LISTING STATUS, FAMILY FIRM AND THE COST OF BANK LOAN FINANCING

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Abstract

This research examines the impact of firm's listing status on the relationship between corporate governance and cost of bank loans. The analysis yields four major findings after controlling for firm characteristics and prime interest rate. First, the financing cost of debt is higher for private firms. This result confirms that information risk is higher for private firms. Second, family firms enjoy lower cost of debt. The result found is consistent with the literature that family firms are related to a lower cost of debt financing. Third, that family firms having lower cost of debt is only found in listed firms. This evidence supports the prediction based on the lack of market perspective which suggests that the family effect requires a capital market to make it substantiate. Finally, strong corporate governance helps reduce financing cost of debt. However, these governance effects are not affected by the listing status. In other words, commercial lenders in this study price indifferently for good governance mechanisms regardless of public or private firms.

Keywords: Cost of Debt, Listing Status, Corporate Governance, Family Firms

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1. Introduction

Bank loans are important sources of external capital for most firms around the world, which means that bank loans are essential for most firms' operations. Surprisingly, few studies, if any, examine the determinants of bank loan pricing. In addition, some prior studies show that listing status (public vs. private) affects earnings quality. Given that accounting earnings and its related information is commonly used by creditors to assess firm health and viability, listing status may influence the determination of the cost of debt financing. This study explores how the cost of debt is affected by the listing status, corporate governance and the interaction effect of the two. The results indicate that listing status, governance variables, and financial variables systematically explain the level of cost of debt, which is measured by interest rates of bank loans.

The studies on the determinants of cost of debt generally document that higher the default risk of the firm, higher the cost of debt. Some examples of factors in addition to financial variables affecting the estimate of default risk through lessening the degree of agency conflicts and information asymmetry are firm's disclosure policy (Sengupta, 1998), family ownership (Anderson, Mansi, and Reeb, 2003a, 2003b) and the effect of corporate governance (Bhojraj and Sengupta, 2003; Anderson, Mansi, and Reeb, 2004; Ashbaugh-Skaife, Collins, and LaFond, 2006). More recent studies investigate whether the cost of debt for firms being overlevered or underlevered will be asymmetrical (Van Binsbergen, Graham and Yang, 2010), the roles of auditor (Dhaliwal, Gleason, Heitzman, and Melendrez, 2008; Amir, Guan and Livne, 2010; Karjalainen, 2011) on the pricing of debt capital. These studies suggest that firms with weak governance tend to have higher cost of debt, measured in terms of effective interest rate, yield or spread of bond for publicly traded companies.[1] Limited research, if any, examines whether listing status affects the relationship between corporate governance and the cost of debt. To fill this void, I explore whether commercial lenders price differently the attributes of corporate governance due to difference in firm's listing status.

Some support for the research idea is found in recent studies that investigate the effect of listing status on financial reporting incentives and the effect of corporate governance on cost of bond financing. For instance, using European public and private firms, Burgstahler, Hail, and Leuz (2006) find that public firms have more incentives to report

1 The exception is Karjalainen (2011) who exmines privately held Finnish firms.

higher quality earnings. Opposed to findings in Burgstahler et al. (2006), Kim and Yi (2006), using Korean companies, find that listed firms are associated with greater magnitude of earnings management. Although these studies have focused on the potentially differential effect of listing status on earnings reporting behavior, none of them examine the impact of listing status on the cost of capital. Since private firms do not have publicly traded stock prices, I use the cost of debt as the measure for cost of capital.

The analysis, which examines how listing status affects the association between the cost of debt and corporate governance attributes, is important. For instance, Wang (2006) find that family firms are motivated to provide high quality earnings, and Anderson et al. (2003) find that family firms are associated with lower cost of debt. These studies attribute the link between a lower cost of debt and family firm to the desire to retain family's reputation. I believe that there requires a market for reputation for family to be valued. I define *family effect* as how family firms affect the cost of debt. I provide two alternative views on the family effect below.

The first view, referred as the *scarcity of information perspective*, predicts that the family effect is stronger for private firms than for public firms. Because the information environment of private firms is poorer relative to that of public firms, the scarcity increases the importance of family reputation concern for private firms.

The second view, referred as the *lack of market perspective*, predicts that the family effect is weaker for private firms than for public firms. The existence of capital market enhances the value of reputation of family. Therefore, private firms, operating in an environment where their equity securities are nonmarketable, have less concern for their family reputation.[2]

In a similar manner, the scarcity of information perspective predicts that the importance of corporate governance variables on the cost of debt is greater for private firms than that for public firms. The lack of market perspective, on the contrary, predicts the opposite.

The analysis of this study yields four major findings after controlling for firm-specific characteristics and prime interest rate. First, the financing cost of bank loan is higher for private firms. This result confirms that information risk is higher for private firms. Second, family firms enjoy lower cost of debt. This result is consistent with the literature that the benefit of family firms can be shown in a form of reduced cost of debt financing. Third, the previous finding that family firms have lower cost of debt is *only* found in listed firms. This evidence supports the prediction based on the lack of market perspective hypothesis which suggests that the family effect requires a capital market to make it substantiate. Finally, good corporate governance helps reduce financing cost of private debt. Moreover, these governance effects are not affected by the listing status. Both publicly traded and private firms enjoy lower cost of debt given firm are associated with stronger governance mechanisms.

This study makes several contributions to the extant literature on the cost of debt, listing status and corporate governance in the following way. First, different from prior studies focusing on the cost of equity capital which emphasizes an investor's perspective, I adopt a creditor's perspective and use the interest rate charged on a bank loan as the proxy for the cost of debt financing. It is valuable because commercial banks play essential roles in providing finance to firms, public or private, and in stabilizing the order of financial market in any economy—developed, developing or underdeveloped. Second, extant corporate governance literature focuses its research on public firms. The governance issues related to private firms are largely left unexplored. By incorporating listing status, corporate governance, and their interactions into the empirical model, the results regarding the cost of debt financing for private firms add to the literature of governance and the cost of debt.

The remainder of this paper is organized as follows. Section 2 reviews the related literature and presents the hypotheses. Section 3 describes the research design, sample, data, and variable measures. Section 4 presents the empirical results, and section 5 concludes the paper.

2. Literature Review and Hypothesis Development

Evidence shows that firms with high quality financial reporting obtain external financing on better terms (e.g., Sengupta, 1998; Bhojraj and Sengupta, 2003; Ashbaugh-Skaife et al., 2006). Studies also indicate that family firms are associated with lower cost of debt financing. In this section, I discuss two variables of interest—listing status and family firms— and their interaction effect that explain the determination of the cost of debt, and develop three hypotheses regarding their effects on the cost of debt.

2.1. Listing Status and the Cost of Debt Financing

The role of listing status in the cost of debt financing is based on the notion that creditors rely on accounting-based debt covenants, which suggests the influence of credible financial accounting information. As the demand for

2 As few studies focus on the cost of debt for private firms, I find no literature on these two perspectives.

accounting information differs significantly between public and privates firms, listing status may play an important role in creditors' loan decisions.

Two alternative views concerning the quality of accounting reports for public and private firms are presented in the literature. Public firms are distinguished from private firms in that public firms can raise capital from outside investors in stock markets. The presence of the positive or the negative impact of stock market determines the quality of accounting information. The first view argues that public firms usually re-enter the equity capital market for capital, outside investors will be reluctant to supply capital to firms with bad quality of reporting. That stronger demands and pressures from capital market as an external governance force motivates the public firms to report more credible earnings. However, it is also recognized that there are trade-offs and potentially important countervailing effects (e.g., Burgstahler et al., 2006). For instance, controlling insiders in public firms might expropriate outside investors by consuming large private control benefits. As an attempt to hide their activities and prevent outsider intervention, they could mask firm performance by managing reported earnings (e.g., Leuz, Nanda, and Wysocki 2003),3 which provides the second view. The second view argues that stock markets create motives for public firms to engage in earnings manipulations to obtain better terms on additional funding through equity offerings in stock market (e.g., Teoh, Welch and Wong, 1998) to meet the earnings expectations of market participants (e.g., Degeorge, Patel, and Zeckhauser, 1999), or to achieve other economic objectives such as management compensation. Private firms, on the other hand, rely primarily on bank loans or other borrowings from private lenders to meet their financing needs, are free from stock market pressures facing public firms. Private firms have weaker incentives to engage in earnings management than public firms.

Consistent with the first argument, Burgstahler et al. (2006) use European private and public firms and provide evidence that publicly traded firms demonstrate greater incentives to report quality information reflecting economic performance. Burgstahler et al. (2006) pinpoint that due to private firms have other private channels to convey their performance to the shareholders, private firms are found to be related to a lower reporting quality. Opposed to the findings in Burgstahler et al. (2006), Kim and Yi (2006), confirmed to the second argument, find that publicly traded firms tend to engage in earnings management to a greater extent than private firms. Beatty and Harris (1998) and Beatty, Ke, and Petroni (2002) document evidence suggesting that public firms engage in opportunistic earnings management more intensively than private firms.

As accounting disclosure quality reduce the degree of information asymmetry and lower the cost of debt financing (e.g., Sengupta, 1998; Anderson et al., 2004; Karjalainen, 2011), and quality of accounting-based information is different for private and public companies due to difference in demands and incentive for reporting credible economic performance to outside parties (Burgstahler et al., 2006), listing status is related to the cost of debt financing. Due to the lack of literature closely related to this study, and the mixed evidence regarding the effect of listing status on earnings quality, I provide this hypothesis without direction to test the effect of listing status on the cost of debt:

H1: Listing Status of a firm is systematically related to the cost of debt.

2.2. Family Firms and the Cost of Debt Financing

Most companies around the world are family-owned businesses (Burkart, Panunzi, and Shleifer, 2003; La Porta, Lopez-de-Silanes, and Shleifer, 1999; Claessens, Djankov, and Lang, 2000; Claessens, Djankov, Fan, and Lang, 2002; Anderson, Mansi and Reeb, 2003a), indicating the essential role of family.4 Family firms can potentially reduce the cost of debt because family owners share similar incentive structures. Family monitoring and control of the firm could result in better operating performance and superior cash flows to meet debt obligations. For instance, Anderson et al. (2003a) document that family firms, with or without active control, perform better than nonfamily firms. Anderson et al. (2004) further show that the benefit of family firms can be seen in their relation to a lower cost of debt financing. As families hold large, undiversified shareholdings, they have strong incentives to reduce firm risk and cash flow variability. This suggests that debt holders experience less risk and, as a result, demand lower return on capital provided. Anderson et al. (2004) argue, because extended horizons, family loyalty, and concerns over reputation suggest families are less likely to expropriate debt holder wealth than other shareholders.

3 Other examples of forces that could give rise to more earnings management in public firms are managerial compensation contracts, debt covenants, particularly in public debt agreements, or political pressures (Healy and Wahlen 1999).

4 Among others, Anderson et al. (2003a) find that family ownership is both prevalent and substantial. In specific, the authors report that families are present in one-third of the S&P 500 and account for 18 percent of outstanding equity.

Although it is posited that family ownership is associated with a lower agency cost of debt, an alternative perspective is that families can exacerbate agency conflicts because they possess the voice as well as the power to force the firm to meet their demands. Family members usually hold important positions on both the management team and the board of directors. Thus, family firms may have inferior corporate governance because of ineffective monitoring by the board. Another source of entrenchment is potentially greater information asymmetry between founding families and other shareholders. Fan and Wong (2002, p.403) argue that concentrated ownership limits accounting information flows to outside investors, while Francis, Schipper, and Vincent (2005) suggest that information asymmetry lowers the transparency of accounting disclosures. Therefore, family firms could have higher cost of debt resulting from higher information asymmetry.

Anderson et al. (2004) suggest that debtors are concerned with governance attributes that influence the integrity of financial accounting reports. Wang (2006) points out founding family ownership could affect the demand and supply of quality financial reporting in one of two competing ways: the entrenchment effect and the alignment effect. The entrenchment effect motivates financial statement suppliers (firms) to opportunistically manage earnings. It is consistent with the traditional view that family firms are less efficient because concentrated ownership creates incentives for controlling shareholders to expropriate wealth from other shareholders (Fama and Jensen 1983; Morck, Shleifer, and Vishny 1988; Shleifer and Vishny 1997).

Several prior studies report that family ownership affects the quality of accounting information. From the controlling shareholders' view, Fan and Wong (2002) find that a combination of the entrenchment effect and the information asymmetry between family members and other shareholders motivates the family firms to report lower quality earnings information. Opposed to findings of Fan and Wong (2002), Wang (2006) documents findings in consistent with the alignment effect that family firms are associated with higher earnings quality reducing the degree of information asymmetry between insiders and outsiders. With better operating performance, more stable cash flows and less degree of family-debtor agency conflicts, family firms potentially could mitigate the agency cost of debt, which results in a beneficial effect on the cost of debt.

If family increases agency conflicts, then I would expect debt holders to require higher returns, i.e., higher interest rate in this study, from family firms. However, it is argued that family firms share the similar incentive structure, and have stronger incentive to pass the business onto next generation. Hence, family firms are motivated to protect family's reputation. Based on the literature, the association between whether the family members actively involved in management and the cost of debt will be determined by the effect of either entrenchment or alignment. In other words, the entrenchment effect predicts that family-controlled firms are associated with the supply of lower earnings quality, while the alignment effect predicts that family-controlled firms are associated with lower cost of debt. This leads to the second hypothesis:

H2: Family firm is systematically related to the cost of debt.

Most prior research on governance or the cost of debt has focus on public firms. Evidence shows that listing status affects the quality of earnings (Burgstahler et al., 2006; Kim and Yi, 2006), and family firms are found to be related with better performance (Anderson et al., 2003a), higher incentive to report quality earnings (Wang, 2006), and a lower cost of debt (Anderson et al., 2004) than non-family firms. The difference in listing status of firm may thus have differential effect on the cost of debt due to family's incentive and ability in creating stable cash flows and conveying quality earnings that helps creditors to assess the firm health and viability. To enhance the knowledge on the effect of listing status on the association between family firms and the cost of debt, I provide the third hypothesis to test which type of firms—public-family or private-family firms—tend to have lower cost of debt:

H3: The interaction of family firms and listing status is systematically related to the cost of debt.

3. Research Methodology

I use the following model to examine the determinants of cost of debt (COD), measured as interest rate of bank loans:

$$COD = b_0 + b_1\,Private + b_2\,Family + b_3\,Private \times Family + b_4\,BoardHold + b_5\,BlockHold + b_6\,IndBoard + b_7\,Group + b_8\,Private \times BoardHold + b_{10}\,Private \times BlockHold + b_{11}\,Private \times IndBoard + b_{12}\,Private \times Group + b_{13}\,Size + b_{14}\,Leverage + b_{15}\,ROA + b_{16}\,IntCov + b_{17}\,PRate + e \quad (1)$$

The dependent variable is the interest rate of bank loan (*COD*). From financial reports or annual report, for each firm-year, I manually collect and identify *new* loans obtaining from the lenders in the year. The variable *COD* is the weighted average interest rate (using loan amount as the weight) of all new non-collateral loans. The firm and year subscripts are omitted for ease of exposition for all variables.

Two primary variables of interest in this study are *Private* and *Family*. *Private* is a dummy variable to indicate whether the observation is a private firm or not, and *Family* is also a dummy variable to indicate whether the firm is a family firm or not.[5] The coefficient of *Private*, b_1, measures, holding governance and financial variables constant, the difference in *COD* between public and private firms. The coefficient of *Family*, b_2, reports how family companies affect *COD* for public firms. As for the private firms, this effect is measure by the sum of $b_2 + b_3$, which the coefficient b_3 estimates the difference of *COD* between listed and non-listed family firms. Specifically, the scarcity information perspective and the lack of market perspective predict a negative and a positive estimated coefficient of *Private* × *Family* (b_3) respectively.

I control for several economic determinants of *COD* based on prior literature, which can be classified into two categories: corporate governance variables and financial characteristic variables. The corporate governance variables include (1) board member equity ownership, (2) shareholding by outside blockholders, (3) board independence, and (4) a member firm of a group business dummy. As for financial characteristic variables I include (1) firm size, (2) financial leverage, (3) profitability, (4) an interest coverage ratio dummy, and (5) the prime interest rate. These variables are discussed below.

I first discuss four corporate governance variables. First, board member equity ownership (*BoardHold*) is measured as the percentage of a firm's outstanding shares held by its board members.[6] Regarding the effect of board member equity ownership on the cost of debt, Jensen (1993) argues that the board with greater ownership in the firm is more likely to monitor management diligently, which reduces agency conflicts between management and outside stakeholders such as debt holders. Consistent with Jensen (1993), Ashbaugh-Skaife et al. (2006) empirically find that credit ratings (which are negatively related to the cost of debt) are positively related to board ownership. Based on these studies, I expect a negative relation between *COD* and *BoardHold*.

Second, outside block hold (*BlockHold*) is measured as the percentage of shares held by non-board members whose shareholdings are either in the top 10 or over 5%. Previous research substantiates that outside blockholders play a positive role in corporate governance. In an extensive survey on blockholders and corporate control, for instance, Holderness (2003) points out that blockholders have the incentive and opportunity to monitor management and thus enhance a firm's expected cash flows that accrue to all shareholders. I hypothesize that there is an inverse relation between *COD* and *BlockHold*.

Third, board independence (*IndBoard*) is measured as the ratio between the number of independent board members and board size. Myers et al. (1997) find that independent board members curtail managerial perquisite consumption. Prevost et al. (2002) find a positive relation between firm performance and the percentage of independent directors on the board. Moreover, Lee et al. (2003) find that corporate illegal acts are negatively related to the percentage of independent directors on the board in Taiwan. Finally, Ashbaugh-Skaife et al. (2006) find a positive relation between credit ratings and board independence. Based on these studies, I expect a negative relation between *COD* and *IndBoard*.

Last, group business (*Group*) is a dummy variable that takes the value of one if a firm is affiliated with a business group, and zero otherwise. There are two opposite views about the effect of business group on the firm value, which has an inverse relation to the cost of capital. The positive view argues that business group in developing countries can mimic the functions of market mechanism that are present only in advanced economies (Khanna and Palepu 1997, 2000). According to this perspective, there will be negative relation between *Group* and *COD*. The negative view, however, argues that the business group facilitates the controlling shareholders to siphon resource out of the member firms, which is often referred as "tunneling." Thus, tunneling view would expect that *Group* is positively related to *COD*. Due to the lack of consensus in the literature regarding the effect of group business on firm value, I make

5 Family members usually are actively involved in business management. Anderson et al. (2003) note that a potential concern with using family ownership data is that some families are able to exert control with minimal fractional ownership, while others require larger stakes for the same level of control due to differences in firm size, industry, business practices, and product placement. Therefore, a binary variable to denote firms with family ownership is used in the testing. Following Anderson et al. (2003a), I also adopt an indicator variable approach to indicate the degree of participation of family members. As for family member, I indentify it as the individual ultimate controller (including his/her spouse and a collateral relative by affinity within the two generations), unlisted companies of owned by the ultimate controller, non-profit of organizations and foundations owned by the ultimate controller. The variable *Family* equals one if the family members hold more than half of the board seats, and zero otherwise.

6 In Taiwan, basic corporate governance is a two-tier structure that consists of *directors* and *supervisors*, both elected by shareholders. Directors are responsible for ensuring compliance with laws and regulations, avoiding conflicts of interest, and overseeing the overall management of a company's business. Supervisors are responsible for the effective monitoring of a company's board and management. This study uses the term "board members" to indicate both directors and supervisors.

no prediction for the relation between the *Group* and *COD*.

I now turn to discussion of the financial characteristic variables affecting the *COD*. First, following prior literature (e.g., Ederington et al. 1987; Ziebart and Reiter 1992; Pittman and Fortin 2004; Ashbaugh-Skaife et al. 2006), I include firm size (*Size*), measured as the natural logarithm of total assets, return on assets (*ROA*), and a dummy for interest coverage ratio (*IntCovt*), which is set to one if a firm's interest coverage ratio (income before interest expense and taxes divided by interest expense) is higher than the industry median interest coverage ratio computed on a yearly basis and zero otherwise,[7] and prime interest rate (*PRatet*), measured as the average interest rate on a one-month certificate of deposit from five major Taiwan banks.[8] I expect all the coefficients of these three variables, except for that of the *Leverage*, to be negatively related to the *COD*.

4. Empirical Results

Sample selection

I collect data from *Taiwan Economic Journal* for both listed and unlisted firms over the period 1996 to 2006.[9] I delete financial firms, firms with non-calendar years and firms with missing data. This process results in a final sample of 6,218 firm-year observations as shown in Table 1.

Basis statistics

To mitigate the potential influences of extreme values, I winsorize all continuous variables at the top and bottom one percent of their respective distribution.[10] Descriptive statistics for variables examined in this study are reported in Table 2, where the superscript asterisks in the Difference column indelicate that the statistics are significantly different from the two samples.

The mean (median) *COD* for public firms is 4.74% (4.79%), whereas that for private firms is 6.59% (6.98%). A two-tailed *t*-test (Wilcoxon *z*-test) suggests that the *COD* for public firms is significantly smaller than that for private firms at the 0.01 level.

Turning to other variables, the differences of all governance and financial variables in means and medians between public and private samples are all significant. The only one variable requires explanation is *PRate*. Theoretically, if the number of observations in each year of the public and private samples is equal, the central tendency of *PRate* of the two samples should be the same. However, the mean of *PRate* in the public firms (2.86%) is significantly smaller than that of private firms (3.85%).

Table 3 presents the Pearson correlations among key variables where below the diagonal is the matrix of public companies, and above the diagonal is that of private companies. Except for *Family*, the correlations between *COD* and other variables are similar between the public and the private samples, at least in terms of direction of sign of the correlation. I first discuss the variable of interest in this study, *Family*, followed by variables with significant correlations to *COD*, and the remaining ones.

The correlation between *COD* and *Family*, 0.11, is significantly positive at 0.01 level in the sample of private companies, but it turns negative but insignificant, –0.02, in the public-firm sample. This result is consistent with the lack of market perspective. Specifically, this correlation analysis shows that the decreasing *COD* effect of *family*, if any, does not apply to private firms.

For variables with significant correlations in both samples, I find that the *COD* are, at the conventional statistical level, significantly negatively correlated with *BoardHold* (–0.12 and –0.10), *BlockHold* (–0.17 and –0.06), *IndBoard* (–0.33 and –0.39), *ROA* (–0.11 and –0.27), and *IntCov* (–0.21 and –0.29), where the former number in parenthesis is the correlation of public sample and the latter is that of private one. In addition, *COD* is significantly and positively correlations to *Group* (0.08 and 0.35) and *PRate* (0.77 and 0.66). On the other hand, the *COD* is significantly negatively correlated only with *Size* (–0.23, *p*-value < 0.01) in the public sample but become insignificant (–0.01, *p*-value = 0.62) in the private sample. These results support the notion that larger firms can enjoy lower financing cost. Several findings noted are that the effect of these variables, including governance mechanisms, firm characteristics and prime interest rate, on *COD* are similar. The only exception is the variable *Family*.

7 Since an interest coverage ratio above a certain threshold offers little incremental benefit to creditors, I measure *IntCov* as a dummy variable.

8 I measure this as the average interest rate on a one-month certificate of deposit from the five major Taiwan banks – the Bank of Taiwan, Taiwan Cooperative Bank, First Bank, Hua Nan Bank, and Chang Hwa Bank.

9 Taiwan Economic Journal is a popular financial database provider in Taiwan. The database covers firms listed in Taiwan Stock Exchange Corporation and Gre Tai Securities Market in Taiwan and private firms.

10 Deleting, instead of winsorizing, these variables at the top and bottom 1% produces qualitatively identical results as reported in the paper.

Table 1. Sample Selection

Period 1996~2006	Public Company	Private Company
All observations in the TEJ files	13,956	9,204
Less:		
Companies with missing data for corporate governance variables	(6,924)	(474)
Companies with missing data for financial characteristic variables	(58)	(28)
Missing data while computing Rate	(1,708)	(5,802)
Financial institutions	(471)	(1,137)
Non-calendar year firms	(54)	(340)
	4,795	1,423
Final sample	6,218	

Table 2. Univariate tests of differences in means (median) between public and private companies

	Public Companies			Private Companies			Difference	
	Mean	Median	Std. Dev	Mean	Median	Std. Dev	Mean	Median
Explained variable								
COD	4.74	4.79	2.22	6.59	6.98	1.95	–1.85***	–2.19***
Governance variables								
Family	0.58	1.00	0.01	0.63	1.00	0.48	–0.05***	0.00***
BoardHold	29.59	25.87	17.74	50.22	46.39	24.85	–20.63***	–20.52***
BlockHold	14.63	13.08	11.90	10.87	1.21	15.46	3.76***	11.87***
IndBoard	0.35	0.00	0.95	0.14	0.00	0.61	0.21***	0.00***
Group	0.86	1.00	0.35	0.73	1.00	0.45	0.13***	0.00***
Financial variables								
Size	15.28	15.14	1.35	14.34	14.23	0.99	0.94***	0.91***
Leverage	0.47	0.47	0.15	0.56	0.57	0.20	–0.09***	–0.10***
ROA	8.12	7.63	8.63	4.38	4.83	10.31	3.74***	2.80***
IntCov	0.58	1.00	0.49	0.35	0.00	0.48	0.23***	1.00***
PRate	2.86	2.13	1.60	3.85	4.42	1.33	–0.99***	–2.29***

Notes:

*, **, *** Difference in mean (median) between the Public sample and the Private sample significant at the 0.10, 0.05, and 0.01 level using a two-tailed t-test (Wilcoxon z-test).

COD = the weighted-average interest rate for new bank loans initiated, with the loan amounts serving as weights;

Family = one if the family members hold more than half of the board seats, and zero otherwise

BoardHold = the percentage of shares held by its board members;

BlockHold = the percentage of shares held by its outside blockholders;

IndBoard = the ratio between the number of independent board members and board size;

Group = one if a firm is affiliated with a business group, and zero otherwise;

Size = natural logarithm of total assets (in NT$ 1,000)

Leverage = financial leverage measured as the ratio between total liabilities and total assets;

ROA = return on assets;

IntCov = one if a firm's interest coverage ratio (income before interest expense and taxes divided by interest expense) is larger than the median interest coverage ratio in a year, and zero otherwise.

PRate = prime interest rate measured as the average interest rate on a one-month certificate of deposit from five major Taiwan banks.

Table 3. Pearson correlations matrix—publicly traded vs. private companies*

Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)
COD		0.11***	–0.10***	–0.06***	–0.39***	0.35***	–0.01	0.27***	–0.27***	–0.29***	0.66***
Family	–0.02		0.27***	0.04	–0.18***	0.13***	0.11***	0.13***	–0.09***	–0.11***	0.13***
BoardHold	–0.12***	0.02		–0.45***	–0.13***	0.20***	0.05	0.10***	–0.18***	–0.14***	0.20***
BlockHold	–0.17***	0.02	–0.24***		0.13***	–0.07***	–0.04	0.04	0.07***	0.01	–0.15***
IndBoard	–0.33***	–0.19***	–0.02	0.10***		–0.15***	–0.06	–0.07***	0.11***	0.13***	–0.43***
Group	0.08***	0.08***	0.10***	–0.06***	–0.13***		0.16***	0.22***	–0.36***	–0.30***	0.36***
Size	–0.23***	0.18***	–0.28***	–0.06***	–0.03	0.09***		0.38***	0.02	–0.13***	0.07***
Leverage	0.06***	0.09***	0.01	0.05***	0.02	0.03	0.24***		–0.32***	–0.40***	0.12***
ROA	–0.11***	–0.09***	0.19***	0.01	0.13***	0.01	–0.10***	–0.27***		0.57***	–0.17***
IntCov	–0.21***	–0.09	0.11***	0.05***	0.13***	–0.03	–0.07***	–0.30***	0.62***		–0.18***
PRate	0.77***	0.01	0.18***	–0.25***	–0.36***	0.09***	–0.13***	–0.10***	0.01	–0.07***	

Note: The sample consists of 6,218 firm-year observations during 1996-2006 taken from the Taiwan Economic Journal database. See Table 2 for variable definition. Pearson correlations of public (private) companies are reported below (above) the diagonal. *, **, *** indicate significance at 10%, 5%, or 1% respectively.

Table 4. Regression results on bank loan interest rate (number of observation = 6,218)

Variable	sign	Model 1	Model 2	Model 3	Model 4	Model 5
Intercept (b_0)	?	1.728***	1.759***	1.757***	1.781***	6.398***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Private (b_1)	+	0.803***		0.805***	0.703***	0.227*
		(0.000)		(0.000)	(0.000)	(0.090)
Family (b_2)	?		–0.029	-0.051	-0.088**	-0.090**
			(0.446)	(0.164)	(0.034)	(0.024)
Private × *Family* (b_3)	?				0.168*	0.114
					(0.059)	(0.187)
BoardHold (b_4)	−					-0.007***
						(0.000)
BlockHold (b_5)	−					-0.003
						(0.126)
IndBoard (b_6)	−					-0.168***
						(0.000)
Group (b_7)	?					0.126**
						(0.022)
Private × *BoldHold* (b_8)	?					0.000
						(0.939)
Private × *BlockHold* (b_9)	?					0.002
						(0.428)
Private × *IndBoard* (b_{10})	?					-0.090
						(0.150)
Private × *Group* (b_{11})	?					0.085
						(0.388)
Size (b_{12})	+					-0.323***
						(0.000)
Leverage (b_{13})	+					2.104***
						(0.000)
ROA (b_{14})	−					0.001
						(0.725)
IntCov (b_{15})	+					-0.520***
						(0.000)
PRate (b_{16})	−	1.054***	1.109***	1.055***	1.054***	0.993***
		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Adj. R^2		0.6150	0.5950	0.6152	0.6153	0.6781
F-statistic		4968.73	4569.21	3313.63	2487.15	819.65
p-value		(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
H_0: $b_2 + b_3 = 0$					0.080	0.024
					[0.311]	[0.757]

*, **, *** indicate significance at 10%, 5%, or 1% respectively. See Table 2 for variable definitions. Numbers reported in parentheses (brackets) are two-tailed *p*-values of the t-statistics (*F*-statistics).

Regression results

Table 4 reports the findings from estimating equation (1) using the ordinary least squares (OLS) method. To get a clearer picture on how the variables *Family* and *Private* affect *COD*, I provide five OLS models. In Column 1, the significantly positive coefficient of *Private* (b_1), 0.803, means that, on average, the *COD* for private firms is larger than that of public firms. In Column 2, the insignificantly negative coefficient of *Family* (b_2), –0.029 (p-value = 0.446), means that, on average, *Family* has no impact on the *COD*. In Column 3, the positive coefficient of *Private* (b_1), 0.805 with p-value < 0.01, and the negative coefficient of *Family* (b_2), –0.051 with p-value = 0.164). The result is consistent with Column 1 and Column 2.

As for the interaction effect of *Family* and *Private*, in Column 4, the coefficient of *Private* × *Family* (b_3), 0.168 with p-value < 0.10, reveals that the *COD* is higher for private firms than that of public firms. In fact, a further joint test of the sum of $b_2 + b_3$ (0.08, p-value =0.311) finds that there exists no impact of *Family* on *COD* if the observations is private firms. This evidence confirms the hypothesis that prior literature finding evidence that family companies can enjoy lower of financing cost because of the *lack of market perspective*. According to the evidence, public family firms enjoy lower financing costs because they face a stock market in which family reputation is valuable. However, there is no relation between private family firms and loan financing costs owing to lack of a "market" to price reputation, which results in lack of incentive to make reputation built.

Column 5 provides the results of the full model, which includes four parts: *Private*; the corporate governance variables examined in this study (hereafter *CG*) and the interaction of *CG* and *Private*; firms' financial characteristics (*Size*, *Leverage*, *ROA*, and *IntCov*); and prime interest rate (*PRate*). I explain the results in that sequence.

First, the estimated coefficient of *Private*, b_1 (0.227, p-value < 0.10), is still significantly positive. Next, the negative estimated coefficient of *Family*, b_2 (–0.090, p-value < 0.05); the positive estimated coefficient of *Private* × *Family*, b_3 (0.114, p-value = 0.187); the insignificance of the sum of $b_2 + b_3$ (0.024, p-value = 0.757) are largely consistent with the findings in Column 4. The analysis of the effect of remaining CGs reveals that, in public firms, I find significantly negative coefficients on *BoardHold* (–0.007, p-value < 0.01) and *IndBoard* (–0.168, p-value < 0.01), are consistent with the expectation based on prior literature. These findings suggest that firms with greater board equity ownership or more independent board are associated with a lower *COD*. Regarding the effect of *BolckHold* (–0.003, p-value = 0.126) on decreasing *COD* is only modest. On the other hand, the coefficient of *Group* is significantly positive (0.126, p-value < 0.05), suggesting that firms being a group members have a higher cost of debt. I, however, do not find there are different effects between public and private samples because none of the estimated coefficients, b_8, b_9, b_{10} and b_{11}, is significant at the conventional analysis level. These findings imply that, except for *Family*, the effect of governance mechanism on the cost of debt is similar between public and private samples, at least in this study.

The third part in Column 5 documents how firms' financial characteristics affect *COD*. As expected, firms with a larger size (*Size*) or higher interest coverage ratio (*IntCov*) are associated with a lower *COD*, financial leverage (*Leverage*) is strongly positively related to the *COD*. Surprisingly, the only exception is the estimated coefficient of *ROA* is insignificant. I provide two possible reasons to explain this insignificant finding on *ROA*. One is that the banks proving loan face downside risk but without right of sharing upside potential, thus, *ROA* is less important for creditors than to general shareholders. The other is that the correlation between *ROA* and *IntCov* is pretty high in Table 3.[11] Finally, as expected and consistent with Column 1 to Column 4, *PRate* (0.993, p-value < 0.01) is positively related to *COD*.

5. Conclusion and Discussion

In attempt to bridge together research on the influence of listing status on corporate reporting behavior and research on exploring the effect of governance attributes on cost of debt financing, the analysis focuses on two firm-specific factors and an interaction effect that are deemed to affect the financing cost: (1) a firm's listing status (that is, publicly traded versus private); (2) the role of family control, and (3) the interaction effect of listing status and family control.

I explore the effect of firm's listing status and active role of family members in the management or the corporate board, and its interaction effect, on the cost of debt financing by using a unique data set of bank loan information disclosed by publicly traded and private firms in Taiwan. Different from studies commonly adopt yield spreads of bonds as the measure for cost of debt financing, interest rate a firm paid to obtain loan from banks is used in this research.

The findings are consistent with the proposition that the capital market plays a constructive role in enhancing earnings quality, and firms provide quality information can benefit from lowering their financing cost of debt. The analysis also shows that

11 The estimated coefficient of *IntCov* is significant because I adopt a *dummy* measure for it (see Table 1 variable definition). If I use the traditional measure, a *continuous* one, I also find it is insignificant.

strong governance is beneficial for both public and private firms. Interestingly, the evidence indicates that except for the role of family, listing status has no significant impact on all governance variables. In other words, commercial lenders in this study price indifferently for good governance mechanisms regardless of public or private firms. With regards to the finding that family firms provide incremental importance beyond the influence of being listed, indicating a confirmation to the lack of market perspective, which suggests that the family effect requires a capital market to validate.

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