

# **Corporate Governance and Performance in Publicly-Listed Family-Controlled Firms: Empirical Study of the Italian Corporate Sector ♣**

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## **Abstract**

This paper provides an analysis of the governance-performance relations in publicly listed, family controlled firms. After controlling for potential endogeneity problems, the results show that family firms perform better than nonfamily firms. Active family involvement in management positions indicates high firm performance, but the results also support evidence that board dominance is another channel through which families can extract private benefits. Although, outside of increased efficiency, such control does not indicate an increase in valuation levels, and thus might not accrue to minority shareholders. Moreover, the results also show an alignment incentive between a coalition of large shareholders and firm value. Thus, the type of block-holder affects the incentive to collude or to monitor controlling shareholders.

**Keywords:** ownership structure, performance, corporate governance, family firms

**JEL Codes:** G3, G32, G34

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## 1. Introduction

La Porta, Lopez-De-Silanes, and Shleifer (1999) suggest that Berle and Means' (1932) model of widely dispersed corporate ownership is not common, even in developed countries. Large shareholders such as family are common in publicly traded firms around the world. Anderson and Reeb (2003) show that one-third of S&P 500 firms are family controlled. In Western Europe, the majority of publicly held firms remain family-controlled (Faccio and Lang 2002). Claessens, Djankov, and Lang (2000) provide similar evidence for East Asia and Silva and Majluf (2008) for emerging countries. These controlling families often hold large equity stakes and frequently have executive representation (Burkart, Panunzi, and Shleifer 2003).

The concentration of ownership and management in the hands of a family has shifted the focus from the traditional conflict of interest between managers and dispersed shareholders (Berle and Means 1932) towards an equally important agency conflict between large controlling shareholders and minority shareholders. A number of studies suggest that ownership concentration creates a trade-off between the incentive for alignment and entrenchment effects (e.g., Shleifer and Vishny, 1997). But the idea that large concentrated shareholders are inherently less efficient is not a universal view. Combining ownership and control can be advantageous, as large shareholders can act to mitigate managerial expropriation (Holan and Sanz, 2006). Shareholders with relatively long investment horizons can mitigate the incentives for myopic investment decisions by managers, and lead to greater investment efficiency (James 1999).

Empirical evidence reinforces the idea that family firms perform as well as, if not better than, nonfamily firms (e.g., Anderson and Reeb 2003; Maury 2006). Thus, the conflicts of interest between minority shareholders and the controlling family arise when family control is greatest. In this situation, families seek to entrench themselves and extract private benefits from the firm (e.g., La Porta, Lopez-De-Silanes, Shleifer and Vishny 2000). The lack of strong external monitors and disciplining agents potentially permits them to pursue this path. Thus, monitoring activity seems to be critical in family firms. The study here analyses the governance roles of various blockholders and corporate boards on firm performance in the context of family firms. The objective is to provide an analysis of governance-performance relations using a multi-industry data set of 208 firms listed on the Milan Stock Exchange (MSE).

This study focuses on Italian firms because these firms show a higher discrepancy between ownership and control (Faccio and Lang 2002); a situation which potentially aggravates problems associated with a combination of principal-agent and principal-principal relations. In this environment, complementarities between ownership and board-related governance factors might be particularly important. The Italian corporate sector also represents an important laboratory that provides an opportunity to further develop previous research and to make a number of contributions. First is the contribution of analysing corporate governance effects on performance in situations where the managers are frequently family members, where families are also represented on the firm's board, and where they are often the major providers of capital, if not directly, then through relational holdings in other firms.

Second, previous studies on family firms document a nonmonotonic relation between family control and firm performance (e.g., Anderson and Reeb 2003), consequently, these results suggest that family opportunism might increase at high control levels (e.g., Silva and Majluf, 2008). So a closer analysis between the connection of family control and different types of monitoring, including independent boards members and financial institutions, is an important research issue. Third, while previous research focuses on separate organizational outcomes of family/insider owners, outside blockholder, and board characteristics, this study provides an integrated framework that brings together the analysis of the simultaneous performance effects of various insiders and outside investors, as well as their participation on corporate boards. Therefore, this paper also contributes to previous studies by showing that one governance channel may be complementary to another.

This paper proceeds as follows. Section two briefly reviews the relevant literature and discusses the expectations of the effect of family ownership, multiple block-holders, and the governance of boards on firm performance. Section three, describes the data set and variables, and provides a summary of the statistics. Section four presents and discusses the empirical results. Section five concludes the paper.

## **2. Theoretical background**

### **2.1 Family Ownership and Firm Performance**

Some studies express concerns about the problems associating with family control and the increasing likelihood of the abuse of managerial power. Morck, Shleifer, and Vishny (1988) and Smith and Amoako-Adu (1999) provide evidence of the negative effect of a controlling family on corporate performance. In addition, strategy

research identifies family firms to be altruistic in the relationship between parents and children (Schulze, Lubatkin, Dini, and Buchholtz 2001), which might have an impact on the effective succession process when the founder retires. Moreover, family interest might dominate over the interests of nonfamily shareholders because the concentration of personal and family wealth in owner-managed firms normally creates a preference for income and for wealth preservation over other dimensions of firm performance such as the maximization of dividend payments to outside shareholders (DeAngelo and DeAngelo 2000). Additionally, family control tends to shield a firm from the disciplinary pressure of the market on corporate control because concentrated ownership reduces the probability of a hostile take-over (Gomes-Mejia, Nunez-Nickel and Guttierrez 2001).

Although, whether families or professional managers run companies better for society in general is still open to debate. The current prolonged recession, corporate scandals, and the collapse of stock markets have resulted in a return to the kind of values prevalent in family-owned companies. Family businesses that survived their own internal succession dramas have tended to take a long-term view rather than live and die by stock market evaluation of their performance (Casson 1999). Because of the extension of altruism from the family system to the firm, owners in the current generation have the tendency and obligation to protect wealth for the next generation (Lubatkin, Durand and Lin, 2007). As a result, family firms often possess longer horizons compared to nonfamily firms (James 1999).

Therefore, family firms represent a special class of large shareholders that have a unique incentive structure, a strong voice in the firm, and powerful motivation for managers (Demsetz and Lehn, 1985). Such characteristics can alleviate agency conflicts between the firms' debt and equity claimants and reduce the agency costs of debt (Anderson, Mansi, and Reeb 2003). Because the family's wealth links so closely to firm welfare, families may have strong incentives to monitor managers and minimize the free-riding problem inherent with diffused shareholders (Demsetz and Lehn 1985). If monitoring requires knowledge and information about firm technology and processes, families potentially provide superior oversight because of their length of involvement with the firm (Burkart et al. 2003; Chrisman, Sharma and Taggar, 2007).

Family ownership may lead to better monitoring of managerial discretion and reduce principal-agent costs associated with diffused share ownership. As a result, family presence in the firm can provide a competitive advantage and improve short- and

long-term performance. *H<sub>1</sub>: Family ownership and control have a positive association with firm performance.*

## **2.2 Multiple Block-holders and Firm Performance**

All things equal, family control over the firm might have an association with superior oversight and with strong incentives to monitor managers. This association should mitigate principal-agent cost. But families can still seek to maximize firm performance yet create severe conflicts over the distribution of wealth among different groups of shareholders.

The concentration of ownership and management in the hands of a family gives a lot of power to that family and it enables them to take actions that are beneficial to the family and are detrimental to the minority owners (e.g., family paying themselves excessive compensation, consuming perquisites, pursuing non-profit objectives). As a result, the primary agency problem in this environment is not the failure of professional managers to satisfy the objectives of diffused shareholders, but rather the expropriation of minority shareholders by family interests; what Villalonga and Amit (2006) call a “principal-principal” or horizontal agency relation. In this context, family firms pose special concerns to outside (or minority) investors and represent challenges to good corporate governance (e.g., Holan and Sanz, 2006). The potential for a moral hazard conflict between the family and outside shareholders creates a new set of agency costs, including mutual monitoring and opportunity costs that might have an adverse effect on firm performance (e.g., La Porta et al. 2000). Therefore, divestments through sales of large blocks of shares to institutional investors can be a viable alternative to ownership dispersion from the minority shareholders point of view (Shleifer and Vishny 1986).

Institutional investors (mutual funds, pension funds, insurance funds) have both the incentives and the means to restrain the self-serving behaviour of managers (Maug 1998). For example, large shareholders might not allow a poor strategy such as diversification to evolve into poor performance, therefore decreasing the magnitude of restructuring; when managers have an opportunity to conduct a self-serving deal that damages shareholders, the decision to sell a block of shares to non-management investor’s increases shareholder wealth. Building on this research, this study states that:

***H<sub>2</sub>: The presence of institutional investors has a positive impact on firm performance.***

As suggested by Maury and Pajuste (2005) when families are in exceptional control positions, the presence of large shareholders can mitigate the potential for a moral hazard conflict between the family and outside shareholders. Outside the United

States, the presence of several large shareholders with substantial blocks of shares is common (Barca and Bech, 2001). For European companies, Faccio and Lang (2002) show that 39% of firms have at least two block-holders that hold at least 10% of the voting rights and 16% of the firm have at least three block-holders. Therefore, the study here uses the terms large shareholders and block-holders are synonyms.

The theoretical literature provides models in which multiple block-holders compete for control (Bloch and Hege 2001), monitor the controlling shareholders (Winton 1993; Silva and Majluf, 2008), and form controlling coalitions to share private benefits (Zwiebel 1995; Pagano and Roell 1998). So, multiple block-holders can have two different roles in firms. On the one hand, by holding a substantial block of shares, a block-holder has the power and the incentive to monitor the largest shareholder and therefore the ability to reduce profit diversion. On the other hand, the block-holder can form a controlling coalition with other block-holders and share the diverted profits.

According the Maury and Pajuste's (2005) model, the type of block-holder affects the incentives to collude with or to monitor the controlling shareholder. They demonstrate that the propensity to extract benefits at the expenses of minority shareholders is likely to be lower if the controlling coalition includes a financial institution. Since the opportunity cost of getting caught for diverting the firm's proceeds is higher for financial institutions that are supervised by regulatory authorities, so diversion is less likely to be an attraction.

On these views, this study maintains that multiple block-holders have the ability to restrain management, and consequently to prevent a controlling family from diverting profits. Therefore, the more shares a block-holder owns the greater is its motivation to monitor the firm.

*H<sub>3</sub>: A positive relation exists between a more equal distribution of share ownership among the three largest shareholders and firm performance.*

H<sub>4</sub> is a subsidiary hypothesis states.

*H<sub>4</sub>: A controlling coalition which includes an institutional investor has a positive association with the firm performance.*

### **2.3 The Governance Effect of Boards on Firm Performance**

The previous discussion links firm's performance with the presence of large shareholders, such as family owners and outside institutional investors. Nevertheless, this combination of different large shareholders can create its own problems. For instance, the cultivating thrust between insiders and outsiders in a family-controlled

business is difficult as owners are reluctant to share information they consider proprietary (Schulze et al., 2001). Paternalism also contributes to the highly centralized decision-making structure by concentrating power and control among people with family links to the owners of family firms. As pointed out by Shleifer and Vishny (1986) one of the greatest costs that large shareholders can impose is remaining active in management even if they are no longer competent or qualified to run the firm. Because the initial human capital consists of family members, there is a tendency for entrenchment of dominant owners as managers in their firms, and often requires other complementary governance mechanisms (Gomes-Mejia, Larrazza-Kintana, and Makri (2003). Despite family and institutional ownership, concentration overcomes some of the agency costs associated with the lack of legal protection for minority shareholders. .

Corporate governance studies increasingly recognize that the board of directors has a central role in reducing agency problems (Hermalin and Wisbach 2003; Schulze et al. 2001; Jaskiewicz and Klein, 2007). Effective monitoring is usually a function of structural factors such as the proportion of independent directors on the board and the CEO/chairman roles held jointly or separately. Therefore, institutional theorists suggest that board independence might be used as a signalling device by organizations that act to enhance or protect their legitimacy, especially in the investor community.

The studies on corporate-governance in family controlled firms provide evidence that family members dominate the board of directors (Anderson and Reeb 2004). The senior owner-manager who typically assumes the presidency of the firm, currently holds the top executive position, and has complete control of the firm and its decisions usually exercises control. The management of these firms is often autocratic, and consequently minority shareholders may be at a disadvantage (Burkart, Gromb, and Panunzi 1997; Burkart et al. 2003). In this environment, research focus is on the study of organizational outcomes of directors' independence from controlling families.

On the one hand, the previous arguments suggest that family control might be associated with better performance. Therefore, the appointment of "controllers" that are related to the largest shareholder can re-enforce the positive effects of family ownership. On the other hand, family control over the board can lead to greater executive entrenchment and potential conflicts with outside investors, in particular with institutional shareholders whose strategy preferences might differ from the family. For instance, altruism can bias the CEOs' perception of their relatives employed on the board, which hampers their ability to monitor and discipline them. Furthermore, family-

related directors face higher exit costs because leaving the firm means forgoing certain rights, perquisites, and privileges associated with being part of the controlling family. Theoretical models on succession demonstrate that professional managers will be more productive than family descendants (due to the restricted size of the labor pool to choose from), but also hiring a professional manager can lead to a misalignment of interests (e.g., Burkart et al. 2003; Lubatkin et al. 2007). These high exit costs translate into a higher level of entrenchment.

Given an emphasis in the literature on the links between controlling coalitions of large shareholders and the effectiveness of the board, this study hypothesizes that nonfamily directors might have an important governance role that is complementary to the monitoring by block-holders in terms of reconciling potentially different interests among the family and outside investors (especially minority investors), and leading to more efficient organizational outcomes. ***H<sub>5</sub>: Board independence from the controlling families has a positive association with firm performance.***

### **3.Data, variables, and statistics**

#### **3.1 The Sample**

The data set comes from AMADEUS, a private database provided by Bureau van Dijk. The Italian firms in the list are on the Milan Stock Exchange (MSE) with ownership data in 2006. The exclusion of banks (SIC 6000–6900) and public utilities (SIC 4900–4999) is due to the nature of corporate governance in financial institutions, which differs from that in nonfinancial firms, and because government regulation potentially affects firm performance (e.g., Anderson and Reeb 2003). The calculation for the firm-specific control variables is from 2000 through 2006. As a result, the final sample comprises an unbalanced panel data of 208 nonfinancial firms. Data on board structure and CEO characteristics is from BoradEx, a database collected by Harvard University.

#### **3.2 Variables**

Four main groups comprise the variables: family and institutional ownership, board characteristics, measure of firm performance, and control variables.

The use of ownership structure as a proxy for corporate governance varies considerably in the literature. As pointed out by La Porta et al., (1999) a theoretically appropriate measure of ownership concentration requires a model of the interactions between large shareholders, which is not available. So, in order to measure family control, this study collects ultimate ownership data for the sample by following the



methods proposed by the Bureau van Dijk to identify the ultimate owner in Italian listed firms. As a first step, the basis for classifying shareholders comes from the information related to the ultimate owner and places them into the following types: family, corporation, financial institution, state, and other (e.g., Faccio and Lang, 2002). Next in order to track control rather than patrimonial relationships, the study determines the ultimate owner by the voting rights percentage recorded. Then, the study can identify the three largest shareholders in each firm.

### **3.2.1 Family and institutional ownership**

Following Andersen and Reeb (2003), Maury (2006) and Silva and Majluf (2008), this study uses two dummy variables to identify family firms. The first variable, family, is set equal to one if the global ultimate owner is a family, an individual, or an unlisted firm, and zero otherwise. Unlisted firms are classified as family firms because they are often closely held (Faccio and Lang 2002). The second variable, family managed, is set equal to one if the controlling shareholder is a family or an individual who holds the CEO, honorary chairman, chairman, or vice chairman positions, and zero otherwise. This variable controls for active versus passive family ownership (e.g., Andersen and Reeb 2003). The dummy variable, widely held, is used to control for firms that do not have any controlling shareholders (i.e., firms in which no shareholder has more than 25% invested directly or indirectly in the firm). Moreover, the dummy variable, nonfamily, takes the value of one if the controlling shareholder is not classified as family or a widely held firm, and zero otherwise.

The variable, ownership, measures the fractional equity ownership held by the largest shareholder. Based on previous research (e.g., Shleifer and Vishny 1986) that shows that institutional investors play a significant role in monitoring and disciplining managers, this study defines the variable, block-holder, as a dummy variable that assumes the value of one if an institutional investor with at least 5% of equity holdings exists, and zero otherwise.

To measure the capacity of the other large shareholders to reduce profit diversion by monitoring controlling shareholders, this study uses two variables to measure the allocation of control between multiple block-holders (e.g., Maury and Pajuste 2005). The first variable is hi-differences measured by the sum of the squares of the differences between the first and the second largest shareholder, and the second and third largest shareholder (i.e.,  $(\text{Equity1} - \text{Equity2})^2 + (\text{Equity2} - \text{Equity3})^2$ ). The second variable, namely hi-concentration, the study calculates as the sum of the squares of the

stakes of the three largest owners ( $\text{Equity1}^2 + \text{Equity2}^2 + \text{Equity3}^2$ ). Both variables are transformed into natural logarithms to control for the skewness. The results remain unchanged if the study does not take logarithmic transformations of both variables.

Additionally, this study defines two dummy variables to control the type of shareholder in the controlling coalition. The first is family 2<sup>nd</sup> shareholder that takes the value of one if a family is the second largest shareholder, and zero otherwise; the second is nonfamily 2<sup>nd</sup> shareholder that equals one if the second shareholder is not a family, and zero otherwise.

### **3.2.2 Board Characteristics**

Several variables are used to measure board characteristics, such as composition, size, and leadership. In terms of board composition, previous studies differentiate between “insider” directors (e.g., current and retired firm employees, their family members) and “affiliate directors” whose relations with the firm are restricted to their board membership only (see Anderson and Reeb 2004 and Jaskiewicz and Klein, 2007, for a discussion). Because the interest of this study is on the organizational outcomes of board members’ direct family links with family owners, the study uses four variables to measure board independence from the family.

The first variable controls for the size of the board (the natural log of the total members in the board). The second variable, the percentage of independent directors (% IndepDirectors) is the percentage of the total seats on the board of directors and supervisors whose only affiliation with the firm is their directorship. This study also considers a measure of CEO compensation due to the relation between executive pay and firm performance (e.g., Gomes-Mejia et al. 2003).

Thus, the definition of the variable bonus is the bonus paid as a percentage of total pay because firms do not disclose information related to bonus pay schemes. Compensation data comes from BoardEx, a database collected by Harvard University. Because only 24 firms’ report data related to board compensation, the study restricts the analysis of governance effects of boards on performance to those firms. Due to the fact that both databases do not have information related to the equity holdings of officers and directors (less family ownership), no variable could be defined to capture the incentive effects of the ownership of other insiders. The fourth variable is a dummy variable, chairman, which has a value of one if the CEO is also the chair of the board, and zero otherwise.

### **3.2.4 Firm Performance**

To measure firm performance, this study uses Tobin's q and return on assets (ROA) as the primary performance measures. Following La Porta et al. (2000), the estimate of Tobin's q is the market value of common equity plus the book value of total assets minus common equity divided by the book value of total assets. To compute the variable ROA, this study uses earnings before interest and taxes (EBIT) divided by the book value of total assets.

### 3.2.5 Control Variables

Six additional variables are introduced to control factors that have been shown to have an impact on firm performance (e.g., Anderson and Reeb 2003). Firm size is the measurement of the natural logarithm of book value of total assets. To control for debt, leverage, in the capital structure this study employs the ratio of total debt over total assets. Growth in net sales is a proxy for the value of growth opportunities. The measurement for investment intensity is capital expenditures relative to total assets. The Firm risk is the standard deviation of the ratio of net income to total assets. Age is the numbers of years since firm inception.

### 3.3 Statistics

Table 1 presents the statistics on the average Tobin's q in different owner categories by industrial classification. The industrial classification follows the classification proposed by Campbell (1996). According Campbell (1966) industries are defined as follow: 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 40,42,44,45,47), Textile and Trade (SIC 22,23 ,31,51,53,56,59), Services (SIC 72,73,75,76,80,82,87,89), Leisure (SIC 27,58,70,78,79) and Other includes all companies whose SIC codes are not assigned to any of the eleven Campbell industries.

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#### Table 1 here

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Table 1 values show that family firms operate in a broad assortment of industries. Nevertheless, family firms appear to be prevalent in organizational forms in Textile and Trade Industries (21.4%). Regarding the average of Tobin's q, the results reported by family firms are similar to those of widely held and nonfamily firms.

Table 2 provides means, medians, and differences of means tests for the key variables by different ownership categories. For the variables Tobin's q, ROA, size, leverage, investment intensity, growth, and risk, the means tests are based on the time-series average for each firm in the sample (e.g., Anderson and Reeb 2003).

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**Table 2 here**

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The results from Table 2 show that family firms represent 56% (117/208) of the Italian sample firms. From these, 57% (67/117) have a CEO, chairman, or vice chairman that comes from the controlling family. Firms without any controlling shareholder represent 23% (47/208) of the sample firms, and nonfamily firms account of 21% (44/208).

With respect to accounting performance measured by the variable ROA, the results show that family firms have a higher return on assets (10%) than widely held firms (4%), but the difference in the mean of return on assets is not statistically significant between family and nonfamily firms. Regarding family managed firms, the results indicate that family managed firms are better performers (significant at the 1% level) compared to family non-managed firms. The variable ROA is 13% for family managed firms compared to 6% to non-managed family firms. Using Tobin's q as the performance measure, the results show no statistical differences between the three groups of firms, that is, family, nonfamily and widely held firms.

Concerning ownership variables, the results show that ownership is more concentrated in family firms (53.61%) as well as in nonfamily firms (54.72%) compared to widely held firms (18.75%). The results reported by the variables hi-concentration and hi-differences confirm these findings. For these variables, the differences between means are statistically significant at the 1% level only between family firms and widely held firms.

Regarding corporate governance variables, for 29% of the widely held firms the CEO is also the chairman. This result contrast with the results reported by family firms (the means is 59%). Moreover, the percentage of bonus paid is much higher in family firms compared to widely held firms. Furthermore, the differences between family managed and non-managed firms is statistically significant at the 1% level, which indicates that families will ensure that management (through themselves) serves family

interests. Indeed, family firms, especially family managed firms show a low percentage of independent directors.

Related to the size, family managed firms on average are bigger than family non-managed firms, although all the firms show a substantial size. Family firms appear to use more debt than widely held firms. Family firms employ 23% of debt on their capital structure compared to 20% for widely held firms. For the variables growth, investment intensity, age, and risk, the table shows no statistical differences.

Summarizing, the univariate analysis confirms that the management as well as the ownership is in the hands of a family. In these circumstances, if families seek to entrench themselves and extract private benefits from the firm, the lack of strong external monitors and disciplinary agents potentially permits them to pursue this path.

Appendix A presents the Spearman correlation matrix for the variables in the sample. The study uses the Spearman correlations because the basis for the coefficient estimation is a non-parametric technique. Because no significant correlations exist between the independent variables, multicollinearity is not a factor.

#### **4. Regression analysis**

Modeling the relation between corporate governance factors and firm performance is approached generally through standard econometric techniques such as regression analysis. The problem that arises from this technique is the issue of endogeneity. In this study, most of the robustness testing utilizes statistical procedures that investigate the existence of endogenous variables and corrects for them when found (e.g., Demsetz and Lehn 1985).

##### **4.1 Method**

To address endogeneity, this study uses the generalized method of moments (GMM) (Arellano 2003), which corrects for endogeneity by using instruments. Specifically, this study follows the analysis of Hermelin and Weibach (1991) that uses the lagged values of ownership variables as their instruments because some changes in ownership occur within firms over time. To test for over-identifying restrictions, this study employs the Sargan test that tests for the absence of correlation between instruments and the error term. To control for unobserved firms' effects this study uses panel data. On the basis of the discussion in the second section, the basic form of the model that this study uses is:

$$\text{Firm performance}_{it} = \alpha + \beta_1(\text{Family firms}_{it}) + \beta_2(\text{Control Variables}_{it}) + \eta_i + \lambda_t + \varepsilon_{it}, (1)$$

where the measure for firm performance is Tobin's  $q$  and ROA. Family firm is a dummy variable that equals one if the global ultimate owner is a family, an individual, or an unlisted firm, and zero otherwise. Control variables include size, leverage, growth, investment intensity, risk, and age. The  $\eta_i$  is the firm fixed effects;  $\lambda_t$  is year fixed effects, and  $v_{it}$  is the error term.

## 4.2 Results

### 4.2.1 Family ownership effect on firm performance

This study employs four model specifications that consider two measures of firm performance to examine the relation between family ownership and firm performance. In regressions (1) to (4) the dependent variable is the variable Tobin's  $q$ . Regressions (5) to (8) show the results using the variable ROA as the dependent variable. Thus, regressions (1) and (5) examine the effect of family ownership on firm performance. Regressions (2) and (6) analyse the effect of active versus passive family control on firm performance. Regressions (3) and (7) examine the nonlinearity relation between family ownership and firm performance. Regressions (4) and (8) restrict the analysis to family firms to control for the effect of family control in terms of board. Table 3 presents the results.

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**Table 3 here**

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The principal finding from Table 3 is that family ownership has a positive association with firm performance when both measures of performance (i.e., Tobin's  $q$  and ROA) are considered. This result is consistent with hypothesis 1. Specifically, the results show that under family control the firm valuation (Tobin's  $q$ ) is similar for family firms and widely held firms as the coefficient of the variables family and widely held are both positive and statistically significant at 1% in regression 1.

Although, when ROA is the performance metric [regression (5)], family firms report about 11% higher profitability in relative terms (i.e., family coefficient/ average ROA of family firms—0.011/0.10), but the variable widely held reports a negative coefficient. This result provides empirical evidence that family firms perform better compared to nonfamily firms, that is, firms with no controlling shareholder. Thus, these results support the idea that families have longer investment horizons, leading to greater

investment efficiency. Furthermore, beyond monitoring and control advantages, family can bring special knowledge to the firm that outside managers do not possess.

To control for the effect of active versus passive family control on firm performance, the variable family managed (the variable that takes the value of one if the controlling shareholder is a family or an individual, who holds the CEO or chairman position, and zero otherwise) is added to regressions 2 and 6. The coefficient estimated on family managed is positive and statistically significant at the 1% level [regressions (2) and (6)]. Based on the average ROA, family firms appear to have 17% higher returns (i.e., family coefficient/ average ROA of family firms, 0.017/0.10) relative to other firms. Thus, this result confirms that active family involvement in management position implies higher firm performance.

Because previous research suggests that the relation between equity ownership structure and firm performance may be nonlinear if the incentive structure of equity claimant changes as the holdings increase (e.g. Moreck et al. 1988), the study introduces the square of the variable ownership as a continuous variable in regressions (3) and (7). The negative coefficient of the variable square of ownership indicates a nonmonotonic relation between firm performances even when considering both measures of performance.

The results are similar if the analysis includes dummy variables to denote families with different ownership stakes (results available upon to request from the authors). Thus, these findings suggest that family opportunism might increase at high control levels. Furthermore, the results from the restriction of the analysis to the sample of family firms to account for family control in terms of board [regressions (4) and (8)] show an increase of 14% (i.e., family coefficient/ average ROA of family firms - 0.014/0.1) in accounting performance, and is not followed by an increase in firm valuation of the same magnitude. The increase is only 0.6% (family managed coefficient/average Tobin's q of family firms - 0.012/2.0). Taken together these results suggest that family management can increase efficiency but such control does not imply an increase in valuations levels.

For comparison widely held firms, in which there is no controlling shareholder, appear to have approximately equal Tobin's q (but not higher profit rates) compared to family firms. One possible explanation for the positive valuation of widely held firms arises from the liquidity and risk-diversification benefits obtained through such dispersed ownership structures. Therefore, family control has a different impact on

profitability compared to valuation and, thus, the difference could be driven by the agency problem between the controlling family and minority shareholders. This finding is confirmed by the results obtained for the dummy variable block-holders. The coefficient of this variable is positive and statistically significant in all regressions. This result suggests that institutional investors positively moderate the effects of family control, which provides support to the hypothesis 2. Therefore, the incentive to monitor or collude with the leading shareholder becomes important from a valuation/performance perspective.

Regarding the control variables, the results indicate that firm's value (Tobin's q and ROA) has a positive relation with size and investment intensity. The variables leverage, growth, and risk have a negative association with firm value. Moreover, the results from controlling variables are generally consistent with the results of previous research (e.g., Anderson and Reeb, 2003; Maury, 2006; Silva and Majluf, 2008).

#### **4.2.3 The multiple block-holder effects on firm performance**

Table 2 shows that family controlled firms almost always have managerial representation. This result suggests that private benefits could substantially increase (and the firm value decrease) if the ability to monitor the insiders is low. So, this section analyzes the connections between the presence of multiple block-holders, who can monitor the actions of controlling family and firm performance. Regressions (1), (2), (5), and (6) examine the impact of the allocation of control between the three main shareholders on firm performance (i.e., Tobin's q and ROA). Regressions (3), (4), (7), and (8) control for the type of shareholder in the controlling coalition in family controlled firms. Table 4 reports the results.

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#### **Table 4 here**

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Both variables hi-concentration and hi-differences, when interacting with the variable family, report a negative and statistically significant coefficient at the 1% level. A negative coefficient indicates that a more equal distribution among the three largest block-holders has a positive effect in both measures of performance. Thus, these results confirm hypothesis 3 that states that there is a positive relation between a more equal distribution of share ownership between the three largest shareholders and firm performance. These findings are consistent with Benendeson and Wolfenzon's (2000) model, which shows an alignment effect of a coalition of large shareholders; that is, a



positive relation between the cash-flow stake of the controlling coalition and the firm value.

Beside the fact that large shareholders can benefit minority shareholders by monitoring the actions of managers (e.g., Silva and Majluf, 2008), the level of private benefits can actually depend on the type of block-holder. Thus, to examine the role of different types of block-holders in family controlled firms, this study introduces two dummy variables related to the identity of the second largest shareholder. The first variable, family 2<sup>nd</sup> shareholder, takes the value of one if the second largest shareholder is a family, and zero otherwise.

The second variable, nonfamily 2<sup>nd</sup> shareholder, takes the value of one if the second shareholder is a nonfamily owner. The (unrecorded) distribution of ownership types among the second large shareholders shows that families dominate with 37%, and financial institutions report 19%. Regressions (3) and (4) show the results related to the variable Tobin's q. Regressions (7) and (8) present the results related to the variable ROA.

The positive coefficient of the variable nonfamily 2<sup>nd</sup> shareholder indicates a positive and highly significant effect on both measures of performance [regressions (4) and (8)]. But if the second shareholder is a family, the positive impact on accounting performance [the coefficient value is 0.016 – regression (5)] does not translate into an increase in terms of valuation [the coefficient value is -0.026 - regression (7)]. This result, in line with Faccio, Lang, and Young (2001), suggests that some coalitions (such as two families) can make profit diversion easier, while in other coalitions expropriation can be more difficult. Indeed, it is easier for two families to form a coalition and extract private benefits within the legal bounds than for a coalition that includes, for example, an institutional investor. This assumption seems plausible because such owners have different objectives and decision-making horizons. Furthermore, such investors have a higher cost from engaging in profit diverting activities because they are subject to more scrutiny from regulatory authorities. This finding confirms hypothesis 4.

Summarizing, the results strongly confirm the third and four hypotheses, that is, a more equal distribution of share ownership between the three largest shareholders has a positive effect on firm performance. Furthermore, the level of private benefits depends on the type of block-holders. So, the identity of the shareholders is relevant for understanding corporate governance. Regarding the control variables, the results are quite similar to those in Table 3.

#### 4.2.4 The governance effect of boards on firm performance

Results from Table 3 show that family ownership can be advantageous because the family has the incentive and the power to monitor managers. Nonetheless, the results also show a nonmonotonic relation between family control and firm performance. This finding suggests that family opportunism might increase at high control levels. Furthermore, results from Table 4 also show that the presence of multiple block-holders seems to moderate the effects of family control. But the type of block-holders forming the controlling coalition affects the incentives to monitor or collude with the leading shareholder. In this context, the conventional corporate governance mechanisms are less effective (e.g., Gomes-Mejia et al. 2003). Thus, this section analyses the role of independent directors in promoting firm performance. Table 5 presents the results. Columns 1 and 2 show the results when the dependent variable is Tobin's q and columns 3 and 4 report the results using ROA as the dependent variable.

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**Table 5 here**

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The positive coefficient of the variable %IndepDirectors in regressions (1) and (3) support H<sub>5</sub>, which states that board independence from the controlling families has a positive association with firm performance. Because the variable bonus reports different results regarding the performance measures used (the coefficient value is -0.007 when the dependent variable is Tobin's q, and 0.001 when the dependent variable is ROA), regressions (2) and (4) include an interactive variable between board independence and family firms.

The interaction coefficient is negative and statistically significant at the 1% level. This result suggests that board independence in family firms is at stake. In other words, family influence potentially outweigh outside directors' influence in board matters. Consequently, family can pursue their own interests without substantial interference from the board. This interpretation is reinforced by the results from the variable chairman. The positive coefficient of this variable in regressions (3) and (4) indicates that when the chairman is also the CEO, higher accounting performance does not translate into higher valuations [regressions (1) and (2)]. These findings suggest a direct association between family ownership and managerial entrenchment and the extraction of private benefits from control, which should be detrimental to firm value. For the remaining variables, the results are similar to those in previous sections.

## 5. Conclusion

This study analyzes the effect of governance-performance relations in publicly listed and family controlled firms. By using GMM estimators to control for potential endogeneity problems, the results show that family firms have better accounting performance relative to nonfamily firms. Thus, family ownership seems to reduce managerial opportunism. Indeed, active family ownership in which the family holds the CEO or chairman position improves the firm's profitability. But this improvement does not translate into firm value and thus might not accrue to minority shareholders. Furthermore, the results also show a nonmonotonic relation between ownership and performance, which suggest that at high control levels, the potential for family opportunism increases and valuation starts to decline. Thus, monitoring activity is critical in family controlled firms.

In fact, the results indicate a positive relation between firm performance and the presence of multiple block-holders. This result is consistent with a block-holder coalition framework that sustains an incentive alignment effect for the coalition and firm value. Moreover, the results also show that the type of block-holder affects the incentive to collude with or to monitor the controlling shareholder. In other words, multiple block-holders, especially institutional investors, have a positive impact on firm performance by mitigating principal-principal conflicts associated with family control. The results also provide evidence that board dominance is another channel through which families can extract private benefits from control.

Summarizing, this study contributes to understanding the link between family control and firm performance, by showing that the firm performance depends on the efficiency of various governance mechanism such as various block-holders and board characteristics. Nevertheless, a number of extensions to this research can also be suggested. For instance, it is important to verify board appointment mechanisms used by family firms. Since external board members might be vetted and approved by the family or other dominant block-holders, what is the extent of their independence from the dominant owners? Additionally, because this study focus on direct, family links between board members and family owners, consequently, it does not account for "affiliate" directors, that is, nonfamily board members with business ties to the firm. So, further research of the governance rules of these board members would be useful.

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Table 1  
Family and Nonfamily Firms by Two-Digit SIC Code (n=208)

Industry Description	Family Firms			Widely Held			Nonfamily Firms		
	Freq.	%	Mean Q	Freq.	%	Mean Q	Freq.	%	Mean Q
Petroleum	10	8.6%	1.52	2	4.36%	1.74	4	3.4%	2.27
Consumer Durables	6	5.1%	1.53	4	8.5%	1.36	3	2.6%	1.72
Basic Industry	13	11.1%	1.48	6	5.1%	1.67	4	3.4%	0.85
Food and Tobacco	1	0.8%	0.87	1	0.9%	2.91	0		
Construction	9	7.7%	1.51	4	3.4%	0.80	8	6.8%	2.69
Capital Goods	4	3.4%	1.61	0			0		
Transportation	16	13.7%	1.64	5	4.47%	1.49	9	7.7%	1.43
Textiles and Trade	25	21.4%	2.60	6	5.1%	2.32	7	6%	2.78
Services	8	6.8%	2.30	11	9.4%	2.84	3	2.6%	2.73
Leisure	6	5.1%	2.73	0			1	0.9%	2.66
Others	19	16.2%	1.88	8	6.8%	1.55	5	4.3%	3.17

The ownership categories are: Family, Family-managed, Widely Held and Nonfamily dummy variables that equals to one if the if the controlling shareholders is a family, if the controlling family holds the CEO or Chairman position, if the firms has no controlling shareholder, and if the firm is not family and not widely held, respectively. Mean Q is the average of Tobin's q value measured by market value of common equity plus the book value of total assets minus common equity divided by book value of total assets. Industry descriptions come from Campbell's (1996) classifications.



Table 2  
Statistics by Ownership

Variables	Mean	Median	Family Mean	Family Managed Mean	Family Nonmanaged Mean	Widely Held Mean	Nonfamily Mean	Family vs. Widely Held t-stat	Family vs. Nonfamily t-stat	Family Managed vs. Nonmanaged t-stat
<u>Performance variables:</u>										
Tobin's q	2.00	1.58	2.00	1.95	2.13	1.84	2.13	-0.96	0.70	1.18
ROA	0.10	0.09	0.10	0.13	0.06	0.04	0.09	-3.64***	-0.26	-4.38***
<u>Ownership variables:</u>										
Ownership	45.92	50	53.61	54.21	52.55	18.75	54.72	-18.94***	0.41	-0.58
Block-holder	0.77	1.00	0.74	0.74	0.72	0.91	0.70	3.10***	-0.46	-0.26
HI-concentration	7.76	7.93	8.22	8.29	8.11	6.22	8.17	-14.91***	-0.40	-1.55
HI-differences	6.34	7.14	7.21	7.14	7.28	3.20	7.44	-8.45***	1.28	0.63
<u>Corporate governance variables:</u>										
Board	6.74	6.00	6.48	6.84	6.02	6.93	7.26	0.80	1.13	-1.39
% IndepDirectors	0.79	0.83	0.76	0.61	0.94	0.82	0.85	1.47	2.24*	10.50***
Chairman	0.47	0.00	0.59	—	—	0.29	0.37	-3.58***	-2.36*	—
Bonus	1.18	0.00	1.35	1.86	0.42	0.38	1.43	-2.19**	0.07	-2.14**
<u>Control variables:</u>										
Size	12.46	12.25	12.30	12.56	12.03	12.43	12.97	0.96	5.43***	-4.44***
Leverage	0.23	0.22	0.23	0.24	0.23	0.20	0.24	-2.93**	0.79	-1.09
Investment intensity	0.32	0.05	0.32	0.24	0.43	0.42	0.24	0.65	-1.00	1.60
Growth	0.19	0.08	0.18	0.16	0.22	0.23	0.25	0.69	0.79	1.11
Risk	0.66	0.65	0.68	0.68	0.67	0.64	0.62	-1.77	-2.25*	-0.32
Age	27.74	20.00	26.21	29.67	22.48	25.09	34.64	-2.27	1.51	-1.59
Number of firms			117	67	50	47	44			

The table presents the summary statistics for 208 non-financial Italian firms. Performance variables are Tobins's  $q$  and ROA. Family, Family-managed, Widely Held and Nonfamily are dummy variables that equals to one if the if the controlling shareholders is a family, if the controlling family holds the CEO or Chairman position, if the firms has no controlling shareholder, and if the firm is not family and not widely held, respectively. Block-holder equals one if there is an institutional investor with at least a 5% ownership. Hi-concentration and hi-differences are the natural logarithm of the sum of the squares of the equity of the three largest owners' and the sum of the squares of the differences between the three largest shareholders, respectively. Board is the total members in the Board. % IndepDirectors is the percentage of independent directors. Chairman equals to one if the chairman is also the CEO. Bonus is the percentage of bonus paid. Size is measured by total assets; Leverage is the ratio of total debt over total assets. Investment Intensity is the ratio of capital expenditures over total assets. Growth is the growth in sales. Risk is the standard deviation of the ratio net income to total assets. Age is years since firm inception. The symbols (\*), (\*\*) and (\*\*\*) represent significance at the 10%, 5%, and 1% levels, respectively.

Table3  
Regression Analysis of Family Ownership Effect on Firm Performance

Independent Variables	Full Sample	Full Sample	Full Sample	Family sample	Full Sample	Full Sample	Full Sample	Family sample
	Tobin's q	Tobin's q	Tobin's q	Tobin's q	ROA	ROA	ROA	ROA
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Family	0.008** (3.24)				0.011*** (8.01)			
Family managed		0.017*** (8.70)	0.011*** (9.42)	0.012*** (13.01)		0.017*** (19.18)	0.024*** (18.27)	0.014*** (40.70)
Widely Held	0.017*** (5.32)	0.020*** (5.88)	0.013*** (5.97)		-0.005*** (-4.75)	-0.024*** (-9.24)	-0.002 (-1.06)	
Nonfamily		-0.004 (-1.41)	-0.007*** (-4.42)			0.007*** (5.03)	0.007*** (4.81)	
Ownership	0.001*** (21.13)	0.002*** (31.19)	0.006*** (38.16)	0.001 (-1.92)	0.0004*** (14.27)	0.0001*** (4.49)	0.002*** (13.66)	0.001*** (63.59)
(Ownership) <sup>2</sup>			-0.001*** (-30.24)				-0.001*** (-11.66)	
Block-holders	0.016*** (9.22)	0.021*** (12.69)	0.002 (1.55)	0.018*** (20.68)	0.027*** (33.76)	0.012*** (18.03)	0.004** (3.02)	0.025*** (57.77)
Size	0.033*** (37.86)	0.022*** (21.67)	0.014*** (40.16)	0.023*** (84.89)	0.015*** (42.08)	0.017*** (50.05)	0.008*** (29.85)	0.013*** (86.76)
Leverage	-0.033*** (-6.55)	-0.041*** (-9.11)	0.082*** (26.12)	0.047*** (39.83)	-0.070*** (-34.19)	-0.087*** (-32.62)	-0.096*** (-39.53)	-0.104*** (-77.23)
Investment .intensity	0.012*** (45.43)	0.014*** (51.60)	0.002*** (43.02)	-0.001*** (-6.85)	-0.005*** (-18.62)	-0.002*** (-2.73)	0.001*** (45.68)	-0.002*** (-7.82)
Growth	-0.021*** (-69.21)	-0.022*** (-64.09)	-0.003*** (-42.12)	0.003*** (22.69)	0.010*** (25.22)	0.003* (2.54)	-0.001*** (-47.86)	0.002*** (6.68)
Risk	-0.145*** (-11.39)	-0.117*** (-8.13)	-0.090*** (-29.12)	-0.067*** (-24.72)	-0.135*** (-22.18)	-0.060*** (-26.02)	-0.269*** (-128.56)	-0.038*** (-52.78)
Age	-0.001*** (-35.17)	-0.001*** (-23.52)	-0.001*** (-10.74)	-0.001*** (-42.66)	0.0002*** (14.99)	-0.0002*** (-11.15)	-0.001*** (-3.52)	0.0003*** (17.76)
C	0.524*** (61.99)	0.611*** (73.02)	0.524*** (104.33)	0.596*** (186.20)	-0.113*** (-24.90)	-1.132*** (-37.15)	-0.095*** (-19.73)	-0.103*** (-46.821)
Two Digit SIC Code	Included	Included	Included	Included	Included	Included	Included	Included
Number of Observations	826	826	826	770	1380	1380	1380	770

The table presents regressions of firm performance on family ownership and control variables. The dependent variables are: Tobin's q on columns 1 to 4 and ROA on columns 5 to 8. The independent variables are: family, family managed, widely held and nonfamily, dummy variables that equals to one if the if the controlling shareholders is a family, if the controlling family holds the CEO or Chairman position, if the firms has no controlling shareholder, and if the firm is not family and not widely held, respectively; ownership is the percentage of ownership held by the largest shareholder; block-holder equals one if there is an institutional investor with at least a 5% ownership; size is measured by total assets; Leverage is the ratio of total debt over total assets; investment intensity is the ratio of capital expenditures over total assets; growth is the growth in sales; risk is the standard deviation of the ratio net income to total assets; age is years since firm inception. The symbols (\*), (\*\*) and (\*\*\*) represent significance at the 10%, 5%, and 1% levels, respectively.

Table 4  
Regression Analysis of Multiple Block-holders Effect on Firm Performance

	Full Sample	Full Sample	Family Sample	Family Sample	Full Sample	Full Sample	Family Sample	Family Sample
Independent Variables	Tobin's q (1)	Tobin's q (2)	Tobin's q (3)	Tobin's q (4)	ROA (5)	ROA (6)	ROA (7)	ROA (8)
Hi-concentration	0.035*** (32.84)				0.013*** (30.51)			
Hi-concentration*Family	-0.003*** (-12.66)				-0.001*** (-2.85)			
Hi-differences		0.013*** (32.53)				0.012*** (67.16)		
Hi-differences*Family		-0.002*** (-8.82)				-0.001*** (-8.40)		
Family 2 <sup>nd</sup> shareholder			-0.026*** (-28.55)				0.016*** (20.75)	
Nonfamily 2 <sup>nd</sup> shareholder				0.015*** (13.07)				0.037*** (38.42)
Size	0.018*** (24.57)	0.0180*** (23.83)	-0.010*** (-38.38)	0.006*** (7.98)	0.013*** (61.05)	0.005*** (18.66)	0.003*** (16.25)	-0.014*** (-57.89)
Leverage	-0.020*** (-4.36)	-0.024*** (-5.44)	0.113*** (80.31)	0.028*** (10.92)	-0.082*** (-31.86)	-0.109*** (-65.16)	-0.127*** (-106.17)	0.108*** (81.47)
Investment intensity	0.011*** (41.74)	0.011*** (43.03)	-0.002*** (-22.95)	0.002*** (3.92)	-0.005*** (-11.87)	-0.001*** (-7.89)	-0.0005*** (-3.79)	-0.001*** (-10.03)
Growth	-0.017*** (-58.24)	-0.017*** (-57.77)	0.0121*** (66.63)	0.0005*** (0.08)	0.007*** (15.72)	0.013*** (58.82)	0.008*** (30.83)	0.012*** (64.48)
Risk	-0.176*** (-14.61)	-0.177*** (-14.49)	-0.145*** (-35.01)	-0.016*** (-2.09)	-0.037*** (-24.83)	0.0002*** (-12.94)	-0.099*** (-6.94)	-0.164*** (-49.22)
Age	-0.001*** (-27.15)	-0.001*** (-29.72)	-0.0004*** (-20.58)	-0.0004*** (-15.60)	-0.0001*** (-42.97)	0.0003*** (15.59)	0.0001*** (8.55)	-0.0003*** (-13.70)
C	0.430*** (45.31)	0.616*** (76.92)	1.011*** (305.33)	0.812*** (107.85)	-0.180*** (-42.97)	-0.089*** (-28.81)	0.027*** (10.39)	1.026*** (350.96)
Two Digit SIC Code	Included	Included	Included	Included	Included	Included	Included	Included
Number of Observations	826	826	770	770	1380	1380	770	770

The table presents regressions of firm performance on multiple block-holders and control variables. The dependent variables are: Tobin's q on columns 1 to 4 and ROA on columns 5 to 8. The independent variables are: **hi**-concentration and hi-differences are the natural logarithm of the sum of the squares of the equity of the three largest owners' and the sum of the squares of the differences between the three largest shareholders, respectively; family equals to one if the controlling shareholders is a family; family 2<sup>nd</sup> shareholder and nonfamily 2<sup>nd</sup> shareholder equals to one if the second largest shareholder is a family and if the second shareholder is a nonfamily owner, respectively; size is measured by total assets; leverage is the ratio of total debt over total assets; investment intensity is the ratio of capital expenditures over total assets; growth is the growth in sales; risk is the standard deviation of the ratio net income to total assets; age is years since firm inception. The symbols (\*), (\*\*), (\*\*\*) represent significance at the 10%, 5%, and 1% levels, respectively.

Table 5:  
Regression Analysis of the Governance Effect of Boards on Firm Performance

Independent Variables	Full Sample	Family Sample	Full Sample	Family Sample
	Tobin's q (1)	Tobin's q (2)	ROA (3)	ROA (4)
Board	0.068*** (12.65)	0.079*** (137.49)	0.097*** (20.79)	0.131*** (126.600)
%IndepDirectors	0.044*** (4.22)	0.0188*** (19.65)	0.154*** (12.44)	0.023*** (6.816)
%IndepDirector*Family		-0.051*** (-49.61)		-0.217*** (-142.736)
Chairman	-0.036*** (-8.03)	-0.004*** (-7.18)	0.059*** (17.21)	0.062*** (44.990)
Bonus	-0.007*** (-11.84)	0.005*** (79.56)	0.001* (2.37)	0.013*** (198.601)
Size	-0.007*** (-68.41)	-0.036*** (-200.97)	0.011*** (38.24)	-0.008*** (-37.447)
Leverage	0.300*** (30.83)	0.045*** (56.89)	0.189*** (23.55)	-0.204*** (-136.738)
Investment intensity	0.022*** (12.43)	0.039*** (142.62)	0.022*** (15.88)	0.007*** (11.506)
Growth	0.084*** (15.98)	-0.162*** (-292.61)	-0.003 (-1.45)	0.043*** (53.742)
Risk	-2.646*** (-45.23)	-2.121*** (-863.0)	-0.377*** (-60.49)	-0.080*** (-81.464)
Age	-0.001*** (-7.91)	0.002*** (159.61)	0.002*** (23.58)	0.003*** (197.337)
Chairman	1.717*** (88.75)	1.173*** (502.32)	-0.274*** (-13.19)	-0.049*** (-7.373)
Two Digit SIC Code	Included	Included	Included	Included
Number of Observation	166	83	166	83

The table presents regressions of the firm performance on the governance effect of boards and control variables. The dependent variables are: Tobin's q on columns 1 and 2 and ROA on columns 3 and 4. The independent variables are: board is the total members in the board. % IndepDirectors is the percentage of independent directors; family equals to one if the controlling shareholders is a family; chairman equals to one if the chairman is also the CEO; bonus is the percentage of bonus paid; size is measured by total assets; leverage is the ratio of total debt over total assets; investment intensity is the ratio of capital expenditures over total assets; growth is the growth in sales; risk is the standard deviation of the ratio net income to total assets; age is years since firm inception. The symbols (\*), (\*\*), (\*\*\*) represent significance at the 10%, 5%, and 1% levels, respectively.

## Appendix A

### Matrix of Correlation

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1. Tobin's q	1																			
2. ROA	0.25*** (7.38)	1																		
3. Family	0.14*** (3.98)	0.13*** (4.81)	1																	
4. Family managed	0.18*** (5.24)	0.16*** (5.82)	0.60*** (31.93)	1																
5. Widely Held	-0.20*** (-6.00)	-0.21*** (-7.87)	-0.61*** (-33.30)	-0.36*** (-16.65)	1															
6. Nonfamily	0.04 (1.21)	0.05* (1.98)	-0.58*** (-30.63)	-0.33*** (-15.05)	-0.28*** (-12.61)	1														
7. Ownership	0.18*** (5.11)	0.17*** (6.55)	0.44*** (20.94)	0.29*** (12.85)	-0.73*** (-46.39)	0.20*** (9.03)	1													
8. Block-holder	-0.04 (-1.19)	0.04 (1.53)	-0.07** (-3.23)	-0.02 (-0.71)	0.18*** (7.84)	-0.11*** (-4.91)	-0.24*** (-0.83)	1												
9. HI-concentration	0.23*** (6.93)	0.18*** (6.65)	0.49*** (24.51)	0.31*** (15.82)	-0.78*** (-53.02)	0.19*** (8.37)	0.92*** (104.22)	-0.26*** (-11.57)	1											
10. HI-differences	0.07* (1.90)	0.01 (0.03)	-0.04 (-1.51)	-0.02 (-0.94)	-0.12*** (-4.98)	0.16*** (7.05)	0.10*** (4.17)	0.01 (0.60)	0.12*** (5.10)	1										
11. Board	0.01 (0.34)	0.11*** (3.92)	-0.06** (-2.60)	0.05* (2.28)	0.02 (0.98)	0.01 (0.16)	0.05* (2.27)	0.04* (1.74)	0.04* (1.53)	0.14*** (6.29)	1									
12. % IndepDirectors	-0.12*** (-3.39)	-0.07* (-2.48)	-0.17*** (-7.23)	-0.46*** (-21.73)	0.05* (2.02)	0.12*** (5.12)	-0.02 (-0.73)	-0.15*** (-6.35)	-0.05* (-2.19)	0.02 (1.03)	0.11*** (4.58)	1								
13. Chairman	0.14*** (3.92)	0.15*** (5.30)	0.24*** (10.26)	0.55*** (27.47)	-0.20*** (-8.31)	-0.08** (-3.23)	0.13*** (5.40)	0.06* (2.37)	0.17*** (7.14)	-0.06* (-2.59)	-0.04* (-1.82)	-0.05*** (25.68)	1							
14. Bonus	-0.02 (-0.35)	-0.04 (-0.75)	0.05 (1.01)	0.14** (3.02)	-0.011* (-2.45)	0.04 (0.95)	-0.13** (-2.77)	-0.22*** (-4.86)	-0.05 (-1.12)	-0.03 (-0.60)	0.04 (0.86)	0.07 (1.46)	0.09* (1.96)	1						
15. Size	0.13*** (3.70)	0.13*** (4.81)	-0.11*** (-430)	0.02 (0.86)	0.01 (-0.38)	0.13*** (4.89)	0.06* (2.38)	-0.02 (-0.91)	0.06* (2.26)	0.25*** (9.45)	0.37*** (14.27)	0.17*** (6.06)	-0.15*** (-5.28)	0.01 (0.25)	1					
16. Leverage	0.05 (1.58)	-0.01 (-0.11)	0.04 (1.42)	0.05* (1.69)	-0.09** (-3.43)	0.06* (2.16)	0.07** (2.74)	-0.04 (-1.49)	0.12*** (4.62)	0.05* (1.77)	-0.04 (-1.57)	-0.13*** (-4.79)	0.01 (0.31)	-0.14* (-2.57)	0.25*** (9.64)	1				
17. Growth	0.11** (-2.97)	-0.03 (-1.13)	0.02 (0.80)	-0.04 (-1.16)	-0.02 (-0.83)	-0.01 (-0.16)	0.01 (0.50)	0.03 (0.96)	0.01 (0.34)	-0.01 (-0.07)	0.02 (0.77)	0.02 (0.66)	-0.04 (-1.35)	-0.02 (-0.30)	0.04 (1.31)	0.05 (1.25)	0.98*** (181.81)	1		
18. Investment intensity	0.10* (-2.51)	-0.02 (-0.60)	0.02 (0.77)	-0.036 (-1.18)	-0.02 (-0.79)	-0.01 (-0.15)	0.01 (0.43)	0.03 (0.93)	0.01 (0.24)	-0.01 (-0.08)	0.02 (0.70)	0.02 (0.74)	-0.04 (-1.40)	-0.02 (-0.30)	0.04 (1.41)	0.05 (1.58)	0.98*** (181.81)	1		
19. Risk	0.08* (2.19)	-0.10** (-2.76)	0.08* (2.50)	0.06* (1.82)	-0.03 (-0.97)	-0.07* (-1.98)	-0.04 (-1.27)	-0.05 (-1.55)	0.014 (0.43)	0.16*** (4.94)	0.11** (3.15)	0.10** (2.95)	-0.03 (-0.88)	0.10 (1.57)	0.32*** (9.56)	0.15*** (4.49)	-0.01 (-0.35)	-0.02 (-0.56)	1	
20. Age	-0.03 (-0.83)	0.05* (1.82)	-0.08*** (-3.68)	0.02 (0.77)	-0.04* (-1.77)	0.14*** (6.22)	0.04 (1.51)	-0.12*** (-5.07)	-0.01 (-0.18)	0.20*** (8.65)	0.05* (2.22)	-0.01 (-0.44)	0.03 (1.26)	0.08* (1.66)	0.21*** (7.79)	0.01 (0.51)	-0.04 (-1.31)	-0.04 (-1.25)	0.11** (3.18)	1



