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**The Consequences of Increasing Private Enforcement Intensity in Weak  
Institutional Environment: Quasi-Natural Experiment Study**

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# Consequences of Implementing Private Enforcement Rules in a Weak Institutional Environment: A Quasi-Natural Experiment Based on the New Chinese Securities Law and Recent Judgments

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**Abstract:** We examine stock market reactions to the increase in litigation risks against misstatements made by Chinese listed companies. Since the newly revised Chinese Securities Law in December 2019, both the statutory provisions and following judicial rules made by the Supreme People’s Court (SPC) improved the *de jure* private enforcement intensity. In addition, lower courts awarded historical damages to the aggrieved investors. These events are used as the sources of exogenous shocks to private enforcement intensity. To control for potential self-selection bias, a sample of listed companies in the administrative sanction proceedings prior to the exogenous shocks, which should be trapped by the procedure and shall have the highest likelihood of being suited by the aggrieved investors, are used. The marginal costs for the sample of companies due to increased litigation risks are estimated to be approximately 12% of their market valuation when the *de facto* enforcement intensity is increased. Finally, the magnitude of the increased costs is estimated to be positively correlated with the local judiciary quality estimated by the percentage of cases disclosed, which suggests that the market expects that listed companies in regions with high-quality judiciary systems will be liable to pay higher damages.

**Keywords:** Chinese Securities Law; Causal inference; Straddle approach; Litigation risk; Misstatement

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# 1. Introduction

Since the seminal paper of Becker (1968) on the economic analysis of criminal behaviors, law enforcement has been placed at the center of law-and-finance scholarship. Extant literature has investigated enforcement actions against securities misconduct, which is regarded as an important external corporate governance institution containing agency costs (Shleifer and Vishny, 1997). Law enforcement can be further divided into private and public enforcement regimes, with the former initiated by private entities and the latter by public agencies (Polinsky and Shavell, 2000). Although scholars are divided in the relative importance of public and private enforcement (La Port et al., 2006; Jackson and Roe, 2009), a recent cross-jurisdiction study shows that the dominant model of securities law enforcement is a mixed model employing both strategies to approach the optimal enforcement intensity (Gelter, 2019). Most jurisdictions differ in the extent to which they employ a particular enforcement instrument.

Despite the importance of law enforcement in sustaining healthy securities market development, empirical evidence from emerging jurisdictions is comparatively limited. China is not an exception, although the size of its domestic securities market is ranked second across the world in terms of market capitalization, behind only the US (China Securities Regulatory Committee, 2021). The governance quality of China's securities market is far from satisfactory. The market is argued to be dominated by state-owned

or state-controlled enterprises, which are partially protected from external monitoring (Milhaupt and Zheng 2015; Rosen, et al., 2018). In addition, corporate governance institutions are not well established (Clarke, 2010), and a recent governmental policy to incorporate a template of articles elevating party leadership into the articles of association of listed SOEs further exacerbated concerns about the risks of governance failures (Lin and Milhaupt, 2021; Liu and Zhang, 2019). Finally, because of the inefficient enforcement regime and low “on the book” liabilities, insider tunneling and other securities fraudulent activities are inadequately deterred, and the interests of minority shareholders are hence insufficiently protected (Allen et al., 2005; Chen et al., 2005).

This paper examines a recent reform to improve the corporate governance of listed companies in China by enhancing the external discipline from private enforcement against securities misstatements, particularly those made during ongoing/continuous disclosures in secondary markets. Chinese Securities Law went through a landmark major revision in December 2019 (hereinafter, “new Securities Law”), which significantly enhanced investor protection by systematically reshaping the regime of securities litigation against various parties involved in misstatements. Among other notable revisions, Article 95 has established a multilayered litigation regime and introduced regular and special representative proceedings, in addition to the individual and joint proceeding originated in the Several Provisions of the Supreme People’s Court on Trying Cases of Civil Compensation Arising from Misstatements in Securities

Market issued by SPC in 2003 (hereinafter, “SPC’s 2003 Judicial Interpretation”).<sup>1</sup> These representative proceedings significantly reduced obstacles due to the collective action problem, which was used to prevent aggrieved investors from obtaining damages (Xu, 2016). Later, SPC issued in 2020 the Provisions of the Supreme People's Court on Several Issues Concerning Representative Actions Arising from Securities Disputes (hereinafter, “SPC’s 2020 Judicial Interpretation”),<sup>2</sup> providing detailed rules for securities representative proceedings, and issued in 2022 the Several Provisions of the Supreme People's Court on the Trial of Civil Cases for Damages for the Tort of Misrepresentation in the Securities Market (hereinafter, “SPC’s 2022 Judicial Interpretation”),<sup>3</sup> repealing the SPC’s 2003 Judicial Interpretation, while providing concrete rules of constituent elements, liable parties and limitation periods regarding the private enforcement against securities misstatements that has already been established in the new Securities Law over two years ago.

In addition to the aforementioned changes in the “on-the-book” laws concerning securities litigation, Chinese lower courts made several high-profile judgments concerning securities misstatements after the promulgation of these new rules, among

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<sup>1</sup> See Zuigao Renmin Fayuan Guanyu Shenli Zhengquan Shichang Yin Xujia Chenshu Yinfa De Minshi Peichang Anjian De Ruogan Guiding, available at <https://www.faxin.cn/lib/Zyfl/ZyflContent.aspx?gid=A190933> (Accessed January 17, 2023).

<sup>2</sup> See Zuigao Renmin Fayuan Guanyu Zhengquan Jiufen Daibiaoren Susong Ruogan Wenti De Guiding, available at <https://www.faxin.cn/lib/Zyfl/ZyflContent.aspx?gid=A292523> (Accessed January 17, 2023).

<sup>3</sup> See Zuigao Renmin Fayuan Guanyu Shenli Zhengquan Shichang Xujia Chenshu Qinquan Minshi Peichang Anjian De Ruogan Guiding, available at <https://www.faxin.cn/lib/Zyfl/ZyflContent.aspx?gid=A313266> (Accessed January 17, 2023).

which the most well-known two are “Wuyang Judgment”<sup>4</sup> and “Kangmei Judgment”<sup>5</sup>. The former is the first regular representative proceeding with indeterminate claimants concerning fraudulent issuance of company bonds in the exchange market, and the defendants are ordered to pay more than 1 billion RMB damages to the aggrieved investors, whereas the latter is the first special representative proceeding concerning misstatements in the secondary market, and the defendants are ordered to pay more than 2.4 billion RMB damages. Both amounts are historical records and much higher than the amount of damages ordered in any judgments concerning securities misstatements prior to the new Securities Law.

We examine the stock market reactions to the aforementioned events. A key challenge for testing the effects of civil liabilities of securities fraud on stock market outcomes is that they are often endogenously determined. This paper adopts two research designs to identify the causal effects of increased civil liabilities on stock prices. First, the shock-based approach proposed by Atanasov and Black (2016) is employed. SPC’s 2020 Judicial Interpretation and the two court decisions are used as exogenous sources of increased “on-the-book” and “in-action” civil liabilities, respectively. Second, the “straddle approach” proposed by Hubbard (2017) is employed to control for potential self-selection bias. The main sample is restricted to those companies trapped in the administrative sanction proceedings against misstatements but failed to obtain the final

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<sup>4</sup> *Wang Fang v Wuyang Construction Group Co Ltd.* [2020] Hangzhou Intermediate People’s Court, Z01MC No 1691.

<sup>5</sup> *Gu Huajun v Kangmei Pharmaceutical Co Ltd.* [2020] Guangzhou Intermediate People’s Court, Y01MC No 2171.

decisions prior to the events.

It is found that the stock price of sample companies most significantly reacts to the “Wuyang Judgment”, given that the stock market has already learned about the new Securities Law and SPC’s judiciary rules. The cumulative average daily AR over the [-2,7] event window of the sample is approximately -14.62% around the disclosure of “Wuyang Judgment”, which provides strong supporting evidence for the “Enforcement Matters Hypothesis”. In addition, the estimated abnormal return is negatively correlated with the Judicial Transparency Index,<sup>6</sup> which measures the provincial judiciary quality with the percentage of judiciary documents disclosed on the China Judgment Online. Hence, the securities market expects that the quality of the local judiciary system matters for private enforcement intensity and hence determines the magnitude of damages paid.

However, two other events fail to trigger significant stock price reactions. Following a similar spirit, we also run the event study with the event of “Kangmei Judgment”, but the sample companies do not show any significant abnormal return. This is likely ascribed to the fact that the market has already incorporated information about the increased intensity at the enforcement level after the “Wuyang Judgment”. In addition, we also estimate the effects of SPC’s 2020 Judicial Interpretation. Article 5 paragraph 1 item 3 specifies that preliminary evidence, which includes disciplinary sanctions

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<sup>6</sup> See CourtData, available at <http://court-ai.com/index?site=transparency>. (Accessed January 17, 2023)

issued by the CSRC and its regional offices (ROs) and self-regulatory sanctions issued by stock exchanges (hereinafter, “nonadministrative sanctions”), should be provided so that regular representative proceedings can be launched. This is the first time that the SPC confirmed the legal status of these sanctions as evidence for securities misstatements, which should increase the expected civil liabilities of sanctioned firms. We collect a sample of listed companies receiving such nonadministrative sanctions between the promulgation of the new Securities Law and SPC’s 2020 Judicial Interpretation, from 3 February 2020 and 31 July 2020. The estimated cumulative average daily AR of the sample stocks over the [-1,2] event window is approximately 1.87%.

This paper contributes to at least three lines of literature. First, a large body of literature has focused on the group litigation initiated by aggrieved investors against securities misconduct, in particular, American class action (Romano, 1991; Bhagat et al., 1987). Class action is regarded as a fundamental instrument to support an exceptional securities market in the US (Coffee, 2007) and discipline securities misconduct by inducing market sanctions (Gande and Lewis, 2009; Alexander, 1999; Karpoff et al., 2008a) and increasing executive turnover (Karpoff et al., 2008b). However, Cumming et al. (2015) point out that there is little information about such litigation outside the US, and this paper provides a detailed analysis of the recent litigation reform and its impacts in China. Second, we also contribute to the competition between the “Law Matters Hypothesis” and the “Enforcement Matters Hypothesis” (Bhattacharya and



Daouk, 2002; Jackson and Roe, 2009; La Porta et al., 2006; Spamann, 2010) and demonstrate that securities private enforcement outcomes matter even when the “law on the book” governing the enforcement procedures is improved in a weak institutional environment. Finally, this paper also engages with studies on the determinants of the costs of committing financial misconduct and shows that regional judiciary quality matters.

## **2. Institutional Background and Hypothesis Development**

### **2.1. New Securities Law and the Reform of the Private Enforcement Regime**

China had for a long time adopted a public-centric enforcement regime, leaving private litigations significantly crippled (Huang, 2021). However, its securities law enforcement regime has been going through overwhelming reform during the last decade, starting from the public enforcement regime. Since 2011, a pilot project has been launched to decentralize the authority to impose administrative sanctions on local ROs, and all ROs were granted such authority in 2013.<sup>7</sup> This reform follows the regionally decentralized authoritarian model described by Xu (2011), and ROs are delegated to conduct front-line investigations and sanction minor cases within their jurisdictions. They are encouraged to actively enforce securities law, resulting in a significant increase in enforcement outputs compared to those prior to the reform (Xu,

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<sup>7</sup> See “CSRC Fully Delegated the Authority to Impose Administrative Sanctions”, available at <https://finance.sina.com.cn/stock/y/20130930/010216887149.shtml>. Accessed January 17, 2023).

et al., 2017). Rather than being a “toothless tiger”, the administrative sanctions issued by the CSRC and its ROs have generated considerable costs, in the form of stock price depression, to sanctioned companies and individuals (Firth et al., 2011; Xu and Xu, 2020). Furthermore, the Shanghai Stock Exchange and Shenzhen Stock Exchange have also been identified as front-line regulators, and their self-regulatory sanctions have also generated meaningful disciplinary effects (Milhaupt and Liebman, 2008; Zeng, 2020; Cao et al., 2021).

In contrast, the systematic reform in the private enforcement regime was left behind, starting as late as the revision of the Securities Law in December 2019. While both academic commentators and policy makers are fully aware of the detrimental effects of securities misstatements on the integrity and efficiency of securities markets (Cumming et al., 2011), the liabilities rules of securities misstatements specified in the previous versions of Securities Law are far too low. For example, Securities Law 2014 once specified that the administrative monetary fines for misstatements were between 300,000 RMB and 600,000 RMB for corporate violators and between 30,000 RMB and 300,000 RMB for individual violators.<sup>8</sup> It is criticized that the minimal costs cannot effectively deter securities misstatements. A consensus has been reached during the most recent revision process that the *de jure* liabilities for securities fraudulent behaviors should be increased, and the liability regime has undergone the most significant change. For example, the new Securities Law has increased the

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<sup>8</sup> Arts 189 and 193 of Securities Law 2014.

administrative liabilities for fraudulent securities issuance to between 2 million RMB and 20 million RMB for corporate violators and between 1 million RMB and 10 million RMB for individual violators.<sup>9</sup>

The *de jure* civil liabilities for securities misstatements provided in the new Securities Law require that the culprits are liable to pay damages to those aggrieved investors.<sup>10</sup> Previously, civil litigation concerning securities misstatements was governed by the SPC's 2003 Judicial Interpretation, which created multiple obstacles for aggrieved investors to obtain judicial relief (Hutchens, 2003; Lu, 2003). First, Chinese courts had for nearly two decades refused to hear a private enforcement claim for compensation due to securities misstatements unless the defendant had already been administratively or criminally sanctioned by preexisting public enforcement.<sup>11</sup> Put differently, the award of damages was conditioned on public enforcement outcomes and therefore was under *de facto* control of public agencies. This has been formally repealed by the SPC's 2022 Judicial Interpretation, which expressly states that the lack of an administrative or criminal sanction is not a reason for the court to strike out a private law claim for securities misstatements.<sup>12</sup> Second, investors were only allowed to bring individual or joint suits but not representative suits or class action.<sup>13</sup> Such a requirement significantly aggravated the collective action problem faced by the aggrieved investors

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<sup>9</sup> Art 181 of the new Securities Law.

<sup>10</sup> Art 85 of the new Securities Law. See also arts 24, 93 and 163 of the new Securities Law.

<sup>11</sup> Art 6 of SPC's 2003 Judicial Interpretation.

<sup>12</sup> Art 2 para 2 of SPC's 2022 Judicial Interpretation. While this provision is made in 2022, it does not create a new rule, but nevertheless restates the same position implicitly established in the new Securities Law back in 2019.

<sup>13</sup> Art 12 of SPC's 2003 Judicial Interpretation.

(Xu, 2016). Recent empirical studies show that very few listed companies committing misstatements were sued by investors, and the damages paid by most defendants were trivial (Huang, 2013).

Article 95 of the new Securities Law institutes the representative litigation procedure for aggrieved investors to obtain an award of damages and addresses the collective action problem faced by claimants. Paragraph 1 provides that if the number of claimants is numerous in a private enforcement of securities misstatements, claimants may appoint a representative to carry out the proceeding. Paragraph 2 furthermore specifies that after the commencement of the proceeding set out in paragraph 1, if there are other indeterminate investors who are eligible to be the claimants of the same ground, the court may make a public announcement by explaining the case information to notify other investors in the market to lodge their claims and hence participate in the regular representative proceeding. The judgments and rulings made in the representative proceeding bind these registered investors. Both paragraphs specify the constituent elements for regular representative proceeding. Paragraph 3 establishes the mechanism for special representative proceedings, which is also called “Chinese class action”. It is transformed from the regular representative proceeding, and the criteria for the court to switch from a regular one to a special one is that if the investor protection agency (i.e., a nonprofit legal person called the China Securities Investor Services Center) has obtained power of attorney from over 50 investors during the time when the court makes the announcement to notify investors to lodge their claims for participation. The

agency will then serve as the representative for all the investors in the special representative proceeding. Put differently, the proper claimant of a regular representative proceeding is the investor, whereas the proper claimant of a special representative proceeding is the investor protection agency. Another intriguing feature of the “Chinese class action” is that because the investment accounts are held in genuine names, the investor protection agency is authorized to obtain the list of eligible claimants from securities registration and clearing institutions. These investors are deemed to have automatically joined the representative proceeding if they do not quit by clear manifestation of intent. The “Chinese class action” therefore combines the “opt-in” rule of American class action and the designated class representative rule (Lin and Xiang, 2022).

SPC’s 2020 Judicial Interpretation was later promulgated and now provides detailed governing rules concerning securities representative litigation. SPC’s 2020 Judicial Interpretation creates a multilayered securities litigation regime and categorizes securities litigation into three types of proceedings. First, aggrieved investors are entitled to bring individual claims even if they cannot adduce evidence of any administrative sanction imposed on the defendant.<sup>14</sup> Second, courts must apply regular representative proceedings if the number of claimants is over 10, and 2 to 5 representatives are selected and named in the complaint.<sup>15</sup> Regular representative litigation can be further divided into litigation with determinate claimants and litigation

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<sup>14</sup> Art 5 para 2 of SPC’s 2020 Judicial Interpretation.

<sup>15</sup> Art 5 para 1 items 1 and 2 of SPC’s 2020 Judicial Interpretation.

with indeterminate claimants at the stage of filing lawsuits. The latter is similar to an “opt-in” class action and could involve a large number of claimants. An additional requirement for regular representative litigation is that claimants should provide preliminary evidence for any misstatements made by the defendant, which includes nonadministrative disciplinary sanctions issued by the CSRC and its ROs and self-regulatory sanctions issued by stock exchanges.<sup>16</sup> Finally, the special representative litigation could be transformed from the regular representative if the investor protection agency has successfully obtained the delegation from more than 50 investors and decided to participate in the litigation as claimant representative.<sup>17</sup>

The change in the governmental attitude toward private securities litigation has both economic and political foundations. First, the government would like to increase the internationalization of its securities market and the ranking of the Ease of Doing Business Index launched by the World Bank. Efficient damage to aggrieved investors matters significantly for these endeavors. Second, China used to rely heavily on indirect finance and has accumulated huge debt since the subprime mortgage crisis. Market-based financing is regarded as the key to deleveraging the national economy, and the government’s policy documents repeatedly emphasize the importance of securities market development. Investor protection is regarded as the fundamental institution to a strong securities market. Third, the composition of the listed companies no longer warrants policy favors. In contrast to a situation where the SOEs are the majority, now

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<sup>16</sup> Art 5 para 1 item 3 of SPC’s 2020 Judicial Interpretation.

<sup>17</sup> Art 32 of SPC’s 2020 Judicial Interpretation.

they only account for less than one-fourth of the total listed companies. Hence, it is of no political value to protect them from civil liabilities. Finally, China has been encouraging institutional investors to participate for years. On the one hand, institutional shareholders have a louder voice and stronger lobby power to increase external protection against securities fraud. On the other hand, those representing public interests, such as pension funds, have increased their investment in the securities market. Both forces urge the provision of more efficient damage schemes for investors.

## **2.2. Hypothesis Development**

While the new Securities Law has revealed to the market about the “on the book” reform of securities litigation, SPC’s 2020 Judicial Interpretation has increased the expected liabilities for one particular group of listed companies. SPC’s 2003 Judicial Interpretation has set the administrative prerequisites, and lower courts are accustomed to the requirement that civil litigation is conditioned on the fact that defendants are sanctioned either administratively or criminally. In essence, it gives up the authority of the courts to independently decide if there are any securities misstatements. Although the SPC issued Some Specific Problems Concerning the Current Commercial Judgment in 2015, in which article 2 explicitly abolished the administrative prerequisites, lower courts are reluctant to rule against defendants without any administrative sanctions, and to date, few claimants prevail in such cases. In contrast to previous judiciary practices, the SPC’s 2020 Judicial Interpretation officially recognizes that nonadministrative sanctions could be used as preliminary evidence for proving securities fraud. This

changes the previous uncertain standing of Chinese courts on this type of evidence and mandatorily expands the scope of the cases heard by courts. The rule should increase the expected litigation risks of listed companies receiving nonadministrative sanctions. Of course, the degree of proof for these sanctions should be weaker than that for administrative sanctions. Hence, the following hypothesis is proposed related to the “Law Matters Hypothesis”.

Hypothesis 1: listed companies sanctioned nonadministratively should experience a negative abnormal return around the event window of the promulgation of the SPC’s 2020 Judicial Interpretation.

In addition to the “on-the-book” reform of private securities litigation, Chinese courts delivered two important judgments soon after the promulgation of SPC’s 2020 Judicial Interpretation, which strongly signal to the market about the increased liability in the dimension of law enforcement. First, the Hangzhou Intermediate Court made the first instance judgment of the “Wuyang Case” on December 31, 2020, which involved the fraudulent private offering of company bonds committed by Wuyang Construction Group Co., Ltd. (Wuyang). Wuyang is a nonlisted company in the real estate construction industry and successfully issued two company bonds on the Shanghai Stock Exchange in August and September 2015. However, it failed to pay the interest due and eventually defaulted in August 2017. After the default, the CSRC jumped in and launched an investigation against potential misstatements and sanctioned Wuyang



for misstatements in the issuance process. Bondholders subsequently brought civil litigations against Wuyang, its controllers and financial intermediaries for fraudulent issuance of company bonds, and the Hangzhou Intermediate Court applied “opt-in” regular representative litigation. The number of registered claimants is 496 investors. The judgment mandated the defendants to pay the principal and interests due to defaulted bonds held by the claimants, and the total amount of damages reached more than 1 billion RMB.

The second case is the Kangmei Judgment, which is the first judgment applying the special representative litigation procedure. The Guangzhou Intermediate Court adjudicated the case, and the defendant Kangmei Pharmaceutical Co., LTD. is a private listed company on SHSE and specializing in the pharmaceutical industry. Kangmei announced that it received the administrative sanction of the CSRC for multiple informational infractions in May 2020, and investors brought civil litigation for damages. The China Securities Investor Services Center successfully obtained authorization from more than 50 aggrieved investors and participated in litigation as the representative claimant. The number of qualified claimants is 52,037 investors, and the judgment released by the Guangzhou Intermediate Court on November 12, 2021, mandates that defendants pay nearly 2.5 billion RMB damages to aggrieved investors.

The “Law Matters Hypothesis” and “Enforcement Matters Hypothesis” differ in their predictions concerning the market reactions to the aforementioned cases. The “Law

Matters Hypothesis” argues that the “on-the-book” reform should have fully informed the market about the changes in the expected litigation risks, and the stock price of those affected companies should incorporate the information. Hence, the stock market should not respond significantly to enforcement outcomes. In contrast, the “Enforcement Matters Hypothesis” argues that court decisions will furthermore reveal new information concerning changes in the dimension of law enforcement, which is also valuable for securities pricing. Hence, the stock market should react significantly to enforcement outcomes given that legal rules have already been changed. The following hypothesis relating to “Enforcement Matters Hypothesis” is hence proposed.

Hypothesis 2a: Listed companies committing securities misstatements should experience negative abnormal returns around the event window of the release of “Wuyang judgment”.

Hypothesis 2b: Listed companies committing securities misstatements should experience negative abnormal returns around the event window of the release of “Kangmei Judgment”.

The stock market reactions to the aforementioned events are essentially an update and readjustment of the expected litigation costs. However, it is unlikely that such effects will be uniformly distributed among listed companies. The literature has already documented two main channels that might affect the expected litigation costs faced by

listed companies. First, firm-specific characteristics are proven to influence court decisions and hence lead to varied litigation costs. For example, empirical studies find that politically connected firms are favored by Chinese firms (Lu et al., 2016). Second, regional judiciary quality could also influence case outcomes. It has been documented that regional judiciary quality varies significantly across China (Liu et al., 2022), and the difference is correlated with various judiciary and stock market outcomes. Hence, the following hypothesis relating to the “Judiciary Quality Hypothesis” is proposed.

Hypothesis 3: Controlling for firm-specific characteristics, market reactions to the events should be negatively correlated with the judiciary quality of the provincial regions.

### **3. Identification Strategies and Sample Description**

#### **3.1. Identification Strategies**

The identification strategy employed to estimate the causal effects of increased litigation costs on stock market outcomes comprises two parts. First, following the shock-based research design, we use the events discussed in the previous section as the sources of exogenous shocks on the litigation costs faced by Chinese listed companies. The shocks could be further divided into those due to the change in the “on the book” rule, which includes the promulgation of SPC’s 2020 Judicial Interpretation, and those due to enforcement intensity, which includes the “Wuyang Judgment” and “Kangmei Judgment”.

Second, theoretically, the increased litigation costs could lead to two opposite effects on stock price. On the one hand, it will deter future securities misstatements and improve investor protection, which should generate positive effects on stock prices. On the other hand, increased litigation costs tend to decrease at least the short-term profitability of listed companies, which should depress their stock prices. What makes the causal inference even more difficult is that the stock price of firms with high expected litigation risks may have already been dispersed, which will lead to an endogenous relationship between price reactions and the aforementioned events. Consequently, the “straddle approach” is employed to select our samples. We only include companies sanctioned by securities regulators for misstatements that are entering the litigation process when the events are disclosed. Hence, their stock price should have already incorporated the expected litigation costs estimated with the information prior to the event, and the results of the event study will be only ascribed to the marginal change in the expected litigation costs.

To estimate the stock market reactions to the SPC’s 2020 Judicial Interpretation, we take advantage of the following institutional settings. One important innovation of the private enforcement regime, which is not mentioned in the new Securities Law, is that Article 2 of the Judicial Interpretation removes the ambiguity concerning the legal status of nonadministrative sanctions as proof of misstatements, which in theory should increase the litigation risks of sanctioned companies. According to SPC’s 2003 Notice, investors could bring civil litigation within two years of knowing that listed companies

have committed misstatements. Hence, a sample of listed companies receiving nonadministrative sanctions within half a year prior to the promulgation of SPC's 2020 Judicial Interpretation are selected. SPC's 2020 Judicial Interpretation should exogenously increase the expected litigation costs in the sense that the likelihood of the sample companies being litigated increases.

In addition, to estimate the stock market reactions to the "Wuyang Judgment" and "Kangmei Judgment", a unique feature of the administrative sanction proceeding is exploited in the process of sample selection. The CSRC's process for imposing administrative sanctions is lengthy and sometimes takes years to complete. Listed companies in such proceedings normally make three types of announcements to inform the market, which include Investigation Announcement, Preliminary Sanction Announcement and Final Sanction Announcement. Once listed companies make the Investigation Announcement, which informs the market that they are in the official enforcement proceedings of the CSRC, they are highly likely to eventually receive administrative sanctions. The failure rate of the CSRC is relatively low. In addition, the stock prices of listed companies experience the most significant negative abnormal returns on the event window around the Investigation Announcement and fail to show significant negative abnormal returns around two other announcements (Xu and Xu, 2020). Hence, to purely estimate the effects of judgments on stock price, the sample only includes those companies already making the Investigation Announcement but not making the Final Sanction Announcement prior to the events. For these companies, the

securities market should have already incorporated the expected litigation costs under the liability regime prior to the event, and the abnormal returns estimated with the event studies should hence cleanly reflect the market expectation about the increase in the expected costs with the updated information revealed by the enforcement outcomes.

### **3.2. Sample Description**

This paper uses samples of listed companies on SZSE and SHSE sanctioned by the CSRC, its ROs and/or stock exchanges for informational infractions.<sup>18</sup> The data concerning misstatements committed by listed companies are mainly obtained from the China Stock Market and Accounting Research Database (CSMAR). CSMAR collects the data on enforcement outputs of the CSRC, its ROs, and the two stock exchanges, which documents the exact dates when sanctions against listed companies are made public and allows us to examine the stock market reactions accordingly. We further cross-check the CSMAR data by accessing the website of the CNINF, a website designated by the CSRC as the official platform for listed companies to disclose information. When there are mismatches between the two data sources, we use that of the CNINF. The information about the firm-level characteristics is obtained from CSMAR.

Because the hypotheses developed in the previous sections are concerned with different events, a series of samples is used to test the aforementioned hypotheses. To test

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<sup>18</sup> The sample excludes those B-share companies.

Hypothesis 1 about the relationship between the promulgation of SPC’s 2020 Judicial Interpretation and the market reaction of firms sanctioned nonadministratively, we collect Sample 1, mainly comprising listed companies that made announcements about receiving such sanctions between February 1, 2020, and July 31, 2020. CSMAR documents 245 distinctive listed companies receiving such sanctions, and 35 of them are excluded because they have been sanctioned administratively within two years prior to July 31, 2020. The remaining sample includes 210 listed companies.

To test Hypothesis 2a concerning the market reactions to the “Wuyang Judgment”, Sample 2 comprises listed companies making the Investigation Announcement one month before the release of the “Wuyang Judgment” and making the Final Sanction Announcement half a month after the judgment; that is, the company should make the Investigation Announcement before November 30, 2020, and the Final Sanction Announcement after January 15, 2021. Previous studies have shown that the market reaction to the Investigation Announcement is most significant within one week after the announcement, and its reactions to the Final Sanction Announcement are limited (Xu and Xu, 2020). The sample selection algorithm may avoid the confounding effects due to these announcements. The final sample includes 81 listed companies after excluding 17 listed companies that have suspended trading during the event window.<sup>19</sup>

To test Hypothesis 2b concerning the market reactions to the “Kangmei Judgment”, Sample 3 comprises listed companies making the Investigation Announcement one

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<sup>19</sup> Our paper tends to underestimate the effects because sanctioned firms also delisted after the “Wuyang Judgment”.

month before the release of the “Kangmei Judgment” and making the Final Sanction Announcement half a month after the judgment; that is, the company should make the Investigation Announcement before October 1, 2021, and the Final Sanction Announcement after December 1, 2021. The final sample includes 48 listed companies.

Table 1 presents the distribution of sample firms across the provincial regions of mainland China. Our sample mostly comprises listed companies from Guangdong, Zhejiang, Jiangsu, Beijing, Shandong, Fujian and Shanghai and some other economically developed regions. Because the number of listed companies is not evenly distributed among provincial regions in China and is concentrated in the coastal area and economically developed regions, our sample is broadly consistent with such distributional patterns.

**Table 1 Regional Distribution of Sample Firms**

Provincial Region	Sample 1	Sample 2	Sample 3
Anhui	5	1	0
Beijing	14	6	2
Fujian	11	2	0
Gansu	3	1	0
Guangdong	49	14	8
Guangxi	4	3	0
Guizhou	3	1	2
Hainan	2	0	0
Hebei	3	1	1
Henan	4	2	1
Heilongjiang	1	1	1
Hubei	4	1	1
Hunan	4	2	2
Jilin	2	1	0
Jiangsu	20	8	6
Jiangxi	4	1	1
Liaoning	4	3	1
Inner Mongolia	1	0	0



Ningxia	0	0	0
Qinghai	1	0	0
Shandong	12	6	4
Shanxi	2	0	0
Shaanxi	3	1	0
Shanghai	9	2	4
Sichuan	4	4	1
Xizang	0	1	2
Tianjin	1	0	0
Xinjiang	2	4	2
Yunnan	1	0	1
Zhejiang	36	15	8
Chongqing	1	0	0
Sample size	210	81	48

Hypothesis 3 is concerned with the judicial determinants of stock market reactions. We mainly use the listed companies in Sample 2 to test the hypothesis. Table 2 reports the summary statistics for the variables used in the regression analysis. The definition of these variables is reported in Appendix Table A1. First, the independent variable of interest is DISCPERCENTAGE, which estimates the disclosure rate of cases adjudicated within one provincial region as reported by COURTDATA.<sup>20</sup> The database compares the number of cases disclosed in the China Judgment Online and reported in the annual report of the provincial high court. China launched an important judiciary reform measure that requires local courts to disclose their court rulings. This reform has increased the transparency of local courts and attracted a large volume of scholarly attention. The DISCPERCENTAGE variable is used as the proxy for regional judiciary quality.

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<sup>20</sup> <http://court-ai.com/index?site=transparency>. (Accessed January 17, 2023)

Second, the dummy variable of YESPRESANCTION reflects the stages in which the administrative sanction procedure is proceeding. Because the Investigation Announcement contains limited information and the Preliminary Sanction Announcement often contains the same material facts and proposed sanctions as those in the Final Sanction Announcement, the uncertainty concerning the liabilities of the misstatements should be significantly reduced. Approximately 31% of our sample companies make the Preliminary Sanction Announcement prior to the release of the Wuyang Judgment.

Third, the variable of CAR. INVESTIGATION[-1,7] is employed to control for the effects of the seriousness of misstatements, which was seldom handled properly in previous studies. It is estimated with the event studies method and the cumulative daily abnormal return of listed companies in Sample 2 over the [-1,7] event window, with the event date being the day when they make the Investigation Announcement. The CAR variable. INVESTIGATION[-1,7] hence estimates the market expectations about the seriousness of the misstatements and hence the costs due to the administrative sanctions on sample companies. Our sample companies experienced on average 9.7% cumulative average daily AR over the [-1,7] event window around the Investigation Announcement day. It should be noted that the maximum value of the CAR variable. INVESTIGATION is approximately 298.06%, which is ascribed to the fact that one sample company was suspended trading for half a year and experienced a daily return of approximately 315% in the first trading day after the Investigation Announcement.

The regression outputs with winsorized data are reported in the Appendix and remain qualitatively similar to those of the main regressions.

Following the previous studies, the additional controlling variables of firm-specific features are also included in the model specification. First, it is argued that the size of the company is correlated with its ability to influence the local courts (Milhault and Zheng, 2015); hence, the lagged total asset (L. LNASSET) of the sample company is included. In addition, the proxies for the financial status of the listed companies, including profitability (L. ROA and L. EARNINGPERSHARE) and leverage (L. LIABILITYTOASSET), are also included. Our sample companies have poorer operational conditions, and the average companies are losing money and have negative ROA and earnings per share. Third, the number of listed years (LNLISTYEAR) is also included. Firms with longer listing years should have lower asymmetric information levels. Finally, we also control for state ownership (L. YESSOE) of our sample companies, as approximately 8.6% of our sample companies are SOEs.

**Table 2 Summary Statistics**

	Sample size	Mean	Std. Dev.	Min.	Max.
DISCPERCENTAGE	81	0.7751	0.1073	0.5310	0.9400
YESPRESANCTION	81	0.3086	0.46481	0	1
CAR.INVESTIGATION[-1,7]	81	-0.097	0.38219	-0.597	2.9806
L.LNASSET	81	3.5654	1.17543	-0.412	6.6248
L.LIABILITYTOASSET	81	0.9796	3.44361	0.0714	31.467
L.ROA	81	-0.549	3.4402	-30.96	0.6243
L.EARNINGPERSHARE	81	-0.652	1.59844	-6.502	2.3805
LNLISTYEAR	81	2.4859	0.61835	0	3.4012
SOEDUMMY	81	0.0864	0.28273	0	1

## 4. Regression Analysis

### 4.1. The Results of Event Studies

We use the standard event study methodology described by Bhagat and Romano (2002) and Fisch et al. (2018) to estimate the AR of our sample stocks over the event windows. The method has been widely applied in the law and finance literature to estimate the effects of legal changes and court decisions. The event date is the first trading day after the release of the legal rule or court decision. The daily AR is calculated with Eq. (1).

$$AR_{it} = R_{it} - \hat{R}_{it} \quad \text{Eq. (1)}$$

where  $R_{it}$  and  $\hat{R}_{it}$  are the daily returns and expected returns of stock  $i$  on Day  $t$ , respectively.

The expected return  $\hat{R}_{it}$  is estimated using the standard market model, as shown in Eq. (2).

$$\hat{R}_{it} = \hat{\alpha}_i + \hat{\beta}_i * R_{mt} + \hat{\varepsilon}_{it} \quad \text{Eq. (2)}$$

where  $R_{mt}$  is the proxy for market return on Day  $t$ , and  $\hat{\alpha}_i$  and  $\hat{\beta}_i$  are estimated over a period of 150 trading days prior to the event window. Table 2 summarizes the event study outcomes.

**Table 3 Stock Price Reactions to Enforcement Actions**

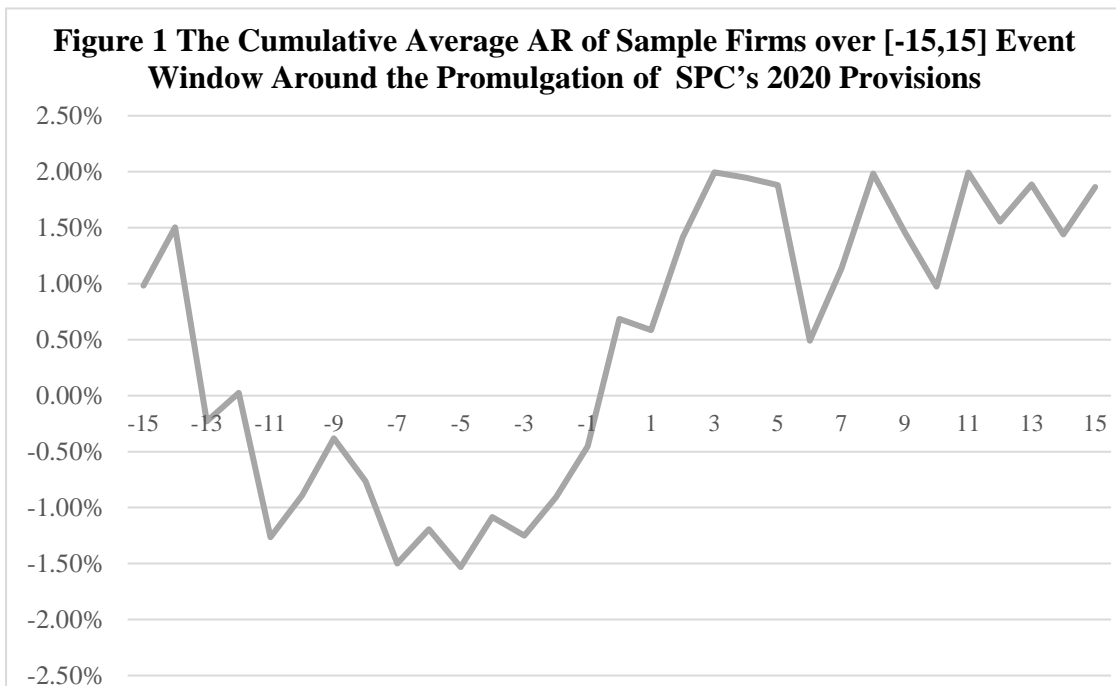
Trading Day	Panel A SPC's 2020 Judicial Interpretation				Panel B Wuyang Judgment				Panel C Kangmei Judgment			
	Sample Size	Mean AR	Median AR	"z value", Wilcoxon Sign-rank Test	Sample Size	Mean AR	Median AR	"z value", Wilcoxon Sign-rank Test	Sample Size	Mean AR	Median AR	"z value", Wilcoxon Sign-rank Test
7	210	0.65%	0.52%	3.221***	81	-1.49%	-2.04%	-4.061***	48	-0.35%	-0.52%	-1.744*
6	210	-1.39%	-1.70%	-7.528***	81	-0.99%	-1.65%	-2.761***	48	0.67%	0.27%	1.405
5	210	-0.07%	0.24%	0.273	81	-1.41%	-2.19%	-3.388***	48	-0.39%	-0.58%	-1.364
4	210	-0.05%	-0.67%	-2.250**	81	0.48%	0.17%	0.308	48	-0.11%	0.13%	-0.297
3	210	0.58%	-0.25%	0.641	81	-4.00%	-4.56%	-6.848***	48	-0.81%	-0.91%	-2.554**
2	210	0.83%	0.50%	4.536***	81	-2.22%	-2.68%	-5.577***	48	0.55%	-0.13%	0.800
1	210	-0.10%	-0.92%	-1.711*	81	-2.63%	-3.04%	-5.106***	48	0.29%	-0.16%	0.144
0	210	1.14%	0.65%	6.014***	81	-0.62%	-0.48%	-1.603	48	-0.14%	-0.23%	-0.841
-1	210	0.45%	-0.03%	1.213	81	-0.73%	-0.80%	-3.406***	48	-0.05%	-0.15%	-1.169
-2	210	0.34%	-0.13%	0.164	81	-1.01%	-1.25%	-4.146***	48	-0.01%	-0.07%	-0.123
-3	210	-0.17%	-0.61%	-3.521***	81	0.15%	0.02%	-0.148	48	0.57%	0.35%	1.077
-4	210	0.45%	0.23%	1.720*	81	-0.16%	-0.93%	-1.236	48	1.72%	1.07%	3.477***
-5	210	-0.34%	-0.73%	-3.018***	81	0.65%	0.48%	1.693*	48	1.41%	1.29%	2.492***
-6	210	0.31%	0.28%	1.108	81	-0.78%	-1.42%	-2.663***	48	-0.58%	-0.73%	-1.580
-7	210	-0.74%	-1.45%	-5.330***	81	-0.56%	-0.50%	-2.229**	48	0.27%	-0.19%	0.021

Note: \*\*\*, \*\* and \* denote significance at the 1%, 5%, and 10% levels, respectively.

#### **4.1.1. Stock Market Reactions to SPC's 2020 Judicial Interpretation**

The event study estimation of the stock market reactions to SPC's 2020 Judicial Interpretation using Sample 1 is reported in Panel A of Table 3. Its second and third columns report the daily average and median AR of the sample stocks over the [-7,7] event window. SPC's 2020 Judicial Interpretation was released to the public on 31 July 2020, and the first trading date is 3 August 2020, which is chosen as the event date. The average and median daily AR of the sample companies on the event date are approximately 1.14% and 0.65%, and the cumulative average and median AR over the

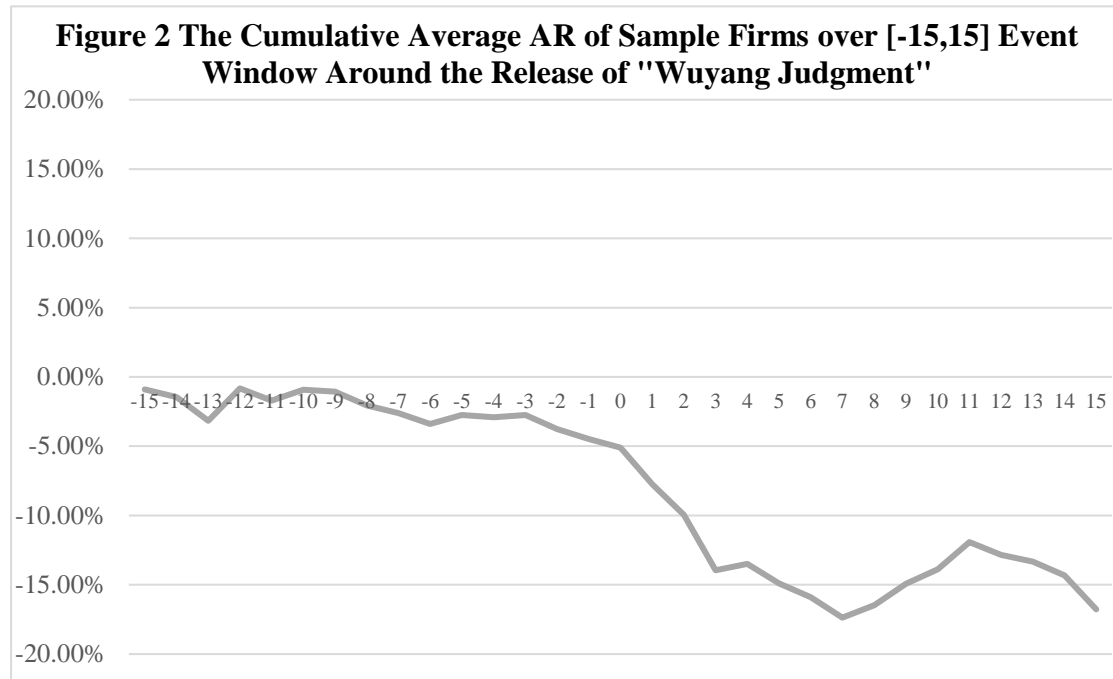
[0,2] event window are 1.87% and 0.23%, respectively. Figure 1 furthermore presents the cumulative average AR of sample firms over the [-15,15] event window around the promulgation of SPC’s 2020 Judicial Interpretation. The sample maintains a relatively stable cumulative average AR for approximately 2% after the event. The results indicate that the effects of investor protection dominate those of liability increase. On the one hand, SPC’s 2020 Judicial Interpretation offers a package of reform measures, which are mostly concerned with improving the efficiency of damages for aggrieved investors and shareholder value. On the other hand, the listed companies of Sample 1 only receive nonadministrative sanctions, which indicates that the regulatory agencies regard the misstatements made by sample firms to be not serious. The increase in the expected liability is hence limited.



### **4.1.2. Stock Market Reactions to Wuyang Judgment**

The event study estimation of the stock market reactions to “Wuyang Judgment” using Sample 2 is reported in Panel B of Table 3, whose second and third columns report the daily average and median AR of the sample stocks over the [-7,7] event window. “Wuyang Judgment” was released on 31 December 2020, and the first trading date is 4 January 2021, which is chosen as the event date. The average and median daily AR of the sample companies on the event date are approximately -0.62% and -0.48%, respectively, and the Wilcoxon sign-rank test suggests that the median is weakly insignificant, with a “p value” equal to 0.1089. However, the AR of the sample companies around the event date are highly significant. The average and median daily AR of sample companies over the [-2,7] event window are -14.62% and -18.52%, respectively, and those over the [-2,3] event window are -11.21% and -12.81%, respectively. Figure 2 furthermore presents the cumulative average AR of sample firms over the [-15,15] event window around the release of “Wuyang Judgment”. The sample maintains a relatively stable cumulative average AR, which is close to 0, prior to the event. The cumulative average AR sharply decreases over the [-2,7] event window and reaches a minimum of -17.37% on the 7th trading day after the event. The results indicate that the “Wuyang Judgment” has revealed new information concerning the judiciary position about the civil liabilities of misstatements. Considering the “zero tolerance policy” articulated in the national documents, the judiciary is no exception and adjusts its position on the civil liabilities of informational infractions. Our results cleanly estimate that the private enforcement outcome will convey new information

concerning expected liabilities of misstatements, in addition to the change in the rule on the book.

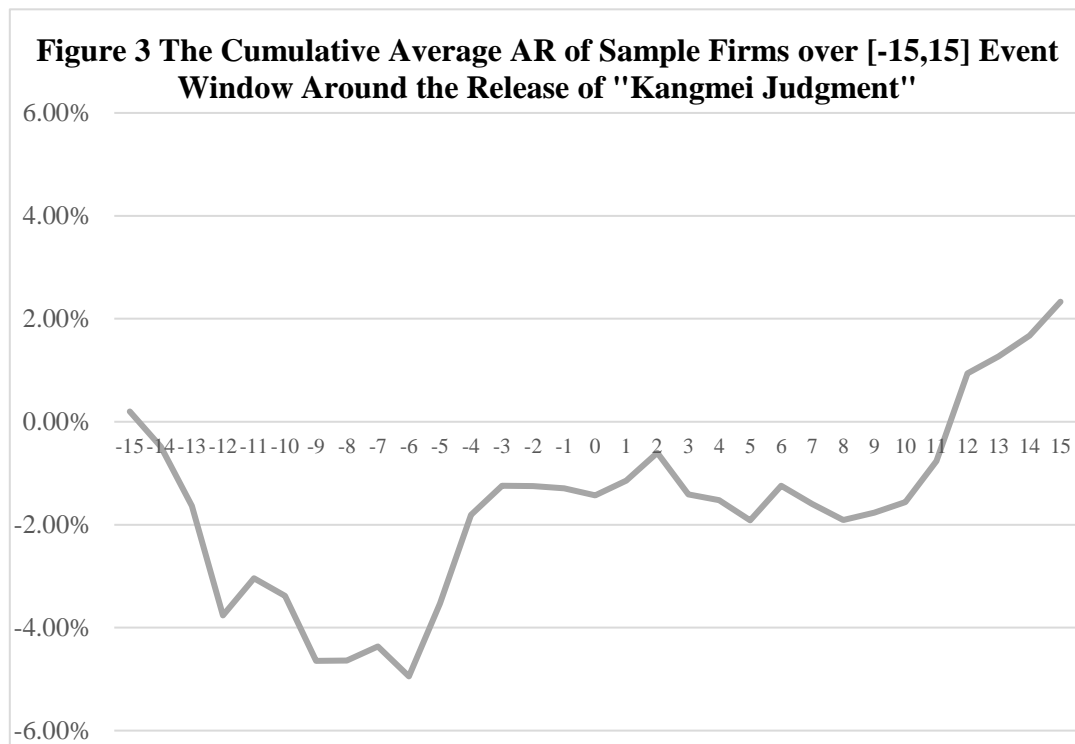


### 4.1.3. Stock Market Reactions to Kangmei Judgment

The event study estimation of the stock market reactions to “Kangmei Judgment” using Sample 3 is reported in Panel C of Table 3. Its second and third columns report the daily average and median AR of the sample stocks over the [-7,7] event window. “Kangmei Judgment” was released on 12 November 2021, and the first trading date is 15 November 2021, which is chosen as the event date. The average and median daily AR of the sample companies on the event date are approximately -0.14% and -0.23%, respectively, and the Wilcoxon sign-rank test suggests that the median is insignificant. The sample companies fail to show any significant AR around the event date. Figure 3 furthermore



presents the cumulative average AR of sample firms over the [-15,15] event window around the release of “Kangmei Judgment”. The cumulative average AR sharply decreases over the [-15, 7] event window and starts to increase and maintain a stable level ever since. The results indicate that the securities market has fully adjusted to the increased enforcement intensity when the “Wuyang Judgment” was released and no longer regards the historical damages ordered by Guangdong Intermediate Court as an out-of-expectation amount.



## 4.2. The Determinants of Stock Market Reactions to Wuyang Judgment

Hypothesis 3 predicts that stock market reactions to changes in private enforcement intensity should be correlated with regional judiciary quality. From the event studies in

the previous subsection, the stock market reaction is most significant in the event of “Wuyang Judgment”. Hence, sample 2 is used in this subsection. We adopt a multivariate regression to test the proposed relationship. The dependent variable is CAR. WUYANG [-2,7] and CAR. WUYANG[-2,3], which are the cumulative daily abnormal returns of sample companies over the respective event windows estimated in Panel B of Table 3. Based on the jurisdictional rule, individual litigation and regular representative litigation should be heard by the intermediate court of the provincial region where the issuer is registered.<sup>21</sup> The DISCPERCENTAGE variable is consequently chosen as the independent variable of interest.

The empirical models also include various controlling variables. On the one hand, a challenge in identifying the relationship between stock market reactions and regional judiciary quality is the seriousness of misstatements. Our research design offers an innovative way to solve this problem. We first conduct an event study to estimate the abnormal return of the companies in Sample 2 around the event window of making Investigation Announcement. Based on the results, we estimate the CAR. INVESTIGATION [-1,7], which is the cumulative average daily AR over the event window of [-1,7]. It is a proxy for the seriousness of misstatements based on the information revealed by market trading activities. On the other hand, we include the following controlling variables: L. LNASSET, L. LIABILITYTOASSET, L. ROA, L. EARNINGPERSHARE, LN. LISTYEAR, SOEDUMMY and industrial dummies. The

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<sup>21</sup> Art 2 of SPC’s 2020 Judicial Interpretation.

standard errors are clustered in the provincial region where the companies are registered to adjust within jurisdiction correlation.

**Table 4 The Determinants of Stock Market Reactions to the “Wuyang Judgment”**

	CAR[-2,7]	CAR[-2,3]	CAR[-2,7]	CAR[-2,3]	CAR[-2,7]	CAR[-2,3]
L.DISCPERCENTAGE	-0.27* (0.14)	-0.23* (0.12)	-0.28 (-0.2)	-0.22 (0.18)	-0.35* (0.2)	-0.26 (0.19)
YESPRESANCTION	0.10* (0.04)	0.05* (0.03)	0.10** (0.05)	0.06 (0.04)	0.09** (0.04)	0.05* (0.03)
CAR.INVESTIGATION[-1,7]			-0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.03 (0.02)
L.LNASSET					0.02 (0.02)	0.02 (0.02)
L.LIABILITYTOASSET					-0.05 (0.08)	0.01 (0.07)
L.ROA					-0.07 (0.07)	-0.10* (0.05)
L.EARNINGPERSHARE					0.04 (0.03)	0.04* (0.02)
LN.LISTYEAR					-0.002 (0.01)	0.001 (0.02)
SOEDUMMY			0.07 (0.09)	0.04 (0.06)	0.03 (0.11)	0.003 (0.08)
Industrial Dummies	No	No	Yes	Yes	Yes	Yes
Constant	0.03 (0.09)	0.05 (0.08)	0.002 (0.12)	0.05 (0.11)	0.08 (0.14)	0.03 (0.13)
R-squared	0.0960	0.0566	0.2122	0.1889	0.2928	0.2788
Sample size	81	81	81	81	81	81

Note: 1) The standard error clustered in the provincial regions is reported in parentheses.

2) \*\*\*, \*\* and \* denote significance at the 1%, 5%, and 10% levels, respectively.

Table 4 reports the empirical outputs.<sup>22</sup> In Column 1, a simple model specification is adopted and only includes the dependent variable CAR. WUYANG[-2,7] and two

<sup>22</sup> The regression outputs with the dependent variables “CAR[-2,7]” and “CAR[-2,3]” and the independent variable “CAR\_SANCTION[-1,7]” winsorized at the 5% and 95% levels are reported in the Appendix Table A2. The results are similar to those reported in Table 4.

explanatory variables, L. DISCPERCENTAGE and YESPRESANCTION, and a constant. The variable L. DISCPERCENTAGE has a coefficient of -0.27 and is significant at the 10% level (“p value=0.066). The result suggests that given other factors constant, a 1% increase in the judgment disclosure rate of the provincial regions where the listed companies are registered, the cumulative daily AR of the said company over the event window of [-1,7] is expected to decrease by approximately 0.27%. The market expects that the listed companies, which are in the administrative enforcement proceedings, in the region with high judiciary quality will tend to assume higher costs in addition to those already incorporated in the stock prices after the “Wuyang Judgment”. In addition, the variable YESPRESANCTION has a positive and significant coefficient, and its magnitude is 0.10, which suggests that those companies announcing the Preliminary Sanction Announcement experience smaller CAR during the event window around the “Wuyang Judgment”. The observed effects could be ascribed to the fact that the uncertainty concerning the misstatements and the enforcement proceedings is significantly reduced, which is incorporated in the stock price reactions.

Column 2 reports the regression with the dependent variable CAR. WUYANG[-2,3] and the same explanatory variables. The results are similar, and the variable L. DISCPERCENTAGE has a smaller coefficient of -0.23, with a “p value” equal to 0.081. The variable YESPRESANCTION has a positive and significant coefficient of 0.05. The magnitudes of both coefficients are reduced because of the mean and variance of

CAR. WUYANG[-2,3] is much smaller than that of CAR.WUYANG[-2,7].

We further control for an additional set of variables and include CAR. INVESTIGATION[-1,7], SOEDUMMY and industrial dummies in the model specification. Columns 3 and 4 report the results with the dependent variable CAR. WUYANG [-2,7] and CAR. WUYANG [-2,3], respectively. The coefficient of L. DISCPERCENTAGE is no longer significant, although its magnitude remains similar to those reported in the previous two columns. Both CAR. INVESTIGATION[-1,7] and SOEDUMMY are insignificant. On the one hand, the market reaction at the time when listed companies issued Investigation Announcements shows no predictive power for the market reaction to “Wuyang Judgment”. The reason for the observed effects could be because the market has already incorporated information concerning the seriousness of misstatements in previous events related to administrative enforcement proceedings. On the other hand, state ownership fails to reduce the expected costs due to increased private enforcement intensity. The market expects that those SOEs investigated administratively have already lost their political privilege.

In Column 5 and Column 6, we add additional firm-level controls for financial features into the model specification and include the full set of variables. In Column 5, the variable L. DISCPERCENTAGE has a significant and negative coefficient, and its magnitude is increased to -0.35 (p value=0.097). The variable YESPRESANCTION is significant at the 5% level, and its coefficient is 0.09. All other controls are insignificant.

In Column 6, the variable L. DISCPERCENTAGE is no longer significant and has a coefficient of 0.26 (p value= 0.171). The coefficient of YESPRESANCTION is reduced to 0.05 and significant at the 10% level. The two controlling variables L. ROA and L. EARNINGPERSHARE are significant at the 10% level.

## **5. Conclusion**

This paper takes advantage of recent reform in the securities law and enforcement regime in China and tests stock market reactions to both *de jure* and *de facto* increases in private enforcement intensity. To control for potential endogeneity problems, the identification strategy adopts a straddle approach, and the sample includes only listed companies in the administrative sanction procedure. Using the event study methodology, it is found that the stock price of the sample company reacts most significantly to the “Wuyang Judgment”, which indicates that the stock market regards that the trial outcomes reveal valuable information concerning the marginal increase in the private enforcement intensity given that the “on-the-book” laws have already changed. We also test whether the magnitude of the stock market reaction is correlated with the quality of the regional judiciary system and find that listed companies in regions with high-quality judiciary systems are expected by the market to be liable to pay higher damages.

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## Appendix

**Table A1 Variables Definition**

<b>Variable</b>	<b>Definition</b>
<b>Dependent variables</b>	
CAR[-2,7]	Cumulative average daily abnormal return of the portfolio of stocks issued by companies in Sample 2 over the [-2,7] event window of “Wuyang Judgment”.
CAR[-2,3]	Cumulative average daily abnormal return of the portfolio of stocks issued by companies in Sample 2 over the [-2,3] event window of “Wuyang Judgment”.
<b>Independent variables</b>	
L.DISCPERCENTAGE	The percentage of the number of cases disclosed in the China Judgment Online and that reported in the annual report of the provincial high court in 2019 as is reported by COURTDATA.
YESPRESANCTION	Dummy variable (=1 if a company has made the Preliminary Sanction Announcement, 0 otherwise).
CAR.INVESTIGATION[-1,7]	Cumulative average daily abnormal return of the portfolio of stocks issued by companies in Sample 2 over the [-2,7] event window of making the Investigation Sanction Announcement.
L.LNASSET	Lagged Napierian Logarithm of the total asset owned by the sanctioned firm (in 1 Billion RMB) as reported in the annual report.
L.LIABILITYTOASSET	Lagged liability-to-asset ratio as reported in the annual report.
L.ROA	Lagged return on asset as reported in the annual report, the ratio is calculated with the following equation: (total profit + financial expense)/ total asset at the end of the year.
L.EARNINGPERSHARE	Lagged earning per share as reported in the annual report.
LN.LISTYEAR	Napierian Logarithm of the number of years between the listing date and the releasing date of “Wuyang Judgment”.
SOEDUMMY	Dummy variable (=1 if a company is an SOE, 0 otherwise).

**Table A2 The Determinants of Stock Market Reactions to the “Wuyang Judgment”**

	CAR[-2,7]	CAR[-2,3]	CAR[-2,7]	CAR[-2,3]
L.DISCPERCENTAGE	-0.21** (0.09)	-0.15 (0.09)	-0.25* (0.13)	-0.13 (0.12)
YESPRESANCTION	0.07* (0.03)	0.04 (0.03)	0.06** (0.03)	0.04 (0.02)
CAR.INVESTIGATION[-1,7]			-0.06 (0.1)	-0.02 (0.07)
L.LNASSET			0.03** (0.01)	0.02 (0.02)
L.LIABILITYTOASSET			-0.06 (0.06)	-0.0007 (0.05)
L.ROA			-0.06 (0.07)	-0.07 (0.06)
L.EARNINGPERSHARE			0.02 (0.01)	0.02 (0.02)
LN.LISTYEAR			0.001 (0.01)	0.002 (0.01)
SOEDUMMY			-0.005 (0.08)	-0.004 (0.07)
Industrial Dummies	No	No	Yes	Yes
Constant	0.0009 (0.06)	-0.003 (0.06)	0.0005 (0.1)	-0.06 (0.09)
R-squared	0.0881	0.0458	0.3552	0.3395
Sample size	81	81	81	81

Note: 1) The standard error clustered in the provincial regions is reported in parentheses.

2) \*\*\*, \*\* and \* denote significance at the 1%, 5%, and 10% levels, respectively.

3) The dependent variables “CAR[-2,7]” and “CAR[-2,3]” and the independent variable “CAR\_SANCTION[-1,7]” are winsorized at the 5% and 95% levels to address concerns about outliers.