Audit Firms' Corporate Social Responsibility Activities and Auditor Reputation

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Abstract

Professional audit firms increasingly engage in Corporate Social Responsibility (CSR) activities. This paper examines the effect of audit firms' CSR activities on auditors' reputation. We find that audit firms that engage in CSR experience an increase in the size of their client base compared to audit firms that do not engage in CSR. The effect is stronger for audit firms without existing reputation from a Big 4 brand name or industry specialization. We also find that clients that value CSR are more likely to hire audit firms that engage in CSR. Overall, our results suggest that CSR is an effective tool for audit firms to build their reputation in the marketplace.

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1. Introduction

This study examines whether auditors' engagement in Corporate Social Responsibility (CSR) helps build their reputation and attract more clients. Following broader global trends, professional audit firms have significantly increased their involvement with Corporate Social Responsibility (CSR) activities (O'Dwyer & Edgecliffe-Johnson, 2021). [1] For example, PwC has made US$222.5 million in community investment in the form of cash and in-kind donations, volunteer hours and pro-bono or discounted work since 2018 (PwC, 2022). Deloitte is sponsoring One Young World (a not for profit) to address the United Nations Sustainable Development Goal (SDG) 4 – Quality Education and SDG 13 – Climate Action (Deloitte, 2023). Ernst & Young is committed to and remains on track to reach "net zero" emissions globally by 2025 (Sibio and Varley, 2022). KPMG has launched its' first global LGBTQ+ inclusion statement in collaboration with its Global Pride Network (KPMG 2023).

The growing awareness towards CSR makes investing in CSR activities a potentially important reputation enhancing mechanism for audit firms. However, little 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. A large body of literature documents that CSR engagement helps corporations build social capital and enhance stakeholder trust (McWilliams & Siegel, 2001; Dhaliwal, Li, Tsang, & Yang, 2011; Cho, Guidry, Hageman & Patten, 2012; Christensen, 2016;

[1] Following prior research (e.g., Lins, Servaes, & Tamayo, 2017, p. 1790), 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, 2000)."

Christensen, Hail & Leuz, 2021). We argue that CSR activity will also help auditors build a positive reputation in the marketplace for two reasons. First, CSR can be an effective signal of quality, reputation and trustworthiness, particularly for organizations offering credence services such as audit firms (Fombrun, 1996; Barney, 1991; Hart, 1995; Porter & Kramer, 2011; Russo & Fouts, 1997; Flammer, 2015; Siegel & Vitaliano, 2007). This would be especially true for small audit firms without an existing reputation for providing high-quality audits. Second, prior studies identify prospective clients as one of the major constituencies for auditors' CSR strategies (Duff, 2016). With the growing demand for CSR reporting and associated assurance service from public companies and investors, engaging in CSR activities may serve as a strategy for audit firms to receive publicity and exposure to attract potential clients, especially when clients themselves value CSR.

While existing literature supports the view that CSR serves as an effective reputation enhancing mechanism, there are reasons to believe these results will not extend to audit firms. Since CSR activity is not directly linked to the core assurance service of audit firms, clients may not view it as relevant to the auditor's reputation compared to other observable signals of audit quality such as audit firm brand name or industry expertise. Further, previous studies on corporate CSR suggest that investor demand for information about CSR is a significant driver behind corporate engagement in CSR (Gamerschlag, Moller, & Verbeeten, 2011; Dhaliwal et al., 2011; Christensen et al., 2021). Audit firms may not be subject to the same level of investor pressure as their corporate clients to engage in CSR activities.

We use the Chinese setting to examine the effect of CSR activity on audit firms' reputation. We choose the Chinese setting because several unique features allow us to observe CSR activity in ways that are not possible using data from other countries, such as the U.S. For example, the

local branches of the Chinese Institute of Certified Public Accountants (CICPA) publicly report audit firms' CSR activities. Further, Chinese audit firms themselves frequently disclose their CSR activities, and these activities are frequently covered by social media in China.[2] This could be because audit firms in China cannot directly advertise their services (CICPA, 2009), which may lead to audit firms engaging in and disclosing CSR as a way to increase publicity. These features allow us to create a comprehensive dataset of CSR activity from 2008 to 2019 for 529 audit firm-year observations that covers all audit firms in China that audit at least one public company. To the best of our knowledge, similar times-series data on audit firms' CSR activities is not readily available in other countries.

We calculate three measures that capture different aspects of auditors' CSR activity: (1) whether the audit firms engage in CSR during the year, (2) the number of CSR engagements, and (3) the breadth of CSR engagement. We predict that if CSR activities increase auditors' publicity and enhance their reputation in the marketplace, auditors will experience growth in their client base (e.g., the number of new clients gained will exceed the number of clients lost to competitors). After controlling for various audit firm and client characteristics, including audit firm fixed effects to account for unobserved differences between audit firms, we find robust evidence supporting this prediction using all three CSR measures. Economically, audit firms that engage in CSR in year *t* increase the number of clients they serve on a net basis in the following year by 6.5 clients compared with audit firms that do not engage in any CSR activity (the average auditor in China

[2] As discussed in detail in Section 3, examples of audit firms' CSR activities include monetary and goods donations, reforestation, carbon reduction and environmental campaigns, investments in employee welfare, and community volunteer programs. There are no mandatory disclosure requirements for audit firms' CSR activity. However, audit firms voluntarily disclose their CSR activity to the CICPA or on their firms' own websites. We acknowledge some audit firms may choose not to disclose all or a portion of their CSR activity.

has 57.7 clients). Thus, our results suggest that CSR serves as an effective strategy to build reputational capital and attract more clients.

If CSR serves as a positive signal for the auditor to increase their publicity and reputation, we expect the magnitude of CSR activities should also matter. As donations are the most frequent type of CSR activity in our database, we manually collect information about the value of audit firm donations. We find the donation amount is positively associated with the growth in audit firms' clientele base. Thus, CSR activities have a larger effect on auditors' reputations when the activities are more significant.

As noted above, we predict CSR will be related to client portfolio growth for two reasons: (1) the reputation enhancing effects of CSR, and (2) client demand for service providers who engage in CSR. We hypothesize a series of cross-sectional tests to investigate these mechanisms further. First, if CSR can be an effective signal of quality and reputation for audit firms, we expect this effect to be more pronounced for small audit firms which are less likely to have an established reputation for providing high-quality audits. We thus examine whether the positive association between CSR and client growth is significantly larger for non-Big 4 (non-industry expert) auditors compared to Big 4 (industry expert) auditors and find evidence generally consistent with our expectations. One implication of this result is that CSR can potentially act as a substitute reputation enhancing activity for audit firms that do not have international brand name recognition or are not industry market leaders.

Second, if clients' demand for CSR from auditors helps to explain our main results, we expect clients who themselves value CSR will be more likely to choose auditors engaging in CSR. To empirically test this mechanism, we restrict our sample to clients changing their auditor and examine the characteristics of client firms that are more likely to select auditor firms engaging in

CSR activities in the prior year. The results show that clients with higher CSR performance themselves, clients with higher levels of institutional shareholders, and clients who are State Owned Enterprises (SOE) are more likely to hire an audit firm that engages in CSR.[3] Overall, these results support the view that CSR has a larger effect on auditor reputation when clients themselves place a greater value on CSR.

We conduct several additional analyses to bolster our main findings. Because audit firms voluntarily choose to engage in CSR activities, an alternative explanation is that some underlying auditor characteristic, such as audit quality, is associated with both CSR activity and auditors' client portfolio growth. Several features of our main empirical analyses help to mitigate this concern. First, we include audit firm fixed effects to control for time-invariant audit firm characteristics. Second, we control several audit quality proxies, such as client restatements, regulatory sanctions, and modified audit opinions. Third, we find a stronger effect of auditors' CSR engagement on client growth for less reputable auditors. Nevertheless, we conduct three additional analyses to further mitigate the endogeneity concern. First, we conduct propensity score matching (PSM) procedures to address potential functional form misspecification of the observable variables in the model. Our results hold under different PSM specifications. Second, we conduct change analyses and find that the change in CSR activity is associated with the change in the client growth in the subsequent period. Finally, we use a Heckman two stage model to control for selection bias and find consistent results. Combined, these analyses suggest that our results are unlikely to be explained by an omitted variable that correlates with both auditors' CSR activity and auditors' client growth.

[3] Prior studies show that institutional investors play an important role in corporate CSR decisions (Gamerschlag et al., 2011; Dhaliwal et al., 2011). In addition, SOEs are subject to higher expectations regarding CSR and are more likely to engage in CSR themselves (Bai, Lu & Tao, 2006; Faccio, 2006).

To provide additional insights about how audit firms' engagement in CSR activities affects their reputation, we conduct semi-structured, qualitative interviews with 6 senior managers and audit committee members of listed companies in China. We asked each interviewee their awareness and perception of audit firms' CSR activities, as well as whether audit firms' engagement in CSR play a role in their companies' auditor selection process. In summary, the interviews provide evidence consistent with our arguments that clients are aware of audit firms' CSR activities, and view audit firms' CSR engagements as reflective of the firms' sense of social responsibility, trustworthiness, and public image. CSR engagements are considered as one of the criteria in selecting auditors, especially when the clients want to choose a long-term partner. Overall, these interviews are consistent with our theoretical arguments and demonstrate the practicality of our empirical results.

Our study makes two 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 (McWilliams & Siegel, 2001; Cho et al., 2012; Lins et al., 2017; Christensen et al., 2021), whether CSR has a similar effect for audit firms is unknown given the different nature of the public accounting market. Despite arguments against CSR benefiting audit firms, we provide robust evidence that auditors' CSR engagement serves as a reputation enhancing strategy which especially helps smaller audit firms attract more clients.

Second, audit firms actively attempt to build positive reputations (Brozovsky & Richardson, 1998). However, existing evidence about how auditors build a positive reputation is limited and primarily focuses on audit firms with 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, & Li,

2000; Knechel, Naiker, & Pacheco, 2007; DeFond & Zhang, 2014). Reputational capital embedded in auditor size and industry specialization takes considerable time to build and can be very costly to establish, especially for small audit firms in a competitive market with low supplier concentration. For example, investing in the expertise of certain industries may forgo clients in other industries. We add to the literature by investigating an alternative way for small audit firms and non-industry expert auditors to enhance reputational capital—engaging in CSR activity.

2. Literature review and Hypothesis Development

2.1. Literature on 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, & Viswanathan, 2009; Sapienza, Toldra-Simats, & 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 argue that CSR engagement contributes to a differentiation strategy by helping companies to build intangible assets such as brand equity, trust and reputation (Fombrun, 1996; McWilliams, Siegel, & Wright, 2006; Gardberg & Fombrun, 2006). Marketing survey results suggest that CSR influences consumers' overall assessment of a company's reputation (Brown & 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 & 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 & 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, & Yang, 2012; El Ghoul, Guedhami, Kwok, & Mishra, 2011). Companies' CSR engagement also has a positive effect on firm performance as reflected in higher firm value (Matsumura, Prakash, & Vera-Muñoz, 2013; Ferrell, Liang, & Renneboog, 2016), higher stock market returns (Flammer, 2015; Lys, Naughton, & Wang, 2014) and better accounting performance (Lev, Petrovits, & 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 & Siegel, 2001; Milgrom & Roberts, 1986; Elfenbein, Fisman & Mcmanus, 2012). Credence goods and services are those where the market does not have perfect information about quality, i.e. consumers do not know the quality even after purchasing the goods. Auditing services have several attributes of credence goods (Causholli & Knechel, 2012). 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 thus, must place a certain amount of trust in the audit firm that the audit is performed appropriately. As a result, client

firms infer quality information from audit firms' established reputations (McWilliams & Siegel, 2001).

Prior literature generally uses auditor size (e.g., Big N versus non-Big N) or industry expertise as proxies for higher reputation auditors (DeAngelo, 1981; Defond et al., 2000; Casterella, Francis, Lewis, & Walker, 2004; Balsam, Krishnan, & Yang, 2003; Knechel et al., 2007; Fung, Gul, & Krishnan, 2012; DeFond & 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 speed the rate of reputation development (Milgrom & Roberts, 1986; Elfenbein et al., 2012). One could view a high level of CSR activities as a signal of trustworthiness or firm quality (McWilliams et al., 2006).

2.2. Hypotheses development

As noted above, CSR can be an effective signal of quality, reputation and trustworthiness, particularly for organizations offering credence services such as audit firms that want to enhance their reputation, brand, and trust in the market place (Fombrun, 1996; Barney, 1991; Hart, 1995; Porter & Kramer, 2011; Russo & Fouts, 1997; Flammer, 2015; Siegel & Vitaliano, 2007). Auditors have the responsibilities as guardians of the public trust in capital markets and the corporate system. Audit firms are entrusted by law to conduct statutory audits of public-interest entities to enhance the degree of confidence of the public in the financial statements of such entities (Brydon, 2019). Engaging in CSR could be reflective of the value the audit firm places on qualities such as social image, credibility and trustworthiness, which in turn, serves as a form of endorsement of the audit firm.

In addition, while audit firms do not face the same level of investor demand for CSR as companies do, they still have key stakeholders to satisfy. Duff (2016) identifies prospective clients as one of the major constituencies for auditors' CSR strategies. With the growing demand for CSR reporting and associated assurance service from companies and investors, engaging in CSR activities may serve as a strategy for audit firms to receive publicity and exposure to attract potential clients.[4]

There are also ex-ante arguments for why CSR activity will not improve auditors' reputation. First, because CSR activity is not directly linked to auditors' core business of assuring financial statements, clients and investors 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, previous studies on corporate CSR suggest that investors value CSR activity and investor demand for information about CSR is a significant driver behind corporate engagement in CSR (Gamerschlag et al., 2011; Dhaliwal et al., 2011; Christensen et al., 2021). Audit firms are not subject to the same level of investor pressure as their corporate clients. If the corporations themselves do not value CSR in their suppliers, it may not be an effective tool for auditors in the marketplace.

Although there are arguments that CSR will not be an effective tool for audit firms, the large literature showing CSR's overall ability to signal quality, reputation and trustworthiness, especially for providers of credence services, leads us to expect that audit firms engaging in CSR will be effective at increasing their recognition in the marketplace. If this is the case, we expect

[4] This advertising dimension of CSR may be especially strong when social efforts are unrelated to business conduct (Kitzmueller & Shimshack, 2012). For example, corporate donations to charity could serve as a positive signal about firm quality and type (Navarro, 1988).

auditors who engage in CSR will be able to grow their client portfolio larger compared to auditors who do not engage in CSR. Thus, we state the following alternative-form hypothesis:

> HYPOTHESIS 1*: Compared to audit firms not engaging in CSR, those engaging in CSR experience a larger subsequent net increase in the number of clients audited.*

The arguments above suggest there are two main mechanisms through which CSR could serve to improve auditors' reputation and allow them to grow their client portfolio: (1) the reputation enhancing effects of CSR, and (2) client demand for service providers who engage in CSR. To investigate these mechanisms further, we predict that we will observe the effect of CSR to be more pronounced for certain audit firms and certain client firms.

Regarding the reputation enhancing effects of CSR, a large body of auditing literature documents that auditors build positive reputation through their internationally recognized brand names (e.g., the "Big 4") or by building a reputation as an industry expert. Since Big 4 and industry expert auditors have already established their reputations for high-quality audits, CSR may not have significant incremental effect for these auditors. In contrast, non-Big 4 firms and non-industry expert auditors do not necessarily have well-recognized reputations. For these auditors, CSR could serve as a relatively stronger signal of reputation. Consistent with this, prior studies find that CSR's effects are more significant for relatively new sellers that have limited alternative means of developing their reputations (McWilliams & Siegel, 2001; Elfenbein et al., 2012).[5] Moreover, CSR is arguably more costly for smaller audit firms as it requires devoting resources such as money and employee volunteer time. Engaging in CSR is likely to be a stronger positive signal of these audit firms' commitment to social welfare. Thus, our second set of hypotheses

[5] For example, Elfenbein et al. (2012) find that consumers respond positively to products tied to charity, particularly from sellers that are relatively new and hence have limited alternative means of assuring quality using data from a diverse group of eBay sellers. Most of charity's benefits accrue to sellers without extensive eBay histories.

compare the relative effect of CSR for auditors with previously established reputations (Big 4 and industry experts) to those without such reputations:

> HYPOTHESIS 2a*: The effect of audit firm's engagement in CSR on the change in the number of clients audited is larger for non-Big 4 audit firms compared to Big 4 audit firms.*

> HYPOTHESIS 2b*: The effect of audit firm's engagement in CSR on the change in the number of clients audited is larger for industry expert auditors compared to non-industry expert auditors.*

Regarding client demand for service providers who engage in CSR, we expect the effect of CSR to be stronger when investors and companies value CSR activities. We consider three types of clients as placing a greater value to CSR, and thus are more likely to view auditors with CSR activities favorably and choose to engage with those auditors. First, when companies themselves have higher CSR performance, this is evidence they are more likely to care more about CSR. Second, previous studies on corporate CSR show that the demand from institutional investors plays an important role in corporate CSR decisions (Gamerschlag et al., 2011; Dhaliwal et al., 2011). While investors are not the owners of audit firms, investors are consumers of audit reports. If engaging in CSR activities serves as a strategy for audit firms to be viewed favorably by the investors of their clients, we expect clients with higher levels of institutional shareholdings are more likely to select audit firms engaging in CSR. Third, SOEs are subject to higher expectations regarding CSR and are more likely to engage in CSR themselves (Bai et al., 2006; Faccio, 2006). As such, SOEs should be more likely to hire an audit firm engaging in CSR. Our third set of hypotheses are stated as follows:

> HYPOTHESIS 3a*: Clients with better CSR performance are more likely to select audit firms that engage in CSR.*

> HYPOTHESIS 3b*: Clients with a high level of institutional shareholders are more likely to select audit firms that engage in CSR.*

HYPOTHESIS 3c*: Clients that are SOEs are more likely to select audit firms that engage in CSR.*

3. Empirical design and Sample Selection

3.1 Empirical Design

To investigate whether audit firms engaging in CSR experience a larger increase in the number of clients audited (H1), we estimate the following OLS model:

$$\begin{aligned}\Delta Client\ Number_{i,t} = {} & \beta_0 + \boldsymbol{\beta_1 CSR\ Variables_{i,t-1}} + \beta_2 NonBig4_{i,t-1} + \beta_3 NonAud\_Exp_{i,t-1} \\ & + \beta_4 LnClient\_Number_{i,t-1} + \beta_5 AudSan_{t-1} + \beta_6 Mao\_Ratio_{i,t-1} \\ & + \beta_7 Misstat\_Ratio_{i,t-1} + \beta_8 Small\_ROA_{i,t-1} + \beta_9 LnTenure_{i,t-1} \\ & + \beta_{10} Client\_SIZE_{i,t-1} + \beta_{11} Client\_MTB_{i,t-1} + Year\ FE + \varepsilon_{i,t} \end{aligned} \quad (1)$$

The analysis is conducted at the audit firm level. $\Delta Client\ Number_{i,t}$, 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, $\Delta Client\ Number_{i,t}$ can increase when new clients are gained or decrease when existing clients are lost.

Our test variable is audit firms' CSR activity in year *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 audit firms' CSR activity. The first one is $AUD\_CSR_{i,t-1}$, 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 $LnCSR_{i,t-1}$, 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 frequency of audit firm's CSR activities so that audit firms engaging in multiple CSR activities receive a higher value compared to firm's that only engage in one or a few CSR activities in a year.[6] The third measure is $CSR\_Type_{i,t-1}$, which is the number of total

[6] As a sensitivity analysis, we also use *Relative_HighCSR* which is an indicator variable equal to one if the number of unique CSR activities engaged in by an audit firm in a given year is greater than the median number of CSR

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 activity 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 monetary donations, goods donation or donations through foundations to the community, universities, orphanages or aged care homes; (2) *Environmental Protection*, which includes activities related to tree-planting, carbon reduction and environmental campaigns; (3) *Employee Welfare*, which includes initiatives to show care for employees who have fallen sick or experienced a tragic event; and (4) *Community Activities*, which includes activities related to community volunteer programs, educational aid in high poverty regions, local community programs for the disabled, elderly, and children, and other volunteer services, such as blood donation and fun run activities. If an audit firm's CSR engagement serves as a reputation enhancing strategy that can be used to attract more clients, β_1 should be positive in equation (1).

With respect to control variables, we first control for the audit firm's reputation, which can affect their ability to attract and retain clients. $NonBig4_{i,t-1}$ is one if the audit firm is not one of the Big 4 firms.[7] 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 $NonAud\_Exp_{i,t-1}$ as one if the audit firm is not an industry expert in any industry (Reichelt & Wang, 2010).[8] We further control for clientele size in year *t*-1 ($LnClient\_Number_{i,t-1}$) as a proxy for audit firm size. We also include several proxies for auditor quality. $AudSan_{,t-1}$ is an indicator

engagement of all audit firms within the same province and zero otherwise. We obtain qualitatively similar results using this alternative measure.

[7] As a robustness check, we also control for two largest local audit firms in China (Lixin and Ruihua) in the model. The results remain the same.

[8] The results remain similar if we use a cut-off of 20% market share.

variable that equals one if an audit firm has been sanctioned in year t-1 by the China Securities Regulatory Commission (CSRC),[9] and zero otherwise. We measure reputation damage using CSRC sanctions because existing research finds that these sanctions cause severe reputation damage for audit firms in China (Qi, Li, Robin & Yang, 2017; Fung, Jiang & Ramman, 2018). We manually collect data on audit firm sanctions from government websites during the same sample period 2008-2019.[10] $Mao\_Ratio_{i,t-1}$ measures the percentage of audit clients receiving a modified audit opinion,[11] and $Misstat\_Ratio_{i,t-1}$ is the percentage of clients whose financial statements are misstated (and subsequently restated). Because Aobdia (2019) finds propensity to meet or beat zero earnings threshold is associated with poor audit quality, we include $Small\_ROA_{i,t-1}$. It is measured as the number of audit clients with ROA between 0% and 3%, divided by the number of total audit clients in a given year. We also control for auditor tenure, which is measured as one plus the log value of the median tenure of all audit clients in a given year ($LnTenure_{i,t-1}$) (Brown & Knechel 2016).

Next, we include several control variables for client characteristics, which we aggregate to the audit firm-year level. $Client\_SIZE_{i,t-1}$ equals the median value of the natural log of total assets

[9] Lawsuits against auditors are rare in China (Firth, Phyllis, Mo & Wong, 2005; Lisic, Silveri, Song & Wang, 2015). Instead, the 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 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 & Xu, 2016).

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

[11] In China, audit reports can be modified for one of three reasons: (1) unqualified opinion with an explanatory note, (2) qualified opinion, and (3) disclaimer of opinion. None of the firms in our sample received an adverse opinion. Going concern opinions fall into the first category. In order to ensure this category reflects issues related to the auditor, we read and classify each of the unqualified opinions with explanatory language. They generally fall into three categories: (i) uncertainties arising from government sanction or litigation (ii) uncertainties regarding the going concern status of the company (iii) other accounting issues such as internal control weaknesses, restatements, or issues with a specific account such as such as accounts receivable. After reading each opinion, we do not identify any situations that are unrelated to the auditor.

across all clients audited by the audit firm in year *t*-1; $Client\_MTB_{i,t-1}$ is the median value of the market to book ratio across all clients audited by the audit firm in year *t*-1. Finally, we control for year fixed effects in case there is variation in CSR activity 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 including audit firm fixed effects ($NonBig4_{i,t-1}$ is subsumed by these fixed effects and drops out of this model). We winsorize all continuous variables at the top and bottom one percent. Appendix 1 provides detailed variable descriptions.

H2a and H2b examine whether the association between CSR and client attraction is more pronounced for non-Big 4 firms and non-industry expert auditors. To test these hypotheses, we modify equation (1) by adding an interaction between *CSR* variables and $NonBig4_{i,t-1}$ or $NonAud\_Exp_{i,t-1}$:

$$\begin{aligned}\Delta Client\ Number_{i,t} = {} & \beta_0 + \beta_1\, NonBig4_{i,t-1} + \beta_2 CSR\ Variables_{i,t-1} \\ & + \boldsymbol{\beta_3 CSR\ Variables_{i,t-1} \times NonBig4_{i,t-1}} + \beta_4 NonAud\_Exp_{i,t-1} \\ & + \beta_5 LnClient\_Number_{i,t-1} + \beta_6 AudSan_{t-1} + \beta_7 Mao\_Ratio_{i,t-1} \\ & + \beta_8 Misstat\_Ratio_{i,t-1} + \beta_9 Small\_ROA_{i,t-1} + \beta_{10} LnTenure_{i,t-1} \\ & + \beta_{11} Client\_SIZE_{i,t-1} + \beta_{12} Client\_MTB_{i,t-1} + Year\ FE + \varepsilon_{i,t}\end{aligned} \quad (2)$$

$$\begin{aligned}\Delta Client\ Number_{i,t} = {} & \beta_0 + \beta_1\, NonAud\_Exp_{i,t-1} + \beta_2\, CSR\ Variables_{i,t-1} \\ & + \boldsymbol{\beta_3 CSR\ Variables_{i,t-1} \times NonAud\_Exp_{i,t-1}} + \beta_4\, NonBig4_{i,t-1} \\ & + \beta_5\, LnClient\_Number_{i,t-1} + \beta_6 AudSan_{t-1} + \beta_7 Mao\_Ratio_{i,t-1} \\ & + \beta_8 Misstat\_Ratio_{i,t-1} + \beta_9 Small\_ROA_{i,t-1} + \beta_{10} LnTenure_{i,t-1} \\ & + \beta_{11} Client\_SIZE_{i,t-1} + \beta_{12} Client\_MTB_{i,t-1} + Year\ FE + \varepsilon_{i,t}\end{aligned} \quad (3)$$

Consistent with equation (1), the proxy for audit firms' CSR activity is either $AUD\_CSR_{i,t-1}$, $LnCSR_{i,t-1}$ or $CSR\_Type_{i,t-1}$. Our variable of interest is the interaction between CSR variables and $NonBig4_{i,t-1}$ as well as the interaction between CSR variables and $NonAud\_Exp_{i,t-1}$. We expect the interactions to be significantly positive following H2a and H2b. The control variables remain the same as equation (1).

H3a, H3b and H3 examine clients' preference for audit firms' CSR engagement. To test these hypotheses, we conduct client-year level analyses on a sample of clients that switched auditors in year *t* (see detailed discussion in the sample selection process). We employ the following audit firm selection model:

$$\begin{aligned} CSR\ Variables_{i,t-1} = {} & \beta_0 + \boldsymbol{\beta_1 Client\_CSR\_High_{i,t}} + \beta_2 SIZE_{i,t} + \beta_3 ROA_{i,t} + \beta_4 LOSS_{i,t} \\ & + \beta_5 LEV_{i,t} + \beta_6 DA_{i,t} + \beta_7 LIQ_{i,t} + \beta_8 CFO_{i,t} + \beta_9 INV_{i,t} + \beta_{10} REC_{i,t} \\ & + \beta_{11} GROWTH_{i,t} + \beta_{12} MTB_{i,t} + \beta_{13} TURNOVER_{i,t} + \beta_{14} INSTSHS_{i,t} \\ & + \beta_{15} BOARD_{i,t} + \beta_{16} IND_{i,t} + \beta_{17} Mismatch_{i,t} \\ & + \beta_{18} NonAud\_Exp_{i,t} + \beta_{19} NonBIG4_{i,t} + Industry\ FE + Year\ FE + \varepsilon_{i,t} \end{aligned} \quad (4)$$

We use the same variables to capture audit firms' CSR activity in year *t-1* as in equation (1) ($AUD\_CSR_{i,t-1}$, $LnCSR_{i,t-1}$ or $CSR\_Type_{i,t-1}$). We use three variables to proxy for the type of clients that are likely to place higher value on CSR initiatives. The first variable is $Client\_CSR\_High_{i,t}$ which is an indicator variable equal to one if the audit client's CSR score is higher than or equal to the median value of industry average CSR score, and zero otherwise.[12] The second variable is $Institut\_High_{i,t}$, which is coded as one if the proportion of shareholding by institutional investors of audit client is higher than the median value of all proportion of shareholding by institutional investors of audit clients within the same province that the client is located at and zero otherwise. The third variable is State Owned Enterprises ($SOE_{i,t}$) coded one if the audit client is a SOE and zero otherwise. We expect clients that place higher value on CSR initiatives are more likely to choose new auditors that have engaged in CSR activities in the prior year.

We include several other client-level characteristic variables found in prior auditing and CSR studies as determinants of auditor choice (Shu, 2000; Beasley & Petroni 2001; Hay, Knechel,

[12] See http://stockdata.stock.hexun.com/zrbg/Plate.aspx and http://stock.hexun.com/2013/gsshzr/index.html for the methodology to calculate the CSR score. Different databases in China have different coverage of companies' CSR activities. For instance, Hexun CSR database reports 35,065 companies having CSR activities from 2010 to 2019. That number is 28,851 in CSMAR, and 23,975 in Chinese Research Data Services (CNRDS) database. We use the CSR data from Hexun CSR database because it has the largest coverage of companies' CSR activities.

& Wong, 2006; Chen & Zhou 2007; Chen, Sun & Wu, 2010; Boone, Khurana, & Raman, 2015; Huang, Raghunandan, Huang & Chiou, 2015; Ke, Lennox & Xin, 2015; Chen, Hung & Wang, 2018; Liao, Lin & Zhang, 2018). These determinants include client size ($SIZE_{i,t}$), financial health ($ROA_{i,t}$, $LOSS_{i,t}$, $LEV_{i,t}$, $DA_{i,t}$, $LIQ_{i,t}$ and $CFO_{i,t}$), client complexity ($INV_{i,t}$ and $REC_{i,t}$), client risk ($GROWTH_{i,t}$, $MTB_{i,t}$ and $TURNOVER_{i,t}$), corporate governance ($INSTSHS_{i,t}$, $BOARD_{i,t}$, *and* $IND_{i,t}$), and client-auditor fit ($Mismatch_{i,t}$). We also include audit firm characteristics for the new auditor: non-industry specialist ($NonAud\_Exp_{i,t}$) and non-Big 4 ($NonBIG4_{i,t}$).

3.2 Sample Selection

We collect audit firm CSR data in China from 2008 to 2019.[13] 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. We focus on audit firms that have public clients so we can observe client financial data. There are a total of 529 audit firm-year observations, representing 40 unique audit firms.[14] We manually collect the CSR data each year from the audit firms' websites, the local CICPA websites, and from news media coverage found using the online search engine Baidu.com.[15] Since all CSR activities are publicly available and broadcasted to the general population, it is reasonable to believe that these CSR activities are observed by existing and potential clients. We count the number of unique CSR activities reported each year from these sources to calculate the frequency of CSR activity ($LnCSR_{i,t-1}$). For each CSR activity identified,

[13] We stopped the data collection in 2019 due to the significant business disruptions caused by China's strict zero-COVID policy.

[14] In order to audit listed clients, the Chinese Ministry of Finance requires audit firms to be established for at least three years, have capital of no less than 2 million RMB for a limited liability firm and 1 million RMB for partnerships, and have revenues of at least 8 million RMB in the previous year. There are two additional requirements regarding staffing: (i) an audit firm must have at least 20 CPAs (ii) At least 40 CPAs of the audit firm should be under the age of 60. If a firm has at least 40 CPAs under 60, they will automatically satisfy requirement (i). If an audit firm has less than 40 CPAs, all CPAs need to be under the age of 60 (MOF, Regulation 56 2000).

[15] We used search terms including "donation, foundation, red-cross; environmental protection, tree planting, pollution, decarbonisation, renewable energy; sick employee, medical assistance to employees, employee caring programs, volunteering, blood donation, fund-raising running event and caring for the old, disabled, young and female.

we read the disclosure and classify it into one of four categories: Donation, Environmental Protection, Employee Welfare, and Community activities. We then count the number of different categories for our measure of CSR breadth ($CSR\_Type_{i,t-1}$).

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 2008-2019. The initial sample consists of 32,192 client-year observations. This sample is used to construct the client portfolio data at the audit firm level for H1 and H2. For H3, we further delete 660 financial institutions and 851 special treatment companies following prior literature (Huang et al., 2015; He, Pan & Tian, 2017; Li, Qi, Tian, & Zhang, 2017). Then we delete 4,854 observations with missing data. This results in a sample of 25,827 client-year observations. Because we are interested in the relationship between the characteristics of clients that switched auditors and the CSR activity of the audit firm that they chose to switch to, we restrict our sample to new, first-year clients, which results in 2,517 client-year observations in the test for H3.

3.3 Descriptive Statistics

Table 1 Panel A shows that on average 39.5% of audit firms engage in at least one CSR activity each year.[16] Of the audit firms that engaged in at least one CSR activity, the average number of CSR activities in a year is 7.72, with a minimum value of one and a maximum value of 93. Because this variable is highly skewed, we use the log transformation of the number of CSR activities *($LnCSR_{i,t-1}$)* in our regression analyses. Audit firms participate in, on average, two different types of CSR activities each year. The most frequent type of CSR activity is *Donation*, with 81% of all CSR audit firms making at least one donation in a year. The next most frequent

[16] There is an overall increasing trend in the total number of CSR activities by audit firms, with a slight decrease in 2014 and 2015.

type is *Community Activities (57%)*, followed by *Employee Welfare (32%)*, and *Environmental Protection (25%)*.

Panel B of Table 1 provides more granular information about CSR activity. For example, activities in the "Donation" category can be in the form of monetary donations (67% out of all audit firms engaging in CSR activities), goods donation (e.g. computers, clothes, 27.8%), and donations through foundations (22%). For the observations with a specific donation amount disclosed, the average donation is 1.243 million RMB (USD 191,231 based on an exchange rate of 1 USD: 6.5 RMB). This amount is not trivial, considering GDP per capita in China is USD 10,484 and the average yearly household income in China is USD 10,220 (source: Forbes.com). Environmental protection activities include tree-planting (15.8%), carbon reduction activities (6.2%), and environmental campaigns (9.1%). Employee Welfare refers to activities such as initiatives to show care for employees who have fallen sick or experienced a tragic event (32.1%). Community activities include volunteer programs (32.5%), aid education in high poverty regions (12%), local community programs for the disabled, elderly, and children (24.9%), and other volunteer services, such as blood donation and fun run activities (31.1%). We provide specific examples of audit firms' disclosures about their CSR activities (translated from the original Chinese disclosures) in Appendix 2.

<Insert Table 1 here>

Table 2 Panel A displays the descriptive statistics for the overall sample. Since the dependent variable ($\Delta Client\ Number_{i,t}$) is the audit firm-level change in clients audited from year *t*-1 to year *t*, it requires two years of data. This reduces the sample size to 464 audit-firm years (compared to 529 in Table 1). On average, audit firms experience a yearly change of 5.8 clients. In other words, most audit firms are growing consistent with the relatively fast-growing Chinese

economy. 90.5% of the firms are non-Big4 audit firms and 89% of the firms are non-industry experts. The average number of clients per audit firm is 57.7 ($Client\_Number_{i,t-1}$). On average, 22.6% of the audit firms receive government sanctions in a year ($AudSan_{i,t-1}$), 5.5% of audit clients receive a modified opinion ($Mao\_Ratio_{i,t-1}$) and 12.7% of clients misstate their financial statements ($Misstat\_Ratio_{i,t-1}$). 36% of audit clients report ROA just above zero (between 0% to 3% ($Small\_ROA_{i,t-1}$). The median value of audit clients tenure is 5 years ($LnTenure_{i,t-1}$).

Panel B of Table 2 presents the descriptive statistics for the audit firm-year variables used in equation (1) separately for audit firms that engage in CSR activity ($AUD\_CSR_{i,t-1} = 1$) compared to those that do not engage in CSR activity ($AUD\_CSR_{i,t-1} = 0$). The univariate comparison shows that audit firms engaging in CSR activity experienced an average increase in the number of clients of 10.514, compared to 2.871 for audit firms that do not engage in CSR. This difference in means is statistically significant at the $p<0.01$ level, which provides univariate support for H1. Non-Big 4 auditors and non-industry expert auditors are less likely to engage in CSR activity. This is consistent with CSR being relatively more costly for smaller audit firms, and these audit firms tend to have fewer resources to devote to CSR activity.[17] This also reinforces our need to include audit firm fixed effects in our multivariate analyses since audit firm type is correlated with CSR activity. Panel C of Table 2 reports the correlation coefficients. All variables measuring audit firms' CSR engagement, i.e. $AUD\_CSR_{i,t-1}$, $LnCSR_{i,t-1}$, $CSR\_Type_{i,t-1}$ and $LnDonationMoney_{i.t-1}$ are positively and significantly correlated with the dependent variable, i.e. $\Delta Client\ Number_{i,t}$.[18]

<Insert Table 2 here>

[17] It may also be that small audit firms are not fully aware of the benefit of CSR, possibly because CSR is still emerging as an important topic (Yin & Zhang, 2012; Cumming, Hou, & Lee, 2016).

[18] We note that the correlation between *NonBig4* and *Client_SIZE* is quite high (-0.843). The largest VIF for each individual variables included in all models without audit firm fixed effects (i.e., column 1-3) in Table 3 is 9.7, which pertains to *Client_SIZE* and is below the threshold of 10 (Johnston 1984). Our results remain the same if we drop *Client_SIZE* variable.

4. Regression Results

4.1 Auditor CSR and audit clientele growth

Table 3 presents the regression results for each dependent variable in equation (1) using the 464 audit firm-year observations described in Table 2. The left (right) three columns report the results without (with) audit firm fixed effects for each of our CSR activity measures ($AUD\_CSR_{i,t-1}$, $LnCSR_{i,t-1}$ *and* $CSR\_Type_{i,t-1}$). Column (1) shows that the coefficient on $AUD\_CSR_{i,t-1}$ is significantly positive, suggesting that compared to audit firms without any CSR activity in the prior year, those engaging in CSR experience a significantly larger increase in the number of clients in the subsequent year. Economically, audit firms net 6.4 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 audit firms have 57.7 clients on average. We further calculate Shapley values to check how the variables in the model contribute to the model's explanatory power (untabulated). We find that $AUD\_CSR_{i,t-1}$ has the second highest Shapley value (0.050) next to $LnClient\_Number_{i,t-1}$, which has the largest Shapley value of 0.082. This suggests the relative economic effect of audit firms' CSR activity on market share is not trivial.

Column (2) shows that the coefficient on $LnCSR_{i,t-1}$ is positive, but not significant at conventional levels Finally, Column (3) presents the result for CSR breadth. The significantly positive coefficient on $CSR\_Type_{i,t-1}$ indicates that more variety in the type of CSR activities that the audit firm engages in is associated with an increase in the number of clients audited. [19] This is consistent with clients appreciating audit firms' multi-dimensional CSR strategies. With respect

[19] We also investigate the different types of CSR activity (donation, environmental protection, employee welfare, and community activities) individually in untabulated analyses. We find both donation and community activities are significant in models with and without audit firm fixed effects. Environmental protection is only significant in the model with audit firm fixed effects. Employee welfare is insignificant in the both models (i.e. with or without audit firm fixed effects).

to control variables, we find non-Big4 firms and firms with more clients in the prior year experience larger increases in the number of clients served. Non-industry expert auditors experience smaller increases in the number of clients compared to expert auditors.

The right-hand columns in Table 3 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 are similar to the left-hand columns, except $LnCSR_{i,t-1}$ is now positive and statistically significant. These results provide evidence that the positive association between CSR activities and the growth in auditors' client portfolio is unlikely to be driven by time-invariant, unobserved audit firm characteristics. Taken together, the results in Table 3 demonstrate that audit firms' CSR engagement is associated with a net increase in the number of clients served by the audit firm, thus providing support for H1.[20]

In untabulated tests, we also separately examine the number of new clients gained and the number of new clients lost. For this analysis, we use Tobit regression since the dependent variable is censored at zero. We find that all three CSR activity measures are associated with auditors gaining more new clients in models with and without audit firm fixed effects. We also find some evidence that CSR is associated with fewer client losses, albeit only when *LnCSR* is the independent variable.

<Insert Table 3 here>

4.2. Magnitude of CSR engagements and audit clientele growth

We argue that engaging in CSR helps increase audit firms' publicity and builds their reputation. If this is true, we should expect that the magnitude of the CSR activities also matters to existing and potential clients. To this end, we investigate the magnitude of CSR using monetary

[20] We acknowledge the limitation of the overall small sample size as there are only 40 unique audit firms in China and these analyses are conducted on audit firm level with 464 audit firm-year observations.

donations in the *Donation* category. We use the *Donation* category for this analysis because it is the largest portion of audit firms' CSR activities (Table 1 Panel A) and because it is the category we can most easily quantify. We manually collect data on the donation amount for each of the *Donation* CSR activities.[21] Out of 120 audit firm-year observations that have monetary donations in the prior year, we are able to collect the donation amount for 85 observations. $LnDonation\_Money_{i,t-1}$ is our variable of interest, which equals the log of the donation amount in RMB. To maintain the same control group as used in Table 3, it is set to zero for 287 observations that do not have CSR activities.[22] The results are reported in Table 4. We find that the amount of donation is positively and significantly associated with clientele growth in both columns regardless of whether we control for audit firm fixed effects. These results provide evidence that larger magnitude donations are associated with larger subsequent audit firm growth in the number of clients.

<Insert Table 4 here>

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 predicted in H1. In H2a and H2b, we predict that the 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 experts.[23]

[21] We attempted to collect volunteer hours, but after reading through all of the CSR activity announcements, we only found one example that disclosed the number of volunteer hours.
[22] We delete 92 observations that have CSR activity in year *t*-1 but either do not engage in monetary donations (57) or do not disclose donation amount (35).
[23] 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 ($AUD\_CSR_{i,t-1}$, $LnCSR_{i,t-1}$ and $CSR\_Type_{i,t-1}$) is significantly positive with p value=0.045, 0.000 and 0.032, respectively.

We test these hypotheses in Table 5. In Panel A, we find that the coefficient on the interaction between $Nonbig4_{i,t-1}$ and each of the CSR engagement variables ($AUD\_CSR_{i,t-1}$, $LnCSR_{i,t-1}$ and $CSR\_Type_{i,t-1}$) is significantly positive. 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. In fact, the main effect of audit firms' CSR engagement variables are insignificant in all models, suggesting that the positive effect of audit firms' CSR engagement on clientele growth is almost completely driven by smaller audit firms. This is perhaps not surprising as large audit firms have already established their reputations via other means such as international networks, and superior audit quality.

Table 5 Panel B reports the results for CSR activities and non-industry expert audit firms. We find that the coefficients on the interaction between $NonAud\_Exp_{i,t-1}$ and $LnCSR_{i,t-1}$ is significantly positive. This result suggests that engagement in more frequent CSR activities helps non-industry expert audit firms attract and retain clients. The coefficients on the interaction with CSR in the other two models are positive, although they are not statistically significant (columns 1 and 3). Overall, the results in Table 5 support H2 that non-Big 4 audit firms benefit more from the CSR activity compared to Big 4 auditors. We also find some evidence that non-industry leaders benefit more from more frequent CSR engagements compared to industry leaders.

<Insert Table 5 here>

4.4 Audit clients' preference for audit firms' CSR engagement

In H3a, H3b and H3c, we predict that audit clients that value CSR themselves are more likely to have preference for audit firms with CSR engagement. We test these hypotheses using client-level observations that choose new auditors in year *t* and report the results in Table 6. Table 6 Panel A shows that clients with high CSR scores are more likely to engage audit firms with all

three proxies of CSR activities. Similarly, Table 6 Panel B shows that clients with high level of institutional ownership are more likely to hire auditors that engage in CSR across all three proxies. Panel C demonstrates that SOEs are more likely to hire audit firms that engage in CSR when $LnCSR_{i,t-1}$ and $CSR\_Type_{i,t-1}$ are used as the dependent variable. These results suggest that just engaging in CSR activity per se (i.e. $AUD\_CSR_{i,t-1} = 1$) is not sufficient to attract SOEs. Rather they place more emphasis on the number of CSR activities and the breadth of the CSR activities that audit firms engage in. For other variables, consistent with the descriptive statistics reported in Table 2, non-Big 4 auditors and non-industry expert auditors are less likely to engage in CSR activity.

<Insert Table 6 here>

5. Additional Analyses

5.1 Changes in total client audit fees and client assets

In the main analysis we chose to use the number of clients as the dependent variable because it is not confounded by clients themselves growing larger. For example, a client who makes a significant acquisition could become significantly larger (resulting in an increase in client assets audited and audit fees), but this would not necessarily reflect the auditor growing its client base by building its reputation. Nonetheless, we also acknowledge using the number of clients assumes that all clients are the same size. Hence, in this section we examine the change in total client audit fees and client assets following Bills, Swanquist, & Whited (2016). Specifically, we replace the dependent variable from equation (1) with either $\triangle Audit\_Fee_{i,t}$, which is the percentage change in clientele total audit fees from year *t*-1 to year *t* or $\triangle Audit\_Asset_{i,t}$, which is the percentage change in clientele total assets audited from year *t*-1 to year *t*.

Table 7 Panel A presents results using changes in clientele audit fees ($\triangle Audit\_Fee_{i,t}$) as the dependent variables. We find consistent results on $AUD\_CSR_{i,t-1}$ and $CSR\_Type_{i,t-1}$, suggesting that compared to audit firms without any CSR activity in the prior year, those engaging in CSR and engaging in a variety of CSR activities experience a significantly larger increase in audit fees in the subsequent year. Panel B reports results using changes in clientele total assets ($\triangle Audit\_Asset_{i,t}$) as the dependent variable. We find positive and significant results on all three measures of audit firms' CSR activity. Together, these analyses provide additional support that audit firms engaging in CSR activity experience increases in the size of their clientele portfolios.

<Insert Table 7 here>

5.2 Analyses to address alternative explanations

We acknowledge that audit firms voluntarily engage in CSR activities and the CSR sample is not random. This self-selection issue can result in biased coefficients if unobserved factors affect both auditors' decision to engage in CSR and their ability to attract and retain clients. In our main models, we include audit firm fixed effects to controls for time-invariant omitted variables, and include several audit quality proxies, such as client restatements, regulatory sanctions, and modified audit opinions. In addition, we find a stronger effect of auditors' CSR engagement on client growth for less reputable auditors. To further alleviate this concern, we conduct three additional analyses in this section.

5.2.1 Propensity score matching (PSM)

We use PSM as a way to address the imbalance in covariates between CSR auditors and non-CSR auditors among known variables (Minutti-Meza, 2013; Shipman, Swanquist, & Whited, 2017). The first stage matching model uses all of the control variables from equation (1) in a logit model to estimate the propensity score for all audit-firm year observations. The model is as follows:

$$AUD\_CSR_{i,t-1} = \beta_0 + \beta_1 NonBig4_{i,t-1} + \beta_2 NonAud\_Exp_{i,t-1} + \beta_3 LnClient\_Number_{i,t-1} + \beta_4 AudSan_{t-1} + \beta_5 Mao\_Ratio_{i,t-1} + \beta_6 Misstat\_Ratio_{i,t-1} + \beta_7 Small\_ROA_{i,t-1} + \beta_8 LnTenure_{i,t-1} + \beta_9 Client\_SIZE_{i,t-1} + \beta_{10} Client\_MTB_{i,t-1} + Year\ FE + \varepsilon_{i,t} \quad (5)$$

The dependent variable, $AUD\_CSR_{i,t-1}$, is an indicator variable coded one if the auditor engages in CSR in year *t*-1, and coded zero otherwise. The control variables are the same as those in Equation 1. In the second stage, we match each treatment observation to one control observation with and without replacement within a caliper value of 0.01. The matching procedure results in a PSM with (without) replacement sample of 207 (180) firm-year observations, including 129 (90) treatment firm-years and 78 (90) control firm-years. When matching with replacement, we adjust the weights in the regression for observations chosen more than once. In addition, we check the balance between the treatment and control samples by testing the differences in the means for all control variables. The covariate balance results after PSM are reported in Table 8 Panel A, and the multivariate results using the PSM samples are reported in Table 8 Panel B, respectively. The results are generally consistent with our main analyses presented in Table 3.

<Insert Table 8 here>

5.2.2 Change analyses

Table 9 reports the result of a change analysis. To the extent that the underlying audit firm quality does not change significantly from one year to another, the change analyses also help mitigate concerns that audit firms' underlying audit quality explains our main results.[24] The dependent variable is the change in client number from year *t* to year *t*+1 ($\Delta Client\ Number_{i,t+1}$).

[24] We expect it is easier for auditors to change their level of CSR from year to year than it is for them to change their audit quality. Further, we expect that it is more difficult for clients to observe and react to year-to-year changes in audit quality since observing audit quality is difficult for clients (Causholli & Knechel, 2012; Knechel, Krishnan, Pevzner, Shefchik & Velury, 2013), and it takes time for public signals of audit quality to be revealed (e.g., restatements and government sanctions only occur after errors are discovered). In contrast, disclosures about CSR can be observed quickly and immediately by prospective and existing clients.

The independent variable is $\triangle AUD\_CSR_{i,t}$, which equals one if the audit firm engages in CSR in year *t* but not in year *t*-1; equals negative one if the audit firm does not engage in CSR in year *t* and engages in CSR in year *t*-1; and equals to zero if there are no changes in auditors' CSR engagement from year *t*-1 to year *t*. All other control variables are in their change form from year *t*-1 to year *t*. We do not include *NonBig4* in the model as it does not vary within audit firms. We find that auditors' change in CSR engagement ($\triangle AUD\_CSR_{i,t}$) is positively and significantly associated with changes in clientele portfolio ($\Delta Client\ Number_{i,t+1}$).

<Insert Table 9 here>

5.2.3. Heckman's two stage analysis

In untabulated analysis, we also conduct a Heckman two stage regression. We use the variable $\Delta Found\_Number\_Ratio_{i,t-1}$ as the instrument variable. $\Delta Found\_Number\_Ratio_{i,t-1}$ is obtained from the Chinese Research Data Services Platform and is collected to measure the number of newly established charitable foundations (e.g. foundations to combat poverty, protect the environment, etc.) within the province that the audit firm is located at within. We scale this variable by the total number of foundations within the province in the given year. We use this variable as the instrumental variable because the number foundations in a province likely reflects CSR awareness by auditors and clients within the same geographic location, and hence, we expect it to be positively associated with audit firms' engagement in CSR. Importantly, there is no reason to expect that the number of foundations within a province has a direct effect on the changes in any particular audit firm's clientele.[25]

[25] In untabulated regression test, we do to find an association between $\Delta Found\_Number_{i,t-1}$ and client growth. In addition, we conduct several exclusion restriction tests, including the Variance Inflation Factors (VIF) test (Lennox Francis, and Wang. 2012), the correlation test (Kim and Zhang 2015) and different model specifications test (e.g., Bushway et al. 2007; Lennox et al. 2012). In all those analyses, we find no evidence that our instrument fails the exclusion restriction.

We find that in the first stage a significant positive (p-value = 0.008) association between $\Delta Found\_Number\_Ratio_{i,t-1}$ and audit firms' CSR engagement (*AUD_CSR*) as expected. Once we include the Inverse Mills Ratio (IMR) calculated from the first stage into the second stage where the change in clientele (*ΔClient_Number*) is the dependent variable, we continue to find qualitatively similar results to our main analyses.

We believe collectively these approaches help to alleviate the concern that our main results are driven by unobserved factors.[26] Nevertheless, we acknowledge that we cannot completely rule out this concern.

6. Insights from qualitative interviews

6.1. Interview method

To further understand the potential role of audit firms' engagement in CSR, we conducted semi-structured, qualitative interviews with audit committee members and senior managers of listed companies in China. These interviews provide us with insights into company management's awareness of an audit firm's CSR engagement and whether such engagement affects their impressions of audit firms. Our interview pool consists of 6 senior managers and board members of listed companies in China. All but one of these companies engages a non-Big4 auditor. We recruited our interviewees through professional contacts (Seidman, 2019). We require the work of our interview subjects to involve interactions with auditors and all of our interviewees had direct experience with auditor hiring decisions.

[26] Another alternative explanation is that audit firms use CSR disclosures to attract employees, which allow the audit firms to take on more clients. To address this concern, we included in Table 3 an additional control variable "*TalentIndex*" which proxies for labor talent available to the auditors. It is obtained from the China Market Index database and is collected to measure the level of human capital in a province. It is measured from three aspects: the supply of technical workers, the supply of management staff and the supply of experienced workers. We find *TalentIndex* is positively associated with auditors' CSR activities. However, when we control for *TalentIndex* in Table 3, we obtain qualitatively similar results.

Our interviewees have a range of 3 to 5 years of experience in their roles. On average, the interviews lasted 25 minutes. We audio-recorded each interview for transcription, and all subjects gave consent to the interviews being recorded. To ensure open communication, we promised anonymity to our subjects, which is why we refer to them as "Interviewee-X [number 1 through 6]". Our interviewees provided us with insights into the following questions:

(1) Are managers and audit comments members aware of auditors' CSR activities? If yes, what kind of CSR activities are the interviewees aware of?
(2) Do managers and audit committee members perceive audit firms' engagement in CSR activities as enhancing the brand awareness and the reputation of the audit firm?
(3) What role does audit firms' engagement in CSR play in their companies' auditor selection process?

Our questions are intentionally general, and we encouraged the interviewees to answer them candidly and honestly. For consistency, the interviews were all performed by the same team of interviewers and the interviewers asked the subjects to share only their personal experiences and perceptions without being concerned about whether their answers were representative of the sample of interview subjects. The interviews were conducted in Chinese to allow our interviewees to freely express themselves in their native language. Following prior literature (Malsch & Salterio, 2016), we performed a member checking analysis, wherein we sent a draft of the study to our interview subjects to gather their reactions and to ensure we were presenting results that agree with what our interview subjects intended. All interviewees responded positively to the check.

6.2. Interview findings

6.2.1 Awareness of audit firms' CSR engagement

Our interviews suggest that managers or audit committee members in general are aware of audit firms' CSR engagement, such as in the form of donations, environmental protection, volunteering for poverty alleviation and providing aid to education in the poverty regions. For example, Interviewee-2 mentioned "*I have heard from our auditors that their firms make*

donations during earthquakes and have been involved in charity work during the pandemic". Similarly, Interviewee-3 commented that "*Although there is no official requirement for audit firms to engage in CSR, the fact that many firms are participating may encourage individual firms to do so. Typical activities include poverty alleviation, rural revitalization, and support for primary and secondary schools, and some activities go into great depth*". Interviewee-4 said "*I'm particularly interested in [our audit firm's] ESG actions, something I found intriguing in the past. [Our audit firm] organized a program, the name of which escapes me right now. What they do is gather some of their senior staff to volunteer their time to educate children in remote mountain areas (educational support) and provide training to local teachers. This illustrates that the firm places significant importance on social responsibility contributions".* Overall, our interviewees appear to be aware of audit firms' CSR activities and are able to give concrete examples of these activities.

6.2.2 Perception towards audit firms' CSR engagement

All interviewees view audit firms' CSR engagement positively. Some of them suggest that audit firms' CSR activities are reflective of the firms' sense of social responsibility, trustworthiness, and public image, which are basic qualities expected from an audit firm. For example, Interviewee-4 said "*As I mentioned earlier, the audit firm's credibility and social image are crucial. For example, their audit reports not only deal with specific accounting principles but also largely reflect the social image and credibility of the audit firm. This, in turn, serves as a form of endorsement for the company hiring the audit firm. Therefore, we consider the audit firm's social responsibility activities, such as their involvement in CSR matters, as a reflection of an organization's social responsibility and credibility".*

Several interviewees mentioned they view audit firms' CSR activity as reflective of the competency and profitability of the audit firm. This is because only when a firm is sufficiently

competent and profitable would they have the capacity to devote resources to CSR activities (Interviewee-1, 3, 4). For instance, Interviewee 1 commented that "*Some audit firms haven't undertaken these (CSR) activities, and from our perspective, it may be because these audit firms haven't reached a certain size. In simpler terms, these audit firms may still be in a growth phase or haven't achieved the level of profitability that would allow them to voluntarily engage in CSR—they haven't reached a stage where they can give back to society*". Similarly, Interviewee 3 said "*If an audit firm does not have the time or energy to engage in CSR, they won't do it. On the other hand, if an audit firm is performing well in the industry and has the capabilities, then they may engage in CSR*".

Some interviewees even believe it is an audit firms' responsibility to engage in CSR, especially considering long-term sustainable development. For example, Interviewee-2 commented that "*I believe both corporations and audit firms should participate in CSR. Audit firms as limited liability partnership enterprises, engaging in various social activities, such as assistance and pandemic response, have obligations that they should fulfill as responsible citizens*". Interviewee-6 said that "*As a responsible enterprise aiming for long-term development, both accounting firms and corporations should collectively care about and actively participate in CSR. Therefore, audit firms should take the initiative and drive this forward".*

Thus, our interviewees agree that audit firms' CSR engagement is helpful in establishing positive public image and enhancing an audit firm's reputation.

6.2.3 The role of audit firms' CSR engagement in the auditor selection process

Several of our interviewees view CSR as one of the criteria in selecting auditors and other business partners, especially when choosing a long-term partner. For example, Interviewee-6 commented "*We, as a publicly traded company ourselves, also pay attention to social*

responsibility. Audit firms are also enterprises and should be concerned about it. We are particularly interested in whether our partners are involved in CSR. When selecting business partners, we consider whether they excel in social responsibility, and this influences our choice of partners. We also draw inspiration from their activities in how we conduct our own related initiatives".

Our interview data also reveal that if the company values CSR, they are more likely to value an audit firm's CSR activities and choose CSR auditors. For example, Interviewee-2 said "*Yes, I find these (ESG) actions quite attractive. Especially for state-owned enterprises like ours, a sense of giving back to society allows companies to maintain their long-term presence. We share the same values, and mutual recognition is enhanced. In the future, we will likely focus more on working with people who share these values, as it makes for a pleasant collaborative foundation*". This is further reflected in Interviewee-4's comments that "*When we choose a sustainable and like-minded partner, it's like two individuals in a relationship…If we're going to establish a long-term partnership, personal character matters. The same goes for companies. I would consider more factors like their long-term sustainable development. It's like having a side view to see if there are any issues that could impact their sustainable development. If they are doing well in those aspects, long-term cooperation becomes more reliable".*

Overall, while our subjects believe an audit firm's competency and reputation in ensuring smooth and high-quality audit work is the most important criteria in their auditor selection process, they take audit firms' CSR engagement into consideration, especially when they themselves value CSR.

7. Conclusion

A large body of literature has documented that CSR helps corporations build social capital and enhance stakeholder trust. As a result, CSR 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 & Siegel, 2001; Dhaliwal et al., 2011; Tian, Wang & Yang, 2011; Christensen, 2016). However, there is little evidence on whether CSR can build reputation 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 (and client audit fees and client assets) in the subsequent year. We also find such positive effect is mainly driven by smaller accounting firms and non-industry expert audit firms, which have limited alternative means to build their reputation. In addition, clients that value CSR initiatives themselves are more likely to choose auditors engaging in CSR activities. We further supplement our archival evidence with interviews and find consistent evidence. Overall, our study provides initial evidence that auditors' CSR engagement could serve as a reputation enhancing strategy, especially for smaller audit firms, non-industry expert audit firms and clients that value CSR. Our results should have implications to public accounting firms, client companies and investors.

A natural limitation of single country studies, such as ours, is that it is difficult to know if the results will generalize to other countries. The Chinese setting has institutional features that are similar to and different from other countries. For example, the Chinese audit market has relatively low litigation risk and relatively low market concentration, similar to some other countries, such as Japan and Germany (Chaney & Philipich, 2002; Skinner & Srinivasan, 2012). Unlike these countries, but like the US, Chinese auditors are subject to regulatory risk through significant regulatory penalties for low audit quality (e.g. Firth et al., 2005; Sun et al., 2016; Gunn, Li, Liao

& Zhou, 2023).[27] An additional institutional feature that may limit generalizability of our results is that the China Code of Ethics for Certified Public Accountants (CICPA, 2009, Chapter 6, No.37) prohibits audit firms in China from advertising their products and services directly. However, this provides an additional motive for audit firms in China to engage in CSR activity as an alternative to increase their publicity compared to auditors in other countries. While a comprehensive analyses on the results of a single country study (ours or any other) will generalize to other countries is beyond the scope of our study, future research may be able to answer this question. CSR has become an increasingly important topic not only for public companies, but also for audit firms around the world. Given the increasing importance attached to this topic, we maintain that it is important to exploit the data available in the Chinese setting, despite these potential threats to generalizability.

[27]As discussed in Gunn et al. (2023), government sanctions are public signals of poor audit quality in China as they are followed by an increased likelihood of client dismissal, decreases in the number of new clients, and lower audit fees (He, Pittman & Rui, 2016). There is also evidence that individual audit partners suffer reputation damage when their clients are sanctioned, even if the audit partners were not found culpable in the investigations (Fung et al., 2018).

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Table 1. Descriptive Statistics for Auditor CSR Activity

Panel A: Summary of Auditor CSR activities

Variable	N	Mean	S.D	Min	P25	Median	P75	Max
AUD_CSR	529	0.395	0.489	0.000	0.000	0.000	1.000	1.000
*CSR_Number**	209	7.722	12.823	1.000	1.000	3.000	9.000	93.000
*CSR_Type**	209	1.947	0.967	1.000	1.000	2.000	3.000	4.000
*Donation**	209	0.813	0.391	0.000	1.000	1.000	1.000	1.000
*Donation Amount**	209	589,000	2,810,000	0.000	0.000	0.000	107,000	25,700,000
*Environmental Protection**	209	0.249	0.433	0.000	0.000	0.000	0.000	1.000
*Employee Welfare**	209	0.321	0.468	0.000	0.000	0.000	1.000	1.000
*Community Activities**	209	0.565	0.497	0.000	0.000	1.000	1.000	1.000

*descriptive statistics are only presented for the 209 firms that engaged in at least one CSR activity.

Panel B: Details of Auditor CSR activities

Donation	
Percentage of audit firms (N = 209) engaging in donations	81.3%
Percentage of audit firms (N = 209) engaging in monetary donation	66.5%
Percentage of audit firms (N = 209) engaging in non-monetary goods donation	27.8%
Percentage of audit firms (N = 209) engaging in donations through foundation	22%
Average number of donations made by each audit firm per year	2.474
Average amount of donation by each audit firm per year (in RMB)[28]	1,243,066
Environment Protection	
Percentage of audit firms (N = 209) engaging in environment protection	24.9%
Percentage of audit firms (N = 209) engaging in tree-planting activities	15.8%
Percentage of audit firms (N = 209) engaging in carbon reduction activities	6.2%
Percentage of audit firms (N = 209) engaging in other environmental activities (e.g. green lectures/seminars/campaigns)	9.1%
Average number of environmental protections activities made by each audit firm per year	0.742
Employee Welfare	
Percentage of audit firms (N = 209) engaging in employee welfare such as initiatives to show care for employees who have fallen sick or experienced a tragic event	32.1%
Average number of employee activities made by each audit firm per year	1.177
Community Activities	
Percentage of audit firms (N = 209) engaging in community activities	56.5%
Percentage of audit firms (N = 209) engaging in volunteer programs	32.5%
Percentage of audit firms (N = 209) engaging in aid education in the poverty regions	12%
Percentage of audit firms (N = 209) engaging in community programs (care for the disabled, elderly, children, etc.)	24.9%
Percentage of audit firms (N = 209) engaging in other activities (e.g. blood donation, fun run)	31.1%
Average number of community activities made by each audit firm per year	3.33

[28] This amount is larger than the average donation amount in Panel A because the amount in Panel B is calculated on audit firms that have made donations and disclosed the donation amount while the amount in Panel A is calculated on all audit firms that have engaged in CSR activities but not all of them have engaged in donation and/or the disclosed donation amount.

Table 2 Descriptive Statistics for audit firm-year variables

Panel A Descriptive statistics of audit firm-year variables

Variable	N	Mean	S.D	Min	P25	Median	P75	Max
$\Delta Client\ Number_{i,t}$	464	5.787	14.237	-40.000	0.000	2.000	7.500	75.000
$NonBig4_{i,t-1}$	464	0.905	0.293	0.000	1.000	1.000	1.000	1.000
$NonAud\_Exp_{i,t-1}$	464	0.890	0.313	0.000	1.000	1.000	1.000	1.000
$Client\_Number_{i,t-1}$	464	57.748	77.054	2.000	17.000	32.000	57.000	407.000
$AudSan_{i,t-1}$	464	0.226	0.419	0.000	0.000	0.000	0.000	1.000
$Mao\_Ratio_{i,t-1}$	464	0.055	0.066	0.000	0.000	0.037	0.081	0.300
$Misstat\_Ratio_{i,t-1}$	464	0.127	0.094	0.000	0.063	0.111	0.178	0.400
$Small\_ROA_{i,t-1}$	464	0.360	0.130	0.000	0.281	0.345	0.429	0.750
$LnTenure_{i,t-1}$	464	1.639	0.417	0.693	1.386	1.609	1.946	2.526
$Client\_SIZE_{I,Ti,t-1}$	464	21.948	0.954	20.705	21.421	21.750	22.062	25.683
$Client\_MTB_{i,t-1}$	464	0.750	0.384	0.269	0.502	0.665	0.854	2.358

Panel A of Table 2 presents descriptive statistics of audit firm-year variables. See Appendix 1 for variable definition. All continuous variables are winsorized at the top and bottom one percent.

Panel B Univariate analyses of audit firm-year variables

	$AUD\_CSR_{t-1} = 1$						$AUD\_CSR_{t-1} = 0$						MeanDiff
variable	N	Mean	S.D	P25	Median	P75	N	Mean	S.D	P25	Median	P75	
$\Delta Client\ Number_{i,t}$	177	10.514	19.038	1.000	5.000	14.000	287	2.871	9.095	0.000	2.000	4.000	7.643***
$NonBig4_{i,t-1}$	177	0.791	0.408	1.000	1.000	1.000	287	0.976	0.155	1.000	1.000	1.000	-0.185***
$NonAud\_Exp_{i,t-1}$	177	0.791	0.408	1.000	1.000	1.000	287	0.951	0.216	1.000	1.000	1.000	-0.160***
$Client\_Number_{i,t-1}$	177	92.356	108.286	22.000	43.000	124.000	287	36.404	34.605	13.000	29.000	46.000	55.952***
$AudSan_{i,t-1}$	177	0.322	0.469	0.000	0.000	1.000	287	0.167	0.374	0.000	0.000	0.000	0.155***
$Mao\_Ratio_{i,t-1}$	177	0.053	0.067	0.000	0.033	0.068	287	0.057	0.066	0.000	0.038	0.086	-0.003
$Misstat\_Ratio_{i,t-1}$	177	0.135	0.084	0.080	0.127	0.182	287	0.122	0.099	0.056	0.100	0.171	0.014
$Small\_ROA_{i,t-1}$	177	0.367	0.113	0.291	0.352	0.438	287	0.355	0.139	0.273	0.333	0.429	0.012
$LnTenure_{i,t-1}$	177	1.600	0.319	1.386	1.609	1.792	287	1.664	0.466	1.386	1.705	1.946	-0.064
$Client\_SIZE_{I,Ti,t-1}$	177	22.364	1.229	21.677	21.939	22.301	287	21.691	0.609	21.362	21.620	21.911	0.673***
$Client\_MTB_{i,t-1}$	177	0.832	0.460	0.516	0.713	0.997	287	0.699	0.320	0.497	0.654	0.820	0.133***

Panel B of Table 2 presents the univariate analyses of the audit firm-year variables used in equation (1) separately for audit firms that engage in CSR activity ($AUD\_CSR_{i,t-1} = 1$) compared to those that do not engage in CSR activity ($AUD\_CSR_{i,t-1} = 0$). See Appendix 1 for variable definitions. *, **, and *** indicate two-tailed statistical significance for the difference in means at the ten, five and one percent levels, respectively.

Panel C Correlation table (N = 464)

	ΔClient Number$_{i,t}$	*AUD_CSR$_{i,t-1}$*	*LnCSR$_{i,t-1}$*	*CSR_Type$_{i,t-1}$*	*LnDonation _Money$_{i.t-1}$*	*NonBig4$_{i,t-1}$*	*NonAud _Exp$_{i,t-1}$*	*Client _Number$_{i,t-1}$*	*AudSan$_{i,t-1}$*	*Mao _Ratio$_{i,t-1}$*	*Misstat _Ratio$_{i,t-1}$*	*Small _ROA$_{i,t-1}$*	*Tenure$_{i,t-1}$*	*Client _SIZE$_{I,Ti,t-1}$*	*Client _MTB$_{i,t-1}$*
ΔClient Number$_{i,t}$	1.000														
AUD_CSR$_{i,t-1}$	0.261***	1.000													
LnCSR$_{i,t-1}$	0.151***	0.810***	1.000												
CSR_Type$_{i,t-1}$	0.237***	0.844***	0.935***	1.000											
LnDonation _Moneyi.t-1	0.227***	0.980***	0.865***	0.869***	1.000										
NonBig4$_{i,t-1}$	0.043	-0.306***	-0.568***	-0.458***	-0.367***	1.000									
NonAud_Exp$_{i,t-1}$	-0.205***	-0.249***	-0.363***	-0.341***	-0.270***	0.427***	1.000								
Client _Number$_{i,t-1}$	0.398***	0.353***	0.359***	0.408***	0.379***	0.074	-0.286***	1.000							
AudSan$_{i,t-1}$	0.072	0.180***	0.186***	0.247***	0.131**	0.175***	0.042	0.368***	1.000						
Mao_Ratio$_{i,t-1}$	-0.022	-0.025	-0.086*	-0.052	-0.064	0.207***	0.151***	-0.125***	0.203***	1.000					
Misstat_Ratio$_{i,t-1}$	-0.069	0.070	0.071	0.091**	0.012	0.073	0.067	0.017	0.296***	0.207***	1.000				
Small_ROA$_{i,t-1}$	-0.080*	0.046	0.086*	0.056	0.035	-0.154***	0.013	-0.147***	0.045	0.108**	0.203***	1.000			
Tenure$_{i,t-1}$	-0.080*	-0.074	-0.032	-0.056	-0.073	0.044	0.007	-0.069	0.004	-0.035	-0.015	0.039	1.000		
Client_SIZE$_{I,Ti,t-1}$	-0.030	0.343***	0.567***	0.473***	0.365***	-0.843***	-0.315***	-0.026	-0.072	-0.286***	0.039	0.279***	-0.002	1.000	
Client_MTB$_{i,t-1}$	-0.101**	0.168***	0.270***	0.193***	0.222***	-0.424***	-0.178***	-0.181***	-0.162***	-0.142***	-0.036	0.319***	-0.100**	0.513***	1.000

Table 3: Auditor CSR activity and change in clientele portfolio size

	Exp. Sign	(1) $\Delta Client\ Number_{i,t}$	(2) $\Delta Client\ Number_{i,t}$	(3) $\Delta Client\ Number_{i,t}$	(4) $\Delta Client\ Number_{i,t}$	(5) $\Delta Client\ Number_{i,t}$	(6) $\Delta Client\ Number_{i,t}$
AUD_CSR$_{i,t-1}$	+	**6.403*****			**6.498*****		
		(3.982)			**(3.976)**		
LnCSR$_{i,t-1}$	+		**1.781**			**2.216***	
			(1.482)			**(1.713)**	
CSR_Type$_{i,t-1}$	+			**2.920*****			**3.250*****
				(2.969)			**(3.088)**
NonBig4$_{i,t-1}$		12.896***	13.883***	15.006***			
		(3.597)	(3.118)	(3.681)			
NonAud_Exp$_{i,t-1}$		-7.089**	-7.503**	-6.664**	-2.968	-3.087	-2.733
		(-2.115)	(-2.195)	(-1.989)	(-1.018)	(-1.022)	(-0.936)
LnClient_Number$_{i,t-1}$		3.716***	4.083***	3.769***	-4.399*	-3.873*	-4.284*
		(4.505)	(5.108)	(4.573)	(-1.896)	(-1.654)	(-1.833)
AudSan$_{i,t-1}$		-2.443	-2.488	-3.009*	0.136	-0.153	-0.631
		(-1.439)	(-1.508)	(-1.833)	(0.064)	(-0.071)	(-0.296)
Mao_Ratio$_{i,t-1}$		-0.731	2.753	0.707	-2.268	-1.507	-2.598
		(-0.071)	(0.271)	(0.069)	(-0.210)	(-0.138)	(-0.239)
Misstat_Ratio$_{i,t-1}$		-4.108	-4.657	-3.659	-2.502	-1.344	-1.787
		(-0.695)	(-0.803)	(-0.633)	(-0.423)	(-0.230)	(-0.309)
Small_ROA$_{i,t-1}$		2.319	1.505	1.960	0.029	-0.148	-0.033
		(0.462)	(0.305)	(0.397)	(0.006)	(-0.034)	(-0.007)
LnTenure$_{i,t-1}$		-2.852***	-3.367***	-2.936***	-1.016	-0.502	-0.691
		(-2.624)	(-3.064)	(-2.636)	(-0.488)	(-0.239)	(-0.329)
Client_SIZE$_{I,Ti,t-1}$		1.411	1.562	1.516	1.970	1.868	1.793
		(1.172)	(1.236)	(1.223)	(1.053)	(1.070)	(0.952)
Client_MTB$_{i,t-1}$		-1.833	-1.153	-1.498	-6.040**	-5.997**	-5.504**
		(-0.798)	(-0.487)	(-0.654)	(-2.225)	(-2.236)	(-2.026)
Constant		Yes	Yes	Yes	Yes	Yes	Yes
Year FE		Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE		No	No	No	Yes	Yes	Yes
N		464	464	464	464	464	464
Adj. R2		0.199	0.171	0.193	0.359	0.340	0.359

This table presents the regression results for equation (1). The sample covers 464 audit firm-year observations for the period 2008-2019. The dependent variable in all the six columns, $\Delta Client\ Number_{i.t}$, is the change in the number of clients audited. The three variables of interest are (1) $AUD\_CSR_{i.t-1}$ equals one if the audit firm engaged in CSR in year t-1; (2) $LnCSR_{i.t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; (3) $CSR\_Type_{i.t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. See Appendix 1 for other variable definitions. Year and audit firm fixed effects are included as indicated, but the coefficients are suppressed for brevity. Robust t-statistics in parentheses. *, **, and *** indicate two-tailed p-value is less than 0.10, 0.05, and 0.01, respectively.

Table 4: Auditor monetary donations and change in clientele portfolio size

	Exp. Sign	(1) $\Delta Client\ Number_{i,t}$	(2) $\Delta Client\ Number_{i,t}$
***LnDonation_Money*$_{i.t-1}$**	+	**0.453****	**0.542*****
		(2.327)	**(3.408)**
$NonBig4_{i,t-1}$		12.604***	
		(2.734)	
$NonAud\_Exp_{i,t-1}$		-7.188*	-7.205**
		(-1.790)	(-1.995)
$LnClient\_Number_{i,t-1}$		2.539***	-5.663**
		(3.028)	(-2.234)
$AudSan_{i,t-1}$		-0.714	1.481
		(-0.442)	(0.618)
$Mao\_Ratio_{i,t-1}$		3.623	0.787
		(0.304)	(0.067)
$Misstat\_Ratio_{i,t-1}$		-7.407	-8.274
		(-1.225)	(-1.338)
$Small\_ROA_{i,t-1}$		3.327	4.193
		(0.568)	(0.864)
$LnTenure_{i,t-1}$		-2.045*	-0.016
		(-1.816)	(-0.008)
$Client\_SIZE_{1,Ti,t-1}$		1.767	3.129
		(1.283)	(1.426)
$Client\_MTB_{i,t-1}$		-2.270	-7.364**
		(-0.812)	(-2.216)
Constant		Yes	Yes
Year FE		Yes	Yes
Audit Firm FE		No	Yes
N		372	372
Adj. R2		0.123	0.363

This table shows the association between monetary donations and the change in clientele portfolio size. The sample covers 372 audit firm-year observations for the period 2008-2019. The dependent variable in both columns, $\Delta Client\ Number_{i.t}$, is the change in the number of clients audited. The variable of interest, $LnDonation\_Money_{i.t-1}$, equals the log of donation amount in RMB in year *t*-1. See Appendix 1 for other variable definitions. Robust t-statistics are in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. Two-tailed p-value is reported for signed expectations.

Table 5 Interactions between CSR and audit firm characteristics

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

	Exp.Sign	(1) $\Delta Client\ Number_{i,t}$	(2) $\Delta Client\ Number_{i,t}$	(3) $\Delta Client\ Number_{i,t}$
$NonBig4_{i,t-1}$		7.351*	6.988*	7.043*
		(1.738)	(1.856)	(1.802)
$AUD\_CSR_{i,t-1}$		0.238		
		(0.074)		
$AUD\_CSR_{i,t-1} * NonBig4_{i,t-1}$	+	**6.587***		
		(1.912)		
$LnCSR_{i,t-1}$			-0.860	
			(-0.862)	
$LnCSR_{i,t-1} * NonBig4_{i,t-1}$	+		**3.592****	
			(2.019)	
$CSR\_Type_{i,t-1}$				-0.154
				(-0.140)
$CSR\_Type_{i,t-1} * NonBig4_{i,t-1}$	+			**3.616****
				(2.360)
$NonAud\_Exp_{i,t-1}$		-7.161**	-7.751**	-6.960**
		(-2.134)	(-2.258)	(-2.065)
$LnClient\_Number_{i,t-1}$		3.677***	3.897***	3.632***
		(4.460)	(4.935)	(4.419)
$AudSan_{i,t-1}$		-2.585	-2.886*	-3.388**
		(-1.519)	(-1.778)	(-2.057)
$Mao\_Ratio_{i,t-1}$		-0.595	2.711	0.471
		(-0.057)	(0.267)	(0.046)
$Misstat\_Ratio_{i,t-1}$		-3.965	-4.412	-3.582
		(-0.670)	(-0.767)	(-0.622)
$Small\_ROA_{i,t-1}$		2.180	1.355	1.943
		(0.435)	(0.276)	(0.395)
$LnTenure_{i,t-1}$		-2.734**	-3.083***	-2.699**
		(-2.481)	(-2.711)	(-2.359)
$Client\_SIZE_{I,Ti,t-1}$		1.219	1.211	1.103
		(1.019)	(1.011)	(0.909)
$Client\_MTB_{i,t-1}$		-1.359	-0.348	-0.910
		(-0.592)	(-0.153)	(-0.401)
Constant		Yes	Yes	Yes
Year FE		Yes	Yes	Yes
N		464	464	464
Adj. R2		0.199	0.176	0.197

This table presents the regression results for equation (2). The sample covers 464 audit firm-year observations for the period 2008-2019. The dependent variable, $\Delta Client\ Number_{i,t,}$ is the change in the number of clients audited. $AUD\_CSR_{i,t-1}$ equals one if the audit firm engaged in CSR in year t-1; $LnCSR_{i,t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; $CSR\_Type_{i,t-1}$ is the number of CSR categories engaged in by an audit firm in year t-1. $NonBig4_{i,t-1}$ equals one if the audit firm is a non-Big 4 firm, and zero otherwise. See Appendix 1 for other variable definitions. Robust t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. Two-tailed p-value is reported for signed expectations and two-tailed p-value is for unsigned expectations.

Table 5 (continued)

Panel B: Interaction between CSR and Non-industry expert

	Exp.Sign	(1) $\Delta Client\ Number_{i,t}$	(2) $\Delta Client\ Number_{i,t}$	(3) $\Delta Client\ Number_{i,t}$
$NonAud\_Exp_{i,t-1}$		-8.320*	-12.280***	-10.072**
		(-1.935)	(-2.904)	(-2.226)
$AUD\_CSR_{i,t-1}$		4.743		
		(0.852)		
$\mathbf{AUD\_CSR_{i,t-1}*NonAud\_Exp_{i,t-1}}$	+	**1.842**		
		(0.326)		
$LnCSR_{i,t-1}$			-1.050	
			(-0.545)	
$\mathbf{LnCSR_{i,t-1}*\ NonAud\_Exp_{i,t-1}}$	+		**3.690***	
			(1.795)	
$CSR\_Type_{i,t-1}$				1.081
				(0.445)
$\mathbf{CSR\_Type_{i,t-1}*NonAud\_Exp_{i,t-1}}$	+			**2.266**
				(0.910)
$NonBig4_{i,t-1}$		12.617***	11.552**	13.764***
		(3.341)	(2.571)	(3.092)
$LnClient\_Number_{i,t-1}$		3.698***	3.843***	3.648***
		(4.503)	(4.864)	(4.470)
$AudSan_{i,t-1}$		-2.387	-2.232	-2.688*
		(-1.425)	(-1.363)	(-1.695)
$Mao\_Ratio_{i,t-1}$		-0.919	1.806	-0.002
		(-0.088)	(0.176)	(-0.000)
$Misstat\_Ratio_{i,t-1}$		-4.178	-4.529	-3.531
		(-0.707)	(-0.787)	(-0.613)
$Small\_ROA_{i,t-1}$		2.327	1.209	1.731
		(0.463)	(0.246)	(0.351)
$LnTenure_{i,t-1}$		-2.799**	-2.935**	-2.645**
		(-2.574)	(-2.584)	(-2.317)
$Client\_SIZE_{I,Ti,t-1}$		1.327	0.880	1.176
		(1.083)	(0.694)	(0.913)
$Client\_MTB_{i,t-1}$		-1.712	-0.197	-0.955
		(-0.739)	(-0.083)	(-0.402)
Constant		Yes	Yes	Yes
Year FE		Yes	Yes	Yes
N		464	464	464
Adj. R2		0.197	0.179	0.195

This table presents the regression results for equation (3). The sample covers 464 audit firm-year observations for the period 2008-2019. The dependent variable, $\Delta Client\ Number_{i,t}$, is the change in the number of clients audited. $AUD\_CSR_{i,t-1}$ equals one if the audit firm engaged in CSR in year t-1; $LnCSR_{i,t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; $CSR\_Type_{i,t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. $NonAud\_Exp_{i,t-1}$ equals one if the audit firm is not an industry expert, and zero otherwise. See Appendix 1 for other variable definitions. Robust t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. Two-tailed p-value is reported for signed expectations.

Table 6. Client characteristics and the selection of CSR audit firms
Panel A

	Exp. Sign	(1) $AUD\_CSR_{i,t-1}$	(2) $LnCSR_{i,t-1}$	(3) $CSR\_Type_{i,t-1}$
***Client_CSR_High*$_{i,t}$**	+	**0.227***	**0.080****	**0.135*****
		(1.864)	**(2.255)**	**(2.936)**
$SIZE_{i,t}$		0.123*	0.077***	0.075***
		(1.723)	(3.522)	(2.929)
$ROA_{i,t}$		0.032	-0.100	-0.109
		(0.071)	(-0.720)	(-0.506)
$LOSS_{i,t}$		-0.105	-0.118**	-0.092
		(-0.533)	(-2.033)	(-1.197)
$LEV_{i,t}$		-0.833*	-0.157	-0.196
		(-1.940)	(-1.256)	(-1.218)
$DA_{i,t}$		0.399	0.042	-0.057
		(0.463)	(0.171)	(-0.182)
$LIQ_{i,t}$		-0.036	-0.001	0.001
		(-1.263)	(-0.187)	(0.100)
$CFO_{i,t}$		-0.361	-0.021	-0.130
		(-0.414)	(-0.085)	(-0.419)
$INV_{i,t}$		-0.706	-0.063	-0.211
		(-1.449)	(-0.436)	(-1.235)
$REC_{i,t}$		-0.365	-0.119	0.038
		(-0.644)	(-0.726)	(0.175)
$GROWTH_{i,t}$		-0.085	-0.012	-0.021
		(-0.987)	(-0.435)	(-0.626)
$MTB_{i,t}$		-0.056	-0.030	-0.022
		(-0.516)	(-0.878)	(-0.591)
$TURNOVER_{i,t}$		0.266*	0.069	0.090
		(1.721)	(1.516)	(1.594)
$INSTSHS_{i,t}$		-0.949	-1.024***	-1.171***
		(-0.786)	(-3.223)	(-2.817)
$BOARD_{i,t}$		0.001	0.011	0.001
		(0.033)	(1.078)	(0.109)
$IND_{i,t}$		-0.049	-0.275	-0.391
		(-0.044)	(-0.826)	(-0.915)
$Mismatch_{i,t}$		-0.223	-0.057	0.006
		(-0.902)	(-0.658)	(0.063)
$NonAud\_Exp_{i,t}$		-1.603***	-0.563***	-0.802***
		(-9.296)	(-15.382)	(-15.766)
$NonBIG4_{i,t}$		-0.735**	-1.023***	-0.579***
		(-2.450)	(-9.260)	(-5.424)
Constant		Yes	Yes	Yes
Year FE		Yes	Yes	Yes
Industry FE		Yes	Yes	Yes
N		2385	2387	2387
Pseudo R^2/Adj. R^2		0.269	0.488	0.475
Area under ROC Curve		0.828		

This table presents the regression results for equation (4). The sample is restricted to 2,387 new clients. Each column has a different dependent variable: (1) $AUD\_CSR_{i,t-1}$ equals one if the audit firm engaged in CSR in year t-1; (2) $LnCSR_{i,t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; (3) $CSR\_Type_{i,t-1}$ is

the number of CSR categories engaged by an audit firm in year t-1. Year fixed effects are included as indicated, but the coefficients are suppressed for brevity. Robust z-statistics in parentheses. *, **, and *** indicate two-tailed p-value is less than 0.10, 0.05, and 0.01, respectively. Standard errors are clustered at the client firm level.

Panel B

	Exp. Sign	(1) $AUD\_CSR_{i,t-1}$	(2) $LnCSR_{i,t-1}$	(3) $CSR\_Type_{i,t-1}$
***Institut_High*$_{i,t}$**	+	**0.336*****	**0.120*****	**0.171*****
		(2.934)	**(3.545)**	**(3.870)**
Control Variables		Included	Included	Included
Year FE		Yes	Yes	Yes
Industry FE		Yes	Yes	Yes
N		2515	2517	2517
Pseudo R^2/adj. R^2		0.248	0.486	0.476
Area under ROC Curve		0.815		

This table presents the regression results for equation (4). The sample is restricted to 2,517 new clients. Each column has a different dependent variable: (1) $AUD\_CSR_{i.t-1}$ equals one if the audit firm engaged in CSR in year t-1; (2) $LnCSR_{i.t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; (3) $CSR\_Type_{i.t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. Year fixed effects are included as indicated, but the coefficients are suppressed for brevity. Robust z-statistics in parentheses. *, **, and *** indicate two-tailed p-value is less than 0.10, 0.05, and 0.01, respectively. Standard errors are clustered at the client firm level.

Panel C

	Exp. Sign	(1) $AUD\_CSR_{i,t-1}$	(2) $LnCSR_{i,t-1}$	(3) $CSR\_Type_{i,t-1}$
***SOE*$_{i,t}$**	+	**0.067**	**0.126*****	**0.151*****
		(0.558)	**(3.499)**	**(3.343)**
Control Variables		Included	Included	Included
Year FE		Yes	Yes	Yes
Industry FE		Yes	Yes	Yes
N		2515	2517	2517
Pseudo R^2/adj. R^2		0.246	0.486	0.475
Area under ROC Curve		0.813		

This table presents the regression results for equation (4). The sample is restricted to 2,517 new clients. Each column has a different dependent variable: (1) $AUD\_CSR_{i.t-1}$ equals one if the audit firm engaged in CSR in year t-1; (2) $LnCSR_{i.t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; (3) $CSR\_Type_{i.t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. Year fixed effects are included as indicated, but the coefficients are suppressed for brevity. Robust z-statistics in parentheses. *, **, and *** indicate two-tailed p-value is less than 0.10, 0.05, and 0.01, respectively. Standard errors are clustered at the client firm level.

Table 7 Panel A: Auditor CSR activity and change in clientele audit fees

	Exp. Sign	(1) $\triangle Audit\_Fee_{i.t}$	(2) $\triangle Audit\_Fee_{i.t}$	(3) $\triangle Audit\_Fee_{i.t}$	(4) $\triangle Audit\_Fee_{i.t}$	(5) $\triangle Audit\_Fee_{i.t}$	(6) $\triangle Audit\_Fee_{i.t}$
***AUD_CSR*$_{i,t-1}$**	+	**0.140*****			**0.126*****		
		(3.130)			**(2.622)**		
***LnCSR*$_{i,t-1}$**	+		**0.047**			**0.026**	
			(1.579)			**(0.794)**	
***CSR_Type*$_{i,t-1}$**	+			**0.063*****			**0.059****
				(2.949)			**(2.330)**
NonBig4$_{i,t-1}$		0.095	0.129	0.140			
		(0.508)	(0.656)	(0.742)			
NonAud_Exp$_{i,t-1}$		0.045	0.038	0.054	0.171**	0.171**	0.176**
		(0.630)	(0.552)	(0.761)	(2.173)	(2.119)	(2.222)
LnClient_Number$_{i,t-1}$		-0.082***	-0.075***	-0.080***	-0.390***	-0.377***	-0.387***
		(-3.948)	(-3.474)	(-3.813)	(-5.009)	(-4.758)	(-4.888)
AudSan$_{i,t-1}$		-0.065	-0.068	-0.077*	-0.042	-0.046	-0.056
		(-1.530)	(-1.555)	(-1.745)	(-0.743)	(-0.795)	(-0.952)
Mao_Ratio$_{i,t-1}$		0.257	0.324	0.291	-0.243	-0.215	-0.246
		(0.531)	(0.677)	(0.605)	(-0.518)	(-0.462)	(-0.527)
Misstat_Ratio$_{i,t-1}$		-0.331	-0.340	-0.322	-0.394	-0.370	-0.380
		(-1.134)	(-1.174)	(-1.113)	(-1.464)	(-1.374)	(-1.414)
Small_ROA$_{i,t-1}$		0.178	0.164	0.169	0.128	0.121	0.126
		(0.783)	(0.721)	(0.753)	(0.723)	(0.670)	(0.710)
LnTenure$_{i,t-1}$		-0.077*	-0.087*	-0.079*	0.081	0.096	0.088
		(-1.727)	(-1.946)	(-1.765)	(1.083)	(1.246)	(1.160)
Client_SIZE$_{I,Ti,t-1}$		0.096	0.099	0.098	0.163**	0.161**	0.160**
		(1.270)	(1.281)	(1.299)	(2.236)	(2.117)	(2.166)
Client_MTB$_{i,t-1}$		-0.215*	-0.205*	-0.207*	-0.505***	-0.498***	-0.494***
		(-1.794)	(-1.735)	(-1.727)	(-3.821)	(-3.786)	(-3.710)
Constant		Yes	Yes	Yes	Yes	Yes	Yes
Year_FE		Yes	Yes	Yes	Yes	Yes	Yes
Audit_Firm_FE		No	No	No	Yes	Yes	Yes
N		464	464	464	464	464	464
Adj. R2		0.082	0.067	0.078	0.176	0.164	0.175

This table presents the association between auditor CSR activity and the change in clientele audit fees. The sample covers 464 audit firm-year observations for the period 2008-2019. The dependent variable in all columns, $\triangle Audit\_Fee_{i.t}$, is the change in total client audit fees. Three variables of interest are: (1) $AUD\_CSR_{i,t-1}$ equals one if the audit firm engaged in CSR in year t-1; (2) $LnCSR_{i,t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; (3) $CSR\_Type_{i,t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. See Appendix 1 for other variable definitions. Robust t-statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. Two-tailed p-value is reported for signed expectations.

Table 7 Panel B: Auditor CSR activity and change in clientele total assets

	Exp. Sign	(1) $\triangle Audit\_Asset_{i,t}$	(2) $\triangle Audit\_Asset_{i,t}$	(3) $\triangle Audit\_Asset_{i,t}$	(4) $\triangle Audit\_Asset_{i,t}$	(5) $\triangle Audit\_Asset_{i,t}$	(6) $\triangle Audit\_Asset_{i,t}$
AUD_CSR$_{i,t-1}$	+	**0.237*****			**0.231*****		
		(3.854)			**(3.537)**		
LnCSR$_{i,t-1}$	+		**0.094*****			**0.090****	
			(3.307)			**(2.245)**	
CSR_Type$_{i,t-1}$	+			**0.089*****			**0.082****
				(3.660)			**(2.558)**
NonBig4$_{i,t-1}$		0.128	0.208	0.181			
		(0.661)	(1.019)	(0.902)			
NonAud_Exp$_{i,t-1}$		-0.132*	-0.139**	-0.126*	-0.123	-0.129	-0.116
		(-1.899)	(-2.029)	(-1.779)	(-1.270)	(-1.319)	(-1.176)
LnClient_Number$_{i,t-1}$		-0.141***	-0.133***	-0.134***	-0.523***	-0.506***	-0.510***
		(-4.247)	(-3.988)	(-4.089)	(-4.088)	(-3.863)	(-3.902)
AudSan$_{i,t-1}$		0.011	0.002	-0.003	0.070	0.059	0.049
		(0.169)	(0.028)	(-0.047)	(0.900)	(0.741)	(0.621)
Mao_Ratio$_{i,t-1}$		-0.115	-0.022	-0.034	-0.795	-0.777	-0.778
		(-0.177)	(-0.034)	(-0.053)	(-1.115)	(-1.095)	(-1.097)
Misstat_Ratio$_{i,t-1}$		0.197	0.186	0.204	0.081	0.120	0.113
		(0.434)	(0.412)	(0.450)	(0.182)	(0.272)	(0.257)
Small_ROA$_{i,t-1}$		-0.304	-0.321	-0.326	-0.324	-0.328	-0.332
		(-1.082)	(-1.140)	(-1.162)	(-1.276)	(-1.266)	(-1.293)
LnTenure$_{i,t-1}$		-0.002	-0.019	-0.009	0.176*	0.191*	0.196*
		(-0.033)	(-0.325)	(-0.149)	(1.786)	(1.849)	(1.921)
Client_SIZE$_{I,Ti,t-1}$		-0.008	-0.002	-0.004	0.053	0.050	0.047
		(-0.096)	(-0.022)	(-0.047)	(0.449)	(0.412)	(0.386)
Client_MTB$_{i,t-1}$		-0.075	-0.068	-0.052	-0.390***	-0.393***	-0.368***
		(-0.617)	(-0.527)	(-0.420)	(-2.832)	(-2.807)	(-2.639)
Constant		Yes	Yes	Yes	Yes	Yes	Yes
Year FE		Yes	Yes	Yes	Yes	Yes	Yes
Audit Firm FE		No	No	No	Yes	Yes	Yes
N		464	464	464	464	464	464
Adj. R^2		0.082	0.060	0.065	0.151	0.134	0.138

This table presents the association between auditor CSR activity and the change in total clientele assets audited. The sample covers 464 audit firm-year observations for the period 2008-2019. The dependent variable in all columns, $\triangle Audit\_Asset_{i,t}$, is the change in client audited total assets. The variables of interest are: (1) *AUD_CSR$_{i,t-1}$*equals one if the audit firm engaged in CSR in year t-1; (2) *LnCSR$_{i,t-1}$* is the natural log of the number of CSR activities engaged by an audit firm in year t-1; (3) *CSR_Type$_{i,t-1}$* is the number of CSR categories engaged by an audit firm in year t-1. See Appendix 1 for other variable definitions. Robust t-statistics are in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. Two-tailed p-value is reported for signed expectations.

Table 8 Panel A PSM covariates

	1:1 with replacement					1:1 without replacement				
	AUD_CSR = 1		*AUD_CSR* = 0		MeanDiff	*AUD_CSR* = 1		*AUD_CSR* = 0		MeanDiff
Variable	N	Mean	N	Mean		N	Mean	N	Mean	
$NonBig4_{i,t-1}$	129	0.938	78	0.923	0.015	90	0.967	90	0.933	0.033
$NonAud\_Exp_{i,t-1}$	129	0.891	78	0.885	0.007	90	0.900	90	0.900	0.000
$LnClient\_Number_{i,t-1}$	129	3.714	78	3.494	0.220	90	3.438	90	3.491	-0.053
$AudSan_{i,t-1}$	129	0.318	78	0.192	0.126**	90	0.200	90	0.189	0.011
$Mao\_Ratio_{i,t-1}$	129	0.062	78	0.058	0.003	90	0.067	90	0.060	0.007
$Misstat\_Ratio_{i,t-1}$	129	0.138	78	0.134	0.004	90	0.138	90	0.130	0.008
$Small\_ROA_{i,t-1}$	129	0.358	78	0.364	-0.006	90	0.360	90	0.367	-0.007
$LnTenure_{i,t-1}$	129	1.593	78	1.661	-0.069	90	1.614	90	1.658	-0.044
$Client\_SIZE_{I,Ti,t-1}$	129	21.954	78	21.892	0.062	90	21.821	90	21.859	-0.039
$Client\_MTB_{i,t-1}$	129	0.755	78	0.701	0.054	90	0.759	90	0.731	0.028

Panel A of Table 8 presents the univariate analyses of the audit firm-year variables for audit firms that engage in CSR activity ($AUD\_CSR_{i,t-1}$ = 1) compared to those that do not engage in CSR activity ($AUD\_CSR_{i,t-1}$ = 0) after PSM. See Appendix 1 for variable definitions. *, **, and *** indicate two-tailed statistical significance for the difference in means at the ten, five and one percent levels, respectively.

Table 8 Panel B Regression results after PSM

		1st Stage	1:1 matching with replacement			1:1 matching without replacement		
	Exp. Sign	(1) $AUD\_CSR_{i,t-1}$	(2) $\triangle Client\ Number_{i,t}$	(3) $\triangle Client\ Number_{i,t}$	(4) $\triangle Client\ Number_{i,t}$	(5) $\triangle Client\ Number_{i,t}$	(6) $\triangle Client\ Number_{i,t}$	(7) $\triangle Client\ Number_{i,t}$
AUD_CSR$_{i,t-1}$	+		**6.257*****			**6.778*****		
			(2.669)			**(3.371)**		
LnCSR$_{i,t-1}$	+			**2.429***			**3.102****	
				(1.716)			**(2.466)**	
CSR_Type$_{i,t-1}$	+				**2.743****			**3.216*****
					(2.479)			**(2.735)**
NonBig4$_{i,t-1}$		-1.633	10.694	12.707*	12.333*	13.032**	15.393**	14.557**
		(-1.562)	(1.622)	(1.822)	(1.829)	(2.075)	(2.359)	(2.259)
NonAud_Exp$_{i,t-1}$		-0.820*	-8.853	-8.245	-8.397	-9.802*	-10.084*	-9.850*
		(-1.880)	(-1.632)	(-1.502)	(-1.527)	(-1.692)	(-1.727)	(-1.692)
LnClient_Number$_{i,t-1}$		0.775***	6.626***	6.546***	6.534***	5.159***	4.958***	5.120***
		(5.158)	(4.711)	(4.786)	(4.689)	(3.873)	(3.719)	(3.839)
AudSan$_{i,t-1}$		0.197	-5.164**	-5.247**	-5.354**	-5.414**	-5.808**	-5.493**
		(0.659)	(-2.006)	(-2.029)	(-2.074)	(-2.033)	(-2.144)	(-2.091)
Mao_Ratio$_{i,t-1}$		6.373***	-10.654	-10.362	-10.284	-5.577	-7.021	-6.837
		(2.810)	(-0.736)	(-0.728)	(-0.709)	(-0.388)	(-0.496)	(-0.472)
Misstat_Ratio$_{i,t-1}$		-0.719	10.241	8.155	9.563	4.824	3.922	4.079
		(-0.466)	(0.988)	(0.808)	(0.930)	(0.383)	(0.315)	(0.321)
Small_ROA$_{i,t-1}$		-1.535	7.896	7.588	7.097	8.206	8.311	7.944
		(-1.467)	(1.197)	(1.148)	(1.103)	(1.224)	(1.247)	(1.189)
LnTenure$_{i,t-1}$		-0.545**	-2.458	-2.542	-2.309	-2.909	-3.239	-2.948
		(-1.964)	(-0.620)	(-0.623)	(-0.569)	(-1.211)	(-1.336)	(-1.207)
Client_SIZE$_{I,Ti,t-1}$		0.031	0.979	0.897	0.851	1.671	1.526	1.438
		(0.070)	(0.358)	(0.319)	(0.311)	(0.752)	(0.676)	(0.639)
Client_MTB$_{i,t-1}$		1.989**	-0.564	0.210	0.226	-0.050	-0.052	0.219
		(2.453)	(-0.108)	(0.039)	(0.043)	(-0.012)	(-0.011)	(0.050)
Constant		Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year FE		Yes	Yes	Yes	Yes	Yes	Yes	Yes
N		464	207	207	207	180	180	180
Pseudo R^2/Adj. R^2		0.272	0.344	0.323	0.335	0.203	0.171	0.185

The table presents results after conducing PSM matching. Column 1 presents the first stage PSM determinant model (equation 7) and columns 2-7 present the regression results for equation (1) using the PSM sample. The dependent variable in columns 2-7, $\triangle Client\ Number_{i,t}$, is the change in clients audited. The three variables of interest are: (1) $AUD\_CSR_{i,t-1}$ equals one if the audit firm engaged in CSR in year t-1; (2) $LnCSR_{i,t-1}$ is the natural log of the number of CSR activities engaged by an audit firm in year t-1; and (3) $CSR\_Type_{i,t-1}$ is the number of CSR categories engaged by an audit firm in year t-1. See Appendix 1 for other variable definitions. Robust t statistics in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. Two-tailed p-value is reported for signed expectations.

Table 9 Change analyses

	Exp. Sign	$\triangle Client\ Number_{i,t+1}$
$\boldsymbol{\Delta AUD\_CSR_{i,t}}$	+	**4.361****
		(2.462)
$\Delta NonAud\_Exp_{i,t}$		-6.946*
		(-1.704)
$\Delta LnClient\_Number_{i,t}$		7.378**
		(2.475)
$\Delta AudSan_{i,t}$		2.296
		(1.094)
$\Delta Mao\_Ratio_{i,t}$		-7.250
		(-0.681)
$\Delta Misstat\_Ratio_{i,t}$		-0.945
		(-0.196)
$\Delta Small\_ROA_{i,t}$		-1.326
		(-0.398)
$\Delta LnTenure_{i,t}$		-2.109
		(-0.631)
$\Delta Client\_SIZE_{i,t}$		2.022
		(0.772)
$\Delta Client\_MTB_{i,t}$		0.955
		(0.360)
$\Delta Constant$		Yes
Year FE		Yes
N		408
Adj. R^2		0.081

This table presents the regression results of a change analysis. The dependent variable $\triangle Client\ Number_{i,t+1}$, is the change in clients audited. The variable of interest, $\triangle AUD\_CSR_{i,t}$, equals one if the audit firm engages in CSR in year *t* but not in year t-1; equals negative one if the audit firm does not engage in CSR in year *t* and engages in CSR in year *t*-1; and equals to zero if there are no changes in auditors' CSR engagement from year *t*-1 to year *t*. All other control variables are in their change form from year *t*-1 to year *t*. Robust t-statistics are in parentheses. * p < 0.1, ** p < 0.05, *** p < 0.01. Two-tailed p-value is reported for signed expectations.

Appendix 1: Variables Definitions

Variable Name	Definition
Audit Firm Level Variables	
$AUD\_CSR_{i,t-1}$	An indicator variable equal to one if an audit firm engaged in any CSR activity in year t-1, and zero otherwise.
$LnCSR_{i,t-1}$	Log value of one plus the number of unique CSR activities engaged by an audit firm in year t-1.
$CSR\_Type_{i,t-1}$	The number of total different categories of CSR activities in which an audit firm has participated.
$LnDonation\_Money_{i.t-1}$	The log of the donation amount in RMB
$Donation_{i,t}$	An indicator variable equal to one if an audit firm engaged in donation in year t, and zero otherwise
$Environment\ Protection_{i,t}$	An indicator variable equal to one if an audit firm engaged in environment protection in year t, and zero otherwise.
$Employee\ Welfare_{i,t}$	An indicator variable equal to one if an audit firm engaged in employee welfare in year t, and zero otherwise.
$Community\ Activities_{i,t}$	An indicator variable equal to one if an audit firm engaged in community activities in year t, and zero otherwise.
$Client\_Number_{i,t-1}$	the number of clients of the audit firm in year t-1
$LnClient\_Number_{i,t-1}$	Log value of the total number of clients of an audit firm in year t-1
$\triangle Client\ Number_{i,t}$	Change in the number of clients audited from year t-1 to year t, 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.
$\triangle Audit\_Fee_{i,t}$	Percentage change in clientele audit fees from year t-1 to year t, calculated as (sum of audit fees in year t minus sum of audit fees in year t-1) divided by sum of audit fees in year t-1.
$\triangle Audit\_Asset_{i,t}$	Percentage change in clientele total assets from year t-1 to year t, calculated as (client total assets in year t minus client total assets in year t-1) divided by client total assets in year t-1.
$\triangle AUD\_CSR_{i,t}$	A variable equal to one if an audit firm engages in CSR in year t but not in year t-1; equal to negative one if the audit firm does no tengage in CSR in year t and engages in CSR in year t-1; equals to zero if there are no changes in auditors' CSR engagement from year t-1 to year t.
$\triangle Found\_Number\_Ratio_{i,t-1}$	The number of newly created foundations within the province the audit firm is located at in a given year scaled by the total number of foundations in the province in the year（Database source: Chinese Research Data Services Platform）.
$NonBig4_{i,t-1}$	An indicator variable equal to one if an audit firm is not one of the Big 4 firms, and zero otherwise.
$NonAud\_Exp_{i,t-1}$	An indicator variable equal to one 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% in year t-1.
$AudSan_{i,t-1}$	An indicator variable equal to one if an audit firm has been sanctioned in year t-1 by the China Securities Regulatory Commission (CSRC), and zero otherwise.
$Mao\_Ratio_{i,t-1}$	The total number of audit clients receiving modified audit opinions divided by the total number of audit clients in year t-1.

$Misstat\_Ratio_{i,t-1}$	The total number of audit clients with misstatements (which were subsequently restated) divided by the total number of audit clients in year t-1.
$Small\_ROA_{i,t-1}$	The number of audit clients with ROA between 0% to 3%, divided by the number of total audit clients in a given year.
$LnTenure_{i,t-1}$	Log value of the median tenure of all audit clients in a given year plus 1
$Client\_SIZE_{i,t-1}$	The median value of natural log of total assets across all clients audited by the audit firm in year t-1.
$Client\_MTB_{i,t-1}$	The median value of market to book ratio across all clients audited by the audit firm in year t-1.
Audit Client Level Variables	
$Client\_CSR\_High_{i,t}$	An indicator variable that equals to one if the client company's CSR score is higher than or equal to the median value of industry average CSR scores, and zero otherwise.
$Institut\_High_{i,t}$	An indicator variable that equals to one if the proportion of shareholding by institutional investors of audit client is higher than the median value of all proportion of shareholding by institutional investors of audit clients within the same province that the client is located at and zero otherwise
$SOE_{i,t}$	An indicator variable equal to one if the company is a State-Owned-Enterprise, and zero otherwise
$SIZE_{i,t}$	Log value of total assets in year t
$ROA_{i,t}$	Return on assets in year t
$LOSS_{i,t}$	An indicator variable equal to one if the company has incurred a negative net income, and zero otherwise.
$LEV_{i,t}$	Total liabilities/total assets in year t
$DA_{i,t}$	Debt/total assets in year t
$LIQ_{i,t}$	Current assets/current liabilities in year t
$CFO_{i,t}$	Cash from operations/total assets in year t
$INV_{i,t}$	Inventory/total assets in year t
$REC_{i,t}$	Total receivables/total assets in year t
$GROWTH_{i,t}$	Changes in sales
$MTB_{i,t}$	Book-to-market ratio in year t
$TURNOVER_{i,t}$	Sales divided by total assets in year t
$INSTSHS_{i,t}$	Percentages of shares held by institutional shareholders in year t
$BOARD_{i,t}$	The number of directors on the board in year t
$IND_{i,t}$	The number of independent directors serving on the board divided by the size of board in year t
$Mismatch_{i,t}$:	1 if the company is mismatched with the incumbent auditor, following the methodology in Shu (2000), and 0 otherwise.
$NonAud\_Exp_{i,t}$	An indicator variable equal to one if an audit firm is not an industry expert, and zero otherwise.
$NonBIG4_{i,t}$	An indicator variable equal to one if an audit firm is not a Big4 firm, and zero otherwise.

Appendix 2: Examples of CSR Activities

This appendix provides additional details about auditor CSR disclosures. For each of the four categories of CSR activity, we provide several examples of the text of the disclosures, translated into English from the original Chinese.

Category 1: Donations
Includes monetary donations, donation of goods, and donations made through foundations

> *After a magnitude 8.0 earthquake occurred in Wenchuan, Sichuan Province on May 12, 2008. the employees of Zhongxingcai Guanghua CPA Firm are concerned with the safety of the people in the disaster-stricken area and are eager to share the love with those affected. In addition to employees' donations of 15,571 RMB, Zhongxincai also donated 38,000 RMB in the name of the accounting firm.*
>
> *As of May 23, 2008, Peking CPA Firm has donated a total of 729,786 RMB to Red Cross Society of China to help relief efforts for the Sichuan Earthquake.*
>
> *After the earthquake occurred in Yushu Qinghai in 2010, PricewaterhouseCoopers promptly initiated internal fundraising activities. The company and staff raised a total of 1 million RMB to express our deep condolences to the victims.*
>
> *On August 27, 2012, Zhongrui CPA Firm donated computers, air conditions and other charitable materials to orphans and disabled children.*
>
> *On October 31, 2016, Zhonghui CPA Firm, together with the Red Cross Society of China, established "ZHonghui-Hunan Boai" Foundation in Jingping Village, Hunan Province. 40 students from impoverished families received a total of 205,000 RMB in donations. This donation was dedicated to the development of local rural education and equal education rights.*

Category 2: Environmental Protection
Includes activities related to afforestation, environmental campaigns, or education about reducing carbon.

> *On March 1, 2009, more than 100 staff from KMPG participated in tree planting in Shunyi Beijing. A total of 80 trees were planted.*
>
> *On June 16, 2012, 58 volunteers and 16 family members from PricewaterhouseCoopers participated in beach cleaning activities.*
>
> *On September 1, 2016, in order to promote the concept of carbon reduction and environmental protection, Deloitte and Shanghai Simai Charity Foundation have organized a charity run to advocate carbon reduction and an eco-friendly lifestyle.*

Category 3: Employee Welfare

Includes investments in occupational health, employee recreation, amusement and sport, and family planning services or maternity assistance.

On December 17, 2008, a staff member of PricewaterhouseCoopers China died in an airplane crash. The company established a foundation to raise funds for the family.

On December 20, 2013, Zhonghui CPA Firm provided 70,000 RMB to a colleague who was seriously ill to help defray medical expenses.

On January 15, 2016, ShineWing CPA Firm established a poverty-alleviation foundation, which provides monetary support to staff in financial difficulty.

Category 4: Community Activities

Includes activities related to blood donation, disabled care, or other community volunteer work.

In 2008, KPMG organized more than 100 staff as volunteers for the Poverty Alleviation and China Charity Federation for two weeks of voluntary work.

On December 5, 2009, 50 volunteers from Deloitte, together with the Shenzhen Children Hospital, organized an event for 20 children with cerebral palsy to visit Shenzhen Wildlife Park. The purpose of this activity is to help these children deepen their knowledge and understanding of the animal world and facilitate their recovery.

On March 10, 2014, ShineWing CPA Firm organized a blood donation in Chengdu.