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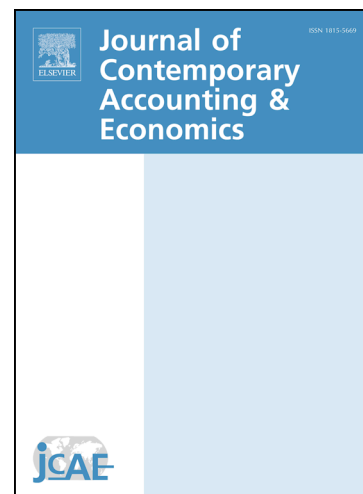
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# Voluntary Corporate Social Responsibility Reporting and Financial Statement Auditing in China

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# Voluntary Corporate Social Responsibility Reporting and Financial Statement Auditing in China

## Abstract

This study finds a positive association between voluntary corporate social responsibility (CSR) reporting and audit fees in China. In contrast to prior research from the US, CSR reporting in China is associated with greater earnings management. Results suggest that Chinese firms use CSR reporting as a strategic device for window dressing, and that auditors charge higher fees in response to heightened audit risk and greater audit effort. Further, the positive effects of CSR reporting on audit fees and earnings management are more significant for non-state-owned enterprises (non-SOEs) than for state-owned enterprises, which suggests that non-SOEs have not fully embraced the principles of CSR and essentially use CSR reporting to create the appearance of legitimacy. In additional tests, we find that non-SOEs with more highly rated CSR performance or longer CSR reports are associated with lower audit fees and less earnings management.

### *Key words:*

Corporate social responsibility, audit fees, earnings quality, CSR disclosure, audit risk, window dressing.

### *JEL Classification:*

D21, D8, M42, O1

## 1. Introduction

The institutional environment for corporate social responsibility (CSR) disclosure worldwide is still predominantly voluntary and unaudited, with few studies exploring the validity of information disclosed in CSR reports (Ingram and Frazier, 1980; Holder-Webb *et al.*, 2008; Chen *et al.*, 2016). Researchers frequently argue that CSR disclosure enhances legitimacy by reflecting a genuine commitment to social responsibility (see, for example, Ullmann, 1985).

CSR reporting might, however, be motivated by managerial self-interest (Kim *et al.*, 2012) and the need to window dress or to greenwash, which can involve the use of false or misleading information to present an environmentally responsible image (Griffin and Weber, 2006). In such cases, voluntary CSR disclosure would tend to be biased towards the strengths of a firm's CSR performance, while information of potential concern to the public might be withheld (Chen *et al.*, 2012).

Concern over the credibility of voluntary CSR disclosure has attracted researchers' attention since the early 1980s. A number of studies find that firms' voluntary CSR disclosures do not always correlate with actual CSR performance (Pattern, 2002). In a multi-country study investigating voluntary assurance of CSR reports, Simnett *et al.* (2009) demonstrate a strong link between companies with a higher need to enhance credibility and those having their CSR reports assured. They also find that companies operating in stakeholder-oriented countries are more likely to choose the auditing profession as an assurer.

In the most recent study examining the credibility of voluntary CSR disclosure, Chen *et al.* (2016) used the US data to investigate whether firms' commitments to independent financial statement verification (auditing) increase the credibility of their voluntary CSR disclosures. In other words, Chen *et al.* (2016) use firms' investment in the assurance of their financial information quality, proxied by higher audit fees, to signal a higher level of credibility of voluntary CSR disclosure. The proposition of Chen *et al.* (2016) is based on the idea that firms adopting voluntary CSR reporting will also demand a higher level of audit assurance for their financial statements.

Empirical support for the positive association between firms' CSR orientation and financial reporting quality is presented by Chih *et al.* (2008), Kim *et al.* (2012), Dhaliwal *et al.* (2012) and Kim *et al.* (2014). The theoretical intuition is that firms genuinely embracing CSR are stakeholder-oriented. These firms not only provide more transparent and reliable financial information to shareholders, but also expand their effort and resources in implementing CSR practices to meet the ethical expectations of stakeholders.

Chen *et al.* (2016) adopt this argument and similarly propose that firms voluntarily embracing CSR reporting will likewise make a greater investment in auditing their financial statements. The authors therefore predict a positive relationship between voluntary CSR disclosure and

audit fees. We characterise this argument from a demand perspective, where CSR reporting and financial statement auditing are complementary.

The aim of our study is to extend Chen *et al.* (2016)'s theoretical framework to an emerging economy – China. China's institutional setting exhibits a number of distinct characteristics that differentiate it from the US setting. The CSR concept in the US is more mature, and the majority of firms, especially large firms, have for many decades been voluntarily engaged in CSR activities and provided voluntary CSR disclosure (Dhaliwal *et al.*, 2011). In China, by contrast, CSR disclosure is still in the early stages of development (Kuo *et al.*, 2012). It was not until 2001 that the Chinese government first introduced legislation designed to encourage firms to embrace the concept of CSR (Moon and Shen, 2010). A unique feature of the Chinese market is the government's heavy involvement in resource allocation. There is also a high degree of government ownership among listed firms, which means that business decisions can be significantly shaped by political considerations or interference (Fan *et al.*, 2007; Firth *et al.*, 2007; Piotroski and Wong, 2012). This gives rise to the possibility that the voluntary disclosure of CSR information by Chinese firms might simply be a response to government's call for firms to engage in CSR activities, rather than a genuine commitment to the implementation of CSR strategies in business operations. Indeed, researchers find some companies in China make philanthropic donations to cover up environmental pollution issues or to build up connections with politicians (Xue and Xiao, 2011; Zhang *et al.*, 2013; Dai *et al.*, 2014; Du, 2015). Unlike the US, where investor protection is strong and companies are penalized by regulators and investors for making false or misleading disclosures, China is characterized by weak investor protection. The unique institutional environment in China motivates us to examine whether voluntary CSR disclosure in China reflects a genuine commitment to corporate social responsibility, or if CSR disclosure is adopted mainly as a tool for window dressing.

To assess the above issue, this study first examines whether the positive association between voluntary CSR disclosure and audit fees that exists in the US can also be observed in China. Second, we explore whether the complementary argument that predicts higher audit fees for firms making voluntary CSR disclosure provides an appropriate theoretical explanation in China. In other words, should higher audit fees be regarded as a signal of more credible CSR disclosure in China, or is there a plausible alternative theoretical explanation for such an association?

Given the institutional setting in China, we contend that there are two competing arguments which could both potentially lead to the positive relationship between voluntary CSR disclosure and audit fees. The complementary argument previously discussed, and adopted by Chen *et al.* (2016), is based on the demand-side perspective of auditing, which holds that stakeholder-oriented firms demand quality auditors to provide a higher level of assurance on financial information. Auditees pay higher audit fees, and the higher fee is an indicator of more credible CSR reports. The alternative argument, the audit-risk argument, is based on what we characterize as the supply-side view of auditing. This argument proposes that poor CSR performing firms adopt voluntary CSR disclosure as a strategic device to cover up or divert public attention away from their misconduct. Du (2015) similarly finds corporate environmental misconduct in China is positively associated with corporate philanthropy. Poor CSR performing firms are more likely to be associated with increased regulatory, litigation and reputation risks. In responding to higher perceived audit risk, auditors will need to spend more efforts in evidence collection and substantive testing, which will be reflected in higher audit fees. The higher audit fees could also be the result of auditors seeking compensation for potential reputation loss when dealing with risky clients (Hribar *et al.*, 2014; Doogar *et al.*, 2015).

We perform our empirical investigation of audit fees, earnings quality and voluntary CSR reporting on 7341 firm-year observations for firms listed on the Chinese stock market between 2008 and 2013. Similar to Chen *et al.* (2016), we find a positive association between voluntary stand-alone CSR reports and higher audit fees. If the complementary view advocated by Chen *et al.* (2016) was valid in China, we would expect to see a positive relationship between firms' voluntary CSR disclosure and higher financial information quality, measured by less earnings management. In fact, we find this is not the case. Firms issuing stand-alone CSR reports in China instead are found to be associated with more earnings management. This result implies that in China, firms making voluntary CSR disclosure may not be also committed to higher financial information quality. Thus, the incurring of higher audit fees by firms making voluntary CSR disclosure in China does not serve as a signal for the credibility of their CSR disclosures. Our findings suggest that the driving factor for the positive association between voluntary CSR disclosure and higher audit fees in China is the audit-risk view, rather than the complementary view. Our results are

robust after controlling for endogeneity using both the Heckman selection approach and the Propensity Matching procedure.

To further investigate audit pricing in firms issuing CSR reports, we investigate the influence of ownership structures by splitting our sample into state-owned enterprises (SOEs) and non-SOE firms (non-SOEs). Prior research finds that non-SOEs in China use philanthropy to divert public attention from environmental misconduct (Du, 2015). This finding suggests non-SOEs issuing CSR reports may be associated with higher audit risk. Our empirical analysis confirms the positive association between stand-alone CSR reports and audit fees in non-SOEs, but not in SOEs. Similarly, we find a positive association between stand-alone CSR reports and earnings management in non-SOEs, but not in SOEs. Our results thus support our prediction that auditors charge higher fees for non-SOEs issuing CSR reports due to higher audit risk.

We corroborate the main results by identifying contexts in which the credibility of stand-alone CSR reports varies. First, more highly rated CSR reports (based on the RKS CSR performance index<sup>1</sup>) and more lengthy CSR reports are assumed to be more credible. If audit pricing, in response to CSR, is influenced primarily by the audit-risk perspective, we expect lower audit fees and higher earnings quality for firms issuing more credible stand-alone CSR reports. Consistent with this prediction, we find firms with more highly rated CSR reports and longer CSR reports are associated with lower audit fees and less earnings management, but these results apply only in non-SOEs. Second, politically connected firms have less incentive to use CSR reporting for window dressing because prior research finds they are less likely to be punished for social or environmental misconduct than non-politically connected firms (see, for example, Chaney *et al.*, 2009). Research finds that politically connected firms are less likely to use philanthropy to divert public attention from their environmental misconduct (Du, 2015). We therefore predict that politically connected firms are less likely than non-politically connected firms to window dress their CSR reports in the pursuit of legitimacy, and therefore present a lower audit risk. For a subsample of firms issuing CSR reports, we find higher audit fees and more earnings management for non-SOEs without

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<sup>1</sup> RKS is a third-party rating agency that evaluates CSR reporting quality in China, and which has published a CSR rating index since 2008. RKS evaluates CSR reports and compiles the CSR index from the following three dimensions: Content, Macrocosm and Technique. The scores are first developed for each dimension, and then the scores for each dimension are added up as the firm's CSR reporting quality index. A higher CSR index indicates better CSR performance.

political connections. These findings further support the audit-risk perspective in explaining the positive association between voluntary CSR disclosure and higher audit fees in China.

Our study contributes to the existing literature in several ways. First, to the best of our knowledge, to date there is no published research investigating the potential relationship between voluntary CSR disclosure and audit pricing in developing countries. Our study accordingly extends the CSR and audit pricing literature from the western context to an emerging economy. Second, we build on the Chen *et al.* (2016) US study by investigating CSR reporting in China, a jurisdiction with weaker investor protection than the US, which gives Chinese firms greater scope to produce less credible CSR reports. While the complementary relationship between CSR reporting and financial reporting quality presented in Chen *et al.* (2016) might apply in the US, we provide an alternative theoretical framework to explain the predicted positive relationship between voluntary CSR disclosure and higher audit fees in China. We also expand the extant CSR disclosure and audit pricing research by considering the impact of different ownership structures (SOE vs. non-SOE ownership) on the incentives to make voluntary CSR disclosures. Our findings provide regulators in China an insight into CSR disclosures and demonstrate that there is a need to further strengthen the monitoring over CSR disclosure, particularly those made by non-SOEs.

The remainder of this paper is organised as follows. The next section introduces CSR disclosures in China. Section three reviews prior studies and develops the hypotheses. This is followed by a description of our research method, sample and data. Results are then discussed, followed by additional tests. The last section summarizes and concludes.

## **2. CSR disclosure in China**

The economic reform launched by the Chinese government in the late 1970s facilitated China's rapid industrialization. However, economic prosperity came with significant social and environmental costs (Ip, 2009; Kolk *et al.*, 2010; Sarkis *et al.*, 2011). Toxic emissions in the countryside, overworked and underpaid employees and faulty consumer products are all problems that came to be associated with China's emerging economy. For example, by the early part of this century, 16 of the 20 most polluted cities in the world were in China, and most of the water in the seven main rivers in China was unsafe for human consumption (Ip,



2009). In 2006, more than 80% of worldwide deaths in the coal mining industry occurred in China (Homer, 2009).

After China was admitted into the World Trade Organisation (WTO) in 2001, the Chinese government sought to encourage businesses to embrace corporate social responsibility (Moon and Shen, 2010). The *Harmonious Society Policy* issued by the National People's Congress in 2005 and the amended *Company Law of the PRC* in 2006 explicitly require Chinese business enterprises to adopt ethical practices, to conduct their businesses with honesty and trustworthiness and to fulfil their social responsibilities. Article 5 of the Company Law states: "When undertaking business operations, a company shall comply with... social morality and business morality. It shall act in good faith... and bear social responsibilities". Similarly, the China Securities Regulatory Commission (CSRC) has sought to encourage listed firms to adopt best practice in CSR by highlighting environmental protection and social responsibility in the 2001 *Code of Corporate Governance for Chinese Listed Firms*. In 2006 and 2008, the Shenzhen and Shanghai stock exchanges jointly issued the *Social Responsibility Guidelines for Listed firms*, calling for firms to make CSR disclosures.

Despite regulatory guidance encouraging listed firms to embrace corporate social responsibility, the proportion of Chinese firms disclosing CSR information remains low. In 2007, just 28 of the largest 100 firms (both listed and non-listed) in China voluntarily made CSR disclosures through CSR reports, annual reports and company websites (Gao, 2009). The *Blue Book of Corporate Social Responsibility* published by the Chinese Academy of Social Sciences (hereafter referred to as the Blue Book) reveals that in 2013, the proportion of firms in China issuing CSR reports was just 26 per cent, and third party verification or audit of CSR reports was rare. Clearly, although the number of firms making voluntary CSR disclosures has gradually increased in recent years, CSR practices and reporting in China remain in the early stages of development.

### **3. Literature Review and Hypothesis Development**

Prior research suggests a strong association between the credibility of voluntary CSR disclosure and the underlying motives of firms in making such disclosures. For example, the publication of positive news in CSR reports by good CSR performers can be regarded as a process of disclosing legitimacy (Hughes *et al.*, 2001). By contrast, disclosure or actions that

aim to enhance the image of a poor CSR performer have been characterized in research as a process of ‘legitimization’ or window dressing (Gray *et al.*, 1995). Legitimization, in this context, is concerned with changing the perceptions of relevant stakeholders without making the effort to change actual behaviour, or manipulating perception by deflecting attention from problematic issues. A poor CSR performer, such as a heavy polluter, might choose to ignore the cause of its pollution and instead focus on being involved with environmental charities. This would be an example of legitimization (Lindblom, 1994, p.56). Voluntary CSR disclosure motivated by legitimization therefore lacks credibility because it doesn’t provide truly useful social information to investors (Gray *et al.*, 1995). The different motivations for voluntary CSR disclosure give rise to two competing arguments on the potential relationship between CSR disclosure and audit fees: the complementary viewpoint and the audit-risk viewpoint. Both arguments predict a positive relationship between voluntary CSR disclosure and audit fees.

#### Complementary viewpoint

Chen *et al.* (2016) argue their results suggest that committing more resources to higher quality audits adds to the credibility of voluntary CSR reports and renders those reports more informative to investors. They contend that greater expenditure on auditing complements CSR reporting. This argument is consistent with genuine CSR performers pursuing legitimacy for two reasons. First, managers pursue high quality auditing services to signal the truthfulness of their other voluntary disclosures to external users. High quality financial reporting enhances managers’ credibility and reputation, encouraging external users to infer that CSR disclosures are similarly credible. Second, the information system used to produce financial reports will be the same as the system used to produce other types of disclosure such as CSR reports. Demonstrating a commitment to transparency towards shareholders through a superior information system that produces financial reports will exert positive externality on the CSR report. Other prior research also provides strong evidence for a positive relationship between voluntary CSR disclosure and quality of financial information (Chih *et al.*, 2008; Hong and Andersen, 2011; Kim *et al.* 2012; Kim *et al.*, 2014).

#### Audit-risk viewpoint

One strand of research focusing on the credibility of CSR disclosures examines the association between firms’ CSR disclosures and actual CSR performance. Taking advantage of the discretionary information environment for CSR reporting, poorer CSR performers that

are subject to greater exposure to potential public and regulatory scrutiny disclose CSR information with selective bias in order to portray themselves as better CSR performers (Gray *et al.*, 1995). A self-laudatory tone in CSR disclosure can be utilized in an attempt to change perceptions or divert public attention from environmental issues, cover up corporate misconduct, window dress or obtain a form of reputation insurance (Hughes *et al.*, 2001; Hemingway and Maclagan, 2004; Holder-Webb *et al.*, 2008). Petrovits (2006) and Prior *et al.* (2008) also provide evidence showing opportunistic use of CSR disclosure by managers to advance their careers or to achieve other personal gains, rather than to advance the interest of stakeholders.

The audit-risk argument is built on the supply view of audit, and predicts a positive relationship between voluntary CSR disclosure and audit fees for two reasons. First, auditors need to collect all the relevant information needed to assess their clients' regulatory, litigation and reputation risks in order to determine the acceptable threshold of audit risk. The higher the risk, the lower the acceptable threshold, and the more efforts auditors are required to put into the auditing process (Chen *et al.*, 2012). Clients' CSR performance is one type of information auditors need to pay attention to. If clients' CSR performance is determined to be poor, it will necessarily increase clients' regulatory, litigation and reputation risks (Kim *et al.*, 2012; Kim *et al.*, 2014). Higher assessed risk will result in a higher audit fee. Second, clients' poor CSR performance could signal to auditors that there is a lack of management ethics and integrity. Given CSR disclosure and financial information is likely to be produced by the same information system (Chen *et al.*, 2016), poor CSR performance would bring into question the reliability of the internal control system (Raghynandan and Rama, 2006; Hoitash *et al.*, 2008; Hogan and Wilkins, 2008). This might cause an auditor to make an unfavourable assessment of a firm's ability to produce quality financial information, which would increase audit production costs (Doogar *et al.*, 2015).

It could be argued that if clients exploit CSR disclosure to legitimize their conduct, management integrity will be questioned, which will result in an increase in perceived audit risks. Auditors will accordingly charge higher audit fees in response to heightened audit risk and greater audit effort. Prior research supports the likelihood that if a firm's voluntary CSR disclosure is merely an act of legitimization, the firm is not expected to be a genuine CSR performer (Gray *et al.*, 1995). In such cases, higher audit fees are a response to higher audit risk, instead of being regarded as a signal of high quality financial information.

The preceding discussions on the complementary view and audit-risk view both predict a positive relationship between voluntary CSR disclosure and audit fees, depending on firms' motives for CSR disclosure. Our first hypothesis is therefore established as:

**H1:** Voluntary CSR disclosure is positively related to audit fees.

The complementary viewpoint on the positive relationship between voluntary CSR disclosure and audit fees implies that the association between voluntary CSR disclosure and the financial information quality for firms paying higher audit fees could also be positive. By contrast, the audit-risk viewpoint – which also predicts a positive relationship between CSR reporting and audit fees – could imply a negative association between CSR disclosure and quality of financial information. Prior studies suggest that higher audit fees (fee residuals) can result from greater audit effort necessitated by a known or perceived heightened risk of material miss-statement in financial reports (Doogar *et al.*, 2015; Hribar *et al.*, 2014). Indeed, as Hribar *et al.* (2014) find, higher audit fees do not necessarily lead to higher financial information quality. In other words, additional audit effort or audit procedures will not necessarily transform firms with low quality accounting information into firms with high quality accounting information; this reflects the inherent constraints in auditors' ability to remediate low quality accounting information. By extension, Hribar *et al.* (2014) find that there is a positive association between unexplained audit fees and low quality accounting information. Given the competing predictions, we set the second hypothesis as non-directional:

**H2:** There is no association between voluntary CSR disclosure and firms' financial information quality.

As previously stated, this paper tests the proposition that CSR disclosure by many Chinese firms, and in particular non-SOEs, could be strategic rather than stakeholder-oriented. Since mid-2000, the Chinese government has issued a series of guidelines to encourage CSR activities and CSR reporting (Marquis *et al.*, 2011). Marquis and Qian (2014) argue that these 'legitimacy guidelines' constitute institutional pressure for listed firms to step up their CSR commitment and disclosure.

Gao (2011), in an investigation of stand-alone CSR reports issued in China, finds that CSR reports published by SOEs cover a much broader range of social and environmental issues than those issued by non-SOEs. Zhang (2016) argues that compared to SOEs, non-SOEs in China are very much profit-focused, with less attention paid to the wellbeing of employees, the safety of consumers and environment protection. Other prior studies find that non-SOEs' enthusiasm for philanthropy is motivated by a need to develop political connections (Xue and Xiao 2011; Zhang *et al.*, 2013; Dai *et al.*, 2014; Li *et al.*, 2016). Du (2015) demonstrates how non-SOEs also use philanthropy as a strategic mechanism to divert public attention away from environmental misconduct.

Unlike non-SOEs, SOEs have less need to use CSR disclosure to window dress and to enhance political connections because, by definition, they already have close ties to the government and are more likely to conform to government CSR directives as a matter of course.

Taking into account both the complementary and audit-risk perspectives on CSR activities and reporting, and the contrasting motives of non-SOEs and SOEs in China, our third hypothesis is stated as:

**H3a:** The association between voluntary CSR disclosure and higher audit fees is more pronounced in non-SOEs than in SOE firms in China.

**H3b:** There is a negative association between voluntary CSR disclosure and financial information quality in non-SOEs in China.

## **4. Research design, sample and summary statistics**

### **4.1 Research models and variable definitions**

This study uses the voluntary issuance of a stand-alone CSR report to proxy for CSR disclosure (Dhaliwal *et al.*, 2012; Simnett *et al.*, 2009). We identify CSR reports issued by Chinese listed firms from the following sources: (i) The Shanghai Stock Exchange website, (ii) The Shenzhen Stock Exchange website, and (iii) company websites. We verify our list of

firms voluntarily issuing stand-alone CSR reports against the summary total of firms issuing CSR reports in the Blue Book.<sup>2</sup>

To test H1, we use the following regression specification to examine the relationship between voluntary CSR reporting and the audit fees<sup>3</sup>:

$$\log fee_t = \alpha + \beta_1 DCSR_{i,t} + \beta_2 EQ_{i,t} + \beta_3 size_{i,t} + \beta_4 lev_{i,t} + \beta_5 ROA_{i,t} + \beta_6 Lloss_{i,t} + \beta_7 SOE_{i,t} + \beta_8 opinion_{i,t} + \beta_9 Auditor_{i,t} + \beta_{10} rec_{i,t} + \beta_{11} inv_{i,t} + \gamma AndDum_{i,t} + \delta YearDum_{i,t} + \varepsilon_{i,t} \quad (1)$$

As discussed above, *DCSR* is a binary variable relating to firms' voluntary issuance of CSR reports. If CSR disclosure and higher levels of assurance of financial statements are complementary, we would observe firms issuing CSR reports demanding greater assurance. A positive coefficient  $\beta_1$  would reflect greater demand for auditing. Alternatively, a positive coefficient  $\beta_1$  is also consistent with a higher audit risk, indicating the use of CSR reporting in China as a tool for window dressing.

We include a number of firm characteristics as controls that prior studies find are correlated with audit fees (Simunic, 1980; Ferguson *et al.*, 2003; Basioudis and Francis, 2007). These are client size measured by log of total assets (*size*), audit complexity captured by receivable ratio (*rec*) and inventory ratio (*inv*),<sup>4</sup> auditor-client risk sharing proxied by leverage ratio (*lev*), ROA, incurrence of loss in the last year (*Lloss*) and auditor opinions (*opinion*). We also control for earnings quality (*EQ*) as Kim *et al.* (2012) find socially responsible firms in the US are associated with lower earnings management. Following the approach in Liu and Subramaniam (2013), we include a variable *SOE* capturing state-owned enterprises that pay lower audit fees. Following the approach adopted in Wang *et al.* (2008), this study defines

<sup>2</sup> The Blue Book provides summary statistics on the total number of listed firms disclosing CSR reports, but does not identify the names of firms issuing CSR reports.

<sup>3</sup> Prior research analysing audit fees regresses variables to control for cross-sectional differences in factors that affect fees such as client size, audit complexity, and auditor-client risk (Simunic, 1980). The adjusted R-squares from these models are generally high, which reduces the likelihood that the experimental variables proxy for correlated omitted variables. The model has been robust across different samples, time periods, countries and sensitivity analyses (Ferguson *et al.*, 2003; Basioudis and Francis, 2007).

<sup>4</sup> Prior audit fee research conducted in other countries includes the number of subsidiaries (or the number of business segments) as a proxy for audit complexity. However, this information is not readily available for Chinese listed firms.

large auditors (*Lauditor*) as Big-N plus top-6 national firms based on audit revenue.<sup>5</sup> Appendix A provides a detailed description of the variables.

To test H2, we use the following regression specification to examine the relationship between voluntary CSR reporting and earnings quality:

$$EQ_{i,t} = \alpha + \beta_1 DCSR_{i,t} + \beta_2 size_{i,t} + \beta_3 lev_{i,t} + \beta_4 ROA_{i,t} + \beta_5 SOE_{i,t} + \beta_6 Auditor_{i,t} + \beta_7 loss_{i,t} + \beta_8 growth_{i,t} + \beta_9 logage_{i,t} + \sum industry_i + \sum year_i + \varepsilon_{i,t} \quad (2)$$

As previously discussed, if CSR disclosure and assurance of financial statements are complementary, we would observe that firms issuing CSR reports are associated with higher earnings quality. A negative coefficient  $\beta_1$  would reflect higher earnings quality. On the other hand, a positive coefficient  $\beta_1$  suggests lower earnings quality and thus is consistent with the audit-risk perspective.

The dependent variable that measures earnings quality is calculated by following the performance matched discretionary accrual model in Kathari *et al.* (2005). Specifically, we use a cross-sectional version of the modified Jones model and include return on total assets in the prior year as a regressor in the estimation model to control for the effect of performance on measured discretionary accruals. We then take the absolute value of performance matched discretionary accrual as the dependent variable.

We include control variables expected to influence earnings quality identified in prior research (e.g. Roychowdhury, 2006). These variables are firm size measured by the log of total assets (*size*), financial performance (*ROA* and *loss*), sales growth (*growth*), ownership structure captured by the indicator variable indicating whether firms are state-owned enterprises (*SOE*), auditor quality proxied by top 10 auditors (*Lauditor*), financial leverage measured by leverage (*lev*), and different developmental stages of the business proxied by firm age (*logage*).

To examine hypothesis 3a and hypothesis 3b, we run equation (1) and (2) separately for SOE and non-SOE firms.

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<sup>5</sup> Audit revenue data was obtained from the Chinese Institute of Certified Public Accountants (CICPA) publicly available database.



Research undertaken in the US and Europe typically relies on CSR rating indexes compiled by KLD to measure a firm's CSR performance (e.g. Baron *et al.*, 2009; Kim *et al.*, 2012). In China, the RKS CSR performance index has been widely used by scholars and practitioners. The RKS CSR index assesses a firm's CSR performance based on its publicly disclosed stand-alone CSR report. This means the index is available only for the minority of Chinese firms that have issued stand-alone CSR reports. Therefore, unlike Chen *et al.* (2016), which controls for CSR performance in the investigation of stand-alone CSR reports, we do not control for CSR performance in the main analyses. Rather, we examine the impact of CSR performance in further analyses based on the subsample of firms that have issued stand-alone CSR reports.

Both regression (1) and regression (2) are estimated as industry and year fixed-effects models. For brevity, the results on industry and year indicators are not reported in the tables. Standard errors clustering at the firm level is used to mitigate concern about heteroscedasticity.<sup>6</sup> All continuous variables are winsorized at the top and bottom 1 percentile to remove the outlier influence.

#### 4.2 Sample selection

We start with all Chinese firms listed on the Shanghai and Shenzhen Stock exchanges from 2008 to 2013. From the initial sample of 12788 firm-year observations extracted from China Securities Market and Accounting Research Database (CSMAR), we excluded 270 financial institutions because modelling of their audit fees and earnings quality is different from other industry sectors. Firms required by authorities to disclose stand-alone CSR reports during the sample period were also excluded from the sample.<sup>7</sup> We further excluded 2554 observations that lacked the necessary data for hypothesis testing. The final sample consists of 7341 firm-year observations, including 909 firm-years of voluntarily issued stand-alone CSR reports.

Insert Table 1 here

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<sup>6</sup> In addition, following Petersen (2009), we draw inferences based on two-way clustered standard errors. Main results remain similar.

<sup>7</sup> The Shanghai and Shenzhen Stock Exchanges released Circular on List Firms' Preparation for 2008 Annual Financial Reports, requiring a subset of listed firms (i.e., Shanghai Stock Exchange corporate governance index firms, cross-listed firms and financial and insurance firms, Shenzhen composite index firms) to issue stand-alone CSR reports starting in December 2008.



### 4.3 Summary statistics and correlations

Table 2 presents the sample data on CSR reporting in China. Results suggest that CSR reporting has been increasing and CSR performance has been improved during the sample period. The number of firms voluntarily issuing CSR reports increased from 124 in 2008 to 215 in 2013. This trend is consistent with the description in the Blue Book in China, which reported a similar increase in the number of firms publishing CSR reports. The 909 firm-year observations of stand-alone CSR reports published during the sample period represents 12.38 per cent of the sample. The average length of CSR reports was 15.06 pages. The figure has increased over time, from 8.75 pages in 2008 to 19.42 pages in 2013. CSR performance ratings have steadily increased over the sample period from an average value of 27.11 in 2008 to 37.757 in 2013.

Insert Table 2 here

Table 3 provides descriptive statistics on firm characteristics. Column 1 provides statistics for the full sample, and Columns 2 and 3 compare firms voluntarily issuing CSR reports ( $DCSR=1$ ) with firms not issuing CSR reports ( $DCSR=0$ ). The audit fee ( $logfee$ ) is higher in firms issuing CSR reports compared with firms not issuing CSR reports. This result provides evidence consistent with the positive association between CSR disclosure and audit fees. Univariate tests suggest there is no difference in earnings quality ( $EQ$ ) between firms issuing CSR reports and firms not issuing CSR reports. We find that firms issuing CSR reports tend to be larger, older, exhibit higher returns on total assets, lower accounts receivables, hold more long-term liability, and are less likely to hire top-10 auditors.

Insert Table 3 here

Table 4 reports Pearson correlations. The correlation coefficients among most variables are relatively low, suggesting the collinearity problems are not a concern. Consistent with the above univariate tests, the variable  $DCSR$  is significantly positively correlated with the level of audit fees and not significantly associated with earnings quality ( $EQ$ ). In addition, consistent with extant research that lower earnings quality is associated with higher audit fees, we find that  $EQ$  is positively correlated with audit fees ( $logfee$ ). As found in prior research, there is a high correlation (0.6419) between audit fees ( $logfee$ ) and firm size ( $size$ ). In the further analysis section, we partition the sample on size and replicate our hypothesis testing to further control for the potential influence of firm size.

Insert Table 4 here

## 5. Empirical results

### 5.1 The relationship between voluntary stand-alone CSR reporting and audit fees

Table 5 Column 1 presents the regression results for the association between audit fees (*logfee*) and the issuance of CSR reports (*DCSR*). The coefficient of *DCSR* is positive and significant (0.054 with  $t=2.19$ ), indicating that firms issuing CSR reports pay higher audit fees. We estimate the audit fee is 5.54% higher for firms issuing CSR reports than for firms not issuing CSR reports.

The estimation results for control variables in regression (1) are generally consistent with those presented by prior studies. Larger firms pay higher audit fees and firms with higher leverage pay higher fees in response to audit risks. The coefficient for return on assets (*ROA*) is significantly negative and the indicator variable *Lloss* is positively related to audit fees, suggesting that better performing firms are assessed as lower risk, and hence are charged lower fees. Firms that receive a qualified audit opinion (*opinion*) pay higher audit fees. Large size auditors are associated with higher audit fees (*Lauditor*), implying quality differentiation in China. Lower financial reporting quality attracts higher audit pricing, and SOEs pay lower fees.

Overall, the positive relationship between stand-alone CSR reporting and audit fees is consistent with both the complementary argument and the audit-risk argument. The following analysis allows us to determine which of these explanations applies in China.

### 5.2 The relationship between voluntary stand-alone CSR reporting and earnings quality

Table 5 Column 2 presents the regression results for the association between the absolute value of discretionary accruals (*EQ*) and the issuance of CSR reports (*DCSR*). The coefficient on the variable of interest *DCSR* is positive and significant (0.011 with  $t=1.96$ ), indicating that firms issuing CSR reports are associated with lower financial reporting quality.

The estimation results for control variables in regression (2) are generally consistent with those presented by prior studies. Loss-making firms (*loss*) and growth firms (*growth*) engage in earnings management (Fang *et al.*, 2016). Consistent with the view that state-owned

enterprises (*SOE*) have less incentive to manage financial performance than non-SOEs (Chen *et al.*, 2011), we find SOEs (*SOE*) are associated with a lower level of earnings management. Older firms (*logage*) are associated with more earnings management.

In sum, the estimation results from equation (2) suggest that firms issuing stand-alone CSR reports engage in more earnings management. Results provide supporting evidence for the audit-risk perspective that voluntary CSR reporting in China is frequently associated with window dressing.<sup>8</sup>

Insert Table 5 here

### 5.3 Differential impacts of voluntary stand-alone CSR reporting on audit fees (earnings quality) in SOEs versus non-SOEs

To test H3a and H3b – that ownership structure affects the relationship between CSR reporting and audit fees and the relationship between the issuance of CSR reports and earnings management – we partition the total sample into SOEs and non-SOEs, and re-run regression (1) and (2). Table 6 Column 1 reports the results from estimation of the impact of voluntary CSR disclosure on audit fees for the SOE subsample, and Column 2 presents the results based on the non-SOE firm subsample. For the SOE subsample, the coefficient on *DCSR* is not significant. For the non-SOE firm subsample, the coefficient on *DCSR* is positive and significant (0.0823 with  $t=2.63$ ). The comparison of the two coefficients indicates the coefficient on *DCSR* is significantly different across the two subsamples ( $F$  value=6.19). These results suggest that the issuance of CSR reports is associated with higher audit fees for non-SOE firms, but not for SOEs. Columns 3 and 4 in Table 6 present the estimation results from the association between stand-alone CSR reporting and earnings quality for SOEs and non-SOEs respectively. The coefficient on *DCSR* is not significant for SOEs, but statistically significant and positive (0.0129 with  $t=1.68$ ) for non-SOEs. The  $F$  test indicates the coefficient on *DCSR* for non-SOEs is significantly higher than that for SOEs. The findings suggest that compared to SOEs issuing CSR reports, non-SOEs that voluntarily release stand-alone CSR reports are associated with more earnings management. Taken together, the results in Table 6 suggest that in China, non-SOEs have a strong tendency to use

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<sup>8</sup> We perform additional analyses of the change in audit fees (change in earnings quality) in the year following first-time CSR issuance on both the full sample and the subsamples of non-SOE and SOE firms. We use firms that have issued more than one CSR report as a control sample. We don't find any significant change in audit fee or change in earnings management subsequent to the issuing of first-time CSR reports.

CSR disclosure for window dressing purposes, and auditors charge non-SOEs higher fees in response to heightened audit risk and greater audit effort.

Insert Table 6 here

## 6. Additional tests

### 6.1 CSR performance ratings

More highly rated CSR performance is indicative of firms' integrity and commitment to social responsibility. Prior studies find that socially responsible firms constrain earnings management, maintain better reputations and are associated with lower information asymmetry (Kim *et al.*, 2012; Cui *et al.*, 2016; Lewis *et al.*, 2003). Therefore, when a firm's CSR performance is higher, CSR reporting serves as a genuine signal of more ethical and responsible management. On a reduced sample of 802 firms whose CSR performance is rated by RKS, we classify 401 CSR reports with performance ratings above the annual median value, and denote these firms by an indicator variable ( $hcsrindex=1$ ). In the subsample of firms rated by RKS, we replace  $DCSR$  with  $hcsrindex$  in both regressions (1) and (2). We re-run regressions (1) and (2) on the subsample and also separately on subsamples of SOEs and non-SOEs. Columns 1-3 in Table 7 present the estimation results from the audit fee regression. The estimated signs for  $hcsrindex$  are all negative but only significant for non-SOEs. Columns 4-6 in Table 7 report the results from the earnings management regression. The coefficient on  $hcsrindex$  is negative and significant only for non-SOEs. Coefficients on  $hcsrindex$  for non-SOEs are significantly different from those for SOEs in both the audit fee regression ( $F$  value=3) and the earnings management equation ( $F$  value=3.93). Taken together, the results from Table 7 suggest that firms with more highly rated CSR performance are associated with less earnings management, and pay lower audit fees.

Insert Table 7 here

### 6.2 Length of CSR reports

It is argued that more extensive CSR disclosure provides additional information to facilitate an assessment of a firm's corporate social responsibility, which mitigates information asymmetry relating to a firm's commitment to corporate social responsibility (Leuz and Schrand, 2009; Chen *et al.*, 2016).<sup>9</sup> A firm is deemed to have more extensive CSR disclosure if the number of pages in the CSR report in a particular year is greater than the median

<sup>9</sup>. It is possible, however, that firms use 'soft talk' in CSR reports and/or utilize more extensive CSR disclosure to cover up their opportunistic conduct (Hemingway and Maclagan, 2004).

number of pages (denoted  $Hpage$  taking value of 1). We replace  $DCSR$  with  $Hpage$  and re-run regressions (1) and (2). The analyses are undertaken on a subsample of 825 firms that had issued CSR reports during the sample period. The information on the number of pages in CSR reports is available from RKS. Table 8 reports that longer CSR reports are associated with lower audit fees (-0.0568 with  $t=2.01$ ), but this effect is observed only among non-SOEs (-0.104 with  $t=-2.93$ ), and not among SOEs (-0.0156 with  $t=-0.27$ ). The F test suggests that the coefficients on  $Hpage$  are significantly different across the two subsamples ( $F\ value=2.65$ ). From the estimation results of regression (2) reported in Columns 4-6, Table 8, we find that the signs for  $hpage$  are, as predicted, all negative, but results are not statistically significant.

Insert Table 8 here

### 6.3 Political connections in non-SOE firms

Political connections in China provide firms with a range of benefits, including preferential access to government support and bank financing (McGuinness *et al.*, 2017). Political connections can protect a firm from punishment and penalty for environmental and social misconduct (Chaney *et al.*, 2009). Thus, politically connected firms have less incentive to use CSR reporting for window dressing. Following Fan *et al.* (2007), a firm is defined as being politically connected (PC) if its chairman or CEO currently works for, or formerly served in, a local or central government, or as a deputy of the People's Congress or the People's Political Consultative Conference. We partition non-SOEs into politically connected (PCs) and non-politically connected (non-PCs), and run regressions (1) and (2) separately for PCs and non-PCs.<sup>10</sup> We expect that the positive relationship between CSR reporting and audit fees, and the positive relationship between CSR reporting and earnings management, will be more pronounced in firms that are not politically connected. Table 9 presents the results. The estimated results from the audit fee regression show that the coefficient on  $DCSR$  is significant and positive in non-PCs (0.170 with  $t=2.52$ ), but not in PCs. The statistics show that the coefficient on  $DCSR$  is significantly different across the two subsamples ( $F\ value=13.86$ ). The signs of the estimated coefficients on  $DCSR$  from the earnings quality regression are positive for both PCs and non-PCs, but lack statistical significance. The findings from Table 9 suggest that non-SOEs without political connections are subject to

<sup>10</sup> We exclude SOEs because they are majority owned and controlled by the government and are thus politically connected.

higher audit fees but, compared to politically connected firms, do not engage in greater levels of earnings management.

Insert Table 9 here

#### 6.4 Endogeneity issue

Because audit fees (earnings quality) and the issuance of CSR reports may be endogenously determined, we perform several tests to address the issue of potential endogeneity that could bias our results.

First, we perform a Heckman-two stage procedure that corrects for self-selection bias.<sup>11</sup> In the first stage of the Heckman procedure, we run a probit model examining incentives to issue a CSR report (*DCSR*). We include the following control variables that have been shown to be associated with the issuance of CSR reports (Dhaliwal *et al.*, 2011; Chen *et al.*, 2009; Simnett *et al.*, 2009; Baron *et al.*, 2009): leverage (*lev*), the plan for capital raising (*Issue*), firm performance measured by last year ROA (*LagROA*) and sales growth (*growth*), firm size (*size*), state-owned enterprises (*SOE*), managerial ownership (*Mghold*), institutional ownership (*Inshold*), CEO duality (*Dual*), ratio of independent directors to total number of board directors (*Indir*), size of board of directors (*logsizeboard*) and size of supervisory board (*logsuperboard*). From the first stage (results untabulated), we calculate inverse Mills ratio (*INV\_Mills*) and include it as an additional explanatory variable in the regression (1) for the audit fees and into the regression (2) for the earnings quality in the second stage. Due to the data requirement to run the first-stage Heckman test, the sample size is reduced. Table 10, Panel A, Columns 1-3 present the estimation results from the second stage audit fee regression on the full sample, the subsample of SOEs and the subsample of non-SOE firms. Columns 4-6 report the results from the second stage earnings quality regression on the full sample, the subsample of SOEs and the subsample of non-SOE firms. Results from the Heckman two-stage self-selection analyses continue to suggest that non-SOE firms issuing stand-alone CSR reports are associated with poor earnings quality and higher audit fees.

Second, we perform a propensity score matching procedure. In the first stage, we construct samples comprising firms voluntarily issuing CSR reports and firms not issuing CSR reports.

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<sup>11</sup> Results presented in Table 3 reveal that firms disclosing CSR reports are larger and carry higher levels of long-term liabilities. These characteristics are also found to be associated with higher audit fees. In addition, firms issuing CSR reports are older, and this feature is found to be associated with poor earnings quality.

To do so, we employ the same probit model used in the first stage of the Heckman procedure. We match, using the nearest neighbourhood technique without replacement, each CSR firm observation (treatment firm) with a non-CSR firm observation (control firm). To obtain closer matches, following the recommendations from prior studies, we set caliper as 0.25 standard deviations of propensity score (Ho *et al.*, 2007). Upon completing the matching, we conduct a balancing test to check the difference in the distribution of the control variables across the treatment and control firms in the matched sample. Untabulated results suggest a balance achieved between treatment and control firms on firm characteristics controlled in the probit regression. In the second stage, we re-estimate the baseline regressions (including regression 1 and 2) on the sample obtained from the first stage. The results from the second stage are reported in Table 10, Panel B. Columns 1-3 present the audit fee regression results on a full sample, the subsample of SOEs and the subsample of non-SOE firms. Columns 4-6 report the estimation results from the earnings quality regression on a full sample, the subsample of SOEs and the subsample of non-SOE firms. The propensity score matching procedure suggests that non-SOE firms issuing stand-alone CSR reports pay higher audit fees, and marginally supports the findings that these firms are associated with higher levels of earnings management.

Insert Table 10 here

### 6.5 The influence of firm size

Firms issuing CSR reports are larger (see Table 3), and large firms pay higher audit fees (Table 5). Therefore, it is possible that firm size – rather than CSR disclosure – explains the positive association between CSR disclosure and audit fees. To investigate this further, we partition the sample into small (size below the median) and large firms (size above the median). For both large and small firms, estimation results from equation (1) show the coefficient on *DCSR* is significantly positive only for small firms (0.08 with  $t=2.66$ ), not for large firms. We further partition the sample into SOEs and non-SOE firms, and re-run equation (1) on four subsamples, i.e. large SOEs, small SOEs, large non-SOE firms and small non-SOE firms. Untabulated results suggest that the coefficients on *DCSR* are significantly positive for both large (0.0750 with  $t=1.83$ ) and small non-SOE firms (0.0828 with  $t=2.13$ ), but there is no statistical significance for both large and small SOEs. These results are consistent with our main findings that non-SOE firms issuing stand-alone CSR reports pay higher audit fees.



## 7. Summary and conclusion

This study investigates the association between voluntary of CSR reporting and audit fees in China. Building on Chen *et al.* (2016), who find a positive association between CSR reporting and audit fees in the US, and on the unique institutional environment in China where CSR reporting is in the early stage of development, we propose two competing theories that both lead to a positive relationship between voluntary CSR disclosure and audit fees. The complementary argument, adopted by Chen *et al.* (2016), suggests that stakeholder-oriented firms which commit more resources to higher quality audits improve the credibility of voluntary CSR reports and render those reports more informative and reliable to investors. The audit-risk perspective contends that voluntary CSR disclosure is used by some firms as a strategic device for window dressing, and that these firms are therefore more likely to be associated with higher audit fees because of higher perceived audit risk.

Findings from this study supports the audit-risk perspective in explaining the positive association between voluntary CSR disclosure and higher audit fees in China. Chinese firms issuing stand-alone CSR reports are associated with more earnings management and are charged higher audit fees. Further, the positive associations between CSR reporting and audit fees and earnings management are more significant for non-SOEs, indicating that CSR reporting by such firms is used more as a device to create the appearance of integrity and legitimacy, rather than as a genuine expression of commitment to stakeholders.

Our study complements and extends Chen *et al.* (2016) by proposing and empirically testing an alternative theoretical explanation for the positive association between audit fees and stand-alone CSR reporting in China. Our findings are likely to apply in other developing countries where CSR reporting is at the emergent stage. The study highlights the importance and influence of institutional environment in firms' CSR strategies and reporting. Our findings contribute to the extant literature debating the motivations of firms undertaking CSR activities and reporting, and have broad implications for the management literature and CSR practices.

Our study is subject to several limitations. First, the study is conducted in China where CSR practices and reporting are in the early stages of development. While our results may be pertinent to other developing nations, they may not be applicable to jurisdictions such as the



UK and Europe where the CSR concept has a longer history. Second, the absence of a generally accepted CSR disclosure standard in China makes content analysis difficult. When CSR disclosure in China becomes more standardised, future research might further investigate the credibility of CSR reporting using content analysis.

**Table 1: Sample**

	Total Sample
Population of Chinese listed firms 2008-2013	12788
Less: financial institutions	(270)
Less: firms mandatorily issue stand-alone CSR reports	(2623)
Less: observations with missing value on financial information or other control variables to be adopted in the current research	(2554)
Number of observations in the final analysis	7341
Including: firms voluntarily releasing stand-alone CSR reports	909
firms NOT releasing stand-alone CSR reports	6432

**Table 2: Sample distribution and CSR reporting by year**

Year	Sample	No. of CSR reports (%)	Average (median) No. of pages per report	Average (median) CSR performance
2008	943	124 (13.14%)	8.74 (8)	27.111 (27.185)
2009	1021	113 (11.06%)	9.95 (8)	27.978 (25.825)
2010	1096	126 (11.49%)	11.23 (8)	29.592 (27.265)
2011	1262	147 (11.64%)	15.42 (10)	33.620 (32.030)
2012	1486	184 (12.38%)	18.79 (12.5)	36.447 (34.200)
2013	1533	215 (14.02%)	19.42 (12)	37.757 (36.200)
Total	7341	909 (12.38%)	15.06 (10)	33.557 (32.016)

**Table 3: Descriptive statistics**

Variables	Total sample Column 1					CSR disclosure Column 2				No-CSR disclosure Column 3				Mean diff. statistics
	Mean	Median	Min.	Max.	Std.	Mean	Median	Min.	Max.	Mean	Median	Min.	Max.	
Logfee	13.277	13.218	9.210	16.328	0.524	13.451	13.385	11.983	16.328	13.252	13.218	9.210	15.787	-0.199***
Auditfee (thousands)	698.82	500	10	61800	1391	829.94	650	160	12300	615.08	500	10	16000	-214.864***
EQ	0.149	0.089	0.0006	0.952	0.173	0.151	0.092	0.0006	0.952	0.149	0.088	0.0006	0.952	-0.002
Size	21.508	21.477	18.264	25.810	1.080	21.975	21.916	18.266	25.810	21.442	21.424	18.264	25.200	-0.533***
Total asset (millions)	3730	1890	85	162000	6620	6500	3250	85	162000	3120	1720	85	87900	197***
Lev	0.070	0.018	0	0.511	0.103	0.094	0.056	0	0.511	0.067	0.015	0	0.511	-0.027***
ROA	0.031	0.031	-0.510	0.332	0.071	0.048	0.042	-0.213	0.332	0.029	0.030	-0.510	0.332	-0.019***
Rec	0.096	0.068	0	0.455	0.094	0.083	0.060	0	0.455	0.097	0.070	0	0.455	0.013***
Inv	0.176	0.137	0	0.775	0.158	0.193	0.151	0	0.775	0.173	0.135	0	0.775	-0.019***
SOE	0.475	0	0	1	0.499	0.471	0	0	1	0.476	0	0	1	0.005
Lloss	0.114	0	0	1	0.317	0.045	0	0	1	0.123	0	0	1	0.078
Opinion	0.063	0	0	1	0.244	0.009	0	0	1	0.071	0	0	1	0.061
Lauditor	0.428	0	0	1	0.494	0.393	0	0	1	0.433	0	0	1	0.039**
growth	0.236	0.129	-0.868	8.094	0.716	0.238	0.134	-0.796	5.748	0.224	0.116	-0.868	8.094	-0.014
Age	8.65	9	1	23	4.84	9.192	10	1	21	8.84	9	1	23	-0.34**

<sup>1</sup> T-statistics for continuous variables and Z-statistics for dichotomous variable.

\*\*\*, \*\* and \* Indicate statistical significance at the 0.1, 0.05 and 0.01 levels, respectively, based on a two-tailed test.

**Table 4: Correlations**

Variables	Logfee	DCSR	EQ	size	Lev	ROA	rec	inv	SOEs	Lloss	opinion	Lauditor	growth	logage
Logfee	1													
DCSR	0.1251***	1												
EQ	0.0710***	0.0048	1											
size	0.6419***	0.1625***	-0.0769***	1										

lev	0.2023***	0.0882***	0.0707***	0.4109***	1									
ROA	0.0469***	0.0883***	0.0036	0.0888***	-0.1203***	1								
rec	-0.0196*	-0.0491***	-0.0138	-0.0966***	-0.2552***	0.0208*	1							
inv	0.0625***	0.0405***	0.0361***	0.1614***	0.0792***	-0.0298**	-0.0774***	1						
SOE	0.0803***	-0.0033	-0.0648***	0.2433***	0.1799***	-0.1006***	-0.1206***	-0.0461***	1					
Lloss	-0.0736***	-0.0812***	0.0179	-0.1618***	0.016	-0.2121***	-0.047***	-0.0464***	0.0349***	1				
opinion	-0.111***	-0.0830***	0.0694***	-0.2902***	-0.0516***	-0.2885***	-0.0689***	-0.0941***	-0.0244**	0.2786***	1			
Lauditor	0.1912***	-0.0264***	-0.0382***	0.1233***	0.0089	0.0516***	0.0676**	0.0098	-0.0249*	-0.0559***	-0.0497***	1		
growth	0.0187	0.0055	0.1084***	0.0697***	0.0553***	0.1692***	-0.0060	0.069***	-0.0234**	0.0702***	-0.0183	-0.0103	1	
logage	0.0904***	-0.0313***	-0.0004	0.1016***	0.2054***	-0.1511***	-0.2429***	0.1091***	0.3418***	0.1522***	0.1308***	-0.1035***	0.0435***	1

\*\*\*, \*\*, \* Indicate statistical significance at the 0.01, 0.05, 0.1 levels, respectively, based on a two-tailed test.

**Table 5: CSR reporting and its association with audit fees and earnings quality**

Variables	Dep=logfee Column 1	Dep=EQ Column 2
DCSR	0.0540** (2.19)	0.011** (1.96)
EQ	0.0291 (1.04)	
size	0.327*** (28.79)	-0.00242 (-1.06)
lev	0.277*** (3.09)	-0.0358 (-1.57)
ROA	-0.199** (-1.99)	0.0073 (0.14)
Lloss	0.0402** (2.38)	
SOE	-0.0524*** (-2.88)	-0.0196*** (-4.62)
opinion	0.155*** (4.94)	
Lauditor	0.0736*** (4.48)	-0.00286 (-0.73)
rec	0.121 (1.3)	
inv	-0.0965 (-1.58)	
loss		0.0272*** (3.5)
growth		0.0274*** (6.03)
logage		0.0104*** (4.14)
Constant	6.288*** (26.2)	0.197*** (4.07)
N	7341	7341
adj. R <sup>2</sup>	0.486	0.226

This table reports the estimation results for the association between voluntary stand-alone CSR reporting and the level of audit fees in Column ,1 and the association between CSR reporting and earnings quality in Column 2. Detailed definitions for all variables are reported in Appendix A. T-statistics are reported in brackets below the coefficients. Standard errors clustered by firm. \*, \*\* and \*\*\* represent significance at the 10%, 5% and 1% levels.

**Table 6: CSR reporting and its association with audit fees and earnings quality: SOEs versus non-SOEs**

Variables	Dep=Logfee SOEs Column 1	Dep=Logfee Non-SOEs Column 2	Dep=EQ SOEs Column 3	Dep=EQ Non-SOEs Column 4
DCSR	0.0168 (0.44)	0.0823*** (2.63)	0.0105 (1.28)	0.0129* (1.68)

EQ	0.0103 (0.25)	0.0113 (0.31)		
size	0.344*** (18.87)	0.306*** (23.4)	0.00272 (0.85)	-0.00711** (-2.16)
lev	0.442*** (3.68)	0.0203 (0.15)	-0.0779*** (-2.78)	0.0269 (0.7)
ROA	-0.386** (-2.50)	-0.098 (-0.78)	-0.0475 (-0.67)	0.0754 (0.99)
Lloss	0.0226 (0.87)	0.0503** (2.55)		
opinion	0.166*** (3.23)	0.148*** (4.12)		
Lauditor	0.0747*** (2.92)	0.0778*** (3.8)	-0.00556 (-1.04)	-0.00034 (-0.06)
rec	0.0741 (0.5)	0.133 (1.15)		
inv	-0.166 (-1.76)	-0.0493 (-0.64)		
loss			0.0131 (1.26)	0.0448*** (3.81)
growth			0.0312*** (4.56)	0.0248*** (4.06)
logage			0.0158*** (3.58)	0.00459 (1.49)
Constant	5.912*** (15.12)	6.655*** (24.03)	0.0515 (0.75)	0.25*** (3.59)
N	3489	3852	3489	3852
adj. R <sup>2</sup>	0.527	0.458	0.195	0.26

This table reports the effect of voluntary CSR disclosure after the total sample is partitioned into SOE and non-SOE subsamples. Columns 1 and 2 report the results when audit fees is the dependent variable. Column 3 and 4 report results when earnings quality is the dependent variable. Detailed definitions for all variables are reported in Appendix A. T-statistics are reported in brackets below the coefficients. Standard errors clustered by firm. \*, \*\* and \*\*\* represent significance at the 10%, 5% and 1% levels, respectively.

**Table 7: CSR reporting and its association with audit fees and earnings quality – CSR reports rating**

Variables	Dep= Logfee Total sample Column 1	Dep=Logfee SOEs Column 2	Dep=Logfee Non-SOEs Column 3	Dep=EQ Total sample Column 4	Dep=EQ SOEs Column 5	Dep=EQ Non-SOEs Column 6
hcsrindex	-0.0484 (-1.42)	-0.0427 (-0.99)	-0.0738** (-1.97)	-0.0172 (-1.46)	0.0124 (0.68)	-0.0374** (-2.42)
EQ	0.0998 (1.34)	0.186* (1.73)	-0.004 (-0.04)			
size	0.369*** (11.46)	0.388*** (12.32)	0.353*** (14.54)	0.00419 (0.65)	0.00257 (0.31)	0.00647 (0.62)
lev	-0.453** (-2.21)	-0.496** (-2.36)	-0.274 (-1.06)	0.0169 (0.26)	-0.134* (-1.66)	0.188 (1.50)
ROA	-0.103	-0.496	0.0737	0.308**	0.0296	0.574***

	(-0.26)	(-1.40)	(0.18)	(2.04)	(0.13)	(3.05)
Lloss	0.138**	0.13	0.182			
	(2.18)	(1.5)	(1.24)			
SOE	-0.119**			-0.0123		
	(-2.35)			(-0.95)		
opinion	0.408***	0.278	0.622***			
	(2.99)	(1.58)	(5.65)			
Lauditor	0.0348	-0.00597	0.0661*	-0.00194	-0.0249	0.0239
	(0.82)	(-0.12)	(1.83)	(-0.16)	(-1.43)	(1.47)
rec	-0.0768	-0.0315	-0.0435			
	(-0.29)	(-0.13)	(-0.17)			
inv	0.0736	-0.26	0.294			
	(0.36)	(-1.55)	(1.53)			
loss				0.0166	-0.0315	0.0996**
				(0.69)	(-1.02)	(2.27)
growth				0.0217*	0.00802	0.0253**
				(1.91)	(0.31)	(1.99)
logage				0.00595	0.0168	-0.00427
				(0.81)	(1.19)	(-0.48)
Constant	5.436***	5.016***	5.674***	-0.00271	0.099	0.0197
	(7.98)	(7.31)	(10.93)	(-0.02)	(0.53)	(0.09)
N	802	373	429	793	371	422
adj. R <sup>2</sup>	0.512	0.552	0.489	0.243	0.214	0.303

This table reports the effect of CSR performance rating on audit fees as well as the association between CSR performance ratings and earnings quality based on total sample, SOEs and non-SOEs, respectively. Columns 1-3 report the results when audit fees is the dependent variable. Columns 4-6 report results when earnings quality is the dependent variable. hcsrindex=1 if the CSR performance index is above the median value, and 0 otherwise. Detailed definitions for all variables are reported in Appendix A. T-statistics are reported in brackets below the coefficients. Standard errors clustered by firm. \*, \*\* and \*\*\* represent significance at the 10%, 5% and 1% levels, respectively.

**Table 8: CSR reporting and its association with audit fees and earnings quality – length of CSR reports**

Variables	Dep=Logfee Total sample Column 1	Dep=Logfee SOEs Column 2	Dep=Logfee Non-SOEs Column 3	Dep=EQ Total sample Column 4	Dep=EQ SOEs Column 5	Dep=EQ Non-SOEs Column 6
hpage	-0.0568**	-0.0156	-0.104***	-0.0144	-0.00247	-0.02
	(-2.01)	(-0.27)	(-2.93)	(-1.28)	(-0.15)	(-1.30)
EQ	0.11	0.161	0.0287			
	(1.48)	(1.58)	(0.28)			
size	0.366***	0.383***	0.353***	0.00348	0.0062	0.000994
	(17.7)	(7.69)	(14.9)	(0.57)	(0.83)	(0.1)
lev	-0.492***	-0.568*	-0.277	0.0179	-0.15*	0.191
	(-3.19)	(-1.77)	(-1.09)	(0.28)	(-1.92)	(1.55)
roa	-0.203	-0.724	0.0934	0.277*	0.0287	0.501***
	(-0.73)	(-1.60)	(0.23)	(1.93)	(0.13)	(2.69)
Lloss	0.159**	0.14*	0.219*			

	(2.42)	(1.84)	(1.71)			
SOE	-0.118*** (-4.00)			-0.0126 (-1.00)		
opinion	0.421*** (2.9)	0.265 (1.53)	0.646*** (5.48)			
Lauditor	0.0356 (1.24)	-0.0106 (-0.14)	0.0705** (2.03)	-0.0066 (-0.56)	-0.0329* (-1.91)	0.0202 (1.24)
rec	-0.0383 (-0.21)	0.0253 (0.07)	-0.0152 (-0.06)			
inv	0.101 (0.82)	-0.215 (-0.96)	0.3* (1.67)			
loss				0.00952 (0.4)	-0.0318 (-1.08)	0.0792* (1.85)
growth				0.0216** (2.06)	0.00666 (0.27)	0.0269** (2.25)
logage				0.00719 (1.04)	0.0174 (1.38)	-0.00346 (-0.40)
Constant	5.412*** (12.46)	5.104*** (4.75)	5.641*** (11.28)	0.0807 (0.62)	-0.112 (-0.64)	0.107 (0.51)
N	835	386	449	825	383	442
adj. R <sup>2</sup>	0.52	0.545	0.516	0.241	0.227	0.288

This table reports the effect of the length of CSR reports on audit fees as well as the association between the length of CSR reports and earnings quality based on total sample, SOEs and non-SOEs, respectively. Columns 1-3 report the results when audit fees is the dependent variable. Columns 4-6 report results when earnings quality is the dependent variable.  $hpage=1$  if the number of pages in a CSR report is above the median value, and 0 otherwise. Detailed definitions for all variables are reported in Appendix A. T-statistics are reported in brackets below the coefficients. Standard errors clustered by firm. \*, \*\* and \*\*\* represent significance at the 10%, 5% and 1% levels, respectively.



**Table 9 CSR reporting and its association with audit fees and earnings quality: political connection in non-SOE firms**

Variables	Dep=logfee	Dep=logfee	Dep=EQ	Dep=EQ
	Political connection=1	Political connection=0	Political connection=1	Political connection=0
DCSR	-0.136 (-1.30)	0.170** (2.52)	0.0178 (0.47)	0.0203 (1.24)
size	0.277*** (9.54)	0.284*** (15.93)	0.00145 (0.14)	-0.0156** (-2.55)
lev	0.227 (0.82)	-0.0538 (-0.32)	-0.181** (-1.98)	0.0878 (1.3)
ROA	0.593* (1.76)	0.0144 (0.12)	0.0746 (0.26)	0.107 (0.88)
Lloss	-0.0382 (-0.66)	0.0405* (1.71)		
opinion	0.0413 (0.73)	0.0609** (2.07)		
Lauditor	0.0463 (0.8)	0.105** (2.51)	0.00707 (0.36)	0.00516 (0.43)
rec	0.529* (1.76)	0.327 (1.45)		
inv	-0.413** (-2.55)	-0.135 (-1.34)		
loss			0.0146 (0.38)	0.0607*** (2.96)
growth			0.00838 (0.84)	0.0208** (2.5)
logage			0.0243* (1.67)	0.00792 (0.86)
Constant	7.422*** (12.47)	7.105*** (18.42)	0.213 (0.9)	0.632*** (4.59)
N	333	1342	303	1222
adj. R <sup>2</sup>	0.535	0.479	0.122	0.174

This table reports the effect of voluntary CSR disclosure after non-SOE firms are partitioned into politically-connected and non-politically-connected firms. Columns 1 and 2 report the results when audit fees is the dependent variable. Columns 3 and 4 report results when earnings quality is the dependent variable. Detailed definitions for all variables are reported in Appendix A. T-statistics are reported in brackets below the coefficients. Standard errors clustered by firm. \*, \*\* and \*\*\* represent significance at the 10%, 5% and 1% levels, respectively.

**Table 10 CSR reporting and its association with audit fees and earnings quality: Addressing endogeneity****Panel A: Heckman selection approach: Second stage**

variables	Dep= Logfee Total sample Column 1	Dep=Logfee SOEs Column 2	Dep=Logfee Non-SOEs Column 3	Dep=EQ Total sample Column 4	Dep=EQ SOEs Column 5	Dep=EQ Non-SOEs Column 6
DCSR	0.456*** (3.53)	0.25 (1.64)	0.405*** (3.14)	0.1815*** (3.43)	0.02498 (0.45)	0.1669*** (2.73)
EQ	0.0187 (0.63)	0.0131 (0.28)	-0.0108 (-0.29)			
size	0.305*** (33.87)	0.331*** (30.15)	0.287*** (27.01)	-0.0111*** (-3.09)	0.0023 (0.58)	-0.0152*** (-3.17)
lev	-0.341*** (-5.62)	-0.497*** (-6.21)	-0.0549 (-0.64)	-0.0611** (-2.52)	-0.0757** (-2.66)	-0.0017 (-0.04)
ROA	-0.169** (-2.17)	-0.374*** (-3.17)	-0.0643 (-0.64)	0.0116 (0.31)	-0.0402 (-0.77)	0.0789 (1.51)
Lloss	0.0449*** (2.76)	0.0294 (1.26)	0.0519** (2.35)			
SOE	-0.0354*** (-3.10)			-0.0149*** (-3.11)		
opinion	0.150*** (6.54)	0.167*** (4.61)	0.144*** (5.09)			
Lauditor	0.0740*** (7.7)	0.0732*** (5.04)	0.0810*** (6.47)	-0.00311 (-0.80)	-0.00524 (-0.98)	-0.00006 (-0.01)
rec	0.124** (2.28)	0.069 (0.81)	0.132 (1.95)			
inv	-0.0767** (-2.18)	-0.151*** (-2.73)	-0.0239 (-0.53)			
loss				0.0288*** (3.85)	0.0138 (1.41)	0.0485*** (4.26)
growth				0.0267*** (8.13)	0.0285*** (6.19)	0.0245*** (5.31)
logage				0.00908*** (3.82)	0.0157*** (3.76)	0.00412 (1.37)
Constant	6.940*** (38.81)	6.487*** (28.92)	7.175*** (32.92)	0.297*** (4.16)	-0.00094 (-0.01)	0.394*** (4.03)
INV_Mills	-0.220*** (-3.18)	-0.132 (-1.61)	-0.178** (-2.55)	-0.0921*** (-3.25)	-0.00851 (-0.28)	-0.0836** (-2.54)
N	6779	3193	3586	6779	3193	3586

This Table reports results from the second stage of Heckman selection approach. Columns 1-3 report the results when audit fees is the dependent variable based on total sample, SOEs and non-SOEs, respectively. Columns 4-6 report results when earnings quality is the dependent variable based on total sample, SOEs and non-SOEs, respectively. Detailed definitions for all variables are reported in Appendix A. T-statistics are reported in brackets below the coefficients. Standard errors clustered by firm. \*, \*\* and \*\*\* represent significance at the 10%, 5% and 1% levels, respectively.

### Panel B: Propensity score matching approach

Variables	Dep= Logfee Total sample Column 1	Dep=Logfee SOEs Column 2	Dep=Logfee Non-SOEs Column 3	Dep=EQ Total sample Column 4	Dep=EQ SOEs Column 5	Dep=EQ Non-SOEs Column 6
DCSR	0.0479**	0.004	0.0837***	0.00887	0.00853	0.0127

	(2.31)	(0.13)	(3.07)	(1.19)	(0.85)	(1.19)
EQ	0.0884	0.0284	0.0631			
	(1.45)	(0.3)	(0.79)			
size	0.347 <sup>***</sup>	0.365 <sup>***</sup>	0.335 <sup>***</sup>	0.00299	0.00645	0.00135
	(24.51)	(17.43)	(17.72)	(0.67)	(1.1)	(0.19)
lev	0.304 <sup>**</sup>	0.523 <sup>***</sup>	0.045	-0.0198	-0.0811 <sup>*</sup>	0.0486
	(2.59)	(3.45)	(0.25)	(-0.49)	(-1.83)	(0.63)
ROA	-0.27	-0.643 <sup>**</sup>	-0.05	0.226 <sup>**</sup>	0.083	0.389 <sup>***</sup>
	(-1.22)	(-2.22)	(-0.16)	(2.38)	(0.66)	(2.88)
Lloss	0.0502	0.0605	0.0495			
	(1.21)	(1)	(0.870)			
SOE	-0.0764 <sup>***</sup>			-0.014		
	(-3.36)			(-1.56)		
opinion	0.108 <sup>***</sup>	0.0579	0.133 <sup>***</sup>			
	(2.81)	(1.18)	(2.65)			
Lauditor	0.0440 <sup>**</sup>	-0.0101	0.103 <sup>***</sup>	0.0028	-0.0262 <sup>**</sup>	0.0346 <sup>***</sup>
	(2.02)	(-0.30)	(3.6)	(0.35)	(-2.50)	(3.01)
rec	0.274 <sup>**</sup>	0.327 <sup>*</sup>	0.148			
	(2.12)	(1.68)	(0.88)			
inv	-0.0451	-0.186	-0.0538			
	(-0.55)	(-1.49)	(-0.47)			
loss				0.0266	0.00621	0.0563 <sup>**</sup>
				(1.66)	(0.32)	(2.08)
growth				0.0367 <sup>***</sup>	0.0266 <sup>*</sup>	0.0444 <sup>***</sup>
				(4.15)	(1.9)	(3.99)
logage				0.0109 <sup>*</sup>	0.0179 <sup>*</sup>	0.00194
				(1.86)	(1.69)	(0.27)
Constant	5.822 <sup>***</sup>	5.382 <sup>***</sup>	5.962 <sup>***</sup>	0.237 <sup>**</sup>	-0.0492	0.101
	(18.89)	(11.68)	(14.9)	(2.48)	(-0.39)	(0.68)
N	1490	718	772	1490	718	772
adj. R <sup>2</sup>	0.499	0.534	0.484	0.258	0.246	0.295

This table reports the effect of voluntary CSR reports on audit fees as well as the association between CSR reports and earnings quality based on total sample, SOEs and non-SOEs, respectively. Columns 1-3 report the results when audit fees is the dependent variable. Columns 4-6 report results when earnings quality is the dependent variable. The sample is constructed by following propensity score matching procedure. Detailed definitions for all variables are reported in Appendix A. T-statistics are reported in brackets below the coefficients. Standard errors clustered by firm. \*, \*\* and \*\*\* represent significance at the 10%, 5% and 1% levels, respectively.

## Appendix A: Variable Definitions

Variable	Definition of variables
Logfee	Natural logarithm of total audit fees

EQ	Absolute value of performance matched discretionary accruals, following Kothari <i>et al.</i> (2005)
DCSR	Indicator variable equalling 1 for a firm voluntarily issuing a social responsibility report, and 0 otherwise
size	Natural logarithm of total assets
ROA	Ratio of net income to total assets
lev	Ratio of total liability to total assets
rec	Ratio of accounts receivable to total assets
inv	Ratio of total inventory to total assets
Loss	Indicator variable, equals 1 if reported net income was negative, 0 otherwise
Lloss	Indicator variable, equals 1 if reported net income in the last year was negative, 0 otherwise
opinion	Indicator variable, equals 1 for qualified audit opinion, 0 otherwise
Lauditor	Large auditors include Big4/Big5 plus top-6 national audit firms. Top-6 national audit firms are those whose audit fees are ranked top 6 according to CICPA annual statistics
SOE	Indicator variable equalling 1 for firms owned by governments, 0 otherwise
growth	Annual revenue growth rate from year t-1 to year t
logage	Natural logarithm of number of years a firm has been listed on stock exchanges
hcsrindex	Indicator variable, equals 1 for a firm issuing a CSR report rated by RKS above the annual median value of performance index
hpage	Indicator variable, equals 1 for a firm issuing a CSR report with number of pages longer than the annual median value
mghold	The ownership percentage held by senior managers
Inshold	The ownership percentage held by institutional shareholders
Dual	Indicator variable equalling 1 if the CEO and the Chairman of board of directors are the same person and 0 otherwise
Indir	The percentage of independent directors on the board of directors
Issue	Indicator variable equalling 1 if firms issue new shares in the next financial year and 0 otherwise
logsizeboard	Natural logarithm of size of board of directors
logsuperboard	Natural logarithm of size of supervisory board
PC	Indicator variable equalling 1 if a firm is politically connected. We follow Fan et al (2007) to identify whether a firm is politically connected

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