

## Family firms and the enhanced corporate control: The bright side of business groups

### **Abstract**

We analyze the effect of the enhanced corporate control on the performance of the Chilean family firms by considering the impact of both ownership pyramids and business groups. Our results suggest that low levels of separation between control rights and ownership rights increase the firm performance but too much separation can result in perverse incentives for family members to extract private benefits. We also find that group affiliation is positive for family controlled firms. Furthermore, family business groups alleviate the negative effect of the disproportionate control, which corroborates the bright side of internal capital markets for family firms.

### **Keywords:**

Firm performance, Family corporate control, Pyramidal Structure, Business groups, Ownership structure.

**JEL codes:** G32.

## 1. Introduction

The use of corporate control enhancing mechanisms that do not follow the proportionality principle is widespread around the world. The survey conducted by Institutional Shareholder Services (2007) on 464 firms from 16 European countries shows that 44% of the firms feature at least one control enhancing mechanism, being this proportion 52% among the largest listed firms. The review of the theoretical literature shows that control enhancing mechanisms have advantages and drawbacks, and their final effect depends on the context in which they are utilized, particularly on the shareholder structure (Adams & Ferreira, 2008; Cronqvist et al., 2012). It is an open question whether these mechanisms would improve the quality of corporate governance, notably in systems built around large owners such as family firms.

The empirical economic literature does not give a robust answer to the question of whether disproportional ownership creates or destroys firm value. This lack of concluding evidence can be due partly to the fact that the value of the firm reflects the private benefits accruing to whoever is in control. The ownership structure of family businesses and the specific agency problems in such firms, raises the question about the influence of the separation between cash flow rights and control rights in the family firms.

Cronqvist and Nilsson (2003) and Coles et al. (2012) support the idea that families are particularly interested in owning corporate votes and use disproportional ownership. One of the mechanisms that families often use to achieve control of the firms is pyramidal structures. In such structures the controlling shareholders break the rule *one-vote-one-share* by a chain of ownership relations: the family directly controls a firm, which in turn controls another

firm, which might itself control other firms, and so forth (Almeida & Wolfenzon, 2006; Claessens, Djankov, & Lang, 2000; Faccio & Lang, 2002).

Pyramids can be also associated to business groups, which could be defined as any business organization where a number of firms are linked through ownership or where a single individual, family or coalition of families own a number of different firms. Thus, in business groups there is a well-established social structure among participating firms (Silva et al., 2006). Because of this inter-linked structure, the effects of group affiliation are still far from being unequivocal. The financial literature has coined the bright side and the dark side of business groups to describe the positive and the negative impact of group affiliation on firm performance.

We claim that the conflicting results are due to the lack of a more comprehensive framework, and that family businesses play an important role in reconciling these apparently conflicting views. To some extent, the empirical evidence on the effect of business affiliation is driven by the agency theory approach, and the results are often interpreted in terms of conflicts of interests among different types of shareholders (Dodd & Dyck, 2015; Madison et al., 2015). We posit that a family based approach of business groups provides helpful insights that can explain whether group affiliation is profitable and the circumstances under which it happens.

We analyze a sample of 1,018 firm-year observations from 88 Chilean firms listed in the *Bolsa de Comercio de Santiago* for the period 2000-2014. Chile is a unique environment to test the effects of the control enhancing mechanisms on family firms for a number of reasons. First, the legal protection of investors in Chile is lower than that of the Anglo-Saxon

common law countries. Thus, minority shareholders run the risk of expropriation by family controlling shareholders. Second, the use of control enhancing mechanisms is widespread among Chilean firms. Third, although business groups are prevalent around the world, the affiliation to business groups seems to characterize the emerging markets (Barca & Becht, 2001; Buchuk et al., 2014). As shown by Claessens, Djankov, and Klapper (2000), four out of ten Chilean firms are associated with business groups. Forth, as prescribed by the Chilean Capital Markets Law, the Stock Market Regulator *Superintendencia de Valores y Seguros* (SVS hereinafter) must track the composition of the business groups in the country. Thus, the Chilean financial regulator provides us with an objective and unambiguous definition of business groups.

Consistent with previous research on the higher profitability of family firms (Bonilla et al., 2010; Chen et al., 2010; Kowalewski et al., 2010; Martínez et al., 2007; Naldi et al., 2015; Sacristán-Navarro et al., 2011), our results show that, first, family control is beneficial in terms of firm performance. After taking into account the specific effects of the enhanced control, the firms under family control outperform their nonfamily counterparts. Second, we confirm the dual effect of pyramid structures. According to our results, low levels of separation between control rights and ownership rights increase the firm performance. Nevertheless, too much separation can result in perverse incentives for family member to extract private benefits. Consequently, an excessive separation of control and ownership rights can aggravate potential conflicts of interests inside family firms. Third, we find that, although business groups have a negative impact on the performance of nonfamily firms, the group affiliation is positive for family controlled firms. Furthermore, family business groups

alleviate the negative effect of the disproportionate control. Business groups, by mitigating the asymmetric information problems and alleviating the financial constraints, improve the allocation of funds and increase the market value of the firm.

The contribution of our paper is twofold. First, we extend the literature on family business by testing the specific effects of corporate control mechanisms in this kind of firms. Previous literature has analyzed the impact of the ownership structure on the performance of family firms but has not studied how the control enhancing mechanisms can jointly modify such impact. Some papers have analyzed the control motivations of family business groups around the world (Masulis et al., 2011) but, to the best of our knowledge, the joint effect of both control enhancing mechanisms has not been taken into account. Conversely, there is much research on ownership pyramids (Almeida & Wolfenzon, 2006; Sacristán-Navarro & Gómez-Ansón, 2007) but it has not been connected to business group affiliation. Second, we search into the sources underlying the better performance of family firms. Our research shows that the mechanisms used by the family shareholders to keep the control of the firm are possible explanations of the outperformance of family businesses.

The remainder of the paper is organized as follows. Section 2 reviews prior literature on the relation between family ownership, corporate control and firm performance. This section also includes the hypotheses to be tested. Section 3 describes the empirical method, the sample and the variables. Section 4 presents the results of our estimates. Finally, we discuss some implications of our findings and develop our conclusions.

## **2. Theoretical review**

## **2.1. Family firms performance and the wedge of control/cash flow rights**

Almeida and Wolfenzon (2006) suggest that the starting point of a family-controlled firm begins when family initially sets up a firm and, at some point in the future, the opportunity to set up another firm arises. In doing so, the family faces the decision about which mechanisms to use to keep the firm under control and, in consequence, a complex ownership structure can result. The ownership structure of family firms has a number of characteristics that exceed the classical agency problem between managers and shareholders (Blanco-Mazagatos et al., 2007; Miller & Le Breton-Miller, 2006; Moores, 2009; Naldi et al., 2007; Short et al., 2009). Family firms usually have a more concentrated ownership structure, and their family shareholders have a less diversified portfolio (Cheng, 2014; Villalonga & Amit, 2009), which usually leads to higher family control. Thus, family shareholders use a range of mechanisms to retain the control such as dual-class stocks, pyramidal ownership structures and business groups (Bhaumik & Gregoriou, 2010; Levy, 2009; Villalonga & Amit, 2010). Given the commitment of the family to the business, family firms are more sensitive to a loss of control than non-family firms.

The concentrated ownership structure and the involvement of family members in management positions result in less separation between shareholders and managers. An alternative problem in family firms can arise from the possible conflict between controlling family shareholders and minority shareholders (Claessens, Djankov, & Lang, 2000; Greco et al., 2015; Sacristán-Navarro et al., 2015; Singal & Singal, 2011). In such environments, family members have incentives to prioritize their own interests at the expense of non-family

investors (Liu et al., 2015; Maury & Pajuste, 2005; Sacristán-Navarro et al., 2011; Songini & Gnan, 2015).

A key issue of family firms is the intensification of the family control (Le Breton-Miller et al., 2004; Sharma, 2004; Sharma et al., 2003; Villalonga & Amit, 2009). Bhaumik and Gregoriou (2010) suggest three different benefits that accrue to the family if it preserves the control. First, the family may derive non-pecuniary utility from the control over the firm. Second, the family name can be seen as an intangible asset that increases the value of the family stake. Third, control could give the family the ability to appropriate a disproportionate share of the firm cash flows. The corporate control can be enhanced by a number of mechanisms, such as dual class shares, the use of pyramids, cross-shareholdings, disproportionate board representation, and voting agreements, which result in family shareholders owning control rights far beyond their cash flow rights (Sacristán-Navarro & Gómez-Ansón, 2007).

Pyramid structures are the most common control enhancing mechanism (Institutional Shareholder Services, 2007). Pyramids are implemented through a chain of ownership relations that allow expanding the control over a large number of firms with less investment (Boubaker & Labégorre, 2008). Since pyramids imply the separation between voting rights and cash flow rights they can exacerbate the agency costs among different types of shareholders given the possibility of private benefits at a less than proportional cost. The general economic theory on pyramidal structures argue that pyramids can be harmful to minority shareholders whose interests are often at odds with those of controlling shareholders (Bebchuk et al., 2000). This negative effect can be the result of corporate decisions such as

investment in non-value maximizing projects, tunneling and propping, biased dividend policies, etc. (Bona et al., 2011; Ruiz Mallorquí & Santana Martín, 2009).

Although some recent papers have delivered conflicting results, the mainstream research has found empirical support to the negative effect of the divergence between control rights and ownership rights on firm value (Almeida et al., 2011; Jin & Park, 2015; Vázquez, 2015; Zhang & Su, 2015). We posit that, the specific features of the family firms can exacerbate this negative effect of the divergence between cash flow rights and voting rights. First, given that in family firms the conflict between controlling and minority shareholders can be more severe, the mechanisms of control that increases this separation can be seen as having a more detrimental effect on the value of the firm. Second, family firms rely on private communication channels rather than public disclosure, producing a poor informational environment (Norhidayah & Wee, 2015). Moreover, the concentrated ownership of family firms can exacerbate this poor information environment (Hung & Kuo, 2011). Consequently, we state our first hypothesis as follows:

H1: The wedge between voting rights and cash flow rights has a negative influence on the performance of family firms.

## **2.2. Family firms performance and business groups**

Business groups are an alternative means to retain the control in family firms. A characteristic of business groups is that firms are usually linked through cross-ownership relations and the same controlling shareholder (either a single individual, a family or a group of families) holds the control of a number of firms.

The impact of business groups on firm performance is a controversial issue (Carney et al., 2015). The financial literature has coined the expressions dark and bright sides of business groups. The dark side of business groups underlines the inefficiencies of financial flows inside groups. The internal capital markets are a way to avoid the scrutiny of the external markets. When managers pursue their own objectives, the capital allocation from the internal markets can be less efficient and result in underinvesting in the most profitable firms or overinvesting in the weakest subsidiaries (Ozbas & Scharfstein, 2010; Scharfstein & Stein, 2000). These inefficiencies can be exacerbated by the conflicts between controlling and non-controlling shareholders, so that the separation between cash flow rights and voting rights in family business groups can result in incentives of the family shareholders to pursue their own benefits at the expense of the non-family or minority shareholders.

On the contrary, the bright side of business groups emphasizes the ability of such groups to overcome the market frictions (Khanna & Tice, 2001). According to this view, in markets with little qualified workforce, firms within business groups can optimize the resources by transferring human capital. In the same vein, firms with limited access to intermediated funds or in countries with narrow capital markets can benefit from the financial support of the other firms of the group. The less asymmetric information among divisions and headquarters, and the possibility of loosening the financial constraints by transferring resources from the least productive units to the most productive affiliates are reasons for this positive effect of group affiliation. The financial literature has also reported evidence consistent with the internal financing motives of business groups (Almeida et al., 2011; Gopalan et al., 2007; Masulis et al., 2011; Wagner et al., 2015).

We claim that family firms have some characteristics that can amplify the effect of business groups on firm performance. Buchuk et al. (2014) state that the internal capital markets might allocate funds more efficiently than the external ones when managers have the right incentives and good information about investment opportunities. In family firms, there is a convergence between managers' and controlling shareholders' interests. Thus, top managers are less prone to rent-seeking behavior through investment policies. In fact, Kuo and Hung (2012) prove that family governance means that the interests of the shareholders and the managers in growth opportunities and risk are more closely aligned.

In addition, internal capital markets allow the family firms to overcome the financial constraints. The research on how family firms are affected by financial constraints is not yet conclusive: whereas some authors show that family firms are more financially constrained than their non-family counterparts (Gopalan et al., 2007; Sharma et al., 2003), other papers provide conflicting results (Andres, 2011). In any case, there is evidence that the excess of control rights in family firms leads to more tightening financial constraints (Kuo & Hung, 2012). Consequently, business group affiliation can alleviate financial constraints for these family firms and improve firm performance.

The long term orientation of family firms is an additional reason to explain the positive effect of group affiliation (Kappes & Schmid, 2013).. Since family firms usually undertake the long term growth opportunities, they are less affected by the overinvestment problem. On the contrary, family firms could need the financial support of the business group to avoid underinvestment problems (Gopalan et al., 2007). These growth opportunities improve the

market value of the firms and, consequently, group affiliation could have a positive effect on the value of the firm. Thus, we formulate our second hypothesis as follows:

H2: The affiliation to a business group has a positive influence on the market performance of family firms.

### **3. Sample and empirical method**

#### **3.1. The sample: the Chilean corporate context**

We employ a sample of 88 Chilean non-financial firms to test our hypothesis. Although family firms, ownership pyramids, and business groups are almost ubiquitous around the world (Enriques & Volpin, 2007; Institutional Shareholder Services, 2007; La Porta et al., 1999), Chile provides a specially suitable corporate framework to test the effect of such control enhancing mechanisms in the performance of family businesses. The corporate ownership of the Chilean firms is quite concentrated, mainly in the hands of individual shareholders or business groups who control the firms through direct ownership and/or pyramidal structures (Buchuk et al., 2014; Masulis et al., 2011; Silva & Majluf, 2008). In this framework, the family shareholders dominate the Chilean corporate system.

Our dataset comes from several sources of information. First, we obtain the financial information from Thomson Reuters Eikon, a reputed dataset at firm-level. The second source is the Chilean Stock Exchange Authority SVS (*Superintendencia de Valores y Seguros*), from

which we collect the identification of the business groups. Third, we obtain the IPSA<sup>1</sup> index from the Santiago Stock Exchange (*Bolsa de Santiago*). Four, we hand collect the information about the ownership participation of the Chilean pension funds (AFP or *Administradoras de Fondos de Pensión*) from the Chilean Pension Funds Regulator website (*Superintendencia de Pensiones*). We also collect information on the board of directors and the top management team from credit rating agencies, the financial press and some other company sources.

The definition of family firm is a key concept of our paper. Following previous studies (Bonilla et al., 2010; Chen et al., 2010; Kowalewski et al., 2010; Martínez et al., 2007; Naldi et al., 2015; Sacristán-Navarro et al., 2011), one of the characteristics of family firms is the fact that the ultimate large shareholder is an individual investor or a family group. Coherently with other comparable research we use the control chain methodology to identify the ultimate family (or family group) shareholder of the pyramidal structure, that is, the shareholder who effectively controls the firm<sup>2</sup> (La Porta et al., 1999; Ruiz Mallorquí & Santana Martín, 2011). In this process we follow the weakest link plus the direct participations to compute the voting rights. The cash flow rights are computed as the multiplication of indirect participations and then we sum the direct participation.

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<sup>1</sup> IPSA or Selective Stock Prices Index (*Indice de Precios Selectivos de Acciones*) is the index with the 40 most often traded stocks in the Chilean capital markets shares.

<sup>2</sup> In some cases, the ultimate controller was a closed society. In this case, we identify the ultimate shareholder by the notarial document of the society constitution.

According to the Chilean Capital Markets Law<sup>3</sup>, a firm belongs to a business groups if any of this conditions holds: 1) it has the same controller of other firms and the controller holds at least 25% of direct ownership; 2) a significant portion of the firm's assets are compromised to the business groups; 3) the firm is controlled by one or more firms that belong to a business groups controlled by an ultimate shareholder. The SVS website provides periodically with the list of firms that are affiliated to each of business group<sup>4</sup>.

Note that there are other characteristics of family business in addition to the family control of the firm such as the family involvement in the board of directors or in the senior managerial team (Bettinelli, 2011; Block, 2011; Vandekerckhof et al., 2015). Consequently, we also categorize a firm as family business when any of the two following conditions hold. A firm whose ultimate shareholder is not a family is considered actually a family business when the board of directors is majority controlled by family members or when some the family members are in the senior managers team.

We focus on non-financial firms and also exclude the utilities sector. We drop the outliers in the top and bottom 1% of each variable. The final sample is an unbalanced panel of 1,018 firm-year observations from 88 quoted firms for the period 2000-2014. In this sample, 731 observations are considered firms under family control and 287 are nonfamily firms. The distribution of the observations across industries for family and nonfamily firms can be found in Table 1.

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<sup>3</sup> Law n. 18,045 – Title XV, pp. 39-44.

<sup>4</sup> <http://www.svs.cl/sitio/mercados/grupos.php> (accessed in October, 2015).

<<INSERT TABLE 1 ABOUT HERE>>

To provide a broad idea of how the firms in the sample use the control enhancing mechanisms, we split the sample into four groups depending on the structure of the ownership and control: (1) firms with family direct ownership participation (when the voting rights equal the cash flow rights); (2) firms controlled by indirect ownership participation through investment firms that are not affiliated to a business group (pyramidal structure in which there is a separation between voting rights and cash flow rights); (3) firms controlled by direct ownership but belonging to a business group (voting rights are equal to cash flow rights); and (4) firms with pyramidal structures and affiliated to a business group. Further description of the sample by control categories is provided in Table 2.

<<INSERT TABLE 2 ABOUT HERE>>

Family owned firms account for 71.6% of the total sample. The family firms that feature piramidal structures account for 48.4% of the sample, and 69.3% of the family owned firms belongs to a business groups. Business groups are quite common in Chile and account for 63.6% of the total sample. In addition, 78.3% of the business groups are controlled by a family as the ultimate shareholder.

### **3.2. Variables and models**

To make sure of the robustness of our analysis, we use three measures of firm value, all of them based on the market valuation of the firm (Jin & Park, 2015): Tobins'  $q$  (QTOB variable), Tobins'  $q$  adjusted to the median of the industry-year (QTOBMED variable), and the equity market-to-book ratio (MTB). We define Tobin's  $q$  as the sum of equity market

value and debt book value scaled by the firm book value. This variable is divided by the yearly median of the industry to obtain QTOBMED. The MTB is the ratio of equity market value to equity book value.

We define FAM, a dummy variable that equals 1 when the ultimate controlling shareholder is a family, and zero otherwise. DCF represent the cash flow rights of the ultimate shareholder. DVDFC is the difference between voting rights and cash flow rights. SEP is a dummy variable that equals 1 for firms with separation between voting rights and cash flow rights. SEP1 and SEP2 are dummy variables that equal 1 when the separation between voting rights and cash flow rights are under or over the median value of the separation, respectively. BG is the dummy of business group affiliation according to the Chilean Regulator definition.

To enhance the comparability of our results we control for a number of issues potentially affecting the value of the firm. SIZE is the log of total assets, DEBT is the financial leverage and is defined as debt to total assets, DIVID is the dividend payout and is defined as total dividends to total equity, AGE is the age of the firm (log of the number of years). We also control for the fact of the being listed in the IPSA index with the IPSA dummy variable.

A characteristic of the Chilean financial and corporate system is the importance of the pension funds as external minority shareholders (Lefort & González, 2008; Lefort & Urzúa, 2008). The Chilean pension funds AFP (*Administradoras de Fondos de Pensiones*) have much visibility and are supposed to act for public interest. The AFPs cannot intervene directly in the firm management, and their ultimate objectives are the maximization of their portfolio

return and the protection of the interests of their affiliates. Despite of being minority shareholders, the AFPs have a wide capacity to deal with the potential opportunistic behavior of majority/controlling shareholders. This role is enhanced by the fact that the AFPs in Chile cannot *vote with their feet* as the short-term traders in other contexts do, which reinforces their long-term orientation and the active role of AFPs in the governance of the firms. Given the importance of pension funds in Chile, we define the PAFP variable is the proportion of ownership held by the *Administradoras de Fondos de Pensiones*.

The explanatory analysis is implemented through panel data estimations. The models (1), (2) and (3) are extended versions of the baseline model proposed by Anderson and Reeb (2003) and used by Larrain and Urzúa (2013), Barontini and Caprio (2006), Martínez et al. (2007), Bonilla et al. (2010), and Pindado and Requejo (2015), among many others..

In model (1), we take into account the effect of the family corporate ownership (FAM variable), the separation of voting rights and cash flow rights (SEP), and the business group affiliation (BG). In equation (2), we introduce the effect of two different levels of wedge (SEP1 and SEP2 variables) and the business groups' affiliation (BG). Finally, in equation (3) we introduce the effect of the separation of rights through a continuous variable (DVDFC) and the squared term (DVDFC<sup>2</sup>) to check non-linear effects. The empirical models are as follows:

$$VALUE_{i,t} = \beta_1 FAM_{i,t} + \beta_2 FAM_{i,t} \times SEP_{i,t} + \beta_3 FAM_{i,t} \times SEP_{i,t} \times BG_{i,t} + \beta_4 FAM_{i,t} \times BG_{i,t} + \beta_5 SEP_{i,t} \times BG_{i,t} + \beta_6 SEP_{i,t} + \beta_7 BG_{i,t} + CV_{i,t} + y_t + s_k + u_{i,t} \quad (1)$$

$$\begin{aligned}
VALUE_{i,t} = & \beta_1 FAM_{i,t} + \beta_2 FAM_{i,t} \times SEP1_{i,t} + \beta_3 FAM_{i,t} \times SEP1_{i,t} \times BG_{i,t} + \\
& \beta_4 FAM_{i,t} \times SEP2_{i,t} + \beta_5 FAM_{i,t} \times SEP2_{i,t} \times BG_{i,t} + \beta_6 FAM_{i,t} \times BG_{i,t} + \beta_7 SEP1_{i,t} \times BG_{i,t} + \\
& \beta_8 SEP2_{i,t} \times BG_{i,t} + \beta_9 SEP1_{i,t} + \beta_{10} SEP2_{i,t} + \beta_{11} BG_{i,t} + CV_{i,t} + y_t + s_k + u_{i,t}
\end{aligned} \tag{2}$$

$$\begin{aligned}
VALUE_{i,t} = & \beta_1 DFC_{i,t} + \beta_2 DVDFC_{i,t} + \beta_3 DVDFC_{i,t}^2 + \beta_4 DVDFC_{i,t} \times FAM_{i,t} + \\
& \beta_5 DVDFC_{i,t}^2 \times FAM_{i,t} + \beta_6 DVDFC_{i,t} \times FAM_{i,t} \times BG_{i,t} + \beta_7 DVDFC_{i,t}^2 \times FAM_{i,t} \times BG_{i,t} + \\
& \beta_8 FAM_{i,t} \times BG_{i,t} + \beta_9 DVDFC_{i,t} \times BG_{i,t} + \beta_{10} DVDFC_{i,t}^2 \times BG_{i,t} + \beta_{11} FAM_{i,t} + \beta_{12} BG_{i,t} + \\
& CV_{i,t} + y_t + s_k + u_{i,t}
\end{aligned} \tag{3}$$

where VALUE represents our proxies of financial performance and  $CV_{i,t}$  is a set of control variables. In addition, we include a set of fixed effects at the industry level ( $S_k$ ) and year level ( $y_t$ ) to control for unobservable time-invariant and time-variant fixed effects. We also control for the financial crisis with the CRISIS variable, a dummy variable that equals 1 for 2008 and 2009, and 0 otherwise.

The equations (1)-(3) are estimated with the OLS panel data estimator. Since OLS estimates could be biased in the presence of endogeneity, we also use the instrumental variables panel data estimates to check the robustness of our results. Specifically, our firm-level variable of cash flow rights may be endogenous with firm performance (Demsetz & Villalonga, 2001; Miguel et al., 2004; Pindado & Requejo, 2015). We deal with this issue by running instrumental variables regressions that consist of a two-stage corrected estimation (Coles et al., 2012). In the first stage we use the cash flow rights as the dependent variable. As independent variables (instruments assumed to be exogenous to the dependent variable), we introduce three variables: the shareholder protection index of Lee (2006), a lagged dummy variable for the introduction of the Sarbanes-Oxley Act that only impacts the ADRs

firms<sup>5</sup>, and the introduction of the three corporate governance regulatory reforms: the “Takeover Law” in 2000, the “Corporate Governance Law” in 2009, and the legal rules on board constitution and operation in 2012. This selection of instrumental variables is coherent with Roberts and Whited (2013) recommendations to address endogeneity issues in corporate finance. We also introduce the same set of control variables. Once we estimate the first stage regression, we run again the same equations corrected by endogeneity.

## **4. Results**

### **4.1. Descriptive statistics**

We begin our analysis by presenting the descriptive statistics and some tests of means comparison (Tables 3 and 4). 46.6% of the firms in the sample feature pyramidal structures that allow separating the voting rights and cash flow rights. On average, this difference of rights is 8.6%. As in other similar countries, the ownership structure is highly concentrated (Qi & Jiaoton, 2012): on average, the ultimate shareholder’s voting rights and cash flow rights are 59.3% and 50.6%, respectively. These numbers highlight the potential incentives that pyramidal ownership gives to controllers through excess of voting power over cash flows.

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<sup>5</sup> ADR (*American Depositary Receipt*), is a common way for non-American to be listed in US capital markets such as NYSE or NASDAQ. The ADR firms has to adopt the mandatory rules stated in the Sarbanes-Oxley Act.

This separation is more pronounced in family owned firms. In Table 4 we compare the means of family vs. non-family owned firm and present the correlation matrix. As shown in Panel A, the ownership concentration of the family controlled firms is significantly lower than that of their non-family counterparts: the voting rights of the ultimate shareholder are, on average, 58.5% (family) vs. 61.3% (nonfamily) and the cash flow rights are 48.9% (family) vs. 54.8% (non-family). Interestingly, families tend to use more control enhancing mechanisms that result in a higher separation between voting and cash flow rights: 9.3% for families vs. 6.4% for non-families. Family controlled firms also show higher performance than non-family firms, whatever the measure of performance (QTOB, QTOBMED, and MTB). These results are in line with previous evidence of Martínez et al. (2007) and Bonilla et al. (2010) regarding the superior performance of family owned firms.

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#### **4.2. The effect of the pyramidal ownership**

In Table 5 we report the estimates of the baseline model. We use three different dependent variables: QTOB (columns 1 and 2), QTOBMED (columns 3 and 4), and MTB (columns 5 and 6), and two methods of estimation: OLS (columns 1, 3, and 5) and two stages least squares (columns 2, 4, and 6). The most interesting coefficient is that of FAM (the dummy variable for family control). This coefficient is positive and statistically significant in all the regressions, which corroborates the positive impact of family control on the performance of the firm.

<<INSERT TABLE 5 ABOUT HERE>>

Tables 6 and 7 report the results of the effects of ownership pyramids, i.e., when there is a separation between cash flow rights and ownership rights. In both tables, for each dependent variable (i.e., the three alternative measures of firm performance) we run an OLS and a two-stages least squares regression. The evidence across all the columns of Table 6 is the positive effect of family control (FAM) on the performance of the firm irrespective of the measure of firm performance or the method of estimation.

As far as our first hypothesis about the impact of piramydal structures is concerned, the results of Table 6 do not support completely this hypothesis. First, the estimates for the SEP variable (i.e., when there is a separation between cash flow rights and voting rights) are not systematically significant. Furthermore, the coefficients of the interacted variable FAM\*SEP are not significant too. It means that neither the pyramidal structures nor the pyramids in family firms have a clear impact on the performance of the firms in our sample. These results are coherent with previous literature about the lack of an unambiguos effect of disproportional ownership structures on the value of the firm. Therefore, our results indicates that pyramidal structures presence *per se* do not have a differential impact on the value of the firms (either family controlled or nonfamily controlled).

<<INSERT TABLE 6 ABOUT HERE>>

Then we address the question about whether the effect of piramydal structures could be influenced by the level of voting/cash flow rights separation. Accordingly, in Table 7 we disentagle this effect by considering two different levels of wedge (SEP 1 when the separation of rights is low and SEP2 when the separation of rights is high). Although SEP1 does not always have a significant impact on the performance of the firm, the results of

columns 2, 4, 6, 8, 10, and 12 show that the interacted variable FAM·SEP2 have a significantly negative influence on the value of the firm. This result suggests a differential effect of the high separation of rights in the family controlled firms. It must be understood as a sign that higher use of the pyramidal structures increases the incentives of the family controlling shareholders to extract private benefits. This result also lends support to our first hypothesis that argues that in the family firms the conflict between controlling and minority shareholders can be more severe at higher levels of wedge. An additional check of the significance of our results is given by the marginal effects test. The marginal effect test gives the combined effect of family control when SEP2=1 and the total combined effect of family control either when SEP1=1 or when SEP2=1. We can see that in all the columns of Table 7, the marginal effect of family control is negative when SEP2=0, i.e., when we only focus on the firms with the highest separation of rights. In other words, given the potential expropriation of nonfamily shareholders, the positive effect of family control is offset by the negative impact of high separation of rights, so that the joint effect is negative. On the contrary, when we compute the total marginal effect of family control, we focus both on the firms with low (SEP1=1) and high (SEP2=2) separation of rights. If this is the case, the total effect is not significant since it balances the negative influence of high separation and the positive influence of low separation in family controlled firms<sup>6</sup>.

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<sup>6</sup> For example, the marginal effect of family control in Column 1 when SEP2=1 is -0.181. This effect is the addition of the coefficients of FAM and FAM\*SEP2 (0.144-0.326). The negative coefficient of FAM\*SEP2 dominates the positive coefficient of FAM, so that the joint effect is significantly negative. The total marginal effect of family control in Column 2 takes into account the observation either when SEP1=1 or when SEP2=1. Thus, this effect is the addition of the coefficients of FAM, FAM\*SEP2, and FAM\*SEP1 (0.091+0.235-0.246). Nevertheless, the effect is no longer significant since the positive effect of both FAM and FAM\*SEP1 offsets the negative impact of FAM\*SEP2.

<<INSERT TABLE 7 ABOUT HERE>>

To have a more in-depth view of the asymmetric impact of the difference between voting and cash flow rights, we check a possible non-linear relation between the wedge of rights and the firm value. In Table 8 we report the nonlinear relation between the difference of rights (DVDFC) and the performance of the firm. There is a U-shaped relation between firm performance and the separation of voting rights and cash flow rights. This is in line with the contingent effect of the disproportional ownership structures, so that whether such mechanisms create or destroy value is contingent on its level of use<sup>7</sup>. More interestingly, the specific effects for family firms (DVDFC\*FAM) have the opposite sign, so that there is an inverse U-shaped influence of the separation of rights in family controlled firms. Consistently with the results reported in Table 8, this kind of relation suggests that, for low levels of separation, such separation positively affects the firm performance. Nevertheless, after a certain threshold<sup>8</sup>, too much divergence between voting rights and cash flow rights has a negative impact on the value of the firm. Thus, in family controlled firms there is an optimal value for the wedge. This result is coherent with our first hypothesis concerning the negative influence of the pyramidal structures. Given this complex interacted effect, we should pay attention to the marginal effect of family control to assess the broad impact of family control. The marginal effect is positive and significant in ten out of twelve models. It means that, in

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<sup>7</sup> The inflection point of DVDFC oscillates between 20.6% (Column 10) and 25.82% (Column 12).

<sup>8</sup> According to our results, this threshold oscillates between 8.95% (Column 12) and 16.84% (Column 2).

spite of the effect being conditional on the degree of separation of rights, the family control improves the performance of the firm

<<INSERT TABLE 8 ABOUT HERE>>

### **4.3. The effect of business groups affiliation**

We now address the question about the extent to which the effect of family control and of disproportional ownership can be moderated by business groups by introducing the BG dummy variable. This variable equals 1 when the firm belongs to a business group according to the definition of the Chilean Stock Exchange Commission SVS. The results in Table 9 provide interesting insights. First, the family control (FAM) *per se* has no longer a positive effect. Furthermore, in Columns 1 and 5 it has a significant and negative coefficient. The business group affiliation (BG) also impacts negatively and significantly on the firm's performance, which is in line with the dark side of business groups. Nevertheless, both effects revert when jointly considered (FAM\*BG variable). This interacted variable has a positive and significant effect on the value of the firm. It means that being affiliated to a business group creates value for the firms under family control, and it is consistent with the bright side of business groups. These results support our second hypothesis and are coherent with other research on Chilean business groups (Buchuk et al., 2014; Farías, 2014; Khanna & Palepu, 2000). Thus, the business groups have a positive effect on the performance of the family controlled firms by allowing to overcome some frictions of the Chilean markets. Taken together, the effect of the family control is positive as shown by the positive and significant marginal effects of FAM.

<<INSERT TABLE 9 ABOUT HERE>>

We now combine the effect of business groups and the different levels of voting cash flow and ownership rights wedge. The results reported in Table 10 corroborate our two hypotheses. First, family control has a negative effect on the value of the firm for high levels of separation of rights (FAM\*SEP2). Second, business groups affiliation is positive for family controlled firms (FAM\*BG). But what about the joint effect of much separation of rights and group affiliation in a family controlled firm? The FAM\*SEP2\*BG variable has a positive and significant coefficient across all the columns in Table 10. Thus, it seems that the bright side of group affiliation prevails over the incentives for private benefits extraction in these firms.

<<INSERT TABLE 10 ABOUT HERE>>

Finally, Table 11 reports similar results when we introduce the rights difference DVDFC and its squared value DVDFC<sup>2</sup> interacted with the family control and the business group affiliation. Specifically, the interacted terms DVDFC\*FAM\*BG and DVDFC<sup>2</sup>\*FAM\*BG have a positive and a negative coefficient, respectively. This fact suggests an inverted U-shaped relation, in which the optimal value of wedge is around 18% or 20% of separation of rights.

## **5. Concluding comments**

The use of mechanisms aimed to enhance the control of the firms is widespread in many countries. In this paper we analyze the effect on the value of the Chilean family firms of two of these mechanisms: business groups and pyramidal ownership. Chile is a unique

environment to test such effects since business groups are obliged to report to the Chilean Stock Exchange Authority. Thus, we have an objective and unambiguous definition of business groups.

We use the methodology of the ultimate shareholder to identify the firms with are under family control. We find that, as in many other countries, family control is very common among Chilean firms. We document that around three out of four (71.8%) Chilean listed firms are controlled by a family or an individual. Although both family and non-family ultimate shareholders use pyramidal structures to control the firm in slightly less than half of the cases (48.4% and 41.8%), business group affiliation prevails among family firms: 69.4% of family-controlled firms are affiliated to a business group, while 48.8% of nonfamily firms belong to a group too.

The consequences of the control enhancing mechanisms are twofold: on the one hand, it can incentivize the family shareholder to be involved in value creation and improve the capital allocation. On the other hand, these mechanisms can exacerbate the conflicts among family controlling and minority nonfamily shareholders, and lead to an inefficient allocation of funds among business units. Our results show that, first, family control is beneficial in terms of firm performance, and after controlling for the specific effects of the enhanced control, the firms that are under family control outperform their nonfamily counterparts. Second, we confirm the dual effect of pyramid structures. Low levels of separation between control rights and ownership rights increase the firm performance. Nevertheless, too much separation can result in perverse incentives for family members to extract private benefits. Consequently, an excessive separation of control and ownership rights can aggravate

potential conflicts of interests inside family firms. Third, we find that, although business groups have a broad negative impact on the firm performance, group affiliation is positive for family controlled firms. Furthermore, family business groups alleviate the negative effect of the disproportionate control. This result corroborates the bright side of internal capital markets for family firms. Business groups, by mitigating the asymmetric information problems and allowing the transfer of qualified human and financial resources among affiliates, improve the allocation of funds and increase the market value of the firm.

Our research has implications both for academia, investors and policy makers. For academia, we confirm the contingent influence of the control enhancing mechanisms. There is not a universal effect of such mechanisms but their ultimate impact depends on the context in which they are utilized, particularly on the shareholder structure. Our study for family Chilean firms calls for further research in different institutional environments. For investors, our findings emphasize the need to consider the multiple complex consequences of the ownership structure and confirm the advantages of family control. For authorities in capital markets our research underlines how informationally transparent frameworks improve the corporate landscape. Better and widely disclosed information on the use of control enhancing mechanisms results in more efficient individual and corporate financial decisions.

Our paper opens several directions for future research. First, and although the availability of information makes Chile a unique case, it would be interesting extending these results to other countries or institutional settings. Second, more comprehensive definitions of family business could be helpful. We rely on the identification of the ultimate shareholder and also control for family involvement as directors or managers. Nevertheless, taking into

account some issues such as the presence of the founder or the generation in charge of the firm could shed new light. Finally, we have not controlled for the degree of diversification in business groups. The question about how value can be created or destroyed through business diversification could also shed some light on the effect of family business groups.

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**Table A1: Variable Definition**

<b>Abbreviation</b>	<b>Variable</b>	<b>Definition</b>
<b>Dependent Variables</b>		
QTOB	Tobin's Q	(Market Capitalization + Total debt)/Total Asset's replacement value
QTOBMED	Tobin's Q/Median (industry-year)	Tobin's Q divided by the yearly median of the industry.
MTB	Market-to-book ratio	Market Capitalization/Total Equity (book value)
<b>Hypothesis explanatory variables</b>		
<i>FAM</i>	Family Ownership	1 if the ultimate large shareholder is a family group or an individual investor, and zero otherwise.
<i>SEP</i>	Pyramidal Ownership	1 if the ultimate large shareholder control the firm through pyramidal ownership, and zero otherwise.
<i>DVDFC</i>	Voting and Cash Flow Rights Divergence	(Voting Rights – Cash Flow Rights) of the ultimate large shareholder.
<i>DV</i>	Voting Rights	Voting Rights of the ultimate large shareholder estimated through the weakest link methodology.
<i>DFC</i>	Cash Flow Rights	Cash Flow Rights of the ultimate large shareholder estimated by the sum of direct ownership plus the multiplication of indirect participations.
<i>BG</i>	Business Groups	1 if Firm belongs to a Business Group, according to the <i>Superintendencia de Valores y Seguros</i> (SVS) definition, and zero otherwise.
<b>Firm-level control variables</b>		
SIZE	Size	Natural logarithm of total assets.
DEBT	Debt Ratio	Total debt to total assets.
DIVIDEND	Dividend Ratio	Dividends Paid over Total Equity
AGE	Age	Natural logarithm of the company Age.
PAFP	Pension Funds	Percentage of ownership in hands of AFP ( <i>Administradoras de Fondos de Pensión</i> )
IPSA	IPSA Index	1 if Firm <i>i</i> is included in the IPSA index ( <i>Index of Selective Prices</i> ), and zero otherwise.
<b>Other Control Variables</b>		
YEAR	Year FE	Set of year dummies
INDUSTRY	Industrial dummies	Set of industrial dummies according to Thomson Reuter's Business definition.
CRISIS	Financial crisis periods	1 for 2008 and 2009, and zero otherwise.

**Table 1:** Distribution of the sample across industries

<b>Industry</b>	<b>Family firms</b>	<b>Non-Family firms</b>	<b>Total</b>
Applied Resources	69	33	102
Chemicals	10	16	26
Cyclical Consumer Products	6	23	29
Cyclical Consumer Services	46	13	59
Food & Beverages	134	36	170
Food & Drug Retailing	88	33	121
Healthcare Services	11	11	22
Ind. & Commercial Services	16	25	41
Industrial Conglomerates	43	19	62
Industrial Goods	31	16	47
Mineral Resources	116	0	116
Retailers	26	20	46
Telecommunications Services	37	27	64
Transportation	98	15	113
<b>Total</b>	<b>731</b>	<b>287</b>	<b>1,018</b>

**Table 2:** Distribution of the sample by control categories

	<b>Family firms</b>	<b>Non-Family firms</b>	<b>Total</b>
Non-Business Group	224	147	371
<i>Direct Ownership</i>	136	90	226
<i>Piramidal Ownership</i>	88	57	145
Business Group Affiliation	507	140	647
<i>Direct Ownership</i>	241	77	318
<i>Piramidal Ownership</i>	266	63	329
<b>Total observations</b>	<b>731</b>	<b>287</b>	<b>1,018</b>

**Table 3:** Descriptive statistics

Variable	Mean	Std. Dev.	Min	Max
QTOB	0.949	0.566	0.191	3.698
QTOBMED	1.110	0.532	0.203	3.187
MTB	1.447	1.299	0.099	8.795
FAM	0.718	0.450	0	1
BG	0.636	0.482	0	1
SEP	0.466	0.499	0	1
DVDFC	0.086	0.138	0.000	0.575
DV	0.593	0.213	0.100	0.996
DFC	0.506	0.239	0.074	0.991
SIZE	25.966	1.831	20.224	31.103
DIVID	0.060	0.103	0.000	0.771
DEBT	0.235	0.143	0.000	0.592
PAFP	0.040	0.064	0	0.350
IPSA	0.255	0.436	0	1
AGE	3.909	0.712	0.693	4.977
CRISIS	0.161	0.368	0	1

**Table 4: Test of Means Difference and Correlations****Panel A:** Test of means difference test: Family vs. non-family controlled firms

	Family	Non-Family	<i>t</i> -statistic	Sig. level
QTOB	1.001	0.815	4.777***	0.000
QTOBMED	1.166	0.968	5.417***	0.000
MTB	1.542	1.203	3.775***	0.000
DVDFC	0.093	0.064	3.039***	0.002
DV	0.585	0.613	-1.890*	0.058
DFC	0.489	0.548	-3.565***	0.000

**Panel B:** Correlations

Variable	QTOB	MTB	FAM	SEP	DFC	DVDFC	PAFP	DIVIDEND	IPSA	AGE	DEBT
MTB	0.88***										
FAM	0.15***	0.12***									
SEP	0.05	0.04	0.06*								
DFC	-0.18***	-0.12***	-0.11***	-0.44***							
DVDFC	0.07*	0.03	0.10***	0.67***	-0.47***						
PAFP	0.12***	0.09**	-0.11***	0.14***	-0.24***	0.23***					
DIVID	0.31***	0.36***	0.08**	0.14***	-0.02	0.01	0.05				
IPSA	0.15***	0.18***	0.00	-0.02	-0.14***	0.08**	0.47***	0.00			
AGE	0.07**	0.08**	-0.03	-0.03	-0.05*	0.03	0.26***	-0.11***	0.16***		
DEBT	0.06*	0.07**	-0.12***	-0.03	0.04	-0.08**	0.17***	-0.08**	0.23***	-0.02	
SIZE	0.09***	0.16***	0.04	0.13***	-0.07**	0.13***	0.41***	0.06**	0.57***	0.16***	0.31***

**Table 5: Baseline model estimates**

Estimated coefficients (robust standard errors) from the OLS and 2SLS regressions of the baseline equation. The dependent variables are the Tobin's Q, the Tobin's Q adjusted by the median of the industry, and the market to book ratio.  $Fam_{i,t}$  is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise. DFC is the cash flow rights of the ultimate shareholder, SIZE is the log of total assets, DIVID is the dividend payout and is defined as total dividends to total equity, DEBT is the financial leverage (debt to total assets), PAFP is the ownership held by pension funds, IPSA is a dummy variable whether the firm is included in the index of selective prices, AGE is the age of the firm (log of the number of years), CRISIS is a dummy variable that equals 1 for 2008 and 2009, and 0 otherwise. We include fixed effects at the firm level ( $f_i$ ), industry level ( $s_k$ ) and year level ( $q_t$ ). \*\*\*, \*\*, and \* stand for a level of significance lower than 1%, 5%, and 10%, respectively.

	Tobin's Q		Tobin's Q/Median (industry-year)		Market-to-book ratio	
	OLS	2SLS	OLS	2SLS	OLS	2SLS
	(1)	(2)	(3)	(4)	(5)	(6)
FAM	0.096** (2.310)	0.208*** (3.157)	0.213*** (3.779)	0.125*** (3.529)	0.129* (1.952)	0.166* (1.663)
DFC	-0.109 (-1.278)	-0.807*** (-3.339)	-0.691*** (-3.724)	-0.159** (-2.290)	-0.436*** (-3.056)	-1.997*** (-4.635)
SIZE	-0.097*** (-5.918)	-0.091*** (-5.135)	-0.078*** (-5.046)	-0.075*** (-5.253)	-0.028 (-1.112)	0.031 (1.115)
DIVID	2.449*** (5.501)	1.959*** (4.740)	1.329*** (4.169)	1.682*** (4.537)	4.141*** (6.122)	3.759*** (5.002)
DEBT	-1.688*** (-14.731)	-2.039*** (-13.938)	-1.619*** (-11.851)	-1.308*** (-12.878)	0.982*** (4.883)	0.728*** (2.941)
PAFP	0.453 (1.510)	0.689** (2.009)	0.613** (2.117)	0.379 (1.446)	0.225 (0.467)	-0.570 (-0.896)
CRISIS	0.093 (0.924)	0.030 (0.304)	-0.021 (-0.266)	0.164* (1.832)	0.158 (0.956)	0.256 (1.505)
IPSA	0.286*** (5.747)	0.418*** (6.520)	0.335*** (6.851)	0.228*** (5.918)	0.415*** (5.187)	0.559*** (5.776)
AGE	0.015 (0.808)	0.023 (0.834)	0.031 (1.472)	0.009 (0.575)	0.004 (0.130)	0.034 (0.702)
# Obs.	1,018	950	1,018	950	1,018	950
R-squared	0.445	0.458	0.31	0.349	0.373	0.403
F-Test	25.22	17.46	7.556	9.369	16.01	15.55

**Table 6:** Firm performance, pyramidal ownership and family control

Estimated coefficients (robust standard errors) from the OLS and 2SLS regressions of the baseline equation. The dependent variables are the Tobin's Q, the Tobin's Q adjusted by the median of the industry, and the market to book ratio.  $Fam_{i,t}$  is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise.  $SEP$  is a dummy variable that equals 1 when the ultimate shareholder controls the firm through a pyramidal structure,  $DFC$  is the cash flow rights of the ultimate shareholder,  $SIZE$  is the log of total assets,  $DIVID$  is the dividend payout and is defined as total dividends to total equity,  $DEBT$  is the financial leverage (debt to total assets),  $PAFP$  is the ownership held by pension funds,  $IPSA$  is a dummy variable whether the firm is included in the index of selective prices,  $AGE$  is the age of the firm (log of the number of years),  $CRISIS$  is a dummy variable that equals 1 for 2008 and 2009, and 0 otherwise. We include fixed effects at the firm level ( $f_i$ ), industry level ( $s_k$ ) and year level ( $q_t$ ). The marginal effect test gives the combined effect of family control when  $SEP=1$ . \*\*\*, \*\*, and \* stand for a level of significance lower than 1%, 5%, and 10%, respectively.

	Tobin's Q		Tobin's Q/Median (industry-year)		Market-to-book ratio	
	OLS (1)	2SLS (2)	OLS (3)	2SLS (4)	OLS (5)	2SLS (6)
FAM	0.089* (1.865)	0.213** (2.357)	0.135*** (3.351)	0.236*** (2.939)	0.149** (1.987)	0.132 (0.998)
FAM x SEP	0.035 (0.491)	-0.124 (-1.443)	-0.023 (-0.364)	-0.137* (-1.900)	-0.047 (-0.397)	-0.152 (-1.018)
SEP	-0.140** (-2.341)	-0.112 (-1.181)	-0.097* (-1.898)	-0.058 (-0.701)	-0.125 (-1.298)	-0.282* (-1.954)
DFC	-0.215** (-2.123)	-0.860*** (-3.516)	-0.256*** (-3.002)	-0.740*** (-3.868)	-0.570*** (-3.516)	-2.082*** (-4.818)
SIZE	-0.094*** (-5.782)	-0.080*** (-4.647)	-0.071*** (-5.119)	-0.070*** (-4.694)	-0.024 (-0.918)	0.051* (1.836)
DIVID	2.487*** (5.675)	2.073*** (5.000)	1.725*** (4.731)	1.423*** (4.505)	4.202*** (6.245)	3.969*** (5.221)
DEBT	-1.701*** (-14.824)	-2.112*** (-14.741)	-1.323*** (-13.125)	-1.677*** (-12.832)	0.961*** (4.771)	0.592** (2.416)
PAFP	0.571* (1.958)	0.570* (1.672)	0.447* (1.772)	0.492* (1.705)	0.308 (0.641)	-0.733 (-1.160)
CRISIS	0.092 (0.910)	0.036 (0.356)	0.164* (1.847)	-0.014 (-0.181)	0.159 (0.964)	0.261 (1.511)
IPSA	0.285*** (5.592)	0.406*** (6.151)	0.222*** (5.674)	0.324*** (6.414)	0.407*** (5.023)	0.543*** (5.501)
AGE	0.011 (0.563)	0.010 (0.342)	0.003 (0.197)	0.020 (0.910)	-0.004 (-0.131)	0.009 (0.191)
Obs.	1,018	950	1,018	950	1,018	950
R-squared	0.451	0.474	0.317	0.364	0.376	0.425
F-Test	24.48	17.54	7.843	9.318	15.62	14.93
FAM marginal effect (SEP=1)	0.124* (1.93)	0.887 (1.16)	0.112** (2.01)	0.099* (1.65)	0.101 (0.95)	-0.019 (-0.15)

**Table 7:** Firms performance, pyramidal ownership levels and family control

Estimated coefficients (robust standard errors) from the OLS and 2SLS regressions of the baseline equation. The dependent variables are the Tobin's Q, the Tobin's Q adjusted by the median of the industry, and the market to book ratio.  $Fam_{i,t}$  is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise. SEP1 is a dummy variable that equals 1 when the separation of cash flow and voting rights is under the median value and SEP2 when such separation is over the median value. DFC is the cash flow rights of the ultimate shareholder, SIZE is the log of total assets, DIVID is the dividend payout and is defined as total dividends to total equity, DEBT is the financial leverage (debt to total assets), PAFP is the ownership held by pension funds, IPSA is a dummy variable whether the firm is included in the index of selective prices, AGE is the age of the firm (log of the number of years), CRISIS is a dummy variable that equals 1 for 2008 and 2009, and 0 otherwise. We include fixed effects at the firm level ( $f_i$ ), industry level ( $s_k$ ) and year level ( $q_t$ ). The marginal effect test gives the combined effect of family control when SEP2=1 and the total combined effect of family control either when SEP1=1 or when SEP2=1. \*\*\*, \*\*, and \* stand for a level of significance lower than 1%, 5%, and 10%, respectively.

	Tobin's Q				Tobin's Q/Median (industry-year)				Market-to-book ratio			
	OLS		2SLS		OLS		2SLS		OLS		2SLS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
FAM	0.144*** (3.256)	0.091* (1.911)	0.246*** (3.520)	0.212** (2.378)	0.175*** (4.484)	0.137*** (3.402)	0.255*** (3.999)	0.237*** (2.953)	0.224*** (3.290)	0.154** (2.055)	0.227** (2.141)	0.134 (0.989)
FAM x SEP1		0.235*** (3.000)		0.057 (0.573)		0.165** (2.367)		0.027 (0.337)		0.310** (2.279)		0.121 (0.666)
FAM x SEP2	-0.326*** (-3.149)	-0.246** (-2.309)	-0.426*** (-3.756)	-0.385*** (-3.166)	-0.347*** (-3.661)	-0.291*** (-3.031)	-0.403*** (-4.099)	-0.381*** (-3.559)	-0.671*** (-3.973)	-0.567*** (-3.304)	-0.673*** (-3.255)	-0.564*** (-2.617)
SEP1		-0.184*** (-3.127)		-0.093 (-0.932)		-0.149*** (-2.926)		-0.052 (-0.614)		-0.278*** (-3.024)		-0.278* (-1.763)
SEP2	-0.032 (-0.386)	-0.103 (-1.163)	-0.225** (-2.404)	-0.261** (-2.321)	0.009 (0.120)	-0.047 (-0.610)	-0.139* (-1.700)	-0.159 (-1.615)	0.158 (1.077)	0.054 (0.354)	-0.333** (-2.116)	-0.434** (-2.365)
DFC	-0.276*** (-2.889)	-0.315*** (-3.092)	-1.359*** (-4.618)	-1.308*** (-5.027)	-0.308*** (-3.981)	-0.344*** (-4.089)	-1.137*** (-4.849)	-1.106*** (-5.349)	-0.631*** (-3.908)	-0.697*** (-4.150)	-2.845*** (-5.309)	-2.673*** (-5.442)
SIZE	-0.094*** (-5.760)	-0.097*** (-5.931)	-0.069*** (-3.989)	-0.069*** (-4.034)	-0.073*** (-5.105)	-0.075*** (-5.266)	-0.061*** (-3.996)	-0.061*** (-4.024)	-0.028 (-1.082)	-0.031 (-1.204)	0.065** (2.169)	0.064** (2.163)
DIVID	2.372*** (5.413)	2.358*** (5.399)	1.811*** (4.750)	1.840*** (4.780)	1.614*** (4.420)	1.615*** (4.444)	1.208*** (4.115)	1.227*** (4.212)	4.051*** (6.043)	4.053*** (6.030)	3.531*** (4.892)	3.651*** (4.892)
DEBT	-1.741*** (-15.01)	-1.734*** (-14.96)	-2.295*** (-15.09)	-2.288*** (-14.98)	-1.355*** (-13.30)	-1.350*** (-13.23)	-1.826*** (-13.08)	-1.822*** (-12.89)	0.920*** (4.597)	0.930*** (4.643)	0.336 (1.308)	0.357 (1.393)
PAFP	0.460* (1.683)	0.593** (2.133)	0.528 (1.518)	0.566 (1.637)	0.360 (1.536)	0.461* (1.933)	0.471 (1.604)	0.489* (1.689)	0.105 (0.232)	0.293 (0.637)	-0.820 (-1.221)	-0.736 (-1.108)
CRISIS	0.095 (0.957)	0.088 (0.892)	0.058 (0.568)	0.052 (0.505)	0.165* (1.907)	0.160* (1.857)	0.002 (0.021)	-0.002 (-0.026)	0.160 (0.994)	0.150 (0.946)	0.123 (0.776)	0.105 (0.684)
IPSA	0.256*** (5.084)	0.262*** (5.208)	0.368*** (5.505)	0.369*** (5.533)	0.197*** (5.004)	0.201*** (5.138)	0.288*** (5.578)	0.289*** (5.597)	0.360*** (4.556)	0.367*** (4.669)	0.480*** (4.717)	0.484*** (4.782)
AGE	0.008 (0.439)	0.017 (0.910)	-0.009 (-0.311)	-0.007 (-0.223)	0.004 (0.260)	0.010 (0.639)	0.008 (0.330)	0.009 (0.394)	0.002 (0.078)	0.014 (0.430)	-0.015 (-0.293)	-0.008 (-0.162)
Obs.	1,018	1,018	950	950	1,018	1,018	950	950	1,018	1,018	950	950
R-squared	0.462	0.466	0.474	0.480	0.333	0.337	0.370	0.374	0.387	0.391	0.400	0.419

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F-Test	25.55	25.02	16.35	15.87	8.072	7.989	9.259	8.958	17.70	17.07	16.19	15.44
FAM marginal effect (SEP2=1)	-0.181* (-1.88)	-0.155* (-1.67)	-0.179* (-1.65)	-0.172* (-1.66)	-0.171** (-2.04)	-0.153* (-1.82)	-0.148* (-1.76)	-0.144* (-1.74)	-0.447*** (-2.73)	-0.413** (-2.53)	-0.446** (-2.17)	-0.429** (-2.12)
FAM total marginal effect		0.079 (0.61)		-0.115 (-0.81)		0.011 (0.10)		-0.117 (-1.03)		-0.103 (-0.48)		-0.308 (-1.17)

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**Table 8:** Family ownership, voting-cash flow rights wedge and firm performance

Estimated coefficients (robust standard errors) from the OLS and 2SLS regressions of the baseline equation. The dependent variables are the Tobin's Q, the Tobin's Q adjusted by the median of the industry, and the market to book ratio.  $Fam_{i,t}$  is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise, DFC is the cash flow rights of the ultimate shareholder, DVDFC is the difference between voting rights and cash flow rights, SIZE is the log of total assets, DIVID is the dividend payout and is defined as total dividends to total equity, DEBT is the financial leverage (debt to total assets), PAFP is the ownership held by pension funds, IPSA is a dummy variable whether the firm is included in the index of selective prices, AGE is the age of the firm (log of the number of years), CRISIS is a dummy variable that equals 1 for 2008 and 2009, and 0 otherwise. We include fixed effects at the firm level ( $f_i$ ), industry level ( $s_k$ ) and year level ( $q_t$ ). The marginal effect test gives the combined effect of family control conditional on the DVDFC variable. \*\*\*, \*\*, and \* stand for a level of significance lower than 1%, 5%, and 10%, respectively.

	Tobin's Q		Tobin's Q/Median (industry-year)		Market-to-book ratio	
	OLS	2SLS	OLS	2SLS	OLS	2SLS
	(1)	(2)	(3)	(4)	(5)	(6)
DFC	-0.333*** (-2.975)	-1.393*** (-4.739)	-0.368*** (-3.896)	-1.190*** (-5.189)	-0.756*** (-4.172)	-2.882*** (-5.434)
DVDFC	-2.640*** (-4.036)	-4.306*** (-4.300)	-2.185*** (-3.709)	-3.767*** (-4.428)	-3.833*** (-3.702)	-5.582*** (-3.644)
DVDFC <sup>2</sup>	5.622*** (3.420)	9.289*** (4.084)	4.881*** (3.173)	8.691*** (4.487)	9.294*** (3.732)	10.809*** (2.931)
DVDFC x FAM	1.790** (2.552)	2.077** (2.411)	1.228* (1.961)	1.912*** (2.746)	2.046* (1.872)	1.363 (0.983)
DVDFC <sup>2</sup> x FAM	-5.314*** (-3.140)	-8.063*** (-3.786)	-4.391*** (-2.809)	-7.694*** (-4.353)	-7.894*** (-3.077)	-7.617** (-2.136)
FAM	0.082* (1.737)	0.124 (1.426)	0.127*** (3.138)	0.149* (1.895)	0.133* (1.851)	0.066 (0.531)
SIZE	-0.079*** (-5.606)	-0.066*** (-3.745)	-0.058*** (-4.998)	-0.058*** (-3.670)	0.003 (0.143)	0.066** (2.245)
DIVID	2.451*** (5.675)	1.854*** (5.061)	1.683*** (4.684)	1.222*** (4.447)	4.160*** (6.278)	3.665*** (5.245)
DEBT	-1.760*** (-14.752)	-2.388*** (-15.157)	-1.374*** (-13.218)	-1.913*** (-13.747)	0.886*** (4.379)	0.217 (0.823)
PAFP	0.405 (1.552)	0.961*** (2.850)	0.303 (1.384)	0.852*** (3.065)	-0.031 (-0.069)	-0.178 (-0.283)
CRISIS	0.090 (0.949)	0.010 (0.096)	0.162* (1.941)	-0.040 (-0.515)	0.158 (1.000)	0.239 (1.333)
IPSA	0.285*** (5.634)	0.352*** (5.085)	0.220*** (5.773)	0.273*** (5.411)	0.406*** (5.152)	0.457*** (4.482)
AGE	0.015 (0.807)	-0.005 (-0.173)	0.008 (0.531)	0.012 (0.549)	0.012 (0.388)	-0.023 (-0.464)
Obs.	1,018	950	1,018	950	1,018	950
R-squared	0.471	0.490	0.345	0.387	0.402	0.420
F-Test	24.36	17.67	7.477	9.812	16.18	15.80
FAM marginal effect	0.132*** (2.98)	0.143* (1.99)	0.146*** (3.82)	0.161** (2.50)	0.152*** (2.13)	0.029 (0.27)

**Table 9:** Family control, business group affiliation and firmperformance.

Estimated coefficients (robust standard errors) from the OLS and 2SLS regressions of the baseline equation. The dependent variables are the Tobin's Q, the Tobin's Q adjusted by the median of the industry, and the market to book ratio.  $Fam_{i,t}$  is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise. BG is a dummy variable that equals 1 if the firm belongs to a business group, DFC is the cash flow rights of the ultimate shareholder, SIZE is the log of total assets, DIVID is the dividend payout and is defined as total dividends to total equity, DEBT is the financial leverage (debt to total assets), PAFP is the ownership held by pension funds, IPSA is a dummy variable whether the firm is included in the index of selective prices, AGE is the age of the firm (log of the number of years), CRISIS is a dummy variable that equals 1 for 2008 and 2009, and 0 otherwise. We include fixed effects at the firm level ( $f_i$ ), industry level ( $s_k$ ) and year level ( $q_t$ ). The marginal effect test gives the combined effect of family control when BG=1. \*\*\*, \*\*, and \* stand for a level of significance lower than 1%, 5%, and 10%, respectively.

VARIABLES	Tobin's Q		Tobin's Q/Median (industry-year)		Market-to-book ratio	
	OLS	2SLS	OLS	2SLS	OLS	2SLS
	(1)	(2)	(3)	(4)	(5)	(6)
FAM	-0.163*	-0.082	-0.085	0.049	-0.350**	-0.314
	(-1.920)	(-0.728)	(-1.187)	(0.604)	(-2.324)	(-1.500)
BG	-0.256***	-0.372***	-0.209***	-0.258**	-0.490***	-0.547**
	(-2.958)	(-2.642)	(-2.799)	(-2.470)	(-3.306)	(-2.332)
FAM x BG	0.342***	0.359**	0.276***	0.201*	0.630***	0.596**
	(3.451)	(2.477)	(3.135)	(1.802)	(3.678)	(2.416)
DFC	-0.086	-1.222***	-0.141**	-1.105***	-0.396***	-2.430***
	(-1.020)	(-5.172)	(-2.007)	(-5.844)	(-2.862)	(-5.802)
SIZE	-0.094***	-0.082***	-0.072***	-0.067***	-0.022	0.036
	(-6.022)	(-4.227)	(-5.426)	(-3.829)	(-0.885)	(1.107)
DIVID	2.508***	1.920***	1.729***	1.280***	4.247***	3.734***
	(5.538)	(4.612)	(4.595)	(3.993)	(6.173)	(4.921)
DEBT	-1.660***	-2.041***	-1.287***	-1.656***	1.022***	0.775***
	(-14.529)	(-13.747)	(-11.885)	(-11.431)	(5.098)	(2.975)
PAFP	0.304	0.664*	0.260	0.647**	-0.043	-0.678
	(1.045)	(1.811)	(1.039)	(2.079)	(-0.091)	(-1.038)
CRISIS	0.085	0.038	0.157*	-0.014	0.142	0.266
	(0.856)	(0.373)	(1.788)	(-0.166)	(0.869)	(1.538)
IPSA	0.298***	0.432***	0.237***	0.341***	0.438***	0.585***
	(6.081)	(6.490)	(6.271)	(6.632)	(5.574)	(5.926)
AGE	0.023	0.005	0.015	0.017	0.019	0.009
	(1.251)	(0.176)	(1.015)	(0.763)	(0.637)	(0.186)
Obs.	1,018	950	1,018	950	1,018	950
R-squared	0.453	0.417	0.318	0.292	0.384	0.373
F-Test	23.23	16.51	7.179	8.458	15.65	15.06
FAM marginal effect (BG=1)	0.179***	0.277***	0.191***	0.250***	0.280***	0.281**
	(3.67)	(3.39)	(4.36)	(3.55)	(3.71)	(2.35)

**Table 10:** Firm performance, pyramidal ownership levels, business group affiliation and family control

Estimated coefficients (robust standard errors) from the OLS and 2SLS regressions of the baseline equation. The dependent variables are the Tobin's Q, the Tobin's Q adjusted by the median of the industry, and the market to book ratio.  $Fam_{i,t}$  is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise. SEP1 is a dummy variable that equals 1 when the separation of cash flow and voting rights is under the median value and SEP2 when such separation is over the median value. BG is a dummy variable that equals 1 if the firm belongs to a business group, DFC is the cash flow rights of the ultimate shareholder, SIZE is the log of total assets, DIVID is the dividend payout and is defined as total dividends to total equity, DEBT is the financial leverage (debt to total assets), PAFP is the ownership held by pension funds, IPSA is a dummy variable whether the firm is included in the index of selective prices, AGE is the age of the firm (log of the number of years), CRISIS is a dummy variable that equals 1 for 2008 and 2009, and 0 otherwise. We include fixed effects at the firm level ( $f_i$ ), industry level ( $s_k$ ) and year level ( $q_t$ ). The marginal effect test gives the combined effect of family control when either BG=0 or BG=1, irrespective of the separation of rights (SEP1=1 or SEP2=1). \*\*\*, \*\*, and \* stand for a level of significance lower than 1%, 5%, and 10%, respectively.

	Tobin's Q				Tobin's Q/Median (industry-year)				Market-to-book ratio			
	OLS		2SLS		OLS		2SLS		OLS		2SLS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
FAM	-0.145** (-2.112)	-0.137* (-1.693)	-0.221** (-2.336)	-0.285** (-1.982)	0.014 (0.280)	-0.007 (-0.129)	0.037 (0.320)	-0.013 (-0.068)	-0.214* (-1.650)	-0.175 (-1.084)	-0.384** (-2.097)	-0.339 (-1.069)
FAM x SEP1		-0.024 (-0.153)		0.116 (0.602)		0.085 (0.823)		0.085 (0.376)		-0.135 (-0.519)		-0.118 (-0.318)
FAM x SEP1 x BG		0.297 (1.631)		0.017 (0.074)		0.173 (1.279)		0.258 (0.932)		0.560* (1.885)		0.543 (1.252)
FAM x SEP2	-0.843*** (-3.139)	-0.840*** (-3.100)	-0.718*** (-4.149)	-0.642*** (-3.153)	-0.693** (-2.568)	-0.659** (-2.449)	-1.112*** (-5.978)	-1.059*** (-4.645)	-1.854*** (-4.767)	-1.872*** (-4.671)	-1.567*** (-4.385)	-1.597*** (-3.702)
FAM x SEP2 x BG	0.756*** (2.700)	0.842*** (2.975)	0.651*** (3.654)	0.634*** (2.854)	0.544** (1.965)	0.587** (2.124)	0.812*** (4.183)	0.962*** (3.744)	1.460*** (3.550)	1.619*** (3.818)	1.119*** (2.984)	1.406*** (2.969)
FAM x BG	0.250*** (3.167)	0.168* (1.814)	0.374*** (3.446)	0.390** (2.393)	0.192*** (3.158)	0.146** (2.071)	0.192 (1.422)	0.064 (0.310)	0.480*** (3.384)	0.327* (1.877)	0.656*** (3.226)	0.388 (1.124)
SEP1 x BG		-0.031 (-0.213)		0.111 (0.523)		0.181* (1.892)		-0.244 (-0.953)		-0.106 (-0.439)		-0.552 (-1.303)
SEP2 x BG	-0.716*** (-2.700)	-0.732*** (-2.726)	-0.681*** (-4.477)	-0.644*** (-3.302)	-0.697*** (-2.741)	-0.653** (-2.570)	-0.723*** (-4.677)	-0.858*** (-3.869)	-1.439*** (-3.674)	-1.479*** (-3.660)	-1.030*** (-3.068)	-1.302*** (-3.039)
SEP1		-0.183 (-1.361)		-0.183 (-1.033)		-0.287*** (-3.380)		-0.220 (-1.084)		-0.248 (-1.158)		-0.047 (-0.136)
SEP2	0.522** (2.038)	0.458* (1.774)	0.520*** (3.915)	0.461*** (2.794)	0.528** (2.125)	0.446* (1.798)	0.233* (1.719)	0.136 (0.716)	1.347*** (3.614)	1.255*** (3.274)	0.715** (2.281)	0.686* (1.780)
BG	-0.208*** (-3.345)	-0.206*** (-2.720)	-0.321*** (-3.249)	-0.369*** (-2.426)	-0.050 (-1.204)	-0.102** (-2.056)	-0.201 (-1.620)	-0.103 (-0.521)	-0.344*** (-2.996)	-0.326** (-2.185)	-0.522*** (-2.792)	-0.283 (-0.868)
DFC	-0.344*** (-3.854)	-0.400*** (-4.150)	-0.058 (-0.117)	0.059 (0.108)	-0.237*** (-3.573)	-0.245*** (-3.374)	-2.862*** (-4.792)	-2.907*** (-4.586)	-0.639*** (-4.062)	-0.736*** (-4.393)	-2.236*** (-2.584)	-2.308** (-2.494)
SIZE	-0.041*** (-3.148)	-0.038*** (-2.954)	-0.049*** (-3.705)	-0.051*** (-3.497)	-0.034*** (-3.495)	-0.032*** (-3.304)	-0.001 (-0.048)	0.005 (0.267)	0.032 (1.376)	0.038 (1.630)	0.068*** (2.732)	0.077*** (2.935)
DIVID	2.575*** (5.560)	2.689*** (5.736)	2.225*** (5.289)	2.297*** (5.137)	1.767*** (4.593)	1.880*** (4.835)	0.754** (2.304)	0.821** (2.371)	4.264*** (6.136)	4.465*** (6.344)	3.696*** (5.074)	3.756*** (4.957)

DEBT	-1.707*** (-18.56)	-1.743*** (-18.30)	-1.863*** (-11.78)	-1.887*** (-11.81)	-1.070*** (-12.18)	-1.129*** (-12.08)	-1.789*** (-9.357)	-1.820*** (-9.390)	1.071*** (6.037)	1.018*** (5.628)	0.944*** (3.450)	0.935*** (3.407)
PAFP	-0.004 (-0.014)	0.179 (0.677)	0.167 (0.500)	0.294 (0.844)	-0.005 (-0.024)	0.170 (0.783)	-0.443 (-0.968)	-0.201 (-0.438)	-0.818* (-1.916)	-0.535 (-1.218)	-1.941*** (-2.995)	-1.670*** (-2.603)
CRISIS	0.116 (1.220)	0.110 (1.158)	0.025 (0.220)	0.017 (0.149)	0.140* (1.684)	0.135 (1.627)	-0.008 (-0.070)	-0.031 (-0.272)	0.207 (1.346)	0.199 (1.316)	0.269 (1.432)	0.242 (1.259)
IPSA	0.308*** (6.336)	0.316*** (6.424)	0.436*** (6.573)	0.435*** (6.483)	0.187*** (5.125)	0.187*** (5.132)	0.344*** (4.606)	0.353*** (4.594)	0.438*** (5.813)	0.450*** (5.983)	0.580*** (5.727)	0.591*** (5.804)
AGE	-0.027 (-1.405)	-0.022 (-1.117)	-0.036 (-1.167)	-0.028 (-0.865)	-0.036** (-2.340)	-0.026 (-1.619)	-0.104*** (-3.086)	-0.101*** (-2.952)	-0.061** (-2.028)	-0.056* (-1.769)	-0.072 (-1.523)	-0.075 (-1.483)
Obs.	1,018	1,018	950	950	1,018	1,018	950	950	1,018	1,018	950	950
R-squared	0.397	0.405	0.399	0.390	0.290	0.303	-0.371	-0.354	0.406	0.414	0.372	0.384
F-Test	21.67	19.59	15.12	12.97	8.614	8.004	5.608	5.027	16.82	15.69	14.47	12.82
FAM marginal effect (BG=0)	-0.988*** (-3.77)	-1.00*** (-3.37)	-0.939*** (-6.24)	-0.81*** (-3.31)	-0.679*** (-2.55)	-0.581** (-2.10)	-1.075*** (7.03)	-0.986*** (-3.84)	-1.66*** (4.01)	-1.76*** (-3.86)	-1.950*** (-6.30)	-2.055*** (-4.30)
FAM marginal effect (BG=1)	0.017 (0.24)	0.306** (2.24)	0.086 (1.07)	0.231* (1.68)	0.057 (1.01)	0.324*** (2.83)	-0.071 (-0.78)	0.297* (1.68)	-0.079 (-0.49)	0.471* (1.90)	-0.176 (-1.23)	0.281 (1.11)

**Table 11:** Family ownership, voting-cash flow rights wedge, business group and firm performance

Estimated coefficients (robust standard errors) from the OLS and 2SLS regressions of the baseline equation. The dependent variables are the Tobin's Q, the Tobin's Q adjusted by the median of the industry, and the market to book ratio.  $Fam_{i,t}$  is a dummy variable that equals 1 when the ultimate controlling shareholders is a family, and 0 otherwise, DFC is the cash flow rights of the ultimate shareholder, DVDFC is the difference between voting rights and cash flow rights, SIZE is the log of total assets, BG is a dummy variable that equals 1 if the firm belongs to a business group, DIVID is the dividend payout and is defined as total dividends to total equity, DEBT is the financial leverage (debt to total assets), PAFP is the ownership held by pension funds, IPSA is a dummy variable whether the firm is included in the index of selective prices, AGE is the age of the firm (log of the number of years), CRISIS is a dummy variable that equals 1 for 2008 and 2009, and 0 otherwise. ). The marginal effect test gives the combined effect of family control when either BG=0 or BG=1, irrespective of the separation of rights. We include fixed effects at the firm level ( $f_i$ ), industry level ( $s_k$ ) and year level ( $q_t$ ). \*\*\*, \*\*, and \* stand for a level of significance lower than 1%, 5%, and 10%, respectively.

	Tobin's Q				Tobin's Q/Median (industry-year)				Market-to-book ratio			
	OLS		2SLS		OLS		2SLS		OLS		2SLS	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
DFC	-0.393*** (-3.613)	-0.518*** (-4.132)	-1.627*** (-5.749)	-1.742*** (-6.132)	-0.434*** (-4.845)	-0.569*** (-5.360)	-1.456*** (-6.558)	-1.540*** (-6.887)	-0.868*** (-4.663)	-1.009*** (-4.800)	-3.049*** (-6.125)	-3.181*** (-6.133)
DVDFC	-0.113 (-0.303)	-3.226* (-1.748)	0.092 (0.247)	-2.200 (-1.033)	0.352 (1.466)	-2.172 (-1.574)	0.252 (1.085)	-1.964 (-1.230)	0.243 (0.304)	-1.860 (-0.626)	0.704 (0.870)	0.931 (0.274)
<i>DVDFC</i> <sup>2</sup>		8.702* (1.790)		6.518 (1.160)		7.136** (2.004)		6.371 (1.523)		6.113 (0.751)		-0.463 (-0.050)
DVDFC x FAM	-1.238*** (-2.668)	-2.422 (-1.175)	-2.912*** (-5.111)	-4.983** (-1.993)	-1.433*** (-3.876)	-3.583** (-2.411)	-2.416*** (-5.678)	-4.747*** (-2.601)	-2.424*** (-2.790)	-4.882 (-1.418)	-5.308*** (-4.825)	-11.306*** (-2.649)
<i>DVDFC</i> <sup>2</sup> xFAM		4.196 (0.726)		6.945 (1.007)		6.995* (1.656)		7.770 (1.527)		7.743 (0.786)		18.742 (1.572)
DVDFC x FAM x BG	0.685 (1.208)	5.311** (2.511)	2.787*** (3.948)	9.227*** (3.488)	0.699 (1.517)	5.930*** (3.806)	2.108*** (3.698)	8.334*** (4.182)	1.994* (1.947)	7.015** (1.990)	5.571*** (4.250)	16.004*** (3.593)
<i>DVDFC</i> <sup>2</sup> x FAM x BG		-12.885** (-2.187)		-18.441*** (-2.610)		-15.075*** (-3.432)		-18.199*** (-3.409)		-14.855 (-1.488)		-31.340*** (-2.594)
FAM x BG	0.151 (1.502)	0.170 (1.485)	-0.078 (-0.599)	-0.103 (-0.681)	0.050 (0.549)	0.059 (0.559)	-0.111 (-1.061)	-0.123 (-0.978)	0.207 (1.200)	0.213 (1.057)	-0.194 (-0.822)	-0.281 (-0.999)
DVDFC x BG	-0.006 (-0.011)	-0.066 (-0.031)	-1.377** (-2.503)	-3.695 (-1.485)	-0.351 (-0.935)	-0.983 (-0.568)	-1.199*** (-2.752)	-3.238 (-1.597)	-0.674 (-0.715)	-1.598 (-0.472)	-3.009*** (-2.885)	-8.878** (-2.244)
<i>DVDFC</i> <sup>2</sup> x BG		-0.496 (-0.090)		5.360 (0.857)		1.011 (0.235)		4.641 (0.936)		1.691 (0.188)		15.027 (1.462)
FAM	0.131 (1.590)	0.035 (0.366)	0.282** (2.565)	0.179 (1.412)	0.228*** (3.250)	0.149* (1.854)	0.325*** (3.800)	0.225** (2.244)	0.062 (0.411)	-0.004 (-0.021)	0.317 (1.624)	0.267 (1.129)
BG	-0.144 (-1.474)	-0.192 (-1.613)	-0.026 (-0.222)	-0.010 (-0.069)	-0.037 (-0.462)	-0.062 (-0.591)	0.007 (0.079)	0.019 (0.148)	-0.182 (-1.093)	-0.192 (-0.928)	0.064 (0.317)	0.184 (0.708)
SIZE	-0.087*** (-5.549)	-0.091*** (-5.690)	-0.064*** (-3.453)	-0.064*** (-3.391)	-0.069*** (-5.239)	-0.074*** (-5.597)	-0.052*** (-3.091)	-0.053*** (-3.183)	0.011 (0.412)	0.006 (0.243)	0.063* (1.942)	0.062* (1.886)
DIVID	2.030***	2.058***	1.924***	1.915***	1.307***	1.344***	1.281***	1.294***	3.729***	3.766***	3.737***	3.736***

	(5.525)	(5.490)	(5.230)	(5.044)	(4.695)	(4.748)	(4.592)	(4.550)	(5.576)	(5.458)	(5.396)	(5.146)
DEBT	-1.896***	-1.903***	-2.403***	-2.429***	-1.575***	-1.567***	-1.947***	-1.957***	0.826***	0.844***	0.206	0.227
	(-12.894)	(-12.880)	(-14.748)	(-14.505)	(-12.105)	(-12.074)	(-12.768)	(-12.714)	(3.230)	(3.235)	(0.696)	(0.736)
PAFP	0.597**	0.886***	0.823**	1.190***	0.495**	0.786***	0.719**	1.060***	-0.049	0.243	-0.322	0.071
	(2.154)	(3.283)	(2.210)	(3.284)	(2.088)	(3.424)	(2.242)	(3.448)	(-0.101)	(0.500)	(-0.492)	(0.112)
CRISIS	0.098	0.113	0.030	0.018	0.165*	0.183**	-0.021	-0.030	0.201	0.220	0.253	0.250
	(0.943)	(1.112)	(0.282)	(0.172)	(1.944)	(2.202)	(-0.256)	(-0.387)	(1.136)	(1.251)	(1.415)	(1.404)
IPSA	0.346***	0.359***	0.387***	0.391***	0.269***	0.278***	0.301***	0.303***	0.452***	0.454***	0.533***	0.534***
	(5.927)	(6.057)	(5.662)	(5.486)	(6.031)	(6.251)	(5.660)	(5.658)	(5.126)	(5.062)	(5.339)	(5.152)
AGE	0.021	0.031	-0.053*	-0.035	0.018	0.026	-0.032	-0.015	0.011	0.018	-0.086	-0.069
	(0.974)	(1.442)	(-1.673)	(-1.157)	(0.998)	(1.443)	(-1.286)	(-0.613)	(0.307)	(0.502)	(-1.574)	(-1.274)
Observations	1,018	1,018	950	950	1,018	1,018	950	950	1,018	1,018	950	950
R-squared	0.448	0.465	0.454	0.474	0.354	0.381	0.328	0.362	0.394	0.400	0.404	0.420
F-Test	19.55	19.99	15.93	16.46	8.328	9.731	8.836	9.579	15.51	15.34	14.95	15.43
FAM marginal effect (BG = 0)	-0.018	-0.038	-0.016	-0.031	-0.097	-0.068	-0.105	-0.063	-0.158	-0.177	-0.165	-0.105
	(-0.25)	(-0.40)	(-0.19)	(-0.25)	(-1.64)	(-0.86)	(-1.53)	(-0.70)	(-1.23)	(-0.94)	(-1.11)	(-0.45)
FAM marginal effect (BG=1)	0.231***	0.163*	0.192**	0.059	0.210***	0.139*	0.185**	0.064	0.229**	0.153*	0.147	-0.026
	(3.36)	(1.90)	(2.49)	(0.61)	(3.52)	(1.78)	(2.73)	(0.70)	(2.27)	(1.69)	(1.22)	(-0.18)