Corporate Management Review
Vol. 40 No. 1, 2020
pp. 1-33

Do family firms engage in voluntary external assurance of corporate social responsibility reports?
家族企業是否自願從事企業社會責任報告書確信?

Chih-Wei Peng[1]
Department of Accounting, National Changhua University of Education

Abstract: Many companies have increasingly voluntarily adopted external corporate social responsibility (CSR) assurance services in order to enhance the credibility of their CSR reports. As family businesses play a crucial role in the socio-economic development of emerging economies, this study thus investigates the relationship between family-controlled firms and voluntarily adoption of external CSR assurance services, using a sample of Taiwanese-listed firms and manually collecting CSR reports spanning the period 2009-2016. Unlike the expectation of the traditional sociopolitical theory or economics theory, this study demonstrates that family-owned firms have less motivation to voluntarily provide assurance of CSR reports compared to non-family firms. Moreover, findings indicate that family firms with high control-cash flow divergence have less motivation to engage in voluntary CSR assurance. In contrast, family firms with independent non-executive board directors have greater motivation to engage in voluntary CSR assurance. Finally, I analyze and discuss the results of comparing the various levels of family firms and their assurance decisions.

Keywords: CSR report assurance, family firms, corporate governance.

摘要:越來越多公司自願性聘請獨立第三方機構進行企業社會責任報告書確信，以提高企業社會責任報告書的可信度。在發展中的國家，家族企業型態在國家經濟與社會發展演進過程扮演重要的角色。本研究以 2009 至 2016 年

[1] Corresponding author: Chih-Wei, Peng, Department of Accounting, National Changhua University of Education. Email: nqd6281@cc.ncue.edu.tw. Financial support from the Ministry of Science and Technology (MOST 107-2410-H-018 -002) is greatly appreciated.

台灣家族企業為研究對象，手工蒐集家族企業社會責任報告書確信資料，分析家族企業與自願性企業社會責任報告書確信關連性。實證結果指出，相較於非家族企業，家族企業較沒有動機從事自願性企業社會責任報告書確信，此結論與傳統社會政治學或經濟學理論的預期相反。此外，當家族企業控制權與現金流量權偏離程度越高時，這類型家族企業比較不會從事自願性企業社會責任報告書確信行為；相反地，當家族企業設有獨立非執行董事時，這類型家族企業較會從事自願性企業社會責任報告書確信行為。最後，本文將討論家族企業對於從事自願性企業社會責任報告書確信決策之管理與實務意涵。

關鍵詞：企業社會責任報告書確信、家族企業、公司治理

1. Introduction

KPMG (2015) stated that the CSR report preparation ratio in Taiwan for the 100 largest companies in 2014 was approximately 77%, or a bit higher than the average of 73% for 4,500 companies in 45 other countries. Obviously, many Taiwanese firms disclose their CSR activities, but while most realize the importance of CSR and are thus more likely to disclose their CSR reports, the quality of these reports varies considerably in practice. As noted by Cho, Michelon, Patten, and Roberts (2015), CSR reporting is subject to a broad array of concerns regarding the completeness and credibility of the information being provided. Prior studies generally support the notion that third-party assurance of CSR reports can help enhance their credibility and reliability, much like external auditing in the case of financial reporting (Casey and Grenier, 2015; Cohen and Simnett, 2015; Simnett, Vanstraelen, and Chua, 2009).

In reality, firms today face the daunting task of determining what and how much information to report publicly in relation to the risks and costs of their CSR reports. Investors and interested public groups generally call for the full disclosure of uniform and transparent CSR reports. (e.g., Coburn, Donahue, and Jayanti, 2011), but in contrast to developed markets, emerging markets like exhibit poor disclosure and financial opacity. Better information transparency improves

monitoring by shareholders and also creates higher firm value (Chung, Judge, and Li, 2015; Sheu, Chung, and Liu, 2010). On the other hand, firms worry about the undesirable costs of CSRA when weighing them against the benefits of disclosing information (e.g., Li, Richardson, and Thornton, 1997). Since most Taiwanese firms present CSRA voluntarily[2], this emerging market serves as a very appropriate setting to investigate why they might do so.

Family firms are a common form of organizational enterprises in emerging economies, including Taiwan. In the U.S., about 33% of the top S&P 500 corporations are family-owned (Anderson and Reeb, 2003), while 44% of firms are family-controlled in Western Europe (Faccio and Lang, 2002). Conversely, in East Asia, including Taiwan, over two-thirds of existing firms are controlled by founding families or individuals (Claessens, Djankov, Fan, and Lang, 2002). Particularly for Taiwan, over half of the listed companies are controlled by family shareholders through pyramid schemes and through cross-holdings among corporations (Claessens *et al.*, 2002; Kuan, Li, and Liu, 2012; Yeh, Lee, and Woidtke, 2001), thus making its market be dominated by the presence of family-controlled firms.

Prior studies have shown that family firms often behave differently from non-family firms (Berrone, Cruz, Gomez-Mejia, and Larraza-Kintana, 2010; Jaskiewicz and Luchak, 2013; Zellweger, Kellermanns, Chrisman, and Chua, 2012). For example, family firms are more likely to pursue long-term organizational goals and express the intention of passing their businesses to the next generation (Zellweger *et al.*, 2012). Family firms are also more likely engage in accruals management due to higher information asymmetry between family members and other shareholders (Tai, 2017). Thus, Taiwan is an ideal setting in which to examine whether it is beneficial or detrimental for a family firm to voluntarily report CSRA.

Regarding voluntary CSR disclosure, recent studies have exclusively shown the role of the family in the adoption of social initiatives (Bingham, Dyer, Smith,

[2] The exception is mandatory reporting for firms in the food industry and for companies that have over 50% of their annual revenue coming from food products.

and Adams, 2011; Block and Wagner, 2014; Cennamo, Berrone, Cruz, and Gomez-Mejia, 2012; Dyer and Whetten, 2006; Simnett *et al.*, 2009). However, empirical research into the voluntary assurance of CSR reporting by family firms and non-family firms is relatively limited. According to traditional voluntary disclosure in economics theory, most firms prefer to disclose time-sensitive information voluntarily, because it can reduce the cost of capital by decreasing transaction costs (Amihud and Mendelson, 1986) or non-diversifiable estimation risks (Barry and Brown, 1985). By contrast, family owners usually are directly involved in the management team as executives or directors, and therefore, such firms engage in less voluntary disclosure of timely information, because managers may be performing short-term earnings management while sacrificing long-term performance. Family firms may also bear potential proprietary costs such as those arising from a managerial emphasis on short-term rather than long-term performance (Chen, Chen, and Cheng, 2008). Dhaliwal, Li, Tsang, and Yang (2011) indicate that CSR disclosure per se is not significantly associated with a change in a firm's future cost of equity capital. Thus, family firms have less motivation to engage in voluntary CSR disclosure (Nekhilia, Nagatib, Chtiouic, and Rebolledod, 2017). In addition, family firms have lower information asymmetry between management and shareholders and thus have less motivation to present CSR non-financial information that is of high quality (Bushman, Chen, Engle, and Smith, 2004). Thus, this study argues that Taiwanese family firms are less likely to engage in voluntary CSRA than would be the case for non-family firms.

In many emerging markets, family members who are shareholders usually exercise control, but own only a small fraction of their firm as a result of pyramidal control structures and cross-stockholdings (Claessens *et al.*, 2002). Most family-controlled firms have the typical principle-principal (largest shareholder vs. minor shareholders) agency problem, because of high control-ownership disparities (Faccio, Lang, and Young, 2001). Under such an ineffective corporate governance structure, family controlling shareholders have greater motivation to pursue their private interests at the expense of other shareholders, thus generating information asymmetry regarding CSR disclosure. Prior studies suggest that these firms have

less motivation to effectively control corporate policies and hence greater information asymmetry (Attig, Fong, Gadhoum, and Lang, 2006). This study investigates whether high control-ownership disparities negatively moderate the link between CSRA and family firms.

Outside shareholders or minor shareholders must rely on the board of directors to monitor opportunism on the part of controlling families, and this tendency is greater in family firms than in non-family firms (Kuo and Hung, 2012). Independent non-executive board directors are typically one of the primary lines of defense that outside shareholders can use to protect their rights from the influence and power of controlling families (Anderson and Reeb, 2003). To balance both stakeholder and shareholder values, a company's independent non-executive board directors must gain an understanding of the environmental and social consequences of the company's actions and ensure that the company is properly responding to the views of those with whom it comes into contact. Thus, this study also examines whether having independent non-executive board directors positively moderates the link between CSRA and family firms.

After controlling for firm characteristics that determine CSRA, the empirical results show that family firms have fewer motivations to engage in voluntary CSRA. In addition, the findings of this study also suggest that family business firms with high control-cash flow divergence have less motivation to engage in voluntary CSR assurance, whereas family firms with independent non-executive board directors have greater motivations to engage in voluntary CSR assurance. Finally, the results are robust to several identification strategies, such as the sample excluding the food industry (which has mandatory CSRA in Taiwan), and additional analyses using different types of providers of CSR assurance, covering other corporate governance factors affecting firm CSRA, only including a sample with voluntary appointments of independent directors, and considering a propensity score analysis.

This study offers three contributions to the related literature as follows. First, a growing number of studies has focused only on the relationships between family-controlled firms and their voluntary financial information disclosure with topics

encompassing only corporate governance practices (Ali, Chen, and Radhakrishnan, 2007), earnings warnings news (Chen *et al.*, 2008), and material weakness on internal control over financial reporting (Bardhan, Lin, and Wu, 2015). In a Malaysian context, Ghazali (2007) notes that firm directors who hold a higher proportion of equity shares are less motivated to engage in voluntary CSR report disclosure. Nekhilia *et al.* (2017) researched information related to several differences between family and non-family firms in terms of CSR report disclosure in France, while Ghazali (2007) and Nekhilia *et al.* (2017) investigate the association between firm ownership and CSR report disclosure. This study looks into the context of voluntarily issuing external assurance for CSR reports, because CSR report disclosure might not be credible unless accompanied by external third-party assurance. Prior studies assert that third-party assurance of these reports is important at enhancing their credibility and reliability, much like external auditing in the case of financial reporting (Casey and Grenier, 2015; Cohen and Simnett, 2015; Simnett *et al.*, 2009). In fact, most Taiwanese firms provide this assurance voluntarily. Hence, it is worthwhile to investigate which type of firms have greater or less motivation to engage in voluntary assurance of CSR reports. This study fills a critical gap in the extant literature by targeting Taiwanese family firms' association with voluntary assurance of CSR reports.

This study further extends the literature on family-controlled firms and their voluntary financial information disclosure and takes a first step in this direction on the basis of the type I agency problem (i.e., the principal–agent problem). Most firms prefer to disclose only information that satisfies firm stakeholders or helps reduce their cost of equity. This study argues and offers evidence that family-owned firms have less motivation to voluntarily provide assurance of CSR reports, relative to their counterparts, because family owners usually have better access to information and can directly monitor management, thus reducing the type I agency problem between management and shareholders.

Most family-controlled firms in East Asia encounter the type II agency problem between major and minor shareholders due to high control-ownership disparities (Claessens *et al.*, 2002). The traditional theoretical framework asserts

that independent directors provide voluntary disclosure in order to reduce information asymmetry and litigation risks, as well as to protect their reputation (Lim, Matolcsy, and Chow, 2007), thus alleviating the type II agency problem. Thus, this research extends previous analyses of voluntary disclosure and corporate governance in family studies. It also tackles the possible moderating effect from the degree of control-cash flow divergence and firms with an independent board of director on the association between family-controlled firms and voluntary external assurance of CSR reports.

The rest of this paper is organized as follows. Section 2 presents the related literature and development of hypotheses Section 3 describes the research method. Section 4 provides the empirical results. Finally, Section 5 offers the conclusion.

2. Literature review and hypotheses development

2.1 Family firms and CSR assurance

The issue as to whether firms provide more or less voluntary CSR disclosure can be explained from two theoretical perspectives (Clarkson, Li, Richardson, and Vasvari, 2008). First, sociopolitical theories on legitimization and stakeholders assert that CSR disclosure is one strategy employed by firms seeking to gain approval of their activities from society or specific interest groups. For example, Cormier, Gordon, and Magnan (2004) indicate that firms will consider their stakeholders' interests and concerns when determining their own environmental performance disclosure. The external assurance can enhance the quality of environmental reporting, thus engendering widespread credibility for the benefit of external stakeholders.

Second, the economic theory related to voluntary information disclosure asserts that CSR disclosure is influenced by the degrees of both benefit and risk to the company in terms of how it might be affected by third parties. For example, firms may voluntarily disclose CSR information, because it generates specific benefits, such as fewer information asymmetry problems (Lev, 1992) and uninformed investors (Petersen and Plenborg, 2006) and a lower cost of capital

(Botosan, 1997; Welker, 1995). However, Li *et al.* (1997) indicate that environmental disclosures might incur significant costs to firms when made public, because environmental liabilities or commitments can be used to damage their competitive position in the market.

In terms of the benefits and costs of voluntary CSR information disclosure, family firms generally have large, under-diversified equity holdings and are thus arguably more concerned about the negative impact on firm value that such a cost to capital would incur (Chen *et al.*, 2008). It is necessary to take into account that CSR disclosure per se is not significantly associated with a change in a firm's future cost of equity capital (Dhaliwal *et al.*, 2011). Family owners usually have a longer horizon than non-family owners (e.g., Anderson and Reeb, 2003), but this implies that the benefits of accelerating the provision of timely information documented in prior research (e.g., McNichols and Trueman, 1994), such as information related to trading profits, are fewer to family owners who stand to bear the potential associated costs, such as proprietary costs or costs arising from managerial emphasis on short-term rather than long-term performance.

Some prior empirical works support that viewpoint. Ghazali (2007) shows that Malaysian companies with a high level of director ownership disclose significantly less CSR information. Nekhilia *et al.* (2017) offer evidence that French family firms report less information about their CSR duties than is the case for non-family firms. In addition, family owners usually have better access to information and can directly monitor management, thus reducing the agency problem (e.g., type I agency problem) between management and shareholders (Bushman *et al.*, 2004). This perspective implies that family owners directly monitor managers and have less motivation to meet the demand for public CSR information (Campopiano and De Massis, 2015; Nekhilia *et al.*, 2017).

The arguments stated above imply that family owners prefer less informative voluntary CSR disclosure and might further be less likely to engage in voluntary CSRA at all. In contrast, based on the sociopolitical theory and traditional economic theory, family firms may choose more informative voluntary CSR disclosure when they want to satisfy firm stakeholders. Thus, it is unclear whether

family firms desire more or less voluntary CSR disclosure. Therefore, I present Hypothesis 1 as non-directional and address this issue empirically as follows.

Hypothesis 1: The likelihood of voluntary CSR assurance is systematically different between family and non-family firms.

2.2 Moderating effects of excess control rights and board independence

Decisions in the area of CSR likely reflect both high information asymmetry and low programmability (Deckop, Merriman, and Gupta, 2006). In situations such as those reflecting an ineffective corporate governance system, the cost of monitoring increases the number of decisions made and actions taken (information asymmetry is present), and tasks are difficult to structure (low programmability). Therefore, the corporate governance problem will exacerbate agents' opportunities to pursue self-interests at the expense of principals in terms of social responsibility. Alternatively, the extraction of private control benefits, if detected, will likely invite external intervention by analysts, stock exchanges, or regulators.

Shleifer and Vishny (1997) state that strong corporate governance deals with the ways in which suppliers of finance to corporations can be guaranteed to realize a return on their investment. The quality of CSR reports also affects organizational reputation, thereby improving investor perceptions of the firm (e.g., Orlitzky, Schmidt, and Rynes, 2003), which in turn may influence stock prices. Thus, this study posits that good governance mechanisms may closely mitigate risk aversion on the part of managers concerning CSR report decisions. This study examines two important corporate governance structures (e.g., type II agency problem) in family firms, including high control-cash flow divergence and independent non-executive boards.

In emerging markets like Taiwan a family controlling shareholder usually exercises control, but owns only a small fraction of the firm as a result of pyramidal control structures and cross-stockholdings (Claessens *et al.*, 2002). Higher separation of control rights and cash flow rights in family firms might lead to more severe expropriation of wealth from minority shareholders (Amihud and Lev, 1981;

Jensen and Meckling, 1976). Shareholders who have control rights in excess of their cash flow rights may exacerbate information asymmetry (Arora and Dharwadkar, 2011; Claessens *et al.* 2002). Thus, an ineffective corporate governance structure generates information asymmetry, caused by firms having lesser motivation to effectively control corporate policies (Attig *et al.*, 2006). Ali *et al.* (2007) present evidence that family-controlled firms are less likely to engage in voluntary non-financial disclosure, such as corporate governance practices, because a typical agency problem exists between the largest shareholder and minority shareholders. High control-cash flow divergence might discourage firms from engaging voluntarily in the assurance of social and environmental reports. Based on the arguments above, I next propose Hypothesis 2-1.

Hypothesis 2-1: The presence of high control-cash flow divergence in family firms negatively correlates to CSRA.

Independent non-executive board directors are seen as having accountability mechanisms since their role is to help ensure that companies are pursuing the interests of both their shareholders and their stakeholders (Haniffa and Cooke, 2005), thus exerting pressure on companies to engage in sustainability disclosure in order to ensure congruence between organizational decisions and actions and societal values and corporate legitimacy (Frías-Aceituno, Rogdríguez-Ariza, and García-Sánchez, 2012). Rupley, Brown, and Marshall (2012) observe that a higher degree of board independence increases information disclosure related to a low number of environmental themes. Wan-Hussin (2009) gives evidence indicating that independent directors cannot promote corporate transparency in Malaysian firms, while García-Sánchez and Martínez-Ferrero (2017) show that independent directors might have less motivation to monitor firm CSR disclosure practices when their firms have higher proprietary costs related to environmental disclosure. Based on the arguments above, this study asserts that independent non-executive board directors have greater voluntary social and environmental assurance motivations to reduce information asymmetry and litigation risks and thus protect their firm's reputation. This leads to Hypothesis 2-2.

Hypothesis 2-2: The presence of independent non-executive board directors in family firms positively correlates to CSRA.

3. Research method

3.1 Sample

The sample for this study is drawn from Taiwanese companies listed over the period from 2009[3] to 2016. The source of the financial data is the TEJ (Taiwan Economics Journal) database. I rely on the categorization of firms in the TEJ database for the definition of family firms. Family firms are those where the largest controlling shareholder is a family group, and at least two family members are involved on the board of directors or in senior management. This is slightly more restrictive than the definition used in prior U.S. studies, but ensures that family firms are being identified when the family group is actively involved in the company. Data on the assurance of CSR reports are hand-collected from annual reports in the Market Observation Post System (MOPS) maintained by the Taiwan Stock Exchange(TSE). This study excludes utility firms and financial institutions from the sample, because they operate in a different business environment than the other industries.

The initial sample is made up of 13,924 firm-year observations, and firms without sufficient data are measured by financial variables (3,635 observations). Therefore, I have 10,289 (1,398 firms)[4] firm-year observations available for analysis. Table 1 shows the sample composition regarding CSR reports and external assurance of CSR reports across industries between family and non-family firms. Overall, the number of CSR reports by family firms (859 observations) is greater than the number of CSR reports by non-family firms (587 observations). However, the number of external assurances of CSR reports for family firms (227 observations) is slightly lower than those for non-family firms

[3] The year 2008 marks the global financial crisis, and thus I start the sample period at 2009. In fact, there are only 11 firms that provided external assurance of their CSR reports before 2009.

[4] I include 1,144 firms in 2009, 1,189 firms in 2010, 1,237 firms in 2011, 1,276 firms in 2012, 1,308 firms in 2013, 1,355 firms in 2014, 1,382 firms in 2015, and 1,398 firms in 2016.

(235 observations). More specifically, the percentage of external assurances of CSR reports from non-family firms (40%) is higher than that from family firms (26%). The initial findings tend to support the argument that family firms are less likely to engage in external assurance of their CSR reports.

3.2 Empirical model and variables

Based on Liao, Lin, and Zhang (2018) and Simnett *et al.* (2009), I employ the following logistic regression model (1) to investigate the impact of various types of family firms on the likelihood of CSRA:

$$CSRA_i = a_0 + a_1 Family_i + a_2\, DIV_i + a_3\, INDE_i + a_4 Family_i \times DIV_i + a_5 Family_i \times INDE_i + b_i Control\ Variables_i + \varepsilon_i. \quad (1)$$

Table 1

Sample composition

TEJ Industry Sub-sample	*CSR reports*			*External assurance of reports*		
	Non-family		*Family*	*Non-family*		*Family*
	Obs.	Obs.	Obs.	%	Obs.	%
1. Cement	0	22	0	n.a.	7	32%
2. Foods	4	17	3	75%	17	100%
3. Plastics	6	44	4	67%	15	34%
4. Textiles	4	20	0	0%	8	40%
5. Electrical engineering and machinery	33	32	18	55%	0	0%
6. Electric and cable	3	14	0	0%	6	43%
7. Chemical, medical, and biotechnology	18	33	9	50%	7	21%
8. Glass and ceramics	0	12	0	n.a.	3	25%
9. Pulp and paper	0	3	0	n.a.	3	100%
10. Steel and iron	12	40	10	83%	8	20%
11. Rubber	4	14	0	0%	6	43%
12. Automobile	5	4	5	100%	0	0%
13. Electronics and semiconductor	469	512	167	36%	118	23%
14. Others	29	92	19	66%	29	32%
Total	587	859	235	40%	227	26%

Here, the dependent variable is CSRA, which is an indicator variable equal to 1 if the CSR report is assured and 0 otherwise. Family firms are identified as those where the largest controlling shareholder is a family group and at least two family members are involved on the board of directors or in senior management. A value of 1 (Family) means the firm is a family firm and 0 otherwise. DIV represents the divergence between the ultimate controlling shareholder's voting rights and cash flow rights. Independence (INDE) is an indicator variable equal to 1 if the firm has an independent non-executive board director and 0 otherwise.

Based on prior studies (Liao *et al.*, 2018; Simnett *et al.*, 2009), this work includes the following control variables SIZE is the natural logarithm of total sales used to proxy for firm size. MTB is the ratio of a firm's market value of equity to its book value of equity. ROA, calculated as return on assets, measures the profitability of the company. INST is measured by the percentage of shares outstanding that are owned by financial institutions. LNAGE is the natural log of the listing year of a firm. LEV is calculated as the ratio of total debt divided by total assets, measuring the company's financial risk. Finally, year effects and industry effects are also controlled in the model. Year Effect is a categorical variable for each of the years. Industry Effect is a categorical variable based on the TEJ industry codes.

4. Empirical results

4.1 Univariate analysis

Panel A of Table 2 provides the descriptive statistics for all the variables included in this study. The mean of CSRA is 0.045, which indicates that 4.5% of the sample firms have CSR reports assured by a third party. The mean of Family is 0.605, which suggests more than half of the sample firms are family firms, which is consistent with prior studies noting the high percentage of Taiwanese-listed firms that are family owned or operated (Claessens *et al.*, 2002; Kuan *et al.*, 2012; Yeh *et al.*, 2001). The mean of DIV is 6.0%, suggesting that the ultimate controlling shareholders' voting rights are on average in excess of their cash flow

rights, and thus these firms might have a greater motivation to expropriate minority wealth.

The mean of independent non-executive board directors (INDE) is 66%. Some firms voluntarily appoint independent directors, whereas it is mandatory for other firms ever since 2002 when the Taiwan Securities and Exchange Act required the appointment of independent directors for initial public offering firms. Since 2017, all firms must mandatorily appoint independent directors. Panel B of Table 2 provides the descriptive statistics for the sample firms, partitioned based on whether the firm is family-owned or not (Family Versus Non-Family). The means and median tests of external assurance of CSR reports (CSRA), independent non-executive board director (INDE), and ultimate controlling shareholders' voting rights in excess of their cash flow rights (DIV) are all significantly lower for family firms than for non-family firms. The above results suggest that family firms might have fewer motivations to voluntarily appoint independent directors, and that they also have a lower divergence between voting rights and cash flow rights. Other significant differences between the two groups are that family firms are larger in size (SIZE), have fewer growth opportunities (MTB), lower profitability (ROA), lower percentage of shares outstanding owned by financial institutions (INST), are older (LNAGE), and have higher financial leverage (LEV).

Table 3 shows the Pearson correlations among the variables. Family firm (Family) negatively and significantly correlates with sample firms whose CSR reports have been assured by a third party (CSRA). The ultimate controlling shareholders' voting rights in excess of their cash flow rights (DIV) positively and significantly correlate with sample firms whose CSR reports have been assured by a third party (CSRA). Independent non-executive board directors (INDE) positively and significantly correlate with sample firms whose CSR reports have been assured by a third party (CSRA).

4.2 Multivariable analysis results

This study investigates two sub-samples (e.g., the full sample data and the sample of only firms with CSR reports) for Hypothesis 1 and Hypothesis 2. The

Table 2

Descriptive summary

Panel A: Descriptive statistics

Variables	Mean	Std. Dev	Median	Min	Max
CSRA	0.045	0.207	0	0	1
Family	0.605	0.489	1	0	1
DIV	0.060	0.109	0.014	0	0.761
INDE	0.665	0.472	1	0	1
SIZE	14.918	1.649	14.798	4.127	22.223
MTB	1.774	3.105	1.297	0.067	192.868
ROA	0.036	0.104	0.041	-4.388	0.892
INST	0.369	0.226	0.337	0	1
LNAGE	3.192	0.555	3.258	0	4.262
LEV	0.401	0.179	0.396	0.005	0.991

Panel B: Tests comparing family and non-family firms

Sub-Sample	*Family*		*Non-Family*		*Difference Tests*	
Variables	*Mean*	*Median*	*Mean*	*Median*	*t-value*	*z-value*
CSRA	0.035	0	0.049	0	-3.57***	-3.57***
DIV	0.056	0.010	0.072	0.022	-7.44***	-12.85***
INDE	0.577	1	0.797	1	-25.82***	-24.41***
SIZE	14.844	14.755	14.817	14.635	0.83	3.38***
MTB	1.668	1.219	1.939	1.434	-4.48***	-10.54***
ROA	0.031	0.035	0.049	0.053	-9.22***	-13.15***
INST	0.357	0.320	0.409	0.390	-11.73***	-10.63***
LNAGE	3.351	3.401	2.880	2.996	42.98***	34.65***
LEV	0.413	0.412	0.385	0.374	8.25***	8.59***

Notes:

1. There are 10,289 observations. *CSRA* is an indicator variable equal to 1 if the CSR report is assured and 0 otherwise. A value of 1 (*Family*) is assigned when the firm is classified as a family firm and 0 otherwise. *DIV* represents the divergence between the ultimate controlling shareholder's voting rights and cash flow rights; independent non-executive board director is an indicator variable equal to 1 if the firm has an independent board director and 0 otherwise. *SIZE* is the natural logarithm of a firm's sales; *MTB* is the ratio of a firm's market value of equity to its book value of equity; *ROA* is measured by a firm's return on assets; *INST* is measured by the percentage of shares outstanding that are owned by financial institutions; *Ln(LNAGE)* is the natural log of the listing year of a firm; *LEV* is measured by the ratio of debt to assets.
2. ***, **, and ** represent significance at the 1%, 5%, and 10% levels using a two-tailed test, respectively.

Table 3
Matrix of correlations

	CSRA	*Family*	*DIV*	*INDE*	*SIZE*	*MTB*	*ROA*	*INST*	*LNAGE*	*LEV*
CSRA	1.000	-0.051	0.055	0.086	0.365	-0.001	0.030	0.227	0.059	0.090
		(<0.01)	(<0.01)	(<0.01)	(<0.01)	(0.47)	(<0.01)	(<0.01)	(<0.01)	(<0.01)
Family		1	-0.051	-0.240	-0.041	-0.043	-0.068	-0.073	0.368	0.077
			(<0.01)	(<0.01)	(<0.01)	(<0.01)	(<0.01)	(<0.01)	(<0.01)	(<0.01)
DIV			1	0.044	0.079	0.019	0.014	0.344	-0.148	0.020
				(<0.01)	(<0.01)	(0.05)	(0.17)	(<0.01)	(<0.01)	(0.04)
INDE				1	-0.116	0.058	0.019	0.044	0.126	0.338
					(<0.01)	(<0.01)	(0.06)	(<0.01)	(<0.01)	(<0.01)
SIZE					1	-0.116	0.250	0.344	0.126	0.338
						(<0.01)	(<0.01)	(<0.01)	(<0.01)	(<0.01)
MTB						1	-0.035	0.084	-0.103	0.031
							(<0.01)	(<0.01)	(<0.01)	(<0.01)
ROA							1	0.158	-0.022	-0.176
								(<0.01)	(0.02)	(<0.01)
INST								1	-0.114	0.085
									(<0.01)	(<0.01)
LNAGE									1	0.114
										(<0.01)
LEV										1

Notes:

1. There are 10,289 observations. This table shows the Pearson correlations. Parentheses indicate the p-value. Definitions of the variables appear in Table 2.

underlying estimation assumption for the full sample data compares the difference between firms with assurance of CSR reports (CSRA=1) and those without such assurance (CSRA=0). The control firms (CSRA=0) include firms without CSR reports and those with CSR reports that are not assured. The composition of control firms includes all possible samples, which helps alleviate the potential

problem of non-randomly selected samples.

The underlying estimation assumption for firms with CSR reports is comparing those with assurances of CSR reports (CSRA=1) to those that are not assured (CSRA=0). The control firms (CSRA=0) only include those with CSR reports that are not assured. The credibility of CSR reporting is suspect, because firms can voluntarily disclose environmental and social information in a strategic manner (Li *et al.*, 1997). CSR reporting disclosure policies may be motivated by managerial self-interests, as firms tend to window-dress their environmentally responsible image, but rarely report the strengths of their CSR performance (Griffin and Weber, 2006; Kim, Park, and Wier, 2012).

The initial findings shown in Table 1 indicate that family firms have greater motivation to issue CSR reports, but fewer of them provide external assurance of the reports. Thus, compared to firms without external assurances of CSR reports, public investors will trust the credibility of those firms voluntarily giving assurances of CSR reports. The difference between firms with assurances of CSR reports (CSRA=1) and those without them (CSRA=0, firms with CSR reports, but their CSR reports are not assured) helps to illustrate the above concerns. However, this composition of control firms might be affected by the problem of non-randomly selected samples. Thus, I consider a Heckman two-stage technique to correct this problem, as shown in Table 5.

As for the effect of Hypothesis 1, Panel A of Table 4 shows in the case of the main independent variables for both the full sample and the sample of only firms with CSR reports that Family has a significantly negative impact on CSRA, suggesting that family businesses have less motivation to engage in voluntary CSR assurance. This is consistent with the argument that family firms have less motivation to engage in public information disclosure. In relation to the control variables, SIZE, INST, and LNAGE, all have a significantly positive impact on CSRA, denoting that larger firms (SIZE), those with a high percentage of shares outstanding owned by financial institutions (INST), older firms (LNAGE), and those with higher financial leverage have less motivation to engage in voluntary CSR assurance. In contrast, ROA and LEV have a significantly negative impact

on CSRA, which suggests that firms with higher profitability have less motivation to engage in voluntary CSR assurance.

Panel B of Table 4 reports the empirical results for Hypotheses 2-1 and 2-2. As expected, Family×DIV has a negative impact on CSRA in both the full sample and in the sample with only firms having CSR reports, indicating that family businesses with high control-cash flow divergence exhibit less motivation to engage in voluntary CSR assurance. This finding is consistent with the prediction that a worse corporate structure (high control-cash flow divergence) is associated with worse monitoring in terms of CSR disclosure.

I note on the other hand that Family×INDE has a positive impact on CSRA in both the full sample and in the sample comprising only firms with CSR reports. This suggests family business firms with independent non-executive board directors have a greater motivation to engage in voluntary CSR assurance. It is also consistent with the argument suggesting that firms engage in better CSR disclosure in response to social or stakeholder pressure (Bugeja *et al.*, 2017; Donaldson and Preston, 1995).

Sample selection bias may occur since firms with assurances of CSR reports identified in the sample may not be representative of all firms. Hence, the adoption of voluntary external assurance of CSR reports might be endogenous and due to self-selection bias. This study employs the Heckman two-stage technique to correct any bias from non-randomly selected samples, because the selection sample only includes firms with CSR reports, as shown in Table 4. In other words, the sample comprising only firms with CSR reports is examined to exclude firms that do not produce a CSR report and thereby have no CSR assurance.

In order to control for the potential endogeneity problem, this study adopts a two-stage Heckman model estimation by using the inverse Mills' ratio to take the sample selection problem into account. In the first step, I model a regression for observing a positive outcome of the dependent variable with a Probit Model. The estimated parameters are used to calculate the inverse Mills' ratio, which is then included as an additional explanatory variable in the OLS estimation (Greene, 1997). The Heckman's two-stage estimation then corrects for the possible sample

Table 4

Family control and voluntary assurance of CSR reports

Panel A: Family firms and external assurance of CSR reports

Dependent Variables: CSRA

Subsamples'	*Full Sample*		*Firms with CSR Reports*	
Variables	*Coefficient*	*p-value*	*Coefficient*	*p-value*
Intercept	-13.378	0.96	10.012	0.96
Family	-0.405***	<0.01	-0.636***	<0.01
SIZE	1.303***	<0.01	1.035***	<0.01
MTB	-0.047	0.33	0.062	0.32
ROA	-2.685***	<0.01	-5.989***	<0.01
INST	1.451***	<0.01	1.628***	<0.01
LNAGE	0.433***	<0.01	0.513***	<0.01
LEV	-2.037***	<0.01	-1.568***	<0.01
YEAR	*YES*		*YES*	
INDUSTRY	*YES*		*YES*	
*N=9,636, Wald x^2=779.32***, Pseudo R^2=16.12%, Hosmer–Lemeshow (p-value)=10.72(p=0.21).*			*N=1,352, Wald x^2=244.51***, Pseudo R^2=41.25%, Hosmer–Lemeshow(p-value)=25.36(p<0.01).*	

Panel B: The moderating effect of high control-cash flow divergence and independent board of directors

Dependent Variables: CSRA

Subsamples'	*Full Sample*		*Firms with CSR Reports*	
Variables	*Coefficient*	*p-value*	*Coefficient*	*p-value*
Intercept	-13.490	0.96	9.289	0.96
Family	-1.229***	<0.01	-1.093***	<0.01
DIV	2.559***	<0.01	3.220***	<0.01
INDE	0.273	0.28	0.412	0.16
Family×DIV	-3.490***	<0.01	-4.117***	<0.01
Family×INDE	1.223***	<0.01	0.839**	0.04
SIZE	1.309***	<0.01	1.044***	<0.01
MTB	-0.045	0.37	0.092*	0.09
ROA	-2.925***	<0.01	-6.506***	<0.01
INST	1.087***	<0.01	1.071**	0.05
LNAGE	0.508***	<0.01	0.681***	<0.01
LEV	-2.160***	<0.01	-1.925***	<0.01
YEAR	*YES*		*YES*	
INDUSTRY	*YES*		*YES*	
*N=9,517, Wald x^2=753.30*** Pseudo R^2=16.06%, Hosmer–Lemeshow(p-value)=4.57(p=0.80).*			*N=1,319, Wald x^2=238.32*** Pseudo R^2=42.25%, Hosmer–Lemeshow (p-value)=25.97(p<0.01).*	

Notes:

1. Definitions of the variables appear in Table 2. ***, **, and * represent significance at the 1%, 5%, and 10% levels using a two-tailed test, respectively.
2. In Panel A of Table 4, the initial sample is 10,289, and 653 observations are eliminated due to omitted variables. Thus, there are 9,636 for the full sample of firms and 1,352 for the sample of only firms with CSR reports. A comparison of Panel A in Table 4 led to 119 and 33 observations in Panel B of Table 4 being eliminated, because of a lack of sufficient data for the DIV and INDE variables, respectively.

selection problem with regard to the CSR report discourse in the first stage. Prior studies (Chan, Watson, and Woodiff, 2014; Chung *et al.*, 2015; Ghazali, 2007; Nekhilia *et al.*, 2017; Sheu *et al.*, 2010) suggest that firms providing more voluntary disclosure information have better corporate governance ratings,[5] are larger in size, and are more highly leveraged. Thus, this study adds the above instrument variables in the first stage, with the Probit model in this stage expressed as follows:

$$CSR\ Report_i = \gamma_0 + \gamma_1\ INDE_i + \gamma_2 DIV_i + \gamma_3\ OUTBOARD_i + \gamma_4\ Duality_i + \gamma_5 SIZE_i + \gamma_6 MTB_i + \gamma_7\ ROA_i + \gamma_8\ INST_i + \gamma_9\ LNAGE_i + \gamma_{10} LEV_i + \sum INDUSTRY\ EFFECT + \sum YEAR\ EFFECT + \varepsilon_i, \quad (2)$$

Where CSR Report equals one if the firm has a CSR report and zero otherwise. INDE equals 1 if the firm has an independent non-executive board director and zero otherwise. DIV refers to the divergence between the ultimate controlling shareholder's voting rights and cash flow rights. OUTBOARD is the percentage of outside directors on the board of directors. Duality is measure by CEO duality, such as cases where the chief executive officer (CEO) is also a chairman of the board of directors. The other control variables in Equation (2) are also introduced as the main regression models. After considering the sample selection problem, Table 5 shows that the coefficients for Family, the moderating effect of the coefficient for Family×DIV, and the coefficient for Family×INDE all have the predicted signs and are significant. Thus, the main results do not change.

The above findings overall provide new evidence related to the contribution of family studies on external assurance of CSR reports, which suggests that family firms have less motivation to engage in voluntary external assurance for social and environmental reports. Furthermore, this study finds that firms with control-cash flow divergence and firms having independent non-executive board directors

[5] This study does not include a foreign institutional investor variable since Luan and Tien (2017) find that foreign institutional investors fail to play a necessary role in directly improving a firm's information transparency and disclosure in Taiwan, because they have limited company information or those firms being targeted by foreign institutional investors may have previously performed well in corporate governance.

Table 5

Family control and voluntary assurance of CSR reports with Heckman models

Stages	*Second-stage*			*First-stage*	
Dependent Variables:	*CSRA*			*CSR*	
Variables	*Coefficient*	*p-value*		*Coefficient*	*p-value*
Intercept	-6.303***	0.41	*Intercept*	-10.007***	<0.01
Family	-0.111***	<0.01	*INDE*	0.104**	0.01
DIV	0.510***	<0.01	*DIV*	0.099	0.61
INDE	0.103***	<0.01	*OUTBOARD*	0.341***	<0.01
Family×DIV	-0.612***	<0.01	*Duality*	-0.039	0.31
Family×INDE	0.083**	0.03	*SIZE*	0.513***	<0.01
SIZE	0.314***	<0.01	*MTB*	-0.010	0.45
MTB	0.009	0.27	*ROA*	-0.507**	0.03
ROA	-0.855***	<0.01	*INST*	0.572***	<0.01
INST	0.466***	<0.01	*LNAGE*	0.265***	<0.01
LNAGE	0.159***	<0.01	*LEV*	-0.840***	<0.01
LEV	-0.525***	<0.01			
Invers Mill	0.585***	<0.01			
YEAR	*YES*			*YES*	
INDUSTRY	*YES*			*YES*	
N=1,319, R^2=45.40%.				*N=9,517, R^2=21.58%.*	

Notes:

1. Definitions of the variables appear in Table 2. OUTBOARD is the percentage of outside directors on the board of directors. Duality is a measure for CEO duality, such as cases where the CEO is also a chairman of the board of directors.
2. ***, **, and * represent significance at the 1%, 5%, and 10% levels using a two-tailed test, respectively.

might serve as important moderators of the link between family firms and CSR assurance.

4.3 Sub-sample analysis

This study also conducts additional tests to assess model validity. First, the

assurance of CSR reports is mandatory in the case of the food industry in Taiwan. Thus, the food industry sample is excluded to re-run the main hypotheses. Panel A of Table 6 shows that the coefficient of family business firms (Family) has the predicted negative sign and is found to be significant. In addition, the moderating effect of the coefficient for Family×DIV and the coefficient for Family×INDE have the predicted sign and are significant. Thus, the above results are similar to those for the prior main findings.

Second, of those CSR reports that are voluntarily assured, the quality of the assurance seems to vary considerably in practice. Firms purchase assurance services from a wide variety of providers, and assurers have various levels of quality depending on the extent of their assurance (depth and breadth) and their own quality (reputation). Companies offering assurance include international accounting firms (Deloitte, EY, KPMG, and PwC) and other specialized consulting firms. In fact, there are two major international standards used by providers of CSR assurance, AA1000AS and ISAE 3000, but they are designed for different purposes and have different objectives (Manetti and Becatti, 2009). The standard AA1000AS is "a free, open-source set of principles that focuses on the learning aspects of addressing CSR issues," while ISAE 3000 aims to "provide guidance in the form of basic principles and essential procedures for professional accountants on how to conduct non-financial assurance engagements" (Perego and Kolk, 2012). Different assurance providers prefer to base their assurance on specific standards.

International accounting firms in general are more likely to use the high-level ISAE 3000 as its criteria to assure a narrower scope of CSR information, while specialized consulting firms are more likely to use AA1000AS (Cohen and Simnett, 2015). Some firms choose a review rather than an examination or a verification. Thus, an indicator variable (ACCFIRM) is set as 1 if the firms' choice of assurance providers is accounting firms (i.e., ISAE 3000) and 0 otherwise, such as consulting firms (i.e., AA 1000). Panel B of Table 6 reports the estimation results. This study finds that the coefficient for ACCFIRM is positive and significant with CSR assurance. The coefficient for Family×ACCFIRM is

positively but insignificantly associated with CSR assurance. The above results do not support the argument that family businesses choose high quality assurance standards by which to verify their CSR reports

Third, this study includes other corporate governance factors such as CEO duality, whereby the CEO is also a chairman of the board of directors and is also an outside director. CEO duality concentrates power in the CEO position, potentially allowing for more managerial discretion. The dual office structure also permits the CEO to effectively control information available to other board members, which thus may impede effective monitoring (Jensen, 1993). If CEO duality does impede effective monitoring, then this may result in pressure on managers to engage in CSR disclosure activities, which would be especially true in the case of firms with mechanisms intended to ensure effective board of director characteristics. In addition, outside directors may feel that they are acting in the best long-term interests of shareholders by encouraging the development of quality products and services and by accruing a positive environmental reputation (Johnson and Greening, 1999). Zahra, Oviatt, and Minyarde (1993) suggest that a diverse board will be more sensitive to socially acceptable hiring practices. Thus, outside directors may enhance the reputation and credibility of an organization and help establish and maintain its legitimacy (Pfeffer and Salancik, 1978). Panel C of Table 6 reports the estimation results, which indicate that the coefficients for Family×Duality and Family×BOARD are all insignificantly related to CSR assurance. However, after considering other corporate governance factors, the coefficients for Family, the moderating effect of the coefficient for Family×DIV, and the coefficient for Family×INDE all have the predicted signs and are significant. Thus, the main results do not change when other corporate governance factors are included.

Fourth, this study considers the sample selection bias for firms without CSR reports. Thus, this study re-runs the main results using a propensity-score-matched (PSM) sample by making the treatment firms (with CSR reports) and benchmark firms (without CSR reports) more comparable on the observable covariates (Rosenbaum and Rubin, 1984). Next, each treatment firm is matched to a

benchmark firm using the nearest neighbor matching technique with replacement and setting the caliper to a 0.25∗standard error of the propensity score (Dehejia and Wahba, 2002). Panel D of Table 6 reports the empirical estimation results, which are similar to those of the prior main findings.

Finally, the sample period used in this study is between 2009 and 2016, during which time some firms engaged in voluntary appointment of independent directors, whereas other firms were required to do so in Taiwan. The Taiwan Securities and Exchange Act revised the appointment of independent directors for all public firms with capital greater than NT$10 billion beginning in 2011. Thus, this study excludes the period from 2011 to 2016 in the case of firms with capital greater than NT$10 billion and thus only investigates the association between CSRA in terms of voluntary appointment of independent directors. Panel E of Table 6 reports the estimation results. Most of the results are similar to those of the prior main findings.

5. Conclusion

Most studies in the literature examining external assurance for CSR reports have been conducted in a U.S. or European context. This study thus extends the literature by studying the CSR reporting practices in emerging markets, specifically those of Taiwanese family firms. The findings demonstrate that family-owned companies on average prefer less voluntary disclosure of publicly external assurances for CSR reports. The results are consistent with the argument of Chen *et al.* (2008). In addition, shareholders prefer more credible voluntary information, because voluntary disclosure can reduce information asymmetry and will therefore also reduce the cost of capital by reducing transaction costs. The findings herein indicate that family owners have different preferences related to external assurances of CSR report decisions than is the case for other owners. The possibility of stricter direct monitoring of management and faster access to the relevant CSR information of family-owned companies leads to the prediction of less voluntary external assurances for CSR reports.

Table 6

Family control and voluntary assurance of CSR reports for the sub-samples

Panel A: Excluding food-related industries

Dependent Variable: CSRA

Independent variables	*Coefficient*	*p-value*
Intercept	-15.224	0.95
Family	-1.201***	<0.01
DIV	2.900***	<0.01
INDE	0.156	0.54
Family × DIV	-3.722***	<0.01
Family × INDE	1.048***	<0.01
SIZE	1.386***	<0.01
MTB	-0.048	0.36
ROA	-2.982***	<0.01
INST	1.157***	<0.01
LNAGE	0.559***	<0.01
LEV	-2.211***	<0.01
YEAR	*YES*	
INDUSTRY	*YES*	

N=9,343,
*Wald x^2=718.35***, Pseudo R^2=16.25%,*
Hosmer–Lemeshow (p-value)=5.06(p=0.75).

Panel B: Different CSR assurance providers

Dependent Variable: CSRA

Independent variables	*Coefficient*	*t-value*
Intercept	-7.049	0.97
Family	-1.800***	<0.01
DIV	0.984	0.36
INDE	-0.524	0.19
Family × DIV	-0.986	0.46
Family × INDE	1.421***	<0.01
SIZE	1.023***	<0.01
MTB	-0.014	0.88
ROA	-2.815	0.11
INST	-0.175	0.73
LNAGE	0.247	0.18
LEV	-2.391***	<0.01
ACCFIRM	1.654***	<0.01
Family × ACCFIRM	0.722	0.19
YEAR	*YES*	
INDUSTRY	*YES*	

N=997,
*Wald x^2=220.57***, Pseudo R^2=34.59%,*
Hosmer–Lemeshow (p-value)=4.17(p=0.84).

Panel C: Adding other corporate governances

Dependent Variable: CSRA

Independent variables	*Coefficient*	*p-value*
Intercept	-12.758	0.96
Family	-1.270***	<0.01
DIV	2.428***	<0.01
INDE	0.389	0.16
Family × DIV	-3.499***	<0.01
Family × INDE	1.248***	<0.01
SIZE	1.289***	<0.01
MTB	-0.035	0.49
ROA	-2.798***	<0.01
INST	1.018***	<0.01
LNAGE	0.469***	<0.01
LEV	-2.099***	<0.01
Duality	-0.031	0.89
Family×Duality	0.086	0.79
OUTBOARD	-0.771	0.21
Family× OUTBOARD	-0.073	0.93
YEAR	*YES*	

Panel D: Propensity score analysis

Dependent Variable: CSRA

Independent variables	*Coefficient*	*t-value*
Intercept	-3.662	0.99
Family	-1.057***	<0.01
DIV	2.104***	<0.01
INDE	0.270	0.27
Family × DIV	-3.126***	<0.01
Family × INDE	1.106***	<0.01
SIZE	0.761***	<0.01
MTB	0.082**	0.05
ROA	-6.385***	<0.01
INST	1.398***	<0.01
LNAGE	0.387***	<0.01
LEV	-2.432***	<0.01
YEAR	*YES*	

INDUSTRY	*YES*	*INDUSTRY*	*YES*
N=9,517, Wald x^2=735.17***, Pseudo R^2=16.09%, Hosmer–Lemeshow (p-value)=4.44(p=0.81).		*N=2,649, Wald x^2=373.25**,* Pseudo R^2=19.78%, Hosmer–Lemeshow (p-value)=2.25(p=0.97).*	

Panel E: Firms with voluntary appointment of independent directors

Dependent Variables: CSRA

Subsamples	*Full Sample*		*Only Firms with CSR Reports*	
Variables	*Coefficient*	*p-value*	*Coefficient*	*p-value*
Intercept	-10.537	0.96	24.998	0.94
Family	-1.214***	<0.01	-0.725	0.18
DIV	3.396***	<0.01	4.350***	<0.01
INDE	-0.210	0.55	0.194	0.64
Family×DIV	-7.641***	<0.01	-10.887***	<0.01
Family×INDE	1.566***	<0.01	0.699	0.26
SIZE	1.194***	<0.01	0.407***	<0.01
MTB	-0.002	0.98	0.128	0.16
ROA	-2.280***	<0.01	-5.563**	0.03
INST	0.568	0.32	0.900	0.28
LNAGE	0.108	0.64	0.523	0.16
LEV	-1.516**	0.04	-1.333	0.20
YEAR	*YES*		*YES*	
INDUSTRY	*YES*		*YES*	
N=8,526, Wald x^2=272.08***, Pseudo R^2=4.71%, Hosmer–Lemeshow(p-value)=4.44(p=0.81).		*N=770, Wald x^2=62.61***, Pseudo R^2=30.52%, Hosmer–Lemeshow (p-value)=8.51(p=0.38).*	

Notes:

1. Definitions of the variables appear in Table 2. An indicator variable (ACCFIRM) is equal to 1 if the firm's choice of assurance providers is an accounting firm (i.e., ISAE 3000) and 0 otherwise, such as when a consulting firm is used (i.e., AA 1000). Duality is measure by CEO duality, such as cases where the CEO is also a chairman of the board of directors. OUTBOARD is the percentage of outside directors on the board of directors. ***, **, and * represent significance at the 1%, 5%, and 10% levels using a two-tailed test, respectively.
2. A comparison of Panel B in Table 4 led to 174 observations being eliminated in Panel A of Table 6, because they comprise a food-related industry sample. A comparison of Panel B in Table 4 led to 322 observations in Panel B of Table 6 being eliminated, because some firms did not disclose their assurance service companies even though they declared their CSR reports had been assured. Some observations were eliminated due to omitted variables. In addition, the sample for Panel B of Table 6 includes firms with assurance of CSR reports (CSRA=1) and those that do not have assurance (CSRA=0). The control firms (CSRA=0) are those with CSR reports that are not assured. For Panel D of Table 6, there are 2,649 observations for running a propensity score approach. A comparison of Panel B of Table 4 led to 991 observations (full sample) and 549 observations being eliminated in Panel E of Table 6, because those firms have mandatory appointment of independent directors during the sample year, while Panel E of Table 6 only includes firms with voluntary appointment of independent directors.

Academics and practitioners have also placed greater emphasis on government policy reforms affecting firms' financial or non-financial disclosure practices in recent years. With respect to this study, the Taiwan government has

adopted a solution to reform listed firms' CSR reporting. The results of this study suggest that family firms are less likely to engage in external assurances for CSR reports, but those with a better governance structure are more likely to voluntarily provide such external assurances. This results in a direct implication for the future as to whether regulations should be put in place, whether they should be mandatory or voluntary, and how they should be implemented.

This paper does have some limitations, which offers the potential for improvement in future studies on this topic. The above inferences should be taken with the following caveats. First, this study does not have access to the relevant data regarding the costs and benefits of obtaining the assurances of CSR reports, but this potential critical comparative cost-benefit analysis may be important in determining CEO's CSR report decisions in most firms. Thus, in the future, researchers may employ a case study approach based on a more comprehensive understanding of firms' decisions related to assurances of CSR reports. In addition, the findings of this study might only be utilized in other countries with an emerging stock market similar to that in Taiwan. Future research could use developed market samples such as those of the U.S. or European companies to investigate whether those family firms prefer more or less voluntarily assurances of CSR reports. Finally, this study only employs pooled data for the period between 2009-2016. Future studies could enhance this relevant issue by taking a longer data period and utilizing a fixed- (or random-) effect panel model to estimate the results.

References

Ali, A., Chen, T. Y., and Radhakrishnan, S. (2007). Corporate disclosures by family firms. *Journal of Accounting and Economics*, *44*(1-2), 238-286.

Amihud, Y., and Lev, B. (1981). Risk reduction as a managerial motive for conglomerate mergers. *Bell Journal of Economics*, *12*(2), 605-617.

Amihud, Y., and Mendelson, H. (1986). Asset pricing and the bid-ask spread. *Journal of Financial Economics, 17*(2), 223-249.

Anderson, R. C., and Reeb, D. M. (2003). Founding family ownership and firm

performance: Evidence from the S&P 500. *Journal of Finance*, *58*(3), 1301-1328.

Arora, P., and Dharwadkar, R. (2011). Corporate governance and corporate social responsibility: The moderating roles of attainment discrepancy and organizational slack. *Corporate Governance: An International Review*, *19*(2), 136-152.

Attig, N., Fong, W., Gadhoum, Y., and Lang, L. (2006). Effects of large shareholding on information asymmetry and stock liquidity. *Journal of Banking & Finance*, *30*(10), 2875-2892.

Bardhan, I., Lin, S., and Wu. S. L. (2015). The quality of internal control over financial reporting in family firms. *Accounting Horizons, 29*(1), 41-60.

Barry, C., and Brown, S. (1985). Differential information and security market equilibrium. *Journal of Financial and Quantitative Analysis, 20*(4), 407-422.

Berrone, P., Cruz, C., Gomez-Mejia, L. R., and Larraza-Kintana, M. (2010). Socioemotional wealth and corporate responses to institutional pressures: Do family-controlled firms pollute less? *Administrative Science Quarterly*, *55*(1), 82-113.

Bingham, J. B., Dyer, W. G., Smith, I., and Adams, G. L. (2011). A stakeholder identity orientation approach to corporate social performance in family firms. *Journal of Business Ethics*, *99*(4), 565-585.

Block, J. H., and Wagner, M. (2014). The effect of family ownership on different dimensions of corporate social responsibility: Evidence from large US firms. *Business Strategy and the Environment*, *23*(7), 475-492.

Botosan, C. (1997). Disclosure level and cost of equity capital. *The Accounting Review, 72*(3), 323-350.

Bugeja, M., Matolcsy, M., and Spiropoulos, H. (2017). The CEO pay slice: Managerial power or efficient contracting? Some indirect evidence. *Journal of Contemporary Accounting & Economics*, *13*(1), 69-87.

Bushman, R., Chen, Q., Engle, E., and Smith A. (2004). Financial accounting information, organizational complexity and corporate governance systems. *Journal of Accounting & Economics*, *37*(2), 167-201.

Campopiano, G., and De Massis, A. (2015). Corporate social responsibility reporting: A content analysis in family and non-family firms. *Journal of Business Ethics*, *129*(3), 511-534.

Casey, R. J., and Grenier, J. H. (2015). Understanding and contributing to the enigma of corporate social responsibility (CSR) assurance in the United States. *Auditing: A Journal of Practice and Theory*, *34*(1), 97-130.

Cennamo, C., Berrone, P., Cruz, C., and Gómez-Mejía, L. R. (2012). Socioemotional wealth and proactive stakeholder engagement: Why family controlled firms care more about their stakeholders. *Entrepreneurship Theory & Practice*, *36*(6), 1153-1173.

Chan. M. C., Watson, J., and Woodiff, D. (2014). Corporate governance quality and CSR disclosures. *Journal of Business Ethics*, *125*(1), 59-73.

Chen, S., Chen, X., and Cheng, Q. (2008). Do family firms provide more or less voluntary disclosure? *Journal of Accounting Research*, *46*(3), 499-536.

Cho, C. H., Michelon, G., Patten, D. M., and Roberts, R. W. (2015). CSR disclosure: The more things change…? *Accounting, Auditing & Accountability Journal*, *28*(1), 14-35.

Chung, H., Judge, W. Q., and Li, Y. H. (2015). Voluntary disclosure, excess executive compensation, and firm value. *Journal of Corporate Finance*, *32*, 64-90.

Claessens, S., Djankov, S., Fan, J. P. H., and Lang, L. H. P. (2002). Disentangling the F and entrenchment effects of large shareholdings. *Journal of Finance*, *57*(6), 2741-2771.

Clarkson, P. M., Li, Y., Richardson, G., and Vasvari, F. (2008). Revisiting the relation between environmental performance and environmental disclosure: An empirical analysis. *Accounting, Organizations and Society, 33*(4/5), 303-327.

Coburn, J., Donahue, S. H., and Jayanti, S. (2011). *Disclosing climate risks & opportunities in SEC filings*. Boston, MA: Ceres.

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

Cormier, D., Gordon, I. M., and Magnan, M. (2004). Corporate environmental

disclosure: Contrasting management's perceptions with reality. *Journal of Business Ethics*, *49*(2), 143-165.

Deckop, J. R., Merriman, K. K., and Gupta, S. (2006). The effects of CEO pay structure on corporate social performance. *Journal of Management*, *32*(3), 329-342.

Dehejia, R. H., and Wahba, S. (2002). Propensity score matching methods for non-experimental causal studies. *Review of Economics and Statistics*, *84*(1), 151-161.

Dhaliwal D., Li, O. Z., Tsang, A., and Yang, G. Y. (2011). Nonfinancial disclosure and analyst forecast accuracy: International evidence on corporate social responsibility disclosure. *The Accounting Review, 87*(3), 723-759.

Donaldson, T., and Preston, L. E. (1995). The stakeholder theory of the corporation: Concepts, evidence and implications. *Academy of Management Review*, *20*(1), 65-92.

Dyer, W. G., and Whetten, D. A. (2006). Family firms and social responsibility: Preliminary evidence from the S&P 500. *Entrepreneurship Theory and Practice*, *30*(6), 785-802.

Faccio, M., and Lang, L. H. P. (2002). The ultimate ownership of Western European corporations. *Journal of Financial Economics*, *65*(3), 365-395.

Faccio M., Lang, L. H. P., and Young, L. (2001). Dividends and expropriation. *American Economic Review*, *91*(1), 54-78.

Frías-Aceituno, J. V., Rogdríguez-Ariza, L., and García-Sánchez, I. M. (2012). The role of the board in the dissemination of integrated corporate social reporting. *Corporate Social Responsibility and Environmental Management*, *20*(4), 219-233.

García-Sánchez, I. M., and Martínez-Ferrero, J. (2017). Independent directors and CSR disclosures: The moderating effects of proprietary costs. *Corporate Social Responsibility and Environmental Management*, *24*(1), 28-43.

Ghazali, N. (2007). Ownership structure and corporate social responsibility disclosure: some Malaysian evidence. *Corporate Governance, 7*(3), 251-266.

Greene, W. H. (1997). *Econometric analysis*. Upper Saddle River, NJ: Prentice

Hall.

Griffin, J., and Weber, J. (2006). Industry social analysis: examining the beer industry. *Business & Society*, *45*(4), 413-440.

Haniffa, R. M., and Cooke, T. E. (2005). The impact of culture and governance on corporate social reporting. *Journal of Accounting and Public Policy*, *24*(5), 391-430.

Jaskiewicz, P., and Luchak, A. A. (2013). Explaining performance differences between family firms with family and nonfamily CEOs: It's the nature of the tie to the family that counts! *Entrepreneurship Theory and Practice*, *37*(6), 1361-1367.

Jensen, M. C. (1993). The modern industrial revolution, exit, and the failure of internal control systems. *Journal of Finance*, *48*(3), 831-880.

Jensen, M. C., and Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics, 3*(4), 305-360.

Johnson, R. A., and Greening, D. W. (1999). The effects of corporate governance and institutional ownership types on corporate social performance. *Academy of Management Journal*, *42*(5), 564-576.

Kim, Y., Park, M., and Wier, B. (2012). Is earnings quality associated with corporate social responsibility? *The Accounting Review*, *87*(3), 761-796.

KPMG. (2015). *The KPMG Survey of Corporate Responsibility Reporting 2015*. Zurich, Switzerland: KPMG International.

Kuan, T. H., Li, C. S., and Liu, C. C. (2012). Corporate governance and cash holdings: A quantile regression approach. *International Review of Economics & Finance*, *24*, 303-314.

Kuo, Y. P., and Hung, J. H. (2012). Family control and investment-cash flow sensitivity: Moderating effects of excess control rights and board independence. *Corporate Governance: An International Review*, *20*(3), 253-266.

Lev, B. (1992). Information disclosure strategy. *California Management Review, 34*(4), 9-32.

Li, Y., Richardson, G. D., and Thornton, D. B. (1997). Corporate disclosure of environmental liability information: Theory and evidence. *Contemporary Accounting Research, 14*(3), 435-474.

Liao, L., Lin, T. P., and Zhang, Y. (2018). Corporate board and corporate social responsibility assurance. Evidence from China. *Journal of Business Ethics*, *150* (1), 211-225.

Lim, S., Matolcsy, Z., and Chow, D. (2007). The association between board composition and different types of voluntary disclosure. *European Accounting Review*, *16*(3), 555-583.

Luan, C. J., and Tien, C. (2017). Where is foreign institutional investors' efficacy? A transparency & disclosure perspective. *Corporate Management Review*, *37*(1), 41-75.

Manetti, G., and Becatti, L. (2009). Assurance services for sustainability reports: Standards and empirical evidence. *Journal of Business Ethics*, *87*(1), 289-298.

McNichols, M., and Trueman, B. (1994). Public disclosure, private information collection, and short-term trading. *Journal of Accounting & Economics, 17*(1-2), 69-94.

Nekhilia, M., Nagatib, H., Chtiouic, T., and Rebolledod, C. (2017). Corporate social responsibility disclosure and market value: Family versus nonfamily firms. *Journal Business Research, 77*, 41-52.

Orlitzky, M., Schmidt, F. L., and Rynes, S. L. (2003). Corporate social and financial performance: A meta-analysis. *Organization Studies*, *24*(3), 403-441.

Perego, P., and Kolk, A. (2012). Multinationals' accountability on sustainability: The evolution of third-party assurance of sustainability reports. *Journal of Business Ethics*, *110*(2), 173-190.

Petersen, C., and Plenborg, T. (2006). Voluntary disclosure and information asymmetry in Denmark. *Journal of International Accounting, Auditing and Taxation, 15*(2), 127-149.

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

Rosenbaum, P. R., and Rubin, D. B. (1984). Reducing bias in observational studies

using subclassification of the propensity score. *Journal of the American Statistical Association, 79*(387), 516-524.

Rupley, K. H., Brown, D., and Marshall, R. S. (2012). Governance, media and the quality of environmental disclosure. *Journal of Accounting and Public Policy, 31*(6), 610-640.

Sheu, H. J., Chung, H., and Liu, C. L. (2010). Comprehensive disclosure of compensation and firm value: The case of policy reforms in an emerging market. *Journal of Business Finance & Accounting*, *37*(9-10), 1115-1144.

Shleifer, A., and Vishny, R. (1997). A survey of corporate governance. *Journal of Finance*, *52*(2), 737-783.

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

Tai, Y. H. (2017). Earnings management in family firms: The role of inside directors. *Corporate Management Review*, *37*(1), 77-114.

Wan-Hussin, W. N. (2009). The impact of family-firm structure and board composition on corporate transparency: Evidence based on segment disclosures in Malaysia. *The International Journal of Accounting*, *44*(4), 313-333.

Welker, M. (1995). Disclosure policy, information asymmetry and liquidity in equity markets. *Contemporary Accounting Research, 11*(2), 801-828.

Yeh, Y., Lee, T. S., and Woidtke, T. (2001). Family control and corporate governance evidence for Taiwan. *International Review of Finance*, *2*(1-2), 21-48.

Zahra, S. A., Oviatt, B. M., and Minyard, K. (1993). Effects of corporate ownership and board structure on corporate social responsibility and financial performance. *Academy of Management Proceedings, 1*, 336-340.

Zellweger, T. M., Kellermanns, F. W., Chrisman, J. J., and Chua, J. H. (2012). Family control and family firm valuations by family CEOs: The importance of intentions for transgenerational control. *Organization Science*, *23*(3), 851-868.