J Bus Ethics
DOI 10.1007/s10551-016-3176-9

Corporate Board and Corporate Social Responsibility Assurance: Evidence from China

Lin Liao[1] · Teng (Philip) Lin[2] · Yuyu Zhang[3]

Received: 11 January 2016 / Accepted: 8 April 2016

Abstract This paper investigates the association between board characteristics and the company's corporate social responsibility (CSR) assurance decision in China. By examining 2054 firm-years of Chinese listed companies with CSR reports from 2008 to 2012, we find that firms with a large board size, more female directors, and separation of CEO and chairman positions are more likely to engage in CSR assurance. Gender diversity also influences the CSR assurance provider choice. However, board independence and overseas background of the CEO do not affect the CSR assurance decision. Inconsistent with our prediction, firms with foreign directors are less likely to engage in voluntary CSR assurance. In summary, this research provides in-depth insights into the determinants of Chinese firms' voluntary CSR assurance.

Keywords Assurance · Corporate governance · Corporate social responsibility · China

Introduction

This study examines the association between corporate boards and a company's decision to obtain corporate social responsibility (CSR) assurance in the Chinese setting. Assurance over CSR reports is considered an important means of enhancing the credibility and reliability of CSR reports, much like external auditing for financial reporting (Simnett et al. 2009). About 40 % of sustainability reports issued by large corporations on an international level are assured by a third party (Kolk and Perego 2010). As this assurance is voluntary in nature, it provides an appropriate setting in which to investigate the role of different players in this less regulated market. Empirical studies in CSR assurance have remained scant until recent examination by auditing researchers. For instance, previous studies cover multiple areas in CSR assurance: the process and trends of these practices (Wallage 2000; Deegan et al. 2006; O'Dwyer and Owen 2007); advantages of independent CSR assurance (Kolk and Perego 2010); firm-level drivers of CSR assurance (Mock et al. 2007; Perego 2009; Cho et al. 2014; Casey and Grenier 2015; Peters and Romi 2015); the impact of country and industry factors on the CSR assurance decision (Simnett et al. 2009); and the financial consequence or information users' response to CSR assurance (Pflugrath et al. 2011; Cho et al. 2014; Cheng et al. 2015).[1] However, the recent research agenda presented by Cohen and Simnett (2015) reveals that CSR assurance remains an under-researched, but potentially fruitful field. They call for rigorous auditing studies in this area.

The present study responds to this call for CSR assurance research by investigating the relationship between corporate boards and CSR assurance in China. We are interested in the CSR assurance practice in the Chinese context following enormous achievements by Chinese corporations. China's economy, after 30 years of economic development, has become the world's second largest economy by nominal GDP, and the world's largest economy by purchasing power parity. In addition to pursuing

✉ Yuyu Zhang
Yuyu.zhang@qut.edu.au

1 Southwestern University of Finance and Economics, Chengdu, China

2 Shantou University, Shantou, China

3 Queensland University of Technology, Brisbane, Australia

[1] See Cohen and Simnett (2015) for the detailed review.

financial targets, the Chinese community and many Chinese firms have become more aware of the importance of CSR issues, and are willing to be identified as responsible corporate citizens by actively undertaking CSR activities. However, the environmental regulations in China are poorly implemented and business ethics are still being formed. There are companies spending substantial advertising money and issuing CSR reports to shape positive and environmentally friendly images, while recklessly depleting resources and polluting the environment. As revealed in the striking Sanlu melamine event,[2] the lack of CSR assurance coincides with criticism over the reliability and transparency of CSR information. In this paper, we focus on the impact of different board characteristics on the company's voluntary decision to obtain CSR assurance. The board of directors is the corporate governance mechanism to monitor, guide, and control corporations. The board makes essential strategic, operational and financial decisions and considers the needs of firms' stakeholders (Jo and Harjoto 2012). Therefore, a well-governed board of directors should ensure reporting effectiveness and reporting quality. In addition, ethical directors make decisions on behalf of shareholders and ensure management behaviors are in line with ethical practices. A socially responsible board should actively foster the sharing of values and behavior regarding external relationships, adherence to law, and social and environmental commitments. Thus, CSR reporting decisions are a direct result of the nature of the board of directors.

Institutional theory suggests that firms need to incorporate social norms and political influences of the host country into their corporate practices. Pressures and expectations from the environment force an organization to conform with institutional requirements, because the conformance helps the organization compete for favorable political policies and earn institutional legitimacy. Failure to comply with certain norms means the environment may reject the organization and jeopardize the organization's operation (Oliver 1991). Moreover, external legitimacy pressures, such as satisfying customers and suppliers' requests and obtaining public recognition, can influence firm-level CSR practices to comply with other international practices (Marquis and Qian 2014). Hence, from an institutional theory perspective, the needs for legitimacy have motivated Chinese firms to follow a typically Western style of CSR practices.

Based on a sample of 2054 Chinese firm-year observations with CSR reports from 2008 to 2012, only 83 (4.04 %) CSR reports have been assured. This is lower than the US [14 and 13 % in 2008 and 2011, respectively (PMG 2008, 2011)] and the international practice [40 and 46 % in 2008 and 2011, respectively (KPMG 2008, 2011)]. Regarding the relationship between corporate board and the propensity to undertake voluntary CSR assurance, the empirical evidence shows that firms with more directors in the board, more female directors, and separation of CEO and chairman positions are more likely to engage in CSR assurance. Furthermore, whether the CEO has overseas education or working experience has no impact on the propensity to obtain CSR assurance, indicating that the CEO background is relatively less important in facilitating a firm's CSR assurance activity. Inconsistent with our prediction, firms with foreign directors are less likely to engage in voluntary CSR assurance, while these foreign directors would increase the CSR performance (Lau et al. 2014). Finally, we do not find that the independent directors and supervisory directors in the board are significantly associated with the propensity of CSR assurance. This result supports the notion that independent directors in China are perfunctory and ineffective at monitoring and advising the management (Liu et al. 2014).

Our study contributes to the body of CSR assurance literature in a number of ways. First, most CSR assurance studies so far have been conducted in a Western context. The development of CSR assurance is scant in the context of emerging economies. This research fills the gap by focusing on CSR assurance practice in China, the world's largest developing country and second largest economy, which is also experiencing serious environmental and social issues. Comprehensive empirical investigation of the CSR assurance practice in China additionally contributes to the prior literature that uses samples from developed countries (such as Australia, Europe, and the US).

Second, within the limited literature of CSR assurance, the impact of corporate governance requires further research (Cohen and Simnett 2015). The board of directors is critical to corporate governance and its significance not only stems from their central role in establishing corporate strategy and setting objectives, but also from their involvement in planning and managing corporate resources (Nekhili and Gatfaoui 2013). Therefore, the board of

[2] In September 2008, after months of intentionally hiding information from the public, the infant formula from Sanlu Group, one of China's leading infant formula producers, was reported to contain an industrial chemical ingredient melamine. This caused numerous infant kidney stones and/or kidney failure in China. The melamine incident not only led to the bankruptcy of Sanlu Group, it swept 22 dairy enterprises (including well-known brands) and destroyed consumer confidence in the entire dairy and food industry. An estimated 300,000 victims caused considerable pressure on the public medical system. Laid-off workers from the dairy industry required government intervention. The incident reshaped the national regulation system, with the suspension of inspection-free systems and the implementation of the 'Regulation on the Supervision and Management of the Quality and Safety of Dairy,' triggering intensive debates on CSR in China.

directors plays a significant and crucial role within corporate governance. Furthermore, in the aftermath of corporate scandals and the rise of civil society campaigns against negative CSR behaviors, sound board governance is perceived as a way to ensure companies discharge their accountability to stakeholders and act in a socially responsible manner in their business activities (Solomon 2009). Research to date has mainly focused on the determinants of CSR assurance at country and industry levels. No research has been conducted on the impact of different aspects of firm's board governance on the propensity of CSR assurance, except for the work by Peters and Romi (2015) who offered a glimpse into how the presence of a Chief Sustainability Officer and environmental committees affects CSR assurance. In this paper, we extend our knowledge of CSR assurance by investigating the association between CSR assurance and a full set of board variables. Such linkage should be able to provide more in-depth insights into the determinants of a firm's voluntary corporate social activities.

Third, this paper focuses on the impact of corporate boards in Chinese listed firms. The globalization of capital markets puts pressure on all countries to address their corporate governance regimes. Countries must address differences in the issue of convergence of governance principles versus the need to retain diversity that responds to a country's cultural and legal heritage. While Chinese listed firms share certain common characteristics of board governance with other developed countries, the board of directors in China has its unique features, such as the largest owners with absolute controlling shareholding, existence of two-tier board structures (i.e., a board of directors and a board of supervisors) and ineffectiveness of independent directors. The investigation of Chinese corporate boards and their role in determining corporate voluntary activity may provide generalizable implications for different corporate governance mechanisms that cannot be drawn solely from the study of developed countries (Peters and Romi 2015).

This paper is organized as follows. The institutional background of corporate boards in China and relevant literature on CSR assurance are presented in Sect. 2. Hypotheses on the association between board characteristics and CSR assurance are developed in Sect. 3. Section 4 introduces the research method and Sect. 5 discusses the multivariate regression results on the impact of board characteristics on the CSR assurance decision. Section 6 further investigates the theory of critical mass in board gender diversity and the role of board characteristics on CSR assurance provider choices. Section 7 concludes the paper.

Institutional Background

Corporate Boards in China

In order to protect their investment in Chinese firms, investor groups strongly demand a transparent and efficient corporate governance system, including an effective board of directors. However, in the past China has been criticized by the western media for the lack of effective corporate board governance (e.g., Clarke 2003; Dahya et al. 2003). In response, the Chinese Securities Regulatory Commission (CSRC) published a number of regulations and recommendations on corporate governance for Chinese listed firms, such as the *Code of Corporate Governance for Listed Companies in China* (2001), the *Recommendation for the Institution of Independent Directors in Listed Companies* (2001) and the *Regulations on Information Disclosure of Listed Companies* (2007). The responsibilities and duties of directors are clearly stated in the related company law and guidelines, similar to the Anglo-Saxon model. For instance, the boards of Chinese listed firms should consist of both executive and non-executive directors. Other requirements, according to the *Code of Corporate Governance for Listed Companies in China*, include the following: (i) the number of directors should range from three to 13 for a limited liability company and five to 19 for a listed company; (ii) the board of directors has the responsibility of appointing and removing management; (iii) directors and managers must faithfully perform their duties, protect the company's interests, and ultimately answer to shareholders; (iv) a director's appointment should not exceed three years, subject to reappointment for a further term; and (v) the appointment (and reappointment) of directors should be approved by shareholders. In addition, the CSRC requires the board of each listed company to consist of at least one-third of independent directors by June 2003, and encourages firms to separate the roles of the chairman and CEO. In terms of multi-directorship, the CSRC requires that independent directors must spend enough time in the companies for which they hold directorships, and stipulates that one director cannot hold more than five directorship positions simultaneously.

Literature Review

A number of empirical studies investigate the assurance on sustainability reports or CSR disclosures in an international setting (Mock et al. 2007; Perego 2009; Simnett et al. 2009; Kolk and Perego 2010; Moroney et al. 2012, Cho et al. 2014). Using 130 worldwide assured sustainability reports between 2002 and 2004 as samples, Mock et al. (2007) find that about 67 % of assured sustainability reports are issued in the European Union, and firms operating in environmental sensitive industries such as utilities, mining and oil areas are more like to provide assured reports. Simnett et al. (2009) is another influential paper investigating assurance on sustainability reports around the world between 2002 and 2004. They use sequential logit analysis to identify the factors associated with the decision to voluntarily purchase assurance and the choice of assurance providers for 2113 firms from 31 countries. They find that firms in the mining, production, utilities, and finance industries, which are more exposed to environmental and social risks and thus need to increase user confidence in the credibility of sustainability reports, are more likely to engage in assurance activities. Following the study of Simnett et al. (2009), Kolk and Perego (2010) investigate the impact of country-level institutional factors on the voluntary decisions to assure social, environmental and sustainability reports. Using 212 Fortune Global 250 companies for the years 1999, 2002, and 2005, the authors find that companies located in countries with a code law system (stakeholder-oriented), weak governance enforcement mechanisms, and higher pressure towards corporate sustainability due to public policy are more likely to assure sustainability reports.

In addition to these international studies, research on CSR assurance is also conducted in a single-country context. Moroney et al. (2012) use the stakeholder-agency theory to examine whether the quality of voluntary environmental disclosures is enhanced by assurance in Australia between 2003 and 2007. They find that the quality score of disclosures for assured companies is significantly higher than unassumed companies. Cho et al. (2014) use the US data to examine the factors that might influence the choice to attain third-party CSR assurance as well as the market reaction to CSR assurance. Consistent with previous studies, they show that the choice to obtain assurance on the CSR report is positively associated with membership in an environmentally sensitive industry, as well as the finance industry. However, they do not find a significant relationship between CSR assurance and market value of reporting firms, suggesting that assurance of standalone CSR reports seems not to add incremental value to disclosing firms. Similarly, Casey and Grenier (2015) use a large sample of 2649 US CSR reports (1993–2010), of which 230 are assured, to find that US finance and utilities firms are not more likely to obtain CSR assurance. They argue that this is probably attributable to the strict regulatory regime and high litigation risk on those industries which may suppress CSR demand by serving as an alternative form of credibility enhancement. Opposite to the international evidence in Simnett et al. (2009), highly leveraged firms are less likely to obtain CSR assurance, and this is attributed to the stringent bank monitoring of highly leveraged firms that indirectly suppresses demand. Furthermore, Wong and Millington (2014) employ a questionnaire survey to investigate the UK stakeholder perceptions and their demand for CSR assurance. The results show that there is a positive and tentatively significant association between stakeholder perceived value of CSR and assurance; and a strongly positive association between stakeholder use of the responsible investment index (an information intermediary to communicate-mediated CSR evaluation to audiences) and stakeholder demand for CSR assurance, supporting a complementary relationship between CSR assurance and CSR indexes. Stakeholders are more likely to request CSR assurance when they perceive the CSR report is biased.

There are several studies that examine CSR assurance in China. For instance, Shen et al. (2011) investigate the signaling effect of corporate social reports and assurance based on the reputation theory. By using a sample of 3135 Chinese firm-year observations (including 874 corporate social reports and 43 assurance reports) over the period of 2008–2009, they find that corporate social performance is positively associated with corporate reputation. However, they do not find that CSR assurance can improve the positive relationship between corporate social reports and reputation, showing the insignificant impact of corporate social assurance on corporate reputation in China. Li and Li (2012) examine the information content of CSR reports that are assessed by either the independent third party or the board of directors. They find that firms, which have engaged in CSR attestation by an independent third party, experience higher favorable abnormal returns. However, CSR reports assessed by the board of directors have no significant effect on the market returns. A recent study by Li et al. (2013) investigates the drivers of CSR assurance by using a sample of 1517 Chinese listed companies that disclosed CSR reports from 2010 to 2012. They find that legal environment, media scrutiny, social trust, and firm's internal financial factors, such as size and leverage ratio, significantly affect the propensity of CSR assurance.

Hypothesis Development

Research to date on the determinants of CSR assurance has mainly dealt with country and industry factors. In this research, we extend CSR assurance research by investigating the influence of various board characteristics on the firm's propensity to undertake CSR assurance.

Board Size

Board size is one of the key characteristics that exert significant pressure on the effectiveness of the board's monitoring role, since a large board may have more experience, knowledge, and opinions from different sources. For example, Dalton et al. (1999) show that there is a significant positive relationship between board size and a firm's performance, using a large sample of 20,620 observations in a meta-analysis of 131 different study samples. Similarly, in a transitional economy, a traditional Chinese board typically has more members to represent different interest groups, such as the Communist Party, labor union, and finance providers. The role of the board is to form a resourceful coalition to counter any reform obstructions (Xie 2009). Consequently, a Chinese board is relatively larger compared to boards in the U.S. and the U.K.[3] In addition, resource dependence theory proposes that firms need to have an essential link to outside resources that could facilitate their survival and success. As Chinese firms operate in an environment dealing with multiple interests from various groups, they need to appoint a variety of directors with qualified experience and related expertise for legitimacy needs. A larger board can incorporate various perspectives from different stakeholders and devote more energy and resources towards fulfilling their roles in social activity and performance. One approach is to have CSR reports assured and hence, address the interests of regulatory bodies and social groups, and increase the disclosure creditability and reliance. Therefore, we perceive that the larger the board, the higher the possibility of improved quality of the CSR report and engagement in voluntary CSR assurance.

Hypothesis 1 There is a positive association between board size and the propensity to undertake CSR assurance.

Female Directors

Women and men have different cognitive patterns and, therefore, are likely to differ in beliefs, norms and behaviors (Pelled et al. 1999). Dang et al. (2009) use two theoretical perspectives to describe the role of women on the board. The first perspective is the resource dependency theory developed by Pfeffer (1972). This theory perceives a company as an open system which is dependent on the external environment and that corporate boards are tasked with reducing environmental uncertainty, managing external dependency and reducing the transaction costs (Davis and Cobb 2009). An organization needs advice and counsel, channels for communicating information with the external environment, and legitimacy from the board (Pfeffer and Salancik 1978). Women join a board because they are desired for their wide base of resources they can offer, such as knowledge, skills, legitimacy, prestige, and connections, to external sources (Peterson and Philpot 2007). The second perspective is the agency theory, where the agent (e.g., manager) takes advantage of the role of decision-making on behalf of the principal (e.g., directors) and acts in his own interest rather than the interest of the principal (Agrawal and Knoeber 1996; La Porta et al. 2000; Fields et al. 2012; Das 2014). One task of the board is to monitor managers to reduce the agency problem. A gender-diverse board is generally believed to be more effective in this regard. Erhardt et al. (2003) and Carter et al. (2003) argue that companies with a gender-diverse board outperform companies with a non-diverse board. In terms of CSR, because female directors exhibit significant differences in their ethical perceptions compared to male directors (Ibrahim et al. 2009), stakeholders normally see gender diversity as an indication of a caring and socially oriented organization with higher aspirations. Lane (1995) determines a positive relationship between having female directors and ethical behaviors. Bear et al. (2010) show that female directors bring various benefits to boards and that these benefits can contribute to the improvement of CSR ratings. Williams (2003) finds that firms with a higher proportion of female directors engage more in corporate philanthropy than firms with a lower percentage of female directors. The appointment of female directors on boards not only signifies the ethical importance of board diversity, but also acts as a signal to stakeholders showing that the engaging firms are socially responsible (Bear et al. 2010). Furthermore, previous literature finds that firms with more female directors are more likely to demand more audit efforts and managerial accountability (Adams and Ferreira 2009). Therefore, given that external audit services on CSR reporting can enhance reporting quality, we expect Chinese firms with more female directors to be more likely to engage in CSR assurance:

Hypothesis 2 There is a positive association between the percentage of female directors on the board and the propensity to undertake CSR assurance.

Independence

Board independence reflects the extent to which the board is independent of company management. For the purpose of this study, we consider two types of board independence: independent directors and supervisory directors.

Independent directors are those 'who are not dependent on the firm for employment, sales or other benefits' (Hillman et al. 2000). The agency theory suggests that managers have incentives to opportunistically manipulate a company's performance (Jensen and Meckling 1976). Independent directors are generally most interested in compliance

[3] Yang et al. (2008) show that more than 80 % of listed firms in China have boards of nine or eleven members.

with legislation and the ethical behaviors of the firm (Ibrahim and Angelidis 1995). Therefore, they, on behalf of shareholders, have strong motivations to prevent and detect opportunistic behaviors, objectively question and evaluate management and firm performance (Fama and Jensen 1983). Beasley (1996) provides evidence showing that independent directors better control potential unethical conduct and frauds. Since independent directors are more likely to be conscious of improving the relationships of the firm with different stakeholders, they are more interested in coping with higher incentives to develop more sustainable and ethical behaviors. Previous studies have confirmed the positive relationship between the presence of independent directors and a firm's socially responsible activities (O'Neill et al. 1989) and voluntary CSR disclosure (Jamali et al. 2008). Furthermore, Carcello et al. (2002) show that independent directors are more willing to pay for extra audit services to enhance the credibility of financial statements in order to reduce management's opportunistic conduct.

Another important mechanism which limits the potential for management's unethical conduct in China is the implementation of the supervisory board. According to *The Code of Corporate Governance for Listed Companies in China* issued by the CSRC, one of the main duties of the supervisory board is to monitor the firm's accounting system and financial statements. The supervisory board members can report directly to the regulatory authorities if they are aware of any violation of laws, regulations or the company's charter (Firth et al. 2007). In addition, the supervisory board comprises people from diversified expertise and, therefore, a larger supervisory board is considered to have a greater expertise and be more likely to apply pressure on the company to engage in social voluntary activities that can enhance the reputation and positive image of the company.

In summary, firms with more supervisors, directors, and independent directors are more sensitive to stakeholders' demands and exhibit greater concern about the creditability and reliance of CSR reporting. External assurance is an important mechanism for reducing opportunistic behaviors by management and enhancing the credibility and reliability of CSR information. Therefore, based on previous theoretical arguments, we expect that the board with more independent directors and supervisory directors are more likely to engage in CSR assurance:

Hypothesis 3 There is a positive association between the percentages of independent directors and supervisory directors in the board and the propensity to undertake CSR assurance.

Duality

Another important dimension of the board of directors is the duality of the board chairman and CEO. Firth et al. (2007) point out that when the chairman of the board is the same as the CEO, the effectiveness of the board to monitor top management is decreased due to the dominating power of the board chairman and CEO duality. In this case, managers' private interests are likely to have negative impacts on the way they engage in CSR activities (Jizi et al. 2014). For instance, since the chair of the board has the authority to determine the board's agenda, the CEO who also acts as the chair might hide crucial information from independent directors and may be reluctant to engage in ethical behaviors when they view CSR activities as detrimental to their personal interests. Consistent with this argument, the prior study by Galbraith (2010) shows firms who separated the CEO-board chair role achieved better governance on climate change. Since the CSR assurance can increase the transparency and reliability of CSR information, separation of CEO and chairman is expected to prevent powerful CEOs from using their influence to curtail CSR information and CSR assurance decisions. Therefore, we expect that:

Hypothesis 4 There is a positive relationship between a separation of the CEO and chairman role and the propensity to undertake CSR assurance.

Meetings

Board meetings are an important communication mechanism for outside directors to understand a firm's operation and managerial decision-making, effectively facilitating participation in a firm's governance. Previous literature often uses board meeting to measure board activity and vigilance, and suggests that frequent board meetings are considered as a signal of increased vigilance and insight by the top management of the firm (Chen et al. 2006; Masulis et al. 2012). Laksmana (2008) provides empirical evidence that frequent board meetings benefit the stakeholders by delivering greater transparency in information disclosure. Carcello et al. (2002) suggest that more frequent board meetings enhance the level of insight on the financial reporting process and improve the relevance of the choice of assurance services. In order to discharge the board's responsibilities, a suitably diligent board (as measured by the number of board meetings) would be more likely to purchase a greater amount of external audit services. Therefore, we posit the following hypothesis:

Hypothesis 5 There is a positive relationship between the number of board meetings and the propensity to undertake CSR assurance.

Board Internationalization: Foreign Directors and CEO with Overseas Background

Board internationalization is typically referred to as a dimension in measuring board diversity (Miller and Triana 2009). The internationalization of the boardroom is argued to provide beneficial access to diversified expertise and skills, broader social networks, international funding, and listing opportunities. These commercial and financial motives are particularly favorable for non-Anglo-American firms (Oxelheim et al. 2013). However, prior literature provides a mixed result when it comes to the relationship between board internationalization and firm performance. For example, Oxelheim and Randøy (2003) provide evidence that in the European setting, Anglo-American directors in non-Anglo-American firms contribute positively to the firm's market value. On the other side, Masulis et al. (2012) report that US firms with foreign directors display poorer performance, monitor less effectively, and add value only when companies are highly dependent on foreign markets. Board internationalization is also reflected by other international experience such as the home-country-based CEO's overseas study or working background. By spending a considerable amount of time overseas, a home-based board member or CEO may obtain international experience and in-depth understanding of international responsibility, communication skills, other international connections, and exposure to cultural diversity (Carpenter and Westphal 2001; Herrmann and Datta 2002; Tihanyi et al. 2005). Oxelheim et al. (2013) find evidence that board members' international experience positively contributes to firm performance. Lau et al. (2014) find that foreign experience of board directors and top management has a positive relationship with the firm's CSR performance, because the exposure to CSR practices in foreign countries can provide a positive impetus for Chinese directors and managers to follow good social responsible activities. Consistent with this, we assume that a board with greater international exposure may pay more attention to the environmental and social responsibility issues as addressed by their international counterparts, and hence this would influence their investment decisions on CSR assurance. The hypothesis is expressed as follows:

Hypothesis 6 There is a positive relationship between board internationalization and the propensity to undertake CSR assurance.

Research Design

Model Specification

Based on Simnett et al. (2009), we use the following logistic regression model to investigate the impact of various board characteristics on the likelihood of CSR assurance:

$$\begin{aligned}\mathrm{CSRA} = {} & \beta_0 + \beta_1 Boardsize + \beta_2 Female + \beta_3 Inddirector \\ & + \beta_4 Superdirector + \beta_5 Duality \\ & + \beta_6 Meeting + \beta_7 Fordirector + \beta_8 CEO\_overseas \\ & + \beta_9 EnviIndustry + \beta_{10} LnSales \\ & + \beta_{11} ROA + \beta_{12} Lev + \beta_{13} Big4 + \beta_{14} MarketIndex \\ & + \beta_{15} LawIndex + \beta_{16} SOE + \beta_{17} CSRscore \\ & + \beta_{18} CSRindex + \beta_{19} Cross-listing + Year\ effect + \varepsilon. \end{aligned} \quad (1)$$

Dependent Variable

The dependent variable is *CSRA*, which is a dummy variable equal to 1 if the CSR report is assured, and zero otherwise.

Independent Variables

Boardsize is measured as the number of directors serving on the board. *Female* is measured as the percentage of female directors over total directors in the board, and is used to proxy for gender diversity. *Inddirector* is measured as the percentage of independent directors over the total number of directors in the board. *Superdirector* is measured as the percentage of supervisory directors over the total number of directors in the board. *Duality* is measured as one if the CEO is not the chairman of the board, and zero otherwise. *Meeting* is measured as the total number of board meetings held in a year to proxy for the level of board activity. *Fordirector* is measured as the percentage of foreign directors in the board. *CEO_overseas* is a dummy variable equal to one if the CEO has overseas study or working experience, and zero otherwise.

Control Variables

Following Simnett et al. (2009), we use *EnviIndustry* to control for industry effect. The variable is defined as a dummy variable equal to 1 if the firm is in the environmentally sensitive industries of production, mining, utilities and chemical industries, and zero otherwise. *LnSales* is the natural logarithm of total sales used to proxy for firm size. *ROA*, calculated as return on assets, is used to measure the profitability of the company. The variable *Lev* is calculated as the ratio of total debt divided by total assets, measuring financial risk of the company. *Big4* is a dummy variable equal to 1 if the Big Four auditors audit the firm and zero otherwise. *MarketIndex* and *LawIndex* are used to control for geographic development in China. Both variables are obtained from Fan et al. (2011) and are used to measure the development of market system and regulation system in China, respectively. *SOE* is a dummy variable equal to 1 if the firm is a state-owned enterprise (SOE), and zero otherwise. We use *CSRscore* to measure a firm's CSR performance, which is provided by an independent rating agency, Rankins CSR Ratings.[4] Similar to the US social investment rating agency Kinder, Lydenberg, Domini & Co., Inc. (KLD), Rankins independently rates firms' CSR activities as presented in the CSR reports, websites as well as other communication media. The Rankins score and its validity was documented in previous Chinese CSR studies (e.g., Lau et al. 2014; Marquis and Qian 2014). *CSRindex* is measured as 1 if the firm is in the Shenzhen or Shanghai CSR indexes, which comprise the 100 best CSR practices firms listed in the Shenzhen or Shanghai Stock Exchange. *Cross-listing* is a dummy variable equal to 1 if the firm is cross-listed in another country and zero otherwise. As CSR assurance is a prevalent practice in the western countries, Chinese firms with overseas listing are more likely to follow foreign CSR activities. Year effects are also controlled in the model.

Samples

The primary database used in this study is the Chinese Stock Market Trading Database (CSMAR), a leading database for the Chinese stock market and listed firms. CSMAR provides us with the financial statements, CSR assurance, ownership structure as well as corporate governance data of listed Chinese firms.[5] CSR performance scores are provided by Rankins CSR Ratings, which analyzes 70 indicators for three categories of firm's CSR practice: social responsibility strategy and innovation, disclosure content, and technical sufficiency (Lau et al. 2014). Altogether these two databases offer us a total of 2054 firm-year observations over the period of 2008–2012 in China.

[4] www.rksratings.com.

[5] As CSMAR covers CSR information from 2008 for all the listed companies, we are unable to include prior year CSR reports and assurance data in this analysis, even though we note that the earliest CSR reports and the first CSR assurance in China was made in 2006 for China Ocean Shipping Corporation (COSCO).

Table 1 CSR reporting and CSR assurance by year

Year	Listed companies	CSR report		CSR assurance	
	No.	No.	%	No.	%
2008	1817	178	9.80	4	2.25
2009	1944	186	9.57	4	2.15
2010	2326	497	21.37	19	3.82
2011	2570	588	22.88	23	3.91
2012	2668	605	22.68	33	5.45
Total	11,325	2054	18.14	83	4.04

Results

Descriptive Statistics-CSR Assurance Practice in China

Table 1 presents the trend of CSR reports and assurance from 2008 to 2012. Driven by the intensive regulatory intervention from government agencies and stock exchange regulators in 2008, there has been an exceptional growth in CSR reporting in China, increasing from 178 to 605 reports. Till 2012, the ratio of CSR reports issuers to the total number of listed firms has reached 22.68 %. Furthermore, the number of CSR assurances has increased from four in 2008 to 33 in 2012, indicating the prevalence of CSR assurance practices among Chinese firms. In total there are 83 CSR reports assured over the 5 years, with about 4.04 % of firms issuing the CSR report. However, the total ratio of CSR reports assured is still lower than the US as well as other developed countries.

Table 2 presents the distribution of CSR assurance providers in China during the period of 2008–2012. In 83 CSR assurance reports, 42 reports (50.6 %) are issued by public auditing firms, and 41 reports (49.4 %) are issued by other non-auditing professions. Among Big 4 accounting firms, PWC and KPMG dominate the CSR assurance market, followed by EY and Deloitte. Compared to Big 4 accounting firms, local Chinese accounting firms have a relatively small market share, while the number of assurance engagements increases three folds over the whole sample period. In terms of non-auditing firms, Table 2 shows that only 7 reports were assured by local Chinese certification firms compared to 34 reports assured by foreign certification providers. Two international CSR certification specialists, Bureau Verltas and Det Norske Veritas, have relatively large market share, in which Bureau Verltas issues 17 assurance reports and Det Norske Veritas comes in second with 7 CSR assurance engagements.

Table 3 presents the descriptive statistics of all variables used in the regression analysis. Detailed definitions of the variables are given in Appendix Table 7. The average value of *Boardsize* is 9.744, indicating that on average,

Table 2 Distribution of CSR assurance providers

Public accounting firms	PWC	KPMG	Ernst and young	Deloitte	Non-big four	Total
2008	0	1	0	0	0	1
2009	0	1	1	0	0	2
2010	1	4	2	1	2	10
2011	3	2	2	1	3	11
2012	6	2	2	2	6	18
Sub-total	10	10	7	4	11	42

Assurance providers other than accounting firms	Bureau Verltas	Det Norske Veritas	Other foreign certification firms	Other Chinese certification firms	Total
2008	1	2	0	0	3
2009	1	1	0	0	2
2010	5	1	3	0	9
2011	5	1	3	3	12
2012	5	2	4	4	15
Sub-total	17	7	10	7	41

Table 3 Descriptive statistics of variables

Variables	Obs	Mean	SD	Min	Max
Dependent variables					
CSRA	2054	0.040	0.197	0	1
SAprovider	83	0.506	0.503	0	1
Independent variables					
Boardsize	2054	9.744	2.388	5	19
Female	2054	0.107	0.114	0	0.667
Inddirector	2054	0.370	0.059	0.125	0.800
Superdirector	2054	0.440	0.144	0.125	1.167
Duality	2054	0.847	0.360	0	1
Meeting	2054	9.751	3.983	3	38
Fordirector	2054	0.005	0.026	0	0.267
CEO_overseas	2054	0.048	0.214	0	1
Onefemale	2054	0.342	0.475	0	1
Twofemale	2054	0.182	0.386	0	1
Threefemale	2054	0.094	0.293	0	1
Control variables					
EnviIndustry	2054	0.623	0.485	0	1
LnSales	2054	22.186	1.705	17.792	28.550
ROA	2054	0.065	0.066	−0.314	0.759
Lev	2054	0.505	0.217	0.014	1.843
Big4	2054	0.178	0.383	0	1
MarketIndex	2054	9.087	1.924	0.380	11.800
LawIndex	2054	11.728	5.430	0.180	19.890
SOE	2054	0.270	0.444	0	1
CSRscore	2054	33.818	15.783	0	84.019
CSRindex	2054	0.325	0.468	0	1
Cross-listing	2054	0.145	0.352	0	1

there are about 10 directors serving on the board during the period of 2008–2012. The mean of *Female* is 0.107, suggesting that on average only 10.7 % of directors on the board are female. According to the critical mass theory, 34.23, 18.21, and 9.45 % of firms have one, two, and three female directors, respectively. In addition, on average, 37 and 44 % of directors are independent directors (*Inddirector*) and supervisory directors (*Superdirector*) in each board, respectively. Furthermore, about 84.66 % of firms separate the positions of CEO and the chairman of the board (*Duality*). We also observe that on average boards normally hold about 10 meetings a year (*Meeting*). Regarding the CEO's background, about 4.82 % of CEOs in China have overseas study or working experience (*CEO_overseas*). On average 0.5 % of directors in the Chinese listed firms are foreigners (*Fordirector*).

Regarding control variables, about 62.32 % of our sampled firms operate in environmentally sensitive industries (*EnviIndustry*). On average, 17.82 % of firms have their financial statements audited by Big four auditors. In addition, the average mean of *LnSales*, *ROA*, and *Lev* are 22.186, 0.065, and 0.505, respectively. Our sample firms have a mean of *MarketIndex* of 9.087 and *LawIndex* of 11.728. The CSR performance measure, *CSRscore*, ranges from 0 to 84.019, with the mean value at 33.818. Finally, we observe that 26.97 % of firms are *SOE* and 32.5 % of firms are included in the Shenzhen or Shanghai Stock Exchange CSR Index. On average, 14.5 % of firms are also cross-listed in another country.

Multivariate Results: Board Characteristics and CSR Assurance

Table 4 presents the regression results for the impact of board characteristics on voluntary CSR assurance. As expected in H1, the coefficient on *Boardsize* is 0.092 with *p* value of 0.087, showing that *Boardsize* is positively and significantly associated with CSR assurance at the 10 % level. This supports the argument that large boards in China, which represent diversified stakeholders' interests, are more likely to obtain CSR assurance to ensure CSR reporting quality. The coefficient on *Female* is 2.551 ($z = 1.74$, p value 0.082), indicating a significant and positive association between the percentage of female directors on the board and CSR assurance. It supports H2 that a board with more female members is more likely to undertake CSR assurance and suggests a positive role of female directors in enhancing non-financial reporting quality and information reliability. However, the empirical evidence as shown in Table 4 indicates that board independence as proxied by the percentages of independent directors and supervisory directors has no impact on the firm's CSR assurance decision. Specifically, both independent director and supervisory director variables are statistically insignificant ($p = 0.336$ and $p = 0.707$, respectively). This is consistent with the argument that independent directors as well as supervisory directors in China are perceived as a token in the board and are perfunctory (Liu et al. 2015). Therefore, H3 is not supported. Regarding H4, CEO-chairman duality is positively and significantly associated with CSR assurance ($p = 0.036$), suggesting that proper segregation of the board chair and executive role enhance the corporate investment on CSR assurance. In terms of H5, we do not find a positive relationship between the propensity to undertake CSR assurance and the frequency of board meetings, so H5 is not supported. With respect to board internationalization, we observe a significant negative relationship between CSR assurance and the percentage of foreign directors, as well as an insignificant relationship between CSR assurance and CEO overseas study or working background, suggesting that in China, board internationalization does not have positive influence on a firm's voluntary CSR assurance activity.

Table 4 Multivariate result–board characteristics and CSR assurance

	Coef.	Robust SE	z	p
Boardsize	0.092	0.057	1.71	0.087
Female	2.551	1.465	1.74	0.082
Inddirector	−3.068	3.186	−0.96	0.336
Superdirector	0.368	0.981	0.38	0.707
Duality	1.767	0.841	2.10	0.036
Meeting	0.044	0.029	1.53	0.126
Fordirector	−10.536	3.859	−2.73	0.006
CEO_overseas	0.058	0.485	0.12	0.905
EnviIndusry	−1.036	0.384	−2.70	0.007
LnSales	0.149	0.141	1.05	0.293
ROA	7.780	3.642	2.14	0.033
Lev	0.930	0.890	1.05	0.296
Big4	0.143	0.525	0.27	0.786
MarketIndex	−0.417	0.202	−2.06	0.039
LawIndex	0.239	0.077	3.08	0.002
SOE	−0.142	0.370	−0.38	0.701
CSRscore	0.109	0.024	4.51	0.000
CSRindex	−0.222	0.333	−0.67	0.506
Cross-listing	0.053	0.395	0.13	0.894
Constant	−13.924	3.380	−4.12	0.000
Year effect	Control			
Observations	2054			
Pseudo R^2	0.548			

Clustered by company with year effect controlled

In terms of control variables, we find that firms in the environmentally sensitive industries in China are less likely to have their CSR report assured (coefficient = −1.036, $p = 0.007$). This is probably because the strong regulations or public scrutiny in these industries reduce the necessity of CSR assurance, demonstrating a potential substitution effect of regulations for CSR. Inconsistent with international evidence, firm size, as proxied by *LnSales*, does not have a significant impact on the firm's CSR assurance decision ($p = 0.293$). *ROA* is significant and positive, confirming the view that profitable firms are more willing to have their CSR reports assured. *Lev* is not significant in the Chinese setting, meaning that highly leveraged firms with greater financial risk may not be willing to participate in voluntary CSR assurance. *Big4* also has no impact on firm's CSR assurance decision. Geographic variables, *MarketIndex* and *LawIndex,* are significant, consistent with the findings of Li et al. (2013) that legal and market environments affect Chinese firms' CSR assurance decisions. With respect to CSR performance (*CSRscore*), we observe that firms with better CSR performance would be more likely to have the CSR reports assured (Coef. = 0.109, $p = 0.000$); the result confirms the view that CSR assurance might be employed strategically by Chinese firms to demonstrate their legitimacy and deliver a positive message to the community.

Additional Tests

Critical Mass: The Number of Female Directors and CSR Assurance

According to the token status and sex-role stereotypes of female directors, a lone female director in the board is considered as a mere "token" by various stakeholders, and thus her influence on the board decisions is limited (Liu et al. 2014). However, the minority voice can be considered and heard when a group is faced with consistent opinions from multiple minority members (Asch 1955). For instance, when a critical mass of women (i.e., at least three) is represented on a board, female directors should be able to work together to demonstrate collaboration in decision-making (Konrad et al. 2008; Bear et al. 2010). Therefore, the critical mass theory on board gender diversity suggests that "one is a token, two is a presence, and three is a voice" (Kristie 2011). That is, three or more women may exert a stronger influence than one woman on a board (Liu et al. 2014). Prior studies find empirical evidence to support this argument that female members promote environmental and CSR reporting, especially when the number of female directors is in excess of three or more (Bear et al. 2010). We follow this critical mass theory to investigate the impact of the number of female directors on the CSR assurance decision by using the three female director dummy variables. The variable *Onefemale* takes the value of 1 if the board has one female director and 0 otherwise. The dummy variable *Twofemale* equals 1 if the board has two female directors and the variable *Threefemale* equals 1 if the board has three or more female directors in the board. We replace the percentage of female directors variable (*Female*) with these three dummy variables in the regression. Other independent and control variables remain the same. The descriptive statistics and the multivariate regression result are presented in Table 5.

Table 5, Panel A shows that among all 2054 firm-year observations, about 34.2, 18.2 and 9.4 % firm-year observations have one, two and three or more female directors on their boards, respectively. Further multivariate tests demonstrate that a board with one and two female directors (*Onefemale* and *Twofemale,* respectively) has no significant influence on the propensity to undertake CSR assurance. However, we observe that a board with three or more female directors is more likely to engage in voluntary CSR assurance ($p = 0.023$), which is consistent with the critical mass theory of female directors.

Table 5 Multivariate result—the number of female directors and CSR assurance

Variables	Obs	Mean	SD	Min	Max
Panel A: descriptive statistics on the number of female directors					
Onefemale	2054	0.342	0.475	0	1
Twofemale	2054	0.182	0.386	0	1
Threefemale	2054	0.094	0.293	0	1

	Coef.	Robust SE	z	$p > z$
Panel B: Multivariate result on the number of female directors and CSR assurance				
Onefemale	0.221	0.406	0.54	0.586
Twofemale	0.149	0.514	0.29	0.772
Threefemale	1.184	0.519	2.28	0.023
Boardsize	0.055	0.063	0.87	0.383
Inddirector	−3.574	3.186	−1.12	0.262
Superdirector	0.201	1.006	0.20	0.841
Duality	1.850	0.797	2.32	0.020
Meeting	0.036	0.030	1.17	0.243
Fordirector	−11.996	4.145	−2.89	0.004
CEO_overseas	−0.109	0.486	−0.22	0.822
EnviIndusry	−0.992	0.385	−2.58	0.010
LnSales	0.137	0.145	0.94	0.346
ROA	7.606	3.948	1.93	0.054
Lev	0.891	0.924	0.96	0.335
Big4	0.122	0.535	0.23	0.819
MarketIndex	−0.432	0.208	−2.08	0.038
LawIndex	0.244	0.079	3.08	0.002
SOE	−0.102	0.385	−0.27	0.790
CSRscore	0.110	0.024	4.51	0.000
CSRindex	−0.196	0.344	−0.57	0.569
Cross-listing	0.146	0.387	0.38	0.706
Constant	−12.976	3.461	−3.75	0.000
Year effect	Control			
Observations	2054			
Pseudo R^2	0.552			

CSR Assurance Provider

Distinct from financial statement audits, which are conducted by accounting professionals only, both accounting firms and a broad range of other alternative professions offer CSR assurance services to the market. Prior studies have discussed the relative advantages and disadvantages of these two categories of assurance providers. For instance, non-accounting certification bodies can provide more specialized and informative verification services due to their expertise on the particular areas, and auditing firm assurers may not have the necessary subject matter knowledge (Cohen and Simnett 2015). However, Simnett et al. (2009) point out that the quality of assurance engagement provided by accounting firms is higher than others, because accountants possess unique skills and tradition of providing high-quality decision-making information (Elliott 1997; Gray 2000). Furthermore, many of the auditing firm members also have diverse industrial and environmental backgrounds, and the existing assurance standards in place request the assembly of competent and multidisciplinary assurance team members (Huggins et al. 2011). The risk model universally used in financial statement audits enhances the understanding of the entity and risk assessment, and can be translated well into the CSR assurance domain (Huggins et al. 2011). Moreover, the leading auditing firms invest extensively in their reputational capital and public confidence can be enhanced by recruiting a leading auditing firm as the CSR assurance provider (Simnett et al. 2009). Multinational auditing firms have the global networks to offer multidisciplinary industry specialists and global knowledge in multiple jurisdictions, which is not offered by other assurance providers (Carson 2009; Simnett et al. 2009).

In this study, we also examine the impact of corporate board on the choice of assurance providers. Specifically, the following logit regression models are used to examine how board characteristics affect the assurance provider choice:

$$\begin{aligned}\text{SAprovider} = {} & \beta_0 + \beta_1 Boardsize + \beta_2 Female \\ & + \beta_3 Inddirector + \beta_4 Superdirector + \beta_5 Duality \\ & + \beta_6 Meeting + \beta_7 Fordirector + \beta_8 CEO\_overseas \\ & + \beta_9 EnviIndusry + \beta_{10} LnSales \\ & + \beta_{11} ROA + \beta_{12} Lev + \beta_{13} Big4 + \beta_{14} MarketIndex \\ & + \beta_{15} LawIndex + \beta_{16} SOE + \beta_{17} CSRscore \\ & + \beta_{18} CSRindex + \beta_{19} Cross-listing \\ & + Year\ effect + \varepsilon. \end{aligned} \tag{2}$$

The dependent variable *SAprovider* is a dummy variable taking the value of 1 if the assurance is provided by an accounting firm, and zero otherwise. Independent variables and control variables are the same as Model (1).

Table 6 shows that *Female* is positively and significantly associated with *SAprovider*, suggesting that boards with more female directors are more likely to seek assurance from the auditing profession. However, other board characteristics do not have significant influence on the choice of assurance providers.

With regard to control variables, firms with larger size, lower profitability, and higher financial risk tend to choose accounting firms in CSR assurance engagements. Firms in lower market-disciplined areas and higher legally regulated areas are more likely to use accounting firms as the assurance providers. This supports the view that firms under pressure or challenged to prove their financial and CSR disclosure credibility are more willing to purchase a more expensive assurance service from accounting firms.

Table 6 Multivariate result–board characteristics and the choice of assurance provider

	Coef.	Robust SE	z	$p > z$
Boardsize	0.204	0.142	1.440	0.149
Female	6.386	2.855	2.24	0.025
Inddirector	−2.192	3.674	−0.60	0.551
Superdirector	−4.230	2.889	−1.46	0.143
Meeting	−0.063	0.063	−1.00	0.319
Fordirector	8.257	9.973	0.83	0.408
CEO_overseas	1.136	1.553	0.73	0.464
EnviIndusry	−0.206	1.201	−0.17	0.864
LnSales	0.678	0.360	1.88	0.060
ROA	−8.638	5.833	−1.48	0.139
Lev	−5.967	3.641	−1.64	0.101
Big4	0.012	1.494	0.01	0.994
MarketIndex	−2.184	0.823	−2.65	0.008
LawIndex	0.496	0.215	2.30	0.021
SOE	−0.459	0.901	−0.51	0.611
CSRscore	0.004	0.018	0.22	0.824
CSRindex	−0.463	0.777	−0.60	0.551
Cross-listing	−0.151	1.157	−0.13	0.896
Constant	2.477	10.696	0.23	0.817
Year effect	Control			
Observations	83			
Pseudo R^2	0.328			

Conclusion

This study contributes to the body of CSR literature by investigating the association between board characteristics and a firm's voluntary CSR assurance decision, using a sample of 2054 firm-year observations over the period of 2008–2012 in China. We find that a firm's CSR assurance decision is positively and significantly associated with board size, the number of female directors, as well as the segregation of chair and CEO position. Overall evidence is consistent with the view that board diversity contributes to the strategic decision of CSR assurance. That is, a more diversified board can influence the management understanding of CSR activities and better capture the comparative benefits of CSR assurance in enhancing information quality and stakeholder confidence. Furthermore, although board independence has been proven as an important corporate governance structure in enhancing financial information transparency, at least in the Chinese setting, board independence seems to have little impact on voluntary CSR assurance decisions, suggesting that independence is more for appearances and is in reality more of a "token" symbol.

Complementary to prior literature, this paper addresses the influential factors of Chinese CSR assurance practices at the board level. Given that the profession-wide effort in improving non-financial assurance services, and integrating this type of service with financial information audits have positive influences on the community and firms,[6] our findings will be of interest for the accounting profession as well as the other certification professions in understanding the CSR assurance market in China and the role of the board in the market.

[6] The International Auditing and Assurance Standard Board (IAASB) has made an effort to establish an Integrated Reporting Working Group in 2014 and a discussion draft, entitled "Assurance on Integrated Reporting" has been circulated for comment in April 2015. Website: http://auasb.cmail1.com/t/ViewEmail/r/478F94AB1E82E8632540EF23F30FEDED#toc_item_3.

Appendix

See Table 7.

Table 7 Definitions to the variables

Variable	Definition
Dependent variable	
CSRA	A dummy variable, 1 if CSR report is assured, and 0 otherwise
SAprovider	A dummy variable, 1 if CSR report is assured by an accounting firm, and 0 otherwise
Independent variables	
Boardsize	The number of directors serving on the board
Female	The percentage of female directors over total directors on the board
Inddirector	The percentage of independent directors over total directors on the board
Superdirector	The percentage of supervisory directors over total directors on the board
Duality	A dummy variable, 1 if the CEO is not the chairman of the board, and 0 otherwise
Meeting	The total number of meetings held in a year to proxy for the level of board activity
Fordirector	The percentage of foreign directors in the board
CEO_overseas	A dummy variable; 1 if the CEO has overseas study or working experience, and 0 otherwise
Onefemale	A dummy variable; 1 if the board has one female member and 0 otherwise
Twofemale	A dummy variable; 1 if the board has two female members and 0 otherwise
Threefemale	A dummy variable; 1 if the board has three female members and 0 otherwise
Control variables	
EnviIndustry	A dummy variable, 1 if the firm is in the environmentally sensitive industries: production, mining, utilities and chemical industries, and 0 otherwise
LnSales	The natural logarithm of total sales
ROA	Return on assets
Lev	The ratio of total debt divided by total assets
Big4	A dummy variable, 1 if the firm is audited by the Big Four auditors and 0 otherwise
MarketIndex	The index of geographic development of market system in China, obtained from Fan et al. (2011)
LawIndex	The index of geographic development of regulation system in China, obtained from Fan et al. (2011)
SOE	A dummy variable, 1 if the firm is a state-owned enterprise (SOE), and 0 otherwise
CSRscore	The score of a firm's CSR performance, provided by an independent rating agency Rankins CSR Ratings
CSRindex	A dummy variable, 1 if the firm is listed in the Shenzhen or Shanghai CSR index, and 0 otherwise
Cross-listing	A dummy variable, 1 if the firm is cross-listed in another country, and 0 otherwise

References

Adams, R. B., & Ferreira, D. (2009). Women in the board and their impact on governance andperformance. *Journal of Financial Economics, 94*(2), 291–309.

Agrawal, A., & Knoeber, C. R. (1996). Firm performance and mechanism to control agency problems between managers and shareholders. *Journal of Financial and Quantitative Analysis, 31*(3), 377–397.

Asch, S. (1955). Opinions and social influence. *Scientific American, 193*, 31–55.

Bear, S., Rahman, N., & Post, C. (2010). The impact of board diversity and gender composition on corporate social responsibility and firm reputation. *Journal of Business Ethics, 97*(2), 207–221.

Beasley, C. E. (1996). An empirical analysis of the relationship between the board of directors composition and financial statement fraud. *The Accounting Review, 71*, 443–465.

Carcello, J. V., Hermanson, D. R., Neal, T. L., & Riley, R. (2002). Board characteristics and audit fees. *Contemporary Accounting Research, 19*(3), 365–384.

Carpenter, M. A., & Westphal, J. D. (2001). The strategic context of external network ties: Examining the impact of director appointments on board involvement in strategic decision making. *Academy of Management Journal, 44*(4), 639–660.

Carson, E. (2009). Industry specialization by global audit firm networks. *The Accounting Review, 84*(2), 355–382.

Carter, D. A., Simkins, B. J., & Simpson, W. G. (2003). Corporate governance, board diversity, and firm value. *Financial Review, 38*(1), 33–53.

Chen, G., Firth, M., Gao, D. N., & Rui, O. M. (2006). Ownership structure, corporate governance and fraud: evidence from China. *Journal of Corporate Finance, 12*, 424–448.

Cheng, M., Green, W., & Ko, J. (2015). The impact of strategic relevance and assurance of sustainability indicators on investors' decisions. *Auditing: A Journal of Practice and Theory, 34*(1), 131–162.

Cho, C. H., Michelon, G., Patten, D. M., & Roberts, R. W. (2014). CSR report assurance in the USA: An empirical investigation of determinants and effects. *Sustainability Accounting Management and Policy Journal, 5*(2), 130–148.

Clarke, D. C. (2003). Corporate governance in China: An overview. *China Economic Review, 14*(4), 494–507.

Cohen, J. R., & Simnett, R. (2015). CSR and assurance services: A research agenda. *Auditing: A Journal of Practice & Theory, 34*(1), 59–74.

Dahya, J., Karbhari, Y., Xiao, J. Z., & Yang, M. (2003). The usefulness of the supervisory board report in China. *Corporate Governance: An International Review, 11*(4), 308–321.

Dalton, D. R., Daily, C. M., Johnson, J. L., & Ellstrand, A. E. (1999). Number of directors and financial performance: A meta-analysis. *Academy of Management Journal, 42*, 674–686.

Dang, R., Nguyen, D. K., & Vo, L. (2009). *Women on corporate boards and firm performance: A comparative study*. Available from http://events.em-lyon.com/AFFI/Papers/252.pdf.

Das, P. K. (2014). The role of corporate governance in foreign investments. *Applied Financial Economics, 24*(3), 187–201.

Davis, G. F., & Cobb, J. A. (2009). Resource dependence theory: Past and future. In S. B. Bacharach (Ed.), *Research in the sociology of organizations*. London: Elsevier.

Deegan, C. M., Cooper, B. J., & Shelly, M. (2006). An investigation of TBL report assurance statements: UK and European evidence. *Managerial Auditing Journal, 21*(4), 329–371.

Elliott, R. (1997). Assurance service opportunities: Implications for academia. *Accounting Horizons, 11*(4), 61–74.

Erhardt, N. L., Werbel, J. D., & Shrader, C. B. (2003). Board of director diversity and firm financial performance. *Corporate Governance: An International Review, 11*(2), 102–111.

Fama, E. F., & Jensen, M. C. (1983). Separation of ownership and control. *Journal of Law and Economics, 26*, 301–325.

Fan, G., Wang, X., & Ma, G. (2011). Contribution of marketization to China's economic growth. *Economic Research Journal, 9*, 4–16.

Fields, L. P., Fraser, D. R., & Subrahmanyam, A. (2012). Board quality and the cost of debt capital: The case of bank loans. *Journal of Banking & Finance, 36*, 1536–1547.

Firth, M., Fung, P. M., & Rui, O. M. (2007). Ownership, two-tier board structure, and the informativeness of earnings—evidence from China. *Journal of Accounting and Public Policy, 26*, 463–496.

Galbraith, J. (2010). Corporate governance practices that address climate change: An exploratory study. *Business Strategy and the Environment, 19*, 335–350.

Gray, R. (2000). Current developments and trends in social and environmental auditing, reporting and attestation: A review and comment. *International Journal of Auditing, 4*(3), 247–268.

Herrmann, P., & Datta, D. K. (2002). CEO successor characteristics and the choice of foreign market entry mode: An empirical study. *Journal of International Business Studies, 33*(3), 551–569.

Hillman, A., Cannella, A., & Paetzold, R. (2000). The resource dependence role of corporate directors: Strategic adaptation of board composition in response to environmental change. *Journal of Management Studies, 37*, 213–255.

Huggins, A., Green, W., & Simnett, R. (2011). The competitive market for assurance engagements on greenhouse gas statements: Is there a role for assurers from the accounting profession? *Current Issues in Auditing, 5*(2), A1–A12.

Ibrahim, N., & Angelidis, J. (1995). The corporate social responsiveness orientation of board members: Are there differences between inside and outside directors. *Journal of Business Ethics, 14*(5), 405–410.

Ibrahim, N., Angelidis, J., & Tomic, I. (2009). Managers' attitudes toward codes of ethics: Are there gender differences? *Journal of Business Ethics, 90*, 343–353.

Jamali, D., Safieddine, A. M., & Rabbath, M. (2008). Corporate governance and corporate social responsibility synergies and interrelationship. *Corporate Governance: An International Review, 16*(5), 443–459.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: managerial behaviour, agency costs and ownership structure. *Journal of Financial Economics, 3*, 305–360.

Jizi, M. I., Salama, A., Dixon, R., & Stratling, R. (2014). Corporate governance and corporate social responsibility disclosure: Evidence from the US banking sector. *Journal of Business Ethics, 125*(4), 601–615.

Jo, H., & Harjoto, M. A. (2012). The causal effect of corporate governance on corporate social responsibility. *Journal of Business Ethics, 106*, 53–72.

Kolk, A., & Perego, P. (2010). Determinants of the adoption of sustainability assurance statements: An international investigation. *Business Strategy and the Environment, 19*(3), 182–198.

Konrad, A., Kramer, V., & Erkut, S. (2008). Critical mass: The impact of three or more women on corporate boards. *Organizational Dynamics, 37*(2), 145–164.

KPMG. (2008). *KPMG international survey of corporate responsibility reporting 2008*. London: KPMG LLP.

KPMG. (2011). *KPMG international survey of corporate responsibility reporting 2011*. London: KPMG LLP.

Kristie, J. (2011). The power of three. *Director Boards, 35*(5), 22–32.

La Porta, R., Lopez-de-Silances, F., Shleifer, A., & Vishny, R. (2000). Investor protection and corporate governance. *Journal of Financial Economics, 58*, 3–27.

Laksmana, I. (2008). Corporate board governance and voluntary disclosure of executive compensation practices. *Contemporary Accounting Research, 25*(4), 1147–1182.

Lane, J. C. (1995). Ethics of business students: Some marketing perspectives. *Journal of Business Ethics, 14*(7), 571–580.

Lau, C., Lu, Y., & Liang, Q. (2014). Corporate social responsibility in China: A corporate governance approach. *Journal of Business Ethics, 119*, 1–15.

Li, Z., Guan, F., & Li, Z. Q. (2013). An empirical research on drivers of corporate social responsibility report attestation: Empirical evidence from Chinese listed companies. *Auditing Research, 3*, 102–112.

Li, Z., & Li, Z. Q. (2012). Information content of corporate social responsibility report attestation opinion: Empirical evidence from Chinese listed companies. *Auditing Research, 1*, 78–86.

Liu, Y., Miletkov, M. K., Wei, Z., & Yang, T. (2015). Board independence and firm performance in China. *Journal of Corporate Finance, 30*, 223–244.

Liu, Y., Wei, Z., & Xie, F. (2014). Do women directors improve firm performance in China? *Journal of Corporate Finance, 28*, 169–184.

Marquis, C., & Qian, C. (2014). Corporate social reporting in China: Symbol or substance. *Organization Science, 25*, 127–148.

Masulis, R. W., Wang, C., & Xie, F. (2012). Globalizing the boardroom—the effects of foreign directors on corporate governance and firm performance. *Journal of Accounting and Economics, 53*, 527–554.

Miller, T., & Triana, M. C. (2009). Demographic diversity in the boardroom: Mediators of the board-diversity-firm performance relationship. *Journal of Management Studies, 46*, 755–786.

Mock, T. J., Strohm, C., & Swartz, K. M. (2007). An examination of worldwide assured sustainability reporting. *Australian Accounting Review, 17*(1), 67–77.

Moroney, R., Windsor, C., & Aw, Y. T. (2012). Evidence of assurance enhancing the quality of voluntary environmental disclosures: An empirical analysis. *Accounting and Finance, 52*(3), 903–939.

Nekhili, M., & Gatfaoui, H. (2013). Are demographic attributes and firm characteristics drivers of gender diversity? Investigating women's positions on French boards of directors. *Journal of Business Ethics, 118*, 227–249.

O'Dwyer, B., & Owen, R. (2007). Seeking stakeholder-centric sustainability assurance: An examination of recent sustainability assurance practice. *The Journal of Corporate Citizenship, 25*, 77–94.

Oliver, C. (1991). Strategic responses to institutional processes. *Academy of Management Review, 16*(1), 145–179.

O'Neill, H. M., Saunders, C. B., & McCarthy, A. D. (1989). Board members, corporate social responsiveness and profitability: Are tradeoffs necessary? *Journal of Business Ethics, 8*(5), 353–357.

Oxelheim, L., Gregorič, A., Randøy, T., & Thomsen, S. (2013). On the internationalization of corporate boards: The case of Nordic firms. *Journal of International Business Studies, 44*, 173–194.

Oxelheim, L., & Randøy, T. (2003). The impact of foreign board membership on firm value. *Journal of Banking & Finance, 27*, 2369–2392.

Pelled, L. H., Eisenhardt, K., & Xin, K. R. (1999). Exploring the black box: An analysis of work group diversity, conflict, and performance. *Administrative Science Quarterly, 44*(1), 1–28.

Perego, P. (2009). Causes and consequences of choosing different assurance providers: An international study of sustainability reporting. *International Journal of Management, 26*(3), 412–487.

Peters, G. F., & Romi, A. M. (2015). The association between sustainability governance characteristics and the assurance of corporate sustainability reports. *Auditing: A Journal Of Practice & Theory, 34*(1), 163–198.

Peterson, C. A., & Philpot, J. (2007). Women's roles on U.S. Fortune 500 boards: Director expertise and committee memberships. *Journal of Business Ethics, 72*, 177–196.

Pfeffer, J. (1972). Size and composition of corporate boards of directors: The organization and its environment. *Administrative Science Quarterly, 17*(2), 218–228.

Pfeffer, J., & Salancik, G. R. (1978). *The external control of organizations: A resource dependence perspective*. New York: Harper & Row.

Pflugrath, G., Roebuck, P. J., & Simnett, R. (2011). Impact of assurance and assurer's professional affiliation on financial analysts? Assessment of credibility of corporate social responsibility information. *Auditing: A Journal Of Practice & Theory, 30*(3), 32–43.

Shen, H. T., Wang, L. Y., & Wan, T. (2011). Can corporate social report and assurance be effective signals? *Auditing Research, 4*, 87–93.

Simnett, R., Vanstraelen, A., & Chua, W. F. (2009). Assurance on sustainability reports: An international comparison. *The Accounting Review, 84*(3), 937–967.

Solomon, J. (2009). *Corporate governance and accountability* (3rd ed.). Chichester: John Wiley and Sons.

Tihanyi, L. D., Griffith, A., & Russel, C. J. (2005). The effect of cultural distance on entry mode choice, international diversification, and MNE performance: A meta-analysis. *Journal of International Business Studies, 36*(1), 270–283.

Wallage, P. (2000). Assurance on sustainability reporting: An auditor's view. *Auditing: A Journal of Practice & Theory, 19*, 53–65.

Williams, R. J. (2003). Women on corporate boards of directors and their influence on corporate philanthropy. *Journal of Business Ethics, 42*, 1–10.

Wong, R., & Millington, A. (2014). Corporate social disclosure: A user perspective on assurance. *Accounting, Auditing & Accountability Journal, 27*(5), 863–887.

Xie, X. B. (2009). Operational complexity, ownership characteristics and the determinant of board structure (Chinese Version). *Economic Review, 9*(1), 77–92.

Casey, R., & Grenier, J. (2015). Understanding and contributing to the enigma of corporate social responsibility (CSR) assurance in the United States. *Auditing, 34*(1), 97–130.

Yang, J. D., Yang, X. Q., & Sun, L. (2008). Research on the association between boards characteristics and earnings management in listed firms (Chinese Version). *Communication of Finance and Accounting, 8*(1), 117–119.