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# Family Control and Financing Decisions

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## Abstract

*This study uses a comprehensive European dataset to investigate the role of family control in corporate financing decisions during the period 1998–2008. We find that family firms have a preference for debt financing, a non-control-diluting security, and are more reluctant than non-family firms to raise capital through equity offerings. We also find that credit markets are prone to provide long-term debt to family firms, indicating that they view their investment decisions as less risky. In fact, our empirical results demonstrate that family firms invest less than non-family firms in high-risk, research and development (R&D) projects, but not in low-risk, fixed-asset capital expenditure (CAPEX) projects, suggesting that fear of control loss in family firms deters risk-taking. Overall, our findings reveal that the external financing (and investment) decisions of family firms are in greater (lesser) conflict with the interests of minority shareholders (bondholders).*

**Keywords:** *family firms, financing decisions, equity issues, debt issues, capital structure*

**JEL classification:** *G32*

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## 1. Introduction

Most companies around the world are controlled by families, including more than half of all public corporations in the USA and Europe and more than two-thirds in Asia (La Porta *et al.*, 1999; Claessens *et al.*, 2000; Faccio and Lang, 2002; Gadhoun *et al.*, 2005; Masulis *et al.*, 2011).<sup>1</sup>

Despite the prominent presence and economic importance of family businesses there has been a paucity of research about the financing behaviour of family firms. In fact, we are not aware of any research that directly attempts to understand the financing decisions of family-controlled public firms. Since the seminal work of Jensen and Meckling (1976), the question of how agency costs impact financing policy has dominated the literature, but, with the exceptions of Anderson *et al.* (2003) and Ellul (2009), little, if any, attention has been given to the question of how family ownership structure affects financing policy.<sup>2</sup> This study addresses this gap in the literature by investigating the financing behaviour of family and non-family firms. Since family firms are usually controlled by shareholders with relatively large stakes in the organisations they head, the financing decisions in family firms are more likely to be influenced by the dominant shareholder's incentives than those of diversified (outside) shareholders.<sup>3</sup> Therefore, we postulate that control motives may influence the financing decisions of family firms and conduct empirical tests to address this issue in the European context. Furthermore, fear of control loss is likely to have a direct influence on risk-taking and, therefore, encourage family firms to invest in less risky projects. Continental Europe, with its stable ownership of family firms (Franks *et al.*, 2010) and its developed financial markets, provides an ideal testing ground to study the role of control incentives on corporate financing decisions.

Understanding how family control impacts the external financing decisions of the firm is motivated by the second agency problem, the conflict of interest between controlling and minority shareholders. Surprisingly, prior literature on capital structure decisions has largely ignored owners' control motivations on a firm's finance choices, and the predictions of these theories, such as the trade-off and pecking order hypotheses, have been tested exclusively on non-family-owned public firms (Shyam-Sunder and Myers, 1999; Frank and Goyal, 2003, 2008; Leary and Roberts, 2010). In addition, while the prevalent view in the entrenched management literature has been that entrenched managers tend to issue less debt, family firms, generally viewed as corporate organisations run largely by entrenched managers, provide an ideal source from which

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<sup>1</sup> For example, Wal-Mart Stores in the USA, Toyota Motor Corporation in Japan, Arcelor-Mittal in the Netherlands/Luxembourg, A.P. Møller-Mærsk in Denmark, Roche Holding in Switzerland, Porsche in Germany, Colruyt in Belgium, Michelin in France, and Fiat in Italy, among others.

<sup>2</sup> Anderson *et al.* (2003), using a sample of US family firms, study the effect of family ownership on the agency costs of debt and find that family ownership reduces the cost of debt. With a sample of family firms from 36 countries over the period 1996–2004, Ellul (2009) investigates whether control motivations influence a firm's capital structure and shows that family firms have higher leverage ratios in countries where investor protection is high. While these studies are insightful, they do not examine the effects of family ownership on a firm's financing decisions.

<sup>3</sup> Harris and Raviv (1988), Israel (1991), and Stulz (1988) suggest that control motives can shape a firm's capital structure decisions.

to draw inferences about the relation between financing decisions and managerial entrenchment. Hence, from these perspectives, the financing behaviour of family-owned firms merits additional investigation.

This paper examines the external financing decisions of 777 large continental European firms during the period 1998–2008 and shows that the external financing policies of family-controlled firms are influenced by control considerations.<sup>4</sup> We find that family firms have a strong aversion to equity financing. Our evidence also reveals that debt financing is the most favourable choice in family-owned firms. These findings are consistent with the value of control hypothesis, which purports that controlling shareholders are reluctant to issue equity out of fear of diluting or relinquishing control.

Our results suggest that the potential agency conflict between family controlling shareholders and public shareholders explains why family firms, especially those in which a founder holds an influential position (CEO and/or chairperson of the board of directors), issue more debt, a non-control-diluting security. This implies that the conflict of interest between family shareholders and bondholders is less severe than the friction between diversified non-controlling shareholders and bondholders. This further suggests that bondholders view family ownership as a corporate structure that better protects their interests. In addition, we find that the appeal of debt financing in family firms is related to the adverse selection costs of equity arising from information asymmetries. Our evidence also shows that family firms have a preference for low-risk investments. Finally, we find that credit markets provide more long-term debt to family firms, indicating that they view their investment decisions as less risky.

This study adds to the existing literature, which has focused mainly on the performance, investment (acquisition), control (i.e., wedge between cash flow and control rights), CEO succession decisions of family firms (Bennedson *et al.*, 2007), and, recently, the existence and evolution of family business groups.<sup>5</sup> Studies that examine

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<sup>4</sup> Studying the financing behaviour of family firms using cross-country data allows us to (i) overcome typical endogeneity concerns that plague single-country studies and (ii) exploit cross-country differences. Besides enhancing the external validity of this study's findings, the use of cross-country data allows one to account for variability in characteristics such as political and economic institutions (i.e., contracting and property rights), ownership, taxes, and capital market conditions, which is not feasible with country-level data.

<sup>5</sup> Almeida and Wolfenzon (2006) provide a theory of group formation where pyramidal structures exist because they create a financing advantage compared to direct family ownership by leveraging the internal capital under the family's control. In particular, firms that have cash flows and/or assets that are difficult to pledge to outside investors should be placed in pyramids. Also, new firms that represent low NPV investments are more likely to be placed in pyramids. Because of the anticipation that they are used to make low NPV acquisitions, holding companies in family business groups are traded at discount compared to other listed firms. This theory is tested and supported by Almeida *et al.* (2011), who investigate the evolution of Korean *chaebols* where cross-shareholdings and pyramids are common. Masulis *et al.* (2011) provide evidence that group structures exist not only to perpetuate control, but also to alleviate financing constraints. Finally, Dewaelheyns and Van Hulle (2010) examine internal/external debt mix across the subsidiaries in Belgian business groups. Differently from these papers and similarly to Franks *et al.* (2010), we focus on the trade-off between family and non-family ownership rather than on the ownership structure and evolution of groups.

the relation between family ownership and firm value have produced mixed results.<sup>6</sup> A different strand of the literature reveals that control considerations tend to make family firms reluctant not only to conduct acquisitions, but also to accept takeover offers (Sraer and Thesmar, 2007; Klasi, 2007; Bauguess and Stegemoller, 2008; Caprio *et al.*, 2011). Furthermore, Anderson *et al.* (2003) find that family ownership lowers the cost of debt financing as a result of fewer agency conflicts between equity and debt holders, suggesting that bondholders view family ownership as a safety device protecting their interests. The preference of debt financing in European family-controlled firms documented in our study supports the view of Anderson *et al.* (2003), who argue and show that US family firms have a lower agency cost of debt and a higher debt level than non family firms, a result that is also confirmed by Ellul (2009), who shows that family firms have higher leverage ratios in countries with high investor protection. This result is also consistent with Faccio and Masulis (2005), who find that in Europe controlling shareholders, who are mostly families, prefer to use cash as method of payment in acquisitions for control considerations.

Finally, since family firms can be considered as entrenched managed firms, our study also contributes to the entrenched management literature, which often holds the view that entrenched managers tend to avoid debt financing to reduce firm-specific risk in their undiversified portfolios (Berger *et al.*, 1997). Our study, however, shows that family firms issue more debt mainly due to control considerations, suggesting that the risk reduction motive in family firms is weaker than the control motive. Our findings are also consistent with theoretical papers (e.g., Fulghieri and Suominen, 2008) arguing that poor corporate governance (entrenched firms) can lead to greater debt financing and the empirical studies (e.g., John and Litov, 2010); which show that firms with entrenched managers (i.e., weak governance) select less risky investments and use more debt finance.

Other recent literature has produced important evidence that control motives affect the choice of external financing. In a conceptually related paper to our study, Brav (2009) shows that UK private firms, relative to their public counterparts, rely almost exclusively on debt financing. This has led the author to conclude that debt financing is motivated by control considerations. Given that family firms are typically controlled by a large, often uncontested shareholder who enjoys enormous private benefits of control (e.g., Faccio and Lang, 2002) and who focuses on maximising his or her own benefits rather than those of all shareholders (Bertrand and Schoar, 2006), our results are also consistent with the view that firms controlled by a major shareholder are reluctant to use equity financing when doing so causes the controlling shareholder to risk losing control (Amihud *et al.*, 1990; Stulz, 1988).

This paper makes additional contributions to the literature. First, it shows that the financing behaviours of family- and non-family-controlled firms are sharply different. Specifically, the evidence of this study shows that family-controlled firms rely more on debt for their funding needs, while they are averse to equity financing. To our knowledge, there is no prior empirical evidence on this issue. The financing patterns of European

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<sup>6</sup> For example, Anderson and Reeb (2003), Villalonga and Amit (2006, 2009), Andres (2008), and Franks *et al.* (2010) document a positive overall effect of family control on firm performance, whereas Claessens *et al.* (2002), Cronqvist and Nilsson (2003), Bennedsen *et al.* (2007) find the opposite. Villalonga and Amit (2006) and Barontini and Caprio (2006) show that the use of control-enhancing mechanisms such as multiple share classes, pyramids, and voting agreements tend to substantially reduce family-owned firm value.

family firms appear to be consistent with Brav's (2009) evidence for UK private firms, which demonstrates that they rely heavily on debt. Second, we provide evidence of the role of firm credit quality on the external financing choices for family and non-family firms. Our results show that credit market reputation increases the likelihood of equity issuance by reducing information asymmetries. Third, we examine whether debt maturity structures vary across family and non-family firms and find that family-controlled firms are viewed by credit markets as non-risk-seeking firms. Moreover, we confirm the non-risk-seeking behaviour of family firms by focusing on the nature of their investment decisions. The results show that family firms invest less than non-family firms in high-risk, research and development (R&D) projects, but not in low-risk, fixed-asset capital expenditure (CAPEX) projects.<sup>7</sup>

The rest of the paper proceeds as follows. Section 2 reviews the related literature and presents the hypothesis. Section 3 describes the sample selection and data sources and defines the variables. Section 4 analyses the propensity of family firms to issue equity and debt, respectively. Section 5 examines the relation between family ownership and debt maturity structure. Section 6 explores the role of information asymmetry, performance, and the investment policies of family firms. Section 7 presents our conclusions.

## 2. Literature Review and Hypothesis Development

Prior theory examines firms' financing choices in the context of information asymmetry, agency costs of debt, and the efficient renegotiation of debt claims. This theory does not distinguish, however, between family- and non-family-controlled firms. Although there is some evidence that family firms adopt very conservative strategies when it comes to corporate decisions such as acquisitions (Klasa, 2007; Bauguess and Stegemoller, 2008; Sraer and Thesmar, 2007; Caprio *et al.*, 2011); not much is known about the nature of their financing decisions and, in particular, whether their financing behaviour differs from that of non-family firms.

As originally observed by Demsetz and Lehn (1985) and Holderness and Sheehan (1988), controlling individual shareholders, and thus, by extension, families with a tight grip on ownership, value opportunities to consume perquisites more than corporate majority shareholders, especially because of non-pecuniary and non-transferable private benefits. Ownership concentration in family firms is tilted more toward the interests of family controlling shareholders in relation to firms with non-family shareholders. Hence, family-controlled firms are unlikely to make risky financing decisions (i.e., equity) that will dilute their power or even put their control at risk. Consequently, family-controlled firms are more likely to use debt than equity financing, since an increase in equity capital will weaken their equity stakes and undermine their controlling position.

Capital structure theories indicate that shareholders and creditors are not willing to supply funds when managers/owners have more information about the firm they manage than outside investors (Myers, 1984; Myers and Majluf, 1984) or the expectation of expropriation is high (Frank and Goyal, 2008). In family firms, the largest shareholders and often executives and/or directors are family members, who certainly have better information about investment opportunities and future cash flows than investors. Tunnelling can also be a relevant problem in family firms (Shleifer and Vishny, 1997). Consequently, since family firms are less transparent to outside investors, and equity

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<sup>7</sup> Campello *et al.* (2011) use a similar classification of firm investment.

is the most junior security in the capital structure and more sensitive to information asymmetry than debt, the cost of equity relative to debt will be much higher for family firms than for non-family firms. Therefore, equity financing will be less attractive than debt for family firms.<sup>8</sup> Considerations of the value of control, the higher cost of equity arising from information asymmetries, and wealth expropriation suggest that family firms are less likely to issue equity than non-family firms. Another reason that family firms may prefer debt financing relates to portfolio diversification (Anderson *et al.*, 2003). In fact, families typically invest a large fraction of their wealth in their own firms and, therefore, are interested in the firm's long-term survival and reputation, a concern they share with creditors. Debt financing, then, is probably more appealing to family firms, due to its lower cost arising from lower agency costs of debt relative to those for non-family firms. Consistent with this view, Anderson *et al.* (2003) and Ellul (2009) find that family firms have higher debt ratios than non-family firms in the USA.

### 3. Sample Selection, Variable Definitions, and Descriptive Statistics

#### 3.1 Sample selection and data sources

Using a large sample of European firms, this paper aims to examine the external financing decisions of family-controlled firms during the years 1998–2008. The focus of the analysis is to investigate the financing behaviour of family-controlled firms. In particular, we are interested in first mapping the financing preferences of family-controlled firms relative to non-family firms and, second, identifying the motives behind their financing decisions (i.e., issue equity versus debt). The empirical analysis centres on testing the effect of family control on firms' decisions to raise capital in the form of equity and debt. We also examine the impact of information asymmetry on the financing behaviour of family firms.

The starting point of our analysis is based on a sample of 4,058 publicly listed Western Continental European firms listed in Thomson's *Worldscope* database. We focus on relatively large companies, whose value in total assets (*Worldscope* item WC07230) exceeded US\$250 million at the end of 1997. This selection criterion reduces the original sample to 1,735 firms. We also exclude financial firms (Standard Industrial Classification, or SIC, 6000–6999) and regulated utilities (SIC 4900–4999). We also exclude firms with shareholder holdings greater than 95% of the equity capital, because these firms are usually about to be delisted. The final sample consists of 777 firms from the following countries: Belgium (24), Denmark (38), Finland (37), France (161), Germany (144), Italy (72), Luxembourg (two), the Netherlands (77), Norway (40), Spain (46), Sweden (64), and Switzerland (72). The sample consists of to the universe of non-financial publicly traded companies of this size in this geographical area. Since no source on ownership structures comparable to the SEC's EDGAR database exists in Europe, ownership data are obtained from databases like *Worldscope* and *Orbis* and in

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<sup>8</sup> Although previous empirical studies (Baker and Wurgler, 2002; Henderson *et al.*, 2006) have shown that equity financing is motivated by market timing considerations (equity overvaluation), family firms are less likely to be attracted by such windows of equity issuance opportunity, mainly because of the value of control, private benefits, and information asymmetry considerations.

stock market information repositories. This information is integrated with that disclosed in firms' annual reports, available on Orbis, in the 'investor relations' section of their websites, and in financial press.

We use Thomson's Worldscope database to determine whether a firm increases its debt obligation, including bank debt, in a given year. Similarly to Brav (2009),<sup>9</sup> a firm is defined as issuing debt if the change in total debt (i.e., the sum of short-term debt and long-term liabilities), divided by the starting-period total debt is larger than 10%. Total debt includes all types of interest bearing obligations, from bank loans to debt sold to the public. Following this definition, we find 2,424 debt issues in our sample period. Equity data are drawn from Thomson One Banker equity database for the period 1998–2008. We use the Thomson One Banker data to collect information about all the issuance activity of the 777 continental European firms. We then match issues and firms to identify equity issues involving our 777 sample companies. Over the period of investigation, we identify 498 equity offerings.

### 3.2 Variable definitions

We use detailed ownership data for the 777 family- and non-family-controlled companies in our sample.<sup>10</sup> The starting point for our analysis, relates to the cash-flow rights and voting-rights held by the largest direct shareholders. If the largest shareholder is a corporation, its owners are traced to obtain voting rights and cash flows rights of the ultimate owner. A shareholder of a corporation is considered its ultimate owner at the 10% threshold if she controls it via a control chain whose links all exceed the 10% of the voting rights. We define a firm as family-controlled if a family or an individual is the largest ultimate owner (in terms of voting rights) at the 10% threshold. In choosing this threshold, we follow La Porta *et al.* (1999), Faccio and Lang (2002), Dahya *et al.* (2008), Maury (2006), Laeven and Levine (2009).<sup>11</sup>

We also construct another family-related measure, *Founder CEO/Chair*, to identify whether a family firm is managed by a CEO or chairperson who is the founder. This variable is intended to capture the family effect on firm financing decisions in more tightly controlled family firms. In addition to the family control measures used in this study, we compute the cash flow and voting rights of the largest shareholders, according to the methodology developed by La Porta *et al.* (1999), to construct and employ the following ownership-related variables in the empirical analysis: the voting rights of the ultimate owner, *VR UO*; the difference between the voting and cash flow rights of the ultimate owner, *Wedge UO*; and the voting rights of the second largest shareholder, *VR2nd LS*. The *VR UO* is expected to have a negative impact on new equity issuance, because it can dilute the ownership stakes of large shareholders and expose the firm to takeover threats. The *Wedge UO* variable is intended to gauge the entrenchment effect of excess control rights. It should exert a negative influence on equity and debt issuance, since both shareholders and lenders are reluctant to purchase securities issued by firms with a high wedge, due to the ability of controlling shareholders

<sup>9</sup> Brav (2009) use a lower threshold (5%) to determine if a firm is a debt issuer or not.

<sup>10</sup> The European dataset on ownership structure was generously made available by Lorenzo Caprio and Alfonso Del Giudice, and was also used in Caprio *et al.* (2011).

<sup>11</sup> La Porta *et al.* (1999) and Faccio and Lang (2002) also use 20% as a threshold. Other authors employ different thresholds, usually 20 or 25% (Andres, 2008; Franks *et al.*, 2010).



to protect their own private benefits. Consistent with this view, Masulis *et al.* (2009) show that managers with greater excess control rights over cash flow rights are more prone to pursue private benefits at shareholders' expense. Finally, *VR2nd LS*, measures the monitoring role of the second largest shareholder. Assuming indivisible private benefits of control, Pagano and Roell (1998) argue that the second large block holder will monitor to make sure that the firm value is maximised and also predict that overmonitoring increases with the amount of outside finance to be raised. However, Maury and Pajuste (2005) model that incentives to collude with or to monitor the largest shareholder are significantly affected by the type of the blockholder. In fact, they find that families tend to collude with family controlling shareholder, while financial institutions monitor the controlling shareholders. A number of theoretical papers derive different predictions on the behaviour of multiple large shareholders. Bennedsen and Wolfenzon (2000) demonstrate that large owners compete to form controlling coalitions because there are private benefits from control and controlling coalitions with small cash-flow rights have the incentives (small cash-flow rights) and ability (sufficient voting rights) to divert corporate resources for private gain. They also show that when cash-flow rights are distributed unevenly across shareholders, the likelihood of a winning coalition with small cash-flow rights goes up. Other theoretical models (Zwiebel, 1995; Gomes and Novaes, 2005) show that large shareholders form coalition to share private benefits.

In addition, we control for several other influences that are known from previous literature to have an impact on the propensity to issue equity. In all tables herein, the values of these variables (including ownership variables) refer to the end of the previous calendar year. Specifically, we use the following control variables in the analysis.

The variable *Age*, a proxy for the firm's age, is defined as the difference between the sample year and the year the company was established.<sup>12</sup> Lack of collateral value and cash flows in young firms make equity financing the only choice.

The firm's market value of equity is *Size* (Worldscope item WC07210).<sup>13</sup> In their survey of trade-off and pecking order theories of debt, Frank and Goyal (2008) document that small firms actively use equity financing, whereas large firms rely more on corporate bonds.

The growth rate of sales, *Sales growth*, is defined as the growth rate in total sales during the previous year (WC07240). Strong sales growth is likely to increase the company's cash flows, thus reducing the need for external financing. Moreover, strong sales growth can also signal growth opportunities. If a firm has growth opportunities but not enough free cash flows, it may have to raise external capital. Growth opportunities exacerbate the debt overhang problem (Myers, 1977).

Return on assets, *ROA*, is a measure of the firm's profitability defined as earnings before interest, taxes, depreciation, and amortisation (EBITDA) over total assets (WC18198/WC02999). Firms that are doing well generate more cash flows, decreasing the need to raise capital from external sources.<sup>14</sup>

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<sup>12</sup> The results do not change if we use the difference between the sample year and the firm's initial public offering (IPO) year as a proxy for age.

<sup>13</sup> Our regressions use the log of the market value of the company's equity as a proxy for size.

<sup>14</sup> The results remain largely unchanged when using the cash flow variable, defined as the ratio of the firm's cash flow to total assets (WC04201/WC02999). The cash flow represents the sum of net income and all non-cash charges or credits.

The firm's liquid assets, *Cash holdings*, is the ratio of cash plus tradable securities to total assets (WC02001/WC02999). Cash-rich firms can use their cash reserves to fund their investment projects without issuing any new security.

The firm's debt ratio, *Leverage*, is defined as the ratio of the book value of financial debt to the book value of total assets (WC03255/WC02999). Lemmon and Zender (2010) argue that debt capacity plays an important factor in the choice of external financing. If a firm requires external funds and has not reached its debt capacity, then it can raise more debt. However, if a firm has issued too much debt, then issuing equity may be its only real option. Leverage can also affect the decision to issue new debt, because part of this debt may be close to maturity. Firms can issue new debt to refinance previous issues or roll over old debt.

The ratio of tangible assets to total assets is *Collateral* (WC02501/WC02999). Collateral increases debt capacity and therefore makes it easier for a firm to raise new debt capital (Almeida and Campello, 2007). Firms with a high ratio of fixed (tangible) assets to total assets are also more likely to rely on public debt (Denis and Mihov, 2003).

The market-to-book ratio, *M/B*, is defined as the ratio of the market value of equity in US dollars (WC07210) to common equity (WC07220), and is used to capture the extent to which overvaluation (equity mispricing) motivates external financing.

The tax advantage of debt is denoted *Tax Adv. Debt*. Miller (1977) shows that firm value is a positive function of the debt tax shield, which depends on corporate and personal tax rates. We use data from the Organisation for Economic Co-operation and Development (OECD) Tax Database to compute the tax advantage measure of debt using the Miller (1977) formula.<sup>15</sup>

A firm's reputation in the credit markets is represented by *Rating*, a binary variable that takes the value of one if the firm has a Standard and Poor's (S&P) rating (either short-term or long-term debt) at the end of the year. We obtain S&P ratings from S&P Credit Ratings.<sup>16</sup> Denis and Mihov (2003), document that firms with an established reputation in credit markets are more likely to issue public debt. The authors also use credit ratings as a proxy for credit market reputation. Similarly, Faulkender and Petersen (2006) find that firms with a credit rating have more debt in their capital structure.

To gauge the magnitude of the adverse selection costs of equity arising from information asymmetries in family and non-family firms, we use the stock price synchronicity,  $R^2$ , which measures the amount of market-wide information relative to firm-specific information (Roll, 1988; Morck *et al.*, 2000b) rooted in stock prices. A high (low)  $R^2$  indicates high (low) information asymmetry, since a larger (smaller) amount of market-wide (firm-specific) information is used by investors to value equity (future cash flows). The stock price synchronicity is the residual sum of squares from a market model regression of daily stock returns for each sample year. We also use the number of analysts following a firm from the IBES database (*No. Analysts*) as an alternative proxy

<sup>15</sup> The corporate income tax rate is from the OECD Tax Database, Table II.1, column 5; the personal tax rate on equity income is from Table II.4 (overall statutory tax rates on dividend income), column 10. We use different sources, including OECD publications and various websites, to obtain the statutory tax rates on interest income. If interest income is taxed as ordinary income, we use the highest marginal tax rate from Table I.1 (central government personal income tax rates and thresholds) of the OECD Tax Database. These tables are available at [www.oecd.org/ctp/taxdatabase](http://www.oecd.org/ctp/taxdatabase).

<sup>16</sup> S&P Credit Ratings provide a history of short- and long-term commercial credit and corporate bond ratings for both issuer/entity and issue/instrument levels.

for information asymmetry. To the extent that analysts monitor corporate managerial behaviour, firms with high (low) analyst coverage are expected to have lower (higher) information asymmetries.

### 3.3 Descriptive statistics

Table 1 summarises the descriptive statistics of the variables for the 777 companies in our sample.<sup>17</sup> As is common in continental European listed companies, controlling shareholders own, on average, a remarkably large fraction of company voting rights (39.86%). Consistent with Faccio and Lang (2002), we observe an important divergence from the one-share, one-vote principle in our sample of firms. While the median is zero, the average wedge, *Wedge UO*, is 9.58%. The average firm does not have a second large blockholder who can monitor and challenge the controlling shareholder. In fact, the average voting rights of the second blockholder are only 6.62%.<sup>18</sup> We also notice that the companies in our sample are relatively old, with an average age well over 89 years (median 87 years).

Columns IV to IX of Table 1 highlight the differences between family and non-family firms. In family firms, the controlling shareholder owns a larger fraction of the voting rights (49.91%) than their counterparts in non-family firms (26.20%). Moreover, the second largest blockholder, who can monitor and challenge the controlling shareholder, is relatively weak in both family and non-family firms. The controlling shareholders in family firms appear to rely more on control-enhancing devices to create a positive wedge. In fact, the average wedge is 13.57% in family firms, but only 4.18% in non-family firms. There are additional differences between family and non-family firms: Most evidently, family firms are smaller than non-family firms (median market cap US\$746 million versus US\$1.106 billion), hold more cash (median cash holding 8.82% versus 6.6%), and are more levered (median leverage 25.6% versus 0.24%), but have less collateral (median collateral 26.26% versus 30%). This finding suggests that the external financing choice of family firms tilts in favour of debt. Their profitability does not appear to be different from that of non-family firms, even though they have considerably higher growth in sales. While family firms, are younger than non-family firms, with a median age of 83 years (versus a median age of 97 years for non-family firms), they cannot be considered young companies in absolute terms.

Finally, stock return synchronicity ( $R^2$ ), the first measure of information asymmetry, for family-controlled firms is significantly lower (with a mean of 0.1284 and a median of 0.0729) than for non-family firms (with a mean of 0.1735 and a median of 0.1106). Analyst coverage (*No. Analysts*), the second proxy for information asymmetry, based on a smaller number of observations due to lack of data, indicates that family firms are covered by fewer analysts than non-family firms. In fact, the average (median) family firm is followed by 12.38 (10) analysts, whereas the average (median) non-family

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<sup>17</sup> To avoid large outliers affecting the results, we winsorised all financial variables at 0.01 and 0.99.

<sup>18</sup> The voting rights of the second largest shareholder ranges from a maximum of 41.5% to a minimum of 0% (i.e., no second largest blockholder is present). The second largest shareholder owns more than 5% of the firm's voting rights in 3,344 firm-year observations (50.35% of the sample). For this subsample of firms, the average (median) voting rights of the second largest blockholder are 12.14% (10%).

Table 1  
Descriptive statistics of sample companies

This table reports the descriptive statistics of the 777 sample companies, both family and non-family firms. A firm is defined as a family (non-family) firm if its ultimate owner is (is not) a family member. The variable *VR UO* represents the ultimate owner's voting rights in the firm; *Wedge UO* stands for the difference between cash flow and voting rights held by the ultimate owner; *VR 2nd LS* measures the voting rights held by the second largest shareholder in the firm; *Age* is the difference between the sample year and the year the company was established; *Size* is the firm's market value of equity (Worldscope item WC07210); *Collateral* is the ratio of tangible assets to total assets (WC02501/WC02999); *Cash Holding* is the ratio of cash plus tradable securities to total assets (WC02001/WC02999); *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999); *M/B* is the ratio of the market value of equity in US dollars (WC07210) to common equity in US dollars (WC07220); *ROA* is the return on assets, defined as EBITDA divided by total assets (WC18198/WC02999); *Sales Growth* is the growth rate in total sales (WC07240); *R<sup>2</sup>* is the residual sum of squares from a market model regression of daily stock returns for the calendar year; and *No. Analysts* is the number of financial analysts covering the firm. Observations are in firm-years over the period 1997–2007 (at the starting date, January 1, 1997, 434 of the 777 companies were family controlled, according to our definition, while 343 are not). \*\*\*, \*\*, \* and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively, for the tests of difference in means and medians between family and non-family firms.

	Full sample			Family firms			Non-family firms		
	I Mean	II Median	III No. Obs.	IV Mean	V Median	VI No. Obs.	VII Mean	VIII Median	IX No. Obs.
VR UO	39.8550	38	6618	49.9054	50.6000	3811	26.2098***	16.9***	2807
Wedge UO	9.5812	0	6613	13.5661	9.2999	3806	4.1782***	0***	2807
VR 2nd LS	6.6214	5.03	6617	6.8266	5.0000	3811	6.3426**	5.12*	2806
Age	89.6196	87	6478	86.5469	83.0000	3754	93.8543***	97.0000***	2724
Size	5331.298	867.6445	6486	3677.54	745.589	3734	7575.17***	1106.48***	2752
Collateral	0.3058	0.2766	6510	0.3005	0.2626	3747	0.313***	0.3009***	2763
Cash holding	0.1082	0.0790	6506	0.1183	0.0882	3744	0.0946***	0.0661***	2762
Leverage	0.2561	0.2493	6511	0.2614	0.2560	3748	0.2489***	0.2427**	2763
M/B	2.4090	1.7269	6487	2.4255	1.7205	3740	2.3866	1.7354	2747
ROA	0.1303	0.1256	6435	0.1314	0.1248	3711	0.1289	0.1262	2724
Sales growth	0.0845	0.0577	6618	0.0893	0.0616	3811	0.0779**	0.0529***	2807
R <sup>2</sup>	0.1475	0.0861	6570	0.1284	0.0729	3782	0.1735***	0.1106***	2788
No. analysts	14.2488	12.0000	5828	12.3810	10.0000	3260	16.6199***	15.0000	2568

Table 2

## Equity and debt sample distribution for family and non-family-controlled firms

This table reports statistics for equity, and total debt issues made by 777 European sample firms during the period 1998–2008. A firm is defined as issuing equity if the Equity database of Thomson One Banker reports at least an equity issue for the firm in the full sample period (Panel A) or in a given year (Panels B and C). A firm is defined as issuing debt if the change in total debt (i.e., the sum of short-term debt and long-term liabilities), divided by the starting-period total debt is larger than 10% at least once over the full sample period (Panel A) or in a given year (Panels B and C). Total debt includes all types of interest bearing obligations, from bank loans to debt sold to the public. Panel A reports the number of firms with at least one issue (issuing firms) for the full sample of 777 non-family (344) and family (433) firms. Non-issuing firms are defined as firms that did not engage in issuance activity during 1998–2008. A firm is defined as a family (non-family) firm if its ultimate owner is (is not) a family. Panel B reports the number of issues and the amount raised (proceeds in mil. US\$) for equity issues and debt for non-family and family firms. Panel C reports the issuance sample distribution by year.

Panel A: Issuing firms						
	Issuing firms	All firms (777) Non-issuing firms	% Issuing firms	Issuing firms	Family (433) Non-issuing firms	% Issuing firms
Equity	240	537	30.89%	109	324	25.17%
Total debt	703	74	90.48%	389	44	89.83%
All issues	709	68	91.25%	393	40	90.76%

## Panel B: Number of issues and proceeds

	Equity issues	Proceeds	Debt issues	Change in total debt
Family	210	85,851.81	1415	504,237.4
Non-family	288	239,873.7	1009	459,928.8
Total	498	325,725.5	2424	964,166.2

## Panel C: Issuance distribution

Year	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	Total
Equity	77	47	44	53	45	48	51	53	28	32	20	498
Debt	337	351	356	248	139	120	116	214	152	179	212	2424

firm is followed by 16.62 (15) analysts. Hence, based on these two measures, it is rather difficult to assess how much firm-specific information is available to outside investors (information asymmetry) in family firms, and, consequently, how it affects their financing decisions. This is an issue that we address later in the paper.

We turn now to the external financing activities of the 777 sample companies. Table 2 reports their financing behaviour in terms of issuing equity and fund raising through total debt in the years 1998–2008. As shown in Panel A of Table 2, almost all the firms in our sample (709 firms, 91.25% of all firms) engaged in some kind of external financing at least once during the sample period. More firms issued debt (703, or 90.48% of all firms) than equity (240, or 30.89% of all firms) and this pattern appears to hold for family and non-family firms, debt preference in family firms is more pronounced (389 debt versus 109 equity) than in non-family firms (314 debt versus 131 equity). Panel B of Table 2 shows that family firms engage in less equity and more debt financing than non-family firms. These figures confirm that family firms rely less on external financing

than non-family firms. Interestingly, both family- and non-family-controlled firms raise more debt than equity. In general, firms across Europe raised more debt than equity capital during 1998–2008. Panel C of Table 2 shows the number of debt and equity issues by year. Both equity and debt issues peaked at the beginning of the sample period, during the dot.com boom.

#### 4. Propensity to Raise Capital

##### 4.1 Equity financing

This section examines the propensity of firms to issue equity. Table 3 presents the results of logit regressions with a binary dependent variable that takes the value of one if in year  $t$  a firm makes at least one issue of equity.<sup>19</sup> This dummy is then regressed on the firm's age and a set of financial variables for the year  $t - 1$ . These regressions also include family variables to gauge the role of family control on a firm's external fund raising and three ownership variables: the ultimate owner's voting rights, *VR UO*; the difference between the voting rights and cash flow rights of the ultimate shareholder, *Wedge UO*; and the voting rights of the second largest shareholder, *VR2nd LS*. The analysis is conducted at the firm-year level. All regression models include year and industry fixed effects. Industry fixed effects are based on Fama and French's 48-industry classification.<sup>20</sup> In unreported regressions, we also account for country fixed effects, but, since they do not significantly alter the conclusions of our analysis, these results are not reported here but are available from the authors upon request.<sup>21</sup>

As discussed earlier, family control is particularly important in the decision to issue equity. In fact, the coefficient of *Family*, in column I of Table 3, is negative and statistically significant, indicating that the probability of issuing equity is considerably lower in family-controlled firms than in non-family firms, accounting for other effects. This result is consistent with the value of control hypothesis, which predicts that family-controlled firms are less likely to issue equity for control considerations. In fact, this result is also consistent with the equity issuance activity of family firms, reported in Table 2, which demonstrates that they rely less on equity financing. The *Family* coefficient in the regression indicates that the average family firm is approximately 13% less likely to issue equity than non-family firms across European countries, which is

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<sup>19</sup> In unreported regressions, we use as dependent variable a dummy for equity issue based on the share issuance variable of McLean *et al.* (2009). We consider a firm as equity issuer in a given year if the change in the share issuance variable is at least 10%. Results in these regressions are similar to those presented in Table 3.

<sup>20</sup> Family firms are distributed across all the 48 Fama and French industries with the only exception of Industry 5 (Tobacco products), which however counts only 11 firm-year observations. No industry accounts for more than 8% of the family-firm observations, with the highest percentage (7.94%) of family firms in Industry 42 (Retail).

<sup>21</sup> In unreported regressions, we also account for market and credit market conditions by including the market return and the spread between long- and short-term interest rates. These variables are generally not significant, and their inclusion does not affect our results.

Table 3  
Propensity to issue equity in family firms

This table reports estimates of logit regressions where the dependent variable is a binary variable that takes the value of one if the sample firm makes, in year  $t$ , at least one issue of equity during the period 1998–2008. Data on equity issues are from Thomson One Banker. The variable *Family* is a dummy that takes the value of one when the controlling shareholder is a family. *Founder CEO/Chair* is a dummy variable that takes the value of one when the founder is the CEO or serves as chair of the board in a family firm, and *Family\*Rating* (*Founder CEO/Chair\*Rating*) is a dummy variable that takes value of one if the family firm (family firm where the founder is CEO/chair) has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. *VR UO* is the ultimate owner's voting rights in the firm; *Wedge UO* is the difference between cash flow and voting rights held by the ultimate owner; *VR 2nd LS* is the voting rights held by the second largest shareholder in the company. *Age* is the difference between the sample year and the year the company was established. *Age* is the difference between the sample year and the year the company was established;  $\text{Ln}(\text{Size})$  is the log of the firm's market value of equity (Worldscope item WC07210); *Collateral* is the ratio of tangible assets to total assets (WC02501/WC02999); *ROA* is the return on assets, defined as EBITDA divided by total assets (WC18198/WC02999); *Cash Holding* is the ratio of cash plus tradable securities divided by total assets (WC02001/WC02999); *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999); *M/B* is the ratio of the market value of equity in US dollars (WC07210) to common equity in US dollars (WC07220); *Sales Growth* is the growth rate in total sales in the previous year (WC07240); and *Tax Adv. Debt* is the tax advantage of debt in the issuer's country in year  $t$ , computed as in Miller (1977). Corporate and personal tax rates are from the OECD Tax Database and Internet sources. *Rating* is a dummy variable that takes value of one if the firm has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	I	II	III	IV
Constant	-19.4828*** [0.6856]	-19.5042*** [0.7090]	-19.9585*** [0.8023]	-21.3511 [0.7669]
Family	-0.5259*** [0.1331]	-0.5402*** [0.1386]	-0.7186*** [0.1428]	-0.7265*** [0.1505]
Founder CEO/Chair		0.0899 [0.2301]		0.0615 [0.2547]
Family*Rating			1.0251*** [0.2705]	0.9695*** [0.2838]
Founder*Rating				0.376 [0.5651]
VR UO	0.0034 [0.2852]	-0.0112 [0.2913]	0.0213 [0.2844]	-0.0017 [0.2907]
Wedge UO	-0.8022 [0.5139]	-0.7814 [0.5211]	-1.0429* [0.5371]	-1.0193* [0.5441]
VR 2nd LS	1.4197** [0.6732]	1.4530** [0.6806]	1.3110* [0.6809]	1.3571** [0.6882]
Age	-0.0022* [0.0012]	-0.0021* [0.0012]	-0.0020* [0.0011]	-0.0020* [0.0012]
Ln(Size)	0.3915*** [0.0397]	0.3916*** [0.0397]	0.4149*** [0.0451]	0.4163*** [0.0448]

Table 3  
Continued.

	I	II	III	IV
Collateral	0.4937 [0.3770]	0.4982 [0.3772]	0.6444* [0.3783]	0.6491* [0.3776]
Cash holding	-0.2985 [0.6591]	-0.3158 [0.6607]	-0.0829 [0.6566]	-0.1347 [0.6612]
Leverage	1.6817*** [0.4326]	1.6761*** [0.4327]	1.7805*** [0.4343]	1.7587*** [0.4356]
M/B	0.0513** [0.0213]	0.0509** [0.0212]	0.0480** [0.0219]	0.0477** [0.0218]
ROA	-3.7791*** [0.8929]	-3.7745*** [0.8937]	-3.7741*** [0.9039]	-3.7777*** [0.9038]
Sales growth	0.6552*** [0.2447]	0.6510*** [0.2454]	0.6351** [0.2493]	0.6275** [0.2499]
Tax adv. debt	-0.1102 [0.3303]	-0.1076 [0.3308]	-0.1146 [0.3307]	-0.1088 [0.3314]
Rating			-0.4952** [0.2076]	-0.5018** [0.2074]
Pseudo-R <sup>2</sup>	0.1182	0.1183	0.1229	0.1232
Observations	5920	5920	5920	5920

certainly economically significant.<sup>22</sup> This evidence suggests that family firms are less likely to use equity than non-family firms.

So far, we have considered family firms as a unique group of firms. However, previous literature (Morck *et al.*, 2000a; Miller *et al.*, 2007; Andres, 2008) shows that there are important differences within family firms. In particular, this literature highlights behavioural differences between founders and heirs. Thus, the financing choices in family firms may depend on whether the founder is in charge or family heirs run the company. In fact, founders have a long-term commitment and are more attached to the firms they found. To address the influence this type of family control exerts on the financing decisions of the firm, we introduce in the regression of column II a second family-related variable, *Founder CEO/Chair*, based on a dummy that takes the value of one when the founder acts as the company's CEO or chairperson.<sup>23</sup> While the coefficient is positive as expected, the second family related variable does not appear to be significant.

In columns III and IV, we consider the effect of a firm's credit reputation on the probability to issue equity. To examine the role of credit quality on family firms' external financing decisions, we first construct a binary variable that takes the value of one when a firm has an S&P credit rating, and then we form an interaction variable *between* family and credit rating, *Family\*Rating*. We form a similar interaction term for founder-led

<sup>22</sup> The economic significance was estimated by dividing the *Family* coefficient by four (see Greene, 2008).

<sup>23</sup> In many European countries (e.g., Germany), the roles of CEO and chairperson of the board do not exist. For firms in countries with a two-tier board structure, we consider the chairperson of the management board equivalent to the CEO, and the chairperson of the supervisory board equivalent to the chairperson of the board.



family firms, *Founder CEO/Chair\*Rating*. Consistent with the previous evidence, the new results demonstrate that family firms are unlikely to issue equity. However, the positive and statistically significant coefficient of the interaction term *Family\*Rating* indicates that an S&P credit rating increases the probability that family firms issue equity. A possible explanation for this result is that credit ratings tend to mitigate the adverse selection costs of equity in family firms. The aversion to equity financing can also be attributed to higher costs of equity arising from high information asymmetries in family firms. Section 6.1 addresses this issue using alternative information asymmetry measures. Consistent with the previous findings, the regression results in column IV confirm that founder-led family variable is not statistically significant.

The insignificant coefficient of *VR UO* suggests that, once we controlled for the family effect, large shareholders are not more averse to issuing equity even if it can dilute their ownership stakes and expose the firm to takeover threats. To the extent that *Wedge UO* captures the ability of controlling shareholders to protect their private benefits through enhancing mechanisms (i.e., pyramids, dual-class shares), it should exert a negative influence on equity, since shareholders may fear that they are less protected when purchasing securities issued by firms with a high *Wedge UO*. The regression results weekly corroborate the negative association between *Wedge UO* and external equity financing when we control for rating. It is worth pointing out that the shareholder with the second largest voting rights, as shown by the coefficients of the *VR2nd LS* variable favors equity financing, revealing that a powerful blockholder will prefer diluting family control with the additional issuance of equity. In sum, the positive and significant coefficient of *VR2nd LS* in the equity regressions is consistent with the interests of blockholders to reduce the controlling power of family ownership.

We now turn our focus to the control variables. The *Age* coefficient indicates that older firms are less likely to issue equity. The *M/B* coefficient suggests that firms with overvalued equity are attracted to equity markets to meet their funding needs. This result is consistent with that of Baker and Wurgler (2002), who find that firms tend to issue equity when they experience equity overvaluation. The coefficients of *ROA* indicate that firms with good operating performance are less likely to raise external capital. This result is in line with the pecking order theory (Myers and Majluf, 1984). Firms with high growth opportunities, proxied by *Sales Growth*, tend to issue more equity.<sup>24</sup> Finally, the evidence indicates that the tax advantage of debt (*Tax Adv. Debt*) does not play any role in affecting equity issues.

Consistent with the descriptive statistics, size matters when it comes to raising new capital. The coefficient for the log of *Size*, measured as the market value of the equity of the company, is positive and significant in all the regressions. A firm's cash reserves (*Cash Holding*) do not have a bearing on the probability of raising equity capital. The coefficient of *Leverage* is positive in all regressions, and it can be explained by the firm's attempt to rebalance its capital structure. Finally, the variable *Rating* has the expected negative coefficient. In fact, a rating from a major credit rating agency facilitates debt issuance and it reduces the need to use equity.

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<sup>24</sup> We obtain remarkably similar results if we use the one-year growth in assets instead of the growth in sales. The correlation between the two growth rates is 0.53 and significant at the 1% level.

#### 4.2 Debt financing

We now turn our attention to debt issuance. A firm is defined as issuing debt if the change in total debt (i.e., the sum of short-term debt and long-term liabilities, divided by the starting-period total debt) is larger than 10%. Total debt includes any type of debt: bank debt and debt sold to the public. We replicate the regressions of Table 3 with the debt issuer dummy as the dependant variable and report these results in Table 4.

As expected, the *Family* coefficient is positive and statistically significant at conventional levels in all four regressions, indicating that family firms are more likely to issue debt than non-family firms. The positive *Family* coefficient in the debt regression supports the value of control hypothesis, which postulates a positive relation between family control and debt issuance. Taken together with the negative *Family* coefficient in Table 3, this implies that family firms are more averse to issuing ownership-diluting securities, such as equity, than raising capital through debt. In addition, the *Founder CEO/Chair* coefficient in regression II is positive and statistically significant, suggesting the founder-led firms prefer even more debt. However, this result is not robust to the inclusion of the interaction with the credit rating variable.

While ownership variables are never significant, we find a positive and significant coefficient for *Size* and *Collateral*. The positive coefficient of *Collateral* is consistent with Hirsch and Walz (2011), who predict that debt financing is more likely in firms with a significant proportion of tangible assets. As expected, firms with high cash reserves (*Cash holding*) have a lower probability of raising debt financing. The initial level of debt, measured by *Leverage*, affects negatively the probability of issuing new debt. This finding is consistent with the view that firms with a high leverage have already exhausted their debt capacity and cannot raise more debt (Lemmon and Zender, 2010). Market timing considerations, however, play no role in debt issuance. The coefficients of *ROA* indicate that firms with good operating performance are more likely to raise external debt capital because they are able to generate enough cash-flows internally to service their debt. Surprisingly, neither *Tax Advantage of Debt* nor *Rating* is statistically significant.

#### 4.3 External financing proceeds

The analysis so far gives the same importance to any external financing issue, regardless of its monetary amount. However, this may conceal the true probability of external financing decisions across different types of firms. For example, a small (large) equity issue is unlikely (more likely) to put family control at risk. To control for this effect, this section replicates the previous analysis by estimating regressions where the ratio of the proceeds from the issuance of different securities, scaled by the market value of the company's equity, is used as the dependent variable. We employ Tobit regressions for equity since we have data only on issues. We use a standard OLS regression for the change in debt, because this variable is not censored at zero. The regression results, reported in Table 5, are consistent with the previous evidence documented in Tables 3 and 4, respectively. The coefficient of *Family* in Table 5 is negative and statistically significant in the equity regression (column I), indicating once again that family-controlled firms issue less equity than non-family-controlled firms. In column III, the coefficient of *Family* is positive and significant in the regression for the change in total debt, highlighting once again the preference of family firms for debt financing.

Table 4  
Propensity to issue debt in family firms

This table reports estimates of logit regressions where the dependent variable is a binary variable that takes the value of one if the sample firm makes in year  $t$  issue debt during the period 1998–2008. A firm is defined as issuing debt if the change in total debt divided by the starting-period total debt is larger than 10%. *Family* is a dummy that takes the value of one when the controlling shareholder is a family. *Founder CEO/Chair* is a dummy variable that takes the value of one when the founder is the CEO or serves as chair of the board in a family firm, and *Family\*Rating* (*Founder CEO/Chair\*Rating*) is a dummy variable that takes value of one if the family firm (family firm where the founder is CEO/chair) has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. *VR UO* is the ultimate owner's voting rights in the firm; *Wedge UO* is the difference between cash flow and voting rights held by the ultimate owner; *VR 2nd LS* is the voting rights held by the second largest shareholder in the company; *Age* is the difference between the sample year and the year the company was established.  $\ln(\text{Size})$  is the log of the firm's market value of equity (Worldscope item WC07210); *Collateral* is the ratio of tangible assets to total assets (WC02501/WC02999); *ROA* is the return on assets, defined as EBITDA over total assets (WC18198/WC02999); *Cash Holding* is the ratio of cash plus tradable securities over total assets (WC02001/WC02999); *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999); *M/B* is the ratio of the market value of equity in US dollars (WC07210) to common equity in US dollars (WC07220); *Sales Growth* is the growth rate in total sales in the previous year (WC07240); and *Tax Adv. Debt* is the tax advantage of debt in the issuer's country in year  $t$ , computed as in Miller (1977). Corporate and personal tax rates are from the OECD Tax Database and Internet sources. *Rating* is a dummy variable that takes value of one if the firm has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	I	II	III	IV
Constant	0.2789 [0.7188]	0.211 [0.7278]	-0.6797 [0.7321]	-0.0175 [0.7403]
Family	0.1674** [0.0695]	0.1383* [0.0713]	0.1226* [0.0710]	0.1564** [0.0744]
Founder CEO/Chair		0.1845* [0.1048]		0.1747 [0.1099]
Family*Rating			-0.1504 [0.1670]	-0.2071 [0.1819]
Founder*Rating				0.1974 [0.3427]
VR UO	0.0964 [0.1521]	0.0696 [0.1532]	0.1281 [0.1492]	0.045 [0.1534]
Wedge UO	0.017 [0.2241]	0.0567 [0.2259]	-0.0817 [0.2216]	0.0972 [0.2274]
VR 2nd LS	0.2802 [0.3813]	0.342 [0.3822]	0.1303 [0.3760]	0.3402 [0.3832]
Age	-0.0011 [0.0007]	-0.0009 [0.0007]	-0.0012* [0.0006]	-0.0009 [0.0007]
Ln(Size)	0.0376* [0.0214]	0.0387* [0.0214]	0.0972*** [0.0237]	0.0583** [0.0243]
Collateral	0.3622* [0.2075]	0.3792* [0.2077]	0.4622** [0.2051]	0.3655* [0.2084]

Table 4  
Continued.

	I	II	III	IV
Cash holding	-2.9717*** [0.3606]	-2.9794*** [0.3614]	-2.8075*** [0.3501]	-3.0401*** [0.3622]
Leverage	-3.2797*** [0.2475]	-3.3038*** [0.2482]	-2.4956*** [0.2361]	-3.2642*** [0.2498]
M/B	0.0105 [0.0149]	0.0096 [0.0150]	-0.0086 [0.0150]	0.0064 [0.0151]
ROA	2.6193*** [0.4809]	2.6161*** [0.4809]	2.4307*** [0.4698]	2.5452*** [0.4826]
Sales growth	0.1193 [0.1438]	0.11 [0.1446]	0.1281 [0.1415]	0.0969 [0.1444]
Tax adv. debt	-0.2124 [0.1812]	-0.2157 [0.1812]	-0.0994 [0.1761]	-0.2256 [0.1812]
Rating			-0.1668 [0.1235]	-0.1234 [0.1279]
Pseudo-R <sup>2</sup>	0.0909	0.0913	0.0882	0.0919
Observations	6005	6005	6005	6005

In columns II and IV, we include *Founder CEO/Chair* in the regression models. Family firms run by their founders do not exhibit an additional effect due to founder's role in equity and changes in total debt regressions. *Family* remains highly statistically significant in the equity regressions.

Concerning the remaining variables, their coefficients confirm the results presented in Tables 3 and 4. *Leverage*, while decreasing the recourse to additional debt, affects positively both the amount of equity issued. As expected, *Size* has a positive and significant coefficient in all the regressions models. Ownership variables are not significant.

## 5. Leverage and Debt Maturity Structure

### 5.1 *Leverage regression results*

The previous analysis has concentrated on the relation between family ownership and the external financing policies of firms using security issuance and proceeds as measures of financing. This section examines the sensitivity of our results using leverage, measured as the ratio of the book value of financial debt to the book value of total assets, as a percentage. These results are reported in Table 6. These results illustrate that both *Family* and *Founder CEO/Chair* ownership measures in all regressions have positive and statistically significant coefficients. Consistent with our earlier results, the leverage-based evidence suggests that family firms have significantly more leverage than non-family firms and that this is more pronounced in founder-led family firms, where losing or diluting control is not an option. The interaction term between the family control and the S&P credit ratings is negative. This indicates that, *ceteris paribus*, family firms with a credit rating rely less on debt. However, the total effect of rating is still positive

Table 5  
External financing proceeds in family firms

This table reports estimates of Tobit regressions where the dependent variable is the firm's total proceeds in year  $t$  (scaled by the market value of its equity at the beginning of the year) from equity issues from Thomson One Banker (column I); and OLS regressions for the change in total debt in year  $t$  (scaled by the market value of the firm's equity at the beginning of the year) during the period 1998–2008. The variable *Family* is a dummy that takes the value of one when the controlling shareholder is a family. *Founder CEO/Chair* is a dummy variable that takes the value of one when the founder is the CEO or serves as chair of the board in a family firm. *VR UO* is the ultimate owner's voting rights in the firm; *Wedge UO* is the difference between cash flow and voting rights held by the ultimate owner; *VR 2nd LS* is the voting rights held by the second largest shareholder in the company. *Age* is the difference between the sample year and the year the company was established;  $\text{Ln}(\text{Size})$  is the log of the firm's market value of equity (Worldscope item WC07210); *Collateral* is the ratio of tangible assets to total assets (WC02501/WC02999); *ROA* is the return on assets, defined as EBITDA over total assets (WC18198/WC02999); *Cash Holding* is the ratio of cash plus tradable securities over total assets (WC02001/WC02999); *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999); *M/B* is the ratio of the market value of equity in US dollars (WC07210) to common equity in US dollars (WC07220); *Sales Growth* is the growth rate in total sales (WC07240); and *Tax Adv. Debt* is the tax advantage of debt in the issuer's country in year  $t$ , computed as in Miller (1977). Corporate and personal tax rates are from the OECD Tax Database and Internet sources. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Equity		Change in total debt	
	I	II	III	IV
Constant	-1.7854*** [0.2397]	-1.7849*** [0.2391]	-0.7121* [0.3943]	-0.9573 [0.5893]
Family	-0.1353*** [0.0361]	-0.1346*** [0.0366]	0.0714** [0.0324]	-0.0244 [0.0632]
Founder CEO/Chair		-0.0038 [0.0536]		0.5909 [0.5157]
VR UO	-0.0149 [0.0743]	-0.0144 [0.0758]	0.8172 [0.7233]	0.7295 [0.6466]
Wedge UO	-0.1256 [0.1173]	-0.1262 [0.1188]	-0.4346 [0.3786]	-0.316 [0.2784]
VR 2nd LS	0.2756 [0.1723]	0.2742 [0.1721]	-0.2828 [0.5905]	-0.0813 [0.4231]
Age	-0.0004 [0.0003]	-0.0004 [0.0003]	-0.002 [0.0021]	-0.0014 [0.0015]
Ln(Size)	0.0694*** [0.0109]	0.0694*** [0.0108]	0.0797** [0.0384]	0.0820** [0.0403]
Collateral	0.1089 [0.0872]	0.1086 [0.0870]	0.3537 [0.4324]	0.4258 [0.4937]
Cash holding	0.0023 [0.1743]	0.0027 [0.1750]	-0.6970*** [0.2152]	-0.7017*** [0.2197]
Leverage	0.5151*** [0.1177]	0.5157*** [0.1175]	-0.5573*** [0.1887]	-0.6614*** [0.1446]

Table 5  
Continued.

	Equity		Change in total debt	
	I	II	III	IV
M/B	0.0121** [0.0053]	0.0121** [0.0053]	-0.0136** [0.0063]	-0.0155** [0.0062]
ROA	-0.9333*** [0.2391]	-0.9332*** [0.2391]	-0.6842 [1.7325]	-0.7121 [1.7549]
Sales growth	0.1774*** [0.0641]	0.1775*** [0.0643]	-0.0527 [0.1795]	-0.0814 [0.2038]
Tax adv. debt	0.0127 [0.0840]	0.0127 [0.0840]	-0.7189 [0.7277]	-0.7373 [0.7429]
Pseudo-R <sup>2</sup> /Adj. R <sup>2</sup>	0.109	0.109	-0.0009	-0.0002
Observations	6246	6246	5993	5993

even for family firms.<sup>25</sup> We find that the interaction between founder-led firms and ratings is positive and significant, signaling that founder-led firms tend to make a larger use of debt if they are rated. Overall, these results suggest that family firms are more levered than non-family firms as a result of having lower agency costs of debt than their non-family counterparts. The preference for debt financing is more pronounced in founder-run family firms.

## 5.2 Debt maturity structure

Asset substitution theory argues that short-term maturity debt alleviates the agency costs of debt (Barnea *et al.*, 1981; Diamond, 1991; Leland and Toft, 1996). Johnson (2003) examines the role of short-term debt maturity in mitigating the debt overhang problem for high-growth firms and finds that shorter debt maturity lessens the negative effects of growth opportunities on leverage. Contrary to the findings of Johnson (2003), Myers' (1997) prediction that growth opportunities exert a negative impact on leverage does not gain support in the data, since the coefficient of the market to book, a growth proxy, in the leverage regressions of Table 6 is positive. While Barclay and Smith (1995), Guedes and Opler (1996), Stohs and Mauer (1996), and others demonstrate that debt maturity is determined by firm characteristics (i.e., asset maturity, growth opportunities, and firm size), Datta *et al.* (2005) show that managerial stock ownership plays an important role in determining corporate debt maturity.

Since the ownership structure between family- and non-family-controlled firms is different, this section examines whether the debt maturity structure varies across family and non-family firms. To address this issue, we estimate regressions using short- and long-term leverage as the dependent variables, respectively. Specifically, the short-term debt represents the portion of debt payable within one year, including long-term debt obligations due within one year, and long-term debt corresponds to all interest-bearing financial obligations, excluding payments due within one year. Both short- and

<sup>25</sup> In fact, the sum of the coefficient of rating and the interaction term in Column II is larger than zero.

Table 6  
Leverage in family firms

This table reports estimates of OLS regressions of the firm's leverage on family and founder-led family measures and a series of control variables during the period 1998–2008. *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). The variable *Family* is a dummy that takes the value of one when the controlling shareholder is a family; *Founder CEO/Chair* is a dummy variable that takes the value of one when the founder is the CEO or serves as chair of the board in a family firm; and *Family\*Rating (Founder CEO/Chair\*Rating)* is a dummy variable that takes value of one if the family firm (family firm where the founder is CEO/chair) has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. The variable *VR UO* is the ultimate owner's voting rights in the firm; *Wedge UO* is the difference between the cash flow and voting rights held by the ultimate owner; and *VR 2nd LS* is the voting rights held by the second largest shareholder in the company. *Age* is the difference between the sample year and the year the company was established;  $\text{Ln}(\text{Size})$  is the log of the firm's market value of equity (Worldscope item WC07210); *Collateral* is the ratio of tangible assets to total assets (WC02501/WC02999); *Cash Holding* is the ratio of cash plus tradable securities to total assets (WC02001/WC02999); *M/B* is the ratio of the market value of equity in US dollars (WC07210) to common equity in US dollars (WC07220); *ROA* is the return on assets, defined as EBITDA over total assets (WC18198/WC02999); *Sales Growth* is the growth rate in total sales in the previous year (WC07240); and *Tax Adv. Debt* is the tax advantage of debt in the issuer's country in year  $t$ , computed as in Miller (1977). Corporate and personal tax rates are from the OECD Tax Database and Internet sources. *Rating* is a dummy variable that takes value of one if the firm has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. Market and accounting variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Market and financial variables are winsorised at 0.01 and 0.99. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	I	II	III	IV
Constant	0.4817*** [0.0318]	0.5449*** [0.0328]	0.4739*** [0.0311]	0.5375*** [0.0323]
Family	0.0243*** [0.0041]	0.0287*** [0.0042]	0.0204*** [0.0042]	0.0259*** [0.0044]
Family*Rating		-0.0311*** [0.0090]		-0.0385*** [0.0095]
Founder CEO/Chair			0.0239*** [0.0056]	0.0175*** [0.0059]
Founder CEO/Chair*Rating				0.0411** [0.0163]
VR UO	-0.0238*** [0.0088]	-0.0173** [0.0088]	-0.0271*** [0.0088]	-0.0202** [0.0088]
Wedge UO	-0.0280** [0.0122]	-0.0260** [0.0123]	-0.0227* [0.0123]	-0.0206* [0.0123]
VR 2nd LS	-0.0613*** [0.0208]	-0.0524** [0.0206]	-0.0533** [0.0209]	-0.0450** [0.0207]
Age	-0.0091** [0.0038]	-0.0099*** [0.0038]	-0.0072* [0.0038]	-0.0086** [0.0038]
Ln(Size)	-0.0002 [0.0013]	-0.0065*** [0.0015]	-0.0001 [0.0013]	-0.0063*** [0.0015]
Collateral	0.1996*** [0.0127]	0.1935*** [0.0127]	0.2011*** [0.0127]	0.1953*** [0.0127]

Table 6  
Continued.

	I	II	III	IV
Cash holding	−0.3216*** [0.0202]	−0.3138*** [0.0204]	−0.3218*** [0.0202]	−0.3158*** [0.0204]
M/B	0.0055*** [0.0010]	0.0066*** [0.0010]	0.0054*** [0.0010]	0.0064*** [0.0010]
ROA	−0.5075*** [0.0300]	−0.4845*** [0.0299]	−0.5070*** [0.0301]	−0.4842*** [0.0300]
Sales growth	0.0561*** [0.0086]	0.0598*** [0.0085]	0.0549*** [0.0086]	0.0582*** [0.0086]
Tax adv. debt	−0.0063 [0.0100]	−0.0044 [0.0100]	−0.0066 [0.0100]	−0.0042 [0.0100]
Rating		0.0689*** [0.0068]		0.0679*** [0.0069]
Adjusted R <sup>2</sup>	0.2821	0.2937	0.284	0.2957
Observations	6246	6246	6246	6246

long-term debt measures are scaled by total assets. In addition to the controlling variables of Table 6, we also include *Spread* to capture the effect of the term structure of interest rates on the debt maturity. *Spread* is the difference between the country's long-term interest rate and the short-term interest rate. The interest rates are obtained from the OECD Statistics Database. Short-term rates are usually either the three-month interbank offer rate attaching to loans given and taken among banks, or the rate associated with Treasury bills, certificates of deposit, or comparable instruments, each of three months' maturity. Long-term (in most cases 10-year) government bonds are the instrument whose yield is used as the representative 'interest rate'.

The regression results, reported in Table 7, indicate that there is a positive relation between family-run firms and both short- and long-term debt maturity. This positive relation, partially mitigated by a credit rating, reveals that the management of family-controlled firms is viewed by credit markets as not risk seeking. Of greater importance, the coefficients of *Family* in the long-term regressions (columns IV to VI of Table 7) are not only highly significant, but considerably larger than their counterparts in the short-term debt regressions (columns I to III of Table 7), suggesting that family-controlled firms are more likely to issue long-term debt. This finding is consistent with the notion that credit markets perceive controlling shareholders in family firms as risk averse because of the lower agency costs of debt, arising from family control, which tend to mitigate bondholder–shareholder agency conflicts. That is, creditors understand the lower (greater) risk incentives in family (non-family) firms and price them accordingly. To put it differently, family shareholders with most of their wealth invested in their own firms have bigger stakes at risk than the managers of non-family firms which discourages managerial risk taking. This, then, makes long-term debt more affordable, due to lower agency costs of debt, and explains why family firms consider long-term debt as their favourite debt financing choice. In sum, the greater reliance of family firms than non-family firms on long-term rather than short-term debt indicates that the agency costs of debt arising from family control are mitigated by the large wealth stakes family members have in family firms. Contrary to the case of non-family firms, where short-term debt



Table 7  
Corporate debt maturity structure in family firms

This table reports estimates of OLS regressions of the firm's short-term debt (columns I to III) and long-term debt (columns IV to VI) on family and founder-led family measures and a series of control variables during the period 1998–2008. Short-term debt represents that portion of debt payable within one year, including the current portion of long-term debt (WC03051). Long-term debt represents all interest-bearing financial obligations, excluding amounts due within one year (WC03255). We scale short-term debt and long-term debt by total assets (WC02999). The variable *Family* is a dummy that takes the value of one when the controlling shareholder is a family; *Founder CEO/Chair* is a dummy variable that takes the value of one when the founder is the CEO or serves as chair of the board in a family firm; *Family\*Rating* (*Founder CEO/Chair\*Rating*) is a dummy variable that takes value of one if the family firm (family firm where the founder is CEO/chair) has a rating. *Age* is the difference between the sample year and the year the company was established;  $\ln(\text{Size})$  is the log of the firm's market value of equity (Worldscope item WC07210); *Collateral* is the ratio of tangible assets to total assets (WC02501/WC02999); *Cash Holding* is the ratio of cash plus tradable securities to total assets (WC02001/WC02999); *M/B* is the ratio of the market value of equity in US dollars (WC07210) to common equity in US dollars (WC07220); *ROA* is EBITDA over total assets (WC18198/WC02999); *Sales Growth* is the growth rate in total sales in the previous year (WC07240); and *Tax Adv. Debt* is the tax advantage of debt in the issuer's country in year *t*. *Rating* is a dummy variable that takes value of one if the firm has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. *Spread* is the difference between the country's long-term interest rate and the short-term interest rate. These interest rates are obtained from the OECD Statistics Database. Short-term rates are usually either the three-month interbank offer rate attaching to loans given and taken among banks, or the rate associated with Treasury bills, certificates of deposit, or comparable instruments, each of three months' maturity. Long-term (in most cases 10-year) government bonds are the instrument whose yield is used as the representative "interest rate". Market and accounting variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Short term debt			Long term debt		
	I	II	III	IV	V	VI
Constant	0.2614*** [0.0237]	0.2608*** [0.0238]	0.2681*** [0.0245]	0.2194*** [0.0287]	0.2114*** [0.0273]	0.2640*** [0.0284]
Family	0.0087*** [0.0022]	0.0084*** [0.0023]	0.0108*** [0.0024]	0.0139*** [0.0035]	0.0098*** [0.0036]	0.0126*** [0.0037]
Family*Rating			-0.0187*** [0.0055]			-0.0160* [0.0082]
Founder CEO/Chair		0.0018 [0.0035]	0.002 [0.0037]		0.0254*** [0.0051]	0.0191*** [0.0053]
Founder*Rating CEO/Chair*Rating			-0.004 [0.0096]			0.0421*** [0.0154]
VR UO	0.0036 [0.0051]	0.0034 [0.0051]	0.004 [0.0051]	-0.0268*** [0.0074]	-0.0301*** [0.0074]	-0.0241*** [0.0074]
Wedge UO	-0.0410*** [0.0071]	-0.0406*** [0.0072]	-0.0381*** [0.0072]	0.0157 [0.0103]	0.0213** [0.0103]	0.0205** [0.0104]
VR 2nd LS	-0.0348*** [0.0116]	-0.0342*** [0.0116]	-0.0321*** [0.0116]	-0.0389** [0.0181]	-0.0305* [0.0182]	-0.0247 [0.0181]
Age	-0.0067*** [0.0021]	-0.0066*** [0.0021]	-0.0067*** [0.0021]	-0.0011 [0.0034]	0.001 [0.0034]	-0.0003 [0.0034]
Ln(Size)	-0.0052*** [0.0008]	-0.0051*** [0.0008]	-0.0060*** [0.0009]	0.0054*** [0.0011]	0.0055*** [0.0011]	0.0004 [0.0013]

Table 7  
Continued.

	Short term debt			Long term debt		
	I	II	III	IV	V	VI
Collateral	-0.0273*** [0.0066]	-0.0272*** [0.0066]	-0.0295*** [0.0066]	0.2249*** [0.0113]	0.2266*** [0.0113]	0.2235*** [0.0113]
Cash holding	-0.1781*** [0.0106]	-0.1781*** [0.0106]	-0.1796*** [0.0107]	-0.1425*** [0.0166]	-0.1427*** [0.0166]	-0.1349*** [0.0167]
M/B	0.0026*** [0.0007]	0.0026*** [0.0007]	0.0027*** [0.0007]	0.0024*** [0.0009]	0.0023*** [0.0009]	0.0032*** [0.0009]
ROA	-0.1391*** [0.0168]	-0.1390*** [0.0168]	-0.1373*** [0.0168]	-0.3492*** [0.0248]	-0.3486*** [0.0249]	-0.3284*** [0.0250]
Sales growth	-0.0039 [0.0047]	-0.004 [0.0047]	-0.0034 [0.0047]	0.0588*** [0.0075]	0.0575*** [0.0076]	0.0602*** [0.0076]
Tax adv. debt	0.0376*** [0.0057]	0.0375*** [0.0057]	0.0373*** [0.0057]	-0.0387*** [0.0090]	-0.0391*** [0.0090]	-0.0366*** [0.0090]
Spread	-0.1087 [0.2348]	-0.1106 [0.2347]	-0.092 [0.2339]	-1.3945*** [0.3467]	-1.4167*** [0.3455]	-1.3830*** [0.3434]
Rating			0.0139*** [0.0039]			0.0508*** [0.0062]
Adjusted R <sup>2</sup>	0.1768	0.1767	0.1781	0.2805	0.2833	0.2947
Observations	6185	6185	6185	6223	6223	6223

is used by credit markets to mitigate the agency costs of debt, arising from incentives to increase risk and executive compensation contracts, family ownership seems to better facilitate the monitoring of family firms by creditors, resulting in the lower (greater) use of short-term (long-term) debt. In sum, these results reveal that the debt maturity choice depends on the firm's ownership structure.

The results in columns IV to VI show that in family firms led by founders, where the value of control is more prominent, long-term debt is the most prevalent external financing source. The *Founder CEO/Chair* coefficients in the long-term regressions (columns IV to VI of Table 7) are all positive and highly significant, whereas in the short-term regressions (columns I to III) the corresponding coefficients are considerably smaller and statistically insignificant. This evidence demonstrates that credit markets view founder-run firms as less risky, and are therefore willing to provide them with long-term debt at more favourable terms, as a result of facing lower agency costs of debt. Consistent with the previous results, the *Founder CEO\*Rating* interaction term has a positive and significant association with long-term debt, but an insignificant relation with short-term debt. This suggests that high investment grade founder-run firms are more likely to issue long-term than short-term debt. Overall, the evidence supports the view that family ownership is perceived by creditors as a corporate structure mechanism that reduces agency costs of debt, providing an additional explanation for the reliance of family-controlled firms on debt financing. Hence, the debt maturity choice also depends on the firm's ownership structure.

## 6. Information Asymmetry, Performance, and Investment

### 6.1 Family firms and information asymmetry

Given the information asymmetry differences between family- and non-family-controlled firms, reported in Table 1, this section examines how such differences affect

the equity and debt funding of family firms, controlling for other effects. To the extent that information asymmetries raise the adverse selection costs of equity, they are expected to have a negative (positive) influence on equity (leverage) financing. In Table 8, we report regression results. The dependent variables are binary variables that take value one if the firm issues equity (columns I to IV) and debt (columns IV to VIII). In addition to the variables considered in Tables 3 and 4, we also include stock price synchronicity,  $R^2$  (columns I, II, V, and VI), a measure also used by Doukas *et al.* (2011), and the number of analysts, *No. Analysts* (columns III, IV, VII, and VIII).

In general, the inclusion of asymmetric information variables, do not alter the main results of Tables 3 and 4. In fact, we still find evidence that family firms tend to prefer debt over equity financing. While the  $R^2$  coefficient is never significant, firms with high information asymmetries, as a result of low analyst coverage (less firm-specific information available to outside investors), are more (less) likely to resort to debt (equity) financing.

Collectively, our analysis suggests that, in addition to control considerations, increased information asymmetries in family-controlled firms induce debt financing, especially when we use the number of analysts as a proxy. The frictions associated with the value of control and information asymmetries help explain the strong preference of debt over equity financing in family firms and where there is an inherent affinity for greater control.

## 6.2 Performance and access to capital markets

We now examine how the operating performance, *ROA*, of family firms affects their access to capital markets and investment decisions. To address this question, we perform OLS regressions of the change in *Cash Holding*, *Leverage*, and fixed-asset capital expenditures, *CAPEX*, respectively, on changes in contemporaneous and lagged operating performance. The control covariates, not reported, include the lagged values of *Age*,  $\text{Ln}(\text{Size})$ , *Collateral*, and *Sales Growth*, and the ownership variables.

Table 9 presents the results, from which several interesting points emerge. First, the coefficients of the performance for both family and non-family firms are positive and statistically significant. However, this relation is more pronounced for family firms, indicating that their cash holdings are more sensitive to performance. Cash holdings do not appear to build up, as the insignificant coefficient on lagged performance indicates. This finding seems to suggest that cash holdings are used to draw down debt and finance CAPEX. Second, as column II of Table 9 shows, the leverage of family firms is inversely and significantly related to both recent and past performance. This finding is consistent with the previous evidence, which demonstrates that family firms do not build up their cash holdings in response to past improved profitability. Interestingly, the evidence also shows that family-controlled firms use consistently larger amounts of recent and past cash flows, a result of improved profitability, in reducing their leverage than non-family firms. This finding suggests that they rely less on external capital markets than their non-family counterparts. Finally, the CAPEX regression (column III) results demonstrate that CAPEX values in family firms (contemporaneous *ROA* coefficient of 0.1411, statistically significant at the 1% level) increase considerably, and much more so than in non-family firms (contemporaneous *ROA* coefficient of 0.019, not statistically significant at conventional levels), following a period of good performance. Family-controlled firms' investments increase in response to not only

Table 8  
Financing decisions and information asymmetry in family firms

This table reports estimates of logit regressions where in columns I to IV the dependent variable is the is a binary variable that takes the value of one if the sample firm makes, in year  $t$ , at least one issue of equity during the period 1998–2008. Data on equity issues are from Thomson One Banker. In columns V to VIII the table reports estimates of logit regressions where the dependent variable is a binary variable that takes the value of one if the sample firm makes in year  $t$  issue debt. A firm is defined as issuing debt if the change in total debt divided by the starting-period total debt is larger than 10%. Here *Family* is a dummy variable that takes the value of one when the controlling shareholder is a family; *Founder CEO/Chair* is a dummy variable that takes the value of one when the founder is the CEO or serves as chair of the board in a family firm; *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999);  $R^2$  is the residual sum of squares from a market model regression of daily stock returns for the calendar year; *No. Analysts* is the number of financial analysts covering a firm; *Age* is the difference between the sample year and the year the company was established;  $\text{Ln}(\text{Size})$  is the log of the firm's market value of equity (Worldscope item WC07210); *Collateral* is the ratio of tangible assets to total assets (WC02501/WC02999); *ROA* is the return on assets, defined as EBITDA divided by total assets (WC18198/WC02999); *Sales Growth* is the growth rate in total sales in the previous year (WC07240); All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Equity				Debt			
	I	II	III	IV	V	VI	VII	VIII
Constant	-20.882*** [0.7558]	-20.900*** [0.6451]	-18.504*** [1.0452]	-18.048*** [0.9244]	0.2339 [0.7416]	0.1547 [0.7503]	0.3899 [0.9437]	0.3004 [0.9493]
Family	-0.5034*** [0.1352]	-0.5135*** [0.1398]	-0.5020*** [0.1365]	-0.5321*** [0.1428]	0.1659** [0.0698]	0.1386* [0.0716]	0.1582** [0.0733]	0.1214 [0.0754]
Founder CEO/Chair		0.0643 [0.2323]		0.1841 [0.2343]		0.1750* [0.1054]		0.2402*** [0.1127]
VR UO	-0.0721 [0.2953]	-0.0830 [0.3017]	0.2443 [0.3104]	0.2184 [0.3156]	0.0774 [0.1558]	0.0497 [0.1570]	0.0242 [0.1666]	-0.0126 [0.1681]
Wedge UO	-0.9339* [0.5261]	-0.9185* [0.5319]	-1.0207* [0.5370]	-0.9799* [0.5451]	0.0363 [0.2255]	0.0753 [0.2274]	-0.0023 [0.2376]	0.0481 [0.2396]
VR 2nd LS	1.4287*** [0.6865]	1.4521** [0.6931]	1.6115** [0.7247]	1.6760** [0.7315]	0.2051 [0.3881]	0.2609 [0.3889]	0.1806 [0.4280]	0.2613 [0.4291]
Age	-0.0021* [0.0012]	-0.0021* [0.0012]	-0.002 [0.0012]	-0.0019 [0.0012]	-0.001 [0.0007]	-0.0009 [0.0007]	-0.0011 [0.0007]	-0.001 [0.0007]

Ln(Size)	0.4089*** [0.0519]	0.4093*** [0.0518]	0.2809*** [0.0629]	0.2803*** [0.0628]	0.0408 [0.0276]	0.0433 [0.0276]	0.0881** [0.0356]	0.0889** [0.0355]
Collateral	0.4864 [0.3806]	0.4897 [0.3807]	0.5632 [0.3959]	0.5761 [0.3966]	0.3667* [0.2078]	0.3828* [0.2081]	0.4347** [0.2192]	0.4612** [0.2195]
Cash holding	-0.2205 [0.6673]	-0.2326 [0.6690]	-0.2118 [0.6739]	-0.2512 [0.6781]	-3.0183*** [0.3638]	-3.0244*** [0.3645]	-3.0434*** [0.3873]	-3.0659*** [0.3887]
Leverage	1.6224*** [0.4373]	1.6184*** [0.4372]	1.4700*** [0.4559]	1.4540*** [0.4564]	-3.2455*** [0.2488]	-3.2668*** [0.2495]	-3.5080*** [0.2636]	-3.5505*** [0.2645]
M/B	0.0532** [0.0215]	0.0530** [0.0215]	0.0672*** [0.0235]	0.0664*** [0.0235]	0.0112 [0.0151]	0.0103 [0.0151]	0.0181 [0.0169]	0.0166 [0.0169]
ROA	-3.9531*** [0.8952]	-3.9494*** [0.8959]	-4.0502*** [0.9241]	-4.0399*** [0.9262]	2.6541*** [0.4832]	2.6519*** [0.4830]	2.4258*** [0.5108]	2.4238*** [0.5103]
Sales growth	0.6742*** [0.2485]	0.6713*** [0.2492]	0.6511** [0.2612]	0.6440** [0.2617]	0.1221 [0.1455]	0.1132 [0.1463]	0.1424 [0.1544]	0.1322 [0.1552]
Tax adv. debt	-0.1428 [0.3320]	-0.1408 [0.3324]	-0.0517 [0.3372]	-0.0471 [0.3376]	-0.1953 [0.1822]	-0.199 [0.1822]	-0.3203* [0.1909]	-0.3244* [0.1910]
R2	-0.1481 [0.4734]	-0.1523 [0.4735]			-0.0776 [0.2813]	-0.1012 [0.2816]		
No. analysts			0.0161* [0.0096]	0.0163* [0.0096]			-0.0123** [0.0055]	-0.0123** [0.0055]
Pseudo R-squared	0.1209	0.121	0.1134	0.1137	0.091	0.0913	0.0946	0.0952
Observations	5888	5888	5287	5287	5977	5977	5387	5387

Table 9  
Financing decisions and performance

This table reports coefficient estimates of OLS regressions where the dependent variables are the annual change in *Cash Holding*, *Leverage*, and *CAPEX* during the period 1998–2008. *Cash Holding* is the ratio of cash plus tradable securities to total assets (WC02001/WC02999); *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *Capex* represents the funds used to acquire fixed assets other than those associated with acquisitions, scaled by the firm's market value of equity at year  $t - 1$  (in local currency) (WC04601/WC08001). The independent variable measures operating performance: return on assets, *ROA*, defined as EBITDA over total assets (WC18198/ WC02999); and *Family* is a dummy variable that takes the value of one when the controlling shareholder is a family. The lagged values of the following control covariates are included in all regressions: *VRUO*, *Wedge*, and *VR 2nd LS*, *Age*,  $\ln(\text{Size})$ , *Collateral*, and *Sales Growth* (not reported). Market and financial variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Cash holding I	Leverage II	CAPEX III
$\Delta\text{ROAt\_Family}$	0.1286*** [0.0245]	-0.3163*** [0.0276]	0.1411*** [0.0367]
$\Delta\text{ROAt\_Non-Family}$	0.0850*** [0.0253]	-0.2895*** [0.0288]	0.019 [0.0366]
$\Delta\text{ROA } t-1\_Family$	-0.0124 [0.0234]	-0.0877*** [0.0254]	0.2091*** [0.0383]
$\Delta\text{ROA } t-1\_Non-Family$	-0.029 [0.0260]	-0.0868*** [0.0298]	0.1114*** [0.0387]
Adjusted R2	0.0226	0.0926	0.0243
Observations	5962	5965	5939

their recent performance but also their past performance. In accord with the previous evidence, this result provides supplemental support for the view that family firms rely more on internally generated funds to finance investments because they have limited access the capital markets.

### 6.3 Family ownership and investment policy

The evidence from the debt maturity structure of family firms has indicated that they are perceived by creditors as less risky than their non-family counterparts. To shed more light on the non-risk-seeking behaviour of family firms, we turn our focus to the nature of their investment decisions. Specifically, we examine whether family firms pursue less risky corporate investments. The rationale for this investigation is also motivated by the generally held view that family firms are more risk averse than non-family firms because a large fraction of the controlling shareholders' wealth is exposed to firm-specific risk, and therefore they are more likely to adopt conservative (non-risk-seeking) investment policies.

Typically, R&D expenditures are viewed as high-risk investments compared to CAPEX on property, plant, and equipment (e.g., Bhagat and Welch, 1995; Coles *et al.*, 2006). Consequently, to address this issue we use fixed-asset capital expenditures (CAPEX, a

low-risk (reliable) investment, and R&D expenditures, a high-risk (innovation-related) investment, as the dependent variables in our baseline regression model. If family firms follow less risky investment policies than non-family firms, we expect the relation between R&D and the family ownership measures to be negative and significant, but we do not expect to find such a negative relationship for CAPEX. The regression results, reported in Table 10, are generally consistent with the view that family firms undertake less risky (less innovative) investment decisions than non-family firms. The coefficient of *Family* is consistently negative and statistically significant in R&D regressions (columns V to VIII of Table 10), indicating that family firms are less likely to invest in risky projects than non-family firms. As expected, we do not find any evidence suggesting that family firms reduce CAPEX investments compared to non-family firms.

An interesting result that emerges from these regressions is that larger voting rights of the ultimate owner increase CAPEX, but they decrease R&D expenditures. In sum, the value of control incentives seems to dictate the nature of investment strategy and the choice of external financing in family firms. Moreover, less risky investment decisions in family firms suggest that family (majority) shareholders are in greater alignment with creditors than minority equity investors, which, in turn, facilitates the availability of funds through credit rather than equity markets.

#### 6.4 Robustness test: external financing and dividend payout

Until now, our analysis has implicitly assumed that the external financing decisions of family firms are unlikely to be influenced by dividend policy. To the extent that family controlling shareholders value the private benefits of control the most and the expropriation of minority shareholders is likely, family firms can pay out high dividends to resolve conflicts of interest with minority shareholders.<sup>26</sup> Consequently, it can be argued that dividend policy has a bearing on the external financing of family firms.

To address this problem, we examine if dividend policy affects the decision to issue debt. Following Ellul (2009), we use a simultaneous equation framework to account for simultaneity in leverage and dividend decisions.<sup>27</sup> In these regressions, we scale dividends, defined as the total cash dividends paid by the firm in a given year, by total assets to be consistent with our leverage measure. We include lagged dividends in the regression because of the persistence in firms' dividend policies.

These results are presented in Table 11. Consistent with Table 6, the positive and significant *Family* and *Founder CEO/Chair* coefficients in these regressions indicate that family control positively affects leverage, even after controlling for the firm's dividend policy decision. In these models, we find that there is a negative and significant relation between debt issuance and dividends, suggesting that firms do not use new issue proceeds to pay out dividends.

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<sup>26</sup> Jensen (1986) shows that debt and dividends are substitutes in controlling agency conflicts.

<sup>27</sup> Following Lemmon *et al.* (2008), who find persistence in capital structure, we include lagged leverage in the leverage regressions. The results remain unchanged.

Table 10  
Corporate investment policies in family firms

This table reports estimates of OLS regressions where the dependent variables are the firm's CAPEX in columns I to IV and the firm's R&D expenses in columns V and VIII, respectively, during the period 1998–2008. *Capex* represents the funds used to acquire fixed assets other than those associated with acquisitions, scaled by the firm's market value of equity at year  $t - 1$  (in local currency) (WC04601/WC08001), and *R&D* represents R&D expenses in year  $t$  divided by the firm's market value of equity at year  $t - 1$  (in local currency). If the company does not report *R&D* in a given year, we set the variable equal to zero. Here *Family* is a dummy that takes the value of one when the controlling shareholder is a family. *Founder CEO/Chair* is a dummy variable that takes the value of one when the founder is the CEO or serves as chair of the board in a family firm, and *Family\*Rating (Founder CEO/Chair\*Rating)* is a dummy variable that takes value of one if the family firm (family firm where the founder is CEO/chair) has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. *Rating* is a dummy variable that takes value of one if the firm has a rating (either short- or long-term debt rating) at the end of a sample year according to S&P's CreditExpress. The following control covariates are also included in all regressions: *VR(UO, Wedge, and VR 2nd LS, Age, Ln(Size), Collateral, and Sales Growth*. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	CAPEX				R&D			
	I	II	III	IV	V	VI	VII	VIII
Constant	0.3418*** [0.0897]	0.3425*** [0.0896]	0.3599*** [0.0906]	0.3601*** [0.0906]	0.1308*** [0.0391]	0.1315*** [0.0394]	0.1380*** [0.0392]	0.1389*** [0.0396]
Family	-0.0063 [0.0044]	-0.0058 [0.0046]	-0.0038 [0.0047]	-0.0036 [0.0049]	-0.0043*** [0.0012]	-0.0038*** [0.0012]	-0.0044*** [0.0013]	-0.0039*** [0.0013]
Founder CEO/Chair		-0.0028 [0.0081]		-0.0011 [0.0086]		-0.003 [0.0019]		-0.0032 [0.0020]
Family*Rating			-0.0180** [0.0088]	-0.0136 [0.0090]			0.0018 [0.0035]	
Founder CEO/Chair *Rating				-0.0236 [0.0202]				-0.0002 [0.0067]
VR UO	0.0655*** [0.0113]	0.0658*** [0.0115]	0.0671*** [0.0113]	0.0675*** [0.0115]	-0.0096*** [0.0029]	-0.0092*** [0.0029]	-0.0089*** [0.0029]	-0.0084*** [0.0029]
Wedge UO	-0.006 [0.0155]	-0.0066 [0.0158]	-0.0042 [0.0155]	-0.0052 [0.0157]	0.0231*** [0.0046]	0.0225*** [0.0046]	0.0225*** [0.0047]	0.0218*** [0.0047]



VR 2nd LS	-0.0285	-0.0294	-0.0257	-0.0271	-0.0197***	-0.0207***	-0.0193***	-0.0203***
	[0.0238]	[0.0241]	[0.0238]	[0.0241]	[0.0057]	[0.0058]	[0.0058]	[0.0058]
Age	-0.0042	-0.0045	-0.0044	-0.0045	0.0068***	0.0065***	0.0067***	0.0064***
	[0.0047]	[0.0047]	[0.0047]	[0.0047]	[0.0012]	[0.0012]	[0.0012]	[0.0012]
Ln(Size)	-0.0124***	-0.0124***	-0.0142***	-0.0142***	-0.0001	-0.0001	-0.0007	-0.0007
	[0.0015]	[0.0015]	[0.0018]	[0.0018]	[0.0005]	[0.0005]	[0.0005]	[0.0005]
Collateral	-0.0261	-0.0258	-0.0263	-0.0249	0.0099*	0.0101*	0.0110**	0.0113**
	[0.0212]	[0.0213]	[0.0212]	[0.0213]	[0.0055]	[0.0056]	[0.0056]	[0.0056]
Cash holding	0.2697***	0.2700***	0.2645***	0.2652***	0.0108***	0.0111***	0.0092**	0.0095**
	[0.0190]	[0.0191]	[0.0192]	[0.0194]	[0.0039]	[0.0038]	[0.0039]	[0.0039]
Leverage	-0.0089	-0.0089	-0.0087	-0.0087	-0.001	-0.0009	-0.0009	-0.0009
	[0.0062]	[0.0062]	[0.0062]	[0.0062]	[0.0013]	[0.0013]	[0.0013]	[0.0013]
M/B	-0.0130***	-0.0130***	-0.0127***	-0.0127***	-0.0016***	-0.0016***	-0.0015***	-0.0015***
	[0.0010]	[0.0010]	[0.0010]	[0.0010]	[0.0003]	[0.0003]	[0.0003]	[0.0003]
ROA	0.1084***	0.1083***	0.1107***	0.1106***	-0.0513***	-0.0513***	-0.0494***	-0.0494***
	[0.0330]	[0.0330]	[0.0331]	[0.0331]	[0.0085]	[0.0085]	[0.0085]	[0.0085]
Sales growth	0.0218*	0.0219*	0.0231*	0.0235*	0.0014	0.0016	0.0019	0.002
	[0.0122]	[0.0122]	[0.0122]	[0.0122]	[0.0030]	[0.0030]	[0.0030]	[0.0030]
Rating			0.0225***	0.0226***			0.0053**	0.0054**
			[0.0068]	[0.0068]			[0.0025]	[0.0025]
Adj. R2	0.2349	0.2348	0.2355	0.2354	0.272	0.2722	0.2731	0.2732
Observations	6223	6223	6223	6223	6223	6223	6223	6223

Table 11  
External financing proceeds, leverage, and dividends in family firms

This table reports in models I and II estimates a simultaneous equations model where the dependent variables in the two equations are *Leverage* and *Dividends* during the period 1998–2008. *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999); *Dividends* is the total cash dividend paid by the firm in year  $t$  divided by the firm's total assets; The variable *Family* is a dummy that takes the value of one when the controlling shareholder is a family; and *Founder CEO/Chair* is a dummy variable that takes the value of one when the founder is the CEO or serves as chair of the board in a family firm. *Age* is the difference between the sample year and the year the company was established;  $\text{Ln}(\text{Size})$  is the log of the firm's market value of equity (Worldscope item WC07210); *Collateral* is the ratio of tangible assets to total assets (WC02501/WC02999); *ROA* is the return on assets, defined as EBITDA over total assets (WC18198/WC02999); *Cash Holding* is the ratio of cash plus tradable securities to total assets (WC02001/WC02999); *Leverage* is the ratio of the book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999); *M/B* is the ratio of the market value of equity in US dollars (WC07210) to common equity in US dollars (WC07220); *Sales Growth* is the growth rate in total sales (WC07240); and *Tax Adv. Debt* is the tax advantage of debt in the issuer's country in year  $t$ , computed as in Miller (1977). All exogenous independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorised at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are shown in square brackets. \*\*\*, \*\*, and \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Simultaneous regressions			
	I		II	
	Leverage	Dividends	Leverage	Dividends
Constant	0.4279*** [0.0415]	0.001 [0.0064]	0.4203*** [0.0415]	0.0011 [0.0064]
Family	0.0272*** [0.0040]	-0.0002 [0.0005]	0.0235*** [0.0041]	-0.0002 [0.0006]
Founder CEO/Chair			0.0226*** [0.0060]	-0.0002 [0.0008]
Dividends	-2.0577*** [0.1646]		-2.0482*** [0.1644]	
Leverage		-0.0185** [0.0075]		-0.0186** [0.0074]
Lagged dividends		0.5578*** [0.0151]		0.5577*** [0.0151]
VR UO	-0.0262*** [0.0088]	0.0003 [0.0011]	-0.0291*** [0.0089]	0.0003 [0.0011]
Wedge UO	-0.0263** [0.0134]	-0.0007 [0.0017]	-0.0214 [0.0134]	-0.0007 [0.0017]
VR 2nd LS	-0.0668*** [0.0223]	-0.001 [0.0029]	-0.0589*** [0.0223]	-0.0011 [0.0029]
Age	-0.0116*** [0.0037]	-0.0007 [0.0005]	-0.0097*** [0.0037]	-0.0007 [0.0005]
Ln(Size)	0.0036*** [0.0013]	0.0004*** [0.0002]	0.0037*** [0.0013]	0.0004*** [0.0002]

Table 11  
Continued.

	Simultaneous regressions			
	I		II	
	Leverage	Dividends	Leverage	Dividends
Collateral	0.1859*** [0.0114]		0.1876*** [0.0114]	
Cash holding	-0.3322*** [0.0192]	0.0074* [0.0041]	-0.3323*** [0.0191]	0.0074* [0.0041]
M/B	0.0065*** [0.0009]	0.0004*** [0.0001]	0.0064*** [0.0009]	0.0004*** [0.0001]
ROA	-0.1572*** [0.0328]	0.0608*** [0.0038]	-0.1578*** [0.0327]	0.0608*** [0.0038]
Sales growth	0.0195** [0.0086]	-0.0055*** [0.0011]	0.0184** [0.0086]	-0.0055*** [0.0011]
Tax adv. debt	-0.0194* [0.0106]	-0.0023* [0.0014]	-0.0198* [0.0105]	-0.0023* [0.0014]
Observations	5904	5904	5904	5904

## 7. Conclusions

The corporate finance literature has established that financing decisions, such as choosing between debt and equity, are important mechanisms for monitoring managers when there is separation of ownership and control. However, in family firms, where the presence of controlling shareholders is dominant, the firm's decisions are at the discretion of owners/managers, who cannot be expected to voluntarily make optimal financing choices on behalf of the shareholders. This study documents that family control (i.e., an extreme form of concentrated ownership structure) plays a significant role in determining corporate finance, debt maturity, and investment decisions.

This study uses a unique and comprehensive dataset of continental European firms to examine the external financing behaviour of family firms during the period 1998–2008. In general, the evidence shows that family-controlled firms raise less equity capital and more debt capital than non-family-controlled firms. The financing policies of the former are influenced by control motives. While information asymmetry in family firms favour debt financing, control considerations exert a far greater influence on debt over equity financing. We find that family-controlled firms have a preference for debt financing, a non-diluting security, while they are averse to issuing equity compared to non-family firms.

Moreover, we find that debt maturity structure varies across family and non-family firms. Specifically, family-controlled firms are more likely to issue long-term than short-term debt, indicating that they are viewed by credit markets as non-risk-seeking firms. The non-risk-seeking behaviour of family firms is confirmed by the nature of their investment decisions. The results show that they commit less capital resources in R&D expenditures, high-risk investments, than non-family firms. Overall, the evidence suggests that the agency conflict between family-controlling shareholders and public

shareholders explains why the issuance of more debt is the favorite finance choice of family firms.

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