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## Family Control and Financing Decisions

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### **Abstract**

*Empirical studies examining the financing decisions of the firm focus exclusively on publicly held firms, not family-controlled firms despite their economic importance. This study investigates the external financing behavior of family-controlled firms, using a comprehensive sample of 777 large European firms during the period 1998 to 2008. We document that, unlike nonfamily-controlled firms, the external financing decisions of family-controlled firms are influenced by control incentives and information asymmetry considerations. We find that family firms have a strong preference for debt financing, a non-control diluting security, while they are more reluctant to raise capital through equity offerings in comparison to nonfamily firms. We also find that credit markets, view family firms as more risk-averse and that family firms invest more in low-risk (fixed-asset capital expenditures (CAPEX)), than in high-risk investments (R&D expenditures) confirming their non-risk seeking behavior.*

**JEL Classification:** G32

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

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## 1. Introduction

Most companies around the world are controlled by their founders, or by the founders' families and their heirs, including more than half of all public corporations in the U.S. and Europe, and more than two thirds of these in Asia. While many family firms are small businesses, the majority of publicly traded firms are controlled by a large shareholder, typically founders or their families (La Porta, Lopez-de-Silanes, and Shleifer (1999), Claessens, Djankov, and Lang, (2000), and Faccio and Lang (2002)) and some of the largest publicly traded firms are controlled by families (i.e., Wal-Mart Stores Inc. (U.S.), Toyota Motor Corp. (Japan), ArcelorMittal (The Netherlands/Luxembourg), A.P. Møller-Mærsk (Denmark), Roche Holding (Switzerland), Porsche (German), Colruyt (Belgian), Michelin (France), Fiat (Italy), among others)). What distinguishes Europe from the other economies of the world is the prevalence of large family firms. Family firms generate about 65% of the gross national product of European Union states and account for more than 50% of employment.<sup>1</sup>

Despite the economic importance of family businesses in Europe, we do not know of any work that directly attempts to understand the financing decisions of family-controlled public firms. This study addresses this gap in the literature by investigating the financing behavior of family and nonfamily firms, using a unique data set of continental European firms. Surprisingly, the external financing decisions of the firm have traditionally been studied for nonfamily-controlled firms with the motivation to shed light on the importance of the standard agency problem arising from the separation of ownership and control between managers and shareholders. Moreover, the prior theory typically does not distinguish between family and

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<sup>1</sup> See Euractiv.Com, 25 September 2009, at: <http://www.euractiv.com/en/enterprise-jobs/europe-family-run-firms-face-tough-times/article-185793> and The PricewaterhouseCoopers Family Business Survey 2007/08.

nonfamily external financing choices. However, since family firms are typically controlled by a shareholder with large undiversified stakes, the financing decisions in family firms are more likely to be influenced by the dominant shareholder's incentives than those of the diversified shareholders. Therefore, the financing decisions of family and nonfamily-owned firms are less likely to be identical. Understanding how family control influences the firm's external financing decisions is motivated by the second agency problem: the conflict of interests between large (family/undiversified) shareholders and small (nonfamily/diversified) shareholders. This is crucial for minority shareholders because the firm's choice among financing options impacts shareholder value and the shareholder-bondholder agency conflict. Equally important, the predictions of conventional capital structure theories, such as the trade-off and pecking order hypothesis, have exclusively been tested on nonfamily-owned public firms. Hence, the financing behavior of family-owned firms merits investigation for these reasons. We posit, that if value of control is more important in family-owned than in nonfamily-owned public firms, family ownership is more likely to be associated with debt than equity financing.

In this paper we examine the external financing decisions of 777 large continental European firms during the period 1998 to 2008 and show that the external financing policies of family-controlled firms are influenced by control considerations. Our findings suggest that the potential agency conflict between family shareholders and public shareholders explains why family firms, especially those in which a founder holds an influential position (CEO and/or Chairman of the board of directors), issue more debt, a non-control-diluting security. This result implies that the conflict of interests between founding family shareholders and bondholders is less severe than between diversified non-controlling shareholders and bondholders. In

addition, we find that the desire for debt financing in family firms is related to the adverse selection costs of equity due to information asymmetries.

This study adds to the existing literature that has mainly focused on the performance, investment (acquisition), control (i.e., wedge between their cash-flow and control rights) and CEO succession decisions of family firms. Studies that examine the relationship between family ownership and firm value have produced mixed results. For example, Anderson and Reeb (2003), Villalonga and Amit (2006), Andres (2008), Villalonga and Amit (2009), document a positive overall effect of family control on firm performance while others (e.g., Claessens, Djankov, Fan, and Lang (2002), Cronqvist and Nilsson (2003), and Bennedsen, Nielson, Perez-Gonzalez, and Wolfenzon (2007)) find a negative contribution of family ownership on firm's performance. Villalonga and Amit (2006), and Barontini and Caprio (2006), show that use of control-enhancing mechanisms such as multiple share classes, pyramids, and voting agreements, tend to substantially reduce family-own firm value. 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 (2006), Klasa (2007), and Bauguess and Stegemoller (2008)). Perez-Gonzales (2006) shows that CEO succession with a family member has negative impact on firm value. Finally, Anderson, Mansi, and Reeb (2003) find that founding 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 recent study of Brav (2009) is related to our analysis. Brav (2009), shows that private firms relative to their public counterparts in UK, rely almost exclusively on debt

financing. While our empirical findings are consistent with Brav's (2009) evidence, they allow us to gain additional insights about the links of family-run firms and capital markets. We show that family firms issue more debt, especially when a founder is still in an influential position (CEO and/or Chairman of the board). Given that family firms are typically controlled by a large, often uncontested, shareholder, who enjoys large private benefits of control (Faccio and Lang, (2002), among others) and that they focus on maximizing their own benefits, not that of all shareholders (Bertrand and Schoar (2006)), our results are also consistent with the view that firms controlled by a major shareholder should be reluctant to use equity financing when doing so causes the controlling shareholder to risk losing control (Amihud, Lev, and Travlos (1990), Stulz (1988)).

Using a unique dataset of 777 large European firms, we first compare the external financing patterns of family- and nonfamily-controlled firms to determine whether there are differences in their financial policies, an issue that has been ignored in the literature. This comparison permits us to draw inferences about the role of "value of control" on the type of firm's external financing decision. Our study has the advantage of using a cross-country sample of firms to appraise the importance of control and information asymmetries on firm's financing decisions.<sup>2</sup>

Second, we analyze both the equity and debt (i.e., corporate bonds, convertible debt, and syndicated loans) financing policies of family firms, controlling for other effects. Specifically, the empirical analysis centers on testing the effect of family control on the firms'

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<sup>2</sup> Studying the financing behavior 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 the findings of this study, the use of cross-country data allows accounting for the variability in characteristics such as political and economic institutions (i.e., contracting and property rights), ownership, taxes and capital market conditions that are not feasible in country-level data.

decisions to raise capital in the form of equity, convertible debt, corporate bonds, and syndicated loans. The inclusion of syndicated loans in our analysis is motivated by the view that they are important sources of financing (Sufi (2007)) positioned between public debt and sole-lender bank loans. Given their similarities with public debt and the growing differences between syndicated debt and bank loans (Altunbas, Kara, and Marques-Ibanez, (2009)), syndicated loans are viewed as an important alternative to corporate bonds. Since the relationship between a single bank and the borrower is not known, we consider syndicated debt as a sort of semi-public source of financing. We also examine the impact of information asymmetry on the financing behavior of family firms.

Using data from *Thomson One Banker's Equity and Debt databases*, we find that family firms tend to raise less outside capital than non-family firms. However, as expected, this reluctance of family controlled firms towards external financing is mainly limited to equity issues. The lack of equity issues by family firms can be explained by the fear of the controlling family to dilute or relinquish control. Furthermore, founder-led family firms, that have been found to have better performance (Miller, Le Breton-Miller, Lester and Cannella (2007), Andres (2008)), issue more debt. These results are robust to a series of tests that take into account other motivations to issue equity, like equity overvaluation.

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

family firms appears to be consistent with the evidence of Brav (2009) for UK private firms, demonstrating that they rely heavily on debt. Second, it highlights differences among founder-led family firms, where the founder is the CEO or chairman of the board, and family firms. Our findings show that founder-run firms have a stronger preference for debt and syndicated loans than family firms not led by founders. Third, our empirical analysis examines the importance of syndicated loans, a form of bank-debt, relative to other forms of external financing, such as equity, convertible debt and straight debt. This is essential because our findings show that syndicated loans represent an important financing source for family firms and, in particular, founder-run family firms. Fourth, we provide evidence on the role of firm's credit quality on the external financing choices for family and nonfamily firms. Our results show that credit market reputation increases the likelihood of debt issuance. In addition, credit quality seems to exert a positive influence on equity issuance by reducing information asymmetries. Fifth, we examine whether the debt maturity structure varies across family and nonfamily firms and find that family-controlled firms are viewed by credit markets as non-risk seeking firms. This provides another explanation why family-controlled firms are more likely to issue long-term debt. Moreover, we confirm the non-risk seeking behavior of family firms by focusing on the nature of their investment decisions. The results show that they invest more in low-risk, fixed-asset capital expenditures (*CAPEX*), than high-risk, R&D expenditures, investments. Finally, this study sheds light on the external financing decisions of family-controlled firms at the European cross-country level.

The rest of the paper proceeds as follows. Section 2 reviews the related literature and presents the hypothesis. Section 3 describes the sample selection, data sources and variable



definitions. Section 4 analyzes the external financing behavior of family- and nonfamily-controlled firms by focusing on the propensity to issue equity relative to debt and other external financing sources and provides evidence for the financing behavior of different types of family firms. Section 5 examines the relation between family ownership and debt maturity structure. Section 6 examines the role of information asymmetry, performance and investment policies of family firms. Section 7 concludes.

## **2. Literature Review and Hypothesis Development**

Prior theory examines firm's financing choices in the context of information asymmetry, the agency costs of debt, and efficient renegotiation of debt claims. This theory does not distinguish between family- and nonfamily-controlled firms. While there is some evidence that family firms adopt very conservative strategies when it comes to corporate decisions such as acquisitions, either selling their stakes to outsiders (Klasa (2007), and Bauguess and Stegemoller (2008)) or making acquisitions (Sraer and Thesmar (2006)), not much is known about the nature of their financing decisions and, in particular, whether their financing behavior differs from that of nonfamily 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 the opportunities to consume perquisites more than corporate majority shareholders, especially because of non-pecuniary and non-transferable private benefits. A major difference between family and nonfamily public firms is their ownership structure and, therefore, the degree to which control is valued by their shareholders. Ownership concentration in family firms is tilted more towards the interests of family controlling

shareholders in relation to firms with nonfamily shareholders. Hence, family-controlled firms are unlikely to take 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 will not be willing to supply funds when managers/owners have more information about the firm they manage than do outside investors (Myers (1984) and Myers and Majluf (1984)) or the expectation of expropriation is high (Frank and Goyal (2007)). 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. Tunneling 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 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 nonfamily firms. Therefore, equity financing will be less attractive than debt for family firms.<sup>3</sup> Value of control, higher cost of equity, arising from information asymmetries, and wealth expropriation considerations in family firms suggest that they are less likely to issue equity than non-family firms. Another reason that family firms may prefer debt financing relates to the family firm's portfolio diversification (Anderson, Mansi, and Reeb, (2003)). In fact, founding families typically have a large fraction of their wealth

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<sup>3</sup> While previous empirical studies (Baker and Wurgler (2002), Henderson, Jegadeesh, and Weisbach (2006), have shown that equity financing is motivated by market timing considerations (equity overvaluation)) and family firms could be attracted to such windows of equity issuance opportunities, it seems less likely because of value control, private benefits and information asymmetry considerations are much more pronounced in family than to nonfamily firms.

invested in their own firms and, therefore, are interested in the firm's long-term survival and reputation, a concern that they share with creditors. Debt financing, then, is probably more appealing to family firms due to its lower cost arising from the lower agency costs of debt relative to that of nonfamily firms.

It is known that security design, such as convertible bonds, can be used by issuers to efficiently mitigate specific debt- and equity-related costs of external finance. Green (1984) suggests that convertible debt can be used as a substitute for debt to mitigate the agency conflicts between creditors and shareholders. On the other hand, Stein (1992) argues that convertible debt can be used as a substitute for common equity to ease the adverse selection costs of equity financing. Lewis, Rogalski, and Seward (1999, 2003) find evidence in support of these two motivations behind the decision to issue convertible debt. However, they argue that there are two distinct groups of issuers that would consider convertible bond financing: the first group has high debt capacity, investment opportunities, and high firm risk; the second one has valuable investment opportunities, but high financial distress costs and high costs of asymmetric information. The first group is consistent with Green's (1984) risk-shifting motivation, while the second is consistent with Stein's (1992) backdoor equity motivation. Given the fact that convertible debt is considered as a backdoor equity financing (Stein, 1992), we also expect that family firms will rely less on convertible debt than nonfamily firms.

Finally, we examine the importance of syndicated loans in family firms. Sufi (2007) suggests that syndicated loans are positioned halfway between sole-lender loans and public debt. His study shows that asymmetric information and reputation play important roles in determining the structure of the loans, and in case of severe asymmetric information problems

syndicated loans resemble bank loans (i.e., close substitutes). While Altunbas, Kara, and Marques-Ibanez (2009), point out that the market of syndicated loans is distinct from the market of bilateral bank loans, mainly because of an active secondary market and the rising number of rated syndicated loans, they suggest that syndicated loans are the closest substitute to public bonds and show that the choice of syndicated loans is positively related to the firm's size, leverage, profitability and fixed assets. To the extent that syndicated loans represent near-debt financing, for the reasons described earlier we expect that family firms are more likely to prefer syndicated loans to equity financing.

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

#### *3.1. Sample Selection and Data Sources*

Using a large European sample of firms, the aim of this paper is to examine the external financing decisions of family-controlled firms during the years 1998 through 2008. The focus of the analysis is to investigate the financing behavior of family-controlled firms. In particular, we are interested to first map the financing preferences of family-controlled firms relative to nonfamily firms and second, identify the motives behind their financing decisions (i.e., issue equity versus convertible debt, corporate bonds, and syndicated loans).

The starting point of our analysis is based on a sample of 4,058 publicly listed Western continental European firms listed on Thomson's *Worldscope* database. Following Barontini and Caprio (2006) and Caprio, Croci, and Del Giudice (2009), we focus on relatively large companies, whose value in total assets (*Worldscope* item WC07230) exceeds US\$ 250 million at the end of 1997. This selection criterion reduces the original sample to 1,735 firms. We also exclude financial firms (SIC 6000-6999) and regulated utilities (SIC 4900-4999). We also exclude firms

with a shareholder holding more 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 (2), Netherlands (77), Norway (40), Spain (46), Sweden (64), and Switzerland (72).<sup>4</sup> As argued in Barontini and Caprio (2006), a continental European sample permits us to examine firms with a large dispersion of ownership structures both in terms of the (i) size of the largest shareholders' cash-flows and voting-rights, and (ii) family/non family control.

Equity, convertible debt, corporate bond offerings and syndicated loans data are drawn from *Thomson One Banker* for the period 1998 to 2008. We start by considering all issue announcements reported in Thomson Financial Securities Data's Equity (equity and convertible debt), Bond (public debt), and Loans (syndicated loans) Databases over the years between January 1998 and December 2008. We used SDC to collect information about all the issuance activity of the 777 continental European firms. Since our focus is on listed companies, we remove all the IPO-related equity issues from the database. We then match issues and firms to identify equity, convertible debt, corporate bond, and syndicated loan issues involving our 777 sample companies. Over the period of investigation, we identify 2,530 external financing issues consisting of 498 equity offerings, 140 convertible debt offerings, 1,031 corporate bond offerings, and 861 syndicated loans.<sup>5,6</sup>

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<sup>4</sup> No firms from Austria, Portugal and Greece survive our screening procedures.

<sup>5</sup> Both corporate bonds and syndicated loans are medium- long-term instruments in our sample. They have similar maturities. In fact, the median maturity for corporate bonds is about 6 years, while the median maturity for syndicated loans is 5 years. So, when it comes to maturities there is no a great difference between syndicated loans and corporate bonds in our sample. Moreover, no syndicated loan has maturity less than one year, the threshold for short term financing.

<sup>6</sup> Differently from Brav (2009), we do not investigate the decision to retire debt or equity primarily due to the unavailability of debt retirement data from the *Thomson One Banker* databases.

### 3.2. Variable Definitions

We use detailed ownership data for the 777 family- and nonfamily-controlled companies in our sample.<sup>7</sup> We consider as family-controlled any company, *Family*, in which a family or individual is the largest shareholder with more than 10% of voting rights. Second, we construct another family related measure, *Founder CEO/Chair*, to identify if a family firm is managed by a CEO or chairman who is a family member. This variable is intended to capture the family effect on firm's financing decisions in more tightly controlled family firms. In addition to the family control measures used in this study, our main metrics of interest, we compute cash-flow rights and voting rights of the largest shareholders, according to the now standard methodology developed by La Porta, Lopez-de-Silanes, and Shleifer (1999), and used by Claessens, Djankov, and Lang (2000) and Faccio and Lang (2002), to construct and employ the following ownership-related variables in the empirical analysis: the voting rights of the ultimate shareholder, *VR UO*, the difference between voting rights and cash-flow rights of the ultimate shareholder, *Wedge UO*, and the voting rights of the second largest shareholder, *VR2<sup>nd</sup> LS*. The *VR UO* measure captures the voting stake held by the ultimate owner. Hence, the *VR UO* is expected to have a negative impact on new equity issuance because it may dilute the ownership stakes of large shareholders and expose the firm to takeover threats. The *Wedge UO* is intended to gauge the entrenchment effect of excess control rights. Since *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 and debt issuance as both shareholders and lenders are reluctant to purchase securities

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<sup>7</sup> The European dataset on ownership structure was generously made available by Lorenzo Caprio and Alfonso Del Giudice, used in Caprio, Croci, and Del Giudice (2009) as well.

issued by high *Wedge UO* firms due to the ability of controlling shareholders to protect their own private benefits. Finally, the  $VR2^{nd}$  *LS*, measuring the monitoring role of the second largest shareholder, it is expected to have a positive (negative) impact on equity (debt) issuance. Namely, the shareholder with the second largest voting rights should favor equity than debt financing, in order to enhance his monitoring power on the ultimate owners of the firm by diluting their control.

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

The firm's age, *Age*, defined as the difference between the sample year and the year in which the company was established as a proxy for the firm's age.<sup>8</sup> Internal financing is more important for young firms due to the uncertainty about their future cash flows, and the lack of an established credit reputation. However, young firms typically exhaust internal sources of finance quickly because of their inability to generate sufficient cash flows. Lack of collateral value and cash flows in young firms make equity financing the only choice.

The firm's market value of equity, *Size* (Worldscope Item WC07210).<sup>9</sup> In their survey of trade-off and pecking order theories of debt, Frank and Goyal (2007) document that small firms actively use equity financing, while large firms rely more on corporate bonds.

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<sup>8</sup> Results do not change if we use the difference between the sample year and the firm's IPO year as proxy for age.

<sup>9</sup> In the regressions, we use the log of the market value of the company's equity as proxy for size.

The growth rate in sales, *Sales growth*, defined as the growth rate in total sales in the previous year (WC07240). A strong sales' growth is likely to increase the company's cash flows, thus reducing the need of external financing. Moreover, a strong sales growth may 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*, a measure of the firm's profitability defined as EBITDA over total assets (WC18198/WC02999). Firms that are doing well generate more cash flows, decreasing the need to raise capital from external sources.

The firm's liquid assets, *Cash holdings*. This is the ratio of cash plus tradable securities over 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*, defined as the ratio of book value of financial debt to the book value of total assets (WC03255/WC02999). Lemmon and Zender (2008) argue that debt capacity plays an important factor in the choice of external financing. If a firm requires external funds and has not reached the limit of its debt capacity, then the firm can raise more debt. However, if a firm issued too much debt, then issuing equity may be its only real option. Lemmon and Zender (2008) show that profitable, low leverage firms with minimal transaction costs for issuing new securities appear to stockpile debt capacity. Leverage can also affect the decision to issue new debt or negotiate new loans because part of this debt may be close to maturity. Firms may issue new debt to refinance previous issues or rollover old loans. Thus, in this situation, leverage can be positively related to debt issue. High debt levels may also suggest that the firm has already established a reputation on the debt markets. Denis and Mihov



(2003), show that firms with an established reputation in credit markets and firms with public debt outstanding are more likely to issue public debt.

Tangible assets to total assets, *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 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,  $M/B$ , defined as the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220), is used to capture the extent to which overvaluation (equity mispricing) motivates external financing and, in particular, equity than debt issuance. However, a high market-to-book ratio may also signal superior performance or high growth opportunities, facilitating access to the credit market.<sup>10</sup>

To gauge the magnitude of the adverse selection costs of equity arising from information asymmetries in family and nonfamily firms, we use the stock price synchronicity,  $R^2$ , which measures the amount of market-wide information relative to the firm-specific information (Roll (1988), and Morck, Yeung and Yu (2000)) rooted into stock prices. A low (high)  $R^2$  indicates low (high) information asymmetry since a larger (smaller) amount of 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.

Firm's reputation in credit markets, *Rating*. This is a binary variable that takes value of one if the firm has a Standard & Poor's rating (either short-term or long-term debt) at the end

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<sup>10</sup> In unreported analysis, we also use the stock price performance of the firm in the calendar year instead of the market-to-book ratio. Results are identical to those reported in the paper.

of the year. We obtain S&P ratings from S&P Credit Ratings, which provide a history of short- and long-term commercial credit and corporate bond ratings for both the issuer/entity and issue/instrument levels.<sup>11</sup> Denis and Mihov (2003), document that firms with an established reputation in credit markets are more likely to issue public debt. They also use credit ratings as a proxy for credit market reputation. Similarly, Faulkender and Petersen (2007) find that firms with a credit rating have more debt in their capital structure.<sup>12</sup>

The tax advantage of debt, *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. To account for the tax advantage of debt, following Miller (1977), we compute the tax advantage of debt ( $\tau$ ) for each country in each year as follows:

$$\tau = \left[ 1 - \frac{(1 - \tau_c) * (1 - \tau_e)}{(1 - \tau_i)} \right]$$

where  $\tau_c$  is the corporate tax rate,  $\tau_e$  is the personal tax rate on equity income, and ,  $\tau_i$  is the personal tax rate on interest income. We use data from *OECD Tax Database* to compute the tax advantage measure of debt.<sup>13</sup> In continental European countries, debt usually has a tax advantage over equity. During the 1998-2008 sample period the mean (median)  $\tau$  is 31.67%

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<sup>11</sup> Notice that we cannot rely on rating information provided by Thomson One Banker's databases to construct our variable. In fact, to be in Thomson One Banker's Equity/Bond/Loans databases, the firm has to issue equity/debt or obtain a syndicated loan. So, this rating information is available on Thomson One Banker's databases only if the firm raised external capital. This means that rating is available only for the firms that ex-ante we expect to issue debt. This sample selection would bias our results. Our credit reputation proxy based on S&P Credit Ratings is not affected by this problem.

<sup>12</sup> Sufi (2007) uses credit ratings from Standard & Poor's to construct his measure of information asymmetry.

<sup>13</sup> The corporate income tax rate is from 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, internet searches, 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). These tables are available at: [www.oecd.org/ctp/taxdatabase](http://www.oecd.org/ctp/taxdatabase)

(35%), indicating that debt has a positive influence on firm value. The tax advantage of debt was negative only in Finland (between 1997 and 1999), Norway (2002) and in the Netherlands (from 2001 to 2007).

### 3.3. Descriptive Statistics

In Table 1 we summarize the descriptive statistics of these variables for the 777 companies in our sample.<sup>14</sup> As common in continental European listed companies, controlling shareholders own, on average, a remarkably large fraction of the company's 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 0, the average wedge, *Wedge UO*, is 9.58%. The average firm does not have a second large block holder who can monitor and challenge the controlling shareholder. In fact the average voting rights of the second block holder is just 6.62%. We also notice that the companies in the sample are relatively old, with an average age well over 89 years (median 87 years).

Columns 4 to 9 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 nonfamily firms (26.20%). Moreover, the second large block holder, who can monitor and challenge the controlling shareholder, is relatively weak in both family and non-family firms. The controlling shareholders in family firms also 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 distinct differences between family and nonfamily firms. Most evidently, family firms are smaller than nonfamily firms (median market

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<sup>14</sup> To avoid that large outliers affect results we winsorized all financial variables at 0.01 and 0.99.

cap US \$746m vs. US \$1106m), they hold more cash (median cash holding US \$0.0882m vs. US \$0.0661m), they are more levered (median leverage US \$0.2560m vs. US \$0.2427m), but have less collateral (median collateral US \$0.2626m vs. US \$0.3009m). The net Leverage of family firms is not significantly different from that of their nonfamily counterparts despite the fact that they have higher cash holdings than nonfamily firms. This suggests that the external financing choice of family firms tilts in favor of debt. Their profitability does not appear to be different from that of nonfamily firms, even though they have a considerably higher growth in sales. While family firms are younger with a median age of 83 years relative to the age of nonfamily firms (97 years), they cannot be considered young companies in absolute terms.

[Please insert Table 1 about here]

We turn now to the external financing activities of the 777 sample companies. Table 2 reports their financing behavior in terms of issuing equity, convertible debt, corporate bonds, and fund raising through syndicated loans in the years 1998-2008. As shown in Panel A, there are 405 (52.12% of all firms) firms that engaged in external financing at least once during the sample period. More firms issued debt (360, 46.33% of all firms) than equity (240, 30.89% of all firms) and while this pattern appears to hold for family and nonfamily firms, debt preference in family firms is more pronounced (debt (180) vs. equity (109)) than in nonfamily firms (debt (180) vs. equity (131)). Only 73 firms issued convertible debt (25 by family firms and 48 by nonfamily firms) during the sample period. The convertible debt difference between family and nonfamily firms suggests that the former view convertible debt more like equity than debt security. 197 firms out of the 777 firms issued corporate bonds. However, syndicated loans are

the preferred choice when it comes to debt capital: 297 firms raised funds through syndicated loans.

Panel B shows that family firms engage in less equity and debt (both convertible debt and straight debt) financing than nonfamily firms. The number of syndicated loans is almost evenly split between family and nonfamily firms. These figures confirm that family firms rely less on external financing than nonfamily firms. Interestingly, both family- and nonfamily controlled firms raise more debt than equity. As expected, proceeds raised regardless of the type of external financing are always smaller for family firms. In general, firms across Europe raised more debt than equity capital during the 1998 to 2008 period. Panel C shows the breakdown of the different types of issues by year. Equity issues peaked by number of issues and proceeds raised at the beginning of the sample period, during the dot.com boom. Consistent with Altunbas, Kara, Marques-Ibanez (2009), the funds raised through syndicated loans increased considerably in the final years of the sample period. Figure 1 compares the issuance activity per security for family and nonfamily firms during the sample period and shows that the former rely less on equity and convertible debt issuance than nonfamily firms.

[Please insert Table 2 about here]

#### **4. Propensity to Raise Capital: Debt versus Equity**

We examine now the propensity of firms to issue equity, convertible debt, corporate bonds, and syndicate loans. Table 3 presents the results of logit regressions where the dependent variable takes value one if in year  $t$  a firm makes at least one issue of equity (column I); convertible debt (column II); corporate bond (column III); syndicated loans (column IV); any type of debt (column V). These dummies are then regressed on firm's age and a set of financial

variables for the year  $t-1$ . In these regressions, we also include the family dummy, *Family*, to gauge the role of family control on firm's external fund raising. The analysis is conducted at firm-year level. All regressions models include year-fixed effects and industry-fixed effects. Industry-fixed effects are based on the Fama and French's 48-industry classification.

As discussed earlier, family control is particularly important in the decision to issue equity. In fact, in column I, the coefficient on *Family*, is negative and statistically significant, indicating that in family-controlled firms the probability of issuing equity declines, 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. 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 for control considerations. The aversion to equity financing could also be attributed to higher costs of equity arising from high information asymmetries in family firms. However, as Table 1 indicates the stock return synchronicity ( $R^2$ ), a measure of information asymmetry, for family-controlled firms is significantly lower (mean (median) 0.0729 (0.1284)) than that of nonfamily firms (mean (median) 0.1735 (0.1106)). Therefore, it seems less likely that information asymmetries compel family firms to issue less equity than nonfamily firms. We address this issue in Section 6, accounting for other effects. In line with the family control influence on equity financing, we also find that family-controlled firms tend to issue less convertible debt, an equity-like security that has the potential to dilute family control. The coefficient, for the family binary variable, as shown in the convertible debt regression (column II) is negative and statistically significant. The *Family* coefficients in the equity and convertible debt regressions indicate that the average family firm is approximately 15% to 17% less likely to

issue equity and convertible debt, respectively, than nonfamily firms across European countries, numbers that certainly are economically significant.<sup>15</sup> Jointly, this evidence suggests that family firms are less likely to use equity and convertible debt than nonfamily firms.

Surprisingly, in the debt issuance regression (column III) the coefficient of the family dummy is negative and statistically significant at conventional levels, indicating that family firms are less likely to issue corporate bonds than nonfamily firms. The negative family coefficient, in the debt financing regression, seems to be at variance with the value of control hypothesis, which postulates a positive relation between family control and debt issuance. However, the magnitude of the family coefficient in the debt regression (column III) is half the size of its counterparts in the equity and convertible debt regressions (columns I and II). This implies that family firms are more averse to issuing ownership diluting securities such as equity and convertible debt than raise capital through corporate bonds and syndicated loans. In addition, the family coefficient in the debt regression is not as statistically significant as is it in the equity and convertible debt financing regressions. In accord with the descriptive statistics of Panel B in Table 2, the family coefficient in (column IV) is statistically insignificant suggesting that family firms are not averse to syndicated loans as they are to debt and, in particular, to equity financing. Collectively, these differences indicate that family-controlled firms are more reluctant to issue equity and convertible debt than straight debt and syndicated loans. Consistent with the previous results, the *Family* coefficient in regression V (All Debt) is about four times smaller than its counterpart coefficients in regressions I and II confirming that family firms are more reluctant to issue equity and convertibles debt than debt and syndicated loans.

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<sup>15</sup> The economic significance was estimated by dividing the Family coefficient by 4 (see, William Greene, *Econometric Analysis*, 6 ed., 2008).

Moreover, the coefficient on *Family* in the last regression suggests that the average family firm is approximately 4% less likely to issue debt (straight debt and syndicated loans) than nonfamily firms, a figure that does not appear to be economically significant.

We now turn our focus on the control variables. The regression results indicate that older firms (*Age*) 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. Market timing considerations, however, play no role in convertible debt issuance. Moreover, the evidence demonstrates that a high market-to-book ratio reduces the incentive to raise new debt, either public straight debt (column III) or in the form of syndicated loans (columns IV). As expected, the negative and statistically significant coefficient of market-to-book suggests that corporate bond issuance is inversely related to the firm's equity valuation. That is, corporate bonds are more likely to be issued by firms with higher adverse selection costs of equity, arising from information asymmetries. 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 and convertible debt. Finally, while the evidence thus far points out that the tax advantage of debt (*Tax Adv. Debt*) facilitates public debt financing, mostly convertible and straight debt, suggesting that public debt is issued to take advantage of fiscal regimes, syndicated loans are not, as shown in the syndicated loan regression (column IV).

Consistent with the descriptive statistics, size matters when it comes to raising new capital. The coefficient for the log of the *Size*, measured as the market value of equity of the company, is positive and significant in all the regressions. As expected, firms with high cash



reserves (*Cash holding*) have a lower probability of raising debt financing, (convertible, corporate bond debt and syndicated loans). However, a firm's cash reserves do not have a bearing on the probability of raising equity capital. *Leverage* has a positive coefficient in all regressions. While the positive coefficient in the equity regression can be explained by the firm's attempt to rebalance its capital structure, the positive coefficients of leverage in the convertible debt, debt, and syndicated debt regressions are more difficult to interpret. A possible explanation is that firms with high leverage are likely to be perceived as high grade firms that facilitate the issuance of new debt. An alternative interpretation is that firms with high leverage ratios need to rollover their existing debt, which could explain the positive link between leverage and new debt issues. This explanation is also consistent with the positive coefficient of the firm's age variable.

[Please insert Table 3 about here]

#### 4.1. *Type of Family Firms*

So far, we have considered family firms as a unique group of firms. However, previous literature (Morck, Stangeland, and Yeung (2000), Miller, Le Breton-Miller, Lester and Cannella (2007), and Andres (2008) shows that there are important differences within family firms. In particular, this literature highlights differences between the behavior of 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 are usually more attached to the firms they found and are usually more skilled in managing the company. Hence, founders serving as a Chairman of the board or Chief Executive Officer of the firm, may indicate that the family is still fully committed to the firm. Family heirs, however, are known to be less devoted to the firm. To

address this side of family firms, we introduce in the regression analysis a second family related variable, *Founder CEO/Chair*, based on a dummy that takes value of one when the founder acts as CEO or chairman of the company.<sup>16</sup>

In Table 4, we estimate logit regressions, by including our second family related variable, *Founder CEO/Chair*, in order to assess the family effect on firm's external financing decisions when the founder serves as the CEO or chairman of the board. The new evidence indicates that in tightly controlled family firms, the preferred external financing instruments are debt and syndicated loans. The debt (column III) and syndicated loan (column IV) regression coefficients on *Founder CEO/Chair* show that founder-run family firms have a stronger predisposition for debt financing and syndicated loans to meet their funding needs than non-founder-run family firms (Table 3). Taken together, the results suggest that direct family control on the firm's management leads to different financing choices. Straight debt and syndicated loans represent the primary funding sources in this type of family firms. This is also confirmed in the last regression (column V), which shows that founder-run family firms have a strong tendency for debt in the form of straight debt and syndicated loans in comparison to nonfamily firms and less tightly controlled family firms, as shown in Table 3. The *Founder CEO/Chair* coefficients in the debt and syndicated loans regressions show that the average founder-run family firm is approximately 10% to 11% more likely to issue debt and syndicated loans, respectively, than nonfamily firms. These numbers are economically significant. Collectively, these new results

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<sup>16</sup> In many European countries (for example, Germany), the roles of Chief Executive Officer and Chairman of the board do not exist. For firms in countries with a two-tier board structure, we consider the Chairman of the management board equivalent to the CEO, and the Chairman of the supervisory board equivalent to the Chairman of the board.

point out that the value of control hypothesis gains stronger support in founder-run family firms. The control variables in these regressions exhibit the same patterns as in Table 3.

[Please insert Table 4 about here]

#### 4.2. Ownership Effects

In Table 5, we report regression results by augmenting the previous analysis with the inclusion of the three ownership variables: *VR UO*, the difference between voting rights and cash-flow rights of the ultimate shareholder, *Wedge UO*, and the voting rights of the second largest shareholder, *VR2<sup>nd</sup> LS*. Panels A and B report results for family and founder-led family firms, respectively. As before, the two family measures exhibit the same propensities with regards to the four choices of external financing even after controlling for ownership effects in the regressions analysis. Family owned firms (Panel A) are reluctant to issue equity regardless of the equity stake they own. Family firms managed by a founder CEO or a family related Chairman (Panel B) are strongly in favor of debt financing and syndicated loans, confirming that their external financing decisions are influenced by control considerations. These results suggest that the family effect on the external financing decisions of the firm, documented in Table 4, is not a manifestation of an ownership effect.

The negative coefficient of the *VR UO*, suggests that large shareholders are more averse to issue equity and convertible debt because it may dilute their ownership stakes and expose the firm to take over 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 and debt issuance as both shareholders and lenders may fear that they are less protected when purchasing securities

issued by high *Wedge UO* firms. The regression results seem to corroborate the negative association between *Wedge UO* and external financing. It is worth pointing out that the shareholder with the second largest voting rights, as shown by the coefficients of the  $VR2^{nd}$  *LS* variable in Panels A and B, favor equity financing (column I), revealing that a powerful blockholder prefers diluting (monitoring) family control with additional issuance of equity. This is also confirmed by the negative and significant coefficients of the  $VR2^{nd}$  *LS* variable in the debt regressions (column III). In sum, the positive (negative) and significant coefficients of the  $VR2^{nd}$  *LS* in the equity (debt) regression demonstrates the effort of blockholders to decrease the controlling power of the family ownership. The coefficients and levels of statistical significance of control variables remain largely similar with those reported in Table 4.

[Please insert Table 5 about here]

#### 4.3. Credit Reputation

In Table 6, we consider the effect of firm's credit reputation. 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's 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 family firms, *Founder CEO/Chair\*Rating*. The regression results are reported in Panels A and B, respectively. 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 family firms with S&P credit rating are likely to issue equity. This is probably because credit ratings tend to mitigate the adverse selection costs of equity in family firms. The propensity to issue

convertible debt, as shown in column II, does not appear to be influenced by the high grade status of family firms. As expected, the *Family\*Rating* interaction term enters the debt and syndicated loans regressions with positive and statistically significant coefficients, indicating that the probability to raise debt and syndicated loans increases with the credit quality of the issuing firm. This result is consistent with Denis and Mihov (2003), who find that firms with reputation in credit markets (i.e., an S&P rating) are more likely to issue corporate bonds. The positive relationship between credit ratings and debt financing is also observed in regression V.

Consistent with the previous findings, this set of regressions for founder-led family firms (Panel B) confirms that they have a strong propensity to raise capital through debt (straight and syndicated loans). Credit ratings in founder-led family firms, however, appear to play a lesser role in facilitating external financing than in family firms.

[Please insert Table 6 about here]

#### 4.4. External Financing Proceeds

The analysis of financing decisions performed so far gives the same importance to any external financing issue regardless its size. 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 the family control at risk while a large equity issue. To control for this effect, in this section we replicate the previous analysis by estimating Tobit 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.<sup>17</sup> The regression results, reported in Tables 7 and 8, are consistent with the previous evidence, documented in

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<sup>17</sup> We use Tobit regressions instead of a standard OLS model because the dependent variable cannot take values less than zero.

Tables 3 and 4, respectively. The family dummy in Table 7 is significant and negative (columns I and II), indicating once again that the probability of equity and convertible debt issuance is less likely in family-controlled firms. As before, Table 8 shows that in founder-run family firms, with the founder serving as CEO or chairman, there is a strong founder effect. Specifically, in this type of firms, debt (column V) and, in particular, syndicated loans (column IV) are the preferred financing choices. It is important to highlight, that in founder-run family firms the financing method through debt and syndicated loans is much stronger than in family firms. This suggests that the value of control is much more important in founder-run family firms than the latter. Consistent with family firms, not run by their founders, founder-managed family firms, are averse to equity financing. Overall, the positive and significant relation between the external financing proceeds from debt and, in particular, from syndicated loans, and the founder-led family variable demonstrates the paramount importance of value of control in tightly controlled family firms.

[Please insert Tables 7 & 8 about here]

## **5. Leverage and Debt Maturity Structure**

### *5.1. Leverage Regression Results*

Our previous results concentrate on the relation between family ownership and external financing policies using security issuance and proceeds as measures of financing. In this section, we examine the sensitivity of our results using leverage, measured as the ratio of book value of financial debt as a percentage of the book value of total assets. These results are reported in Table 9. As Panel A illustrates, the family ownership, *Family*, and founder-led family firms, *Founder CEO/Chair*, measures enter all regressions with positive and statistically significant

coefficients. Consistent with our earlier results, the new evidence suggests that family firms have significantly more leverage than nonfamily firms and that this is more pronounced in founder-led family firms. As before, we observe that family and founder-led firms with S&P credit ratings, as the coefficients of the interaction terms indicate, tend to have greater leverage. Similar results are reported in Panel B accounting for ownership characteristics. Overall, these results suggest that family firms are more levered than nonfamily firms as a result of having lower agency costs of debt than their nonfamily counterparts. The inclination for debt financing is more pronounced in founder-run family firms.

[Please insert Table 9 about here]

## *5.2. Debt Maturity Structure*

The asset substitution theory argues that short-term maturity debt mitigates agency costs of debt (Barnea, Haugen, and Senbet (1981), Leland and Toft (1996)). Johnson (2003) examines the role of short-term debt maturity in mitigating the debt overhang problem for high growth firms. 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 firms size), Datta, Iskandar, and Raman (2005) show that managerial ownership is an additional determinant of corporate debt maturity. Since the ownership structure between family- and nonfamily-controlled firms is different, in this section we examine whether the debt maturity structure varies across family and nonfamily 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 long-term debt measures are scaled by total assets.

The regression results, reported in Panel A of Table 10, indicate that there is a positive relation between family-run firms and both short- and long-term debt maturity. This positive relationship, in general, reveals that the management of family-controlled firms is viewed by credit markets as non-risk seeking. What is of interest, is that the *Family* coefficients in the long-term regressions (columns III and IV) are not only highly significant, but their magnitude is mostly twice that of their counterparts in the short-term regressions (columns I, and II), suggesting the family-controlled firms are more likely to issue long-term debt. This is consistent with the notion that credit markets view family firms as risk averse because of the lower agency costs of debt arising from family control which tends to mitigate bondholder-shareholder agency conflicts. That is, creditors understand the lower (greater) risk incentives in family (nonfamily) firms and price them accordingly. To put this differently, family shareholders having most of their wealth invested in their own firms have bigger stakes at risk than managers of nonfamily firms (i.e., their portfolio seems to be viewed as more sensitive to changes in the stock price (*delta*) than stock return volatility (*vega*)) that 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 favorite debt financing choice. In sum, the greater reliance of family than nonfamily firms on long-term 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 nonfamily firms where short-term debt is used by credit markets to mitigate 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 lower (greater) use of short-term (long-term) debt.

Another interesting observation is that the *Family\*Rating* interaction term has a negative (positive) and significant relationship with short-term (long-term) debt, suggesting that high grade family firms are more likely to issue long-term than short-term debt. This provides additional support that creditors view family firms as less risky than nonfamily firms. Panel B of Table 10, reports results for founder-run family firms. These results show that in family firms 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 III and IV) are all positive and highly significant while in the short-term regressions (columns I, and II) the corresponding coefficients are statistically insignificant. This evidence demonstrates that founder-run firms are viewed by credit markets as less risky and, therefore, willing to provide them with long-term debt at more favorable terms, as a result of 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 grade founder-run firms are more likely to issue long-term than short-term debt.

[Please insert Table 10 about here]

## **6. Information Asymmetry, Performance and Investment**

### *6.1. Family Firms and Information Asymmetry*

Given the information asymmetry differences between family- and nonfamily-controlled firms, reported in Table 1, in this section we examine how information asymmetries affect the equity and debt funding of family firms when we control for other effects. Since information asymmetries raise the adverse selection costs of equity, they are expected to have a negative (positive) influence on equity (leverage) financing in family firms. In Table 11, we report Tobit regression results of equity proceeds, and OLS regression results of net leverage and leverage on stock price synchronicity,  $R^2$ , our information asymmetry measure and Family (Panel A) and Founder CEO/Chair (Panel B) metrics, while we control for *Age*, *Size*, *Collateral*, *ROA* and *Sales Growth*.

As expected, Panels A and B show that information asymmetry is another reason that family firms are more likely to rely on debt than equity financing. The coefficient on information asymmetry is positive and statistically significant in the net leverage (I) and leverage (II) regressions, but negative (positive) and statistically insignificant in the equity financing regression (I) for family (founder-led) firms. The coefficients on Family and the control variables are consistent with the previous findings. As before, equity financing decreases, while net leverage and leverage increase in family and founding-led firms. Jointly, these results suggest that in addition to value of control considerations information asymmetry plays an important role in the financing policies of family-controlled firms. The frictions associated with the value of control and information asymmetries aid to explain the different financing policies in family- and nonfamily-controlled firms.

[Please insert Table 11 about here]

## 6.2. Performance and Access to Capital Markets

We now examine how the operating performance of family affects their access to capital markets and investment decisions. To address this question, we perform OLS regressions of the change in Cash Holding, Leverage, Net 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, Ln(Size), Collateral and Sales Growth. Table 12, presents the results. Several interesting points emerge from these results. First, the coefficients on the performance for both family and nonfamily firms are positive and statistically significant. However, this relation is more pronounced in 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 seems to suggest that cash holdings are used to draw down debt and finance capital expenditures. Second, as columns II and III show, the leverage of family firms is inversely and significantly related to both recent and past performance. This is consistent with the previous evidence, which demonstrates that they do not build up their cash holdings in response to improved profitability. Interestingly, the evidence also shows that family-controlled firms use consistently larger amounts of recent and past cash flows as a result of improved profitability in reducing their leverage than nonfamily firms. This suggests that they have lower access to capital markets than their nonfamily counterparts. These patterns are confirmed in column III. Finally, the CAPEX regression results demonstrate that capital expenditures in family firms (contemporaneous ROA coefficient of 0.1415, statistically significant at 1% level) increase considerably and much more than in nonfamily firms (contemporaneous ROA coefficient of 0.0201, not statistically significant at conventional levels) following a period of good

performance. Family-controlled firms increase their investments not only in response to their recent, but also to their past performance. This result, in accord with the previous evidence, provides supplemental evidence pointing out that family firms rely more on internally generated funds to finance investment because they have limited access the capital markets.

[Please insert Table 12 about here]

### *6.3. Family Ownership and Investment Policy*

The evidence from debt maturity structure of family firms has indicated that they are perceived by creditors as less risky than their nonfamily counterparts. To shed more light on the non-risk seeking behavior of family firms we turn our focus on 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 nonfamily firms because of a higher share of the owner's wealth invested in the firm and, therefore, more likely to adopt conservative (non-risk seeking) investment policies. Relying more on debt than equity financing could be another reason that family firms pursue less risky investments.

To address this, we use fixed-asset capital expenditures (*CAPEX*), low-risk investments, and R&D expenditures, high-risk investment, as the dependent variables in our baseline regression model. If family firms follow less risky investment policies than nonfamily firms, we expect the relationship between *CAPEX* (R&D) and the family ownership measures to be positive (negative) and statistically significant. The regression results, reported in Table 13, are generally consistent with the view that family firms (Panel A) undertake less risky investment decisions than nonfamily firms. The coefficient of the R&D is consistently negative and

statistically significant in both regressions (columns III, and IV) indicating that family firms are less likely to invest in risky projects than nonfamily firms. The tendency to invest less in risky projects is somewhat more pronounced in founder-run family firms, Panel B of Table 13, where the *Founder CEO/Chair* coefficient in the R&D regression III (0.0072) is considerably larger than that of family firms (0.0046). This difference persists also in regression IV (0.0056 versus 0.0080) as well. The coefficients of the *Family* variable are all positive and statistically significant in the CAPEX regressions. The *Founder CEO/Chair* variable, Panel B of Table 13, enters both CAPEX regressions with a positive sign, but is not statistically significant. An interesting result that emerges from these regressions is that leverage enters all CAPEX regressions with positive and statistically significant coefficients, implying that firm leverage (external financing) is directed towards less risky investments. While the leverage coefficients in the R&D regressions are also positive, they are much smaller in magnitude than their counterparts in the CAPEX regressions.

[Please insert Table 13 about here]

## **7. Conclusions**

In this study, we use a unique and comprehensive dataset of continental European firms to examine the external financing behavior of family firms during the period 1998 to 2008. In general, the evidence shows that family-controlled firms raise less outside capital than non-family-controlled firms and that the financing policies of the former are influenced by control incentives and information asymmetry considerations. We find that family-controlled firms have a strong preference for debt financing, a non-diluting security, while they exhibit aversion to issuing equity in comparison to nonfamily firms. This is more pronounced in founder-run

family firms where the value of control is likely to be more prominent. Our findings also show that syndicated loans represent an important financing source for family firms and, in particular, founder-run family firms.

Moreover, we find that the debt maturity structure varies across family and nonfamily 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 behavior of family firms is confirmed by the nature of their investment decisions. The results show that they invest more in fixed-asset capital expenditures (*CAPEX*), low-risk investments, than in R&D expenditures, high-risk investments. 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 choice in family firms, especially in founder-led family firms.

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**Table 1: Descriptive statistics of sample companies**

This table reports descriptive statistics of the 777 sample companies, of family and nonfamily firms. A firm is defined as family (nonfamily) firm if its ultimate owner is (is not) a family member. *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 2<sup>nd</sup> 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 over total assets (WC02001/WC02999). *Leverage* is the ratio of book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *Net Leverage* is the difference between Leverage and Cash Holding. *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220). *ROA* is the return on assets, defined as EBITDA over 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. The number of observations is in firm/years (at the starting date, 1997 January 1<sup>st</sup>, 434 of the 777 companies are family-controlled according to our definition while 343 are not). \*\*\*, \*\*, \* 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			Nonfamily Firms		
	Mean	Median	No. Obs.	Mean	Median	No. Obs.	Mean	Median	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 2 <sup>nd</sup> 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
Net Leverage	0.1482	0.1628	6504	0.1437	0.1629	3761	0.1544**	0.1627	2743
Market-to-book	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

**Table 2: Equity, Convertible Debt, Straight Debt and Syndicated loans Sample Distribution**

This table reports statistics for equity, convertible debt, corporate bond, syndicated loans issues and all debt (i.e., the sum of corporate bonds and syndicated loans) made by 777 European sample firms. Panel A reports the number of firms with at least one issue (Issuing firms) for the full sample of 777 nonfamily (344) and family (433) firms. Non-issuing firms are defined as firms that did not engage in issuance activity during the 1998-2008 period. A firm is defined as a family (nonfamily) firm if its ultimate owner is (is not) a family. Panel B reports the number of issues and the amount raised (proceeds) for each type of issue for nonfamily and family firms. Panel C reports the issuance sample distribution (type of issue, numbers and proceeds).

**Panel A: Issuing firms**

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	<b>All Firms (777)</b>		<b>Family (433)</b>	
	Issuing Firms	Non-issuing Firms	Issuing Firms	Non-issuing Firms
Equity	240	537	109	324
Convertible Debt	73	704	25	408
Debt	197	580	97	336
Syndicated Loans	297	480	141	292
All Debt	360	413	180	253

**Panel B: Number of Issues and Proceeds**

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	Equity		Convertible		Debt		Loans	
	issues	Proceeds	Debt issues	Proceeds	issues	Proceeds	issues	Proceeds
Family	210	85851.81	49	17798.05	383	214097.4	424	676046.9
Nonfamily	288	239873.7	91	59697.16	648	610303.8	437	903298.3
Total	498	325725.5	140	77495.21	1031	824401.3	861	1579345

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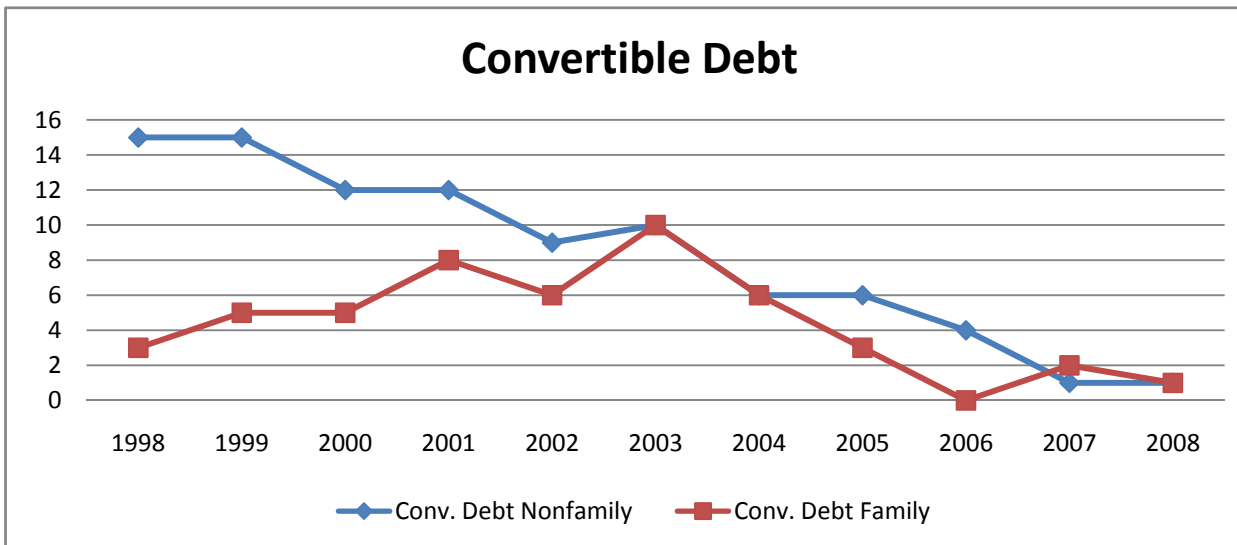
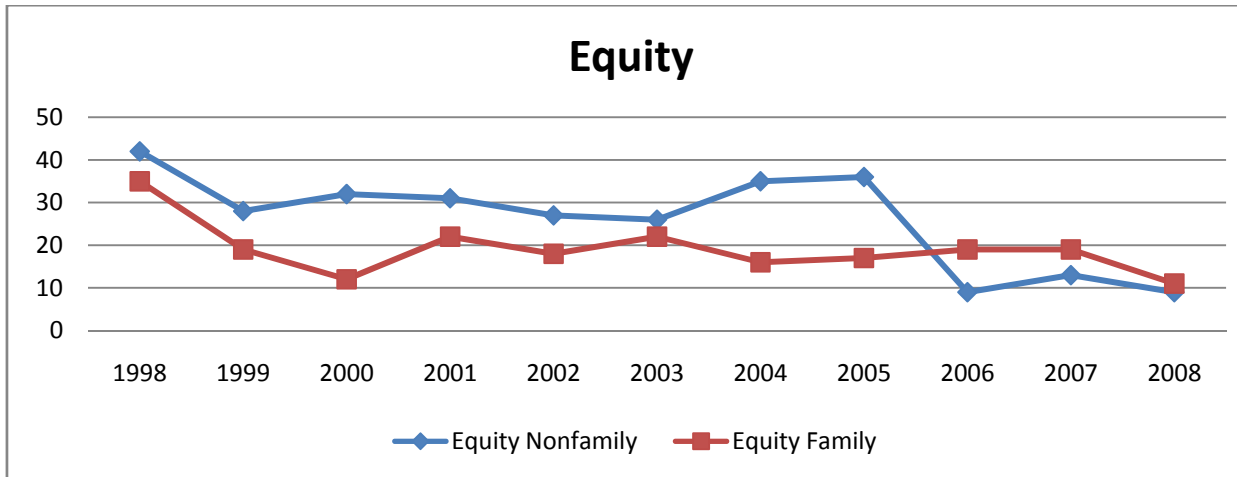
**Table 2: Equity, Convertible Debt, Straight Debt and Syndicated loans Sample Distribution (Continued)****Panel C: Issuance Distribution**

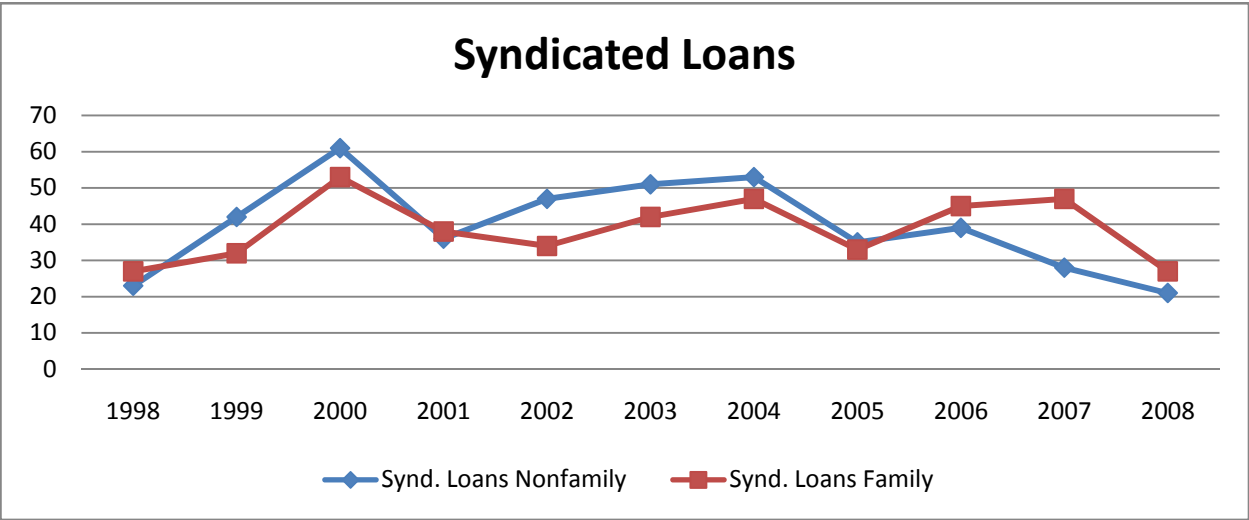
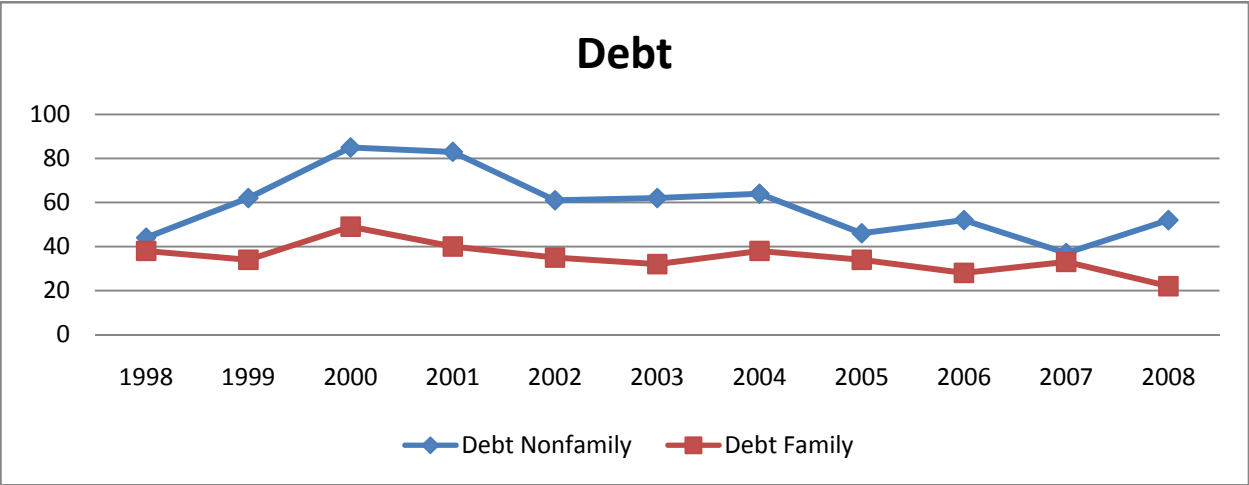
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Year	Equity		Convertible Debt		Debt		Loans	
	No. issues	Proceeds	No. issues	Proceeds	No. issues	Proceeds	No. issues	Proceeds
1998	77	45272.21	18	7182.513	82	30223.52	50	28469
1999	47	33629.01	20	11367.63	96	69967.79	74	167332
2000	44	45172.62	17	9160.977	134	151431.2	114	156700.1
2001	53	25343.94	20	18242.82	123	174007.5	74	97254.2
2002	45	21051.32	15	7430.698	96	65191.68	81	91567.8
2003	48	38151.07	20	11219.55	94	52244.91	93	149037
2004	51	31719.18	12	4039.612	102	54400.01	100	155713.9
2005	53	35394.64	9	2292.233	80	46467.56	68	168261.7
2006	28	13582.03	4	3945.818	80	66716.53	84	198104.2
2007	32	21178.03	3	1938.172	70	73752.06	75	251004.6
2008	20	15231.46	2	675.184	74	39998.49	48	115900.7
Total	498	325725.5	140	77495.21	1031	824401.3	861	1579345

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**Figure 1: Issuance Distribution: Equity, Convertible Debt, Straight Debt and Syndicated loans**





**Table 3: Propensity to Issue in Family Firms**

This table reports estimates of logit regressions where the dependent variable is a binary variable that takes value one if the sample firm makes in year  $t$  at least one issue of equity (column I); convertible debt (column II); corporate bonds (column III); syndicated loans (column IV); corporate bonds plus syndicated loans (All Debt, column V). *Age* is the difference between the sample year and the year the company was established. *Ln(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 book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220). *Sales Growth* is the growth rate in total sales in the previous year (WC07240). *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 OECD Tax database and internet sources. *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Equity	Conv. Debt	Debt	Syn. Loans	All Debt
	I	II	III	IV	V
Constant	-23.9917*** [1.1969]	-27.5082 [0.0000]	-31.2370*** [1.5241]	-26.0645*** [1.0391]	-27.6631*** [1.1583]
Age	-0.0020* [0.0011]	0.002 [0.0022]	0.0037*** [0.0012]	0.0025*** [0.0009]	0.0023*** [0.0008]
Ln(Size)	0.3847*** [0.0378]	0.6258*** [0.0695]	0.9337*** [0.0458]	0.5986*** [0.0316]	0.7442*** [0.0294]
Collateral	0.5683 [0.3764]	-0.3029 [0.7015]	0.1816 [0.3890]	-0.4436 [0.2993]	-0.2712 [0.2645]
Cash Holding	-0.1875 [0.6542]	-2.1579** [1.0608]	-3.5877*** [0.8103]	-2.5557*** [0.5787]	-3.0373*** [0.5320]
Leverage	1.6578*** [0.4340]	1.6852** [0.6899]	2.8105*** [0.4270]	1.7775*** [0.3388]	2.3292*** [0.3038]
M/B	0.0544*** [0.0211]	0.0342 [0.0396]	-0.1788*** [0.0347]	-0.0494** [0.0225]	-0.1009*** [0.0225]
ROA	-3.7672*** [0.9009]	-6.2049*** [1.7337]	-2.1404** [0.9418]	-2.6484*** [0.7381]	-2.7679*** [0.6631]
Sales Growth	0.6730*** [0.2442]	0.8622** [0.3683]	0.2009 [0.2486]	-0.1162 [0.2051]	0.0222 [0.1858]
Tax Adv. Debt	-0.156 [0.3247]	1.3541* [0.6956]	0.6719* [0.3871]	-1.2547*** [0.2748]	-0.5416** [0.2578]
Family	-0.5852*** [0.1135]	-0.6441*** [0.2129]	-0.2811** [0.1166]	-0.0125 [0.0964]	-0.1528* [0.0854]
Pseudo R2	0.1137	0.2052	0.2842	0.149	0.2077
Observations	5925	5439	5852	6224	6224



**Table 4: Propensity to Issue in Founder-led Family Firms**

This table reports estimates of logit regressions where the dependent variable is a binary variable that takes the value of one if a sample firm issues equity at least once in year  $t$  (column I); convertible debt (column II); corporate bonds (column III); syndicated loans (column IV); corporate bonds plus syndicated loans (All Debt, column V). *Age* is the difference between the sample year and the year the company was established. *Ln(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 book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220). *Sales Growth* is the growth rate in total sales in the previous year (WC07240). *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 OECD Tax database and internet sources. *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. *Founder CEO/Chairman* is a dummy variable that takes the value of 1 when the founder is the CEO or Chairman in a family firm. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Equity	Conv. Debt	Debt	Syn. Loans	All Debt
	I	II	III	IV	V
Constant	-25.2922*** [1.2017]	-27.6507 [0.0000]	-31.8710*** [1.5269]	-26.9434*** [1.0634]	-28.6438*** [1.1676]
Age	-0.0018 [0.0012]	0.0024 [0.0021]	0.0039*** [0.0012]	0.0029*** [0.0009]	0.0027*** [0.0008]
Ln(Size)	0.4124*** [0.0376]	0.6731*** [0.0714]	0.9613*** [0.0460]	0.6086*** [0.0311]	0.7623*** [0.0295]
Collateral	0.6137* [0.3716]	-0.0985 [0.6781]	0.2298 [0.3839]	-0.4044 [0.2966]	-0.2237 [0.2614]
Cash Holding	-0.4764 [0.6596]	-2.6371** [1.0611]	-3.9353*** [0.8173]	-2.7086*** [0.5823]	-3.2829*** [0.5364]
Leverage	1.5856*** [0.4328]	1.5974** [0.6746]	2.6723*** [0.4324]	1.6928*** [0.3420]	2.2176*** [0.3068]
M/B	0.0472** [0.0214]	0.0217 [0.0407]	-0.1859*** [0.0350]	-0.0540** [0.0225]	-0.1073*** [0.0228]
ROA	-3.8850*** [0.8998]	-6.4571*** [1.7094]	-2.2402** [0.9471]	-2.7467*** [0.7382]	-2.8812*** [0.6645]
Sales Growth	0.6329*** [0.2433]	0.7729** [0.3558]	0.1371 [0.2483]	-0.1395 [0.2047]	-0.0107 [0.1860]
Tax Adv. Debt	-0.3516 [0.3284]	1.1525 [0.7092]	0.4929 [0.3848]	-1.3067*** [0.2690]	-0.6567*** [0.2540]
Founder CEO/Chair	-0.2513 [0.2090]	0.3195 [0.3490]	0.3917* [0.2078]	0.4463*** [0.1420]	0.3784*** [0.1319]
Pseudo R2	0.1059	0.1985	0.2837	0.1509	0.2084
Observations	5925	5439	5852	6224	6224

**Table 5: Propensity to Issue in Family and Founder-led Family Firms Controlling for Ownership****Characteristics**

This table reports estimates of logit regressions where the dependent variable is a binary variable that takes value one if the sample firm makes in year  $t$  at least one issue of equity (column I); convertible debt (column II); corporate bonds (column III); syndicated loans (column IV); corporate bonds plus syndicated loans (All Debt, column V). *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(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 book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220). *Sales Growth* is the growth rate in total sales in the previous year (WC07240). *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 OECD Tax database and internet sources. *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. *Founder CEO/Chairman* is a dummy variable that takes the value of 1 when the founder is the CEO or Chairman in a family firm. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Panel A. Family firms**

	Equity I	Conv. Debt II	Debt III	Syn. Loans IV	All Debt V
Constant	-24.1645*** [1.2815]	-26.9439 [0.0000]	-31.2842*** [1.5486]	-26.6271*** [1.0774]	-28.1670*** [1.1733]
VR UO	0 [0.0029]	-0.0109* [0.0061]	-0.0021 [0.0029]	-0.001 [0.0023]	-0.0008 [0.0020]
Wedge UO	-0.008 [0.0051]	0.0006 [0.0120]	-0.0016 [0.0042]	-0.0096** [0.0038]	-0.0101*** [0.0033]
VR 2nd LS	0.0142** [0.0067]	-0.008 [0.0126]	-0.0213*** [0.0072]	-0.0032 [0.0060]	-0.0084 [0.0053]
Age	-0.0022* [0.0012]	0.0012 [0.0023]	0.0037*** [0.0012]	0.0025*** [0.0009]	0.0024*** [0.0008]
Ln(Size)	0.3915*** [0.0397]	0.5837*** [0.0729]	0.9192*** [0.0477]	0.5952*** [0.0328]	0.7429*** [0.0309]
Collateral	0.4937 [0.3770]	-0.282 [0.7153]	0.2515 [0.3932]	-0.4236 [0.2993]	-0.2335 [0.2650]
Cash Holding	-0.2984 [0.6591]	-2.1622** [1.0738]	-3.6494*** [0.8100]	-2.5393*** [0.5803]	-3.0757*** [0.5344]
Leverage	1.6817*** [0.4326]	1.7719*** [0.6840]	2.8067*** [0.4305]	1.7391*** [0.3385]	2.2872*** [0.3039]
M/B	0.0513** [0.0213]	0.0343 [0.0399]	-0.1733*** [0.0345]	-0.0509** [0.0224]	-0.1031*** [0.0225]
ROA	-3.7790*** [0.8929]	-6.0372*** [1.6948]	-2.2502** [0.9432]	-2.6748*** [0.7321]	-2.8114*** [0.6607]
Sales Growth	0.6552*** [0.2447]	0.8706** [0.3710]	0.2234 [0.2473]	-0.1157 [0.2050]	0.0241 [0.1860]
Tax Adv. Debt	-0.1102 [0.3303]	1.4918** [0.7049]	0.7094* [0.3904]	-1.2007*** [0.2763]	-0.4822* [0.2605]
Family	-0.5259*** [0.1331]	-0.4252 [0.2784]	-0.1757 [0.1307]	0.1013 [0.1062]	-0.0251 [0.0943]
Pseudo R2	0.1182	0.2092	0.2864	0.1511	0.2104
Observations	5920	5434	5847	6219	6219

**Panel B. Founder-led Family Firms**

	Equity I	Conv. Debt II	Debt III	Syn. Loans IV	All Debt V
Constant	-25.1055*** [1.3013]	-26.8828 [0.0000]	-31.5697*** [1.5455]	-26.1267*** [1.1889]	-27.8051*** [1.1708]
VR UO	-0.0033 [0.0029]	-0.0161** [0.0063]	-0.0047 [0.0029]	-0.0017 [0.0023]	-0.0022 [0.0020]
Wedge UO	-0.0119** [0.0053]	-0.0025 [0.0125]	-0.0016 [0.0042]	-0.0083** [0.0038]	-0.0094*** [0.0033]
VR 2nd LS	0.0112* [0.0067]	-0.0064 [0.0131]	-0.0215*** [0.0072]	-0.0008 [0.0060]	-0.0074 [0.0053]
Age	-0.0021* [0.0012]	0.0014 [0.0022]	0.0039*** [0.0012]	0.0028*** [0.0009]	0.0026*** [0.0008]
Ln(Size)	0.4012*** [0.0396]	0.6015*** [0.0748]	0.9254*** [0.0475]	0.5963*** [0.0327]	0.7471*** [0.0309]
Collateral	0.5434 [0.3729]	-0.1319 [0.7074]	0.2923 [0.3874]	-0.4016 [0.2973]	-0.2037 [0.2626]
Cash Holding	-0.5132 [0.6634]	-2.4883** [1.0799]	-3.8594*** [0.8168]	-2.6219*** [0.5843]	-3.2086*** [0.5384]
Leverage	1.6007*** [0.4291]	1.7008** [0.6703]	2.7062*** [0.4344]	1.6796*** [0.3420]	2.2073*** [0.3070]
M/B	0.0452** [0.0215]	0.0219 [0.0405]	-0.1767*** [0.0345]	-0.0529** [0.0224]	-0.1063*** [0.0226]
ROA	-3.8130*** [0.8835]	-6.1004*** [1.6544]	-2.2647** [0.9467]	-2.7153*** [0.7321]	-2.8530*** [0.6614]
Sales Growth	0.6254** [0.2428]	0.8051** [0.3615]	0.1821 [0.2481]	-0.1308 [0.2045]	0.0048 [0.1859]
Tax Adv. Debt	-0.1893 [0.3362]	1.4748** [0.7186]	0.6445 [0.3919]	-1.1930*** [0.2738]	-0.5083* [0.2598]
Founder CEO/Chair	-0.1223 [0.2205]	0.5968 [0.3803]	0.4150* [0.2156]	0.4823*** [0.1472]	0.4004*** [0.1366]
Pseudo R2	0.113	0.2091	0.287	0.1531	0.2118
Observations	5920	5434	5847	6219	6219

**Table 6: Propensity to Issue in Family and Founder-led Firms and Credit Rating**

This table reports estimates of logit regressions where the dependent variable is a binary variable that takes value one if the sample firm makes in year  $t$  at least one issue of equity (column I); convertible debt (column II); corporate bonds (column III); syndicated loans (column IV); corporate bonds plus syndicated loans (All Debt, column V). *Age* is the difference between the sample year and the year the company was established. *Ln(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 book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220). *Sales Growth* is the growth rate in total sales in the previous year (WC07240). *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 OECD Tax database and internet sources. *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. *Founder CEO/Chairman* is a dummy variable that takes the value of 1 when the founder is the CEO or Chairman in a family firm. *Family\*Rating (Founder CEO/Chair\*Rating)* is a dummy variable that takes value of 1 if 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 Standard & Poor's CreditExpress. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Panel A. Family firms**

	Equity	Conv. Debt	Debt	Syn. Loans	All Debt
	I	II	III	IV	V
Constant	-23.6942*** [1.2045]	-27.7081 [0.0000]	-30.9171*** [1.3408]	-25.8154*** [1.1737]	-27.4750*** [1.1593]
Age	-0.0021* [0.0011]	0.002 [0.0022]	0.0036*** [0.0012]	0.0025*** [0.0009]	0.0023*** [0.0008]
Ln(Size)	0.3621*** [0.0383]	0.6401*** [0.0760]	0.9098*** [0.0457]	0.5795*** [0.0321]	0.7298*** [0.0299]
Collateral	0.6534* [0.3778]	-0.3403 [0.6976]	0.2231 [0.3892]	-0.3991 [0.3005]	-0.2392 [0.2647]
Cash Holding	0.0171 [0.6545]	-2.2719** [1.0992]	-3.4206*** [0.8120]	-2.4213*** [0.5803]	-2.9409*** [0.5334]
Leverage	1.6328*** [0.4347]	1.7025** [0.6882]	2.7787*** [0.4274]	1.7510*** [0.3388]	2.3037*** [0.3031]
M/B	0.0586*** [0.0211]	0.0319 [0.0393]	-0.1769*** [0.0350]	-0.0457** [0.0225]	-0.0982*** [0.0225]
ROA	-3.6775*** [0.9058]	-6.2217*** [1.7350]	-1.9716** [0.9533]	-2.5470*** [0.7430]	-2.6916*** [0.6662]
Sales Growth	0.6921*** [0.2455]	0.8601** [0.3690]	0.2193 [0.2517]	-0.1072 [0.2059]	0.0315 [0.1860]
Tax Adv. Debt	-0.159 [0.3257]	1.3629* [0.6999]	0.6903* [0.3879]	-1.2489*** [0.2750]	-0.5328** [0.2576]
Family	-0.6919*** [0.1227]	-0.5853*** [0.2224]	-0.3846*** [0.1267]	-0.0804 [0.1018]	-0.2014** [0.0899]
Family*Rating	0.5634*** [0.2122]	-0.2926 [0.4479]	0.4159** [0.1753]	0.3445** [0.1497]	0.2669* [0.1365]
Pseudo R2	0.116	0.2057	0.2857	0.15	0.2083
Observations	5925	5439	5852	6224	6224

**Panel B. Founder-led Family Firms**

	Equity	Conv. Debt	Debt	Syn. Loans	All Debt
	I	II	III	IV	V
Constant	-25.1938*** [1.2041]	-27.5328 [0.0000]	-31.7164*** [1.5241]	-26.8453*** [1.0639]	-28.5332*** [1.1683]
Age	-0.0020* [0.0012]	0.0022 [0.0023]	0.0037*** [0.0012]	0.0027*** [0.0009]	0.0026*** [0.0008]
Ln(Size)	0.4082*** [0.0379]	0.6659*** [0.0738]	0.9544*** [0.0458]	0.6032*** [0.0311]	0.7563*** [0.0294]
Collateral	0.6272* [0.3708]	-0.0727 [0.6715]	0.2396 [0.3817]	-0.3903 [0.2964]	-0.2026 [0.2613]
Cash Holding	-0.4806 [0.6627]	-2.6305** [1.0634]	-3.9366*** [0.8193]	-2.7129*** [0.5837]	-3.2921*** [0.5379]
Leverage	1.5513*** [0.4334]	1.5853** [0.6741]	2.6506*** [0.4316]	1.6762*** [0.3419]	2.1959*** [0.3065]
M/B	0.0485** [0.0214]	0.0238 [0.0407]	-0.1854*** [0.0352]	-0.0522** [0.0225]	-0.1051*** [0.0227]
ROA	-3.8788*** [0.9011]	-6.4335*** [1.7196]	-2.1931** [0.9449]	-2.7062*** [0.7393]	-2.8414*** [0.6644]
Sales Growth	0.6347*** [0.2439]	0.7705** [0.3561]	0.1386 [0.2490]	-0.1417 [0.2051]	-0.0133 [0.1864]
Tax Adv. Debt	-0.3518 [0.3284]	1.1565 [0.7052]	0.4938 [0.3844]	-1.2980*** [0.2686]	-0.6444** [0.2535]
Founder CEO/Chairman	-0.3768 [0.2301]	0.2184 [0.3790]	0.2486 [0.2500]	0.3639** [0.1588]	0.2801* [0.1479]
Founder CEO/Chairman*Rating	0.7954 [0.5241]	0.4309 [0.9223]	0.5777 [0.4071]	0.4594 [0.3329]	0.6070** [0.3007]
Pseudo R2	0.1067	0.1988	0.2842	0.1513	0.209
Observations	5925	5439	5852	6224	6224

**Table 7: External Financing Proceeds in Family Firms: Tobit Regressions**

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 (column I); convertible debt issues (column II); corporate bonds issue (column III); syndicated loan issues (column IV); corporate bonds plus syndicated loan issues (All Debt, column V). *Age* is the difference between the sample year and the year the company was established. *Ln(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. *Cash Holding* is the ratio of cash plus tradable securities over total assets (WC02001/WC02999). *Leverage* is the ratio of book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220). *Sales Growth* is the growth rate in total sales (WC07240). *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 OECD Tax database and internet sources. *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Equity	Conv. Debt	Debt	Syn. Loans	All Debt
	I	II	III	IV	V
Constant	-1.7893*** [0.2411]	-1.6468*** [0.1411]	-3.2349*** [0.5084]	-3.3493*** [0.2248]	-3.5071*** [0.2277]
Age	-0.0006** [0.0003]	0 [0.0003]	0.0008*** [0.0003]	0.0008** [0.0004]	0.0008*** [0.0003]
Ln(Size)	0.0702*** [0.0103]	0.0615*** [0.0059]	0.1606*** [0.0251]	0.1730*** [0.0118]	0.1935*** [0.0121]
Collateral	0.0644 [0.0852]	-0.1302 [0.0894]	-0.0195 [0.0690]	-0.2285* [0.1168]	-0.1660* [0.0930]
Cash Holding	0.0834 [0.1711]	-0.1756 [0.1285]	-0.4917*** [0.1719]	-0.7565*** [0.2319]	-0.7343*** [0.1937]
Leverage	0.4569*** [0.1134]	0.2208** [0.0872]	0.6560*** [0.1121]	0.7833*** [0.1501]	0.8872*** [0.1246]
M/B	0.0180*** [0.0053]	0.0134*** [0.0046]	-0.0306*** [0.0076]	-0.0021 [0.0101]	-0.0180** [0.0086]
ROA	-0.9932*** [0.2507]	-1.0003*** [0.2486]	-0.2705 [0.1725]	-1.0610*** [0.3527]	-0.8891*** [0.2885]
Sales Growth	0.1992*** [0.0650]	0.1235** [0.0602]	0.022 [0.0542]	0.0414 [0.1009]	0.0631 [0.0842]
Tax Adv. Debt	0.0101 [0.0842]	0.1156 [0.0829]	0.0469 [0.0779]	-0.4415*** [0.1153]	-0.2419** [0.0964]
Family	-0.1627*** [0.0348]	-0.0782*** [0.0264]	-0.0382 [0.0250]	-0.0444 [0.0376]	-0.0642** [0.0305]
Pseudo R2	0.09	0.1854	0.2261	0.0885	0.1164
Observations	6251	6251	6251	6251	6251

**Table 8: External Financing Proceeds in Founder-led Family Firms: Tobit Regressions**

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 the company's equity at the beginning of the year) from equity issues (column I); convertible debt issues (column II); corporate bonds issue (column III); syndicated loan issues (column IV); corporate bond plus syndicated loan issues (All Debt, column V). *Age* is the difference between the sample year and the year the company was established. *Ln(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. *Cash Holding* is the ratio of cash plus tradable securities over total assets (WC02001/WC02999). *Leverage* is the ratio of book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220). *Sales Growth* is the growth rate in total sales (WC07240). *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 OECD Tax database and internet sources. *Founder CEO/Chairman* is a dummy variable that takes the value of 1 when the founder is the CEO or Chairman in a family firm. All independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Equity	Conv. Debt	Debt	Syn. Loans	All Debt
	I	II	III	IV	V
Constant	-1.9677*** [0.2628]	-1.7918*** [0.1497]	-3.3143*** [0.5262]	-3.4722*** [0.2303]	-3.6407*** [0.2390]
Age	-0.0006** [0.0003]	0.0001 [0.0003]	0.0009*** [0.0003]	0.0009*** [0.0004]	0.0009*** [0.0003]
Ln(Size)	0.0788*** [0.0111]	0.0693*** [0.0066]	0.1650*** [0.0261]	0.1798*** [0.0120]	0.2008*** [0.0126]
Collateral	0.0693 [0.0865]	-0.1057 [0.0890]	-0.0087 [0.0690]	-0.2077* [0.1163]	-0.149 [0.0927]
Cash Holding	0.0144 [0.1693]	-0.2351* [0.1274]	-0.5208*** [0.1758]	-0.8226*** [0.2319]	-0.8017*** [0.1941]
Leverage	0.4321*** [0.1126]	0.1823** [0.0861]	0.6372*** [0.1104]	0.7318*** [0.1503]	0.8424*** [0.1244]
M/B	0.0172*** [0.0053]	0.0125*** [0.0047]	-0.0317*** [0.0078]	-0.0037 [0.0100]	-0.0196** [0.0086]
ROA	-1.0665*** [0.2613]	-1.0764*** [0.2514]	-0.2930* [0.1729]	-1.1120*** [0.3537]	-0.9377*** [0.2896]
Sales Growth	0.1869*** [0.0648]	0.1097* [0.0590]	0.0137 [0.0546]	0.026 [0.0997]	0.0481 [0.0833]
Tax Adv. Debt	-0.0541 [0.0827]	0.068 [0.0847]	0.021 [0.0801]	-0.4935*** [0.1164]	-0.2924*** [0.0983]
Founder CEO/Chair	-0.0852* [0.0514]	0.0607 [0.0419]	0.0400 [0.0404]	0.1553*** [0.0593]	0.1073** [0.0489]
Pseudo R <sup>2</sup>	0.0777	0.1789	0.2256	0.0896	0.1165
Observations	6251	6251	6251	6251	6251

**Table 9: Leverage in Family and Founder-led 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. *Leverage* is the ratio of book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *Age* is the difference between the sample year and the year the company was established. *Ln(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 over total assets (WC02001/WC02999). *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (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). *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 OECD Tax database and internet sources. *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. *Founder CEO/Chairman* is a dummy variable that takes the value of 1 when the founder is the CEO or Chairman in a family firm. Market and accounting variables are winsorized at 0.01 and 0.99. *Family\*Rating* (*Founder CEO/Chair\*Rating*) is a dummy variable that takes value of 1 if 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 Standard & Poor's CreditExpress. All regressions include year and industry fixed effects. *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. Market and financial variables are winsorized at 0.01 and 0.99. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Panel A: Leverage in Family and Founder-led Firms**

	I	II	III	IV
Constant	0.4613*** [0.0311]	0.4734*** [0.0313]	0.4524*** [0.0304]	0.4652*** [0.0307]
Age	-0.0001** [0.0000]	-0.0001** [0.0000]	-0.0001* [0.0000]	-0.0001** [0.0000]
Ln(Size)	0.0005 [0.0012]	-0.0005 [0.0013]	0.0007 [0.0012]	-0.0003 [0.0013]
Collateral	0.1983*** [0.0127]	0.2005*** [0.0128]	0.1998*** [0.0127]	0.2024*** [0.0128]
Cash Holding	-0.3239*** [0.0202]	-0.3171*** [0.0204]	-0.3241*** [0.0202]	-0.3192*** [0.0203]
M/B	0.0055*** [0.0010]	0.0057*** [0.0010]	0.0054*** [0.0010]	0.0055*** [0.0010]
ROA	-0.5123*** [0.0299]	-0.5059*** [0.0300]	-0.5125*** [0.0300]	-0.5060*** [0.0301]
Sales Growth	0.0555*** [0.0086]	0.0559*** [0.0086]	0.0541*** [0.0087]	0.0542*** [0.0087]
Tax Adv. Debt	-0.0097 [0.0100]	-0.0088 [0.0100]	-0.0104 [0.0100]	-0.0089 [0.0100]
Family	0.0165*** [0.0036]	0.0134*** [0.0037]	0.0123*** [0.0038]	0.0101*** [0.0039]
Family*Rating		0.0271*** [0.0072]		0.0184** [0.0077]
Founder CEO/Chair			0.0250*** [0.0055]	0.0203*** [0.0058]
Founder CEO/Chair*Rating				0.0445*** [0.0164]
Adjusted R2	0.2798	0.2812	0.2819	0.2838
Observations	6251	6251	6251	6251



**Panel B: Leverage in Family and Founder-led Firms Controlling for Ownership Characteristics**

	I	II	III	IV
Constant	0.4817*** [0.0318]	0.4935*** [0.0319]	0.4739*** [0.0311]	0.4863*** [0.0314]
VR UO	-0.0002*** [0.0001]	-0.0002** [0.0001]	-0.0003*** [0.0001]	-0.0003*** [0.0001]
Wedge UO	-0.0003** [0.0001]	-0.0003*** [0.0001]	-0.0002* [0.0001]	-0.0003** [0.0001]
VR 2nd LS	-0.0006*** [0.0002]	-0.0006*** [0.0002]	-0.0005** [0.0002]	-0.0005*** [0.0002]
Age	-0.0001** [0.0000]	-0.0001** [0.0000]	-0.0001* [0.0000]	-0.0001** [0.0000]
Ln(Size)	-0.0002 [0.0013]	-0.0012 [0.0013]	-0.0001 [0.0013]	-0.0011 [0.0013]
Collateral	0.1996*** [0.0127]	0.2019*** [0.0128]	0.2011*** [0.0127]	0.2037*** [0.0128]
Cash Holding	-0.3216*** [0.0202]	-0.3144*** [0.0203]	-0.3218*** [0.0202]	-0.3164*** [0.0203]
M/B	0.0055*** [0.0010]	0.0057*** [0.0010]	0.0054*** [0.0010]	0.0055*** [0.0010]
ROA	-0.5075*** [0.0300]	-0.5012*** [0.0301]	-0.5070*** [0.0301]	-0.5006*** [0.0302]
Sales Growth	0.0561*** [0.0086]	0.0566*** [0.0086]	0.0549*** [0.0086]	0.0550*** [0.0086]
Tax Adv. Debt	-0.0063 [0.0100]	-0.0053 [0.0100]	-0.0066 [0.0100]	-0.0052 [0.0100]
Family	0.0243*** [0.0041]	0.0211*** [0.0042]	0.0204*** [0.0042]	0.0181*** [0.0043]
Family*Rating		0.0285*** [0.0072]		0.0199** [0.0078]
Founder CEO/Chair			0.0239*** [0.0056]	0.0193*** [0.0059]
Founder CEO/Chair*Rating				0.0421** [0.0164]
Adjusted R2	0.2821	0.2837	0.284	0.2859
Observations	6246	6246	6246	6246
	0.4817***	0.4935***	0.4739***	0.4863***

**Table 10: Corporate Debt Maturity Structure in Family Firms**

This table reports estimates of OLS regressions of the firm's short-term debt (Columns I to II) and long-term debt (Columns III to IV) on family and founder-led family measures and a series of control variables. Short-term debt represents that portion of debt payable within one year including the current portion of long term debt. We scale short-term debt by total assets (WC03051/WC02999). Long-term debt represents all interest bearing financial obligations, excluding amounts due within one year. We scale long-term debt by total assets. (WC03255/WC02999). *Age* is the difference between the sample year and the year the company was established. *Ln(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 over total assets (WC02001/WC02999). *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (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). *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 OECD Tax database and internet sources. *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. *Founder CEO/Chairman* is a dummy variable that takes the value of 1 when the founder is the CEO or Chairman in a family firm. *Family\* Rating (Founder CEO/Chair\*Rating)* is a dummy variable that takes value of 1 if 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 Standard & Poor'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 amongst banks for any excess or shortage of liquidity over several months or the rate associated with Treasury bills, Certificates of Deposit or comparable instruments, each of three month maturity. Long term (in most cases 10 year) government bonds are the instrument whose yield is used as the representative 'interest rate' for this area. Market and accounting variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Panel A: Family Firms**

	Short-Term Debt		Long-Term Debt	
	I	II	III	IV
Constant	0.2633*** [0.0233]	0.2591*** [0.0235]	0.2058*** [0.0286]	0.2224*** [0.0290]
Age	-0.0001*** [0.0000]	-0.0001*** [0.0000]	0 [0.0000]	0 [0.0000]
Ln(Size)	-0.0054*** [0.0008]	-0.0050*** [0.0008]	0.0064*** [0.0010]	0.0050*** [0.0011]
Collateral	-0.0278*** [0.0066]	-0.0286*** [0.0066]	0.2239*** [0.0113]	0.2268*** [0.0113]
Cash Holding	-0.1794*** [0.0106]	-0.1818*** [0.0107]	-0.1435*** [0.0166]	-0.1344*** [0.0167]
M/B	0.0028*** [0.0007]	0.0027*** [0.0007]	0.0022** [0.0009]	0.0024*** [0.0009]
ROA	-0.1373*** [0.0168]	-0.1396*** [0.0168]	-0.3554*** [0.0247]	-0.3465*** [0.0248]
Sales Growth	-0.0041 [0.0047]	-0.0042 [0.0047]	0.0583*** [0.0075]	0.0589*** [0.0076]
Tax Adv. Debt	0.0368*** [0.0057]	0.0365*** [0.0057]	-0.0410*** [0.0090]	-0.0396*** [0.0090]
Spread	-0.1665 [0.2334]	-0.16 [0.2334]	-1.3641*** [0.3466]	-1.3892*** [0.3467]
Family	0.0057*** [0.0021]	0.0068*** [0.0021]	0.0096*** [0.0031]	0.0053 [0.0033]
Family*Rating		-0.0095** [0.0039]		0.0374*** [0.0063]
Adjusted R2	0.172	0.1725	0.2792	0.2829
Observations	6190	6190	6228	6228

**Panel B: Founder-led Family Firms**

	Short-Term Debt		Long-Term Debt	
	I	II	III	IV
Constant	0.2618*** [0.0235]	0.2574*** [0.0238]	0.1971*** [0.0273]	0.2146*** [0.0279]
Age	-0.0001*** [0.0000]	-0.0001*** [0.0000]	0 [0.0000]	0 [0.0000]
Ln(Size)	-0.0053*** [0.0008]	-0.0050*** [0.0008]	0.0066*** [0.0010]	0.0052*** [0.0011]
Collateral	-0.0275*** [0.0066]	-0.0282*** [0.0066]	0.2256*** [0.0113]	0.2288*** [0.0113]
Cash Holding	-0.1795*** [0.0106]	-0.1818*** [0.0107]	-0.1437*** [0.0166]	-0.1364*** [0.0167]
M/B	0.0027*** [0.0007]	0.0027*** [0.0007]	0.0021** [0.0009]	0.0023** [0.0009]
ROA	-0.1373*** [0.0168]	-0.1396*** [0.0168]	-0.3556*** [0.0248]	-0.3465*** [0.0249]
Sales Growth	-0.0043 [0.0048]	-0.0045 [0.0048]	0.0570*** [0.0076]	0.0573*** [0.0076]
Tax Adv. Debt	0.0367*** [0.0057]	0.0363*** [0.0057]	-0.0417*** [0.0089]	-0.0397*** [0.0089]
Spread	-0.1694 [0.2333]	-0.163 [0.2333]	-1.3772*** [0.3455]	-1.4027*** [0.3457]
Family	0.0050** [0.0021]	0.0060*** [0.0022]	0.0054* [0.0032]	0.0021 [0.0034]
Founder CEO/Chair	0.0042 [0.0035]	0.0045 [0.0037]	0.0244*** [0.0050]	0.0196*** [0.0053]
Family*Rating		-0.0092** [0.0043]		0.0288*** [0.0067]
Founder CEO/Chair*Rating		-0.0022 [0.0095]		0.0435*** [0.0156]
Adjusted R2	0.1721	0.1725	0.2819	0.2862
Observations	6190	6190	6228	6228

**Table 11: Financing Decisions and Information Asymmetry in Family Firms**

In Column I, 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. Column II and III report estimates of OLS regressions where the dependent variable is the firm's net leverage (II) and leverage (III). Net Leverage is the difference between leverage and *Cash Holding*, which is the ratio of cash plus tradable securities over total assets (WC02001/WC02999). *Leverage* is the ratio of 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. *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). *Sales Growth* is the growth rate in total sales in the previous year (WC07240). *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. In Column I, all independent variables are lagged with respect to the dependent variable. Market and financial variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Panel A: Family Firms**

	Equity I	Net Leverage II	Leverage III
Constant	-1.9130*** [0.2746]	0.2961*** [0.0478]	0.4142*** [0.0360]
$R^2$	-0.0116 [0.1033]	0.1010*** [0.0205]	0.1301*** [0.0152]
Age	-0.0009*** [0.0003]	0.0001* [0.0000]	-0.0001 [0.0000]
$\ln(\text{Size})$	0.0817*** [0.0145]	-0.0075*** [0.0021]	-0.0067*** [0.0016]
Collateral	0.1128 [0.0798]	0.4166*** [0.0147]	0.2452*** [0.0121]
ROA	-1.0377*** [0.2495]	-0.7077*** [0.0396]	-0.5157*** [0.0283]
Sales Growth	0.2310*** [0.0646]	0.0976*** [0.0129]	0.0717*** [0.0090]
Family	-0.1451*** [0.0324]	0.0157*** [0.0046]	0.0104*** [0.0036]
Pseudo $R^2$	0.0781	0.2706	0.2461
Observations	6238	6236	6238

**Panel B: Founder-led Family Firms**

	Equity	Net Leverage	Leverage
	I	II	III
Constant	-2.0581*** [0.2909]	0.1576*** [0.0308]	0.2866*** [0.0231]
R <sup>2</sup>	0.0435	0.0567***	0.0733***
Age	[0.1028] -0.0008** [0.0003]	[0.0208] 0.0000 [0.0000]	[0.0152] -0.0001*** [0.0000]
Ln(Size)	0.0849*** [0.0149]	-0.0051** [0.0022]	-0.0045*** [0.0017]
Collateral	0.1378* [0.0818]	0.4317*** [0.0124]	0.2783*** [0.0103]
ROA	-1.1007*** [0.2580]	-0.6351*** [0.0395]	-0.4617*** [0.0283]
Sales Growth	0.2211*** [0.0641]	0.0773*** [0.0133]	0.0551*** [0.0094]
Founder CEO/Chair	-0.0597 [0.0503]	0.0293*** [0.0075]	0.0429*** [0.0057]
Pseudo R <sup>2</sup>	0.0676	0.2068	0.1752
Observations	6238	6236	6238

**Table 12: Financing Decisions and Performance**

This table reports coefficient estimates of OLS regressions where the dependent variables are the change in cash holding, leverage, net Leverage, and CAPEX. *Cash Holding* is the ratio of cash plus tradable securities over total assets (WC02001/WC02999). *Leverage* is the ratio of book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *Net Leverage* is the difference between *Leverage* and *Cash Holding*. The independent variable measures operating performance. *ROA* is the return on assets, defined as EBITDA over total assets (WC18198/ WC02999). *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. The lagged values of the following control covariates are included in all regressions: *Age* , *Ln(Size)* , *Collateral*, *Sales Growth* (not reported). Market and financial variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

	Cash Holding	Leverage	Net Leverage	CAPEX
	I	II	III	IV
$\Delta ROA_{t\_Family}$	0.1298*** [0.0245]	-0.3146*** [0.0277]	-0.4534*** [0.0427]	0.1415*** [0.0367]
$\Delta ROA_{t\_Nonfamily}$	0.0848*** [0.0253]	-0.2886*** [0.0289]	-0.3865*** [0.0427]	0.0201 [0.0366]
$\Delta ROA_{t-1\_Family}$	-0.0125 [0.0234]	-0.0873*** [0.0254]	-0.0806** [0.0391]	0.2091*** [0.0382]
$\Delta ROA_{t-1\_Nonfamily}$	-0.0294 [0.0260]	-0.0855*** [0.0298]	-0.0738* [0.0417]	0.1129*** [0.0387]
Adj. R <sup>2</sup>	0.0229	0.0922	0.0955	0.0246
Observations	5968	5971	5968	5945

**Table 13: Corporate Investment Policies in Family Firms**

This table reports estimates of OLS regressions where the dependent variable is of the firm's capital expenditures (CAPEX) in Columns I to II, and of the firm's R&D expenses in Columns III and IV, respectively. *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). *R&D* represents research and developments 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. *Ln(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 over total assets (WC02001/WC02999). *Leverage* is the ratio of book value of financial debt as a percentage of the book value of total assets (WC03255/WC02999). *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 amongst banks for any excess or shortage of liquidity over several months or the rate associated with Treasury bills, Certificates of Deposit or comparable instruments, each of three month maturity. Long term (in most cases 10 year) government bonds are the instrument whose yield is used as the representative 'interest rate' for this area. *M/B* is the ratio of market value of equity in US\$ (WC07210) divided by common equity in US\$ (WC07220). *ROA* is the return on assets, defined as EBITDA over total assets. *Sales Growth* is the growth rate in total sales (WC07240). *Family* is a dummy variable that takes the value of 1 when the controlling shareholder is a family. *Founder CEO/Chairman* is a dummy variable that takes the value of 1 when the founder is the CEO or Chairman in a family firm. Market and accounting variables are winsorized at 0.01 and 0.99. All regressions include year and industry fixed effects. Robust standard errors are in parenthesis. The symbols \*\*\*, \*\*, \* denote statistical significance at the 1%, 5%, and 10% levels, respectively.

**Panel A: Family Firms**

	CAPEX		R&D	
	I	II	III	IV
Constant	0.3329*** [0.0903]	0.3325*** [0.0906]	0.1193*** [0.0387]	0.1233*** [0.0388]
Ln(Size)	-0.0136*** [0.0014]	-0.0136*** [0.0015]	0.0008* [0.0004]	0.0005 [0.0004]
Cash Holding	-0.0235 [0.0211]	-0.0236 [0.0211]	0.0094* [0.0055]	0.0109** [0.0055]
Leverage	0.2533*** [0.0187]	0.2533*** [0.0188]	0.0101*** [0.0038]	0.0096** [0.0037]
Spread	-0.0106* [0.0061]	-0.0106* [0.0061]	-0.0007 [0.0013]	-0.0007 [0.0013]
M/B	-0.0127*** [0.0010]	-0.0127*** [0.0010]	-0.0019*** [0.0002]	-0.0018*** [0.0002]
ROA	0.1130*** [0.0315]	0.1128*** [0.0317]	-0.0559*** [0.0083]	-0.0539*** [0.0083]
Sales Growth	0.0216* [0.0122]	0.0216* [0.0121]	0.0007 [0.0029]	0.0009 [0.0029]
Family	0.0086** [0.0041]	0.0087** [0.0043]	-0.0046*** [0.0012]	-0.0056*** [0.0012]
Family*Rating		-0.0008 [0.0077]		0.0083*** [0.0028]
Adjusted R <sup>2</sup>	0.2225	0.2224	0.2601	0.2613
Observations	6365	6365	6365	6365

**Panel B: Founder-led Family Firms**

	CAPEX		R&D	
	I	II	III	IV
Constant	0.3422*** [0.0901]	0.3398*** [0.0904]	0.1164*** [0.0393]	0.1174*** [0.0394]
Ln(Size)	-0.0139*** [0.0014]	-0.0138*** [0.0014]	0.0009** [0.0004]	0.0008* [0.0004]
Cash Holding	-0.0176 [0.0214]	-0.0174 [0.0214]	0.0073 [0.0055]	0.0072 [0.0055]
Leverage	0.2539*** [0.0189]	0.2544*** [0.0190]	0.0104*** [0.0037]	0.0102*** [0.0037]
Spread	-0.0110* [0.0061]	-0.0110* [0.0061]	-0.0004 [0.0013]	-0.0004 [0.0013]
M/B	-0.0127*** [0.0010]	-0.0127*** [0.0010]	-0.0018*** [0.0002]	-0.0018*** [0.0002]
ROA	0.1137*** [0.0316]	0.1127*** [0.0317]	-0.0559*** [0.0083]	-0.0555*** [0.0083]
Sales Growth	0.0222* [0.0122]	0.0223* [0.0122]	0.0007 [0.0029]	0.0007 [0.0029]
Founder CEO/Chair	0.0051 [0.0075]	0.0071 [0.0079]	-0.0072*** [0.0018]	-0.0080*** [0.0018]
Founder CEO/Chair *Rating		-0.0214 [0.0192]		0.0091 [0.0058]
Adjusted R <sup>2</sup>	0.2221	0.2221	0.26	0.2602
Observations	6365	6365	6365	6365