Audit Firms' Corporate Social Responsibility Activities and Auditor Reputation

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Abstract

We find that audit firms can build trust and reputational capital in the market place by engaging in corporate social responsibility (CSR). Audit firms that engage in CSR increase the size of their client base, on average, compared to audit firms that do not engage in CSR. The result is robust to audit firm fixed effects as well as an alternate specification that relies on an exogenous shock to charitable giving. The effect is stronger for audit firms without existing reputations from a Big 4 brand name or industry specialization. CSR is also associated with higher underlying audit quality and higher audit fees, suggesting that CSR is reflective of the underlying quality of the audit firm and is not "greenwashing."

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1. Introduction

In this study, we examine whether engaging in corporate social responsibility (CSR) can serve as an effective reputation enhancing mechanism for public accounting firms. Following prior research (e.g., Lins, Servaes, and Tamayo 2017), we view CSR as activity that demonstrates "the commitment of a business to contribute to sustainable economic development, working with employees, their families, the local community, and society at large to improve the quality of life (World Business Council for Sustainable Development)." CSR has become a popular tool for corporations to promote and enhance their reputation. For example, 93% of the world's largest 250 companies issued a report detailing their CSR activities in 2017, compared to 35% in 1999 (KPMG 2017). Moreover, a large body of literature has documented that CSR helps corporations build social capital and enhance stakeholder trust (McWilliams and Siegel 2001; Dhaliwal, Li, Tsang, and Yang 2011; Tian, Wang, and Yang 2011; Christensen 2016; Christensen, Hail and Leuz 2019).

CSR can be especially important method for enhancing reputation for companies that produce credence goods and services—goods and services where buyers make their decisions based on their trust in the service provider (Flammer 2015; Lins et al. 2017). Auditing has several features of a credence service. For example, audit firms are experts who recommend the level of service that they will provide to buyers, and buyers may have difficulty verifying the auditor's quality of service even after the service has been provided (Causholli and Knechel 2012). As such, CSR could be an important way for audit firms to build trust and enhance their reputation in the market place.

Understanding how auditors build reputation and trust is important because auditors' role in the capital markets is to certify financial statements, and public trust in auditors' judgements is

essential to this function (Harris 2015; Stevens 2017). Prior studies find consistent evidence that negative signals of audit quality play a vital role in how investors and clients perceive audit services (Chaney and Philipich 2002; Krishnamurthy, Zhou, and Zhou 2006; Skinner and Srinivasan 2012; Swanquist and Whited 2015; Qi, Li, Robin, and Yang 2017). These studies demonstrate that reputation damage has significant consequences to auditors, such as a higher rate of client turnover and reduced audit market share. In contrast, evidence on how auditors build a positive reputation is more limited, primarily focusing on audit firms that have already established reputations through either the size of the firm (e.g., Big N versus non-Big N) or industry expertise (DeAngelo 1981; Defond, Wong, and Li 2000; Knechel, Naiker, and Pacheco 2007; DeFond and Zhang 2014). However, reputational capital embedded in auditor size and industry specialization takes considerable time to build and can be very costly to establish. We add to the literature by investigating an alternative way for audit firms to enhance reputational capital—engaging in CSR activity. Because serving the public interest is an integral part of the auditing function, we argue that audit firms' engagement in CSR demonstrates their genuine concern for the public interest, and therefore, leads to an increase in public trust and their reputational capital. If this is the case, we expect to observe a positive association between an audit firm's CSR activity and growth in the audit firm's client base (i.e., an increase in the number of clients served) as the audit firm is able to win new clients and less likely to lose existing clients in a competitive marketplace.

We hand-collect data on audit firms' CSR activity between from 2008 to 2016. There are several advantages to using Chinese data to answer our research question. First, auditors' litigation risk in China is low compared to the U.S., which increases the importance of auditors' reputation as a motivation for producing high quality audits. Empirically, this allows us to focus on the

relationship between CSR and reputation without the confounding effects of litigation risk.[1] Second, compared to the U.S., the Chinese audit market has relatively low market concentration and the Big 4 firms have less brand recognition. As a result, there are more audit firms competing for public clients, which increases the power of our tests and makes it more likely that we will be able to observe an effect of CSR on auditors' reputation, if it exists. Third, the local branches of the Chinese Institute of Certified Public Accountants (CICPA) publicly report audit firms' CSR activities. Chinese audit firms themselves also disclose their CSR activities, and social media in China frequently covers CSR activities.[2] This allows us to create a comprehensive dataset of CSR activity for 408 audit firm-year observations that covers all audit firms in China that audit at least one public company.

Using our hand-collected data, we create three proxies for the extent of audit firms' CSR engagement: (1) a binary variable indicating whether auditors engage in any CSR activities; (2) the number of CSR activities; and (3) the breadth of different types of CSR activities in which the audit firm engages.[3] After controlling for various audit firm characteristics, we first document that audit firms' CSR activities in the prior year are associated with a significantly larger increase in the number of clients they serve in the subsequent year. This association applies to all three CSR activity measures. Economically, audit firms that engage in CSR activity experience a 4.7 net increase in the number of clients they serve compared with audit firms that do not engage in any CSR activity. To further mitigate the concern that unobserved differences between audit firms explain our results, we also control for audit firm fixed effects and the results hold.

[1] CSR related studies using Chinese data produce results consistent with U.S. studies. For example, Chinese consumers show a high level of awareness and trust of corporate CSR activity, which leads to more positive images of companies that engage in CSR activity and a higher likelihood of purchasing goods and services from them (Tian et al. 2011).

[2] There are no rules in China that require audit firms to conduct CSR or report their CSR activity to the CICPA. However, audit firms may voluntarily disclose their CSR activity to the CICPA or on their firms' own websites. We acknowledge that if audit firms conduct CSR activities but do not disclose them, we will not include them in our CSR sample and this will likely to bias against our findings.

[3] As discussed in Section 3.1, we categorize CSR activities in four types: Donation, Environment Protection, Employee Welfare, and Other Activities.

Because Big 4 auditors and industry expert auditors have already built their reputations through other means, we next examine whether the effect of CSR activity on auditor reputation is more pronounced for non-Big 4 auditors and non-industry expert auditors. We find that the positive association between CSR and the increase in the number of clients served is more significant for non-Big 4 firms and non-industry expert auditors, suggesting that audit firms without international brand recognition and auditors who do not have industry expertise benefit more from engaging in CSR.

To provide additional evidence of a causal relationship, we exploit the 2013 Ya'an Lushan Earthquake as a natural experiment because it caused a large, exogenous surge of corporate donations. Using a differences-in-differences (DID) methodology, we find that audit firms that engage in new CSR activities after the earthquake experience higher growth in the number of clients than those without new CSR activities. Since audit firms' engagement in new CSR activity initiated after the earthquake is less likely to be endogenously determined, this test provides further support for our main analysis that CSR is an effective strategy to attract clients and build reputational capital.

A related question that emerges is whether audit firms' engagement in CSR is associated with the underlying audit quality delivered by the firms. If audit firms' engagement in CSR shows their genuine concern in safeguarding public interest as we argue, we should observe that auditors engaging in CSR deliver higher quality audits.[4] On the other hand, CSR could simply be used as an impression management tool, an advertising strategy to increase media coverage, or a political tactic to manage relationships with the government (Prior, Surroca, and Tribó 2008; Lyon and Maxwell 2011; McWilliams and Siegel 2001; Marquis, Toffel, and Zhou 2016). If this is the case,

[4] Consistent with this view, prior research finds that corporate CSR is often used as a signalling device for reliability, trustworthiness, or superior product quality for corporations (McWilliams and Siegel 2001; Elfenbein, Fisman, and Mcmanus 2012).

we should observe no association between audit firms' CSR and their underlying audit quality. Using both modified audit opinions and restatements as proxies for audit quality, we find some evidence that audit firm CSR activity is positively associated with modified audit opinions and negatively associated with accounting restatements. As prior research finds that an auditor's reputation for quality is associated with higher fee premiums (Ferguson, Francis, and Stokes 2003), we further examine whether clients pay higher audit fees to audit firms that engage in CSR activities and find confirming evidence. Overall, these results are consistent with the view that audit firms' CSR engagement is reflective of the underlying audit quality delivered by the firms, rather than a "greenwashing" tool.

In additional analysis, we also examine whether auditors engage in CSR activities after a reputation damaging event. The results suggest that audit firms are more likely to engage in CSR, and engage in more and diversified CSR activities, after they are sanctioned by the Chinese government for audit failures. Moreover, engaging in CSR activities after audit failures leads to a lower likelihood of subsequent auditor dismissals. This finding indicates that audit firms may use CSR to rebuild their reputation after it has been damaged, consistent with research in the corporate sector that investment in social capital helps repair reputation damage (Chakravarthy, deHaan, and Rajgopal 2014; Lins et al. 2017).

Our study makes several important contributions to the literature. First, while a considerable number of studies in the marketing, management and accounting domain have documented a positive effect of corporate CSR activity on consumers' and investors' perceptions of the corporation, whether CSR has a similar effect for audit firms is unknown given the different nature of the public accounting market and the role that auditing firms play in the capital markets. Unlike many corporations, audit firms do not generate obvious negative externalities, such as pollution, that CSR can help remedy (Christensen et al. 2019). Thus, the effect of corporate CSR

may not hold for auditors. We provide robust evidence that auditors' CSR engagement can also serve as a reputation enhancing strategy by reinforcing the role of audit firms in safeguarding public interest, which helps audit firms attract more clients.

Second, although it is well-documented that auditor reputation damage has significant consequences to auditors, audit firms are not just interested in avoiding negative reputation. They are also actively engaged in building positive reputations (Brozovsky and Richardson 1998). Extant literature provides two mechanisms through which audit firms build positive reputation: brand name and industry specialization. However, these strategies may be too costly to adopt, especially for small audit firms in a competitive audit market with low supplier concentration. For example, there are only limited number of large audit firms and investing in the expertise of certain industries may forgo clients in other industries. We provide evidence that small audit firms and non-industry expert auditors can use CSR activity to build their reputations.

2. Literature review and Hypothesis Development

2.1. CSR as a method for building reputation

Theoretical work has established that civic engagement, activities through which agents contribute positively to the community and social life (e.g., volunteering, political participation, donations), can lead to positive outcomes by fostering trust (Carlin, Dorobantu, and Viswanathan 2009; Sapienza, Toldra-Simats, and Zingales 2013). CSR is a type of civic engagement that promotes shared beliefs and disposition towards cooperation between a company and its stakeholders, which maps directly to the theoretical foundations of social capital (Lins et al. 2017). A large body of research supports the view that CSR helps companies build social capital and enhance stakeholder trust.

Studies in the marketing and management domain document that CSR has a positive effect on consumers' perceptions. Marketing survey results suggest that CSR influences consumers' overall assessment of a company's reputation (Brown and Dacin 1997), and CSR creates an image that a company is reliable and honest, characteristics that are typically linked to high quality by consumers (Flammer 2015; Siegel and Vitaliano 2007). In addition, because attributes such as quality, reliability, and honesty are important but difficult to determine by search alone, CSR is viewed as an effective differentiation strategy to create new demand or to command a premium price for an existing product or service (McWilliams and Siegel 2001).

In the accounting literature, CSR disclosures provide value-relevant information complementary to financial information when evaluating the company. CSR disclosures are found to attract more analysts and institutional investors and reduce analyst forecast errors, resulting in a reduction in the cost of equity capital (Dhaliwal et al. 2011; Dhaliwal, Radhakrishnan, Tsang, and Yang 2012; El Ghoul, Guedhami, Kwok, and Mishra 2011). Companies' CSR engagement also has a positive effect on firm performance as reflected in higher firm value (Matsumura, Prakash, and Vera-Muñoz 2013; Ferrell, Liang, and Renneboog 2016), higher stock market returns (Flammer 2015; Lys, Naughton, and Wang 2014) and better accounting performance (Lev, Petrovits, and Radhakrishnan 2010; Flammer 2015).

Prior research also argues that CSR's effects are more significant for companies offering credence goods and to relatively new sellers that have limited alternative means of assuring quality (McWilliams and Siegel 2001; Elfenbein et al. 2012). Credence goods and services are those where the market does not have perfect ex-ante information about quality. Prior studies note that auditing services have several attributes of credence goods. For example, audit firms are experts in the field that determine the appropriate level of service, labor mix, and total audit hours that are required to meet professional standards. Client firms may have limited ability to assess the appropriateness of

the audit firm's conclusion on these issues, and as a result, must place a certain amount of trust in the audit firm that the audit is performed appropriately. As a result, client firms infer audit quality information from audit firms' established reputations (McWillams and Siegel 2001).

Prior literature generally uses auditor size (e.g., Big N versus non-Big N) as a proxy for positive reputation as larger auditors have more quasi rents at stake and, therefore, stronger incentives to perform high-quality audits (DeAngelo 1981). Studies have also examined audit firms' investment in industry expertise as another differentiation strategy, which helps build up reputational capital. These studies generally conclude that large auditors and industry expert auditors are associated with better audit quality and a fee premium (Defond et al. 2000; Casterella, Francis, Lewis, and Walker 2004; Balsam, Krishnan, and Yang 2003; Knechel et al. 2007; Fung, Gul, and Krishnan 2012; DeFond and Zhang 2014). However, reputational capital embedded in auditor size and industry specialization takes considerable time to build and can be very costly to establish. Even though positive reputational capital is difficult to build, economic theories suggest that in markets with unobserved quality and asymmetric information, sellers benefit from credible signals of trustworthiness that may substitute for reputation and speed the rate of reputation development (Milgrom and Roberts 1986; Elfenbein et al. 2012).

The growing awareness towards CSR makes investing in CSR activities a potentially important reputation enhancing mechanism for audit firms. However, no empirical evidence exists on the effect of CSR on audit firms. The purpose of this study is to fill this void in the literature and examine whether audit firms' engagement in CSR activities serves as an effective reputation enhancing mechanism. As noted above, CSR can be an effective signal of trustworthiness, particularly for organizations offering credence services such as audit firms that want to enhance their reputation, brand, and trust in the market place (Barney 1991; Hart 1995; Porter and Kramer 2011; Russo and Fouts 1997; Flammer 2015; Siegel and Vitaliano 2007). Thus, engaging in CSR

reinforces the role of audit firms in safeguarding the "public interest", which is beneficial in generating public trust regarding the auditor's reputation.

If CSR engagement serves as a reputation enhancing mechanism for audit firms, we expect it will help auditors win new client contracts and reduce the likelihood of losing existing clients, resulting in a net increase in the number of clients compared to audit firms that do not engage in CSR. Thus, our first hypothesis is stated in the following alternative form:

> *H1a: Audit firms engaging in CSR activities experience a larger subsequent net increase in the number of clients served compared to audit firms not engaging in CSR activities.*

Although there are strong reasons to expect that CSR will help audit firms build a positive reputation, this is ultimately an empirical question because there are also two arguments for the null hypothesis. First, because CSR activity is not directly linked to the core business of audit firms of assuring financial statements, clients and potential clients may not view it as relevant to the auditor's reputation compared to other observable signals, such as regulator sanctions, audit firm size, or industry expertise. Second, Becker-Olsen, Cudmore, and Hill (2006) point out that consumers may perceive CSR as a negative signal if they view it as "greenwash" that companies only engage in to cover up other misdeeds rather than genuine interest in social or environmental concerns. These arguments indicate that CSR may not be related to auditors expanding their clientele base, and thus, the question warrants empirical investigation.

If CSR engagement indeed works as an effective reputation enhancing mechanism for audit firms, as hypothesized in H1a, the effect should be more pronounced among small audit firms and non-industry expert auditors as these firms have limited alternative means to build up their reputation. Hence, we further hypothesize that:

> *H1b: The positive association between audit firm's engagement in CSR activities and the increase in the number of clients is more significant for non-Big 4 audit firms.*

H1c: The positive association between audit firm's engagement in CSR activities and the increase in the number of clients is more significant for non-industry expert audit firms.

2.2 Audit firm CSR activity and audit quality

While engagement in CSR activities can potentially be used as an effective reputation enhancement mechanism for audit firms to attract more clients, it is not clear whether the CSR activity is reflective of the underlying audit quality that the firm delivers. Prior studies suggest that corporate' CSR engagement is associated with less short-term opportunistic behavior from executives (Bénabou, and Tirole 2010). For example, Gao, Lisic, and Zhang (2014) find that executives of companies that engage in CSR profit significantly less from insider trading and are less likely to trade prior to future news than executives of companies that do not engage in CSR activities. They conclude that a company's investment in CSR builds a positive image of caring for social good and imposes additional costs on executives' informed trading, which is widely perceived as self-serving. Kim, Park, and Wier (2012) show that companies that engage in CSR are less likely to manage earnings through discretionary accruals, less likely to manipulate real operating activities, and less likely to be subject to SEC investigations.

Similarly, auditors that engage in CSR activities may be more concerned with the public interest and care more about society as a whole. Because serving public interest is an integral part of the audit function, auditors engaging in CSR could be more likely to act ethically and conduct a more rigorous audit that reduces the likelihood that investors are misled by the financial statements. In this way, engagement in CSR could reflect a high level of underlying audit quality.

These arguments lead to the following hypothesis, stated in alternative form:

H2: The audit quality of audit firms engaging in CSR activities is higher than the audit quality of audit firms not engaging in CSR activities.

However, there are important arguments for the null hypothesis ultimately making the association between audit firm CSR and audit quality an empirical question. Audit firms could use

CSR as an impression management tool, an advertising strategy to attract more media coverage, or a political tactic without any substance or connection to underlying audit quality (Lyon and Maxwell 2011; Marquis et al. 2016). Auditors might pursue a favorable media image and less scrutiny from the public and government regulators by engaging in CSR. If this is the case, CSR activities should have no association with audit quality.

2.3 Audit firm CSR activity and audit fees

Economic theory predicts that establishing a positive reputation allows firms to charge a higher price that can potentially cover the cost of establishing the reputation (Klein and Leffler 1981). Companies that are able to make credible representations of their quality are able to charge a premium because it increases stakeholders' confidence in the quality of the company's goods or services. Similarly, the auditing literature documents that the reputation of an audit firm, such as Big N brand name and industry specialization is positively associated with fee premiums (Beatty 1989; Knechel et al. 2007; Fung et al. 2012). If CSR initiatives serve as a reputation-enhancing strategy and credibly reflect underlying audit quality, auditors should be able to charge higher audit fees. We state the third hypothesis in the following alternative form:

> *H3: Audit fees charged by audit firms engaging in CSR activities are higher than audit fees charged by audit firms not engaging in CSR activities.*

Again, there are arguments for the null hypothesis that there will be no association between audit firms' CSR activities and audit fees. CSR may be insufficient to improve an auditor's reputation in a meaningful way compared to other observable signals. Further, prior research suggests that charging higher prices while investing in CSR can backfire, as it potentially signals that the company only invests in CSR for opportunistic reasons (Fosfuri, Giarratana, and Roca 2015; Gneezy, Gneezy, Nelso, and Brown 2010; Xia, Monroe, and Cox 2004). If that is the case, we may not observe the positive association between audit firm CSR activity and audit fees.

3. Empirical design and Sample Selection

3.1 Empirical Design for test of H1 – Change in number of clients audited

To investigate whether audit firms engaging in CSR experience a larger increase in the number of clients (H1a), we estimate the following OLS model:

$$\Delta Client\ Number_t = \beta_0 + \boldsymbol{\beta_1 AUD\_CSR_{t-1}} + \beta_2 NonBig4 + \beta_3 NonAud\_Exp_{i.t-1} + \beta_4\ Aud\_San_{i.t-2,t-1} + \beta_5 Client\_SIZE_{t-1} + \beta_6 Client\_MTB_{t-1} + Year\ FE + \varepsilon_{i,t} \quad (1)$$

The analysis is conducted at the audit firm level. The dependent variable, $\triangle Client\ Number$, is the net change in the number of clients audited, calculated as the number of clients of the audit firm in year *t* minus the number of clients in year *t*-1 for the same audit firm. Thus, $\triangle Client\ Number$ can increase when new clients are gained or decrease when existing clients are lost.

Our test variable is audit firms' CSR activities in year *t*-1 (AUD_CSR_{t-1}). We use a lagged measure of CSR because auditor selection decisions are typically made at the beginning of the fiscal year when only prior year information is available. We use three measures of AUD_CSR_{t-1}. The first is Aud_CSR_{t-1}, an indicator variable equal to one if an audit firm participates in any CSR activity in year *t*-1, and zero otherwise. The second measure is CSR_Number_{t-1}, which is the log value of one plus the number of unique CSR activities engaged in by an audit firm in year *t*-1. This variable intends to capture the extent of audit firm's CSR engagement so that audit firms that engage in multiple CSR activities receive a higher value compared to firm's that only engage in one or a few CSR activities. The third measure is CSR_Type_{t-1}, which is the number of total different categories of CSR activities in which an audit firm has participated. This measure intends to capture the breadth of an audit firm's CSR activities as firms that engage in a variety of types of activities might be viewed as having a greater commitment to CSR than firms that are only involved in one type of activity. We categorize CSR activities into the following four groups: (1) *Donation*, which includes charitable donations to the community, scholarships to universities, or monetary commitments to orphanage and aged care homes; (2) *Environmental Protection*, which

includes activities related to afforestation, environmental campaigns, or low carbon commuting and lifestyle; (3) *Employee Welfare*, which includes investments in occupational health, employee recreation, amusement and sport, and family planning services or maternity assistance; and (4) *Other Activities*, which includes activities engaged in blood donation, disabled care, or other community volunteer work. If an audit firm's CSR engagement serves as a reputation enhancing strategy that can be used to attract new clients, β_1 should be positive in equation (1).

With respect to control variables, we first control for audit firm's reputation that can affect their client retention and new client attraction decisions. *NonBig4* is one if the audit firm is not one of the Big 4 firms. With regard to industry specialization, we first define an audit firm as an expert if it has a market share based on audit fees greater than 30% in a particular industry in year *t-1*, and define $NonAud\_Exp_{t-1}$ as one if the audit firm is not an industry expert in any industry (Reichelt and Wang 2010).[5] $Aud\_San_{i,t-2,t-1}$ is the ratio of total number of sanctions against the audit firm divided by the auditor's total number of clients during the previous two years. Audit firms experiencing a negative reputation event, such as a sanction from a regulator, are expected to lose more clients.

Furthermore, we include several control variables for client characteristics, which we aggregate to the audit firm-year level. $Client\_Size_{t-1}$ equals the median value of the natural log of total assets across all clients audited by the audit firm in a given year; $Client\_MTB_{t-1}$ is the median value of the market to book ratio across all clients audited by the audit firm in a given year. We also control for year fixed effects in case there is variation in CSR activities over time during our sample period.

To further mitigate the concern that unobserved audit firm characteristics explain CSR engagement and client attraction, we also run a separate model by excluding *NonBig4* and

[5] The results remain similar if we use 20% market share cutoff.

controlling for audit firm fixed effects. All continuous variables for the audit firm level measures are winsorized at the top and bottom one percent. Appendix 1 provides detailed variable descriptions.

H1b and H1c examine whether the positive effect of CSR engagement on client attraction is more pronounced for Non-Big 4 firms and non-industry expert auditors. We modify model (1) by adding an interaction between *CSR* and *Nonbig4* or *NonAud_Exp* $_{t-1}$:

$$\Delta Client\ Number_t = \beta_0 + \beta_1 NonBig4_t + \beta_2 AUD\_CSR_{t-1} + \boldsymbol{\beta_3 AUD\_CSR_{t-1} * NonBig4_t} + \beta_4 NonAud\_Exp_{i.t-1} + \beta_5\ Aud\_San_{i.t-2,t-1} + \beta_6 Client\_SIZE_{t-1} + \beta_7 Client\_MTB_{t-1} + Year\ FE + \varepsilon_{i,t} \quad (2)$$

$$\Delta Client\ Number_t = \beta_0 + \beta_1 NonAud\_Exp_{t-1} + \beta_2 AUD\_CSR_{t-1} + \boldsymbol{\beta_3 AUD\_CSR_{t-1} * NonAud\_Exp_{t-1}} + \beta_4 NonBig4 + \beta_5\ Aud\_San_{i.t-2,t-1} + \beta_6 Client\_SIZE_{t-1} + \beta_7 Client\_MTB_{t-1} + Year\ FE + \varepsilon_{i,t} \quad (3)$$

Consistent with model (1), the proxy for CSR_{t-1} is *Aud_CSR, CSR_Number and CSR_Type*, respectively. Our variable of interest is the interaction between CSR_{t-1} and *Nonbig4* as well as the interaction between AUD_CSR_{t-1} and *NonAud_Exp* $_{t-1.}$ We expect the interactions to be significantly positive according to H1b and H1c. The control variables remain the same as Model (1).

3.2 Empirical design for test of H2 – CSR and Audit Quality

Our next hypothesis examines the association between CSR engagement and audit quality. We employ the following audit quality model:

$$Audit\_Quality_t = \beta_0 + \boldsymbol{\beta_1 AUD\_CSR_t} + \beta_2 Size_t + \beta_3 LEV_t + \beta_4 INV_t + \beta_5 REC_t + \beta_6 LIQ_t + \beta_7 CFO_t + \beta_8 ROA_t + \beta_9 BTM_t + \beta_{10} DA_t + \beta_{11} LOSS_t + \beta_{12} INSTSHS_t + \beta_{13} BOARD_t + \beta_{14} IND_t + \beta_{15} SOE_t + \beta_{16} LARGSHS_t + \beta_{17} NonAud\_Expert_t + \beta_{18} NonBIG4_t + YearFE + IndustryFE + \varepsilon_{i,t} \quad (4)$$

Since the dependent variable in equation (4) is measured at the client-year level (as opposed to the audit firm-year level in equations (1) to (3)), we also estimate the right-hand variables in equation (4) at the client-year level. Because the amount of assurance provided by auditors cannot be explicitly observed by market participants (Defond and Zhang, 2014; He, Pan, and Tian 2017), we

use two common proxies for audit quality. The first proxy is modified audit opinion *(MOA)*, which is an indicator variable equal to one if an auditor issues a modified financial statement opinion in year *t*, and zero otherwise. The second measure is client restatement (*Restatement*), an indicator variable equal to one if a client's financial statements in year *t* are ultimately restated, and zero otherwise. The client restatement data is obtained from the DIB Internal Control and Risk Management Database. As the dependent variables *FMOA* and *Restatement* are dichotomous, we estimate logistic regressions for equation (4). We control for year and client industry fixed effects (a lack of variation in the dichotomous dependent variables prevents us from using client fixed effects as we do in the audit fee model below). The variable of interest is audit firm CSR activity (AUD_CSR_t) in year *t*. If audit firms that engage in CSR have higher audit quality than non-CSR audit firms, we expect the coefficient on AUD_CSR_t to be significantly positive in the *MOA* model and significantly negative in the *Restatement* model.

3.3 Empirical design for test of H3 – CSR and Audit Fees

We test H3 with the following audit fee model:

$$\begin{aligned} Audit\_Fee_t = {} & \beta_0 + \boldsymbol{\beta_1 AUD\_CSR_t} + \beta_2 Size_t + \beta_3 LEV_t + \beta_4 INV_t + \beta_5 REC_t + \beta_6 LIQ_t \\ & + \beta_7 CFO_t + \beta_8 ROA_t + \beta_9 BTM_t + \beta_{10} DA_t + \beta_{11} LOSS_t + \beta_{12} INSTSHS_t \\ & + \beta_{13} BOARD_t + \beta_{14} IND_t + \beta_{15} SOE_t + \beta_{16} LARGSHS_t + \beta_{17} FMOA_t \\ & + \beta_{18} NonAud\text{-}Expert_t + \beta_{19} NonBIG4_t + Year\ FE + Client\ Firm\ FE + \varepsilon_{i,t} \end{aligned} \quad (5)$$

The dependent variable $Audit\_Fee_t$ is the natural logarithm of audit fees for client *i* in year *t*. Similar to equation (4), we estimate the right-hand variables in equation (5) at the client-year level. The variable of interest, AUD_CSR_t, is the same three CSR measures described above. If CSR activities reflect higher audit quality, audit firms should be able to charge a price premium. Thus, we expect β_1 to be significantly positive in equation (5). Control variables are included following prior audit fee studies (Simunic 1980; Hay, Knechel, and Wong 2006; Boone, Khurana, and Raman 2015; Huang, Raghunandan, Huang, and Chiou 2015) and are defined in Appendix 1. We include year fixed effects. In addition, because equation (5) is estimated at the client-level and

audit fee is a continuous variable, we estimate equation (5) using OLS and control for client fixed effects to account for the time-invariant unobservable client characteristics. All continuous variables for the client level measures are winsorized at the top and bottom one percent.

3.5 Sample Selection and Descriptive Statistics

We utilize the audit firm CSR data in China to investigate our hypotheses. Audit firms' CSR activities are publicly reported by audit firms, the local branches of the Chinese Institute of Certified Public Accountants (CICPA), and social media. In order to conduct our empirical analyses, we focus on audit firms that have public clients so we can observe client financial data.[6] There are a total of 408 audit firm-year observations from 2008 to 2016. We manually collect the CSR data from the audit firms' websites, the local CICPA websites, and using the online search engine Baidu.com to search news media coverage of audit firms' CSR activities during our sample period. We count the number of unique CSR activities reported from these sources to calculate our continuous measure of CSR (*CSR_Number*). For each CSR activity identified, we read the disclosure and classify it into one of four categories: Donation, Environment Protection, Employee Welfare and Others as described earlier. We then count the number of different categories for our measure of CSR breadth (*CSR_Type*).

Table 1 presents the number and percentage of audit firms participating in CSR activities by year. On average, 27.5% of audit firms engage in at least one CSR activity in a given year. Out of audit firms that engaged in at least one CSR activity, the average number of CSR activities is 7.84, with a minimum value of one and a maximum value of 93. Because this variable is highly skewed, we take the log transformation for CSR_Number_{t-1}. Audit firms participate in, on average,

[6] According to the regulation released by Ministry of Finance on June 10, 2000, an audit firm that is able to obtain the service license to serve listed clients must be established for at least three years, with capital of no less than 2 million RMB for a limited liability firm and 1 million RMB for partnerships with revenues of at least 8 million RMB in the previous year. In addition, the audit firm must have at least 20 CPAs and at least 40 CPAs under the age 60 (MOF, Regulation 56 2000).

two types of CSR activities a year. The most frequent type of CSR activity is *Donation*, representing 83.9% of all CSR activities.

<Insert Table 1 here>

Client financial data are obtained from the China Stock Market Trading Database (CSMAR). We start with all publicly listed Chinese firms on the Shanghai and Shenzhen exchanges over the sample period 2008-2016. The initial sample consists of 21,358 client-year observations. This sample is used to construct the client portfolio data at the audit firm level.

For client-level analyses on audit quality and audit fees, consistent with prior literature (Huang et al. 2015; He et al. 2017; Li, Qi, Tian, and Zhang 2017), we delete 381 financial institutions, 803 special treatment companies and 5,680 observations with missing values. This results in a final sample of 14,494 client-year observations. Table 2 details the sample attrition process.

<Insert Table 2 here>

Table 3 presents the descriptive statistics for the audit firm-year variables used in equation (1) separately for audit firms that engage in CSR activities ($Aud\_CSR_{t-1} = 1$) compared to those that do not engage in CSR activities ($Aud\_CSR_{t-1} = 0$). The dependent variables ($\triangle Client\ Number$) and the clientele control variables are audit firm level change variables from year *t*-1 to year t, which reduces the sample size to 344 (compared to 408 in Table 1). Table 3 presents preliminary univariate evidence supporting H1, as audit firms that engage in CSR activity experienced an average increase in the number of clients of 7.58, compared 4.32 for audit firms that do not engage in CSR, and the difference in means is statistically significant at the $p<0.01$ level. Big 4 and industry expert audit firms are more likely to engage in CSR activity, which reinforces our need to include audit firm fixed effects in our multivariate analyses since audit firm type is correlated with CSR activity.

<Insert Table 3 here>

4. Regression Results

4.1 Auditor CSR and audit clientele base growth

Table 4 presents the regression results for equation (1) using the 344 audit firm-year observations described in Table 3. There is a separate column for each of our three measures of audit firms' CSR engagement: Aud_CSR_{t-1}, CSR_Number_{t-1} and CSR_Type_{t-1}. Column (1) shows that the coefficient on Aud_CSR_{t-1} is significantly positive (p-value=0.006), suggesting that compared to audit firms without CSR activities in the prior year, those engaging in CSR activities experience a significantly larger increase in the number of clients in the subsequent year. Economically, audit firms gain 4.7 more clients if they engage in CSR activities in the prior year compared to audit firms that did not engage in CSR in the prior year. This effect is significant considering the average value of change in client number for an audit firm is 5, so CSR audit firms added twice as many clients as non-CSR audit firms on average. Column (2) shows that the coefficient on CSR_Number_{t-1} is significantly positive (p-value=0.053), suggesting that the number of CSR activities also has a positive effect on the change in the number of clients for the audit firm. Finally, Column (3) presents the result for CSR breadth. The significantly positive coefficient on CSR_Type_{t-1} (p-value=0.008) indicates that the more variety of CSR activities the audit firm engages in year t-1, the larger increase in the client numbers in year t. This is consistent with clients appreciating audit firms' multi-dimensional CSR strategies.

In untabulated tests, we also separately examine the number of new clients gained and the number of existing client lost for the audit firm in year *t*. Consistent with the reputation effect of CSR activities, we find that when audit firms engage in CSR activities in year *t*-1, they gain

significantly more new clients as well as experience significantly fewer losses on the existing clients in the subsequent year, and these results hold for all three CSR measures.

With respect to control variables, we find non-Big4 firms and industry specialists gain more clients. Additionally, the coefficient on *Aud_San* is negatively significant, suggesting that audit firms that have more sanctions in the prior two years experience a net reduction in the number of clients, all else equal. The coefficients on *Client_MTB* are also significantly negative.

The right-hand columns report results after controlling for audit firm fixed effects and excluding *NonBig4* (which does not vary within audit firms and is therefore subsumed by the fixed effects). The results for our CSR variables still hold, providing evidence that our results are not driven by unobserved audit firm characteristics. When audit firm fixed effects are included in the model, none of the control variables is significant, suggesting that audit firm fixed effects absorb much of the heterogeneity across audit firms. Taken together, the results in Table 4 demonstrate that audit firms' CSR engagement is associated with a net increase in the number of clients served by the audit firm. This supports our first hypothesis that CSR helps audit firms build reputation and trust, and thus, attracting relatively more clients.

<Insert Table 4 here>

4.2 *Exogenous shock to auditor CSR and client base growth*

One concern is that CSR activity and audit firm attributes are endogenously determined. For instance, better audit firms or audit firms with more social capital are more likely to engage in CSR activity, and these firms are also good at attracting clients. Although we find our results in Table 4 are robust to audit firm fixed effects, there could still be a concern that some unobserved factor within audit firms correlates over time with CSR and audit quality. In this section, we further address this issue with a difference-in-difference research design that exploits the exogenous shock of the 2013 Ya'an Lushan Earthquake. On April 20th, 2013, a serious earthquake with 7.0

magnitude occurred at Ya'an Lushan in China. This earthquake resulted in 196 deaths and 11,470 people injured. We utilize the earthquake as an exogenous shock to audit firm's incentive to engage in CSR, as the equilibrium of cost-benefit analyses to engage in CSR during normal times is disrupted during such a disastrous time. Therefore, audit firms' decision to engage in CSR after the earthquake is less likely to be endogenously determined.

We apply the differences-in-differences (DID) methodology and identify treatment audit firms to be those that only engage in CSR after the earthquake and the control audit firms to be those that do not engage in CSR before or after the earthquake. The DID regression model we use is as follows:

$$\Delta Client\ Number_t = \beta_0 + \beta_1 Treatment + \beta_2 Post + \beta_3 Treatment*Post + \beta_4 NonBig4 + \beta_5 NonAud\_Exp_{i.t-1} + \beta_6\ Aud\_San_{i.t-2,t-1} + \beta_7 Client\_SIZE_{t-1} + \beta_8 Client\_MTB_{t-1} + Year\ FE + \varepsilon_{i,t} \quad (6)$$

Where *Treatment* is a dummy variable indicating the audit firm has only engaged in CSR after the earthquake. We delete audit firms that engage in CSR both before (year 2012) and after the earthquake (year 2013) (12 observations), those that engage in CSR only in year 2012 before the earthquake (2 observations), and observations that do not exist in both years (11 observations). Thus, the comparison group is the audit firms that do not engage in CSR activities in both pre and post the earthquake. *Post* equals one if the year is 2013. The coefficient of interest is β_3, which captures whether this is a net gain in client number for audit firms with CSR activities after the earthquake. The final sample is 60 audit firm-year observations in 2012 and 2013. The empirical result is reported in Table 5.

<Insert Table 5 here>

Table 5 shows that the interaction is positively significant at the 1% level (p value=0.009), suggesting that audit firms having CSR activities after the earthquake experience a significantly larger increase in the number of clients than those without CSR engagement. Since engagement in

CSR for this group of audit firms is less likely to be endogenously determined after the earthquake, this test provides additional support for a causal interpretation that CSR increases audit firms' reputational capital, which in turn leads to attracting and retaining more clients.

4.3 Auditor CSR and change in client number for small audit firms and non-industry expert auditors

We find CSR engagement works as an effective reputation enhancing mechanism for audit firms as hypothesized in H1a. In H1b and H1c, we predict that this effect should be more pronounced among non-Big 4 audit firms and non-industry experts, as these firms have limited resources and strategies to compete against large international audit firms or industry expert firms.[7]

The results are presented in Table 6. In Panel A, we find that the coefficient on the interaction between *Nonbig4* and each of the CSR engagement variables (*Aud_CSR*, *CSR_Number* and *CSR_Type*) is significantly positive (p-value=0.014, 0.001 and 0.001, respectively). These results provide support that CSR is a more effective brand-enhancing strategy for small audit firms compared to large, international Big 4 audit firms. The coefficients on the CSR engagement variables are not significant, indicating CSR activities do not enhance Big 4 auditors' ability to increase the number of clients.

<Insert Table 6 here>

Table 6 Panel B reports the results for CSR activities and non-industry expert audit firms. We find that the coefficients on the interaction between *NonAud_Exp* and *CSR_Number* as well as *CSR_Type* are significantly positive (p-value=0.001 and 0.088, respectively), suggesting that engagement in more CSR activities and more diversified CSR activities helps non-industry expert audit firms attract and retain clients.

[7] The results remain similar if we use Big 6 accounting firms in China, which are PricewaterhouseCoopers, Deloitte, Ernst & Young, KPMG, Lixin and Ruihua. Specifically, the coefficient on the interaction between *Nonbig6* and each of the CSR engagement variables (*Aud_CSR*, *CSR_Number* and *CSR_Type*) is significantly positive with p value=0.013, 0.000 and 0.006, respectively.

4.4 Auditor CSR and Audit Quality

H2 tests whether audit firms engaging in CSR have higher audit quality. As discussed previously, we use *FMOA* and *Restatement* as proxies for audit quality. The analyses are conducted at the client-year level. Table 7 presents the descriptive statistics for our client-year regressions for both CSR auditors and non-CSR auditors. It shows that the clients audited by auditors engaging in CSR in year *t* are more likely to restate their financial statements (*Restatement*) and pay higher audit fees (Aud_Fee_t). Clients of CSR auditors are also larger, have fewer inventory but more receivables, have larger book to market ratio, have more shares held by the largest shareholders, are more likely to be Big 4 and industry expert audit firm clients. Because many of these client characteristics affect audit fees and audit quality as well, we draw our conclusions from multivariate analyses after controlling for these variables.

<Insert Table 7 here>

The regression results for H2 are reported in Table 8.[8] Column (1) in Table 8 shows that the coefficient on Aud_CSR_t is positively significant (p-value =0.065), suggesting that audit firms that participate in CSR activity are more likely to issue modified audit opinions in year *t*. Economically, CSR auditors are 0.7 percent more likely to issue modified audit opinions, which represents a 24% increase in the mean likelihood of modified audit opinions. Additionally, the coefficients on CSR_Number_t and CSR_Type_t are also positively significant (p-value=0.050 and 0.034, respectively). With respect to *Restatement*, we find in column (4) that the coefficient on Aud_CSR_t is negative but statistically insignificant (p-value =0.444). Columns (5) and (6) show that CSR_Number_t and CSR_Type_t are negatively and significantly associated with *Restatement* (p-value=0.069 and 0.024, respectively), which suggests that client companies are less likely to

[8] The number of observations is reduced to 14,428 when *FMOA* is used as the dependent variable (column 1 to 3) because there is no variation in *FMOA* in the Scientific Research and Technology Service industry, which has 66 observations and these observations are dropped out from the analyses.

restate their financial statements when they are audited by audit firms that engage in more unique CSR activities and a broader variety of CSR activity types. Overall, the results presented in Table 8 provide some evidence that audit firms engaging in CSR deliver higher audit quality, as evidenced by the tendency to issue more modified audit opinions and the lower likelihood of client companies restating their financial statements.

<Insert Table 8 here>

4.5 Auditor CSR and Audit Fees

Table 9 presents the regression results for H3 that examine whether audit firms engaging in CSR charge higher audit fees. Columns (1) to (3) show that the coefficients on Aud_CSR_t, CSR_Number_t, and CSR_Type_t are all significantly positive (p-values = 0.052, 0.010, and 0.002, respectively). The results suggest that audit firms with a higher number of CSR activities and more diversified activities charge significantly higher audit fees, consistent with audit firms that engage in CSR having a higher reputation for quality.

<Insert Table 9 here>

5. Additional Analyses

5.1 CSR as a mechanism to rebuild a damaged reputation

Previous studies on auditor reputation have mostly focused on damage to an auditor's reputation. These studies find consistent evidence across a number of countries that the market place punishes auditors who are involved in reputation damaging events (Chaney and Philipich 2002; Krishnamurthy et al. 2006; Skinner and Srinivasan 2012; Swanquist and Whited 2015; He, Pittman, and Ruui 2016). While these studies demonstrate that auditor reputation damage has significant consequences to auditors, there is scarce evidence on what audit firms can do to repair their reputation after it has been tarnished. As noted by Brozovsky and Richardson (1998), "firms

are not merely interested in avoiding negative reputation … but are actively engaged in pursuing a positive one. A positive reputation may be inherently different from the absence of a negative one." (p768).[9]

We posit that CSR could be an effective way for audit firms to rebuild their reputation after it has been tarnished. Previous research on corporate CSR activities supports this view. For example, Chakravarthy et al. (2014) find that reputation-repairing actions directed toward the company's customers, employees, and communities generate positive abnormal returns and improve investors' perception about the company's financial reporting credibility after a scandal such as a serious accounting restatement. Christensen (2016) documents that companies that report CSR activities experience a less negative stock price reaction following high-profile misconduct. Lins et al. (2017) find companies that are involved in CSR activities experience higher stock returns, profitability, growth, and sales per employee relative to companies that engage in low CSR activities during the 2008-2009 financial crisis. This suggests that the trust between a company and its stakeholders built through investments in CSR initiatives pays off when the overall level of trust suffers a negative shock.

To test this conjecture, following Dhaliwal et al. (2011), we estimate the following lead-lag model:

$$CSR_t = \beta_0 + \boldsymbol{\beta_1 AUD\_SAN_{t-1}} + \beta_2 NonBig4 + \beta_3 NonAud\_Exp_{t-1} + \beta_4 Client\_SIZE_{t-1} + \beta_5 Client\_MTB_{t-1} + Year\ FE + \varepsilon_{i,t} \quad (7)$$

where the dependent variable CSR_t measures audit firms' CSR engagement in year *t*. It includes three variables as discussed above, *Aud_CSR, CSR_Number and CSR_Type*. The variable of interest is in this analysis is AUD_SAN_{t-1}, which is an indicator variable equal to one if the audit firm has been sanctioned in year *t*-1. We measure reputation damage using sanctions issued by the

[9] Using an experiment, Brozovsky and Richardson (1998) find evidence that auditors' investment to establish positive reputations via the purchase of non-salvageable productive assets (e.g. training) leads to more client contracts.

government regulator in China – the China Securities Regulatory Commission (CSRC) to audit firms for audit failures.[10] Prior studies find that government sanctions to audit firms causes severe reputation damage for those firms in China (Qi et al. 2017; Fung, Jiang, and Raman 2018). We predict β_1 in equation (6) will be positive. We manually collect data on audit firm sanctions from government websites during the same sample period 2008-2016.[11] Other control variables are as defined in in the description of equation (1) and are measured at the end of year *t-1*.

Table 10 Panel A presents the regression results of estimating model (6). The coefficient on AUD_SAN_{t-1} is positive and significant in column (1) (p-value=0.006), indicating that audit firms are significantly more likely to engage in CSR activities after they are sanctioned by the government due to an audit failure. Columns (2) and (3) present OLS results with CSR_Number_t and CSR_Type_t as dependent variables and with the control for audit firm fixed effects. We continue to find positive and statistically significant coefficients (p-value=0.023 and 0.002, respectively). Thus, audit firms appear to engage in more CSR activities and a larger variety of CSR activities to rebuild their reputation after they suffer reputation damage from government sanctions due to an audit failure.

<Insert Table 10 here>

Because prior studies find clients are more likely to dismiss auditors after an audit failure (e.g. Skinner and Srinivasan 2012; Swanquist and Whited 2015), we further test whether CSR activities can help reduce the negative impact of an audit failure by estimating the following logistic regression model:

[10] Lawsuits against auditors are rare in China (Firth, Phyllis, Mo, and Wong 2005; Lisic, Silveri, Song, and Wang 2015). Instead, CSRC plays a significant role in the oversight of capital market participants, including publicly listed firms, investors, security service firms and auditors. The CSRC enforces sanctions against audit firms if they fail to detect the clients' fraudulent financial reporting, fail to comply with audit standards, gather insufficient audit evidence, omit necessary and sufficient audit procedures, or engage in collusion with the client to commit fraud. The punishments for auditor sanctions include a warning, monetary fine, or suspension or termination of the auditor's service license (Firth et al. 2005; Sun, Cahan, and Xu 2016)

[11] See http://www.csrc.gov.cn/pub/zjhpublic/index.htm?channel=3300/3313

$$\text{Dismiss}_t = \beta_0 + \beta_1 AUD\_Sanction_{t-1} + \beta_2 AUD\_CSR_t + \boldsymbol{\beta_3 AUD\_Sanction_{t-1} * AUD\_CSR_t} + \beta_4 Size_t + \beta_5 LEV_t + \beta_6 INV_t + \beta_7 REC_t + \beta_8 LIQ_t + \beta_9 CFO_t + \beta_{10} ROA_t + \beta_{11} BTM_t + \beta_{12} DA_t + \beta_{13} LOSS_t + \beta_{14} INSTSHS_t + \beta_{15} BOARD_t + \beta_{16} IND_t + + \beta_{17} SOE_t + \beta_{18} LARGSHS_t + \beta_{19} NonAud\_Expert_t + \beta_{20} NonBIG4_t + YearFE + IndustryFE + \varepsilon_{i,t} \quad (8)$$

Table 10 Panel B presents the results of the likelihood of auditor dismissals after the audit firm has been sanctioned by the government. The coefficient on $Aud\_Sanction_{t-1}$ is significantly positive, which is consistent with prior literature that clients are more likely to dismiss their auditors after an audit failure. More importantly, the interactions between $Aud\_Sanction_{t-1}$ and all three CSR measures are negative and significant, which provides support that engaging in CSR activities after an audit failure event can actually help reduce the likelihood of auditor dismissals.

Taken together, these results suggest that auditors are more likely to engage in CSR activities after a reputation damaging event, and these CSR engagements seem to be an effective way to reduce the negative impact of the event and rebuild auditors' reputation.

5.2 New Client characteristics and CSR audit firm

Our main analyses reveal that audit firms engaging in CSR activities attract more clients. In this section, we explore the type of firms that are more likely to hire CSR auditors. To do so, we restrict our sample to new clients and perform logistic regressions to see what the client characteristics are that are associated with hiring audit firms that engage in CSR activities in the prior year. The untabulated results show that new clients of CSR audit firms are more likely to be from environmentally sensitive industries, such as mining, transportation, water conservancy and environmental protection. This suggests that clients from the environmentally sensitive industries especially value auditors' CSR initiatives. State Owned Enterprises (SOE) clients are also more likely to hire audit firms with CSR activities, which is consistent with previous studies that CSR could work as a relationship cultivation mechanism with local government authorities to ease

access to sociopolitical legitimacy and resources (Zhang, Rezaee, and Zhu 2010; Wang and Qian 2011; Gao, Farr, and Navissi, 2012).

6. Conclusion

A large body of literature has documented that CSR helps corporations build social capital and enhance stakeholder trust, as a result, CSR activity has become a popular and powerful tool to promote reputation for corporations, especially for those providing credence goods where the market does not have perfect ex-ante quality information (McWilliams and Siegel 2001; Dhaliwal et al. 2011; Tian et al. 2011; Christensen 2016). However, there is no evidence on whether CSR can build reputation and trust, and signal quality for public accounting firms. Using hand-collected audit firm CSR activity data in China, we empirically examine this issue. We first document that audit firms' CSR activity in the prior year leads to a significantly larger increase in the number of clients in the subsequent year, and this effect is mainly driven by smaller accounting firms and non-industry expert audit firms, which have limited alternative means to build up reputation.

We next examine whether auditors engaging in CSR activities are associated with higher audit quality, and find some supporting evidence. Finally, we document that auditors enhancing reputation through CSR engagement are able to charge higher audit fees. In additional analysis, we also find that audit firms are more likely to engage in CSR activities to rebuild their reputation after suffering reputation damage because of Chinese government sanctions, and engagement in CSR helps to reduce the negative impact (i.e., client dismissal) from the damage. Our study provides initial evidence that auditors' CSR engagement could serve as a reputation enhancing strategy, especially for smaller audit firms and non-industry expert audit firms, and should have implications to public accounting firms, client companies and investors.

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Table 1 Descriptive Statistics on Auditor CSR Activities

Panel A: Year distribution

Year	CSR Audit Firms	Percentage	non-CSR Audit Firms	Percentage	Total
2008	19	35.849%	34	64.151%	53
2009	6	11.765%	45	88.235%	51
2010	11	22.000%	39	78.000%	50
2011	8	16.327%	41	83.673%	49
2012	9	20.000%	36	80.000%	45
2013	17	42.500%	23	57.500%	40
2014	15	37.500%	25	62.500%	40
2015	14	35.000%	26	65.000%	40
2016	13	32.500%	27	67.500%	40
Total	112	27.451%	296	72.549%	408

Panel B Auditor CSR activities

Variables	N	mean	p50	sd	min	max
AUD_CSR	408	0.275	0	0.447	0	1
CSR_Number[*]	112	7.839	2	15.514	1	93
CSR_Type	112	1.741	1	0.898	1	4
Donation	112	0.839	1	0.369	0	1
Environmental Protection	112	0.330	1	0.472	0	1
Employee Welfare	112	0.098	0	0.299	0	1
Other Activities	112	0.473	0	0.502	0	1

*for CSR number and CSR types, descriptive statistics are only presented for the 112 firms that engaged in at least one CSR activity.

Table 2 Sample Attrition for Client Year Analyses

All observations from 2008 to 2016		21,358
Delete:		
Financial institutions	381	
Special Treatment firms	803	
Observations with missing values for control variables	5,680	
Final Sample		**14,494**

Table 3 Descriptive Statistics

Descriptive statistics for the audit firm-year variables used in model.

Variables	$Aud\_CSR_{t-1} = 1$		$Aud\_CSR_{t-1} = 0$		
	N	Mean	N	Mean	MeanDiff
△Client Number	96	7.583	248	4.315	3.269***
Nonbig4	96	0.740	248	0.972	-0.232***
$NonAud\_Exp_{t-1}$	96	0.750	248	0.931	-0.181***
$Aud\_San_{t-2, t-1}$	96	0.782	248	0.798	-0.016
$Client\_Size_{t-1}$	96	22.348	248	21.618	0.731***
$Client\_MTB_{t-1}$	96	0.948	248	0.702	0.246***

Table 4 Auditor CSR Activity and Change in Clientele portfolio size

	+/-	(1) △*Client Number*	(2) △*Client Number*	(3) △*Client Number*	(4) △*Client Number*	(5) △*Client Number*	(6) △*Client Number*
AUD_CSR $_{t-1}$	+	**4.735*****			**4.200*****		
		(2.545)			**(2.377)**		
CSR_Number $_{t-1}$	+		**1.768***			**1.753***	
			(1.622)			**(1.429)**	
CSR_Type $_{t-1}$	+			**2.386*****			**1.952****
				(2.419)			**(1.743)**
NonBig4		15.637***	16.686***	17.085***			
		(3.641)	(3.456)	(3.754)			
NonAud_Exp $_{t-1}$		-14.868***	-14.842***	-14.103***	-3.652	-3.735	-3.207
		(-4.038)	(-3.898)	(-3.792)	(-0.993)	(-1.010)	(-0.889)
Aud_San $_{t-2, t-1}$		-0.505**	-0.436*	-0.494**	0.284	0.314	0.284
		(-1.991)	(-1.805)	(-2.009)	(0.814)	(0.910)	(0.817)
Client_Size $_{t-1}$		1.706	1.709	1.776	1.554	1.635	1.577
		(1.371)	(1.359)	(1.397)	(0.963)	(1.028)	(0.963)
Client_MTB $_{t-1}$		-5.341**	-5.176**	-5.307**	-2.195	-2.226	-2.049
		(-2.459)	(-2.368)	(-2.470)	(-1.001)	(-1.037)	(-0.932)
Constant		-29.265	-29.524	-32.282	-28.570	-29.680	-29.264
		(-1.067)	(-1.063)	(-1.148)	(-0.862)	(-0.908)	(-0.873)
Year FE		Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE		No	No	No	Yes	Yes	Yes
N		344	344	344	344	344	344
adj. R^2		0.162	0.144	0.156	0.424	0.414	0.419

The dependent variable in the three columns, △Client Number, is the change in client number. *AUD_CSR* $_{t-1}$ equals one if the audit firm engaged in CSR in year t-1; *CSR_Number* $_{t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; *CSR_Type* $_{t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. See Appendix 1 for other variable definition. Robust t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. One-tailed p is for signed expectations and two-tailed p is for unsigned expectations.

Table 5 Exogenous Shock – 2013 Ya'an Lushan Earthquake

		△*Client Number*
Treat		-2.141
		(-0.987)
Post		-4.682**
		(-2.505)
Treat*Post	+	**6.599***
		(2.450)
Nonbig4		9.200***
		(4.637)
NonAud_Exp $_{t-1}$		-19.425**
		(-2.386)
Aud_San $_{t-2, t-1}$		9.054
		(0.236)
Client_Size $_{t-1}$		0.258*
		(1.803)
Client_MTB $_{t-1}$		0.297
		(0.095)
Constant		8.345
		(0.827)
Observations		60
Adj. R^2		0.374

Treat equals one if the audit firm engaged in CSR in year 2013 and zero otherwise; Post equals one if the year is 2013 and zero otherwise. See Appendix 1 for other variable definition. Robust z and t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. One-tailed p is for signed expectations and two-tailed p is for unsigned expectations.

Table 6 Interactions between CSR and Audit Firm Characteristics

Panel A Interaction between CSR and non-Big 4 audit firms

		(1)	(2)	(3)
		△Client Number	*△Client Number*	*△Client Number*
NonBig4$_t$		8.318*	7.468*	5.709
		(1.787)	(1.728)	(1.297)
AUD_CSR $_{t-1}$		-4.124		
		(-1.026)		
AUD_CSR $_{t-1}$**** NonBig4*** $_t$	+	**9.686****		
		(2.224)		
CSR_Num$_{t-1}$			-1.785	
			(-1.484)	
CSR_Numt-1* NonBig4$_t$	+		**6.182*****	
			(3.336)	
CSR_Type$_{t-1}$				-2.442
				(-1.604)
CSR_Type$_{t-1}$**** NonBig4***$_t$	+			**6.213*****
				(3.372)
NonAud_Exp $_{t-1}$		-15.257***	-15.162***	-14.947***
		(-4.127)	(-4.024)	(-3.976)
Aud_San $_{t-2, t-1}$		-0.522**	-0.523**	-0.546**
		(-2.074)	(-2.148)	(-2.235)
Client_Size $_{t-1}$		1.342	1.168	1.010
		(1.115)	(0.976)	(0.845)
Client_MTB $_{t-1}$		-4.383**	-3.798*	-3.690*
		(-2.125)	(-1.889)	(-1.845)
Constant		-15.290	-11.104	-6.222
		(-0.572)	(-0.417)	(-0.233)
Year FE		Yes	Yes	Yes
N		344	344	344
Adj. R^2		0.168	0.167	0.180

The dependent variable, △Client Number, is the change in client number. *AUD_CSR* $_{t-1}$ equals one if the audit firm engaged in CSR in year t-1; *CSR_Number* $_{t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; *CSR_Type* $_{t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. NonBig4 equals one if the audit firm is a non-big4, and zero otherwise. See Appendix 1 for other variable definition. Robust t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. One-tailed p is for signed expectations and two-tailed p is for unsigned expectations.

Table 6 (continued)

Panel B Interaction between CSR and Non-Industry Expert

		(1)	(2)	(3)
		△Client Number	*△Client Number*	*△Client Number*
NonAud_Exp $_{t-1}$	-	-14.909***	-19.429***	-17.105***
		(-3.527)	(-4.324)	(-3.760)
AUD_CSR $_{t-1}$		4.656		
		(0.736)		
AUD_CSR $_{t-1}$**** NonAud_Exp*** $_{t-1}$	+	**0.090**		
		(0.014)		
CSR_Num$_{t-1}$			-1.316	
			(-0.861)	
CSR_Num$_{t-1}$**** NonAud_Exp*** $_{t-1}$	+		**5.242*** **	
			(3.357)	
CSR_Type$_{t-1}$				0.379
				(0.170)
CSR_Type$_{t-1}$**** NonAud_Exp*** $_{t-1}$	+			**2.971***
				(1.358)
NonBig4		15.614***	13.915***	15.444***
		(3.238)	(3.020)	(3.150)
Aud_San $_{t-2, t-1}$		-0.505**	-0.502**	-0.522**
		(-1.981)	(-2.038)	(-2.103)
Client_Size $_{t-1}$		1.702	0.983	1.461
		(1.349)	(0.810)	(1.145)
Client_MTB $_{t-1}$		-5.335**	-4.155*	-4.790**
		(-2.413)	(-1.954)	(-2.192)
Constant		-29.134	-8.880	-22.057
		(-1.015)	(-0.329)	(-0.759)
Year FE		Yes	Yes	Yes
N		344	344	344
Adj. R^2		0.159	0.169	0.163

The dependent variable, △Client Number, is the change in client number. *AUD_CSR* $_{t-1}$ equals one if the audit firm engaged in CSR in year t-1; *CSR_Number* $_{t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; *CSR_Type* $_{t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. NonAud_Exp $_{t-1}$ equals one if the audit firm is not an industry expert, and zero otherwise. See Appendix 1 for other variable definition. Robust t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. One-tailed p is for signed expectations and two-tailed p is for unsigned expectations.

Table 7 Descriptive Statistics for client firm-year variables for audit fee and audit quality analyses

Variables	CSR Audit Firms		Non-CSR Audit Firms		MeanDiff
	N	Mean	N	Mean	
Audit_Fee$_t$	5656	13.615	8838	13.408	0.207***
FMOA$_t$	5656	0.025	8838	0.031	-0.006**
Restatement$_t$	5656	0.198	8838	0.186	0.012*
Size$_t$	5656	22.208	8838	21.877	0.332***
LEV$_t$	5656	0.443	8838	0.447	-0.004
INV$_t$	5656	0.153	8838	0.165	-0.012***
REC$_t$	5656	0.114	8838	0.105	0.009***
LIQ$_t$	5656	2.414	8838	2.439	-0.025
CFO$_t$	5656	0.044	8838	0.042	0.002
ROA$_t$	5656	0.039	8838	0.038	0.001
BTM$_t$	5656	0.913	8838	0.824	0.089***
DA$_t$	5656	0.443	8838	0.446	-0.003
LOSS$_t$	5656	0.088	8838	0.086	0.002
INSTSHS$_t$	5656	0.046	8838	0.045	0.000
BOARD$_t$	5656	8.792	8838	8.779	0.013
IND$_t$	5656	3.225	8838	3.216	0.010
SOE$_t$	5656	0.441	8838	0.419	0.022***
LARGSHS$_t$	5656	0.362	8838	0.347	0.014***
NonAud_Expert	5656	0.559	8838	0.858	-0.299***
NonBIG4$_t$	5656	0.907	8838	0.974	-0.067***

Table 8 Auditor CSR Activity and Audit Quality

	+/-	(1) $FMOA_t$	(2) $FMOA_t$	(3) $FMOA_t$	+/-	(4) $Restatement_t$	(5) $Restatement_t$	(6) $Restatement_t$
***AUD_CSR**$_t$*	**+**	**0.247***			**-**	**-0.007**		
		(1.513)				**(-0.143)**		
***CSR_Number**$_t$*	**+**		**0.177****		**-**		**-0.049***	
			(1.645)				**(-1.486)**	
***CSR_Type**$_t$*	**+**			**0.136****	**-**			**-0.043****
				(1.827)				**(-1.979)**
Size$_t$		-0.823***	-0.823***	-0.824***		-0.070**	-0.070**	-0.070**
		(-5.407)	(-5.422)	(-5.429)		(-2.064)	(-2.065)	(-2.062)
LEV$_t$		32.661**	32.487**	32.664**		-5.396	-5.487	-5.518
		(2.445)	(2.422)	(2.448)		(-1.058)	(-1.077)	(-1.083)
INV$_t$		-1.874**	-1.851**	-1.857**		-0.359	-0.376*	-0.377*
		(-2.306)	(-2.283)	(-2.292)		(-1.613)	(-1.684)	(-1.693)
REC$_t$		-1.960*	-1.965*	-1.983**		-0.563**	-0.550**	-0.546**
		(-1.944)	(-1.950)	(-1.974)		(-2.041)	(-1.995)	(-1.980)
LIQ$_t$		-0.010	-0.010	-0.010		-0.001	-0.001	-0.001
		(-0.229)	(-0.233)	(-0.239)		(-0.110)	(-0.089)	(-0.084)
CFO$_t$		-1.659*	-1.663*	-1.660*		-1.075***	-1.083***	-1.089***
		(-1.706)	(-1.712)	(-1.711)		(-3.043)	(-3.065)	(-3.082)
ROA$_t$		-4.440***	-4.457***	-4.479***		-1.171*	-1.149*	-1.134*
		(-3.138)	(-3.154)	(-3.165)		(-1.810)	(-1.774)	(-1.751)
BTM$_t$		0.029	0.029	0.030		-0.011	-0.009	-0.009
		(0.147)	(0.147)	(0.153)		(-0.224)	(-0.182)	(-0.175)
DA$_t$		-28.615**	-28.448**	-28.624**		6.115	6.208	6.240
		(-2.099)	(-2.078)	(-2.102)		(1.195)	(1.214)	(1.220)
LOSS$_t$		0.622***	0.623***	0.620***		-0.001	0.003	0.005
		(3.020)	(3.033)	(3.023)		(-0.006)	(0.032)	(0.050)
INSTSHS$_t$		-5.930***	-5.908***	-5.911***		-0.138	-0.137	-0.143
		(-3.377)	(-3.378)	(-3.381)		(-0.249)	(-0.248)	(-0.259)
BOARD$_t$		0.085	0.087	0.087		-0.007	-0.007	-0.008
		(1.119)	(1.151)	(1.156)		(-0.308)	(-0.322)	(-0.340)
IND$_t$		0.131	0.129	0.128		-0.009	-0.009	-0.009
		(0.633)	(0.624)	(0.616)		(-0.138)	(-0.138)	(-0.125)
SOE$_t$		0.021	0.019	0.020		-0.189***	-0.185***	-0.185***
		(0.117)	(0.103)	(0.110)		(-3.192)	(-3.122)	(-3.123)
LARGSHS$_t$		-1.551**	-1.551**	-1.555**		-0.245	-0.242	-0.242
		(-2.296)	(-2.298)	(-2.305)		(-1.318)	(-1.303)	(-1.304)
NonAud_Expert$_t$		0.301*	0.349*	0.384**		0.022	-0.018	-0.036
		(1.721)	(1.952)	(2.113)		(0.376)	(-0.285)	(-0.580)
NonBIG4$_t$		-0.789	-0.613	-0.731		0.523***	0.471***	0.500***
		(-1.523)	(-1.160)	(-1.435)		(3.255)	(2.873)	(3.113)
Constant		12.592***	12.385***	12.494***		-0.569	-0.481	-0.496
		(3.782)	(3.732)	(3.774)		(-0.761)	(-0.642)	(-0.663)
Year FE		Yes	Yes	Yes		Yes	Yes	Yes
Industry FE		Yes	Yes	Yes		Yes	Yes	Yes
N		14428	14428	14428		14494	14494	14494
Pseudo R^2		0.311	0.311	0.311		0.035	0.035	0.036
Model Chi-sqr		707.848	703.454	701.325		404.550	406.226	406.586
Area ROC		0.869	0.869	0.868		0.631	0.632	0.632

Two dependent variables: (1) Modified audit opinions (*FMOA)* equals one if the auditor issues a modified audit opinion in year t, and zero otherwise; (2) *Restatement* equals one if the client restates their financial statements in year t, and zero otherwise. *AUD_CSR* $_t$ equals one if the audit firm engaged in CSR in year t; *CSR_Number* $_t$ is the natural log of the number of CSR activities engaged by an audit firm in year t; *CSR_Type* $_t$ is the number of CSR categories engaged by an audit firm in year t. See Appendix 1 for other variable definition. Robust z statistics in parentheses. * $p < 0.1$, ** $p < 0.05$, *** $p < 0.01$. One-tailed p is for signed expectations and two-tailed p is for unsigned expectations. Standard errors are clustered at the client firm level. The number of observations is reduced to 14,428 in column 1 to 3 because there is no variation in *FMOA* in the Scientific Research and Technology Service industry, which has 66 observations and these observations are dropped out from the analyses.

Table 9 Auditor CSR Activity and Audit fees

	+/-	(1) $Audit\_FEE_t$	(2) $Audit\_FEE_t$	(3) $Audit\_FEE_t$
AUD_CSR$_t$	+	**0.008***		
		(1.626)		
CSR_Number$_t$	+		**0.008*****	
			(2.344)	
CSR_Type$_t$	+			**0.007*****
				(2.990)
$Size_t$		0.319***	0.319***	0.319***
		(33.606)	(33.612)	(33.641)
LEV_t		-0.243	-0.234	-0.228
		(-0.334)	(-0.321)	(-0.312)
INV_t		-0.020	-0.019	-0.019
		(-0.477)	(-0.459)	(-0.451)
REC_t		0.103*	0.104*	0.104*
		(1.700)	(1.701)	(1.702)
LIQ_t		-0.008***	-0.008***	-0.008***
		(-6.488)	(-6.472)	(-6.461)
CFO_t		0.038	0.039	0.039
		(1.175)	(1.190)	(1.208)
ROA_t		0.150*	0.148*	0.146*
		(1.869)	(1.844)	(1.817)
BTM_t		-0.022***	-0.022***	-0.022***
		(-3.465)	(-3.464)	(-3.466)
DA_t		0.308	0.298	0.291
		(0.421)	(0.408)	(0.398)
$LOSS_t$		0.026***	0.026***	0.026***
		(2.745)	(2.727)	(2.706)
$INSTSHS_t$		-0.128**	-0.129**	-0.129**
		(-2.312)	(-2.326)	(-2.337)
$BOARD_t$		0.006*	0.006*	0.006*
		(1.693)	(1.704)	(1.729)
IND_t		-0.005	-0.005	-0.005
		(-0.623)	(-0.626)	(-0.636)
SOE_t		-0.006	-0.006	-0.006
		(-0.260)	(-0.260)	(-0.253)
$LARGSHS_t$		-0.075	-0.075	-0.075
		(-1.605)	(-1.608)	(-1.603)
$FMOA_t$		0.065***	0.065***	0.065***
		(3.954)	(3.948)	(3.946)
$NonAud\_Expert_t$		-0.021***	-0.019***	-0.018***
		(-3.450)	(-3.078)	(-2.986)
$NonBIG4_t$		-0.180***	-0.173***	-0.177***
		(-4.313)	(-4.105)	(-4.250)
Constant		6.531***	6.522***	6.525***
		(31.486)	(31.446)	(31.495)
Year FE		Yes	Yes	Yes
Client FE		Yes	Yes	Yes
N		14494	14494	14494
adj. R^2		0.903	0.903	0.903

The dependent variable, $Audit\_FEE_t$, is the natural log of audit fees in year t. AUD_CSR_t equals one if the audit firm engaged in CSR in year t; CSR_Number_t is the natural log of the number of CSR activities engaged by an audit firm in year t; CSR_Type_t is the number of CSR categories engaged by an audit firm in year t. See Appendix 1 for other variable definition. Robust t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. One-tailed p is for signed expectations and two-tailed p is for unsigned expectations.

Table 10 Audit Firm Sanctions and CSR Activities

Panel A the relationship between audit firm sanctions and CSR activities

	+/-	(1)	(2)	(3)
		AUD_CSR_t	CSR_Number_t	CSR_Type_t
AUD_SAN$_{t-1}$	**+**	**0.803*** **	**0.166** **	**0.310*** **
		(2.516)	**(2.006)**	**(2.890)**
$NonBig4_t$		-2.468**	-1.643***	-1.515***
		(-2.266)	(-5.452)	(-4.510)
$NonAud\_Exp_{t-1}$		-1.148***	-0.470***	-0.747***
		(-2.706)	(-2.656)	(-3.250)
$Clientele\_SIZE_{t-1}$		-0.345	-0.070	-0.151
		(-0.806)	(-0.706)	(-1.436)
$Clientele\_MTB_{t-1}$		0.847	0.287*	0.250
		(1.376)	(1.834)	(1.590)
Constant		7.364	3.256	5.209**
		(0.771)	(1.501)	(2.252)
Year FE		Yes	Yes	Yes
N		344	344	344
Pseudo / Adjusted R^2		0.177	0.494	0.369
Model Chi-sqr		47.040		
Area under ROC Curve		0.767		

Three dependent variables: (1) AUD_CSR_t equals one if the audit firm engaged in CSR in year t; (2) CSR_Number_t is the natural log of the number of CSR activities engaged by an audit firm in year t; (3) CSR_Type_t is the number of CSR categories engaged by an audit firm in year t. AUD_SAN_{t-1} equals one if the audit firm has been sanctioned in year t-1. See Appendix 1 for other variable definition. Robust z and t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. One-tailed p is for signed expectations and two-tailed p is for unsigned expectations.

Table 10 (continued)

Panel B: Audit firm CSR activities and the likelihood of auditor dismissals after sanctions

	+/-	(1)	(2)	(3)
		$Dismiss_t$	$Dismiss_t$	$Dismiss_t$
$Aud\_Sanction_{t-1}$		0.178**	0.192**	0.178**
		(2.294)	(2.562)	(2.402)
Aud_CSR_t		0.040		
		(0.382)		
$Aud\_Sanction_{t-1}$* Aud_CSR_t	-	**-0.281****		
		(-2.142)		
CSR_Number_t			0.011	
			(0.188)	
$Aud\_Sanction_{t-1}$*CSR_Number_t	-		**-0.190*****	
			(-2.588)	
CSR_Type_t				0.023
				(0.384)
$Aud\_Sanction_{t-1}$*CSR_Type_t	-			**-0.133****
				(-2.027)
$Size_t$		-0.162***	-0.163***	-0.163***
		(-4.043)	(-4.061)	(-4.071)
LEV_t		-3.867	-3.876	-3.807
		(-0.430)	(-0.431)	(-0.424)
INV_t		-0.312	-0.326	-0.317
		(-1.085)	(-1.130)	(-1.104)
REC_t		0.605*	0.609*	0.606*
		(1.876)	(1.889)	(1.882)
LIQ_t		0.034***	0.034***	0.034***
		(2.830)	(2.833)	(2.831)
CFO_t		-0.698	-0.714	-0.713
		(-1.566)	(-1.602)	(-1.598)
ROA_t		-0.873	-0.858	-0.852
		(-1.036)	(-1.018)	(-1.011)
BTM_t		-0.023	-0.023	-0.024
		(-0.386)	(-0.381)	(-0.400)
DA_t		4.680	4.694	4.625
		(0.518)	(0.520)	(0.513)
$LOSS_t$		-0.063	-0.064	-0.064
		(-0.476)	(-0.484)	(-0.484)
$INSTSHS_t$		-0.138	-0.149	-0.163
		(-0.197)	(-0.213)	(-0.231)
$BOARD_t$		0.008	0.007	0.006
		(0.297)	(0.258)	(0.234)
IND_t		0.007	0.009	0.011
		(0.093)	(0.117)	(0.138)
SOE_t		0.313***	0.314***	0.313***
		(4.453)	(4.470)	(4.454)
$LARGSHS_t$		0.220	0.222	0.220
		(0.987)	(0.993)	(0.987)
$NonAud\_Expert_t$		-0.050	-0.088	-0.097

	(-0.702)	(-1.193)	(-1.299)
NonBIG4$_t$	-0.496***	-0.519***	-0.480***
	(-3.575)	(-3.134)	(-3.144)
Constant	1.206	1.278	1.247
	(1.377)	(1.441)	(1.416)
Year FE	Yes	Yes	Yes
Industry FE	Yes	Yes	Yes
N	14494	14494	14494
Pseudo R^2	0.031	0.031	0.031
Model Chi-sqr	318.473	318.620	318.693
Area under ROC Curve	0.636	0.635	0.635

The dependent variable *Dismiss*$_t$ equals one if the audit firm has been dismissed in year t; *AUD_SAN*$_{t-1}$ equals one if the audit firm has been sanctioned in year t-1; Three CSR variables: (1) *AUD_CSR* $_t$ equals one if the audit firm engaged in CSR in year t; (2) *CSR_Number* $_t$ is the natural log of the number of CSR activities engaged by an audit firm in year t; (3) *CSR_Type* $_t$ is the number of CSR categories engaged by an audit firm in year t. See Appendix 1 for other variable definition. Robust z statistics in parentheses. Standard errors are clustered at the client firm level. * p < 0.1, ** p < 0.05, *** p < 0.01. One-tailed p is for signed expectations and two-tailed p is for unsigned expectations.

Appendix: Definition of Variables

Variable Name	Definition
Audit Firm Level Variables	
AUD_CSR_{t-1}	A dummy variable coded 1 if an audit firm engaged in CSR in year t-1
CSR_Num_{t-1}	Log value of the total number of CSR activities engaged by an audit firm in year t-1, calculated as log (1+ CSR_Num_{t-1})
CSR_Type_{t-1}	The number of CSR categories engaged by an audit firm in year t-1
$Donation_{t-1}$	A dummy variable coded 1 if an audit firm engaged in donation in year t-1
$Environment_{t-1}$	A dummy variable coded 1 if an audit firm engaged in environment protection in year t-1
$Employee_{t-1}$	A dummy variable coded 1 if an audit firm engaged in employee welfare in year t-1
$Others_{t-1}$	A dummy variable coded 1 if an audit firm engaged in other social activities in year t-1
$\triangle Client\ Number$	Change in client number
Nonbig4	A dummy variable coded 1 if an audit firm is not a Big4 firm and zero otherwise.
$NonAud\_Exp_{t-1}$	A dummy variable coded 1 if an audit firm is not an industry expert. The industry expert is measured based on the market share of audit fees greater than 30%.
$Aud\_San_{t-2,\ t-1}$	The number of sanctions against audit firms divided by the total number of clients during the previous two years, times 100
$Client\_Size_{t-1}$	The median value of natural log of total assets of clienteles in year t-1.
$Client\_MTB_{t-1}$	The median value of market value of equity scaled by book value of equity of clientele in year t-1.
Audit Client Level Variables	
FS_Fees_t	Log value of financial statement audit fees in year t
$FMOA_t$	A dummy variable coded 1 if the auditor issues an adverse or modified financial statements audit opinion in year t and 0 otherwise.
$Restatement_t$	A dummy variable coded 1 if the client restates their financial statement in year t, and 0 otherwise.
$Dismiss_t$	A dummy variable coded 1 if the audit firm has been dismissed in year t, and 0 otherwise.
$Size_t$	Log value of total assets in year t
LEV_t	Total liabilities/total assets in year t
INV_t	Inventory/total assets in year t
REC_t	Total receivables/total assets in year t
LIQ_t	Current assets/current liabilities in year t
CFO_t	Cash from operations/total assets in year t
ROA_t	Return on assets in year t
BTM_t	Book-to-market ratio in year t
DA_t	Debt/total assets in year t
$LOSS_t$	A dummy variable coded 1 if the company has incurred a negative net income and 0 otherwise.
$INSTSHS_t$	Percentages of shares held by institutional shareholders

$BOARD_t$	The number of directors on the board
IND_t	The number of independent directors on the board
SOE_t	A dummy variable coded 1 if the company is a State-owned-enterprise and 0 otherwise
$LARGSHS_t$	Percentages of shares held by the largest shareholder
$NonAud\_Expert_t$	A dummy variable coded 1 if an audit firm is not an industry expert and zero otherwise.
$NonBIG4_t$	A dummy variable coded 1 if an audit firm is not a Big4 firm and zero otherwise.