Review of Accounting Studies
https://doi.org/10.1007/s11142-024-09823-x

Actions speak louder than words: environmental law enforcement and audit fees

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Accepted: 1 April 2024

Abstract
Using the staggered establishment of environmental courts in China, we study the effect of environmental law enforcement on audit fees. We find that companies' abnormal audit fees increase significantly after the establishment of a specialized environmental court strengthens environmental law enforcement. Our cross-sectional analyses show that the increase in abnormal audit fees is greater for companies with worse environmental performance and for those in heavily polluting industries. We then assess the channels through which environmental courts affect companies' audit fees and find that the effect of the courts on fees is driven by both audit effort and audit risk and the establishment of a particular type of environmental court (an independent environmental adjudication division). Finally, our results reveal that public concern about environmental protection plays a substitutive role for environmental courts in affecting the increase in audit fees. Our findings suggest that environmental courts aimed at strengthening environmental laws and regulations alter firms' and auditors' behaviors and decisions, having unintended spillover effects on audit pricing.

Keywords Environmental court · Law enforcement · Audit fees · China

JEL classification M42 · Q51 · Q56 · K41 · K42

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Published online: 04 May 2024

"For some business owners or citizens, the fine costs them little, so they do not care about the forfeit. However, they do fear being arrested. Considering this, the environmental courts established in China's Guizhou province play a huge role on this front."

(edited) Long Yongtu, cochairman of the Global CEO Development Conference and former deputy minister of the Ministry of Foreign Trade and Economic Cooperation in China

1 Introduction

Over the past four decades, China has achieved remarkable economic growth, but it has been at the expense of the environment. As a result, the country ranks fourth among countries in the occurrence of natural disasters and is the largest greenhouse gas emitter worldwide.[1] Moreover, hazardous water and air pollutants have significantly harmed the environment and public health, and the consequences are beginning to affect the country's economic situation.[2] In response to these environmental challenges, the Chinese government has established numerous policies, regulations, and laws to stem pollution and protect the environment. Environmental risks induced by these regulations are of growing interest to a range of stakeholders (e.g., Choi and Luo 2021; de Villiers and van Staden 2010; Griffin et al. 2020; Huang et al. 2023; Sharfman and Fernando 2008). Auditors, one of the most important information intermediaries in the capital market, also must consider environmental matters that significantly affect their clients in their audits of financial statements. Auditing Standard No. 1631 for Certified Public Accountants of China, issued in 2006, requires auditors to consider environmental matters and incorporate environmental risk into their assessments to form an overall audit plan.

Despite the increasing importance of environmental matters in auditing as prescribed in auditing standards, there is little academic research on auditors' responses to companies' environmental matters (Chen 2020; Liu et al. 2021; Shen et al. 2021). In fact, few studies explore the ways in which environmental enforcement affects auditors (Zhai et al. 2020; Zhang et al. 2019). We argue that environmental regulations can pose significant risks to regulated entities and auditors only when they believe there is a strong likelihood that substantial fines will be imposed or adverse consequences will result for a violation (Burby and Paterson 1993). Thus, environmental law enforcement becomes especially important when one is considering

[1] See detailed statistics at "Environmental Quality in China—statistics & facts," Statista.

[2] According to the 2021 World Air Quality Report, of 1,374 cities in East Asia, approximately 11% (143 cities) had recorded annual average $PM_{2.5}$ concentrations seven times higher than World Health Organization (WHO) standards. All these cities were located in China. Hotan, located in southwestern Xinjiang, had the country's worst pollution levels, at around 101 μg/m³, more than 20 times than the WHO guideline. In addition, as much as 90% of the country's groundwater is contaminated by toxic waste, as well as farm fertilizers, which means that about 70% of rivers and lakes are unsafe for human use.

consequences for auditors in China. Our study extends the literature by examining the impact of environmental law enforcement on auditors' pricing. Specifically, we consider the staggered establishment of specialized environmental courts across China as a source of exogenous variation in environmental enforcement that can mitigate endogeneity.[3] Environmental courts help judges and prosecutors develop expertise in environmental matters, accelerate trials, and increase the ability of regulators and administrators to prosecute polluters and sanction violators of environmental rules. Therefore, the establishment of an environmental court signals efficient environmental administration and stringent environmental law enforcement.

We draw on both risk and deterrent perspectives to predict the relationship between environmental law enforcement and audit fees. On the one hand, the risk hypothesis argues that companies in an environmental court jurisdiction face more environmental risks stemming from heavy legal monitoring and environmental law enforcement. To mitigate these risks and reduce expected loss, auditors may need to expand the scope of their work, intensify their audit procedures, or allocate additional learning and checking time in the audit process, as per Auditing Standard No. 1631. Moreover, they may charge a risk premium for the higher audit risk originating from the increased business risk, the greater probability of legal action, and the greater probability of damage to their reputations (Campbell and Slack 2011; Niemi 2002). Ultimately, the increased audit effort and audit risk translate into higher audit fees (Bell et al. 2001; Lyon and Maher 2005; Simunic 1980). As a result, this view predicts a positive association between environmental law enforcement and audit fees. On the other hand, the deterrent hypothesis argues that stricter environmental enforcement could create credible deterrents for affected companies to pursuing environmental initiatives and increasing environmental innovation, reducing environmental risks and boosting financial performance (e.g., Zhai et al. 2020; Zhang et al. 2019, 2018). If environmental enforcement aimed at enhancing environmental governance does in fact work, auditors may perceive their clients as having fewer environmental risks and adjust their audit procedures accordingly. In other words, auditors may charge less with the idea that stringent environmental enforcement may serve as a credible deterrent. Therefore, it is unclear whether and how increased law enforcement affects companies' audit fees, a topic that requires empirical investigation.

Using a difference-in-differences research design, we compare the change in audit fees among companies in environmental court jurisdictions (the treatment group) to the change in audit fees among companies in other jurisdictions (the control group) using a sample of publicly listed companies in China from 2006 to 2014. To make our treatment and control groups more comparable on the observable covariates, we run our analyses using propensity score matching (Rosenbaum and Rubin 1983).

[3] The establishment of environmental courts is a top-down reform initiated by China's Supreme People's Court. Initially pilot environmental courts were set up by local people's courts with the support of the Supreme People's Court to address cases of severe environmental pollution. As of 2014, more than 100 such courts had been established in approximately 60 cities across 20 provinces and municipalities. They have witnessed a surge in caseload since their establishment.

Our results show that companies in environmental court jurisdictions pay significantly higher audit fees than companies in other jurisdictions following the establishment of environmental courts, which supports the risk hypothesis.

We also consider another explanation: The positive association between environmental enforcement and audit fees could also be explained from the clients' perspective by the collusion view. That is, stringent law enforcement may trigger negative market reactions once information about companies' poor environmental performance is publicly revealed. These companies may collude with auditors by paying higher audit fees to obtain a clean opinion to offset any harms. According to this view, client companies may maintain long-term relationships with audit firms to decrease the probability of the audit firm changing. Our analysis shows that the probability of the audit firm changing remains unchanged after the establishment of an environmental court, which casts doubt on this alternative explanation.

We conduct a battery of sensitivity checks to confirm our baseline result. First, we assess the validity of the parallel trends assumption underlying our difference-in-differences estimation. Second, we perform two placebo tests to confirm the robustness of our model: (1) We randomly draw a group of treatment companies from our sample and randomly assign the timing of the establishment of the environmental court, and (2) we define a pseudo-event year by bringing event years forward and backward by two years. Third, because propensity score matching is sensitive to the choice of research design, (1) we repeat the tests with the full sample after controlling for firm and year fixed effects, and (2) we use nearest neighbor one-to-one matching to rematch the treatment group to the control group to avoid excessive loss of observations. (3) We also employ a combination of exact and propensity score matching. Specifically, we begin by matching treatment companies with their precise counterparts in corresponding cities, considering GDP percentile and ownership structure. To address other control variables, we employ analogous matching techniques and derive propensity matching scores. (4) We also adopt alternative matching approaches (e.g., entropy balancing and coarsened exact matching), and perform the Oster and permutation tests to further address omitted variable bias. Fourth, we use two alternative measures of audit fees: measures with and without adjustment by the consumer price index. Fifth, we include observations for two, three, and four years before and after the establishment of the environmental court and rerun our main regression analyses. Sixth, to validate the exogeneity of the establishment of environmental courts, we investigate whether variations in the enforcement of environmental regulations align with the degree of environmental pollution at the city level. The analysis substantiates our assumption regarding the exogeneity of environmental court establishment. Seventh, we tackle the potential bias that could emerge when using residuals as the dependent variable, employing three methods proposed by Chen et al. (2018a). Finally, to address the concern that some companies with operations or subsidiaries spread throughout the country may bias our results, we restrict our sample to manufacturers and firms whose subsidiaries are all in the same city. Our results are generally robust to these alternative research designs.

Next, to confirm our risk perspective, we examine whether the influence of the establishment of an environmental court on audit fees varies directly with expected environmental risk. The analysis shows that the increase in audit fees grows when corporate environmental risk rises (i.e., for companies with worse environmental performance and those in heavily polluting industries). These results further corroborate the finding that increased audit fees are mainly driven by increased environmental risks from more vigorous law enforcement.

Subsequently, we assess two potential channels through which environmental courts affect audit fees: audit risk and audit effort. We hypothesize that companies are exposed to greater litigation, reputational, and operational risks when they face tougher environmental enforcement. We thus examine the risk channel by testing the impact of environmental courts on environmental litigation, reputational, and operational risks. Litigation risk is measured as the total number of environmental lawsuits lost divided by the total number of environmental lawsuits for the company. A total of 9,287,624 lawsuits are checked for their relevance to environmental issues and matched with our sample companies to determine this ratio. Reputational risk is measured as the natural logarithm of the total number of negative media articles related to corporate environmental news. More than 12 million news articles published in 485 Chinese newspapers from 2006 to 2014 are analyzed for descriptions of sample companies' environmental activities and their tone (negative, positive, or neutral), following You et al. (2018). Operational risk is measured as the standard deviation of the ratio of the firm's earnings before interest, taxes, depreciation, and amortization to total assets. Our results are consistent with the main arguments that the environmental litigation, reputational, and operational risks of companies located in cities with environmental courts increase after environmental enforcement increases. Moreover, the traditional audit pricing literature shows that audit effort and audit risk affect audit pricing (Hay et al. 2006; Simunic 1980). We thus also investigate whether the increase in audit fees is attributable to additional audit effort. When we measure audit effort using the audit lag, we fail to find a significant relationship between the establishment of an environmental court and audit effort. However, when we measure audit effort using audit quality (proxied by absolute discretionary accruals and financial restatement), the results suggest that treatment companies' audit quality increases after the court is established. The results show that the increase in audit fees may be attributable not only to an audit risk channel but also to an audit effort channel.

Furthermore, we evaluate and quantify the strength of environmental enforcement based on the type of environmental court: independent environmental adjudication divisions (*huan bao shen pan ting*, abbreviated as IEAD) or environmental collegiate panels (*huan bao he yi ting*, abbreviated as ECP). Because of differences in court structure and organization, judicial functions, and duties, environmental collegiate panels have weaker enforcement power than independent environmental adjudication divisions. Using a continuous difference-in-differences design, we find a positive relationship between the strength of environmental law enforcement and the increase in audit fees. Specifically, the establishment of an independent environmental adjudication division does more to reinforce environmental enforcement, resulting in a more substantial increase in audit fees.

Finally, we explore the interplay among public concern, environmental enforcement, and audit fees. Our findings reveal that companies operating in provinces with greater public concern about environmental issues (proxied by the number of complaint letters from the public and the number of environmental nongovernmental organizations in the province) experience a relatively smaller increase in audit fees. This finding suggests a diminishing impact of strengthened environmental enforcement as the level of public concern about environmental protection rises.

This study makes several contributions to the literature. First, it advances the broad literature on audit pricing by being the first to consider the impact of environmental enforcement on audit fees. The traditional literature on auditing pricing focuses on the impact of a range of client and auditor characteristics (e.g., Hay et al. 2006; Simunic 1980). However, little is known about whether auditors price their clients' environmental profiles. Li et al. (2014) and Sharma et al. (2017) examine the relationship between environmental risks and audit fees based on U.S. samples. Li et al. (2014) use several outcome-based indicators of environmental pollution, whereas Sharma et al. (2017) use input-based environmental initiatives as proxies for corporate environmental risks. However, we argue that a significant factor neglected in the literature is whether or to what extent environmental protection laws or regulations can be enforced. Studies generally find that environmental risks or stakeholder demands for greener practices appear to accrue mainly to countries or regions that have stronger legal enforcement (Alrazi et al. 2016; Dalla Via and Perego 2020; Luo et al. 2021). Specifically, Choi and Luo (2021) reveal that investors in countries with stricter legal enforcement are more sensitive to corporate carbon risks and tend to penalize large emitters more in the capital market. Regulatory enforcement is often weak in emerging economies, such as China, because of limited resources or the decentralized nature of the legal system. This makes our research question particularly important. Most important, unlike studies that focus only on the risk perspective, ours draws on both the risk and deterrent perspectives to provide more nuanced insights into the relationship between environmental enforcement and audit fees.

Second, our study adds to the limited literature on environmental enforcement. Although research examines the role of environmental enforcement in engagement in risk taking (Zhang et al. 2019), expenditures for environmental protection (Zhai et al. 2020), firm value (Sam and Zhang 2020) and access to bank loans (Wu et al. 2023), its impact on the decisions and behaviors of auditors is less explored. Our empirical evidence offers essential insights into how auditors address environmental challenges in settings with ever more stringent law enforcement. Our findings suggest that environmental courts aimed at strengthening environmental laws and regulations alter firms' and auditors' behaviors and decisions, having unintended spillover effects on audit pricing.

Third, we use a mixed-methods approach, incorporating archival and textual analysis to yield comprehensive evidence for our research question. Each method has strengths, which, when combined, enhance the depth and validity of our findings. By integrating these diverse methodologies, we cross-validate results and draw more robust conclusions.

This paper has timely implications for policymakers in emerging markets concerned about the effects of law enforcement on real economic activity from auditors' perspective. Our findings provide insights into the impact of environmental risks on auditors' behaviors and pricing. They give corporate managers a better understanding of how more stringent law enforcement is likely to result in an audit fee premium. Also, the results provide auditors with benchmarking data related to the impact of environmental risks. The consequences of environmental courts in China offer lessons to other countries on reforming their legal environments around environmental policy.

The rest of the paper is organized as follows. Section 2 summarizes the development of environmental courts in China. Section 3 reviews the literature and develops the hypothesis. Section 4 explains the research design. Section 5 discusses our results, and Section 6 gives the results of further analyses. Section 7 describes implications and limitations.

2 Background

2.1 Environmental courts in China

As environmental problems in China have worsened, the central government has devised a complex system of environmental laws. To date, the Chinese government has issued 41 bills related to the environment (see Appendix 1). However, given the country's decentralized legal system, they have been inadequately implemented and enforced (Zhang et al. 2019). To address this, civil groups, such as advocacy lawyers, nongovernmental environmental organizations, and public entities have begun filing disputes with the general courts. Under the Chinese legal system, environmental cases are first classified according to their attributes and then referred to criminal, civil, or administrative divisions. However, the particulars of the case are not considered,[4] and the result is a range of problems, such as long delays in hearing the cases, huge case backlogs, poor case management, lack of environmental expertise among decision-makers, narrow definitions of plaintiff standing, high costs and economic risks of litigation, inconsistent decisions, intimidation, and corruption. Traditional courts have been unable to effectively resolve these conflicts and dispense environmental justice.

Environmental courts have developed as an innovative institutional solution to address this issue. The term "environmental courts" as used in this study refers to judicial bodies established to adjudicate environmental protection cases. Unlike traditional courts, environmental courts have judges with more expertise in environmental law, science, and economics. They can also help centralize and streamline the trying of environmental cases, liberalize standings to encourage public interest

[4] Environmental issues involve public and private interests; cases involve the coordination of litigation and alternative dispute resolution as well as the support of substantive and procedural rules. Thus, it is necessary to address environmental cases in specialized trials. Environmental issues are also scientifically complicated: it is difficult to identify victims and perpetrators as well as to ascertain a causal link between pollution and damage. This leads to the need for special rules for environmental litigation. However, traditional judges may only possess general legal qualifications that are inadequate for handling such cases.

lawsuits that regular courts commonly do not accept under existing Chinese law, and ensure more consistent decision-making across cases. Furthermore, environmental courts combine trial and enforcement, which can greatly improve the efficiency of trials and enforcement. Finally, they can indirectly increase governance of polluting companies by prosecuting local governments and bureaus for acting improperly in their environmental administration or failing to act. Therefore, these courts help enforce environmental laws, promote justice, and resolve disputes around the environment, natural resources, land use, and sustainable development.

The first environmental court in China was established in Guiyang (a city in Guizhou province) in 2007. As of 2013, Intermediate People's Courts in 29 cities across China had introduced a total of 32 environmental courts.[5] These courts have jurisdiction over cases based on their region. Different regions have established various models of environmental courts, according to their characteristics, rather than adopting a unified national approach. This decentralized setup reflects a focus on regional issues and allows for more flexible handling of diverse cases. Different provinces and cities require varying environmental expertise and deal with distinct types of environmental cases given their unique environmental issues. For example, environmental issues in Tianjin mainly revolve around pollution in the Haihe River and Bohai Bay, whereas Shanghai and Guangzhou primarily grapple with severe industrial and technological chemical pollution.

Although environmental courts may primarily focus on environmental issues within their geographic area, their jurisdiction is not limited to local companies. They can adjudicate cases involving companies, organizations, and individuals from both within and outside their city or region, provided the cases relate to environmental matters. Moreover, environmental courts often encounter cases concerning pollution and resource disputes that may extend across administrative boundaries. Coordination and comprehensive understanding among higher courts are needed to manage these multijurisdictional cases.

2.2 Environmental courts cases

The number of environmental cases heard by environmental courts has increased in the past decade. For example, 168 cases were filed in and heard by the Kunming environmental court alone in the 10 years after its establishment in 2008: 74 civil, 87 criminal, five administrative, and two enforcement cases.[6] Through environmental courts, defendant companies that willfully and recklessly pollute in pursuit of higher profits are fined and face other sanctions for remedying the damage, such as eliminating obstacles and hazards in facilities, restoring original conditions, compensating victims. For example, Hunnan Water Group Co., Ltd., was fined RMB 560,000 by the Shenyang Intermediate People's Court for excessive discharging

[5] In 2011, the city of Haikou established three environmental courts, and the city of Chongqing established two.

[6] See https://baijiahao.baidu.com/s?id=1622210139430385290&wfr=spider&for=pc for a report by East Money Net (accessed April 30, 2021).

of water. The perpetrators in the Tengger Desert pollution case were made to pay RMB 569 million, and a number of their managers and executives were given prison sentences in separate criminal proceedings. Finally, Hyundai Motors was alleged to have sold a specific type of vehicle between March 2013 and January 2014 that failed to meet Beijing's emissions standards on the grounds of having defective fuel injectors. A case filed by a nongovernmental organization was settled, with Hyundai voluntarily contributing RMB 1.2 million for environmental protection in addition to paying RMB 200,000 to cover the nongovernmental organization's litigation costs (Xie and Xu 2021).

In addition, we compile a comprehensive data set of all environmental lawsuits that have occurred in cities with environmental courts. This allows us to thoroughly analyze these cases, considering such factors as frequency, magnitude, and material significance. We download information on 9,287,624 corporate lawsuits from the website China Judgements Online.[7] We define an environmental lawsuit as one that uses at least one of our 41 identified environmental bills as the legal basis of judgment. This identification process yields a total of 41,981 lawsuits. Please refer to Appendix 2 for a detailed explanation of the data collection process. Subsequently, we match the names of the defendants in these lawsuits with those of our sample companies. To facilitate our analysis, we incorporate several key variables, namely, the number of lawsuits (*LIT*; the total number of lawsuits filed in cities with environmental courts), the number of lawsuits lost (*LITLOSE*; the number of lawsuits that the defendant lost), the amount involved in lawsuits (*LITMONEY*; the financial value of all lawsuits examined), the amount involved in lost lawsuits (*LITLOSEMONEY*; the financial value of lawsuits lost by the defendant), the ratio of lawsuits lost to the total number of lawsuits (*Ratio_LITLOSE*; the proportion of lawsuits that resulted in a loss by the defendant to the total number of lawsuits), the ratio of the amount involved in lost lawsuits to the total amount involved in lawsuits (*Ratio_LITLOSEMONEY*; the proportion of the financial value of lost lawsuits by the defendant to the total financial value of all lawsuits), and the amount involved in lost lawsuits divided by total assets (*Ratio_LITLOSEMONEY_Size*; the financial impact of lost lawsuits by the defendant determined by comparing the value of those lawsuits to the total assets of the entities involved).

Table 1 Panels A and B summarize the descriptive analysis of the environmental court lawsuits in cities that implemented an environmental court at the city and firm levels, respectively. The descriptive statistics in Panel A demonstrate that the average number of lawsuits per environmental court city amounts to 4.285, with a maximum of 70 lawsuits. Similarly, the average number of lawsuits lost per city stands at 3.097, reaching a maximum of 50. These figures demonstrate the substantial volume of environmental litigation occurring in environmental court jurisdictions. Regarding financial factors, the mean amount involved in lawsuits per city is 40.92 million yuan, with

[7] China Judgements Online (https://wenshu.court.gov.cn/), which is hosted by the Supreme People's Court of the People's Republic of China, issues effective judgment documents from people's courts at all levels. As of April 18, 2021, the total number of documents on China Judgements Online had reached 119 million.

Table 1 Descriptive statistics for lawsuits

Variable	N	Mean	Max	
Panel A: Descriptive analysis of lawsuits at the city level				
Variable	**N**	**Mean**	**Max**	
City_LIT	186	4.285	70.000	
City_LITLOSE	186	3.097	50.000	
City_LITMONEY	186	40,923.620	1,189,593.000	
City_LITLOSEMONEY	186	21,682.510	649,978.700	
City_Ratio_LITLOSE	186	0.205	1.000	
City_Ratio_LITLOSEMONEY	186	0.188	1.000	
City_Ratio_LITLOSEMONEY_Size	186	0.054	1.144	
Panel B: Descriptive analysis of lawsuits at the firm level				
Variable	**N**	**Mean**	**Max**	
Firm_LIT	1,337	0.104	3.000	
Firm_LITLOSE	1,337	0.065	2.000	
Firm_LITMONEY	1,337	59.976	5,000.000	
Firm_LITLOSEMONEY	1,337	58.862	5,000.000	
Firm_Ratio_LITLOSE	1,337	0.048	1.000	
Firm_Ratio_LITLOSEMONEY	1,337	0.048	1.000	
Firm_Ratio_LITLOSEMONEY_Size	1,337	0.131	9.969	
Panel C: Univariate mean difference in lawsuits at the city level				
Variable	**After (N = 58)**	**Before (N = 128)**	**MeanDiff**	**t-value**
City_LITMONEY	128,016.800	1,459.528	126,557.272	4.347***
City_LITLOSEMONEY	66,544.590	1,354.376	65,190.218	4.092***
City_LNLITMONEY	5.913	0.767	5.146	9.250***
City_LNLITLOSEMONEY	5.391	0.568	4.823	9.251***
Panel D: Univariate mean difference in lawsuits at the firm level				
Variable	**After (N = 577)**	**Before (N = 760)**	**MeanDiff**	**t-value**
Firm_LITMONEY	91.662	35.920	55.742	2.218**
Firm_LITLOSEMONEY	89.536	35.574	53.962	2.147**
Firm_LNLITMONEY	0.397	0.244	0.153	2.069**
Firm_LNLITLOSEMONEY	0.346	0.213	0.133	1.863*

This table summarizes descriptive analyses of and univariate mean differences in lawsuits before and after the establishment of an environmental court at the city and firm levels. The unit for the amount involved in lawsuits is thousand yuan. N = number of observations

the maximum reaching an impressive 1.19 billion yuan. The average amount involved in lost lawsuits per city is 21.68 million yuan, with a maximum of 649.98 million yuan. These figures highlight the significant financial stakes and the potential impact on companies operating in environmental court jurisdictions. In the unreported table, applying the natural logarithm to the variables at the city level reveals a similar pattern. At the city level, the mean ratio of lawsuits lost to the total number of lawsuits is 0.205, which implies that, on average, approximately 20.5% of lawsuits end up as losses. The ratio of the amount involved in lost lawsuits to the total amount involved in lawsuits stands at 0.188, which indicates that around 18.8% of the total amount involved in lawsuits is lost. On average, approximately 5.4% of aggregated total assets are involved in lost lawsuits. This figure provides additional perspective on the financial impact of litigation in relation to the overall size of cities.

In Panel B, we identify listed companies engaged in environmental lawsuits occurring within an EC jurisdiction and report the corresponding descriptive statistics. On average, there are 0.104 lawsuits per company, with a maximum of three lawsuits. The number of lawsuits lost averages 0.065, with a maximum of two. The mean amount involved in lawsuits is 59,976 yuan, with a maximum of 5 million yuan. Similarly, the mean amount involved in lost lawsuits is 58,862 yuan, reaching a maximum of 5 million yuan. These figures demonstrate the magnitude of lawsuits and their potential financial impact on companies. In the unreported table, we have also taken the natural logarithm of the variables, and the findings are consistent. The mean ratio of lawsuits lost to the total number of lawsuits is 0.048, which suggests that, on average, approximately 4.8% of lawsuits end up as losses. The ratio of the amount involved in lost lawsuits to the total amount involved in lawsuits also stands at 0.048, which indicates that around 4.8% of the total amount involved in lawsuits is lost. These ratios provide insights into the risk and success associated with litigation.

Next we conduct univariate mean difference tests to compare the variables before and after the establishment of environmental courts in the respective regions or companies. The t-test results reported in Panels C and D of Table 1 indicate that the introduction of the courts has led to notable increases in both the number of environmental lawsuits and their financial ramifications.

3 Literature review and hypothesis development

As stipulated in China's Auditing Standard No. 1631 (Consideration of Environmental Matters in the Audit of Financial Statements), auditors must exercise their professional judgment to determine the nature, timing, and extent of audit procedures with respect to risk assessments, internal control, consideration of laws and regulations, and other substantive procedures. For some entities, environmental matters are insignificant. However, for others, environmental matters, in particular violations of laws and regulations, can directly and materially impact the determination of significant liabilities and disclosures in financial statements. Environmental courts increase the possibility that the public will take legal action against companies that pollute to ensure environmental regulations are enforced. We expect that with the establishment of environmental courts, auditors are more likely to price in the added risk and effort originating from their clients' environmental matters.

In cities with environmental courts, environmental risks become more material. According to the materiality perspective, auditors are more likely to screen, analyze, and evaluate risks and obtain sufficient and appropriate audit evidence of environmental matters when their clients are located in these cities. Some environmental matters are unique and may require the use of procedures that are not part of the routine audit. Some clients may change their practices to pursue proactive environmental initiatives and increase environmental innovation, which subsequently requires auditors to invest more time and resources to understand and assess the implications of these changes for financial reporting. This adds to the workload of the auditors and contributes to the cost of the audit.

Audit risk is also expected to increase with the establishment of environmental courts. Studies show that companies in regions with stringent regulations and law enforcement tend to incur higher compliance costs and bear greater indirect consequences (Blacconiere and Northcut 1997; Blacconiere and Patten 1994; Choi and Luo 2021; Jiang and Luo 2018; Shane 1995).[8] In addition, reducing environmental pollution requires large abatement costs and capital expenditures. This creates uncertainty around companies' financial performance and stability, resulting in greater variability in stock returns and increased exposure to financial loss (He et al. 2022). Palmrose (1987) and St. Pierre and Anderson (1984) show that lawsuits are filed against auditors when clients suffer significant losses without declaring bankruptcy. Stice (1991) suggests that clients' financial losses lead to attempts by the impacted parties to recover these losses through litigation aimed at auditors. Pratt and Stice (1994) argue that poor finances could also lead to more frequent audit failures and more business and litigation risks for affected companies. Besides operational and litigation risks, audit failures create tangible losses and negative publicity for auditors, which harms their long-term reputation (Chaney and Philipich 2002). In particular, when companies violate laws and regulations, they may suffer significant adverse consequences of material misstatements (including inadequate disclosure) on environmental matters. Environmental violations may also indicate less integrity among managers and weaker internal controls (Koh and Tong 2013), both of which may pose significant audit risks to auditors (Firth 1997). To protect themselves, auditors may undertake extra, costly efforts to resolve or mitigate these risks, impose a premium to offset them, or both (Bell et al. 2001; Bonner et al. 1998; Carcello and Palmrose 1994; Feroz et al. 1991; Hay et al. 2006; Lyon and Maher 2005; Simunic 1980). Therefore, we would expect an increase in audit fees after the establishment of environmental courts.

However, a counterargument suggests a negative association between environmental courts and audit fees. Given that the courts increase the prosecution and conviction of environmental violators, their establishment increases companies' risk of being fined and suffering reputational damage (Burby and Paterson 1993). This could create incentives for companies to implement proactive environmental initiatives or preempt more stringent environmental regulations and enforcement. For

[8] Examples of compliance costs include costs to collect, manage, and report energy and emissions data for all operations, including costs associated with internal and external auditing of carbon data, internal and external legal advice, contract amendments to support compliance with legislation, management time to interpret and assess the impact of legislation, the establishment of new policies and procedures, and the development of human resources to support a carbon management system. Indirect consequences include potential increases in the price of energy or materials, government penalties, potential extra fees for accessing debt facilities, and the loss of competitive advantages among firms located in regions without an emissions trading scheme (Busch and Hoffmann 2007; Sato et al. 2007; Schneider 2011).

example, Zhang et al. (2019) find that environmental courts push companies to invest more in the environment, which indicates that enforcement helps boost city and firm efforts at environmental management. Zhai et al. (2020) document that companies located in regions with environmental courts take fewer corporate risks than those in other regions, which shows that companies in regions with the courts generally decrease their risks. This evidence suggests that stricter enforcement together with companies' management of environmental risks (e.g., investment in pollution abatement) may result in fewer business risks, higher stock returns, and a greener reputation (Chiu et al. 2017; Damert et al. 2017; Hart 1995; Kim et al. 2014; King and Lenox 2001). Zhang et al. (2018) show that companies located in cities with stricter environmental enforcement tend to have a lower future risk of a stock price crash than those located in cities with lax enforcement. Environmental courts could thus be perceived as an external monitoring and governance mechanism that credibly threatens companies that do not manage their environmental risks. Hence, environmental law enforcement could have a deterrent effect on companies and make them more transparent. Auditors tend to bear fewer audit risks and collect less evidence for clients in these jurisdictions. Consequently, audit fees are expected to be lower for companies subject to stricter law enforcement, characterized by the presence of environmental courts (the deterrent hypothesis). Thus, whether audit fees are positively or negatively associated with environmental courts is an empirical question, and we therefore establish a nondirectional hypothesis in an alternative form:

Hypothesis 1a: *Auditors charge higher audit fees to companies located in cities with environmental courts.*

Hypothesis 1b: *Auditors charge lower audit fees to companies located in cities with environmental courts.*

4 Research design

4.1 Empirical models

We predict that audit fees will change following the establishment of an environmental court in a company's region. To test this hypothesis, we compare the audit fees of treatment group (companies in environmental court jurisdictions) and control group (companies in other jurisdictions). Following Bertrand and Mullainathan (2003), we use a staggered difference-in-differences model controlling for both firm and year fixed effects, which is specified in Eq. (1):

$$ABFEE_{i,t} = \alpha_0 + \alpha_1 ENV\_COURT_{i,t} + \alpha_2 SIZE_{i,t} + \alpha_3 ROA_{i,t} + \alpha_4 LOSS_{i,t} + \alpha_5 LEV_{i,t} + \alpha_6 LIQUIDITY_{i,t} + \alpha_7 SQSUB_{i,t} + \alpha_8 SOE_{i,t} + \alpha_9 HPI_{i,t} + \alpha_{10} OPINION_{i,t-1} + \alpha_{11} BIG4_{i,t} + \alpha_{12} GDPPC_{i,t} + Firmfixedeffect + Yearfixedeffect + \varepsilon_{i,t}, \quad (1)$$

where our dependent variable *ABFEE* represents abnormal audit fees, which captures auditors' unusual compensation for being exposed to additional effort and risk. We estimate abnormal audit fees as the actual audit fee paid by the client to the auditor minus the predicted (normal) audit fee. We discuss the estimation process in Section 4.2. As a robustness test, we also use the total audit fee as an alternative proxy (see Section 5.3.3). Our explanatory variable of interest, *ENV_COURT*, is a dummy variable that equals 1 for firm-year observations in an environmental court jurisdiction in post-environmental court years and 0 otherwise. *ENV_COURT* is the difference-in-differences term,[9] the coefficient of which (α_1) captures the incremental change in audit fees from the pre-period to the post-period for our treatment sample relative to our control sample. Note that jurisdictions established environmental courts in different years. A negative (positive) coefficient for α_1 indicates a decrease (increase) in audit fees after the establishment of a court.

We draw on previous studies and include a range of client characteristics (including size, complexity, and business risks) as well as auditor type and province-level economic development as control variables (e.g., Casterella et al. 2004; Craswell and Francis 1999; DeFond et al. 2000; Francis 1984; Francis and Simon 1987; Seetharaman et al. 2002; Simunic 1980). Specifically, audit fees are expected to increase with the size (*SIZE*) and complexity (*SQSUB*) of the client firm, because larger companies and those with more subsidiaries usually undertake more transactions and have more assets and liabilities and thus require more audit work. *SIZE* is measured as the natural logarithm of total assets. *SQSUB* is measured as the square root of the number of consolidated subsidiaries. We also expect a positive relation between audit fees and client business risk, which we measure using return on assets (*ROA*), the presence of loss making (*LOSS*), leverage (*LEV*), liquidity (*LIQUIDITY*), and modified audit opinion (*OPINION*). *ROA* is calculated as the ratio of net income to total assets. *LOSS* is a dummy variable that equals 1 if the firm reports a loss and 0 otherwise. *LEV* is total debt scaled by total assets. *LIQUIDITY* is the ratio of current assets to current liabilities. *OPINION* is a dummy variable that equals 1 if the firm received a going-concern modified opinion in the prior year and 0 otherwise. We also include a dummy variable for state ownership (*SOE*), which equals 1 if the largest shareholder of the company is the government or a state-owned enterprise and 0 otherwise. We also control for companies' membership in environmentally sensitive industries. *HPI* is a dummy variable that equals 1 if the company belongs to an environmentally sensitive industry and 0 otherwise. Studies suggest the existence of a fee premium for Big Four auditors (Huang et al. 2009). *BIG4* is a dummy variable that equals 1 if the signing auditor is from a Big Four audit firm and 0 otherwise. Audit fees are likely to be higher in wealthy regions, so we expect the per capita GDP to have a positive coefficient. *GDPPC*, a proxy for economic development in the city where the firm operates, is measured as the natural logarithm of the per capita GDP of the city in which the company operates in RMB (based on comparable prices). To control for both heteroscedasticity and autocorrelation, we

[9] *ENV_COURT* here is equivalent to the interaction term *TREAT*×*AFTER*, where *TREAT* is a dummy variable that equals 1 for firms in an environmental court jurisdiction and 0 for other firms. *AFTER* is a dummy variable that equals 1 for the post-environmental court period and 0 for the pre-period. Because there is no within-firm variation in *TREAT* and no within-year variation in *AFTER* when we control for firm and year fixed effects, the coefficients of *TREAT* and *AFTER* are automatically dropped. This explains why our main model Eq. (1) has only the difference-in-differences term *ENV_COURT*.

follow Chy et al. (2021) and cluster standard errors at the firm level.[10] Finally, we include company and year fixed effects to control for potential variation in audit fees across companies and over time (Chen et al. 2018b).

4.2 Estimation of abnormal audit fees

Following prior studies (Asthana and Boone 2012; Eshleman and Guo 2014; Hribar et al. 2014), we estimate abnormal audit fees (*ABFEE*) as the actual audit fee paid by the client to the auditor minus the predicted (normal) audit fee using the residuals from the audit fee model defined in Eq. (2). Specifically, we conduct regressions by year and control for industry fixed effects.

$$\begin{aligned} LNFEE_{i,t} = {} & \beta_0 + \beta_1 SIZE_{i,t} + \beta_2 ROA_{i,t} + \beta_3 LOSS_{i,t} + \beta_4 LEV_{i,t} + \beta_5 LIQUIDITY_{i,t} + \beta_6 INVENTORY_{i,t} \\ & + \beta_7 CATA_{i,t} + \beta_8 REC_{i,t} + \beta_9 BOARD\_IND_{i,t} + \beta_{10} SQSUB_{i,t} + \beta_{11} EMPLOY_{i,t} + \beta_{12} OPINION_{i,t-1} \\ & + \beta_{13} BIG4_{i,t} + Industry\,fixed\,effect + \epsilon_{i,t} \end{aligned} \tag{2}$$

LNFEE, the measure of audit fees, is defined as the natural logarithm of total fees paid for auditing annual financial statements in RMB. These audit fees pertain specifically to financial auditing and have been adjusted by the consumer price index to account for the overall increase in audit fees over time (e.g., Carson et al. 2012; You et al. 2021). *INVENTORY* is the ratio of inventory to current assets. *CATA* is the ratio of current assets (excluding inventory) to total assets. *REC*, which is accounts receivable divided by total assets, reflects operating risk. Finally, we include board independence, which previous research associates with audit fees. *BOARD_IND* is the percentage of independent directors on the board. *EMPLOY* is the square root of the number of employees in the company. The definitions and measurement of other variables are the same as for Eq. (1).[11] Appendix 3 summarizes the definitions and measurement of all variables.

4.3 Matching

To alleviate the concern that differences in audit fees are driven by firm characteristics rather than *ENV_COURT*, we use propensity score matching. We construct a matched control group using a probit regression based on Eq. (3) (e.g., Shipman et al. 2017). Specifically,

[10] MacKinnon and Webb (2017) point out that the more unequal the number of observations for each cluster, the harder it is to derive consistent estimates of standard errors. In our study, the distribution of observations in each city is highly unbalanced. For example, the minimum and maximum numbers of observations in a city are five (Suqian) and 226 (Nanjing), respectively. Therefore, we cluster standard errors at the client company level in our main regression model. Nonetheless, in analyses not reported here, we also cluster standard errors at the city level and find similar results.

[11] In Eqs. (1) and (2), some variables overlap, whereas others are different. To ensure the robustness of our results, we conduct additional analyses including only the variables unique to Eq. (2). We find results consistent with our baseline regression analysis, which confirms the reliability of our findings. Alternatively, we also add one common variable, *SIZE*, as it is commonly controlled for in many studies during both stages of the analysis (Beck et al. 2019; Bentley et al. 2013; deHaan et al. 2013; Hribar et al. 2014; Messier et al. 2011). The results of this extended analysis align with our main analysis, further supporting the validity of our conclusions.

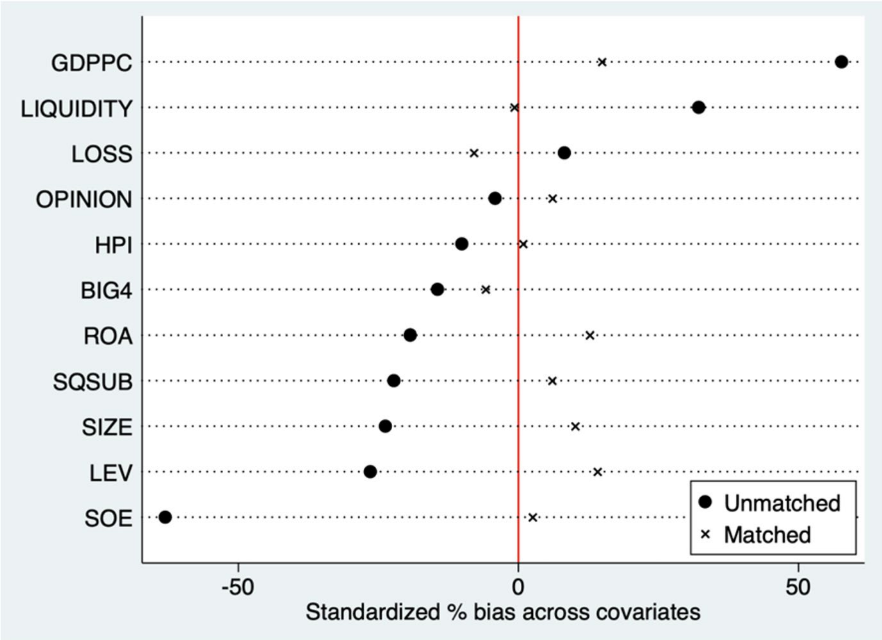

Fig. 1 Standardized percent bias across covariates. This figure plots the change in the standard deviation of each variable before and after propensity score matching

the control firms are selected from any city that never implemented an environmental court during the sample period (i.e., cities other than those listed in Appendix 4). We use nearest neighbor one-to-one matching without replacement and set the caliper to 0.25 standard error of the propensity score (Dehejia and Wahba 2002; Shipman et al. 2017).

$$ENV\_COURT_{i.t} = \gamma_0 + \gamma_1 SIZE_{i,t} + \gamma_2 ROA_{i,t} + \gamma_3 LOSS_{i,t} + \gamma_4 LEV_{i,t} + \gamma_5 LIQUIDITY_{i,t} + \gamma_6 SQSUB_{i,t} + \gamma_7 SOE_{i,t} + \gamma_8 HPI_{i,t} + \gamma_9 OPINION_{i,t-1} + \gamma_{10} BIG4_{i,t} + \gamma_{11} GDPCC_{i,t} + \epsilon_{i,t}. \quad (3)$$

We use the same firm, industry, and city variables as in our main model, shown in Eq. (1), to predict our treatment variable (*ENV_COURT*). Table 2 presents the results of a diagnostic test for differences in each observable firm characteristic between treatment and control companies. None of the differences between the two groups are statistically significant. In addition, the overall mean (median) bias decreases significantly from 25.60% (22.20%) to 7.4% (7.4%). These results suggest that the matching eliminates differences in companies' observable characteristics before the event. Thus, differences in audit fees can plausibly be attributed to the establishment of environmental courts (*ENV_COURT*). To understand the effects of the matching more clearly, we plot the change in the standard deviation of each variable before and after matching in Fig. 1. We find that the standard deviations of all independent variables are effectively reduced.

Table 2 Results of propensity score matching

Variable	Unmatched	Mean		%Bias	%Reduct	T-test	
	Matched	Treatment	Control		|bias|	t-value	p-value
SIZE	U	21.716	21.986	–23.80	57.40	–3.58	0.00
	M	21.780	21.665	10.10		1.16	0.25
ROA	U	0.051	0.064	–19.30	34.10	–2.98	0.00
	M	0.054	0.046	12.70		1.40	0.16
LOSS	U	0.114	0.089	8.20	2.90	1.37	0.17
	M	0.108	0.132	–8.00		–0.82	0.41
LEV	U	0.453	0.508	–26.40	46.70	–4.63	0.00
	M	0.478	0.448	14.10		1.57	0.12
LIQUIDITY	U	0.590	0.523	32.20	97.70	4.90	0.00
	M	0.576	0.577	–0.70		–0.08	0.93
SQSUB	U	3.067	3.441	–22.20	72.90	–3.47	0.00
	M	3.140	3.039	6.00		0.70	0.48
SOE	U	0.381	0.681	–63.10	96.00	–10.20	0.00
	M	0.412	0.400	2.50		0.27	0.79
HPI	U	0.337	0.386	–10.10	91.80	–1.59	0.11
	M	0.356	0.352	0.80		0.09	0.93
OPINION	U	0.037	0.045	–4.20	–45.60	–0.64	0.53
	M	0.040	0.028	6.10		0.74	0.46
BIG4	U	0.029	0.059	–14.40	59.50	–2.03	0.04
	M	0.032	0.044	–5.90		–0.70	0.48
GDPPC	U	10.235	9.706	57.70	74.20	10.54	0.00
	M	10.183	10.046	14.90		1.64	0.10
Sample	Pseudo-R^2	LR χ^2	$p>\chi^2$	Mean bias		Median bias	
Unmatched	0.11	218.88	0.00	25.60		22.20	
Matched	0.02	10.71	0.47	7.40		7.40	

This table presents test statistics for covariate distributions for the treatment and control groups. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles

4.4 Sample and data

We begin with a sample of 371 companies representing publicly listed A-share companies located in cities with environmental courts for the years 2007–2013. As the first environmental court was established in Guiyang (in Guizhou province) in 2007, our sample of treatment companies starts in 2007. Other environmental courts were gradually established elsewhere. There were 32 municipal environmental courts covering 29 cities until 2014, when the Supreme People's Court launched a national environment and resources court.[12] Since then, the

[12] In 2011, the city of Haikou established three environmental courts, and the city of Chongqing established two.

Table 3 Sample selection

Listed companies in EC jurisdictions (2007–2013)	371 companies
Minus	
Companies in financial industries	(4 companies)
Companies with missing financial data	(94 companies)
Companies that are not matched	(69 companies)
Treatment companies	204 companies
Control companies	204 companies
All companies	408 companies
Firm-year sample (2006–2014)	2,991 observations
Minus	
Firm-year observations from years environmental courts were established	(408 observations)
Final sample (2006–2014)	2,583 observations
Treatment group	1,337 observations
Control group	1,246 observations

This table reports the sample selection process

establishment of environmental courts has become a much more common practice. We thus end our treatment sample period in 2013. Appendix 4 summarizes the establishment of environmental courts across China.

To ensure that our treatment companies have at least one year of data in both the pre- and post-environmental court periods, our final sample period covers 2006 to 2014. We eliminate four financial companies. After further excluding eight companies with missing financial data, we obtain a sample of 273 treatment companies (companies in environmental court jurisdictions). After the matching discussed in Section 4.3, our final sample includes 204 treatment companies and 204 control companies and consists of 2,991 firm-year observations. We then delete 408 firm-year observations in the years the environmental courts were established (Huang et al. 2020). Our final sample comprises 2,583 firm-year observations. Table 3 shows the detailed steps of the sample selection.

All financial data are obtained from the China Stock Market & Accounting Research database, the WIND database, and the China Center for Economic Research. Data on the Chinese consumer price index and regional per capita GDP are downloaded from the Economic Science Press and the National Bureau of Statistics of China, respectively. The number of subsidiaries of a parent company is collected manually from the company's annual reports. Auditor data (*BIG4*) are collected manually from the official website of the Chinese Institute of Certified Public Accountants. We manually collect information on the establishment of environmental courts from news reports on the official websites of local people's courts in China. To mitigate the influence of outliers, we winsorize all continuous variables at the first and 99th percentiles.

5 Empirical results

5.1 Descriptive statistics

Table 4 shows descriptive statistics for the full sample for the primary analyses. Panel A reports the distribution of environmental courts by year. The establishment of environmental courts began in 2007 and then increased steadily; 2013 saw the most cities establishing a court. We report the distribution of observations by year and by industry in Panels B and C, respectively. The number of observations in our main regressions increases each year, from 275 in 2006 to 390 in 2014. Most observations are in manufacturing (1,699 observations). Panel D reports descriptive statistics for the dependent and independent variables in our main model. The mean (median) *ABFEE* is -0.083 (–0.095). The mean *ENV_COURT* is 0.223, which suggests that cities with environmental courts account for 22.3% of firm-year observations in our full sample. The mean *SIZE* is 21.77, and average total assets are RMB 5.88 billion. About 9.5% of our sample firm-years experience a net loss during the sample period. The average *ROA* is 0.059, and the mean *LEV* is 0.49. The mean *LIQUIDITY* is 0.552. A total of 54.1% of companies are state owned, and 38.3% of companies operate in environmentally sensitive industries. The percentage of modified audit opinions in the prior year is about 3.8%. Approximately 4.3% of firm-years in our sample are audited by one of the Big Four. The results for the control variables qualitatively resemble those in previous studies (e.g., Su and Wu 2017; Wu and Ye 2020).

5.2 Correlation analysis

Table 5 provides Pearson and Spearman correlations between variables in our main analyses. Both sets of coefficients show that abnormal audit fees are significantly positively correlated with *ENV_COURT*, which provides preliminary evidence for the risk hypothesis. The strongest correlation is between *ROA* and *LOSS* (0.562); the remaining variables have no correlation stronger than 0.50. We also calculate variance inflation factors. All variables have a variance inflation factor less than 2.98, and the overall mean is 1.65, which indicates that multicollinearity is not a serious concern in our regression model (data not shown).

5.3 Regression analyses

5.3.1 The effect of environmental courts on audit fees

Table 6 reports the main results. In Column (1), we include only our main variable of interest, *ENV_COURT*, and, in Column (2), we include *ENV_COURT* and all control variables. We interpret our results based on the full model presented in Column (2). This model is highly significant at $p < 0.01$, and the explanatory

Table 4 Descriptive statistics

Panel A: Establishment of environmental courts by year					
Year	**N (Environmental Courts)**	**N (ECPs)**	**N (IEADs)**	**N (Cities)**	**N (Provinces)**
2007	1	0	1	1	1
2008	3	1	2	3	2
2009	0	0	0	0	0
2010	1	0	1	1	1
2011	10	2	8	7	5
2012	4	1	3	4	3
2013	13	6	7	13	6
Total	32	10	22	29	18
Panel B: Distribution of firm-year observations by year					
Year	**N**				
2006	275				
2007	261				
2008	249				
2009	292				
2010	295				
2011	258				
2012	317				
2013	246				
2014	390				
Total	2,583				
Panel C: Distribution of firm-year observations by industry					
Industry	**N**				
Agriculture, forestry, animal husbandry, and fishery	29				

Table 4 (continued)

Mining	46							
Manufacturing	1,699							
Production and supply of electric power, gas, and water	76							
Construction	56							
Wholesale and retail trade	178							
Transportation, storage, and postal services	115							
Accommodation and food	22							
Information transfer, computer service, and software	42							
Real estate	196							
Leasehold and business service	27							
Scientific research and technical service	1							
Water conservancy, environment and public institution management	13							
Neighborhood services and other services	12							
Cultural, physical, and entertainment	6							
Other	65							
Total	2,583							
Panel D: Summary statistics for main variables								
Variable	**N**	**Mean**	**SD**	**Min**	**P25**	**P50**	**P75**	**Max**
ABFEE	2,583	–0.083	0.371	–0.968	–0.326	–0.095	0.156	0.999
ENV_COURT	2,583	0.223	0.417	0.000	0.000	0.000	0.000	1.000
SIZE	2,583	21.770	1.128	18.950	20.970	21.700	22.430	25.500
ROA	2,583	0.059	0.065	–0.199	0.031	0.052	0.086	0.305
LOSS	2,583	0.095	0.293	0.000	0.000	0.000	0.000	1.000
LEV	2,583	0.490	0.198	0.051	0.349	0.502	0.642	0.999
LIQUIDITY	2,583	0.552	0.211	0.077	0.402	0.570	0.703	0.968

Table 4 (continued)

SQSUB	2,583	3.150	1.575	1.000	2.000	2.828	3.873	9.381
SOE	2,583	0.541	0.498	0.000	0.000	1.000	1.000	1.000
HPI	2,583	0.383	0.486	0.000	0.000	0.000	1.000	1.000
OPINION	2,583	0.038	0.191	0.000	0.000	0.000	0.000	1.000
BIG4	2,583	0.043	0.204	0.000	0.000	0.000	0.000	1.000
GDPPC	2,583	9.864	0.937	6.987	9.290	9.991	10.630	11.120

This table reports descriptive statistics. N = number of observations; EC = environmental court; ECP = environmental collegiate panel; IEAD = independent environmental adjudication division; P25 = 25th percentile; P50 = 50th percentile; P75 = 75th percentile. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles

Table 5 Correlations analysis

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
(1) *ABFEE*	1	0.089***	–0.124***	–0.023	–0.014	0.012	0.035*	–0.012	–0.201***	–0.054***	0.006	0.216***	0.123***
(2) *ENV_COURT*	0.091***	1	0.209***	–0.065***	–0.018	0.058***	0.039**	0.113***	–0.040**	–0.008	–0.048**	–0.023	0.111***
(3) *SIZE*	–0.088***	0.198***	1	0.127***	–0.152***	0.350***	0.081***	0.457***	0.175***	–0.069***	–0.169***	0.227***	0.104***
(4) *ROA*	–0.053***	–0.047**	0.162***	1	–0.492***	–0.205***	0.073***	0.058***	–0.080***	0.026	–0.091***	0.050**	0.054***
(5) *LOSS*	–0.003	–0.018	–0.152***	–0.562***	1	0.127***	–0.152***	–0.093***	0.02	0.077***	0.150***	–0.017	–0.041**
(6) *LEV*	0.019	0.055***	0.348***	–0.245***	0.131***	1	0.081***	0.257***	0.098***	–0.051***	0.026	0.032	–0.047**
(7) *LIQUIDITY*	0.036*	0.045**	0.077***	0.094***	–0.152***	0.080***	1	0.180***	–0.089***	–0.295***	–0.074***	–0.082***	0.166***
(8) *SQSUB*	0.017	0.104***	0.476***	0.045**	–0.082***	0.260***	0.184***	1	–0.006	–0.127***	–0.083***	0.089***	0.118***
(9) *SOE*	–0.181***	–0.040**	0.190***	–0.043**	0.02	0.100***	–0.106***	–0.009	1	0.027	–0.061***	0.097***	–0.238***
(10) *HPI*	–0.047**	–0.008	–0.070***	0.050**	0.077***	–0.055***	–0.282***	–0.131***	0.027	1	0.006	–0.039**	–0.106***
(11) *OPINION*	0.006	–0.048**	–0.187***	–0.125***	0.150***	0.025	–0.084***	–0.072***	–0.061***	0.006	1	–0.032	–0.074***
(12) *BIG4*	0.289***	–0.023	0.290***	0.042**	–0.017	0.037*	–0.093***	0.144***	0.097***	–0.039**	–0.032	1	0.002
(13) *GDPPC*	0.114***	0.079***	0.090***	0.047**	–0.055***	–0.048**	0.171***	0.095***	–0.227***	–0.092***	–0.095***	0.002	1

This table provides Pearson and Spearman correlations. Spearman (Pearson) correlations are presented above (below) the diagonal. Please find definitions of variables in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively

Table 6 The effect of environmental courts on abnormal audit fees

Variable	(1) *ABFEE*	(2) *ABFEE*
ENV_COURT	0.038**	0.045***
	(2.16)	(2.67)
SIZE		–0.124***
		(–8.23)
ROA		0.037
		(0.34)
LOSS		–0.064***
		(–3.58)
LEV		0.219***
		(4.50)
LIQUIDITY		–0.133***
		(–2.92)
SQSUB		–0.012
		(–1.42)
SOE		–0.023
		(–0.84)
HPI		–0.005
		(–0.21)
OPINION		–0.074**
		(–2.25)
BIG4		0.422***
		(6.60)
GDPPC		0.097
		(1.36)
Constant	–0.127***	1.613**
	(–8.03)	(2.16)
Firm fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Observations	2,583	2,583
Adjusted R^2	0.728	0.760

This table reports results for the impact of environmental courts on abnormal audit fees. T statistics computed with robust standard errors clustered by firm are reported in parentheses. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively

power is fairly high, as evidenced by the adjusted R^2 values around 76%. These findings are consistent with Hypothesis 1a (the risk hypothesis) and the economic effect is sizable. As shown in Column (2), the establishment of environmental courts is associated with an increase of 12.13% (0.045/0.371) of the standard deviation in abnormal audit fees. Taken together, the results indicate that when a firm faces stricter environmental enforcement, auditors perceive more audit risks, which leads to higher audit prices.

Among the control variables, the coefficient of *SIZE* is negative and significant, which suggests that larger companies have greater bargaining power, so their abnormal audit fees are less than those of smaller companies. The coefficient of *LOSS* is negative and significant, which runs counter to our expectation. One possible reason could be that our sample includes only listed companies. These companies have a strong incentive to manipulate earnings to avoid losses. Audit firms likely spend extra time identifying earnings management and thus charge higher audit fees. The coefficient of *LEV* is positive and significant, as expected. This result is consistent with prior studies and shows that highly leveraged companies tend to have higher audit fees (e.g., Craswell et al. 1995; Hay et al. 2006; Su and Wu 2017). *LIQUIDITY* is significantly negatively associated with *ABFEE* (–0.133), which is consistent with the idea that higher liquidity can reduce the likelihood of firm failure, reducing audit risk and thus audit fees. We also find a negative association between *OPINION* and *ABFEE*, which could be explained by the fact that auditors can negotiate higher abnormal audit fees only when the audit opinion is clean. In addition, *BIG4* is significantly positively associated with *ABFEE* (0.422), which indicates the existence of audit fee premiums among client companies that employ Big Four auditors.

5.3.2 Exclusion of an alternative explanation

Audit fee models have shown that the determination of audit fees should be considered from both the supply and demand sides. From the supply side (auditors' perspective), the fee is determined by the cost required to complete the audit and the audit risk (Simunic 1980). From the demand side (clients' perspective), the fee is driven by the need to purchase the services of an independent auditor. The higher the quality of the service required, the higher the fee charged to companies. Companies that face stringent law enforcement are of greater concern to their investors. To offset the adverse perceptions of investors and avoid a negative market reaction, companies have an incentive to collude with auditors, paying higher audit fees to obtain clean audit opinions. If this incentive exists, we would expect the probability of an audit firm change to decrease (the collusion view).

To address concerns related to this explanation, we examine the impact of environmental courts on audit firm changes. Audit firm change (*AuditFirmChange*) is a dummy variable that equals 1 if there is an audit firm change in the current year and 0 otherwise. Table 7 reports the results. We find that the coefficient of *ENV_COURT* is insignificant, which indicates that the probability of an audit firm change does not seem to decrease after the establishment of an environmental court, which suggests that the collusion view does not hold in our context.

5.3.3 Robustness checks

We conduct a variety of robustness tests to check the sensitivity of our main results. First, we assess the validity of the parallel trends assumption underlying our

Table 7 The exclusion of an alternative explanation

Variable	(1) *AuditFirmChange*
ENV_COURT	–0.043
	(–1.33)
SIZE	–0.008
	(–0.29)
ROA	0.054
	(0.24)
LOSS	0.007
	(0.17)
LEV	0.049
	(0.50)
LIQUIDITY	–0.085
	(–0.86)
SQSUB	0.029**
	(1.99)
SOE	–0.004
	(–0.06)
HPI	0.001
	(0.03)
OPINION	0.024
	(0.41)
BIG4	0.051
	(0.47)
GDPPC	0.211
	(1.38)
Constant	–1.623
	(–1.11)
Firm fixed effect	Yes
Year fixed effect	Yes
Observations	2,583
Adjusted R^2	0.044

This table reports robustness results to exclude an alternative explanation. T-statistics computed with robust standard errors clustered by firm are reported in parentheses. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively

difference-in-differences estimation. This assumption requires that the average change in audit fees exhibits similar pretreatment trends for both treatment and control companies. We replace *ENV_COURT* with nine dummy variables indicating the number of years before or after the establishment of the environmental court. *BEFORE_5+* is an indicator variable that equals 1 for the period five years or prior to the establishment of an environmental court in a given city. *BEFORE_i* is a dummy variable that indicates the *i*th year

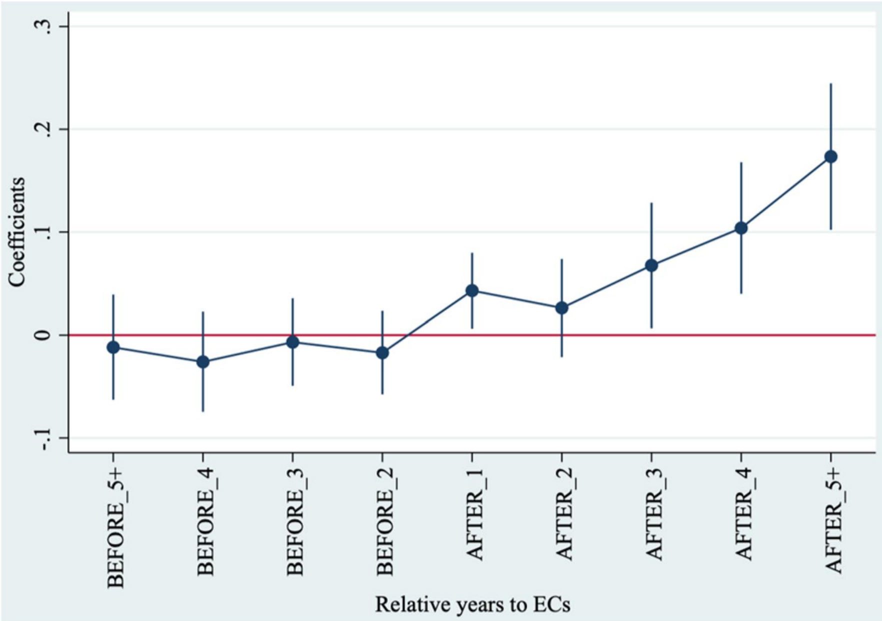

Fig. 2 Parallel trend tests of the effect of environmental courts on abnormal audit fees. This figure plots the impact of the establishment of environmental courts on abnormal audit fees. The dashed lines represent 95% confidence intervals, adjusted for firm-level clustering

before the establishment of the environmental court ($i=1, 2, 3$, and 4), whereas *AFTER_j* is a dummy variable that indicates the *j*th year after the establishment of the environmental court ($j=1, 2, 3$, and 4). *AFTER_5*+ is an indicator variable that equals 1 for the period starting five years after the establishment of an environmental court in a city. We drop *BEFORE_1* to use 1 year prior to the establishment of the environmental court as the benchmark. If the parallel trends assumption is satisfied, we should not observe any significant differences in the regression coefficients of *BEFORE_i*. Table 8 presents the results. We also plot the trend in coefficients for these dummy variables in Fig. 2. Consistent with our expectation, the coefficients of *BEFORE_5+–BEFORE_2* do not differ significantly from one another, whereas the coefficients of *AFTER_1–AFTER_5*+ have an overall significant increasing trend. This suggests that the observed increase in audit fees among our treatment companies occurs after an environmental court is established. In sum, these results indicate that our analysis satisfies the parallel trends assumption.

Second, we perform two sets of placebo tests to confirm the robustness of our difference-in-differences model. First, we randomly draw a group of treatment companies from our sample and randomly assign the timing of the establishment of environmental courts (Chen et al. 2018c; Chetty et al. 2009). Specifically, we randomly draw 2,000 observations out of the total 2,583 observations and assign the treatment status $Treatment^{false}$ to these observations, in which each sample obeys a binomial distribution.[13]

[13] We also randomly draw 800 and 1,600 observations from the 2,583 observations and repeat the simulations. The findings remain consistent.

Table 8 Dynamic test

Variable	(1) *ABFEE*
BEFORE_5+	–0.012
	(–0.45)
BEFORE_4	–0.026
	(–1.05)
BEFORE_3	–0.007
	(–0.31)
BEFORE_2	–0.017
	(–0.83)
AFTER_1	0.043**
	(2.29)
AFTER_2	0.026
	(1.08)
AFTER_3	0.068**
	(2.17)
AFTER_4	0.104***
	(3.19)
AFTER_5+	0.173***
	(4.77)
SIZE	–0.125***
	(–8.34)
ROA	0.038
	(0.36)
LOSS	–0.067***
	(–3.81)
LEV	0.214***
	(4.41)
LIQUIDITY	–0.133***
	(–2.92)
SQSUB	–0.012
	(–1.42)
SOE	–0.026
	(–0.96)
HPI	–0.009
	(–0.37)
OPINION	–0.075**
	(–2.28)
BIG4	0.425***
	(6.60)
GDPPC	0.013
	(0.18)
Constant	2.427***

Table 8 (continued)

Variable	(1) *ABFEE*
	(3.26)
Firm fixed effect	Yes
Year fixed effect	Yes
Observations	2,583
Adjusted R^2	0.762

This table reports results for the dynamic test. T-statistics computed with robust standard errors clustered by firm are reported in parentheses. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively

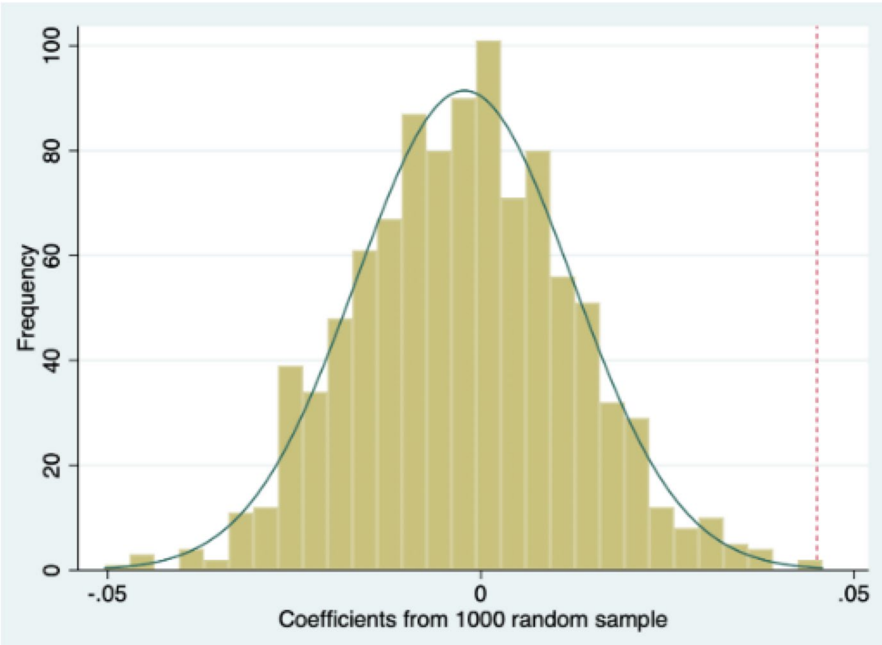

Fig. 3 Placebo test through the reconstruction of treatment and control groups for abnormal audit fees. This figure shows the probability distribution of estimated coefficients of *ENV_COURT* when we use abnormal audit fees from 1,000 simulations as the dependent variable. Specifically, we randomly draw 2,000 observations out of the total 2,583 observations and assign the treatment status $Treatment^{false}$ to these observations, where each sample obeys a binomial distribution

The distribution of 1,000 estimated coefficients for *ENV_COURT* and *ABFEE* is plotted in Fig. 3. As shown, the distribution is approximately normal, with a mean of zero, and the simulated regression coefficients differ significantly from the main regression coefficient reported in Table 6 (0.045). Note that these coefficients are negative and distant from our main regression estimate. The figure provides further support that the main relationship between the establishment of environmental courts and audit fees is causal. Second, we define a pseudo-event year. Specifically, we suppose that the pseudo-event year occurs two years before or two years after the actual event year. The results in Columns (1) and (2) of Table 9 Panel A show that the coefficients of *ENV_COURT* become insignificant, which indicates no evidence of changes in audit fees after the pseudo-event year. These results further confirm that our results are robust.

Third, studies suggest that the use of propensity score matching is subject to varying treatments and leads to variation in the main results. Following Balsam et al. (2014), we use an alternative method based on nearest neighbor one-to-one matching to avoid excessive loss of observations. The results in Column (3) of Table 9 Panel A are comparable to our main results. In addition, Fig. 1 shows a potential concern regarding underlying differences between the two sets of companies concerning variables of *GDPPC* and *SOE*, even after we perform the matching. To address this concern, we first match treatment companies with exact counterparts in their respective cities in terms of GDP percentile and ownership structure. For other control variables, we adopt a similar approach and obtain propensity matching scores. This approach effectively minimizes potential biases arising from confounding effects specifically attributed to variations in GDP and ownership structure. Furthermore, to ensure the robustness of our findings to the choice of a matching approach, we also perform regression analysis using entropy balanced and coarsened exact matched samples (e.g., Cen et al. 2018; Donohoe et al. 2022; Ferracuti 2022). To address any potential bias that might arise from omitted variables, we also perform Oster and permutation tests (Donohoe et al. 2022; Ferracuti 2022; Oster 2019). The results of these tests consistently confirm the robustness of our baseline results, strengthening the validity of our conclusions. For brevity, the detailed description of the matching process and the results obtained from the additional tests are provided in Appendixes 5 and 6.

Fourth, we use two alternative measures of our dependent variable, audit fees. The first is *LNFEE*, which has been defined already. We use the logarithm of audit fees without adjustment by the consumer price index (*AF*) as the second alternative measure. The results are presented in Columns (1) and (2) of Table 9 Panel B. The coefficients of *ENV_COURT* remain positive and significant for both alternative measures of audit fees (*LNFEE* and *AF*), which is consistent with our main inferences. In addition, we use an alternative treatment for our independent variable. Our main analyses rely on a sample that excludes firm-year observations for the year when the environmental courts were established. To test the robustness of this treatment, we add back in these observations. The results in Column (3) of Table 9 Panel B show that the coefficient of *ENV_COURT* continues to be positive and significant (0.036, $p < 0.01$). Our inferences continue to hold.

Fifth, we test whether our main regression results are sensitive to the selection criteria for our sample. We use the full sample rather than the propensity score matched sample to conduct our analysis. The results reported in Column (1) of Table 9 Panel C show that the coefficient of *ENV_COURT* remains positive and significant at the 5% level. In addition, we select samples that have observations for the two, three, and four years before and after the establishment of the environmental court and

Table 9 Robustness tests for the effect of environmental courts on abnormal audit fees

Panel A: Pseudo-tests and alternative methods of propensity score matching			
Variable	**(1)**	**(2)**	**(3)**
	Placebo test: assuming that the pseudo-event year occurs two years before	**Placebo test: assuming that the pseudo-event year occurs two years after**	**Nearest neighbor one-to-one matching**
	ABFEE	***ABFEE***	***ABFEE***
ENV_COURT	0.003	0.020	0.043***
	(0.15)	(1.02)	(2.59)
SIZE	–0.125***	–0.113***	–0.131***
	(–7.92)	(–6.98)	(–8.70)
ROA	0.009	0.019	0.057
	(0.07)	(0.17)	(0.54)
LOSS	–0.064***	–0.072***	–0.063***
	(–3.27)	(–3.77)	(–3.54)
LEV	0.246***	0.216***	0.236***
	(4.96)	(4.09)	(4.85)
LIQUIDITY	–0.148***	–0.119**	–0.126***
	(–3.08)	(–2.46)	(–2.81)
SQSUB	–0.012	–0.012	–0.011
	(–1.39)	(–1.38)	(–1.32)
SOE	–0.026	–0.045	–0.018
	(–0.90)	(–1.36)	(–0.68)
HPI	–0.006	–0.007	–0.017
	(–0.21)	(–0.29)	(–0.66)
OPINION	–0.095***	–0.062*	–0.078**
	(–2.70)	(–1.79)	(–2.41)

Table 9 (continued)

BIG4	0.406***	0.460***	0.422***
	(5.80)	(7.78)	(6.55)
GDPPC	0.142*	0.111	0.083
	(1.95)	(1.52)	(1.17)
Constant	1.208	1.249	1.861**
	(1.56)	(1.59)	(2.48)
Firm fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	2,355	2,277	2,654
Adjusted R^2	0.752	0.765	0.759
Panel B: Alternative measurement of the dependent variable or independent variable			
Variable	**(1)**	**(2)**	**(3)**
	Using the logarithm of audit fees	**Using the logarithm of audit fees without adjustment by the consumer price index**	**Including firm-year observations for the year when the environmental court was established**
	LNFEE	***AF***	***ABFEE***
ENV_COURT	0.056***	0.055***	0.036***
	(3.23)	(3.18)	(2.69)
SIZE	0.209***	0.209***	–0.129***
	(12.85)	(12.75)	(–9.14)
ROA	–0.039	–0.038	0.061
	(–0.36)	(–0.35)	(0.62)
LOSS	0.019	0.020	–0.052***
	(1.05)	(1.09)	(–3.17)

Table 9 (continued)

LEV	0.049	0.049	0.227***
	(1.03)	(1.02)	(5.04)
LIQUIDITY	–0.161***	–0.161***	–0.128***
	(–3.47)	(–3.47)	(–3.05)
SQSUB	0.052***	0.052***	–0.010
	(5.66)	(5.68)	(–1.22)
SOE	–0.009	–0.009	–0.022
	(–0.34)	(–0.31)	(–0.86)
HPI	0.012	0.012	–0.009
	(0.49)	(0.49)	(–0.39)
OPINION	–0.018	–0.018	–0.055*
	(–0.57)	(–0.55)	(–1.73)
BIG4	0.450***	0.450***	0.426***
	(6.21)	(6.20)	(6.93)
GDPPC	0.138*	0.160**	0.113*
	(1.93)	(2.22)	(1.70)
Constant	7.199***	2.387***	1.557**
	(9.33)	(3.08)	(2.22)
Firm fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	2,583	2,583	2,991
Adjusted R^2	0.894	0.895	0.767
Panel C: Alternative samples			

Table 9 (continued)

Variable	(1)	(2)	(3)	(4)
	Full sample	**Using the sample that includes observations for the two years before and after environmental court establishment**	**Using the sample that includes observations for the three years before and after the environmental court establishment**	**Using the sample that includes observations for the four years before and after environmental court establishment**
	ABFEE	***ABFEE***	***ABFEE***	***ABFEE***
ENV_COURT	0.023**	0.051***	0.046***	0.049***
	(2.00)	(2.73)	(2.72)	(2.95)
SIZE	–0.106***	–0.121***	–0.116***	–0.115***
	(–12.26)	(–4.61)	(–5.80)	(–6.34)
ROA	0.021	–0.060	–0.080	–0.070
	(0.38)	(–0.36)	(–0.62)	(–0.60)
LOSS	–0.054***	–0.049**	–0.073***	–0.066***
	(–6.08)	(–2.04)	(–3.76)	(–3.46)
LEV	0.167***	0.175**	0.179***	0.153***
	(6.42)	(2.46)	(3.09)	(2.94)
LIQUIDITY	–0.069***	–0.076	–0.035	–0.078
	(–2.79)	(–0.95)	(–0.61)	(–1.50)
SQSUB	–0.027***	–0.025**	–0.024**	–0.024**
	(–6.51)	(–2.19)	(–2.28)	(–2.32)
SOE	–0.010	0.009	0.000	–0.022
	(–0.51)	(0.31)	(0.00)	(–0.74)
HPI	–0.012	0.038	0.011	–0.010
	(–0.85)	(0.61)	(0.26)	(–0.33)

Table 9 (continued)

OPINION	–0.011	–0.110**	–0.082**	–0.071**
	(–0.68)	(–2.39)	(–2.18)	(–2.08)
BIG4	0.418***	0.342**	0.490***	0.415***
	(11.16)	(2.40)	(4.57)	(4.58)
GDPPC	0.091**	0.173	0.194*	0.113
	(2.37)	(1.05)	(1.67)	(1.18)
Constant	1.337***	0.860	0.544	1.315
	(3.42)	(0.53)	(0.46)	(1.34)
Firm fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	12,990	1,313	1,708	2,011
Adjusted R^2	0.756	0.814	0.805	0.787
Panel D: Addressing the concern about using the residual as the dependent variable				
Variable	**(1)**	**(2)**	**(3)**	
	Estimating the coefficients of all model regressors in a single regression	**Using the Frisch-Waugh-Lovell theorem**	**Estimating the coefficients using the residuals from the first-step regression**	
	LNFEE	***ABFEE***	**Variable**	***LNFEE_Res***
ENV_COURT	0.049***	0.042**	*ENV_COURT_Res*	0.046***
	(2.86)	(2.49)		(2.67)
SIZE	6.697	–0.112***	*SIZE_Res*	0.009
	(1.32)	(–7.06)		(0.51)
ROA	–110.644	0.043	*ROA_Res*	0.263*
	(–1.41)	(0.41)		(1.71)
LOSS	–16.518	–0.061***	*LOSS_Res*	-0.051**
	(–1.22)	(–3.36)		(-2.10)

Table 9 (continued)

LEV	–19.365	0.191***	*LEV_Res*	-0.007
	(–0.88)	(3.84)		(-0.14)
LIQUIDITY	–35.192	1.637	*LIQUIDITY_Res*	-4.494
	(–1.21)	(0.23)		(-0.62)
SQSUB	–4.475*	–0.014	*SQSUB_Res*	-0.012
	(–1.65)	(–1.58)		(-1.46)
SOE	–0.023	–0.024	*SOE_Res*	-0.033
	(–0.85)	(–0.88)		(-1.32)
HPI	0.010	0.001	*HPI_Res*	-0.057*
	(0.42)	(0.03)		(-1.74)
OPINION	–11.253	–0.077**	*OPINION_Res*	-0.101***
	(–0.44)	(–2.28)		(-2.71)
BIG4	2.990	0.416***	*BIG4_Res*	0.464***
	(0.14)	(6.52)		(6.29)
GDPPC	0.142*	0.105	*GDPPC_Res*	0.089***
	(1.96)	(1.48)		(2.63)
INVENTORY	–48.448	0.185**		
	(–1.25)	(2.43)		
CATA	–4.048	–1.851		
	(–0.57)	(–0.26)		
REC	4.726	0.176		
	(0.10)	(1.45)		
BOARD_IND	–182.228**	0.024		
	(–2.48)	(0.31)		
EMPLOY	–0.113	–0.001		
	(–0.75)	(–1.47)		

Table 9 (continued)

SIZE×*Year*	–0.003		
	(–1.28)		
ROA×*Year*	0.055		
	(1.41)		
LOSS×*Year*	0.008		
	(1.22)		
LEV×*Year*	0.010		
	(0.88)		
LIQUIDITY×*Year*	0.019		
	(1.39)		
INVENTORY×*Year*	0.024		
	(1.25)		
REC×*Year*	–0.002		
	(–0.09)		
BOARD_IND×*Year*	0.091**		
	(2.48)		
SQSUB×*Year*	0.002*		
	(1.67)		
EMPLOY×*Year*	0.000		
	(0.76)		
OPINION×*Year*	0.006		
	(0.44)		
BIG4×*Year*	–0.001		
	(–0.12)		
Constant	7.355***	1.316*	-0.002
	(8.88)	(1.74)	(-0.12)

Table 9 (continued)

Firm fixed effect	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes
Observations	2,583	2,583	2,583
Adjusted R^2	0.898	0.761	0.753

Panel E: Robustness results to ensure the consistency of the location

Variable	**(1)**	**(2)**
	Using only manufacturers	**Using a subsample of companies whose subsidiaries are all located in the same city as their city of registration**
	ABFEE	***ABFEE***
ENV_COURT	0.077***	0.076**
	(3.27)	(2.02)
SIZE	–0.120***	–0.116***
	(–4.29)	(–3.19)
ROA	0.099	0.427**
	(0.58)	(2.02)
LOSS	–0.056*	–0.044
	(–1.86)	(–1.38)
LEV	0.231**	0.324***
	(2.46)	(3.06)
LIQUIDITY	–0.127	–0.175
	(–1.54)	(–1.52)
SQSUB	–0.007	–0.041*
	(–0.36)	(–1.67)
SOE	0.014	–0.060
	(0.35)	(–0.64)

Table 9 (continued)

HPI	–0.185***	0.009
	(–2.72)	(0.21)
OPINION	–0.056	–0.087
	(–1.20)	(–1.52)
BIG4	0.454***	0.472***
	(3.54)	(4.10)
GDPPC	–0.009	0.012
	(–0.06)	(0.06)
Constant	2.550	2.213
	(1.64)	(1.15)
Firm fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Observations	1,699	662
Adjusted R^2	0.758	0.772

This table reports results of robustness tests for the effect of environmental courts on abnormal audit fees. T statistics computed with robust standard errors clustered by firm are reported in parentheses. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively rerun our main regressions. Columns (2)–(4) of Table 9 Panel C report these regression results. Our results show that all regression coefficients of *ENV_COURT* are positive and significant at the 1% level (0.051, 0.046, and 0.049, respectively), which indicates that our main inferences are unaffected by the choice of sample interval, which once again demonstrates the validity of our main inferences.

Sixth, one can argue that the environmental operations of companies in a city may drive both the establishment of environmental courts and environmental risks and thus audit fees for the companies. To validate the exogeneity of the establishment of environmental courts, we analyze whether a city's severity of environmental pollution coincides with changes in the enforcement regime. Figure 4 shows the distribution of environmental courts and three major pollutants (industrial sulfur dioxide (SO_2) emissions, industrial effluents, industrial soot, such as smoke, powder, dust emissions) in different cities. This figure clearly shows that a city's adoption of an environmental court is not synchronous with the intensity of its pollution, which supports our assumption that the adoption of environmental courts is likely to be exogenous to local firms' environmental activity.

Seventh, Chen et al. (2018a) point out the potential for bias associated with using residuals from the first-stage model as the dependent variable in the second stage. To ensure the reliability of our results, we use three approaches recommended by Chen et al. (2018a) to mitigate any biases that may arise from this two-step procedure. First, we estimate the coefficients for all model regressors in a single regression and include a set of year indicator variables and their interactions with each of the first-step regressors (Boland and Godsell 2020; Durnev and Mangen 2020; Firth et al. 2019). Second, we use the Frisch-Waugh-Lovell theorem to generate the same coefficients and standard errors as those obtained from a single regression. Specifically, we use a two-step regression model in which the residuals from the first-step regression are regressed on the residuals obtained from regressions of the second-step regressors on the first-step regressors. Third, we regress the residuals from the first-step regression on a combination of all second-step regressors and all first-step regressors (Beck et al. 2019; Sletten et al. 2018). The results reported in Columns (1)–(3) of Table 9 Panel D show that, even after we control for potential bias using all three approaches, our main results remain qualitatively consistent. These robust findings further strengthen our inferences.

Finally, some listed companies may be registered in a particular city that has established an environmental court, but their factories or subsidiaries may be spread all over the country. The use of companies' location of registration as the core criterion for determining treatment or control status may inaccurately reflect the impact of environmental courts on companies' audit fees. Article 10 of the Chinese Company Law stipulates that the domicile of a company shall be the place where its main administrative organization is located. If a company's location of registration differs from the location of its main business, the company can be subject to sanctions. Chen et al. (2018b) note that the main business activity of a manufacturer is to produce goods, so its factories are typically located near the city of registration. We thus rerun our regression analysis using only manufacturers. We also perform an additional robustness check using a subsample of companies whose subsidiaries are all located in the same city as their city of registration. Table 9 Panel E reports these results. The regression coefficients of *ENV_COURT* remain positive and significant at least at the 5% level, which suggests the robustness of our conclusions.

5.4 Cross-sectional analyses

To further explore our risk hypothesis, we examine potential sources of heterogeneity in the treatment effect. If the increase in audit fees after the establishment of environmental court laws is due to increased environmental risk, we expect this treatment effect to strengthen for companies in environmental court jurisdictions with more environmental risks. We measure companies' environmental risks using two proxies: environmental performance and their affiliation with heavily polluting industries.

First, companies with poor environmental performance tend to receive more scrutiny, have worse stock performance, and experience more environmental risks. Conversely, companies with good environmental performance tend to gain more support from stakeholders, have more positive media coverage, and experience fewer environmental risks (e.g., Garber and Hammitt 1998; Jacobs et al. 2010; Konar and Cohen 2001). Second, companies in heavily polluting industries have greater exposure to the law, and thus their share prices are particularly vulnerable and sensitive (e.g., Barth and McNichols 1994; Bushee et al. 2010; Hughes 2000). Sam and Zhang (2020) find that a new enforcement regime spurred a significant decrease in the value of polluting companies because of greater expected regulatory costs for these companies. We use the classification codes issued by the Ministry of Environmental Protection and define heavily polluting industries as thermal power, iron and steel, cement, electrolytic aluminum, coal, metallurgy, chemical, petrochemical, building materials, papermaking, brewing, pharmaceuticals, fermentation, textile, tanning, and mining.

Following prior studies (Irani and Oesch 2016; Lins et al. 2017), we split our treatment sample into two groups: treatment companies with more corporate environmental risks and treatment companies with fewer corporate environmental risks. We operationalize the test by creating two dummy variables for each proxy for environmental risk (*D_YENVAWARD* versus *D_NENVAWARD* and *YHPI* versus *NHPI*) and then interact these variables with *ENV_COURT*. Specifically, *D_YENVAWARD* (*D_NENVAWARD*) equals 1 if the firm received (did not receive) an environmental performance award in the year before the establishment of the environmental court and 0 otherwise.[14] Data on environmental awards are collected manually from corporate annual reports, corporate social responsibility reports, and company websites. *YHPI* equals 1 if the firm operates in a heavily polluting industry and 0 otherwise. *NHPI* equals 1 if the firm operates in a nonheavily polluting industry and 0 otherwise.

We then re-estimate the baseline equation, replacing *ENV_COURT* with two interaction terms. This model allows us to compare each group in our treatment sample with the control sample (companies in non-environmental court jurisdictions). Specifically, the coefficient of *D_YENVAWARD*×*ENV_COURT* (*D_NENVAWARD*×*ENV_COURT*) represents the difference in the audit fee increase

[14] These external awards can indicate best practices and reflect recognition of firms' superior environmental performance, because third-party expert reviewers evaluate a company's compliance with applicable environmental laws and regulations, environmental strategy, management, use of resources, and impact on society and the environment (e.g., water pollution, carbon and pollution emissions, and waste consumption and discharge).

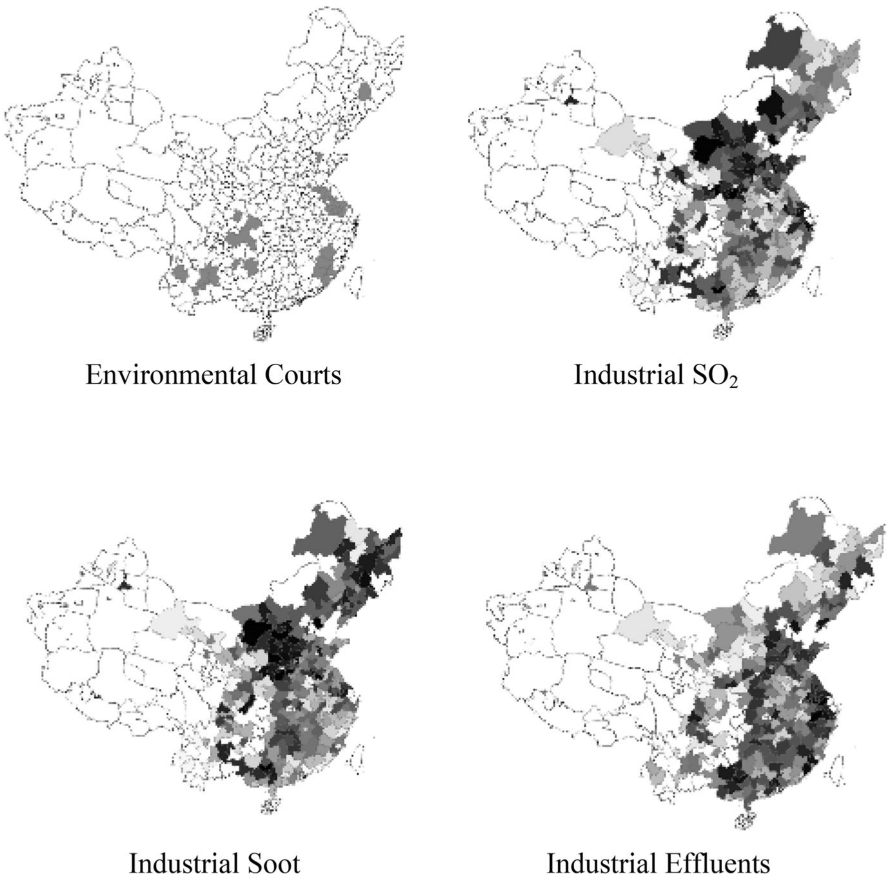

Fig. 4 The distribution of environmental courts and emissions of industrial pollutants. Dark gray indicates cities with environmental courts in 2007–2013 and cities with more emissions of industrial pollutants in 2006. For simplicity, the figure only depicts mainland China and does not include Hong Kong, Macau, and Taiwan, as well as islands that belong to Chinese territory such as those in the South China Sea, the Diaoyu Islands, and their affiliated islands

between treatment companies with better (worse) environmental performance and control companies. Similarly, the coefficient of *YHPI×ENV_COURT* (*NHPI×ENV_COURT*) compares the increase in audit fees between treatment companies in heavily polluting (nonheavily polluting) industries and control companies. We also conduct an F test of the equality of these two coefficients (*D_YENVAWARD×ENV_COURT* versus *D_NENVAWARD×ENV_COURT* and *YHPI×ENV_COURT* versus *NHPI×ENV_COURT*) to see whether the increase in audit fees varies between the two groups of treatment companies.

Table 10 reports results for the conditioning effect of environmental risks on the relationship between environmental courts and audit fees. The results in Column (1) show a negative and significant coefficient for *D_YENVAWARD×ENV_COURT* (0.021, $p > 0.1$) and a positive and significant coefficient for *D_NENVAWARD×ENV_COURT* (0.145,

$p < 0.01$). An F test shows that the difference between these two regression coefficients is significant ($F = 3.10$, $p < 0.1$). These results suggest that audit fees only increase in companies in environmental court jurisdictions with poor environmental performance. Column (2) shows that the coefficients of both *YHPI*×*ENV_COURT* and *NHPI*×*ENV_COURT* are positive and significant, but the coefficient of *YHPI*×*ENV_COURT* significantly exceeds that of *NHPI*×*ENV_COURT* (0.073, $p < 0.01$ versus 0.030, $p < 0.1$; $F = 2.92$, $p < 0.1$). These results indicate that the increase in audit fees is more pronounced for treatment companies in heavily polluting industries. These findings further confirm our risk hypothesis that, when companies have more environmental risks, they experience a significantly greater increase in audit fees after the establishment of environmental courts.

6 Further analyses

6.1 Channel tests

We hypothesize that an increase in audit fees following the establishment of environmental courts could arise from either increased audit effort or increased audit risk. We thus further test these two potential channels through which environmental courts affect audit fees.

6.1.1 Audit risk

We first test whether the increase in audit fees may be the fee premium auditors charge for the increased environmental litigation, operational, and reputational risks associated with clients. We hypothesize that companies are exposed to greater business and litigation risks when they face tougher environmental enforcement. Pratt and Stice (1994) state that variability in a client's financial performance and its operational risk increases the likelihood that the auditor will be sued. Thus, we test whether the establishment of environmental courts is positively associated with client environmental litigation risk (*ENV_LIT*) and operational risk (*OP_RISK*). Environmental litigation risk (*ENV_LIT*) is measured as the number of environmental lawsuits lost divided by the total number of environmental lawsuits for the firm in each year.[15] Operational risk (*OP_RISK*) is calculated as the standard deviation of the ratio of the firm's earnings before interest, taxes, depreciation, and amortization to total assets (Acharya et al. 2011; John et al. 2008).

[15] Alternatively, we measure environmental litigation risk using three monetary-based proxies: the natural logarithm of the amount involved in lost lawsuits (*LITLOSEMONEY*; representing the financial value of lawsuits lost by the plaintiff), the ratio of the amount involved in lost lawsuits to the total amount involved in lawsuits (*Ratio_LITLOSEMONEY*), and the amount involved in lost lawsuits divided by total assets (*Ratio_LITLOSEMONEY_Size*). The regression results consistently show that the variable (*ENV_COURT*) loads with significant and positive coefficients, which indicates a significant increase in the amount of litigation expenses for companies following the implementation of environmental courts. The results indicate that, in cities with environmental courts, environmental lawsuits not only are significantly more frequent but also more costly. The specialized nature of the courts likely influences the outcomes of these lawsuits, potentially resulting in larger settlements or damages awarded compared to cases handled in traditional courts. These findings further confirm that the establishment of environmental courts leads to an increase in environmental litigation risk.

Moreover, companies in regions with stricter law enforcement tend to raise public awareness of environmental protection and attract more negative media attention (*ENV_MEDIA*), which results in more reputational risks for various stakeholders. In sum, we argue that the establishment of environmental courts could affect audit fees through increased litigation risk, operational risk, and reputational risk. We measure a company's reputational risk based on negative corporate environmental news in the media. The more negative the media coverage of a firm, the greater its reputational risk. We download more than 12 million news articles from 485 Chinese newspapers from 2000 to 2014 from China Core Newspapers Full-text Database of China National Knowledge Infrastructure. We include all kinds of newspapers, including national and local papers and financial and non-financial papers (see Appendix 7 for the complete list). We define environmental news articles as those that include at least three keywords out of a total of 197 keywords related to the environment as identified by Shen et al. (2021). We check each article and identify a total of 684,975 environmental news articles covering our sample companies. Following You et al. (2018), we conduct a content analysis to determine the tone (negativity) of each article. We include a detailed explanation of how we determine media tone in Appendix 8. The company's reputational risk (*ENV_MEDIA*) is calculated as the natural logarithm of the number of negative media articles related to corporate environmental news in each year.[16]

Columns (1)–(3) of Table 11 present the regression results. We find that the environmental court effects on *ENV_LIT*, *OP_RISK*, and *ENV_MEDIA* are positive and significant. These results are consistent with our expectation and suggest that auditors charge more to compensate for increased business risks after the establishment of environmental courts.

6.1.2 Audit effort channel

The increase in abnormal audit fees observed in our main results could also be attributable to additional audit effort. In cities with environmental courts, auditors may strive to learn and adapt their procedures for accounts that have the highest likely environmental regulatory risk. This may add to their workload and costs. To test this potential channel, we examine the impact of the establishment of an environmental court on audit effort. We first follow the literature (Knechel and Payne 2001) and

[16] We specifically examine the potential impact of environmental courts on the reputation of auditors. To do this, we create the variable *MEDIA_AUDITENVLIT*, calculated as the natural logarithm of the number of media reports containing negative coverage of environmental litigation involving auditors. This variable captures the media's attention to and perception of auditors' involvement in their clients' environmental litigation. By quantifying the number of negative media reports, we gain insights into the potential reputational risks auditors may face from environmental lawsuits. When we replace the dependent variable with *MEDIA_AUDITENVLIT*, we find that the coefficient of *ENV_COURT* remains positive and statistically significant (0.012, $p < 0.10$). This analysis indicates that, as environmental courts are introduced, the media's negative coverage of environmental litigation involving auditors increases. This suggests that the establishment of the courts amplifies the reputational risks faced by auditors, which leads to higher audit fees.

use the audit lag time to measure audit effort (*LAG*). *LAG* is measured as the natural logarithm of the date of issuance of the audit report minus the balance sheet date.

Higher audit quality also captures greater effort made during the audit. Therefore, we use client companies' earnings quality and financial restatements to measure audit quality as alternative measures for audit effort. Following the literature (Jiang et al. 2019; Li et al. 2017), we measure earnings quality as the absolute value of discretionary accruals (*DA*). *Restatement* is a dummy variable that equals 1 if the company has issued a financial restatement and 0 otherwise.

Columns (4)–(6) of Table 11 report regression results for the impact of environmental courts on audit lag time and quality. The regression coefficient of *ENV_COURT* in Column (4) is positive but insignificant. In Columns (5) and (6), the regression coefficients of *ENV_COURT* are negative and significant at the 5% level (–0.015 and −0.051). Note that absolute discretionary accruals and financial restatement are inverse indicators of audit quality (audit effort). Our results thus provide some empirical support that audit effort increases after the establishment of environmental courts. Overall we conclude that the increase in audit fees after the establishment of the environmental court seems to be driven by both increased audit effort and an increased risk premium.

6.2 Strength of environmental enforcement

Environmental courts in China generally take the form of independent environmental adjudication divisions or environmental collegiate panels. The former, which resemble traditional civil, criminal, and administrative divisions, are designed to hear exclusively environmental and resource cases. They have dedicated personnel, budgets, work conditions, and jurisdictions. Collegiate panels, which are appointed inside traditional divisions to handle cases, consist of at least three judges from the same division or a combination of judges and people's assessors. Their members are appointed on a case-by-case basis. Once the case concludes, the panel is dissolved. Given these differences, we anticipate that environmental courts operating as independent environmental adjudication divisions exhibit stronger environmental enforcement than those functioning as environmental collegiate panels. Consequently, we investigate whether audit fees increase with the strength of environmental enforcement.

To capture the varying strength of enforcement, we assign *ENV_COURT_Strength* a value of 2 if the city's environmental court takes the form of an independent environmental adjudication division, 1 if the environmental court operates as an environmental collegiate panel, and a value of 0 if there is no environmental court in the city. Table 12 reports the results. The coefficient of *ENV_COURT_Strength* is both positive and statistically significant. Notably, we replicate all the robustness tests and channel tests in a manner consistent with our baseline analysis. These additional analyses (not shown) consistently support the validity of our findings.

These findings provide strong evidence that independent environmental adjudication divisions provide stronger enforcement than do environmental collegiate panels or no environmental court at all. The presence of dedicated divisions likely contributes to their greater effectiveness. Conversely, environmental collegiate panels exhibit weaker enforcement power and consequently are less effective at enforcing

Table 10 Cross-sectional tests: Corporate environmental risks

Variable	(1) *ABFEE*	(2) *ABFEE*
D_YENVAWARD×ENV_COURT (a)	0.021	
	(1.18)	
D_NENVAWARD×ENV_COURT (b)	0.145***	
	(4.07)	
YHPI×ENV_COURT (a)		0.073***
		(3.25)
NHPI×ENV_COURT (b)		0.030*
		(1.70)
SIZE	–0.125***	–0.124***
	(–8.29)	(–10.73)
ROA	0.027	0.043
	(0.26)	(0.44)
LOSS	–0.065***	–0.064***
	(–3.65)	(–3.63)
LEV	0.221***	0.222***
	(4.57)	(5.21)
LIQUIDITY	–0.126***	–0.127***
	(–2.78)	(–3.08)
SQSUB	–0.012	–0.012*
	(–1.36)	(–1.74)
SOE	–0.027	–0.024
	(–0.97)	(–0.89)
HPI	–0.002	–0.006
	(–0.09)	(–0.26)
OPINION	–0.076**	–0.076***
	(–2.30)	(–3.12)
BIG4	0.424***	0.424***
	(6.61)	(10.53)
GDPPC	0.121*	0.093
	(1.69)	(1.39)
Constant	1.397*	1.639**
	(1.86)	(2.51)
Controls	Yes	Yes
Firm fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Observations	2,583	2,583
Adjusted R^2	0.762	0.760
F statistics: (a) = (b)	3.10*	2.92*

This table reports results for the moderating effects of environmental courts on abnormal audit fees. T-statistics computed with robust standard errors clustered by firm are reported in parentheses. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively environmental laws. Moreover, our results demonstrate that, as the strength of environmental law enforcement increases, there is a corresponding increase in audit fees. This suggests that companies that operate in areas with stronger environmental enforcement face higher risks, which are reflected in their audit fees. The positive relationship between the strength of environmental enforcement and audit fees further emphasizes the importance of effective environmental regulation and enforcement in influencing the behaviors of firms and auditors.

6.3 Public concern about environmental protection

In this section, we examine the interactions between public concern, environmental enforcement, and audit fees. Specifically, we investigate whether the magnitude of the increase in audit fees following the implementation of environmental courts varies based on the amount of public concern.

We argue that greater public concern is correlated with greater environmental risk. Prior to the establishment of environmental courts, auditors in regions with greater public concern about environmental issues are more likely to factor environmental risks into their risk assessment and pricing determinations. This proactive approach includes conducting more extensive audit procedures, allocating additional time and resources to assessing environmental factors, or exercising stricter scrutiny in areas in which public concern about environmental issues is perceived to be greater.[17] As a result of these efforts, the subsequent increase in audit fees following the implementation of environmental courts is anticipated to be smaller for firms located in environmental court regions with greater environmental concern. In other words, the impact of environmental courts on audit fees may be mitigated in regions where the public has already expressed substantial concern about environmental protection.

To test the role of public concern on the relation between environmental court and audit fees, we re-estimate Eq. (1) and measure public concern based on two proxies (Kassinis and Vafeas 2006; Zhou et al. 2022): the total number of environmental complaint letters (*ECL*) and the total number of newly established environmental nongovernmental organizations (*ENGO*) in the province in which the firm is located. Specifically, we replace *ENV_COURT* with *D_HECL*×*ENV_COURT* and *D_LECL*×*ENV_COURT*, which represent treatment firm-year observations with above- and below-sample median splits based on the total number of environmental complaint letters in their provinces. Similarly, we replace *ENV_COURT* with *D_MOREENGO*×*ENV_COURT* and *D_LESSENGO*×*ENV_COURT*, which represent treatment firm-year observations with above- and below-sample median splits based on the total number of environmental nongovernmental organizations in their provinces.

[17] To validate our proposition, we conduct a separate analysis to explore the relationship between two proxies for public concern, *ECL* and *ENGO*, and abnormal audit fees. The results consistently demonstrate that the coefficients of both *ECL* and *ENGO* are positive and statistically significant. This finding supports our argument that heightened public concern is linked to an increase in environmental risks, which prompts auditors to charge more in response to these risks. As public awareness of environmental issues increases, companies may face greater demands to address environmental risks and enhance transparency, which leads to additional costs in the form of higher audit fees.

Table 11 Mechanism tests of the effect of environmental courts on abnormal audit fees

Variable	(1) *ENV_LIT*	(2) *OP_RISK*	(3) *ENV_MEDIA*	(4) *LAG*	(5) *DA*	(6) *Restatement*
ENV_COURT	0.025***	0.004**	0.034**	0.007	–0.015**	–0.051**
	(2.85)	(2.07)	(2.33)	(0.28)	(–2.17)	(–2.02)
SIZE	0.010	–0.005***	0.000	0.066***	0.014**	–0.045**
	(1.17)	(–2.84)	(0.01)	(3.35)	(2.05)	(–2.26)
ROA	0.021	0.038***	0.022	–0.559***	0.528***	–0.041
	(0.30)	(2.84)	(0.22)	(–3.54)	(6.98)	(–0.26)
LOSS	0.001	0.007***	–0.014	0.013	0.058***	–0.010
	(0.12)	(2.89)	(–0.80)	(0.51)	(6.31)	(–0.31)
LEV	0.041*	0.004	0.021	–0.248***	0.055**	0.000
	(1.83)	(0.55)	(0.53)	(–3.16)	(2.43)	(0.01)
LIQUIDITY	–0.020	–0.011*	–0.018	–0.024	0.061***	0.060
	(–0.70)	(–1.94)	(–0.46)	(–0.37)	(2.62)	(0.82)
SQSUB	0.003	0.001	0.000	0.026**	0.001	0.022*
	(0.64)	(1.29)	(0.03)	(2.52)	(0.34)	(1.92)
SOE	–0.006	–0.005	–0.017	0.093**	–0.024	0.022
	(–0.50)	(–1.39)	(–0.69)	(2.02)	(–1.52)	(0.49)
HPI	0.001	0.002	0.002	–0.020	–0.023*	0.004
	(0.13)	(0.77)	(0.12)	(–0.53)	(–1.75)	(0.10)
OPINION	–0.007	–0.002	0.001	–0.004	0.038***	0.023
	(–0.56)	(–0.67)	(0.02)	(–0.09)	(2.72)	(0.52)
BIG4	–0.027	–0.003	–0.008	–0.000	–0.017	0.038
	(–0.85)	(–1.14)	(–0.13)	(–0.00)	(–0.99)	(0.80)
GDPPC	–0.039	0.014*	–0.000	–0.000	0.001	0.221**
	(–1.20)	(1.74)	(–0.01)	(–0.00)	(0.04)	(2.06)
Constant	0.161	0.026	0.072	3.093***	–0.276	–1.104
	(0.45)	(0.34)	(0.11)	(3.08)	(–0.96)	(–1.10)
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	2,583	2,583	2,583	2,583	2,569	2,583
Adjusted R^2	0.749	0.532	0.373	0.240	0.274	0.059

This table reports results of mechanism tests of the effect of environmental courts on abnormal audit fees. T-statistics computed with robust standard errors clustered by firm are reported in parentheses. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively

Table 13 presents the regression results. As shown in Column (1), the magnitude of the coefficient of *D_HECL×ENV_COURT* is significantly lower than that of *D_LECL×ENV_COURT* (0.035, $p<0.05$ versus 0.091, $p<0.01$, respectively; $F=3.28$, $p<0.1$). This shows that the increase in abnormal audit fees is more pronounced in provinces with fewer environmental complaint letters. Similarly, in

Table 12 Additional test: Strength of environmental law enforcement

Variable	(1) *ABFEE*
ENV_COURT_Strength	0.035***
	(3.36)
SIZE	–0.124***
	(–8.27)
ROA	0.042
	(0.40)
LOSS	–0.063***
	(–3.53)
LEV	0.217***
	(4.49)
LIQUIDITY	–0.130***
	(–2.86)
SQSUB	–0.012
	(–1.44)
SOE	–0.024
	(–0.89)
HPI	–0.008
	(–0.32)
OPINION	–0.073**
	(–2.22)
BIG4	0.420***
	(6.57)
GDPPC	0.090
	(1.28)
Constant	1.677**
	(2.26)
Firm fixed effect	Yes
Year fixed effect	Yes
Observations	2,583
Adjusted R^2	0.760

This table reports results for the impact of strength of environmental law enforcement on abnormal audit fees. T-statistics computed with robust standard errors clustered by firm are reported in parentheses. All variables are defined in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively

Column (2), *D_MOREENGO*×*ENV_COURT* is nonsignificant (0.024, $p > 0.1$) but *D_LESSENGO*×*ENV_COURT* is positive and significant (0.077, $p < 0.01$). An F test shows that the difference between these two coefficients is significant ($F = 3.1$, $p < 0.1$), which indicates that the increase in abnormal audit fees is greater in provinces with fewer newly established nongovernmental organizations. These results show that the

Table 13 Additional test: public concern about environmental protection

Variable	(1) *ABFEE*	(2) *ABFEE*
D_HECL×ENV_COURT (a)	0.035**	
	(2.12)	
D_LECL×ENV_COURT (b)	0.091***	
	(3.07)	
D_MOREENGO×ENV_COURT (a)		0.024
		(1.14)
D_LESSENGO×ENV_COURT (b)		0.077***
		(3.23)
SIZE	–0.124***	–0.124***
	(–10.73)	(–8.29)
ROA	0.043	0.040
	(0.44)	(0.37)
LOSS	–0.064***	–0.063***
	(–3.59)	(–3.50)
LEV	0.218***	0.217***
	(5.12)	(4.47)
LIQUIDITY	–0.132***	–0.127***
	(–3.20)	(–2.79)
SQSUB	–0.012*	–0.013
	(–1.81)	(–1.47)
SOE	–0.026	–0.027
	(–0.98)	(–0.96)
HPI	–0.007	–0.005
	(–0.31)	(–0.19)
OPINION	–0.075***	–0.073**
	(–3.08)	(–2.22)
BIG4	0.417***	0.423***
	(10.36)	(6.62)
GDPPC	0.093	0.106
	(1.38)	(1.49)
Constant	1.652**	1.534**
	(2.53)	(2.05)
Controls	Yes	Yes
Firm fixed effect	Yes	Yes
Year fixed effect	Yes	Yes
Observations	2,583	2,583
Adjusted R^2	0.760	0.760
F statistics: (a) = (b)	3.28*	3.10*

This table reports results for the role of public concern about environmental protection in the relationship between environmental courts and abnormal audit fees. T statistics computed with robust standard errors clustered by firm are reported in parentheses. Please find definitions of variables in Appendix 3. Financial data are in RMB. All continuous variables are winsorized at the first and 99th percentiles. *, **, and *** indicate significance at the 0.10, 0.05, and 0.01 levels (two-tailed), respectively impact of environmental court strengthens in provinces where public concern about environmental issues is lower. This finding is consistent with the viewpoint suggesting a diminished effect of environmental law enforcement. As public concern has increased, auditors may have already responded by incorporating environmental risks into their assessments. Consequently, the introduction of environmental courts is expected to have a lesser impact on audit fees in regions where such concerns are already acknowledged and addressed by auditors in the pre-environmental court period. This finding highlights the complex interplay among environmental regulation and enforcement, public sentiment, and auditors' risk assessments.

7 Conclusion

We examine the impact of the establishment of environmental courts on audit pricing decisions. Research examines the relation between environmental risk (environmental laws) and audit fees but largely ignores the role of environmental enforcement. We exploit the establishment of environmental courts as exogenous shocks to environmental enforcement. We find that companies in environmental court jurisdictions pay significantly higher audit fees after a court is established in their city. Our main findings remain robust across a variety of sensitivity tests. An additional analysis suggests that the impact of enhanced environmental enforcement is more salient when companies face greater environmental risks (i.e., they are affiliated with heavily polluting industries or have poor environmental performance).

We further explore the possible channels of the effects of the establishment of an environmental court on audit fees via audit risk and effort arising from increased environmental litigation, operational, and reputational risks. Our results show that companies in environmental court jurisdictions experience more environmental litigation, operational, and reputational risks after the establishment of the courts. Furthermore, we find some evidence that audit effort (proxied by audit quality) of companies in environmental court jurisdictions also increases with the implementation of environmental courts. These results confirm that environmental courts may increase both audit effort and audit risk and thus lead to higher fees. Subsequently, we quantify the strength of environmental enforcement by categorizing the types of environmental courts as either independent environmental adjudication divisions or environmental collegiate panels. Our analysis reveals that, as the effectiveness of environmental law enforcement strengthens, audit fees increase as well. Finally, we observe that, in regions where there is a heightened public concern, the uptick in audit fees is comparatively subdued.

Our findings advance the literature on audit pricing. Besides typical firm and auditor characteristics, we find that a government's environmental enforcement has a material impact on audit pricing. Our findings have three implications for policy. First, we document a prominent risk effect of the enforcement of environmental regulations in polluting industries. It is not only the toughness of environmental regulations that matters but also the effort put into enforcement, which promotes corporate sustainable development. Hence, it is critical for policymakers to increase enforcement of environmental regulations. Second, we show that there is a substitutive effect of public concern and effective enforcement of environmental regulations. Enhanced enforcement helps the environment but hurts the firm in terms of higher audit fees. Third, our analysis suggests that auditors can identify poorer environmental performers and charge them more than companies with better environmental performance.

Acknowledgements We are grateful for the helpful comments of Stephen H Penman (editor), an anonymous reviewer, Donghui Wu, Yuping Zhao, Yue He, Huihui Shen, Xizi Wang, Qihui Gong, and seminar participants at Xiamen University. Jiaxing You acknowledges the financial support from the Major Program of National Social Science of China (23&ZD072) and the National Natural Science Foundation of China (72272125). Xiting Wu acknowledges the financial support from the National Natural Science Foundation of China (72302131) and the Natural Science Foundation of Shandong Province (ZR2023QG078). Corresponding author: Jiaxing You, E-mail: jxyou@xmu.edu.cn.

Data Availability Our data will be provided upon request.

Declarations

Competing Interests We state that the named authors have no conflict of interest, financial or otherwise.

References

Acharya, V.V., Y. Amihud, and L. Litov. 2011. Creditor rights and corporate risk-taking. *Journal of Financial Economics* 102 (1): 150–166.

Alrazi, B., C. de Villiers, and C.J. Van Staden. 2016. The environmental disclosures of the electricity generation industry: a global perspective. *Accounting and Business Research* 46 (6): 665–701.

Asthana, S.C., and J.P. Boone. 2012. Abnormal audit fee and audit quality. *Auditing: A Journal of Practice & Theory* 31 (3): 1–22.

Balsam, S., W. Jiang, and B. Lu. 2014. Equity incentives and internal control weaknesses. *Contemporary Accounting Research* 31 (1): 178–201.

Barth, M.E., and M.F. McNichols. 1994. Estimation and market valuation of environmental liabilities relating to superfund sites. *Journal of Accounting Research* 32: 177–209.

Beck, M.J., J.L. Gunn, and N. Hallman. 2019. The geographic decentralization of audit firms and audit quality. *Journal of Accounting and Economics* 68 (1): 101234.

Bell, T.B., W.R. Landsman, and D.A. Shackelford. 2001. Auditors' perceived business risk and audit fees: analysis and evidence. *Journal of Accounting Research* 39 (1): 35–43.

Bentley, K.A., T.C. Omer, and N.Y. Sharp. 2013. Business strategy, financial reporting irregularities, and audit effort. *Contemporary Accounting Research* 30 (2): 780–817.

Bertrand, M., and S. Mullainathan. 2003. Enjoying the quiet life? Corporate governance and managerial preferences. *Journal of Political Economy* 111 (5): 1043–1075.

Blacconiere, W.G., and W.D. Northcut. 1997. Environmental information and market reactions to environmental legislation. *Journal of Accounting Auditing and Finance* 12: 149–178.

Blacconiere, W.G., and D.M. Patten. 1994. Environmental disclosures, regulatory costs, and changes in firm value. *Journal of Accounting and Economics* 18 (3): 357–377.

Boland, M., and D. Godsell. 2020. Local soldier fatalities and war profiteers: new tests of the political cost hypothesis. *Journal of Accounting and Economics* 70 (1): 101316.

Bonner, S.E., Z.-V. Palmrose, and S.M. Young. 1998. Fraud type and auditor litigation: an analysis of sec accounting and auditing enforcement releases. *The Accounting Review* 73 (4): 503–532.

Burby, R.J., and R.G. Paterson. 1993. Improving compliance with state environmental regulations. *Journal of Policy Analysis and Management* 12 (4): 753–772.

Busch, T., and V. Hoffmann. 2007. Emerging carbon constraints for corporate risk management. *Ecological Economics* 62 (3–4): 518–528.

Bushee, B.J., J.E. Core, W. Guay, and S.J.W. Hamm. 2010. The role of the business press as an information intermediary. *Journal of Accounting Research* 48 (1): 1–19.

Campbell, D., and R. Slack. 2011. Environmental disclosure and environmental risk: sceptical attitudes of Uk sell-side bank analysts. *The British Accounting Review* 43 (1): 54–64.
Carcello, J.V., and Z.-V. Palmrose. 1994. Auditor litigation and modified reporting on bankrupt clients. *Journal of Accounting Research* 32: 1–30.
Carson, E., R. Simnett, B.S. Soo, and A.M. Wright. 2012. Changes in audit market competition and the big n premium. *Auditing: A Journal of Practice & Theory* 31 (3): 47–73.
Casterella, J.R., J.R. Francis, B.L. Lewis, and P.L. Walker. 2004. Auditor industry specialization, client bargaining power, and audit pricing. *Auditing: A Journal of Practice & Theory* 23 (1): 123–140.
Cen, L., F. Chen, Y. Hou, and G.D. Richardson. 2018. Strategic disclosures of litigation loss contingencies when customer-supplier relationships are at risk. *The Accounting Review* 93 (2): 137–159.
Chaney, P.K., and K.L. Philipich. 2002. Shredded reputation: the cost of audit failure. *Journal of Accounting Research* 40 (4): 1221–1245.
Chen, Q. 2020. The implementation of the new environmental protection law and audit fees. *Modern Economy* 11 (02): 273.
Chen, W., P. Hribar, and S. Melessa. 2018a. Incorrect inferences when using residuals as dependent variables. *Journal of Accounting Research* 56 (3): 751–796.
Chen, Y.-C., M. Hung, and Y. Wang. 2018b. The effect of mandatory CSR disclosure on firm profitability and social externalities: evidence from China. *Journal of Accounting and Economics* 65 (1): 169–190.
Chen, Y.J., P. Li, and Y. Lu. 2018c. Career concerns and multitasking local bureaucrats: evidence of a target-based performance evaluation system in China. *Journal of Development Economics* 133: 84–101.
Chetty, R., A. Looney, and K. Kroft. 2009. Salience and taxation: theory and evidence. *American Economic Review* 99 (4): 1145–1177.
Chiu, S.C., H. Lin, and C.S. Wang. 2017. The impact of investments in pollution reduction on shareholder wealth: evidence from Taiwanese manufacturing companies. *Corporate Social Responsibility and Environmental Management* 24 (6): 676–691.
Choi, B., and L. Luo. 2021. Does the market value greenhouse gas emissions? Evidence from multi-country firm data. *The British Accounting Review* 53 (1): 1–24.
Chy, M., G. De Franco, and B. Su. 2021. The effect of auditor litigation risk on clients' access to bank debt: evidence from a quasi-experiment. *Journal of Accounting and Economics* 71 (1): 101354.
Craswell, A.T., and J.R. Francis. 1999. Pricing initial audit engagements: a test of competing theories. *The Accounting Review* 74 (2): 201–216.
Craswell, A.T., J.R. Francis, and S.L. Taylor. 1995. Auditor brand name reputations and industry specializations. *Journal of Accounting and Economics* 20 (3): 297–322.
Dalla Via, N., and P. Perego. 2020. The relative role of firm incentives, auditor specialization, and country factors as antecedents of non-financial audit quality. *Auditing: A Journal of Practice and Theory* 39(3): 75–104.
Damert, M., A. Paul, and R.J. Baumgartner. 2017. Exploring the determinants and long-term performance outcomes of corporate carbon strategies. *Journal of Cleaner Production* 160: 123–138.
De Villiers, C., and C.J. van Staden. 2010. Shareholders' requirements for corporate environmental disclosures: a cross country comparison. *The British Accounting Review* 42 (4): 227–240.
Dechow, P.M., R.G. Sloan, and A.P. Sweeney. 1995. Detecting earnings management. *The Accounting Review* 70 (2): 193–225.
DeFond, M., D.H. Erkens, and J. Zhang. 2017. Do client characteristics really drive the big n audit quality effect? New evidence from propensity score matching. *Management Science* 63 (11): 3628–3649.
DeFond, M.L., J.R. Francis, and T.J. Wong. 2000. Auditor industry specialization and market segmentation: evidence from hong kong. *Auditing: A Journal of Practice & Theory* 19 (1): 49–66.
Dehaan, E., F. Hodge, and T. Shevlin. 2013. Does voluntary adoption of a clawback provision improve financial reporting quality? *Contemporary Accounting Research* 30 (3): 1027–1062.
Dehejia, R.H., and S. Wahba. 2002. Propensity score-matching methods for nonexperimental causal studies. *The Review of Economics and Statistics* 84 (1): 151–161.
Donohoe, M.P., H. Jang, and P. Lisowsky. 2022. Competitive externalities of tax cuts. *Journal of Accounting Research* 60 (1): 201–259.
Durnev, A., and C. Mangen. 2020. The spillover effects of md&a disclosures for real investment: the role of industry competition. *Journal of Accounting and Economics* 70 (1): 101299.
Eshleman, J.D., and P. Guo. 2014. Abnormal audit fees and audit quality: the importance of considering managerial incentives in tests of earnings management. *Auditing: A Journal of Practice & Theory* 33 (1): 117–138.

Feroz, E.H., K. Park, and V.S. Pastena. 1991. The financial and market effects of the sec's accounting and auditing enforcement releases. *Journal of Accounting Research* 29: 107–142.
Ferracuti, E. 2022. Information uncertainty and organizational design. *Journal of Accounting and Economics* 74 (1): 101493.
Firth, M. 1997. The provision of non-audit services and the pricing of audit fees. *Journal of Business Finance & Accounting* 24 (3): 511–525.
Firth, M., C. Lin, S. M.-l Wong, and X. Zhao. 2019. Hello, is anybody there? Corporate accessibility for outside shareholders as a signal of agency problems. *Review of Accounting Studies* 24 (4): 1317–1358.
Francis, J.R. 1984. The effect of audit firm size on audit prices: a study of the Australian market. *Journal of Accounting and Economics* 6 (2): 133–151.
Francis, J.R., and D.T. Simon. 1987. A test of audit pricing in the small-client segment of the u.S. audit market. *The Accounting Review* 62 (1): 145–157.
Garber, S., and J.K. Hammitt. 1998. Risk premiums for environmental liability: does superfund increase the cost of capital? *Journal of Environmental Economics and Management* 36 (3): 267–294.
Griffin, P.A., T. Neururer, and E.Y. Sun. 2020. Environmental performance and analyst information processing costs. *Journal of Corporate Finance* 61: 1–24.
Hainmueller, J. 2012. Entropy balancing for causal effects: a multivariate reweighting method to produce balanced samples in observational studies. *Political Analysis* 20 (1): 25–46.
Hainmueller, J., and Y. Xu. 2013. Ebalance: a stata package for entropy balancing. *Journal of Statistical Software* 54: 7.
Hart, S.L. 1995. A natural-resource-based view of the firm. *Academy of Management Review* 20 (4): 986–1014.
Hay, D.C., W.R. Knechel, and N. Wong. 2006. Audit fees: a meta-analysis of the effect of supply and demand attributes. *Contemporary Accounting Research* 23 (1): 141–191.
He, R., L. Luo, A. Shamsuddin, and Q. Tang. 2022. The value relevance of corporate investment in carbon abatement: the influence of national climate policy. *European Accounting Review* 31 (5): 1233–1261.
Hribar, P., T. Kravet, and R. Wilson. 2014. A new measure of accounting quality. *Review of Accounting Studies* 19 (1): 506–538.
Huang, N., R. He, L. Luo, and H. Shen. 2023. Carbon emission trading scheme and firm debt financing. *Journal of Contemporary Accounting and Economics:* 100384.
Huang, H.W., K. Raghunandan, and D. Rama. 2009. Audit fees for initial audit engagements before and after sox. *Auditing: A Journal of Practice & Theory* 28 (1): 171–190.
Huang, S., S. Roychowdhury, and E. Sletten. 2020. Does litigation deter or encourage real earnings management? *The Accounting Review* 95 (3): 251–278.
Hughes, K.E. 2000. The value relevance of nonfinancial measures of air pollution in the electric utility industry. *The Accounting Review* 75 (2): 209–228.
Irani, R.M., and D. Oesch. 2016. Analyst coverage and real earnings management: quasi-experimental evidence. *Journal of Financial and Quantitative Analysis* 51 (2): 589–627.
Jacobs, B.W., V.R. Singhal, and R. Subramanian. 2010. An empirical investigation of environmental performance and the market value of the firm. *Journal of Operations Management* 28 (5): 430–441.
Jiang, Y., and L. Luo. 2018. Market reactions to environmental policies: evidence from China. *Corporate Social Responsibility and Environmental Management* 25 (5): 889–903.
Jiang, J., I.Y. Wang, and K.P. Wang. 2019. Big n auditors and audit quality: new evidence from quasi-experiments. *The Accounting Review* 94 (1): 205–227.
John, K., L. Litov, and B. Yeung. 2008. Corporate governance and risk-taking. *The Journal of Finance* 63 (4): 1679–1728.
Kassinis, G., and N. Vafeas. 2006. Stakeholder pressures and environmental performance. *The Academy of Management Journal* 49 (1): 145–159.
Kim, Y., H. Li, and S. Li. 2014. Corporate social responsibility and stock price crash risk. *Journal of Banking & Finance* 43: 1–13.
King, A., and M.J. Lenox. 2001. Does it really pay to be green? An empirical study of firm environmental and financial performance: an empirical study of firm environmental and financial performance. *Journal of Industrial Ecology* 5 (1): 105–116.
Knechel, W.R., and J.L. Payne. 2001. Additional evidence on audit report lag. *Auditing: A Journal of Practice & Theory* 20 (1): 137–146.
Koh, K., and Y.H. Tong. 2013. The effects of clients' controversial activities on audit pricing. *Auditing: A Journal of Practice & Theory* 32 (2): 67–96.

Konar, S., and M. Cohen. 2001. Does the market value environmental performance? *Review of Economics and Statistics* 83 (2): 281–289.
Li, L., B. Qi, G. Tian, and G. Zhang. 2017. The contagion effect of low-quality audits at the level of individual auditors. *The Accounting Review* 92 (1): 137–163.
Li, Y., D. Simunic, and M. Ye. 2014. Corporate environmental risk exposure and audit fees. In: *Working Paper*, University of Toronto and University of British Columbia.
Lins, K.V., H. Servaes, and A.N.E. Tamayo. 2017. Social capital, trust, and firm performance: the value of corporate social responsibility during the financial crisis. *The Journal of Finance* 72 (4): 1785–1824.
Liu, X., H. Xu, and M. Lu. 2021. Do auditors respond to stringent environmental regulation? Evidence from China's new environmental protection law. *Economic Modelling* 96: 54–67.
Luo, L., H. Wu, and C. Zhang. 2021. CEO compensation, incentive alignment, and carbon transparency. *Journal of International Accounting Research* 20 (2): 111–132.
Lyon, J.D., and M.W. Maher. 2005. The importance of business risk in setting audit fees: evidence from cases of client misconduct. *Journal of Accounting Research* 43 (1): 133–151.
MacKinnon, J.G., and M.D. Webb. 2017. Wild bootstrap inference for wildly different cluster sizes. *Journal of Applied Econometrics* 32 (2): 233–254.
Messier, W.F., Jr., J.K. Reynolds, C.A. Simon, and D.A. Wood. 2011. The effect of using the internal audit function as a management training ground on the external auditor's reliance decision. *The Accounting Review* 86 (6): 2131–2154.
Niemi, L. 2002. Do firms pay for audit risk? Evidence on risk premiums in audit fees after direct control for audit effort. *International Journal of Auditing* 6 (1): 37–51.
Oster, E. 2019. Unobservable selection and coefficient stability: theory and evidence. *Journal of Business & Economic Statistics* 37 (2): 187–204.
Palmrose, Z.-V. 1987. Litigation and independent auditors-the role of business failures and management fraud. *Auditing: A Journal of Practice & Theory* 6 (2): 90–103.
Pratt, J., and J.D. Stice. 1994. The effects of client characteristics on auditor litigation risk judgments, required audit evidence, and recommended audit fees. *The Accounting Review* 69 (4): 639–656.
Rosenbaum, P.R., and D.B. Rubin. 1983. The central role of the propensity score in observational studies for causal effects. *Biometrika* 70 (1): 41–55.
Sam, A.G., and X. Zhang. 2020. Value relevance of the new environmental enforcement regime in China. *Journal of Corporate Finance* 62: 1–22.
Sato, M., M. Grubb, J. Cust, K. Chan, A. Korppoo, and P. Ceppi. 2007. *Differentiation and dynamics of competitiveness impacts from the Eu ets*. In. UK: University of Cambridge.
Schneider, T.E. 2011. Is environmental performance a determinant of bond pricing? Evidence from the us pulp and paper and chemical industries. *Contemporary Accounting Research* 28 (5): 1537–1561.
Seetharaman, A., F.A. Gul, and S.G. Lynn. 2002. Litigation risk and audit fees: evidence from Uk firms cross-listed on us markets. *Journal of Accounting and Economics* 33 (1): 91–115.
Shane, P. 1995. An investigation of shareholder wealth effects of environmental regulation. *Journal of Accounting Auditing and Finance* 10: 485–520.
Sharfman, M.P., and C.S. Fernando. 2008. Environmental risk management and the cost of capital. *Strategic Management Journal* 29 (6): 569–592.
Sharma, D.S., V.D. Sharma, and B.A. Litt. 2017. Environmental responsibility, external assurance, and firm valuation. *Auditing: A Journal of Practice & Theory* 37 (4): 207–233.
Shen, H., H. Wu, X. Wu, and J. You. 2021. Once bitten, twice shy: the effect of experiencing a client with an environmental accident on audit effort. *Auditing: A Journal of Practice & Theory* 40 (4): 149–170.
Shipman, J.E., Q.T. Swanquist, and R.L. Whited. 2017. Propensity score matching in accounting research. *The Accounting Review* 92 (1): 213–244.
Simunic, D.A. 1980. The pricing of audit services: theory and evidence. *Journal of Accounting Research* 18 (1): 161–190.
Sletten, E., Y. Ertimur, J. Sunder, and J. Weber. 2018. When and why do IPO firms manage earnings? *Review of Accounting Studies* 23 (3): 872–906.
St. Pierre, K., and J.A. Anderson. 1984. An analysis of the factors associated with lawsuits against public accountants. *The Accounting Review* 59 (2): 242–263.
Stice, J.D. 1991. Using financial and market information to identify pre-engagement factors associated with lawsuits against auditors. *The Accounting Review* 66 (3): 516–533.
Su, X., and X. Wu. 2017. Public disclosure of audit fees and bargaining power between the client and auditor: evidence from China. *The International Journal of Accounting* 52 (1): 64–76.

Wu, X., L. Luo, and J. You. 2023. Actions speak louder than words: environmental law enforcement externalities and access to bank loans. *Journal of Banking & Finance* 153: 106882.
Wu, D., and Q. Ye. 2020. Public attention and auditor behavior: the case of hurun rich list in China. *Journal of Accounting Research* 58 (3): 777–825.
Xie, L., and L. Xu. 2021. Environmental public interest litigation in China: a critical examination. *Transnational Environmental Law* 10 (3): 441–465.
You, J., X. Wu, L. Luo, H. Shen, and X. Tan. 2021. New business as a bargaining factor in audit pricing: evidence from emission trading schemes. *Accounting and Business Research* 51 (6–7): 1–24.
You, J., B. Zhang, and L. Zhang. 2018. Who captures the power of the pen? *The Review of Financial Studies* 31 (1): 43–96.
Zhai, H., K.C. Chan, Q. Liu, and K. Liu. 2020. The impact of specialized environmental courts on corporate risk-taking: evidence from a natural experiment in China. *Asia-Pacific Journal of Financial Studies* 49 (1): 99–118.
Zhang, X., J. Liu, and K. Zhao. 2018. Antecedents of citizens' environmental complaint intention in China: an empirical study based on norm activation model. *Resources Conservation and Recycling* 134: 121–128.
Zhang, Q., Z. Yu, and D. Kong. 2019. The real effect of legal institutions: environmental courts and firm environmental protection expenditure. *Journal of Environmental Economics and Management* 98 (November): 102254.
Zhou, Y., L. Luo, and H. Shen. 2022. Community pressure, regulatory pressure and corporate environmental performance. *Australian Journal of Management* 47 (2): 368–392.