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ABSTRACT

Governance with Poor Investor Protection: Evidence from Top Executive Turnover in Italy*

This Paper studies the determinants of executive turnover and firm valuation as a function of ownership and control structure in Italy, a country that features low legal protection for investors, firms with controlling shareholders, and pyramidal groups. The results suggest that there is poor governance, as measured by a low sensitivity of turnover to performance and a low Q ratio, when (i) the controlling shareholders are also top executives, (ii) the control is fully in the hands of one shareholder and is not shared by a set of core shareholders, and (iii) the controlling shareholders own less than 50% of the firm's cash-flow rights.

JEL Classification: G34, J63 and L14
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1. Introduction

The "law and finance" approach, recently advocated by La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1998 and 2000), emphasizes the important role of laws and institutions protecting investors for the development of a country. These authors argue that a firm's ability to raise external capital and grow is limited by the extent to which control can be effectively separated from ownership without increasing the risk that investors are expropriated by management. Better legal protection for investors reduces the risk of expropriation, allows more separation between ownership and control, and increases growth.

As shown in La Porta, Lopez-de-Silanes, and Shleifer (1999), in several countries "plagued" by low investor protection some separation of ownership from control is obtained via pyramidal groups and nonvoting shares. On the one hand, these institutions preserve sufficiently high ownership concentration to help solve the managerial agency problem because controlling shareholders have the incentives and the power to discipline management. On the other hand, they create the conditions for a new agency problem because the interests of controlling and minority shareholders are not perfectly aligned. For instance, the controlling shareholders can expropriate minority ones via targeted issues and repurchases of securities, transfers of assets, entrenchment, and exploitation of a business relationship with affiliated companies through transfer pricing. Johnson, La Porta, Lopez-de-Silanes, and Shleifer (2000) call this form of agency problem "tunneling."

From a theoretical point of view, Bebchuk (1999), Wolfenzon (1998), and Bebchuk, Kraakman, and Triantis (1998) argue that the balance between the two forces (namely, the reduction in managerial discretion due to the presence of a controlling shareholder and the potential conflict of interest between controlling and minority shareholders) is likely resolved in

favor of the second one, leading to a magnification rather than a reduction of the agency problem. This paper provides direct evidence on the potential costs of pyramidal groups and nonvoting shares by analyzing executive turnover and market valuation in Italian listed companies.

Italy represents an ideal setting to address these issues because it features weak legal protection of creditors and shareholders, inefficient law enforcement, high ownership concentration, and an abundance of pyramidal groups and nonvoting shares. There is suggestive evidence that the size of the private benefits of control is particularly large in Italy. Zingales (1994) finds an average voting premium of 82% in Italian companies with dual-class shares, while the average voting premium in the US is 10%, in the UK is 13%, in Canada 23%, and in Switzerland is 27%.

The existing literature indicates two strategies to assess the effectiveness of a corporate governance system. The first one, following Kaplan (1994a) and Coffee (1999), is to test whether executive turnover increases as a firm's performance declines. The second one, derived from Morck, Shleifer, and Vishny (1988) and McConnell and Servaes (1990), is to analyze the firm's valuation in relation with similar companies.

Accordingly, this paper will first study the determinants of executive turnover in Italian publicly traded companies, by focusing on how the ownership and control structure of a firm affects the sensitivity of the firm's executive turnover to performance. Then, it will evaluate the effect of these same factors on the firm's Q ratio. Both analyses are based on a large data set, which covers all traded companies in Italy (banks and insurance companies excluded) during the period 1986 to 1997 and contains information on ownership, board, and capital structures. For all companies in the sample, I was able to trace back the control chain, identify the ultimate owner,

and determine his ownership stake in the company, distinguishing between voting and cash flow rights (for an example of pyramid, see Fig. 1).

The first finding in the analysis is that controlling shareholders are entrenched. Indeed, the probability of turnover and its sensitivity to performance are significantly lower for top executives who belong to the family of the controlling shareholder than for other executives. Second, the larger the fraction of cash-flow rights owned by the controlling shareholder, the more sensitive turnover is to performance. This result suggests that incentives matter and that governance improves when the controlling shareholder internalizes the consequences of his actions. The third finding is that turnover is more sensitive to performance when a voting syndicate controls the firm. A voting syndicate is a coalition of relevant shareholders who sign a binding agreement to vote together for a few years. About 15% of the companies in the sample have a voting syndicate. These coalitions help the largest shareholder to control a company when his stake would not be large enough to do so by himself. This result suggests that turnover becomes more sensitive to performance when control is, to some extent, contestable, as in the case of a voting syndicate.

These findings are confirmed by the analysis of the firm's Q ratio: Q is significantly smaller in firms where the controlling shareholders are among the top executives, is significantly larger when control is partially contestable as in the case of a voting syndicate controlling the firm, and increases with the fraction of cash-flow rights owned by the controlling shareholder.

Within pyramidal groups, I find a significant lower Q ratio (between 13% and 27%) in firms at the bottom of a pyramid. This result is consistent with the argument that pyramids increase agency problems by creating a wedge between voting and cash-flow rights. A possible explanation is that good managers are promoted to a higher layer of the pyramidal group against

the interests of investors in the firms at the bottom of the pyramid. Indeed, the relationship between turnover and performance is weaker in pyramidal groups although the difference is not statistically significant.

Regarding the role of large minority shareholders, they do not seem to play an important monitoring role within the firm. Specifically, the results in this paper suggest that minority shareholders have a governance role only if their votes are necessary to the controlling shareholder to control the firm, as is the case in voting syndicates. Except for their role in a voting syndicate, large minority shareholders do not improve the firm governance since they do not increase the sensitivity of turnover to performance nor the firm's valuation.

Finally, turnover is much lower in the company at the top of a pyramid (6%) than in its subsidiaries (16%). This result may be explained by the fact that the controlling shareholders of the group sit as executives of their holding companies and they are entrenched in control. They do so because the benefits of control are larger in the holding company, as suggested by the finding that the voting premium in the holding companies is significantly higher than in the subsidiaries.

The structure of the paper is as follows. Section 2 formulates the hypothesis to test by overviewing the literature and describing the Italian corporate governance system. Section 3 describes the data set. Section 4 contains and discusses the results on the determinants of top executive turnover and firm valuation. Section 5 extends the analysis to pyramidal groups and evaluates the role of the market for corporate control. The conclusion is in Section 6.

2. Existing literature and testable hypotheses

Studying top executive turnover and the sensitivity of turnover to performance is one way to assess the quality of the corporate governance standards within a firm or within a country. The reason is, as argued by Coffee (1999), that successful governance systems penalize managers of firms with poor stock performance and with low cash flows. This statement is supported by large international evidence.[1]

Hence, the basic empirical hypothesis to be tested in this paper is the following.

Basic Hypothesis*: Top executive turnover is negatively related to performance.*

If the basic hypothesis is verified on the whole sample, the second step is to study whether there are significant differences across firms. An important factor that may affect turnover is the ownership structure of a firm.

Firms on the Italian stock market typically have a clearly identifiable controlling shareholder who controls at least 20% of the voting rights. Exceptions are banks and insurance companies. However, these are excluded from the sample because their accounting measures of performance are not directly comparable with the other firms.

Hence, Italian traded companies can be classified into four large categories according to their ultimate owner: the state, a foreign company, a set of banks, and one or more Italian individuals

[1] The first studies on US data are Coughlan and Schmidt (1985), and Warner, Watts, and Wruck (1988); on Japan, Kaplan and Minton (1994) and Kang and Shivdasani (1995); on Germany, Kaplan (1994b), and Franks and Mayer (2001); on the UK, Franks and Mayer (1996), and Franks, Mayer, and Renneboog (2001); on Belgium, Renneboog (2000); on eight developing countries, Gibson (1999).

(I define this last category as family-controlled firms). One may expect to find differences across these groups in the sensitivity of turnover to performance. For example, in state-controlled companies management turnover can be more affected by political than economic factors. Therefore, I first check whether there are differences across these categories. However, in order to use a homogeneous and large set of observations, I focus the remainder of the analysis on the set of firms that are controlled by Italian individuals.

2.1. Ownership structure and executive turnover

Within family-controlled firms, there may be significant differences across firms depending on the relationship between the management and the controlling shareholder of the firm. Denis and Denis (1994) find that in the US, majority-owned firms experience significantly lower turnover for given performance than widely held ones. Also, they find that in majority-owned firms the controlling shareholder typically sits as top executive of the firm. Consistent with the result above, Denis, Denis, and Sarin (1997) show that the probability of top executive turnover (and the sensitivity of turnover to performance) is negatively correlated with the ownership stake held by officers. Most Italian traded companies are majority owned. Moreover, the size of the private benefits of control is extremely large in Italy, as shown by Zingales (1994). It is possible that the controlling shareholder is entrenched as a top executive against the interest of the other shareholders, in order to preserve his ability to extract those benefits. Hence, the first main hypothesis to test is the entrenchment hypothesis.

> **Entrenchment Hypothesis**: *Top executive turnover is lower and less sensitive to performance if the controlling shareholder is an executive*.

In Italy, the separation between ownership and control is enhanced by the widespread use of traded pyramids and nonvoting shares. The sensitivity of turnover to performance can be proportionate to the fraction of cash-flow rights owned by the controlling shareholder. One immediate rationale for this hypothesis is that monitoring the management may come at a cost. Hence, the higher the fraction of cash-flow rights owned by the controlling shareholder, the larger the controlling shareholder's incentive to monitor the management.

> **Incentive Hypothesis**: *Top executive turnover is more sensitive to performance if the controlling shareholder owns a larger fraction of cash-flow rights*.

In about 15% of Italian traded companies, a coalition of important shareholders helps the controlling party control the company. These shareholders are kept together by explicit agreements to vote together, which are called voting syndicates ("sindacati di voto"). These agreements are publicly announced on national newspapers, last for a fixed number of years (usually three) and can be renewed. A voting syndicate can decide on its actions either unanimously or by majority rule. According to law experts (see Galgano, 1997), these agreements are legally binding only in the former case. It is important to notice that the degree of entrenchment of the controlling shareholder could be much lower if he or she needs a voting syndicate to control the firm. With a voting syndicate, the controlling shareholder does not have a lock on control and control is partially contestable.

An example is given by the turnover in Olivetti in 1996 (*Il Sole 24 Ore*, September 4 1996). Carlo De Benedetti, the long-time Chairman and President of the Board, was the relative majority

shareholder in Olivetti with 15% of the voting rights. Thanks to a voting syndicate he controlled another 25% of the votes. In January 1996, after several years of very poor performance at Olivetti, the voting syndicate broke down, and in September of the same year De Benedetti was forced to step down from all executive roles in the company. This case suggests that executive turnover is more sensitive to performance if the controlling shareholder does not have absolute control over the company, that is, in the instances where there exists a voting syndicate. However, it is also conceivable that voting syndicates sustain collusive agreements among large families aiming at preserving the stability of control. In this second case, voting syndicates do not necessarily increase turnover or the sensitivity of turnover to performance.

Pagano and Roell (1998) argue from a theoretical viewpoint that large minority shareholders play a role in monitoring the controlling shareholder. For the US, Denis, Denis, and Sarin (1997) show that the probability of top executive turnover is positively correlated to the presence of an outside blockholder.

> **Outside Monitoring Hypothesis**: *Top executive turnover is higher and more sensitive to performance in companies with a large minority shareholder and/or a voting syndicate*.

An alternative way to test the quality of the corporate governance within a firm is to look at the valuation of the firm. For the US, Morck, Shleifer, and Vishny (1988) and McConnell and Servaes (1990) find a nonlinear relationship between Q ratio and managerial ownership. A similar approach is employed also in Yermack (1996) and in La Porta, Lopez-de-Silanes, Shleifer, and Vishny (1999).

If the absence of sensitivity of turnover to performance is an indicator of bad governance, this should be reflected in the firm's valuation. Hence, I will test the following hypotheses on the Q ratio.

Entrenchment Hypothesis: *Q is lower if the executives are controlling shareholders*.

Incentive Hypothesis: *Q is higher if the controlling shareholder owns a larger fraction of the cash-flow rights*.

Outside Monitoring Hypothesis: *Q is higher in firms where there are outside blockholders and/or a voting syndicate*.

2.2. Pyramidal groups

The above hypotheses will be tested in Section 4 of this paper and will help characterize the relationship between executive turnover and ownership structure in Italian firms. However, as mentioned before, many firms in Italy (more than half of the firms traded on the Milan stock exchange) are organized in pyramidal groups. Pyramids of traded firms magnify the separation between ownership and control because they allow the controlling shareholder of the holding company at the top of the pyramid to control the companies in the pyramid by owning a small fraction of their capital. By the same token, they magnify the potential conflict of interest between controlling and minority shareholders. The impact of pyramidal groups on executive turnover and firm valuation is studied in Section 5.1.

2.3. Transfer of corporate control

Finally, the paper will try to evaluate the relative role of external and internal governance forces. Martin and McConnell (1991), for the US, and Franks, and Mayer (1996), for the UK, find that turnover increases following takeovers. Barclay and Holderness (1991), for the US, and Franks, Mayer, and Renneboog (2001) for the UK, find a similar increase in turnover following block trades.

Since Italian firms typically have a controlling shareholder, a sale of the controlling stake is a simple proxy for a change in the firm's ownership structure and should be associated with an increase in top executive turnover. However, since the sale can only happen with the consent of the controlling shareholder, control is not contestable, and takeovers in Italy can have a more limited disciplinary role than in the US or UK.

Gilson (1989), for the US, and Franks, Mayer, and Renneboog (2001), for the UK, find that turnover is higher in firms at the onset of a financial crisis, when the firm's creditors increase their pressure on the management and seize control. Transfer of the control to creditors should then be associated with an increase in top executive turnover in the Italian sample.

The impact of transfers of control as a determinant of executive turnover will be evaluated in Section 5.2.

3. Description of the data set

The sample is collected from several issues of "Il Taccuino dell'Azionista," an annual publication edited by Il Sole 24 Ore. This source provides basic balance sheet data, information about the ownership structure, and the names of the individuals sitting on the Board of Directors ("Consiglio di Amministrazione") of all companies traded on the Italian stock market. Data cover

a period of 12 years, from 1986 to 1997. From the set of all companies traded on the Milan stock exchange over that period, I exclude banks, insurance companies, and foreign companies because of different accounting rules. Foreign companies are firms incorporated abroad, while foreign-controlled companies are firms incorporated in Italy even though owned by foreigners. The latter ones are included in the sample. I exclude all companies that were traded on the Milan stock exchange for less than three years because I need at least three years of data to compute the measures of performance and turnover.

Hence, the sample used in the regressions covers 205 firms and contains a total of 1,611 observations. Table 1 reports summary statistics on ownership structure, board composition, and executive turnover for this sample. All variables used in the analysis are defined in Appendix A.

Italian law limits the extent of cross-holdings to 2% of voting rights among traded companies. Moreover, controlled firms cannot exercise the voting rights eventually owned in their parent company. Hence, it is simple to identify the control chain once ownership data are available for all companies. An example of a common control structure is represented in Fig. 1. The figure shows the structure of the Pesenti group at the end of 1995. The Pesenti family is defined as the controlling shareholder because an individual, Rosalia Radici Pesenti, owns the controlling stake in the holding company (44.87%).

The observations have been classified into four categories according to the information available on the controlling shareholder. A firm is classified as foreign-controlled in a given year if the ultimate owner is a foreign company (106 observations); and is defined as state-controlled if the ultimate owner is the state or a government agency (216 observations). In 55 observations the controlling party is a group of banks, since the company defaulted and the banks took control.

The rest of the observations (1,234) have one or more private Italian citizens or an Italian family as the ultimate owner (I will call this last set family-controlled firms).

In Table 1, two variables describe the firm ownership structure. The *fraction of cash-flow rights owned by the largest shareholder* is defined as the product of the fraction of voting rights along the controlling path. This number is corrected for nonvoting shares by assuming that the ultimate owner owns none of them. For example in Fig. 1, the fraction of cash-flow rights owned by the Pesenti family in Italmobiliare is 29.4%, while the fraction of voting rights is 44.8% because about a third of Italmobiliare's equity is made up of nonvoting shares. The fraction of cash-flow rights owned by the Pesenti family in Italcementi is 9.5%, which is the product of 29.4% (the fraction of cash-flow rights directly owned by the family in the holding company Italmobiliare) and 32.4% (the fraction of cash-flow rights owned by Italmobiliare in Italcementi). The *fraction of voting rights controlled by the controlling shareholder* is computed as the minimum share of voting rights controlled by the controlling shareholder along the control path.

The rationale for this definition is explained as follows with the help of Fig. 1. Let's consider the second layer firm Italcementi and try to evaluate the voting rights of the Pesenti family in this company. The Pesenti family controls Italcementi through the holding company Italmobiliare. In order to exercise the voting rights that Italmobiliare owns in Italcementi, the Pesenti family needs to exercise its voting rights on Italmobiliare. This represents the burden of having an extra layer of control. Even if Italmobiliare owns 54.26% of the voting rights in Italcementi, the Pesenti family owns only 44.87% of the voting rights in Italmobiliare. Hence, the effective voting power of the Pesenti family in Italcementi is equal to 44.87%. The logic of this example simply generalizes to more complex control structures. In the case of a syndicate among shareholders, the controlling party is assumed to control all the voting rights that belong to the syndicate.

As measure of executive turnover, I use the fraction of top executives replaced within a year. This is preferable to the CEO turnover because in Italian firms all top executives (*Presidente*, *Vice-Presidente*, and *Amministratore delegato*) have similar executive power and there is no clear ranking in authority among them (especially between *Presidente* and *Amministratore delegato*). Also, some firms do not have a CEO; others have many CEOs. The data have been cleaned of the cases of retirement identifiable through LEXIS-NEXIS (42 observations are relabeled as non-turnover in this way). However, Italian companies do not provide information about the age and tenure of their executives in the annual report. Since I was able to collect data on age and tenure for only a subset of the executives, I exclude these two variables from the regressions.[2] In order to reduce the biases due to potential mislabeling of individual cases of turnover, in the regressions I use as dependent variable a dummy variable (*Top executive turnover*) that takes value one in year t when at least half of the top executives are replaced between t and t+1.

Two alternative measures of performance are used in the analysis: the change in the ratio of earnings before interest and taxes (EBIT) and total assets between t-1 and t and the annual stock return between t-1 and t. The former is the measure of performance used in Denis and Kruse (2000). The latter one, the stock return, is the standard measure of performance used in studies of executive turnover since the contributions by Warner, Watts, and Wruck (1988) and Weisbach (1988). In unreported regressions I performed the analysis with the addition of lagged measures of performance without finding any difference.

[2] When the econometric analysis is performed on the subset of observations with complete data on age and tenure, representing about a third of the total sample, I find no change in the main results and I find that the coefficients on age and tenure are not significantly different from zero.

As illustrated in Table 1, all companies in the sample have a controlling shareholder, that is a shareholder who controls a fraction of voting rights larger than 20%. The fraction of voting rights held by the controlling shareholder is on average 56%, while it ranges between 20.1% and 100%. There is a large variability in the fraction of cash-flow rights owned by the controlling shareholder. The average is 40%, while the minimum is 0.3% and the maximum 99.4%. Disciplinary turnover (measured as top executive turnover) happens in 14% of the observations. The median number of top executives in the sample is three, while the median size of the board is ten directors.

4. Empirical analysis

In this section, I will test each of the hypotheses discussed in Section 2, starting with the relationship between turnover and performance in the whole sample.

4.1. Turnover and performance

In Table 2, the observations are classified according to the ultimate owner in family-, state-, foreign-, and bank-controlled firms. The table shows that turnover is negatively related to performance in the sample as a whole. More precisely, the observations are sorted into quintiles according to the firm's past performance. I then compare turnover between the worst quintile and the best one. In Panel A, performance is proxied by the change in the ratio of EBIT over assets, while in Panel B is measured by the stock return.

In the whole sample, the probability of top executive turnover is significantly lower if performance is good than if is bad. In Panel A, the average turnover increases from 14.5% in best performing firms to 22.5% in worst performing ones. Similarly, in Panel B, turnover increases

from 14.5% in best performing firms to 19.3% in worst performing ones. In Panel A, the average turnover decreases monotonically as performance improves across quintiles with the significant jump being the one between the first and second quintiles. In Panel B, the average turnover is not monotonic and the third and fourth quintiles are not significantly different from the first one, as far as turnover is concerned.

When examining turnover across types of ultimate owner, one finds a negative and significant relationship between turnover and performance according to either performance measure only for family-controlled firms. It is interesting to notice that in bank-controlled firms turnover is significantly higher after a good performance than otherwise (when stock return is the measure of performance). This result can be explained by noticing that bank-controlled firms are firms that recently defaulted. For troubled companies, the replacement of the management could be a positive signal that liquidation can be avoided and the firm can emerge from reorganization (see, e.g., Gilson, Kose, and Lang, 1990).

Table 3 presents the results of two regressions that characterize the relationship between turnover and performance after controlling for year and industry dummies and firm size. Interactive dummies allow for different coefficients across the types of ultimate ownership. In family-controlled firms, the relationship between turnover and performance is strongly significant and negative. For the remaining firms, the results in Table 2 are confirmed, although in a weaker sense. While the relationship between turnover and performance is weak in all but family-controlled firms, the regression fails to find significant differences across ultimate owners. The only exception is the case of bank-controlled firms for which the sensitivity of turnover to performance is significantly different from family-controlled firms when performance is proxied by the stock return.

In Table 3, the coefficients of the probit model are transformed to simplify their economic interpretation. The reported coefficients represent the change in probability for an infinitesimal change in each independent variable evaluated at the mean values of the regressors. All probit regressions throughout the paper will be reported with this transformation. Hence, in Table 3 the coefficient on the independent variable "Performance" in regression (1) indicates that a decrease in earnings over assets by 10% (or 0.1) increases the probability of turnover in an average firm by 6.5%. The sensitivity of turnover to performance is much weaker in regression (2): a past stock return equal to –10% increases turnover only by 0.6%.

In the rest of the paper I restrict the analysis to the set of family-controlled firms in order to study a large and homogeneous sample.

4.2. Turnover and control

Table 4 evaluates the impact of the separation of ownership and control on turnover. For these purposes, I have created four dummy variables.

The first one (*owner-manager*) identifies the cases in which a member of the family of the controlling shareholder sits as top executive of the firm. I classify the top executives depending on whether they belong to the family of the controlling shareholder. To do so, I searched all available sources for each executive in the sample to find his/her relationship with the controlling shareholder. For example, in Fig. 1, only one of the Pesenti's executives belongs to the Pesenti family: Giampiero Pesenti, son of the controlling shareholder, Rosalia Radici Pesenti. To be consistent with the definition of turnover, the *owner-manager* dummy variable is set equal to one when at least half of the top executives belong to the family of the controlling shareholder. This

happens in about 30% of the observations. The purpose of this first dummy variable is to address the Entrenchment Hypothesis described in Section 2.

The second dummy variable (*owner with high incentives*) identifies the companies in which the controlling shareholder owns a large fraction of the cash-flow rights. More specifically, I define as such all companies in which the controlling shareholder owns more than 50% of the cash-flow rights, a requirement that roughly selects 30% of the observations. The purpose of this second dummy variable is to address the Incentive Hypothesis.

According to the Outside Monitoring Hypothesis discussed in Section 2, turnover should be more sensitive to performance when the company has large minority shareholders. The intuition is that large minority shareholders can play an active role in corporate governance. This hypothesis is tested in Table 4 by using two alternative proxies for minority shareholders. The first is an indicator of whether the second largest shareholder owns a fraction larger than 5% of the voting rights (*large minority shareholder*). This happens in about 40% of the observations. The second one identifies cases where the firm is controlled by a voting syndicate, as happens in 15% of the observations (*voting syndicate*).

The methodology I use to address the hypotheses above is to run a probit regression with the dummies just described entering both additively and in interaction with the measure of performance. Eq. (1) describes the probit model estimated in Table 4:

$$\begin{aligned}\Pr(Turnover_{it}=1) = \Phi(&\alpha_t + \beta_0 * Performance_{it} + \sum_{j=1}^{4}\left(\beta_j * Performance_{it} + \gamma_j\right) * D^j{}_{it} \\ &+ \delta * Size_{it} + \phi * Industry\,dummy_{it} + \varepsilon_{it})\end{aligned} \quad (1)$$

where Φ(.) is the cumulative gaussian distribution, α_t is the year dummy, and firm's size and an industry dummy (firms are classified in nine industries according to the official classification on the Milan stock exchange) are introduced as control variables.[3]

In the regression, I cannot control for firm effects, as with traditional linear models, because a fixed-effect estimator is not available in a probit model. Since the observations are likely not to be independent, the standard errors are corrected for correlation and clustering at the firm level. In an unreported regression, I estimated a linear OLS model with fixed-effects at firm level, finding similar results to the ones reported.

The results in Table 4 are as follows. Regressions (1) and (2) show that turnover does not always decrease with performance when the latter is proxied by the change in earnings. Specifically, in regression (1), a 10% decrease in earnings over assets increases the probability of executive turnover by 5.8%. However, in regression (2), the increase in the probability of executive turnover for a similar change is only 2.8% and is not statistically significant.

When the controlling shareholder sits as top executive of the firm, the relationship between turnover and performance becomes even weaker, as shown by the positive (although not significant) coefficient on the first interactive term. The level of turnover is also significantly lower when a member of the family of the controlling shareholder sits among the top executives. The probability of executive turnover decreases with 6.5% when the controlling shareholder is a top executive. These results are weakly in favor of the Entrenchment Hypothesis.

[3] As already mentioned, the coefficients reported in the tables are not the α, β, γ, δ, and ϕ in Eq. (1) because they have been transformed to represent the change in probability for an infinitesimal change of each independent variable evaluated at the mean values of the data.

The first two regressions also show that the sensitivity of turnover to performance increases significantly when the controlling shareholder owns a large stake in the firm. If the largest shareholder owns more than 50% of the cash-flow rights, a 10% decrease in earnings over assets increases turnover by 10%. This result is in favor of the Incentive Hypothesis.

Regarding the Outside Monitoring Hypothesis, regression (1) suggests that the presence of a large minority shareholder does not increase the sensitivity of turnover to performance. However, regression (2) shows that a voting syndicate does indeed increase the sensitivity of turnover to performance. After a 10% decrease in earnings, executive turnover is 7% more likely if the firm is controlled via a voting syndicate than otherwise. The intuitive explanation for these results is that minority shareholders have the power to play a governance role (and they do so) only when control is not locked in the hands of the controlling shareholder. That is, only if the controlling shareholder needs a voting syndicate to control the firm.

Regressions (3) and (4), in which performance is proxied by the stock return, do not produce any significant coefficient on the interactive terms. The signs on the coefficients are consistent with the Outside Monitoring Hypotheses, but against the Entrenchment and the Incentive Hypothesis. The results in these two regressions can be explained by the fact that the stock return is not likely an ideal measure of performance in the sample of Italian firms. The stock return is a noisy measure of performance for many companies in the sample because many stocks suffer a lack of liquidity and infrequent trades.

4.3. Valuation

An alternative procedure to assess the efficiency of a governance regime is to evaluate the impact of ownership structure on firm valuation, as done by Morck, Shleifer, and Vishny (1988)

and McConnell and Servaes (1990). This analysis is performed in Table 5. The results of four fixed-effect regressions are represented there: regressions (1) and (2) include firm effects; regressions (3) and (4) include only industry effects but report standard errors corrected for clustering at the firm level. The rationale to present the second pair of regression together with the first one is that controlling for firm effects, as in (1) or (2), may reduce the significance of the coefficients because it eliminates most of the variability in the firm ownership structure, which is relatively constant across years. As done in Table 4, in regressions (1) and (3) the power of minority shareholders is measured by the dummy variable *large minority shareholders*; in regressions (2) and (4) minority shareholders' power is proxied by the dummy variable *voting syndicate*.

The results on Q match one-to-one those obtained in the analysis of turnover: firms where turnover is unaffected by performance are discounted by the market. Indeed, Table 5 shows that Q is significantly smaller (between 8% and 11% discount) for firms in which relatives of the controlling shareholder are among the top executives. This is consistent with the results in Table 4 and with the Entrenchment Hypothesis. Table 5 also shows that Q is significantly larger when control is partially contestable as in the case in which a voting syndicate controls the firm (between 14% and 40% premium). This result is consistent with the findings in Table 4 and with the Outside Monitoring Hypothesis. Finally, the table shows that Q increases only weakly with the fraction of cash-flow rights owned by the controlling shareholder: if the controlling shareholder owns more than 50% of the cash-flow rights, the firms trades at a premium estimated between 0% and 8%. This final result supports the Incentive Hypothesis. Consistent with the finding in Table 4, the dummy for large minority shareholder does not affect the Q ratio, as shown by regressions (1) and (3) of Table 5.

4.4. More on the Entrenchment Hypothesis

An alternative test of the Entrenchment Hypothesis is to measure directly the probability of turnover and its sensitivity to performance (for executives who belong to the family of the controlling shareholder and those who do not), and compare them. This is done in Table 6.

The executives in the sample are classified into two groups: *family-executives* (that is, firm's executives who belong to the family of the controlling shareholder of the firm) and *other executives* (that is, executives who do not belong to the family of the controlling shareholder). For each group, year, and company, I compute the fraction of executives replaced in one year. The average turnover is reported in the third column of Table 6, Panel A, which states that turnover is significantly higher for other managers (18.4%) than for owner-managers (6.5%). Similarly, the sensitivity of turnover to past performance is significantly higher for other managers than for owner-managers. In Panel B, the turnover of family and non-family executives is compared by running a regression on both sets of data with a dummy variable (entering both additively and in interaction with performance) identifying whether the data on turnover refers to family or other executives. The findings are that both the level of turnover and its sensitivity to performance is significantly lower for family managers. In regression (1), a 10% decrease in earnings over assets implies a 6% increase in the probability of turnover for a non-family executive and only a 2% increase for a family executive. In regression (2), a realization of the stock return equal to –10% causes the probability of turnover to increase by 0.6% for non-family managers and only by 0.3% for family ones. These results suggest that, when a company is in trouble, non-family managers are likely to be replaced, but family managers are likely to stay, that is, family managers are entrenched.

4.5. International comparison

This section compares the findings on Italy with evidence available on other countries. Few studies have produced results that are directly comparable across countries because of differences in the econometric procedures and in the performance and turnover measures used. A partially comparable set of coefficients can be obtained from Kaplan (1994a and b) for Germany, Japan, and the US. In Table 7, I reproduce the results in these two papers and add comparable results obtained from the sample of (family-owned) Italian firms.

The coefficients on Germany are extracted from Kaplan (1994b), Table 2. The measure of turnover is the fraction of members of the management board replaced in one year. Similarly, turnover in the Italian sample is measured by the fraction of top executive replaced in one year. The results on Japan and US are from Kaplan (1994a), Table 2, where turnover is measured over a two-year period and refers to representative directors in Japan and executive directors in the US. Due to the difference in the time horizon of the two turnover measures, the results are only partially comparable. Indeed, both turnover and performance are computed over a two-year period for Japan and the US, and over a one-year period for Germany and Italy.

The results in Table 7 show that turnover is correlated with performance in Italy as much as in the other countries. This finding holds across all performance measures. Also, the magnitude of the coefficients is not significantly different across countries. However, in the Italian sample performance explains a much smaller fraction of the variability in turnover than in Germany, Japan and US. The R^2 ranges between 2% and 4% in Italy, between 12% and 15% in Japan and the US, and between 5% and 10% in Germany. This suggests that, with respect of the other countries, executive turnover in Italy is explained by other factors than performance, such as

ownership and control structure, personal relationships, family ties, and nonobservable performance measures.

5. Extensions

So far, the paper has evaluated the impact of the firm's ownership structure on top executive turnover. This section considers two extensions. First, more than half of the companies traded on the Milan stock exchange belong to pyramidal groups. It is interesting to see whether the pyramidal structure affects the dynamics of the executive turnover in specific ways not captured by the analysis in Section 4. The second extension explores whether the sensitivity of turnover to performance is due to internal or external governance forces.

5.1. Turnover in pyramidal groups

This section evaluates the impact on turnover and valuation of the firm organizational structure distinguishing between stand-alone firms and companies that belong to pyramidal groups.

Table 8 provides detailed information on the organizational structure of family-controlled firms. The observations are divided into four categories: (1) stand-alone firms and firms that belong to horizontal groups (that is, firms that are not controlled by any other traded company and do not own a controlling stake in any other traded company); (2) firms that are at the top of a pyramidal group (that is, firms that are not controlled by any other traded company and do control at least one other traded company); (3) firms that are at level 2 of a pyramidal group (that is, firms that are directly controlled by a company of type 2); and (4) firms that are at level 3 or higher of a pyramidal group (that is, firms that are controlled directly or indirectly by a company

of type 3). The table presents the mean of a selection of variables conditional on the type of ownership structure.

About 55% of the observations in the sample come from pyramidal groups. The remaining firms in the sample belong to horizontal groups (42 observations only) or are stand-alone firms (all the rest). The first impact of the pyramidal structure is to create a wedge between the fraction of cash-flow and voting rights owned by the controlling shareholder. As shown in Table 8, the separation of voting and cash-flow rights (as measured by the ratio of voting to cash-flow rights) increases from 1.4 at the top of the pyramid to seven at the bottom of it. The difference between voting and cash-flow rights in categories (1) and (2) is due to nonvoting shares (*azioni di risparmio*) and voting syndicates.

Regarding the top executives, turnover is significantly lower at the top of pyramidal groups than in all other firms. At the top of a pyramid, the probability that at least half of the executives are replaced in one year is less than 6%. This suggests the possibility of entrenchment. Moreover, the table shows that members of the family of the controlling shareholder are more likely to sit as top executives in firms at the top of a pyramid. Turnover at the bottom of a pyramid is significantly higher (about 16%) than at the top. One possible explanation is that the management of subsidiaries is replaced after good performance and promoted to higher layers of the pyramidal group. In order to address this concern, I relabeled as nonturnover all cases in which an executive leaves a company to move to another traded company within the same group. I will refer to this variable as *modified top executive turnover*. Table 8 suggests that turnover according to this measure is significantly lower. Hence, I find some support of the hypothesis that the higher turnover at the bottom of the pyramid is due to the dynamics in the internal managerial market in that well-performing managers are promoted to higher level of the pyramid while poor-

performing ones are replaced. In the internal managerial market, the firms at the bottom of the pyramid work as a screening device for managers. They help the controlling shareholder select the best managers and discard the bad ones. An important caveat of this result is that I cannot control for cases in which the manager moves to a privately held company that belongs to a group, because I do not have data on nonlisted firms.

Table 8 also reports the average Q ratio for each type of ownership structure. Q is significantly lower at the bottom and at the top of pyramidal groups than in stand-alone firms. Interestingly, the Q ratio does not decrease monotonically as one proceeds down the pyramid. On the other hand, the voting premium is higher at the top than at lower layers of the pyramid (as also shown by Nicodano, 1998). This suggests that the reason why controlling shareholders entrench themselves as executives of the holding companies is to enjoy higher private benefits of control.

Each of the hypotheses suggested by the discussion of Table 8 is addressed more carefully in Tables 9 and 10. Table 9 tests whether turnover follows different dynamics in firms that belong to pyramidal groups than in stand-alone ones. Table 10 does the same for the Q ratio.

The regressions reported in Table 9 show that the sensitivity of turnover to performance is not significantly different in pyramidal groups and in stand-alone firms. This result holds independently of the measure of performance (change in earnings or stock return) and turnover (top executive turnover or modified top executive turnover) used. When looking at the sensitivity of turnover to performance within pyramids (by testing the hypothesis that the sum of the coefficients on the regressors *Performance* and *Performance* * *Pyramidal level* is equal to zero), turnover is unaffected by performance at the top of a pyramid and at the bottom of it, when the accounting measure of performance (change in EBIT) is used.

The weak results found in Table 9 suggest that the firm's organizational structure does not affect the sensitivity of turnover to performance directly. As shown in Section 4, the latter is affected directly by the firm ownership and control structure as measured by the fraction of cash-flow rights owned by the controlling shareholder, by the presence of a voting syndicate, and by whether the controlling shareholder is also a top executive in the firm. In an unreported regression, I added these three indicators to the regressions presented in Table 9. The result is that the coefficients on the variables describing the organizational structure (namely, the pyramidal level) are not significant, while those capturing directly the firm's ownership and control structure are.

Table 10 shows that there is a significant discount (between 13% and 27%) in firms at the bottom of a pyramid (those in the category "Pyramidal level 3+"). This is consistent with the recent theoretical literature on pyramidal groups (see, e.g., Wolfenzon, 1998; Bebchuk, Kraakman, and Triantis 1998). Since this difference does not show up in the analysis of the determinants of the executive turnover, the source of the agency costs created by the separation of ownership and control is to be found in other areas (like, for example, the firm's investment policy).

5.2. The market for corporate control

This section evaluates the importance of the external forces in the Italian corporate governance system. To do so, I run a simple regression of turnover on past performance where the changes of the controlling shareholder are identified by a dummy variable that is introduced both additively and in interaction with performance. If the market for corporate control plays a role in the corporate governance regime, we expect the interactive variable to be negative and

significant, as the sensitivity of turnover to performance should increase when there is change of control.

The results are presented in Table 11. As in previous tables, I use the change in earnings over assets and the stock return as alternative measures of performance. In both regressions, I find that changes of control increase the level of turnover by more than 50%. However, the increase in executive turnover due to changes of control is largely independent of past performance. Indeed, the sensitivity of turnover to performance increases with a change in control. For example, in regression (1) the interaction term of performance and change of control is negative and significant. A 10% decrease in earnings over assets implies a 13% increase in the probability of executive turnover if there is a change of control. By contrast, the increase in the probability of executive turnover equals only 4% if there is no change of control. In regression (2), where performance is measured by the stock return, the coefficient on the interaction term is non significantly different from zero.

In a regression that is not reported, I find a higher probability of executive turnover and sensitivity of turnover to performance in forced changes of control (i.e., those changes of control due to the firm's default) than in voluntary ones (i.e., those due to the sale of the controlling stake). However, the difference between forced and voluntary changes of control is not significantly different from zero. This latter finding can be due to the relatively smaller number of cases of forced changes of control. Since out of the 65 cases of changes of control, 16 qualify as forced and 49 as voluntary.

Overall, the results in this section suggest that the market for corporate control does not play an important role in the corporate governance regime operating in Italy. The main reason is

probably that control is not really contestable, since all firms in the sample have a controlling shareholder.

6. Conclusion

This paper provides direct evidence on the performance of the corporate governance regime operating in countries characterized by low legal protection for investors, firms with large controlling shareholders, and some separation of ownership and control created via pyramidal groups and nonvoting shares. Studying Italy, a country that shares all these features, I find that the probability of turnover and its sensitivity to performance are significantly lower for top executives who belong to the family of the controlling shareholder than for other executives. This result is evidence that controlling shareholders are entrenched. Second, turnover is more sensitive to performance the larger the fraction of cash-flow rights owned by the controlling shareholder. This result suggests that governance improves when the controlling shareholder's objectives are more aligned with those of minority shareholders. Third, turnover is more sensitive to performance when control is, to some extent, contestable, as in the case of a voting syndicate. Fourth, aside from the role of a voting syndicate, large minority shareholders do not seem to improve governance.

These findings are confirmed by an analysis of the firms' Q ratio. I find that Q increases with the fraction of cash-flow rights owned by the controlling shareholder, is significantly smaller for firms in which controlling shareholders are among the top executives, is significantly larger when a voting syndicate controls the firm, and is unaffected by the presence of large minority shareholders. The combined results on executive turnover and Q suggest a one-to-one

correspondence between bad governance (that is, low sensitivity of turnover to performance) and low valuation (that is, low Q).

The paper also provides evidence on pyramidal groups. I find that executive turnover is not significantly affected by the firm's organizational structure. Indeed, the sensitivity of turnover to performance is not significantly different in stand-alone firms and in firms that belong to pyramidal groups. Within pyramidal groups, turnover is very low in the holding company, while it is relatively high in the subsidiaries. This result suggests that pyramidal groups help the controlling shareholder select the best managers whereby well-performing managers are promoted to higher level of the pyramid while poor-performing ones are replaced. Finally, there is a significant discount in firms at the bottom of a pyramid since the Q ratio is between 13% and 27% lower in those firms if compared to similar stand-alone companies. This is consistent with the recent theoretical literature on pyramidal groups, suggesting that the separation of ownership and control created by these organizational structures is likely to generate large agency problems because of the conflict of interests between controlling and minority shareholders.

What can be done to improve corporate governance in a country like Italy? The finding that voting syndicates increase the sensitivity of turnover to performance and increase the firm's Q suggests that the creation of a more competitive and active market for corporate control may be the answer. However, an effective market for corporate control requires control to be contestable, otherwise control can be transferred only with the consent of the controlling shareholder or if the company defaults. Consistent with this view, the results in this paper suggest that the market for corporate control still plays a very limited corporate governance role. According to Bebchuk (1999), large shareholders stay firmly in control wherever control is extremely valuable. Ultimately, as argued by La Porta, Lopez-de-Silanes, and Shleifer (1999), control is valuable

because low legal protection for investors enables the controlling shareholder to enjoy large private benefits. This suggests that the solution lies at a political level in new legislation to improve the quality and the enforcement of investor protection. The so-called Draghi Reform introduced in Italy in 1998 effectively increased the protection of minority shareholders and may be one step in this direction.

The diffusion among firms of codes of best practice is another way to improve corporate governance. Their effectiveness has been testified by a recent paper on the UK. Employing a methodology similar to the one in this paper, Dahya, McConnell, and Travlos (2000) show that the Cadbury report in the United Kingdom improved corporate governance by increasing executive turnover and its sensitivity to performance, especially in the firms that adopted the code. A similar phenomenon could take place in Italy and other countries, given the increasing attention to corporate governance throughout the world and the growing pressure from the international capital markets.

Table 1.
Descriptive statistics: sample of all firms traded on the Milan Stock Exchange.

The table reports the number of observations, the mean, median, standard deviation, minimum, and maximum for some of the variables used in the analysis. *Top executive turnover* is a dummy variable that takes value 1 in year t if at least half of the top executives are replaced between t and t+1. The sample includes all companies traded on the Milan Stock Exchange, excluding banks, insurance, and pure financial companies, in the years 1987 through 1996. The number of observations is 1,611.

Variable	**Mean**	**Median**	**Std. Dev**	**Min**	**Max**
Ownership structure					
Fraction of cash flow rights owned by controlling shareholder (%)	38.0	40.5	25.0	0.3	99.4
Fraction of voting rights controlled by controlling shareholder (%)	56.4	53.8	14.7	20.1	100
Board composition					
Number of directors	10.4	10	3.3	3	25
Number of top executives	3.34	3	0.68	1	6
Turnover data					
Fraction of top executives replaced in a year (%)	16.9	0	25.3	0	100
Top executive turnover	0.14	0	0.35	0	1

Table 2.
Turnover and performance: family-, state-, foreign-, and bank-controlled firms.

The table reports the average fraction of top executives replaced by quintiles of performance. The observations are sorted in five classes according to their past performance (1=Low, 2, 3, 4, 5=High). The average turnover is compared between the firms with low performance and those with high performance using a two-tailed t-test. The observations are also classified according to the type of ultimate owner (a family, the state, a foreign company, a bank). *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Zero denotes no significant difference. In the first panel performance is measured by the change in EBIT/Total Assets between t-1 and t; in the second panel performance is measured by the excess stock return between t-1 and t.

Panel A. Observations are sorted according to change in EBIT / Total Assets

Average fraction of top executives replaced	1 = Low performance	2	3	4	5 = High performance	Test: (1)=(5)
All firms	22.5	16.6	15.4	15.3	14.5	***
	[323]	[322]	[322]	[322]	[322]	
Family-controlled firms	21.6	13.5	13.5	13.9	12.6	***
	[259]	[250]	[222]	[243]	[260]	
State-controlled firms	34.6	34.1	19.8	17.2	22.4	0
	[26]	[46]	[74]	[44]	[26]	
Foreign-controlled firms	20.0	14.9	20.6	22.3	19.9	0
	[30]	[14]	[17]	[22]	[23]	
Bank-controlled firms	21.9	18.1	16.7	23.1	28.2	0
	[8]	[12]	[9]	[13]	[13]	

Panel B. Observations are sorted according to Stock return

Average fraction of top executives replaced	1 = Low performance	2	3	4	5 = High performance	Test: (1)=(5)
All firms	19.3	15.3	18.0	17.6	14.4	**
	[320]	[320]	[319]	[320]	[319]	
Family-controlled firms	19.1	13.7	15.2	15.4	12.0	***
	[238]	[245]	[246]	[254]	[239]	
State-controlled firms	22.9	21.4	31.5	22.4	22.0	0
	[35]	[37]	[54]	[42]	[47]	
Foreign-controlled firms	19.6	16.3	13.9	31.9	17.6	0
	[28]	[21]	[12]	[18]	[25]	
Bank-controlled firms	14.0	23.0	17.9	33.3	37.5	**
	[19]	[17]	[7]	[6]	[8]	

Table 3.
Turnover and performance: regression analysis of the whole sample.

Probit regressions. The dependent variable (*Top executive turnover*) is a dummy variable that takes value 1 in year t if at least half of the top executives are replaced between t and t+1. *Size* is the logarithm of total assets (in millions of Liras). *Performance* is the change in the ratio of EBIT and total assets between year t-1 and year t in regression (1) and the stock return between t-1 and t in regression (2). Robust standard errors (in parenthesis) control for correlation and clustering at firm level. Year and industry dummies are included but their coefficients are not reported. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. The reported coefficients are transformed to represent the change in probability for an infinitesimal change in each independent variable evaluated at the mean values.

	Performance = Change in EBIT / TA	Performance = Stock return
	(1)	(2)
Performance	-0.646***	-0.063**
	(0.188)	(0.026)
Performance * State ownership dummy	-0.158	0.008
	(0.467)	(0.070)
Performance * Foreign ownership dummy	0.447	0.055
	(0.422)	(0.058)
Performance * Bank ownership dummy	0.834*	0.394***
	(0.481)	(0.153)
State ownership dummy	0.098***	0.103***
	(0.034)	(0.034)
Foreign ownership dummy	0.038	0.034
	(0.040)	(0.040)
Bank ownership dummy	0.010	0.051
	(0.038)	(0.054)
Size	-0.002	-0.004
	(0.008)	(0.006)
Pseudo R^2	0.050	0.044
N. observations	1,611	1,598

Table 4.
Turnover and performance in family-controlled firms.

Probit regressions. The dependent variable (*Top executive turnover*) is a dummy variable that takes value 1 in year t if at least half of the top executives are replaced between t and t+1. *Size* is the logarithm of total assets (in millions of Liras). *Performance* is the change in the ratio of EBIT and total assets between year t-1 and year t in regressions (1) and (2), and the stock return between t-1 and t in regressions (3) and (4). *Owner-manager* is a dummy variable that identifies the cases when at least half of the top executives belong to the family of the controlling shareholder. *Owner with high incentives* is a dummy variable that identifies the cases when the controlling shareholder owns more than 50% of the cash-flow rights. *Voting syndicate* is a dummy variable that takes value 1 when the firm is controlled by a voting syndicate. *Large minority shareholders* is a dummy variable that takes value 1 when the second largest shareholder owns a fraction larger than 5% of the firm's voting rights. Robust standard errors (in parenthesis) control for correlation and clustering at firm level. Year and industry dummies are included but the coefficients are not reported. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. The reported coefficients are transformed to represent the change in probability for an infinitesimal change in each independent variable evaluated at the mean values.

	Performance = Change in EBIT / TA		Performance = Stock return	
	(1)	(2)	(3)	(4)
Performance	-0.581***	-0.283	-0.107***	-0.097***
	(0.211)	(0.201)	(0.032)	(0.032)
Performance * Owner-manager dummy	0.387	0.279	-0.011	-0.007
	(0.395)	(0.413)	(0.058)	(0.058)
Performance * Owner with high incentives dummy	-0.505*	-0.702**	0.059	0.051
	(0.280)	(0.295)	(0.044)	(0.045)
Performance * Large minority shareholders dummy	0.136		0.003	
	(0.361)		(0.055)	
Performance * Voting syndicate dummy		-0.741**		-0.062
		(0.357)		(0.060)
Owner-manager dummy	-0.065***	-0.065***	-0.069***	-0.069***
	(0.018)	(0.019)	(0.018)	(0.018)
Owner with high incentives dummy	-0.002	-0.000	0.013	0.012
	(0.019)	(0.021)	(0.021)	(0.021)
Large minority shareholders dummy	-0.018		-0.019	
	(0.020)		(0.019)	
Voting syndicate dummy		-0.028		-0.012
		(0.024)		(0.028)
Size	-0.008	-0.007	-0.010	-0.009
	(0.007)	(0.007)	(0.007)	(0.007)
Pseudo R^2	0.071	0.074	0.056	0.056
N. observations	1,234	1,234	1,222	1,222

Table 5.
Analysis of the firm's Q ratio.

The dependent variable is the firm's Q ratio. *Size* is the logarithm of total assets (in millions of Liras). *Owner-manager* is a dummy variable that identifies the cases when at least half of the top executives belong to the family of the controlling shareholder. *Owner with high incentives* is a dummy variable that identifies the cases when the controlling shareholder owns more than 50% of the cash-flow rights. *Voting syndicate* is a dummy variable that takes value 1 when the firm is controlled by a voting syndicate. *Large minority shareholders* is a dummy variable that takes value 1 when the second largest shareholder owns a fraction larger than 5% of the firm's voting rights. Robust standard errors (in parenthesis) control for correlation and heteroskedasticity. Year dummies are included but the coefficients are not reported. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	(1)	(2)	(3)	(4)
Owner-manager dummy	-0.067*	-0.116***	-0.092***	-0.083***
	(0.036)	(0.044)	(0.027)	(0.028)
Large minority shareholders dummy	-0.072		0.000	
	(0.048)		(0.027)	
Voting syndicate dummy		0.400***		0.141*
		(0.117)		(0.083)
Owner with high incentives dummy	0.026	0.080*	0.015	-0.006
	(0.052)	(0.048)	(0.031)	(0.032)
Size	-0.059**	-0.068***	-0.092***	-0.092***
	(0.025)	(0.024)	(0.027)	(0.027)
Fixed effects	Industry	Industry	Firm	Firm
Adjusted R^2	0.199	0.273	0.654	0.656
N. observations	1,234	1,234	1,234	1,234

Table 6.
Family executives versus other executives.

Panel A reports the average turnover and the sensitivity of turnover to performance for owner-managers (executives who belong to the family of the controlling shareholder) and other managers. Standard deviations are in parenthesis. Performance is measured by the change in EBIT/Total Assets and by the stock return. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. Panel B presents the result of an OLS regression with the fraction of executives replaced in a year as dependent variable. *Size* is the logarithm of total assets (in millions of Liras). *Family-executive* is a dummy variable that identifies the executives belonging to the family of the controlling shareholder. Robust standard errors (in parenthesis) control for correlation and clustering at firm level. Year and industry dummies are included but the coefficients are not reported. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

Panel A. Descriptive statistics

	Number of observations	Average turnover (%)	Correlation between turnover and performance:	
			Change in EBIT	Stock return
Family-executives	805	6.5 (23.4)	-0.061*	-0.015
Other executives	1,184	18.4 (29.6)	-0.119***	-0.053*

Panel B. Regression analysis

	Performance = Change in EBIT / TA	Performance = Stock return
	(1)	(2)
Performance	-0.572***	-0.060***
	(0.174)	(0.021)
Performance * Family executive dummy	0.316*	0.033*
	(0.171)	(0.020)
Family executive dummy	-0.112***	-0.111***
	(0.011)	(0.012)
Size	-0.007	-0.009
	(0.006)	(0.006)
Adjusted R^2	0.060	0.051
N. observations	1,989	1,977

Table 7.
International comparison.

OLS regressions. The dependent variable is the fraction of top executives replaced in a year for Italy and the fraction of members of the management board replaced for Germany. For Japan the dependent variable is the fraction of representative directors replaced in a two-year period and for the US the fraction of executive directors replaced over the same horizon. Stock returns, sales growth, earnings growth, and negative net income dummies are used as performance measures. A separate regression is run for each performance measure where the latter enters contemporaneously and once lagged. For Italy and Germany, one lag is one year; for Japan and the US, one lag is two years. In Panel D for Japan and US, the regression does not contain the lagged negative income dummy. Robust standard errors are in parenthesis. Year dummies are included but the coefficients are not reported. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. The results on Germany are from Kaplan (1994b), Table 2, p. 150; the results for Japan and the US are from Kaplan (1994a), Table 2, pp. 526-527.

	Italy	Germany	Japan	US
A. Stock return				
Contemporaneous	-0.034	-0.080*	-0.056	-0.072**
	(0.026)	(0.046)	(0.038)	(0.029)
Once lagged	-0.043**	-0.103**	-0.100***	-0.081***
	(0.022)	(0.046)	(0.037)	(0.030)
R^2	0.020	0.102	0.139	0.148
B. Sales growth				
Contemporaneous	-0.063***	-0.066	-0.177**	-0.171***
	(0.015)	(0.083)	(0.076)	(0.083)
Once lagged	-0.064**	0.057	-0.064	0.031
	(0.022)	(0.086)	(0.076)	(0.050)
R^2	0.040	0.054	0.133	0.150
C. Change in earnings/assets				
Contemporaneous	-0.160	0.494	-0.121	-0.208
	(0.197)	(0.376)	(0.460)	(0.147)
Once lagged	-0.636***	0.205	-0.707*	-0.219
	(0.173)	(0.485)	(0.447)	(0.152)
R^2	0.030	0.058	0.127	0.130
D. Negative net income				
Contemporaneous	0.035*	0.095***	0.148***	0.074***
	(0.020)	(0.034)	(0.035)	(0.028)
Once lagged	0.066***	-0.042		
	(0.022)	(0.028)		
R^2	0.026	0.059	0.155	0.137
Mean dependent variable	0.152	0.099	0.285	0.234

Table 8.
Separation of ownership from control in family-controlled firms.

The table reports conditional means. The observations are classified into four categories according to the structure of control. The first category comprises stand-alone firms and firms that belong to horizontal groups, the other three categories are for firms that belong to vertical (or pyramidal) groups. Companies belonging to pyramidal groups are divided in three groups depending on their position in the pyramid. Level 1 are the holding companies, Level 2 are the companies controlled by Level 1 firms, and Level 3 and higher are all the others. *Top executive turnover* is a dummy variable that takes value 1 in year t if at least half of the top executives are replaced between t and t+1. *Modified top executive turnover* is a dummy variable that takes value 1 in year t if at least half of the top executives are replaced between t and t+1 and leave all traded companies of the group to which the firm belongs.

	Horizontal groups and stand alone	Pyramidal group: Level 1	Pyramidal group: Level 2	Pyramidal group: Level 3+
Number of observations	541	173	243	277
Fraction of cash-flow rights owned by controlling shareholder (%)	49.4	42.2	22.5	6.0
Fraction of voting rights controlled by controlling shareholder (%)	58.2	59.8	52.5	42.6
Percentage of relatives of the controlling shareholder among the top executives (%)	38.2	50.1	26.6	7.4
Top executive turnover (%)	12.0	5.8	14.0	15.5
Modified top executive turnover (%)	7.9	4.0	9.5	10.1
Q ratio	1.13	1.01	1.09	1.00
Voting premium (%)	77.2	70.2	59.5	32.5
[Number of observations]	[184]	[118]	[108]	[127]

Table 9.
Executive turnover and pyramidal groups.

Probit regressions. The dependent variable is *Top executive turnover* in regressions (1) and (2) and *modified top executive turnover* in regressions (3) and (4). *Size* is the logarithm of total assets (in millions of Liras). *Performance* is the change in the ratio of EBIT and total assets between year t-1 and year t in regressions (1) and (3) and the stock return between t-1 and t in regressions (2) and (4). *Pyramidal level 1* is a dummy variable that identifies the firms that belong to a pyramidal group and are not controlled by any other traded company. *Pyramidal level 2* is a dummy variable that identifies the firms that are directly controlled by a pyramidal level 1 company. *Pyramidal level 3+* is a dummy variable that identifies the firms that are indirectly controlled by a pyramidal level 1 company. Robust standard errors (in parenthesis) control for correlation and clustering at firm level. Year and industry dummies are included but the coefficients are not reported. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. The reported coefficients are transformed to represent the change in probability for an infinitesimal change in each independent variable evaluated at the mean values.

	Dependent variable: Top executive turnover		Dependent variable: Modified top executive turnover	
	Performance = Change in EBIT / TA	Performance = Stock return	Performance = Change in EBIT / TA	Performance = Stock return
	(1)	(2)	(3)	(4)
Performance	-0.759***	-0.070**	-0.491***	-0.030
	(0.201)	(0.032)	(0.144)	(0.020)
Performance * Pyramidal level 1 dummy	0.602	-0.047	0.479	-0.066
	(0.550)	(0.063)	(0.393)	(0.044)
Performance * Pyramidal level 2 dummy	0.056	0.023	-0.263	0.026
	(0.395)	(0.055)	(0.355)	(0.037)
Performance * Pyramidal level 3+ dummy	0.441	-0.025	0.221	-0.056
	(0.537)	(0.053)	(0.429)	(0.039)
Pyramidal level 1 dummy	-0.055*	-0.061**	-0.025	-0.032
	(0.025)	(0.025)	(0.022)	(0.022)
Pyramidal level 2 dummy	0.034	0.028	0.027	0.031
	(0.028)	(0.026)	(0.021)	(0.021)
Pyramidal level 3+ dummy	0.050*	0.040	0.040*	0.031
	(0.030)	(0.030)	(0.026)	(0.025)
Size	-0.009	-0.013*	-0.009	-0.013**
	(0.006)	(0.007)	(0.006)	(0.006)
Pseudo R^2	0.065	0.049	0.063	0.044
N. observations	1,234	1,222	1,234	1,222

Table 11.
Q ratio and pyramidal groups.

OLS regression with fixed-effects. The dependent variable is the firm's Q. *Size* is the logarithm of total assets (in millions of Liras). *Pyramidal level 1* is a dummy variable that identifies the firms that belong to a pyramidal group and are not controlled by any other traded company. *Pyramidal level 2* is a dummy variable that identifies the firms that are directly controlled by a pyramidal level 1 company. *Pyramidal level 3+* is a dummy variable that identifies the firms that are indirectly controlled by a pyramidal level 1 company. Robust standard errors (in parenthesis) control for correlation and heteroskedasticity. Year dummies are included but the coefficients are not reported. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively.

	(1)	(2)
Pyramidal level 1 dummy	-0.086	-0.013
	(0.065)	(0.075)
Pyramidal level 2 dummy	0.030	-0.010
	(0.097)	(0.114)
Pyramidal level 3+ dummy	-0.268*	-0.129*
	(0.156)	(0.070)
Size	-0.085***	-0.058**
	(0.028)	(0.027)
Fixed effects	Firm	Industry
Adjusted R^2	0.656	0.201
N. observations	1,234	1,234

Table 10.
Internal and external governance forces.

Probit regressions. The dependent variable (*Top executive turnover*) is a dummy variable that takes value 1 in year t if at least half of the top executives are replaced between t and t+1. *Size* is the logarithm of total assets (in millions of Liras). *Performance* is the change in the ratio of EBIT and total assets in regression (1) and the stock return in regression (2). *Change of control* is a dummy variable that takes value 1 in year t when the firm changes controlling shareholder between t and t+1. Robust standard errors (in parenthesis) control for correlation and clustering at firm level. Year and industry dummies are included but the coefficients are not reported. *, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. The reported coefficients are transformed to represent the change in probability for an infinitesimal change in each independent variable evaluated at the mean values.

	Performance = Change in EBIT / TA	Performance = Stock return
	(1)	(2)
Performance	-0.426***	-0.080***
	(0.152)	(0.024)
Performance * Change of control dummy	-0.882**	0.104
	(0.446)	(0.076)
Change of control dummy	0.547***	0.592***
	(0.064)	(0.060)
Size	-0.004	-0.006
	(0.006)	(0.006)
Pseudo R^2	0.170	0.161
N. observations	1,234	1,222

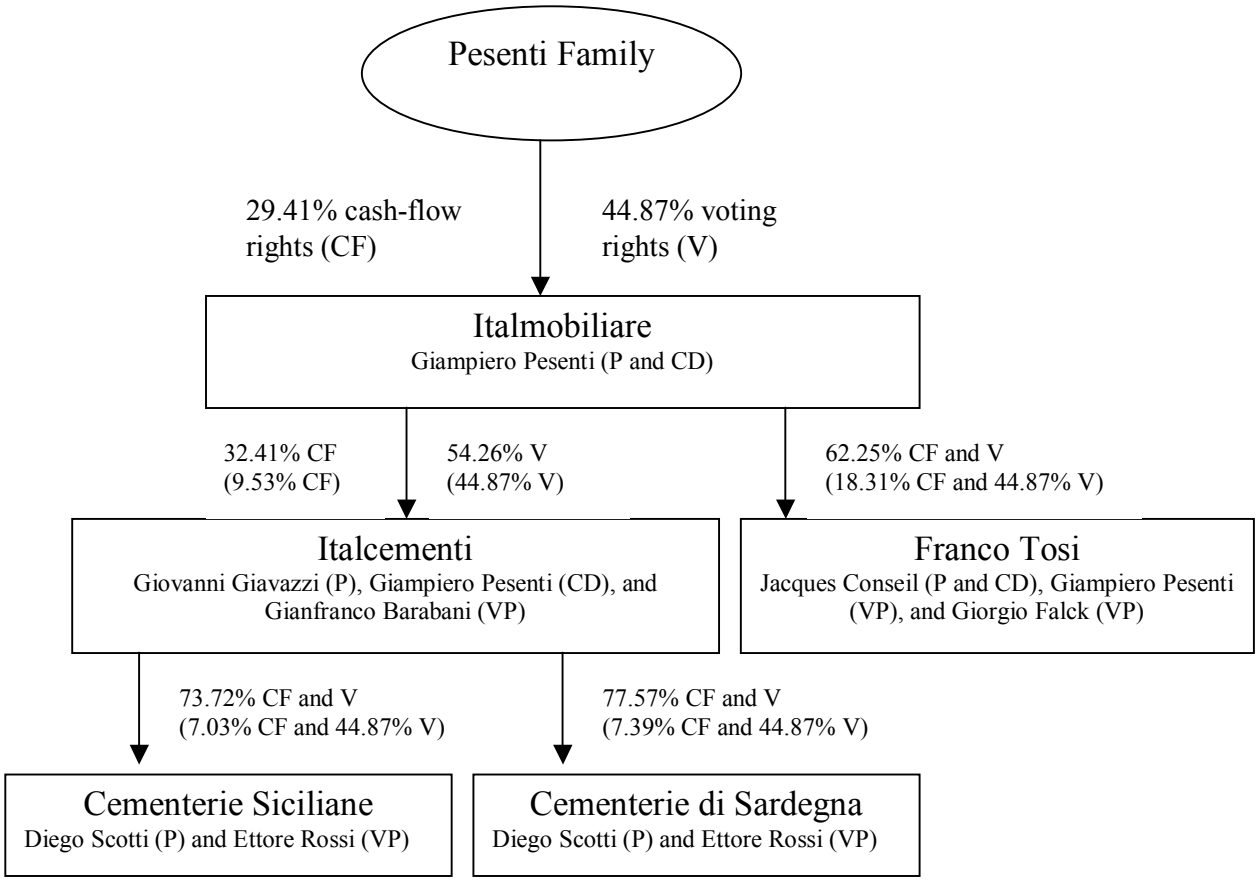

Fig. 1. Structure of the Pesenti's group as of 12/31/1995. The figure shows the ownership and control structure of the traded companies controlled by the Pesenti family. Each box represents a traded company. Inside each box are the name of the company and the names of the top executives with their role on the board of directors: P = President, CD = CEO ("Consigliere Delegato"), VP = Vice-President. The arrow indicates the direction of control. The numbers above each box represent the percentages of cash-flow (CF) and voting (V) rights directly owned by the controlling party (individual or company). In parenthesis are the fractions of cash-flow and voting rights directly or indirectly owned by the ultimate owner (the Pesenti family). These are computed according to the definitions reported in the Appendix A.

Appendix A.
Definition of the variables used in the analysis.

Size	Logarithm of total assets expressed in billions Liras. $Size_{it} = 0.5*TA_{it} + 0.5*TA_{it-1}$.
Change in EBIT	Change in earnings before interest and taxes normalized by size: Change in $EBIT_{it} = (EBIT_{it} - EBIT_{it-1}) / Size_{it}$
Stock return	Stock return between year-end t-1 and t. Stock $return_{it} = (P_{it} - P_{it-1}) / (0.5*P_{it} + 0.5*P_{it-1}) + Dividend\ yield_{it}$. To reduce the impact of outliers, I have set the excess return equal to -1 when smaller than -1 and equal to 2 when larger than 2, for a total of 23 changes.
Cash-flow rights of the controlling shareholder	Fraction of the firm's equity (voting and nonvoting shares) owned by the ultimate owner of the firm. If a firm A is controlled indirectly via another traded firm B, the fraction of cash-flow rights of A owned by the controlling shareholder is equal to the product of the cash-flow rights owned by the controlling shareholder in B times the fraction of cash-flow rights owned by firm B in firm A. This algorithm can be generalized to more layers of controls and more complex control structures.
Voting rights of the controlling shareholder	Fraction of the shares with voting rights of a company controlled by its ultimate owner. If a firm A is controlled indirectly via another traded firm B, the fraction of voting rights of A in the hands of the controlling shareholder is equal to the minimum between the voting rights owned by the controlling shareholder in B and the voting rights owned by firm B in firm A. This algorithm can be generalized to more layers of controls and to more complex control structures.
Ultimate owner indicator	Indicator that classifies the firm in four groups: family-controlled firms, state-controlled firms, foreign-controlled firms, and bank-controlled firms.
Fraction of top executives replaced	Fraction of top executives of the firm at year t who are not executives of the firm any more at year t+1. All discovered cases of retirement have been excluded.
Top executive turnover	Dummy variable that takes value 1 in year t if the fraction of top executives replaced is at least one half.
Modified executive turnover	Dummy variable that takes value 1 in year t if at least half of the top executives are replaced between t and t+1 and at t+1 do not hold any executive position in any traded companies of the group to which the firm belongs.
Family-executives	Firm's top executives who belong to the same family of the controlling shareholder of the firm.
Owner-manager	Dummy variable that takes value 1 if the fraction of relatives of the controlling shareholder among the top executives is at least 0.5.
Owner with high incentives	Dummy variable that takes value 1 if the controlling shareholder owns a fraction of cash-flow rights in the firm larger than 50%.
Large minority shareholder	Dummy variable that takes value 1 if there is a minority shareholder with at least 5% of the voting shares.
Voting syndicate	Dummy variable that takes value 1 if a coalition of relevant shareholders is held together in a voting syndicate.
Pyramidal level 1	Dummy variable that takes value 1 if the firm belongs to a pyramidal group and is not controlled by any other traded company.
Pyramidal level 2	Dummy variable that takes value 1 if the firm is directly controlled by a "Pyramidal level 1" company.
Pyramidal level 3+	Dummy variable that takes value 1 if the firm is directly or indirectly controlled by a "Pyramidal level 2" company.
Q ratio	The ratio of market value of the firm (= market value of equity + book value of debt) over book value of total assets.
Change of control	Dummy variable that takes value 1 if the firm's controlling shareholder changes between t and t+1.
Voting premium	It is defined only for firms with both voting and nonvoting shares: the%age difference in the price of a voting share with respect to a nonvoting one.

Appendix B.
Matrix of correlations.

*, **, and *** denote significance at the 10%, 5%, and 1% level, respectively. The number of observations is 1,611.

	Top executive turnover	Size	Change in EBIT / TA	Stock return	Owner-manager dummy	High-incentive dummy	Voting syndicate dummy
Size	-0.043						
Change in EBIT / TA	-0.135***	-0.002					
Stock return	-0.049*	-0.102***	.163***				
Owner-manager dummy	-0.104***	0.041	0.019	-0.015			
High-incentive dummy	0.006	-0.202***	-0.001	0.068**	0.145***		
Voting syndicate dummy	-0.021	0.073**	-0.018	-0.004	0.116***	-0.219***	
Large minority dummy	-0.030	-0.118***	-0.012	-0.030	0.043	-0.089***	0.306***

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