

# **The effect of family control on firm value and performance : Evidence from Continental Europe**

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## **Abstract**

We investigate the relation between ownership structure and firm performance in Continental Europe, using data from 675 publicly traded corporations in 11 countries. Although family-controlled corporations exhibit larger separation between control and cash-flow rights, our results do not support the hypothesis that family control hampers firm performance. Valuation and operating performance are significantly higher in founder-controlled corporations, and in corporations controlled by descendants who sit on the board as non-executive directors. When a descendant takes the position of CEO, family-controlled companies are not statistically distinguishable from non-family ones in terms of valuation and performance.

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## Introduction

The effect of family control of public corporations is a growing field of interest in the finance and management literature. In this paper we address the point by studying a sample of 675 large public corporations in Continental Europe.

Family control of public corporations is considered with mixed feelings by European public opinion. On one hand, it is respected because many large European companies have prospered under the founding family for a long time, sometimes for centuries, thereby accrediting the view that families are long-term investors committed to the success of the firm they invest in. On the other hand, the different priorities that families may have with respect to those of outside shareholders are seen as a potential for conflicts of interest that may hinder value creation and the growth of European companies. Families are clearly oriented to maintaining control of the companies they found or acquire, and often resort to control-enhancing devices (dual-class shares, pyramid, etc.) that several studies have proven to be associated with lower value-creation (Claessens *et al.*, 2002; Lins, 2003; Gompers *et al.*, 2004), and that many critics would like to see banned by EC regulation (see the EC “High Level Group of Company Law Experts” report, also known as the Winter report, HLG, 2002 a, b). Families are often accused of considering executive positions in the firm as a channel for providing highly-remunerated jobs to the offspring, thereby depriving outside shareholders of the value-creation potential that the selection of the best managers would provide.

Since family control can have both positive and negative properties, empirical evidence is of paramount importance for judging its final effect and for orienting regulation. Empirical literature about family control of public corporations has been rather focused on the U.S., starting from Shleifer and Vishny (1986), Morck *et al.* (1989) and Gadhoun *et al.* (2005). After them, Denis and Denis (1994) study majority-owned firms, and find that, although most of them are characterized by family involvement, they do not exhibit specific inefficiency features. Many papers highlight that founder-CEOs have a positive effect on corporate performance (McConnaughy *et al.*, 1998; Palia and Ravid, 2002; Anderson and Reeb, 2003; Adams *et al.*, 2003; Falenbrach, 2003; Villalonga and Amit, 2004). A critical event for family control is clearly the retirement of the founder coupled to the “passing of the baton” to an heir, that often leads to a decline in the performance of the firm (McConnaughy *et al.*, 1998; Pérez-González, 2001; Villalonga and Amit, 2004; for Canada, Morck *et al.*, 2000). On balance, Anderson and Reeb (2003) suggest that family ownership is an effective

organizational structure in the US, while Villalonga and Amit (2004) report that family control exhibits specific weaknesses when descendants are involved in top management.

There is little comprehensive evidence concerning European corporations. The only paper similar to ours is Maury (2006), who provides results that are close to those we report in § III.A., while the results of single-country studies (Gorton and Schmid, 2000; Volpin, 2002; Cronqvist and Nilsson, 2003; Sraer and Thesmar, 2004; Hillier and McColgan, 2004; Ehrhardt *et al.*, 2004) give rise to a contrasted picture about the effect of family control. To our knowledge, our paper is the first one to document the consequences of family control at the founder and descendants stage across Continental Europe.

The evidence we obtain sheds light on a positive association of family control with market valuation and operating performance. The intriguing feature of our results is that families are the type of owners that most often resort to control-enhancing devices associated with lower performance, yet there is no evidence that family control is negative for firm value and operating performance. If we consider both family affiliation and the percentage of cash-flow and voting rights held by the largest shareholder, the effect of family control is positive, meaning that for any given cash-flow/voting rights combination, families tend to be better than other types of controlling shareholders. If we put together the effect of family control with the ownership structure chosen by families, we find that part of the positive effect is wasted by the over use of wealth-reducing control-enhancing devices, but a residual positive effect is clearly still there. Thus, our results provide a contribution to the existing literature by warning that the simple observation of the over use of control-enhancing devices by family firms does not imply a global negative effect of family control, as is often assumed.

We then move to consider what happens to family firms' performance when the company is still run by its founder or by the descendants, and what is the role that founders and/or descendants take up in the corporation. We find a confirmation of the non-European results on the positive effect of founders. However, there is no evidence at all that descendants-controlled corporations underperform non-family firms. On the contrary, family firms remain better than non-family ones when descendants limit themselves to the role of non-executive directors, and are not worse than non-family ones when a descendant takes the helm.

## I. Sample selection and data

### A. Sample selection

Faccio and Lang (2002), in their study on ownership structure in Western Europe, analyze a sample of 5,547 Worldscope corporations, roughly corresponding to the universe of stock market listed corporations in 13 countries. We consider only non-financial (SIC 6000-6999) and non-regulated (SIC 4900-4999) corporations in Continental Western European countries. We exclude Ireland and the UK because their corporations are commonly considered to follow a different – “anglo-saxon” and more “shareholder-value-oriented” – style of management, and Faccio and Lang show in these two countries family control is less important than in Continental Europe. Therefore, we select corporations from 11 countries (Belgium, Denmark, Finland, France, Germany, Italy, the Netherlands, Norway, Spain, Sweden and Switzerland<sup>1</sup>). This leaves us with 2,631 Worldscope corporations. Given the amount of data needed for the present study, we focus our attention on relatively larger companies – with assets worth more than € 300 millions as of the end of year 1999 – on the assumption that more information can be found for them at reasonable cost. After this, we are left with 853 corporations, that become 675 after excluding companies in which the largest shareholder holds more than 95% of the share capital, limited liability partnerships, and dual class corporations in which only one class is publicly traded.

In Table I we present the number of corporations in the sample by year, country and industry (using Campbell’s (1996) classification of industries). The 675 corporations in 1999 decrease to 640 in 2000 and 606 in 2001 because of mergers, privatisations and bankruptcies. The breakdown by countries shows that the largest number of corporations belong to France (144 in 1999, or 21.3% of the total), and not to Germany (119, 17.5%), by far the largest economy of the area. Three countries, the Netherlands, Italy and Switzerland, weigh in the sample around 10%, the others around 5%.

Finally, the breakdown of the corporations by industries shows a fairly widespread distribution. Basic industry (14.3%), consumer durables (12.2%) and capital goods (11.5%) are the most represented industries.

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<sup>1</sup> Of the continental Western European countries, we do not consider Austria, Greece, Luxemburg and Portugal. For Austria, Luxemburg and Portugal, preliminary research showed that inclusion would have increased the sample size to a negligible extent. We included corporations of Greece at an early stage of the research, but we realized that during the period covered by the study this country’s firms experienced a major change in accounting rules, which made comparison difficult.

## *B. The construction of the dataset*

Given the objectives of the paper, we can divide the variables forming the dataset in three groups; i) ownership, ii) valuation and iii) control variables. The measures of these variables are collected for the years 1999, 2000 and 2001.

### *i) Ownership variables*

The identity of the ultimate largest shareholder and the size of its cash-flow and voting rights are detected according to the standard methodology developed by La Porta *et al.* (1999), and followed by Claessens *et al.* (2000), Faccio and Lang (2002), Claessens *et al.* (2002), to whom we refer for a more in-depth description.

To do this, we work on 1) official registers held by stock market authorities, and 2) information disclosed by the corporations, either in the “investor relation” section of their websites, or in their annual reports. If we find all the information needed in 1) or 2) we end the search for data about ownership. Other reliable sources of information were considered 3) Worldscope, Extel and Osiris, 4) information contained in the various national annual directories of listed companies published privately, 5) information contained in the financial press, that we obtain both through Lexis-Nexis and web-search engines. For sources 3-5 we considered the information valid if confirmed by two different sources. In appendix A we make a list of sources used by country.

The starting point for the ownership variables are thus the *Direct voting rights* and *Direct cash-flow rights* held by the largest shareholders<sup>2</sup>, which are two different figures in the case of a share capital structure departing from one share/one vote<sup>3</sup>. We then trace the map of the ownership of the stakes, in order to identify the ultimate shareholders and their ultimate ownership of voting rights and cash-flow rights. Therefore, the *Ultimate cash-flow rights* are those held by the largest shareholder after taking into account the whole chain of control<sup>4</sup> (if family A owns 50% of direct cash-flows of B and B owns 40% of direct cash-flows of C, family A owns ultimately  $50\% \times 40\% = 20\%$  of cash-flows of C) and *Ultimate voting rights* are the voting rights held in the weakest link of the control chain. 10% is the cutoff point for the existence of a control chain, in the sense that a listed company that

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<sup>2</sup> The detail of mandatory disclosure about the minimum size of shareholdings varies between 2% and 5% across countries. We collect the largest three available, whatever the national regulation. In doing this, we sum up the direct shareholdings pertaining to a single ultimate owner, even if they are held through different juridical subjects.

<sup>3</sup> We take into account the special case of France, where it is possible for “stable” shareholders to obtain two votes for each share held. We collect the information about double votes from annual reports.

<sup>4</sup> We also consider multiple control chains and cross-holdings in the sense defined by Faccio and Lang (2002).

has no shareholder larger than 10% is considered widely held and therefore not controlled (however, it can be the apex of a control chain).

We collect from the above mentioned sources some additional information about corporate governance, concerning: the size and composition of the board<sup>5</sup>, with a separate indication of executive and non-executive directors; the number of members of the board belonging to the controlling family, when there is one; in this case, whether the founder is still alive and has a role on the board, or the family members controlling the company have to be classified as descendants. To obtain the latter variable we have to perform a particularly careful scrutiny of the documentation supplied by family companies on their websites, and of information available through the press.

### *ii) Valuation variables*

The valuation and operating performance variables we employ are Tobin's Q and the accounting Return on Assets (ROA) measured at the end of 1999, 2000 and 2001.

As for the measure of Tobin's Q, we start from the usual ratio between (Book value of total assets - Book value of shareholders' equity + Market value of shareholders' equity) and (Book value of total assets). However, we observe that in our sample full consolidation of the financial statements of controlled companies is the norm. Therefore, to correct for the underestimation of Tobin's Q induced by valuation of "minority interests" at their book value, we multiply the book value of this item by the market-to-book multiple of the company's "shareholders' equity".

ROA is defined as the ratio between "operating profit" and "total assets" (both variables are taken as supplied by Worldscope), but we deduct from "total assets", for consistency, the two items "cash and short-term investments" and "investment in associated companies".

### *iii) Control variables*

In regression analysis we employ the following control variables that are standard in the literature: the Industry in which each firm operates (two-digit SIC code); the Size of the corporation, measured by Total Assets (in the regressions, the logarithm of); a Growth variable, the percentage increase in sales in the previous year; and Leverage, defined as the book value of total financial debt divided by the book value of equity at the end of each year.

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<sup>5</sup> Or of the two boards, in countries where dual boards are mandatory (Germany and the Netherlands) or eligible (Finland and France).

## II. Descriptive Statistics

In this section we present descriptive statistics for the variables we employ in the regression analysis discussed in the following section III. In part A we focus on the concentration of voting rights and cash-flow rights, and in part B on the descriptive evidence of family control.

### A. Ownership concentration

In Table II we present descriptive statistics for some of the variables of most interest by country (data for year 1999). In the upper part of the table we present the average and median values of the ultimate voting and cash-flow rights of the largest shareholder in the 675 companies (1999). In line with Barca and Becht (2001) and Faccio and Lang (2002), European companies exhibit ownership patterns that are among the most concentrated in the world, even after discarding the smallest caps as we do: In our total sample half of the companies have a shareholder with more than 37% of the ultimate voting rights.

The difference between the share of voting and cash-flow rights of the largest shareholder, arising from both dual-class shares and pyramiding, is also relevant though not huge (the median is 8.5%).

In the table we also present the proportions of companies by the various types of the largest shareholder. *Families* are by far the most frequent largest shareholder (52.3%), followed by *widely held corporations*<sup>6</sup> (16.9%), *financial institutions* (15%), the *State* (8%), and *other entities* (6.9%).

### B. Family control

In Table III we present summary statistics about the type of largest shareholder (Panel A), and about the involvement in the corporations of families (Panels B and C). In Panel A, corporations are grouped into the five traditional categories *Widely held*, *Family*, *State*, *Financial* and *Other*. We have already observed the prevalence of family as the largest shareholder, this is clearly visible in the first column of Table III.

In the second and third column, average Tobin's Q and ROA for each class are presented. No clear pattern emerges from their observation, and we can anticipate that some of the inferences that could be suggested by these first figures are not confirmed by the regression results. More relevant is actually the evidence about the average size of the corporations across the different groups, where it is clear that family control is more diffused in comparatively smaller firms.

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<sup>6</sup> In this group we include both widely-held corporations and corporations controlled by the widely-held ones.

The remaining columns are about the degree of separation between control and ownership across the different groups. Family- and state-controlled firms are those where the largest shareholder invests more, on average more than one third of the total shareholder capital in terms of ultimate cash-flow rights. But, what better distinguishes family corporations is their larger wedge between voting and cash-flow rights, higher than 10%. Actually, for the majority of the family corporations in our sample (close to 57% of them) we find that some control-enhancing device is in place.

In Panels B and C of Table III we present descriptive statistics about the involvement of families in the management of corporations. Beginning from now, we refer to the strict definition of family firm that we shall employ in the regression analysis presented in the following sections. By this definition, it is not enough that the largest shareholder at the 10% cut-off is a family (this is the only requirement for inclusion in the group of 355 family-controlled corporations in Panel A) but it must also be true that either the family controls more than 51% of direct voting rights, or controls more than the double the direct voting rights of the second largest shareholder. We employ this definition to obtain clearer evidence about the possible negative effect of family control, often echoed in popular opinion in Europe, because we realize that in several corporations a family is actually the largest shareholder with more than 10% voting rights, but that there are one or more other shareholders (usually banks or the State) with similarly large holdings. We conclude that such corporations may be thought of as controlled by a coalition more than by the family. In order to obtain a clearer response to the question whether family control is negative, indifferent or positive for European corporation, we resort to the strict definition of family control we have just described, in which the controlling power of the family through the voting rights held cannot be denied. This leads to the count of 314 family-controlled corporations we find in panels B and C, instead of the 355 reported in Panel A.

In Panel B we can observe that in nearly 35% of the 314 corporations the CEO is a member of the family; in half of them the CEO is not a member of the controlling family, but at least one member of the family sits on the board of directors<sup>7</sup>; in just 15% the family does not sit on the board at all. Average valuation and performance measures between corporations with family CEO and family-non-executives are quite similar, but Tobin's Q is lower for corporations in which the family stays outside of the board. The average family-CEO corporation is smaller. The percentage of corporations that are controlled through control-enhancing devices is quite similar across the three

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<sup>7</sup> Often being its non-executive chairman (it happens in 49.3% of the corporations in which the CEO is not from the family, but at least one non-executive is).



types. However, the average size of the wedge between voting and cash-flow rights is smaller for family-CEO corporations.

In Panel C we split the sample by founder<sup>8</sup> and descendants corporations. Founder- controlled corporations are 92 out of 295<sup>9</sup>, or about 32% of family corporations. In more than half of them the founder is also the CEO, and in about 40% the founder is a non-executive director (but then, it is not rare for the CEO to be another member of the family). In descendants-corporations the proportion between top-management and board-level family participation reverses. In little more than 25% of them the CEO is a member of the family, while one or more members of the family take a non-executive position on the board in about 55%.

Founder corporations are better off in terms of average Tobin's Q and operating performance. Founder corporations also exhibit a more concentrated ownership and far less separation between voting and cash-flow rights. This can be seen both in the percentage of corporations without such separation, that are more than the half in founder-corporations and just about one-third in descendants-corporations, and in the average wedge, that is clearly higher in descendants-corporations.

### III. The effect of family control on firm value and performance

We can now move to the core of the paper, i.e. the analysis of the relation between market valuation (Tobin's Q) and operating performance (ROA) on one side, and the variables representing ownership concentration and family control, on the other side. The general form for the regressions is:

$$\begin{aligned}
 \text{Firm performance}_{it} = & a + b(\text{family firm}_{it}) + c(\text{ownership variables}_{it}) + d(\text{control} \\
 & \text{variables}_{it}) + e(\text{two digit SIC code dummy variables}) + \\
 & f(\text{year dummy variables}) + g(\text{country dummy variables}) + \varepsilon_{it}
 \end{aligned}$$

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<sup>8</sup> We have to explain what we mean by the term "founder". The simplest case is the one of a corporation whose founder is still alive (and, obviously, has voting-right control, alone or together with other members of his family). However, we consider a corporation founder-controlled also when it is controlled by another corporation that, in its turn, is controlled by its own founder. Finally, we consider founder-controlled a corporation controlled by an individual that did not found it, but took control of it without being a descendant of the previous controlling family (an illustrious example is that of Mr. Arnault, who became the controlling shareholder of the Dior-LVMH group without belonging to the founding family). We consider this individual as the founder of a new family dynasty. Consistently, we also consider descendants, the descendants of someone that took control of a corporation without being its founder.

<sup>9</sup> We refer to a total of 295, because for two of the 314 family-controlled corporations we are missing information about the composition of the board of directors, and for a further 17 we were not able to conclude whether the corporation is still run by the founder or by his descendants.

where

<i>Firm performance</i>	Tobin's Q (natural logarithm of) and ROA;
<i>Family firm</i>	binary variable that equals one when a corporation is controlled by a family <sup>10</sup> and zero otherwise; in various regressions we use more binary variables identifying different types of involvement of families in management;
<i>Ownership variables</i>	a vector composed of the share of ultimate cash-flow rights and the difference between share of voting and share of cash-flow rights (wedge); in some regression specifications this will be omitted <sup>11</sup> ;
<i>Control variables</i>	a vector of variables composed of total assets (natural logarithm of), leverage (book value of total financial debt / book value of equity), sales growth in the previous year;
<i>Two-digit SIC code dummy</i>	dummy variables that capture industry fixed effects;
<i>Year dummy variables</i>	dummy variables that capture year fixed effects;
<i>Country dummy variables</i>	dummy variables that capture country fixed effects.

A problem we encounter is the presence of outliers in the dependent variables, especially in Tobin's Q. In the years 1999-2001 the stock market conditions produce a number of very high Tobin's Qs that are larger than in previous studies (for instance, the average Tobin's Q is 4.22 for unregulated utility firms). Although we use the natural logarithm of Tobin's Q in order to limit the impact of skewness, we note that some extreme values of  $\ln(Q)$  could still affect the results in a significant way. We deal with this problem by applying a winsorizing procedure, that censors Tobin's Q at the 5<sup>th</sup> and 95<sup>th</sup> percentiles by setting extreme values to the 5<sup>th</sup> and 95<sup>th</sup> percentile values, respectively. In the following section we examine the general relation between corporate performance, ownership concentration and family control.

#### A. Corporation performance and family control

In Table IV we report the outcome of two different regression specifications in which the independent variable of main interest is the dummy for family control.

In the first specification (columns 1 and 3), that we can define "gross-of-the-controlling-strategy", we do not include in the regressors the share of ultimate cash-flow rights and the difference between the share of voting and cash-flow rights. If value and operating performance are correlated both to the type of the controlling shareholder (family or not) and to the ownership structure chosen by the

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<sup>10</sup> We employ the strict definition of family control that gives to 314 family-controlled corporations, as we explain in section II.B.

<sup>11</sup> We also test, but do not report, specifications in which we control for the non-linear effects of the share of cash-flow rights of the largest shareholder. The results of these specifications do not introduce relevant changes in the relation between value and performance and family control.

controlling shareholder (share of cash-flow rights and separation between cash-flow and voting rights), then the coefficient on the dummy variable, in this specification, captures both the “pure” effect of the type of controlling shareholder and the effect of the average ownership structure chosen by that type.

In the second specification (columns 2 and 4), that we can define “*net-of-the-controlling-strategy*”, we include in the multivariate regression the dummy-variable for family along with the two continuous variables representing the share of cash-flow rights and the wedge between the voting and the cash-flow rights held by the largest shareholder. In this second specification we can interpret the coefficient of the dummy as informative of the “pure” effect of the type of control, i.e. the specific skills or disadvantages that could make families different as controlling shareholders, separated from the effect of the ownership structure (that is simultaneously estimated by assuming it is equal for family and non-family firms).

The results in Table IV show that in Continental Europe family control goes together with higher value and operating performance.

In all the regressions, either with dependent variable Q (regressions 1 and 2) or with dependent variable ROA (regressions 3 and 4), the coefficient on the dummy-variable “family” is positive and highly statistically significant). This result suggests that family control is beneficial both when we measure a “pure family effect” separated from an “ownership structure effect” and when we measure an “overall family effect”.

More in detail, in regressions 2 and 4 (*net-of-the-controlling-strategy*) the coefficients on the family-dummies are positive and statistically significant both when the dependent variable is Q (regression 2, statistical significance 1%) and when it is ROA (regression 4, statistical significance 5%). This means that, for any given combination of cash-flow rights and wedge, family corporations tend to exhibit clearly better valuation and operating performance than non-family firms.

However, although it cannot be said that separation of voting and cash-flow rights is a necessary corollary of family control (in 43.1% of family-controlled corporations the family holds an identical share of voting and cash-flow rights), family corporations do resort more often to control-enhancing devices, and this makes their ownership structure less efficient in terms of valuation and operating performance, as is shown by the negative signs on the wedge variable in regressions 2 and 4. Therefore, when we measure the joint effect of family control and ownership structure, as we do in regressions 1 and 3, the effect of family control actually turns out to be still positive, but smaller.

Even in this “*gross-of-the-controlling-strategy*” specification, however, the positive family effect is present and highly statistically significant (5% level for Q and 1% for ROA).

We have finally to mention that we run a regression specification (not reported in the tables) in which we also include as independent variables the interaction terms family\*cash-flow rights, and family\*wedge. The estimates for the interaction terms are not significant when we employ ROA as the dependent variable. On the contrary, they are significant when we employ Tobin’s Q, since the value of the family-dummy becomes higher, and the regression line for both cash-flow rights and wedge is more steeply downward sloping in the case of family-controlled corporations. On one side, this suggests that the market is more diffident towards management-entrenching strategies when they are put in place by family firms (a similar result is documented for Swedish firms by Cronqvist and Nilsson, 2003). On the other side, this reinforces the evidence of the positive properties of family control once we separate it from the effect of the quantitative ownership variables.

A last remark about the results in Table IV concerns the estimates for the cash-flow and wedge variables. The general opinion of the relationship between value/performance and these variables, based on papers by Claessens *et al.* (2002), Lins (2003) and Gompers *et al.* (2004) – that regard respectively East Asia, various emerging markets, and the US – is that i) valuation and performance *increase* in the cash-flow rights of the largest ultimate shareholder and ii) valuation and performance *decrease* in the wedge between the voting and the cash-flow rights of the largest shareholder. However, we find practically no association with cash-flow rights as far as Q is concerned, and only weak evidence for ROA (the positive coefficients on ROA are not statistically significant). Results are more aligned with expectations for what regards the wedge variable, since there is clear evidence of negative association with Q, and weak evidence of negative association with ROA (the estimated coefficients are actually negative, though not statistically significant). The reasons for the departure from the results found in other economies about the relationship between value/performance and cash-flow rights<sup>12</sup> cannot be investigated in this paper, but may be an interesting topic for further research.

#### *B. The relation between firm performance and family involvement*

Family control in general seems to have a positive effect, but what about different types of family control? There is evidence, mainly from the U.S., that the performance of corporations run by their founders is actually above the average (McConnaughey *et al.*, 1998; Palia and Ravid, 2002;

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<sup>12</sup> A similar result is however found by Lins (2003) in a sample of 1433 firms from 18 emerging markets.

Anderson and Reeb, 2003; Adams *et al.*, 2003; Falenbrach, 2003), but the same cannot be said when descendants take the reins (McConnaughy *et al.*, 1998; Pérez-González, 2001; Villalonga and Amit, 2004). Furthermore, it is possible to argue that outside managers can take into the corporation skills and experiences that not only descendants, but sometimes also founders, may not have. In this case, the mere fact that the CEO is a member of the family should have a negative effect on performance. Therefore, in the present section we turn to analyze different cases of family control. In Tables V and VI we report results of regressions in which we include dummy-variables representing the different types of family involvement. The regressions are run on the whole sample, therefore the coefficients on dummy-variables inform us if corporations characterized by a given type of family participation are different in their average valuation and operating performance from non-family corporations.

We seek evidence on the following points. First, we wish to understand the effect of family control when a member of the controlling family is CEO of the company. Second, we look at possible differences between family firms controlled by founders and by descendants, following the mainly U.S. evidence about superior performance of founders. Third, we are particularly interested in the performance of family firms whose CEO is a descendant, a case that is often seen as a negative outcome of family control, since it is *a priori* likely that the descendants do not share the founder's distinctive entrepreneurial skills.

### C.1. Family CEO vs. Family non-executive-directors

In Panel A of Table V we abstract from the founder-descendants alternative, and simply consider different degrees of involvement of the family, by considering a first dummy-variable that takes the value one when the CEO belongs to the family, a second dummy-variable that takes the value one when the CEO is not a member of the family but at least one member of the family sits on the board of directors, and a third dummy-variable for the case of no family present on the board at all. The picture released by these regressions is clear; the general positive effect of family control we already noticed can be split according to the degree of involvement of families in management. The effect is confirmed to be clearly positive when the family takes up the role of monitoring by assuming non-executive positions on the board of directors, since the dummies for the presence on the board of non-executive family members is positive and highly statistically significant (in Q regressions, once at the 5% and the other at the 1% level; in ROA regressions, always at the 1% level). On the other hand, when a family member takes the position of CEO, the evidence of the

better position of family vs. non family-firms becomes weaker. Notice that the size of the estimates for the family-CEO dummies does not decline abruptly with respect to the size of the family-non-executive dummies. Rather what declines is statistical significance – both for Q and ROA, the coefficient remains significant at the 10% level in one of the two regressions – suggesting that there is a much larger variance in the market valuation and operating performance of companies run by family-CEOs, coupled with slightly lower average values, compared to companies that are simply monitored by families. But this does not mean that family-CEO firms are worse off than non-family firms, since the regression in the first column of Panel A Table V shows that Q is 8.4 % higher in family-CEO firms, and the one in the third column shows that the coefficient on the family-CEO dummy is equal to 14% of the overall mean ROA.

Finally, note that the results of Panel A Table V do not suggest that family firms perform better the less the family takes interest in the company. It is true that it seems better when the family does not manage and limits itself to monitoring; but the group of worst-performing family firms are those in which the family does not manage and stays outside of the board. For this group there is no sign of better performance with respect to non-family firms, and there could even be worse performance, as is suggested by the (not statistically significant) negative sign of the coefficient when ROA is the dependent variable. This is consistent with the idea that family control is beneficial for the firm when coupled with some degree of involvement of the family<sup>13</sup>.

## C.2. Founders vs. descendants

In Panel B of Table V, we consider a different grouping criterion of family firms, that distinguishes them into two types, those controlled by the founder and those controlled by descendants. The criterion states simply that, if the founder is still alive – no matter her role in the firm, if any – the family-controlled firm is considered a founder-firm, otherwise it is considered a descendant-firm. The results are clear and statistically strong, showing that family firms perform much better when they are still controlled by their founders. The size of the difference in founder-firm average valuation and operating performance with respect to both descendants controlled and non-family corporations is impressive. If we compare the size of the point-estimates, we note that founder-controlled corporations' average Tobin's Q is 12.3% higher than in non-family firms, and their ROA is 28.2% higher than the overall mean (*gross-of-the-controlling-strategy* specification).

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<sup>13</sup> We also test whether the coefficients of the three dummy variables are statistically different one from the other. This is true when we compare the dummies for family-CEO and family-non-executive with the dummy for family-not-on-the board, in regressions in which ROA is the dependent variable.

Although a similarly large overperformance of founder-led corporations is found in the U.S. too (see Adams *et al.*, 2003), we consider the hypothesis that this strong result is due to the omission of control variables representing age since foundation or since IPO. When we run regressions on the sub-samples formed by the corporations for which these data are available, including age-foundation and/or age-IPO as control variables, the results for the founder dummy-variable are nearly unchanged. We interpret this as evidence that the founder effect is distinct from a young-firm effect<sup>14</sup>.

It is thus clear that founder-corporations perform significantly better than descendants-corporations<sup>15</sup>. However, descendants-corporations are no worse than non-family firms, as the positive sign of coefficients on the dummy-variable *descendants* show. Tobin's Q is 6.6% higher than in non-family firms in the *net* specification, and 2.4% in the *gross* one; ROA is higher than the overall mean by, respectively, 15.3% and 12.0%. But, although sizeable – especially in the case of ROA – these point-estimates are never accompanied by statistical significance, so that we cannot reliably say that descendant-firms are better than non-family ones.

### C.3. Founders and descendants, and their involvement in the family company

Previous research has highlighted negative performance of family firms where a descendant assumes the role of CEO. This result has intuitive appeal. While exchange listed companies that have been brought to market by founders are likely to have been run by skilled entrepreneurs, there is no reason to suppose that heirs inherit the managerial skills of founders. Thus, the decision to keep the CEO position in the family can simply mean that a selection of the best candidates for the position has not been put in place, in view of the advantages of enjoying the private benefits of this position in the family.

In Table VI, therefore, we present a finer partition of the family involvement in management, by considering both the founder/descendants alternative and the different roles on the board. Thus, we include in the regression six dummy-variables representing different groups of family-firms:

1 Founder CEO = family-controlled firm in which the founder is CEO (often also chairman);

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<sup>14</sup> To appreciate this, consider that only 20% of the 264 corporations whose IPO took place after 1988, and 30% of the 65 corporation founded after 1978, are still run by their founder. Therefore, we can effectively measure the distinct effects of the age and of the presence of the founder. The coefficient on the age variable is always positive, that means that younger corporations, in term of foundation date or IPO date, do actually perform better. However, the size and the statistical significance of the *founder* dummy-variable are nearly unchanged.

<sup>15</sup> The dummy for founder is statistically different from the dummy for descendants in regressions in which Tobin's Q is the dependent variable.

- 2 Founder non-executive = family-controlled firm in which the founder sits on the board but neither the founder nor any other family member is CEO (the founder may be and often is non-executive chairman);
- 3 Founder not on the board = family-controlled firm in which the founder is still alive but neither the founder nor any other family member sits on the board;
- 4 Descendant CEO = family-controlled firm, family in the second or later generation, CEO belonging to the family;
- 5 Descendant non-executive = family-controlled firm, family in the second or later generation, member of the family on the board as non-executive;
- 6 Descendant not on the board = family-controlled firm, family in the second or later generation, no member of the family on the board.

The neatest result in Table VI is that the statistically significant positive difference between founder-firms and non-family firms – that we already noticed while commenting on Table V – holds both when the founder is CEO and when she is non-executive. However, it is noticeable that both founder and descendant firms seem to be better off when the CEO is from outside the family. While the result for descendants could be expected, it was not a foregone conclusion that founder-firms, that on average are already more profitable than the others, perform even better when not all managerial power is kept within the family.

As far as the comparison between descendant-firms and non-family firms is concerned, results in Table VI trace a more interesting picture than in Table V, where we could notice no statistical difference between the two groups. The interesting evidence arises from the separation between descendant-CEO and descendant-non-executive firms. There is rather strong statistical evidence that descendant-non-executive firms perform better than non-family firms<sup>16</sup>. Descendant-CEO firms, on the contrary, are not statistically different from non-family firms. However, there is no suggestion, contrary to what is found in non-European papers, that descendant-CEO firms are inferior to non-family firms in terms of market valuation or operating performance, as is shown by the fact that the estimates of the Descendant-CEO dummies are always positive, albeit not statistically significant. The only negative signs appear for the dummy-variables of family not in the board, confirming that the absence of the family from both management and monitoring is really the most critical case for family control. .

Coming back to the better performance of all family-firms when the CEO is an outsider, a more detailed look reveals that the estimates concerning market valuation (Q) for founder-CEO and

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<sup>16</sup> In ROA regressions the dummy for this case is positive and statistically significant far beyond the 5% threshold, while the dummy for the descendant-CEO case takes a smaller value and is not statistically significant. The dummy for descendant-non-executive is also positive and statistically significant in the *net* specification of the regression when Q is the dependent variable; it is not in the *gross* specification, due to the important value-discount arising from the diffuse presence of control-enhancing devices in descendant-firms (that was clearly visible in Panel C of Table IV).



founder-non-executive are rather close, and both of them quite large compared to the estimates for descendant-CEO and descendant-non-executive. When we consider instead operating performance (ROA), we notice that the estimate for the founder-non-executive dummy takes a clearly larger value, and that the value taken by the founder-CEO dummy is even slightly lower – at least in the *net* regression (third column) – than that of the descendant-non-executive. In some sense, the market valuation of family firms seems to be affected by more confidence on the value added by a founder-CEO than what would be justified on the basis of operating performance.

A similar but opposite observation can be made when we consider the difference between descendant-CEO and descendant-non-executive firms. In this instance, we find that the difference in market valuation (Q) in favor of descendant-non-executive is larger than what seems implied by the difference in operating performance (ROA), so that the market seems suspicious of a descendant-CEO beyond what should be the case on the basis of accounting profits.

#### **IV. Further analysis and discussion of the statistical evidence**

##### *A. Sample selection effects*

We consider the possibility that some results are driven by the sample selection criteria we adopt, that were explained in § 1. Along with common criteria (we exclude financial firms and regulated utilities), we require for inclusion total assets (accounting value of equity plus net financial debt) larger than € 300 millions in 1999. We check therefore for the possibility that the latter criterion makes us pick successful companies that recently showed more than average growth, thereby artificially selecting observations with higher Tobin's Q and ROI, that could lead to an unknown bias in the comparison between family and non-family companies, and across different types of family companies.

To consider it, we observe that in *Worldscope*, for the 11 countries, the total number of non-financial and non-regulated corporations with accounting and market price data is 2,631 in the base year 1999. In Table VII we report their distribution across countries, distinguishing the number of companies with (a) asset size more than € 300 millions, (b) asset size between € 100 and 300 millions, (c) asset size less than € 100 millions. The pool from which we draw<sup>17</sup> comprises one third

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<sup>17</sup> In that we arrive at 675 out of 853 companies larger than € 300 millions after dropping, as we explained in § I.A, limited partnerships, dual class corporations in which only one class is publicly traded, and companies in which more than 95% of the share capital is held by the largest shareholder.

of the total number of firms. The largest group is the one with the smallest firms (46% of the total), while the mid-sized firms amount to less than one quarter of the total.

We then consider the measure of Tobin's Q and ROA for all the 2,631 companies, and obtain the results that are summarized in Table VIII. It is easy to notice that, on average, firms with total assets below \$ 300 millions, that are excluded from our sample, exhibit higher valuation, and, except in the case of the smallest companies, higher profitability than firms that are included. This suggests that our selection criteria did not produce a bias towards inclusion of more successful companies.

### *B. Pooled (average) regressions*

To check the robustness of the results presented in the previous sections, we run pooled (average) regressions (Table IX) in order to minimize, when performing non-OLS regressions, the problem of correlation across residuals that is solved in OLS through the Hubert-White standard error estimation procedure. In Table IX we report the results of: i) random-effect regressions in which we introduce a country random-effect in place of country fixed-effects; ii) robust regressions, in which a robust weighting function substitutes the winsorization procedure employed in OLS regressions (and in random-effect pooled regressions too)<sup>18</sup>.

Overall, the results of pooled regressions confirm the picture suggested by OLS regressions. Results are very similar for what concerns robust regressions (Panel B), both in terms of the estimated value of coefficients and of statistical significance. They are also similar in random-effect regressions, though statistical significance is lower. In *gross* specifications of random-effect regressions (Panel A, columns 2, 4, 6, 8) the signs of coefficients are fully consistent with the results of OLS and robust regressions while statistical significance is reached only for the founder-non-executive

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<sup>18</sup>We use the robust regression Biweight estimator, that belongs to the class of estimators known as M-estimators of location, and works by minimizing a function of the deviations of each observation from the estimate of location<sup>18</sup> (Huber, 1981). Least squares estimates are very sensitive to contaminated observations and sometimes outliers cannot be detected by looking at residuals, since they affect the estimator in such a way that outlier diagnostics are no longer able to discover them. M-estimators may be used to address this inconvenience, though these estimators are not robust with respect to leverage points (i.e. outliers in the space of the covariates). We used this procedure because in our dataset the main source of bias comes from contamination in the error term (vertical outliers) and not in the explanatory variables (leverage points).

The procedure used consist of the following steps:

- 1) estimate the residuals from OLS regression;
- 2) identify deviant cases by comparing residuals with the MAD (Median Absolute Deviation) estimates, and find the weights according to Hubert or Biweight methodologies;
- 3) perform a robust regression using weighted least squares;
- 4) estimate the residuals from WLS and continue iteratively with step 2), until weights converge (usually within 10 iterations).

The biweight procedure downweights outlying data points more than the Huber methodology. Results from this last weighting function, not presented in the paper, are however similar to the Biweight estimates.

dummy, but in the *net* specifications (Panel B, columns 1, 3, 5, 7) we obtain both the same signs and the achievement of statistical significance as in alternative regression techniques. In conclusion, the results of pooled regressions support the evidence presented in the previous sections.

### *C. On the endogeneity of ownership variables and firm performance*

Possible endogeneity problems in the regressions results have to be considered. In its simplest form, a problem of endogeneity might arise if firm performance caused choices about the share of cash-flow rights held by the largest shareholder. This could happen if under- or over-valuation prompted adjustments in the stakes of controlling shareholders, who could take advantage of private information about the true value of corporations. There could be however other more elaborate reasons for endogeneity. Demsetz and Lehn (1985) and Himmelberg *et al.* (1999) argue that both firm performance and managerial ownership may be endogenously determined by unobserved characteristics in the firm's contracting environment. Endogeneity arguments could also apply to the relation between performance and family control (Anderson and Reeb, 2003; Heiss and Köke, 2004), and to the relation between performance and CEO-founder persistence (Adams *et al.*, 2003). Therefore, we test the robustness of our results by employing linear instrumental variable regressions, in which the ownership variables representing the cash-flow rights of the first shareholder, the wedge between its voting and cash-flow rights, and the occurrence of family control, are estimated using instrumental variables. As instrumental variables we employ the alpha of the ordinary share, its volatility<sup>19</sup>, and the age of the corporation (log of). To avoid the potential problem of "weak instruments" (Stock *et al.*, 2002) due to the modest correlation between the endogenous variables and our instruments, we employ LIML estimates (Anderson *et al.*, 1982) instead of traditional 2SLS methods.

The results in Table X show that after controlling for endogeneity Tobin's Q is still negatively correlated with the wedge between voting and cash-flow rights and positively correlated with family control. Moreover, the positive effect of the presence of the founder - both as CEO and as non-executive - is still highly significant, and the effect of "descendant-non-executive" is also positive and significant (10% level).

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<sup>19</sup> Volatility is the stock return variance, estimated over 40 months prior to each year-end; alpha is estimated by regressing 40 months of returns in excess on treasury bills on the excess returns of an index representative of the country stock market.

When the dependent variable is ROA, the results are qualitatively similar to those of simple regression analysis, but are generally lacking in statistical significance, since only the presence of descendants as non-executives seems to exert a clear positive effect on performance.

The final conclusion about the endogeneity issue is thus clouded by the results of regressions of operating performance. Overall, however, we think there are no clear suggestions that the evidence provided by the OLS results is driven by endogeneity in the variables we employ.

#### *D. Results by country*

Obviously it is interesting to see how much the effect of family control, that up to now we considered for the Continental European area as a whole, holds at the single-country level. To do this, we run regressions on the whole sample of 675 firms similar to those in Tables IV, V and VI, except that we substitute to each family-dummy of interest a set of family-dummy variables, one for each country, while maintaining the regressions identical for all the rest. Some results are summarized in Table XI, where we report the sign of coefficients of these “family\*country” dummy variables for two selected regressions. The signs we report, together with their statistical significance, immediately tell us whether in the single country the family-effect of interest is positive or not<sup>20</sup>.

In Table XI, countries are ordered according to the origin of their legal system, so we present first the five “French-origin” countries (Belgium, France, Italy, the Netherlands, and Spain), then the two “German-origin” (Germany and Switzerland), and finally the four “Scandinavian-origin” (Denmark, Finland, Norway and Sweden). This allows us to highlight the fact that, if we look at the percentage of family firms in which the CEO position is held by a member of the family, we can see (line added at the bottom of Panel A) a tendency to find more family-CEOs in (legal) French-origin countries than in German-origin and, to a clearer extent, in Scandinavian-origin ones. We notice, in particular, that firms in which the CEO is a descendant are concentrated in France and Italy, given that in these two countries we find 35 cases out of 55 for the whole sample. In French-origin countries it is also uncommon for no family member to sit on the board.

The regression results in Table XI are in line with those we commented upon when we considered the family effect in Continental Europe as a whole, in the sense that the relevant results are actually widespread across countries.

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<sup>20</sup> We also run separate regressions by country, that yield similar results. However, the regressions we comment upon exploit more efficiently the information embedded in the whole sample. For instance, in countries for which we have a small number of observations, the industry fixed-effect tends to become, in practice, a firm fixed-effect.

When we look at the regressions in which the simple family-control dummy variable is considered (first line of Panel A and B), we note that in 7 out of 11 countries it always takes a positive sign, as it does in the whole sample (see Table IV). In just two countries – Italy and Denmark – the family effect seems to be negative in both Panels A and B, so that for them we find an unequivocal suggestion that family control negatively affects both market valuation and operating performance. For Switzerland, the effect is positive for market valuation and negative for operating performance, while the reverse is true for Norway.

We then show the results of the regressions in which we split the family effect along both the founder/descendant and the CEO/non-executive dimensions. It is clearly appropriate to be cautious in considering the results of this regression, given that in many countries there is a small number of companies for each case. However, also in this regression, the results at the country level are in line with the evidence for the whole of Europe. The evidence of Tables V and VI showed that there is a large positive effect when the founder is present; and actually the coefficient on the founder-CEO dummy is positive in 7 countries out of 8 (not 11 because there is no founder CEO in Sweden, Denmark and Finland) and the coefficient on founder-non-executive is positive in 8 out of 10 (no founder non-executive in Denmark), both when Tobin's Q and when ROA are the independent variable. The evidence of Table VI then showed that descendant-non-executive firms exhibit better performance than non-family firms, while descendant-CEO firms do not, and actually, in 8 countries out of 11, the descendant-non-executive effect is positive for both market valuation and operating performance, while the descendant-CEO effect is positive in only 6 out of 10 countries (no descendant-CEO in Sweden) for market valuation, and in 5 out of 10 for operating performance. Finally, the evidence of Table VI showed that the case in which members of the family do not sit on the board is the relatively worse case for family firms, and this is confirmed clearly at least by market valuation.

## **V. Summary and conclusion**

In this paper we have highlighted the link existing in Continental Europe between corporate performance and ownership structure. European corporations exhibit concentrated ownership structures, a relevant degree of separation between control and cash-flow rights, and widespread diffusion of family control. Family control is clearly associated with the control-enhancing devices that allow separation between control and cash-flow rights.

However, regression analysis of the link between corporate valuation and ownership structure shows that, notwithstanding the negative effect of the more frequent recourse to control-enhancing devices, family control is positive for European corporations. It is highly positive at the founder stage – provided the founder still exerts an active role as CEO or non-executive director – much in the same way as it is in the U.S. The different result with respect to the U.S., is that the family effect continues to be positive at the descendants stage – when descendants limit themselves to non-executives roles – or at least non-negative – when descendants assume the role of CEO. Only when the family is not represented on the board do family-controlled firms seem to perform worse than non-family firms.

We confirm non-European results about the negative effect of control-enhancing devices. However, we show that although control-enhancing devices are associated throughout the world with family control, this does not *per se* permit the jump to the conclusion of a negative effect of the latter. Outside of the U.S., the U.K. and a few other countries, the majority of listed non-financial corporations are family-controlled, and it is important to reach conclusions about the desirability of this type of control. The Continental European evidence tells us that, notwithstanding the frequent preference of family corporations for apparently inefficient ownership structures, the general effect of family control may still be positive.

Finally, our findings suggest an empirical argument of caution – adding to several theoretically-founded points that have been deployed (Berglof and Burkart, 2002) – towards the usefulness of a regulation aiming to prohibit separation of control and cash-flow rights, of the kind that is currently being debated at the E.C. level. It is true that separation *per se* is associated with lower performance. However, separation may have in a number of cases a role in allowing control of subjects who are better able to manage or monitor corporations, whose beneficial skills may more than outweigh the costs of an inefficient ownership structure. Therefore, it is not clear that an abrupt dissolution of existing controlling equilibria would lead to a more efficient European corporate sector.

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## Appendix A : Data sources

For all countries: Worldscope and Extel (Thomson financial); Osiris (Bureau Van Dijck); corporations' websites; news searched on lexis-nexis and the world wide web (google search engine).

Belgium: Euronext ([www.euronext.com](http://www.euronext.com)); L'Echo ([www.lecho.be](http://www.lecho.be)).

Denmark: Copenhagen Stock Exchange ([www.cse.dk](http://www.cse.dk)).

France: AMF ([www.amf-france.org](http://www.amf-france.org)), Euronext ([www.euronext.com](http://www.euronext.com)).

Germany: Wer gehoert zu wem (Commerzbank), Onvista ([www.onvista.de](http://www.onvista.de)).

Italy: CONSOB ([www.consob.it](http://www.consob.it)), Il taccuino dell'azionista (Il Sole 24 Ore Libri)

The Netherlands: Euronext ([www.euronext.com](http://www.euronext.com)); Elsevier Ondernemings Rapport  
(available on Lexis-Nexis).

Spain: CNMV ([www.cnmv.es](http://www.cnmv.es)).

Switzerland: Bilanz on line ([www.aktienfuehrer.ch](http://www.aktienfuehrer.ch)); Guide des Actions suisses  
(Verlag Finanz und Wirtschaft).

For Finland, Norway and Sweden we do not rely on specific national data sources.

**Table 1**  
**The composition of the sample of publicly traded European corporations**

In the first three rows, we present the number of corporations in the sample across the different countries in each year. In the second part of the table we present the breakdown by industrial classification for the year 1999, based on Campbell (1996). Industries are defined as follows: Petroleum (SIC 13, 29), Consumer durables (SIC 25, 30, 36, 37, 50, 55, 57), Basic industry (SIC 10, 12, 14, 24, 26, 28, 33), Food and tobacco (SIC 1, 2, 9, 20, 21, 54), Construction (SIC 15, 16, 17, 32, 52), Capital goods (SIC 34, 35, 38), Transportation (SIC 40, 41, 42, 44, 45, 47), Unregulated utilities (SIC 46, 48), Textiles and trade (SIC 22, 23, 31, 51, 53, 56, 59), Services (SIC 72, 73, 75, 76, 80, 82, 87, 89), and Leisure (SIC 27, 58, 70, 78, 79). The sample excludes financial companies (SIC 60-69) and regulated utilities (SIC 49), however, we look at the financial statements of holding companies and investment companies. When they present consolidated financial statements that are typical of operating companies, we include them in the twelfth category Other, together with companies whose SICs are not assigned to any of the 11 Campbell industries.

	All count.	Belgium	Denmark	Finland	France	Germany	Italy	Nether.	Norway	Spain	Sweden	Switz.
All sectors (1999)	675	33	30	38	142	118	65	72	32	44	39	62
All sectors (2000)	644	30	28	38	137	116	61	66	30	42	35	61
All sectors (2001)	610	30	25	37	128	111	59	63	28	41	30	58
Petroleum	2.9%	0.0%	3.3%	2.6%	4.2%	1.7%	3.1%	1.4%	15.6%	4.5%	0.0%	0.0%
Consumer durables	12.2%	12.1%	10.0%	10.5%	16.0%	13.4%	16.9%	12.3%	6.3%	4.5%	18.4%	3.2%
Basic industry	14.3%	15.2%	3.3%	23.7%	12.5%	18.5%	6.2%	8.2%	12.5%	13.6%	26.3%	19.4%
Food and tobacco	8.0%	6.1%	13.3%	5.3%	9.0%	5.9%	4.6%	12.3%	9.4%	9.1%	0.0%	11.3%
Construction	10.8%	12.1%	13.3%	5.3%	7.6%	10.9%	15.4%	13.7%	3.1%	29.5%	5.3%	4.8%
Capital goods	11.5%	6.1%	10.0%	15.8%	4.9%	15.1%	9.2%	4.1%	9.4%	2.3%	26.3%	29.0%
Transportation	5.9%	0.0%	13.3%	7.9%	5.6%	3.4%	3.1%	6.8%	21.9%	4.5%	2.6%	6.5%
Unregulated utilities	5.3%	6.1%	6.7%	5.3%	4.2%	5.0%	3.1%	6.8%	6.3%	6.8%	7.9%	4.8%
Textiles and trade	10.9%	12.1%	6.7%	10.5%	13.9%	13.4%	13.8%	12.3%	0.0%	11.4%	0.0%	8.1%
Services	7.8%	12.1%	16.7%	5.3%	10.4%	6.7%	4.6%	6.8%	6.3%	9.1%	2.6%	6.5%
Leisure	4.4%	3.0%	0.0%	5.3%	4.9%	0.8%	10.8%	8.2%	3.1%	4.5%	2.6%	3.2%
Others	6.0%	15.2%	3.3%	2.6%	6.9%	5.0%	9.2%	6.8%	6.3%	0.0%	7.9%	3.2%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

**Table 2**  
**Descriptive data of the sample of publicly traded European corporations**

In this table we present the average and median values of some of the variables of main interest in 1999. Ultimate voting rights is the amount of ultimate voting rights held by the single largest (in term of direct voting rights) shareholder. Ultimate cash-flow rights is the amount of ultimate cash-flow rights held by the single largest (in term of direct voting rights) shareholder. Tobin's Q is the ratio between Book value of total assets - Book value of shareholders' equity + Market value of shareholders' equity, and Book value of total assets. ROA is the ratio Operating Profit/ Total Assets. We also present the breakdown of the companies in the sample according to the type of their control, across the different countries (see § I.B.i., for the definitions). Size (Total assets) is the amount (millions €) of balance-sheet Total assets, Size (Market value equity) is the stock market value (millions €) of all the shares outstanding of any category.

		All count.	Belgium	Denmark	Finland	France	Germany	Italy	Nether.	Norway	Spain	Sweden	Switz.
Ultimate voting rights	average	38.2	44.7	38.6	31.2	46.5	40.8	47.6	23.9	33.8	31.8	29.4	31.4
	median	37.0	40.1	32.9	30.2	49.0	39.5	51.6	14.2	36.0	30.4	24.7	28.3
Ultimate cash-flow rights	average	32.0	40.6	30.9	25.9	35.9	36.0	40.7	23.0	29.4	30.1	16.1	26.1
	median	28.5	34.9	28.0	22.0	33.8	32.0	45.4	14.2	28.1	28.4	11.3	20.2
Type of control (% of the total of each country)	family	52.6%	64.5%	43.3%	31.6%	63.2%	48.3%	76.9%	35.6%	53.1%	43.2%	47.4%	51.6%
	state	8.3%	3.2%	6.7%	23.7%	9.7%	5.9%	7.7%	4.1%	15.6%	4.5%	10.5%	6.5%
	financial inst.	15.1%	6.5%	20.0%	5.3%	11.1%	24.6%	7.7%	17.8%	6.3%	20.5%	23.7%	14.5%
	other entity	7.0%	12.9%	16.7%	13.2%	2.8%	8.5%	7.7%	2.7%	6.3%	6.8%	10.5%	4.8%
	widely held c.	17.0%	12.9%	13.3%	26.3%	13.2%	12.7%	0.0%	39.7%	18.8%	25.0%	7.9%	22.6%
Total		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tobin's Q	average	2.06	2.24	1.71	2.37	2.17	1.86	2.26	2.09	1.61	2.32	1.91	1.91
	median	1.39	1.42	1.21	1.27	1.43	1.30	1.30	1.55	1.24	1.40	1.59	1.59
ROA	average	6.8%	10.8%	5.9%	7.9%	6.6%	3.8%	6.3%	12.4%	3.2%	5.1%	7.3%	7.3%
	median	6.4%	5.1%	5.7%	7.0%	6.7%	3.9%	6.0%	10.0%	5.3%	6.0%	8.0%	8.0%
Size (Total assets)	average	5.421	1.824	1.309	2.744	6.924	7.890	7.304	3.697	1.967	5.010	4.384	4.833
	median	1.256	842	712	1.045	1.598	1.184	1.593	1.337	817	1.413	1.042	1.179
Size (Market value equity)	average	5.168	1.375	1.369	8.578	6.787	5.825	5.442	4.051	1.113	3.955	5.863	5.794
	median	767	703	393	780	970	587	792	745	440	938	931	935
Growth	average	14.9%	17.2%	23.4%	13.3%	14.1%	12.6%	14.2%	21.3%	19.0%	27.0%	6.3%	9.2%
	median	10.2%	11.2%	10.0%	5.5%	10.6%	8.1%	8.4%	12.7%	15.6%	16.5%	5.9%	8.5%
Leverage	average	120	132	85	76	116	168	119	123	133	98	93	98
	median	96	84	78	71	89	142	80	94	120	76	75	81

**Table 3**  
**Descriptive statistics of the 675 corporations, by the type of their largest shareholder and by different types of family control**

In panel A corporations are grouped according to the following classification. We consider a corporation to be Widely-held when it has no controlling shareholder with 10% ultimate voting rights or more, or is controlled by a widely held non-financial corporation. We consider a corporation to fall into the groups Family, State, Financial, Others when a corporation is controlled at the 10% level by (respectively) a family, the State, a widely-held financial institution or another entity. In panels B and C we present descriptive statistics of the 314 family-controlled corporations in our sample, grouped by the degree of involvement of the family in the corporation. In panel B we include in the CEO group corporations in which the CEO is a member of the family. In the Non-executive group we include corporations in which the CEO does not belong to the controlling family, but at least one member of the family serves as non-executive director (non-executive chairman included). In the None group we include corporations in which no member of the controlling family sits on the board. In Panel C we analyze 285 of the 314 corporations partitioned in two groups. In the group founder we include corporations whose founder is still alive. Founder CEO is when the founder serves as CEO. Founder non-executive is when the founder serves as non-executive director. Other member CEO is when the founder serves as non-executive director, and another member of the family is CEO (these corporations are also included in the previous group). No member director is when no member of the family sits on the board. In the columns Tobin's Q, ROA, Size, Ultimate CF and Wedge, the averages of these variables in each class are presented. In the column No separation the percentage of corporations with no difference in the voting and cash-flow rights of the largest shareholder. In the column Dual classes, the percentage of corporations with dual classes of shares, not controlled through a pyramid. In the column Pyramid, the percentage of corporations with a one share-one vote structure, controlled through a pyramidal scheme. In the column Both we include companies that have a dual class structure and are controlled through a pyramid.

**Panel A: Type of the largest shareholder**

	number	%	Tobin's Q	ROA	Size	Ultimate CF	Wedge	No separation	Dual classes	Pyramids	Both	Total
Widely held	115	17%	2.31	6.8%	6.492	18.3	0.5	90.4%	8.7%	0.9%	0.0%	100.0%
Family	355	53%	2.05	7.3%	2.892	35.6	10.4	43.1%	30.7%	14.6%	11.5%	100.0%
State	56	8%	2.29	5.5%	9.339	36.6	5.1	64.3%	10.7%	19.6%	5.4%	100.0%
Financial	102	15%	1.61	5.4%	5.346	17.3	2.4	70.6%	6.9%	17.6%	4.9%	100.0%
Other	47	7%	2.42	7.1%	4.779	32.7	7.0	55.3%	25.5%	12.8%	6.4%	100.0%
<b>Total</b>	<b>675</b>	<b>100%</b>	<b>2.06</b>	<b>6.8%</b>	<b>4.521</b>	<b>29.7</b>	<b>6.8</b>	<b>58.0%</b>	<b>21.3%</b>	<b>13.0%</b>	<b>7.7%</b>	<b>100.0%</b>

**Panel B: Family participation in the board of directors. all family controlled corporations (n = 314)**

	number	%	Tobin's Q	ROA	Size	Ultimate CF	Wedge	No separation	Dual classes	Pyramids	Both	Total
CEO	109	35%	2.03	8.5%	2.151.414	44.4	8.6	43.5%	42.6%	8.3%	5.6%	100.0%
Non-executive	157	50%	2.06	6.9%	3.538.610	36.6	12.0	42.9%	30.1%	12.8%	14.1%	100.0%
None	48	15%	1.92	8.2%	2.943.845	28.6	12.2	41.7%	12.5%	27.1%	18.8%	100.0%

**Panel C: Family participation in the board of directors. founder controlled corporations (n = 92) and descendants controlled corporations (n = 203)**

**1) Founders**

	Number	%	Tobin's Q	ROA	Size	Ultimate CF	Wedge	No separation	Dual classes	Pyramids	Both	Total
Founder CEO	46	50%	2.46	7.3%	2.306.316	47.6	6.7	52.2%	39.1%	4.3%	4.3%	100.0%
Founder non-executive	26	28%	2.59	7.8%	3.866.803	39.7	8.2	53.8%	30.8%	11.5%	3.8%	100.0%
- and other member CEO	10	11%	2.92	11.5%	856.914	47.5	3.0	70.0%	30.0%	0.0%	0.0%	100.0%
No member director	10	11%	2.23	13.4%	2.175.716	43.6	7.8	50.0%	20.0%	20.0%	10.0%	100.0%
Total / Average	92	100%	2.49	9.8%	2.574.466	44.5	7.3	52.4%	34.1%	8.5%	4.9%	100.0%

**2) Descendants**

	Number	%	Tobin's Q	ROA	Size	Ultimate CF	Wedge	No separation	Dual classes	Pyramids	Both	Total
Descendant CEO	55	27%	1.76	6.8%	2.159.270	42.9	10.5	34.5%	47.3%	10.9%	7.3%	100.0%
Descendant non-executive	111	55%	1.96	6.8%	3.926.657	35.1	14.3	36.9%	30.6%	13.5%	18.9%	100.0%
None	37	18%	1.81	4.4%	3.219.571	24.0	13.7	37.8%	10.8%	29.7%	21.6%	100.0%
Total / Average	203	100%	1.88	6.5%	3.318.930	35.2	13.2	36.5%	31.5%	15.8%	16.3%	100.0%

**Table 4****The results of regressions of firm valuation and performance on ownership concentration and family control**

In this table we report the results of OLS regressions, with dependent variables Tobin's Q and ROA, for the years 1999-2001. Family is a dummy variable taking value 1 for family-controlled corporations. Cash-flow rights is the share of cash-flow rights held by the largest shareholder. Wedge is the difference between the share of voting and cash-flow rights held by the largest shareholder. Ln (Size) is the natural logarithm of Total Assets. Leverage is the book value of total financial debt divided by the book value of equity. Sales growth is the growth of sales in the previous year. We include among the regressors the fixed effects for SIC two digits, years, and countries. T-statistics from heteroskedasticity consistent (Huber/White) standard errors appear in parentheses.

Dependent variable				
Regression specification	1	2	3	4
Family	0.0481 (2.16)	0.0849 (2.68)	0.0099 (2.66)	0.0113 (2.43)
Cash-flow rights		-0.0003 (-0.41)		0.0001 (1.21)
Wedge		-0.0039 (-2.74)		-0.0003 (-1.47)
Ln (Size)	0.0174 (1.08)	0.0199 (1.36)	0.0035 (2.39)	0.0042 (2.43)
Leverage	-0.0002 (-2.11)	-0.0003 (-2.39)	-0.0001 (-4.12)	-0.0001 (-4.47)
Sales growth	0.1729 (4.37)	0.1698 (4.22)	0.0180 (2.16)	0.0178 (2.14)
R-squared adj	32.46%	33.09%	20.03%	20.40%
N. Observations	1852	1852	1852	1852

**Table 5****The relationship between firm value and performance, and family involvement in management**

In this table we report results of OLS regressions of Tobin's Q and ROA on proxy variables for the involvement of the family in managing the corporations. In regressions in columns 1 and 3, we include among regressors Cash-flow rights (share of cash-flow rights held by the largest shareholder) and Wedge (difference between the share of voting and cash-flow rights held by the largest shareholder). In panel A Family CEO takes value 1 for corporations in which the CEO is a member of the controlling family. Family non-executive takes value 1 for corporations where the CEO is not a member of the family, but at least one member sits on the board as non-executive director. Family not on the board takes value 1 when no member of the family sits on the board. In panel B Founder takes value 1 when the founder is still alive, Descendants takes value 1 in all other family-controlled corporations. In all regressions we include as control variables (but do not report the results in the table): Ln (Size) (natural logarithm of Total Assets), Leverage (book value of Debt divided by the book value of Total assets), and Sales growth (growth of sales in the previous year). We then include the fixed effects for SIC two-digits, years and country. T-statistics from heteroskedasticity consistent (Huber/White) standard errors are in parentheses.

<b>Panel A: Family CEO vs. family non-CEO</b>				
Dependent variable	Ln (Tobin's Q)		ROA	
Family CEO	0.0806 (1.72)	0.0532 (1.34)	0.0095 (1.59)	0.0091 (1.78)
Family non-executive	0.1007 (2.78)	0.0603 (2.29)	0.0172 (3.41)	0.0154 (3.95)
Family not on the board	0.0416 (0.89)	0.0026 (0.07)	-0.0051 (-0.63)	-0.0075 (-1.05)
Cash-flow rights	-0.0004 (-0.48)		0.0001 (1.05)	
Wedge	-0.0039 (-2.53)		-0.0003 (-1.29)	
Ln (Size)	0.0202 1.3631	0.0182 1.1250	0.0043 2.4822	0.0038 2.4789
Leverage	-0.0003 -2.4601	-0.0003 -2.2302	-0.0001 -4.3544	-0.0001 -4.0475
Sales growth	0.1683 4.2147	0.1708 4.3079	0.0173 2.1128	0.0174 2.1368
R-squared adj	33.15%	32.54%	20.96%	20.63%
N. Observations	1852	1852	1852	1852



**Panel B: Founder vs. descendants**

Dependent variable	Ln (Tobin's Q)		ROA	
Founder	0.1405 (4.33)	0.1164 (4.02)	0.0194 (5.13)	0.0192 (4.54)
Descendants	0.0657 (1.55)	0.0239 (0.75)	0.0104 (1.55)	0.0082 (1.49)
Cash-flow rights	-0.0004 (-0.52)		0.0001 (0.91)	
Wedge	-0.0037 (-2.33)		-0.0003 (-1.41)	
Ln (Size)	0.0211 1.4801	0.0197 1.2668	0.0043 2.3146	0.0038 2.2943
Leverage	-0.0003 -2.4700	-0.0003 -2.2932	-0.0001 -4.5238	-0.0001 -4.2802
Sales growth	0.1672 4.1466	0.1689 4.2671	0.0176 2.1670	0.0177 2.1829
R-squared adj.	33.34%	32.84%	20.74%	20.43%
N. Observations	1852	1852	1852	1852

**Table 6**  
**The relationship between firm value and performance, and the involvement in management of founders and descendants**

In this table we report results of OLS regressions of Tobin's Q and ROA on proxy variables for the involvement of founders and descendants in managing the corporations. In regressions in columns 1 and 3, we include among regressors Cash-flow rights (share of cash-flow rights held by the largest shareholder) and Wedge (difference between the share of voting and cash-flow rights held by the largest shareholder). Founder CEO represents when the founder is CEO, Founder non-executive when the founder sits on the board as non-executive director, Founder not on the board when the founder is still alive but no member of the family sits on the board. Descendants CEO, Descendant non-executive, Descendant not on the board represent the equivalent situations for family controlled corporations in which the founder passed away. In all regressions we include as control variables (but do not report the results in the table): Ln (Size) (natural logarithm of Total Assets), Leverage (book value of Debt divided by the book value of Total assets), and Sales growth (growth of sales in the previous year). We then include the fixed effects for SIC two-digits, years and country. T-statistics from heteroskedasticity consistent (Huber/White) standard errors appear in parentheses.

Dependent variable	Ln (Tobin's Q)		ROA	
Founder CEO	0.1338 (3.67)	0.1184 (2.79)	0.0137 (2.52)	0.0140 (2.14)
Founder non-executive	0.1813 (3.27)	0.1597 (2.92)	0.0255 (4.84)	0.0250 (4.38)
Founder not on the board	-0.0197 (-0.23)	-0.0569 (-0.87)	0.0150 (0.89)	0.0129 (0.91)
Descendant CEO	0.0453 (0.59)	0.0143 (0.22)	0.0110 (1.19)	0.0097 (1.21)
Descendant non-executive	0.0808 (2.22)	0.0392 (1.39)	0.0149 (2.31)	0.0122 (2.43)
Descendants not on the board	0.0285 (0.56)	-0.0089 (-0.18)	-0.0033 (-0.35)	-0.0063 (-0.73)
Cash-flow rights	-0.0003 (-0.45)		0.0001 (0.74)	
Wedge	-0.0035 (-2.16)		-0.0003 (-1.27)	
Ln (Size)	(0.02) (1.40)	(0.02) (1.21)	(0.00) (2.40)	(0.00) (2.46)
Leverage	(-0.00) (-2.63)	(-0.00) (-2.48)	(-0.00) (-4.44)	(-0.00) (-4.25)
Sales growth	(0.16) (4.00)	(0.16) (4.08)	(0.02) (2.22)	(0.02) (2.23)
R-squared adj	33.57%	33.10%	21.02%	20.72%

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N. Observations	1852	1852		1852	1852
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**Table 7**  
**Companies included and excluded from the sample according to our selection criteria**

In this table we present the breakdown of the companies included and excluded from the sample of 675, starting from the total of 2631 non-financial and non-regulated companies available in Worldscope in 1999.

	Included	Excluded because one class of shares not listed or limited partnership	Excluded because largest shareholder holds > 95% of share capital	Excluded total assets less than € 300 mil. and more than € 100 mil.	Excluded . total assets less than € 100 mil.	Excluded for other reasons	Total
<b>All countries</b>	<b>675</b>	<b>82</b>	<b>92</b>	<b>566</b>	<b>1212</b>	<b>4</b>	<b>2631</b>
Belgium	33	-	-	24	45	1	103
Denmark	30	14	-	28	67	-	139
Finland	38	4	-	18	62	-	122
France	142	6	23	117	382	-	670
Germany	118	10	38	137	288	1	592
Italy	65	1	9	46	28	1	150
Netherlands	72	-	8	31	75	1	187
Norway	32	8	-	39	64	-	143
Spain	44	-	14	35	25	-	118
Sweden	39	26	-	42	133	-	240
Switzerland	62	13	-	49	43	-	167

**Table 8**  
**Average ROA and Tobin's Q for different size classes**

In this table we present the mean and the median ROA and Tobin's Q for Continental European non-financial and non-regulated corporations in the Worldscope database in 1999. Corporations are divided into three classes. In the first we include corporations with a book value of balance sheet Total Assets larger than € 300 millions. This size class corresponds to the size class of companies examined in the paper. The other two classes correspond to smaller corporations, that are excluded from the sample we study.

Sample	number	%	Tobin's Q		ROA	
			Mean	Median	Mean	Median
Total Assets value < 100	1212	46%	2.69	1.73	4.82%	6.06%
Total Assets value (100 - 300)	566	22%	2.05	1.42	7.42%	7.24%
Total Assets value > 300	853	32%	1.99	1.38	6.22%	5.99%

**Table 9**  
**The results of pooled time-series average regressions**

This table gives the estimated coefficients from regressing Tobin's Q and ROA on ownership and various control variables using a pooled (mean) regression. For each dependent variable and specification we present the results of two different regression methods. In Panel A, results for OLS with random-effects (country level) specification are reported. In Panel B, results for robust regressions (Biweight procedure) are reported. In regressions in columns 1, 2, 5 and 6, we include as regressors the same variables we employ in the regressions in Table V. In regressions in columns 3, 4, 7 and 8 we include the same variables of the regressions in Table VII, the only difference being that in random-effects regressions country fixed-effects are not included. In Robust regressions we include also country fixed-effects, and observations are not winsorized. T-statistics are in parentheses. In all regressions we include as control variables (but do not report the results in the table): Ln (Size) (natural logarithm of Total Assets), Leverage (book value of Debt divided by the book value of Total assets), and Sales growth (growth of sales in the previous year).

**Panel A : Random-effects regressions**

Dependent variable Regression specification	Ln (Tobin's Q)				ROA			
	1	2	3	4	5	6	7	8
Family	0.0723 (1.98)	0.0458 (1.51)			0.0111 (1.88)	0.0070 (1.42)		
Founder CEO			0.1057 (1.65)	0.0914 (1.50)			0.0113 (1.09)	0.0102 (1.02)
Founder non-executive			0.2193 (3.16)	0.2045 (3.05)			0.0375 (3.35)	0.0358 (3.28)
Founder not on the board			-0.0387 (-0.30)	-0.0615 (-0.49)			0.0183 (0.89)	0.0143 (0.70)
Descendant CEO			0.0307 (0.52)	0.0072 (0.13)			0.0049 (0.51)	0.0016 (0.18)
Descendant non-executive			0.0760 (1.65)	0.0446 (1.10)			0.0130 (1.74)	0.0073 (1.11)
Descendants not on the board			0.0005 (0.01)	-0.0274 (-0.44)			-0.0008 (-0.07)	-0.0064 (-0.63)
Cash-flow rights	-0.0001 (-0.07)		-0.0002 (-0.23)		0.0001 (0.41)		0.0000 (0.18)	
Wedge	-0.0029 (-1.90)		-0.0026 (-1.70)		-0.0006 (-2.26)		-0.0006 (-2.18)	
R-squared adj	35.93%	35.51%	36.84%	36.53%	20.11%	19.23%	21.32%	20.63%
N. Observations	663	663	663	663	663	663	663	663

**Panel B : Robust regressions**

Dependent variable Regression specification	Ln (Tobin's Q)				ROA			
	1	2	3	4	5	6	7	8
Family	0.0980 (3.36)	0.0429 (1.86)			0.0119 (2.39)	0.0126 (2.93)		
Founder CEO			0.1491 (2.86)	0.1379 (2.72)			0.0113 (1.24)	0.0152 (1.71)
Founder non-executive			0.2505 (4.64)	0.2191 (4.15)			0.0329 (3.44)	0.0354 (3.78)
Founder not on the board			-0.0107 (-0.11)	-0.0583 (-0.61)			0.0143 (0.83)	0.0147 (0.86)
Descendant CEO			0.0692 (1.47)	0.0276 (0.62)			0.0074 (0.90)	0.0086 (1.10)
Descendant non-executive			0.0667 (1.80)	0.0118 (0.36)			0.0130 (2.06)	0.0128 (2.28)
Descendants not on the board			0.0458 (0.90)	-0.0039 (-0.08)			-0.0003 (-0.03)	-0.0039 (-0.45)
Cash-flow rights	-0.0003 (-0.49)		-0.0002 (-0.35)		0.0003 (2.39)		0.0002 (2.07)	
Wedge	-0.0052 (-4.04)		-0.0044 (-3.43)		-0.0003 (-1.49)		-0.0003 (-1.42)	
R-squared adj.	45.46%	45.58%	46.17%	46.15%	29.81%	27.46%	28.77%	27.46%
N. Observations	663	663	663	663	663	663	663	663

**Table 10**  
**Instrumental variable results**

In this table we report the results of instrumental variable LIML (limited-information maximum likelihood) regressions (with Fuller's modification), with dependent variables Tobin's Q and ROA, for the years 1999-2001. All independent variable(s) reported, in each regression, are considered endogenous. Instrumental variables are the following: Alpha and variance of the ordinary share (alpha is estimated by regressing 40 months of returns in excess on treasury bills on the excess returns of an index representative of the country stock market; variance is estimated over 40 months prior to the date of performance valuation), and the age of the corporation (log of). Cash-flow rights is the share of cash-flow rights held by the largest shareholder. Wedge is the difference between the share of voting and cash-flow rights held by the largest shareholder. Family is a dummy variable taking value 1 for family-controlled corporations. Founder CEO represents when the founder is CEO, Founder non-executive when the founder sits on the board as non-executive director, Founder not on the board when the founder is still alive but no member of the family sits on the board. Descendants CEO, Descendant non-executive, Descendant not on the board represent equivalent situations for family controlled corporations in which the founders passed away. In all regressions we include as control variables (but do not report the results in the table): Ln (Size) (natural logarithm of Total Assets), Leverage (book value of Debt divided by the book value of Total assets), and Sales growth (growth of sales in the previous year). We then include the fixed effects for SIC two-digits, years and country.  $k$  is the stochastic parameter used to estimate the first stage predicted values of endogenous variable(s). T-values are in parentheses.

Regression specification	Ln(Tobin's Q)				ROA			
	1	2	3	4	1	2	3	4
Cash-flow rights	0.0008 (1.12)		-0.0001 (-0.13)	-0.0004 (-0.52)	0.0003 (2.33)		0.0002 (1.60)	0.0002 (1.22)
Wedge	-0.0014 (-1.00)		-0.0034 (-2.11)	-0.0026 (-1.79)	-0.0003 (-1.21)		-0.0005 (-1.61)	-0.0006 (-2.05)
Family		0.0767 (2.27)	0.0964 (2.62)			0.0081 (1.27)	0.0078 (1.15)	
Founder CEO				0.1704 (3.04)				0.0082 (0.77)
Founder non-executive				0.2108 (3.46)				0.0164 (1.42)
Founder not on the board				0.0392 (0.36)				0.0150 (0.73)
Descendant CEO				0.0465 (0.88)				0.0100 (1.00)
Descendant non-executive				0.0726 (1.74)				0.0183 (2.37)
Descendants not on the board				-0.0380 (-0.63)				-0.0023 (-0.20)
$k$	76.25%	80.28%	75.88%	68.53%	74.91%	80.53%	74.58%	68.70%

R-squared adj.	29.88%	29.91%	30.08%	30.48%	17.54%	17.17%	17.56%	17.62%
N. Observations	1804	1804	1804	1804	1804	1804	1804	1804

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**Table 11**

**The relation between family control and valuation and operating performance by country**

In this table we report the signs of the estimated coefficients for family dummy variables in regressions where Tobin's Q (Panel A) or ROA (Panel B) is the dependent variable, and the independent variables are ownership variables and the various control variables. The regression specifications are the same reported in Tables V (for "Family") and VII (for "Founder CEO", "Founder non-executive", "Descendant CEO" and "Descendant non-executive"), except that we substitute the family dummies we use in Tables V and VII with eleven family dummies, one for each country, for which we report results. The regression specification includes in the independent variables (results not reported) cash-flow, wedge, size, leverage, sales growth, fixed effects for SIC two-digits, years and country. T-statistics from heteroskedasticity consistent (Huber/White) standard errors appear in parentheses as follows ; (\*\*\*) significant 1%, (\*\*) significant 5% , (\*) significant 10%. In the row "% of family CEOs" we show for each country the percentage of family firms in which the CEO is a member of the family. In all regressions we include as control variables (but do not report the results in the table): Ln (Size) (natural logarithm of Total Assets), Leverage (book value of Debt divided by the book value of Total assets), and Sales growth (growth of sales in the previous year).

**Panel A: Dependent variable Tobin's Q**

	n.countries		Belg.	Fra.	Ita.	Neth.	Spain	Germ.	Switz.	Den.	Fin.	Norw.	Swe.	Total
	positive	Negative												
Family n. obs. dummy = 1	8	3	+ (***) 20	+ 84	- 47	+ (***) 20	+ (***) 13	+ (**) 49	+ (***) 29	- 12	+ (***) 11	- 14	+ (**) 16	315
Founder CEO n. obs. dummy = 1	7	1	+ (***) 2	+ 20	+ 10	+ 1	- (***) 1	+ (***) 9	+ (***) 2	n.a. 0	n.a. 0	+ (***) 1	n.a. 0	46
Founder non-executive n. obs. dummy = 1	8	2	+ (**) 3	+ 9	+ (***) 6	+ (***) 4	+ 3	- (***) 2	+ (***) 6	n.a. 0	- 1	+ 1	+ (***) 1	36
Founder not on the board n. obs. dummy = 1	2	4	+ (***) 1	+ (***) 2	n.a. 0	- 3	- 1	- (*) 2	n.a. 0	n.a. 0	n.a. 0	- (***) 1	n.a. 0	10
Descendant CEO n. obs. dummy = 1	6	4	+ 2	+ (*) 18	- (***) 17	+ (***) 3	+ (***) 4	- (*) 4	+ 3	- 1	+ (***) 1	- (***) 2	n.a. 0	55
Desc. non-executive n. obs. Dummy = 1	8	3	+ (***) 9	+ 25	- 12	+ (***) 6	+ (***) 2	+ 17	+ 13	- 6	+ (***) 5	+ (***) 7	+ (***) 9	111
Desc. not on the board n. obs. Dummy = 1	4	6	- 1	- (**) 5	- (***) 1	+ (***) 2	+ (*) 2	+ 11	+ (***) 5	- (**) 2	- (**) 3	n.a. 0	- (***) 5	37
% of family CEOs			20%	45%	57%	20%	38%	27%	17%	8%	9%	21%	0%	

**Panel B: Dependent variable ROA**

	n.countries		Belg.	Fra.	Ita.	Neth.	Spain	Germ.	Switz.	Den.	Fin.	Norw.	Swe.	Total
	positive	Negative												
Family n. obs. dummy = 1	8	3	+ (***) 20	+ (***) 84	- (***) 47	+ (***) 20	+ (***) 13	+ (***) 49	- 29	- (***) 12	+ 11	+ 14	+ (***) 16	315
Founder CEO n. obs. dummy = 1	7	1	+ (***) 2	+ (***) 20	- 10	+ (***) 1	+ 1	+ (***) 9	+ (***) 2	n.a. 0	n.a. 0	+ (***) 1	n.a. 0	46
Founder non-executive n. obs. dummy = 1	8	2	+ (***) 3	+ (***) 9	+ (***) 6	- 4	+ (***) 3	- (***) 2	+ (***) 6	n.a. 0	+ (***) 1	+ (***) 1	+ (***) 1	36
Founder not on the board n. obs. dummy = 1	4	2	- 1	+ (***) 2	n.a. 0	+ (***) 3	+ (*) 1	+ 2	n.a. 0	n.a. 0	n.a. 0	- (***) 1	n.a. 0	10
Descendant CEO n. obs. dummy = 1	5	5	+ (***) 2	+ (***) 18	- (***) 17	+ (***) 3	- 4	+ (***) 4	- 3	- (***) 1	+ 1	- (***) 2	n.a. 0	55
Desc. non-executive n. obs. Dummy = 1	8	3	+ (***) 9	+ (***) 25	- (***) 12	+ (***) 6	+ (***) 2	+ 17	+ 13	- (***) 6	- 5	+ (*) 7	+ 9	111
Desc. not on the board n. obs. Dummy = 1	5	4	+ 1	+ 5	- (***) 1	+ (***) 2	+ (***) 2	+ (***) 11	- (***) 5	- (***) 2	- (***) 3	n.a. 0	+ (***) 5	37