.068 *** (2.732)	0.051 *** (2.923)	0.052 *** (2.937)	0.051 *** (2.871)
<i>Treat</i>	−0.014 (−0.701)	−0.037 (−1.616)	−0.035 (−1.561)	−0.022 (−1.465)	−0.032 * (−1.956)	−0.031 * (−1.920)
<i>After</i>	−0.035 * (−1.824)	−0.031 (−1.585)		−0.021 (−1.521)	−0.018 (−1.318)	
<i>Controls</i>	YES	YES	YES	YES	YES	YES
Year FE	NO	NO	YES	NO	NO	YES
Industry FE	NO	YES	YES	NO	YES	YES
<i>F</i> statistic	12.012	13.207	10.104	12.166	12.643	8.005
Observations	16,129	16,129	16,129	16,129	16,129	16,129
Adj-R ²	0.011	0.016	0.038	0.012	0.016	0.044

The robust t-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

Table 7. This table presents the results for including additional firm-fixed effects as well as province–year interaction fixed effects.

Variables	(1)	(2)	(3)	(4)	(5)	(6)
	<i>NCSKEW</i>	<i>NCSKEW</i>	<i>NCSKEW</i>	<i>DUVOL</i>	<i>DUVOL</i>	<i>DUVOL</i>
<i>Treat*After</i>	0.063 ** (2.470)	0.056 ** (2.284)	0.070 *** (2.633)	0.038 ** (2.102)	0.038 ** (2.208)	0.043 ** (2.288)
<i>Treat</i>		−0.031 (−1.393)			−0.023 (−1.427)	
<i>Controls</i>	YES	YES	YES	YES	YES	YES
Year FE	YES	YES	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES	YES	YES
Firm FE	YES	NO	YES	YES	NO	YES
Province FE*Year FE	NO	YES	YES	NO	YES	YES
<i>F</i> statistic	8.980	8.232	8.401	6.908	5.929	6.679
Observations	16,083	16,083	16,083	16,083	16,083	16,083
Adj-R ²	0.067	0.036	0.067	0.071	0.045	0.075

The robust t-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

4.4. Tests for the Influence Mechanism

We consider that the new Chinese financial statement format introduced at the end of 2017 offers greater flexibility for treatment firms in carrying out earnings management and concealing negative information, thereby further increasing their crash risk. We explore whether treatment firms carry out earnings management through classification shifting.

First, the new financial statement format includes an item regarding held-for-sale assets on the balance sheet, which are not subject to depreciation and amortization. Therefore, treatment firms exhibit stronger incentives to classify those long-term operating assets as held-for-sale assets in order to increase operating profit. If the depreciation and amortization rates in treatment firms decrease significantly after implementing the new financial statement format, we can confirm our hypothesis. We use the percentage of total annual depreciation and amortization for each firm relative to its total assets to measure the depreciation and amortization rates (*DAR*). Columns (1) to (3) of Table 8 indicate that *Treat*After* is negatively related to *DAR*, supporting the opinion that treatment firms misclassify held-

for-sale assets to manipulate operating profits and conceal negative news, and further cause a significant increase in crash risk.

Table 8. This table presents the results of the tests on the influence mechanism.

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	DAR	DAR	DAR	Pnr	Pnr	Pnr	UEΔCE	UEΔCE	UEΔCE
<i>Treat*After</i>	−0.002 *** (−3.573)	−0.001 * (−1.864)	−0.001 * (−1.864)	0.018 * (1.869)	0.019 * (1.955)	0.018 * (1.840)	0.005 ** (2.260)	0.004 * (1.736)	0.004 * (1.717)
<i>Treat</i>	0.018 *** (32.382)	0.013 *** (23.990)	0.013 *** (24.015)	−0.020 ** (−2.162)	−0.012 (−1.218)	−0.011 (−1.108)	−0.003 (−1.354)	0.002 (1.047)	0.002 (1.104)
<i>After</i>	0.001 * (1.793)	−0.000 (−0.191)		−0.031 *** (−4.083)	−0.036 *** (−4.592)		−0.007 *** (−3.171)	−0.005 ** (−2.408)	
<i>Controls</i>	YES	YES	YES	YES	YES	YES	YES	YES	YES
<i>Year FE</i>	NO	NO	YES	NO	NO	YES	NO	NO	YES
<i>Industry FE</i>	NO	YES	YES	NO	YES	YES	NO	YES	YES
<i>F statistic</i>	114.232	55.762	58.296	23.413	24.266	23.741	5.894	9.024	9.330
<i>Observations</i>	16,129	16,129	16,129	16,129	16,129	16,129	16,129	16,129	16,129
<i>Adj-R²</i>	0.336	0.437	0.438	0.036	0.045	0.047	0.005	0.011	0.011

The robust t-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

Second, the new financial statement format includes two additional items—gains on asset disposal and government subsidies—placed above the operating profit line, which are important components of non-recurring profits and losses. Previous studies have found that managers opportunistically classify non-recurring gains and losses to smooth profits and meet analysts' and investors' expectations (Barnea et al., 1975; Burgstahler & Dichev, 1997; Y. Fan & Liu, 2017; Y. Fan et al., 2019; Liu & Wu, 2021; McVay, 2006). Specifically, changes in the presentation of special items on the income statement heighten managers' incentives to use classification shifting as a tool to manage market value (Y. J. Lee et al., 2006; Luo et al., 2018; Mohanram et al., 2025). We speculate that treatment firms may seek to boost operating profits by reporting higher non-recurring gains from asset disposals and government subsidies, or by reclassifying core expenses as non-recurring losses to improve their core profits. We employ two variables to measure the level of classifying non-recurring gains and losses. The first is the ratio of non-recurring gains and losses relative to total net profit (*Pnr*), as calculated by Equation (2) below.

$$Pnr_{i,t} = \frac{NRGL_{i,t}}{|NRGL_{i,t}| + |NP_{i,t}|} \quad (2)$$

where *NRGL* represents non-recurring gains and losses, and *NP* is net profit after deducting these non-recurring gains and losses. If *Pnr* is positive, it indicates that the firm adjusts its net profit upward through non-recurring gains and losses; otherwise, it adjusts downward. Considering the differences across industries, we de-mean the *Pnr* using its industry average for each year. The second variable is the unanticipated changes in core earnings, following the method of McVay (2006).

Columns (4) to (9) of Table 8 demonstrate that all the coefficients of *Treat*After* are significantly positive, implying that managers in treatment firms reclassify non-recurring gains and losses after the adoption of the new financial statement format, ultimately increasing the probability of crash risk.

4.5. Cross-Sectional Analysis

We perform three cross-sectional tests on how the adoption of the new financial statement format influences crash risk. First, we analyze whether the level of information transparency moderates this relationship. Generally, reduced transparency in corporate disclosures leads to heightened information asymmetry, creating conditions under which managers can more easily obscure negative news (Hutton et al., 2009). Referring to our

previous analysis, the new financial statement format introduced in 2017 may stimulate managers to conduct classification shifting to hide negative information. Therefore, we expect the influence of the new financial statement on crash risk to be more significant among firms characterized by lower levels of information transparency. To capture corporate transparency, we employ two proxy variables. On one hand, the SHSE and SZSE categorize the listed firms' information disclosure quality into four categories (A to D), with A representing superior disclosure quality and D the poorest. Firms assigned an A or B rating are considered to have high information transparency, while those with lower ratings are considered to have low information transparency. Panel A of Table 9 indicates that the positive coefficients of *Treat*After* are significant only among firms with lower disclosure ratings. This finding suggests that lower information transparency gives managers in treatment groups greater opportunities to conceal negative news, which, furthermore, can increase crash risk. On the other hand, China's SOEs face significant principal-agent problems due to unclear property rights ownership and a complex hierarchy of property rights (Dong et al., 2025). Moreover, the low cost of penalties for information disclosure violations worsens the situation, as managers often exploit false records and misleading statements for personal gain. This behavior contributes to the ongoing poor quality of information disclosure in SOEs (Merkel-Davies & Brennan, 2007). As a result, information transparency in these firms is relatively low (Bushman et al., 2004). Accordingly, we anticipate that SOEs are more susceptible to crash risk after the adoption of the financial statement format. Panel B of Table 9 shows that the coefficients of *Treat*After* are significantly positive for SOEs, while they remain insignificant for non-SOEs, thus confirming our hypothesis.

Table 9. This table reports the cross-sectional analysis for information transparency.

Variables	(1)	(2)	(3)	(4)
	<i>NCSKEW</i>	<i>NCSKEW</i>	<i>DUVOL</i>	<i>DUVOL</i>
Panel A: Information transparency				
	High rating	Low rating	High rating	Low rating
<i>Treat*After</i>	0.030 (1.003)	0.109 ** (2.445)	0.026 (1.295)	0.083 *** (2.733)
<i>Treat</i>	−0.023 (−0.819)	−0.002 (−0.070)	−0.021 (−1.119)	−0.003 (−0.123)
<i>Controls</i>	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
<i>F</i> statistic	8.227	3.156	5.113	5.116
Observations	11,412	4714	11,412	4714
Adj-R ²	0.039	0.047	0.048	0.066
Panel B: Property rights				
	SOEs	Non-SOEs	SOEs	Non-SOEs
<i>Treat*After</i>	0.092 ** (2.509)	0.023 (0.712)	0.059 ** (2.251)	0.022 (0.995)
<i>Treat</i>	−0.053 (−1.538)	−0.005 (−0.171)	−0.039 (−1.583)	−0.007 (−0.341)
<i>Controls</i>	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
<i>F</i> statistic	3.514	7.271	3.806	4.132
Observations	7031	9098	7031	9098
Adj-R ²	0.036	0.038	0.051	0.038

The robust t-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

Second, we examine how differences in internal corporate governance influence the results. Strong governance structures help reduce agency problems and limit managers' opportunistic behavior that undermines shareholder interests (Karamanou & Vafeas, 2005; Masulis et al., 2007). It has been shown that a strong internal corporate governance environment discourages managers' behavior of manipulating earnings and hiding negative news, thus lowering the crash risk (Z. Fan et al., 2020; Hu et al., 2020). Thus, we anticipate that treatment firms will face a greater probability of stock price crashes following adopting the new financial statement format, particularly when their internal corporate governance is weaker. Previous literature indicates that firms with fewer independent directors and higher ownership by majority shareholders may have weaker internal corporate governance quality (Jiang & Kim, 2020; Porta et al., 1999; Tang et al., 2013). Therefore, we split the observations into two groups using the median values of board independence and the largest shareholder's ownership, respectively. Table 10 re-estimates the baseline regression and shows that the *Treat*After* coefficients are positive and significant only for firms with fewer independent directors and higher ownership concentration by the largest shareholder. It supports our hypothesis that when their internal governance quality is poorer, treatment firms are more prone to conduct classification shifting after the implementation of the new financial statement format, thereby heightening their stock crash risk.

Table 10. This table reports the cross-sectional analysis of internal governance.

Variables	(1)	(2)	(3)	(4)
	NCSKEW	NCSKEW	DUVOL	DUVOL
Panel A: Percentage of the independent directors				
	High	Low	High	Low
<i>Treat*After</i>	0.042 (1.200)	0.057 * (1.760)	0.020 (0.834)	0.047 ** (2.088)
<i>Treat</i>	−0.002 (−0.058)	−0.045 (−1.545)	0.001 (0.038)	−0.038 * (−1.799)
<i>Controls</i>	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
<i>F</i> statistic	5.239	4.415	4.562	2.920
Observations	7414	8715	7414	8715
Adj-R ²	0.034	0.034	0.041	0.041
Panel B: Ownership of the largest shareholder				
	High	Low	High	Low
<i>Treat*After</i>	0.061 * (1.893)	0.030 (0.834)	0.047 ** (2.023)	0.023 (0.933)
<i>Treat</i>	−0.041 (−1.380)	−0.006 (−0.182)	−0.030 (−1.403)	−0.012 (−0.509)
<i>Controls</i>	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
<i>F</i> statistic	6.126	3.529	5.221	2.261
Observations	7938	8186	7938	8186
Adj-R ²	0.041	0.030	0.048	0.035

The robust t-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

Third, we analyze the moderating effect of external supervision on the relation between the new financial statement format change and stock price crash risk. Strong external supervision deters managers from hiding unfavorable information, consequently decreas-

ing the crash risk (H. An & Zhang, 2013; Francis & Yu, 2009; N. Xu et al., 2014). The study of Francis and Yu (2009) indicates that Big Four auditors, who have stronger incentives to maintain independence and higher professional competence, play a positive monitoring role in firms' earnings management. Meanwhile, institutional investors could effectively participate in supervision and governance, helping to reduce the crash risk (H. An & Zhang, 2013; S. Chen et al., 2024). Therefore, increased external monitoring power can effectively limit the behavior of treatment firms in classification shifting and hiding bad news after adopting the new financial statement format, thereby preventing sharp declines in stock prices. We subsequently divide our observations into two subsamples by Big Four audit engagement and by whether professional institutional investor shareholding exceeds the median. Table 11 indicates that the coefficients of *Treat*After* on crash risk are significantly positive for firms not audited by the Big Four and firms with lower professional institutional ownership. No significant evidence is observed in other groups, thus confirming our conjecture.

Table 11. This table reports the cross-sectional analysis of external supervision.

Variables	(1)	(2)	(3)	(4)
	NCSKEW	NCSKEW	DUVOL	DUVOL
Panel A: Big Four auditors				
	Big Four	Non-Big Four	Big Four	Non-Big Four
<i>Treat*After</i>	0.072 (0.780)	0.043 * (1.726)	0.032 (0.501)	0.032 * (1.834)
<i>Treat</i>	−0.167 ** (−1.977)	−0.015 (−0.679)	−0.097 (−1.645)	−0.013 (−0.805)
<i>Controls</i>	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
<i>F</i> statistic	1.471	8.185	2.664	5.524
Observations	1176	14,952	1176	14,952
Adj-R ²	0.065	0.033	0.094	0.038
Panel B: Ownership of professional institutional investors				
	High	Low	High	Low
<i>Treat*After</i>	0.020 (0.669)	0.083 ** (2.215)	0.020 (0.927)	0.054 ** (2.134)
<i>Treat</i>	−0.018 (−0.707)	−0.026 (−0.751)	−0.013 (−0.673)	−0.020 (−0.860)
<i>Controls</i>	YES	YES	YES	YES
Year FE	YES	YES	YES	YES
Industry FE	YES	YES	YES	YES
<i>F</i> statistic	6.091	2.900	5.174	3.313
Observations	8569	7557	8569	7557
Adj-R ²	0.044	0.032	0.047	0.042

The robust t-statistics are presented in parentheses and *, **, and *** correspond to significance at the 10%, 5%, and 1% levels.

5. Conclusions

The new Chinese financial statement format introduced in 2017 provides managers with greater flexibility to reclassify held-for-sale assets and non-recurring gains and losses. This study explores whether and how the exogenous shock of the Chinese financial statement format change influences stock price crash risk by employing a DID method. The crash risk of treatment firms rises significantly in the year immediately after implementing the new financial statement format, whereas this effect diminishes to insignificance in

subsequent periods. After conducting a series of robustness checks, our results remain unchanged. Furthermore, treatment firms tend to manipulate earnings through reclassifying held-for-sale assets and non-recurring items to smooth earnings and hide negative information, which ultimately raises crash risk. Additionally, the impact is heightened for firms with lower information transparency, poorer internal governance, and less effective external oversight.

Our findings indicate that while the new financial statement format aims to improve information disclosure quality, it may paradoxically encourage firms to reduce transparency, thereby enhancing the crash risk. Thereby, our study carries important implications for investors, policymakers, and regulators. First, investors who rely on corporate disclosures for decision-making should carefully consider the potential opportunistic behavior of management triggered by current disclosure policies. By critically assessing the effects of these policies, investors can more accurately interpret accounting information, evaluate a firm's profitability, debt repayment ability, and operational efficiency, and ultimately make better-informed investment decisions to protect their interests. Second, the study provides direct empirical evidence regarding the economic consequences of policy implementation, reminding them that they should assess the potential negative consequences of information disclosure policies and develop countermeasures in advance to mitigate these risks. Third, regulatory authorities should monitor corporate behavior following policy changes, refine oversight mechanisms, and promptly address non-compliant practices. In addition, regulators should implement guidance and policies that enhance internal governance and strengthen external supervision, thereby curbing managerial earnings management and reducing crash risk.

One limitation of our study is that it relies mainly on annual data from listed firms, without incorporating quarterly or higher-frequency data. This may lead to underestimating the impact of financial statement format changes on short-term stock price fluctuations and crash risk. Future research could employ high-frequency financial or market data to investigate how format changes dynamically influence stock price crash risk across different time horizons, thereby providing a more detailed understanding.

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Notes

- ¹ Please see details on the website at <https://www.casc.org.cn/2018/0108/203648.shtml> (accessed on 7 December 2025). ASBE No. 42 is mainly about non-current assets held for sale, Disposal Groups and Discontinued Operations, and ASBE No. 16 is about Government Subsidy. ASBE No. 42 provides the accounting framework for non-current assets held for sale, along with disposal groups and discontinued operations. ASBE No. 16 is mainly about government subsidies.

- ² Please see details on the website at <https://stock.stockstar.com/notice/SN2021042300004084.shtml> (accessed on 7 December 2025).
- ³ Please see details on the website at <https://m.cls.cn/detail/520424> (accessed on 7 December 2025).

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