The Value of Academic Directors to Stakeholders: Evidence on Corporate Social Responsibility Reporting

Abstract

This study explores the regulatory setting in Taiwan and examines the association between academic directors and corporate social responsibility (CSR) reporting. We find that firms with academic directors on the board are more likely to issue a stand-alone CSR report and obtain third-party assurance on their CSR reports. We also find a positive association between CSR reporting and academic directors with industry expertise. Further cross-sectional analyses indicate that the positive relation between academic directors (and their industry expertise) and CSR reporting is stronger in firms with higher growth, greater institutional ownership, and larger control-ownership divergence. Our findings that the presence of academic directors can promote better sustainability reporting suggest that academic directors contribute not only to shareholder value but also to wider stakeholder interests.

Keywords: corporate social responsibility, sustainability reporting, academic director, corporate governance

The Value of Academic Directors to Stakeholders: Evidence on Corporate Social Responsibility Reporting

1. Introduction

Corporate boards play an important role in advising and monitoring managerial behavior. Recent trends in U.S. corporate board composition suggest an increase in the appointment of directors from academia. According to Francis, Hasan, and Wu (2015), from 1998 to 2011 approximately 40% of Standard & Poor's (S&P) 1,500 firms have at least one professor in their boardroom and roughly 14.3% of these firms' outside directors are drawn from academia. The proportion of academics on board is especially increasing after the passage of the Sarbanes-Oxley Act (SOX) of 2002, due to the more stringent requirement on board independence and expertise (Linck, Netter, and Yang 2008).

We explore the regulatory setting in Taiwan and examine the association between independent directors' academic expertise and firms' corporate social responsibility (CSR) reporting. In the U.S., the Securities and Exchange Commission (SEC) and major stock exchanges only require outside directors to be independent (i.e., do not have any relationships with the firm) but do not regulate directors' qualifications. In contrast, the Securities Exchange Act in Taiwan explicitly specifies academic experience as one of the qualifications for independent directors. In our sample of listed firms with independent directors on the board, academics account for 40%.[1] Thus it appears that academia is a popular source for Taiwanese firms to appoint independent directors.[2]

Many studies show that the presence of academic directors on board is positively related to firm performance. For example, using the setting of academic director appointments,

[1] According to the independence criterion, all academics on the board are "independent directors" that do not have any affiliations with the firm other than serving as a director on the board.

[2] As a comparison, Pang et al. (2018) show that the largest category of independent directors in China are university professors or academic researchers, with academics accounting for 35% of all independent directors.

White et al. (2014) find that the market reacts favorably to appointments of professors with specialized expertise (e.g., medicine, science, and engineering) and administrative academics affiliated with a business school. Similarly, Francis, Hasan, and Wu (2015) also find that companies with directors from academia are associated with higher financial performance (measured by return on assets and Tobin's Q) and better corporate governance (including lower CEO compensation, higher earnings quality, and higher CEO forced turnover-performance sensitivity). More recently, Chen et al. (2019) and Pang et al. (2018) utilize the regulatory setting in China and document a negative market reaction to academic director resignations, supporting academic directors' positive contribution to firm value. We extend this stream of literature by focusing on the role of academic directors in influencing firms' CSR disclosures.[3]

CSR is corporate social or environmental behavior that goes beyond the legal or regulatory requirements faced by the company (Kitzmueller and Shimshack 2012). Over the last several decades, CSR activities have become an increasingly important investment by firms. A survey by a Boston-based marketing firm shows that 80% of consumers consider corporate support of social issues important in building public trust (Cone 2004). Anecdotal evidence also suggests that a growing number of multinational companies (such as Google, IBM, Johnson & Johnson, Microsoft, Nestle, Starbucks, Unilever, Wal-Mart, etc.) are actively involved in CSR initiatives aimed at creating shared value among stakeholders (Porter and Kramer 2011).

Besides the widespread attention to CSR issues, a global survey by KPMG reveals that CSR reporting becomes a standard practice for large and mid-cap companies around the world, with around three quarters of the 4,900 survey companies issuing CSR reports.[4] The

[3] We use the terms "CSR disclosures", "CSR reporting", and "sustainability reporting" interchangeably throughout the paper.

[4] See "*The Road Ahead—The KPMG Survey of Corporate Responsibility Reporting 2017*", available at https://assets.kpmg/content/dam/kpmg/be/pdf/2017/kpmg-survey-of-corporate-responsibility-reporting-2017.pdf

increased prevalence of CSR reporting is also evident in Taiwan. The Taiwanese government initiated a regulation in year 2014 which mandates large firms and firms in certain industries to issue CSR reports based on the sustainability reporting guidelines developed by the Global Reporting Initiative (GRI).[5] In our study we focus on voluntary reporting as the mandatory rules only apply to a subset of firms and there are still many firms providing CSR reports/assurance voluntarily. As shown by Figure 1, in our sample the percentage of firms voluntarily issuing stand-alone CSR reports keeps growing, from 0.5% in year 2006 to 12.4% in year 2017. Similarly, in the sample with CSR reports the proportion of obtaining third-party assurance increases sharply from 2006 to 2009 and remains stable around 30%~40% thereafter.[6] This highlights an important trend in the awareness of providing credible CSR information even without the mandatory requirement.

As social and environmental issues are now at the forefront of corporate governance in many countries, CSR is often a critical item on boards' agendas and boards have major responsibility in achieving CSR objectives (Elkington 2006; Kakabadse 2007; Mackenzie 2007). Accordingly, a considerable amount of research suggests that various board attributes have significant influence on CSR performance as well as CSR disclosures (see Rao and Tilt [2015] for a complete review). Even though a reasonable consensus exists in the literature suggesting that board composition (such as independence, size, and ownership) plays an important role in promoting CSR investment, there is little research directly examining the effect of director expertise on CSR reporting.

Prior research suggests that CSR reporting has a positive impact on stakeholders' perceptions of firm performance and firm value (Cormier, Ledoux, and Magnan 2011; El

[5] Effective from fiscal year 2014, firms subject to mandatory CSR reporting include: (a) listed firms in the food, chemical, and financial industries, and (b) firms with a paid-in capital of NTD $10 billion or above. In addition, firms in the food industry are required to obtain auditor assurance on their CSR reports. Further, staring from fiscal year 2016, the threshold for criterion (b) is lowered down to paid-in capital of NTD $5 billion or above.
[6] Casey and Grenier (2015) study a sample of U.S. firms during 1993-2010 and document that the average percentage of voluntary CSR reports (assurance) is 2.6% (8.7%).

Ghoul et al. 2011; Goss and Roberts 2011; Godfrey, Merrill, and Hansen 2009). Moreover, CSR reporting can serve as an accountability mechanism which helps reduce the information asymmetry between managers and investors as well as other stakeholders (Dhaliwal et al. 2011, 2012). Dai et al. (2019) further show that higher levels of CSR information disclosures reduce the stock price crash risk.

Dubbink et al. (2008) argue that transparency is a crucial condition to implement a CSR policy, and effective boards of directors tend to encourage higher disclosure transparency (Jamali, Safieddine, and Rabbath 2008). We believe firms with academic faculty members on the board are more likely to disclose CSR-related issues. First, academics are in general perceived to possess higher ethical and socially responsible standards (Baumgarten 1982; Charnov 1987; O'Connell 1998). Second, professors tend to be established scholars with strong reputations and thus have higher incentives to protect their long-built reputation (Yermack 2004).

Our empirical results generally support our predictions. First, we find that firms with academic directors are more likely to issue a stand-alone CSR report and obtain third-party assurance on their CSR reports. Second, we also find a positive association between CSR reporting and academic directors with industry expertise, suggesting that industry-specific knowledge is important to the application of CSR-related practices. Inconsistent with expectations, however, we find only limited evidence that academic directors' accounting expertise has a significant effect on CSR reporting. This highlights the differential expertise requirement between financial reporting and non-financial reporting. All of our results are robust to controlling for CSR performance and considering the endogeneity of the choice of academic directors.

Further cross-sectional analyses show that the positive impact of academic directors as well as their industry expertise on firms' propensity of CSR reporting is stronger in high-growth firms, firms with higher institutional ownership, and firms with a larger divergence

between control rights and cash flow rights. The findings suggest that academic directors exert a greater influence on firms facing higher information asymmetry and that academic director expertise plays a more important role in encouraging better CSR reporting for firms with higher agency problems.

Our study makes the following contributions. First, we add to the literature studying how board characteristics affect CSR activities. Prior research documents that board heterogeneity such as gender, age, and ethnicity has a significant effect on CSR performance. We show that directors' academic background as well as industry expertise are related to a firm's disclosures of CSR activities. Our focus on the role of academic directors also addresses direct calls for more involvement of the academic accounting profession in CSR-related issues in the post-Erron era (Owen 2005).

Second, prior research provides evidence on the effectiveness of academic directors in the monitoring of firms' financial performance. We add to this literature by extending academic directors' advice and oversight functions to social performance. Our findings that the presence of academic directors can promote better sustainability reporting suggest that academic directors contribute not only to shareholder value but also to wider stakeholder interests. Furthermore, our results are also consistent with studies arguing that outside directors are not homogenous (Anderson et al. 2011; Fich 2005). More specifically, additional attributes such as industry expertise could be important in making academic directors more beneficial to the firm.

Third, our study also contributes to a growing literature that examines the determinants of sustainability reporting. In response to the call of Brennan and Solomon (2008) for more research on social and environmental reporting, many researchers using data from different countries have explored the effect of various governance attributes on CSR disclosures. We exploit the unique regulation regarding academic directors in Taiwan and identify directors' industry expertise as a significant determinant of CSR reporting. While regulators and

researchers emphasize director expertise as a prescription for good financial reporting, our findings provide additional insights that director industry expertise also plays a role in the provision of non-financial disclosures.

The remainder of the paper is organized as follows. Section 2 discusses related literature and develops research hypotheses. Section 3 describes the research methodology. Data and sample statistics are summarized in Section 4. Section 5 presents the main empirical results. Section 6 provides additional analyses as well as robustness checks. Section 7 concludes the paper.

2. Literature and Hypotheses

2.1 Institutional Background

The conventional governance scheme in Taiwan consists of a board of directors and supervisors. The board of directors is legally responsible for management decision making, and the board of supervisors is set up separately from the board of directors to counterbalance the power of the board. The supervisors' responsibility is to monitor director affairs, and to ensure the quality of the financial statements. Starting from year 2006, the Securities Exchange Act allows public companies to adopt the independent director scheme, similar to the Anglo-Saxon governance system.[7] The regulation specifies that independent directors need to possess one of the following qualifications with at least five years of experiences: (a) working as a faculty (lecturer or the above positions) in universities; (b) having professional licenses such as lawyers, judges, or certified public accountants (CPAs); (c) having work experiences related to business, law, finance, accounting, or other fields related to the company's operation.

2.2 Board Heterogeneity and Corporate Social Responsibility

Numerous studies have examined how board heterogeneity affects corporate behavior

[7] Effective from year 2007, all listed financial companies as well as listed non-financial companies with a paid-in capital of NTD $50 billion or above are required to have independent directors on the board.

Anderson et al. (2011) suggest that board members with diverse backgrounds can bring valuable experiences, knowledge, and perspectives to the boardroom, which in turn improve the effectiveness or efficacy of monitoring and advising managers. Consistent with this argument, many studies find that board diversity is positively related to firms' financial performance (Adams and Ferreira 2009; Hillman, Cannella, and Paetzold 2000; White et al. 2014). In the aspect of CSR, a majority of studies document a positive relation between board independence and CSR engagement, supporting that outside directors tend to be more responsible (Ibrahim and Angelidis 1995; Jo and Harjoto 2011; Post, Rahman, and Rubow 2011). Moreover, a considerable amount of evidence shows that female directors have a positive impact on the level of a firm's CSR involvement (Bear, Rahman, and Post 2010; Boulouta 2013; Fernandez-Feijoo, Romero, and Ruiz 2012; Hafsi and Turgut 2013; Williams 2003; Zhang 2012). In addition to gender diversity, director age and tenure are also found to have some influence on CSR engagement (Hafsi and Turgut 2013; Post, Rahman, and Rubow 2011).

A very limited number of studies examine the influence of directors' occupational background on CSR. For example, Ibrahim, Howard, and Angelidis (2003) find that government officials and physicians have different values and perspectives towards social performance. Siciliano (1996) finds that greater occupational diversity at the board level is positively related to social performance. Hillman, Keim, and Luce (2001) examine the relation between the presence of stakeholder directors (e.g., suppliers, employees, and community representatives) and CSR performance and find that certain types of stakeholder directors affect diversity and environment performance. Cho et al. (2017), the closest study to ours, find that firms with professor-directors exhibit higher CSR performance ratings. We augment the above studies by expanding the scope of CSR performance to CSR reporting, which is a major tool to communicate firms' CSR activities to wider stakeholders (Fernandez-Feijoo et al. 2014). As the transparency of CSR reports is critical to promote

socially responsible behavior (Dubbink et al. 2008), our examination of academic expertise as one potential determinant of CSR reporting adds value to the literature.

2.3 Academic Directors and Corporate Outcomes

A few studies investigate the role of professors on the board. For instance, White et al. (2014) show that small firms are more likely to appoint academic directors and that the market reacts favorably to appointments of academics with specialized background. Francis, Hasan, and Wu (2015) find that the presence of academic directors is associated with greater operating performance, higher innovation, higher stock price informativeness, lower earnings management, and better corporate governance. Two recent studies explore the regulatory setting in China and find that the stock market reacts negatively to academic directors' resignations (Chen et al. 2019; Pang et al. 2018). These evidence suggests that academic directors are valuable advisors and effective monitors who bring positive impact on firms' financial performance. Nevertheless, we know little about whether academic directors influence a firm's decision-making in the CSR reporting dimension.

2.4 Characteristics of Academics and CSR Reporting

Researchers suggest that outside directors have incentives to develop reputations as good monitors in order to signal their expertise to the external market, which rewards them with additional directorships (Fama 1980; Fama and Jensen 1983). When compared with other outside directors, academics have even fewer direct connections with insiders and thus lower conflicts of interests with managers (Francis, Hasan, and Wu 2015). Therefore, academic directors tend to be less influenced by others and can protect their reputations by exercising independent judgement (Jiang and Murphy 2007). Prior studies have found that more independent outside directors are related to lower information asymmetry and higher levels of voluntary disclosures (Ajinkya, Bhojraj, and Sengupta 2005; Chau and Gray 2010; Cheng and Courtenay 2006; Huafang and Jianguo 2007; Liao, Luo, and Tang 2014). Accordingly, we expect academic directors will require managers to provide more transparent

information to the public.

Several studies indicate that university professors are deemed socially obligated in diverse aspects by the public. For instance, Baumgarten (1982) argues that university teachers have a social obligation to help other citizens and that the academic profession should have higher ethical standards to seek social benefits. Charnov (1987) asserts that professors must take roles in being ethical professionals. Similarly, O'Connell (1998) suggests that professors are obligated to fulfill their own moral responsibilities. Owen (2005) further advocates that the academic accounting profession exercise a larger impact on the promotion of CSR awareness and social reporting for the business society. If academic directors possess higher levels of ethical standards and thus more positive attitude toward CSR, they are more likely to promote CSR activities. Given that academic directors are also more independent monitors, they should encourage a higher level of accountability and transparency in the reporting of CSR-related issues. We therefore formulate our hypothesis as follows:

H1: The presence of academic directors is positively associated with CSR reporting.

We next examine how academic directors' differential expertise affects CSR reporting. Prior literature suggests that industry characteristics play an important role in CSR disclosures. Due to a greater exposure to social and environmental risks, firms in high-pollution industries (such as mining and utilities) are more likely to issue CSR reports and obtain CSR assurance (Casey and Grenier 2015; Simnett, Vanstraelen, and Chua 2009). Trotman and Trotman (2013) points out industry expertise as one of the highly valued attributes of board members. Kor and Misangyi (2008) document evidence that outside directors' industry experience helps to mitigate the competitive disadvantage confronting a firm that is new in an industry. Cohen et al. (2014) also suggest that there are industry-specific practices which require specialized knowledge for effective communication. Many studies have found that independent directors with industry expertise contributes to more effective monitoring, leading to higher firm value and lower earnings management (Cohen et

al. 2014; Drobetz et al. 2018; Faleye, Hoitash, and Hoitash 2018; Wang, Xie, and Zhu 2015). Thus we expect academic directors with industry expertise could be more situated to understand an industry's complexities and risks, and thus promote better CSR reporting.

Studies also suggest that the accounting profession has a stronger reputation for integrity, independence, and professional skepticism (Wallage 2000; Knechel et al. 2006). Accountants also must adhere to professional and organization ethical codes of conduct (Power 1997). Firms who have accounting experts on board tend to have better financial reporting quality (Dhaliwal, Naiker, and Navissi 2010; Krishnan and Visvanathan 2008). Accounting expertise also facilitates the board's communication with external auditors (Abbott et al. 2003; Hoitash, Hoitash, and Bedard 2009). Therefore, we expect academic directors who also have accounting expertise would contribute to higher-quality CSR reporting. Based on the above discussions, our second set of hypothesis is formulated as follows:

H2a: Academic directors with industry expertise is positively associated with CSR reporting.

H2b: Academic directors with accounting expertise is positively associated with CSR reporting.

Despite the above arguments, there are alternative views that might work against our predictions. Opponents of CSR argue that it is a manifestation of agency problem as managers often invest in CSR activities for personal benefits with the potential to hamper shareholder value (e.g., Friedman 1970; Bénabou and Tirole 2010; Krüger 2015; Cheng et al. 2016). Recent studies provide empirical evidence that mandatory requirements of CSR spending or CSR disclosures are detrimental to firm value, suggesting that CSR generates positive externalities at the expense of shareholders (Chen et al. 2018; Manchiraju and Rajgopal 2017). According to this negative perspective of CSR, academic directors might not have a positive influence on CSR reporting if they believe the agency cost argument.

3. Research Design

We test our hypotheses using the following regression model:

$$\begin{aligned}\text{CSR}_{i,t}/\text{ASSURE}_{i,t} &= \beta_0 + \beta_1 DIR\_EXP_{i,t} + \beta_2 ATO_{i,t} + \beta_3 PM_{i,t} + \beta_4 CFO_{i,t} + \beta_5 LEV_{i,t} \\ &+ \beta_6 MTB_{i,t} + \beta_7 SIZE_{i,t} + \beta_8 RD_{i,t} + \beta_9 ADV_{i,t} + \beta_{10} BDIND_{i,t} + \sum FIRM + \sum YEAR + \varepsilon \end{aligned} \quad (1)$$

Following prior literature (Casey and Grenier 2015; Simnett, Vanstraelen, and Chua 2009), we use two measures of CSR reporting. The first measure is *CSR*, which is an indicator equal to one if the firm issues a stand-alone CSR report, and zero otherwise. The second measure is *ASSURE*, which is an indicator equal to one if the firm obtains third-party assurance on its CSR report, and zero otherwise.

In equation (1), our main variable of interest is *DIR_EXP*, which measures different types of director expertise. In the test of H1, *DIR_EXP* is measured by *DIR_ACAD*, an indicator equal to one if the firm has at least one independent director with academic expertise, and zero otherwise. We define an independent director as having academic expertise if he/she is a full-time faculty affiliated with university institutions.[8]

To test H2a, we measure director expertise by *ACAD_IND*, an indicator equal to one if the firm has at least one academic director with industry expertise, and zero otherwise. Following prior studies (e.g., Cohen et al. 2014; Wang, Xie, and Zhu 2015), we define a director as having industry expertise if he/she is/was employed by another firm that operates in the same industry as the firm in which he/she now serves as an independent director.[9]

In the test of H2b, we measure director expertise by *ACAD_ACCT*, an indicator equal to one if the firm has at least one academic director with accounting expertise, and zero otherwise. Following prior research (Dhaliwal, Naiker, and Naissi 2010), we define an

[8] Prior studies tend to also distinguish academics with and without administrative jobs (White et al. 2014; Francis, Hasan, and Wu 2015). Nevertheless, in Taiwan the regulation prohibits professors holding administrative positions to sit on corporate boards. As a result, we do not make such classifications.

[9] Our results are robust if we define industry expertise as serving on the board of two additional firms within the same industry.

academic director as having accounting expertise if he/she has at least one of the following qualifications or experiences: CPA, auditor, controller, chief accounting officer, and principal accounting officer.[10]

Following prior studies, we include various firm-level control variables that could potentially influence firms' CSR reporting. Asset turnover, *ATO*, is defined as net sales divided by year-end total assets. Profit margin, *PM*, is measured by income before extraordinary items divided by net sales. *CFO* is cash flow from operations divided by total assets. *LEV* is total debt divided by total assets. *MTB* is the market-to-book ratio of equity. *SIZE* is measured as the natural logarithm of total assets. *RD* is research and development expenses scaled by net sales. *ADV* is advertising expenses scaled by net sales. *BDIND* is an indicator that equals one if the firm has at least one independent director, and zero otherwise. Finally, we include firm fixed effect and year fixed effect to account for variation in CSR reporting that is potentially driven by unobserved heterogeneities across firms and years. To mitigate the influence of potential outliers, we winsorize all continuous variables at the top and bottom 0.5 percentiles. The Appendix provides a summary of all variable definitions.

We estimate equation (1) by OLS regression (i.e., linear probability model in our case of dichotomous outcome variable). This estimation facilitates interpretation of the economic significance of the findings as one can easily interpret economic significance simply by looking at the coefficient estimates (Angrist and Pischke 2009; Hanlon and Hoopes 2014). Moreover, the use of linear probability model does not impose potential bias or inconsistency on the coefficients and standard errors (Greene 2004). To adjust for the well-known problem of heteroscedasticity, we use heteroscedasticity-robust standard errors clustered by firm. As a robustness test, we conduct all analyses using logistic regression and find qualitatively similar results.

[10] Some academics work in the industry before joining the academia.

4. Data and Sample Summary Statistics

4.1 Data and Sample Selection

Our sample selection process begins with all of the listed nonfinancial companies included in the Taiwan Economic Journal (TEJ) database for fiscal years 2006-2017. Consistent with prior research (e.g., Chen et al. 2018), we do not include financial firms as they are subject to different regulations. The sample period starts from 2006 because it is the year when the independent director regulation was introduced in Taiwan. We obtain CSR and financial data from TEJ. For directors' expertise data, we manually confirm each director's background (from company website and university website) based on the initial data provided by TEJ.

The initial sample consists of 20,441 firm-years. We delete 2,776 observations that lack information on the background of independent directors. As discussed earlier, some firms that meet specified criteria are required to issue CSR reports, thus we remove 955 observations that are subject to mandatory CSR reporting.[11] Finally, we delete 2,786 observations with missing data on any of the empirical variables. The final sample consists of 13,924 observations from 1,431 companies.

In Table 1, we present the sample distribution by year and by industry. Panel A shows that the percentage of firms with at least on professor on the board is on average 25.17% in the full sample and 40.61% in the sample having independent directors.[12] In addition, the number (percentage) of firms with academic directors keeps increasing, from 179 (17.46%) in year 2006 to 454 (38.18%) in year 2017. The results also show that academic directors with industry expertise on average account for 5.10% of the full sample (20.26% within the sample having academic directors), while academic directors with accounting expertise on

[11] As the mandatory CSR reporting starts from year 2014, we also conduct the empirical tests using a sample period from 2006 to 2013. All of the findings are unchanged.
[12] The number of observations with independent directors is 8,631.

average account for 1.95% of the full sample (7.73% within the sample having academic directors).

Table 1 Panel B shows that our sample encompasses a broad cross-section of industries. The most heavily represented industry in our sample is electronic components (14.71%), followed by the semiconductor industry (8.52%). There is also a large variation in the proportion of observations with academic directors across industry sectors. The semiconductor industry has the highest proportion (41.23%) of firm-years that have academic directors, while the rubber products industry has the lowest proportion (3.33%). Further, the biotechnology industry has the highest percentage of academic directors with industry expertise (8.28% of the full sample and 23.43% within the sample with academic directors), likely due to the higher requirement of industry-specific knowledge in the biotech industry. The machinery has the highest percentage of academic directors with accounting expertise (3.61% of the full sample and 13.16% within the sample with academic directors).

[Insert Table 1 here]

4.2 Descriptive Statistics and Univariate Analysis

Table 2 reports the descriptive statistics of the empirical variables used in the regression analysis. The full sample summary in Panel A shows that, 7.2% of the sample voluntarily issue a stand-alone CSR report, and 2.4% of the sample obtain third-party assurance on the CSR report. Also, 62% of our sample have at least one independent director on the board. Panel B of Table 2 performs a univariate analysis that compares the sample with and without academic directors. The results indicate that the average incidence of issuing a CSR report in the sample with academic directors is 10.6%, relative to 6.0% in the sample without academic directors. The difference is significant at the 1% level. The sample with academic directors also has a significantly higher proportion in obtaining CSR report assurance (mean of 4.4% versus 1.8%). These results provide preliminary evidence that the presence of academic directors is positively associated with CSR reporting.

[Insert Table 2 here]

Table 3 reports the correlations among all variables. Consistent with the univariate results in Table 2 Panel B, *DIR_ACAD* is significantly and positively correlated with both *CSR* (0.076) and *ASSURE* (0.074). We observe similar findings for other expertise measures: Both *ACAD_IND* and *ACAD_ACCT* have positive and significant correlations with *CSR* and *ASSURE*. These results provide univariate evidence in support of our research hypotheses.

[Insert Table 3 here]

5. Empirical Results

5.1 Main Analyses

Table 4 presents the regression results of the first hypothesis. In column (1), we find that the coefficient on *DIR_ACAD* is positive and significant at the 5% level, and that this effect is incremental to having an independent director on the board. The coefficient estimate suggests that the probability of issuing a stand-alone CSR report in firms with academic directors is 2.1% higher than in firms without any academic directors. The magnitude of this difference is also economically significant given that the average probability of issuing CSR reports in the sample is 7.2%. In column (2) where the dependent variable is *ASSURE*, we also find a positive and significant coefficient on *DIR_ACAD*.

As indicated by the univariate analysis, firms with academic directors differ from those without academic directors along several dimensions, suggesting potential endogeneity associated with the decision to appoint academic directors. Therefore, we further employ propensity score matching (PSM) to control for observable differences between these two subsamples. As suggested by Shipman et al. (2017), we estimate the propensity score of having academic directors by logistic regression which regresses *DIR_ACAD* on all the control variables in model (1). We present the regression results of model (1) based on the matched sample in Table 4 columns (3) and (4). Consistently, the coefficients on *DIR_ACAD* are significantly positive, and the results suggest that in firms with academic directors the

probability of issuing CSR reports (getting CSR reports assurance) is 3% (1.7%) higher than in firms without academic directors. Overall, the findings support H1 that the presence of academic directors is positively associated with CSR reporting.

[Insert Table 4 here]

Table 5 presents the regression results of the second hypothesis. We perform this analysis based on the full sample (Panel A) and the subsample with academic directors (Panel B). To test the incremental effect of industry expertise and accounting expertise, we control for the presence of academic directors (*DIR_ACAD*) in this analysis. In columns (1) and (2), we find that *ACAD_IND* is positively associated with *ASSURE* (significant at $p<0.01$ level) although *ACAD_IND* is not significantly related to *CSR*. Similar to Table 4, we also use a propensity score matched sample to test hypothesis 2. The results in columns (3) and (4) indicate that based on the PSM sample, the coefficients on *ACAD_IND* are both positive and significant. Taken together, the findings suggest that, after controlling for the presence of academic directors, academic directors' industry expertise has an incremental effect on CSR reporting, in particular the assurance of CSR reports. Consistent results are observed in columns (3) and (4) where the analysis is based on the propensity score matched sample.

Columns (5) through (8) of Table 5 relate to the test of H2b which examines the effect of academic directors' accounting expertise. In the full sample, the coefficient on *ACAD_ACCT* is not significant, suggesting that accounting expertise does not have incremental effect on CSR reporting. The results are similar based on the PSM sample, although we find a marginally significant coefficient when the dependent variable is *ASSURE*. Overall, the results provide only limited support of H2b that academic directors' accounting expertise is positively related to CSR reporting.

Instead of controlling for *DIR_ACAD* in the model, in Panel B we estimate the regression by limiting the sample to the subset of firms with academic directors. Generally, the results are consistent with those in Panel A and thus the inferences do not change in this

subsample analysis. Taken together, we find strong support of H2a that firms having academic directors with industry expertise are more likely to issue CSR reports as well as obtain CSR report assurance. However, limited evidence suggests that academic directors' accounting expertise is positively related to CSR reporting.

[Insert Table 5 here]

5.2 Robustness Tests—Controlling for CSR Performance

While our main focus is on CSR reporting, it is likely that firms with better CSR performance have higher incentives to disclose CSR information (Dhaliwal et al. 2011). To ensure the robustness of our findings, we include CSR performance as another control variable. Unlike prior studies that commonly use KLD or ASSET4 ratings as measures of CSR performance, similar data is not available in Taiwan. The only proxy of CSR performance is an award data provided by CommonWealth Magazine (CWM hereafter)—Taiwan's most influential and professional business magazine. Starting from 2007, CWM evaluates companies' CSR performance in four dimensions, including corporate governance, corporate commitment, social engagement, and environmental sustainability, and award 50 companies (30 among large enterprises, 10 among mid-sized enterprises, and 10 among foreign enterprises) for their excellence in CSR.[13] Accordingly, we create an indicator *CSRPERF* that equals one if a firm receives a CSR award, and zero otherwise, and add this variable into equation (1). This proxy is noisy as it is dichotomous and does not consider the variation in CSR performance among award firms as well as firms without awards. Nevertheless, it is worth examining whether our results are robust to the consideration of CSR performance. The regression results of controlling for *CSRPERF* are presented in Table 6.[14]

[13] Starting from year 2015, CWM expands the scope and give awards to 100 companies, including 50 among large enterprises, 15 among mid-sized enterprises, 15 among foreign enterprises, and 20 among small enterprises.

[14] It is also likely that firms providing voluntary CSR reporting have a higher chance of receiving the CSR award. Therefore, rather than controlling for the award indicator, we perform an alternative analysis by

[Insert Table 6 here]

We find that the coefficients on *CSRPERF* are consistently positive and significant across models, supporting the conjecture that firms with better CSR performance are more likely to issue CSR reports and obtain assurance. After controlling for the effect of CSR performance, we still find a significantly positive coefficient on *DIR_ACAD* in columns (1) and (2). Therefore, our inferences that the presence of academic directors is positively related to CSR reporting remain unchanged. After controlling for CSR performance, the incremental effect of industry expertise becomes weaker. As shown in columns (3) and (4), we only find a significant coefficient on *ACAD_IND* in the assurance model. The last two columns pertain to the incremental effect of academic directors' accounting expertise. Similar to the main results, we do not find a significant coefficient on *ACAD_ACCT* except in column (6) where the coefficient is marginally significant. These results again suggest that the presence of accounting expertise for academic directors appears to have a limited impact on CSR reporting.

5.3 Alternative Measure of Academic Expertise

Prior studies show that the market participants view academic director appointments differently based on the director's academic specialization (e.g., White et al. 2014). Since the accounting profession is considered to have the most influence on promoting transparent disclosures, we further consider how the presence of accounting professor on the board affects CSR reporting. For this analysis, we replace *DIR_ACAD* with an indicator *DIR_ACAD_ACC*, which equals 1 if the firm has an academic director who is a full-time university faculty in the department of accounting, and 0 otherwise. The results of this analysis are reported in Table 7.

Columns (1) and (2) of Table 7 show a positive and significant coefficient on

removing all firms that have received CSR awards from the sample. All of the results remain unchanged.

DIR_ACAD_ACC, suggesting that the presence of accounting professors on the board has a positive influence on the firm's CSR reporting decision. The results also hold after we control for CSR performance in columns (3) and (4). We also find that the coefficient estimates are larger than *DIR_ACAD*, a result suggesting that relative to firms without accounting faculty directors, in firms with accounting faculty directors the probability of issuing CSR reports and getting third-party assurance is 5% and 4% higher, respectively. These findings indicate that academic directors with accounting specialization have a more influential impact on firms' decision to provide more CSR disclosures.

[Insert Table 7 here]

6. Additional Analyses

In this section we explore cross-sectional variations of the effect of academic directors on CSR reporting. Since in the main analysis we do not find any significant effect of academic directors' accounting expertise on CSR reporting, in the following cross-sectional tests we do not include the accounting expertise variable in the regression model.

The effect of growth

Prior studies suggest that high-growth firms might benefit more from the expertise of academic directors (White et al. 2014) and firms in the growth stage also have higher demand for directors with industry expertise (Carcello, Hermanson, and Ye 2011). Accordingly, we expect the positive relation between academic directors and CSR reporting to be more pronounced in firms with higher growth rate. We test this effect by partitioning the sample into tercile based on the value of annual sales growth rate. Table 8 reports the regression results for the highest-growth sample and the lowest-growth sample.

Columns (1) through (4) of Table 8 show that the coefficient on *DIR_ACAD* is positive and significant only in the high-growth sample, suggesting that the positive effect of academic directors on CSR reporting is more pronounced in high-growth firms. Columns (5) through (8) relate to the results after adding the variable measuring academic directors with

industry expertise. We also find a positive and significant coefficient on *ACAD_IND* in the high-growth sample but not in the low-growth sample, supporting a greater demand for academic directors' industry expertise in high-growth firms. Prior research suggests that firms with higher growth opportunities usually face higher information asymmetry as well as higher proprietary costs (Bamber and Cheon 1998). Thus our findings suggest that academic directors play a more influential role in increasing high-growth firms' incentives to disclose more CSR information.

[Insert Table 8 here]

The effect of institutional ownership

Next, we examine whether the association between academic directors and CSR reporting varies with institutional ownership. Studies show that an increasing number of investors, especially institutional investors, are integrating CSR performance into their investment decisions due to both financial and social considerations (Dyck et al. 2019). In addition, institutional investors tend to have higher information demand and are more capable of requesting information from managers (Ajinkya et al. 2005; Dhaliwal et al. 2011). Consequently, the pressure of providing CSR reports could be greater for firms who have higher institutional ownership. We again divide the sample into tercile based on the value of institutional ownership and compare the samples in the top tercile and bottom tercile. Table 9 presents the regression results.

The first four columns of Table 9 indicate that the coefficient on *DIR_ACAD* is significantly positive in the sample with high institutional ownership but not significant in the low-ownership sample. Consistently, the last four columns of Table 9 show a positive and significant coefficient on *ACAD_IND* only in the sample with high institutional ownership. These results suggest that the effect of academic directors as well as academic directors' industry expertise is more pronounced when firms have higher institutional ownership. The findings are consistent with institutional investors having a greater demand for non-financial

information and placing pressures for firms to provide more CSR disclosures. As greater institutional ownership also indicates better monitoring, our results suggest that the oversight function provided by institutional investors and academic directors appear to be complements.

[Insert Table 9 here]

The effect of corporate governance

Finally, we test whether corporate governance characteristics moderate the relation between academic directors and CSR reporting. Listed companies in Taiwan are characterized by a high concentration of ownership (La Porta, Lopez-de-Silanes, and Shleifer 1999; Claessens, Djankov, and Lang 2000; Faccio and Lang 2002). For example, Yeh (2005) reveals that approximately 70% of the listed firms in Taiwan have controlling shareholders. Given this ownership structure, Taiwanese listed firms tend to have the problem of a large divergence between the ultimate owner's control and the level of equity ownership (Fan and Wong 2002; Chin et al. 2006). Studies show that financial reporting quality is lower when there is a large divergence between controlling shareholders' voting rights and their cash flow rights (Francis et al. 2005; Sue et al. 2013). Therefore, we further examine whether the association between academic directors and CSR reporting varies with the control-ownership divergence. To perform this test, we define divergence as one minus the cash flow rights divided by the voting rights (Fan and Wong 2002; Haw et al. 2004). The closer the value of divergence is to one, the more detached are the controlling owner's control rights from their cash flow rights. We then partition our sample into three groups based on the value of control-ownership divergence and compare the regression results for the top tercile and bottom tercile. The results of this analysis are presented in Table 10.

Table 10 shows that the coefficient on *DIR_ACAD* is consistently positive and significant only in the high-divergence sample. This result suggests that the effect of academic directors on CSR reporting is stronger in firms with higher agency problems. We

find consistent evidence in columns (5) through (8) where *ACAD_IND* is significantly positive only in the sample with high divergence, indicating a stronger effect of academic directors' industry expertise for poorly-governed firms. Overall, our findings collectively support a more pronounced effect of academic expertise on CSR reporting in firms with weaker corporate governance, suggesting a substitute relation between director expertise and other governance mechanisms.

[Insert Table 10 here]

7. Conclusion

This study empirically investigates whether the presence of academic directors affects a firm's CSR reporting. Based on the argument that academics tend to be more independent from corporate insiders and generally possess a higher sense of social responsibility and ethical standards, we expect firms with academic directors are more likely to provide CSR-related disclosures. Consistent with our expectations, we find that firms having academic directors on the board are more likely to voluntarily issue stand-alone CSR reports as well as obtain third-party assurance on CSR reports. In particular, the results are stronger if the academic director is a faculty at the department of accounting. Since academics might lack industry-specific experiences, we further examine whether CSR reporting is influenced by academics having two or more directorships within the same industry. This analysis shows that academics with industry expertise has a positive influence on firms' propensity of issuing CSR reports as well as getting external assurance. Finally, we test whether academics with accounting expertise is associated with better CSR reporting as the accounting profession is considered having greater integrity as well as higher professional knowledge about information disclosures. However, the empirical results provide limited evidence that academic directors with accounting expertise (measured by practitioner accounting experience) is positively related to a firm's CSR reporting.

We also find some cross-sectional variation in the association between academic

expertise and CSR reporting. More specifically, the effect of academic directors as well as their industry expertise is more pronounced in firms with higher growth, greater institutional ownership, and larger divergence between control rights and cash flow rights. These findings suggest that academic directors exert a greater influence on CSR disclosures in firms facing higher information demand from investors. Moreover, the effectiveness of academic directors' oversight function and industry expertise is stronger in firms suffering from higher agency problems.

Our study makes an important step toward a better understanding of the value of academic directors in CSR reporting. While prior literature documents the effect of academic directors on firms' financial performance, we provide insight on the role of academic directors in the disclosure of non-financial information. Our findings suggest that directors from academia add value not only to shareholders but also to wider stakeholders. Given the increasing awareness of CSR among the society, our findings have important implications to corporations as well as the policy makers.

Appendix: Summary of Variable Definitions

Variables	Definitions
CSR	An indicator equal to one if the firm issues a stand-alone CSR report, and zero otherwise.
ASSURE	An indicator equal to one if the firm obtains third-party assurance on its CSR report, and zero otherwise.
DIR_ACAD	An indicator equal to one if the firm has at least one independent director who is a full-time faculty affiliated with university institutions, and zero otherwise.
DIR_ACAD_ACC	An indicator equal to one if the firm has at least one academic director who is an accounting faculty, and zero otherwise.
ACAD_IND	An indicator equal to one if the firm has at least one academic director with industry expertise, and zero otherwise.
ACAD_ACCT	An indicator equal to one if the firm has at least one academic director with accounting expertise, and zero otherwise.
ATO	Asset turnover, defined as net sales divided by year-end total assets.
PM	Profit margin, measured by income before extraordinary items divided by net sales.
CFO	Cash flow from operations divided by total assets.
LEV	Total debt divided by total assets.
MTB	The market-to-book ratio of equity.
SIZE	The natural logarithm of total assets.
RD	Research and development expenses scaled by net sales.
ADV	Advertising expenses scaled by net sales.
BDIND	An indicator that equals one if the firm has at least one independent director, and zero otherwise.
CSRPERF	An indicator that equals one if the firm receives an award for CSR performance, and zero otherwise.

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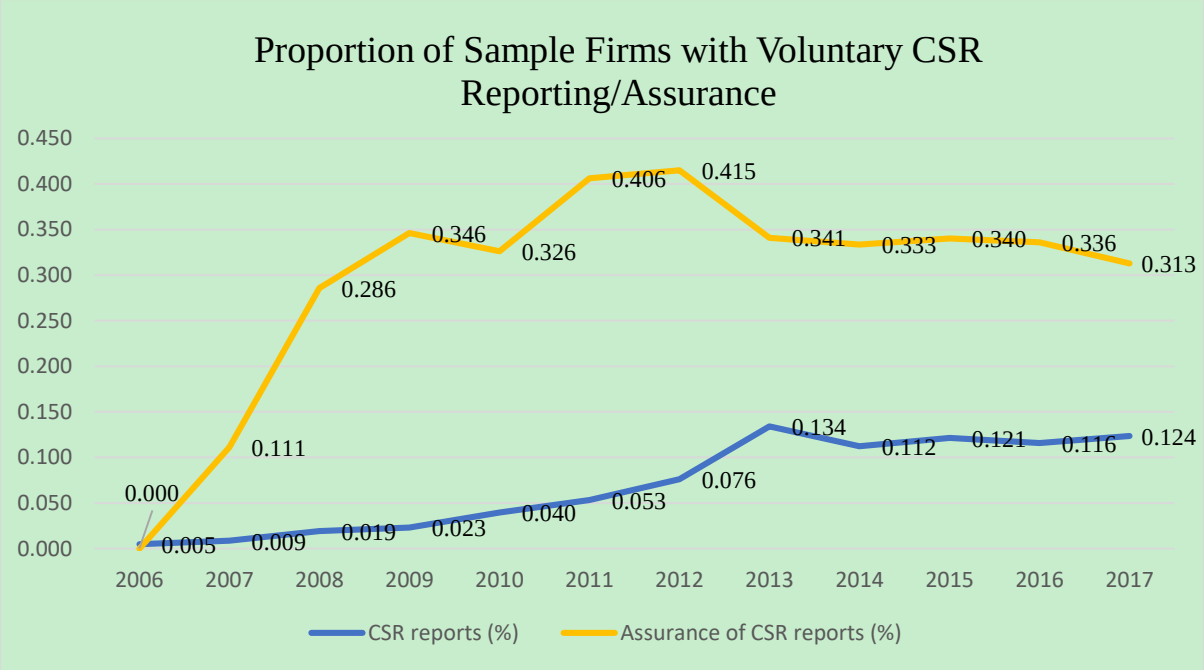
Figure 1 Trend of Voluntary CSR Reporting/Assurance



Note: The percentage of assurance is based on the sample that voluntairy issues CSR reports.

Table 1 Sample distributions of sample firms by year and industry

Panel A: Distribution of sample firms by year

Year	# (%) of firms		# (%) of firms with at least one academic director (*DIR_ACAD*=1)		# (%) of firms having academic director with industry expertise (*ACCT_IND*=1)		# (%) of firms having academic director with accounting expertise (*ACAD_ACCT*=1)	
2006	1,025	(7.36%)	179	(17.46%)	88	(8.59%)	44	(4.29%)
2007	1,056	(7.58%)	215	(20.36%)	46	(4.36%)	29	(2.75%)
2008	1,090	(7.83%)	230	(21.10%)	32	(2.94%)	16	(1.47%)
2009	1,129	(8.11%)	229	(20.28%)	15	(1.33%)	6	(0.53%)
2010	1,161	(8.34%)	236	(20.33%)	23	(1.98%)	7	(0.60%)
2011	1,201	(8.63%)	268	(22.31%)	60	(5.00%)	27	(2.25%)
2012	1,238	(8.89%)	290	(23.42%)	55	(4.44%)	25	(2.02%)
2013	1,289	(9.26%)	323	(25.06%)	51	(3.96%)	14	(1.09%)
2014	1,176	(8.45%)	303	(25.77%)	48	(4.08%)	20	(1.70%)
2015	1,212	(8.70%)	372	(30.69%)	78	(6.44%)	38	(3.14%)
2016	1,158	(8.32%)	406	(35.06%)	83	(7.17%)	25	(2.16%)
2017	1,189	(8.54%)	454	(38.18%)	131	(11.02%)	20	(1.68%)
Total	13,924	(100.00%)	3,505	(25.17%)	710	(5.10%)	271	(1.95%)

Panel B: Distribution of sample firms by industry

Industry	# (%) of firm-years		# (%) of observations with at least one academic director (*DIR_ACAD*=1)		# (%) of observations having academic director with industry expertise (*ACCT_IND*=1)		# (%) of observations having academic director with accounting expertise (*ACAD_ACCT*=1)	
Cement	69	(0.50%)	5	(7.25%)	0	(0.00%)	0	(0.00%)
Food	198	(1.42%)	12	(6.06%)	4	(2.02%)	0	(0.00%)
Plastics	244	(1.75%)	41	(16.80%)	8	(3.28%)	4	(1.64%)
Textile products	596	(4.28%)	39	(6.54%)	8	(1.34%)	2	(0.34%)
Machinery	693	(4.98%)	190	(27.42%)	38	(5.48%)	25	(3.61%)
Appliances	160	(1.15%)	13	(8.13%)	2	(1.25%)	0	(0.00%)
Glass and glass products	49	(0.35%)	3	(6.12%)	2	(4.08%)	1	(2.04%)
Paper products	70	(0.50%)	5	(7.14%)	0	(0.00%)	0	(0.00%)
Iron and steel	458	(3.29%)	49	(10.70%)	18	(3.93%)	11	(2.40%)
Rubber products	120	(0.86%)	4	(3.33%)	1	(0.83%)	0	(0.00%)
Automobile	192	(1.38%)	19	(9.90%)	4	(2.08%)	3	(1.56%)
Building materials and construction	743	(5.34%)	73	(9.83%)	19	(2.56%)	4	(0.54%)
Shipping	216	(1.55%)	27	(12.50%)	8	(3.70%)	2	(0.93%)
Tourism	225	(1.62%)	27	(12.00%)	12	(5.33%)	4	(1.78%)
International trade	254	(1.82%)	50	(19.69%)	13	(5.12%)	2	(0.79%)

Chemical products	272	(1.95%)	35	(12.87%)	6	(2.21%)	3	(1.10%)
Biotechnology	676	(4.85%)	239	(35.36%)	56	(8.28%)	24	(3.55%)
Utilities	137	(0.98%)	8	(5.84%)	3	(2.19%)	0	(0.00%)
Semiconductor	1,186	(8.52%)	489	(41.23%)	82	(6.91%)	41	(3.46%)
Computers and peripherals	993	(7.13%)	297	(29.91%)	55	(5.54%)	18	(1.81%)
Optoelectronics	1,034	(7.43%)	381	(36.85%)	71	(6.87%)	21	(2.03%)
Communication equipment	735	(5.28%)	290	(39.46%)	56	(7.62%)	21	(2.86%)
Electronic components	2,048	(14.71%)	533	(26.03%)	93	(4.54%)	31	(1.51%)
Electronics distributors	399	(2.87%)	103	(25.81%)	22	(5.51%)	9	(2.26%)
Information service	334	(2.40%)	113	(33.83%)	22	(6.59%)	4	(1.20%)
Other electronics	763	(5.48%)	205	(26.87%)	44	(5.77%)	19	(2.49%)
Others	1,060	(7.61%)	255	(24.06%)	65	(6.13%)	22	(2.08%)
Total	13,924	(100.00%)	3,505	(25.17%)	710	(5.10%)	271	(1.95%)

Table 2 Summary Statistics

Panel A: Full Sample (N=13,924)

	Mean	Std. Dev.	Q1	Median	Q3
CSR	0.072	0.258	0.000	0.000	0.000
ASSURE	0.024	0.154	0.000	0.000	0.000
DIR_ACAD	0.252	0.434	0.000	0.000	1.000
ACAD_IND	0.051	0.220	0.000	0.000	0.000
ACAD_ACCT	0.019	0.138	0.000	0.000	0.000
ATO	0.856	0.458	0.527	0.786	1.104
PM	0.062	0.124	0.012	0.060	0.128
CFO	0.052	0.076	0.003	0.044	0.100
LEV	0.408	0.170	0.271	0.408	0.533
MTB	1.545	0.930	0.853	1.259	1.945
SIZE	15.222	1.249	14.293	15.061	15.984
RD	0.025	0.033	0.000	0.011	0.034
ADV	0.039	0.035	0.012	0.028	0.053
BDIND	0.620	0.485	0.000	1.000	1.000

Panel B: Sub-sample Partitioned by Academic Director

	DIR_ACAD=1 (3,505 observations)			*DIR_ACAD*=0 (10,419 observations)			Difference	
	Mean	Std. Dev.	Median	Mean	Std. Dev.	Median	t-test	Wilcoxon Z-test
CSR	0.106	0.307	0.000	0.060	0.238	0.000	-9.017***	-8.991***
ASSURE	0.044	0.206	0.000	0.018	0.132	0.000	-8.806***	-8.781***
ATO	0.877	0.442	0.811	0.849	0.463	0.778	-3.134***	-4.006***

PM	0.060	0.128	0.062	0.062	0.123	0.059	1.132	-0.761
CFO	0.060	0.079	0.052	0.049	0.075	0.041	-7.742***	-7.339***
LEV	0.391	0.173	0.387	0.414	0.169	0.415	6.794***	6.710***
MTB	1.754	1.018	1.464	1.475	0.888	1.199	-15.474***	-14.908***
SIZE	15.098	1.221	14.945	15.263	1.256	15.103	6.777***	6.805***
RD	0.037	0.038	0.023	0.020	0.030	0.008	-27.572***	-27.905***
ADV	0.041	0.035	0.030	0.038	0.035	0.028	-4.223***	-5.313***
BDIND	0.992	0.091	1.000	0.495	0.500	0.000	-58.519***	-54.428***

Note: *CSR* is an indicator equal to one if the firm issues a stand-alone CSR report, and zero otherwise. *ASSURE* is an indicator equal to one if the firm obtains third-party assurance on its CSR report, and zero otherwise. *DIR_ACAD* is an indicator equal to one if the firm has at least one independent director with academic expertise, and zero otherwise. *ACAD_IND* is an indicator equal to one if the firm has at least one academic director with industry expertise, and zero otherwise. *ACAD_ACCT* is an indicator equal to one if the firm has at least one academic director with accounting expertise, and zero otherwise. Asset turnover, *ATO*, is defined as net sales divided by year-end total assets. Profit margin, *PM*, is measured by income before extraordinary items divided by net sales. *CFO* is cash flow from operations divided by total assets. *LEV* is total debt divided by total assets. *MTB* is the market-to-book ratio of equity. *SIZE* is measured as the natural logarithm of total assets. *RD* is research and development expenses scaled by net sales. *ADV* is advertising expenses scaled by net sales. *BDIND* is an indicator that equals one if the firm has at least one independent director, and zero otherwise. *, ** and *** indicate statistical significance at the 10%, 5% and 1% levels, respectively.

Table 3 Variable Correlation Matrix

	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1. *CSR*	1.000	**0.569**	**0.076**	**0.050**	*0.021*	**0.083**	**0.022**	**0.067**	**0.056**	**0.042**	**0.061**	**0.230**	**0.027**	**-0.067**
2. *ASSURE*	**0.569**	1.000	**0.074**	**0.065**	**0.028**	**0.050**	**0.031**	**0.038**	**0.048**	**0.060**	**0.053**	**0.190**	0.007	**-0.064**
3. *DIR_ACAD*	**0.076**	**0.074**	1.000	**0.334**	**0.191**	**0.444**	**0.034**	0.006	**0.062**	**-0.057**	**0.126**	**-0.058**	**0.236**	**0.045**
4. *ACAD_IND*	**0.050**	**0.065**	**0.334**	1.000	**0.570**	**0.180**	0.010	0.008	**0.023**	-0.013	**0.068**	*-0.021*	**0.077**	**0.027**
5. *ACAD_ACCT*	*0.021*	**0.028**	**0.191**	**0.570**	1.000	**0.110**	**0.027**	0.011	*0.021*	*-0.014*	**0.056**	**-0.032**	**0.062**	*0.014*
6. *BDIND*	**0.083**	**0.050**	**0.444**	**0.180**	**0.110**	1.000	**0.058**	0.006	**0.056**	**-0.085**	**0.178**	**-0.190**	**0.277**	**0.077**
7. *ATO*	**0.022**	**0.031**	**0.027**	0.010	**0.024**	**0.049**	1.000	**-0.131**	**0.167**	**0.177**	**0.094**	-0.010	**-0.057**	**-0.139**
8. *PM*	**0.066**	**0.038**	-0.010	0.003	0.004	*-0.018*	**-0.075**	1.000	**0.409**	**-0.242**	**0.353**	**0.198**	**-0.024**	-0.002
9. *CFO*	**0.056**	**0.049**	**0.066**	*0.022*	*0.018*	**0.059**	**0.141**	**0.398**	1.000	**-0.277**	**0.230**	*0.021*	**0.131**	**0.046**
10.*LEV*	**0.042**	**0.059**	**-0.058**	-0.013	*-0.015*	**-0.087**	**0.194**	**-0.199**	**-0.279**	1.000	**-0.091**	**0.324**	**-0.334**	**-0.203**
11.*MTB*	**0.067**	**0.051**	**0.130**	**0.065**	**0.053**	**0.172**	**0.079**	**0.243**	**0.233**	**-0.079**	1.000	**-0.129**	**0.209**	**0.149**
12.*SIZE*	**0.265**	**0.234**	**-0.057**	-0.020	**-0.027**	**-0.185**	0.004	**0.210**	*0.019*	**0.320**	**-0.108**	1.000	**-0.246**	**-0.347**
13.*RD*	0.003	-0.013	**0.228**	**0.081**	**0.063**	**0.233**	**-0.177**	**-0.099**	**0.078**	**-0.363**	**0.248**	**-0.276**	1.000	**0.305**
14.*ADV*	**-0.060**	**-0.050**	**0.036**	**0.025**	0.011	**0.075**	**-0.166**	**-0.067**	0.010	**-0.187**	**0.150**	**-0.315**	**0.301**	1.000

Table 4 Academic Directors and CSR Reporting (Test of H1)

	(1)	(2)	(3)	(4)
	Full sample	Full sample	PSM sample	PSM sample
Dependent Variable	*CSR*	*ASSURE*	*CSR*	*ASSURE*
DIR_ACAD	**0.021****	**0.021*****	**0.030***	**0.017***
	(2.24)	**(2.78)**	**(1.74)**	**(1.73)**
ATO	0.027*	0.017**	0.046**	0.022*
	(1.69)	(2.24)	(2.32)	(1.65)
PM	-0.016	-0.028*	-0.020	-0.017
	(-0.63)	(-1.95)	(-0.53)	(-0.73)
CFO	-0.013	-0.018	-0.033	-0.038
	(-0.42)	(-0.89)	(-0.69)	(-1.07)
LEV	0.012	0.020	-0.008	0.001
	(0.36)	(1.18)	(-0.20)	(0.03)
MTB	0.006	-0.000	0.013*	-0.002
	(1.22)	(-0.03)	(1.75)	(-0.34)
SIZE	0.050***	0.020***	0.063***	0.020**
	(4.09)	(3.17)	(3.65)	(2.24)
RD	0.856***	0.301**	1.324***	0.352*
	(3.15)	(2.02)	(3.39)	(1.86)
ADV	0.110	-0.030	0.269	0.057
	(0.57)	(-0.30)	(1.11)	(0.56)
BDIND	0.029**	0.013	-0.017	0.006
	(2.31)	(1.51)	(-0.94)	(0.52)
Constant	-0.497**	-0.394***	-1.239***	-0.434***
	(-2.23)	(-3.53)	(-4.18)	(-2.79)
Firm fixed effect	Yes	Yes	Yes	Yes
Industry fixed effect	No	No	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	13,924	13,924	6,960	6,960
Adjusted R^2	0.478	0.370	0.582	0.445

Robust t-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels respectively in a two-tailed test. See the Appendix for variable definitions.

Table 5 Academic Director Industry/Accounting Expertise and CSR Reporting (Test of H2a and H2b)

Panel A: Full sample

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Full sample	Full sample	PSM sample	PSM sample	Full sample	Full sample	PSM sample	PSM sample
Dependent Variable	*CSR*	*ASSURE*	*CSR*	*ASSURE*	*CSR*	*ASSURE*	*CSR*	*ASSURE*
ACAD_IND	**0.013**	**0.019*** **	**0.026***	**0.030*** **				
	(1.36)	**(2.64)**	**(1.90)**	**(3.09)**				
ACAD_ACCT					**0.015**	**0.018**	**0.030**	**0.025***
					(0.87)	**(1.42)**	**(1.40)**	**(1.74)**
DIR_ACAD	0.042***	0.026***	0.000	0.011*	0.043***	0.028***	0.012	0.017***
	(3.01)	(2.96)	(0.01)	(1.78)	(3.14)	(3.16)	(0.97)	(2.61)
ATO	0.025	0.006	0.001	-0.000	0.025	0.006	0.012	0.004
	(1.62)	(1.34)	(0.07)	(-0.01)	(1.61)	(1.30)	(1.42)	(0.86)
PM	-0.016	-0.000	-0.001	-0.001**	-0.016	-0.000	-0.001	-0.001**
	(-0.62)	(-0.04)	(-0.76)	(-2.19)	(-0.63)	(-0.01)	(-1.01)	(-2.17)
CFO	-0.013	-0.028	0.033	0.005	-0.012	-0.028	0.089	0.024
	(-0.42)	(-1.30)	(0.63)	(0.18)	(-0.42)	(-1.29)	(1.60)	(0.87)
LEV	0.013	0.021	-0.082**	-0.022	0.013	0.021	-0.081**	-0.021
	(0.39)	(1.49)	(-2.44)	(-1.32)	(0.39)	(1.48)	(-2.41)	(-1.25)
MTB	0.006	0.000	0.004**	0.002**	0.006	0.000	0.004**	0.002**
	(1.28)	(0.09)	(2.23)	(2.40)	(1.30)	(0.14)	(2.31)	(2.43)
SIZE	0.050***	0.019***	0.079***	0.044***	0.050***	0.019***	0.078***	0.043***
	(4.08)	(3.60)	(13.16)	(9.42)	(4.08)	(3.61)	(12.73)	(9.30)
RD	0.839***	0.000	-0.001	-0.002**	0.835***	0.000	-0.002	-0.002**

	(3.09)	(0.71)	(-0.56)	(-2.23)	(3.07)	(0.76)	(-0.84)	(-2.21)
ADV	0.107	-0.005	-0.004	0.007	0.108	-0.005	-0.004	0.007
	(0.56)	(-0.63)	(-0.33)	(1.30)	(0.56)	(-0.71)	(-0.31)	(1.27)
BDIND	0.018	0.006	0.053***	0.021***	0.018	0.006	0.024*	0.012
	(1.42)	(0.71)	(4.17)	(3.09)	(1.43)	(0.73)	(1.88)	(1.61)
Constant	-0.491**	-0.395***	-1.129***	-0.645***	-0.492**	-0.395***	-1.188***	-0.668***
	(-2.20)	(-3.97)	(-12.84)	(-9.42)	(-2.20)	(-3.97)	(-12.85)	(-9.32)
Firm fixed effect	Yes	Yes	No	No	Yes	Yes	No	No
Industry fixed effect	No	No	Yes	Yes	No	No	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13,924	13,924	6,960	6,960	13,924	13,924	6,960	6,960
Adjusted R^2	0.480	0.372	0.121	0.102	0.480	0.371	0.148	0.109

Panel B: Sample with academic directors (*DIR_ACAD*=1)

	(1)	(2)	(3)	(4)
Dependent Variable	*CSR*	*ASSURE*	*CSR*	*ASSURE*
ACAD_IND	**0.019***	**0.022*****		
	(1.85)	**(2.63)**		
ACAD_ACCT			**0.022**	**0.029***
			(1.09)	**(1.73)**
ATO	0.048	0.040	0.047	0.039
	(1.42)	(1.42)	(1.39)	(1.38)
PM	-0.007	-0.005	-0.009	-0.007
	(-0.11)	(-0.12)	(-0.13)	(-0.16)

CFO	-0.063	-0.084	-0.061	-0.082
	(-0.87)	(-1.40)	(-0.86)	(-1.37)
LEV	-0.026	-0.026	-0.025	-0.025
	(-0.39)	(-0.49)	(-0.38)	(-0.46)
MTB	0.015	0.002	0.015	0.002
	(1.45)	(0.18)	(1.47)	(0.22)
SIZE	0.050*	0.003	0.050*	0.003
	(1.78)	(0.21)	(1.77)	(0.21)
RD	1.765***	0.564**	1.749***	0.548**
	(3.16)	(2.13)	(3.13)	(2.09)
ADV	0.433	-0.019	0.439	-0.013
	(0.98)	(-0.12)	(0.99)	(-0.09)
BDIND	0.010	0.017	0.011	0.017
	(0.19)	(0.40)	(0.20)	(0.41)
Constant	-1.044**	-0.160	-1.043**	-0.160
	(-2.10)	(-0.65)	(-2.09)	(-0.65)
Frim fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	3,505	3,505	3,505	3,505
Adjusted R^2	0.663	0.528	0.662	0.527

Robust t-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels respectively in a two-tailed test. See the Appendix for variable definitions.

Table 6 Robustness Tests—Controlling for CSR Performance

	(1)	(2)	(3)	(4)	(5)	(6)
Dependent Variable	*CSR*	*ASSURE*	*CSR*	*ASSURE*	*CSR*	*ASSURE*
DIR_ACAD	0.021**	0.021***	0.037***	0.023***	0.038***	0.025***
	(2.17)	(2.81)	(2.79)	(2.72)	(2.91)	(2.92)
ACAD_IND			0.013	0.020***		
			(1.41)	(2.76)		
ACAD_ACCT					0.019	0.020*
					(1.15)	(1.70)
ATO	0.018	0.015**	0.023	0.005	0.023	0.005
	(1.57)	(2.17)	(1.50)	(1.33)	(1.49)	(1.29)
PM	-0.001	-0.027*	-0.014	-0.000	-0.014	-0.000
	(-0.08)	(-1.91)	(-0.55)	(-0.10)	(-0.56)	(-0.07)
CFO	-0.009	-0.019	-0.013	-0.027	-0.013	-0.027
	(-0.37)	(-0.92)	(-0.46)	(-1.28)	(-0.45)	(-1.27)
LEV	0.012	0.018	0.009	0.020	0.009	0.020
	(0.41)	(1.10)	(0.29)	(1.44)	(0.29)	(1.44)
MTB	0.003	0.000	0.007	0.000	0.007	0.000
	(0.92)	(0.05)	(1.39)	(0.09)	(1.41)	(0.15)
SIZE	0.045***	0.018***	0.047***	0.017***	0.047***	0.017***
	(4.21)	(2.96)	(4.00)	(3.36)	(4.00)	(3.36)
RD	0.247**	0.269*	0.789***	0.000	0.785***	0.000
	(2.40)	(1.84)	(2.94)	(0.75)	(2.93)	(0.80)
ADV	0.091	-0.034	0.101	-0.005	0.102	-0.006

	(0.81)	(-0.34)	(0.56)	(-0.70)	(0.57)	(-0.78)
BDIND	0.023*	0.009	0.013	0.002	0.013	0.003
	(1.87)	(1.01)	(1.03)	(0.29)	(1.04)	(0.31)
CSRPERF	0.332***	0.208***	0.329***	0.205***	0.329***	0.206***
	(6.13)	(4.30)	(6.10)	(4.26)	(6.11)	(4.26)
Constant	-0.416**	-0.358***	-0.434**	-0.357***	-0.435**	-0.357***
	(-2.08)	(-3.27)	(-2.02)	(-3.68)	(-2.03)	(-3.68)
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Observations	13,924	13,924	13,924	13,924	13,924	13,924
Adjusted R^2	0.490	0.383	0.545	0.449	0.545	0.449

Robust t-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels respectively in a two-tailed test. See the Appendix for variable definitions.

Table 7 Presence of Accounting Faculty Director and CSR Reporting

	(1)	(2)	(3)	(4)
Dependent Variable	*CSR*	*ASSURE*	*CSR*	*ASSURE*
DIR_ACAD_ACC	**0.055****	**0.043***	**0.045****	**0.038***
	(2.36)	**(1.92)**	**(2.13)**	**(1.73)**
ATO	0.026*	0.017**	0.017	0.015**
	(1.67)	(2.19)	(1.55)	(2.14)
PM	-0.017	-0.029**	-0.001	-0.027*
	(-0.66)	(-1.99)	(-0.11)	(-1.94)
CFO	-0.013	-0.018	-0.009	-0.019
	(-0.44)	(-0.91)	(-0.38)	(-0.94)
LEV	0.012	0.020	0.012	0.018
	(0.36)	(1.18)	(0.41)	(1.09)
MTB	0.006	-0.000	0.003	0.000
	(1.21)	(-0.04)	(0.89)	(0.05)
SIZE	0.050***	0.019***	0.044***	0.018***
	(4.13)	(3.14)	(4.23)	(2.93)
RD	0.831***	0.280*	0.234**	0.249*
	(3.06)	(1.88)	(2.27)	(1.71)
ADV	0.105	-0.034	0.090	-0.037
	(0.55)	(-0.33)	(0.81)	(-0.36)
BDIND	0.029**	0.013	0.022*	0.009
	(2.25)	(1.51)	(1.85)	(1.03)
CSRPERF			0.330***	0.206***
			(6.07)	(4.25)
Constant	-0.492**	-0.390***	-0.411**	-0.354***
	(-2.24)	(-3.49)	(-2.08)	(-3.23)
Firm fixed effect	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes
Observations	13,924	13,924	13,924	13,924
Adjusted R^2	0.479	0.370	0.490	0.383

Robust t-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels respectively in a two-tailed test. See the Appendix for variable definitions.

Table 8 Cross-sectional Analysis: The Moderating Effect of Growth

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	Low-growth	High-growth	Low-growth	High-growth	Low-growth	High-growth	Low-growth	High-growth
Dependent Variable	*CSR*	*CSR*	*ASSURE*	*ASSURE*	*CSR*	*CSR*	*ASSURE*	*ASSURE*
DIR_ACAD	0.005	0.031*	0.003	0.042***	0.008	0.060***	0.007***	0.045***
	(0.76)	(1.67)	(1.07)	(2.93)	(1.19)	(3.37)	(2.89)	(3.27)
ACAD_IND					0.004	0.025	0.001	0.049***
					(0.57)	(1.25)	(0.48)	(3.18)
ATO	-0.001	0.063***	0.000	0.028	-0.002	0.077***	0.000	0.047**
	(-0.13)	(2.78)	(0.11)	(1.58)	(-0.20)	(2.66)	(0.05)	(2.11)
PM	0.008	-0.164**	0.000	-0.083	0.017	-0.203**	0.001	-0.188***
	(1.12)	(-2.44)	(0.07)	(-1.59)	(1.11)	(-2.36)	(0.12)	(-2.82)
CFO	-0.000	-0.094	-0.005	-0.075	-0.007	-0.121	-0.008	-0.083
	(-0.02)	(-1.35)	(-0.67)	(-1.39)	(-0.28)	(-1.53)	(-0.96)	(-1.35)
LEV	-0.010	0.152**	0.006	0.122**	-0.019	0.177**	0.006	0.141**
	(-0.65)	(2.17)	(1.03)	(2.23)	(-1.18)	(2.46)	(1.00)	(2.54)
MTB	0.001	0.004	0.000	0.000	0.002	0.014*	0.001	0.005
	(0.74)	(0.62)	(0.71)	(0.02)	(0.89)	(1.70)	(1.35)	(0.73)
SIZE	0.019***	0.025	0.003	0.030*	0.028***	0.013	0.004	0.018
	(3.53)	(1.27)	(1.30)	(1.96)	(4.41)	(0.63)	(1.57)	(1.16)
RD	0.046	1.003**	0.000	1.289***	0.034	2.302***	0.012	1.975***
	(0.89)	(2.00)	(0.01)	(3.30)	(0.29)	(3.08)	(0.29)	(3.40)
ADV	0.022	0.097	-0.008	-0.401*	0.071	0.883**	-0.028	0.031
	(0.47)	(0.36)	(-0.45)	(-1.94)	(0.84)	(2.26)	(-0.90)	(0.10)

BDIND	0.011	0.077***	0.005**	0.030**	0.010	0.056***	0.004	0.016
	(1.59)	(4.76)	(2.03)	(2.42)	(1.37)	(3.32)	(1.44)	(1.21)
Constant	-0.364***	-0.180	-0.056	-0.687**	-0.529***	0.040	-0.082*	-0.455
	(-3.43)	(-0.48)	(-1.45)	(-2.34)	(-4.33)	(0.11)	(-1.83)	(-1.56)
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,772	4,511	4,772	4,511	4,772	4,511	4,772	4,511
Adjusted R^2	0.511	0.528	0.305	0.410	0.512	0.530	0.307	0.413

We divided the sample into tercile based on the value of sales growth rate. High-growth (low-growth) sample refers to firms in the top (bottom) tercile. Robust t-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels respectively in a two-tailed test. See the Appendix for variable definitions.

Table 9 Cross-sectional Analysis: The Moderating Effect of Institutional Ownership

	(1) Low-ownership	(2) High-ownership	(3) Low-ownership	(4) High-ownership	(5) Low-ownership	(6) High-ownership	(7) Low-ownership	(8) High-ownership
Dependent Variable	*CSR*	*CSR*	*ASSURE*	*ASSURE*	*CSR*	*CSR*	*ASSURE*	*ASSURE*
DIR_ACAD	0.016	0.070**	0.013	0.036*	0.014	0.064***	0.012	0.028**
	(0.96)	(2.26)	(1.34)	(1.65)	(1.46)	(3.89)	(1.27)	(2.28)
ACAD_IND					0.010	0.033*	0.005	0.044***
					(0.94)	(1.76)	(0.78)	(3.11)
ATO	0.023	0.018	-0.006	0.034	0.023*	0.016	-0.006	0.032*
	(1.25)	(0.46)	(-0.90)	(1.30)	(1.85)	(0.65)	(-0.89)	(1.70)
PM	0.021	-0.007	0.017	-0.061	0.021	-0.005	0.017	-0.059
	(0.60)	(-0.09)	(1.47)	(-1.30)	(0.77)	(-0.09)	(1.48)	(-1.33)
CFO	-0.030	-0.037	-0.019	-0.029	-0.030	-0.036	-0.019	-0.028
	(-0.94)	(-0.43)	(-1.25)	(-0.43)	(-0.84)	(-0.50)	(-1.23)	(-0.51)
LEV	-0.014	0.136	0.013	0.085	-0.014	0.137**	0.013	0.086**
	(-0.43)	(1.60)	(0.85)	(1.51)	(-0.54)	(2.38)	(0.85)	(1.98)
MTB	0.001	0.019	0.001	0.001	0.001	0.019***	0.001	0.000
	(0.31)	(1.57)	(0.44)	(0.06)	(0.33)	(2.62)	(0.44)	(0.07)
SIZE	0.020*	0.023	0.009	0.016	0.020**	0.022	0.009	0.015
	(1.71)	(0.75)	(1.22)	(0.78)	(2.28)	(1.31)	(1.22)	(1.20)
RD	0.754**	0.721	0.153	0.514	0.756***	0.719	0.154	0.511
	(2.15)	(0.77)	(1.61)	(0.96)	(3.57)	(1.41)	(1.62)	(1.33)
ADV	0.048	0.359	-0.006	0.113	0.046	0.359	-0.007	0.112

	(0.22)	(0.81)	(-0.05)	(0.42)	(0.31)	(1.12)	(-0.06)	(0.46)
BDIND	0.044**	-0.016	0.010	-0.002	0.044***	-0.017	0.010	-0.003
	(2.03)	(-0.57)	(1.01)	(-0.08)	(4.69)	(-1.00)	(1.00)	(-0.20)
Constant	-0.354*	-0.253	-0.162	-0.378	-0.355**	-0.250	-0.163	-0.374
	(-1.86)	(-0.46)	(-1.27)	(-1.04)	(-2.37)	(-0.77)	(-1.27)	(-1.53)
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	4,773	4,510	4,773	4,510	4,773	4,510	4,773	4,510
Adjusted R^2	0.393	0.520	0.286	0.371	0.393	0.520	0.286	0.373

We divided the sample into tercile based on the value of institutional ownership. High-ownership (low-ownership) sample refers to firms in the top (bottom) tercile. Robust t-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels respectively in a two-tailed test. See the Appendix for variable definitions.

Table 10 Cross-sectional Analysis: The Moderating Effect of Control-Ownership Divergence

	(1) Low-divergence	(2) High-divergence	(3) Low-divergence	(4) High-divergence	(5) Low-divergence	(6) High-divergence	(7) Low-divergence	(8) High-divergence
Dependent Variable	*CSR*	*CSR*	*ASSURE*	*ASSURE*	*CSR*	*CSR*	*ASSURE*	*ASSURE*
DIR_ACAD	0.033	0.065**	0.011	0.036	0.032	0.062***	0.007	0.033***
	(1.45)	(2.47)	(0.80)	(1.47)	(1.33)	(4.08)	(0.50)	(3.21)
ACAD_IND					0.007	0.019	0.018	0.018*
					(0.35)	(1.24)	(1.15)	(1.72)
ATO	-0.010	0.067***	0.001	0.002	-0.010	0.067***	0.001	0.002
	(-0.68)	(2.69)	(0.07)	(0.14)	(-0.67)	(3.55)	(0.09)	(0.18)
PM	-0.014	0.039	-0.012	-0.004	-0.014	0.039	-0.012	-0.005
	(-0.82)	(1.14)	(-1.27)	(-0.28)	(-0.82)	(1.19)	(-1.27)	(-0.23)
CFO	0.015	-0.059	-0.022	-0.017	0.015	-0.059	-0.022	-0.017
	(0.42)	(-1.22)	(-1.15)	(-0.68)	(0.41)	(-1.16)	(-1.17)	(-0.50)
LEV	-0.001	0.027	-0.009	0.013	-0.001	0.027	-0.009	0.013
	(-0.02)	(0.37)	(-0.45)	(0.33)	(-0.02)	(0.55)	(-0.45)	(0.40)
MTB	0.007	-0.001	0.002	0.004	0.007	-0.001	0.002	0.004
	(0.90)	(-0.12)	(0.50)	(0.70)	(0.90)	(-0.22)	(0.49)	(1.16)
SIZE	0.020	0.050*	0.009	0.020	0.020	0.051***	0.009	0.020*
	(1.14)	(1.80)	(1.45)	(1.21)	(1.14)	(3.26)	(1.45)	(1.91)
RD	0.127	0.536*	0.039	-0.020	0.128	0.541**	0.041	-0.014
	(1.30)	(1.76)	(0.72)	(-0.16)	(1.30)	(2.57)	(0.78)	(-0.10)
ADV	-0.265	0.295	-0.210	-0.005	-0.267*	0.290*	-0.215	-0.010

	(-1.64)	(1.11)	(-1.17)	(-0.07)	(-1.65)	(1.66)	(-1.20)	(-0.08)
BDIND	0.057**	0.061**	0.012	0.011	0.056**	0.061***	0.012	0.011
	(2.50)	(2.06)	(0.87)	(0.56)	(2.49)	(3.79)	(0.84)	(1.00)
Constant	-0.358	-0.568	-0.162	-0.410	-0.358	-0.576*	-0.162	-0.418**
	(-1.25)	(-1.10)	(-1.46)	(-1.37)	(-1.25)	(-1.95)	(-1.47)	(-2.07)
Firm fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Observations	5,023	4,247	5,023	4,247	5,023	4,247	5,023	4,247
Adjusted R^2	0.498	0.539	0.322	0.413	0.498	0.539	0.322	0.413

We divided the sample into tercile based on the value of control-ownership divergence, measured by one minus the cash flow rights divided by the voting rights. High-divergence (low-divergence) sample refers to firms in the top (bottom) tercile. Robust t-statistics are reported in parentheses. *, **, and *** indicate significance at the 10%, 5%, and 1% levels respectively in a two-tailed test. See the Appendix for variable definitions.