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RESEARCH PAPER

Board diversity and financial statement comparability: evidence from China

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Abstract

We investigate the relationship between board diversity (relation-oriented diversity, task-oriented diversity, and overall board diversity) and financial statement comparability. We find that diverse boards are positively associated with financial statement comparability, suggesting that board diversity improves governance mechanisms by alleviating agency conflicts, leading to higher comparability than homogenous boards. We also find that institutional ownership positively affects the association between board diversity and financial statement comparability. Furthermore, the positive effect of diversity, institutional ownership, and comparability are more pronounced in non-state-owned firms and non-crisis periods. Our findings remain consistent with a battery of econometric techniques and measures of comparability. This study provides new insights regarding the role of boardroom diversity in shaping the qualitative aspect of financial reporting, i.e., financial statement comparability.

Keywords Financial statement comparability · Relation diversity · Task diversity · China

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1 Introduction

Corporate boards influence all the organizational outcomes because of the strategic nature of their decisions. The idea of diversity has gained attention over the last two decades after the extraordinary governance failures and increasing demand from investors and regulators for improved monitoring (Ararat et al., 2015). Since then, the opportunities and challenges presented by board diversity have long fascinated the researchers. Diversity has various facets, such as age, gender, technical expertise, and experience of running a business. Earlier studies suggest that diversity affects firms in many ways. For instance, board diversity has a significant effect on a firm's stock price crash risk (Jebran et al., 2020), cash holding (Atif et al., 2019), asset prices (Li and Zeng, 2019), firm performance (Aggarwal et al., 2019; Carter et al., 2010), corporate investment (Harjoto et al., 2018), financial frauds (Xu et al., 2018), earnings management (Bilal et al., 2018; Hoang et al., 2017; Labelle et al., 2010; Park & Shin, 2004), corporate social responsibility (Harjoto et al., 2015) and corporate risk-taking (Serfling, 2014), etc. All these prior research have explored the effect of board diversity on various corporate dimensions, including earnings management and financial fraud (Bilal et al., 2018; Hoang et al., 2017; Labelle et al., 2010; Park & Shin, 2004; Xu et al., 2018). However, these studies ignored the qualitative facets of financial reporting, i.e., financial statement comparability (comparability hereafter). Using a comprehensive measure of diversity includes relation diversity which comprises demographic characteristics such as gender and age; task diversity which contains job-related attributes such as tenure, education, and expertise; and overall diversity to study the impact of diversity on comparability.

Comparability is an important and one of the most desired characteristics of financial reporting (International Accounting Standard Board, 2010). Comparability is beneficial for the users of financial statements as it aids in appraising true firm performance and facilitates making informed decisions as it aids in interpreting accounting information. Comparability, according to archival research, improves the accuracy (quality) of accounting information while minimizing the cost of its acquisition and processing (Barth et al., 2012; De Franco et al., 2011; Zhang, 2018). Comparability curtails information asymmetry leading to increased transparency which results in higher innovation efficiency (Chircop et al., 2020), efficient allocation of resources (Kim et al., 2020), higher stock price informativeness (Choi et al., 2019), lower tax avoidance (Majeed & Yan, 2019), superior acquisitions (Chen et al., 2018), greater relevance of accounting information (Kim et al., 2018), decrease the cost of capital (Imhof et al., 2017), minimize credit risk (Kim et al., 2013), lower stock price crash risk (Kim et al., 2016), and forecast accuracy (De Franco et al., 2011). However, there are various benefits linked with comparability in the literature (e.g., Chen et al., 2018; Chircop et al., 2020; Choi et al., 2019; Kim et al., 2018, 2020; Zhang et al., 2020), only a handful of studies focused on the determinants of comparability (Cao et al., 2016; Dhole et al., 2021; Francis et al., 2014; Imhof et al., 2018; Lee et al., 2016; Majeed et al., 2018). We bridge this gap and provide new insights on the determinants of comparability.

We argue that higher diversity would improve comparability. We consider board heterogeneity a multi-facet intricate phenomenon encompassing the directors' gender, age, education, expertise, and tenure. Following the extant literature (Harjoto et al., 2018; Jebran et al., 2020), we classified these characteristics into relation-oriented (RD), task-diversity (TD), and overall board diversity (BD) categories. RD comprises members' distinctive features such as age and gender. In contrast, TD consists of directors' job-related learned attributes like education, experience and tenure, and board (overall) diversity (BD), equal to the RD and TD's sum. The intergroup contact hypothesis can explain the effect of relation diversity (Allport, 1954). Under optimal circumstances, the impact of diversity on board performance (i.e., with similar tasks, equal status, and shared goals) may help overcome the conflict of interest and stereotypes (Pettigrew & Tropp, 2006), resulting in improved performance or higher quality governance leading to higher comparability. However, agency theory (Jensen & Meckling, 1976) suggests that higher quality governance mechanisms may help mitigate agency problems, enhancing transparency leading to lower information asymmetry (Chung et al., 2010). When there is more gender diversity on the board, it leads to better managerial oversight and less opportunism, resulting in higher-quality financial disclosure (Abad et al., 2017; Carter et al., 2003; Cumming et al., 2015; Terjesen et al., 2016; Ullah et al., 2019; Wahid, 2019). Since greater gender diversity improves financial reporting quality, we anticipate that greater gender diversity will improve comparability. Similarly, age plays a significant effect in decision-making. Previous research has found a substantial significant association between age and financial reporting and a lower likelihood of fraud (Huang et al., 2012; Troy et al., 2011; Xu et al., 2018). These studies posit that the age of the top management mitigates managerial opportunisms, thus, affecting (reducing) information asymmetry. Consequently, we conclude a strong correlation between board age and comparability. Similarly, task-related diversity (tenure, expertise, and education) also increases the cognitive abilities of the board, improves board performance, and makes monitoring of managers (Harjoto et al., 2018; Webber & Donahue, 2001). Improved board performance, as a result of tenure and board diversity, increases the financial reporting quality and transparency (Bedard et al., 2004; Bilal et al., 2018; Li & Wahid, 2018; Liu & Sun, 2010; Jebran et al., 2020; Zalata et al., 2018). Therefore, we anticipate that higher TD would strengthen the monitoring of management, and superior board performance would enhance the qualitative facet of financial reporting quality, i.e., comparability. Based on these arguments, we further argue that overall diversity improves organizational resources, cognitive abilities, monitoring capabilities, and firm reputation as well. Such benefits decrease the incentives for information opacity and asymmetry, leading to higher quality financial reporting. The governance view further strengthens this argument and suggests that higher-quality governance mechanisms result from diversity and lower agency problems and facilitate information dissemination. Since higher comparability improves information quality and information asymmetry, therefore we reason that higher diversity would enhance comparability.

China is unique in the sense that even with the absence of an environment which supports market-based institutions, China has been growing at an unprecedented rate. China is the second largest economy in the world, but it suffers from a poor corporate information environment (Allen et al., 2012) which makes it vital to study the factors that could improve the information environment and alleviate information asymmetry. Furthermore, weak governance, and less developed legal setting, direct and indirect government intervention to achieve socio-political goals, lack of capital market pressure for higher quality financial reporting also affect the financial reporting practices in China (Berger et al., 2009; Faccio, 2006; Firth et al., 2016). Another unique aspect of Chinese setting is the large number of SOEs (Lin et al., 2020). Ownership concertation, which leads to agency conflict between majority and minority shareholders (type II agency conflict) (Claessens et al., 2002), is an important aspect of a corporate environment. Such uniqueness of the Chinese environment provides a rich environment for studying the effect of board diversity. Moreover, China is a developing economy, so the study's findings provide implications for other developing countries as well.

Our sample comprises of China's A-listed firms registered on Shanghai and Shenzhen Stock Exchanges for the period from 2005 to 2020. Our results posit that whether RD, TD, or BD, significantly influences comparability. These findings suggest that greater board diversity strengthens the monitoring of managerial resources, reduces agency conflict, and result in higher comparability. The findings also exhibit that greater diversity increases the collective knowledge, cognitive abilities, and enhances the board functionality, improving monitoring and leading to higher comparability. We also find that institutional ownership positively affects the nexus between board diversity and comparability. The monitoring induced by the institutional investors strengthens the association of board diversity with comparability. Our study further documents that the impacts of all three dimensions of diversity and institutional ownership on comparability are insignificant for state-owned enterprises (SOEs) and non-crisis periods. We established the robustness of our results through a battery of econometric models and alternative comparability proxies.

This study contributes to the comparability literature in the following ways. First, this study demonstrates strong empirical evidence on board diversity as a determinant of a firm's comparability and contributes to the accounting literature. Previous studies documented the role of economic policy uncertainty (Dhole et al., 2021), corporate social responsibility (Wang et al., 2020), competitive environment (Imhof et al., 2018), audit committee (Endrawes et al., 2018), related party transactions (Lee et al., 2016) auditor style (Francis et al., 2014) and financial reporting standards (Barth et al., 2012). However, the preceding literature ignored the role of corporate boards in shaping financial statement comparability. We fill this gap and document the association between diversity and comparability. To the best of our knowledge, none of the existing studies has examined the effect of board diversity on comparability. Thus, we enrich the extant literature on determinants of comparability. Second, the findings suggest that board diversity improves the corporate information environment by improving comparability. Our study is different from earlier studies in two ways. First, we consider various aspects of diversity (i.e., RD, TD, and BD) to examine their effect on comparability, while prior studies focused on either one or two aspects only. Second, previous literature on diversity and accounting quality focused on financial fraud (Wahid, 2019; Xu et al., 2018) earnings management (Bilal et al., 2018; Hoang et al., 2017; Srinidhi et al., 2011), while we explore the impact of diversity on comparability (the qualitative aspect of financial reporting). Third, our study enhances the understanding of the effects of board diversity from an emerging economy, i.e., China. China is the second-largest emerging economy in the world. Though, the Chinese institutional environment shares various features with other emerging economies, it also has its unique facets. Therefore, the study of board diversity and comparability in Chinese institutional settings can provide substantial insights as other studies only focus on developed economies. Moreover, a poor corporate information environment is particularly a problem in emerging markets. Therefore, the study of determinants of comparability which improve corporate information environment is critical.

The rest of our study is as follow: Sect. 2 reports literature and hypotheses; Sect. 3 covers the methodology we followed; Sect. 4 depicts the results; robustness and endogeneity tests are discussed in Sect. 5; Sect. 6 comprises of additional analysis of the study, and Sect. 7 concludes the study.

2 Literature review and hypotheses development

Traditional construct suggests that a board of directors is a group of homogeneous elites with similar educational, social, economic, and professional backgrounds and share similar business views or practices (Westphal & Milton, 2000). However, today's world is more multicultural, has greater gender sensitivity, and encourages more diverse backgrounds (Van der Walt & Ingley, 2003). Therefore, firms face an intricate situation with globalization, technological advancements, and organizational de-centralization (Chambers et al., 1998). In this rapidly changing world, the firms have recognized the value of diversity in their board of directors since the monoculture boards do not fit in today's business setting where heterogeneous views are an asset. The value and demand of diversity particularly surged after the global financial crisis of 2008. Regulators promoted and, in some cases, made it mandatory[1] to enhance the diversity in board of directors (Milliken & Martins, 1996; Smith, 2001). Diversity of perspectives brought by heterogeneous group increase knowledge and wisdom of group may lead to informed decision making and enhances the monitoring of managerial activities (Adams & Ferreira, 2009; Srinidhi et al., 2011; Ullah et al., 2020). This view is reinforced by the cognitive resource view, which suggests that a diverse group brings a broad knowledge base, social networks, skills, and enhanced analytical capabilities resulting in a greater ability to deal with complex situations (Webber & Donahue, 2001). From a societal standpoint, the boards are the reflections of society, and increasing participation of the minority groups in social settings should also be reflected in the organizational governance. So, contemporary social settings that advocate for democracy and greater inclusion of minority groups intensify the demand for board diversity.

[1] *Certain European countries introduced gender-based quotes and non-compliance could result in delisting. However, in US companies are required to define the diversity where some firms may consider gender, age and race as diversity and others may consider tenure and expertise as diversity.*

The impact of board diversity on corporate decisions may be explained through resource dependence theory (RTD) and agency theory (governance view). RTD (Salancik & Pfeffer, 1979) suggests that organizations must have various (heterogeneous) resources to assert their influence, obtain power, and seek stability in the operating environment. So, the availability of diverse perspectives from stakeholders is necessary for the functioning and critical for survival (Pfeffer, 1973). Board heterogeneity means board members are from different walks of life and diverse in their attributes. The boards would be different in terms of age, gender, race, educational background, experience, etc. This diverse group would bring an understanding of various cultures, experiences of life, access to social networks, and technical expertise, which facilitates informed decision making and problem-solving capability of the boards (Davis & Cobb, 2010; Gruenfeld et al., 1996). Agency theory (Jensen & Meckling, 1976) suggests that the conflict of interest arises between the agents and principals (i.e., manager and shareholders, respectively), and heterogeneous boards may provide a mitigation mechanism. Furthermore, firms with diverse boards facilitate the dissemination of relevant information, which improves the monitoring, decreases agency issues, and enhances corporate reputation (Adams & Ferreira, 2009; Gul et al., 2011; Khan et al., 2021; Mirza et al., 2020; Upadhyay & Zeng, 2014).

Extant studies take into account various features of the boards to define diversity. The board's diversity considers multiple social and demographic factors such as gender, race, and nationality as well as structural and task-oriented aspects such as expertise, industry experience, education—organizational outcomes, etc. (Hoang et al., 2017; Upadhyay & Zeng, 2014). We classify diversity into three aspects, i.e., RD, TD, and BD, as described in recent literature (e.g., Harjoto et al., 2018). RD includes demographic and social features such as gender and age factors, while TD represents the features of the diversity related to the functions or responsibilities of the boards, such as education, expertise, and tenure. BD combines all the attributes of RD and TD.

2.1 Financial statement comparability

The value of comparable accounting information is vital in accounting and finance literature. Regulators, standard setters, and academics have highlighted the value of comparability (FINANCIAL ACCOUNTING STANDARDS BOARD (FASB), 2010; Phillips et al., 2013). When comparable information is available, it leads to efficient decision-making since it helps identify similarities and differences. Greater comparability leads to greater availability of information (to creditors, investors, and regulators), resulting in lower information asymmetry (De Franco et al., 2011). Earlier research documented that comparability is negatively associated with the cost of capital (Imhof et al., 2017; Kim et al., 2013; Majeed & Yan, 2021), stock price crash risk (Kim et al., 2016), and enhances the flow of information (Choi et al., 2015), facilitates in the efficient deployment of cash, capital and labor and research resources (Chircop et al., 2020; Kim et al., 2020; Zhang et al., 2020), reduces tax avoidance (Majeed & Yan, 2019), aids investors in decision making (Chen & Gong, 2019; Young & Zeng, 2015) and curbs risk-taking by financial institutions (Hasan et al., 2020) leading to higher firm value (Neel, 2017). Such benefits of comparability motivate to study the governance, institutional, and business factors that nurture this qualitative feature of financial reporting. However, despite such great benefits of comparability, archival studies on the determinants of comparability are quite limited. Some of the earlier studies in this domain fixated the role of reporting standards in shaping the comparability (Cascino & Gassen, 2015; Lang et al., 2010), and only a few considered the governance and institutional factors. Earlier studies have documented the effect of competitive pressure, strategic orientation, corporate social performance, auditor style, and audit committee features on comparability (e.g., Endrawes et al., 2018; Majeed et al., 2018; Wang et al., 2020). However, extant studies have ignored the influence of governance brought by diverse boards in improving the comparability and reducing information opacity of the firms.

2.2 Relation oriented diversity and comparability

We argue that RD is associated with comparability. RD consists of two aspects, i.e., gender and age. The intergroup contact hypothesis (Allport, 1954), put forth by social psychologists, can help explain the effects of diversity on board performance. The intergroup contact may decrease prejudice, under optimal circumstances, whenever the group is assigned similar tasks, have equal status, and (or) share common goals. Such intergroup contacts enhance the harmony among group members, which may help overcome the conflict of interest and other stereotypes (Pettigrew & Tropp, 2006), leading to higher board performance, i.e., improved monitoring of management. Moreover, the experience of the group members (Dovidio et al., 2003) makes the group members reconsider the precision of the decision leading the corrections as required resulting in higher quality governance of the firm.

The Agency theory framework (Jensen & Meckling, 1976) also suggests that higher quality governance mechanisms may enhance transparency leading to lower information asymmetry (Chung et al., 2010). Carter et al. (2003) documented that a greater number of females on the boards result in enhanced monitoring of management, decreased opportunistic inclination, and increased independence of the boards (Terjesen et al., 2016). Hence, improved monitoring and greater autonomy of the boards can lead to better quality financial disclosure (Abad et al., 2017). Earlier studies provide empirical evidence to this notion that greater board gender diversity (i.e., greater number of female directors) may lead to lower information asymmetry, increase informativeness of stock prices, increase public disclosure and result in higher informational transparency (Abad et al., 2017; Gul et al., 2011). Moreover, women are associated with lesser overconfidence (Lundeberg et al., 1994) and higher moral values (Pan & Sparks, 2012). Women are also regarded as risk-averse and conservative in their decisions (Powell & Ansic, 1997). Earlier studies suggested that women in the corporate boardroom are associated with higher quality of financial reporting and superior auditing standards to enhance the reputation and lessen litigation risk (Ali et al., 2020; Gul et al., 2011). Thus, gender diversity may be regarded as an indication of superior governance mechanisms and higher quality financial disclosure (Brammer et al., 2009). Preceding literature also documented that greater board gender diversity is negatively associated with earnings management, securities fraud, and accounting manipulation (Cumming et al., 2015; Kyaw et al., 2015; Wahid, 2019). Since greater gender diversity improves, financial reporting would improve comparability to enhance transparency and reduce information asymmetry.

Age is another crucial factor that influences the behavior and decisions of individuals. It is essential to note reputational and financial security concerns become important for the individuals (Hambrick & Mason, 1984). As people age, they become risk-averse and conservative in their decisions (Serfling, 2014). People may lose a lot at the career stage if they do not make the correct decisions. Thus, an aged person tends to be more prudent, which may be reflected in his risk-taking capacity and resistance to change at the time of decision making. The age of the corporate upper management team members has a vital role in curtailing managerial opportunism and influencing financial reporting. Huang et al. (2012) suggested that the CEO age significantly affects the firm's financial reporting quality. Earlier studies indicate that younger CEOs are more vulnerable to engaging in financial fraud (Troy et al., 2011), and the older CEOs have fewer incentives to withhold adverse information, which increases the probability of stock price crash risk (Andreou et al., 2017). Xu et al. (2018) documented that as the board age (i.e., average age of board members) increases, the probability of accounting fraud decreases. These previous studies suggested that older top management teams have greater life experience, avoid reckless and risky investment decisions, and have greater reputational concerns. Therefore, we argue that older board members are more likely to curb managerial opportunism and promote informational transparency. The young board members would bring new ideas, broaden the group's perspective, and improve the problem-solving capabilities of the boards, increasing the team's monitoring capabilities (Li & Wahid, 2018). Such members would be more likely to increase the comparability to improve transparency and reduce information asymmetry to curb opportunism and increase corporate reputation. Hence, the RD has a greater resource like fresh ideas, unnecessary risk avoidance, life experiences, and reputational concerns, which motivate informational transparency and curbs opportunism leading to higher comparability. Hence, we put forth flowing hypothesis:

H1 Greater relation-oriented diversity increases comparability.

2.3 Task-oriented diversity and comparability

We also posit that TD of the board, which consists of tenure and education, influence corporate financial reporting decisions and affect comparability. When board members have diverse experiences or education, it increases their cognitive abilities, increasing collective knowledge and improved team skills. Such resources enrich the processing and exchange of information and provide a broader board perspective (Pelled et al., 1999). Task or functional diversity increases the knowledge and (industry) expertise which is helpful in the performance of tasks leading to superior team performance (Milliken & Martins, 1996; Simons et al., 1999). Furthermore, from the social categorization perspective, groups with diverse functional attributes (experience/tenure) would help them understand group members' cognitive resources like talents and knowledge. Such understanding would improve the utilization of such abilities and skills, leading to superior board performance (Harjoto et al., 2018). Higher functional diversity would enhance the performance of the firms, which increases the incentives to increase transparency leading to higher comparability.

Although less tenure diverse groups are cohesive but too friendly, boards decrease the boards' effectiveness (O'Reilly III et al., 1989). Therefore, TD is critical for corporate boards to improve the effectiveness of monitoring. TD brings relatively greater independence (Li & Wahid, 2018; Vafeas, 2003). The basic argument in favor of TD is that junior and senior board members improve the boards' problem-solving ability and enhance board performance (Arnaboldi et al., 2020). Jebran et al. (2020) argued that greater diversity improves the transparency of the information by reducing the suppression of negative news. Earlier studies also suggested that higher tenure diversity improves financial reporting quality (Li & Wahid, 2018). Since tenure diversity improves monitoring and increases information transparency, we expect that higher tenure diversity would increase comparability.

Earlier studies have documented the effect of board members' education on financial reporting practices (Sanchez et al., 2017; Zalata et al., 2018). The impact of the financial expertise of the board members increases the quality of financial information (Bedard et al., 2004; Bilal et al., 2018). Similarly, the board members with industry experience and legal knowledge are negatively related to the firm's earnings management leading to higher financial reporting quality (Krishnan et al., 2011; Wang et al., 2015). The arguments presented by these studies suggest that education background in finance or accounting, legal matters, and industry knowledge increases the monitoring ability of the boards and quality of financial information leading to higher quality financial reporting and lower information asymmetry. Based on these arguments, we posit that higher education diversity would increase financial reporting quality by enhancing the comparability of accounting information. Building on this discussion, we argue that higher TD would improve the monitoring of managerial activities, reduce information opacity, and enhance transparency, resulting in higher accounting comparability.

H2 Greater task-oriented board diversity (education and tenure) increases accounting comparability.

2.4 Overall diversity and comparability

The overall diversity (BD) of the board includes both RD and TD. The board's combined thinking and decisions shape the strategic organizational decisions (Yeung & Lento, 2018). Hence, overall diversity is vital when considering organizational outcomes. The resource dependence perspective also suggested that overall board expertise facilitates the firm in dealing with uncertainties (Boyd, 1990). Greater diversity gives an organization wide-ranging skills, knowledge, and expertise, improving firm reputation, financial performance, investment decisions, and investor confidence (Jebran et al., 2020). Such benefits decrease the incentives for an opaque information environment and information asymmetry. The governance view suggested that higher diversity leads to higher-quality governance mechanisms and lower agency problems, and lower managerial opportunism, which facilitates disseminating information and reducing information asymmetry. Since higher comparability improves information quality and information asymmetry, therefore we argue that higher diversity would enhance comparability. Based on this argument, we argue that greater board diversity would enhance comparability to reduce information asymmetry and improve the information environment. This leads to our third hypothesis.

H3 The higher overall board diversity (gender, age, education, tenure, and expertise) increases accounting comparability.

2.5 Moderating impact of institutional ownership

Institutional investors play a significant role in corporate governance (Huang & Zhu, 2015) by monitoring and influencing managerial behavior like cash management, diversification, tax avoidance, risk-taking, organizational culture, philanthropic decisions, corporate leverage adjustment, corporate innovation, CSR, and investment efficiency (Ameer, 2010; An et al., 2021; Andreou et al., 2021; Cao et al., 2020; Cheng et al., 2021; Fu & Qin, 2021; García-Sánchez et al., 2020; Hartzell et al., 2014; Jiang et al., 2021; Sakawa et al., 2021). This role helps mitigate agency issues between principals and agents and improve the firm's performance (Shleifer & Vishny, 1986). Institutional investors have a fiduciary duty to their stockholders to protect their interests, which is why they prefer to invest in companies with effective governance (Chung & Zhang, 2011). Governance role of the institutional ownership improves the corporate information environment by decreasing earnings management, improving earnings quality, increasing analyst following, enhancing the flow of firm-specific information, and curtails the withholding of negative information (Chung et al., 2002; Cornett et al., 2007; How et al., 2014; Velury & Jenkins, 2006). We argue that monitoring by institutional investors disciplines the management and would enhance the comparability. Investors would be particularly interested in comparability since it would improve their ability to compare the investment avenues and make the best decisions. Keeping in view the positive effect of institutional ownership, we expect that when institutional ownership is high, the impact of board diversity on comparability becomes more pronounced. Based on this discussion, we propose the following hypothesis:

H4 The effect of board diversity on comparability is more pronounced when institutional ownership is higher.

3 Methodology

3.1 Sample and data

Our sample comprises Chinese A-share (listed) firms registered on Shenzhen and Shanghai Stock Exchanges for a period spanning 2005–2020. We exclude ST and PT designated firms[2] from our sample. Consistent with earlier studies (e.g., Ji et al., 2021; Luo et al., 2021), the financial firms are not part of this study. These firms are quite different from non-financial institutions since they operate in different regulatory environments. Our sample comprises 32,122 observations. However, the total number of observations in regression is relatively less since some variables have missing values. To exclude the unwarranted influence of extreme values of certain variables in our sample, we winsorized all continuous variables at 99th percentiles. Appendix A provides definitions of all the variables.

3.2 Measurement of board diversity

This study uses board diversity (RD, TD, BD) as the key independent variable. We employed the model proposed by Blau (2000) to calculate the diversity index. The equation for the above model is given as;

$$D = 1 - \sum P_i^2, \tag{1}$$

where "D" refers to diversity index; "P" signifies the proportion (%) of members in each group (category); "i" denotes the total number of groups. The diversity index has a value between 0 and 1. A larger value denotes complete heterogeneity, whereas a smaller value signifies complete homogeneity. The diversity of the index increases with the increase in the number of categories.

For the calculation of board diversity, we first measured five diversity indexes. These indexes include gender, age, tenure, education, and expertise. For gender diversity, we used two groups, i.e., male and female; Age diversity index is grouped into five categories, 40 (and younger), 41–49, 50–59, 60–69, 70 years (and above); tenure index is divided into four categories, i.e., 3 years (and less), 4 years, and 5 years (more than 5 years); education diversity has five facets, i.e., (1)—Technical secondary school (and below), (2)—Associate degree, (3)—Bachelor, (4)—Master degree, and (5)—PhD degree; and expertise diversity are grouped into five categories such as (1)—financial; (2)—consulting; (3)—legal; (4)—management (executives); and (5)—other expertise (i.e., medical, research, etc.,).

Following Harjoto et al. (2018) and Jebran et al. (2020), we compute relation diversity which includes demographic characteristics such as age and gender (relation diversity = sum of gender and age diversities), task-oriented diversity, which

[2] *ST and PT refers to special treatment and particular treatment firms. The firm is labeled as ST if its recent financial profit is negative for two consecutive years. ST firms will be relabeled as PT if it is unable to be revived within two years.*

includes characteristics related to jobs such as tenure, education, and expertise (task diversity = sum of tenure, education, and expert diversities), and overall board diversity (overall diversity = sum of education diversity, expert diversity, tenure diversity, gender diversity, and age diversity).

3.3 Institutional ownership

Institutional ownership is the moderator variable in this study. Institutional ownership (InsOwn) is calculated as the percentage of a company's shares held by institutional investors.

3.4 Measurement of financial statement comparability

Following Majeed & Yan (2022), we develop a firm-specific, output-based comparability measure. This measure considers firms to be comparable if they generate similar financial statements in response to a certain economic event. De Franco et al. (2011) defined their accounting system as "mapping from economic events (measured by stock returns) into financial statements (earnings)":

$$Financail\ Statement_i = f_i\left(Economic\ Event_i\right), \tag{2}$$

where, "f_i" signifies the firm's accounting system "i," and the economic event is shown by stock returns. For two firms to have comparable accounting systems, their economic events must be mapped similarly. According to De Franco et al. (2011), we assume "f_i" is a linear function, as illustrated in the above equation [1]. To measure the accounting function of a specific firm "i" in each year, we estimate the following time-series regression (using 16 previous quarters of data):

$$Earnings_{it} = \beta_i + \delta_i Return_{it} + \varepsilon_{it}. \tag{3}$$

where, in Eq. (2), *Earnings* is used as a proxy for financial statement outcomes, which is measured as quarterly net income before extraordinary items deflated by the beginning – of – period market value of equity and *Return* (quarterly stock returns during quarter t) is used as a proxy for economic events. We estimate the accounting function for firm "i" and accounting function for firm "j" for a given fiscal year. Comparability between two firms increases with the closeness of the functions between the two firms. The estimated accounting functions of firm "i" and firm "j" are employed to predict their respective earnings, assuming that they have experienced the same economic event (i.e., return of firm "i"):

$$\text{Firm } i : E(Earnings)_{iit} = \hat{\alpha}_i + \hat{\beta}_i Returns_{it}. \tag{4}$$

$$\text{Firm } j : E(Earnings)_{ijt} = \hat{\alpha}_j + \hat{\beta}_j Returns_{it}. \tag{5}$$

In Eqs. (3) and (4), $E(Earnings)_{iit}$. represents the predicted earnings of firm i and $E(Earnings)_{ijt}$ is the predicted earnings of firm j, with the stock return of firm i in period t as the same economic event. When firms employ comparable accounting systems, the difference between two predicted earnings is smaller. Accordingly, we use the following equation to estimate comparability.

$$CompAc_{ijt} = \left(-\frac{1}{16}\right) \times \sum_{t-15}^{t} |\mathrm{E}\left(Earning_{iit}\right) - \mathrm{E}\left(Earning_{ijt}\right)|. \tag{6}$$

The $CompAc_{ijt}$ (comparability) between two firms, i.e., firm $i's$ and firm $j's$ accounting system is estimated as the absolute difference between the predicted earnings (using firm $i's$ and firm $j's$) accounting functions multiplied by -1. Therefore, the proxy for the comparability ($CompAc_{ijt}$) has nonpositive values. Higher values indicate higher comparability. The comparability is higher between firm "*i*" and firm "*j*" when the comparability measure, i.e., $CompAc_{ijt}$ has higher values because it represents a smaller absolute difference between $E(Earnings)_{iit}$ and $E(Earnings)_{ijt}$.

To get the firm-year level of the comparability measures, we rank all the values of $CompAc_{ijt}$ for each firm i from the highest to lowest within an industry. Our measures for firm-year level of comparability $FSC4_{it}$ or $FSC10_{it}$ are the mean value of the four or ten largest comparability scores ($CompAc_{ijt}$) of firm "*i*" in year "*t*" in the same industry, respectively. And FSCInd is the median of all of the comparability scores of firm "*i*" in the industry for year "*t*".

3.5 Control variables

Following prior comparability literature (e.g., Dhole et al., 2021; Francis et al., 2014), we control for a vector of firm characteristics that have been shown to affect comparability. First, we add size (*Size*: defined as the natural log of the firm's total assets) and market to book ratio (*MB*: market value of equity deflated by the book value of equity) to control for the firm's unobservable attributes. Second, following Dhole et al. (2021) and Francis et al. (2014), we control for operating cash flow (*OCF*: cash flow from operation scaled by total assets), sales growth (*Growth*: measured as current year sales minus previous year sales divided by sales in the previous year), and leverage (*Lev*: firm's total liability divided by total assets). We use these variables to view that both firm's business environment and manager's inclination to change financial reports could affect comparability. Third, we include return on assets (*ROA*: net income divided by total assets), since ROA could affect comparability (Sohn, 2016). Fourth, we also control the firm age (*FAge*: measured as natural log of the number of years of the firm since its inception), board size (*BSize*: equals to number of board members), board independence (*BIND*: number of independent directors on the board), and duality (*Dual*: indicator variable equals to 1 if the CEOs also serve as board chair, and 0 otherwise). These variables help in controlling similarities and differences in economic fundamentals and managers' inclination towards earnings management (Francis et al., 2014). We add absolute discretionary accruals (*AQ:* followed the Kothari et al. (2005) model). Finally, we add board audit committee expertise (ACEXP: the proportion of audit committee financial expertise directors) and board audit committee gender diversity in our study (ACGD: the gender diversity in the audit committee followed Blau, (2000) index). We also use moderator variable in our additional analysis, i.e., state-owned enterprises (*SOEs*: dummy variable that takes the value of one if the firm is owned by the state and zero otherwise).

3.6 Regression model

We employed a panel data regression model to estimate the effect of board diversity on firm's comparability.

$$\begin{aligned} CompAc_{it} = {} & \delta_0 + \delta_1(RD_{it}, TD_{it}, BD_{it}) + \delta_2 Size_{it} + \delta_3 MB_{it} + \delta_4 OCF_{it} \\ & + \delta_5 Growth_{it} + \delta_6 AQ_{it} + \delta_7 Lev_{it} + \delta_8 ROA_{it} + \delta_9 FAge_{it} \\ & + \delta_{10} BSize_{it} + \delta_{11} BIND_{it} + \delta_{12} Dual_{it} + Firm + Year + \gamma_{it} \end{aligned} \tag{7}$$

$$\begin{aligned} CompAc_{it} = {} & \delta_0 + \delta_1(RD_{it}, TD_{it}, BD_{it}) * InsOwn_{it} + \delta_2 Size_{it} + \delta_3 MB_{it} + \delta_4 OCF_{it} \\ & + \delta_5 Growth_{it} + \delta_6 AQ_{it} + \delta_7 Lev_{it} + \delta_8 ROA_{it} + \delta_9 FAge_{it} + \delta_{10} BSize_{it} \\ & + \delta_{11} BIND_{it} + \delta_{12} Dual_{it} + Firm + Year + \gamma_{it} \end{aligned} \tag{8}$$

where $CompAc_{it}$ represents proxies for comparability (i.e., FSC4, FSC10, and FSCInd, discussed in Sect. 3.3), RD_{it}, TD_{it}, and BD_{it} represent relation diversity, task diversity, and overall board diversity, respectively. $InsOwn_{it}$ represents the institutional ownership while the rest are the control variables that were discussed in Sect. 3.4.

4 Summary statistics and Pearson correlation

Table 1 depicts summary statistics of variables predicted in the regression model. The mean (median) of the comparability measures i.e., *FSC4*, *FSC10,* and *FSCInd* are − 0.530 (− 0.203), − 0.736 (− 0.325), and − 1.654 (− 1.201), respectively. These values are closed to those reported in the study of Majeed and Yuan (2019). The mean (standard deviation) values of the board diversity variables i.e., *RD*, *TD*, and *BD* are 0.853 (0.161), 0.815 (0.290), and 1.668 (0.343), respectively. These values are congruent with previous research (e.g., Jebran et al., 2020). Similarly, the mean (SD) of *InsOwn* is 0.038 (0.106).

In terms of control variables, the average size of the firms in our sample is 22.236, *MB* of 2.088, *OCF* of 0.046, *Growth* of 0.131, *AQ* of 0.095, *Lev* of 0.467, *ROA* of 0.033, and *FAge* of 2.801. In addition, the mean (SD) values of *BSIZE*, *BIND*, *Dual, ACEXP, and ACGD* are 0.413 (0.492), 0.411 (0.492), 0.206 (0.405), 0.202 (0.135), and 0.195 (0.208), respectively.

Table 1 Descriptive statistics

Variables	Mean	SD	Min	P50	Max	N
FSC4	−0.530	1.341	−12.756	−0.203	0.000	24,104
FSC10	−0.736	1.584	−14.645	−0.325	0.000	24,104
FSCIND	−1.654	2.076	−17.809	−1.201	0.000	24,104
RD	0.853	0.161	0.105	0.861	1.247	24,104
TD	0.815	0.290	0.000	0.869	1.430	24,091
BD	1.668	0.343	0.249	1.711	2.551	24,091
InsOwn	0.038	0.106	0.000	0.016	11.706	22,923
Size	22.236	1.276	19.156	22.087	25.818	24,104
MB	2.088	1.203	−4.252	2.128	10.085	24,100
OCF	0.046	0.070	−0.184	0.044	0.260	24,104
Growth	0.131	0.388	−6.591	0.108	9.608	23,300
AQ	0.095	0.276	0.000	0.057	16.787	23,026
Lev	0.467	0.207	0.017	0.468	3.805	24,104
ROA	0.033	0.074	−3.043	0.031	0.863	24,104
FAge	2.801	0.335	1.098	2.833	3.480	24,104
BSIZE	0.413	0.492	0.000	0.000	1.000	24,104
BIND	0.411	0.492	0.000	0.000	1.000	24,104
Dual	0.206	0.405	0.000	0.000	1.000	23,640
ACEXP	0.202	0.135	0.000	0.000	0.600	24,104
ACGD	0.195	0.208	0.000	0.000	0.500	24,104

This table reports the summary statistics of variable used in the study. Refers to Appendix 1 for variable definitions

Table 2 depicts the findings of the Pearson correlation matrix. We find that the board diversity indexes, i.e., *RD*, *TD*, and *BD,* and *InsOwn* are significantly and positively correlated with all measures of comparability. These statistics preliminary provide support for our core hypotheses. The correlation between our independent variables and control variables is low. The unreported results of VIF show no multicollinearity issues among variables, as values of VIF are all below 5.

5 Results

5.1 Board diversity and financial statement comparability

Table 3 shows the findings of our regression analysis. From columns (1) to (3), we report the results of H1, where the explanatory variable is *RD*. The coefficients (t-statistics) for comparability measures i.e., *FSC4*, *FSC10*, *FSCInd* are 0.269 (4.348), 0.362 (4.992), and 0.509 (5.519), respectively. These findings advocate that an increase of 1 standard deviation in the *RD* is linked with a 26.9%, 36.2%, and 50.9% rise in the degree of comparability. These results strongly suggest that R*D* is a significant determinant of comparability. The findings are congruent

Table 2 Pearson correlations

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
1) FSC4	1									
2) FSC10	0.990***	1								
3) FSCIND	0.907***	0.934***	1							
4) RD	0.040***	0.051***	0.063***	1						
5) TD	0.155***	0.179***	0.232***	0.080***	1					
6) BD	0.150***	0.174***	0.225***	0.547***	0.879***	1				
7) InsOwn	0.017**	0.032***	0.072***	0.012*	0.050***	0.036***	1			
8) Size	0.065***	0.069***	0.085***	−0.190***	0.093***	−0.012*	0.225***	1		
9) MB	−0.108***	−0.109***	−0.128***	0.110***	−0.017**	0.037***	−0.299***	−0.571***	1	
10) OCF	−0.001	−0.015**	−0.037***	−0.044***	−0.013*	−0.032***	0.128***	0.028***	−0.038***	1
11) Growth	−0.018***	−0.014**	−0.010	0.016**	−0.044***	−0.029***	0.097***	0.082***	−0.030***	0.035***
12) AQ	−0.042***	−0.043***	−0.048***	0.028***	−0.041***	−0.020***	0.028***	0.020***	0.001	−0.054***
13) Lev	−0.154***	−0.156***	−0.159***	−0.134***	−0.104***	−0.152***	0.017**	0.467***	−0.138***	−0.143***
14) ROA	0.048***	0.034***	−0.012*	0.009	−0.037***	−0.026***	0.234***	0.049***	−0.057***	0.373***
15) FAge	0.044***	0.070***	0.141***	0.122***	0.247***	0.266***	−0.031***	0.145***	−0.005	−0.056***
16) BSIZE	−0.010	−0.011*	−0.001	−0.066***	0.078***	0.033***	0.024***	0.207***	−0.102***	0.038***
17) BIND	−0.004	−0.003	−0.021***	0.055***	0.083***	0.096***	−0.031***	−0.009	0.047***	−0.032***
18) Dual	0.033***	0.038***	0.039***	0.136***	0.055***	0.112***	−0.001	−0.114***	0.091***	−0.018**
19) ACGD	0.026***	0.034***	0.047***	0.336***	0.092***	0.238***	−0.010	−0.058***	0.036***	0.003
20) ACEXP	0.023***	0.034***	0.051***	0.062***	0.120***	0.130***	−0.026***	0.047***	−0.024***	−0.052***

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
1) FSC4										
2) FSC10										
3) FSCIND										

Table 2 (continued)

	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
4) RD										
5) TD										
6) BD										
7) InsOwn										
8) Size										
9) MB										
10) OCF										
11) Growth	1									
12) AQ	0.389***	1								
13) Lev	0.050***	0.051***	1							
14) ROA	0.199***	−0.001	−0.311***	1						
15) FAge	−0.028***	0.014**	0.069***	−0.052***	1					
16) BSIZE	0.004	0.018***	0.112***	−0.011	0.061***	1				
17) BIND	−0.024***	0.003	−0.043***	−0.008	−0.017**	0.088***	1			
18) Dual	0.036***	0.008	−0.106***	0.007	−0.009	−0.102***	0.084***	1		
19) ACGD	−0.001	−0.013*	−0.055***	0.007	0.078***	−0.016**	0.019***	0.059***	1	
20) ACEXP	−0.030***	−0.003	−0.009	−0.023***	0.173***	−0.201***	0.085***	0.032***	0.110***	1

This table reports Pearson correlation

***, **, and * present significance levels at 1%, 5%, and 10%, respectively

Table 3 Board diversity and financial statement comparability

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis One			Hypothesis Two			Hypothesis Three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
RD	0.269***	0.362***	0.509***						
	(4.348)	(4.992)	(5.519)						
TD				0.447***	0.606***	1.029***			
				(10.940)	(12.795)	(17.620)			
BD							0.396***	0.535***	0.885***
							(11.329)	(13.267)	(17.795)
Size	0.236***	0.291***	0.423***	0.211***	0.258***	0.368***	0.221***	0.272***	0.393***
	(17.730)	(19.161)	(22.979)	(15.639)	(16.721)	(19.787)	(16.706)	(17.942)	(21.438)
MB	− 0.000	− 0.000	− 0.000	− 0.000	− 0.000	− 0.000	− 0.000	− 0.000	− 0.000
	(− 1.492)	(− 1.395)	(− 1.282)	(− 1.509)	(− 1.417)	(− 1.311)	(− 1.488)	(− 1.391)	(− 1.273)
OCF	− 0.928***	− 1.296***	− 1.824***	− 0.947***	− 1.322***	− 1.857***	− 0.913***	− 1.275***	− 1.780***
	(− 4.213)	(− 5.091)	(− 5.603)	(− 4.343)	(− 5.249)	(− 5.813)	(− 4.182)	(− 5.059)	(− 5.561)
Growth	− 0.004	0.024	0.133	0.000	0.030	0.143*	− 0.004	0.025	0.134
	(− 0.073)	(0.356)	(1.599)	(0.000)	(0.443)	(1.736)	(− 0.062)	(0.368)	(1.625)
AQ	− 0.228***	− 0.288***	− 0.447***	− 0.208***	− 0.261***	− 0.403***	− 0.215***	− 0.271***	− 0.420***
	(− 2.820)	(− 2.995)	(− 3.567)	(− 2.703)	(− 2.873)	(− 3.457)	(− 2.742)	(− 2.914)	(− 3.494)
Lev	− 1.903***	− 2.330***	− 3.363***	− 1.770***	− 2.149***	− 3.055***	− 1.773***	− 2.153***	− 3.071***
	(− 17.762)	(− 19.143)	(− 23.133)	(− 16.100)	(− 17.216)	(− 20.566)	(− 16.205)	(− 17.332)	(− 20.745)
ROA	1.411***	1.447**	0.213***	1.609***	1.714***	0.658***	1.569***	1.660***	0.557***
	(2.616)	(2.327)	(3.263)	(3.017)	(2.795)	(4.834)	(2.940)	(2.703)	(3.704)
FAge	0.005***	0.011***	0.035***	0.001***	0.006***	0.026***	0.000***	0.005***	0.024***
	(2.990)	(5.785)	(13.843)	(3.721)	(3.067)	(9.972)	(3.225)	(3.445)	(9.186)
BSIZE	− 0.052***	− 0.065***	− 0.058**	− 0.073***	− 0.094***	− 0.105***	− 0.068***	− 0.087***	− 0.093***
	(− 2.696)	(− 2.890)	(− 2.024)	(− 3.846)	(− 4.231)	(− 3.727)	(− 3.561)	(− 3.903)	(− 3.266)

Table 3 (continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis One			Hypothesis Two			Hypothesis Three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
BIND	−0.043**	−0.050**	−0.124***	−0.056***	−0.068***	−0.155***	−0.059***	−0.072***	−0.162***
	(−2.360)	(−2.387)	(−4.607)	(−3.063)	(−3.207)	(−5.813)	(−3.229)	(−3.402)	(−6.024)
Dual	0.058***	0.081***	0.113***	0.052**	0.072***	0.095***	0.039*	0.055**	0.068**
	(2.854)	(3.374)	(3.551)	(2.552)	(3.028)	(3.018)	(1.939)	(2.325)	(2.162)
ACGD	0.050	0.087*	0.175***	0.073*	0.118**	0.203***	−0.017	−0.004	0.004
	(1.139)	(1.699)	(2.624)	(1.792)	(2.462)	(3.287)	(−0.407)	(−0.077)	(0.070)
ACEXP	−0.045	0.008	0.098	−0.125	−0.100	−0.081	−0.117	−0.089	−0.059
	(−0.577)	(0.092)	(0.847)	(−1.590)	(−1.095)	(−0.709)	(−1.485)	(−0.974)	(−0.510)
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−5.158***	−6.591***	−10.472***	−4.721***	−6.002***	−9.602***	−5.210***	−6.663***	−10.702***
	(−19.820)	(−22.010)	(−28.568)	(−19.107)	(−21.109)	(−27.637)	(−21.210)	(−23.540)	(−30.860)
N	22,384	22,384	22,384	22,371	22,371	22,371	22,371	22,371	22,371
R^2	0.107	0.114	0.134	0.114	0.124	0.151	0.115	0.124	0.151

This table reports OLS regression results on the association between board diversity and financial statement comparability. The t-statistics are reported in parentheses based on standard errors adjusted for clustering on the firm level

***, **, and * denote $p < 1\%$, 5%, and 10%, respectively. Refer to Appendix 1 for variable definitions

with the notion that *RD* has a greater resource like fresh ideas, unnecessary risk avoidance, life experiences, and reputational concerns, improving informational transparency and curbing opportunism, leading to higher comparability. Thus, supporting H1. In Table 3, from columns (4) to (6), the results of H2 are shown, where the regressor is *TD* (sum of tenure, education, experience diversity). The coefficients for comparability proxies (*FCS4*, *FSC10*, and *FSCInd*) are 0.447 (t = 10.940), 0.606 (t = 12.795), and 1.029 (t = 17.620), respectively. The results are positive and significant, revealing that *TD* enhances comparability in Chinese firms. The results are consistent with the arguments that higher *TD* increases the monitoring of managerial activities, reduces information opaqueness, and enhances transparency, resulting in higher comparability. Therefore, H2 stands.

Similarly, in Table 3, columns (7) to (9), the results of overall board diversity (H3) are reported. The results are positively significant with all the comparability measures. The results confirm the argument that higher board diversity improves firms' information environment, reduces agency issues, and facilitates the dissemination of information, thus leading to higher comparability. Therefore, H3 stands. For control variables, in Table 3, in all three hypotheses, the coefficients of *Size*, *ROA, FAge, and Dual* are positive and significant at 1%. The coefficients of *OCF*, *AQ*, *Lev*, *BSize, and BIND* are significantly negative at the 1% level. However, *MB*, *Growth*, and *ACEXP* have no significant relationship with comparability in all three regression results. These findings support the results reported in earlier studies (Cao et al., 2016; Dhole et al., 2021; Francis et al., 2014).

5.2 Moderating impact of institutional ownership

Table 4 reports the results of H4. Columns (1) to (9) report the results of the moderating effect of *InsOwn*, where the independent variables are *RD*, *TD*, and *BD*, respectively. It is evident from the results that board diversity has a positive impact on comparability in all models, and the impact of diversity on comparability is contingent on the presence of institutional ownership. In other words, the study suggests that board diversity has a greater effect on comparability in the presence of institutional ownership in Chinese listed firms. The results are consistent with the arguments that institutional investors help to mitigate agency issues and lower information opacity, thus leading to higher comparability. Regarding control variables, the coefficients of *Size, ROA, FAge,* and *Dual* are positive and significant at 1% level. The coefficients of *OCF, AQ, Lev, BSIZE, and BIND* are negative. However, the rest of the variables are insignificant.

Table 4 Board diversity, institutional ownership, and financial statement comparability (Hypothesis Four)

Variables	(1) FSC4	(2) FSC10	(3) FSCInd	(4) FSC4	(5) FSC10	(6) FSCInd	(7) FSC4	(8) FSC10	(9) FSCInd
RD	1.167**	0.287***	0.588***						
	(2.078)	(3.689)	(6.848)						
TD				0.541***	0.757***	1.329***			
				(11.469)	(13.761)	(19.241)			
BD							0.469***	0.633***	0.981***
							(11.795)	(13.738)	(16.093)
InsOwn	2.559***	3.676***	3.087***	0.989***	1.411***	2.751***	1.332**	1.305**	3.651***
	(4.477)	(5.048)	(12.109)	(7.024)	(8.105)	(11.191)	(2.422)	(2.031)	(3.389)
RD*InsOwn	1.600***	2.317***	0.595***						
	(2.619)	(2.977)	(7.202)						
TD*InsOwn				0.257***	0.427***	0.909***			
				(3.752)	(5.291)	(8.546)			
BD*InsOwn							0.188***	0.232***	0.346***
							(14.154)	(15.278)	(17.818)
Size	0.207***	0.258***	0.418***	0.178***	0.217***	0.318***	0.592***	0.855***	0.459***
	(15.962)	(17.354)	(22.162)	(13.437)	(14.325)	(17.160)	(7.426)	(8.535)	(3.727)
MB	−0.000	−0.000	−0.000	−0.000*	−0.000	−0.000	−0.000	−0.000	−0.000
	(−1.636)	(−1.506)	(−1.346)	(−1.675)	(−1.561)	(−1.452)	(−1.638)	(−1.510)	(−1.376)
OCF	−0.912***	−1.240***	−1.563***	−0.935***	−1.270***	−1.730***	−0.918***	−1.247***	−1.685***
	(−4.298)	(−5.023)	(−4.769)	(−4.495)	(−5.267)	(−5.448)	(−4.394)	(−5.142)	(−6.826)
Growth	−0.006	0.026	0.145*	−0.001	0.034	0.171**	−0.006	0.026	0.159*
	(−0.108)	(0.382)	(1.711)	(−0.019)	(0.499)	(2.044)	(−0.102)	(0.389)	(1.955)
AQ	−0.158**	−0.208***	−0.370***	−0.139**	−0.182**	−0.324***	−0.143**	−0.188**	−0.331***
	(−2.428)	(−2.641)	(−3.436)	(−2.272)	(−2.482)	(−3.300)	(−2.310)	(−2.523)	(−3.328)
Lev	−1.608***	−1.985***	−2.967***	−1.451***	−1.767***	−2.577***	−1.465***	−1.792***	−2.645***
	(−15.488)	(−16.773)	(−20.546)	(−13.589)	(−14.532)	(−17.402)	(−13.817)	(−14.842)	(−18.150)

Table 4 (continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	FSC4	FSC10	FSCInd	FSC4	FSC10	FSCInd	FSC4	FSC10	FSCInd
ROA	0.211***	1.084***	0.414***	1.396**	1.403***	0.170***	0.208***	0.270***	0.513***
	(3.197)	(3.645)	(4.457)	(2.547)	(3.196)	(4.196)	(3.149)	(3.470)	(5.128)
FAge	0.004**	0.009***	0.031***	−0.001	0.002	0.019***	−0.001	0.003*	0.022***
	(2.152)	(4.745)	(12.529)	(−0.719)	(1.140)	(7.441)	(−0.420)	(1.648)	(8.524)
BSIZE	−0.037**	−0.046**	−0.032	−0.058***	−0.075***	−0.085***	−0.055***	−0.071***	−0.077***
	(−2.043)	(−2.174)	(−1.178)	(−3.315)	(−3.661)	(−3.229)	(−3.131)	(−3.430)	(−2.931)
BIND	−0.047***	−0.060***	−0.153***	−0.065***	−0.085***	−0.196***	−0.062***	−0.080***	−0.183***
	(−2.772)	(−2.987)	(−5.946)	(−3.727)	(−4.187)	(−7.584)	(−3.618)	(−3.975)	(−7.135)
Dual	0.071***	0.097***	0.127***	0.063***	0.086***	0.118***	0.055***	0.075***	0.104***
	(3.840)	(4.405)	(4.290)	(3.435)	(3.948)	(4.037)	(2.989)	(3.435)	(3.544)
ACGD	0.049	0.081	0.146**	0.074*	0.115**	0.198***	0.021	0.042	0.092
	(1.180)	(1.644)	(2.296)	(1.920)	(2.537)	(3.358)	(0.501)	(0.868)	(1.453)
ACEXP	−0.008	0.042	0.148	−0.091	−0.074	−0.084	−0.076	−0.050	−0.039
	(−0.108)	(0.482)	(1.344)	(−1.225)	(−0.855)	(−0.768)	(−1.028)	(−0.580)	(−0.356)
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−4.535***	−5.840***	−10.366***	−4.029***	−5.107***	−8.362***	−4.491***	−5.792***	−9.431***
	(−17.814)	(−19.869)	(−27.537)	(−16.292)	(−17.915)	(−23.722)	(−17.442)	(−19.480)	(−24.333)
N	22,317	22,317	22,317	22,317	22,317	22,317	22,317	22,317	22,317
R^2	0.084	0.091	0.120	0.093	0.103	0.139	0.093	0.103	0.137

This table reports the OLS results of the moderating effect of institutional ownership on the association between board diversity and financial statement comparability. The t-statistics are reported in parentheses based on standard errors adjusted for clustering on the firm level

***, **, and * denote $p < 1\%$, 5%, and 10%, respectively. Refer to Appendix 1 for variable definitions

6 Robustness test

6.1 Alternative measures of comparability

Following previous research (e.g., Campbell & Yeung, 2016; Chircop et al., 2020), we employ additional methods to measure comparability. Comparability refers to estimating firm *X's* earnings with the conjecture that firm *X* would face the same business shock as faced by peer firm Y. To achieve this, basic business shocks for both firms are held constant. Following the methodology of De Franco et al. (2011), stock returns are employed as a proxy for business shocks, and the mapping between profits and business shocks is estimated using linear regression (piecewise) over the course of 16 quarterly periods. It is expected that the link between earnings and returns is not identical when firms incur loss compared to the years in which they generate profits (i.e., "the relationship between earnings and stock returns is asymmetrical whether firms have positive or negative returns") (Chircop et al., 2020). Thus, we adapt Basu's (1997)[3] model, and an indicator variable (D) is added for negative returns. In addition, an interaction term between "D" and "Return" is also introduced. Therefore, the impact that business shocks have on firm *X's* and firm *Y's* earnings is estimated by coefficient as indicated in the following equations:

$$Earning_{Xjq} = \delta_X + \beta_i Return_{Xjq} + \eta_X D_{Xjq} + \gamma_X D_{Xjq} \times Return_{Xjq} + \varepsilon_{Xjq}, \tag{9}$$

$$Earning_{Yjq} = \delta_Y + \beta_J Return_{Yjq} + \eta_J D_{Yjq} + \gamma_J D_{Yjq} \times Return_{Yjq} + \varepsilon_{Yjq}, \tag{10}$$

where $Returns_{Xjq}$ represents the quarterly stock returns, and "*D*" is set to 1 for negative $Returns_{Xjq}$, and otherwise 0. The influence of business shocks on firm *X's* and firm *Y's* earnings is reflected by the estimated coefficients vector $(\delta_X, \beta_X, \eta_X, \gamma_X)$ and $(\delta_j, \beta_j, \eta_j, \gamma_j)$. The rest of the method is the same as in Sect. 3.4. We begin by calculating conditional earnings and then estimating the mean difference between quarterly conditional earnings, which are expressed in absolute terms. These values are then multiplied by − 1, so the higher values represent higher comparability and vice versa. FSC4_ADJ, FSC10, and FSCInd_ADJ are the revised comparability proxies based on this model.

Tables 5 and 6 reports the findings using this new comparability measure. The coefficients on *RD, TD* and *BD (RD*InsOwn, TD*InsOwn, and BD*InsOwn)* are statistically significant and positive in all cases.

Second, following De Franco et al. (2011), in Eq. 3, we employ lagged stock returns while estimating the comparability measures so that accounting earnings are tied to lagged stock returns. Collins et al. (1994) argue that stock prices incorporate

[3] *Although not primarily,* De Franco et al. (2011) *incorporate losses for computing earnings comparability as discussed in their study in Footnote 11. They justify the addition of this "piece-wise linear regression technique" by saying that "asymmetric earnings timeliness [is] a potential source of bias in our comparability measure (*Ball et al., 2000; Basu, 1997*)." We choose this De Franco* et al. *version since it better depicts comparability in our context. Our focus is on a situation in which significant economic losses occur (i.e., large negative stock returns).*

Table 5 Board diversity and financial statement comparability: using alternative proxies of comparability

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ
RD	0.338***	0.417***	0.513***						
	(4.167)	(4.721)	(4.935)						
TD				0.657***	0.802***	1.168***			
				(12.298)	(13.841)	(17.469)			
BD							0.568***	0.695***	0.990***
							(12.496)	(14.105)	(17.414)
Size	0.351***	0.393***	0.497***	0.315***	0.350***	0.437***	0.331***	0.369***	0.465***
	(20.641)	(21.479)	(23.809)	(18.261)	(18.812)	(20.588)	(19.511)	(20.190)	(22.302)
MB	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000
	(−1.475)	(−1.407)	(−1.300)	(−1.492)	(−1.428)	(−1.325)	(−1.468)	(−1.401)	(−1.290)
OCF	−1.032***	−1.308***	−1.679***	−1.052***	−1.333***	−1.708***	−1.002***	−1.272***	−1.623***
	(−3.643)	(−4.223)	(−4.553)	(−3.755)	(−4.362)	(−4.725)	(−3.574)	(−4.158)	(−4.477)
Growth	0.038	0.059	0.142	0.044	0.066	0.152	0.038	0.059	0.143
	(0.486)	(0.703)	(1.504)	(0.565)	(0.795)	(1.633)	(0.493)	(0.713)	(1.523)
AQ	−0.380***	−0.422***	−0.544***	−0.352***	−0.387***	−0.494***	−0.363***	−0.400***	−0.514***
	(−3.424)	(−3.487)	(−3.858)	(−3.331)	(−3.386)	(−3.766)	(−3.366)	(−3.425)	(−3.801)
Lev	−2.830***	−3.159***	−3.963***	−2.632***	−2.917***	−3.610***	−2.641***	−2.927***	−3.633***
	(−20.806)	(−21.588)	(−23.768)	(−18.879)	(−19.455)	(−21.169)	(−19.020)	(−19.605)	(−21.378)
ROA	1.467**	1.346*	0.133	1.757***	1.699**	0.639	1.694**	1.622**	0.519
	(2.185)	(1.821)	(0.146)	(2.659)	(2.341)	(0.717)	(2.558)	(2.231)	(0.580)
FAge	0.007***	0.013***	0.034***	0.002	0.006**	0.023***	0.001	0.005*	0.021***
	(3.369)	(5.463)	(11.899)	(0.705)	(2.424)	(7.898)	(0.222)	(1.843)	(7.204)
BSIZE	−0.083***	−0.091***	−0.078**	−0.114***	−0.129***	−0.131***	−0.106***	−0.119***	−0.116***
	(−3.349)	(−3.342)	(−2.427)	(−4.634)	(−4.788)	(−4.152)	(−4.295)	(−4.413)	(−3.665)

Table 5 (continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ
BIND	−0.061***	−0.069***	−0.149***	−0.081***	−0.093***	−0.186***	−0.085***	−0.098***	−0.193***
	(−2.585)	(−2.691)	(−4.954)	(−3.437)	(−3.639)	(−6.211)	(−3.595)	(−3.820)	(−6.393)
Dual	0.079***	0.105***	0.142***	0.068**	0.091***	0.120***	0.050*	0.070**	0.090***
	(2.980)	(3.609)	(4.077)	(2.571)	(3.162)	(3.464)	(1.913)	(2.425)	(2.612)
ACEXP	−0.070	−0.018	0.028	−0.185*	−0.159	−0.174	−0.171*	−0.142	−0.146
	(−0.716)	(−0.169)	(0.219)	(−1.875)	(−1.481)	(−1.393)	(−1.731)	(−1.322)	(−1.165)
ACGD	0.105*	0.139**	0.217***	0.125**	0.164***	0.234***	−0.003	0.007	0.013
	(1.840)	(2.210)	(2.921)	(2.333)	(2.795)	(3.372)	(−0.048)	(0.124)	(0.176)
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−7.697***	−8.852***	−12.076***	−7.121***	−8.144***	−11.161***	−7.826***	−9.005***	−12.397***
	(−22.989)	(−24.473)	(−29.134)	(−22.338)	(−23.647)	(−28.341)	(−24.725)	(−26.325)	(−31.668)
N	22,384	22,384	22,384	22,371	22,371	22,371	22,371	22,371	22,371
R^2	0.128	0.131	0.141	0.137	0.142	0.158	0.137	0.142	0.158

This table reports the OLS results on the effect of board diversity on comparability. The t-statistics are reported in parentheses based on standard error adjusted for clustering at the firm level

***, **, and * denote p < 1%, 5%, and 10%, respectively. Refer to Appendix 1 for variable definitions

Table 6 Board diversity, institutional ownership, and financial statement comparability: using alternative proxies of comparability (Hypothesis Four)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ	FSC4_ADJ	FSC10_ADJ	FSCInd_ADJ
RD	0.006***	0.011***	0.030***						
	(2.653)	(4.642)	(10.742)						
TD				0.772***	0.966***	1.469***			
				(12.637)	(14.489)	(18.886)			
BD							0.615***	0.755***	1.122***
							(11.219)	(12.679)	(16.259)
InsOwn	2.615***	3.550***	2.991***	1.069***	1.410***	2.624***	1.503**	1.982**	3.373***
	(3.824)	(4.396)	(11.039)	(6.333)	(7.183)	(10.105)	(1.983)	(2.290)	(2.980)
RD*InsOwn	1.490**	2.101**	0.628***						
	(2.000)	(2.400)	(6.851)						
TD*InsOwn				0.339***	0.488***	0.919***			
				(3.842)	(4.992)	(7.843)			
BD*InsOwn							0.287***	0.320***	0.400***
							(16.082)	(16.561)	(18.191)
Size	0.302***	0.342***	0.480***	0.261***	0.291***	0.373***	0.319	0.379	0.363
	(18.136)	(19.005)	(22.514)	(15.344)	(15.807)	(17.663)	(0.732)	(0.761)	(0.548)
MB	−0.000	−0.000	−0.000	−0.000*	−0.000	−0.000	−0.000	−0.000	−0.000
	(−1.626)	(−1.534)	(−1.374)	(−1.667)	(−1.585)	(−1.466)	(−1.637)	(−1.544)	(−1.400)
OCF	−1.030***	−1.288***	−1.448***	−1.058***	−1.323***	−1.620***	−0.728***	−1.015***	−1.584***
	(−3.731)	(−4.244)	(−3.911)	(−3.922)	(−4.473)	(−4.517)	(−3.341)	(−4.275)	(−5.718)
Growth	0.021	0.046	0.135	0.028	0.055	0.162*	0.068	0.089	0.149
	(0.273)	(0.555)	(1.420)	(0.366)	(0.673)	(1.726)	(0.911)	(1.107)	(1.631)
AQ	−0.275***	−0.312***	−0.435***	−0.247***	−0.277***	−0.384***	−0.270***	−0.299***	−0.391***
	(−3.061)	(−3.152)	(−3.663)	(−2.939)	(−3.026)	(−3.546)	(−3.133)	(−3.190)	(−3.562)
Lev	−2.393***	−2.690***	−3.474***	−2.168***	−2.410***	−3.038***	−2.349***	−2.587***	−3.103***

Table 6 (continued)

Variables	(1) FSC4_ADJ	(2) FSC10_ADJ	(3) FSCInd_ADJ	(4) FSC4_ADJ	(5) FSC10_ADJ	(6) FSCInd_ADJ	(7) FSC4_ADJ	(8) FSC10_ADJ	(9) FSCInd_ADJ
	(−18.108)	(−18.846)	(−21.045)	(−15.955)	(−16.429)	(−17.910)	(−17.007)	(−17.397)	(−18.681)
ROA	1.100	0.916	−0.511	1.429**	1.326*	0.135	−0.316***	−0.382***	−0.656***
	(1.535)	(1.148)	(−0.500)	(2.056)	(1.721)	(0.138)	(−3.681)	(−4.061)	(−5.875)
FAge	0.293***	0.355***	0.592***	−0.001	0.002	0.017***	−0.001	0.003	0.020***
	(3.399)	(3.764)	(6.161)	(−0.594)	(0.805)	(5.720)	(−0.359)	(1.205)	(6.703)
BSIZE	−0.058**	−0.063**	−0.044	−0.089***	−0.101***	−0.103***	−0.088***	−0.098***	−0.095***
	(−2.506)	(−2.482)	(−1.454)	(−3.921)	(−4.072)	(−3.520)	(−3.892)	(−3.982)	(−3.250)
BIND	−0.076***	−0.088***	−0.185***	−0.101***	−0.120***	−0.233***	−0.097***	−0.114***	−0.219***
	(−3.443)	(−3.629)	(−6.438)	(−4.524)	(−4.904)	(−8.064)	(−4.372)	(−4.688)	(−7.657)
Dual	0.100***	0.126***	0.160***	0.087***	0.110***	0.146***	0.074***	0.096***	0.133***
	(4.116)	(4.739)	(4.916)	(3.618)	(4.193)	(4.568)	(3.041)	(3.593)	(4.113)
ACEXP	−0.047	0.003	0.084	−0.164*	−0.144	−0.171	−0.151	−0.122	−0.125
	(−0.503)	(0.027)	(0.696)	(−1.758)	(−1.412)	(−1.439)	(−1.615)	(−1.206)	(−1.056)
ACGD	0.105*	0.135**	0.195***	0.129**	0.166***	0.235***	0.060	0.080	0.131*
	(1.938)	(2.254)	(2.730)	(2.545)	(2.976)	(3.559)	(1.112)	(1.344)	(1.848)
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−6.667***	−7.737***	−11.738***	−5.980***	−6.856***	−9.663***	−6.695***	−7.726***	−10.732***
	(−20.265)	(−21.699)	(−27.652)	(−18.714)	(−19.781)	(−24.164)	(−19.087)	(−20.301)	(−24.559)
N	22,317	22,317	22,317	22,307	22,307	22,307	22,307	22,307	22,307
R^2	0.099	0.103	0.122	0.111	0.118	0.142	0.109	0.116	0.140

This table reports the OLS results on the moderating effect of institutional ownership on the association between board diversity and financial statement comparability. The t-statistics are reported in parentheses based on standard errors adjusted for clustering on the firm level

***, **, and * denote $p < 1\%$, 5%, and 10%, respectively. Refer to Appendix 1 for variable definitions

Table 7 Board diversity and financial statement comparability: using alternative proxies of comparability

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4_Lag	FSC10_Lag	FSCInd_Lag	FSC4_Lag	FSC10_Lag	FSCInd_Lag	FSC4_Lag	FSC10_Lag	FSCInd_Lag
RD	0.305***	0.389***	0.511***						
	(3.734)	(4.326)	(4.849)						
TD				0.612***	0.762***	1.166***			
				(11.286)	(12.906)	(17.261)			
BD							0.527***	0.658***	0.988***
							(11.417)	(13.099)	(17.167)
Size	0.342***	0.391***	0.506***	0.310***	0.350***	0.446***	0.324***	0.368***	0.474***
	(19.611)	(20.665)	(23.749)	(17.509)	(18.273)	(20.687)	(18.668)	(19.556)	(22.346)
MB	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000
	(−1.257)	(−1.224)	(−1.180)	(−1.273)	(−1.244)	(−1.205)	(−1.252)	(−1.219)	(−1.172)
OCF	−1.089***	−1.417***	−1.841***	−1.110***	−1.443***	−1.872***	−1.064***	−1.386***	−1.786***
	(−3.759)	(−4.455)	(−4.920)	(−3.868)	(−4.589)	(−5.095)	(−3.706)	(−4.403)	(−4.853)
Growth	0.010	0.034	0.130	0.016	0.041	0.140	0.011	0.035	0.131
	(0.125)	(0.387)	(1.313)	(0.194)	(0.468)	(1.436)	(0.132)	(0.395)	(1.332)
AQ	−0.311***	−0.361***	−0.501***	−0.285***	−0.329***	−0.452***	−0.295***	−0.341***	−0.472***
	(−2.878)	(−2.990)	(−3.501)	(−2.765)	(−2.870)	(−3.389)	(−2.805)	(−2.913)	(−3.429)
Lev	−2.679***	−3.057***	−3.958***	−2.495***	−2.828***	−3.606***	−2.504***	−2.839***	−3.629***
	(−19.125)	(−20.229)	(−23.430)	(−17.336)	(−18.225)	(−20.874)	(−17.488)	(−18.386)	(−21.091)
ROA	1.732**	1.747**	0.520	1.996***	2.077***	1.020	1.936***	2.004***	0.900
	(2.468)	(2.265)	(0.559)	(2.880)	(2.733)	(1.124)	(2.790)	(2.631)	(0.989)
FAge	0.005**	0.011***	0.035***	−0.001	0.005*	0.025***	−0.002	0.003	0.023***
	(2.056)	(4.523)	(12.058)	(−0.329)	(1.748)	(8.182)	(−0.729)	(1.239)	(7.510)
BSIZE	−0.071***	−0.080***	−0.066**	−0.100***	−0.115***	−0.119***	−0.092***	−0.106***	−0.104***
	(−2.830)	(−2.871)	(−2.024)	(−3.985)	(−4.191)	(−3.691)	(−3.674)	(−3.845)	(−3.219)

Table 7 (continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4_Lag	FSC10_Lag	FSCInd_Lag	FSC4_Lag	FSC10_Lag	FSCInd_Lag	FSC4_Lag	FSC10_Lag	FSCInd_Lag
BIND	−0.059**	−0.067**	−0.144***	−0.078***	−0.090***	−0.180***	−0.081***	−0.094***	−0.187***
	(−2.508)	(−2.575)	(−4.699)	(−3.278)	(−3.446)	(−5.922)	(−3.424)	(−3.615)	(−6.106)
Dual	0.078***	0.100***	0.133***	0.067**	0.087***	0.111***	0.051*	0.067**	0.081**
	(2.916)	(3.362)	(3.705)	(2.526)	(2.937)	(3.108)	(1.928)	(2.261)	(2.283)
ACEXP	−0.080	−0.017	0.063	−0.187*	−0.152	−0.139	−0.173*	−0.136	−0.111
	(−0.788)	(−0.155)	(0.482)	(−1.843)	(−1.364)	(−1.072)	(−1.708)	(−1.215)	(−0.853)
ACGD	0.082	0.116*	0.204***	0.100*	0.139**	0.220***	−0.019	−0.009	−0.000
	(1.444)	(1.828)	(2.698)	(1.858)	(2.341)	(3.129)	(−0.338)	(−0.149)	(−0.001)
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−7.397***	−8.692***	−12.229***	−6.878***	−8.033***	−11.323***	−7.533***	−8.850***	−12.555***
	(−21.611)	(−23.343)	(−28.900)	(−21.230)	(−22.781)	(−28.265)	(−23.387)	(−25.210)	(−31.408)
N	22,384	22,384	22,384	22,371	22,371	22,371	22,371	22,371	22,371
R^2	0.118	0.124	0.140	0.126	0.134	0.157	0.126	0.134	0.157

This table reports the OLS results on the effect of board diversity on comparability. The t-statistics are reported in parentheses based on standard errors adjusted for clustering on the firm level

***, **, and * denote $p < 1\%$, 5%, and 10%, respectively. Refer to Appendix 1 for variable definitions

Table 8 Board diversity, institutional ownership, and financial statement comparability: using alternative proxies of comparability (Hypothesis Four)

Variables	(1) FSC4_Lag	(2) FSC10_Lag	(3) FSCInd_Lag	(4) FSC4_Lag	(5) FSC10_Lag	(6) FSC10_Lag	(7) FSC4_Lag	(8) FSC10_Lag	(9) FSCInd_Lag
RD	1.520**	1.431*	0.031***						
	(2.104)	(1.769)	(10.885)						
TD				0.711***	0.920***	0.920***			
				(11.707)	(13.734)	(13.734)			
BD							0.635***	0.789***	1.197***
							(12.179)	(13.874)	(18.239)
InsOwn	2.799***	3.874***	3.109***	1.114***	1.496***	1.496***	1.746**	1.711**	0.386
	(4.086)	(4.729)	(11.378)	(6.631)	(7.573)	(7.573)	(2.475)	(2.172)	(0.390)
RD*InsOwn	1.675**	2.394***	0.642***						
	(2.260)	(2.713)	(6.948)						
TD*InsOwn				0.275***	0.453***	0.453***			
				(3.084)	(4.556)	(4.556)			
BD*InsOwn							0.274***	0.313***	0.415***
							(15.790)	(16.610)	(19.350)
Size	0.300***	0.346***	0.495***	0.264***	0.298***	0.298***	0.667***	0.907***	1.696***
	(17.669)	(18.712)	(22.787)	(15.220)	(15.825)	(15.825)	(6.944)	(7.948)	(10.899)
MB	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000
	(−1.309)	(−1.269)	(−1.204)	(−1.344)	(−1.315)	(−1.315)	(−1.315)	(−1.275)	(−1.231)
OCF	−1.097***	−1.392***	−1.597***	−1.124***	−1.424***	−1.424***	−1.106***	−1.401***	−1.743***
	(−3.947)	(−4.522)	(−4.275)	(−4.124)	(−4.737)	(−4.737)	(−4.042)	(−4.635)	(−4.770)
Growth	−0.008	0.021	0.129	−0.002	0.029	0.029	−0.008	0.022	0.142
	(−0.106)	(0.240)	(1.296)	(−0.031)	(0.342)	(0.342)	(−0.097)	(0.251)	(1.448)
AQ	−0.218**	−0.263***	−0.411***	−0.193**	−0.230**	−0.230**	−0.197**	−0.237**	−0.370***
	(−2.466)	(−2.615)	(−3.333)	(−2.317)	(−2.463)	(−2.463)	(−2.346)	(−2.496)	(−3.225)
Lev	−2.271***	−2.614***	−3.488***	−2.064***	−2.348***	−2.348***	−2.078***	−2.374***	−3.115***
	(−16.829)	(−17.892)	(−21.010)	(−14.839)	(−15.608)	(−15.608)	(−15.046)	(−15.890)	(−18.387)

Table 8 (continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	FSC4_Lag	FSC10_Lag	FSCInd_Lag	FSC4_Lag	FSC10_Lag	FSC10_Lag	FSC4_Lag	FSC10_Lag	FSCInd_Lag
ROA	0.238***	0.306***	−0.066	1.815***	1.815**	1.815**	−0.352***	−0.412***	−0.659***
	(2.746)	(3.194)	(−0.064)	(2.579)	(2.313)	(2.313)	(−4.066)	(−4.315)	(−5.813)
FAge	0.003	0.009***	0.592***	−0.003	0.001	0.001	−0.003	0.002	0.021***
	(1.461)	(3.724)	(6.086)	(−1.396)	(0.230)	(0.230)	(−1.146)	(0.673)	(7.031)
BSIZE	−0.048**	−0.054**	−0.034	−0.076***	−0.090***	−0.090***	−0.073***	−0.085***	−0.085***
	(−2.060)	(−2.098)	(−1.105)	(−3.336)	(−3.560)	(−3.560)	(−3.184)	(−3.364)	(−2.844)
BIND	−0.067***	−0.079***	−0.174***	−0.090***	−0.109***	−0.109***	−0.087***	−0.104***	−0.208***
	(−3.017)	(−3.214)	(−6.001)	(−3.990)	(−4.408)	(−4.408)	(−3.903)	(−4.221)	(−7.167)
Dual	0.097***	0.121***	0.150***	0.084***	0.106***	0.106***	0.075***	0.094***	0.121***
	(3.957)	(4.454)	(4.481)	(3.459)	(3.916)	(3.916)	(3.097)	(3.491)	(3.680)
ACEXP	−0.060	−0.003	0.104	−0.169*	−0.143	−0.143	−0.153	−0.118	−0.102
	(−0.624)	(−0.029)	(0.829)	(−1.751)	(−1.350)	(−1.350)	(−1.588)	(−1.114)	(−0.819)
ACGD	0.^{084}	0.112*	0.181**	0.102**	0.139**	0.139**	0.044	0.064	0.122*
	(1.550)	(1.866)	(2.503)	(2.012)	(2.474)	(2.474)	(0.821)	(1.060)	(1.708)
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−6.508***	−7.707***	−12.016***	−5.934***	−6.913***	−6.913***	−6.434***	−7.628***	−11.120***
	(−19.522)	(−21.137)	(−27.788)	(−18.387)	(−19.603)	(−19.603)	(−19.091)	(−20.693)	(−26.309)
N	22,317	22,317	22,317	22,307	22,307	22,307	22,307	22,307	22,307
R^2	0.093	0.099	0.123	0.104	0.113	0.113	0.104	0.112	0.140

This table reports the results on the moderating effect of institutional ownership on the association between board diversity and financial statement comparability. The t-statistics are reported in parentheses based on standard errors adjusted for clustering on the firm level

***, **, and * denote p < 1%, 5%, and 10%, respectively. Refer to Appendix 1 for variable definitions firm-specific news before they are reported in accounting earnings, which means that "price lead earnings" (PLA). Using the following equation, we use the lagged price changes into our model and re-estimate comparability.

$$Earnings_{it} = \beta_0 + \beta_1 Return_{it} + \beta_2 Return_{it-1} + \varepsilon_{it}, \tag{11}$$

where $Return_{it-1}$ is the quarterly lagged stock returns. FSC4_Lag, FSC10_Lag, and FSCInd_Lag are the revised firm-year proxies of comparability based on this model.

Tables 7 and 8 show the results using these alternative proxies of comparability, which remain consistent, supporting our hypotheses. Overall, these measures (alternative) of comparability provide supporting arguments that board diversity is positively associated with comparability. We also find that InsOwn positively moderates boardroom diversity-comparability relationship.

6.2 Using firm fixed effect model

We employ an additional technique, i.e., fixed effect model (FEM),[4] to find the board diversity-comparability nexus. FEM is used to control for issues that may happen due to omitting time-invariant firm-specific attributes that may affect both comparability and the likelihood of hiring diverse directors. The results are reported in Panel A and B of Table 9. These results imply that board diversity enhances comparability, and InsOwn positively moderates diversity-comparability relationship. This suggests that time-invariant firm-specific factors do not influence our findings.

6.3 Endogeneity check

In previous sections, we examine that board diversity enhances comparability, however, it is difficult to find and detect the direct impact of board diversity on comparability. In this context, an ideal experimental design would need the random assignment of firms to treatment and control groups, which is unlikely and unattainable. The presence of directors with diverse characteristics is assumed to be exogenous in the preceding assumptions. However, it is likely to be endogenous and depends on the firm's demand for diverse boards. We apply four additional analyses in the following sections to account for these endogeneity concerns: (1) GMM; (2) PSM; (3) 2SLS; and (4) change analysis.

First, we use GMM to cater endogeneity issues. The GMM techniques offer potential instruments that deal with the unobserved heterogeneity, which is essential to mitigate any endogeneity concerns (Wintoki et al., 2012). Panel A and B of Table 10 show the results. The results confirm that board diversity enhances comparability. Additionally, we find that InsOwn moderates (positively) the link between board diversity and comparability. Thus, our results are not driven by any unobserved heterogeneity.

[4] *We use Hausman test to make a choice between fixed and random effect model. The test reveals that FEM is an appropriate choice for our estimation analyses.*

Table 9 Board diversity, institutional ownership, and financial statement comparability: using fixed effect model

Variables	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
Panel A: Board diversity and comparability									
RD	0.194***	0.260***	0.435***						
	(2.679)	(3.072)	(4.065)						
TD				0.175***	0.243***	0.309***			
				(5.110)	(6.102)	(6.140)			
BD							0.176***	0.243***	0.329***
							(5.736)	(6.797)	(7.284)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm Fixed Effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−7.095***	−9.088***	−14.617***	−6.779***	−8.666***	−13.973***	−6.970***	−8.930***	−14.315***
	(−28.081)	(−30.745)	(−38.791)	(−28.270)	(−30.877)	(−39.016)	(−29.105)	(−31.860)	(−40.035)
N	22,384	22,384	22,384	22,371	22,371	22,371	22,371	22,371	22,371
R^2	0.0974	0.1020	0.1112	0.1020	0.1083	0.1191	0.1031	0.1097	0.1211
Panel B: Moderating effect of institutional ownership (hypothesis four)									
RD	1.221***	1.246***	0.640***						
	(8.147)	(7.151)	(2.869)						
TD				0.292***	0.393***	0.492***			
				(7.409)	(8.565)	(8.331)			
BD							0.168***	0.241***	0.324***
							(5.193)	(6.374)	(6.701)
InsOwn	1.977***	2.827***	3.092***	1.484***	2.096***	3.254***	1.282***	1.330***	0.744***
	(3.158)	(3.887)	(3.325)	(2.667)	(3.236)	(3.905)	(8.520)	(7.604)	(3.325)
RD*InsOwn	1.706**	2.383***	2.059*						
	(2.407)	(2.893)	(1.955)						

Table 9 (continued)

Variables	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
TD*InsOwn				0.293***	0.391***	0.311***			
				(3.662)	(4.191)	(2.590)			
BD*InsOwn							0.274***	0.341***	0.514***
							(23.229)	(24.686)	(28.958)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−6.324***	−8.154***	−13.587***	−0.663***	−1.077***	−2.945***	−6.277***	−8.093***	−13.498***
	(−25.542)	(−28.159)	(−36.510)	(−11.671)	(−16.228)	(−34.433)	(−25.332)	(−27.941)	(−36.270)
N	22,317	22,317	22,317	22,307	22,307	22,307	22,307	22,307	22,307
R^2	0.0715	0.0749	0.0865	0.0539	0.0572	0.0659	0.0774	0.0827	0.0958

This table reports the fixed effect results on the association between board diversity and financial statement comparability. The t-values are reported in parentheses

***, **, and * report significance levels at 1%, 5%, and 10%, respectively. Refer to Appendix 1 for variable definitions

Table 10 Endogeneity checks

Panel A: Using GMM

	Hypothesis one			Hypothesis two			Hypothesis three		
Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
RD	0.646**	0.679***	2.763***						
	(2.535)	(3.699)	(5.578)						
TD				0.117***	0.165***	0.471***			
				(5.063)	(6.309)	(10.142)			
BD							0.142***	0.193***	0.475***
							(6.618)	(7.578)	(12.341)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−3.032***	−2.452***	−30.812***	−1.213***	−1.433***	−4.153***	−1.126***	−1.500***	−3.978***
	(−9.829)	(−9.924)	(−23.468)	(−10.529)	(−10.509)	(−16.293)	(−10.690)	(−12.374)	(−22.586)
Diagnostic tests									
Ar(1)	−6.28***	−5.86***	−5.69***	−6.13***	−5.85***	−6.20***	−6.15	−5.87***	−6.09***
Ar(2)	1.37	1.30	0.95	0.74	1.34	0.86	0.79	0.39	0.91
Hansen Test	77.15	89.86	63.36	83.71	86.62	80.74	74.86	98.45	74.10
N	19,861	19,861	19,861	19,853	19,853	19,853	19,853	19,853	19,853

Panel B: Using GMM (hypothesis four)

Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
RD	0.543***	0.934***	2.512***						
	(2.653)	(3.457)	(5.396)						
TD				0.149***	0.182***	0.301***			
				(7.430)	(7.774)	(6.702)			
BD							0.116***	0.149***	0.159***

Table 10 (continued)

Panel B: Using GMM (hypothesis four)

Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
							(5.289)	(5.784)	(3.785)
InsOwn	1.083***	1.849***	5.620***	0.613***	0.971***	5.508***	0.374	0.775	2.738***
	(3.254)	(4.182)	(7.271)	(7.127)	(8.981)	(8.350)	(0.643)	(1.151)	(2.888)
RD*InsOwn	0.248***	0.269**	0.435**						
	(2.702)	(2.371)	(2.220)						
TD*InsOwn				0.129**	0.188***	0.315**			
				(2.280)	(2.804)	(2.158)			
BD*InsOwn							0.054***	0.075***	0.489***
							(13.356)	(15.900)	(31.551)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−3.909***	−5.370***	−10.771***	−1.142***	−1.558***	−5.054***	−1.355***	−1.848***	−10.678***
	(−12.334)	(−12.984)	(−15.434)	(−12.772)	(−15.439)	(−23.556)	(−15.769)	(−18.700)	(−36.035)
Diagnostic tests									
AR(1)	−5.81***	−5.65***	−7.10***	−5.54***	−5.34***	−5.97***	−5.59***	−5.39***	−5.87
AR(2)	0.07	1.20	−0.99	0.73	0.32	0.75	0.74	1.32	0.99
Hansen Test	110.41	117.35	123.78	125.82	150.51	127.36	162.03	129.83	138.98
N	19,894	19,894	19,894	19,887	19,887	19,887	19,887	19,887	19,887

Panel C: Using 2SLS

Variables	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
RD	0.281***	0.352***	1.431***						
	(3.630)	(3.902)	(12.502)						

Table 10 (continued)

Panel C: Using 2SLS

Variables	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
TD				0.439***	0.684***	1.267***			
				(7.556)	(10.033)	(14.776)			
BD							0.282***	0.422***	0.651***
							(7.781)	(9.900)	(11.919)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−5.216***	−6.608***	−9.592***	−4.725***	−5.961***	−9.289***	−5.149***	−6.602***	−10.330***
	(−17.949)	(−19.799)	(−23.510)	(−18.512)	(−20.323)	(−26.072)	(−20.076)	(−22.341)	(−28.589)
N	22,384	22,384	22,384	22,384	22,384	22,384	22,384	22,384	22,384
Adjusted R^2	0.107	0.114	0.130	0.110	0.118	0.140	0.109	0.117	0.135

Panel D: Using 2SLS: (hypothesis four)

Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
RD	1.549***	2.157***	3.710***						
	(10.680)	(8.705)	(13.849)						
TD				1.066***	1.543***	3.239***			
				(15.685)	(19.158)	(29.135)			
BD							0.918***	1.321***	2.685***
							(16.232)	(19.599)	(28.158)
InsOwn	1.140**	0.004*	0.023***	1.596***	1.713***	0.965	1.553***	1.646***	0.791
	(2.050)	(1.832)	(8.997)	(2.951)	(2.741)	(1.179)	(2.875)	(2.636)	(0.966)
RD*InsOwn	1.502***	2.001***	4.206***						

Table 10 (continued)

Panel D: Using 2SLS: (hypothesis four)

Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
	(9.565)	(3.882)	(14.133)						
TD*InsOwn				1.509***	2.208***	4.545***			
				(9.107)	(10.620)	(11.353)			
BD*InsOwn							0.815***	1.182***	2.463***
							(10.281)	(11.634)	(15.121)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−6.046***	−8.085***	−13.258***	−4.529***	−5.844***	−9.638***	−5.401***	−7.094***	−12.210***
	(−19.553)	(−19.563)	(−28.157)	(−17.636)	(−19.722)	(−26.017)	(−20.753)	(−23.488)	(−32.469)
N	22,266	22,266	22,266	22,266	22,266	22,266	22,266	22,266	22,266
Adjusted R^2	0.085	0.092	0.123	0.096	0.110	0.169	0.097	0.111	0.168

Panel E: Using PSM

Variables	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
RD	1.506***	2.162***	3.326***						
	(5.751)	(7.002)	(8.338)						
TD				0.589***	0.958***	1.909***			
				(6.066)	(8.391)	(13.037)			
BD							0.675***	1.049***	1.979***
							(7.507)	(9.924)	(14.618)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	YES

Table 10 (continued)

Panel E: Using PSM

Variables	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
Intercept	−6.897***	−8.995***	−13.875***	−5.280***	−6.638***	−10.107***	−5.913***	−7.635***	−12.023***
	(−16.846)	(−18.641)	(−22.254)	(−16.139)	(−17.242)	(−20.465)	(−17.898)	(−19.656)	(−24.159)
N	6405	6405	6405	6405	6405	6405	6405	6405	6405
R^2	0.151	0.160	0.172	0.152	0.164	0.187	0.155	0.168	0.194

Panel F: Using PSM (hypothesis four)

Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
RD	1.585***	2.272***	3.489***						
	(6.635)	(8.052)	(9.367)						
TD				0.116***	0.137***	0.186***			
				(3.222)	(3.222)	(3.302)			
BD							0.042	0.053	0.085
							(1.146)	(1.202)	(1.469)
InsOwn	1.553***	2.196***	3.449***	1.057***	1.536***	2.730***	2.452***	2.623***	1.491***
	(5.381)	(6.439)	(7.662)	(3.045)	(3.735)	(5.021)	(8.889)	(8.030)	(3.450)
RD*InsOwn	0.650*	0.792*	0.113**						
	(1.652)	(1.702)	(2.252)						
TD*InsOwn				0.066*	0.090**	0.108**			
				(1.941)	(2.218)	(2.020)			
BD*InsOwn							0.514***	0.700***	1.138***
							(3.418)	(3.930)	(4.828)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 10 (continued)

Panel F: Using PSM (hypothesis four)

Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
Intercept	− 6.435***	− 8.433***	− 13.259***	− 4.918***	− 6.247***	− 9.896***	− 4.919***	− 6.292***	− 10.051***
	(− 16.551)	(− 18.356)	(− 21.863)	(− 15.799)	(− 16.948)	(− 20.297)	(− 14.582)	(− 15.750)	(− 19.013)
N	6098	6098	6098	6098	6098	6098	6098	6098	6098
R^2	0.146	0.154	0.166	0.140	0.144	0.153	0.137	0.141	0.149

Panel G: Using change analysis

	Hypothesis one			Hypothesis two			Hypothesis three		
Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
ΔRD	1.768***	2.174***	2.762***						
	(4.960)	(5.505)	(5.950)						
ΔTD				0.112***	0.117**	2.758***			
				(2.722)	(2.573)	(5.922)			
ΔBD							0.087**	0.087**	0.056***
							(2.255)	(2.017)	(2.963)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	0.084	0.050	0.651***	− 36.730***	− 47.770***	0.638***	0.147**	0.133*	0.643***
	(1.242)	(0.652)	(7.279)	(− 10.656)	(− 12.341)	(7.062)	(2.161)	(1.728)	(7.160)
N	19,842	19,842	19,842	19,782	19,782	19,829	19,271	19,271	19,829
R^2	0.033	0.037	0.042	0.040	0.046	0.042	0.032	0.036	0.042

Table 10 (continued)

Panel H: Using change analysis (hypothesis four)									
Variables	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
ΔRD	1.404***	1.619***	2.014***						
	(3.493)	(3.626)	(3.738)						
ΔTD				0.049*	0.033	0.190***			
				(1.699)	(1.031)	(4.923)			
ΔBD							0.052	0.038	0.048**
							(1.252)	(0.832)	(2.544)
ΔInsOwn	0.327***	0.500***	−0.420***	0.167***	0.285***	0.118	0.061	0.164*	0.072*
	(5.009)	(6.793)	(−4.605)	(3.024)	(4.564)	(1.560)	(0.797)	(1.914)	(1.920)
ΔRD*InsOwn	0.127***	0.161***	0.582***						
	(2.728)	(3.112)	(9.431)						
ΔTD*InsOwn				1.927***	2.224***	2.711***			
				(4.481)	(4.722)	(4.720)			
ΔBD*InsOwn							0.017***	0.024***	0.065***
							(3.632)	(4.510)	(10.308)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Constant	−31.004***	−41.349***	0.554***	−0.107*	−0.207***	−0.076	−0.382***	−0.594***	−1.139***
	(−9.307)	(−11.076)	(6.383)	(−1.740)	(−2.997)	(−0.906)	(−2.777)	(−3.866)	(−6.082)
N	18,775	18,775	18,820	18,810	18,810	18,810	18,810	18,810	18,810
R^2	0.029	0.032	0.027	0.027	0.028	0.034	0.014	0.014	0.018

This table reports the results of using GMM, 2SLS, PSM, and change analyses. The t-values are reported in parentheses

***, **, and * denote the significance levels at 1%, 5%, and 10%, respectively. Refer to Appendix 1 for variable definitions

Although we use an important technique (GMM) to remove endogeneity concerns, however, there is still a possibility that some unobservable heterogeneity may affect our results. For this purpose, we employ instrumental variable (IV) regression with a 2SLS estimator. We use industry mean of the board diversity (i.e., *IndMeanRD, IndMeanTD,* and *IndMeanBD*)[5] as the IVs.[6] Leary and Roberts (2014) posit that firms emulated one another's financial decisions and were significantly influenced by their peers' financial decisions. For instance, Faccio et al. (2016) use the proportion of peer firms with female CEO as the instrumental variable (IV) for the firm CEOs. Huang and Mazouz (2018) conjecture that, in the same industry, firms tend to implement comparable corporate strategies and thus use the log of industry mean of the excess cash as the IV of the firm's excess cash. Similarly, Eom (2018) also uses industry average (log of industry mean of oversubscription in the five most recent IPOs) as the IV in his research. Hasan and Cheung (2018) take the industry-level average firm capital in each year as an IV. Meanwhile, Ye et al. (2019) imply the industry average of the female directors as IV. Following these studies, we believe that *IndMeanRD, IndMeanTD,* and *IndMeanBD* are appropriate as our paper's instruments: "board diversity of firms in the same industry may be similar and closely related with the industry-level of board diversity." The industry level board diversity directly impacts the board diversity of each firm in this industry but can not directly affect comparability.

We use the endogenous variables (RD, TD, and BD) as a dependent variable in the first stage while treating the other variables and IV (*IndMeanRD, IndMeanTD,* and *IndMeanBD*) as independent variables.[7] Then we estimate the "fitted values" of endogenous variables. After that, in the second stage, we then substitute the endogenous variables with the fitted values generated in the first-stage regression. We present the results in Table 10. Panel C of Table 10 presents the findings of H1, H2, and H3, while Panel D shows the results of H4. We find that board diversity increases comparability. We, therefore, conclude that our main results are robust across the endogeneity issues since our 2SLS regressions demonstrate similar results to our OLS findings.

To address the endogeneity problem in our research, we acknowledge the importance of a strong and valid instrumental variable. As a result, we run multiple post-estimation methods to check the validity of our instrumental variables. First, we test for the F-statistics in the first-stage regressions. The un-tabulated results show that F-statistics for our first stage regressions are higher than the cutoff points suggested by Staiger and Stock (1997). Secondly, we also check the t-statistics for each of our instrumental variables. Similarly, the un-tabulated results show that the t-statistics for each instrumental variable are higher than the cutoff point suggested by Adkins and Hill (2008). Thus, we conclude that our IVs are valid, reliable, and sufficiently strong to mitigate the endogeneity bias in our 2SLS regressions.

In previous sections, we used different methods to address endogeneity issues, however, the impact of board diversity on comparability can still be subject to some

[5] *IndMeanRD, IndMeanTD, and IndMeanBD are the industry mean of relation diversity, task diversity, and overall board diversity, respectively.*

[6] Also see Lin et al. (2013), An et al. (2016), Jiang and Yuan (2018), and Chen (2015).

[7] *We do not report the results of the first stage regressions due to brevity.*

unobserved firms' characteristics. To address this issue, we compare firms with higher board diversity[8] (treatment firms) to a sample of control firms with lower board diversity (control firms) matched on the propensity for a firm to hire directors with diverse backgrounds. The core benefit of using control sample matched on propensity scores is that it allows us to attribute any unobserved effects more clearly to the hiring of directors with diverse backgrounds itself, rather than to the firm characteristics associated with the hiring of directors with diverse backgrounds (Bowen et al., 2010). We re-estimate the models [7] and [8] using treatment and matched control samples and report the results in Panel E and F of Table 10. The results posit that the coefficients on all the board diversity indexes and interaction terms (i.e., RD*InsOwn, TD*InsOwn, and BD*InsOwn) are significantly positive, suggesting that board diversity enhances comparability, and InsOwn positively moderate the diversity-comparability nexus.

In the previous section, we document substantial evidence that comparability is high for firms with higher diversity on board. Therefore, an essential concern is that firms with greater comparability in their earlier periods may be likely to attract board members with a diverse background relative to firms with lower comparability. Consequently, if it is true, the causality may spread from the opposite side. To address this issue, reverse causality concerns do not influence our findings; we use change analysis following previous studies (Aggarwal et al., 2011; Jebran et al., 2020). This technique also caters the impact of time-invariant unobservable firm characteristics.

Panel G and H of Table 10 show the findings of change estimation. The explained variables ($\Delta FSC4, \Delta FSC10, and \Delta FSCInd$) are calculated as the change from previous period, i.e., time $t-1$. Our primary test variables (ΔRD, ΔTD, and ΔBD, ΔRD*InsOwn, ΔTD*InsOwn, and ΔBD*InsOwn) and control variables are also computed as the change from time $t-1$ to t. Consistent with our expectations, the findings show positive and statistically significant coefficients on Δ*RD,* Δ*TD,* Δ*BD*, ΔRD*InsOwn, ΔTD*InsOwn, and ΔBD*InsOwn, which support our hypotheses.

7 Additional analyses

7.1 State and non-state-owned firms

SOEs have an important role in a country's economic growth and development. In emerging economies, i.e., China, SOEs offer a higher probability of agency concerns due to their close contact with the state. SOEs have various objectives, systems of governance, and reporting procedures (Allen et al., 2012). They are dominating in industries that directly affect people's livelihoods, such as water utilities, postal service, and electricity generating and distribution. As a result, their performance criteria are more social than economic (Faccio, 2006). Thus, SOEs in China face agency

[8] *We change our board diversity indexes to dummy variables and define higher (lower) board diversity on the board. RD_dummy is the indicator variable equaling one if the board has higher relation diversity, otherwise zero. We repeat the same process for task diversity (TD_dummy) and overall board diversity (BD_dummy).*

Table 11 Board diversity and financial statement comparability: impact in SOEs and Non-SOEs

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
RD	0.214**	0.303***	0.470***						
	(2.455)	(2.964)	(3.572)						
TD				0.423***	0.572***	1.004***			
				(8.537)	(9.895)	(13.716)			
BD							0.370***	0.503***	0.868***
							(8.199)	(9.626)	(13.254)
SOE	−0.065	−0.060	−0.003	−0.090	−0.126	−0.163	−0.077	−0.092	−0.031
	(−0.628)	(−0.498)	(−0.020)	(−1.312)	(−1.575)	(−1.640)	(−0.693)	(−0.715)	(−0.196)
RD*SOE	−0.044	−0.100	−0.295*						
	(−0.373)	(−0.713)	(−1.645)						
TD*SOE				0.010	0.011	−0.044			
				(0.141)	(0.130)	(−0.418)			
BD*SOE							0.012	0.005	−0.068
							(0.196)	(0.075)	(−0.757)
Size	0.239***	0.295***	0.429***	0.216***	0.265***	0.380***	0.225***	0.277***	0.401***
	(17.839)	(19.287)	(23.102)	(15.922)	(17.088)	(20.301)	(16.913)	(18.213)	(21.768)
MB	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000	−0.000
	(−1.501)	(−1.405)	(−1.295)	(−1.513)	(−1.421)	(−1.317)	(−1.492)	(−1.396)	(−1.279)
OCF	−0.901***	−1.259***	−1.759***	−0.921***	−1.284***	−1.792***	−0.896***	−1.251***	−1.737***
	(−4.071)	(−4.918)	(−5.375)	(−4.195)	(−5.066)	(−5.572)	(−4.083)	(−4.935)	(−5.395)
Growth	−0.013	0.012	0.111	−0.008	0.019	0.123	−0.009	0.018	0.120

Table 11 (continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
	(−0.220)	(0.173)	(1.336)	(−0.127)	(0.282)	(1.500)	(−0.146)	(0.257)	(1.453)
AQ	−0.229***	−0.291***	−0.451***	−0.211***	−0.266***	−0.410***	−0.217***	−0.274***	−0.424***
	(−2.837)	(−3.015)	(−3.586)	(−2.726)	(−2.900)	(−3.483)	(−2.758)	(−2.933)	(−3.508)
Lev	−1.861***	−2.269***	−3.253***	−1.741***	−2.107***	−2.983***	−1.756***	−2.128***	−3.023***
	(−17.192)	(−18.450)	(−22.153)	(−15.812)	(−16.855)	(−20.043)	(−16.032)	(−17.107)	(−20.395)
ROA	1.413***	1.452**	0.226	1.598***	1.698***	0.631	1.559***	1.646***	0.537
	(2.606)	(2.320)	(0.278)	(2.982)	(2.753)	(0.795)	(2.909)	(2.667)	(0.674)
FAge	0.005***	0.011***	0.035***	0.001	0.006***	0.025***	0.000	0.005**	0.024***
	(2.904)	(5.694)	(13.750)	(0.617)	(2.928)	(9.809)	(0.225)	(2.444)	(9.217)
BSIZE	−0.042**	−0.052**	−0.035	−0.064***	−0.082***	−0.084***	−0.062***	−0.078***	−0.076***
	(−2.187)	(−2.279)	(−1.204)	(−3.355)	(−3.636)	(−2.936)	(−3.204)	(−3.460)	(−2.663)
BIND	−0.049***	−0.059***	−0.140***	−0.061***	−0.075***	−0.168***	−0.062***	−0.077***	−0.169***
	(−2.693)	(−2.799)	(−5.183)	(−3.329)	(−3.536)	(−6.247)	(−3.386)	(−3.600)	(−6.296)
Dual	0.035*	0.049**	0.056*	0.032	0.044*	0.047	0.027	0.037	0.035
	(1.683)	(1.970)	(1.721)	(1.526)	(1.785)	(1.435)	(1.273)	(1.497)	(1.086)
ACEXP	−0.060	−0.013	0.060	−0.134*	−0.113	−0.102	−0.122	−0.097	−0.070
	(−0.774)	(−0.145)	(0.525)	(−1.710)	(−1.242)	(−0.894)	(−1.557)	(−1.060)	(−0.606)
ACGD	0.055	0.095*	0.187***	0.064	0.106**	0.183***	−0.018	−0.005	0.003
	(1.261)	(1.842)	(2.813)	(1.580)	(2.205)	(2.956)	(−0.423)	(−0.096)	(0.052)
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 11 (continued)

Variables	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
Intercept	−5.143***	−6.582***	−10.494***	−4.773***	−6.077***	−9.763***	−5.217***	−6.683***	−10.801***
	(−19.794)	(−22.008)	(−28.644)	(−18.713)	(−20.690)	(−27.259)	(−20.592)	(−22.868)	(−30.226)
N	22,384	22,384	22,384	22,371	22,371	22,371	22,371	22,371	22,371
R^2	0.108	0.116	0.137	0.115	0.125	0.153	0.115	0.125	0.152

This table reports the results of the impact of board diversity on comparability in SOEs and Non-SOEs. The t-statistics are reported in parentheses based on standard errors adjusted for clustering at the firm level

***, **, and * denote $p < 1\%$, 5%, and 10%. Refer to Appendix 1 for variable definitions conflicts between management and shareholders (both minority and majority shareholders) (Ali et al., 2020; Jensen & Meckling, 1976). Further, Chen et al. (2010) argue that SOEs, as compared to NSOEs, are less riskier because they get support from the state during their financial distress. Shen and Lin (2009) also posit that government ownership and informal networks are the potential governance tools in China. Such variations also highlight that the financial reporting of SOEs is different from NSOEs. Consequently, we argue that board diversity in SOEs is less likely to enhance comparability than those in NSOEs.

We construct new interaction variables, i.e., RD*SOEs, TD*SOEs, and BD*SOEs, and find their impact on comparability. We report the results in Table 11, which highlights significant differences in the results of SOEs and Non-SOEs. Specifically, we find that board diversity has no significant impact on comparability in SOEs because the main aim of the SOEs is to fulfill the socio-political goals of the firms rather than increasing comparability.

7.2 Board diversity and financial statement comparability: crisis vs non-crisis periods

Furthermore, we investigate the association between board diversity and comparability in the global financial crisis. The 2008 global financial crisis has seriously impacted the Chinese economy and industries. Financial crisis plays a major part in the reshaping of the business world. The crisis significantly shocked investor confidence globally and raised serious concerns about the quality of the reporting. Chinese firms also face the same issues regarding reporting quality during crisis periods. However, most Chinese firms are under the control of the state, and the state work as an insurer for these firms; thus, we may predict no effect of board diversity on the comparability in crisis periods. Keeping in view the concerns about the quality of reporting in Chinese firms, we examine whether and how board diversity influences comparability during the global financial crisis. We divide our sample into two sub-periods for this reason, the crisis period (2008–2010) and the non-crisis periods (2005–2007 and 2011–2020).[9] We report the results in Table 12. Our findings indicate that board diversity during the recission periods does not substantially affect comparability. However, RD, TD, BD, and interaction terms (i.e., RD*InsOwn, TD*InsOwn, and BD*InsOwn) improve comparability in the non-financial crisis periods.

8 Conclusion

The study investigates the effect of board diversity on financial statement comparability in China settings. We divide board diversity characteristics into three categories: relation-oriented diversity (i.e., gender and age), task-oriented diversity

[9] We also find the impact of board diversity for Covid-19 (2020). The un-tabulated results show that board diversity has no effect on comparability during Covid-19.

Table 12 Board diversity, institutional ownership, and financial statement comparability: crisis vs non-crisis periods

Variables	Crisis periods								
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
Panel A: Board diversity and financial statement comparability									
RD	0.133	0.172	0.438						
	(1.443)	(1.636)	(1.495)						
TD				−0.171	−0.234	−0.130			
				(−1.309)	(−1.524)	(−1.392)			
BD							−0.028	−0.045	−0.169
							(−0.272)	(−0.380)	(−1.106)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−4.709***	−5.911***	−7.921***	−4.300***	−5.383***	−7.308***	−4.340***	−5.426***	−7.243***
	(−5.338)	(−5.825)	(−6.479)	(−5.314)	(−5.762)	(−6.465)	(−5.279)	(−5.715)	(−6.295)
N	2975	2975	2975	2969	2969	2969	2969	2969	2969
R^2	0.149	0.149	0.139	0.149	0.149	0.140	0.148	0.148	0.139
Panel B: Moderating effect of institutional ownership (Hypothesis Four)									
RD	0.204	0.315	0.346						
	(1.321)	(1.595)	(1.439)						
TD				0.003	−0.031	−0.239			
				(0.021)	(−0.205)	(−1.195)			
BD							−0.005	−0.013	−0.447
							(−0.048)	(−0.098)	(−1.462)
InsOwn	1.229***	1.735***	3.475***	1.265***	1.756***	3.506***	2.574*	2.698*	11.007***
	(3.317)	(3.869)	(6.053)	(3.538)	(4.004)	(6.157)	(1.833)	(1.733)	(5.350)
RD*InsOwn	−0.106	−0.084	−0.302						
	(−0.438)	(−0.290)	(−0.811)						

Table 12 (continued)

Variables	Crisis periods								
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
TD*InsOwn				0.118	0.092	−0.165			
				(0.598)	(0.375)	(−0.476)			
BD*InsOwn							−0.115	−0.094	−0.319
							(−0.466)	(−0.318)	(−0.844)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−23.957	−25.767	−48.961	−3.137***	−4.019***	−5.931***	−3.384***	−4.404***	−6.591***
	(−0.299)	(−0.275)	(−0.420)	(−4.064)	(−4.477)	(−5.378)	(−4.147)	(−4.641)	(−5.425)
N	3501	3501	3501	3510	3510	3510	3510	3510	3510
R^2	0.108	0.107	0.112	0.097	0.093	0.100	0.095	0.092	0.102
Variables	Non-crisis periods								
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
Panel A: Board diversity and financial statement comparability									
RD	0.241***	0.319***	0.462***						
	(3.817)	(4.305)	(4.880)						
TD				0.502***	0.643***	0.997***			
				(10.406)	(11.546)	(14.578)			
BD							0.426***	0.547***	0.841***
							(10.416)	(11.633)	(14.546)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

Table 12 (continued)

Variables	Non-crisis periods								
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
Intercept	−4.765***	−5.978***	−9.468***	−4.514***	−5.645***	−8.996***	−5.035***	−6.314***	−10.024***
	(−17.082)	(−18.668)	(−24.173)	(−16.907)	(−18.430)	(−24.091)	(−18.514)	(−20.214)	(−26.265)
N	19,394	19,394	19,394	19,387	19,387	19,387	19,387	19,387	19,387
R^2	0.093	0.098	0.115	0.103	0.109	0.131	0.102	0.109	0.131
Panel B: Moderating effect of institutional ownership (Hypothesis Four)									
RD	0.286***	0.378***	0.564***						
	(4.740)	(5.329)	(6.183)						
TD				0.592***	0.778***	1.267***			
				(9.788)	(11.082)	(14.578)			
BD							0.500***	0.638***	0.989***
							(10.408)	(11.516)	(14.440)
InsOwn	1.064***	1.511***	2.826***	0.897***	1.287***	2.468***	1.101*	1.125***	1.461***
	(6.846)	(7.871)	(9.877)	(5.786)	(6.721)	(8.845)	(1.825)	(4.338)	(4.270)
RD*InsOwn	0.264***	0.322***	0.524***						
	(4.752)	(4.974)	(6.369)						
TD*InsOwn				0.265***	0.398***	0.794***			
				(3.482)	(4.457)	(6.849)			
BD*InsOwn							0.188***	0.229***	0.338***
							(13.110)	(13.986)	(16.939)
CV	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year/Ind	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	−4.747***	−5.978***	−9.699***	−4.064***	−5.080***	−8.229***	−4.533***	−5.729***	−9.318***

Table 12 (continued)

Variables	Non-crisis periods								
	Hypothesis one			Hypothesis two			Hypothesis three		
	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND	FSC4	FSC10	FSCIND
	(− 16.786)	(− 18.298)	(− 23.971)	(− 15.082)	(− 16.381)	(− 21.569)	(− 16.114)	(− 17.675)	(− 23.358)
N	18,802	18,802	18,802	18,797	18,797	18,797	18,797	18,797	18,797
R^2	0.078	0.083	0.104	0.087	0.093	0.119	0.087	0.093	0.118

(i.e., experience, education, and tenure), and overall board diversity (sum of task and relation diversity). We find a positive relationship between board diversity and financial statements comparability. The magnitude is significant, both statistically and economically. These findings suggest that greater board diversity improves the monitoring of managerial resources, reduces agency conflict, and result in higher comparability. The findings also exhibit collective knowledge, increase cognitive abilities, improve board functionality, improve the monitoring of managerial activities and lead to higher comparability. We also document that institutional ownership positively affects the relationship between board diversity and comparability. The monitoring effect of institutional investors boosts the effect of board diversity on comparability. The results reveal that diversity reduces incentives for an opaque information environment, enhances monitoring of managerial activities, and increases transparency resulting in higher comparability.

The findings remain robust after controlling for potential endogeneity. Furthermore, our additional analysis reveals that the effect is more pronounced in NSOEs than SOEs. We further document that the effect of board diversity and comparability is significant only for non-crisis periods only. Furthermore, the effect of institutional ownership on board diversity and comparability is also significant only for non-crisis period.

Our results offer several implications. First, related to corporate governance literature, this study provides valuable insight that board diversity is one of the important attributes of corporate board, which has been ignored in the extant literature. While many researchers (Ain et al., 2020; Arena et al., 2015; Kyaw et al., 2015) have considered a single facet (mostly, gender) of the board diversity and overlooked its multi-facet nature. We take into account various diversity attributes such as gender, age, education, experience, and tenure and group them in relation and task-oriented categories. Considering these important attributes of boardroom diversity, we report how a diverse board increases comparability. The regulators and policymakers may consider board diversity an important determinant affecting comparability. Second, our results help shareholders, both current and potential, by providing insights from the board's composition. The shareholders may consider various attributes of board diversity important for superior firm performance. This study exploits Chinese institutional environment, which is unique and a transition economy. The emerging-market settings and unique business/cultural environment impose limitations on the generalizability of the study. However, these limitations also provide an opportunity to study the relationship in the developed economic environment.

Appendix 1: Variable definitions

Variable	Definition
Panel A: Financial statement comparability variables	
FSC4	Is the mean of the four highest comparability scores of firm "i" in period "t" in the same industry
FSC10	Is the mean of the comparability scores of the top 10 firm within the industry

Variable	Definition
FSCInd	Is the median of all of the comparability scores of firm "i" in the industry for period "t"
Panel B: Board diversity variables	
Gender	Index of diversity for gender with two categories: males and females
Age	Index of diversity for age with five types: 40 and younger, 40–49, 50–59, 60–69, 70 years and older
Experience	Index of diversity for directors expertise with five groups: financial, consulting, legal, management, and other expertise (i.e. research, technology, medical, etc.)
Tenure	Index of diversity for director tenure, measured by the number of terms served on the board. On average, a director serves a term of 3 years. This variable contains six categories: 1 (i.e., 3 years or less), 2, 3, 4, 5, and more than 5 (i.e., more than 15 years) terms
RD	The sum of gender and age diversities
TD	The sum of experience, education and tenure diversities
BD	The sum of both relation and task diversities
InsOwn	Number of shares owned by the institutional shareholders
Panel C: Control variables	
Size	Natural log of the firm's total assets
MB	Market value of equity divided by book value of equity
OCF	Operating cash flow scaled by total assets
Growth	Equals to sales in current year minus sales in previous year divided by sales in previous year
AQ	Absolute value of discretionary accruals calculated using the Jones (1991) model, as modified by Kothari et al. (2005)
Lev	Total liability divided by total assets
ROA	Net income scaled by total assets
FAge	The natural logarithm of the number of years since the listing date
BSIZE	The indicator variable equal to one if the board size (the number of board members) is smaller than the median of board size of the sample firms in the year t
BIND	The indicator variable equals to one if the proportion of independent directors who serve on the board is lower than the median of the independent directors of the sample firms in the year t
Dual	Equals to 1 if the CEOs also serve as chairman of the board, and 0 otherwise
ACEXP	The proportion of audit committee financial expertise directors
ACGD	Audit committee gender diversity, refers to the gender diversity in the audit committee measured through the Blau index
Panel D: Other variables	
SOEs	Equals to 1 if the firm is owned by the state, and 0 otherwise

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