

Do Taiwanese Family Firms Have a Lower Propensity to Pay Cash Dividends? The Roles of Corporate Governance, Product Market Competition and Corporate Social Responsibility

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This study analyzes the effect of corporate governance, product market competition and corporate social responsibility on the cash dividend policies of family firms. Previous literature has mostly focused on the direct relationship between corporate governance and dividend policy without explicitly considering product market competition and corporate social responsibility. This study explores the relationship between the dividend payouts of family firms and corporate governance, product market competition and corporate social responsibility using the Tobit model on publicly listed Taiwanese family firms from 2005 to 2014. The empirical results show that Taiwanese family firms pay less cash dividends to shareholders; however, this negative dividend payout presents a nonlinear effect depending upon levels of corporate governance and corporate social responsibility; that is, a negative dividend payout by a family business can be moderated by better corporate governance quality or more corporate social responsibility. Additionally, we further discover that family businesses do exhibit different behaviors in dividend policies depending on whether they are high- or low-dividend payout firms. High-dividend family firms tend to reduce their dividend payout, while this negative dividend payout would be mitigated by better corporate governance. Low-dividend family firms tend to increase

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dividend payouts, and this positive payout is enhanced by stronger industry competition and a higher degree of corporate social responsibility (CSR). Attempts to combine all moderating factors together are first documented in the related literature and are discussed in depth in analyzing the dividend payout behavior of family businesses, which is a major contribution of this research.

Keywords: family firms, cash dividends, corporate governance, product market competition, corporate social responsibility

JEL classification: G30, G34, G35

1 Introduction

Family firms¹ usually prefer to pass their businesses to the next generation, and they run their businesses motivated by long-term goals and attaining good reputation (Anderson *et al.*, 2003; Andres, 2008). Accordingly, pursuing noneconomic goals, instead of profit (or value)-maximization, is another method for achieving the sustainability of a family business (Anderson *et al.*, 2003; Corbetta and Salvato, 2004). For sustainable development, family firms not only take care of the interests of stockholders but also those of other stakeholders. Under such premises, family firms tend to engage in corporate social responsibility (hereafter, CSR) activities, such as donations, philanthropy, and the use of anti-pollution devices. Many Taiwanese companies characterized as family firms have established foundations to implement CSR. Engagement in corporate social responsibility can be regarded as a type of social feedback that fulfills the corporate responsibility of society. By doing so, family firms with CSR are able to keep their operations in good shape. However, engaging in CSR, such as purchasing environmental protection equipment, might create a crowding-out effect on the company's dividend distribution. Therefore, whether the implementation of CSR will affect the cash dividend payout of family businesses is worthy of further discussion.

One of the core issues of corporate governance is the agency problem. The agency problem may be caused by having too much cash held within the firm, which motivates the manager to abuse the cash. There are various ways for managers to

¹ We greatly appreciate the anonymous reviewers' extremely helpful comments which have significantly helped to improve the overall quality of the paper.

abuse cash, e.g., investing in low-return, high-risk projects and using excess cash for personal privileged consumption (such as the use of luxury offices). Therefore, a company can issue cash dividends to shareholders to avoid a manager's misuse of cash. Accordingly, cash dividend payouts can help resolve the agency problem between managers and shareholders, thus protecting minority shareholders' interests (Jensen, 1986 and Gomes, 2000). In addition to the less serious Type I agency problem, which includes conflicts between shareholders and managers, family firms, instead, are more likely to face an agency problem arising between controlling shareholders and minority shareholders (Type II agency problem). Family members usually hold important management positions (such as CEOs) and are the blockholders in the company. If the family business is a group business, it is easier to control the company through pyramidal shareholding and cross-shareholdings. Thus, the agency problem of blockholders expropriating minority shareholders' interests is likely to be more serious at family firms than the traditional agency problems (Adams *et al.*, 2005). Dividend payouts are usually considered a device to mitigate traditional agency problems (Type I agency problems) but not Type II agency problems (agency conflicts between controlling shareholders and minority shareholders). Therefore, we argue that family businesses may pay less cash dividends.

Yeh, Lee and Woidtke (2001) found that up to 76% of Taiwan-listed companies are characterized by family businesses in which family members control most of the board of directors. Family firms in Taiwan may enhance their competitiveness in the industry by issuing cash dividends; this is especially true in highly competitive industries; thus, we argue that the competitiveness of the product market will increase the cash dividends paid by firms (Kao and Chen, 2013; He, 2011).

Corporate governance of Taiwanese family business should be discussed for the following reason. Corporate governance can be viewed from two perspectives: the national level of the protection of shareholders' rights and interests and the corporate level of internal and external governance. La Porta, *et al.* (2000) divide corporate governance at the national level into the common law and civil law based on the degree of shareholder being protected. Shareholders' rights and interests are relatively well protected in countries with common law systems and relatively weakly protected in countries with civil law systems. La Porta *et al.* (2000) noted that companies in countries with weak shareholder protection (the civil law system) will

pay less cash dividends than those in countries with common law systems. In contrast to past research focusing on developed markets and common law countries, this study focuses on Taiwan, which has a civil law system that provides weak protection of shareholders' rights; in these conditions, the quality of corporate governance of Taiwanese companies becomes more important for protecting shareholder rights at the corporate level. Moreover, as indicated by Yeh, *et al.* (2001), most Taiwanese firms have concentrated ownership and hence have a controlling shareholder, which is common in Taiwanese firms that are family businesses and is quite different from the countries with disperse ownership. In summary, Taiwanese family firms encounter a different agency problem (Type II agency problem), which merits further examination.

This research will use Taiwanese listed firms characterized as family businesses to explore whether corporate governance or CSR has a greater impact on the dividend policy of family businesses in the context of product market competition. The empirical results show that Taiwanese family firms do pay less cash dividends to shareholders; however, this does not appear at firms with low cash dividend payouts or at large firms. Moreover, family firms' dividend policies are significantly affected by CSR and firm size but less influenced by product market competition and corporate governance. Prior literature failed to simultaneously consider corporate governance, product market competition and CSR on family business dividend policy. This research can fill the gaps in related literature and constitutes the primary contribution of this paper to the existing literature.

The remainder of the paper is organized as follows. In Section 2, we provide a literature review. Section 3 describes our research sample and empirical model. In Section 4, we present and discuss our empirical findings. Sections 5 and 6 provide additional robustness checks, and finally, we conclude the paper.

2 Literature Review

2.1 Family Businesses, Agency Problems and Corporate Governance

A family business is a company that has a unique ownership structure and has a certain degree of influence on the global economy (La Porta *et al.*, 1999; Claessens,

et al., 2000; Faccio and Lang, 2001; Anderson and Reeb, 2003). In the Asian region, the family business is a very popular business model. Claessens *et al.*, 2000, indicated that single family-controlled enterprises prevail in Asia. Compared with nonfamily companies, family businesses have their own unique management structures to create a sustainable business that can be passed down to future generations. Family members are usually major shareholders at these companies and also serve in important management positions, so family businesses are less likely to have agency problems between managers and shareholders and more likely to have agency conflicts between controlling shareholders and minority shareholders (Type II agency problem).

Family members usually have high shareholdings in the company and hold key positions in the company; as a result, controlling shareholders are common in family businesses (Jensen and Meckling, 1976; Shleifer and Vishny, 1986; La Porta *et al.*, 1999). Agency problems between controlling shareholders and minority shareholders are common in family businesses, which are often controlled through cross-shareholdings and pyramidal shareholdings, resulting in a serious separation of voting rights and cash flow rights. This agency problem is the so-called core or central agency problem that is quite different from the traditional agency problem occurring between managers and shareholders (Adams, Almeida and Ferreira, 2005). Prior research notes that blockholders in family firms tend to plunder the interests of minority shareholders (Shleifer and Vishny, 1997; Faccio *et al.*, 2001; Fama and Jensen, 1983; La Porta *et al.*, 2000; Villalonga and Amit, 2006; Bozec and Laurin, 2008). Claessens *et al.* (2000), investigating eight East Asia countries characterized by ownership concentration (including Taiwan), found that blockholders are more likely to expropriate the interests of the minority shareholders when the family business controlling shareholders' cash flow rights and voting rights are seriously deviated. Yeh *et al.* (2001) also have similar findings. In light of this, we argue that Taiwanese family businesses are likely to have a central agency problem, which provides a good reason to study the corporate governance of Taiwanese family businesses.

Corporate level of governance includes internal governance, emphasizing the corporate board's functions and sound ownership structure, and external governance, emphasizing corporate market competition. Both kinds of corporate governance

have an important influence on corporate payout policy. Mitton (2004) and Bartram *et al.* (2008) have shown that companies with poor corporate governance pay fewer dividends. From the finance perspective of agency problems, La Porta *et al.* (2000) proposed two theories to explain the relationship between cash dividends paid and corporate governance — the dividend outcome model and the dividend substitution model. The dividend outcome model anticipates that corporate governance quality is positively correlated with cash dividends. In other words, the better the corporate governance, the more dividends issued to shareholders. Conversely, the dividend substitution model predicts that companies with poor corporate governance tend to issue more dividends to shareholders in consideration of the company's reputation and lower fund raising costs in the capital market. Adjaoud and Ben-Amar (2010) support the dividend outcome model by examining the relationship between corporate governance and dividend policy in a Canadian sample, and La Porta *et al.* (2000) and Adjaoud and Ben-Amar (2010) also confirm the dividend outcome model. However, Jiraporn and Ning (2006) and John and Knyazeva (2008) support the dividend substitution model.

2.2 Family Businesses and Cash Dividend Policies

How family businesses are related to corporate payout policy deserves further investigation. Faccio *et al.* (2001) noted that compared with European companies, East Asia firms (characterized as family-owned business) pay less cash dividends because family shareholders tend to invest in high-risk (low-return or even negative cash flow) projects to deprive the interests of minority shareholders. Similarly, Hu *et al.* (2007) find that American family businesses pay significantly less dividends than American nonfamily businesses; similar results are also found in other countries, e.g., Chinese listed firms (Hu (2002) and Taiwanese listed firms (Chen and Ho, 2009). However, some research has found conflicting evidence that family businesses tend to pay out more dividends to shareholders (Schmid *et al.*, 2010; Setia-Atmaja *et al.*, 2009). Using the Taiwanese corporation sample, Huang, *et al.* (2012) demonstrated that the ownership of Taiwanese family firms presents a nonmonotonic (nonlinear) relationship with cash dividend payments. The nonlinear relationship is presented in three phases of cash flow levels: low, middle and high. When the controlling family has a low level of cash flow rights in the company, the

firm tends to pay more cash dividends because there is less influence from less shareholding by the family; the family firm prefers to maximize personal wealth by making more dividend distributions rather than keep cash in the company. However, when the controlling family has the middle level of cash flow rights, it is more likely to control the company as desired; then, family firms are likely to abuse the company's resources to maximize personal benefits through nonpositive investments without considering benefits from cash flow rights, so less cash dividends are preferred. Finally, when the controlling family holds extremely high cash flow rights, even if it is also given more control of the company, more cash dividends to stakeholders will definitely be preferred because the family's personal wealth is bonded with the company's resources. This is a three-phase nonlinear relationship between cash dividends and family shareholdings in Huang, *et al.* (2012). From above, there is not a consistent conclusion on whether more or less cash dividends are paid out by family companies, which motivates this research for further study.

2.3 Product Competition and Cash Dividend Policies

Competition in the product market can drive the interests of managers in line with shareholders, thus reducing agency problems. Therefore, competition in the product market can be viewed as a substitute for corporate governance. Giroud and Mueller (2011) validate this inference and note that when the product market is "highly" competitive, the degree of product market competition can help monitor manager behavior; as a result, corporate governance is unnecessary.

Both the outcome model and the substitution model could illustrate the possible relationships between corporate governance and cash dividends. The outcome model considers that corporate governance and cash dividends are positively related, while the substitution model views that corporate governance and cash dividends are inversely related. Giroud and Mueller (2011) argue that when the product market is highly competitive (good corporate governance), the company has a liquidation bankruptcy risk, so the company will not over invest in negative cash flow projects. As a result, more cash dividends are paid out, which is in line with the outcome model. On the other hand, the substitution model tells us that when the product market is highly competitive, the competition in the product market itself can reduce the agency problem; as a result, it is not necessary to issue a cash

dividend to reduce the agency problem, and less cash dividends are distributed, which is in line with the substitution model.²

Whether product competition has an impact on cash dividend payouts deserves further examination, especially in family businesses. Is the dividend outcome model or dividend substitute model applicable in family firms? Using a sample of 9448 Taiwan-listed firms from 1996 to 2010, Kao and Chen (2013) indicate that product market competition and cash dividends exist in a nonlinear relationship. When the market is in a state of low competition, the company issues more cash dividends, in line with the dividend substitution model, but when the market is highly competitive, the company also issues more cash dividends, in line with the dividend outcome model. The dividend outcome model applicable in situations of high product competition is also evidenced by other developed capital markets, such as the USA market (Grullon and Michaely, 2008) and the Japan market (He, 2011). Whether this positive relationship between cash dividends and product market competition occurs in family businesses deserves further examination. Taiwanese firms are characterized by family businesses, accounting for 70% of Taiwanese companies, which is a representative sample and allows us to investigate this issue.

2.4 Corporate Social Responsibility (CSR) and Cash Dividend Policies

Considering sustainable development, companies must establish a strategy to meet the needs of various stakeholders with different interests. That is, a strategy is established to consider both shareholders' and other stakeholders' interests. Other stakeholders include employees, customers, communities and all individuals or groups related to the company. Except for maximizing profits, the company must engage in corporate social responsibility to treat employees and other stakeholders equally and fairly (Gordon, 1963; Lintner, 1962).

Both corporate social responsibility and cash dividend payouts to shareholders convey to the investors that the company is a good company (signaling theory). However, the involvement in corporate social responsibility requires funds;

² When the product market is less competitive, the competition in the market itself cannot mitigate the agency problem, which push companies to pay more cash dividends.

will that crowd out dividend payout to shareholders? In other words, whether corporate social responsibility will increase or decrease the distribution of cash dividends is worthy of further study. Currently, the relationship between corporate social responsibility (CSR) and company dividend policy is rarely addressed by past literature. Benlemlih (2014) thinks that companies highly involved in corporate social responsibility pay more dividends than those with low involvement in corporate social responsibility.

To pursue excessive personal interests (good reputation), company executives may also sacrifice shareholders' rights and overinvest in CSR. Brown *et al.* (2006) noted that managers may engage in philanthropic practices for their own reputation and personal networks. If so, companies may put too much resources in corporate social responsibility activities (Bartkus *et al.*, 2002; Cespa and Cestone, 2007; Harjoto and Jo, 2014). Barnea and Rubin (2010) also indicated that insiders who are highly involved in corporate social responsibility firms will derive personal benefits from them, supporting Brown *et al.* (2006). Based on this, both Godfred (2005) and Ye and Zhang (2011) argue that each company has an optimal level of CSR. The participation in corporate social responsibility should not exceed this optimal level. Over the optimal level, additional costs might be incurred from the additional CSR activities; in other words, CSR is overinvested. At this time, CSR itself is an agency problem. This is especially true when the company has too much cash and engages in “too much” CSR, thus further increasing the agency costs of CSR. Accordingly, companies tend to pay out more cash dividends to suppress or reduce managers' opportunities to engage in excessive CSR (Benlemlih, 2014). Thus, we argue that companies highly involved in CSR will issue more cash dividends to curb agency costs caused by excessive CSR³.

3 Research Sample and Empirical Model

This study used the family companies listed on the Taiwan Stock Exchange (TSE) from 2005 to 2014 as the research sample, excluding companies with missing data and those from regulated industries, such as the financial industry. In addition,

³ Benlemlih (2014) also mentions 「one bird at hand」 and life cycle theory, both of which believe that companies engaged in corporate social responsibility will issue more cash dividends.

companies that have negative earnings per share are also excluded. Family firm is defined by TEJ (refer to variable definition of FAM). The source of the data is collected from the Taiwan Economics Journal (TEJ) Database. Current literature had addressed the importance of corporate governance or industrial competition on cash dividends, and few studies focus on the role of corporate social responsibility in cash dividend policy. To avoid estimation bias in regression analysis resulting from missing key variables, this paper considers corporate governance, industrial competition and corporate social responsibility all together to examine whether Taiwanese family businesses pay less cash dividends. Due to cash dividend being truncated at 0, Tobit model is adopted in empirical model as follow.

$$\begin{aligned}
 DID_{i,t} = & \\
 & \beta_0 + \beta_1 ONE_HHI_t + \beta_2 FAM_{i,t} + \beta_3 GOV_{i,t} + \beta_4 CSR_INDEX_{i,t} + \\
 & \alpha_1 FAM_ONE_HHI_t + \alpha_2 FAM_GOV_{i,t} + \alpha_3 FAM_CSR_INDEX_{i,t} + \\
 & \alpha_4 FAM_SIZE_{i,t} + \sum \gamma_i CONTROL_{i,t} + \sum \phi_i INDUS + \sum \theta_i YEAR + \varepsilon_{i,t}
 \end{aligned} \tag{1}^4$$

Variable Definition

Dependent variable – cash dividend (DID)

According to Chay & Suh (2009) and Chae *et al.* (2009), cash dividends divided by EBITDA are used to measure the level of dividend payout⁵. A higher DID value means more cash dividends issued by firms.

Explanatory variables.

ONE_HHI is a dummy variable defined as a value of 1 if the corporate industry is a highly competitive industry and a value of 0 otherwise. According to the Herfindahl–Hirschman index, the following definition is used as the continuous measure of industry competition.

$$ONE_HHI_{j,t} = 1 - \sum_{i=1}^{N_j} \left(\frac{SALES_{i,j,t}}{\sum_{i=1}^{N_j} SALES_{i,j,t}} \right)^2 \tag{2}$$

SALES_{i,j,t} represents the total sales of the ith company in the jth industry at

⁴ Relevant studies of SIZE could refer to Fama, Eugene F., French Kenneth R. (2001).

⁵ This study also tried two other measures of cash dividends to test the same model (cash dividend divided by net operating income and cash dividend divided by gross profits). Due to limited space, their results will be provided upon request.

t-year. A higher ONE_HHII index in equation (2) indicates that the corporate industry is more competitive. According to Kao and Chen (2013), this paper uses ONE_HHI as the dummy variable for industry competition. The dummy variable of ONE_HHI with a value of 1 represents a highly competitive industry, defined as ONE_HHII being higher than the median of the industry's ONE_HHII for the year.

FAM is a dummy variable with a value of 1 if the firm is a family firm and a value of 0 otherwise. This study follows TEJ's definition of family firms by using the type of ultimate controlling shareholder that satisfies at least one of the following conditions as a single-family-controlled firm:

A. The chairman of the board and general manager are appointed by a single family member

B. The percentage of director controlled seats is greater than 50% (excluding friendly seats), and the percentage of friendly seats as well as the percentage of outside director seats are both less than 33%.

C. The percentage of director controlled seats is greater than 33%, and the family members of the ultimate controller have taken at least 3 seats as directors/supervisors or managers.

D. Control shareholding percentages are greater than necessary control shareholding percentages.

The corporate governance index (GOV) is a more appropriate measure covering various aspects of corporate governance. If an individual dimension of corporate governance is used to measure corporate governance, it can generate measurement errors and lack reliability (Larcker and Richardson, 2004). Currently, the generally accepted index of corporate governance in the literature is G-Index and BCF. Both indices are compiled using the anti-takeover measure in the Investor Responsibility Research Center (IRRC), which could refer to Gompers, Ishii and Metrick (2003) and Bebchuk, Cohen and Ferrell (2009). Due to the difficulties in obtaining detailed anti-takeover information in Taiwan, this paper extends the practice of Chen *et al.* (2007) to compile the following six variables: the governance index (CEO duality), the size of the board of directors, the shareholding of management, the shareholding of blockholders, the percentage of independent directors and the degree of deviation between cash flow rights and control rights. The corporate governance index constructed by the above six variables ranges between 0 and 6. The higher the

corporate governance index, the better the corporate governance. This paper considers corporate governance to be weak if the company governance index is 0, 1, 2 or 3, and a company has strong corporate governance if the index is greater than 3 (indexes of 4, 5 or 6). The relevant variables in the corporate governance index are defined in Table 1.

Table 1. Variable Definition in Corporate Governance

| Variable | Variable name | Definition |
|---|----------------|--|
| CEO duality | duality_dum | duality_dum equals 1 if the firm size is small and the CEO is also serving as chairman of the board (CEO duality), or if the firm size is large and there is no CEO duality, duality_dum equals 0 otherwise. The detailed explanations can be found in Chen, <i>et al.</i> (2007). |
| size of the board of directors | BS | BS equals 1 if the number of board members is greater than the quorum (5) and smaller than the sample average board size plus twice the standard of the board size deviation; BS equals 0 otherwise. |
| shareholding of the management | mgt_holding | mgt_holding equals 1 if the shareholding of the top 5 shareholders is greater than 10%; mgt_holding equals 0 otherwise. |
| shareholding of the blockholders | block | block equals 1 if the sum of shareholding of blockholders is greater than 25%; block equals 0 otherwise. A blockholder is defined as shareholding more than 5%. |
| percentage of independent directors | independent_cg | independent_cg equals 1 if the percentage of independent directors exceeds the median of the sample and equals 0 otherwise. |
| deviation between cash flow rights and control rights | deviate_cg | deviate_cg equals 1 if the deviation between cash flow rights and control rights is less than its median of the year and equals 0 otherwise. |
| Corporate governance index | GOV | GOV is the sum of above six variables and ranges from 0 to 6. |

The CSR INDEX is a corporate social responsibility index that is defined as the sum of award-winning corporate social responsibility (WCSR), positive corporate image (PCSR), general involvement in corporate social responsibility (GCSR) and negative corporate image (NCSR) (definitions refer to Table 3). As shown in Table 2, the measures of WCSR, PCSR, GCSR and NCSR are based on four dimensions: corporate governance in terms of information disclosure, corporate commitment (labor relations), social participation (illegal and/or other violations) and environmental protection (environmental and safety issues).

Table 2. Dimensions for Corporate Social Responsibility (CSR)

| Dimension | Definition |
|--|---|
| corporate governance in terms of information disclosure | the independence of the board and disclosure of information transparency |
| corporate commitment (labor relations) | commitment to consumers, nurturing care for employees, and investing in innovative R&D |
| social participation (other violations) | whether a company has long term investments in specific social issues and exerted positive influence |
| environmental protection (environmental and safety issues) | whether companies have specific goals and practices in environmental protection and energy conservation |

Table 3. Variable Definition of Corporate Social Responsibility (CSR)

| Variable | | Definition |
|---|-----------|--|
| Award-winning corporate social responsibility | WCSR | WCSR is 1 if the company is listed on the "Global Corporate Citizenship" list published by Tianxia Magazine and the "Corporate Social Responsibility Award" list of Vision Magazine; WCSR is 0 otherwise. |
| general involved in corporate social responsibility | GCSR | Basically, we will view all listed companies as participating in corporate social responsibility, the difference is in the degree of involvement in CSR, thus, all companies in GCSR are given a value of 1. |
| positive corporate image | PCSR | Sum of the occurrence of positive events reported by media, news or internet outlets; the event issues are those listed in Table 2. |
| negative corporate image | NCSR | Sum of the occurrence of negative events reported by TEJ; the event issues are those listed in Table 2. |
| corporate social responsibility index | CSR INDEX | The CSR INDEX is defined as the sum of WCSR, GCSR and PCSR minus NCSR. |

FAM_ONE_HHI is the term that defines the interaction between family businesses and highly competitive industries, capturing the extent to which family companies' cash dividend policies are affected by highly competitive industries; FAM_GOV represents the interaction between family businesses and corporate governance quality, capturing the extent to which the cash dividend policies of family businesses are affected by corporate governance quality.

The FAM_CSR INDEX term is defined as the interaction between family businesses and corporate social responsibility, it represents the extent to which a family business's cash dividend policy is affected by corporate social responsibility; FAM_SIZE represents the interaction between family businesses and firm size; CONTROL indicates all control variables including investment opportunities, company size, profitability, cash holdings, cash flow volatility and debt ratio (refer to Fama and French (2001), Lie (2005), Choy *et al.* (2011) and Kao and Chen (2013)). INDUS and YEAR represent the dummy variables of industry categories and year variables, respectively. Table 4 shows the definition of all relevant variables

and their expected relationship with cash dividends.

Table 4. Model Variable Measurements and Expected Sign with Cash Dividend (DID)

| Variable | | Measurements | Expected sign with cash dividend |
|---------------------------------------|-----------------|---|----------------------------------|
| Dependent variable | | | |
| Cash dividend | DID | cash dividend/ EBITDA(Earnings Before Interest, Taxes, Depreciation and Amortization) | |
| Explanatory variables | | | |
| Family-controlled firm | FAM | FAM is equal to 1 if the company is a family-controlled firm and 0 otherwise. | +/- |
| Industrial competition | ONE_HHI | ONE_HHI is equal to 1 if the company is in a highly competitive industry, as measured by the company's HHI being greater than the median HHI in the industry; ONE_HHI is 0 otherwise. | +/- |
| Corporate governance index | GOV | GOV is defined in Table 1 and ranges from 0 for weak governance to 6 for good governance. | +/- |
| Corporate social responsibility index | CSR INDEX | Assuming each company is involved in social responsibility with a GCSR=1, so, CSR INDEX is redefined as CSR INDEX=1+WCSR+PCSR -NCSR and ranges from -17 to 15 (refer to Table 5). | +/- |
| Control variables | | | |
| Investment opportunities | MB | Closing stock prices at the end of the year /equity per share | - |
| firm size | SIZE | Natural logarithm of book value of total assets at the end of the year | + |
| cash holding | Cash Level | Cash balances and cash equivalents / total assets | + |
| debt ratio | LEB | Total liabilities / total assets | - |
| cash flow volatility | Stock price_std | Standard deviation of monthly stock returns over past two years | - |
| industry category | INDUS | A dummy variable for the company's industry | |
| year | YEAR | A dummy variable for the year | |

4 Empirical Results

4.1 Descriptive Analysis

Table 5 shows the summary statistics of the variables. The standard deviation of cash dividends is higher than the average of cash dividends; in the case of DID, the standard deviation of cash dividends is 0.2870, and the average cash dividend is 0.2757, implying a large difference in cash dividends among sample companies. The average corporate governance (GOV) is 3.3395. There is a relatively high proportion

of family businesses in the sample of Taiwanese listed companies (the average FAM is 0.6877), and the sample companies have higher levels of industry competition (average ONE_HHI is 0.8206). For the variable correlation matrix, please refer to the appendix.

Table 5. Summary Statistics

| Variable | Obs | Mean | SD | Min | Q1 | Q50 | Q3 | Max |
|-----------------|-------|---------|---------|---------|---------|---------|---------|---------|
| DID | 4,170 | 0.2757 | 0.2870 | 0.0000 | 0.0374 | 0.2227 | 0.4046 | 2.6054 |
| FAM | 4,170 | 0.6877 | 0.4634 | 0.0000 | 0.0000 | 1.0000 | 1.0000 | 1.0000 |
| ONE_HHI | 4,170 | 0.8206 | 0.3837 | 0.0000 | 0.0000 | 1.0000 | 1.0000 | 1.0000 |
| GOV | 4,170 | 3.3395 | 1.0811 | 0.0000 | 3.0000 | 3.0000 | 4.0000 | 6.0000 |
| CSR INDEX | 4,170 | -0.0580 | 0.9662 | -17.000 | 0.0000 | 0.0000 | 0.0000 | 15.0000 |
| SIZE | 4,170 | 15.6425 | 1.4581 | 13.6182 | 14.6256 | 15.4957 | 16.4462 | 20.8982 |
| MB | 4,170 | 1.6384 | 1.1486 | 0.3700 | 0.8800 | 1.3100 | 1.9800 | 8.0700 |
| Cash Level | 4,170 | 14.7370 | 11.1856 | 1.6572 | 6.3208 | 12.1599 | 20.0877 | 56.5506 |
| LEB | 4,170 | 43.2278 | 16.7578 | 8.4200 | 31.0900 | 43.8650 | 55.0300 | 83.0000 |
| Stock price_std | 4,170 | 11.2158 | 4.9947 | 4.0243 | 7.5878 | 10.3872 | 14.0544 | 29.0412 |

Note: Obs is the observed numbers, Mean is the average value, SD is the standard deviation, Min is the minimum value, Q1 is the 25th percentile, Median (Q50) is the median (50th percentile), Q3 is the 75th percentile, and Max is the maximum value. DID is the cash dividend/EBITDA. FAM is family control firms, ONE_HHI is a dummy variable of industrial competition index, GOV is corporate governance index, CSR INDEX is the corporate social responsibility (CSR) index, SIZE is firm size, and MB is the market to book value of equity measured by closing price / equity per share, Cash Level is cash holdings measured by cash and cash equivalents / total assets, LEB is debt ratio measured by total liabilities / total assets at the end of the year, Stock price_std is the standard deviation of monthly stock returns over the past two years.

4.2 Bivariate Analysis

Table 6 shows the testing significance of the cash dividend difference between the family firms and the nonfamily firms. A company is a family business when FAM = 1, and FAM = 0 means a nonfamily business. Table shows that the mean [or median P50] of cash dividends paid by family and nonfamily companies is 0.2538 [0.1948] and 0.3240 [0.2802], respectively, and the p value for the T-test [or Wilcoxon test] is 0.0000 [0.0000], indicating that the family businesses pay significantly less cash dividends than nonfamily businesses.

Table 6. Bivariate Analysis of Cash Dividends between Family and Nonfamily Firms

| | | FAM=0 | FAM=1 | Diff | p-value | |
|-----|------|--------|--------|--------|-----------|-----------------|
| DID | Mean | 0.3240 | 0.2538 | 0.0702 | 0.0000*** | T-test (7.3579) |
| | P50 | 0.2802 | 0.1948 | 0.0854 | 0.0000*** | Wilcoxon test |

Note: Mean is the average, P50 is the median. DID is cash dividend / EBITDA. FAM=1 indicates that the company is a family-controlled firm, FAM is 0 otherwise. Diff is the cash dividend of nonfamily business (FAM=0) minus that of family business (FAM=1). The t-test with the t value in parenthesis is a two-sample test of the average value, and the Wilcoxon test is a two-sample test of the median.

4.3 Tobit Model

The bivariate analysis does not control the relevant influences of other variables on cash dividends. To control the influences of other variables and to obtain more accurate estimation results, we use Tobit analysis shown in Table 7. Panel A in Table 7 explores those impacts of corporate governance, product market competition and corporate social responsibility on a firm's issuance cash dividends measured by DID. From Model 1, the family business (FAM) is shown to issue significantly less cash dividends. In Model 2, industry competition (ONE_HHI) has a positive impact on dividends, but it is not significant, suggesting that product market competition does not have a significant impact on a company's issuance of cash dividends. In Model 3, the corporate governance quality (GOV) does not present significant results, indicating that the cash dividends issued by the company are not affected by the quality of corporate governance either. In Model 4, corporate social responsibility has an insignificantly positive impact on dividends, meaning firms with better social responsibility (CSR INDEX) will not issue more cash dividends. Furthermore, after adding control variables, Model 5 still shows that family businesses are inclined to issue less cash dividends. When corporate governance and corporate social responsibility are better, companies will also issue less cash dividends. Among control variables, both firm size and cash holdings are positively and significantly related to the cash dividends paid, while the debt ratio and firm risks measured by the standard deviation of monthly stock returns have a significantly negative impact on cash dividends.

In summary, Table 7 consistently shows that family businesses do distribute less cash dividends to shareholders, regardless of whether controlling for relevant variables. Industry competition has an insignificant influence on cash dividends,

while corporate governance and corporate social responsibility have a statistically significant negative impact on corporate cash dividends. The above results suggest that being a family business explains the cash dividend policies in most companies and confirms the results from previous literature. To date, there is limited literature addressing whether the lower level of cash dividends paid by family businesses is moderated by industry competition, corporate governance or corporate social responsibility. Therefore, this paper will further explore this issue, in other words, whether the influence of family businesses on cash dividends exhibits a “nonlinear” effect.

Table 7. Tobit Model (Cash Dividends DID)

| | Model 1 | Model 2 | Model 3 | Model 4 | Model 5 |
|-----------------|------------------------|------------------------|------------------------|------------------------|------------------------|
| Cons | 0.2938*** (0.0000) | 0.2835*** (0.0000) | 0.2651*** (0.0000) | 0.2691*** (0.0000) | -0.0191 (0.8650) |
| FAM | -0.0987*** (0.0000) | -0.0977*** (0.0000) | -0.0971*** (0.0000) | -0.0951*** (0.0000) | -0.0443*** (0.0060) |
| ONE_HHI | | 0.0118 (0.5960) | 0.0105 (0.6370) | 0.0092 (0.6750) | 0.0168 (0.1060) |
| GOV | | | 0.0056 (0.5170) | 0.0046 (0.5990) | -0.0099** (0.0490) |
| CSR INDEX | | | | 0.0125 (0.1310) | -0.0065*** (0.0010) |
| SIZE | | | | | 0.0267*** (0.0000) |
| DID_lag | | | | | 0.4153*** (0.0000) |
| MB | | | | | 0.0089 (0.6110) |
| Cash level | | | | | 0.0020*** (0.0000) |
| LEB | | | | | -0.0028*** (0.0000) |
| stock price_std | | | | | -0.0138*** (0.0000) |
| Obs | 4,170 | 4,170 | 4,170 | 4,170 | 4,170 |
| YEAR | control | control | control | control | control |
| INDUS | control | control | control | control | control |

Note: DID is cash dividend / EBITDA. DID_lag is defined as lagged one period at DID. FAM=1 indicates that the company is a family-controlled firm, it is 0 otherwise; ONE_HHI is a dummy variable of industry competition index; GOV is company Governance Index; CSR INDEX is CSR Index; SIZE is company size; MB is the closing stock price/equity per share; Cash Level is the sum of cash and cash equivalent/total assets; LEB is total liabilities at end of year/ total assets at end of year; Stock price_std is the standard deviation of monthly stock returns over past two years; Obs is the observation numbers; YEAR is the dummy variable for the year; INDUS is the dummy variable for the industries.

We further take a detailed look at the interaction of industry competition, corporate governance and social responsibility with family business to examine the moderating effects of industrial competition (Model 1), corporate governance (Model 2), social responsibility (Model 3) and firm size (Model 4); these results are shown in Table 8. Except for the insignificance of FAM*ONE_HHI in Model 1 (coefficient, -0.0027), the interaction terms for both corporate governance (FAM*GOV) in Model 2 and social responsibility (FAM* CSR INDEX) in Model 3 show significantly positive coefficients. This indicates that cash dividends paid by family businesses are not affected by industry competition but that family businesses will pay more dividends because of better corporate governance quality and more corporate social responsibility. Model 4 examines the firm size moderating effect. The positive coefficient of FAM*SIZE is also statistically significant, with a positive coefficient of 0.0326, indicating that the cash dividends paid by the family business will be affected by the firm's scale. That is, family business will issue more cash dividends due to the larger scale.

When interactive terms exist in the model, the marginal effect is appropriate to examine the effect of family business on cash dividends. Thus, we further observe the marginal effect of the family business on cash dividends. As shown in the bottom of Models 1, 2, 3 and 4, marginal effects (FAM+FAM*ONE_HHI, FAM+FAM*GOV, FAM+FAM*CSR INDEX, and FAM+FAM*SIZE) are all significantly negative, which confirms that the family business does significantly distribute less cash dividends after considering HHI, CSR and GOV.

In summary, based on the moderating effects in Table 8, which presents the nonlinear effect of family business on cash dividends in terms of interactive terms of each moderating factor with family business, family businesses will pay more dividends because of better corporate governance quality and more corporate social responsibility and larger firm size, but not because of industry competition. The above results are also empirically supported by using two other cash dividend measures. That is, both social corporate responsibility and corporate governance quality play important moderating roles in the family firm's cash dividend policy, in which a nonlinear relationship is found in this study, which comprises the major contribution of this research.

Table 8. Tobit Model with Moderating Effects (Cash Dividends DID)

| | Model 1 | Model 2 | Model 3 | Model 4 |
|-----------------|------------------------|------------------------|------------------------|------------------------|
| Cons | -0.0207 (0.8560) | 0.0175 (0.8810) | -0.0299 (0.7910) | 0.2181 (0.1700) |
| FAM | -0.0420 (0.2920) | -0.1028** (0.0140) | -0.0449*** (0.0060) | -0.3955* (0.0610) |
| ONE_HHI | 0.0189 (0.5860) | 0.0163 (0.1210) | 0.0156 (0.1370) | 0.0168 (0.1040) |
| GOV | -0.0099** (0.0490) | -0.0218*** (0.0020) | -0.0099** (0.0500) | -0.0099*** (0.0010) |
| CSR INDEX | -0.0065*** (0.0010) | -0.0064 (0.1420) | -0.0181** (0.0110) | -0.0047 (0.2960) |
| SIZE | 0.0267*** (0.0000) | 0.0270*** (0.0000) | 0.0275*** (0.0000) | 0.0117 (0.2020) |
| FAM*ONE_HHI | -0.0027 (0.9400) | | | |
| FAM*GOV | | 0.0172*** (0.0050) | | |
| FAM*CSR INDEX | | | 0.0158** (0.0100) | |
| FAM*SIZE | | | | 0.0222*** (0.0000) |
| DID_lag | 0.4153*** (0.0000) | 0.4141*** (0.0000) | 0.4145*** (0.0000) | 0.4129*** (0.0000) |
| <i>MB</i> | 0.0090 (0.6120) | 0.0086 (0.6250) | 0.0086 (0.6260) | 0.0086 (0.6260) |
| Cash level | 0.0020*** (0.0000) | 0.0020*** (0.0000) | 0.0020*** (0.0000) | 0.0020*** (0.0000) |
| LEB | -0.0028*** (0.0000) | -0.0028*** (0.0000) | -0.0028*** (0.0000) | -0.0028*** (0.0000) |
| Stock price_std | -0.0138*** (0.0000) | -0.0137*** (0.0000) | -0.0138*** (0.0000) | -0.0139*** (0.0000) |

Table 8. Tobit Model with Moderating Effects (Cash Dividends DID)(continued)

| | Model 1 | Model 2 | Model 3 | Model 4 |
|-------------------|------------------------|-----------------------|----------------------|-----------------------|
| Obs | 3,753 | 3753 | 3,753 | 3753 |
| YEAR | control | control | control | control |
| INDUS | control | control | control | control |
| FAM+ FAM*ONE_HHI | -0.0447*** (0.0031) | | | |
| FAM+FAM*GOV | | -0.0856** (0.0286) | | |
| FAM+FAM*CSR INDEX | | | -0.0291* (0.0901) | |
| FAM+FAM*SIZE | | | | -0.3733** (0.0318) |

Note: DID is cash dividend / EBITDA. DID_lag is defined as lagged one period at DID. FAM=1 indicates that the company is a family-controlled firm; it is 0 otherwise; ONE_HHI is the industry competition index; GOV is the company Governance Index; CSR INDEX is CSR Index; SIZE is company size; MB is the closing stock price/equity per share; Cash Level is sum of cash and cash equivalent/total assets; LEB is total liabilities at end of year/ total assets at end of year; Stock price_std is the standard deviation of monthly stock returns over past two years; FAM*ONE_HHI is the interactive term between family business and industrial competition; FAM*GOV is the interactive term between family business and corporate governance index; FAM*CSR INDEX is the interactive term between family business and corporate social responsibility; FAM*SIZE is the interactive term between family business and firm size; FAM+ FAM*ONE_HHI is the marginal effect of family business on cash dividends after considering industrial competition; FAM+FAM*GOV is the marginal effect of family business on cash dividends after considering corporate governance; FAM+FAM*CSR INDEX is the marginal effect of family business on cash dividends after considering social responsibility; FAM+FAM*SIZE is the marginal effect of family business on cash dividends after considering firm size; Obs is the observation numbers; YEAR is the dummy variable for the year; INDUS is the dummy variable for the industries.

5 Robustness Check (Quantile Regression)

In order to examine whether the previous results remain unchanged in high cash dividends family business, we further analyze how industrial competition, corporate social responsibility and corporate governance affect high cash dividends of family businesses (75Q is defined as the 75th percentile cash dividend). In Table 9, Model 1 presents the positive, but insignificant, coefficient of FAM*ONE_HHI (0.0364), indicating that family companies with high cash dividends will not issue more dividends because of the competitive product market. In Model 2, the interactive term of FAM*GOV is found to be significantly positive in family firms with high cash dividends (0.1179). That is, family businesses with very high cash dividends (75Q) tend to issue much more cash dividends when corporate governance is better. Model 3 reveals that high cash dividend family businesses do not issue more cash dividends due to more corporate social responsibility. Looking at the marginal effect

of family business (FAM+FAM*GOV) from Model 2, the significantly negative coefficient tells that family businesses with high cash dividends again pay less cash dividends.

In sum, in a sample of family businesses with high cash dividends, our results show that family businesses with better governance pay more cash dividends, but industry competition and corporate social responsibility have no significant impact on dividend policy at high cash dividends family business (75Q).

Table 9. Cash Dividends in the 75th Percentile Sample (75Q)

| | Model 1 | Model 2 | Model 3 |
|---------------|-----------------------|-----------------------|------------------------|
| Cons | -0.2358 (0.5900) | -0.0045 (0.9910) | -0.3318 (0.4290) |
| FAM | -0.1153 (0.5690) | -0.4838** (0.0150) | -0.0881 (0.2290) |
| ONE_HHI | 0.1740 (0.3920) | 0.1955* (0.0770) | 0.1921* (0.0690) |
| GOV | 0.0110 (0.6410) | -0.0697 (0.1510) | 0.0102 (0.6590) |
| CSR INDEX | -0.0130 (0.5200) | -0.0135 (0.6660) | -0.1210*** (0.0030) |
| SIZE | -0.0096 (0.5480) | -0.0078 (0.6150) | -0.0036 (0.8140) |
| FAM*ONE_HHI | 0.0364 (0.8560) | | |
| FAM*GOV | | 0.1179** (0.0170) | |
| FAM*CSR INDEX | | | 0.1350 (0.1250) |
| DID_lag_75Q | 1.4285*** (0.0000) | 1.4204*** (0.0000) | 1.4196*** (0.0000) |
| MB | 0.0653 (0.3730) | 0.0631 (0.4150) | 0.0630 (0.3870) |
| Cash level | 0.0063*** | 0.0063*** | 0.0064*** |

Table 9. Cash Dividends in the 75th Percentile Sample (75Q)(continued)

| | | | |
|-------------------|---------------------|-----------------------|--------------------|
| | (0.0010) | (0.0010) | (0.0000) |
| LEB | -0.0126*** | -0.0126*** | -0.0124*** |
| | (0.0000) | (0.0000) | (0.0000) |
| Stock price_std | -0.0483*** | -0.0478*** | -0.0487*** |
| | (0.0000) | (0.0000) | (0.0000) |
| Obs | 3,753 | 3,753 | 3,753 |
| YEAR | control | control | control |
| INDUS | control | control | control |
| FAM+ FAM*ONE_HHI | -0.0789 (0.2715) | | |
| FAM+FAM*GOV | | -0.3659** (0.0175) | |
| FAM+FAM*CSR INDEX | | | 0.0469 (0.6896) |

Note: 75Q is firms in the highest 75 percentile for issuing cash dividends. DID_lag_75Q is defined as lagged one period of DID at firms with the 75th percentile cash dividends. All other variable definitions are the same as in Table 8.

Next, we also examine the same issue at companies issuing low cash dividends (25Q is defined as the low end of cash dividends, with a cash dividend below the 25th percentile). The results are shown in Table 10. The significantly positive FAM coefficient in Model 3 indicates that low cash dividend family businesses will issue more dividends than nonfamily low dividend firms, which is quite different from the high dividend sample. Looking at interactive terms, all three interactive terms show insignificant results. That is, compared to nonfamily business, the dividend policy of family firms with low cash dividends will not be moderated by the competitive product market, corporate governance and social responsibility. However, the marginal effects of family business on dividend policy are significantly positive in the competitive product market and social responsibility (FAM+FAM*ONE_HHI and FAM+FAM*CSR INDEX). That is, after considering product market competition and social responsibility, family companies at low cash dividends will issue more cash dividends to investors. In summary, being a family business with low cash dividends has a significantly positive impact on cash dividends, and this result is opposite to that at high cash dividend firms.

Table 10. Cash Dividends in the 25th Percentile Sample (25Q)

| | Model 1 | Model 2 | Model 3 |
|--|------------------------|------------------------|------------------------|
| Cons | 2.9930*** (0.0000) | 2.7761*** (0.0000) | 2.8216*** (0.0000) |
| FAM | 0.1078 (0.6460) | 0.4057 (0.1320) | 0.3023*** (0.0080) |
| ONE_HHI | -0.3024 (0.1160) | -0.1217 (0.2170) | -0.1237 (0.2120) |
| GOV | 0.0783*** (0.0050) | 0.1030 (0.1170) | 0.0793*** (0.0040) |
| CSR INDEX | -0.0306 (0.2760) | -0.0305 (0.2870) | -0.0991 (0.1320) |
| SIZE | -0.2940*** (0.0000) | -0.2953*** (0.0000) | -0.2933*** (0.0000) |
| FAM*ONE_HHI | 0.2179 (0.2980) | | |
| FAM*GOV | | -0.0324 (0.5850) | |
| FAM*CSR INDEX | | | 0.0822 (0.3100) |
| DID_lag_25Q | -1.1311*** (0.0000) | -1.1336*** (0.0000) | -1.1342*** (0.0000) |
| MB | -0.1651* (0.0570) | -0.1623* (0.0600) | -0.1642* (0.0560) |
| Cash level | -0.0016 (0.6400) | -0.0018 (0.6030) | -0.0017 (0.6250) |
| LEB | 0.0077*** (0.0000) | 0.0077*** (0.0000) | 0.0078*** (0.0000) |
| Stock price_std | 0.0736*** (0.0000) | 0.0730*** (0.0000) | 0.0733*** (0.0000) |
| Obs | 3,753 | 3,753 | 3,753 |
| YEAR | control | control | control |
| INDUS | control | control | control |
| Table 10 Cash Dividends in the 25 th percentile sample (25Q)(continued) | | | |
| FAM+ FAM*ONE_HHI | 0.3257*** (0.0022) | | |
| FAM+FAM*GOV | | 0.3733 (0.1003) | |
| FAM+FAM*CSR INDEX | | | 0.3845** (0.0113) |

Note: 25Q includes firms in the lowest 25 percentile in terms of issuing cash dividends. DID_lag_25Q is defined as lagged one period of DID at firms with the lowest percentile cash dividends. All other variable definitions are the same as in Table 8.

To summarize the quantile regression results, we interestingly found that family-owned businesses do have different behaviors in their dividend policies depending on whether they were high- or low-dividend payout firms. High-dividend

family firms tend to follow the pecking order hypothesis developed by Myers and Majluf (1984) to reduce their dividend payout because internal financing from accumulated earnings is preferred to external financing for future investments. However, this negative dividend payout by high-dividend family firms would be mitigated by better corporate governance. The low-dividend family firms tend to increase dividend payouts to maintain their control and share their personal wealth as the controlling shareholders at the firm, and this positive payout by low-dividend family firms would be enhanced by stronger industry competition and by a higher degree of CSR.

6 Additional Tests

Since this study focuses on the issue of whether family firms have a lower propensity to pay cash dividends and the roles that corporate governance, product market competition and corporate social responsibility play in family firms' cash policy, we also perform bivariate tests of cash dividends between family and nonfamily firms under high vs. low levels of the following four factors (corporate governance, product market competition, corporate social responsibility and firm size) as an additional test. The results are shown in Table 11. Panel A shows that regardless of the cash dividends measures, when the industry becomes more competitive, family businesses tend to issue less cash dividends than nonfamily businesses. In addition, Panel B also shows that the family company pays significantly less cash dividends than nonfamily companies when firms have good corporate governance. As to the Corporate Social Responsibility section (Panel C), family businesses still pay significantly less cash dividends than nonfamily businesses when they engage in more corporate social responsibility. Finally, Panel D also shows that larger family businesses tend to issue fewer cash dividends than larger nonfamily businesses. Taken together, we discover that regardless of any sample segmentation, family business always issues significantly less cash dividends than nonfamily business, which confirms our research question.

In summary, we found that different factors influence cash dividend policy between high and low levels of dividend family firms. High cash dividend family firms will issue less cash dividends because they have better corporate governance; family businesses with low cash dividends tend to issue more cash dividends. The latter result of low cash dividend family business does not confirm our earlier results

that family businesses issue significantly less cash dividends. That is, less cash dividends issued by family businesses do not appear at a low level of cash dividends. For the low cash dividend companies, family businesses will issue more cash dividends; it is inferred that the family business still believes that cash dividend payments are a good signal to outside shareholders and markets, so those low-dividend family firms will try to gradually increase dividend payout to shareholders.

Table 11. Additional Tests (Cross Tabulation of Cash Dividends)

| Panel A | ONE_HHI=0 | ONE_HHI =1 |
|---|---------------|---------------|
| DID | Mean | Mean |
| FAM=0 | 0.3049 | 0.3267 |
| FAM=1 | 0.2406 | 0.2572 |
| p-value | (0.0091) | (0.0000) |
| Panel B | GOV_D = 0 | GOV_D = 1 |
| DID ₁ | Mean | Mean |
| FAM=0 | 0.3369 | 0.3099 |
| FAM=1 | 0.2473 | 0.2627 |
| p-value | (0.0000) | (0.0006) |
| Panel C | CSR INDEX_D=0 | CSR INDEX_D=1 |
| DID | Mean | Mean |
| FAM=0 | 0.3192 | 0.3244 |
| FAM=1 | 0.2046 | 0.2610 |
| p-value | (0.0001) | (0.0000) |
| Panel D | SIZE_D=0 | SIZE_D=1 |
| DID ₁ | Mean | Mean |
| Table 11 Additional Tests (cross tabulation of cash dividends)(continued) | | |
| FAM=0 | 0.3035 | 0.3402 |
| FAM=1 | 0.2241 | 0.2869 |
| p-value | (0.0000) | (0.0000) |
| p-value | (0.0002) | (0.7768) |

Note: DID is cash dividend / EBITDA. FAM=1 indicates that the company is a family-controlled firm; it is 0 otherwise; ONE_HHI is equal to 1 when the firm is in high industry competition and 0 otherwise; GOV_D is equal to 1 when the company has a good governance Index (GOV) with value of 3,4 or 4; it is 0 otherwise; CSR INDEX_D is equal to 1 when the firm has a low CSR Index and is 0 otherwise; SIZE_D is equal to 1 when the company is large size and 0 otherwise.

7 Conclusions

The dividend payout policy is an important policy at any company. When a company has operating earnings, it is expected to share those earnings with shareholders, and the distribution of cash dividends is one of the most common ways to share earnings with shareholders. Moreover, a dividend payout is also a message to shareholders signaling how well the firm is performing. As known from the relevant literature, industry competition, corporate governance and corporate social responsibility will affect payout policy. Nevertheless, current research on cash dividends only analyzes these impacts separately. In view of this, we consider corporate governance, industry competition and corporate social responsibility all together to explore their influences on family firms' cash dividend policies to avoid missing important variables and getting an estimation error.

This paper uses listed companies on the Taiwan Stock Exchange from 2005 to 2014 as the research sample collected from the Taiwan Economic Journal (TEJ) database. Considering that the cash dividend is truncated at 0, the Tobit model is adopted to empirically analyze the dividend payout behavior of Taiwanese family businesses. Our empirical results found that family businesses pay fewer cash dividends, which is consistent with prior research. Interestingly, we further discover that this negative dividend payout presents a nonlinear effect depending upon corporate governance and corporate social responsibility. That is, a negative dividend payout by a family business would be moderated or mitigated by better corporate governance quality and more corporate social responsibility. In addition, we further explore the dividend issue by using quantile regression analysis and only reported the highest 25% (or 75th percentile) as the high-dividend sample and the lowest 25% as the low-dividend sample. We interestingly found that family businesses do have different behavior in dividend policy between high- and low-dividend payout firms. High-dividend family firms tend to reduce their dividend payout, while this negative dividend payout would be mitigated by better corporate governance. Low-dividend family firms tend to increase dividend payouts, and this positive payout is enhanced by stronger industry competition and a higher degree of CSR.

The above efforts to combine all the moderating factors together are first documented in the related literature and are discussed in depth in the analysis of the

dividend payout behavior of family businesses, which comprises the major contribution of this research.

Appendix: Variable Correlation Matrix

| | DID | FAM | CG_mean | CSR_index | SIZE | MB | CashLevel | LEB | Stock price_std |
|-----------------|------------|------------|------------|------------|------------|------------|------------|-----------|-----------------|
| DID | 1.0000 | | | | | | | | |
| FAM | -0.1133*** | 1.0000 | | | | | | | |
| CG_mean | 0.0200 | -0.0564*** | 1.0000 | | | | | | |
| CSR_index | 0.0369** | -0.0860*** | 0.0967*** | 1.0000 | | | | | |
| SIZE | 0.1166*** | -0.0770*** | 0.1667*** | 0.1258*** | 1.0000 | | | | |
| MB | 0.0845*** | -0.0714*** | 0.1587*** | 0.1257*** | 0.4399*** | 1.0000 | | | |
| Cash Level | 0.1992*** | -0.1701*** | 0.1316*** | 0.0606*** | 0.0958*** | 0.2212*** | 1.0000 | | |
| LEB | -0.2327*** | 0.0930*** | -0.0101 | -0.0316** | 0.0625*** | -0.0449*** | -0.3677*** | 1.0000 | |
| Stock price_std | -0.2160*** | 0.0315** | -0.0464*** | -0.1009*** | -0.2077*** | 0.0969*** | -0.0336** | 0.0862*** | 1.0000 |

Note: DID is the cash dividend / EBITDA. FAM=1 indicates that the company is a family-controlled firm, and it is 0 otherwise; GOV is company Governance Index;

CSR INDEX is CSR Index; SIZE is company size; MB is the closing stock price/equity per share; Cash Level is the sum of cash and cash equivalent/total assets;

LEB is total liabilities at the end of year/ total assets at end of year; Stock price_std is the standard deviation of monthly stock returns over the past two years.

References

- Adams, R. B., Almeida, H. and D. Ferreira, (2005), "Powerful CEOs and Their Impact on Corporate Performance," *Review of Financial studies*, 18, 1403-1432.
- Adjaoud, F. and W. Ben-Amar, (2010), "Corporate Governance and Dividend Policy: Shareholders' Protection or Expropriation?" *Journal of Business Finance & Accounting*, 37, 648-667.
- Andres C., (2008), "Large shareholders and firm performance-An empirical examination of founding--family ownership," *Journal of Corporate Finance*, 14, 431-445.
- Allen, F. and D. Gale, (2000), "Corporate Governance and Competition, in Vives, X., eds, *Corporate Governance: Theoretical and Empirical Perspectives*,"

Cambridge University Press, 23-94.

- Anderson, R. C. and D. M. Reeb, (2003), "Founding-Family Ownership and Firm Performance: Evidence from the S&P 500," *Journal of Finance*, 58, 1301-1328.
- Anderson R. C., Mansi, S.A., and D. M. Reeb, (2003), "Founding family ownership and the agency cost of debt," *Journal of Financial Economics*, 68, 263-285.
- Bartram, S., Brown, P., How, J. and P. Verhoeven, (2008), "Agency Conflicts and Corporate Payout Policies: A Global Study," *Working Paper*, University of Auckland.
- Bebchuk, L. A., Cohen, A. and A. Ferrell, (2009), "What Matters in Corporate Governance?" *The Review of Financial Studies*, 22, 783-827.
- Bozec, S. R. and C. Laurina, (2008), "Law of Incorporation and Firm Ownership Structure: The Law and Finance Theory Revisited," *International Review of Law and Economics*, 28,140-149.
- Chae, J., Kim, S. and E. J. Lee, (2009), "How Corporate Governance Affects Payout Policy under Agency Problems and External Financing Constraints," *Journal of Banking and Finance*, 33, 2093-2101.
- Chay, J. B. and J. Suh, (2009), "Payout Policy and Cash-Flow Uncertainty," *Journal of Finance Economics*, 93, 88-107.
- Chen, A., Kao, A., Tsao, M., and C. Wu, (2007), "Building a Corporate Governance Index from the Perspectives of Ownership and Leadership for Firms in Taiwan," *Journal Compilation*, 15, 251-261.
- Chen, Y. R., and C. Y., (2009), "The Impact of Family Control and Board Characteristics on Corporate Policies," *Journal of Management*, 26, 1-16.
- Choy, H. L., Gul, F. A., and J. Yao, (2011), "Does Political Economy Reduce Agency Costs? Some Evidence from Dividend Policies around the World," *Journal of Empirical Finance*, 18, 16-35.
- Claessens, S., Djankov, S., Lang and L.H.P., (2000), "The Separation of Ownership and Control in East Asian Corporations," *Journal of Financial Economics*, 58, 81-112.
- Claessens, S., Djankov, S., Fan P. H. and L. H. P. Lang, (2002), "Disentangling the Incentive and Entrenchment Effect of Large Shareholding," *Journal of Financial Economics*, 57, 2741-2772.

- Corbetta, G. and C. Salvato, (2004), "Self-Serving or Self-Actualizing? Models of Man and Agency Costs in Different Types of Family Firms: A Commentary on "Comparing the Agency Costs of Family and Non-family Firms: Conceptual Issues and Exploratory Evidence," *Entrepreneurship Theory and Practice*, 28, 355-362.
- Faccio, M., Lang, L. and L. Young, (2001), "Dividends and Expropriation," *American Economic Review*, 91, 54-78.
- Fama, E. F. and K. R. French, (2001), "Disappearing Dividends: Changing Firm Characteristics or Lower Propensity to Pay?" *Journal of Financial Economics*, 60, 3-43.
- Fama, E. F., and M. C. Jensen, (1983), "Separation of Ownership and Control," *Journal of Law and Economics*, 26, 301-325.
- Fee, C., and C. Hadlock, (2000), "Management Turnover and Product Market Competition: Empirical Evidence from the U.S. Newspaper Industry," *Journal of Business*, 73, 205-243.
- Gilson, R.J. and M. J. Roe, (1993), "Understanding the Japanese Keiretsu: Overlaps between Corporate Governance and Industrial Organization," *The Yale Law Journal*, 102, 871-906.
- Giroud, X. and H. M. Mueller, (2011), "Corporate Governance, Product Market Competition, and Equity Prices," *Journal of Finance*, 64, 563-600.
- Gomes, A., (2000), "Going Public without Governance: Managerial Reputation Effects," *Journal of Finance*, 55, 615-646.
- Gompers, P. A., Ishii, J. L. and A. Metrick, (2003), "Corporate Governance and Equity Prices," *The Quarterly Journal of Economics*, 118, 107-155.
- Grullon, G. and R. Michaely, (2008), "Corporate Payout Policy and Product Market Competition," *Working Paper Cornell University*.
- Grullon, G. and R. Michaely, (2011), "The Impact of Product Market Competition on Firms' Payout Policy," *Working Paper Cornell University*.
- Guadalupe, M. and F. Pérez-González, (2010), "Competition and Private Benefits of Control," *Working Paper*.
- Hart, O., (1983), "The Market as an Incentive Mechanism," *Bell Journal of Economics*, 14, 336-382.
- He, W., (2011), "Agency Problems, Product Market Competition and Dividend

- Policies in Japan,” *Working Paper*.
- Hu, Z., (2002), “Family Shareholdings: a Comparison of Family-Controlled Listed Companies at Home and Abroad,” *New Fortune* (8) (in Chinese).
- Hu, Y., Wang, D. and S. Zhang, (2007), “Founding Family Ownership, Management and Payout Policy,” *Working Paper*.
- Huang, Y., Chen, A. and L. Kao, (2012), “Corporate Governance in Taiwan: The Nonmonotonic Relationship between Family Ownership and Dividend Policy,” *Asia Pacific Journal of Management*, 29, 39-58.
- Jensen, M. C., (1986), “Agency Costs of Free Cash Flow, Corporate Finance, and Takeover,” *American Economic Review*, 76, 323-329.
- Jensen, M. C. and W. Meckling, (1976), “Theory of Firm: Managerial Behavior, Agency Costs and Ownership Structure,” *Journal of Financial Economics*, 3, 305-360.
- Jiraporn, P. and Y. Ning, (2006), “Dividend Policy, Shareholder Rights, and Corporate Governance,” *Journal of Applied Finance*, 16, p24.
- John, K. and A. Knyazeva, (2008), “Corporate Governance and Payout Commitments,” *Working Paper*.
- Kao, L. and A. Chen, (2013), “How Product Market Competition Affect dividend Payments in a Weak Investor Protection Economy: Evidence from Taiwan,” *Pacific-Basin Finance Journal*, 25, 21-39.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A. and R. W. Vishny, (1999), “Corporate Ownership around the World,” *Journal of Finance*, 54, 471-517.
- La Porta, R., Lopez-de-Silanes, F., Shleifer, A., and R. W. Vishny, (2000), “Agency Problems and Dividend Policies around the World,” *Journal of Finance*, 55, 1-33.
- Larcker, D. F. and S. A. Richardson, (2004), “Fees Paid to Audit Firms, Accrual Choices, and Corporate Governance,” *Journal of Accounting Research*, 42, 625-658.
- Lie, E., (2005), “Operating Performance Following Dividend Decreases and Omissions,” *Journal of Corporate Finance*, 12, 27-53.
- Michaelas N., Chittenden F. and P. Poutziouris, (1998), “A model of capital structure decision making in small firms,” *Journal of Small Business and Enterprise Development*, 5, 246-260.

- Mitton, T., (2004), "Corporate Governance and Dividend Policy in Emerging Markets," *Emerging Markets Review*, 5, 409-426.
- Myers S. C. and N. S. Majluf, (1984), "Corporate financing and investment decisions when firms have information that investors do not have," *Journal of Financial Economics*, 12, 187-221.
- Perez-Gonzalez, F., (2006), "Inherited Control and Firm Performance," *American Economic Review*, 96, 1559-1588.
- Raith, M., (2003), "Competition Risk and Managerial Incentives," *American Economic Review*, 93, 1425-1436.
- Rakotomavo, M.T.J., (2012), "Corporate Investment in Social Responsibility versus Dividends?" *Social Responsibility Journal*, 8, 199-207.
- Redding, L.S., (1997), "Firm size and Dividend Payouts," *Journal of Financial Intermediation*, 6, 224-248.
- Schmidt, K.M., (1997), "Managerial Incentives and Product Market Competition," *Review of Economic Studies*, 64, 191-213.
- Schmid, T., Ampenberger, M., Kaserer, C., and A. K. Achleitner, (2010), "Controlling Shareholders and Payout Policy: Do Founding Families Have a Special Taste for Dividends?" *Working Paper*.
- Setia-Atmaja, L., Tanewski, G. A. and M. Skully, (2009), "The Role of Dividends, Debt and Board Structure in the Governance of Family Controlled Firms," *Journal of Business Finance and Accounting*, 36, 863-898.
- Shleifer, A., (1985), "A Theory of Yardstick Competition," *RAND Journal of Economics*, 16, 3-27.
- Shleifer, A. and R. W. Vishny, (1986), "Large Shareholders and Corporate Control," *Journal Political Economy*, 94, 461-483.
- Shleifer, A. and R. W. Vishny, (1997), "A Survey of Corporate Governance," *Journal of Finance*, 52, 737-783.
- Villalonga, B. and R. Amit, (2006), "How Do Family Ownership, Control and Management Affect Firm Value?" *Journal of Financial Economics*, 80, 385-417.
- Yeh, Y. h., Lee, T. S. and T. Woidtke, (2001), "Family Control and Corporate Governance : Evidence from Taiwan," *International Review of Finance*, 2, 21-48.