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Directors' Incentives from Potential Regulatory Penalties: Evidence from their Voting

Finance Working Paper N° 809/2021
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Abstract

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Keywords: Board of directors, director voting, regulatory penalties, board networks

JEL Classifications: G34, G38

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1. Introduction

One of the most important issues in corporate governance is the manner in which boards of directors monitor top management. Originally raised by Adam Smith in the *Wealth of Nations*, it has been addressed many times in the subsequent almost 250 years. The literature has more or less agreed that some of the time, boards do monitor management. However, the extent to which this monitoring is optimal is unclear, as is the impact of the legal and regulatory environment on directors' monitoring.[1]

While the question of what boards do is fairly well understood, what is less clear is why they do what they do. Directors have a fiduciary responsibility to protect shareholders' interests and to comply with regulations, and they can face penalties if they fail to take this responsibility seriously. The possibility of being sanctioned is one potential factor that motivates directors to act in shareholders' interests and to monitor management diligently. Yet, measuring the extent to which the risk of being penalized for negligence increase directors' monitoring is a difficult empirical exercise. The same set of penalties normally apply to all firms in a country, so that even in the circumstances when directors' monitoring is observable, it is impossible to know if this monitoring was motivated by the fear of penalties or for some other reason.

In this paper we take advantage of two unique institutional features in China to identify the impact of directors' perceived risk of regulatory sanctions on their monitoring. The first feature is that in China, the capital market regulator has implemented a system of penalties for directors who fail to perform their fiduciary responsibilities. Importantly for our purposes, these penalties are public information. Second, while in many countries, the actions of directors in the board room are unknown to outsiders, in China, however, the votes of directors on board proposals are public information. As argued by Jiang, Wan, and Zhao (2016), a director's negative vote (or an abstention from voting) is an important way in which Chinese

[1] The famous statement in Smith (1776) is: "The Directors of [joint stock] companies, however, being the managers of other people's money rather than their own, it cannot be expected that they should watch over it with the same anxious vigilance [as owners would]… Negligence and profusion, therefore, must always prevail, more or less, in the management of the affairs of such a company." (p. 700) See Hermalin and Weisbach (2003), Adams, Hermalin, and Weisbach (2010), and Adams (2017) for surveys of the voluminous recent literature on boards of directors.

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directors monitor and discipline management, and sends a strong negative signal about the firm to the public markets. This voting information provides us with a direct measure of directors' monitoring.

Our study is based on a sample that consists of 3,728 publicly traded Chinese firms between 2004 and 2019. These firms had a total of 19,209 independent directors, who met 263,276 times and considered 878,193 proposals. Of these 878,193 proposals, 2,394 had a "dissent", meaning that, according to public records, at least one director voted against the proposal or abstained from voting. Therefore, the dissension rate is only 0.27 percent, indicating that such public dissents are a fairly extreme way for directors to express displeasure with management.

Sanctioning one director will clearly affect her own behavior. However, a penalty for one director can also influence the behavior of other directors if such sanctions change their perceived risk that they could be penalized as well if they fail to fulfill their monitoring duty. Such changes in the perceived risk are more likely if the director knows the penalized director personally. In the psychology literature, this phenomenon is known as the "salience theory" and states that the impact of an observation on a person's priors depends on closeness of that observation to her personally. There is also a stream of literature that studies "homophily" which suggest that people interact more with people that have similar backgrounds and trust information received from them more. These ideas suggest that directors are more likely to pay attention to penalty information and its consequence for connected directors.[2]

To identify directors' perceptions of the likelihood of facing penalties, our approach is to rely on the extent to which a director is "connected" to penalized directors through board networks. We construct a database of director networks that covers 3.7 million bilateral relationships and link directors to one another through common directorships they hold. Our focus is on the voting behavior of directors who are connected to penalized directors, who received a regulatory penalty in the form of a monetary fine, a market ban, or both, using unconnected directors' voting in the same firm-year or firm-quarter as control. To ensure that

[2] For more on salience, see Tversky and Kahneman (1973, 1974) and Bordalo, Gennaioli, and Shleifer (2012), and on homophily see Lazarsfeld and Merton (1954) and McPherson, Smith-Lovin, and Cook (2001).

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we do not capture any direct impact of the penalty on voting behavior, we exclude all connected directors if they received a penalty themselves or are affiliated with any firm in which a penalty occurred. Additionally, we ignore votes on proposals if any of the voting directors have received a penalty in the past. We estimate that relative to control directors in the same firm-year or firm-quarter, directors are twice as likely to vote against the management after a connected director received a regulatory penalty as unconnected directors in the same firm and year or quarter. We find no differences in the voting behavior of connected and control directors before the penalty event. However, shortly after the penalty event, connected directors show an increase in their dissention rate relative to control directors, and this effect persists for several years.

Our empirical approach of comparing the response of connected and unconnected directors to a penalty of a director at a different firm identifies the incremental change in an individual director's perception of being penalized when a connected director at another firm is penalized. We consider a number of possible other reasons why there could conceivably be a difference in the response of directors' behavior between connected and unconnected directors to penalties at other firms. The effect does not appear to come from observable or differences between connected and unconnected directors, endogenous director-firm matching, or by change in regulatory enforcement environment affecting differences in the director's actual enforcement risk exposure.

We document a number of cross-sectional differences in the way in which sanctions on one director affect other directors. All of these findings are consistent with the notion that the more a penalty is likely to increase the expected cost in future penalties to connected directors, by a larger amount they change their voting behavior. For example, the effect is stronger if the peer's penalty is more severe, which would likely lead connected directors to have a larger expected penalty themselves, and therefore react more strongly. Additionally, the effect is larger when the penalized and the connected director have a higher overlap of their professional backgrounds, or if they have the same gender. Presumably if the penalized directors are similar to themselves, the salience effect is likely to be larger, leading directors to increase the perceived

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probability that they themselves will be penalized. Finally, if the connected directors work for firms that are more likely to be penalized, they change their voting behavior more when a connected director is penalized.

The higher dissent rate of connected directors after a peer's penalty raises the question whether their change in behavior is caused by irrational over-reaction (Bordalo, Gennaioli, and Shleifer, 2012), observational learning (Bikhchandani, Hirshleifer, and Welch, 1998), or a combination of both. Although our results do not allow us to draw strong distinctions, some of the evidence is more in line with learning than over-reaction. As previously discussed, the higher dissent rate persists for several years while over-reaction tends to be corrected over time. Furthermore, the behavioral change is stronger if the director works for a firm with higher penalty risk. We also show that penalized directors face severe negative career effects: both the number of their independent directorships and the salary per independent directorship decreases after the penalty.[3] Given such severe career consequences, it seems plausible that directors learn from the experiences of their peers and perform their duties more diligently.

Overall, the findings suggest that the possibility of being penalized should be thought of as a factor motivating directors to perform their monitoring duty. As such, regulatory penalties should be thought of as an important part of the corporate governance system.

Probably the most related paper to ours is Jiang, Wan, and Zhao (2016). They examine the voting behavior of independent directors in Chinese listed firms from 2004 to 2012. Their focus is on independent directors who participate in dissension proposals. Studying within-proposal variation, they find that independent directors with greater reputational concerns are more likely to dissent than other directors. While these authors focus on the reputational concerns of independent directors, we provide novel evidence showing that the threat of regulatory sanctions is an important factor that increases the likelihood of directors opposing management proposals and expressing their own voice.

[3] These findings complement those in Johnson, Karpoff, and Wittry (2021) who show that directors who adopt poison pills suffer negative labor market consequences.

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Our findings complement the previous literature on director incentives. Harford (2003) documents that outside directors suffer financial losses because of lost positions when they do not monitor well, and Adams and Ferreira (2008) find that outside directors are less likely to be absent from board meetings if the board meeting fees are higher. Fama and Jensen (1983) discuss the role of reputation on directors, and many subsequent studies provide empirical evidence in favor of the reputational concern hypothesis (e.g., Kaplan and Reishus 1990; Fich and Shivdasani 2007; Masulis and Mobbs 2014; Jiang, Wan, and Zhao 2016). Adams, Licht, and Sagiv (2011) consider the intrinsic motivations of directors and document that the more directors endorse entrepreneurial values, the more they will act in the interests of shareholders. Fos, Li, and Tsoutsoura (2018) document that when individual directors are close to being re-elected, the relation between CEO turnover and performance increases, suggesting that the prospect of an election motivates directors to monitor CEOs more diligently. Finally, prior literature has shown that directors' time constraints affect their monitoring.[4]

More generally, our findings relate to the literature on how experiences of peers affect decision-making. D'Acunto, Weber, and Xie (2019), for instance, use a setting in China to show that peer punishments have a substantial impact on the decision-making of CEOs. Further supportive evidence for the importance of peer effects on individuals' behavior is, among others, provided by Shue (2013), Leary and Roberts (2014), and Ouimet and Tate (2020). Our results add to this literature by showing that peer punishment incentivizes directors to confront management and express their own voice in the board room. Finally, we contribute to the literature on boards in the Chinese institutional environment (e.g., Giannetti, Liao, and Yu 2015).

2. Institutional Background & Data

This section describes the system of independent directors in China and the data that we use for our analyses. Appendix A provides an overview on all variables.

[4] For instance, Fich and Shivdasani (2006) find that firms with busy outside directors are associated with weak corporate governance and Adams and Ferreira (2008) document that busy directors spend less time at each firm.

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2.1. Independent Directors in China

Starting from 1990, China's stock market has grown to include near 4,000 listed firms with a market capitalization of $9 trillion at the end of 2019, becoming the second largest market in the world and the largest in the Asia-Pacific region. As the market grew, the corporate governance of public firms became a topic that increasingly concerned regulators. Consequently, regulators in China have made an effort to enhance corporate governance over the last decades. The changes they have made include two reforms that we exploit in this paper: the establishment of an independent director system and the introduction of mandatory board meeting disclosure requirements.

Until 2000, there was no legal obligation for listed firms in China to hire independent directors. In 2001, the China Securities Regulatory Commission (CSRC) required listed firms to establish an independent director system to enhance their corporate governance. These regulations require that at least one-third of all directors of publicly listed firms must be independent. Furthermore, at least one independent director must have an accounting background. Board members and shareholders who solely or collectively hold more than 1% of the shares can nominate independent director candidates. After the disclosure of a candidate's independence declaration, the shareholders will vote during the general shareholder meeting and decide whom to employ. Each person can hold an independent directorship in at most five listed firms at the same time, and each independent directorship must not exceed six continuous years. However, a director can be rehired by the same firm several years after completing a six-year independent directorship.

Independent directors have the rights to propose external auditors and to attend board and general shareholder meetings. Furthermore, they are required to express opinions on board-related issues. These issues include material related-party transactions, the nomination, appointment, and dismissal of directors and the top management team, compensation of directors and top management, inter-corporate or insider loans, hiring asset valuation agents, financial statements and periodic reports, changing the usage of publicly raised capital, asset restructurings, dividend policies, and so on.

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2.2. Director Data

We obtain detailed information on directors from the CSMAR Corporate Governance database. Listed firms in China must disclose information on their directors and top managers in a standardized format in their annual reports, which are then collected and compiled by CSMAR. These data contain information on 149,740 unique directors and managers who jointly held 182,977 positions between 1999 and 2019. Among them, 20,655 persons are employed as independent directors.

The CSMAR dataset also includes data on directors' characteristics, such as age, gender, and a short biography. To determine the professional background of an independent director, we search for keywords in their bibliography. We distinguish the following backgrounds: academic, accounting, judicial, and government officers. Multiple backgrounds can apply to the same director. For example, if the phrase "accounting professor" appears in the bibliography, we classify this person as having both accounting and academic backgrounds. Additionally, we obtain data on the compensation of each independent director from the CSMAR database.

On average, each independent director holds 1.8 positions, for a total of 36,820 directorships. The average duration of each independent directorship is 3.8 years. In 2002, the average compensation for each independent directorship was about $3,900 per year, which rose to about $12,100 in 2019. More than 40% of the independent directors are from academia. Since the annual compensation for professors in China is approximately $50,000 to $100,000, the additional compensation from a directorship is extremely attractive to most professors.[5]

2.3. Classifying Connected Directors

[5] For example, Ms. Liu Shuwei at the Central University of Finance and Economics, who detected several billion-dollar frauds through financial analysis (i.e., Lantian Ltd. in 2001, LeTV in 2015, Baoneng Group in 2018), has been employed as an independent director for three large, publicly-listed firms and several well-known private firms.

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We classify directors as connected based on the existence of common directorships. Directors who serve on the same board typically know each other. Board meetings in China typically finish in one day, but it is common to have social events such as joint dinners before and after formal meetings. To identify the independent directors who are connected to the penalized directors, we calculate the pairwise overlap of employment periods for all people in the CSMAR dataset. This process generates 3.7 million bilateral relationships. We classify two persons as connected if they serve on the board of the same firm at the same time.

We identify 1,114 independent directors who are connected to penalized directors. Of those, we have to drop 128 because they have a direct exposure to a penalty. For 12 directors, we do not have all necessary data, such as their age or salary. Thus, 974 directors (=1,114-128-12) who have no direct penalty exposure or missing data are classified as connected in our sample, while 16,025 are unconnected. In our empirical specifications with firm-year or firm-quarter fixed effects, we essentially compare after a peer's penalty, the change in voting, of connected directors to that of unconnected directors who serve on the same board in the same year or quarter. A total of 2,300 directors of the 16,025 unconnected directors fulfill this condition. We do not exclude other unconnected directors in our baseline specification because they contribute to the estimation of the fixed effects.[6]

Figure 1 illustrates the way in which we classify directors.[7] Each circular dot represents a firm, and each triangular dot represents a person. The link between firms (indicated by circles) and persons (triangles) represents an existing employment arrangement. In the example, Mr. P was an independent director of both Firm G and Firm Y in 2013. In March, he received a CNY 300,000 ($48,000) fine because of his negligence in Firm G's financial fraud, so we classify Mr. P as a penalized director. Connected directors are all those who sit on a board with Mr. P at the time of the penalty. In our example, these are Dr. T1, Mr. T2, and Mr.

[6] Refering to Figure 1, control director C1 and C2 may also serve at other unconnected firms, i.e., firms with no connected direcotrs. Excluding observations in these firms will affect the estimation of director fixed effects of C1 and C2.

[7] The example in the Figure 1 is a real case, but we mask the director and firm names.

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T3, who also sit on the board of Firm G. Furthermore, Mr. T4 and Mr. T5 sit on the board of Firm Y, together with Mr. P. Thus, these five independent directors (Dr. T1, Mr. T2, Mr. T3, Mr. T4, and Mr. T5), colored in purple, are considered to be connected to and affected by Mr. P at the time of the penalty.

Since we exclude penalized firms and those with penalized directors, neither Firm G nor Y are in our sample. Mr. T4 had no direct exposure to the penalty since he did not serve on the board of the penalty Firm G, but he is connected to Mr. P via their shared board position in Firm Y. Our main empirical models, which include firm-year or firm-quarter fixed effects, compare the change in voting behavior of the connected director Mr. T4 to that of the unconnected control directors Mr. C1 and Mr. C2 in Firm J. Firm K does not directly contribute to the estimation of the coefficient for the connected dummy since all directors on its board are unconnected.

To provide a more comprehensive overview of our approach to classifying directors through networks, we also present an illustration of a larger part of the overall network in Appendix F. This snapshot from March 2013 contains about 20% of all directors in our sample. The notation is the same as in Figure 1, and the network shown in Figure 1 is a subset of this broader network.

2.4. Disclosure of Board Voting

An important feature of Chinese corporate governance that is not present in most other countries is that companies are required to disclose directors' votes about proposals that are brought to the board. This requirement was introduced in the *Shenzhen Stock Exchange Stock Listing Rules* and *Shanghai Stock Exchange Stock Listing Rules* in December 2004 in an effort to increase the quality of firms' corporate governance. Firms must disclose information on the board meeting date and the contents of discussed proposals, as well as the number of votes in favor and against these proposals. If there is any dissension,

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the firms also must disclose the name of dissenting directors and their reasons for dissenting. However, this voting disclosure only applies to board meetings that discuss material business decisions.[8]

In addition, there is a second legal requirement that helps to identify directors' dissension votes. Since 2004, The CSRC mandates all listed firms to disclose any dissension by independent directors in their annual reports in the same fiscal year.[9] This annual report disclosure requirement complements the board meetings disclosures: if a board meeting does not contain any material business decision, disclosing the number of votes in favor and against a proposal is not legally required, even if there are dissension votes. However, firms must disclose all dissensions of independent directors in their annual reports.

Directors can express the following four types of opinions: consent, reservation, objection, and abstention. Directors are required to offer an explanation if they do not consent. In practice, firms disclose the number of consents, objections, and abstentions, while reservations are not separately revealed.[10] A proposal can be passed only if the number of eligible votes and the consent ratio both exceed certain thresholds.[11] The number of eligible votes is calculated as consent plus objection votes, and the consent ratio is defined as consent votes divided by eligible votes.

Since both objections and abstentions are effectively public statements by a director against a particular proposal, we classify both types as a vote against the proposal (which we refer to as a "dissension vote"). This classification is consistent with Jiang, Wan, and Zhao (2016), who document that abstentions and objections have similar effects.

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[8] What is considered to be a material business decision is determined by a list issued and updated by the regulators from time to time.

[9] See *Code No.2 of Public Company Disclosure, Format and Content of Annual Report*, §29, December 2004.

[10] The regulation prescribes that there are four types of opinion, but in practice, all firms treat reservation as consent or objection depending on the real intention of the director in order to calculate the consent ratio. Therefore, reservations are not separately revealed.

[11] These thresholds are suggested by the *Company Law*. Typically, a proposal can be passed with (1) eligible votes no less than half of the total number of directors and (2) consent ratio larger than 50%. For some critical decisions such as offering external guarantee or merger, the threshold is higher and is bound by specific rules proscribed in the firm policy. For example, "To offer an external guarantee, firm should acquire approvals from at least two thirds of board meeting participants and at least two thirds of independent directors." (37 Interactive Entertainment, April 2020).

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2.5. Data on Voting

Because there exists no comprehensive database on the voting behavior of individual independent directors, we collect these data manually. To do so, we use board meeting disclosures and annual reports of all listed Chinese firms, which we obtain from *Wind Terminal*, a Chinese financial information provider. We first search for signs of dissension in 39,355 annual reports between 2004 and 2019. We extract the related section of the annual report ("independent director dissensions on firm affairs") and search for any signs that dissension occurred in this section. Our code detects if the length of this section is unusually long (typically, firms would only write something like "Independent directors have no dissension throughout the year" if there is no dissension) or if the name of any independent director is mentioned in this section. This approach leads to 1,314 annual reports that potentially contain dissension votes. We then manually read these documents and collect the director-level votes.

Additionally, we consider the board meetings disclosure documents for 263,276 board meetings to ensure that we do not miss any dissensions. We exploit the fact that firms disclose the voting outcomes in similar ways and search for expressions that could indicate dissensions.[12] Examples of such expressions are the verbs: "disagree," "dissent," and "abstain" or verb-noun combinations such as "express dissension" or "show objection."[13] We also extract the number of votes in favor and against each proposal, which must be disclosed in this document. Overall, we identify 7,235 board meeting disclosures with either non-zero dissent votes or any of the previously mentioned expressions. Again, we read these documents manually and collect the director-level votes. After removing duplicates between the board meetings disclosures and annual reports, we end up with 3,494 dissension votes from independent directors on 2,394 unique proposals. Appendix B provides more details about the voting data.

[12] The paragraph that summarizes the voting outcome is similar to the following example: "In the votes, there are 8 consents, 1 objection. Director Mr. Pan disagrees. His reason is that the subsidiary firm is performing well and growing fast, and thus, firm should not sell this subsidiary" (Hubei Shuanghuan, November 25, 2003).

[13] The Chinese words we searched for are "反对" (objection), "弃权" (abstention), "提出异议" (raising dissension), and "表示反对" (expressing objection) etc.

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This process allows us to identify dissension votes. For non-dissension votes, we cannot rely on the annual reports because firms are only required to disclose dissension votes. In the board meetings disclosures, firms disclose meeting dates, proposal titles, and the voting outcome (e.g., five in-favor votes, zero dissensions). In the 263,276 board meeting disclosures, there are on average 3.3 proposals discussed in each board meeting, leading to a total of 878,193 proposals. We assume that all director votes are in favor of a proposal if we did not detect any indications of dissension in the annual reports and the board meetings' disclosures in the previous step. Unfortunately, we cannot directly collect director-level votes in favor of proposals because firms typically do not disclose the names of the directors who vote in favor of a proposal.[14]

We end up with a total of 2,829,808 individual votes of independent directors on proposals, of which 3,494 are dissension votes. Thus, the dissension rate is 0.12% among all votes, and dissensions occur in 0.51% of all meetings. If we aggregate within firms, 2.65% of all listed firms had dissensions in any given year, and 14.5% of all listed firms had at least one dissension during our sample period from 2004 to 2019. We also classify all proposals according to their topics and find that 440,220 are related to finance, 288,148 to governance, 130,340 to personnel, and 19,485 to other topics.[15] Appendix C provides an overview of the distribution of the proposal topics and the corresponding dissension rates. Overall, dissensions appear to be a fairly extreme way for directors to express displeasure with management, which is also reflected by the negative stock market reaction to the publication of dissension votes as documented by Jiang, Wan, and

[14] We could infer this information from the attendees list, but this information is also not always available and, if available, not reported in a standardized way. Directors could not participate in the voting on a proposal for one of two main reasons: (1) they are absent from the meeting, or (2) they have conflict of interests with certain proposals. Thus, although we always know that none of the present directors voted against a proposal, we cannot be sure who voted in favor.

[15] Financial proposals include proposals related to investment decisions, accounting treatment, financing decisions, and financial reporting. Governance proposals include proposals related to internal control, related-party transactions, business strategy, CSR, and shareholders' interests (e.g., profit allocation). Personnel proposals include hiring, promotion, and dismissal of directors and top managers, as well as compensation. For proposals that cannot be captured by our keywords, after carefully examination, we will classify them into $Other$. The classification is done by keyword matching.

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Zhao (2016). When we replicate their event study for our sample in Appendix D, we also find a negative market reaction to dissention votes.

2.6. Regulatory Penalties

In the Chinese capital market, investors mainly rely on regulators to protect their interests.[16] Once a violation is suspected in a listed firm, it is investigated by the regulators. If the investigation reveals that there was indeed a violation, the regulators issue an administrative penalty to the firm and also to the individuals who were involved. If the violation is related to a failure to monitor properly, the regulator will typically also issue a penalty for the involved independent directors for negligence. Appendix E illustrates this regulatory punishment process.

The most important regulations for the capital market are the *Securities Law* and the *Company Law*. The *Securities Law* regulates capital market participants and their behavior, including listed firms, stock exchanges, securities companies (e.g., investment banks, financial advisors), clearing agencies, industry associations, etc. Specifically, *Securities Law* regulates their obligations for the issuance of securities, the trading of securities, mergers and acquisitions, and disclosure. For example, if a listed firm discloses a fraudulent financial statement to the public that causes damages to the investors, not only the firm but also the controlling shareholders, directors, managers, or financial agents can be penalized depending on their role in the law's violation (*Securities Law* 2019, §85). Wang, Yu, and Zhang (2022) document a series of manipulated disclosures regarding foreign operations and investments in the Chinese stock market after Google left China, which illustrates the way in which CSRC punishes after manipulation is found.[17] On the

[16] This practice is different from the U.S., where litigation is a common instrument for shareholders to protect their interests. In December 2019, a revised *Securities Law of China* was enacted in China, which strengthened the legal rights of shareholders and could potentially lead to more shareholder litigations. Beneish et al. (2022) provide discussion on the impacts of the new *Securities Law of China* on independent directors.

[17] For example, Jiangsu Yabaite (002323.SZ) disclosed they had made a 580 million CNY investment in Pakistan in 2015. In fact, they had provided fake Pakistan official documents to investors and regulators. In 2017, CSRC uncovered the fraud and punished Jiangsu Yabaite accordingly. Among other sanctions, the executive director who was directly responsible for the fraud was banned from the securities market for life. CSRC official webpage provides detail about this fraud and the way it was punished: http://www.gov.cn/xinwen/2017-12/16/content_5247703.htm

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other hand, the *Company Law* is a more general law that regulates a wide range of firms' activities throughout their life cycle, including the establishment of a company, general corporate governance, financing, accounting, liquidation, and so on. Moreover, this law also regulates the requirements and obligations of directors and managers. For example, it states that "[d]irectors should be responsible for the consequences of any proposal passed in the board meeting unless there is explicit evidence showing that he/she dissented" (*Company Law* 2013, §112). This statute makes clear that a dissenting vote can indeed protect directors from potential penalties.

In terms of capital market supervision, China has adopted a two-level system. The top-level regulator is the China Securities Regulatory Commission (CSRC), which plays a similar role to the SEC in the U.S. The CSRC can issue administrative penalties to all security market participants. The measures that the CSRC can take when they identify a violation include warnings, monetary fines, bans from the capital market, and the confiscation of illegal gains. The second-level regulators are the two stock exchanges, the Shanghai Stock Exchange (SSE) and the Shenzhen Stock Exchange (SZSE). Those stock exchanges can take disciplinary actions against the listed firms. Because more severe cases are escalated to the CSRC, the punishments from the exchanges are typically mild. For this reason, we focus on the administrative penalties from CSRC in this study.

2.7. Data on Regulatory Penalties

The CSMAR Event Study database collects all penalty events that were announced by the regulators or disclosed by listed firms. This database includes 7,607 penalty events between 1994 and 2019. There are three major types of punishments: warnings, monetary fines, and bans from the capital market. For our analysis, we restrict ourselves to the latter two punishments and exclude cases in which directors received merely a warning. The CSMAR database reports the penalties as a textual description of the event. We use natural language processing to extract person-level punishment information from that text. We find 1,313 cases in which at least one director or manager faces a penalty, leading to 4,534 penalized persons. Among

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them, 4,177 received only a monetary fine, 96 received only a ban, and 261 received both. The average fine in our dataset is 154,032 CNY ($23,955), which is equal to two or three years of independent director compensation. Of the 357 individuals who were banned, 113 were banned forever, and 244 were banned temporarily (on average, for 6.6 years).

We then match the names of these penalized directors to the director database. Most of these 4,534 penalized individuals are top managers or executive directors who do not hold multiple positions and cannot affect other directors through the board network. There are 301 individuals who are linked to 357 penalty events (director can be penalized multiple times), who serve on multiple boards and generate potential spillover effects by changing the perceived risk of connected independent directors. Of these 301 penalized directors, 201 are independent directors, and 100 are executive directors. In our baseline specification, we consider both penalties for independent directors and executive directors. While penalties for independent directors are all linked to negligence in monitoring management, many penalties for executive directors also involve monitoring failures by independent directors.[18]

Table 9 shows that penalties have severe negative consequences for the careers of penalized directors. Our estimates imply that a penalty leads to a 58% decrease in their total salary, a 52% decrease in their number of independent directorships, and a 40% decrease in their salary per directorship, relative to the sample average.

3. Perceived Risk and Director Monitoring

While it is clear that sanctions have an impact on the penalized individual directors, it is harder to observe the way in which they affect the behavior of directors who are not penalized. The extent to which a more aggressive system of penalties can improve corporate governance depends on the way in which

[18] The 100 penalized executive directors are linked to 116 penalty events. The descriptions of these penalties indicate that 92 of them involve penalties for improper monitoring. In a robustness test, we either exclude 116 penalty events related to executive directors or we exclude the 24 penalty events that do not involve penalties for improper monitoring (Appendix I Panel C). The estimates are similar to those in our main specification.

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potential sanctions affect the behavior of directors who are not themselves penalized. However, identifying such network effects is an extremely difficult empirical exercise since it is often difficult to establish causality between a possible penalty and an agent's actions.[19]

3.1. Director connections and perceptions of risk

A penalty to one director could potentially affect behavior of non-penalized directors if this penalty changes their perceived risk of being penalized. Even though all penalties are public information, this change in perceived risk is likely to be higher for directors who are connected to the penalized director for two reasons.

First, the literature on homophily found that people are more willing to interact with peers who have similar backgrounds and are more likely to trust the information from them (see Lazarsfeld and Merton, 1954 and McPherson, Smith-Lovin, and Cook, 2001). This idea implies that information transmission is better when people know one another (Jackson 2020; Huang, Hwang, and Lou 2021). In our setting, the implication is that directors who have a connection with the penalized director are particularly likely to update their assessment of the probability that they will be penalized themselves. As a consequence, they may react more to the penalty than unconnected directors who do not directly learn about the penalty from the penalized director.

Second, the literature has documented that the perceived likelihood of events increases if more attention is paid to them due to the so-called availability heuristic (Tversky and Kahneman 1973, 1974).[20] Availability refers to how easily people can think of similar events or occurrences, and one factor that affects this availability is salience. According to Taylor and Thompson (1982, p. 175), saliency "refers to the

[19] The same issues come up in other contexts. For example, despite many attempts, the large literature that tries to measure the effect of the death penalty or imprisonment on crime still has not reached agreement. For evidence on the effect of the death penalty, see Ehrlich (1975) and Durlauf, Fu, and Navarro (2012). For imprisonment, see Levitt (1996) and Drago, Galbiati, and Vertova (2009).

[20] See DellaVigna (2009) for a survey of the literature on the way in which psychological biases can affect the decision making of individuals and Malmendier (2018) for an overview of behavioral corporate finance.

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phenomenon that when one's attention is differentially directed to one portion of the environment rather than to others, the information contained in that portion will receive disproportionate weighting in subsequent judgments."[21] Or, as Tversky and Kahneman (1974, p. 1127) put it: "[...] the impact of seeing a house burning on the subjective probability of such accidents is probably greater than the impact of reading about a fire in the local paper." In our context, this idea means that a penalty for someone who an independent director personally knows through her board network has a greater effect on her change in the perceived penalty risk than reading about the penalty in news media.

Based on this logic, we compare changes in the behavior of directors who are connected to penalized directors via common directorships (in firms that are unrelated to the penalty) before and after the penalty to those who are not connected to penalized directors. We compare changes in the behavior of connected and unconnected directors in the same year to ensure that any behavioral changes are not caused by differences in the objective penalty risk (e.g., a stricter enforcement by capital market regulators). Observed differences in behavior between the two groups of directors are consistent with the notion that the penalties lead connected directors to update their subjective assessment that they will be penalized themselves and thus will improve their behavior. We emphasize that these estimates likely underestimate the true overall impact of penalties, since a sanction on any director is likely to affect all directors' assessments of the likelihood they will be penalized to some extent, even if they do not personally know the directors who are directly affected. Our empirical estimates only capture the differential change in risk perception between connected and unconnected directors, which is easier to identify than the overall effect.

3.2. Empirical Specification

To evaluate the spillover effects of penalty events in board networks, we use a staggered difference-in-differences model. The first difference is between directors who connect with a penalized director and

[21] See Bordalo, Gennaioli, and Shleifer (2012) for a discussion of saliency theory and its applications to economics.

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directors who do not, and the second difference refers to the voting behavior before and after the connected director is penalized.

While we have director-level data on dissension votes, firms do not usually disclose voting details or participants of board meetings if all directors voted in favor of the proposals. Because not all directors attend all board meetings and participate in the voting of all proposals, we cannot distinguish whether a director voted in favor of a proposal, was absent during a meeting, or was avoided due to a conflict of interests. Thus, we cannot conduct our analysis on the proposal level but have to collapse to the director-firm-quarter level, assuming that each director attends at least one board meeting per quarter. We code our main dependent variable, $Dissension_{i,j,t}$, as one if the independent director *i* voted against at least one proposal in firm *j* during quarter *t*. $Dissension_{i,j,t}$ is set to zero for independent directors for whom we did not detect any dissension during a quarter.[22] We estimate the following model:

$$Dissension_{i,j,t} = \alpha + \beta Connected_{i,t} + \gamma X_{j,t}^{'} + \mu Z_{i,t}^{'} + \delta_i + \delta_j + \delta_y + \varepsilon_{i,j,t}, \quad (1)$$

where *i*, *j*, *t,* and *y* indicate director, firm, quarter, and year, respectively. The dependent variable, $Dissension_{i,j,t}$, is a dummy variable that equals one if independent director *i* has at least one dissension vote in firm *j* during quarter *t* and otherwise zero. $Connected_{i,t}$ is a dummy variable that equals one if director *i* is connected to another director who was penalized before quarter *t* and zero otherwise.[23] $X_{j,t}^{'}$ is a vector of time-varying firm characteristics. $Z_{i,t}^{'}$ is a vector of time-varying director characteristics. The director and firm fixed effects δ_i and δ_j control for any time-invariant director and firm characteristics. The year fixed effects δ_y control for any year-specific effects. In most specifications, we also include firm times

[22] It would be unusual for an independent director not to attend any board meeting in a quarter since, at very least, the quarterly financial report must be approved by the board. As a robustness test, we aggregate the data annually, assuming independent directors attend at least one board meeting per year. The estimates are similar to the results from our baseline model (see Panel D of Appendix I).

[23] For example, if a penalized director received penalty in the second quarter of 2013, the variable *Connected* equals zero in and before the second quarter of 2013 and one afterwards for directors who share a board position with her.

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year (quarter) fixed effects $\delta_{j,y}$ ($\delta_{j,q}$), which additionally control for time-varying firm characteristics. We report t-statistics based on standard errors that are clustered at the director level.[24]

After dropping observations with missing values, our final sample has 351,119 firm-quarter-director observations between 2004 and 2019. It covers 3,505 listed firms and 16,999 independent directors, of whom 723 are connected to a penalized director without experiencing any direct penalty effects. Additional firm-level data for this sample, such as financial conditions, are obtained from CSMAR. We provide summary statistics of the key variables that we use in our analyses in Table 1.

4. Estimates of the Impact of Perceived Risk on Directors' Voting Behavior

4.1. Time Trends

Before providing the formal estimates, we present time trends in regulatory penalties and dissension votes in Figure 2. Both penalties and dissensions have increased substantially over our sample period. In 2004, there were less than 50 penalty events and about 200 dissension votes. By 2019, the numbers of both penalty events and dissension votes have increased by more than a factor of four, to over 200 penalty events and nearly 1,000 dissension votes. Of course, a common trend of penalties and dissension votes is not evidence of a causal relationship but does provide an initial indication that there could be a link.

4.2. Predicting Dissensions

To estimate the relation between penalties and dissensions formally, we present estimates of Equation (1) that identify the impact the threat of regulatory enforcement on voting behavior. We report these estimates in Table 2. We start with a simplified model in column 1 that includes firm controls, firm fixed effects, director fixed effects, and year fixed effects. The coefficient estimate for the *Connected* dummy is 0.210, which is statistically significantly different from zero at the 5 percent level. This finding suggests

[24] The results are similar when we cluster standard errors at the firm level, use two-way clustering at the director and firm level, or use two-way clustering at the firm and year level (See Appendix E).

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that directors do alter their voting behavior in response to a subjective increase in the threat of being punished. In column 2, we consider the possibility that a director who is about to leave the firm is more likely to dissent (directors are limited to two terms). Therefore, we include a dummy variable that equals one if a particular director is in her second term. Also, prior director experience, current compensation, and the current number of director appointments could affect the director's monitoring activity. We include a vector of time-varying director characteristics as additional control variables. The coefficient on *Connected* is essentially unchanged by the inclusion of these controls.

In columns 3 and 4, we add firm times year fixed effects that control for all time-variant and time-invariant firm characteristics. These models effectively compare the voting behavior of connected and unconnected directors in the same firm and year. Including these variables more than doubles the impact of a director's likelihood of being connected to the penalized director—the coefficient on *Connected* increases from 0.210 in column 1 to 0.435 in column 3. In columns 5 and 6, we add firm times quarter fixed effects, which control for time-variant firm characteristics at a more granular level. The coefficient on *Connected* is 0.385 in column 5, which is still statistically significantly different from zero.

The magnitude of the estimated coefficients is substantial. The predicted probability of a dissent increases by between 0.210% (column 1) and 0.471% (column 4) for directors who are connected to a penalized director, relative to the control group. Because the overall dissension rate in our sample is 0.28%, these coefficient estimates imply that the dissension probability increases by between 75% (=0.210/0.28) and 168% (=0.471/0.28) in relative terms. In other words, independent directors' willingness to express dissension approximately doubles after a connected director receives a regulatory penalty.

4.3. Time Pattern of the Effect

We evaluate the time pattern of the changes in voting behavior for two reasons. First, the parallel trend assumption is a critical assumption when making causal inferences when applying the difference-in-

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differences methodology (see Wooldridge, 2002). Second, evaluating whether the change in voting behavior persists or reverts quickly helps us to understand the underlying mechanism better.

To estimate the time pattern of the treatment effects, we adjust the baseline model by replacing the single dummy for connected directors with multiple, time-dependent dummies, as in Beck, Levine, and Levkov (2010). In addition, we estimate the model on the year level instead of the quarter level to reduce noise and show a longer pre- and post-period. Specifically, we estimate the following model:

$$Dissension_{i,j,t} = \alpha + \sum_{y=-5}^{-1} \beta_y D_{i,t}^{y} + \sum_{y=1}^{5} \beta_y D_{i,t}^{y} + \mu Second\ Term_{i,t} + \delta_i + \delta_{j,t} + \varepsilon_{i,j,t} \qquad (2)$$

where i, j, t, and y indicate director, firm, quarter, and year, respectively. $D_{i,t}^{y}$ is a series of dummy variables which equal one if the time difference between the current year and the first regulatory penalty for the director i's connected director is y years, and zero otherwise. For the control group, $D_{i,t}^{y}$ is always zero. We omit $D_{i,t}^{0}$, i.e., the year of the penalty, and use it as the reference period. The other variables are defined in the same way as our baseline model.

The estimates of β are illustrated in Figure 3. Prior to the penalty, connected directors have a similar probability of voting against the management as unconnected directors. However, in the year after the penalty, the probability of dissension increases by 0.4 to 0.6 percentage points for connected directors, relative to unconnected directors. Taking the sample mean of 0.28% as the benchmark, this jump indicates that the likelihood of a dissension vote more than doubles. This effect still exists five years after the penalty event, which suggests that the change in behavior is relatively persistent over time and is not a temporary overreaction.

4.4. Characteristics of Treated and Control Directors

Our estimates compare the change in voting behavior of connected directors to that of similar unconnected directors. The implicit assumption is that the penalty received by peer directors is the reason behind the increase in the dissension probability of connected directors. However, it is possible that

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connected and unconnected directors could differ in other ways, and that these other differences could be what is affecting their behavior. We do emphasize that our analysis is identified through the difference in the responsiveness to a penalty between connected and unconnected directors, and any possible explanation would have to involve differences in characteristics affecting the *change* in directors' voting behavior in response to a penalty.

In Table 3, we compare the characteristics of connected directors to three other groups of directors. The first group is all unconnected directors, who were never connected to a penalized peer. Second, we focus on a smaller group of unconnected directors, who sit on the same board as a connected director in at least one quarter ("control directors"). Third, we include a subsample of control directors who have more than one independent directorship before they enter sample.

When we compare connected to unconnected directors in Table 3, the latter tend to have fewer current and past directorships and earn lower salaries. For control directors, the differences in the number of directorships still exist, although less pronounced, but their salaries are comparable to connected directors. When we impose the additional condition that control directors need to have more than one independent directorship, this group of directors has a comparable number of current and past directorships than connected directors. Control directors with multiple directorships tend to be slightly older than connected directors, but this difference is small (less than one year) and statistically only marginally significant.

We reestimate our main specification using these alternative control groups in Table 4. For comparison, we show our baseline specification results when using all unconnected directors as control group in the first two columns. Across all alternative control groups, we find a positive coefficient estimate for the connected dummy that is statistically significantly different from zero. The effect magnitude when using the alternative control groups is also comparable to our baseline specification. These results indicate that differences in observable characteristics between connected and other directors are unlikely to be the explanation for our result.

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4.5. A Placebo Test

A potentially important source of unobservable differences between connected and unconnected directors is that the former share, by definition, a board seat with a penalized peer while unconnected directors do not. This requirement leads to a selection of a particular group of directors with potentially different unobservable characteristics. To address this possibility, we conduct a placebo test in which we define directors as treated who sit on the same board as a penalized peer, but not at the same time (we require a time difference of at least 12 months).

The estimates reported in Appendix G indicate that the placebo directors did not change their voting behavior relative to the control directors after the peer's penalty. In both specifications, the coefficient estimates on the placebo connected dummy are negative but not statistically significantly different from zero. This result helps to alleviate concerns that endogenous matching between firms and directors leads to differences in unobservable director characteristics, which in turn drive the voting results.

4.6. Penalty Risk over Time

Although the estimates presented above suggest that differences in observable characteristics between connected and unconnected directors are unlikely to affect our results, the existence of unobservable differences is still a concern. One possibility is that in periods when many directors are investigated and penalized, it is the differences in the *actual* enforcement risk exposure, instead of differences in *perceived* risk from penalized peers that leads to differences in the voting behavior between connected and unconnected directors. Indeed, as Figure 2 documents, the number of penalties varies over time. Connected directors could have behaved worse in the past, and once regulatory enforcement intensifies, face a higher penalty risk from their own past negligence. This possibility could make them more cautious and thus more likely to vote against management.

To evaluate this potential concern, we exclude years in which the number of penalties (scaled by the number of listed firms) is in the top tercile and years in which the growth rate of penalties relative to the

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previous years is in the top tercile. The results in Columns (1) to (4) of Appendix H show that these exclusions have relatively little effect on the estimated coefficient for the connected dummy. In the last two columns of this table, we interact the connected dummy with the number of penalties in a given year and find that the interaction term is not statistically different from zero. These results indicate that our main findings are unlikely to be driven by increase in the actual enforcement risk.

4.7. Alternative Model Specifications

In Appendix I, we evaluate whether our main findings are robust to various alternative model specifications. In Panel A, we add director-firm fixed effects in Column (1). These fixed effects control for time invariant differences in voting behavior of individual directors across firms. In Column (2), we add penalty event fixed effects to control for unobserved differences across penalty events. In Column (3), we add both director-firm and penalty event fixed effects. Across all three specifications, the coefficient estimate for the connected dummy is positive, statistically significantly different from zero, and quantitatively similar to our main estimates.

In Panel B, we adjust the way in which we cluster the standard errors. In our main specification, we use robust standard errors clustered by directors. In Columns (1) to (4), we alternatively cluster standard errors by firm, firm and director, firm and year, and director and year. The alternative clustering of standard errors has relatively little effect on the estimated standard errors and the corresponding t-statistics.

In Panel C, we exclude different subsamples. In Column (1), we ignore penalties that were not given for director negligence, such as penalties for insider trading (24 of our 116 penalty events). In Column (2), we ignore the 53 penalty events that only involved non-independent directors, such as executive directors. In Columns (3) and (4), we exclude central government-owned enterprises and state-owned enterprises, respectively. In the last column, we exclude all the aforementioned groups. Across all five specifications, the coefficient estimate for the connected dummy is again positive, statistically significantly different from zero, and quantitatively similar to our main estimates.

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In Panel D, we aggregate the data annually and reestimate our main specifications. The assumption here is that independent directors attend at least one board meeting per year, as compared to one board meeting per quarter in our main specification. Again, the results are largely unchanged.

5. Heterogeneity of the Effect

5.1. Severity of Penalties

In previous sections we have documented that connected directors increase dissension upon observing peer director's penalty. If the effects are indeed driven by connected directors updating their likelihood of receiving a penalty themselves, we should expect updates of greater scale when their peer's penalty is more severe. Consequently, more severe penalties should lead to larger behavioral changes in connected directors. We examine this hypothesis by estimating the extent to which the severity of the penalty affects the voting change of connected directors. Since the size of the monetary fine is often related to the company size, we scale the fine by the total assets of the penalized company. We then divide the sample into two groups and classify events in the top half or the top tercile of all in-sample events as *High Fine* and *High Fine (Tercile)*, respectively, and estimate the equation allowing for different effects in each subsample.

Table 5 documents that the coefficient estimates of *Connected* * *High Fine* and *Connected* * *High Fine (Tercile)* are all positive and statistically significantly different from zero. These results imply that directors connected to more severely penalized peer are significantly more likely to dissent than directors who are connected to penalized peers with smaller penalties. In terms of magnitudes, directors who are connected to a peer in the top half of severity increase their dissension rate by 0.48% (=1*0.481) more than those connected to other penalized directors, which is equivalent to 171% (=0.48/0.28) of the sample average dissension rate. This finding suggests that when a penalty is more severe, its deterrent effect on other directors is larger.

5.2. Background and Gender

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Directors who share common background or gender likely have more interactions with each other during board meetings and board social events, and tend to have a closer relationship than other directors on the same board. In addition, penalties affecting directors who are more similar to connected directors are likely to be more salient to that director. For this reason, we evaluate the extent to which penalties affects more similar connected directors to a greater degree than less similar directors.

We classify the background of each independent director based on her biography as academic, accounting, financial, judicial, or government. For instance, we define a director to have academic background if keywords such as "professor," "lecturer," or "research fellow" are present in a person's bibliography.[25] One person can have multiple backgrounds. For example, an accounting professor is considered to have both an academic and accounting background.[26] Among the 723 connected directors, 79% share at least one background with the penalized director. Specifically, 49% of them share an academic background, 23% share an accounting background, 35% share a financial background, 39% share a judicial background, and 28% share a government background. Based on this information, we construct the variable *Background Overlap* as the number of common backgrounds between the penalized director and the connected director. For the control group director, this variable is set to zero. The dummy variable *Same Gender* equals one if the connected director and the penalized director are both male or female and zero otherwise. For control group directors, *Same Gender* is again set to zero. In our sample, 549 connected directors have the same gender as the penalized director. For 536 of those 549 pairs, both directors are male.

[25] Similarly, a director has accounting background if keywords such as "audit", "ACCA", or "CPA" are found. A person has financial background if keywords such as "finance", "insurance", "CFA", "financial advisor", or "banker" are found. A person has judicial background if keywords such as "lawyer", "judge", "prosecutor", or "legal study" are found. A person has government background if keywords such as "mayor", "party secretary", and several other Chinese words describing different titles of officials are found.

[26] Among all 20,655 persons who have been appointed as independent directors in the CSMAR dataset, 43% have an academic background, 31% have an accounting background, 22% have a financial background, 21% have a judicial background, and 29% have a background as government official. For 15% of independent directors, we cannot detect any of the above-mentioned five backgrounds in their biographies.

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Table 6 presents estimates of how the change in voting of connected directors depends on their background and gender overlap with the penalized peer. The coefficient estimates for the interaction term of *Connected* * *Background Overlap* and *Connected* * *Same Gender* are both positive and statistically significant. The coefficients imply that a one standard deviation increase in the number of common backgrounds by the penalized director and the observing director is associated with a 0.12% (=0.59*0.206) increase in dissension probability, which is equivalent to 43% (=0.12/0.28) of the sample mean dissension rate. If the penalized and connected directors share the same gender, the increase in dissension probability is 0.42% higher than if they have different genders, which is equivalent to 150% (=0.42/0.28) of the sample mean dissension rate. These estimates suggest that directors react more to penalties of peers who share the same background or gender.

5.3. Proposal Type

Proposals can be classified into a number of types, with the most common types being financial, governance and personnel. The distribution of each proposal type and the dissension rates are shown in Appendix C. We consider votes on each type of proposal separately and estimate equations predicting dissensions of each type as a function of penalties, replacing the dependent variable in Eq. (1) with $Dissension_{Fin}$, $Dissension_{Gov}$, or $Dissension_{Per}$. These dummy variables equal one if the independent director votes against at least one proposal that deal with financial, governance, or personnel topics during a quarter, and zero otherwise. Table 7 presents estimates of this specification. The estimated coefficients on *Connected* are all positive and statistically significant at the 5% level for financial and governance-related proposals, but only marginally significant for personnel proposals (t-statistic = 1.82). However, we cannot reject the possibility that all three coefficients are the same.

5.4. Firm-Level Penalty Risk

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We have documented that connected directors are more likely to dissent when their perceived likelihood of penalty increases. It seems likely that this pattern reflects the importance of penalties in corporate governance; it suggests that connected directors exert more efforts in monitoring and dissent when the management needs more discipline. On the other hand, it is also possible that connected directors try to avoid future penalty by increasing dissension regardless of the quality of management. An approach to evaluate the extent to which the spillover affects of penalties affects corporate governance, we examine whether the dissension votes of connected directors are more likely when management quality is lower.

What factors of the firm are correlated with greater needs for monitoring and discipline? To answer this question, we examine the relationship between regulatory sanctions and firm characteristics. Regulatory sanctions are imposed when the regulators believe the firm needs more stringent discipline than what it received from the directors. Therefore, we use regulatory penalty as a proxy for the extent to which the management needs better monitoring and uncover firm characteristics correlated with such needs.

We conjecture that regulatory sanctions are more likely when firms perform poorly and are riskier in general. In addition, firms in which there is a high degree of information asymmetry are potentially the ones regulators deem to rely heavily on board monitoring. To evaluate how these factors actually affect penalty probability, we estimate the following model:

$$Penalty_{j,t} = \alpha + \mu X_{j,t}^{'} + \delta_j + \delta_t + \varepsilon_{j,t} \quad (3)$$

where *j* and *t* index firm and year. $Penalty_{j,t}$ are various penalty measures: $Penalty_{Persons}$ is the number of firm *j*'s insiders who received a penalty in year *t*; $Penalty_{Events}$ is the number of penalties that firm *j* received in year *t*; $Penalty_{Dum}$ equals one if firm *j* received any penalty in year *t,* and zero otherwise. $X_{j,t}^{'}$ is a vector of firm characteristics at the beginning of year *t*. We include *EBITDA*, scaled by total assets, at the end of

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the last fiscal year to measure a firm's profitability. As a measure of information asymmetry, we use firm size (the natural logarithm of total assets) and *High Coverage*, which is a dummy variable that equals one if the firm has an above-average number of analysts that issue forecasts on the firm. We also calculate *CF Volatility* as a measure of the operational risk, which is the standard deviation of the past five years operating cash flow, scaled by total assets. We define *Low CF Volatility* as equal to one if a firm has below average *CF Volatility* in that year and zero otherwise. We include firm fixed effects δ_j and year fixed effects δ_t and report robust standard errors clustered at the firm level.

We present estimates of this equation in Panel A of Table 8. The findings suggest that low profitability, a small size, low analyst coverage, and high cash flow volatility are associated with higher penalty rates, indicating a higher demand for board monitoring. To evaluate whether connected directors adjust their voting behavior more in firms that require highter monitoring, we reestimate Equation (1) interacting *Connected* with the variables that appear to affect the likelihood of penalization. We present these estimates in Panel B of Table 8. The findings suggest that the variables that predict greater monitoring needs also predict a greater change in the voting behavior of connected directors. In particular, connected directors are more likely to dissent in firms with lower profitability, smaller size, lower analyst coverage, and higher cash flow volatility after peer penalty. These findings are consistent with the notion that increased dissension improves corporate governance.

6. Career Consequences of Regulatory Penalties

The final set of estimates we provide concern the long-run effects of penalties for directors. The magnitude of the long-term cost of a penalty to a director will determine how much effort she should exert to avoid receiving such a penalty.

To study the career consequences of penalties empirically, we obtain information on independent directors' compensation from the CSMAR database. Firms must disclose the compensation for each independent director in their annual reports. CSMAR has collected these compensation data since 1999.

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We define $Total\ Salary_{i,t}$ to be the aggregate income from independent directorships of director i in each year t. A change in the total salary can come either from a change in the number of independent directorships or from a change in the compensation per directorship. To distinguish these two effects, we use the employment data of independent directors to calculate the number of independent directorships of director i in year t. Based on their total salary and their number of positions, we calculate the average salary per independent directorship. We then estimate the following model:

$$Ln(Y_{i,t}) = \alpha + \beta Penalizied_{i,t} + \delta_i + \delta_t + \varepsilon_{i,t}$$

where i and t denote director and year, respectively. $Y_{i,t}$ is one of our career measures, that is, $Total\ Salary_{i,t}$, $Positions_{i,t}$, or $Salary\ per\ Position_{i,t}$. $Penalized_{i,t}$ is a dummy that equals one if director i has been punished in any year before year t. We include director fixed effects δ_i and year fixed effects δ_t and estimate robust standard errors clustered at the director-level.

We report the estimates in Table 9. The estimated coefficients on $Penalized$ are negative and statistically significant for all three measures. The coefficients imply that a penalty leads to a 55% decrease in total salary,[27] a 50% decrease in the number of independent directorships, and a 38% decrease in the salary per directorship relative to the sample average. Clearly, these estimates indicate that the consequences of a penalty for a director are substantial. Therefore, it seems plausible that a director would intensify her monitoring efforts to avoid receiving a penalty herself after observing a director she knows receiving a penalty and suffering substantial damage to her career.

7. Conclusion

[27] The sample average *Ln(Total Salary)* is 10.53, equivalent to CNY 37,421 (=$e^{10.53}$) or US$ 5,813. After being penalized, it decreases to 9.725 (=10.53-0.805), equivalent to CNY 16,731 (=$e^{9.725}$) or US$ 2,600. Therefore, the drop in the total salary is 55% (=16,731/37,421-1= $e^{-0.805}$-1). Calculations for Columns 2 and 3 are similar.

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Directors have a fiduciary responsibility to protect shareholders' interests and to comply with regulations, and they can face penalties if they fail to take this responsibility seriously. But what motivates independent directors to confront management and express their own voice in the board room? We examine the threat of being punished by regulators for negligence as one potential reason. The unique setting in China enables us to observe individual directors' actions because the regulator requires their votes on management proposals to be public information. Regulatory penalties for a peer to whom a director is connected via her board network provides us with plausible variation in the regulatory enforcement threat.

We estimate the effect of a peer's penalty on the voting behavior of connected directors using data on 2,829,808 individual votes of independent directors. We find that the likelihood of voting against management proposals approximately doubles after a penalty to a peer director. This effect lasts for several years after the penalty event. The effect is also stronger if the observing and penalized directors share the same professional background or gender and if the observing director is at a firm that is more likely to be penalized. These results provide direct evidence suggesting that the threat of receiving regulatory penalties is an important factor motivating directors.

Although our setting allows us to show that the threat of regulatory penalties affects directors' voting, it does not enable us to finally resolve the question whether this change in behavior is caused by an irrational over-reaction or by rational observational learning. Some of our evidence is not in line with over-reaction, such as the persistence of the effect over time or the finding that directors in firms with higher penalty risk react stronger to peer penalties. However, it is well possible that both rational and irrational factors play a role here. Although it would be interesting to know the exact cause behind the change in directors' behavior, we argue that, from a policy perspective, what matters more is the finding that their behavior changes.

Understanding what motivates directors to monitor is an important issue in corporate governance. This paper documents that the threat of regulatory penalties is an important motivator. This finding aids in our understanding of boards and their actions and also emphasizes the value of penalizing directors who do not fulfill their fiduciary responsibilities. Furthermore, the extent to which a more aggressive system of

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penalties can improve corporate governance depends on the way in which the threat of penalties affects the behavior of directors who are not themselves penalized. Penalties on one director can provide indirect incentives for other directors to monitor management and these indirect incentive should be considered one of the many factors that motivate directors.

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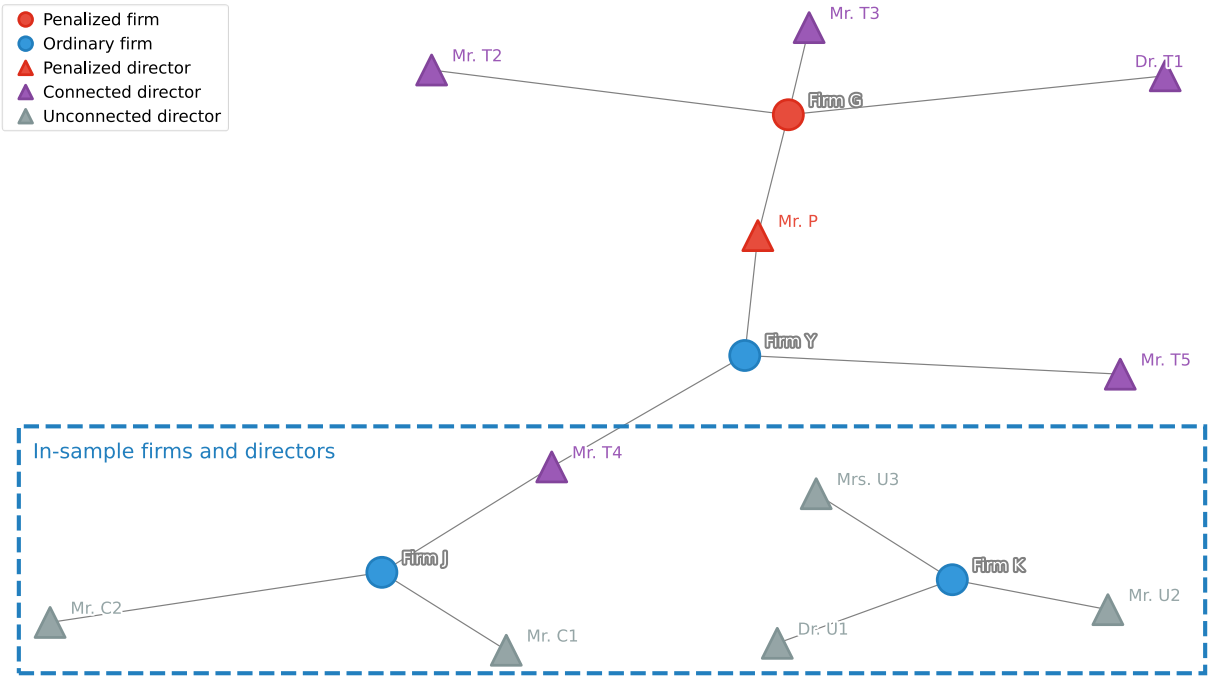


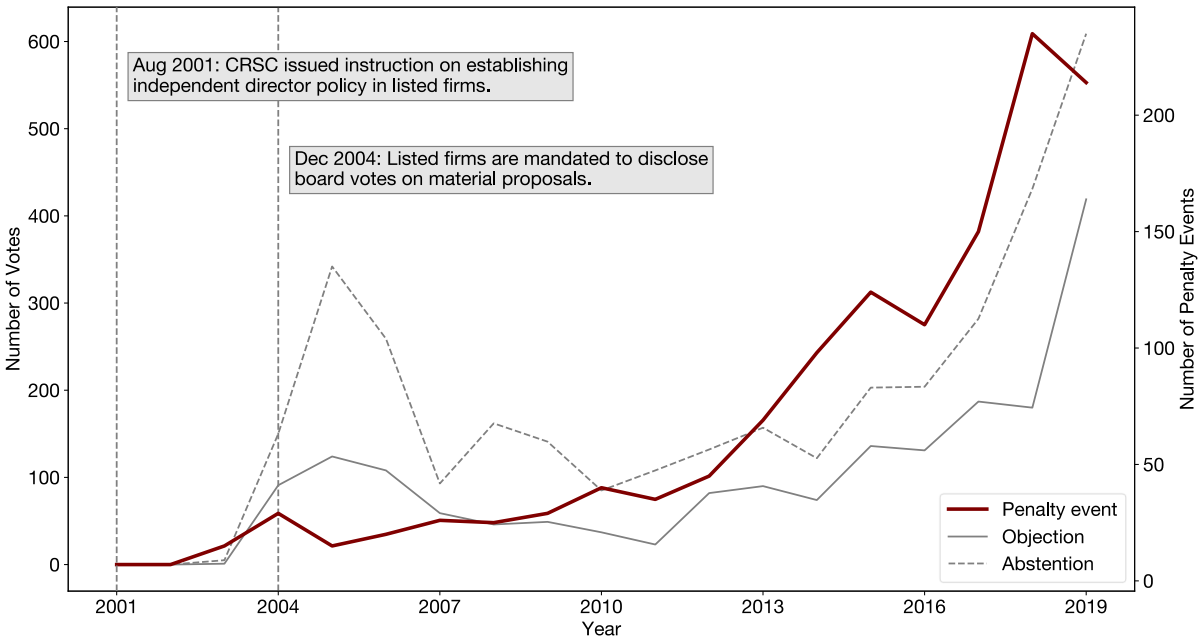
Figure 1. Board Network Illustration

This figure illustrates our setting based on real data (we mask names to protect privacy)

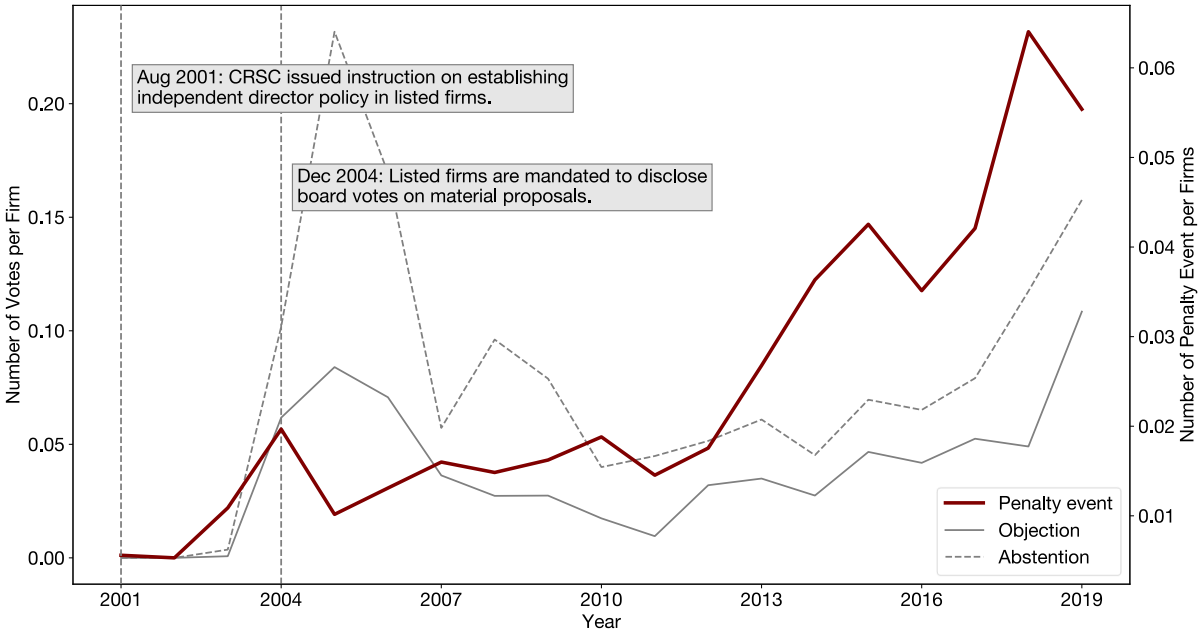
Red circles represent penalized firms and blue circles represent non-penalized firms. Red triangles represent penalized directors, purple triangles represent connected directors, and grey triangles represent control directors. Lines represent the employment relationship between directors (triangles) and firms (circles). Penalized firms and non-penalized firms with penalized directors are excluded from the sample; the blue box shows the firms and directors in our sample.

In this example, Mr. P was fined 300,000 CNY in March 2013 due to his negligence in Firm G (the red circles). At the time he was penalized, he served as an independent director for Firms G and Y. One of his board colleagues at Firm Y, Mr. T4, also served as an independent director for another Firm J. In our estimations, we compare the change in voting behavior, after the penalty event, of Mr. T4 to that of the control directors Mr. C1 and Mr. C2.

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Panel A. Absolute Count



Panel B. Count Scaled by Number of Listed Firms

Figure 2. Dissensions and Penalties over Time

This figure presents the number of penalty events, dissenting votes, and abstentions from 2001 to 2019. The red line represents the number of penalties with monetary punishments each year. The solid grey line represents the number of dissenting votes in each year, and the grey dashed line represents the number of abstentions in each year. Panel A reports absolute counts of votes and events, while Panel B reports the counts scaled by the number of listed firms.

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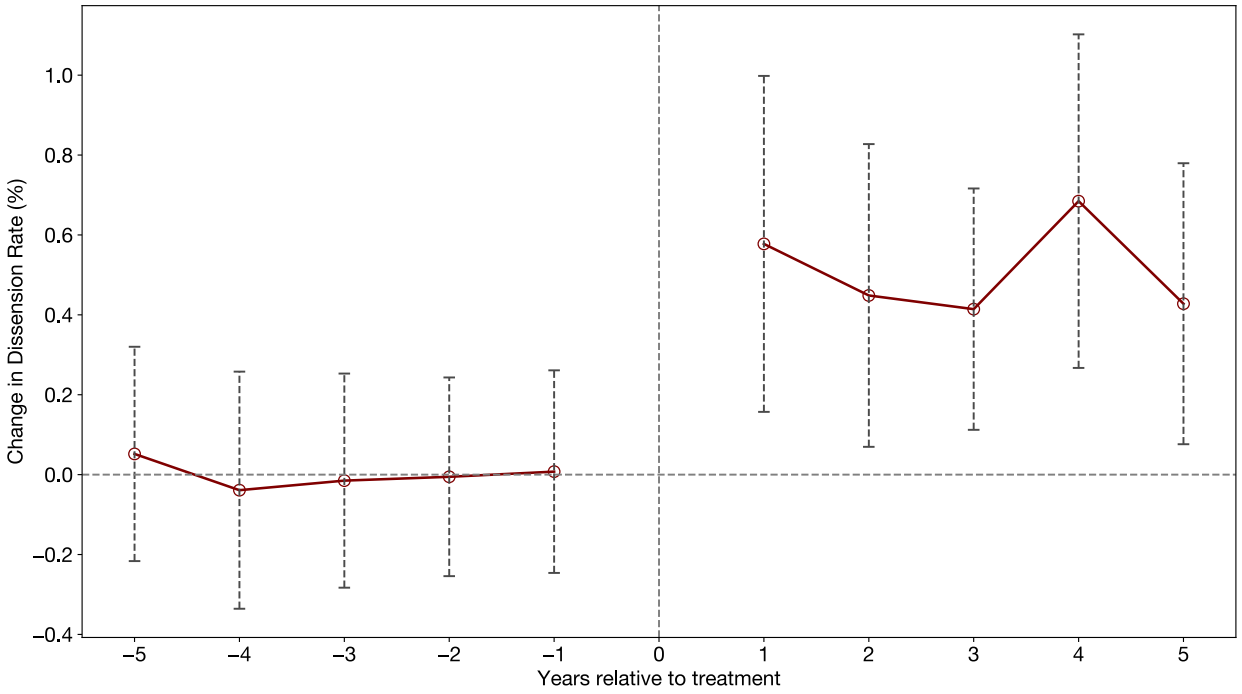


Figure 3. Time Dynamics

This figure illustrates the effect of a penalty observation on independent directors' voting behavior over time. The horizontal axis measures years relative to the time in which the penalty event occurred. The vertical axis measures the change in dissension rate relative to the pre-treatment period average. The dashed lines represent 95% confidence intervals for each estimated coefficient. Standard errors are clustered at the director level.

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Table 1. Summary Statistics

This table presents summary statistics for the key variables that are used in our analyses. The sample period is from 2004 to 2019. Continuous variables are winsorized at the 1% and 99%-level. All variables are defined in Appendix A.

	Number of Obs.	Mean	Std. Dev.	P10	Median	P90
Panel A. Director characteristics						
$Dissension_{j,i,q}$	337,111	0.28	5.27	0	0	0
$Connected_{j,q}$	337,111	0.04	0.19	0	0	0
Second $Term_{j,i,q}$	337,111	0.37	0.48	0	0	1
$\#Directorships_{j,q}$	337,111	1.87	1.18	1	1	4
$Ln(\#Directorships_{j,q})$	337,111	0.99	0.36	0.69	0.69	1.61
$\#Prior\ Ind\ Dir_{j,q}$	337,111	0.58	1.20	0	0	2
$Ln(\#Prior\ Ind\ Dir_{j,q})$	337,111	0.29	0.51	0	0	1.10
$\#Prior\ Exec\ Dir_{j,q}$	337,111	0.05	0.22	0	0	0
$Ln(\#Prior\ Exec\ Dir_{j,q})$	337,111	0.04	0.15	0	0	0
$Salary_{j,i,t}$	337,111	63,460	45,665	23,300	55,000	100,200
$Ln(Salary_{j,i,t})$	337,111	10.49	2.22	10.06	10.92	11.51
Background $Overlap_j$	337,111	0.16	0.59	0	0	0
Same $Gender_j$	337,111	0.08	0.27	0	0	0
Panel B. Firm characteristics						
$Ln(Total\ Assets_{t-1})$	337,111	21.93	1.47	20.39	21.69	23.76
$Cash_{t-1}$	336,984	0.19	0.15	0.05	0.15	0.39
$EBITDA_{t-1}$	337,111	0.04	0.07	-0.01	0.04	0.11
$Leverage_{t-1}$	325,994	0.05	0.08	0	0.01	0.16
High $Coverage_{t-1}$	337,111	0.36	0.48	0	0	1
Low CF $Volatility_{t-1}$	239,479	0.67	0.47	0	1	1

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Table 2. The Impact of Regulator Enforcement Threat on Independent Directors' Voting

This table presents estimates of how connected directors change their voting behavior after a peer's penalty. The dependent variable $Dissension_{j,i,q}$ equals one if independent director q has at least one dissension in firm i during quarter q and zero otherwise. $Connected_{j,q}$ equals one if director j shares a board position with a peer who received a penalty before quarter q and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	$Dissension_{j,i,q}$					
	(1)	(2)	(3)	(4)	(5)	(6)
$Connected_{j,q}$	0.210**	0.235**	0.435***	0.471***	0.385***	0.396***
	(2.05)	(2.30)	(3.46)	(3.89)	(3.25)	(3.51)
$Ln(Total\ Assets)_{i,t-1}$	-0.035	-0.045				
	(-0.90)	(-1.13)				
$Cash_{i,t-1}$	0.629***	-0.620***				
	(-5.16)	(-5.09)				
$EBITDA_{i,t-1}$	-1.828***	-2.047***				
	(-4.95)	(-5.25)				
$Leverage_{i,t-1}$	0.121	0.080				
	(0.42)	(0.28)				
$Second\ Term_{j,i,q}$		-0.007		0.004		0.007
		(-0.26)		(0.15)		(0.27)
$Ln(\#Directorships_{j,q})$		0.026		0.010		-0.023
		(0.43)		(0.19)		(-0.41)
$Ln(\#Prior\ Ind\ Dir_{j,q})$		0.247***		-0.117***		-0.119**
		(-4.72)		(-2.62)		(-2.29)
$Ln(\#Prior\ Exec\ Dir_{j,q})$		0.343*		0.077		0.028
		(1.83)		(0.49)		(0.17)
$Ln(Salary_{j,i,t})$		0.010**		0.017***		0.012**
		(1.99)		(3.39)		(1.97)
Firm FE	Y	Y				
Year FE	Y	Y				
Firm-year FE			Y	Y		
Firm-quarter FE					Y	Y
Director FE	Y	Y	Y	Y	Y	Y
Observations	339,946	325,994	351,118	337,111	351,118	337,111
Adjusted R2	0.081	0.083	0.160	0.163	0.445	0.473
Number of Directors	16,330	15,933	17,400	16,999	17,400	16,999

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Table 3. Director Characteristics

This table presents descriptive statistics for connected directors, all unconnected directors, control directors (i.e. directors who sit on the same board as a connected director), and control directors who have sat on multiple boardsAll variables are defined in Appendix A. The standard errors are clustered at the director level. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	Connected	Unconnected			Control			Control Directorship > 1		
	Mean	Mean	Diff.	t	Mean	Diff.	t	Mean	Diff.	t
$Male_j$	0.85	0.84	-0.01	-0.50	0.84	-0.01	-0.43	0.85	0.00	0.09
Age_j	53.32	52.94	-0.38	-1.04	53.96	0.64	1.43	54.19	0.87	1.75*
Second $Term_{j,i,q}$	0.38	0.37	-0.01	-0.77	0.38	0.00	-0.37	0.39	0.01	1.08
#Ind $Directorships_{j,q}$	2.59	1.74	-0.85	-16.05***	1.92	-0.67	-10.95***	2.56	-0.03	-0.39
#$Directorships_{j,q}$	2.67	1.79	-0.88	-17.05***	1.96	-0.71	-11.66***	2.64	-0.03	-0.55
#Prior Ind $Dir_{j,q}$	1.24	0.50	-0.74	-10.72***	0.68	-0.56	-7.27***	1.17	-0.07	-0.78
#Prior Exec $Dir_{j,q}$	0.08	0.05	-0.03	-3.00***	0.06	-0.02	-1.88*	0.10	0.02	1.15
Salary (1,000 CNY)$_{j,i,q}$	67.79	62.98	-4.81	-3.90***	67.77	-0.15	-0.01	69.38	1.59	0.87
Total Assets (Ln CNY)$_{i,t-1}$	25.85	22.59	-3.26	-1.10	27.06	1.21	0.17	29.52	3.67	0.35
$Cash_{i,t-1}$	0.18	0.19	0.01	1.36	0.19	0.01	0.41	0.18	0.00	0.11
$EBITDA_{i,t-1}$	0.04	0.04	0.00	0.09	0.04	0.00	1.04	0.04	0.00	1.00
$Leverage_{i,t-1}$	0.05	0.05	0.00	-1.09	0.05	0.00	0.91	0.05	0.00	0.65
Observations	974		16,025			2,300			1,205	

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Table 4. Alternative Control Groups

This table presents estimates of how connected directors change their voting behavior after a peer's penalty when using various control groups. As control groups, we consider all unconnected directors (baseline specification), directors that have sat on multiple boards, control directors (i.e., directors who sit on the same board as a connected director), and control directors have sat on multiple. The dependent variable $Dissension_{j,i,q}$ equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise. $Connected_{j,q}$ equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. Director-time controls include $Second\ Term_{j,i,q}$, $Ln(\#Directorships_{j,q})$, $Ln(\#Prior\ Ind\ Dir_{j,q})$, $Ln(\#Prior\ Exec\ Dir_{j,q})$, and $Ln(Salary_{j,i,t})$. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

Control Group	$Dissension_{j,i,q}$					
	Unconnected Directors (baseline specification)		Control Directors		Control Directors > 1 Directorships	
	(1)	(2)	(3)	(4)	(5)	(6)
$Connected_{j,q}$	0.471***	0.396***	0.592***	0.472**	0.532**	0.327*
	(3.89)	(3.51)	(3.07)	(2.52)	(2.48)	(1.65)
Director-time Controls	Y	Y	Y	Y	Y	Y
Firm-year FE	Y		Y		Y	
Firm-quarter FE		Y		Y		Y
Director FE	Y	Y	Y	Y	Y	Y
Observations	337,111	337,111	55,404	55,404	45,875	45,875
Adjusted R2	0.163	0.473	0.136	0.506	0.152	0.505
Num. of Directors	16,999	16,999	3,274	3,274	2,179	2,179

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Table 5. Penalties Severity

This table presents estimates of how penalty severity affects the change in connected directors' voting behavior. *High Fine$_j$* and *High Fine (Tercile)$_j$* are two dummy variables that equal one if director *j* is connected to a penalized directors who's penalty, scaled by the firm's total assets, is in the top half or top tercile of all in-sample events, respectively, and zero otherwise. Equals one if the monetary fine of penalized director, scaled by the total assets of the penalized firm, is above the sample median or in the top tercile, respectively, and zero otherwise. The dependent variable *Dissension$_{j,i,q}$* equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise. *Connected$_{j,q}$* equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. Director-time controls include *Second Term$_{j,i,q}$*, *Ln(#Directorships$_{j,q}$)*, *Ln(#Prior Ind Dir$_{j,q}$)*, *Ln(#Prior Exec Dir$_{j,q}$)*, and *Ln(Salary$_{j,i,t}$)*. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	Dissension$_{j,i,q}$			
	(1)	(2)	(3)	(4)
Connected$_{j,q}$	0.318**	0.179*	0.378***	0.257***
	(2.42)	(1.69)	(3.16)	(2.63)
Connected$_{j,q}$ * High Fine$_j$	0.373**	0.481***		
	(2.12)	(3.00)		
Connected$_{j,q}$ * High Fine (Tercile)$_j$			0.398**	0.512***
			(2.03)	(2.64)
Director-time Controls	Y	Y	Y	Y
Director FE	Y	Y	Y	Y
Firm-year FE	Y		Y	
Firm-quarter FE		Y		Y
Observations	334,633	334,633	334,633	334,633
Adjusted R2	0.163	0.472	0.163	0.472
Number of Years	16,974	16,974	16,974	16,974

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Table 6. Professional Background and Gender Overlap

This table presents estimates of how the overlap of professional backgrounds and gender between the connected and penalize directors affects the change in connected directors' voting behavior. *Background Overlap$_j$* is the number of shared backgrounds (academic, accounting, financial, judicial, and government background are considered) between the penalized peer and director *j*. *Same Gender$_j$* is a dummy variable that equals one if the penalized director and director *j* share the same gender. The dependent variable *Dissension$_{j,i,q}$* equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise. *Connected$_{j,q}$* equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. Director-time controls include *Second Term$_{j,i,q}$*, *Ln(#Directorships$_{j,q}$)*, *Ln(#Prior Ind Dir$_{j,q}$)*, *Ln(#Prior Exec Dir$_{j,q}$)*, and *Ln(Salary$_{j,i,t}$)*. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	Dissension$_{j,i,q}$			
	(1)	(2)	(3)	(4)
Connected$_{j,q}$ * Background Overlap$_j$	0.206**	0.153*		
	(2.57)	(1.82)		
Connected$_{j,q}$ * Same Gender$_j$			0.420**	0.399**
			(2.12)	(2.06)
Connected$_{j,q}$	0.121	0.132	0.143	0.082
	(0.76)	(0.70)	(0.92)	(0.53)
Director-time Controls	Y	Y	Y	Y
Firm-year FE	Y		Y	
Firm-quarter FE		Y		Y
Director FE	Y	Y	Y	Y
Observations	351,118	351,118	351,118	351,118
Adjusted R2	0.160	0.445	0.160	0.445
Number of Directors	17,400	17,400	17,400	17,400

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Table 7. Proposal Types

This table presents estimates of how connected directors change their voting behavior after a peer's penalty for different types of proposals. The sample in Column 1 consists of financial proposals (including accounting treatment, financial reporting, investment, and financing). The sample in Column 2 consists of governance-related proposals (including internal control, related-party transactions, strategy, CSR, and shareholder meetings). The sample in Column 3 consists of personnel-related proposals (including appointment, dismiss, and compensation). The sample in Column 4 consists of all types of proposals. *Fin* is a dummy variable that equals one for financial proposals and zero otherwise. *Gov* is a dummy variable that equals one for governance-related proposals. The dependent variable $Dissension_{j,i,q}$ equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise. $Connected_{j,q}$ equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. Director-time controls include $Second\ Term_{j,i,q}$, $Ln(\#Directorships_{j,q})$, $Ln(\#Prior\ Ind\ Dir_{j,q})$, $Ln(\#Prior\ Exec\ Dir_{j,q})$, and $Ln(Salary_{j,i,t})$. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	$Dissension_{Fin}$	$Dissension_{Gov}$	$Dissension_{Per}$	Dissension
	(1)	(2)	(3)	(4)
$Connected_{j,q}$	0.372**	0.269**	0.203*	0.282***
	(2.42)	(2.34)	(1.82)	(3.00)
$Connected_{j,q}$ * Fin				-0.024
				(-0.41)
$Connected_{j,q}$ * Gov				-0.012
				(-0.22)
Fin				0.101***
				(7.35)
Gov				0.013
				(1.17)
Director-time Controls	Y	Y	Y	Y
Firm-quarter FE	Y	Y	Y	Y
Director FE	Y	Y	Y	Y
Observations	243,161	209,078	157,531	609,770
Adjusted R2	0.503	0.502	0.491	0.406
Number of Directors	15,823	15,639	15,526	15,951

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Table 8. Firm-Level Penalty Risk

This table presents estimates of how firm-level penalty risk affects the change in connected directors' voting behavior. Panel A is a firm-year-level analysis that investigates which firm-level factors affect penalty risk. The dependent variables are $Penalty_{Persons,i,t}$, which is the number of firm insiders who got penalized in firm *i* and year *t*, $Penalty_{Events,i,t}$, which is the number of penalty events in firm *i* and year *t*, and $Penalty_{Dum,i,t}$, which is a dummy variable that equals one if there is any penalty event in firm *i* and year *t* and zero otherwise. The standard errors are clustered at the firm level. Panel B is a director-firm-quarter-level analysis that investigates how firm-level factors affect the voting behavior of connected directors. The dependent variable $Dissension_{j,i,q}$ equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise. $Connected_{j,q}$ equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. Director-time controls include $Second\ Term_{j,i,q}$, $Ln(\#Directorships_{j,q})$, $Ln(\#Prior\ Ind\ Dir_{j,q})$, $Ln(\#Prior\ Exec\ Dir_{j,q})$, and $Ln(Salary_{j,i,t})$. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

Panel A. Which Firm-level Factors Affect Penalty Risk?

	$Penalty_{Persons}$	$Penalty_{Events}$	$Penalty_{Dum}$
	(1)	(2)	(3)
$EBITDA_{i,t-1}$	-0.936***	-0.128***	-0.091***
	(-3.42)	(-4.26)	(-4.35)
$Ln(Total\ Assets)_{i,t-1}$	-0.060**	-0.007***	-0.005***
	(-2.23)	(-2.99)	(-2.74)
$High\ Coverage_{i,t-1}$	-0.047**	-0.001	-0.002
	(-2.11)	(-0.30)	(-0.83)
$Low\ CF\ Volatility_{i,t-1}$	-0.150***	-0.014***	-0.012***
	(-3.88)	(-4.70)	(-4.90)
$Cash_{i,t-1}$	-0.521***	-0.020	-0.025*
	(-3.26)	(-1.18)	(-1.89)
$Leverage_{i,t-1}$	0.312	0.016	-0.002
	(0.79)	(0.72)	(-0.13)
Firm FE	Y	Y	Y
Year FE	Y	Y	Y
Observations	27,887	27,887	27,887
Adjusted R2	0.041	0.058	0.052
Number of Firms	2,680	2,680	2,680

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Panel B. Firm-level factors and the Voting Behavior of Connected Directors

Risk Indicator	$Dissension_{j,i,q}$							
	$EBITDA_{i,t}$		$Ln(Total\ Assets)_{i,t}$		$High\ Coverage_{i,t}$		$Low\ CF\ Volatility_{i,t}$	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$Connected_{j,q}$	0.705***	0.578***	3.887***	3.475***	0.595***	0.486***	1.001***	0.834***
	(3.79)	(3.38)	(3.15)	(2.76)	(4.06)	(3.61)	(3.70)	(3.21)
$Connected_{j,q}$ * Risk	-5.536**	-4.316*	-0.152***	-0.137**	-0.309***	-0.224*	-0.670***	-0.556**
	(-2.37)	(-1.93)	(-2.92)	(-2.56)	(-2.72)	(-1.89)	(-2.87)	(-2.36)
Director-time Controls	Y	Y	Y	Y	Y	Y	Y	Y
Firm-year FE	Y		Y		Y		Y	
Firm-quarter FE		Y		Y		Y		Y
Director FE	Y	Y	Y	Y	Y	Y	Y	Y
Observations	337,111	337,111	337,111	337,111	337,111	337,111	239,479	239,479
Adjusted R2	0.164	0.473	0.164	0.473	0.163	0.473	0.165	0.482
Number of Directors	16,999	16,999	16,999	16,999	16,999	16,999	12,855	12,855

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Table 9. The Impact of Directors' Penalties on their Careers

This table presents estimates of the career consequences of penalties for independent directors. The dependent variables are *#Total Ind Dir$_{j,t}$*, which is the total number of independent directorships that director *j* holds in year *t, Ln(Total Salary$_{j,t}$)*, which is the natural logarithm of director *j*'s total compensation in year *t* across all firms, and Salary per Position$_{j,t}$, which is defined as the natural logarithm of *Total Salary$_{j,t}$* divided by *#Total Ind Dir$_{j,t}$. Penalized* is a dummy variable that equals in years one director *j* has received a regulatory penalty and zero otherwise. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	#Total Ind Dir$_{j,t}$	Ln(Total Salary$_{j,t}$)	Ln(Salary per Position$_{j,t}$)
	(1)	(2)	(3)
Penalized$_{j,t}$	-0.724***	-0.858***	-0.511***
	(-11.40)	(-5.98)	(-3.79)
Director FE	Y	Y	Y
Year FE	Y	Y	Y
Observations	101,508	101,508	101,508
Adjusted R2	0.569	0.298	0.277
#Directors	17,941	17,941	17,941

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Appendix A. Variable Definitions

Variable	Definition	Source
$Dissension_{j,i,q}$	Dummy variable that equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise.	See Appendix B
$Connected_{j,q}$	Dummy variable that equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise.	CSMAR, Own calculation
Second $Term_{j,i,q}$	Dummy variable that equals one if director *j* is in the second term of his/her independent directorship at firm *i* in quarter *q* and zero otherwise.	CSMAR
#Ind $Directorships_{j,q}$	Number of director *j*'s independent directorships in quarter *q*.	CSMAR
#$Directorships_{j,q}$	Number of director *j*'s directorships in quarter *q*. Both independent and executive directorships are considered.	CSMAR
Ln(#$Directorships_{j,q)}$	Natural logarithm of one plus #$Directorships_{j,q}$.	CSMAR
#Prior Ind $Dir_{j,q}$	Number of independent directorships that director *j* in quarter *q* held before the current appointment.	CSMAR
Ln(#Prior Ind $Dir_{j,q}$)	Natural logarithm of one plus #Prior Ind $Dir_{j,q}$.	CSMAR
#Prior Exec $Dir_{j,q}$	Number of executive directorships that director *j* in quarter *q* held before the current appointment.	CSMAR
Ln(#Prior Exec $Dir_{j,q}$)	Natural logarithm of one plus #Prior Exec $Dir_{j,q}$.	CSMAR
$Salary_{j,i,t}$	Monetary compensation of director *j* in firm *i* and year *t*.	CSMAR
Ln(Total $Assets)_{i,t-1}$	Natural logarithm of total assets of firm *i* at the end of the previous fiscal year.	CSMAR
$Cash_{i,t-1}$	Cash and cash equivalent divided by total assets of firm *i* at the end of the previous fiscal year.	CSMAR
$EBITDA_{i,t-1}$	EBITDA divided by total assets of firm *i* at the end of the previous fiscal year.	CSMAR
$Leverage_{i,t-1}$	Long-term debt divided by total assets of firm *i* at the end of the previous fiscal year.	CSMAR
High $Fine_j$	Dummy variable that equals one if director j is connected to a penalized directors who's penalty, scaled by the firm's total assets, is in the top half of all in-sample events and zero otherwise.	CSMAR
High Fine $(Tercile)_j$	Dummy variable that equals one if director j is connected to a penalized directors who's penalty, scaled by the firm's total assets, is in the top tercile of all in-sample events and zero otherwise.	CSMAR
High $Coverage_{i,t}$	Dummy variable that equals one if analyst coverage of firm *i* in year *t* is higher than the average of all in-sample firms in year *t* and zero otherwise.	CSMAR
Low CF $Volatility_{i,t}$	Dummy variable that equals one if the standard deviation of the past five years' operating cash flow, scaled by total assets at the end of the last fiscal year, of firm i in year t is lower than the average of all in-sample firms in year *t*.	CSMAR

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Variable	Definition	Source
Background Overlap$_j$	The number of common background between the penalized peer and director *j*. We consider academic, accounting, financial, judicial, and official backgrounds.	CSMAR
Same Gender$_j$	Equals one if the penalized peer and director *j* have the same gender and zero otherwise.	CSMAR
$CAR_{ER,i}$	Cumulative daily return of firm *i* minus the value-weighted market return	CSMAR
$CAR_{MM,i}$	Cumulative daily return of firm *i* minus the predicted return, which is estimated by the model market. We use an estimation window from 250 to 20 trading days prior to the announcement and each event must have at least 60 trading days in the estimation window.	CSMAR
$CAR_{FF,i}$	Cumulative daily return of firm *i* minus the predicted return, which is estimated by the Fama-French 3-factor model. We use an estimation window from 250 to 20 trading days prior to the announcement and each event must have at least 60 trading days in the estimation window.	CSMAR
$Penalty_{Persons,i,t}$	The number of firm insiders who received a penalty in firm *i* and year *t*.	CSMAR
$Penalty_{Events,i,t}$	The number of penalties a firm received in firm *i* and year *t*.	CSMAR
$Penalty_{Dum,i,t}$	Dummy variable that equals one if there is any penalty event in firm *i* and year *t* and zero otherwise.	CSMAR
#Total Ind $Dir_{j,t}$	Number of director *j*'s independent directorships in year *t*.	CSMAR
Ln(Total $Salary_{j,t}$)	Natural logarithm of the monetary compensation of director *j* in year *t* across all firms.	CSMAR
Ln(Salary per $Position_{j,t}$)	Natural logarithm of Total $Salary_{j,t}$ divided by #Total Ind $Dir_{j,t.}$	CSMAR
Placebo $Connected_{j,q}$	Dummy variable that equals one if director *j* sit on the same board as a peer who received a penalty, but not at the same time (with at least 12 months time lag), and zero otherwise.	CSMAR, Own Calculation
#$Penalties_t$	Number of penalties in year *t*.	CSMAR

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Appendix B. Voting Data Technical Details

B.1. Retrieve disclosures from *Wind Terminal*

In the *Wind Terminal*, the "Firm Announcement" section contains all announcements of publicly listed firms. For board meeting disclosures, we impose two filters: (1) the title must contain "董事会" (board), and (2) the title must contain at least one of the following keywords: "会议" (meeting), "决议" (resolution), "专项说明" (special explanation, a type of disclosure required by CSRC when there is proposal related to material business decisions such as M&A or changing auditor), "意见" (opinion). That means we are looking for combinations such as "董事会决议" (board resolution) or "董事会会议公告" (board meeting announcement). After applying these filters, the *Wind Terminal* returns a list of links that contain the original PDF versions of the disclosure statements. We use the Python "requests" package to download those PDF files, "pikepdf" to unify PDF encoding, and "pdfminer.six" to parse the text and translate the PDF files into plain text files. Another set of firm disclosures is annual reports. We search for disclosures for which the title contains "年报" or "年度报告" (annual report) and exclude those containing "摘要" (abstract version of the annual report), "半年报," or "半年度报告" (interim/semi-annual report). The steps of converting the PDF to plain text are the same as for the board meeting disclosures. In the end, we get 39,355 text files of annual reports between 2004 and 2019 and 335,052 text files for board meeting disclosures announced between January 1, 2004, and June 30, 2020. Six additional months are included to avoid missing delayed disclosures.

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B.2. Identifying potential dissension votes in board meetings disclosures

We use the regular expressions (Python "re" package) to extract text that potentially contains a dissension vote. Specifically, we do the following steps for each collected text file.

1. Number cleaning. Some disclosures show voting statistics in Chinese, such as "两票反对" (two objections, where "两" is number two in Chinese). To simplify the identification of the number of each type of opinion, we first replace all Chinese numbers with Arabic numbers.

2. Drop certain characters. "Control characters" (or "non-printing character") is a computer term describing characters that are used to control the format of the text without any underlying meaning. The most common control character is "\n," which means changing to a new line. In translating the PDF to plain text, there are several misidentified control characters. For example, if the text like "1 objection" appears at the end of one line, leaving "1" in the first line and "objection" in the next line, it will probably be translated into "1 \n objection" in the text file, while the "\n" is a misidentified line break. Another type of formatting character is symbols in disclosure templates. Some templates leave a pair of brackets to fill numbers in, such as "[1] objection". By dropping all these formatting characters, we can get the correct phrase back.

3. Identify the number of each type of opinion. After cleaning the text, we can use a regular expression to extract text, such as "\d+票反对," where "\d+" is a regular expression which means any non-negative Arabic numbers and "票反对" means objection votes. There are multiple similar expressions, such as "弃权票 2" (abstention votes: 2) and "反对人数 3" (number of directors with the objection: 3). We iterate the process of applying the parsers and sampling to find missing

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patterns tens of times and stop when we cannot find any missing pattern among 30 randomly chosen files. After this step, we can identify those disclosures with non-zero dissension.

4. Identify phrases describing dissenting action. As a supplement, we also identify those files with patterns like "投出反对," which is "vote objection" in English. Phrases containing action and a dissension opinion are very likely associated with real dissension. We perform iteration processes similar to the above to find a bunch of patterns. After this step, we can additionally identify disclosures that potentially contain dissension but are not identified in Step 3.

After all these steps, we find 7,235 board meeting disclosures that potentially contain any dissension.

B.3. Identifying potential dissension votes in annual reports

For annual reports, the text cleaning process is similar to the process we apply for board meeting disclosure (Section A.2). Then, we apply the regular expression technique (Python "re" package) to locate the paragraph discussing independent directors' dissension in this fiscal year. The corresponding paragraph is under the section "（二）独立董事对公司有关事项提出异议的情况." In English, it is "Section 2. Situations of Independent Directors' Dissension on Firm Affairs". There are some variations of the phrasing. We first separate sections by section numbers and extract the desired section by keywords "独立董事" (independent directors) and "异议" (dissension) in the title.

Typically, when there is nothing to disclose, this paragraph is short, such as "不适用" (not applicable) or "报告期内独立董事对公司有关事项未提出异议" (there is no dissension

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expressed by independent directors in the reporting period). After going through several annual reports from various years, we decide to use 40 Chinese characters as the threshold. That is to say, if this paragraph is longer than 40 Chinese characters, we will mark it as a potential dissension document. This step gives us 1,314 annual reports that could potentially contain dissension votes.

B.4. Manual check

After all the above-mentioned steps, we have 8,549 documents to be manually checked. We work with three research assistants to read through these documents one by one and record the names of dissenting directors and the proposals with dissension. Then we merge the directors' names with CSMAR's director background dataset to identify independent directors. In the end, we find 3,494 dissension votes. Since it is too time-consuming to read all 374,407 documents manually, we randomly chose an additional 1,000 documents from the documents that we did not classify as potentially including dissension votes. We then manually read them to check if our approach systematically misses dissension votes. However, we did not find any missing dissension votes in those 1,000 documents.

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Appendix C. Dissension across Proposal Types

This table shows the dissension rate for different types of proposals. The data is reported at the proposal level. In Column 1, we report the number of proposals for each type. In Column 2, *Abstention* reports the number of proposals with abstention and without objections from the independent directors. In Column 3, *Objection* reports the number of proposals with objections from the independent director. If one proposal simultaneously contains abstention and objection, it will be classified into a proposal with objection. In Column 4, *Dissension* is the sum of *Abstention* and *Objection*, representing the number of proposals with any type of dissension.

	Number of Proposals (1)	Abstention (2)	Objection (3)	Dissension (4) =(2)+(3)	Dissension Rate (5) =(4)/(1)
Panel A. Financial Proposals					
Investment	142,711	370	169	539	0.38%
Financing	118,670	208	96	304	0.26%
Reporting	106,765	202	88	290	0.27%
Accounting	72,074	135	56	191	0.27%
Subtotal	440,220	915	409	1,324	0.30%
Panel B. Governance Proposals					
Shareholder Interest	116,310	141	111	252	0.22%
Internal Control	67,587	64	44	108	0.16%
Strategy	52,204	38	29	67	0.13%
Related-party Transaction	45,124	73	28	101	0.22%
CSR	6,923	2	0	2	0.03%
Subtotal	288,148	318	212	530	0.18%
Panel C. Personnel Proposals					
Hiring, Promotion, Dismissal	88,842	189	141	330	0.37%
Compensation	41,498	58	28	86	0.21%
Subtotal	130,340	247	169	416	0.32%
Panel D. Summary					
Other	19,485	87	37	124	0.64%
Total	878,193	1,567	827	2,394	0.27%

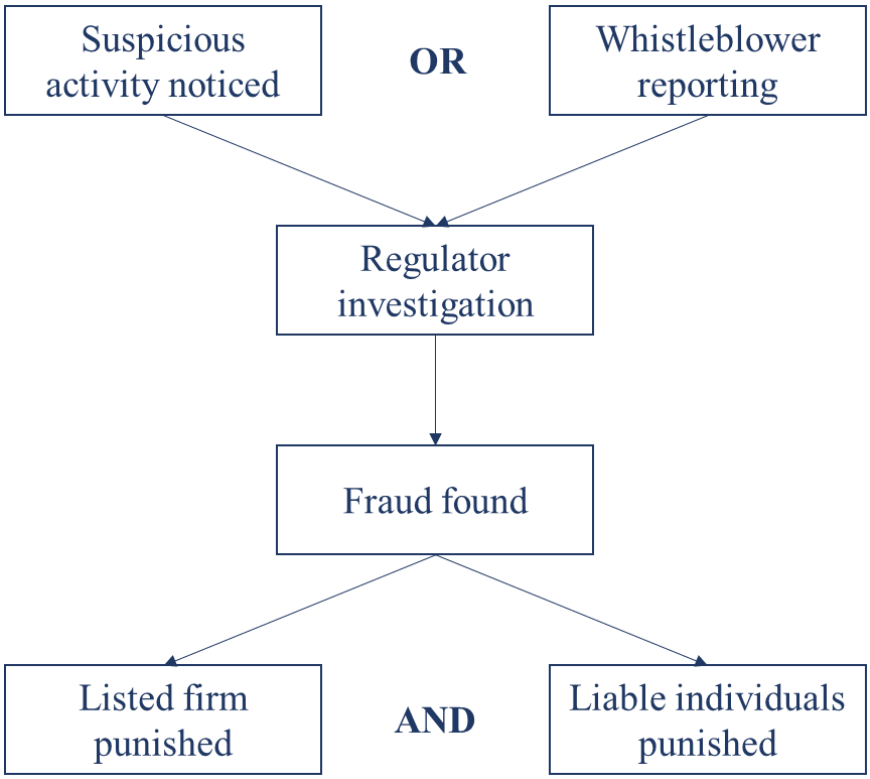
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Appendix D. Market Reaction to Dissensions

This table presents the market reaction when a firm discloses independent directors' dissensions. The CAR_{ER} is the cumulative daily return of firm *i* minus the value-weighted market return. CAR_{MM} is the cumulative daily return of firm *i* minus the predicted return, which is estimated by the model market. CAR_{FF} is calculated in the same way, but we use the Fama-French 3-factor model (Fama and French 1993) instead of the market model. For the market model and the Fama-French 3-factor model, we use an estimation window from 250 to 20 trading days prior to the announcement and each event must have at least 60 trading days in the estimation window. The standard errors are clustered at the firm level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	# of Events	# of Firms	[-10,-3]	[-3,3]	[-3,5]	[-3,10]
$CAR_{ER,i}$	1,157	517	-0.242	-1.057***	-1.174***	-1.197***
			(-0.55)	(-4.15)	(-4.07)	(-3.13)
$CAR_{MM,i}$	1,143	506	-0.383	-0.919***	-1.055***	-1.043**
			(-1.44)	(-3.44)	(-3.36)	(-2.44)
$CAR_{FF,i}$	1,143	506	-0.235	-0.553**	-0.772**	-0.969**
			(-0.98)	(-2.07)	(-2.52)	(-2.42)

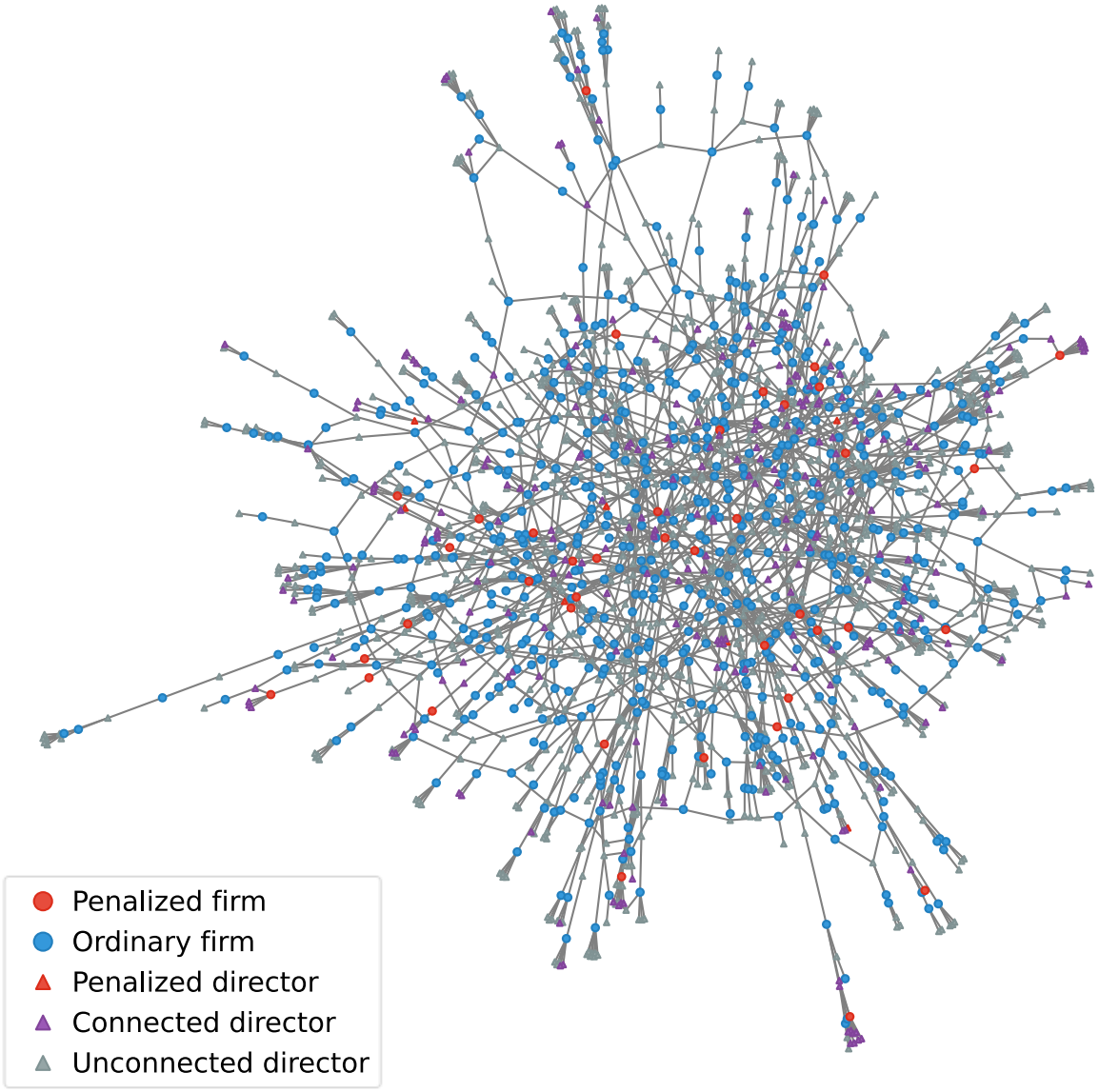
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Appendix E. Regulatory Penalty Process

This figure shows how the regulatory penalty process works in China. The regulator starts an investigation either because they observe suspicious activity (from corporate events like loan default, non-clean audit opinion, or abnormal market returns) or because of whistleblower reports. If the regulator detects fraud, a penalty is issued to both the listed firm and the liable individuals, usually including the executives and independent directors.

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Appendix F. Board Network in 2013 (20 Percent of All Nodes)

This figure shows 20 percent of the nodes of the whole board network in March 2013. Red circles represent penalized firms and blue circles represent non-penalized firms. Red triangles represent penalized directors, purple triangles represent connected directors, and grey triangles represent control directors. Lines represent the employment relationship between directors (triangles) and firms (circles). Penalized firms and non-penalized firms with penalized directors are excluded from the sample.

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Appendix G. Placebo Test

This table presents estimates of how placebo connected directors change their voting behavior after a peer's penalty. A director is placebo connected if she sits on the same board as a penalized director, but not at the same time (we require a minimum difference of 12 months). The dependent variable $Dissension_{j,i,q}$ equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise. $Connected_{j,q}$ equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	Dissension	
	(1)	(2)
Placebo Connected$_{j,q}$	-0.089	-0.091
	(-1.44)	(-1.33)
Second Term$_{j,i,q}$	0.004	0.011
	(0.15)	(0.37)
Ln(#Directorships$_{j,q}$)	0.033	-0.002
	(0.60)	(-0.04)
Ln(#Prior Ind Dir$_{j,q}$)	-0.093**	-0.097*
	(-2.11)	(-1.87)
Ln(#Prior Exec Dir$_{j,q}$)	0.093	0.043
	(0.59)	(0.26)
Ln(Salary$_{j,i,q}$)	0.017***	0.012**
	(3.39)	(1.97)
Firm-year FE	Y	
Firm-quarter FE		Y
Director FE	Y	Y
Observations	337,111	337,111
Adjusted R2	0.163	0.473
Number of Directors	16,999	16,999

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Appendix H. Penalty Risk over Time

This table presents estimates of how connected directors change their voting behavior after a peer's penalty when we explicitly consider changes in penalty risk over time. In Columns (1) and (2), we exclude observations from years that belong to the top tercile with regard to the number of penalties years scaled by number of listed firms. In Columns (3) and (4), we exclude observations from years that belong to the top tercile with regard to the growth rate of the number of penalties years scaled by number of listed firms. In Columns (5) and (6), we interact the *connected* dummy with the number of penalties in a year. The dependent variable $Dissension_{j,i,q}$ equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise. $Connected_{j,q}$ equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. Director-time controls include $Second\ Term_{j,i,q}$, $Ln(\#Directorships_{j,q})$, $Ln(\#Prior\ Ind\ Dir_{j,q})$, $Ln(\#Prior\ Exec\ Dir_{j,q})$, and $Ln(Salary_{j,i,t})$. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

	Dissension					
	Drop top tercile number of penalties years (scaled by number of listed firms)		Drop top tercile penalty growth rate years		Interact with number of penalties in a year	
	(1)	(2)	(3)	(4)	(5)	(6)
$Connected_{j,q}$	0.490***	0.438**	0.568***	0.497***	0.516***	0.426***
	(2.59)	(2.45)	(3.56)	(3.16)	(3.32)	(3.07)
$Connected_{j,q}$ * $\#Penalties_t$					-0.092	-0.062
					(-0.65)	(-0.50)
Director-time Controls	Y	Y	Y	Y	Y	Y
Firm-year FE	Y		Y		Y	
Firm-quarter FE		Y		Y		Y
Director FE	Y	Y	Y	Y	Y	Y
Observations	203,336	203,336	244,140	244,140	337,111	337,111
Adjusted R2	0.147	0.471	0.164	0.470	0.163	0.473
Number of Directors	12,867	12,867	16,156	16,156	16,999	16,999

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Appendix I. Alternative Specifications

This table presents alternative specifications for estimating how connected directors change their voting behavior after a peer's penalty. In Panel A, we report results with different combinations of fixed effects. Specifically, we include penalty fixed effects to control for heterogeneity across penalty events. In Panel B, we report results with different ways of clustering. In Panel C, we exclude the 24 penalty events that are not directly related to monitoring (Columns 1), all 116 penalty events that do not affect independent directors (Columns 2), central government-owned enterprises (Column 3), state-owned enterprises (Column 4), and all above-mentioned criteria (Column 5). In Panel D, we report the results using annual aggregation. The dependent variable $Dissension_{j,i,q}$ equals one if director *j* has at least one dissension in firm *i* during quarter *q* and zero otherwise. $Connected_{j,q}$ equals one if director *j* shares a board position with a peer who received a penalty before quarter *q* and zero otherwise. Firm controls are measured in *t-1*, that is at the end of the previous fiscal year. Firms that received penalties and proposals in which any voting director received a penalty are excluded. Director-time controls include $Second\ Term_{j,i,q}$, $Ln(\#Directorships_{j,q})$, $Ln(\#Prior\ Ind\ Dir_{j,q})$, $Ln(\#Prior\ Exec\ Dir_{j,q})$, and $Ln(Salary_{j,i,t})$. All variables are defined in Appendix A. The standard errors are clustered at the director level. We report t-statistics in parentheses. ***, ** , and * denote significant levels at 1%, 5%, and 10%.

Panel A. Alternative Fixed Effects

	$Dissension_{j,i,q}$		
	(1)	(2)	(3)
$Connected_{j,q}$	0.396**	0.394***	0.373**
	(2.39)	(3.12)	(2.30)
Director-time Controls	Y	Y	Y
Firm-quarter FE	Y	Y	Y
Director FE		Y	
Director-firm FE	Y		Y
Penalty Event FE		Y	Y
Observations	337,111	89,756	89,756
Adjusted R2	0.477	0.477	0.475
Number of Directors	16,999	6,566	6,566

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Panel B. Alternative Clustering

Clustering by	$Dissension_{j,i,q}$			
	Firm	Firm+Director	Firm+Year	Director+Year
	(1)	(2)	(3)	(4)
$Connected_{j,q}$	0.396***	0.396***	0.396***	0.396***
	(3.16)	(3.29)	(4.17)	(4.56)
Director-time Controls	Y	Y	Y	Y
Firm-quarter FE	Y	Y	Y	Y
Director FE	Y	Y	Y	Y
Observations	337,111	337,111	337,111	337,111
Adjusted R2	0.473	0.473	0.473	0.473
Number of Directors	16,999	16,999	16,999	16,999

Panel C. Subsample

Exclude	$Dissension_{j,i,q}$				
	Non-monitoring Penalties	Non-ind. director Penalties	Central gvt-owned firms	State-owned firms	All (1)-(4)
	(1)	(2)	(3)	(4)	(5)
$Connected_{j,q}$	0.385***	0.314**	0.378***	0.495***	0.554***
	(3.31)	(2.28)	(3.16)	(2.95)	(2.61)
Director-time Controls	Y	Y	Y	Y	Y
Firm-quarter FE	Y	Y	Y	Y	Y
Director FE	Y	Y	Y	Y	Y
Observations	332,829	325,843	294,620	182,953	176,184
Adjusted R2	0.472	0.476	0.477	0.492	0.498
Number of Directors	16,871	16,792	15,736	11,787	11,542

Panel D. Yearly Aggregation

	$Dissension_{j,i,q}$		
	(1)	(2)	(3)
$Connected_{j,q}$	0.899***	0.906**	0.901**
	(2.63)	(2.57)	(2.37)
Director-time Controls		Y	Y
Firm-year FE	Y	Y	Y
Director FE	Y	Y	Y
Penalty Event FE			Y
Observations	102,386	91,391	26,746
Adjusted R2	0.455	0.498	0.508
Number of Directors	17,400	16,659	6,276

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