

## Board compensation and ownership structure: empirical evidence for Italian listed companies

Roberto Barontini · Stefano Bozzi

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**Abstract** This paper investigates the relationships among corporate ownership, the level of board compensation, and firms' future performance within Italian listed companies. Board compensation could be related to corporate ownership characteristics, like the type of controlling shareholder, ownership concentration, the separation between cash flow and voting rights, and the presence of shareholders' agreements. The evidence of high levels of board compensation associated with certain governance characteristics could signal, in a principal-agent framework, rent extraction by entrenched managers or by controlling shareholders versus minority shareholders; high board compensation, however, could be related to the need to hire directors with higher professional standing and also to the desire to create a network with other companies through the enlargement of the board, according to a social network view. In this paper we disentangle this issue showing the relationship between excess board compensation and future performance: examining firms listed on the Milan Stock Exchange over the period 1995–2002, we show that board compensation is linked to many governance characteristics, but excess compensation is never positively related to future performance. For founder family firms, in particular, high board compensation is associated with (a) smaller board size; (b) higher proportion of family members on the board; (c) lower future performance. The whole evidence therefore doesn't support the hypothesis suggested by the social network view, but is consistent with a rent extraction hypothesis. These results could add new empirical evidence to the recent debate on the need for global remuneration reform. According to our results, some control mechanism and an increase in transparency of executive compensation schemes could be appropriate.

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R. Barontini  
Scuola Superiore Sant'Anna, Piazza Martiri della Libertà, 33, Pisa, Italy  
e-mail: r.barontini@sssup.it

S. Bozzi (✉)  
Catholic University "Sacro Cuore", Largo F. Vito, 1, Rome, Italy  
e-mail: stefano.bozzi@unicatt.it

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## 1 Introduction

Board and CEO compensation is one of the most debated topics in corporate governance literature. As documented by Murphy (1999), the number of papers focused on management compensation has risen over the last two decades, in line with the increase in the amount of executives' pay.

Within this area of research, growing attention is devoted to the relationship between corporate governance and compensation, in order to study the role played by governance characteristics in explaining the cross-sectional differences in the level of board compensation.

A few papers empirically document the correlation between the level of board of directors' pay and several corporate governance variables, such as executive ownership (Cyert et al. 2002; Lambert et al. 1993; Cheng and Firth 2005), ownership concentration (Dyl 1988; Cheung et al. 2003), the presence of institutional owners (Hartzell and Starks 2003), board size (Holthausen and Larcker 1993; Ghosh and Sirmans 2005), the presence of independent directors (Anderson and Reeb 2004), the nature of the ownership (DeAngelo and DeAngelo 2000; Anderson and Reeb 2003a) and the degree of separation between cash flow and voting rights (Masulis et al. 2009).

However, even after the discovery of a systematic association between a specific governance characteristic and the level of management pay, a relevant question is left unanswered, namely is high compensation, under an agency scheme, a form of management's rent extraction or, on the contrary, is it the result of an omitted variable problem, i.e. is it the adequate compensation for the unobserved complexity associated with that governance characteristic?

In this paper we address the results in order to distinguish between the two hypotheses outlined above. In more detail, we focus on four main corporate governance characteristics expected to be relevant in affecting the level of board compensation: the type of ownership, the degree of ownership concentration, the wedge between voting and cash flow rights, and the presence of shareholders' agreements.

Furthermore, we test whether the relationship between the level of board compensation and the governance characteristics under scrutiny could be interpreted within theoretical perspectives alternative to the classic principal-agent scheme, to which the mainstream research on board of directors largely relies (Daily et al. 2003). In this respect, social network theory has potential for explaining cross-sectional variation in the level of compensation through board size: by way of appointment to the board of directors, the firm could capture highly qualified managers and, especially in family firms, improve its relationship network. Within this perspective, higher board compensation could be due to a larger board that

better accommodate the need to widen the network of the firm; at the same time, higher compensation should reflect higher performance.

Our research is based on a large sample of companies listed on the Milan Stock Exchange in the period 1995–2002.

We first analyze the determinants of the level of cash compensation, finding that board compensation is consistently affected by the governance characteristics of the firm. Looking at the nature of the ultimate owner, the level of board compensation is significantly higher for family firms, and particularly for founder-controlled corporations, and lower for state-owned firms. High ownership concentration is associated with lower board pay, according to the existing literature. Surprisingly, the wedge between voting and cash flow rights is also negatively correlated to board compensation, a result that further scrutiny reveals to be almost entirely referred to family firms' board characteristics. We find however that shareholders' agreements, the other very common control-enhancing device within Italian listed firms, induces a higher level of board compensation.

In interpreting the results, we test if high board compensation could be explained within social network theory. In this perspective, the board size, and then the level of board compensation, should be higher for those firms that use co-optation as a mechanism for developing external linkages to organizations that could provide critical resources (Pfeffer 1972; Westphal et al. 2006).

Family firms, in particular, could benefit from the involvement of external directors within the board, as a way of softening family ownership-related issues, such as dispute among powerful family owners (Miller et al. 2005) or the agency costs related to "altruism" that characterizes the relationship among family members (Schulze et al. 2002). Moving from this premise, Lester and Cannella (2006) argue that family firms seek to mitigate these additional costs, that could induce strategic inertia, misalignment of interests and ineffective governance, by building and maintaining community-level social capital through board interlocks.

According to this view, the higher board compensation associated with family firms should be driven by the number of members on the board, instead of the level of individual pay granted to each board member. However, in contrast with this prediction, our analysis indicates that the number of members on the board is negatively correlated with family control and also with weight of family members on the board, therefore supporting the view of rent extraction by family members versus minority shareholders.

Finally, we estimate excess compensation and its relationship with future stock and accounting returns, in order to verify whether higher compensation associated with a given governance characteristic can be regarded as a form of expropriation of shareholders' value through excess compensation or, instead, as the right premium for hidden qualities requested by the board in order to manage the firm.

As previously noted, the presence of the founder on the board of family firms is associated with higher mean compensation. We find that for founder-family firms higher compensation negatively affects subsequent firm performance, signalling sub-optimal compensation practices. We don't detect, however, a significant relation among returns and excess compensation for ownership structure variables (wedge, ownership concentration and shareholders' agreements), namely for those

governance characteristics that in a principal-agency scheme are associated with higher agency costs. These results open the field to further analysis in order to discern if it is due to sample idiosyncratic features, or to “hidden characteristics” of the board. For example, lower pay associated with higher ownership concentration or wedge may not signal “good” governance characteristics, but could be related to certain hidden features of the board that justify lower compensation.

Our paper contributes to the literature in several ways. First, through the analysis of Italian listed firms, we are able to provide empirical evidence on the relationship between a broad number of governance characteristics and board of directors’ pay with respect to a market that, at the same time, is highly representative of European firms characteristics and significantly different from the US and UK markets.

Moreover, we provide further insights on compensation practices within family firms. This type of ownership structure characterizes more than the half of the firms in the sample, and is associated with compensation schemes that are quite different from those implemented by non-family firms. While the literature on the role and the structure of board of directors in small and medium enterprises and in family firms is quite large and still growing (Pearce and Zahra 1991; Johnson et al. 1996; Huse 2000; Schulze et al. 2001, 2002; Mustakallio et al. 2002), more limited empirical evidence is available with respect to the compensation practices induced by ownership characteristics within family firms (Gomez-Mejia et al. 2003; Haid and Yurtoglu 2006; Cavalluzzo and Sankaraguruswamy 2000; Carrasco Hernandez and Sanchez-Marin 2007).

Finally, following a recent stream of research on “excess compensation”, we examine the impact of governance characteristics on firm’s future performance. Previous studies, such as Core et al. (1999) and Hayes and Schaefer (2000), use this approach to verify whether the excess compensation is a form of rent extraction or the implicit premium for unobserved qualities of the board. In our study, we extend this approach, by testing for the first time this hypothesis with respect to the specific governance characteristics considered.

The paper is organized as follows. The next Section presents the discussion of the literature and develops the hypothesis. Section 3 describes data and methodology; Section 4 presents the results of the empirical analysis, showing the determinants of board compensation and analyzing the relationship between governance characteristics, excess compensation and future firm performance; Section 5 concludes the paper.

## 2 Literature review and hypotheses development

Even if most of the papers empirically analyse the evolution in board compensation with respect to the US and, to a smaller extent the UK, a growing number of studies focus on directors’ compensation within continental European countries.<sup>1</sup>

<sup>1</sup> A non exhaustive listing of available papers includes Angel and Fumás (1997), Crespi and Gispert (1998), Gomez-Mejia et al. (2003), and Carrasco Hernandez and Sanchez-Marin (2007) for Spain; Duffhues and Kabir (2008) for the Netherlands; Haid and Yurtoglu (2006) for Germany; Randøy and

In the European environment, the empirical evidence on Anglo-Saxon markets is of little utility, given the substantial differences affecting corporate governance characteristics: Anglo-Saxon companies have very dispersed ownership and hardly deviate from the one-share one-vote rule; on the other hand, European companies present higher ownership concentration and greater use of control-enhancing devices. Moreover, continental European firms are characterized by family ownership, while in the US and the UK the typical model under scrutiny is the widely held company. These ownership differences are of particular interest because, among other factors, they are expected to affect the level of board of directors' compensation.

In order to study the relationship between board compensation and ownership structures, the case of Italian listed companies offers a wide variety of features that are common to other European countries. On average, Italian listed companies show very high levels of ownership concentration and separation between ownership and control; moreover, there is a relevant number of state-owned companies, and a large number of family firms (Corbetta and Tomaselli 1996; Faccio and Lang 2002; Barontini and Caprio 2006). Therefore, the study of the relationship between ownership structures and board compensation in Italy may offer results that can be of general interest for other continental European countries.

To our knowledge, this is the first empirical study on board compensation in Italy that benefits from a large database, with yearly data on compensation from 1995 to 2002, and very detailed information on companies' ownership structures. Previous studies focused on the Italian case were limited by the restricted number of companies and the non-random origin of the sample (Brunello et al. 2001), as well as the shortness of time-period and the limited amount of data on ownership structures (Zona 2001). Another paper focused on Italian listed companies is Barucci and Falini (2007), on a sample extended over the 2001–2003 period.<sup>2</sup>

Looking at the international literature, the effect on board compensation exerted by ownership concentration and by the nature of the ultimate shareholder has been addressed in previous papers, while, to our knowledge, the impact of the wedge between voting and cash flow rights has been studied only recently by Masulis et al. (2009). However, none of the previous studies qualify the results in order to

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Footnote 1 continued

Nielsen (2002) for Norway and Sweden; Sraer and Thesmar (2006), and Llense (2008) for France; Fernandes (2008) for Portugal.

<sup>2</sup> The paper by Brunello et al. (2001) is based on a selection of 107 listed and non-listed firms and is limited to the 1993–1996 period. The sample account for 2996 observations, reduced to 623 observations when the focus is only on executives. The main findings of the paper are that Italian firms show a low fraction of incentive pay over total compensation and a low sensitivity to firm performance. The paper of Zona (2001) focuses exclusively on 1999 and to changes in executive compensation with respect to 1998 for all listed companies. This paper focuses on size and performance as the main determinants for the level of executive compensation. The paper of Barucci and Falini (2007) is based on a sample of Italian listed firms over the 2000–2003 period. Their findings with respect to the determinants of board compensation are that remuneration does not depend on performance measures and growth opportunities, while the wedge is positively related to compensation, even if not highly significant with respect to the board. The difference with our findings could be related to the smaller sample.

establish whether each of the governance characteristics under scrutiny lead to rent extraction in the form of excessive compensation granted to the board.

In addressing this issue, we first develop a number of hypotheses with respect to the impact that ownership concentration, the nature of the ultimate shareholder and the wedge are expected to exert on the level of board compensation.

## 2.1 Ownership concentration

The level of ownership concentration is expected to impact on the agency costs of the firm and, among these, on the amount of compensation granted to the management. As highlighted by Dyl (1988), in closely held corporations major shareholders have substantial economic incentives to monitor management's conduct, whereas in widely held corporations no individual shareholder is likely to have a sufficient motivation to engage in such monitoring activities. Closer monitoring activity is expected to reduce the manager's rent-extraction of shareholder's wealth, leading to lower management compensation.<sup>3</sup>

Several papers provide empirical evidence that the share ownership of the largest shareholder is negatively related to the level of compensation: Dyl (1988), Core et al. (1999), Kraft and Niederprum (1999), Cavalluzzo and Sankaraguruswamy (2000), Cyert et al. (2002) for US firms. The same result is found by Fitzroy and Schwalbach (1990), Schmid (1997), and Haid and Yurtoglu (2006) for a sample of German firms.

Thus we formulate the following hypothesis:

**Hypothesis 1** Ownership concentration is negatively related to board compensation.

## 2.2 Type of controlling shareholder

The ownership structure of Italian firms is also interesting also with regard to the type of the ultimate shareholder, that we organize in three groups: family, state, and widely held corporations. Our attention is focused on state and family firms, since we use the widely held corporation as the benchmark.

State ownership is expected to generate significant inefficiencies, given that control rights are *de facto* in the hands of bureaucrats that have no cash flow rights and no incentives to run the organization efficiently (Shleifer and Vishny 1997). Within this perspective, the lack of control by the main shareholder could favour rent expropriation by the management, and could take the form of higher levels of executive compensation. On the other hand, in recent years there has been the growing pressure of public opinion on politicians to limit the excesses in

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<sup>3</sup> We proxy monitoring activity by using the percentage of share ownership of the ultimate shareholder. However a number of other variables, not considered here, impact on the intensity of monitoring activity, such as the presence of institutional investors (Hartzell and Starks 2003); or the presence of non-executive directors (Fama and Jensen 1983; Cadbury 1992; Cheng and Firth 2005). Managerial compensation is also affected by concentration of ownership in the hands of the CEO, i.e. the owner-manager (Core et al. 1999; Ramaswamy et al. 2000; Cheung et al. 2003; Cohen and Lauterbach 2008).

management pay. State-owned firms, therefore, can be more easily forced to restrict the amount paid to the management, in particular in companies deemed to be “strategic” for the national interest, where a more efficient scrutiny of managerial actions is expected.

Cohently with this latter view, we state the following hypothesis:

**Hypothesis 2a** The type of ownership affects the amount of board compensation. Lower pay levels are expected for state-owned firms.

Theoretical analysis of the impact of family ownership on agency costs stems from the classical principal-agent approach (Jensen and Meckling 1976) and leads to the preliminary conclusion that, with respect to public companies with dispersed ownership, family firms should be less exposed to agency costs because of the limited degree of separation between ownership and control. Moreover, in family firms characterized by the presence of the founder or his/her successors, the commitment of the family leads to more intense monitoring of managers’ behaviour, thereby minimizing the free rider problem found in firms with more widely dispersed ownership structures (Anderson and Reeb 2003a, b).<sup>4</sup>

The agency problem related to family ownership is therefore not that of diverging interests between owners and managers, as suggested by the classical scheme of Jensen and Meckling (1976), but instead that of family’s incentives to extract private benefits at the expense of minority shareholders. As an evidence of this problem, DeAngelo and DeAngelo (2000) found that family shareholders extract private rents through special dividends, excessive compensation schemes, and with related-party transactions.<sup>5</sup>

Moreover, within family firms, relational issues could exacerbate the problem of rent extraction in the form of excessive compensation: Schulze et al. (2001) highlight the “altruism” that characterizes relations between family members, which can appear in the form of benefits granted to family members that they instead not otherwise receive, such as secure employment (Gomez-Mejia et al. 2001), as well as perquisites and privileges (Gersick et al. 1997; Ward 1987). As a corollary of altruism, Schulze et al. (2002) expect that, despite the family firm’s need to monitor and discipline decision agents in order to prevent inefficiencies related to family relationships, the enforcement of formal governance mechanisms, like independent boards or incentives, will be less likely, as a consequence of the prevalence of family-related issues to business needs.

Furthermore, previous studies highlighted that family business founders play an important role in whether or not the appropriate balance in responsibility to the

<sup>4</sup> Evidence of the reduced agency problem between owners and managers within family firms is provided by Carrasco Hernandez and Sanchez-Marin (2007), through the analysis of under-the-top employee compensation: pay level is the lowest in family owned and managed firms, given the relative ability of the owner-manager to prevent agency problems, is higher in professionally managed family firms, because of the lower degree of CEO’s discretionary capacity, and is the highest in non-family firms.

<sup>5</sup> However, the rent-extraction hypothesis associated with family ownership doesn’t necessarily imply that family ownership negatively affects firm’s value and performance, given the other positive effects that are also associated with family ownership. As pointed out by Barontini and Caprio (2006), in continental Europe family control is positive for firm value and operating performance.

family and to the business is achieved (Gersick et al. 1997; Athanassiou et al. 2002); the direct involvement of the founder of the firm or descendants on the board is then expected to worsen the problem, as they are able to more effectively address the management's choices to their own interests. Higher levels of board compensation are then expected when the founder or his descendants are present on the board.

The empirical evidence on the relation between family ownership and board of directors' compensation is mixed. For German firms, Haid and Yurtoglu (2006) find a positive relationship between family ownership and management pay. On a sample of Israeli firms, Cohen and Lauterbach (2008) find that CEOs who belong to the family or business group that owns most of the firm shares receive significantly higher pay than professional CEOs who do not belong to the control group. As an opposite view, on a sample of privately-owned small US firms, Cavalluzzo and Sankaraguruswamy (2000) find a negative impact of family ownership on the level of executive compensation.

The arguments developed above lead us to expect higher board compensation associated with family firms, and a positive effect on board compensation associated with the presence of the founder (or his/her successors) and other family members within the board.

Thus, we formulate the following hypotheses:

**Hypothesis 2b** Higher pay levels are expected for family firms. Within family firms, the presence of the founder or descendants is positively related to board compensation.

### 2.3 Control enhancing devices

Another interesting characteristic of Italian firms is the use of dual-class shares, pyramidal groups and other control-enhancing devices that increase the separation of ownership and control. The limited amount of cash flow rights related to a highly leveraged structure of control could worsen the agency problem between majority and minority shareholders: since only a small fraction of company's cost is born by controlling shareholders, they could indulge in inefficiently high-rewarding contracts with the manager (for example, because she/he is a member of the controlling family). Under this perspective the inefficient compensation contract can be considered an agency cost related to the separation of ownership and control.

The literature has focused on the effect that the wedge between cash flow and voting rights exerts on firm value (La Porta et al. 2002; Claessens et al. 2002; Volpin 2002; Barontini and Siciliano 2003), while only little attention has been devoted to explore the effect on directors' compensation. Haid and Yurtoglu (2006), exploring this issue on a sample of German firms, show that the wedge between voting and cash flow rights influences the relationship between firm's size and the level of compensation (i.e. the increase in compensation in larger firms is positively influenced by the wedge); however, they do not provide evidence of a direct influence of the wedge on the executive level and pay-performance sensitivity. In a more recent paper, Masulis et al. (2009) find that CEO pay is significantly higher in companies where the insider control-cash flow rights divergence is larger.



Then we formulate:

**Hypothesis 3a** Board compensation is higher in firms with a higher wedge between voting and cash-flow rights.

Shareholders' agreements are also a very common feature within Italian listed firms, where the ultimate shareholder is supported by a coalition of blockholders (Bianchi and Bianco 2006). Through restrictions on the transfer of shares, or voting rights, consulting and directors appointment clauses, blockholders can enhance control and protect controlling shareholders from hostile takeovers.<sup>6</sup> Similarly to the use of non-voting shares and pyramidal groups, the largest shareholder within the agreement often can get control of the board despite owning only a minority fraction of the company's cash-flow rights.

It could be argued that shareholders' agreements induce a higher level of board compensation, (a) in order to offer a reward to other coalition members that sit on the board; (b) to extract private benefits for the ultimate owner.

We formulate therefore the following hypothesis:

**Hypothesis 3b** Board compensation is higher in firms with a shareholders' agreement.

### 3 Data and methodology

#### 3.1 Data on board of directors' compensation

Empirical studies on board of directors' compensation in continental European countries suffered from the paucity of data on management pay, information that for a long time has not been subject to mandatory disclosure. Only recently many European countries adopted regulations that require companies to disclose information on management compensation. In Italy, this rule was enforced in 1998.<sup>7</sup>

Our study benefits from a unique database on board compensation over the period 1995–2002, jointly with detailed information on performance and ownership structure of the companies, more specifically described below.

Data on board compensation have been manually collected from annual end-of-year reports published by almost all companies listed on the Milan Stock Exchange. The sample accounts for 1722 observations, corresponding to 215 firms on average per year. For the period 1995–1997 data on compensation are available only on an aggregate basis, for the whole board of directors, while for the 1998–2002 period they are collected for each single member of the board, according to the following classification: base compensation, bonus, non-monetary benefits, other

<sup>6</sup> For example, Gianfrate (2007) shows that, on average, a voting trust owning 52% of the total company's cash-flow rights is able to exercise up to 87% of the total board rights.

<sup>7</sup> CONSOB communication n. 11580 released on 15 February 1998 and substituted by the regulation n. 11971 released on 14 May 1999.

compensation. The sum of these variables defines *Total Compensation*. In order to account for inflation, we re-express yearly compensation in terms of 2002 Euro.<sup>8</sup>

Data on *Other Compensation* deserve a more thorough analysis, because it is not reported uniformly by companies. Under this heading, forms of compensation of a very different nature could be registered, such as executive committee participation fee, indemnity paid when the director leaves the firm, compensation granted by the controlled companies, compensation the director returns to the company that appointed him (generally the holding of the group), reimbursement of anticipated expenses, compensation for consulting services provided to the firm by the member of the board and, in a smaller number of observations, compensation the board member receives as an employee of the company.

In order to study annual board compensation, we adopt a “refined version” of *Other Compensation*, namely *Other Compensation* net of components that are credits of the director, accrued in previous years (indemnity) or in the current year (reimbursement of expenses), compensation received for consulting services provided to the firm, and compensation returned to the company; we include in annual compensation the other components, such as the executive committee participation fee, compensation received as an employee of the company, and compensation granted by group firms.<sup>9</sup>

Among these components, the most relevant one for our analysis is probably the item “compensation granted by controlled companies”. In fact, it could be sensible to overlook this type of compensation, in order to prevent the board pay being related to “infra-group interlocking” (i.e. the rate of participation of some directors on the boards of controlled companies). On the other hand, however, if this component were not included we would be ignoring a very important component of compensation. In fact, many companies set the compensation of members of the board considering all the sources of payments, regardless that they are provided by the parent company or controlled companies (often unlisted). In this perspective, compensation provided by controlled companies cannot be discriminated with respect to the parent company’s payments. Moreover, if this component were not included in board compensation, the link between company performance, measured in terms of consolidated data, and directors’ compensation would be partially hidden. These arguments induced us to include in *Total Compensation* the payments provided by controlled companies.<sup>10</sup>

### 3.2 Ownership variables

In order to detect the identity of the ultimate shareholder and the size of its cash-flow and voting rights, we use the standard methodology developed by La Porta et al. (1999), and followed, among others, by Faccio and Lang (2002).

<sup>8</sup> The same adjustment has been applied to Total Assets, our proxy for firm size.

<sup>9</sup> Given that the information provided by the companies on these very different types of payments is poor, in a limited number of cases we were not able to break up the item *Other Compensation*; in this case, we included the whole amount, without other refinements.

<sup>10</sup> As a robustness check, we run regressions excluding compensation granted by controlled companies from Total Compensation. Results are highlighted when they differ from those reported in the paper.

Looking at data available on “Taccuino dell’Azionista”, “Calepino dell’azionista”, and information disclosed by corporations in the ‘investor relation’ section of their websites, we started finding the voting rights and the cash-flow rights held by the largest direct shareholders, and then trace the map of the ownership of the stakes, in order to identify the ultimate shareholders and their ownership of voting and cash-flow rights. We use 20% as the cut off point for the existence of a control chain (a listed company that has no shareholder larger than 20% is considered widely held). Ultimate cash-flow rights (stated as the variable “*O*”) takes into account the ownership over the whole control chain, while ultimate voting rights are the voting rights held in the weakest link of the chain. In order to detect the separation between ownership and control that reflects the use of control-enhancing devices (dual-class shares and pyramid), we use the variable “wedge” (*W*), that capture the difference between the share of voting and cash-flow rights held by the ultimate owner.

Following Pagano and Roell (1998), Denis et al. (1997) and Volpin (2002), we also include the percentage of ownership for the second largest shareholder, moving from the theoretical viewpoint that large minority shareholders play a role in monitoring the controlling shareholder. This control activity could add efficiency to the firm; however, the second largest shareholder could engage in bargaining activity with the controlling shareholder, and then acquire for himself the right to appoint a given number of members to the board and increase board compensation.

The type of controlling owner is defined with respect to the nature of the ultimate shareholder,<sup>11</sup> classifying firms as family-owned (*Family*), state-owned (*State*), or widely-held (*WH*).<sup>12</sup>

For family firms, in particular, it will be interesting to examine size and composition of the board, and their relation with board compensation. From this perspective, as in Barontini and Caprio (2006), we detect the number of members of the board belonging to the controlling family, when there is one; in this case, we verify whether the founder is still alive and has a role in board, or otherwise if family members have to be classified as descendants.

We control also for the presence of a shareholders’ agreement using the dummy variable (*SA<sub>it</sub>*), that takes the value one if any type of agreement (restrictions on the transfer of shares, voting, consulting and directors appointment) is in place for the firm *i* in year *t*, and zero otherwise. Data on shareholders’ agreements are collected from the Consob database for every year covered by this study.

<sup>11</sup> We also classify according to this criterion firms whose largest direct shareholder owns less than 20% of capital, in order to define a classification not related to ownership concentration, directly captured by the variable *ownership* (*O*).

<sup>12</sup> We included in this class firms without a first direct shareholder or whose first direct shareholder is a widely held company. Firms with ultimate owners that are institutional investors are included in widely held corporations, as well as a small group of co-operative banks (“banche popolari”), in which shareholders have voting rights not related to the number of shares held. Foreign ultimate owners are classified according to the type of controlling owner.

### 3.3 Control variables

In testing the hypotheses described above, we include control variables related to firm characteristics that previous studies found to exert a significant impact on directors' pay.

Rosen (1982) predicts that larger firms require more talented and more costly management; Baker et al. (1988) document that larger firms, in terms of net sales, pay executives more, although Murphy (1999) shows that the explanatory power of firm sales has declined over time; on the contrary, Gabaix and Landier (2008) argue that firm size is the most important single variable in explaining the level of CEO compensation. We then expect a positive association between firm size and the level of board compensation. As a proxy for firm size, we adopt the log of Total Asset (*LSize*), given that our sample also includes banks and financial firms, for which company sales are not available.

As control variables we also adopt firm's performance, given the positive correlation found in previous studies between these variables and the level of directors' pay (Kaplan 1994; Murphy 1985). As performance variables, we consider both market and accounting returns:

- Contemporary and lagged stock market returns, respectively  $RETURN_t$  and  $RETURN_{t-1}$ ;
- Contemporary and lagged accounting return on assets, respectively  $ROA_t$  and  $ROA_{t-1}$ , defined as the ratio between 'operating profit' and 'total assets'.

Accounting returns, as well as all the accounting information, are supplied by Worldscope, while market returns are collected by Datastream.

Moreover, following Smith and Watts (1992), we expect complexity of operations and growth opportunities to be positively related to the level of directors' pay. Complexity of operations and growth opportunities are proxied by the Tobin's Q (*LQ*), computed as the log of the ratio between (Book value of total assets – Book value of shareholders' equity + Market value of shareholders' equity) and (Book value of total assets).

Under a theoretical perspective, the level of board compensation may either increase or decrease with firm risk (Banker and Datar 1989). Cyert et al. (1997), consistent with standard agency theory, document positive associations between CEO compensation and firm's risk. On the other hand, Core et al. (1999) found that the level of CEO total compensation is negatively related to firm risk.<sup>13</sup> Firm risk is measured in terms of firm's stock returns standard deviation (*STD*) computed over the previous 256 days.<sup>14</sup>

In order to test if stock-based compensation is a supplement or a substitute for core salaries, we include a dummy variable for the existence of stock option plans. A negative correlation between total compensation and the existence of a stock option

<sup>13</sup> Cyert et al. (1997) and Core et al. (1999) measure firm's risk as the standard deviation of the firm's common equity returns.

<sup>14</sup> We also considered stock Beta as a measure of firm's risk, but results didn't change significantly. However we think that standard deviation of returns is a more appropriate risk measure, since board members could hardly diversify the risk of the firm.

plan will be consistent with a substitution effect, and an incentive role on management behaviour within the ‘optimal contracts’ model (Bebchuk et al. 2001); a positive correlation would signal, on the other hand, that stock options are used to increase furthermore high cash compensation and (perhaps) to extract rents from shareholders. We tried to collect data on stock options. Even if in Italy the growth in the use of stock options was less dramatic than in the US,<sup>15</sup> since the late 1990s the frequency of stock option grants has been rising, and could represent a significant part of board compensation. Unfortunately, information on stock options provided by Italian companies over the period under scrutiny is very cryptic and, as a consequence, the valuation of directors’ stock option portfolio not reliable. We could therefore simply detect the existence of a stock option plan for board members, using a dummy variable ( $ST\_OP_{it}$ ) that takes the value one if for firm  $i$  in year  $t$  a stock option plan is in place.

Finally, since business cycle and industry unobservable characteristics could be related to the board of directors’ pay, in panel data regression we use fixed effect specifications by including year and industry dummy variables. For industry effect we use 15 dummy variables based on the Campbell (1996) classification.

### 3.4 Methodology

We organize the empirical analysis into three steps. As a first step we perform a panel data regression in order to find the determinants of the level of board compensation, with a focus on the corporate governance characteristics outlined in the previous section.

In the second step we devote particular attention to the size of the board. According to Jensen (1993), in widely held companies a large board could be costly and inefficient, implying a negative correlation between firm performance and the size of a firm’s board of directors.<sup>16</sup> However, with concentrated ownership, typical of Italian firms, a reduction in management-board conflicts is expected and different arguments could emerge. According to social network theory, the appointment to the board of directors could be a way of capturing managerial resources and developing the relationship network. Higher board compensation and large board size could signal the need for co-optation (Pfeffer 1972), and could therefore explain board characteristics for those organizations, like family firms, that benefit more by network connections with the business environment, as suggested by Lester and Cannella (2006). Large and costly boards of directors for family-owned firms could then be interpreted as support for predictions of social network theory.

As a third step of the analysis we look at the relationship between excess compensation and future firm performance, in order to test whether higher board compensation is a form of rent extraction associated with the three governance

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<sup>15</sup> For example, Hall and Murphy (2002) find that 94% of S&P 500 companies granted options to their top executives in 1999, and the value of these option grants at the date of grant accounted for nearly 50% of CEOs total compensation. .

<sup>16</sup> This result could be determined by greater problems of communication and coordination as group size increases, and less ability to control management, in a typical agency framework focusing on the separation of management and control. Yermack (1996) and Eisenberg et al. (1998) obtain results consistent with this hypothesis.

characteristics under scrutiny, i.e. nature of controlling shareholder, ownership concentration and control enhancing mechanisms. For example, the positive relationship between family ownership and board cash compensation could be interpreted as a tendency for family firms to overpay the managers. However, this relationship could emerge also if the compensation of the board within family firms is influenced by an unobservable variable, not considered within the regression model, i.e. the need for family firms to hire more quality, and hence more paid, managers to run the company. In this latter perspective, the higher compensation paid to the board by family firms should not hurt future firm performance, and then would not be considered an agency cost in terms of “excess” compensation extracted by the management.

Within this stream of research, Core et al. (1999) provide evidence that weaker governance structures, in terms of board structure and share ownership, produce agency costs that negatively affect subsequent performance of the firm. Hayes and Shaefer (2000) verify that compensation contracts include measures of executive performance (unobservable to outsiders) that are correlated with future firm’s performance. Brick et al. (2006) observe that excess compensation of CEO and directors of the firm is associated with firm underperformance and conclude that the evidence is consistent with excessive compensation due to cronyism. Barak et al. (2008), on a sample of Israeli closely held firms, point out that when the CEO is from the controlling family, “excess” pay granted to the family-CEO appears to be a form of private benefit, as suggested by the negative correlation between excess compensation and the firm’s Tobin Q.

We regress firm’s future performance (across the period 1996–2003) over residuals and a number of control variables. A negative coefficient associated with the residuals indicates that extra payment to management is related to lower firm performance, and should be considered as excessive compensation granted to the management. On the other hand, a non-negative coefficient indicates that the extra payment is related to unobserved firm complexity (i.e. an omitted variable problem) hiding, for example, the need for the firm to hire managers with greater skills and higher payment expectations.

We use this empirical approach to qualify the results obtained by testing Hypothesis 1–3, and then estimating which corporate governance characteristic under scrutiny is eventually associated with the hypothesis of rent extraction in the form of excessive compensation granted to the board of directors.

## 4 Results

### 4.1 Descriptive statistics

In this section we document the dynamics of board of directors’ compensation of Italian firms over the 1995–2002 period.

As shown in Table 1, the mean of Total Compensation increased almost constantly until 2001, while only a slight decrease is registered in 2002. It is noteworthy that Total Compensation seems related to lagged stock returns (the

**Table 1** Sample description of board compensation and firm characteristics over 1995–2002 period

Year	N. Obs.	Total Compensation (in .000 Euro)		Base Compensation (in .000 Euro)		Size Mean	ROA Mean (%)	Return Mean (%)	Tobin's Q Mean
		Mean	Median	Mean	Median				
1995	169	835	590	721	447	10.130	4.95	-10.83	0.95
1996	192	779	528	659	441	8.864	5.22	4.20	1.03
1997	204	1021	554	741	453	8.758	5.87	51.42	1.20
1998	218	1747	686	1183	486	9.798	6.49	38.28	1.27
1999	201	1685	924	841	506	12.836	6.06	33.92	1.61
2000	247	2030	932	1119	531	11.545	5.28	19.03	1.45
2001	230	2318	1131	1165	652	12.143	1.72	-25.14	1.45
2002	252	2057	1050	988	606	10.996	0.66	-17.61	1.46

Total Compensation is the sum of all the cash components of board of directors' pay (Base Compensation, Non-Monetary Benefits, Bonus, Non-Monetary Benefits, Refined Other Compensation). Size is firm's total asset (in thousands of Euro), *ROA* is annual Return on Assets, *RETURN* is the annual stock return, *Tobin's Q* is the ratio between (Book value of total assets - Book value of shareholders' equity + Market value of shareholders' equity) and (Book value of total assets). Compensation and Size are adjusted for inflation rates (2002 values)

decreases in 1996 and 2002 follow a drop in the stock market in the previous year), while the relation between board compensation and accounting returns (ROA) looks less clear.

It's remarkable, furthermore, that there is a much stronger increase in Total compensation compared to Base Compensation. This shows the growing importance of Bonus, Non-Monetary Benefits, and Other Compensation components of directors' pay.

Due to the presence of some outliers, Total and Base Compensation median values provide a better description than mean values.<sup>17</sup> Their dynamics appear much more regular and confirm the existence of a delayed reaction of cash compensation to company performance.

Table 2 summarizes the evolution in the structure of control for Italian firms over the period considered.

Table 2a shows that the ownership structure is characterized by the presence of very large direct shareholders (*First Sh.*). Their stakes seem quite stable over time, even if we can observe a slight decrease both for *First Shareholders* and for the second shareholder (*2nd Sh.*).

On the other hand, the concentration of the ultimate shareholder, shown by the percentage of cash flow rights (*O*), increases over time, while the percentage of voting rights (*C*) tends to be stable or slightly decreasing. The combination of these effects leads to the clear reduction of the wedge (*W*) between cash flow and voting rights, as evidence of the lower use by Italian firms of control-enhancing devices, such as pyramidal groups and dual-class shares.

<sup>17</sup> In more detail, the mean is influenced by the very large compensation paid by Fiat and Pirelli to their CEOs.

**Table 2** The structure of control for Italian firms over the 1995–2002 period (a) ownership concentration; (b) sample composition by controlling shareholder; (c) the wedge between voting and cash flow rights

(a) Ownership concentration <sup>a</sup>					
Year	First sh. (%)	2nd sh. (%)	O (%)	C (%)	W (%)
1995	48.3	8.1	37.6	48.8	11.2
1997	46.5	8.7	37.7	46.6	8.9
2000	46.9	7.3	39.5	45.6	6.1
2002	45.5	7.4	41.0	45.5	4.5
(b) Sample composition by controlling shareholder <sup>b</sup>					
Year	Family (%)	State (%)	WH (%)		
1995	51.9	17.4	30.7		
1997	55.1	14.4	30.5		
2000	53.0	14.0	33.0		
2002	55.6	11.6	32.8		
(c) The wedge between voting and cash flow rights <sup>c</sup>					
	Family (%)	State (%)	WH (%)		
O	41.1	39.4	36.1		
C	48.6	44.1	40.8		
W	7.5	4.7	4.0		

<sup>a</sup> *First sh.* and *2nd sh.* are the percentage of voting rights respectively for the first and the second largest direct shareholder. *O* and *C* are respectively the percentage of cash-flow rights and voting rights of the ultimate owner. *W* is the difference between voting rights (*C*) and cash-flow rights (*O*) of the ultimate owner

<sup>b</sup> Sample composition for different controlling shareholder: Family and State are respectively family-owned and state-owned firms. WH are widely-held firms and firms owned by a widely-held company

<sup>c</sup> Family and State are respectively family-owned and state-owned firms. WH are widely-held firms and firms owned by a widely-held company. *W* is the difference between voting rights (*C*) and cash-flow rights (*O*) of the ultimate owner

A further step is the analysis of the nature of ownership. In this respect, we consider three groups: family-owned (*Family*), state-owned (*State*), and widely held companies (*WH*). Table 2b shows that in Italy the predominant ownership model is family-based, accounting for more than half of listed companies. The percentage of state-owned firms decreases over time, as a result of the ongoing privatization process, while firms owned by widely held companies account for roughly one-third of listed companies.

In order to explore whether ownership structures are related to the nature of the controlling shareholder, in Table 2c we look at the wedge between cash flow and voting rights, dividing the sample by the type of ultimate owner. Data confirm a very strong ownership concentration for Italian listed companies and lead to the conclusion that family firms make the largest use of control-enhancing devices (the mean Wedge is 7.5%, the largest value among all types of control).



#### 4.2 The determinants of the level of board compensation in Italy

In order to explore the impact that governance variables exert on the level of board compensation, we perform a regression described by the following general equation:

$$\ln(TOTComp_{it}) = \alpha + \bar{\beta} CV_{i,t-1} + \bar{\Omega} YEAR + \bar{\gamma} INDUSTRY + \bar{\lambda} CGov_{it} \quad (1)$$

where  $TOTComp_{it}$  is Total Board Compensation;  $\overline{CV}$  is a vector of control variables, such as the Log of Total Asset ( $LSize$ ), Tobin's Q ( $LQ$ ), firm's risk measured by stock returns standard deviation ( $STD$ ), contemporary and lagged firm performance ( $ROA_t$  and  $ROA_{t-1}$  respectively), and the presence of stock option plans ( $ST\_OP$ ).  $YEAR$  is a set of dummy variables for 1995–2002 years;  $INDUSTRY$  is a set of industry dummy variables; and  $CGov$  is a vector of proxies for corporate governance of the firm, i.e. the percentage of cash-flow rights of the ultimate owner ( $O$ ), the wedge between cash-flow rights and voting rights of the ultimate owner ( $W$ ), the percentage of voting rights for the second largest shareholder ( $2nd\ Sh.$ ), the presence of shareholders' agreements ( $SA$ ), and a set of dummy variables that identify the controlling shareholder ( $Family$ ,  $State$ ,  $Widely\ Held$  companies). Within family firms, the variables  $Founder$ ,  $Descendent$  and  $Out\ of\ board$  are dummies that capture the presence of the founder, his/her descendents or the lack of any family member within the board.

The results are reported in Table 3.

As expected, the size of the firm exerts a large and positive impact on the level of the board compensation, as well as lagged firm operating performance and investment opportunities. All coefficients are significant at 1% levels for all specifications. No significant effects are registered for contemporary firm operating performance (excepted for specification 2 and only at 10% level), while firm's risk, although negatively correlated with compensation, is significant at 5% level only within specification 5 and 6.

The presence of a stock option plan is positively related to board cash compensation.<sup>18</sup> This result shows that stock options cannot easily be considered as a substitute for cash compensation (this would imply a negative coefficient). On the contrary, the assignment of stock options is joined with higher levels of cash compensation, leading to higher total compensation, even after taking into account stock based incentives.<sup>19</sup>

The remaining of this section is devoted to an analysis of the hypotheses stated in Sect. 2.

The results in Table 3 strongly support *Hypothesis 1*, i.e. board compensation is lower within firms with more concentrated ownership. The coefficients on the proxy for ownership concentration are negative and highly significant in all the regression specifications. We then conclude that even for Italian firms, as widely observed in

<sup>18</sup> The coefficients are always significant at least at 10% level (5% in some specifications).

<sup>19</sup> Through a logit regression, not reported in the paper for brevity, we analyze the determinants of stock option plans adoption. The results show that, coherently with agency theory, the probability of the adoption of stock option plans is positively related to the firms' size and to growth opportunities (Tobin's Q).

**Table 3** Determinants of board compensation

	(1)	(2)	(3)	(4)	(5)	(6)
Intercept	3.9675 <i>19.97***</i>	4.2109 <i>17.58***</i>	3.5189 <i>17.29***</i>	3.8942 <i>15.81***</i>	3.6030 <i>16.88***</i>	4.1288 <i>15.82***</i>
LSize	0.4306 <i>25.16***</i>	0.4239 <i>22.63***</i>	0.4536 <i>26.69***</i>	0.4383 <i>23.32***</i>	0.4571 <i>25.38***</i>	0.4350 <i>21.57***</i>
ROA_t	0.2134 <i>0.40</i>	1.0497 <i>1.79*</i>	-0.0347 <i>-0.07</i>	0.8365 <i>1.44</i>	-0.2810 <i>-0.53</i>	0.4999 <i>0.82</i>
ROA_t-1	1.6659 <i>3.16***</i>	1.5266 <i>2.69***</i>	1.4147 <i>2.76***</i>	1.4412 <i>2.57***</i>	1.4068 <i>2.63***</i>	1.4453 <i>2.41**</i>
LQ	0.2430 <i>2.86***</i>	0.3134 <i>3.33***</i>	0.3064 <i>3.70***</i>	0.3328 <i>3.57***</i>	0.3434 <i>4.03***</i>	0.3997 <i>4.15***</i>
STD	-0.1980 <i>-0.78</i>	-0.3264 <i>-1.28</i>	-0.3414 <i>-1.38</i>	-0.4254 <i>-1.68*</i>	-0.4797 <i>-2.08**</i>	-0.4883 <i>-2.20**</i>
ST_OP	0.1674 <i>2.21**</i>	0.1426 <i>1.82*</i>	0.1590 <i>2.15**</i>	0.1541 <i>1.98**</i>	0.1457 <i>1.94*</i>	0.1341 <i>1.68*</i>
O		-0.6437 <i>-4.08***</i>		-0.5726 <i>-3.65***</i>		-0.6971 <i>-4.16***</i>
W		-0.9535 <i>-3.31***</i>		-1.1235 <i>-3.89***</i>		-1.1705 <i>-3.75***</i>
2nd Sh.		-0.5748 <i>-1.11</i>		-0.5674 <i>-1.10</i>		-0.6971 <i>-1.30</i>
SA		0.2003 <i>2.84***</i>	0.2528 <i>3.82***</i>	0.2187 <i>3.13***</i>	0.2786 <i>4.04***</i>	0.2521 <i>3.44***</i>
Family			0.3328 <i>5.21***</i>	0.2719 <i>4.11***</i>		
Founder					0.3867 <i>4.70**</i>	0.3474 <i>3.94**</i>
Descendent					0.3207 <i>4.24***</i>	0.1910 <i>2.41**</i>
Out board					-0.7282 <i>-3.37***</i>	-0.3630 <i>-1.56</i>
State			-0.2714 <i>-3.01***</i>	-0.0922 <i>-0.94</i>	-0.2636 <i>-2.94***</i>	-0.0480 <i>-0.49</i>
R <sup>2</sup> adj.	54.42%	61.64%	57.25%	62.70%	58.36%	63.84%

Significant at 1% (\*\*\*), 5% (\*\*), and 10% (\*) levels

*T* statistics appear in italics, under coefficients

LSize is the Log of firm's Total Asset, ROA and ROA\_t-1 are respectively current and lagged Return on Asset, LQ is the Log of Tobin's Q, STD is the standard deviation of stock returns, *O* is the percentage of cash-flow rights of the ultimate owner, *W* is the difference between the percentage of voting rights and cash-flow rights of the ultimate owner, 2nd Sh. is the percentage of voting rights for the second largest shareholder, ST\_OP is the dummy for the presence of stock option plans, SA is the dummy for the presence of shareholders' agreements. Family, State and WH are respectively family-owned, state-owned and widely held companies. Within Family, the variables Founder, Descendent and Out of board are dummies respectively for the presence of the founder, his/her descendants or none of the family member within the board

other European and non-European countries, more concentrated ownership is associated with lower board pay.

According to *Hypothesis 2a and 2b*, the level of board cash compensation is influenced by the nature of the ownership. In order to explore the effect that the type of ultimate shareholder produces on the level of board compensation, we specify the governance proxies in terms of dummies for the nature of the owner (family, state, widely held corporations) and we measure the impact of each variable with respect to widely held companies.

The results on *Family* and *State* dummies confirm that the nature of the owner effectively impacts on the amount of compensation granted to the board of directors. As predicted by the *Hypothesis 2a and 2b*, state-owned firms pay less, while in family firms board compensation is significantly higher than in widely held firms.

Another relevant issue within family firms is related to the impact exerted on compensation by the role of the family on the board, as pointed out in the second part of *Hypothesis 2b*. Our findings support this hypothesis, given that the positive and significant coefficients for the dummies *Founder* and *Descendent* provide the evidence that board compensation is higher when the founder of the firm or his descendants are members of the board, with a larger effect associated to the presence of the founder.

*Hypothesis 3a* predicts that the level of board cash compensation is higher within the firms with a higher wedge between voting and cash flow rights. Negative and statistically significant coefficients on this variable lead to the rejection of this hypothesis: when the ultimate owner uses control enhancing devices, the firm pays lower compensation to the board. This result could appear somewhat surprising, given that one of the effects associated with the use of pyramidal group and non-voting shares is the opportunity for control shareholders to expropriate minority shareholders, eventually with larger board compensation.

Furthermore, we note that the presence of “strong” minority shareholders (as identified by the percentage of ownership for the second largest shareholder, *2nd Sh.*), are negatively related to board compensation, but the coefficients are never statistically significant.

The results reported are therefore partially at odds with agency theory, that would predict the expropriation of minority shareholders to be related to control enhancing devices and with the monitoring role exerted by the second largest shareholder. Later we will try to better understand the characteristic of this “Italian anomaly” and suggest some explanations.

Finally, *Hypothesis 3b* states that board compensation should be higher in firms with a shareholders’ agreement, since enhancing control through coalition could ease the extraction of private benefits. Shareholders’ agreements, as expected, are positively related to board compensation: when the controlling shareholder strengthen his/her power by building a coalition of blockholders, higher compensation may be devoted to reward a higher number of board members, or also to extract private benefit by the controlling shareholder.<sup>20</sup> Since coefficients are highly significant in all regressions, we can clearly confirm *Hypothesis 3b*.

<sup>20</sup> We explore the impact of shareholder agreements in more detail, by considering four groups, divided by the percentage (X) of voting rights within the agreement ( $X \leq 30\%$ ,  $30\% \leq X < 50\%$ ;

**Table 4** Determinants of board compensation by the nature of control

	Family	WH	State
O	-0.9111 -3.62***	-1.0578 -2.29**	-0.7682 -3.29***
W	-2.3020 -5.68***	-1.0396 <i>-1.11</i>	-0.3398 <i>-0.51</i>
2nd Sh.	-0.9214 <i>-1.29</i>	-0.9691 <i>-0.72</i>	-0.0887 <i>-0.09</i>
SA	0.0588 <i>0.56</i>	0.1374 <i>0.69</i>	0.2380 <i>2.07**</i>
ST_OP	0.2835 <i>2.69***</i>	0.1427 <i>0.65</i>	-0.0007 <i>-0.01</i>
R <sup>2</sup> adj.	66.68%	72.45%	68.23%

Significant at 1% (\*\*\*), 5% (\*\*), and 10% (\*) levels

*T* statistics appear in italics, under coefficients

*O* is the percentage of cash-flow rights of the ultimate owner, *W* is the difference between the percentage of voting rights and cash-flow rights of the ultimate owner, 2nd Sh. is the percentage of voting rights for the second largest shareholder, SA is the dummy for the presence of a shareholders' agreements, ST\_OP is the dummy for the presence of stock option plans. Control variables LSize, ROA, ROA\_t-1, LQ, and STD are omitted for brevity

### 4.3 Board compensation and the type of controlling shareholder

In order to interpret the result previously reported for the wedge coefficient, we re-run the previous regression on sub-samples selected by the nature of the controlling shareholder. Table 4 highlights that the negative relation between wedge and board compensation is almost entirely attributable to family firms: the coefficient is negative and highly significant, indicating that compensation is lower the larger is the opportunity for the family to bear only a fraction of the higher compensation granted to board members.

A possible explanation for this result could be related to the hierarchical position of a firm within the group. If a firm is at the end of the control chain, the wedge of the company is likely larger, while the compensation of the board could be lower only because members of the board have fewer opportunities to receive compensation from controlled companies.

In order to test this hypothesis, we re-run regressions in Table 4 not considering compensation received by controlled companies within the group. The results, not reported here for brevity, show that the coefficient of the wedge is not significant when considering the sample as a whole, while it is still significant, although with less magnitude, when considering the sub-sample of family firms.

Footnote 20 continued

50% ≤ *X* < 70%; *X* ≥ 70%). The results show a positive and strong impact when the percentage of voting rights within the agreement is under 50%; the magnitude is lower for 50% ≤ *X* < 70%, but the coefficients are still significant, while the impact on compensation is not significant for *X* ≥ 70%.

We then conclude that within family firms, the negative relation between wedge and compensation is not entirely due to the effect of compensation received by controlled companies.

Two not mutually exclusive arguments could then explain the negative relation between wedge and compensation: on one side, it is possible that family groups effectively exploit the wedge, but not in the form of higher board compensation, given that probably this is not the most profitable means to extract benefits from minority shareholders, while being one of the most visible, and the one that more likely could trigger the “outrage reaction” by minority shareholders (Bebchuk and Fried, 2004). On the other hand, a more feasible explanation is based on two contemporary sets of evidence on family firms, not reported here in detail. The first one is that the number of family members increases for companies at the top of the control chain, since we verify that the presence of family members on the board is negatively related to the level of wedge.<sup>21</sup> The second is that family groups tend to pay higher compensation to members of the family.<sup>22</sup> The combination of these two facts leads to the conclusion that family firms appoint highly paid members of the family to the board of the companies at the top of the pyramid, where the wedge is low, thus explaining the negative correlation between wedge and board compensation.

Table 4 also reveals that the positive correlation between board cash compensation and the presence of a stock option plan is significant only for family firms. This result is contrary to what could be expected a priori, since family control should imply a closer alignment with shareholders’ interests and, therefore, less need for incentive compensation.

#### 4.4 The effect of board size and family involvement on compensation

Previously reported results show that board compensation is related to many governance variables and, in particular, that the level of compensation is higher for family firms.

Before realizing that family firms extract private benefits through excess compensation at the expense of minority shareholders, however, it is necessary to check if alternative explanations could justify board payments. According to social networking theory, for example, the board size, and the level of board compensation, should be higher for those firms that use co-optation as a mechanism for developing external linkages to organizations on which they depend for critical resources. In this perspective, family firms should be characterized by larger boards, composed in substantial proportion by outsiders.

In order to check the effect of governance characteristics on board size, we then perform regressions based on the following general specification:

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<sup>21</sup> In more detail, we group the firms of the sample in three classes of wedge (0, 1 and 2) and found that the percentage of family members on the board decreases as the wedge increases. Moreover, the difference in family participation on the board between these classes is statistically significant.

<sup>22</sup> In an unreported test, on a sample of family firms we regress the individual compensation of each member of the board versus a number of control variables plus a dummy that takes the value one for family members. The positive and statistical significant coefficient for this dummy means that family members get higher compensation compared to their non-family counterparts.

$$\ln(\text{BoardSize}) = \alpha + \beta_1(\text{LSize}) + \beta_2(\text{LQ}) + \beta_3(\text{O}) + \beta_4(\text{W}) + \beta_5(2\text{nd} \cdot \text{Sh}) + \beta_6(\text{SA}) + \beta_7(\text{Family}) + \beta_8(\text{Family}\%) + \beta_9(\text{State}) \quad (2)$$

where *BoardSize* is the number of members on the board, the independent variables are the same as previously defined, the only exception being “*Family%*”. This variable exhibits the percentage of family members on the board, and can therefore capture the relation between family participation on the board and board size. If the presence of the family on the board is high, the need to establish external links, as predicted by the network theory, would imply a larger board size, and then a positive coefficient on the variable “*Family%*”. On the contrary, a negative coefficient would imply that the presence of family on the board is associated with a “private board”, i.e. a board that is small and close to external resources.

Results shown in Table 5 exhibit the strong effect exerted on the number of board members by the size of company (*LSize*) and investment opportunities (*LQ*).

**Table 5** Determinants of board size

	(1)	(2)	(3)	(4)	(5)
Intercept	1.2695 <i>21.91***</i>	1.3242 <i>28.47***</i>	1.0183 <i>15.83***</i>	1.3631 <i>21.45***</i>	1.1034 <i>12.02***</i>
LSize	0.1358 <i>25.50***</i>	0.1339 <i>25.88***</i>	0.1271 <i>17.75***</i>	0.1285 <i>22.39***</i>	0.1230 <i>15.74***</i>
LQ	0.1821 <i>6.03***</i>	0.1675 <i>5.70***</i>	0.1545 <i>4.28***</i>	0.1828 <i>6.07***</i>	0.1538 <i>4.19***</i>
O	-0.0160 <i>-0.27</i>			-0.0234 <i>-0.39</i>	-0.1327 <i>-1.57</i>
W	0.1948 <i>1.72</i>			0.2557 <i>2.23**</i>	0.1084 <i>0.65</i>
2nd Sh.	0.3646 <i>2.00**</i>	0.3573 <i>2.06**</i>	0.5599 <i>2.34**</i>	0.3050 <i>1.66*</i>	0.5528 <i>2.20**</i>
SA	0.0789 <i>2.97***</i>	0.0768 <i>2.97***</i>	0.0582 <i>1.74*</i>	0.0746 <i>2.82***</i>	0.0400 <i>1.22</i>
Family		-0.0572 <i>-2.63</i>		-0.0740 <i>-3.03***</i>	
Family (%)			-0.0043 <i>-5.92***</i>		-0.0042 <i>-5.71***</i>
State		0.0321 <i>0.91</i>		0.0221 <i>0.59</i>	
R <sup>2</sup> adj.	44.76%	45.02%	50.74%	45.30%	51.03%

Significant at 1% (\*\*\*), 5% (\*\*), and 10% (\*) levels

*T* statistics appear in italics, under coefficients

LSize is the log of firm’s Total Asset, LQ is the log of Tobin’s Q, *O* is the percentage of cash-flow rights of the ultimate owner, *W* is the difference between the percentage of voting rights and cash-flow rights of the ultimate owner, 2nd Sh. is the percentage of voting rights for the second largest shareholder, SA is the dummy for the presence of shareholders’ agreements. Family and State are respectively family-owned and state-owned companies, Family% is the percentage of family members on the board

Positive and significant coefficients are estimated both for the voting rights of the second large shareholder (*2nd Sh.*) and for the existence of a shareholders' agreement, suggesting that the power of these stakeholders is addressed at bargaining activity with the controlling shareholder. Ownership concentration doesn't significantly affect the number of members on the board, while for the wedge we observe a weak and irregular positive relation.

With respect to other governance variables, the family nature of the firm is associated with a smaller board of directors, and this effect is further reinforced as the number of family members within the board increases. These results indicate that high board compensation within family firms is related to small board size, supporting the rent extraction hypothesis against the explanation offered by social network theory.

#### 4.5 Governance, compensation and firm performance

Results in a previous section shed light on the effect of the firm's governance characteristic on the level of board compensation. As a further step in the analysis, we want to test how "excess compensation", i.e. the difference between the compensation effectively granted to the board and "normal" compensation (that the firm should pay given its economic characteristics), impacts on the firm's future performance. A negative correlation would qualify the residual as evidence of an agency cost associated with a given governance characteristic of the firm; otherwise, a non-negative correlation would reflect the effect of an unobservable variable, not considered within the regression model.

As a first step, we estimate the parameters of "predicted" compensation through the following regression:

$$\begin{aligned} \ln(TOTComp_{it}) = & \alpha + \beta_1 LSize_{it} + \beta_2 RETURN_{it} + \beta_3 RETURN_{it-1} + \beta_4 ROA_{it} \\ & + \beta_5 ROA_{it-1} + \beta_6 LQ_{it} + \beta_7 STD_{it} + \bar{\Omega} YEAR \\ & + \bar{\gamma} INDUSTRY + \varepsilon_{it} \end{aligned} \quad (3)$$

where  $\ln(TOTComp_{it})$  is the log of Total Board Compensation, ( $LSize$ ) the log of Total Asset,  $RETURN_t$  and  $RETURN_{t-1}$  contemporary and lagged yearly stock return,  $ROA_t$  and  $ROA_{t-1}$  contemporary and lagged firm performance,  $LQ$  is the log of Tobin's Q,  $STD$  is the stock returns standard deviation, while  $YEAR$  and  $INDUSTRY$  are sets of dummy variables respectively for 1995–2002 years and for the sector at which the firm belongs.

The residuals  $\varepsilon_{it}$  are "excess compensation" (*ExcComp*), since they capture the difference between "predicted" board pay, stemming from the application of Eq. 3 parameters to firm  $i$ , and the actual board compensation of firm  $i$  over the sample period.

As a final step, we regress firm's performance across the years 1996–2003 over the residuals, plus a number of control variables. We perform three separate regressions, one for each of the governance characteristics under test (type of

ownership, ownership concentration and wedge). The general regression equation is then the following:

$$\begin{aligned} PERF_{it+1} = & \beta_1 CGov + \overline{\beta_2}(ExcComp * CGov) + \beta_3 ROA_{it} + \beta_4 ROA_{it-1} + \\ & + \beta_5 LSize_{it} + \beta_6 LQ_{it} + \beta_7 STD_{it} + \beta_8 2ndSh_{it} + \beta_9 O_{it} + \beta_{10} W_{it} \\ & + \overline{\Omega}YEAR + \overline{\gamma}INDUSTRY + \varepsilon_{it} \end{aligned} \quad (4)$$

where *CGov* is a set of dummies for the corporate governance characteristic under test, and *ExcComp\*CGov* are the residuals of board compensation associated with that governance characteristic (the intercept is omitted, in order to estimate directly a coefficient for each group).

In more detail, the interaction items among *ExcComp* and *Family\_Founder*, *Family\_Descend.* and *Family\_Out* are respectively the residuals for family firms where the founder is still present, where descendants are present and where no family members are present on the board; *ExcComp\*State* and *ExcComp\*WH* are respectively the residuals for the other types of ultimate owner (state and widely held firms); *ExcComp\*Own\_1*, *ExcComp\*Own\_2* and *ExcComp\*Own\_3* are residuals associated with an increasing degree of ownership concentration<sup>23</sup>; *ExcComp\*Wedge\_1*, *ExcComp\*Wedge\_2* and *ExcComp\*Wedge\_3* are residuals associated with an increasing degree of wedge<sup>24</sup>; *ExcComp\*SA = 0*, *ExcComp\*SA = 1* are residuals associated with the absence or the presence of shareholders' agreements. The dependent variable, *PERF*, is the firm's future performance, and is proxied either by yearly market stock return (*RETURN*) or account performance (*ROA*).

In an agency-theory framework, a lower level of ownership concentration, higher wedge, and the presence of shareholders' agreements would be more likely associated with rent extraction hypothesis; in fact, the incentives of shareholders to monitor management behaviour are reduced when ownership concentration is low, while in the presence of shareholders' agreements and high levels of wedge between voting and cash flow rights, the cost for the ultimate shareholder associated with excessive compensation granted to the board is lower. These circumstances favour opportunistic behaviour by the board, that is more likely to benefit from excess compensation at the expense of shareholders.

The results reported in Table 6, Sections (b–d), do not support this view: different degrees of wedge are associated with non-significant coefficients, while for ownership concentration the negative coefficient detected for lower levels of concentration is significant only at 10% level.

A possible interpretation for this result could then be related to an omitted variable problem within the regression: the higher compensation granted is not a form of rent extraction but instead the right premium for the “hidden

<sup>23</sup> *Own\_1* takes the value 1 if the ultimate shareholder owns less than 20% of voting rights and 0 otherwise; *Own\_2* takes the value 1 if the ultimate shareholder owns more than 20% but less than 50% of voting rights, and 0 otherwise; *Own\_3* takes the value 1 if the ultimate shareholder owns more than 50% of voting rights and 0 otherwise.

<sup>24</sup> *Wedge\_1* takes the value 1 if  $W = 0\%$  and 0 otherwise; *Wedge\_2* takes the value 1 if  $0\% < W < 8\%$  and 0 otherwise; *Wedge\_3* takes the value 1 if  $W > 8\%$  and 0 otherwise.



**Table 6** The effect of excess compensation on future firm performance

	Return	Roa
Exc Comp (all types)	-0.0173 -1.02	-0.0027 -0.99
<i>Section a: ownership type</i>		
Exc Comp*Family	-0.0399 <i>-1.77*</i>	-0.0053 <i>-1.43</i>
Exc Comp*Family Founder	-0.1228 <i>-2.88***</i>	-0.0068 <i>-1.47</i>
Exc Comp*Family Descend.	-0.0023 <i>-0.08</i>	-0.0005 <i>-0.07</i>
Exc Comp*Family Out	-0.0132 <i>-0.18</i>	-0.0049 <i>-0.40</i>
Exc Comp*State	0.0314 <i>0.65</i>	-0.0006 <i>-0.08</i>
Exc Comp*WHI	-0.0004 <i>-0.01</i>	-0.0007 <i>-0.14</i>
<i>Section b: ownership concentration</i>		
Exc Comp*Own 1	-0.0561 <i>-1.93*</i>	-0.0011 <i>-0.23</i>
Exc Comp*Own 2	0.0167 <i>0.54</i>	-0.0051 <i>-0.97</i>
Exc Comp*Own 3	-0.0108 <i>-0.41</i>	-0.0035 <i>-0.82</i>
<i>Section c: wedge</i>		
Exc Comp*Wedge 1	-0.0035 <i>-0.15</i>	-0.0049 <i>-1.25</i>
Exc Comp*Wedge 2	-0.0413 <i>-1.09</i>	0.0035 <i>0.57</i>
Exc Comp*Wedge 3	-0.0261 <i>-0.94</i>	-0.0032 <i>-0.69</i>
<i>Section d: shareholder agreement</i>		
Exc Comp*SA = 0	-0.0243 <i>-1.32</i>	-0.0033 <i>-1.10</i>
Exc Comp* SA = 1	0.0151 <i>0.35</i>	0.0021 <i>0.30</i>

Significant at 1% (\*\*\*), 5% (\*\*), and 10% (\*) levels

*T* statistics appear in italics, under coefficients

*ExcComp* and *Family\_Founder*, *Family\_Descend.* and *Family\_Out* are respectively the residuals for family firms where the founder is still present, where descendants are present and where no family members are present on the board; *ExcComp\*State* and *ExcComp\*WH* are respectively the residuals for the other types of ultimate owner (state and widely held firms); *ExcComp\*Own\_1*, *ExcComp\*Own\_2* and *ExcComp\*Own\_3* are residuals associated with increasing degree of ownership concentration; *ExcComp\*Wedge\_1*, *ExcComp\*Wedge\_2* and *ExcComp\*Wedge\_3* are residuals associated with increasing degree of ownership wedge; *ExcComp\*SA = 0*, *ExcComp\*SA = 1* are residuals associated with the absence or the presence of shareholders' agreements

characteristics” of the board requested to manage firms with a shareholders’ agreement, higher level of wedge or lower ownership concentration.

On the contrary, for family firms, excess compensation is negatively related to the firm’s future performance, especially when the founder is present on the board. This result, combined with the circumstance that the presence of the founder is associated with higher levels of board pay (Table 3), lead to the conclusion that an inefficient compensation policy is implemented when the founder is still present on the board.

In these terms, the higher payment granted to the board is a signal of the indulgence of the founder towards members of the board, often belonging to the family, and the evidence of a sub-optimal way of managing the firm that negatively affects future performance. The negative impact on a firm’s future performance then suggests that the extra compensation granted to the board is probably a reward for its loyalty to the family, rather than the higher payment for a more intense scrutiny of CEO’s actions.

In an attempt to interpret the results through theoretical schemes which are alternative to those of agency theory, a possible explanation could arise from social network theory. Moving from this perspective, the higher compensation associated with the family nature of the firm could be due to the use of the board as a means for creating a relational network, through interlocks and the co-optation of outside directors that could provide advantages for the firm. A corollary of this interpretation would be that higher board compensation would be driven mainly by the larger size of a board that is needed in order to employ a larger number of outside directors, rather than by the higher individual pay granted to each member of the board.

However, the empirical results do not support this view. Table 5 shows that family firms have smaller boards of directors, and that higher board compensation is due to higher individual pay granted to each director, instead of to the enlargement of the board. Moreover, from this perspective, higher board compensation should be associated with a positive future performance, as a consequence of the benefits of the improved network, but Table 6 shows instead a negative impact on future performance. These results lead us to rule out the hypothesis that higher board compensation in family firms is linked with relational needs and to conclude that it is instead a form of rent extraction.

## 5 Conclusions

This paper is aimed at studying the effect of corporate ownership on the level of executive compensation and firms’ future performance within Italian listed companies, with a particular focus on four governance characteristics: ownership concentration, type of controlling shareholder, the wedge between cash flow and voting rights, and the presence of shareholders’ agreements.

Each governance characteristic considered exerts a relevant role on the level of cash compensation paid to the board of directors.

A more concentrated ownership is associated with lower board pay, in line with empirical evidence of other European and non-European countries; the level of board cash compensation is influenced by the nature of the ownership, with state-owned firms paying less, while family firms pay more; furthermore, the level of board compensation is influenced by the wedge, even if, contrary to what is expected, pay is lower in firms with higher wedge. Further analysis leads to the conclusion that this negative relationship is almost entirely due to family firms that appoint highly paid family members to the board of companies at the top of control chain. The negative relationship between wedge and board compensation is then the consequence of the participation of higher paid family members to the board of the companies at the top of the pyramid, so that the board of the companies at the end of the group (then with higher wedge) would consist mostly of less paid, non-family members. From this perspective, the negative correlation between wedge and board compensation is the consequence of family strategy in appointing family members on the boards over the control chain. We also find that the use of shareholders' agreements, another way of increasing separation between ownership and control but not related to the hierarchical position of the firm over the control chain, is associated with higher board compensation.

A non-significant impact is detected on firm's future performance by the excess compensation associated with various degrees of ownership concentration and wedge, and with the presence of shareholders' agreements. This result implies that the higher compensation could be related to hidden qualities of the board needed to manage the firm with those governance characteristics, instead of being a form of rent extraction.

With respect to family firms, we find support for the hypothesis of rent extraction through the payment of excess compensation to the board, especially when the founder of the firm is still present on the board. This result confirms the centrality of the founder in addressing strategic management choices in family firms, but reveals that in Italian listed firms this role is played in a "paternalistic" sense: the generous compensation policy associated with the presence of the founder is a signal that the interests of the business are secondary to those of the family, as revealed by the negative association between excess compensation and future firm's performance.

Moreover, the results lead us to discard the interpretation suggested by social network theory, namely that higher board compensation could be due to the enlargement of the board for relational needs, thus reinforcing the hypothesis of rent extraction in founder-family firms.

The results of this paper, while shedding light on the compensation policy of Italian listed firms, and in particular of family firms, bring up policy implications and raise questions for future research.

As a consequence of the financial turmoil, some governments are taking measures to review executive compensation practices, trying to align executive compensation with actual contribution to company success. In some countries the aim is to limit the financial value of remuneration packages for senior executives, particularly where the entities they manage are receiving financial assistance from the state (Germany, the United States), while other governments are considering

more general policies devoted to discourage “excessive compensation” via fiscal measures and new legislation (the Netherlands).

Our results support the view that excess compensation, especially in family firms, is negatively related to future performance, and therefore some control mechanism could be appropriate. According to a recent recommendation by the European Commission (2009), measures that link equity-based compensation to long-term performance are suitable, and in particular the use of “golden parachutes” in cases of poor performance should be discouraged. We believe however that transparency of remuneration practices through disclosure, and also minority shareholder control, could be particularly useful in closely held companies.

As regards future research, some interesting extensions are related to the dynamic of compensation within the board. Our paper focuses on the relationship between excess compensation associated with certain governance characteristics and firm performance, looking at the compensation of the board as a whole. However, a more thorough picture could arise from looking at the compensation of the individuals on the board, and especially with respect to the CEO.

Another theme for future research is the analysis of the role of independent directors in controlling the compensation policy, especially for family firms. Previous literature focused on this theme looking at the level of board compensation. We think that a further step could be that of examining the relationships between the presence of independent directors, excess compensation, and future firm performance.

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## Author Biographies

**Roberto Barontini, PhD** is professor of Corporate Finance at the Sant'Anna School of Advanced Studies in Pisa (Italy). His research is currently focused on corporate governance, risk management, and innovation financing. The effect of ownership structure on corporate performance has been studied in the papers “Equity prices and the risk of expropriation: an analysis of the Italian stock market” (with G. Sicilano), ECGI, 2004, and “The effect of family control on firm value and performance. Evidence from Continental Europe” (with L. Caprio), *European Financial Management*, 2006.

**Stefano Bozzi** is a Tenure Assistant Professor in Corporate Finance at the Catholic University of Rome. He has a PhD in Financial Sciences for Enterprise and has been Research Scholar at London School of Economics. Member of the Organization Committee of the 33rd, 34th and 35th Annual Meetings European Association. He teaches courses in Corporate Finance at Catholic University of Rome and Milan, and at Luiss Guido Carli, Rome. His field of research is focused on management compensation and corporate governance. He recently published a monograph on stock options and several papers on executive pay.